UNIVERSITY OF KENTUCKY
PATIENT CARE FACILITY
PARKING GARAGE

UK Project #: 2239.2

940 Elizabeth Street
Lexington, KY 40506-0293

07900 – Joint Sealants
Submittal Date: July 26, 2006

Construction Manager
Central Kentucky Glass
1123 Versailles Road
Lexington, KY 40508
(859) 253-0710

SUBMITTAL

degussa.
Construction Chemicals

SONOLASTIC® NP 1™

One-component, elastomeric gun-grade polyurethane sealant

PRODUCT DATA

7 07920 **Joint Sealants**

Description

NP 1™ is a one-component, high-performance, non-priming, gun-grade, elastomeric polyurethane sealant. It requires no mixing and typically requires no priming to bond to many materials, including concrete, masonry and metals.

Yield

See page 3 for charts.

Packaging

300 ml (10.1 fl oz) cartridges, 30 cartridges per carton

20 fl oz (590 ml) ProPaks, 20 per carton

2 gallons (7.6 L) pails; available on special order only

For color availability in bulk packaging, call Customer Service.

Color

White, off-white, limestone, stone, tan, aluminum gray, hunter green, medium bronze, special bronze, redwood tan, and black.

Shelf Life

Cartridges and ProPaks:
1 year when properly stored

Pails:
4 months when properly stored

Storage

Store in original, unopened containers away from heat and direct sunshine. Storing at elevated temperatures will reduce the shelf life.

Sonneborn®

Features

- Ready to use
- Joint movement capability ±25%
- Easy to gun and tool
- Available in cartridges, 20 ounce ProPaks, and in bulk
- Eleven standard colors
- No primer required for most construction materials
- Weather resistant
- Wide temperature-application range
- Compatible with nonrigid paints
- UL listed
- Low VOC content

Benefits

Requires no mixing; reduces labor costs

Provides excellent flexibility for keeping moving joints tight

Speeds application and makes neater joints

Reduces jobsite waste, lowers disposal costs

Matches common substrates

Lowers installation costs

Produces long-lasting weather-tight seals

Suitable for all climates

May be painted

Passes 4 hour, 4 inch, fire and hose stream test when used with Ultra Block® or mineral wool

Meets VOC requirements in all 50 states

Where to Use

APPLICATION

- Expansion joints
- Curtain wall construction
- Panel walls
- Precast units
- Aluminum and wood window frames
- Fascia
- Parapets
- Structural components
- Vinyl siding

LOCATION

- Interior and exterior
- Above grade

SUBSTRATE

- Concrete
- Masonry
- Aluminum
- Wood

How to Apply

Joint Preparation

1. The number of joints and the joint width should be designed for a maximum of ±25% movement.

2. The depth of the sealant should be 1/2 the width of the joint. The maximum depth is 1/2" (13 mm) and the minimum is 1/4" (6 mm). Refer to Table 1.

TABLE 1

Joint Width and Sealant Depth

JOINT WIDTH, IN (MM)	SEALANT DEPTH AT MIDPOINT, IN (MM)
1/4 – 1/2 (6 – 13)	1/4 (6)
1/2 – 3/4 (13 – 19)	1/4 – 3/8 (6 – 10)
3/4 – 1 (19 – 25)	3/8 – 1/2 (10 – 13)
1 – 1-1/2 (25 – 38)	1/2 (13)

Yield

LINEAR FEET PER GALLON*

JOINT DEPTH (INCHES)	JOINT WIDTH (INCHES) 1/4	3/8	1/2	5/8	3/4	7/8	1
1/4	308	205	154	122	–	–	–
3/8	–	–	–	82	68	58	51
1/2	–	–	–	–	51	44	38

*One gallon equals approximately 12 cartridges or 6 ProPaks

METERS PER LITER

JOINT DEPTH (MM)	JOINT WIDTH (MM) 6	10	13	16	19	22	25
6	24.8	16.5	12.4	9.8	–	–	–
10	–	–	–	6.6	5.5	4.7	4.1
13	–	–	–	–	4.1	3.5	3.0

3. In deep joints, the sealant depth must be controlled by Closed-Cell Backer-Rod or Soft Backer-Rod. Where the joint depth does not permit the use of backer-rod, a bondbreaker (polyethylene strip) must be used to prevent three-sided adhesion.

4. To maintain the recommended sealant depth, install backer-rod by compressing and rolling it into the joint channel without stretching it lengthwise. Closed-Cell Backer-Rod should be about 1/8" (3 mm) larger in diameter than the width of the joint to allow for compression. Soft Backer-Rod should be approximately 25% larger in diameter than the joint width. The sealant does not adhere to it, and no separate bondbreaker is required. Do not prime or puncture the backer-rod.

Surface Preparation

Surfaces must be structurally sound, fully cured, dry, clean, free of dirt, moisture, loose particles, oil, grease, asphalt, tar, paint, wax, rust, waterproofing or curing and parting compounds, and membrane materials.

CONCRETE, STONE, AND OTHER MASONRY

Clean by grinding, sandblasting, or wire brushing to expose a sound surface free of contamination and laitance.

WOOD

New and weathered wood must be clean and sound. Scrape away loose paint to bare wood. Any coating that cannot be removed must be tested to verify adhesion of sealant or to to determine an appropriate primer.

METAL

Remove scale, rust, and coatings from metal to expose a bright white surface. Remove protective coatings as well as any chemical residue or film. Aluminum window frames are frequently coated with a clear lacquer that must be removed before the application of NP 1™. Any coating that cannot be removed must be tested to verify adhesion of sealant or determine an appropriate primer. Remove any other protective coatings or finishes that could interfere with adhesion.

Priming

1. NP 1™ is generally considered a nonpriming sealant, but special circumstances or substrates may require a primer. It is the user's responsibility to check the adhesion of the cured sealant on typical test joints at the project site before and during application. Refer to product data sheet on Primer 733 or 766, and consult Technical Services for additional information.

2. Apply primer full strength with a brush or clean cloth. A light, uniform coating is sufficient for most surfaces. Porous surfaces require more primer; however, do not overapply.

3. Allow primer to dry before applying NP 1™. Depending on temperature and humidity, primer will be tack free in 15 – 120 minutes. Priming and sealing must be done on the same work day.

Application

1. NP 1™ comes ready to use. Apply by professional caulking gun. Do not open cartridges, sausages, or pails until preparatory work has been completed.

2. Fill joints from the deepest point to the surface by holding a properly sized nozzle against the back of the joint.

3. Dry tooling is recommended. DO NOT use soapy water when tooling. Tooling results in the correct bead shape, a neat joint, and maximum adhesion.

Clean Up

1. Immediately after use, clean equipment with Reducer 990 or xylene. Use proper precautions when handling solvents.

2. Remove cured sealant by cutting with a sharp-edged tool.

3. Remove thin films by abrading.

Curing Time

The cure of NP 1™ varies with temperature and humidity. The following times assume 75° F (24° C), 50% relative humidity, and a joint 1/2" width by 1/4" depth (13 by 6 mm).

Skins: overnight or within 24 hours

Functional: within 3 days

Full cure: approximately 1 week

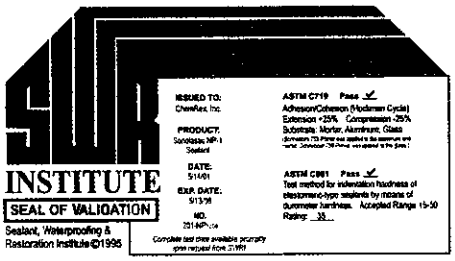
Technical Data

Composition

Sonolastic® NP 1™ is a one-component moisture-curing polyurethane.

Compliances

- ASTM C 920, Type S, Grade NS, Class 25, Use T, NT, M, A, G, and O
- Federal Specification TT-S- 00230C, Type II, Class A
- Corps of Engineers CRD-C- 541, Type II, Class A
- Canadian Specification CAN/CGSB-19.13-M87, Classification MCG-2-25-A-N, No. 81026
- USDA compliant for use in meat and poultry areas
- Underwriters Laboratories Inc.® classified (fire resistance only)
- Canadian approval for use in establishments that handle food
- ISO 11600-F-25LM
- SWRI Validated



Typical Properties

PROPERTY	VALUE
Service temperature range, ° F (° C)	-40 to 180 (-40 to 82)
Expected life	Up to 15 years
Shrinkage	None

Test Data

PROPERTY	RESULTS	TEST METHODS
Movement capability, %	±25	ASTM C 719
Tensile strength, psi (MPa)	350 (2.4)	ASTM D 412
Tear strength, pli	50	ASTM D 1004
Ultimate elongation at break, %	800	ASTM D 412
Rheological, (sag in vertical displacement) at 120° F (49° C)	No sag	ASTM C 639
Extrudability, 3 seconds	Passes	ASTM C 603
Hardness, Shore A		ASTM C 661
At standard conditions	25 – 30	
After heat aging (max Shore A: 50)	25	
Weight loss, after heat aging, %	3	ASTM C 792
Cracking and chalking, after heat aging	None	ASTM C 792
Tack-free time, hrs, (maximum 72 hrs)	Passes	ASTM C 679
Stain and color change	Passes (no visible stain)	ASTM C 510
Bond durability,* on glass, aluminum, and concrete	Passes ±25% movement	ASTM C 719
Adhesion* in peel, pli (min. 5 pli)	30	ASTM C 794
Adhesion* in peel after UV radiation through glass (min. 5 pli)	Passes	ASTM C 794
Artificial weathering, Xenon arc, 250 hours	Passes	ASTM C 793
Artificial weathering, Xenon arc, 3,000 hours	No surface cracking	ASTM G 26

*Primed for water immersion dictated by ASTM C 920. Concrete and aluminum primed with 733; glass primed with 766.

Test results are typical values obtained under laboratory conditions. Reasonable variations can be expected.

For Best Performance

- Do not allow uncured NP 1™ to come into contact with alcohol-based materials or solvents.
- Do not apply polyurethane sealants in the vicinity of uncured silicone sealants or uncured Sonolastic® 150 or 150 Tint Base.
- NP 1™ should not come in contact with oil-based caulking, uncured silicone sealants, polysulfides, or fillers impregnated with oil, asphalt, or tar.
- Protect unopened containers from heat and direct sunshine.
- In cool or cold weather, store container at room temperature for at least 24 hours before using.
- NP 1™ should not be used for continuous immersion in water. Call Technical Services for recommendations.
- Do not apply over freshly treated wood; treated wood must have weathered for at least 6 months.
- Substrates such as copper, stainless, and galvanized may require the use of a primer; Primer 733 or 766 is acceptable. For Kynar 500 based coatings use Primer 733 only. An adhesion test is recommended for any questionable substrate.
- Do not use as a cap, heel, or toe bead for exterior glazing. Refer to Sonolastic® 150 product data sheet (see Form No. 1017910).
- UV exposure may cause white NP 1™ to discolor. This does not affect sealant performance; where maintaining a true white appearance is critical, use Ultra (see Form No. 1017894) or Sonolastic® 150 (see Form No. 1017910) sealants.
- NP 1™ can be applied below freezing temperatures only if substrates are completely dry, free of moisture, and clean. Contact Technical Service for more information.
- Lower temperatures and humidities will extend curing times.
- NP 1™ can be painted over provided it is fully cured and clean. When painting over any elastomeric sealant, use a paint that is also elastomeric. (If movement occurs, the paint will also move.)
- Make certain the most current versions of product data sheet and MSDS are being used; call Customer Service (1-800-433-9517) to verify the most current versions.
- Proper application is the responsibility of the user. Field visits by Degussa personnel are for the purpose of making technical recommendations only and not for supervising or providing quality control on the jobsite.

Health and Safety

NP 1™

Warning

NP 1™ (all colors) contains stoddard solvent and crystalline (quartz) silica.

Risks

May cause skin, eye and respiratory irritation. May cause dermatitis and allergic responses. Potential skin and/or respiratory sensitizer. Ingestion may cause irritation. Reports associate repeated or prolonged occupational overexposure to solvents with permanent brain, nervous system, liver and kidney damage. INTENTIONAL MISUSE BY DELIBERATELY INHALING THE CONTENTS MAY BE HARMFUL OR FATAL.

Precautions

KEEP OUT OF THE REACH OF CHILDREN. Use only with adequate ventilation. Keep container closed. Prevent contact with skin, eyes and clothing. Wash thoroughly after handling. Avoid breathing vapors. DO NOT take internally. Use impervious gloves, eye protection and if the TLV is exceeded or used in a poorly ventilated area, use NIOSH/MSHA approved respiratory protection in accordance with applicable federal, state and local regulations.

First Aid

In case of eye contact, flush thoroughly with water for at least 15 minutes. SEEK IMMEDIATE MEDICAL ATTENTION. In case of skin contact, wash affected areas with soap and water. If irritation persists, SEEK MEDICAL ATTENTION. Remove and wash contaminated clothing. If inhalation causes physical discomfort, remove to fresh air. If discomfort persists or any breathing difficulty occurs, or if swallowed, SEEK IMMEDIATE MEDICAL ATTENTION.

Refer to Material Safety Data Sheet (MSDS) for further information.

Proposition 65

This product contains materials which have been listed by the state of California as known to cause cancer, birth defects, or other reproductive harm.

VOC Content

NP 1™ contains 0.36 lbs/gal or 43 g/L, less water and exempt solvents.

For medical emergencies only, call ChemTrec (1-800-424-9300).

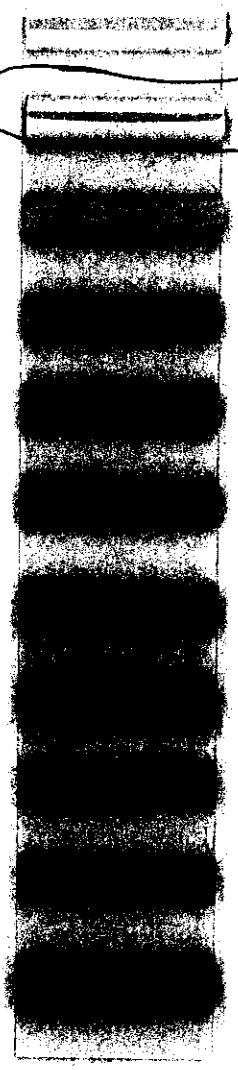
Degussa Building Systems
889 Valley Park Drive
Shakopee, MN, 55379
www.degussabuildingsystems.com
Customer Service 800-433-9517
Technical Service 800-243-6739

For professional use only. Not for sale to or use by the general public.

Form No. 1017906 9/04 (Replaces 9/03)
Printed on recycled paper including 10% post-consumer fiber.

creating essentials

Sonolastic® NP 1™ & NP 2™



White

Off White

APPROVED

Limestone

Tan

Stone

Aluminum Gray

Redwood Tan

Hunter Green

Medium Bronze

Special Bronze

Black

Colors are typical. Field conditions may result in slight variations from that represented.

Sonneborn

Form No. 1018181

GILBANE
University of Kentucky
Patient Care Facility
Gilbane Project No. 18-3986
REVIEWED

J010-Hupac J020-Garage
J030-Pour Fdn J040-POF Foundation
J050-POF Conc Slab J060-Towerup Fd

Sid Package No _____
Submittal No _____
Spec Section _____
Reviewed By _____
Date _____

This review does not relieve the contractor from complying with the contract requirements concerning their work with other trade contractors and verifying field dimensions

UNIVERSITY OF KENTUCKY
PATIENT CARE FACILITY
PARKING GARAGE

UK Project #: 2239.2

940 Elizabeth Street
Lexington, KY 40506-0293

07410 – Metal Panels and Canopies
Submittal Date: January 15, 2007

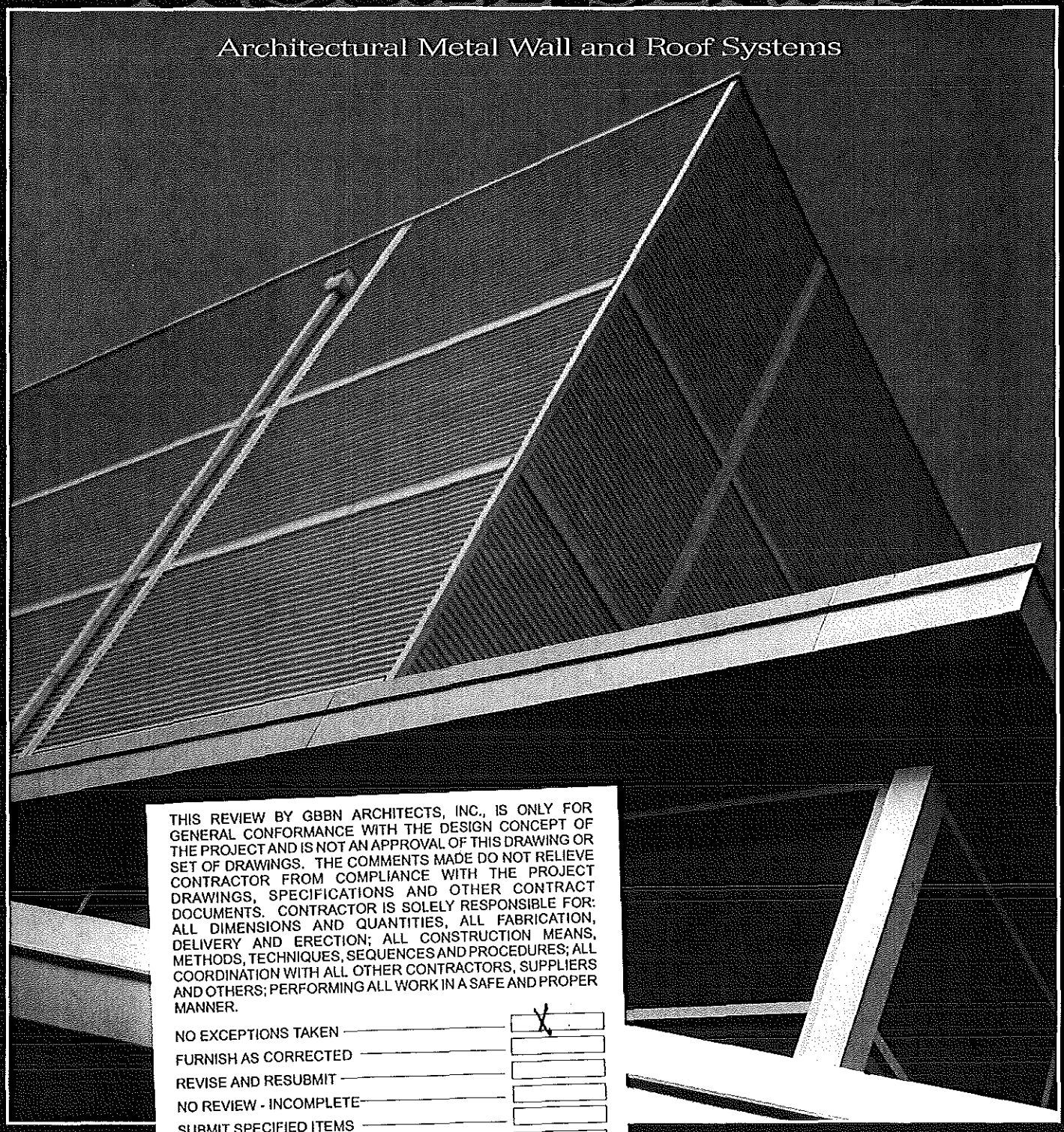
Construction Manager
Central Kentucky Glass
1123 Versailles Road
Lexington, KY 40508
(859) 253-0710

SUBMITTAL

CENTRIA

PROFILE SERIES

Architectural Metal Wall and Roof Systems



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NO EXCEPTIONS TAKEN — X

FURNISH AS CORRECTED —

REVISE AND RESUBMIT —

NO REVIEW - INCOMPLETE —

SUBMIT SPECIFIED ITEMS —

REJECTED —

DATE 7-2-07 BY BK

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325 WEST MAIN STREET, LEXINGTON, KENTUCKY 40507 (859) 381-8787

CENTRIA produces the world's most extensive line of high-end architectural metal products in the industry including: Formawall™ *Dimension Series*® Factory-foamed Architectural Wall System, *Profile Series* Architectural Wall & Roof Systems, *FormaBond*™ Metal Composite Wall System, and *SRS*® Structural Standing Seam Roof Systems.

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- Thermal and structural analyses
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Reference PS-1/06-10M LO/LGT

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Valspar®

INDUSTRIAL
COATINGS

GILBANE
University of Kentucky
Patient Care Facility
Gilbane Project No. 18-3966

REVIEWED

☐ 010-Huguelet ☒ 020-Garage
☐ 030-Infrastructure ☐ 040-PCF Foundation
☐ 050-PCF Core/Shell ☐ 060-TowerUp Fit

Bid Package No. 080
Submittal No. 080-07410-001-1
Spec. Sect/Para.
Reviewed By BH
Date 11/23/07

This review does not constitute nor does it assume design responsibility nor does it relieve the trade contractor's supplier from complying with the contract requirements, coordinating their work with other trade contractors and verifying field dimensions.

Her #

080-07410-002-1

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NO EXCEPTIONS TAKEN ☒
FURNISH AS CORRECTED ☐
REVISE AND RESUBMIT ☐
NO REVIEW - INCOMPLETE ☐
SUBMIT SPECIFIED ITEMS ☐
REJECTED ☐

DATE 8/8/07 BY EK

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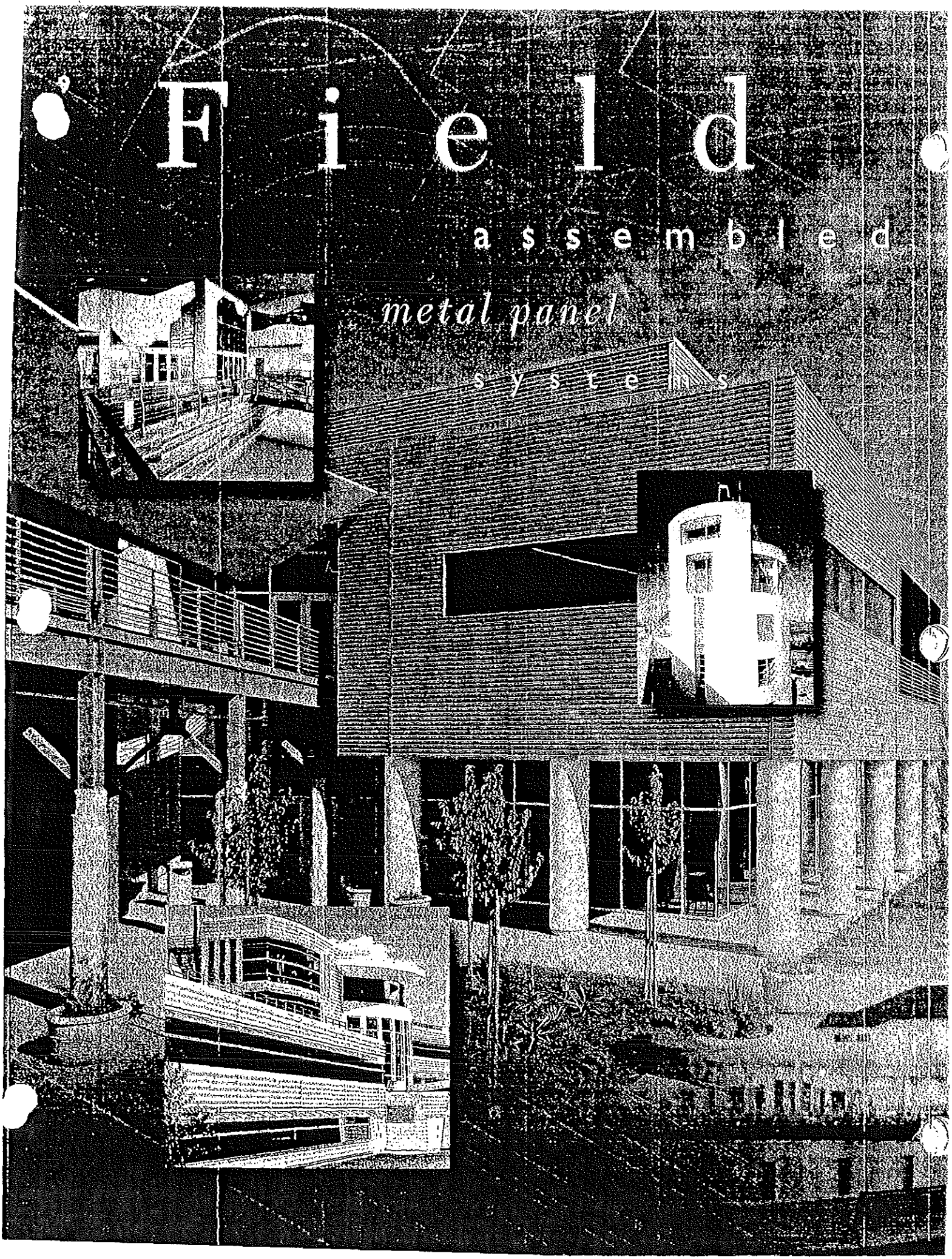
☐ 325 WEST MAIN STREET, LEXINGTON, KENTUCKY 40507 (859) 381-8787

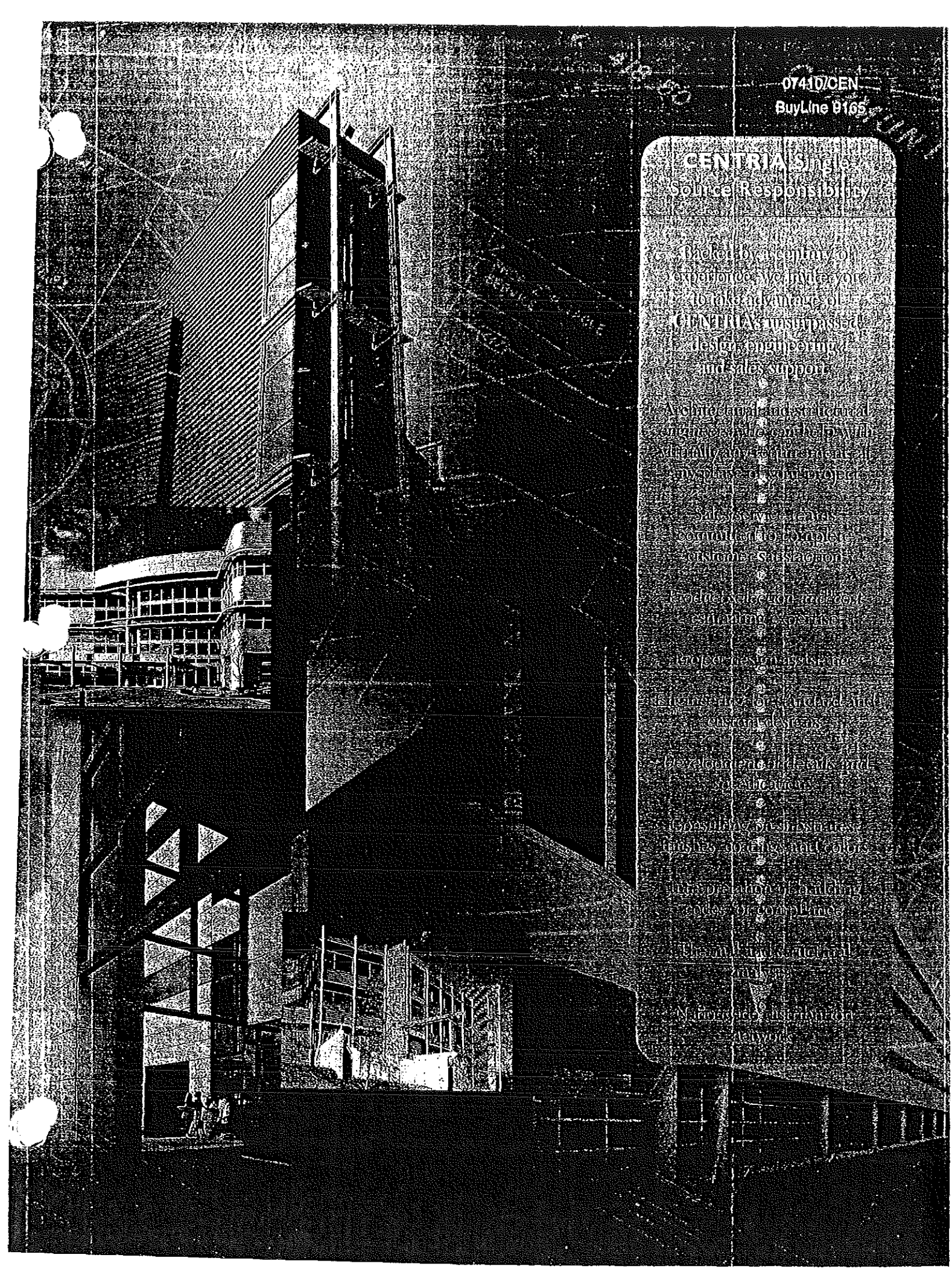
Field

assembled

metal panel

systems





07410/CEN
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Backed by a century of experience, we invite you to take advantage of CENTRIA's unsurpassed design engineering and sales support.

Architectural and structural engineers can be found within virtually any department at any phase of your project.

Sales service teams committed to complete customer satisfaction.

Product selection and cost estimating expertise.

Project specific assistance.

Engineering for architectural and custom designs.

Development of details and layouts.

Consulting on finish options, finishes, coloring, and colors.

Interpretation of building codes and compliance.

Thermal and structural analysis.

Nationwide distribution network.

Wind Load Span Table for CS-200 Wall Panels (3/16" Supports)

CENTRIA
1-800-759-7474

Load	Design Limited By	CS-200 - 24 Span (ft - in)			CS-200 - 22 Span (ft - in)			CS-200 - 20 Span (ft - in)			CS-200 - 18* Span (ft - in)		
		Single	Double	Triple	Single	Double	Triple	Single	Double	Triple	Single	Double	Triple
20 psf	Stress	Not Available			5-10	5-10	6-6	6-8	6-8	7-6	8-4	8-4	9-3
	Defl				4-8	6-3	5-9	5-0	6-9	6-2	5-9	7-9	7-2
30 psf	Stress				4-9	4-9	5-4	5-5	5-5	6-1	6-9	6-9	7-7
	Defl				4-1	5-5	5-0	4-5	5-11	5-5	5-1	6-9	6-3
40 psf	Stress				4-2	4-2	4-7	4-9	4-9	5-3	5-10	5-10	6-7
	Defl				3-8	4-11	4-7	4-0	5-4	4-11	4-7	6-2	5-8
50 psf	Stress				3-8	3-8	4-2	4-3	4-3	4-9	5-3	5-3	5-10
	Defl				3-5	4-7	4-3	3-8	5-0	4-7	4-3	5-8	5-3
60 psf	Stress				3-4	3-4	3-9	3-10	3-10	4-4	4-10	4-10	5-4
	Defl				3-3	4-4	4-0	3-6	4-8	4-4	4-0	5-4	4-11
70 psf	Stress				3-1	3-1	3-6	3-7	3-7	4-0	4-5	4-5	5-0
	Defl				3-1	4-1	3-9	3-4	4-5	4-1	3-10	5-1	4-8

CS-200 Properties:

Nominal Gauge	Thick in	Wgt. psf	I in^4	S in^3
24	Not Available			
22	0.030	1.69	0.023	0.046
20	0.036	2.03	0.029	0.060
18	0.048	2.69	0.044	0.093

Wind Load Span Table for CS-200 Wall Panels (16 Ga. Supports)

Load	Design Limited By	CS-200 - 24 Span (ft - in)			CS-200 - 22 Span (ft - in)			CS-200 - 20 Span (ft - in)			CS-200 - 18* Span (ft - in)		
		Single	Double	Triple	Single	Double	Triple	Single	Double	Triple	Single	Double	Triple
20 psf	Stress	Not Available			5-10	5-10	6-6	6-8	6-8	7-6	8-4	8-4	9-3
	Defl				4-8	6-3	5-9	5-0	6-9	6-2	5-9	7-9	7-2
30 psf	Stress				4-9	4-9	5-4	5-5	5-5	6-1	6-9	6-9	7-7
	Defl				4-1	5-5	5-0	4-5	5-11	5-5	5-1	6-9	6-3
40 psf	Stress				4-2	4-2	4-7	4-9	4-9	5-3	5-10	5-10	6-7
	Defl				3-8	4-11	4-7	4-0	5-4	4-11	4-7	6-2	5-8
50 psf	Stress				3-8	3-8	4-2	4-3	4-3	4-9	5-3	5-3	5-10
	Defl				3-5	4-7	4-3	3-8	5-0	4-7	4-3	5-8	5-3
60 psf	Stress				3-4	3-4	3-9	3-10	3-10	4-4	4-10	4-7	5-3
	Defl				3-3	4-4	4-0	3-6	4-8	4-4	4-0	5-4	4-11
70 psf	Stress				3-1	3-1	3-6	3-7	3-7	4-0	4-5	3-11	4-6
	Defl				3-1	4-1	3-9	3-4	4-5	4-1	3-10	5-1	4-8

Notes for Wind Span Tables:

1. Spans should be limited by the lower of stress, calculated as 0.6 × Fy or deflection @ L/180.
2. For deflection @ L/120, multiply the tabulated L/180 Defl. span by 1.144.
3. Wind span tables are based on using 1/4"-14 fasteners with 5/8" ø combination washers fastened into minimum thickness supports indicated on the tables.
4. Wind span tables are based on single skin with 1 fastener per panel clip per support.
5. *Consult CENTRIA for all 18 gage product lead times.
6. Oil canning within industry standard guidelines as defined by MCA is not a cause for rejection.

SECTION 07410

METAL WALL PANELS

[CENTRIA Concept Series]

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes: All exterior metal wall panels and associated flashing, extruded aluminum trim, insulation, subgirts, sealants, and fasteners necessary to form the exterior metal wall panel system as shown on the contract drawings and/or specified herein.

B. Related Sections:

1. 05100 Structural Metal Framing
2. 05400 Cold-Formed Metal Framing
3. 07210 Building Insulation
4. 07270 Air Barriers
5. 07600 Flashing & Sheet Metal
6. 07900 Joint Sealers
7. 09250 Gypsum Sheathing
8. 10200 Louvers & Vents

1.02 REFERENCES

A. General: Reference latest edition of applicable codes and standards.

B. The Aluminum Association

1. Specification for Aluminum Structures

C. American Society for Testing and Materials (ASTM):

1. ASTM A 653 Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) by the Hot-Dip Process

2. ASTM C 236 Standard Specification for Steady-State Thermal Performance of Building Assemblies by Means of a Guarded Hot Box.[1]

[1] Specify when designing a complete field assembled wall system including liner panel, insulation, subgirts, and Concept Series face panel.

3. ASTM E 283 Standard Test Method for Determining the Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen[1]

4. ASTM E 331 Standard Test Method for Water Penetration of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference[1]

D. American Iron and Steel Institute (AISI):

1. Specification for the Design of Cold-Formed Steel Structural Members

E. American Institute of Steel Construction (AISC):

1. Code of Standard Practice

F. American Society of Civil Engineers (ASCE):

1. ASCE-7, Minimum Design Loads for Buildings and Other Structures

G. [Building Officials and Code Administrators International, Inc. (BOCA)] *or* [International Code Council (ICC)] *or* [Southern Building Code Congress International (SBCCI)] *or* [International Conference of Building Officials (ICBO)]:

1. [BOCA National Building Code] *or* [International Building Code (IBC)] *or* [Standard Building Code (SBC)] *or* [Uniform Building Code (UBC)]

1.03 SYSTEM DESCRIPTION

A. Design Requirements:

1. [Field assembled metal wall panel system including a sealed vapor barrier liner panel, insulation, subgirts and concealed fastener exterior profile.] *or*

[Single-skin concealed fastener metal wall panel applied as the exterior component of an insulated wall system. This system must include an air and water resistant barrier located on the outboard side of the wall supports, that is designed and provided by a subcontractor/supplier other than the metal wall panel manufacturer. The air and water resistant barrier will provide the air and water infiltration performance.[2]] *or*

[Uninsulated single-skin concealed fastener metal wall panel system.]

---

[1] Specify when designing a complete field assembled wall system including liner panel, insulation, subgirts, and Concept Series face panel.

[2] The most common system involves the use of CENTRIA wall products over a DensGlass® Gold substrate by G-P Gypsum overlaid with Tyvek® Commercial Wrap®, by DuPont Company. Assemblies utilizing alternate materials are possible and are dependent on building location and type.

2. Wall panel system shall be manufactured and installed to withstand specified design loads and maintain performance requirements without defects, damage, or failure.

B. Performance Requirements:

1. Design wind loads shall be as specified below, acting normal to the plane of the wall, or as indicated on the contract drawings.

   a. Main Wall: + 20 psf, - 20 psf
   b. Corners: + 35 psf, - 35 psf

   c. Corner zones shall be defined as 15 feet from building outside corners.

2. Wall panels shall be designed for a maximum deflection under loading of L/180.

3. Air infiltration of the wall panel system shall be limited to 0.06 CFM/ft^2 at a positive pressure differential of 1.57 psf when tested in accordance with ASTM E 283. [3]

4. There shall be no uncontrolled water penetration to the building interior when the wall panel system is tested per ASTM E 331 at a positive pressure differential of 6.24 psf or 20% of the design wind pressure whichever is greater. The test pressure need not exceed 12 psf.

5. Wall panel system shall be tested for thermal transmittance in accordance with ASTM C 236. Thermal transmittance, corrected to 15 mph wind outside and still air inside, shall not exceed 10 Btu/hr-ft^2-°F.[1]

1.04 SUBMITTALS

A. Submit product data, test reports, and certifications in accordance with quality assurance and performance requirements specified herein.

B. Submit panel shop drawings consisting of design and erection drawings, finish specifications, and other data necessary to clearly describe the design, materials, sizes, layouts, construction details, and erection. Submit small-scale layouts of panels and large-scale details of edge conditions, joints, fastener and sealant placement, flashings, penetrations, and special details. Distinction must be made between factory and field assembled work.

1. Drawings must be approved prior to fabrication.

C. Submit structural design calculations, in accordance with the AISI Specification for the Design of Cold-Formed Steel Structural Members, for the metal wall panel system.

[3] For "rainscreen" assemblies the air barrier is either the vapor permeable air and water barrier or the vapor barrier component of the wall design.

1. A professional engineer registered in the state where the project is located shall certify the calculations.

D. Samples:

1. Panels: One (1) of each type, full panel width by 12 inches long.
2. Fasteners: Two (2) of each type with statement of intended use.
3. Closures: One (1) of each type metal closure and foam closure as required.
4. Sealants: One (1) sample of each type with statement of intended use.
5. Clips: Two (2) of each type.

1.05 QUALITY ASSURANCE

A. Manufacturers Qualifications: The manufacturer shall have had a minimum of ten (10) years experience in the successful completion of projects employing similar materials, applications, and performance requirements.

1. Manufacturer shall provide a list of five (5) similar completed projects with addresses of the project location, architect, and owner.

B. Installers Qualifications: The wall systems contractor shall have had a minimum of ten (10) years experience in the successful completion of projects employing similar materials, applications, and performance requirements.

1. The wall systems contractor shall provide a list of five (5) similar completed projects with addresses of the project location, architect, and owner.

1.06 DELIVERY, STORAGE, AND HANDLING

A. Materials shall be unloaded and stored per the manufacturer's instructions to prevent damage due to handling and weather.

1.07 WARRANTIES

A. Material Warranty: The manufacturer shall warrant that the materials and accessories furnished in accordance with these specifications shall remain free from defects in material and factory workmanship for a period of one (1) year from date of shipment.

B. [Paint Finish Warranty: The manufacturer shall warrant against fading, chalking, peeling, cracking, checking, chipping, or erosion to base metal of the exterior panel finish, in accordance with the paint supplier's standards.] *or*

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. CENTRIA, 1005 Beaver Grade Road, Moon Township, PA 15108 products and services shall establish the minimum level of quality, performance, dimension, and appearance required.

B. Substitutions: Materials, accessories, and testing specified shall establish the minimum level of quality, performance, dimension, and appearance required of any substitution.

1. No substitution will be considered unless, written request for approval has been received by the specifying architect at least ten (10) days prior to the bid date. Request shall include evidence submitted to demonstrate equivalency to the products and performance levels specified.

   a. A complete description of the substitution including details referenced to the wall conditions shown on the contract drawings.

   b. Independent test reports verifying compliance with specified performance requirements.

   c. Calculations certified by a professional engineer, registered in the state where the project is located, verifying that the proposed substitution meets the specified loading requirements.

   d. A detailed listing of each specification item with which the substitution does not fully comply.

2. The manufacturer or wall systems contractor proposing the substitute shall pay the costs of any other subcontractor affected by the proposed substitute.

2.02 MATERIALS

A. Exterior metal wall panel system shall be Concept Series as manufactured by CENTRIA.

1. Concept Series panel profile(s) shall be [CS-200] *and/or* [CS-210] *and/or* [CS-260] *and/or* [CS-610] *and/or* [CS-620] *and/or* [CS-660]. Wall panel variation shall be as defined on the contract drawings.

   a. Panels shall be nominal 7/8-inches in depth with [12] *and/or* [16] inches of coverage width.

b. Panels shall have identical interlocking side joints to accommodate multiple panel profile integration. [Panel side joints shall have a factory-applied sealant.][4]

c. Panels shall be fastened to the wall girts with minimum 16 gage concealed clips and fasteners to allow for unimpeded thermal movement of the wall system.[4a] Clips shall be designed to hold panel ½" minimum from exterior sheathing. Exposed fastened panels are unacceptable.

d. Panels shall be factory fabricated by roll-forming operations to assure consistency and quality of manufacture. Panels fabricated by press brake or folding machine are unacceptable.

e. Metal panels shall be fabricated from {zinc coated steel conforming to ASTM A 653 SS Grade 37, G90 coating.[4b] Material shall be minimum [22][5] *or* [20] *or* [18] gage with [smooth] *or* [embossed][6] surface texture.}

B. {Liner panel profile shall be [L2 liner as manufactured by CENTRIA. Profile shall be 1-3/8 inches in depth with 24 inches of coverage width. Liner pan shall have two (2) stiffening beads spaced at 8 inches o/c.] *or*

[L2-2 liner as manufactured by CENTRIA. Profile shall be 2 inches in depth with 24 inches of coverage width. Liner pan shall have two (2) stiffening beads spaced at 8 inches o/c.] *or*

[L2-3 liner as manufactured by CENTRIA. Profile shall be 3 inches in depth with 24 inches of coverage width. Liner pan shall have five (5) stiffening beads spaced at 4 inches o/c.] *or*

[L-21A liner as manufactured by CENTRIA. Profile shall be 1-½ inches in depth with 24 inches of coverage width. Liner pan shall have three (3) stiffening beads spaced at 6 inches o/c.]

1. Liner panel side lap shall have a factory-applied sealant.

---

[4] Panels may be provided without sealant in the side joint for simple "rain screen" applications or when Concept Series profiles are the exterior metal skin of a field assembled wall system with vapor barrier liner panel.

[4a] For vertical panel applications, soffit applications, and applications where thermal movement is of minimum concern, Concept Series profiles may be specified and/or ordered with an extended fastener leg for concealed and clipless attachment. If this attachment scheme is preferred, delete the first sentence of paragraph "c" and add an "E" suffix to the chosen profile(s) (Ex. CS-12-00E).

[4b] Optional metal substrates such as Galvalume, aluminum, and stainless steel may be available. Contact you CENTRIA sales representative for more information.

[5] CENTRIA recommends minimum 22 gage metal wall panels for enhanced structural performance and optimum aesthetic appearance. Some Concept Series and liner panels are also available in 24 gage.

[6] Embossing is non-directional.

2. Metal liner panels shall be fabricated from zinc coated steel conforming to ASTM 653 SQ Grade 37, G90 coating. Material shall be minimum [22][5] or [20] or [18] gage with [smooth] or [embossed][6] surface texture.}

{Vapor permeable air and water barrier shall consist of [Tyvek® Commercial Wrap®, by Dupont Company, over exterior grade sheathing] *or* [DensGlass® Gold exterior substrate, by G-P Gypsum]. Perimeter conditions, penetrations, laps, and joints shall be sealed to provide a continuous air and water barrier in strict accordance with manufacturer's instructions.}

C. All exterior metal flashing shall be fabricated in the same material, gage, finish, and color as the exterior profile, unless otherwise noted.

D. Extruded aluminum exterior panel trim shall be MicroLine as manufactured by CENTRIA. Extruded trim details shall provide sharp, crisp appearance with maximum 2 inch sight lines with no exposed fasteners, unless otherwise noted. MicroLine details shall be as defined on the contract drawings.

1. Extrusions shall be 6063-T5 aluminum with exposed surfaces painted to match wall panels.

E. Subgirts shall be fabricated from minimum 16 gage zinc coated steel conforming to ASTM A 653 SQ Grade 37, G90 coating.

~~F. Insulation shall be 1.65 pcf density semi-rigid glass fiber type.[8] Insulation thickness shall be ____ inches.~~

2.03 FINISHES

A. {Exterior metal panel material shall be factory coil coated in one of the manufacturer's standard finishes and colors. Manufacturer shall provide a minimum of 25 standard colors for selection.

1. Exposed exterior surface finish shall be [FLUOROFINISH, consisting of 0.2 mil primer with 0.8 mil 70% Kynar 500 or Hylar 5000 color coat.] *or*

[DURAGARD, consisting of 0.8 mil primer with 0.8 mil 70% Kynar 500 or Hylar 5000 color coat.] *or*

[DURAGARD PLUS, consisting of 0.8 mil primer with 0.8 mil 70% Kynar 500 or Hylar 5000 color coat and 0.8 mil 70% Kynar 500 or Hylar 5000 clear coat.] *or*

[MICA, consisting of 0.2 mil primer with 0.8 mil 70% Kynar or Hylar 5000 color coat containing mica pearlescent flakes.] *or*

[8] For horizontal installations of Concept Series systems field assembled with liner panels, insulation must be bagged or a water barrier, such as Tyvek®, must be applied over the insulation and liner prior to application of the subgirt.

[3-Coat METALLIC, consisting of 0.2 mil primer with 0.8 mil 70% Kynar 500 or Hylar 5000 color coat containing metal flakes and 0.5 mil 70% Kynar 500 or Hylar 5000 clear coat.] *or*

[Valflon, consisting of 0.2 mil primer with 0.8 mil 100% fluorocarbon color coat.]

a. Exposed surface color shall be CENTRIA Bone White, color #3711X635

2. [Concealed interior surface finish shall consist of a 0.2 mil primer and 0.3 mil backer coat] *or*

[Exposed interior surface finish shall match finish and color of specified exterior surface finish and color.]} *or*

B. [Liner panel exterior surface finish shall be factory coil coated Polyester Arctic Ice, consisting of 0.2 mil primer and 0.6 mil polyester color coat. Liner panel interior surface finish shall consist of a 0.2 mil primer and 0.3 mil backer coat.] *or*

[Liner panel material shall be factory coil coated in one of the manufacturer's standard finishes and colors. Manufacturer shall provide a minimum of 25 standard colors for selection.

1. Exposed surface finish shall be [FLUOROFINISH, consisting of 0.2 mil primer with 0.8 mil 70% Kynar 500 or Hylar 5000 color coat.] *or*

[DURAGARD, consisting of 0.8 mil primer with 0.8 mil 70% Kynar 500 or Hylar 5000 color coat.] *or*

[DURAGARD PLUS, consisting of 0.8 mil primer with 0.8 mil 70% Kynar 500 or Hylar 5000 color coat and 0.8 mil 70% Kynar 500 or Hylar 5000 clear coat.] *or*

[MICA, consisting of 0.2 mil primer with 0.8 mil 70% Kynar or Hylar 5000 color coat containing mica pearlescent flakes.] *or*

[3-Coat METALLIC, consisting of 0.2 mil primer with 0.8 mil 70% Kynar 500 or Hylar 5000 color coat containing metal flakes and 0.5 mil 70% Kynar 500 or Hylar 5000 clear coat.] *or*

[Valflon, consisting of 0.2 mil primer with 0.8 mil 100% fluorocarbon color coat.]

a. Exposed surface color shall be CENTRIA _____, color #_____.

2. Concealed surface finish shall consist of a 0.2 mil primer and 0.3 mil backer coat.]

2.04 MITERED CORNERS

A. Horizontal exterior profile panel outside [and/or inside] corners shall be trimless MicroSeam™ [12] corners as manufactured by CENTRIA or equal.

1. Mitered corner assemblies shall match specified exterior profile panel in shape, general appearance, material, and finish.

2. Mitered corner assemblies shall be notched, bent, and structurally bonded by the panel manufacturer. Field fabrication or fabrication by other than the panel manufacturer is not acceptable.

3. Mitered corner assemblies shall be factory coil coated to match adjacent panels. Paint finish shall meet specified warranty requirements.

B. Welded corners or mitered corner assemblies with exposed rivets or fasteners are unacceptable.

2.05 ACCESSORIES

A. Wall panel system fasteners shall be #14 minimum diameter, self-tapping, with hex head.

1. Concealed fasteners shall be cadmium plated carbon steel or 300 series stainless steel with 5/8" bonded neoprene and galvanized or stainless steel washers.

2. Exposed fasteners shall be 300 series stainless steel with 5/8" bonded neoprene and stainless steel washers coated to match the exterior panel color.

B. Closures shall be metal and/or foam as required. Foam shall be a pre-cut profile closure of cross-linked, closed cell foam. Metal closures shall be fabricated from the same material, gage, finish, and color as the exterior metal panel.

C. Sealants:

1. Hidden sealant at all side laps, end laps, and flashing details shall be gun grade non-curing butyl or polymeric non-skinning butyl tape to ensure weather tightness.

2. Exposed sealant shall be one-part moisture curing, gun grade polyurethane.

2.06 FABRICATION

A. Wall panel system components shall be fabricated in the factory for field assembly to the greatest extent possible.

[12] MicroSeam™ corner assemblies are available for **painted and Durallure** Concept Series only.

PART 3 EXECUTION

3.01 INSPECTION

A. Wall panel systems contractor shall check the alignment of the structural supports. Alignment exceeding tolerances defined in the AISC Code of Standard Practice shall be corrected prior to proceeding with the installation of the wall panel system.

B. Wall panel systems contractor shall inspect installation of vapor permeable air and water barrier for compliance with manufacturers installation instructions. Corrections necessary to ensure specified performance shall be made prior to wall panel installation.

3.02 INSTALLATION

A. Manufacturer shall provide detailed instructions covering the tools, fasteners, sealants, and assembly procedures required to achieve the structural, thermal, and weathering performance specified.

B. Metal filings caused by cutting and drilling shall be immediately removed from finished surfaces to prevent rusting and staining.

C. The wall panel systems contractor shall coordinate work with other trades as required to insure proper flashing and seals with adjoining construction.

3.03 DAMAGED MATERIAL AND CLEANING

A. Damage caused by the manufacturer or wall panel systems contractor shall be repaired or replaced.

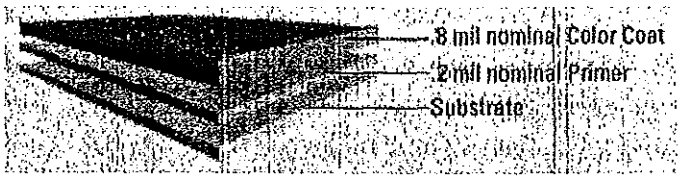
B. The general contractor shall inspect and approve each completed wall area and be responsible for protecting finished work from damage by other trades.

C. The wall panel systems contractor shall remove all protective materials and labels from the wall components as they are installed.

D. The general contractor shall be responsible for final cleaning of the wall panel system due to any conditions that occur after the wall panel systems contractor has completed an area. Cleaning is to be done in accordance with the manufacturer's instructions.

END OF SECTION

FLUOROFINISH



LINKS TO:

Note: These are preview files only. Log in to the eCENTRIA portal to download files in the .dwg format for use in AutoCAD.

Economical Kynar®500 Hylar®5000 based coatings that provide good durability and is a good choice for architectural applications.

Performance Characteristics
Reflect the following performance characteristics in accordance with ASTM test procedures:

Dew Cycle Weatherometer Test (ASTM D 366T)
Passes 1,000 hours. Color Change: No more than 5 Δ (Hunter) units. Chalk: Rating no less than 8.

Specular Gloss (ASTM D523 at 60°)
Coating shall have a gloss of 20-35 typical.

Chalking Resistance (ASTM D4214)
Maximum rating of 8.

Color Change (ASTM D2247)
Maximum 5 Δ E (Hunter) units change.

Humidity Test (ASTM D2247)
100% relative humidity at 100°F. Passes 2,000 hours. No blisters.

Salt Spray (ASTM B117)
Passes 1,000 hours with less than 1/16" creepage from scribe. No blisters.

Pollution Resistance Test (ASTM D1308)
10% HCL, 15 minutes – no effect.
20% H2SO4, 18 hours – no effect.

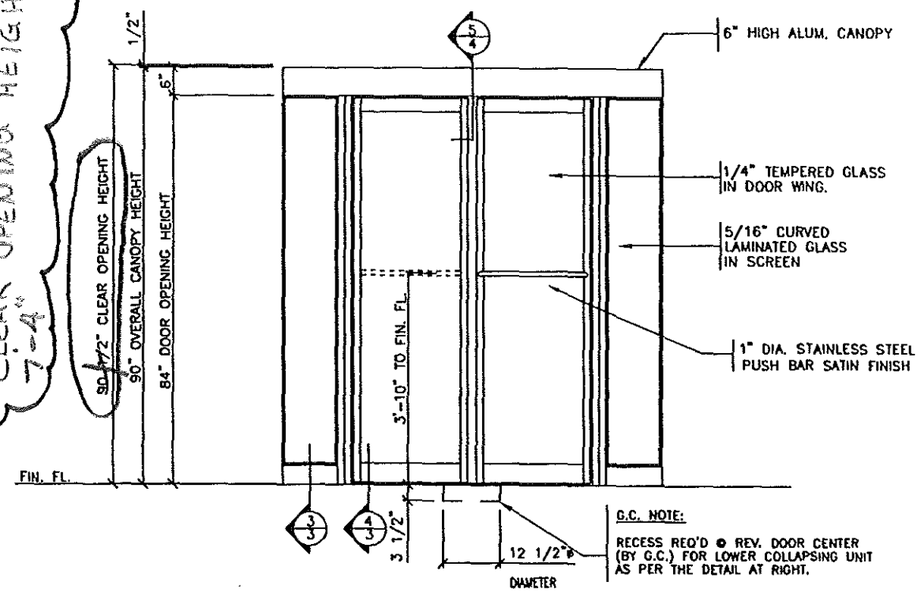
T-Bend (ASTM D4145)
0-T to 2-T no loss of adhesion.

Impact Resistance Test (ASTM D2794)
No loss of adhesion.

Abrasion Resistance Test Falling Sand (ASTM D968)
Liters to expose 5/329 of substrate – 50 liters.

*Polyvinylidene Fluoride (PVDF) coat contains 70% Kynar 500® or Hylar 5000® resin. Kynar 500 is a registered trademark of Elf Atochem North America, Inc. Hylar 5000 is a registered trademark of Ausimont USA, Inc.

CLEAR OPENING HEIGHT 7'-4"

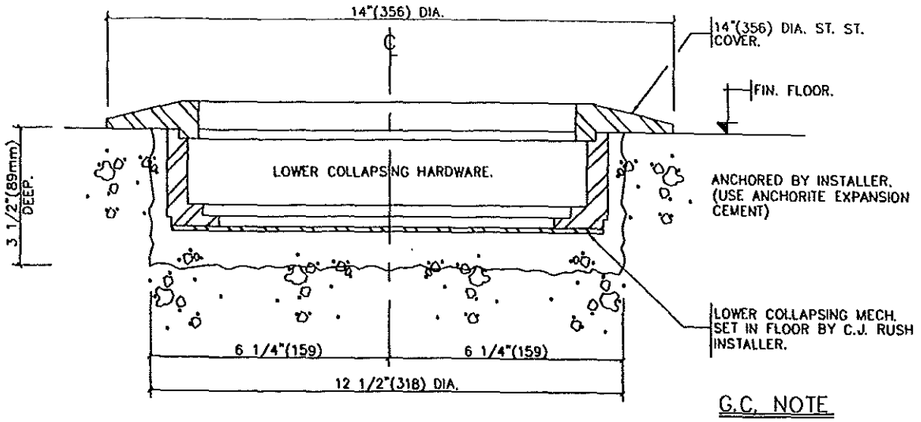


REVOLVING DOOR ENTRANCE ELEVATION

2 (4) REQUIRED

SCALE: NONE

⚠ DOOR # 210A, 310A, 410A, 510A



DETAIL – 4 WING LOWER COLLAPSING MECH.

NOT TO SCALE

G.C. NOTE

GENERAL CONTRACTOR TO PROVIDE 3 1/2"(89) DEEP x 12 1/2"(318) DIA. RECESS IN SLAB FOR COLLAPSING MECH. ALL PREPARATORY WORK TO FLOOR & SLAB BY OTHERS.

Date	REVISIONS	By	Issue

No.	ISSUED	Date
	FOR APPROVAL	MAY.16/06
1	REVISED AS USED	JUN.16/06

IMPORTANT NOTICE

C.J.Rush Industries wishes to bring to your attention the following, for which we assume NO RESPONSIBILITY:

(1) The use of these drawings by other parties is the sole responsibility of that party as to site conditions, measurements, etc.,

(2) Movement of structures by forces causing mis-alignment and improper function of our product.

(3) Results of glass breakage causing bodily harm through improper use or mischief.

NOTE–Available for use in limited sizes are bent laminated glass in lieu of bent annealed plate glass.

–Specifications prevail at time of quotation issued by C.J.Rush Industries.

SPECIAL REFERENCE NOTE

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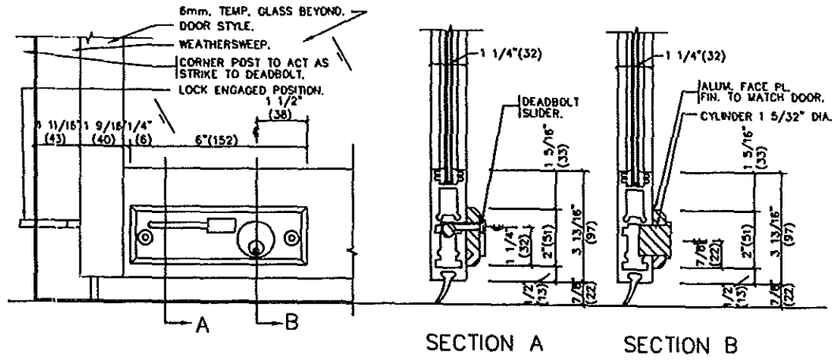
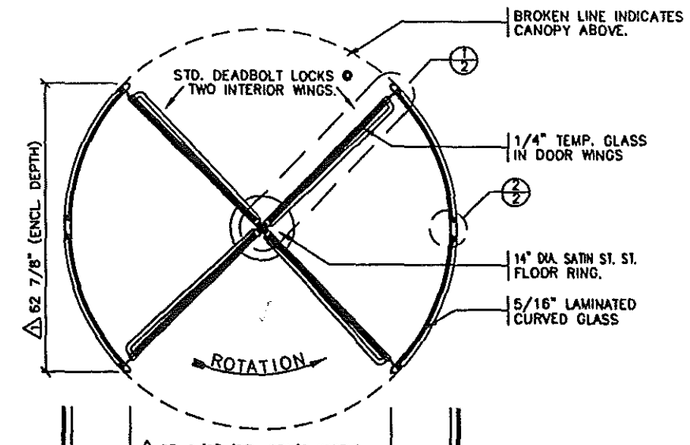


SECTION A SECTION B

STD. DEADBOLT DETAILS

SCALE: NONE



G.C. NOTE:
ALL DIMENSIONS TO BE SITE CONFIRMED PRIOR TO FABRICATION.

SHOP NOTE: ⚠

FINISH= KYNAR PAINT TO MATCH CW. (PLEASE PROVIDE COLOR SAMPLE)

CURVED GLASS TINT= CLEAR
DR. WG. GLASS TINT= CLEAR

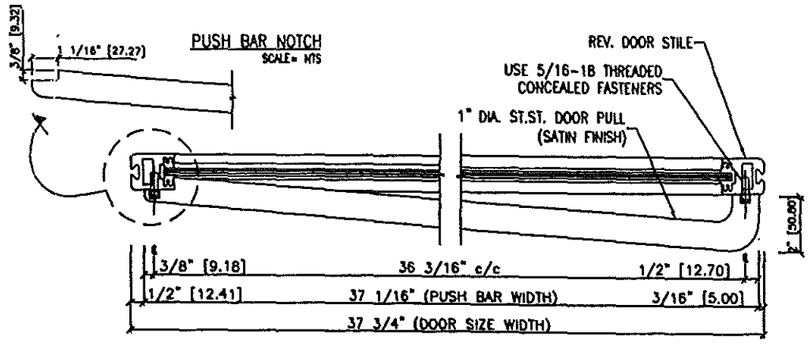
OVERHEAD MANUAL SPEED CONTROL

NOTE:

FLOOR MUST BE LEVEL AND TRUE AT INTERIOR OF REV. DOOR.

REVOLVING DOOR ENTRANCE PLAN

SCALE: NONE



1" DIA. ST.ST. PUSHBAR DETAIL

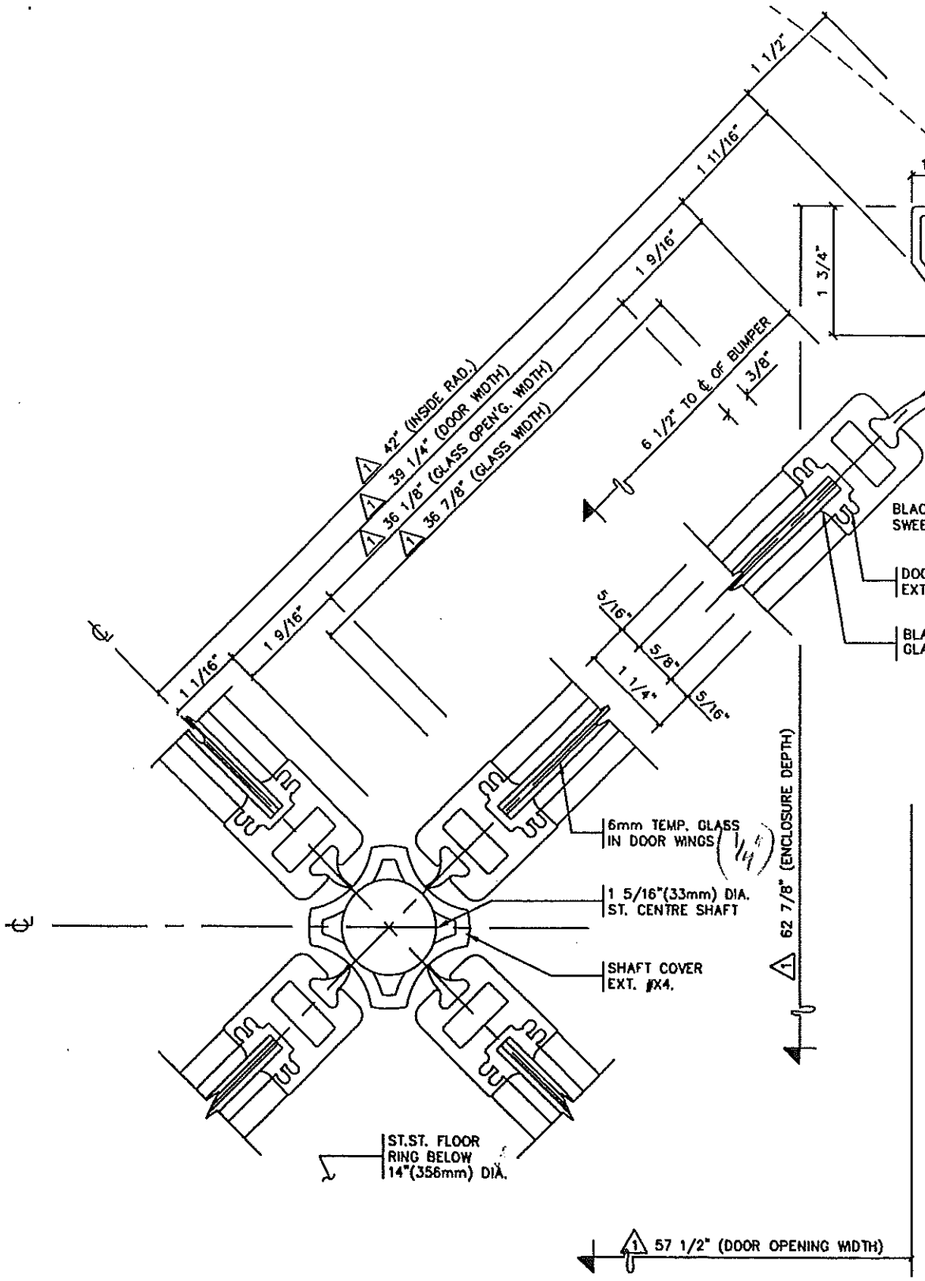
SCALE: NTS

STANLEY Security Solutions

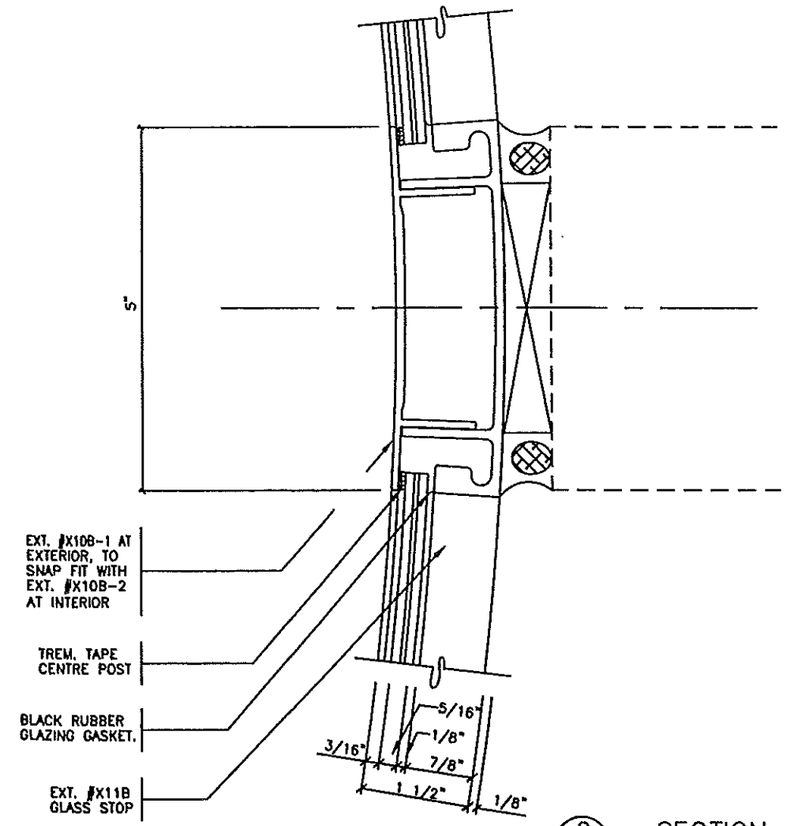
c.j. rush industries
65 RIVIERA DRIVE MARKHAM, ONT. CANADA, L3R 5J6
Tel. 888-301-5407 905-944-8005 Fax 905-944-8006

1500 SERIES REVOLVING DOOR PLAN/ELEV/DETAILS

BUILDING UNIVERSITY OF KENTUCKY	
LOCATION KENTUCKY	
ARCH-ENG.	
CONTRACTOR Stanley Access Technologies	
Drawn by KH	Job No. 9617
Checked by ET	
Scale 3/4"=1'-0"	Dwg. No. 001
Date MAY.15/06	
Finish	



1/1 SECTION
FULL SCALE.



2/1 SECTION
FULL SCALE.

Date	REVISIONS	By	Issue

No.	ISSUED	Date
1	REVISED AS NOTED	JUN.16/06

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(1) The use of these drawings by other parties is the sole responsibility of that party as to site conditions, measurements, etc.,

(2) Movement of structures by forces causing mis-alignment and improper function of our product.

(3) Results of glass breakage causing bodily harm through improper use or mischief.

NOTE-Available for use in limited sizes are bent laminated glass in lieu of bent annealed plate glass.

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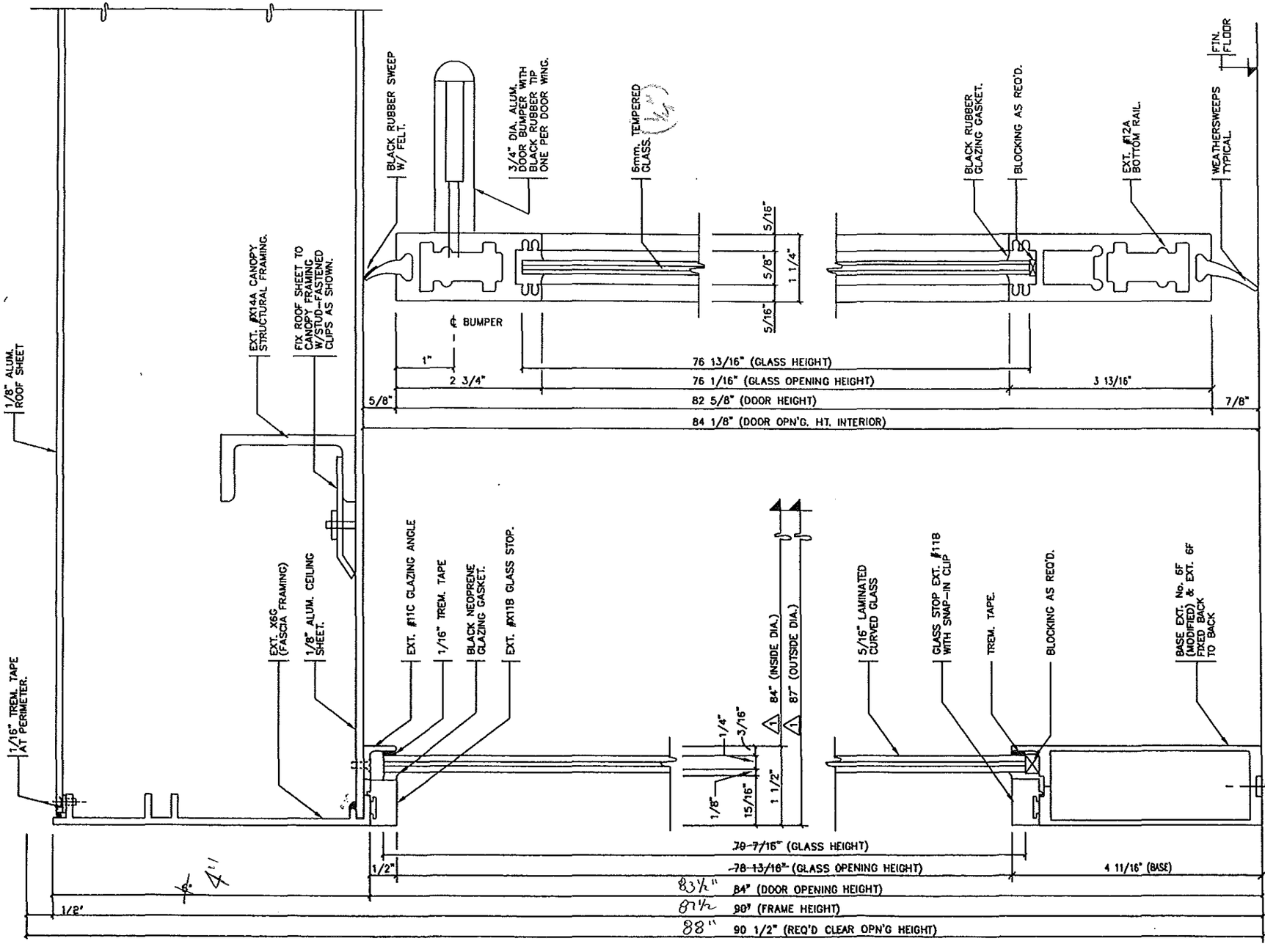
C.J.Rush Industries.

STANLEY
Security Solutions

c.j. rush industries
65 RIVIERA DRIVE
MARKHAM, ONT.
CANADA, L3R 5J6
Tel. 888-301-5407
905-944-8005
Fax 905-944-8006

1500 SERIES REVOLVING DOOR HORIZ-SECTION

BUILDING	UNIVERSITY OF KENTUCKY
LOCATION	KENTUCKY
ARCH-ENG.	
CONTRACTOR	Stanley Access Technologies
Drawn by	KH
Checked by	ET
Scale	FULL SIZE
Date	MAY.15/06
Finish	
Job No.	9617
Dwg. No.	002



4/1 SECTION FULL SCALE.

3/1 SECTION FULL SCALE.

Date	REVISIONS	By	Issue

No.	ISSUED	Date
1	REVISED AS NOTED	JUN.16/06

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C.J.Rush Industries.

STANLEY Security Solutions

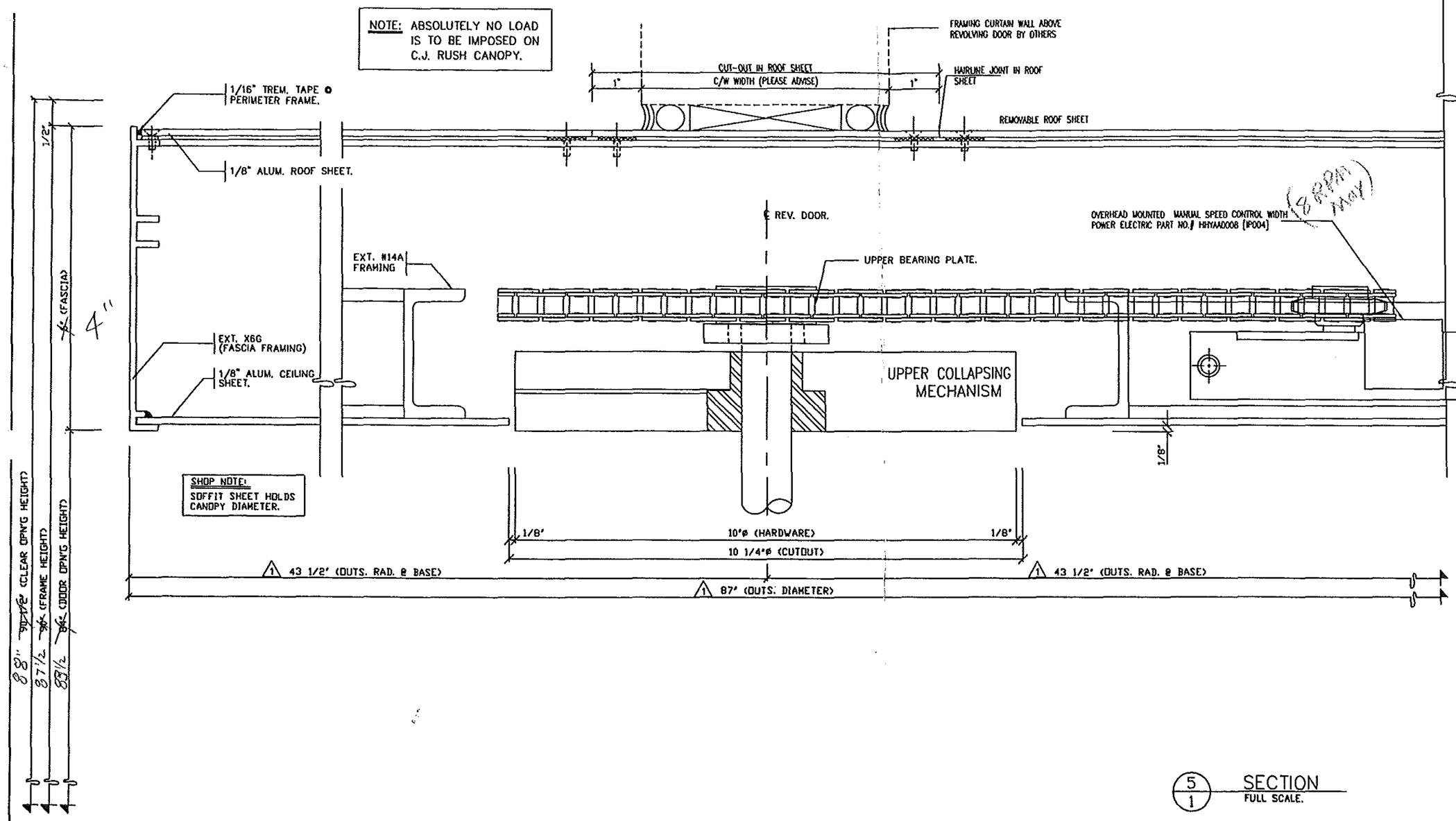
c.j. rush industries

65 RIVIERA DRIVE MARKHAM, ONT. CANADA, L3R 5J6

Tel. 888-301-5407 905-944-8005 Fax 905-944-8006

1500 SERIES REVOLVING DOOR VERTICAL-SECTION

BUILDING	UNIVERSITY OF KENTUCKY
LOCATION	KENTUCKY
ARCH-ENG.	
CONTRACTOR	Stanley Access Technologies
Drawn by KH	Job No. 9617
Checked by ET	
Scale FULL SIZE	Dwg. No. 003
Date MAY.15/06	
Finish	



5/1 SECTION
FULL SCALE.

Date	REVISIONS	By	Issue

No.	ISSUED	Date
1	REVISED AS NOTED	JUN.16/06

IMPORTANT NOTICE

C.J.Rush Industries wishes to bring to your attention the following, for which we assume NO RESPONSIBILITY:

(1) The use of these drawings by other parties is the sole responsibility of that party as to site conditions, measurements, etc.

(2) Movement of structures by forces causing mis-alignment and improper function of our product.

(3) Results of glass breakage causing bodily harm through improper use or mischief.

NOTE-Available for use in limited sizes are bent laminated glass in lieu of bent annealed plate glass.

-Specifications prevail at time of quotation issued by C.J.Rush Industries.

SPECIAL REFERENCE NOTE

Very often the method of manufacturing as shown on these shop drawings are a development of the skills of the company. Any reproduction and or distribution in whole or in part, without expressed or written consent is strictly prohibited.

C.J.Rush Industries.

STANLEY Security Solutions

c.j. rush industries

65 RIVIERA DRIVE
MARKHAM, ONT.
CANADA, L3R 5J6

Tel. 888-301-5407
905-944-8005
Fax 905-944-8006

1500 SERIES REVOLVING DOOR CANOPY-SECTION

BUILDING UNIVERSITY OF KENTUCKY	
LOCATION KENTUCKY	
ARCH-ENG.	
CONTRACTOR Stanley Access Technologies	
Drawn by KH	Job No. 9617
Checked by ET	
Scale FULL SIZE	Dwg. No. 004
Date MAY.15/06	
Finish	

UNIVERSITY OF KENTUCKY
PATIENT CARE FACILITY
PARKING GARAGE

UK Project #: 2239.2

940 Elizabeth Street
Lexington, KY 40506-0293

08470 – Revolving Door Entrances
Submittal Date: November 21, 2006

Construction Manager
Central Kentucky Glass
1123 Versailles Road
Lexington, KY 40508
(859) 253-0710

Sub-Contractor
Stanley Access Technologies
3949 Zoneton Road
Sheperdsville, KY 40165
(502) 955-5589

SUBMITTAL

GILBANE
University of Kentucky
Patient Care Facility
Gilbane Project No. 18-3966

REVIEWED

☐ 010-Huguelet ☒ 020-Garage
☐ 030-Infrastructure ☐ 040-PCF Foundation
☐ 050-PCF Core/Shell ☐ 060-TowerUp Fit

Bid Package No. 080
Submittal No. 080-08450-001-1
Spec. Sect/Para. _____
Reviewed By BH
Date 11/21/06

This review does not constitute nor does it assume design responsibility nor does it relieve the trade contractor's supplier from complying with the contract requirements, coordinating their work with other trade contractors and verifying field dimensions.

THIS REVIEW BY GBBN ARCHITECTS, INC. IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND IS NOT AN APPROVAL OF THE DRAWING OR SET OF DRAWINGS. THE COMMENTS MADE DO NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH THE PROJECT DRAWINGS, SPECIFICATIONS AND OTHER CONTRACT DOCUMENTS. CONTRACTOR IS SOLELY RESPONSIBLE FOR: ALL [illegible] AND QUANTITIES, ALL FABRICATION, DELIVERY, [illegible], ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES, ALL COORDINATION WITH ALL OTHER CONTRACTORS, SUPPLIERS AND OTHERS, AND PERFORMING ALL WORK IN A SAFE AND PROPER MANNER.

NO EXCEPTIONS TAKEN ☐
FURNISH AS CORRECTED ☒
REVISE AND RESUBMIT ☐
NO REVIEW - INCOMPLETE ☐
SUBMIT SPECIFIED ITEMS ☒
REJECTED ☐

DATE 1-5-07 BY BK

GBBN ARCHITECTS, INC.
ARCHITECTURE, INTERIORS, PLANNING, ENGINEERING

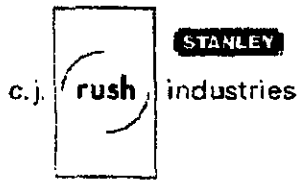
Central Kentucky Glass Company

1123 Versailles Road Lexington. KY 40508
Phone: 859-253-0710 Fax: 859-255-7317

Re: University of Kentucky
Patient Care Facility-Parking Garage
Lexington, KY

The attached shop drawings and data are for spec section 08470 revolving entrance doors, 08700 door hardware-2.9 Automatic Door Operators.

1) Finish for revolving entrance door to be Kynar painted to match curtainwall-color "Bone White"
2) Finish for automatic door operators to be clear anodized finish.
3) Aluminum doors and frames are by Kawneer
4) All automatic door operators are for single leaf doors as shown on drawings.
5) Stanley is an approved supplier per 08470 (C.J. Rush Industries) and 08700.
6) Revolving door to have 5/16" curved clear laminated glass for outer walls and 1/4" clear tempered for wing doors.



Fact Sheet

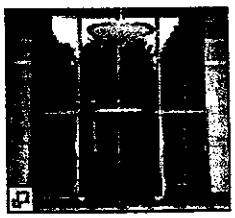
Division and Focus:	c.j. rush industries, established in 1965, is recognized around the world as the preeminent Canadian designer and manufacturer of custom architectural entrance systems. Its products include manual and automatic revolving doors, extra large revolving doors, security revolving doors, balanced doors and pivot/swing doors, along with coordinated architectural metal work such as canopies, screens, windows, glass walls and handrails. The company is skilled and experienced in interpretive design and produces custom solutions to architectural design criteria. c.j. rush provides a single source of solutions for the finest products and leading technology in complete entrance systems. Its technologically advanced engineering, design and materials provide whisper quiet, high endurance automatic revolving doors.
Headquarters:	Toronto, Ontario
Founded:	1965 (Acquired by Stanley Security Solutions in 2003)
Executives:	Frank Luke, COO
Solutions:	Services and manufactures custom revolving door systems. Installations performed by Stanley Access Technologies
Product Offerings:	Revolving Doors, Security Revolving Doors, XL Revolving Doors, Balanced Doors, Pivot/Swing/Hinged Doors, and a complete offering of preventative maintenance and service programs
Markets Served:	Healthcare, Government, Commercial and Industrial
Web Site:	www.cjrush.com

c.j. rush industries™ STANLEY

Click here for a free on-line quote!

revolving doors

Series 1500



Full framed featuring narrow 1 9/16" (40mm) stiles fully weather stripped and integrated to a fluted metal clad centre shaft. With the patented, door wing, pressure release mechanism concealed below the floor and within the canopy ceiling, stile to rail connection is crisp and clean. Three-wing or four-wing design. Various heights of door rails are available to suit any design requirement. Available in standard 7'-0" (2134mm) models or custom models ranging from (but not limited to) 6'-6" (1981mm) diameter to 12'-0" (3657mm) diameter.

Features

- Narrow line flush glazing door and enclosure sections
- Concealed collapsing mechanism and speed control
- Concealed fasteners - snap-on glass stops throughout
- Bookfold wing position factory set for emergency egress
- Conforms to all North American building codes
- Conforms to ASTM E283 for air tightness
- Standard and custom models available
- Easily removed door wings to provide fast and efficient service
- Curved laminated glass in enclosure
- Tempered glass in door wings
- Sliding dead bolt lock
- Overhead or floor mounted speed controls

Options

- Double wall glass enclosure for air plenum and grilles
- Cladding in stainless or bronze sheet (see Architectural Metal Products)
- All glass canopy
- Tinted glass (wings and enclosure)
- Vertical and/or horizontal muntins

- Curved metal panels in place of glass enclosure
- Curved tempered glass
- Custom designed push bars and plates. (some design limitations)
- Manual or automatic operation
- Canopy lighting
- Maintenance and Service contracts available (some limitations apply)
- Quarter-point closing

UNIVERSITY OF KENTUCKY
PATIENT CARE FACILITY
PARKING GARAGE

UK Project #: 2239.2

940 Elizabeth Street
Lexington, KY 40506-0293

08700 – Automatic Door Operators
Submittal Date: November 22, 2006

Construction Manager
Central Kentucky Glass
1123 Versailles Road
Lexington, KY 40508
(859) 253-0710

Sub-Contractor
Stanley Access Technologies
3949 Zoneton Road
Sheperdsville, KY 40165

SUBMITTAL

Central Kentucky Glass Company

1123 Versailles Road Lexington. KY 40508
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NO EXCEPTIONS TAKEN ☐
FURNISH AS CORRECTED ☒
REVISE AND RESUBMIT ☐
NO REVIEW - INCOMPLETE ☐
SUBMIT SPECIFIED ITEMS ☐
REJECTED ☐

DATE 12.07.06 BY JAP

GBBN ARCHITECTS, INC.
ARCHITECTURE, INTERIORS, PLANNING, ENGINEERING
☒ 332 EAST 8TH STREET, CINCINNATI, OHIO 45202-2217 (513) 241-8700
☐ 325 WEST MAIN STREET, LEXINGTON, KENTUCKY 40507 (859) 381-8787
☐ BEIJING XI CHENG DISTRICT, TONG LI GE ROAD NO 85, BEIJING, CHINA 100031 86 10 88386730

Company Certificate

American Association of Automatic Door Manufacturers

AAADM

The Board of Directors of the

American Association of Automatic Door Manufacturers certifies that

Dwight Reed

Stanley Access Technologies

has successfully completed the course of instruction as a

Certified Inspector of power-operated automatic pedestrian doors.

Certificate Number T-98C0018
Expires January 31, 2007

John Addington, Executive Director

AAADM American Association of Automatic Door Manufacturers
1300 Sumner Avenue, Cleveland, Ohio 44115

"Dedicated to promoting safety by establishing programs for training and certification of inspectors."

Intertek Systems Certification

Certificate of Registration

This is to certify that the Quality Management System of:

Stanley Access Technologies

65 Scott Swamp Road, Farmington, Connecticut, 06032, USA

has been assessed and registered by Intertek Testing Services NA, Inc.
as conforming to the requirements of the following standard(s):

ISO 9001:2000

The Quality Management System is applicable to:

Designer and manufacturer of automatic access control systems such as automatic pedestrian doors for worldwide commercial, industrial and transportation applications.

CERTIFICATION Intertek

Certificate No.

US-3218a

Intertek Testing Services NA, Inc.
Boxborough, MA, USA

The approval is subject to the organization maintaining their system in accordance with Intertek Testing Services NA, Inc.'s rules and regulations for certification. This certificate is valid as long as the company name appears on our website: www.intertek-sc.com.

RvA C 050

Initial Date:	July 27, 2005
Issue Date:	October 4, 2005
Renewal Date:	October 4, 2008

GILBANE
University of Kentucky
Patient Care Facility
Gilbane Project No. 18-3966

REVIEWED

☐ 010-Huguelet ☒ 020-Garage
☐ 030-Infrastructure ☐ 040-PCF Foundation
☐ 050-PCF Core/Shell ☐ 060-TowerUp Fit

Bid Package No. 020
Submittal No. 020-08700-001
Spec. Sect/Para. _____
Reviewed By BH
Date 11/22/06

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Stanley
Access Technologies

Dean T. Negrelli
Manager, Evaluation and Analysis

65 Scott Swamp Road
Farmington, CT 06032

Tel 860-679-6453
1-800-7-ACCESS (ext. 56453)
Fax 860.679.6496
dnegrelli@stanleyworks.com

STANLEY

August 9, 2004

Re: STANLEY ACCESS TECHNOLOGIES' ANSI/BHMA SELF-CERTIFICATION

To Whom It May Concern:

This is to certify that the following Stanley Access Technologies' products comply with the standards specified:

ANSI/BHMA A156.10	Dura-Glide Sliding Door Systems – Series DG 2000, DG 3000, DG 5000, IS 10000, Double Diamond, Dura-Storm, Dura-Guard
	Swing Door Systems – Magic-Force, Magic-Access, Magic-Swing
	Bifold Door Systems – Magic-Force Bifold Door System (SB600)
ANSI/BHMA A156.19	Swing Door Systems – Magic-Force, Magic-Access

Certified by:

Dean Negrelli August 9, 2004
Manager, Evaluation & Analysis

STANLEY®

Security Solutions

STANLEY

Access Technologies

Dean Negrelli
Manager, Evaluation & Analysis
Stanley Security Solutions
Stanley Access Technologies
65 Scott Swamp Road
Farmington, CT 06032
Phone 860 679 6453
Fax 860 679 6409
dnegrelli@stanleyworks.com
www.stanleyaccesstechnologies.com

October 28, 2004

Re: Reliability Certification - Magic-Force Operator

To Whom It May Concern:

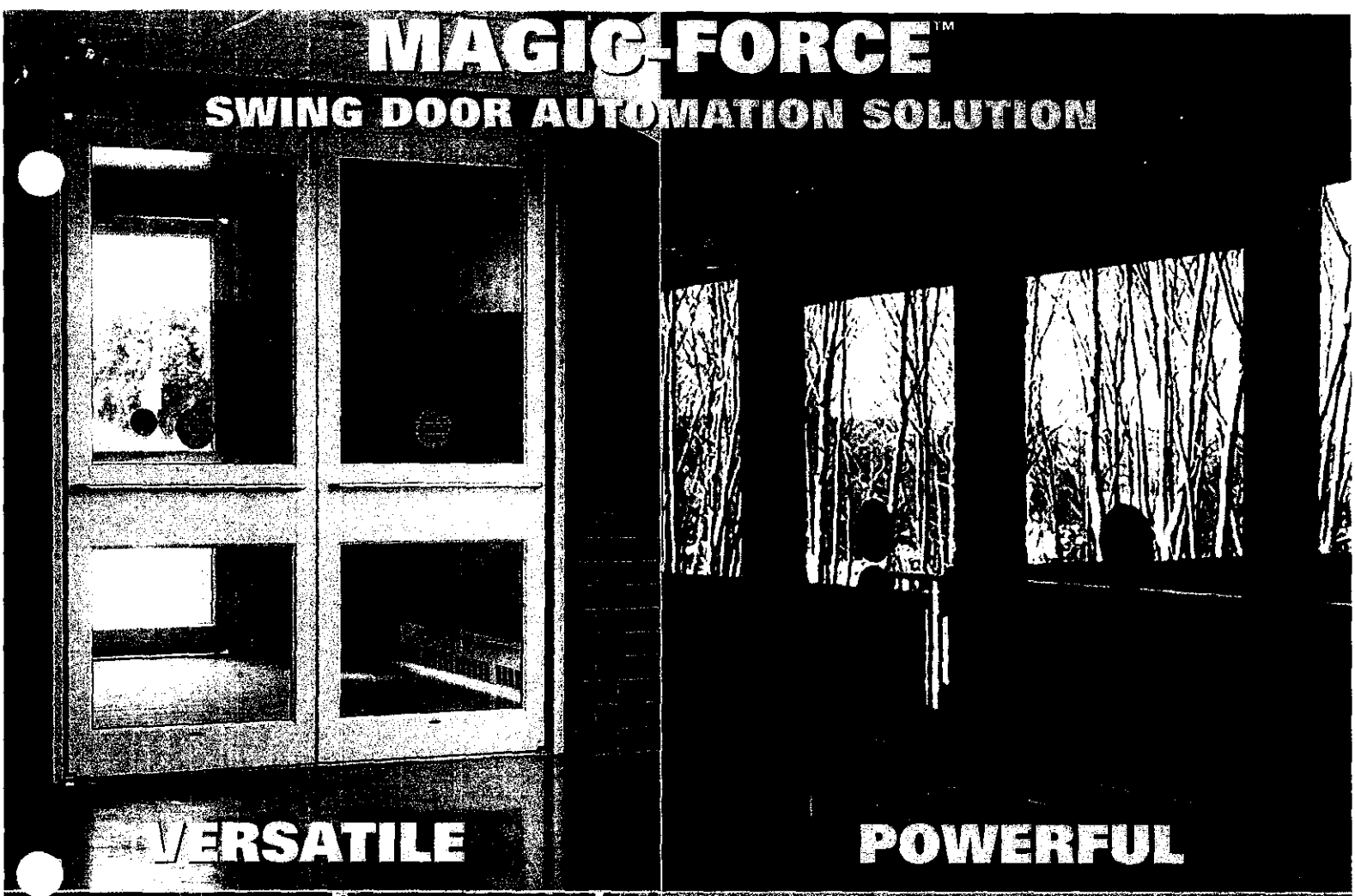
This letter is to certify that Stanley Access Technologies has tested the Magic-Force operator under maximum rated load conditions in excess of one million cycles of operation without failure.

Regards,

Dean Negrelli
Manager, Evaluation & Analysis

MAGIC-FORCE™

SWING DOOR AUTOMATION SOLUTION

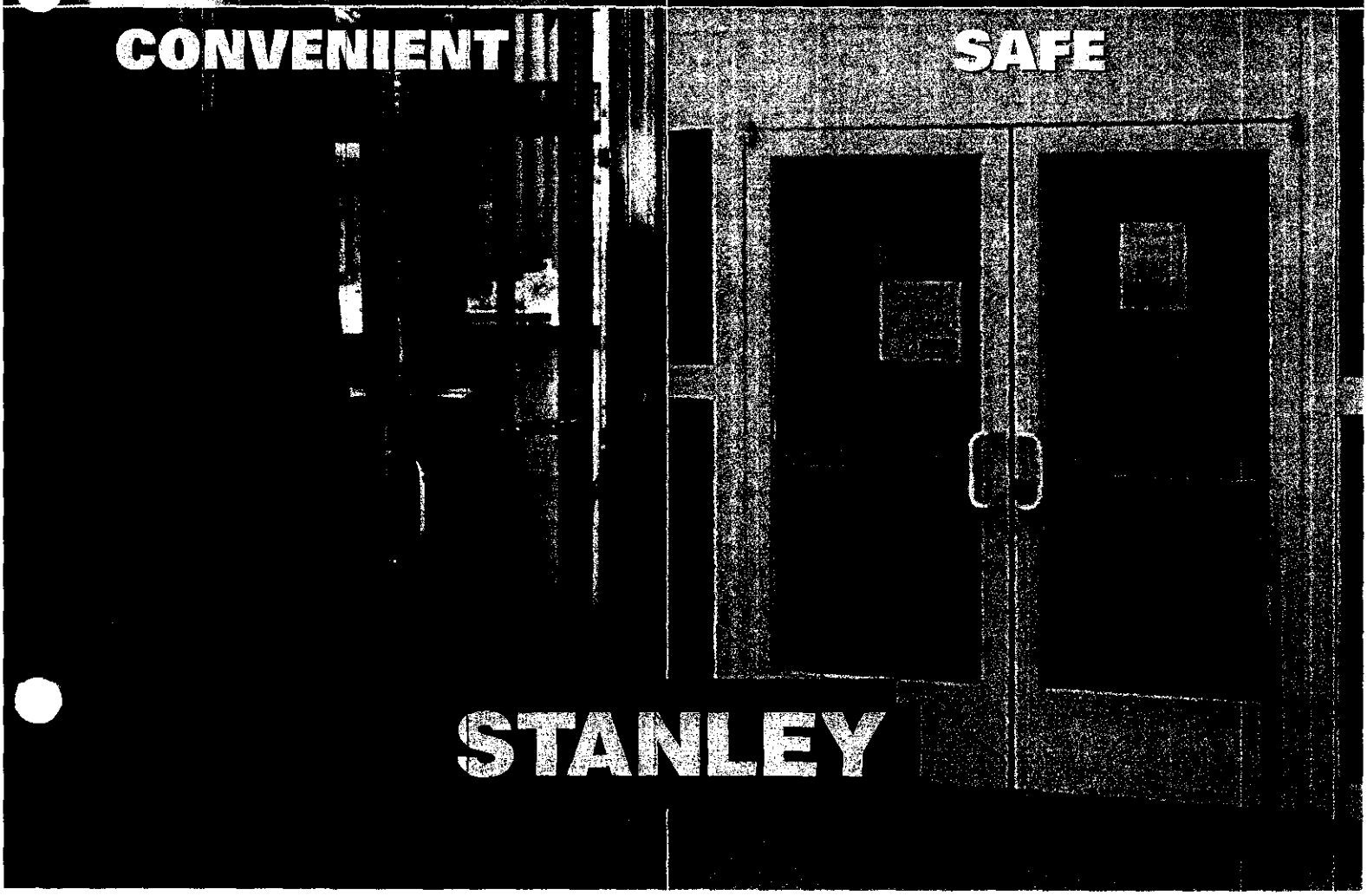


VERSATILE

POWERFUL

CONVENIENT

SAFE



STANLEY

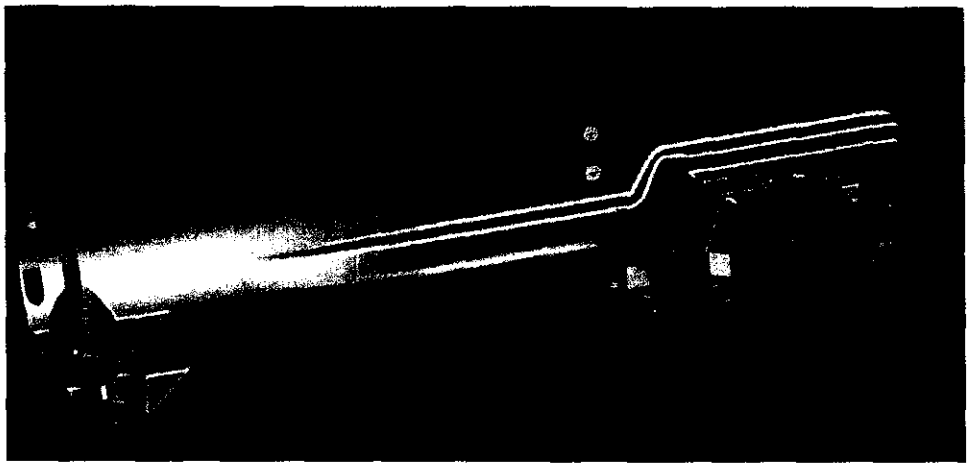
FACTORY TESTED & PROVEN PERFORMANCE

To make sure we could deliver the Magic-Force™ Operator with all the features to meet the demands of a continually changing market, we conducted the most extensive testing yet. In addition to testing the Magic-Force™ Operator to the industry standard number of cycles, we tested it to break it, then re-engineered it, and re-tested to break it again. Extensive field testing confirmed Stanley's lab test results to prove the Magic-Force™ performance.

The Magic-Force™ Operator

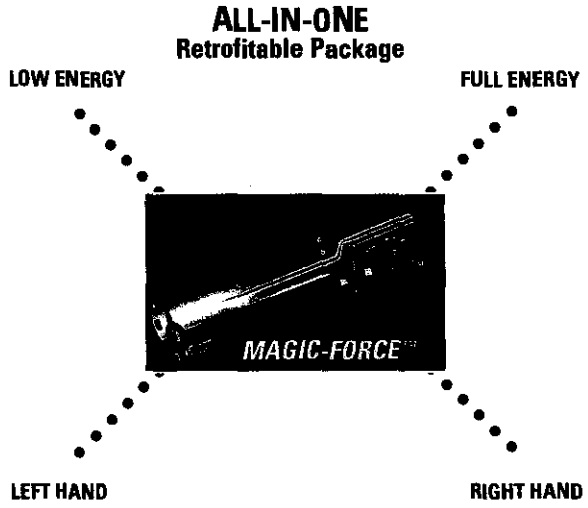
- Listing - UL 325
- cUL Listing - CSA 22.2 No. 247
- UL Listed Fire Door Operator
- BOCA Listing - 1017.4.3
- ICBO Report - UBC 10-1
- NFPA101 Life Safety Code - Section 5-2.1.9
- ANSI 156.10-1998, Full Energy
- ANSI 156.19-1997, Low Energy
- CSFM - CA State Fire Marshal

As the market demands change, the Magic-Force™ Operator is designed to change right along with them. This operator is setting a new standard in the industry and taking our customers into the 21st century.



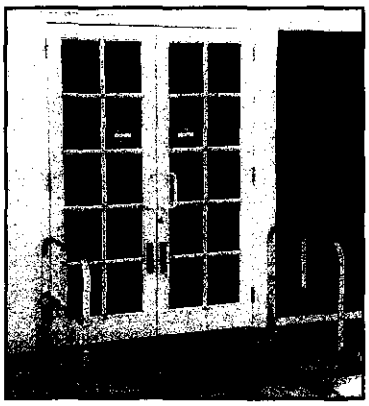
The Versatile Magic-Force™ Operator

- Unique innovative design offers an all-in-one system.
- Non-handed, In-Swing or Out-Swing, Visible or Concealed mounting.
- Configurable for Full Energy & Low Energy applications.
- Simplified Installation & Service.
- Smooth operation, low audible noise.
- Will interface with existing installed products.
- Heavy duty compression spring for unparalleled door control & durability.
- Field adjustable to overcome environmental or facility changes.

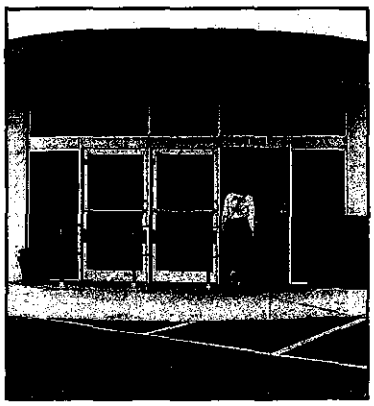


Stanley's Magic-Force™ Operator works in both Full Energy and Low Energy applications. Meets the demands for use in Supermarkets, Department Stores, Hospitals, Airports, Office Buildings, Public Buildings, Schools, Universities and more!

ADA



HEALTHCARE



GROCERY

State-of-the-art computerized factory test equipment ensures each operator works-first time, every time for a long time.

THE FIRST ALL-IN-ONE SYSTEM

The Magic-Force™ System is designed to be retrofittable and backwards compatible—the Magic-Force™ Operator and controller can replace existing Magic-Swing® Operators and/or controllers. Magic-Force™ Door Operators:

- *Work with every type of sensor we make for maximum design flexibility and convenience.*
- *Require only simple tune-in adjustments for fast, trouble-free installation.*
- *Resist wind and stack pressure conditions to maintain smooth, controlled operation.*

Additional Features:

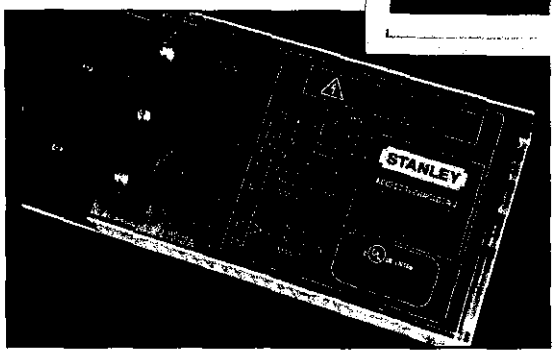
- *Available with Sentrex-3™ active infrared safety system.*

Alternative Sensors/Operators include mats, push plates, radio controls and motion sensors.

- *Surface Mount Header models afford fast and easy retrofits.*
- *Choice of complete factory engineered door systems.*
- *Fire Door Package with UL listed equipment.*
- *Provide safe pedestrian movement at all times with activation and safety sensors.*
- *Variable Spring Operator.*

The Magic-Force™ delivers easy, consistent feel across the entire transition from closed to fully opened. Fully field adjustable to meet specific site conditions. Easy opening with a powerful close. Patent pending.

Every Magic-Force includes the new Life Cycle Data feature, or LCD allowing Stanley to be a market leader in service and installation by adapting to site specific needs. The LCD allows future service based on cycles and customer tailored maintenance programs.

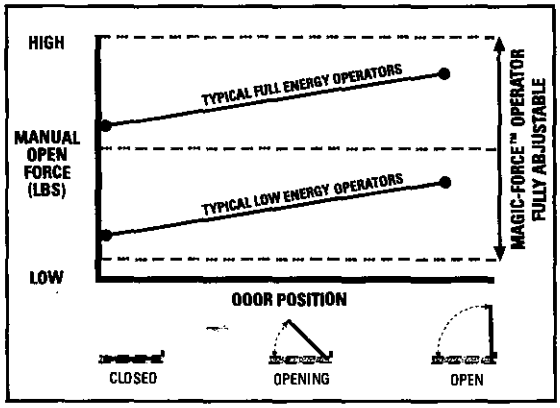


Advanced microprocesser controller and proven enceder technology work together for comprehensive and precise control of the door's motion.

Ensure trouble free operation with advanced controller features that provide:

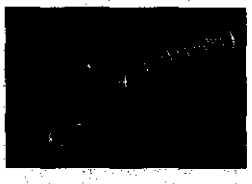
- *Automatic reset upon power up*
- *Fuse protection*
- *Electronic surge protection*
- *Internal power supply protection*

Range switch allows controller to limit the output of the system for heavy duty low energy applications.



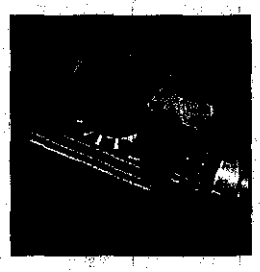
VERSATILE

- Non-handed
- In or Out Swing
- Concealed or Visible
- Full or Low Energy



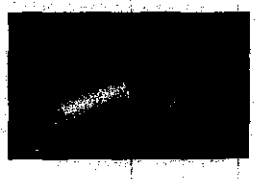
ADJUSTABLE

- Variable Spring Force
- Adjustable Closing Speed
- Adjustable Open Stop



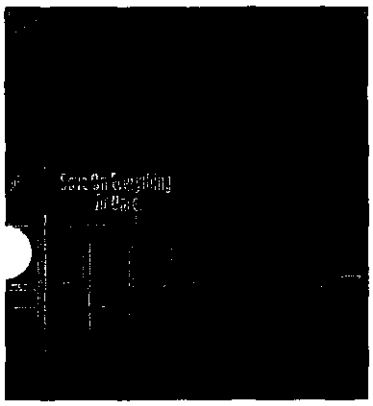
CONTROL

- Microprocessor Controlled
- Consistent Cycle
- Controlled Motion

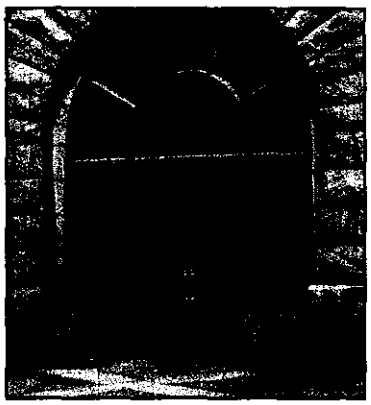


COMPACT POWER

- Precision Gear System
- Heavy Duty Spring
- Durable



DEPARTMENT STORES



OFFICE & PUBLIC BUILDINGS

SCHOOLS & UNIVERSITIES

HARDWARE

FASTENING SYSTEMS

MECHANICS TOOLS

HAND TOOLS

DOORS

AIR TOOLS

HYDRAULIC TOOLS

AUTOMATIC DOORS

Magic-Force™ Operator

FEATURES & BENEFITS:

- ***Full Energy/Low Energy Capable*** — The Magic-Force™ Operator design accommodates both full energy and low energy code requirements.
- ***Non-Handed Operator*** — This versatile operator can be used for right hand or left hand doors with minimal field adjustments. Allows for easy installation. In addition fewer parts are needod for a broad range of applications.
- ***Quiet Running Operation*** — Low noise level is a must! The Magic-Force™ operator is designed for impressively quiet performance.
- ***Consistent Cycle*** — Stanley's innovative design provides easy opening and positive closing under diverse canditions.
- ***Return From Breakout With Controlled Speed*** — Door automatically resots after breakout. Manual reset not required. In addition, the door will nat slam to the closed position after breakout.
- ***Manual Operation*** — Door will act as a manual closer without power applied. Important when used in ADA applications.
- ***Microprocessor Controlled*** — The advanced control box is highly versatile.
- ***Cycle Counter*** — Counter is ideal for preventative maintenance program scheduling and can be used for warranty calculations.
- ***Controls and Adjustments***

Power Opening Force:
Tarque adjustment eble to accommedate the Full Energy/Low Energy ANSI code requirements.

Closing Force:
Field Adjustable Spring

Open Speed, Close Speed, Open Check Speed:
Petentiameter Adjustable

Manual Opening Force:
Field Adjustable Spring allews this eperator te accammedete the Full Energy/Low Energy ANSI code requirements.

SPECIFICATIONS:

- ***Size*** — 4 5/8" (117.48mm) x 3 3/4" (95.25mm) x 18" (457.2mm)
- ***Door Weight*** — Up ta 350 lbs (158.7kg)
- ***Code Compliance*** — UL, cUL, ANSI A156.19, ANSI A156.10, NFPA 101, BOCA

Service & Installation

Stanley Access Tachnelegias designs, manufactures and markets autemetic dear systems werldwide. For mare than 65 years, we have set the global standard for smaoth, quiet aperatien, user safety, design flexibility, quality, reliability and ease of installatian. Our servica farce is Nerth America's largest and most comprehensive network davoted to the installatien and maintanance of autamatic dae; systems. This network cambines the global resources of Stanley with the unmatched customer respansiveness of lecal organizations to ensure every deer we sell and install prevides aur customars with worry-free eperatien.

For Servico, Call Stanley Toll Free: 1-888-DOOR-444.

STANLEY
MAKE SOMETHING GREAT™

Access Technologies: 65 Scott Swamp Road, Farmington, CT 06032
Toll Free: 1-800-7-ACCESS, In CT: 860-677-2861 Fax: 860-679-6436
Service: 1-888-DOOR-444 http://www.stanleyworks.com

STANLEY

JOB NAME _____

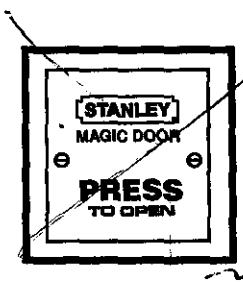
LOCATION _____

_____

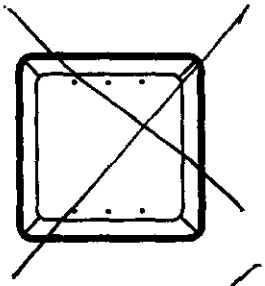
DOOR NUMBER _____

MANUAL ACTIVATORS

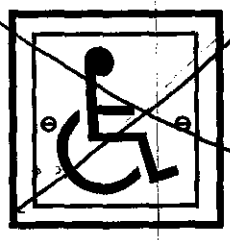
SQUARE PRESS SWITCH



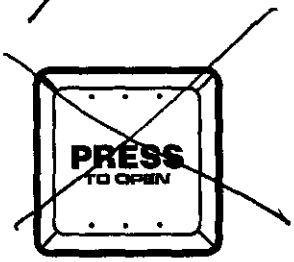
C-8
PRESS TO OPEN
ALUMINUM WALL PLATE
4" X 4"
5" X 5" BACK PLATE
(PTO)



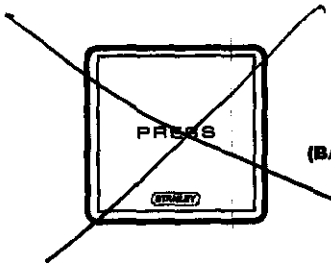
PLAIN
STAINLESS STEEL
4 1/2" X 4 1/2"



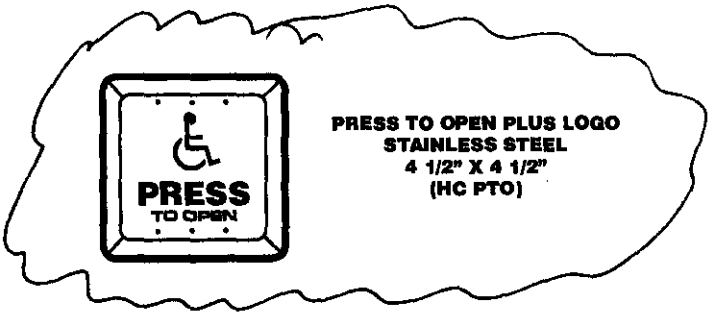
C-8
PRESS TO OPEN
ALUMINUM WALL PLATE
4" X 4"
5" X 5" BACK PLATE
(HC)



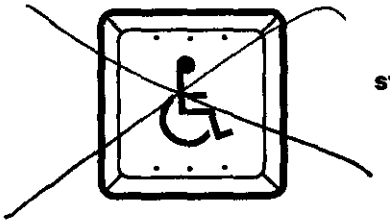
PRESS TO OPEN
STAINLESS STEEL
4 1/2" X 4 1/2"
(PTO)



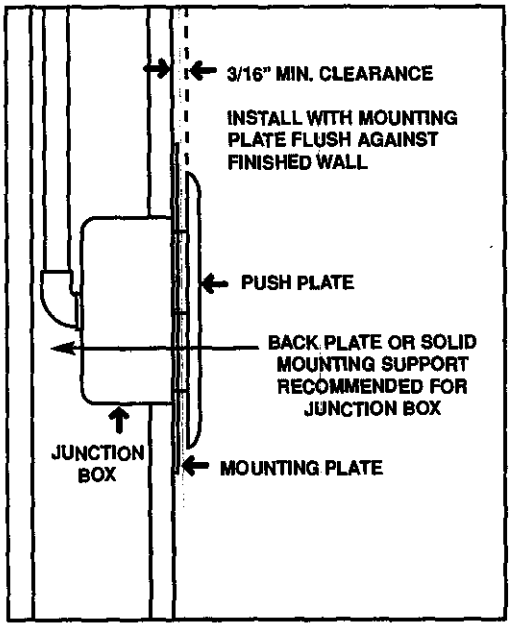
VINYL PUSH PAD
4" X 4"
(BACKING PLATE AVAILABLE
IN CLEAR OR BRONZE)



PRESS TO OPEN PLUS LOGO
STAINLESS STEEL
4 1/2" X 4 1/2"
(HC PTO)



LOGO
STAINLESS STEEL
4 1/2" X 4 1/2"
(HC)



HARDWIRE

1. (2) #18 LOW VOLTAGE WIRES (OR PER LOCAL CODE) REQUIRED FROM OPERATOR TO EACH PUSH PLATE BY ELEC. CONTR.
2. JUNCTION BOX BY ELEC. CONTR.

STANLEY

JOB NAME _____

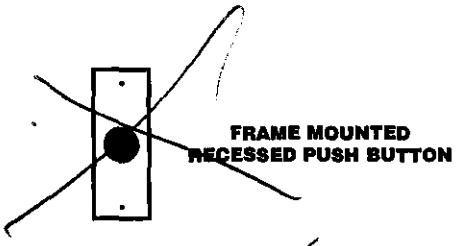
LOCATION _____

_____

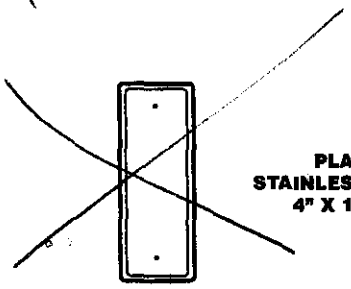
DOOR NUMBER _____

MANUAL ACTIVATORS

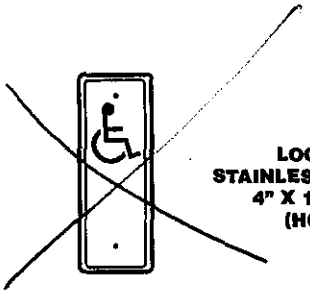
FRAME MOUNTED PRESS SWITCH



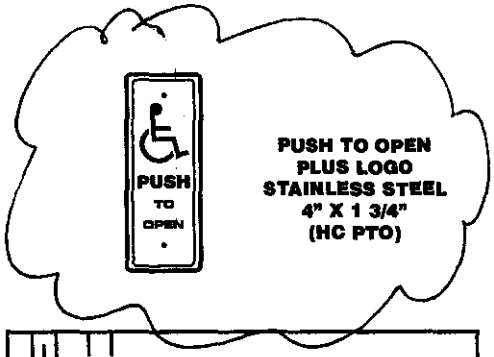
FRAME MOUNTED
RECESSED PUSH BUTTON



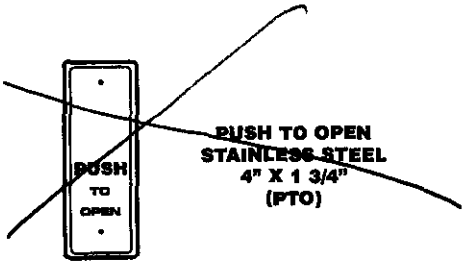
PLAIN
STAINLESS STEEL
4" X 1 3/4"



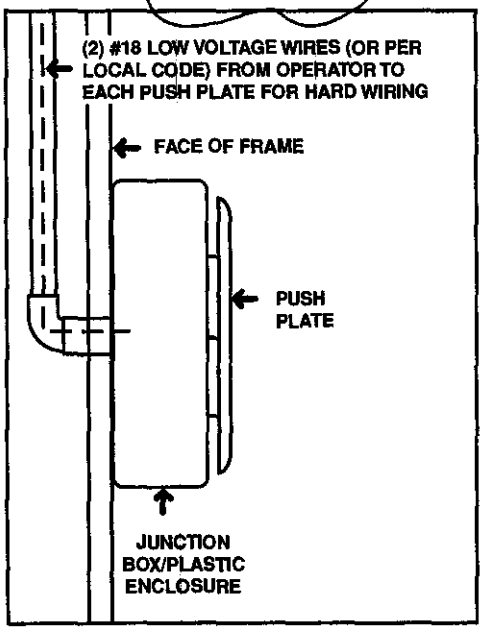
LOGO
STAINLESS STEEL
4" X 1 3/4"
(HC)



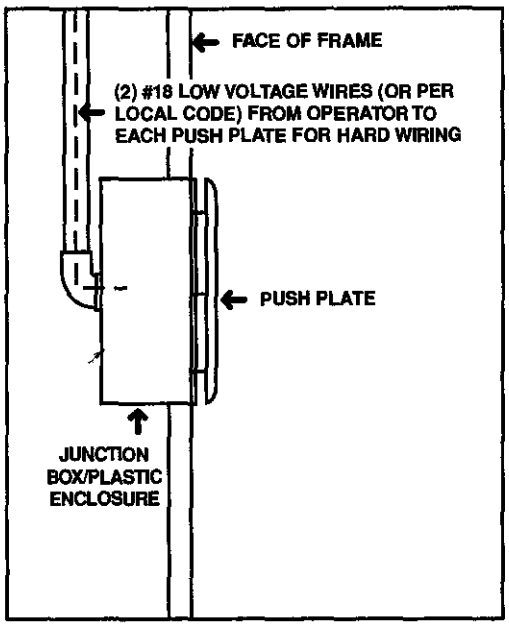
PUSH TO OPEN
PLUS LOGO
STAINLESS STEEL
4" X 1 3/4"
(HC PTO)



PUSH TO OPEN
STAINLESS STEEL
4" X 1 3/4"
(PTO)



SURFACE MOUNTED
HARDWIRE OR BATTERY



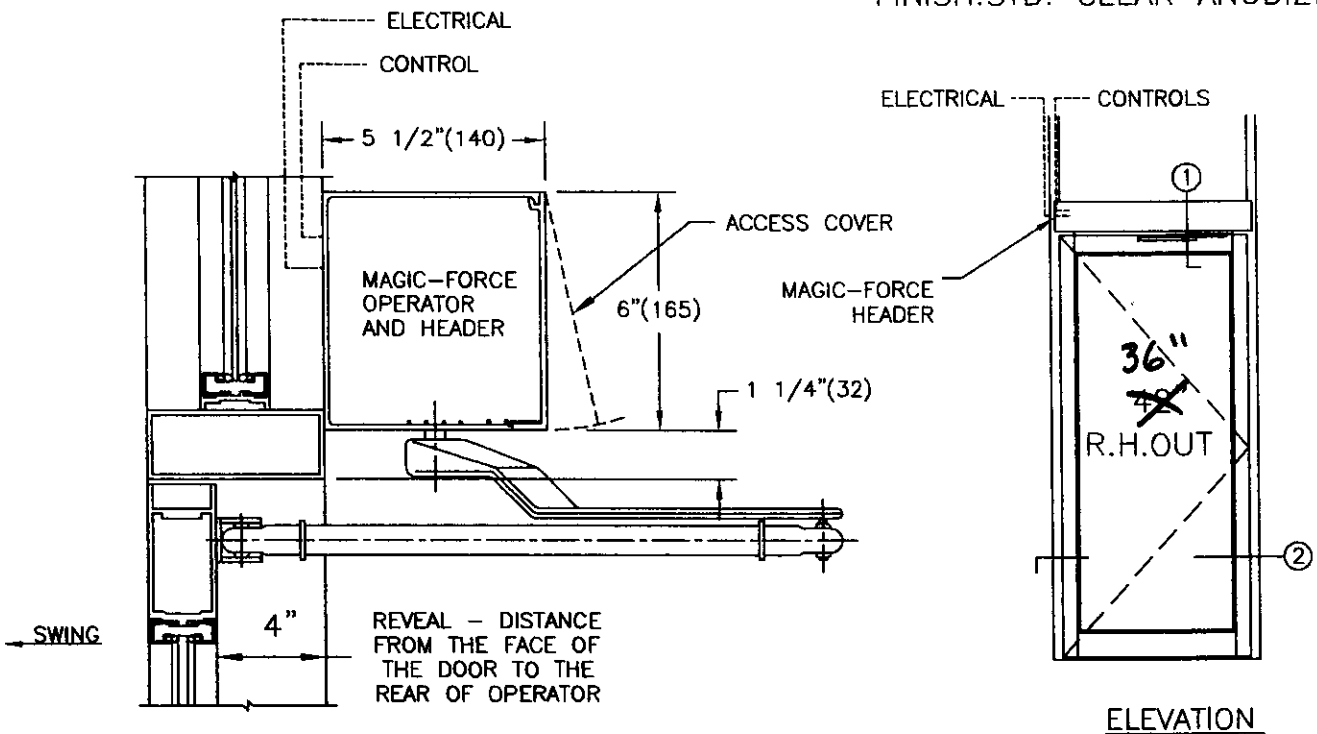
FLUSH MOUNTED
HARDWIRE OR BATTERY

STANLEY

JOB NAME U of K PATIENT PARKING GARAGE
LOCATION LEXINGTON,KY 07/11/06
DOOR NUMBER LOWER LEVEL #010

MAGIC-FORCE
SINGLE DOOR
VISIBLE R.H. "OUT"

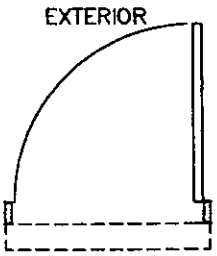
FINISH:STD. CLEAR ANODIZE



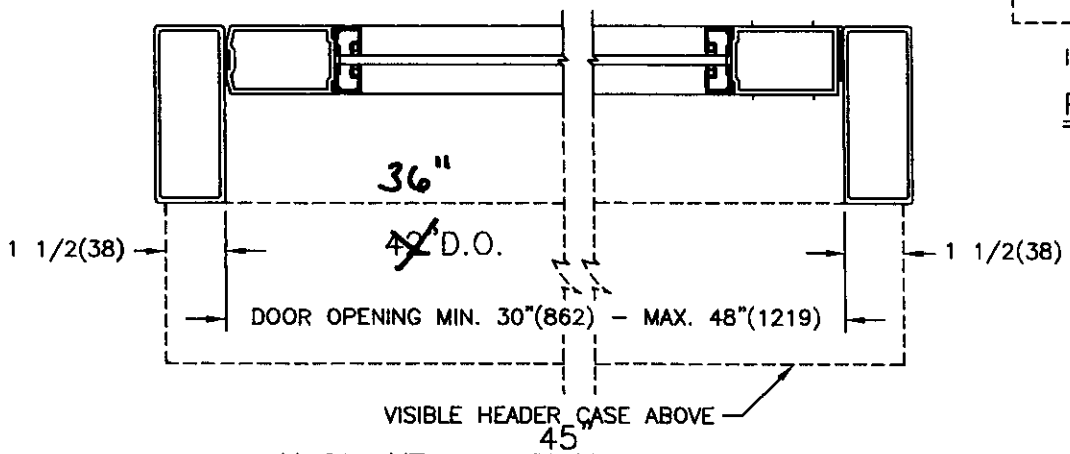
1 VERTICAL SECTION

ELEVATION

INCLUDES (2) WIRELESS PUSH PLATES.



PLAN



2 HORIZONTAL SECTION

NOTES:
1. DETAILS NOT TO SCALE.
2. ELECTRICAL REQUIREMENTS:
   12DVAC, 5AMPS MIN. TO OPERATOR BY ELECTRICAL CONTRACTOR.
3. DOORS, FRAMES AND HARDWARE BY OTHERS.
4. 32" CLEAR DOOR OPENING REQUIRED TO MEET A.D.A. REQUIREMENTS.
5. DOORS MUST BE NON-LATCHED FOR PROPER OPERATION.

STANLEY

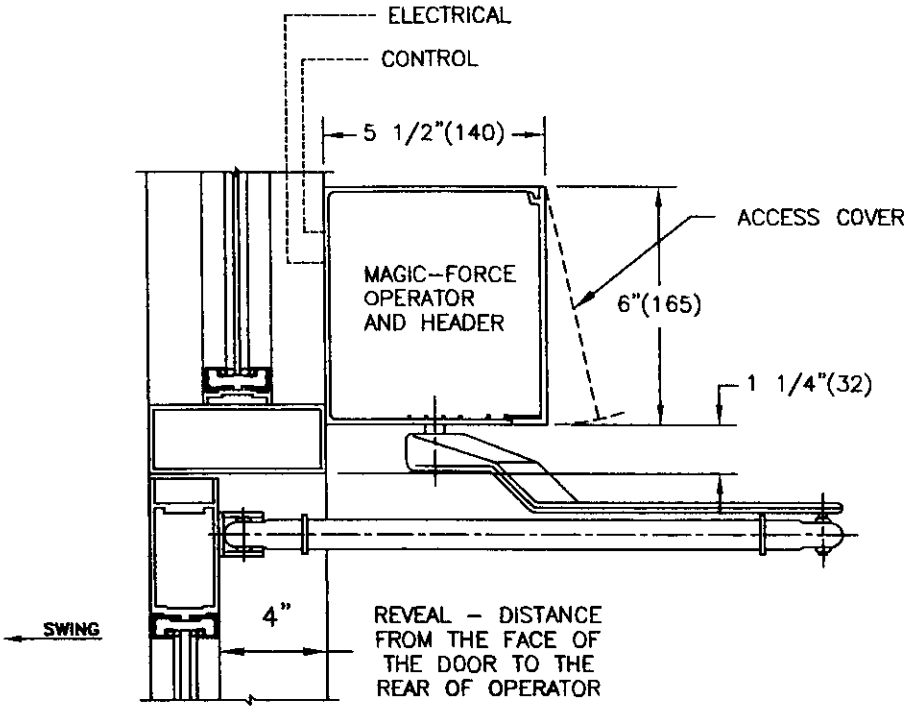
JOB NAME U of K PATIENT PARKING GARAGE
LOCATION LEXINGTON,KY 07/11/06

DOOR NUMBER LOWER LEVEL #010A

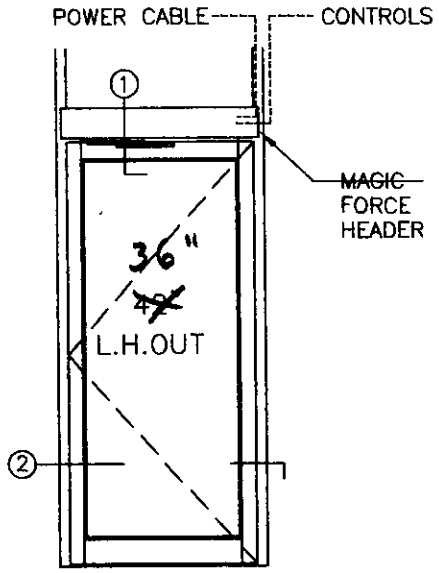
MAGIC-FORCE
SINGLE DOOR

VISIBLE L.H. "OUT"

FINISH:STD.CLEAR ANODIZE

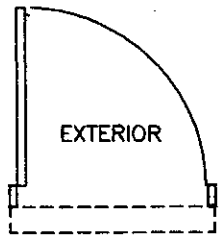


1 VERTICAL SECTION

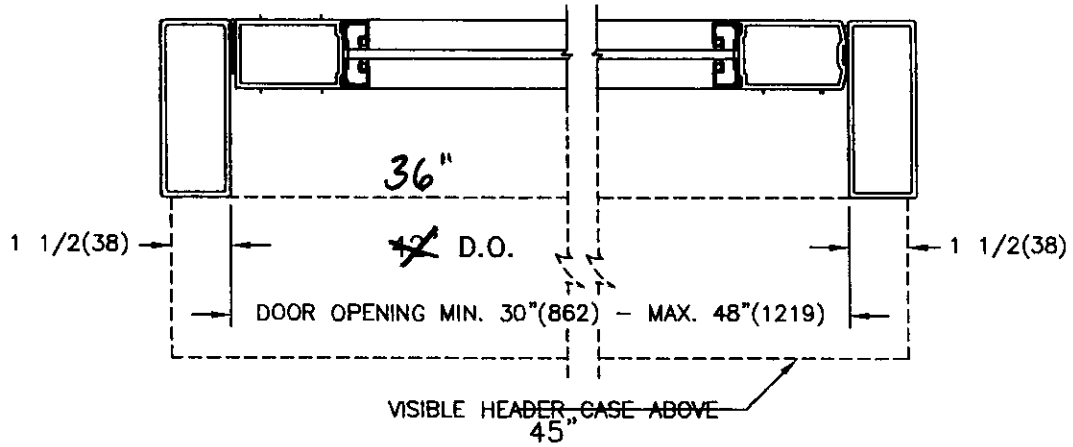


ELEVATION

INCLUDES (2) WIRELESS PUSH PLATES.



PLAN



2 HORIZONTAL SECTION

NOTES:
1. DETAILS NOT TO SCALE.
2. ELECTRICAL REQUIREMENTS:
   120VAC, 5AMPS MIN. TO OPERATOR BY ELECTRICAL CONTRACTOR.
3. DOORS, FRAMES AND HARDWARE BY OTHERS.
4. 32" CLEAR DOOR OPENING REQUIRED TO MEET A.D.A. REQUIREMENTS.
5. DOORS MUST BE NON-LATCHED FOR PROPER OPERATION.

STANLEY

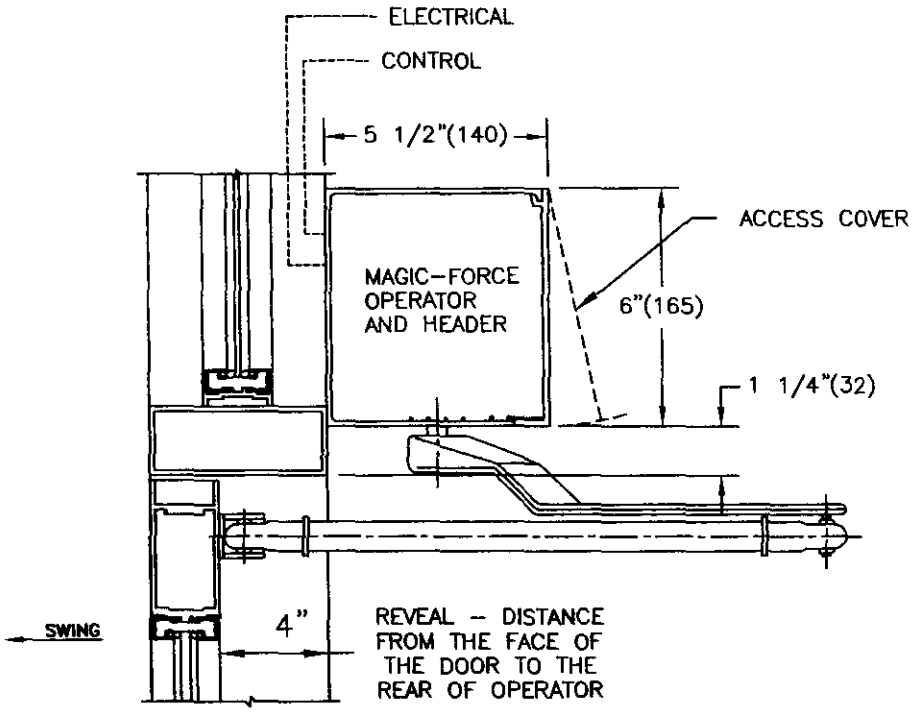
JOB NAME U of K PATIENT PARKING GARAGE
LOCATION LEXINGTON,KY 07/11/06

DOOR NUMBER GRADE LEVEL #110A

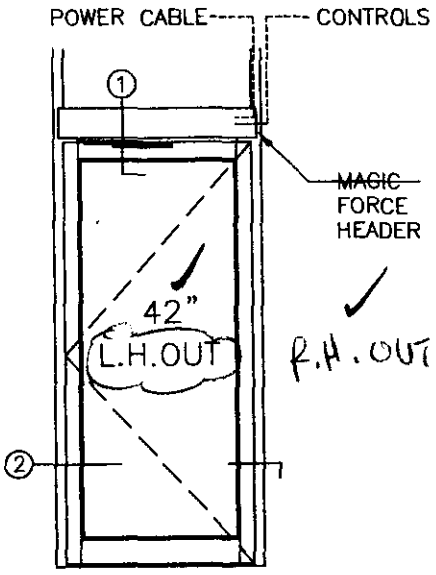
MAGIC-FORCE
SINGLE DOOR

VISIBLE L.H. "OUT"

FINISH:STD. CLEAR ANODIZE

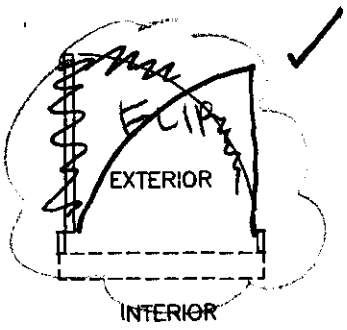


1 VERTICAL SECTION

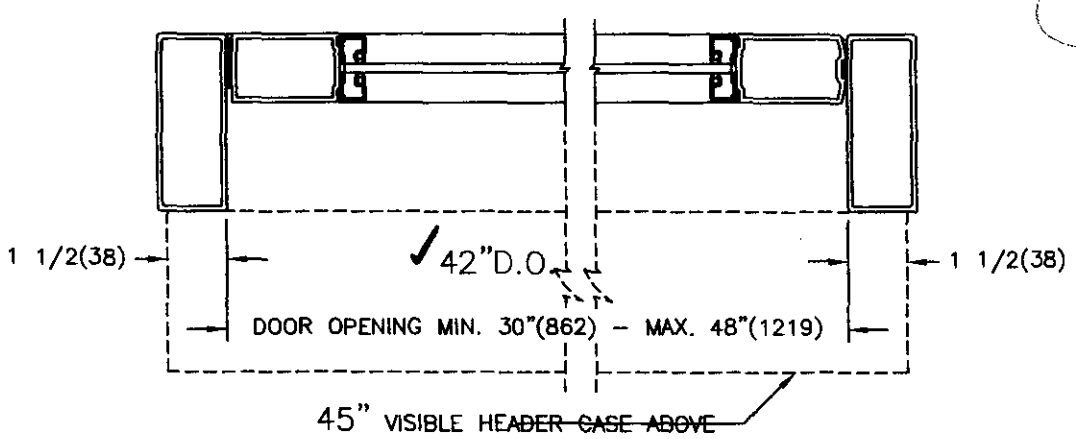


ELEVATION

INCLUDES (2) WIRELESS PUSH PLATES.



PLAN



2 HORIZONTAL SECTION

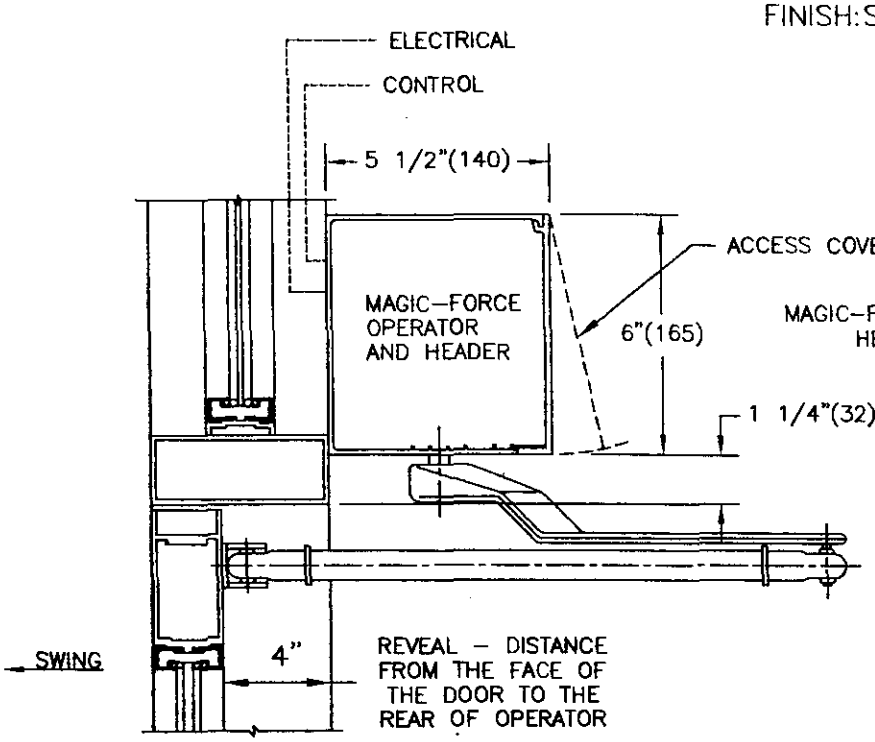
NOTES:
1. DETAILS NOT TO SCALE.
2. ELECTRICAL REQUIREMENTS:
   120VAC, 5AMPS MIN. TO OPERATOR BY ELECTRICAL CONTRACTOR.
3. DOORS, FRAMES AND HARDWARE BY OTHERS.
4. 32" CLEAR DOOR OPENING REQUIRED TO MEET A.D.A. REQUIREMENTS.
5. DOORS MUST BE NON-LATCHED FOR PROPER OPERATION.

STANLEY

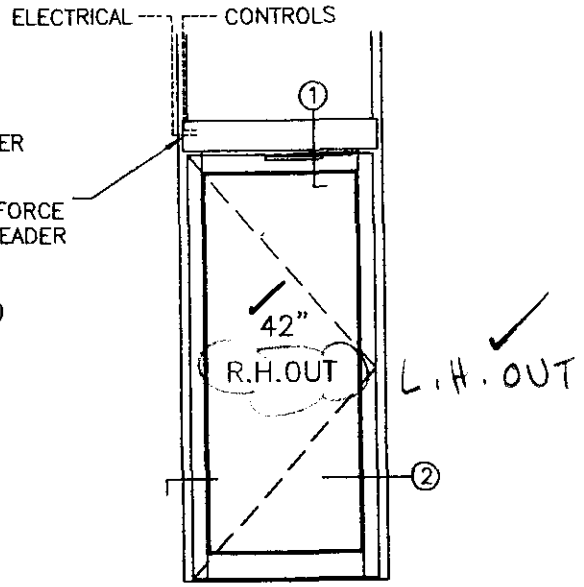
JOB NAME U OF K PATIENT PARKING GARAGE
LOCATION LEXINGTON,KY 07/11/06
DOOR NUMBER GRADE LEVEL #110

MAGIC-FORCE
SINGLE DOOR
VISIBLE R.H. "OUT"

FINISH:STD. CLEAR ANODIZE

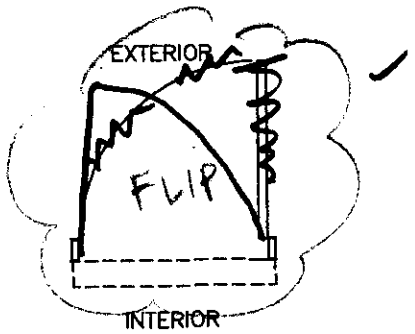


1 VERTICAL SECTION

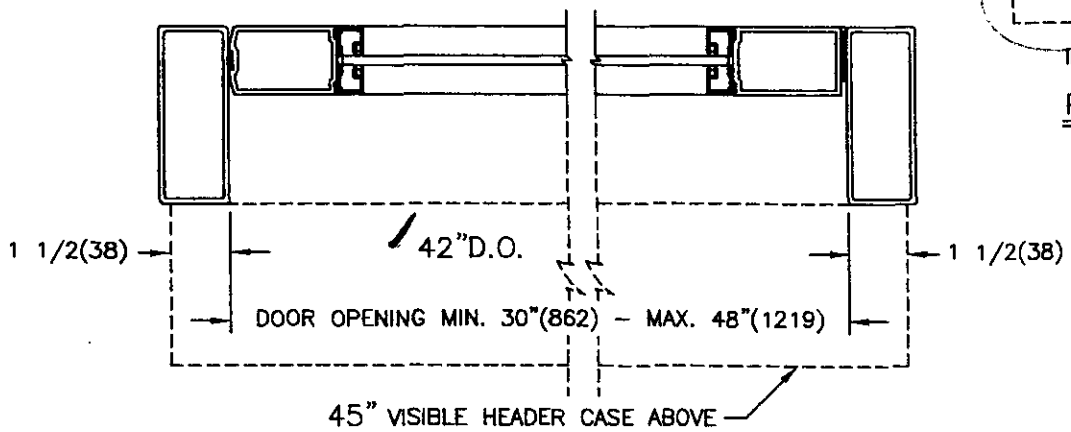


ELEVATION

INCLUDES (2) WIRELESS PUSH PLATES.



PLAN



2 HORIZONTAL SECTION

NOTES:
1. DETAILS NOT TO SCALE.
2. ELECTRICAL REQUIREMENTS:
   120VAC, 5AMPS MIN. TO OPERATOR BY ELECTRICAL CONTRACTOR.
3. DOORS, FRAMES AND HARDWARE BY OTHERS.
4. 32" CLEAR DOOR OPENING REQUIRED TO MEET A.D.A. REQUIREMENTS.
5. DOORS MUST BE NON–LATCHED FOR PROPER OPERATION.

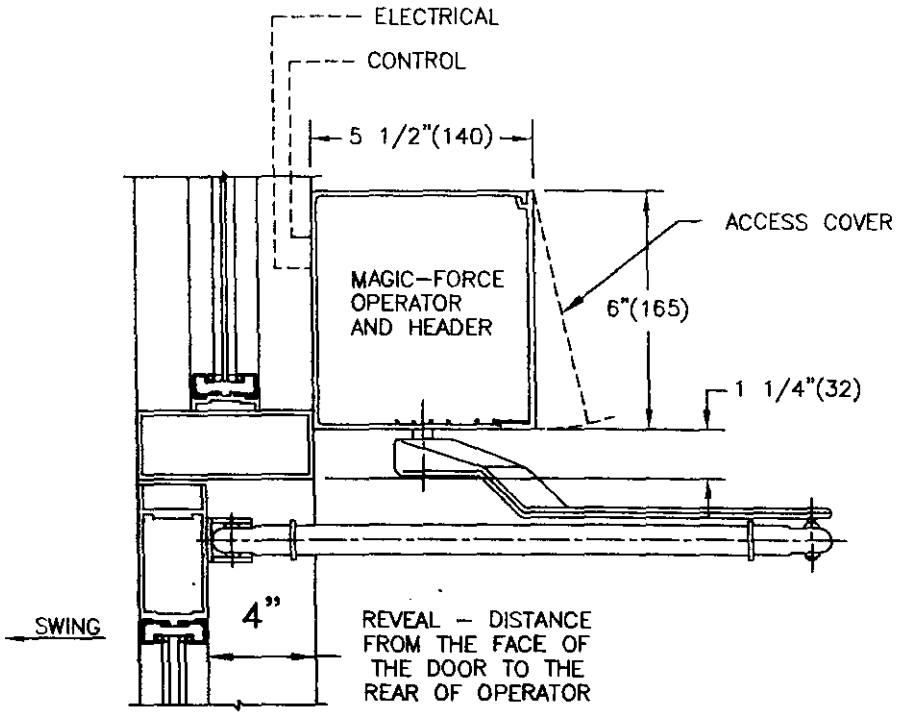
STANLEY

LOCATION LEXINGTON,KY 07/11/06

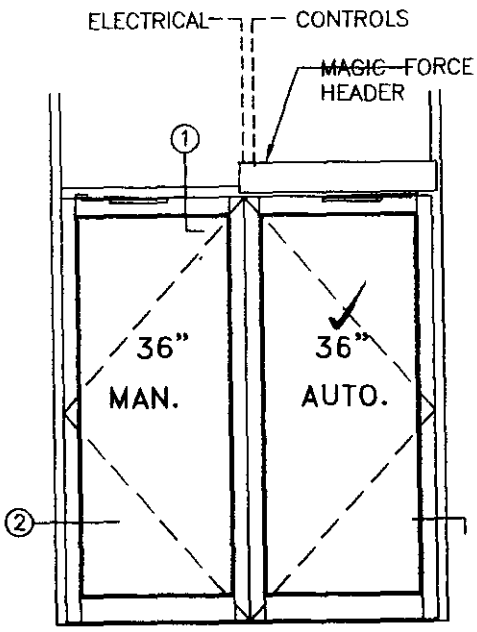
DOOR NUMBER GRADE LEVEL #107 R.H.OUT

MAGIC-FORCE
PAIR DOORS
R.H.
VISIBLE "OUT"

FINISH:STD.CLEAR ANODIZE



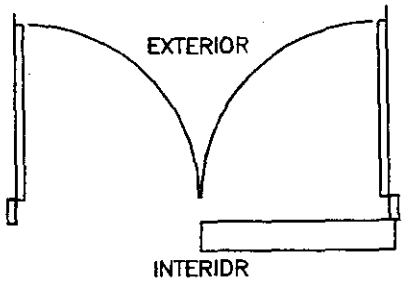
① VERTICAL SECTION



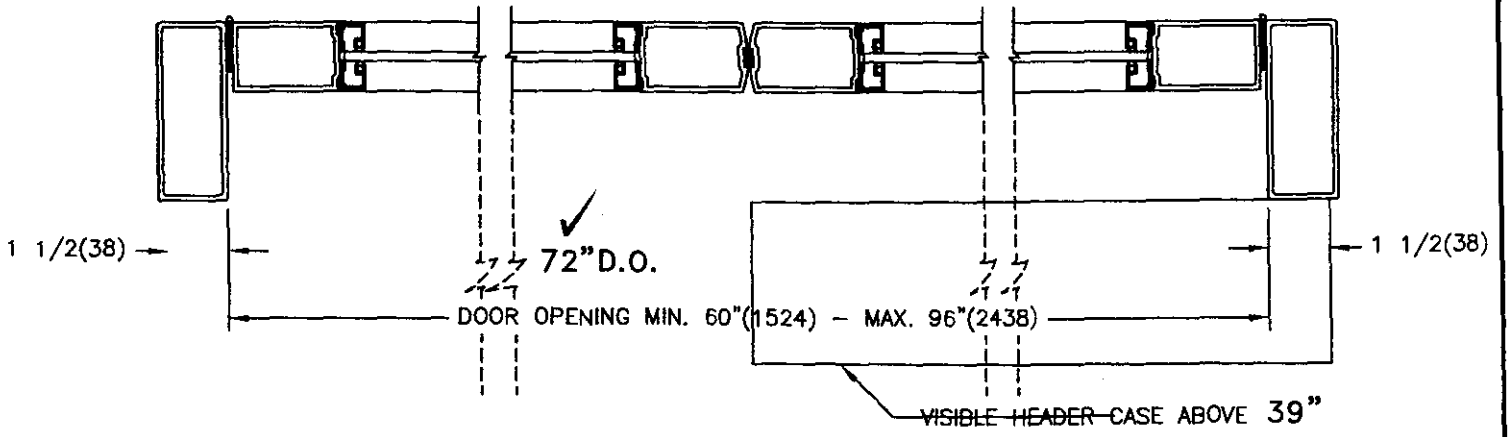
ELEVATION

INCLUDES (2) WIRELESS PUSH PLATES

ARCHITECT TO VERIFY AUTO HAND.



PLAN



② HORIZONTAL SECTION

NOTES:
1. DETAILS NOT TO SCALE.
2. ELECTRICAL REQUIREMENTS:
   120VAC, 10AMPS MIN. TO OPERATOR
   BY ELECTRICAL CONTRACTDR.
3. DOORS, FRAMES AND HARDWARE BY OTHERS.
4. DOORS MUST BE NON-LATCHED FOR PROPER OPERATION.

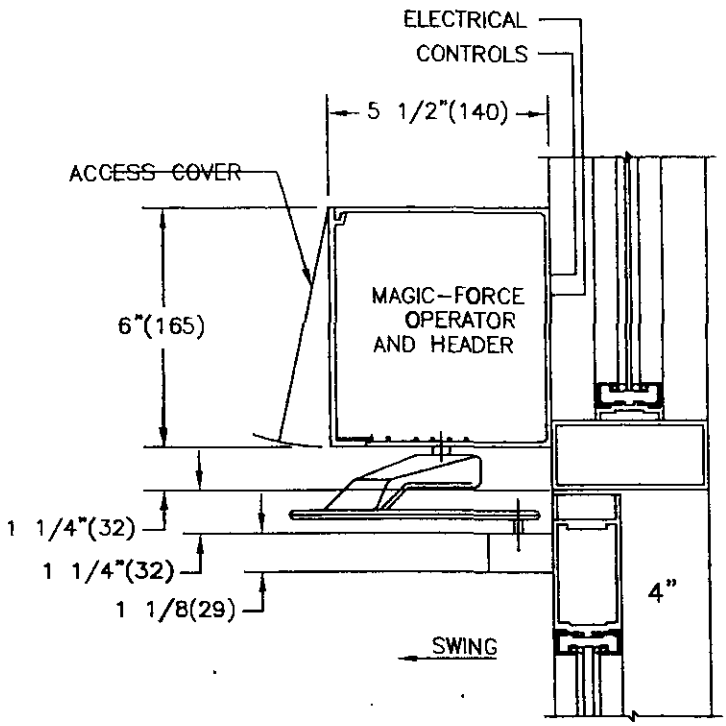
STANLEY

LOCATION LEXINGTON,KY 07/11/06

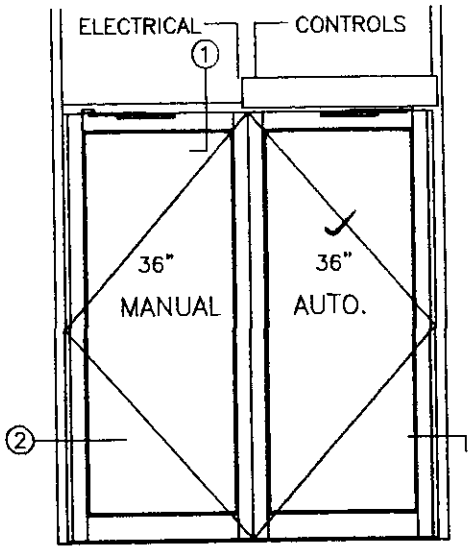
DOOR NUMBER GRADE LEVEL #107A L.H IN

MAGIC FORCE
PAIR DOORS
L.H.
VISIBLE "IN"

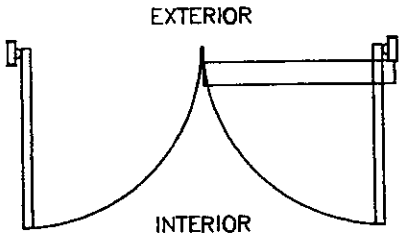
FINISH:STD. CLEAR ANODIZE



① VERTICAL SECTION



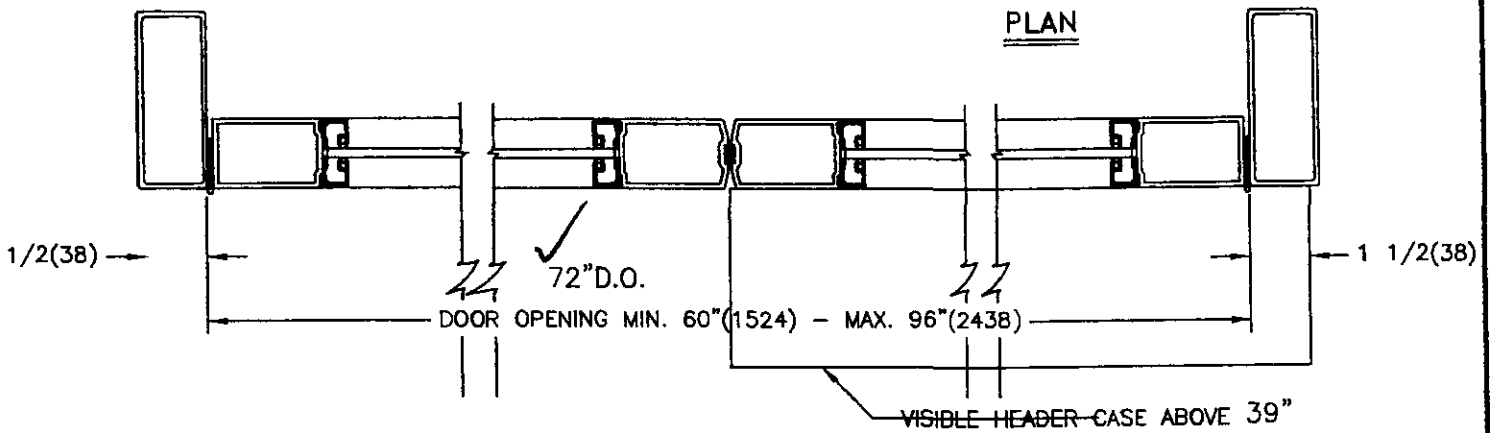
ELEVATION



INCLUDES (2) WIRELESS PUSH PLATES.

ARCHITECT TO VERIFY AUTO HAND.

PLAN



② HORIZONTAL SECTION

NOTES:
1. DETAILS NOT TO SCALE.
2. ELECTRICAL REQUIREMENTS:
   120VAC, 10AMPS MIN. TO OPERATOR
   BY ELECTRICAL CONTRACTOR.
3. DOORS, FRAMES AND HARDWARE BY OTHERS.
4. DOORS MUST BE NON-LATCHED FOR PROPER OPERATION.

STANLEY

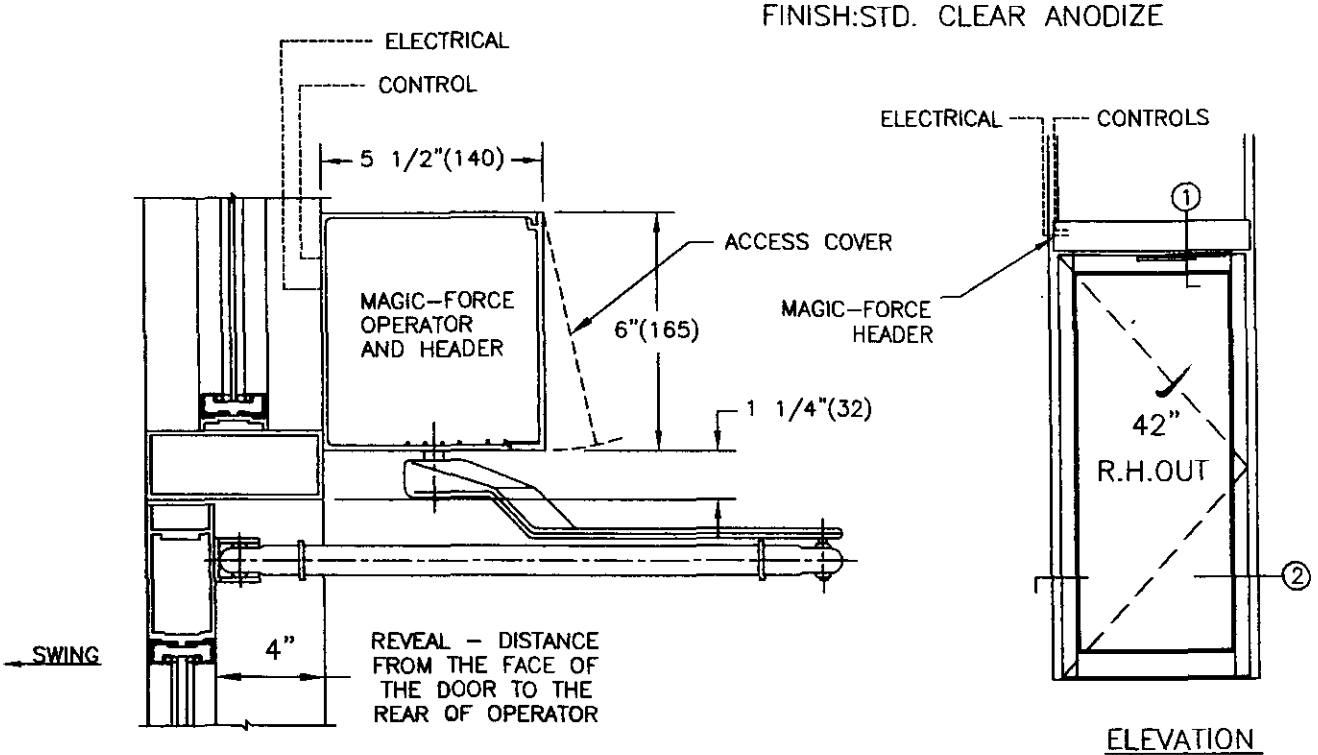
JOB NAME U of K PATIENT PARKING GARAGE
LOCATION LEXINGTON,KY 07/11/06

DOOR NUMBER 2ND LEVEL #210

MAGIC-FORCE
SINGLE DOOR

VISIBLE R.H. "OUT"

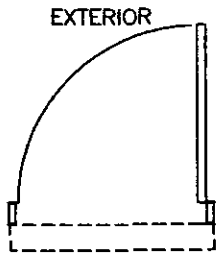
FINISH:STD. CLEAR ANODIZE



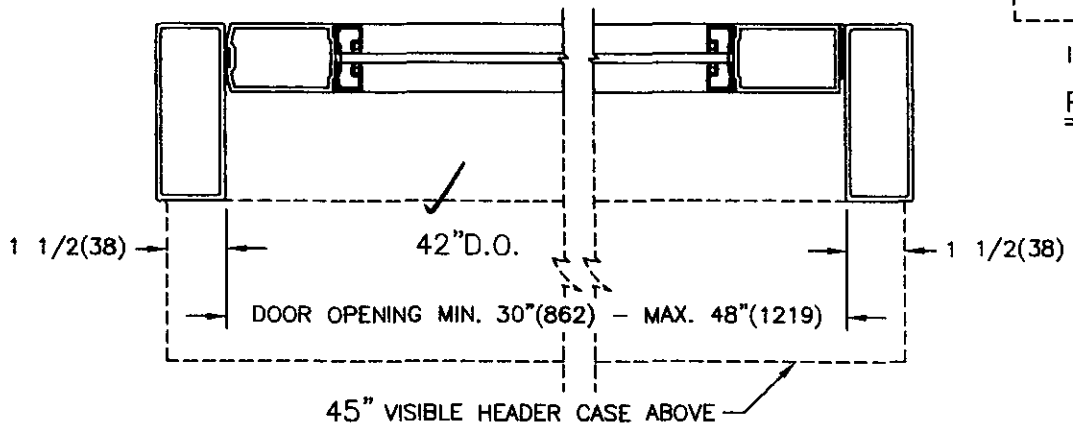
ELEVATION

1 VERTICAL SECTION

INCLUDES (2) WIRELESS PUSH PLATES.



PLAN



2 HORIZONTAL SECTION

NOTES:
1. DETAILS NOT TO SCALE.
2. ELECTRICAL REQUIREMENTS:
   120VAC, 5AMPS MIN. TO OPERATOR BY ELECTRICAL CONTRACTOR.
3. DOORS, FRAMES AND HARDWARE BY OTHERS.
4. 32" CLEAR DOOR OPENING REQUIRED TO MEET A.D.A. REQUIREMENTS.
5. DOORS MUST BE NON-LATCHED FOR PROPER OPERATION.

STANLEY

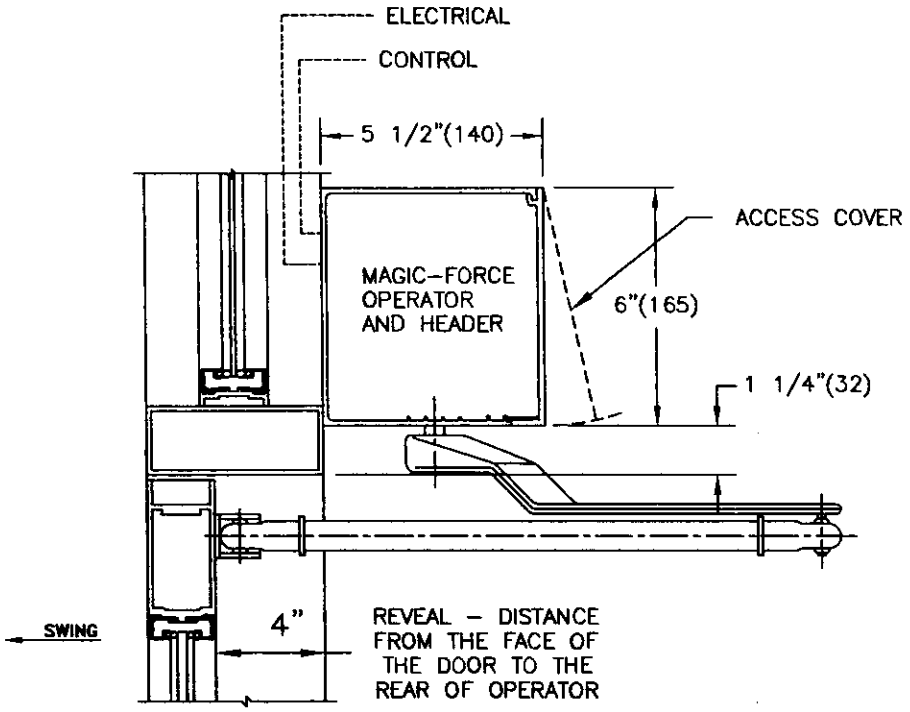
LOCATION LEXINGTON,KY 07/11/06

DOOR NUMBER 3RD LEVEL 310C

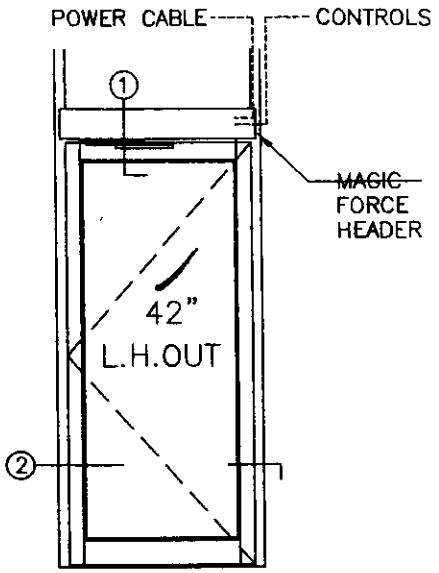
MAGIC FORCE
SINGLE DOOR

VISIBLE L.H. "OUT"

FINISH:STD. CLEAR ANODIZE

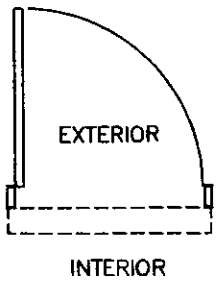


1 VERTICAL SECTION

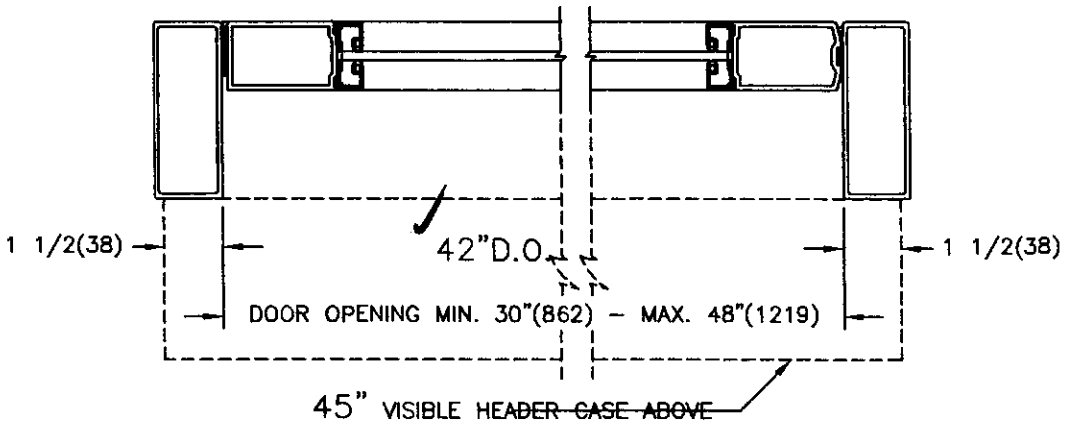


ELEVATION

INCLUDES (2) WIRELESS PUSH PLATES.



PLAN



2 HORIZONTAL SECTION

NOTES:
1. DETAILS NOT TO SCALE.
2. ELECTRICAL REQUIREMENTS:
   120VAC, 5AMPS MIN. TO OPERATOR BY ELECTRICAL CONTRACTOR.
3. DOORS, FRAMES AND HARDWARE BY OTHERS.
4. 32" CLEAR DOOR OPENING REQUIRED TO MEET A.D.A. REQUIREMENTS.
5. DOORS MUST BE NON-LATCHED FOR PROPER OPERATION.

STANLEY

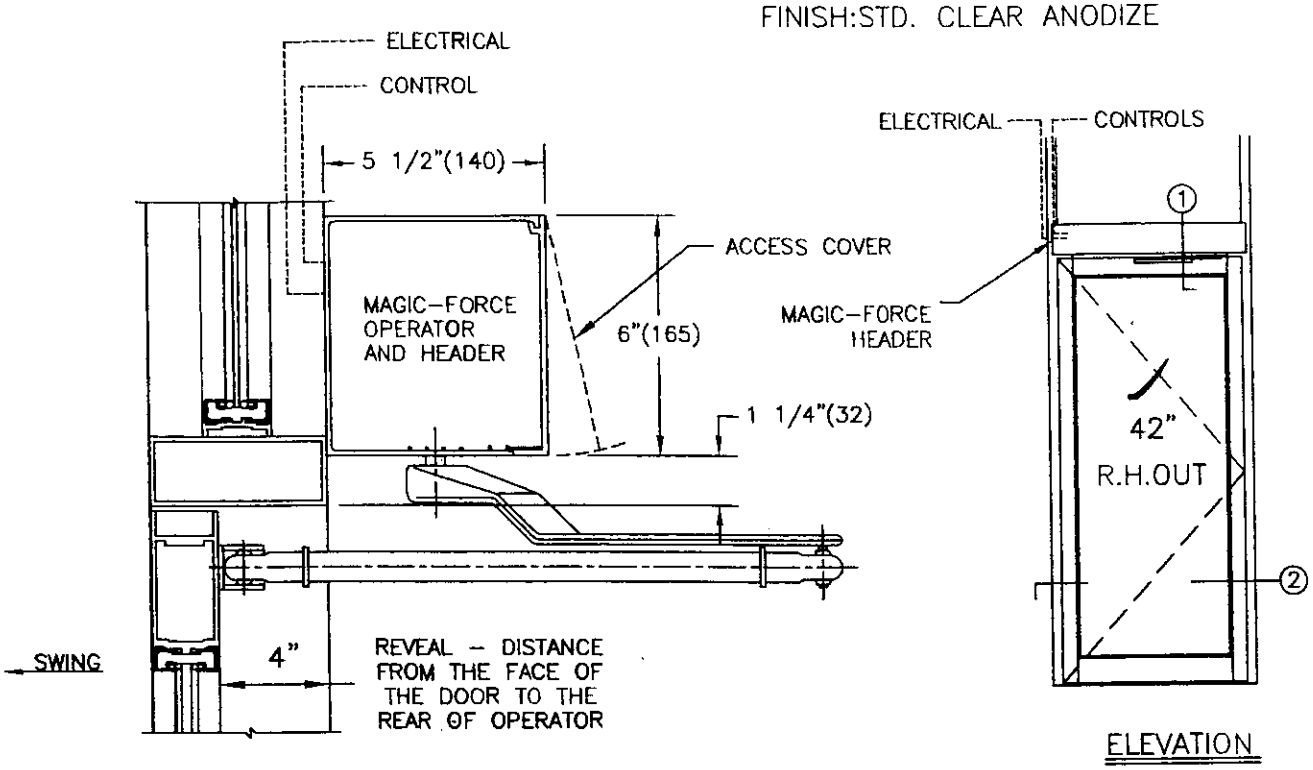
LOCATION LEXINGTON,KY 07/11/06

DOOR NUMBER 4TH LEVEL #410

SINGLE DOOR

VISIBLE R.H. "OUT"

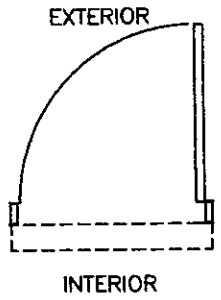
FINISH:STD. CLEAR ANODIZE



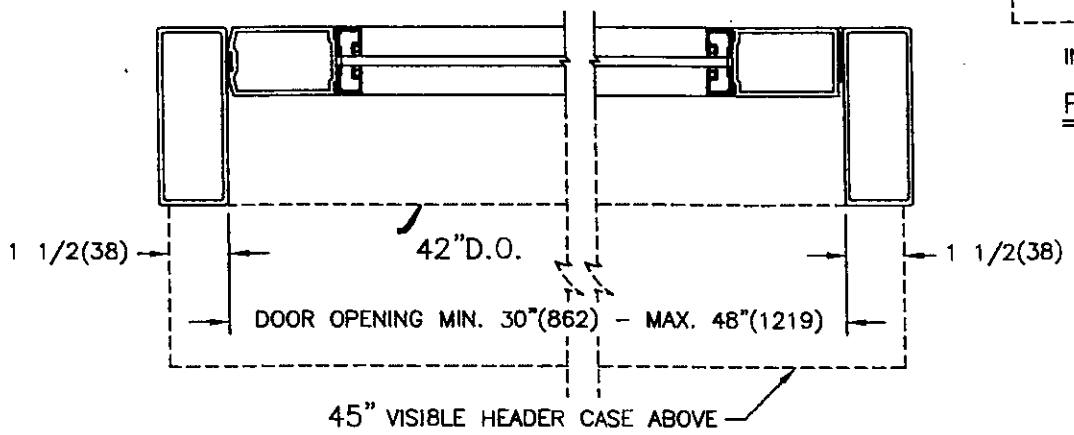
ELEVATION

1 VERTICAL SECTION

INCLUDES (2) WIRELESS PUSH PLATES.



PLAN



2 HORIZONTAL SECTION

NOTES:
1. DETAILS NOT TO SCALE.
2. ELECTRICAL REQUIREMENTS:
   120VAC, 5AMPS MIN. TO OPERATOR BY ELECTRICAL CONTRACTOR.
3. DOORS, FRAMES AND HARDWARE BY OTHERS.
4. 32" CLEAR DOOR OPENING REQUIRED TO MEET A.D.A. REQUIREMENTS.
5. DOORS MUST BE NON-LATCHED FOR PROPER OPERATION.

STANLEY

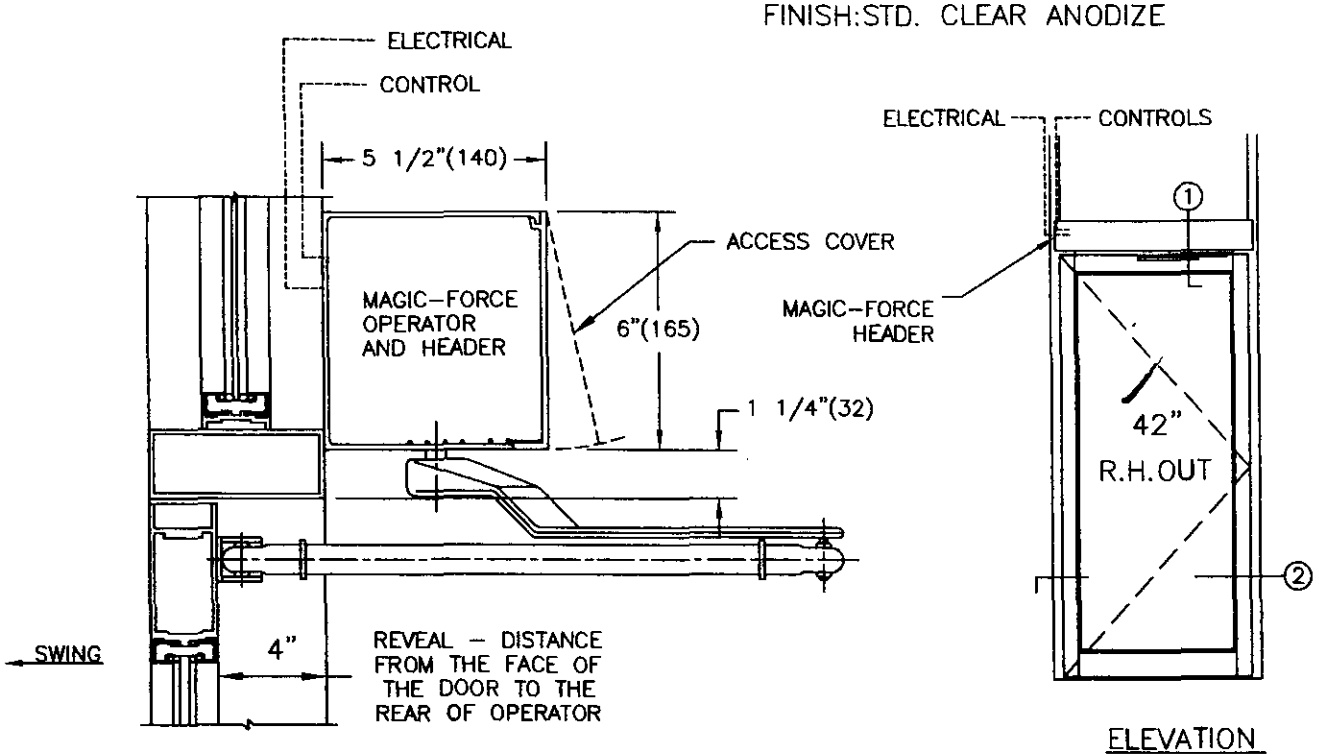
LOCATION LEXINGTON,KY 07/11/06

DOOR NUMBER 5TH LEVEL #510

MAGIC FORCE
SINGLE DOOR

VISIBLE R.H. "OUT"

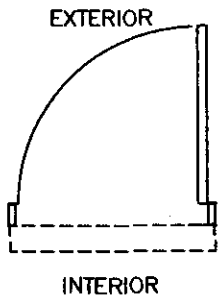
FINISH:STD. CLEAR ANODIZE



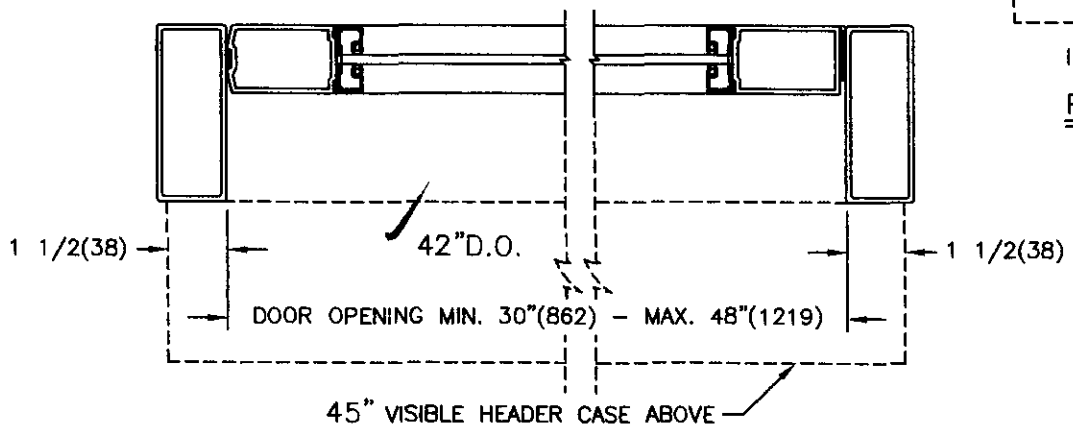
ELEVATION

1 VERTICAL SECTION

INCLUDES (2) WIRELESS PUSH PLATES.



PLAN



2 HORIZONTAL SECTION

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STANLEY

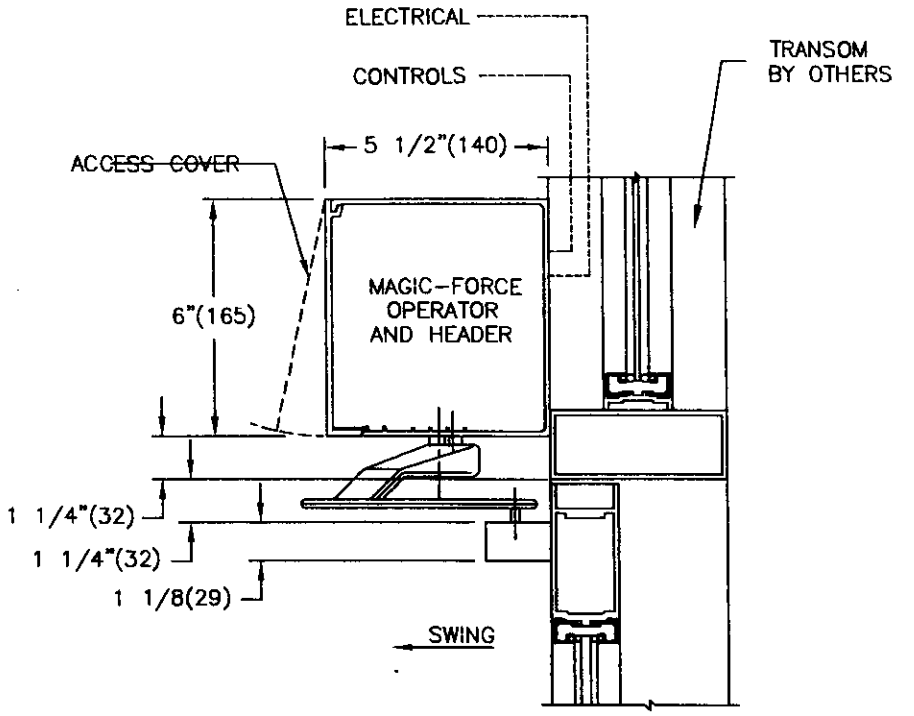
LOCATION LEXINGTON,KY 07/11/07

DOOR NUMBER 5TH FLOOR 510B

MAGIC FORCE
SINGLE DOOR

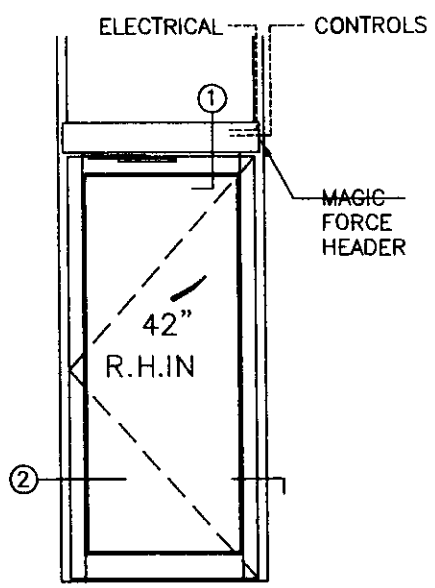
VISIBLE R.H. "IN"

FINISH:STD.CLEAR ANODIZE

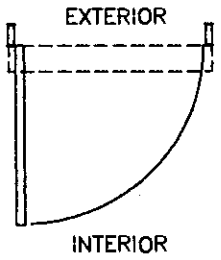


① VERTICAL SECTION

INCLUDES (2) WIRELESS PUSH PLATES.



ELEVATION



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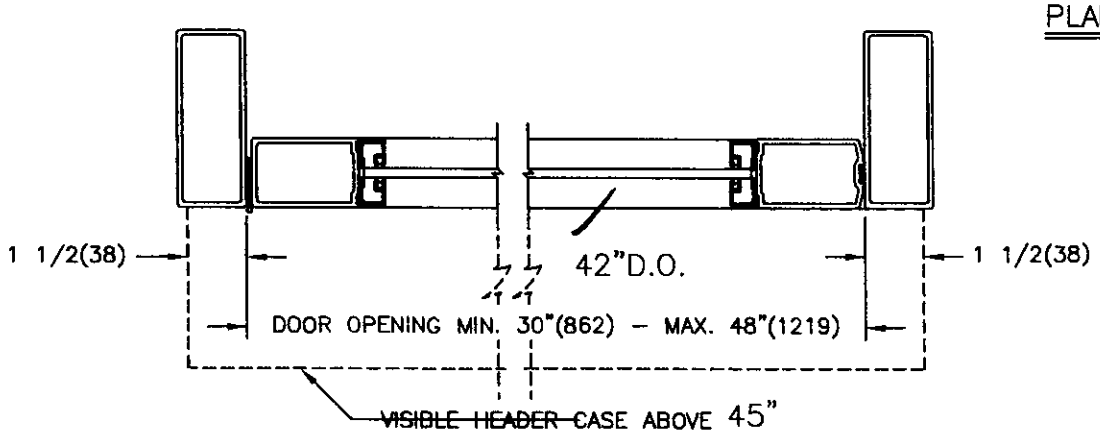

② HORIZONTAL SECTION

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STANLEY

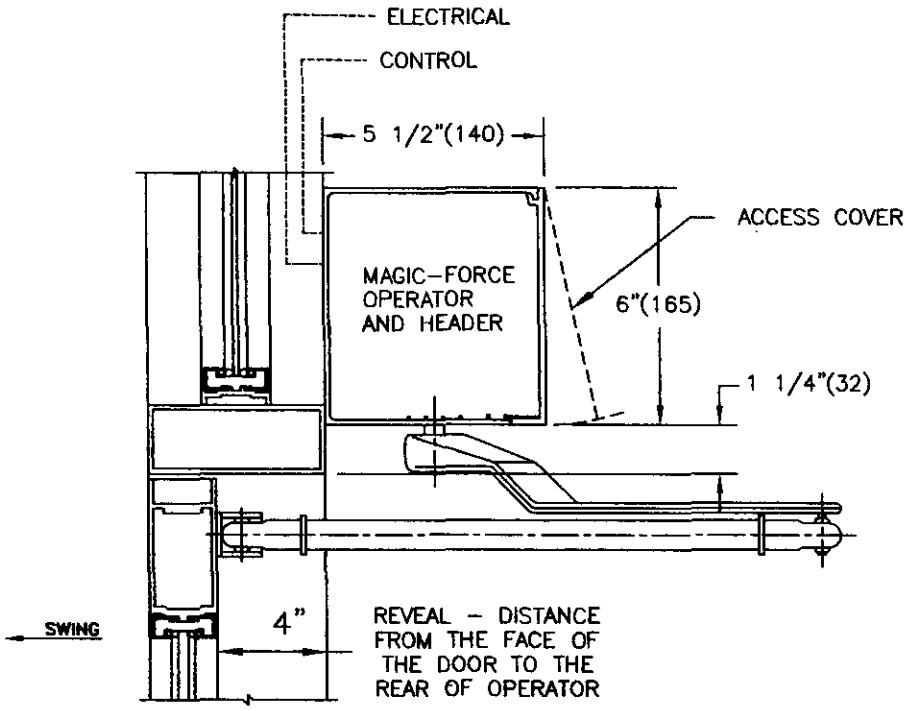
LOCATION LEXINGTON,KY 07/11/06

DOOR NUMBER 5TH FLOOR 510C

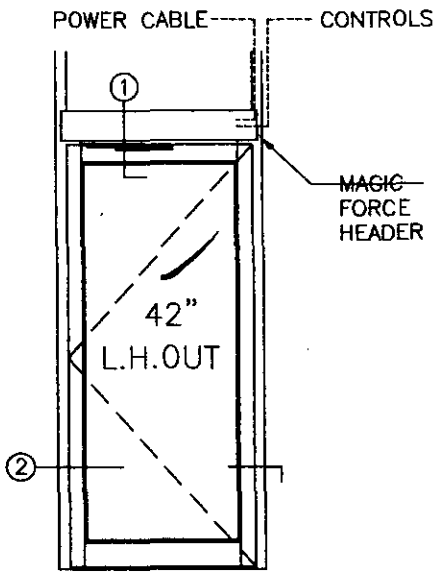
MAGIC-FORCE
SINGLE DOOR

VISIBLE L.H. "OUT"

FINISH:STD. CLEAR ANODIZE

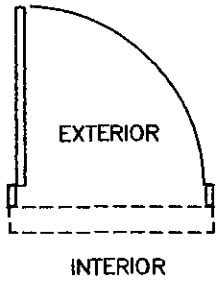


1 VERTICAL SECTION

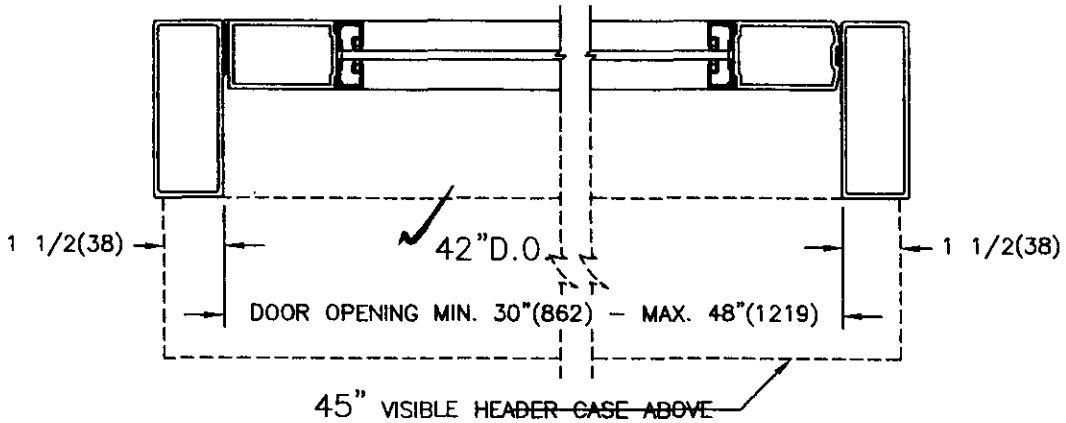


ELEVATION

INCLUDES (2) WIRELESS PUSH PLATES.



PLAN



2 HORIZONTAL SECTION

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STANLEY

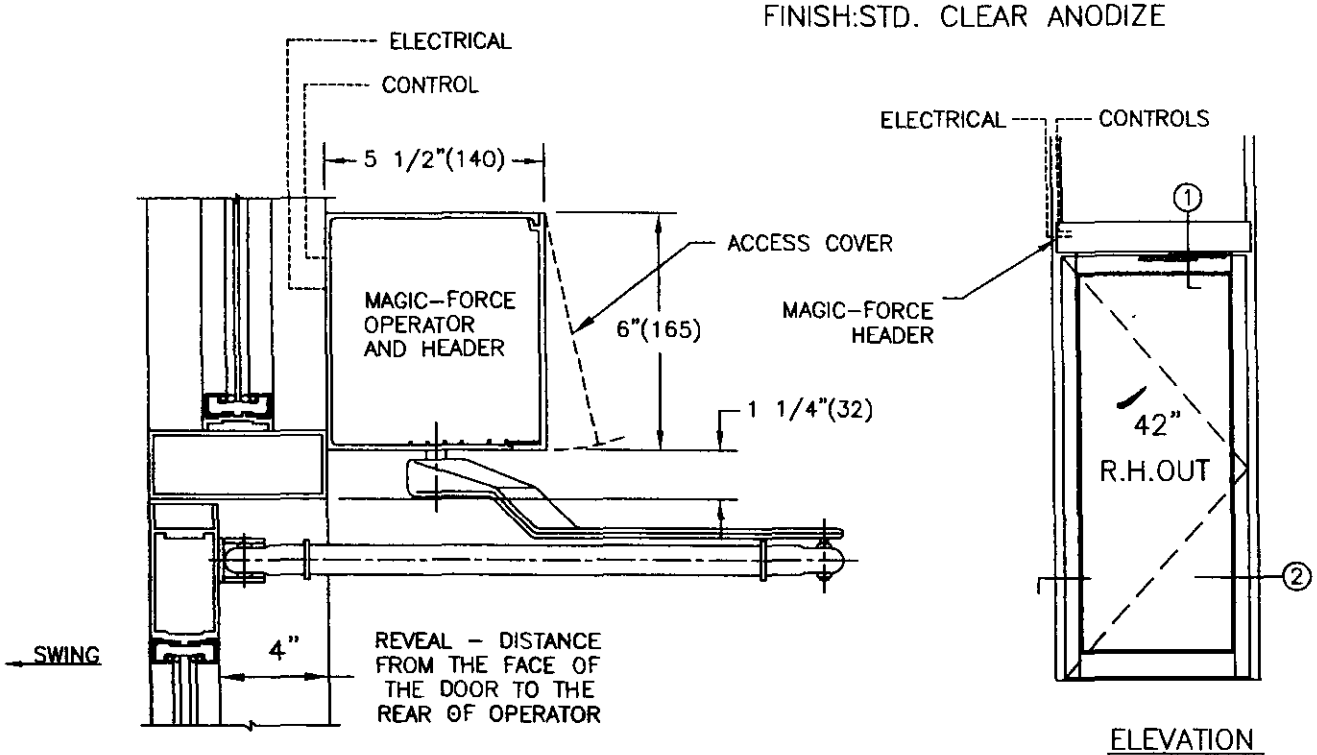
LOCATION LEXINGTON,KY 07/11/06

DOOR NUMBER 6TH LEVEL #610

MAGIC-FORCE
SINGLE DOOR

VISIBLE R.H. "OUT"

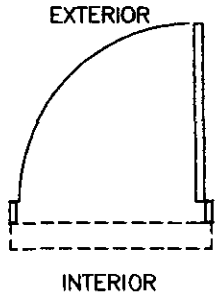
FINISH:STD. CLEAR ANODIZE



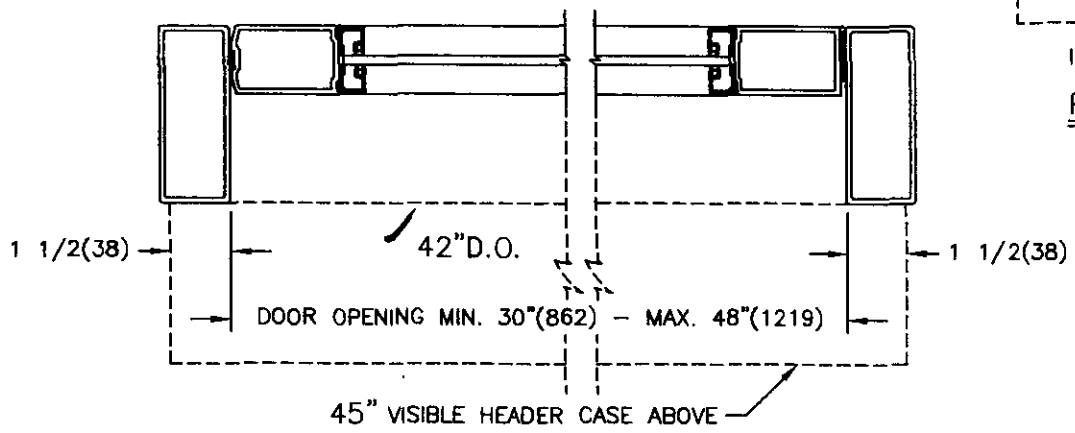
ELEVATION

1 VERTICAL SECTION

INCLUDES (2) WIRELESS PUSH PLATES.



PLAN



2 HORIZONTAL SECTION

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STANLEY

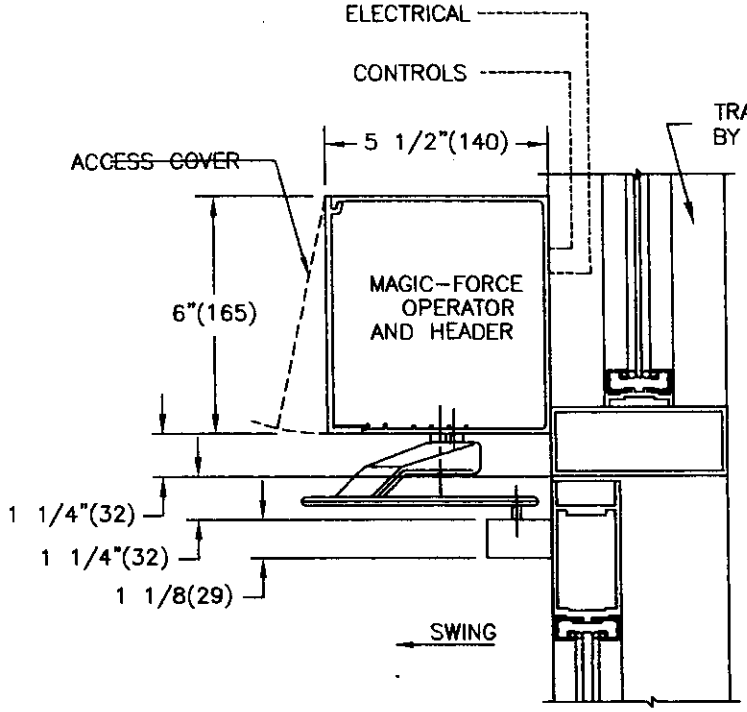
LOCATION LEXINGTON,KY. 07/11/06

DOOR NUMBER 6TH FLOOR #610A

SINGLE DOOR

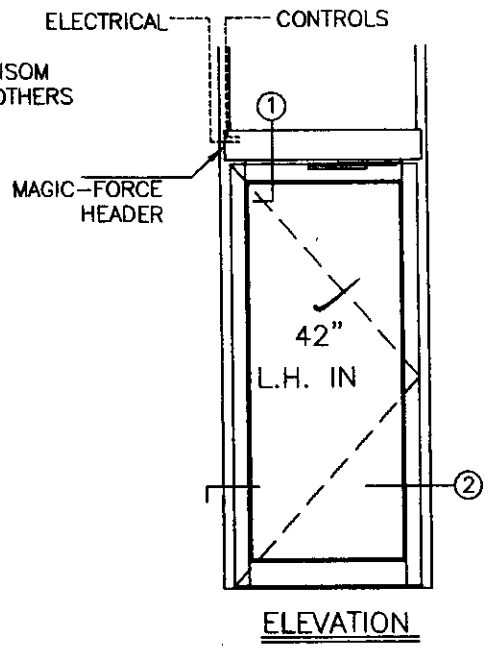
VISIBLE L.H. "IN"

FINISH:STD. CLEAR ANODIZE

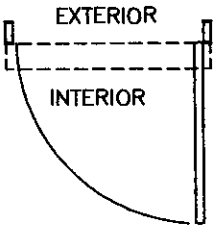


① VERTICAL SECTION

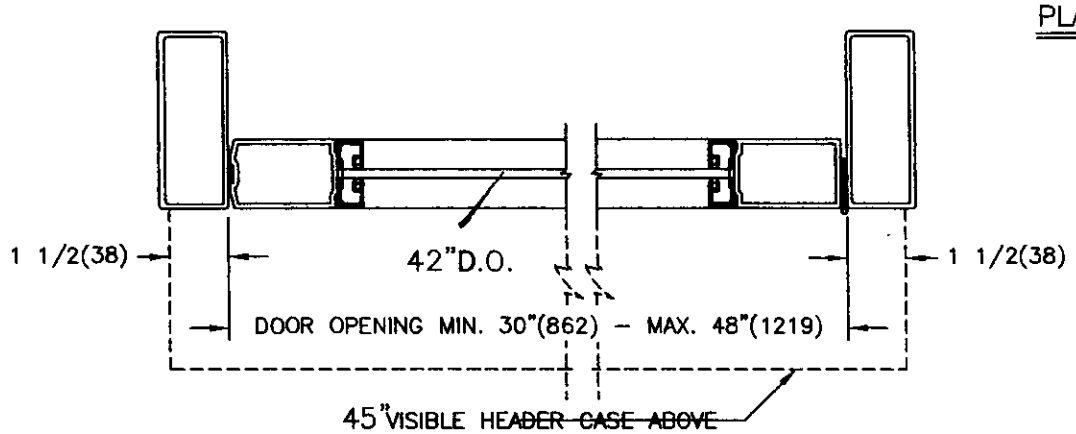
INCLUDES (2) WIRELESS PUSH PLATES.



ELEVATION



PLAN



② HORIZONTAL SECTION

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STANLEY

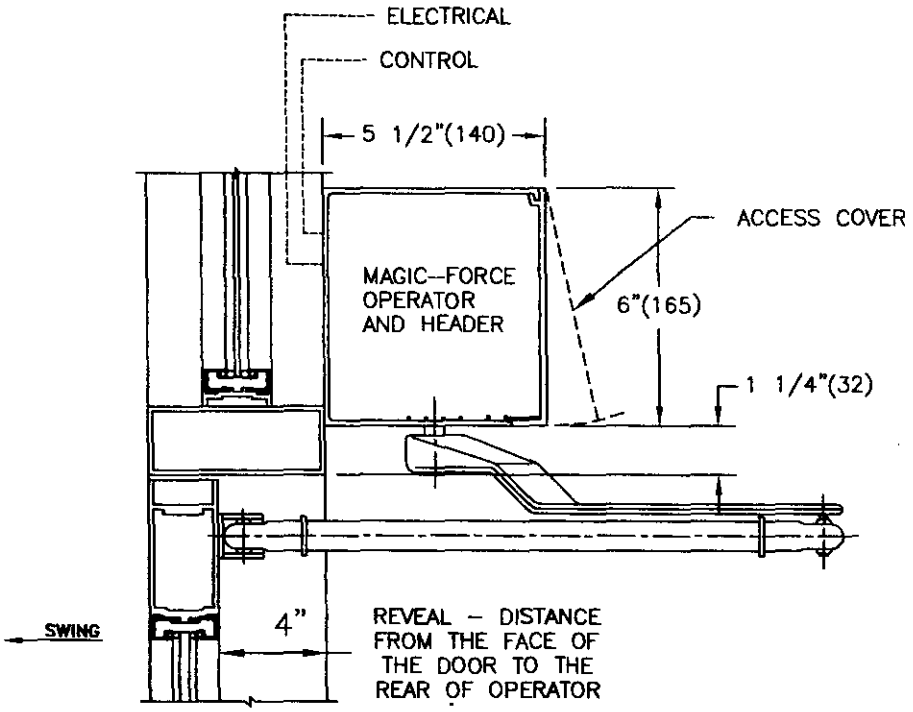
LOCATION LEXINGTON,KY 07/11/06

DOOR NUMBER 6TH LEVEL #610B

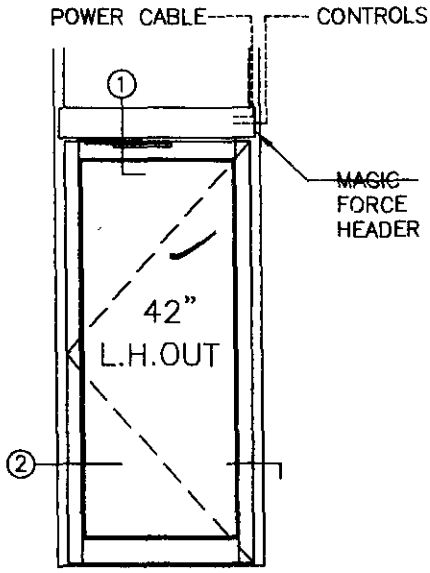
SINGLE DOOR

VISIBLE L.H. "OUT"

FINISH:STD. CLEAR ANODIZE

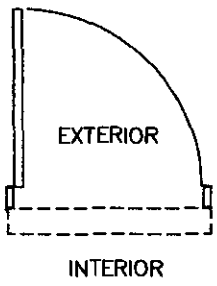


1 VERTICAL SECTION

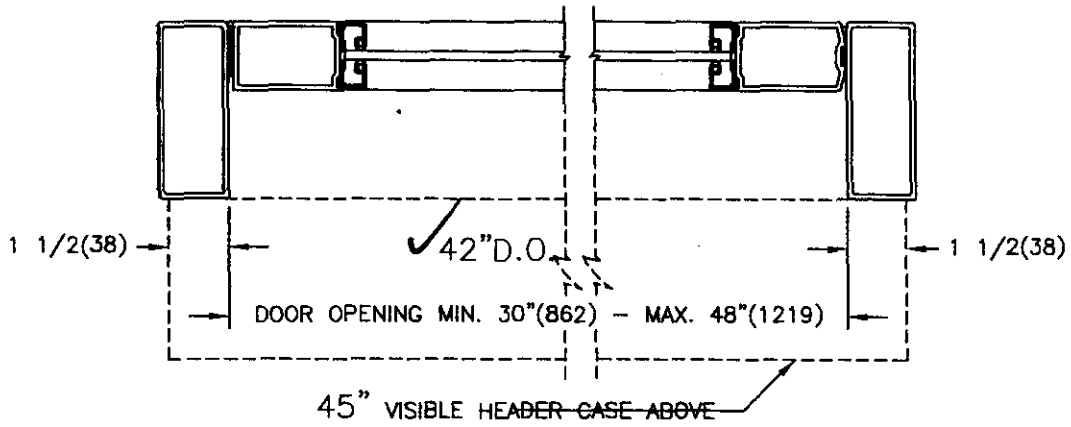


ELEVATION

INCLUDES (2) WIRELESS PUSH PLATES.



PLAN



2 HORIZONTAL SECTION

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UNIVERSITY OF KENTUCKY
PATIENT CARE FACILITY
PARKING GARAGE

UK Project #: 2239.2

940 Elizabeth Street
Lexington, KY 40506-0293

08700 – Door Hardware
Submittal Date: September 19, 2007

Construction Manager
Central Kentucky Glass
1123 Versailles Road
Lexington, KY 40508
(859) 253-0710

SUBMITTAL

GILBANE
University of Kentucky
Patient Care Facility
Gilbane Project No. 18-3966

REVIEWED

☐ 010-Hugueley ☒ 020-Garage
☐ 030-Infrastructure ☐ 040-PCF Foundation
☐ 050-PCF Core/Shell ☐ 060-TowerUp Fit

Bid Package No. 080
Submittal No. 080-08900-003
Spec. Sect/Para. _____
Reviewed By BH
Date 9/19/07

This review does not constitute nor does it assume design responsibility nor does it relieve the trade contractor's supplier from complying with the contract requirements, coordinating their work with other trade contractors and verifying field dimensions.

PACKAGE # 003

ITEM # 010

RECEIVED

OCT 02 2007

GILBANE #3966

Rec'd for
DAVID P.
GBBN

THIS REVIEW BY GBBN ARCHITECTS, INC., IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND IS NOT AN APPROVAL OF THIS DRAWING OR SET OF DRAWINGS. THE COMMENTS MADE DO NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH THE PROJECT DRAWINGS, SPECIFICATIONS AND OTHER CONTRACT DOCUMENTS. CONTRACTOR IS SOLELY RESPONSIBLE FOR: ALL DIMENSIONS AND QUANTITIES, ALL FABRICATION, DELIVERY AND ERECTION; ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES; ALL COORDINATION WITH ALL OTHER CONTRACTORS, SUPPLIERS AND OTHERS; PERFORMING ALL WORK IN A SAFE AND PROPER MANNER.

NO EXCEPTIONS TAKEN ☐
FURNISH AS CORRECTED ☒
REVISE AND RESUBMIT ☐
NO REVIEW - INCOMPLETE ☐
SUBMIT SPECIFIED ITEMS ☐
REJECTED ☐

DATE 10/1/07 BY DRP

GBBN ARCHITECTS, INC.
ARCHITECTURE, INTERIORS, PLANNING, ENGINEERING
☐ 332 EAST 8TH STREET, CINCINNATI, OHIO 45202-2217 (513) 241-8700
☐ 325 WEST MAIN STREET, LEXINGTON, KENTUCKY 40507 (859) 381-8787

FINISH HARDWARE

UNIVERSITY OF KENTUCKY
PATIENT CARE FACILITY
PARKING GARAGE

CENTRAL KENTUCKY GLASS COMPANY
1123 VERSAILLES ROAD
LEXINGTON KENTUCKY 40508
PH (859)253-0710 FX (859)255-7317

SCHEDULED : DENNIS MARTIN 9/12/07

PHS CONTROL NUMBER : 4034

Door Index

Door No	Hand	Hdg
010	LHR	02
010A	RHR	02
107	LHRA	01
107A	RHA	03
110	RHR	02
110A	LHR	02
210	LHR	02
210B	RH	02
210C	RHR	02
310	LHR	02
310B	RH	02
310C	RHR	02
410	LHR	02
410B	RH	02
410C	RHR	02
510	LHR	02
510B	RH	02
510C	RHR	02
610	LHR	02
610A	LH	02
610B	RHR	02

Door No	Hand	Hdg

Finishes

ANSI	US	Description	Base Metal
613	US10B	DARK OXIDIZED SATIN BRONZE, OIL RUBBED	BRONZE
695		DARK BRONZE PAINTED	ANY
710	US10B	DARK OXIDIZED SATIN BRONZE ANODIZED	ALUMINUM

Manufacturers

Abbr	Name
IVE	H.B. IVES
LCN	LCN COMMERCIAL DIVISION
ROC	ROCKWOOD MANUFACTURING CO.
STA	STANLEY HARDWARE

Heading 02 (HwSet 03B)

KeyGroup				Hand	Degree Act	Degree InAct
	1	SGL	DOOR(S) 010 PARKING FROM LOBBY 010	LHR	110	
	1	SGL	DOOR(S) 010A PARKING FROM LOBBY 010	RHR	110	
	1	SGL	DOOR(S) 110 PARKING FROM LOBBY 110	RHR	110	
	1	SGL	DOOR(S) 110A PARKING FROM LOBBY 110	LHR	110	
	1	SGL	DOOR(S) 210 PARKING FROM LOBBY 210	LHR	110	
	1	SGL	DOOR(S) 210B LOBBY 210 TO PARKING	RH	110	
	1	SGL	DOOR(S) 210C PARKING FROM LOBBY 210	RHR	110	
	1	SGL	DOOR(S) 310 PARKING FROM LOBBY 310	LHR	110	
	1	SGL	DOOR(S) 310B LOBBY 310 TO PARKING	RH	110	
	1	SGL	DOOR(S) 310C PARKING FROM LOBBY 310	RHR	110	
	1	SGL	DOOR(S) 410 PARKING FROM LOBBY 410	LHR	110	
	1	SGL	DOOR(S) 410B LOBBY 410 TO PARKING	RH	110	
	1	SGL	DOOR(S) 410C PARKING FROM LOBBY 410	RHR	110	
	1	SGL	DOOR(S) 510 PARKING FROM LOBBY 510	LHR	110	
	1	SGL	DOOR(S) 510B LOBBY 510 TO PARKING	RH	110	
	1	SGL	DOOR(S) 510C PARKING FROM LOBBY 510	RHR	110	
	1	SGL	DOOR(S) 610 PARKING FROM LOBBY 610	LHR	110	
	1	SGL	DOOR(S) 610A LOBBY 610 TO PARKING	LH	110	
	1	SGL	DOOR(S) 610B PARKING FROM LOBBY 610	RHR	110	

3'6" x 7'4" x 1-3/4" x A/G x ALF x NON-RTD

Totals Each Assembly to have:

(19)	1	EA	TOP-BTM PVT SET	7215	613	IVE
(19)	1	EA	INTERMED PIVOT	7215-INT	613	IVE
(19)	1	EA	PUSH-PULL SET	BF157A47 37"	710	ROC
(19)	1	EA	AUTO OPERATOR	SEPARATE	695	STA

HARDWARE FINISHES SPECIFIED DO NOT MATCH DOOR/FRAME FINISH

Heading 03 (HwSet 03A-1)

KeyGroup					Hand	Degree Act	Degree InAct
	1	PR	DOOR(S) 107A LOBBY 110 TO PARKING 6'0" x 7'4" x 1-3/4" x A/G x ALF x NON-RTD		RHA	110	110

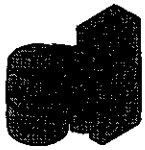
Totals	Each Assembly to have:					
(2)	2	EA	TOP-BTM PVT SET	7215	613	IVE
(2)	2	EA	INTERMED PIVOT	7215-INT	613	IVE
(2)	2	EA	PUSH-PULL SET	BF157A47 31"	710	ROC
(1)	1	EA	SURFACE CLOSER	4041	695	LCN
(1)	1	EA	MOUNTING PLATE	4040-18	695	LCN
(1)	1	EA	AUTO OPERATOR	SEPARATE	695	STA

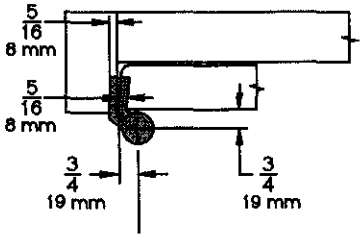
HARDWARE FINISHES SPECIFIED DO NOT MATCH DOOR/FRAME FINISH

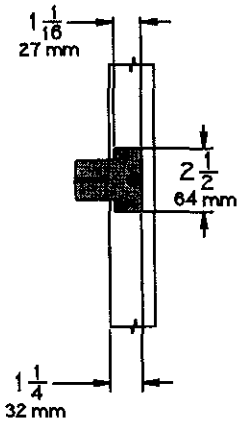
7200 Series Intermediate Pivots

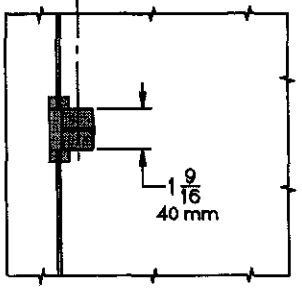
General Information:

- Door Height NFPA 80, Section 3-8.3, requires additional intermediate pivot for some fire-rated doors. We recommend one for every 2'6" (762mm), or fraction thereof, door height over 5'0" (1524mm).
- Door Weight exceeding pivot set limit, add one intermediate pivot for each 100 lbs. (45.5 kg) additional.
- Door Thickness minimum 1-3/4" (44mm), bevel 1/8" (3mm) in 2" (51mm).







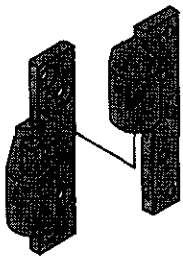


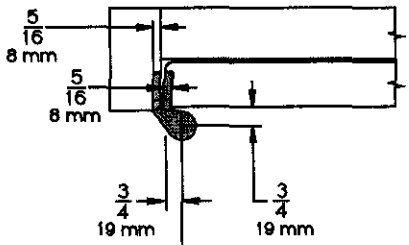
7212-7212V-7222 INT

- Handed 3/4" offset pivots compatible with the following pivot sets: 7212, 7212V and 7222.
- Maximum Load 100 pounds (45.5 kg).
- Vertical Adjustment Range of 3/16" (5mm), which includes a positive locking feature.
- Finishes: US3, US4, US10, US10B, US26, US26D, SP4, SP10, SP28, SP313 and SPBLK.

7215-7226-7227 INT

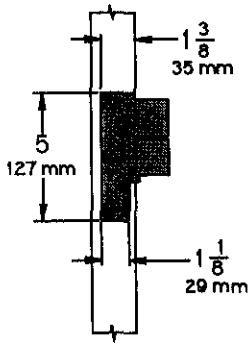
- Handed 3/4" offset pivots compatible with the following pivot sets: 7215, 7226 and 7227.
- Maximum Load 100 pounds (45.5 kg).
- UL Listed for 20 minute rated door.
- Meets ANSI/BHMA Grade 1.
- Vertical Adjustment Range of 3/16" (5mm), which includes a positive locking feature.
- Finishes: US3, US4, US10, US10B, US26, US26D, SP4, SP10, SP28, SP313 and SPBLK.

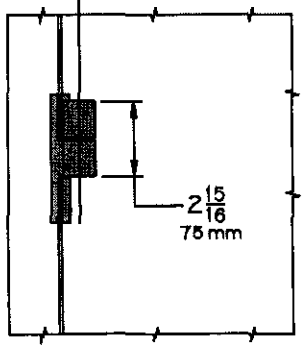




7215F-7226F-7227F INT

- Handed 3/4" offset pivots compatible with the following pivot sets: 7215F, 7226F and 7227F.
- Maximum Load 100 pounds (45.5 kg).
- UL Listed for 3 hour rated door.
- Meets ANSI/BHMA Grade 1.
- Vertical Adjustment Range of 3/16" (5mm), which includes a positive locking feature.
- Finishes: US3, US10, US32, US32D, SP4, SP10, SP2B, SP313 and SPBLK.

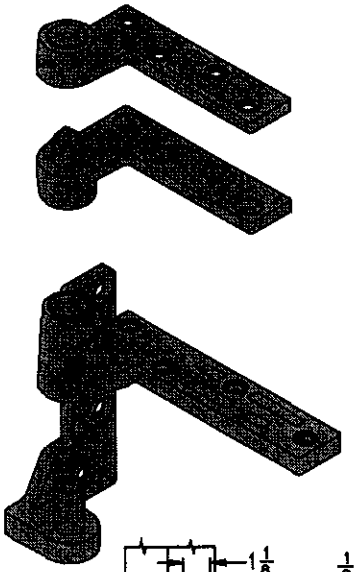


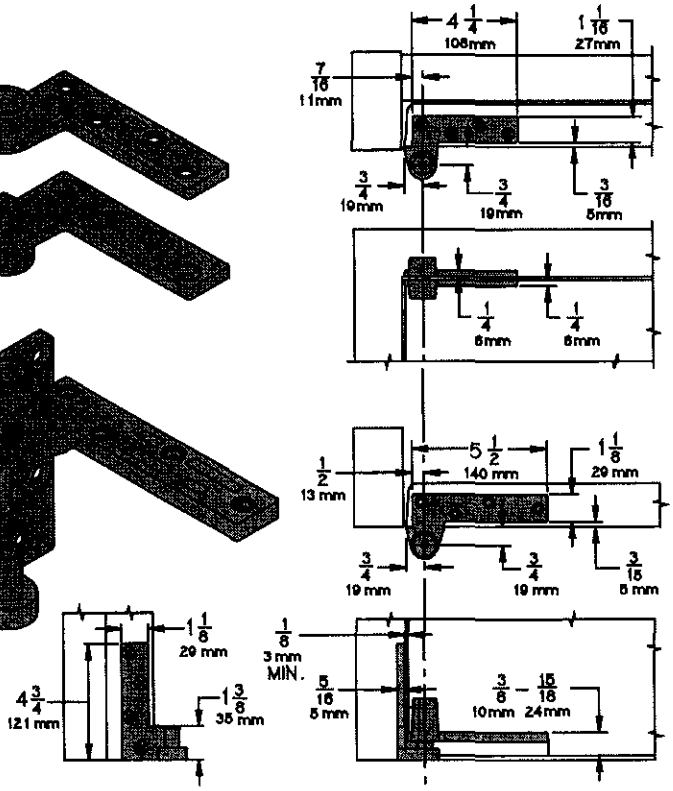


7215 & 7215F 3/4" Offset

7215 or **7215F** Pivot Sets

- Handed 3/4" offset pivot set consisting of a jamb mounted 7215 or 7215F Bottom Pivot (handed) and a head frame mounted 7215 or 7215F Top Pivot, (non-handed).
- Door Thickness minimum 1-3/4" (44mm), bevel 1/8" (3mm) in 2" (51mm).
- Center Line Offset 3/4" (19mm) from face of door and 3/4" from edge of door.
- Maximum Load 500 pounds (227 kg).
- UL Listed
  7215 for 20 minute rated door.
  7215F for 3 hour rated door.
- 7215F meets ANSI/BHMA Grade 1.
- Vertical Adjustment Range of 3/16" (5mm), which includes a positive locking feature.
- Optional Intermediate Pivot
  For 7215 set use 7215 Intermediate Pivot (handed).
  For 7215F set use 7215 Intermediate Pivot (handed).
  Each Intermediate Pivot carries up to an additional 100 pounds (45.5 kg) load or needed for doors over 7'. See page B14.
- Optional 7215 PT Power Transfer Intermediate Pivot (handed). Provides 4 wire transfer with no weight bearing capabilities. See page B20.





How to Order:

7215 ___ - ___ - ___ - ___

Rating:

Blank	Non-fire-rated
F	Fire-rated

Pivot Style:

Blank	Top and bottom set
TOP	Top pivot only
BTM	Bottom pivot only
INT	Intermediate pivot only
PT INT	Power transfer intermediate pivot only

Handing:

LH	Left-hand door
RH	Right-hand door

Finishes:

Non-Fire-Rated	US3, US4, US10, US10B, US26, US26D, SP4, SP10, SP28, SP313, SPBLK
Fire-Rated	US3, US10, US32, US32D, SP4, SP10, SP28, SP313, SPBLK

LCN 4040 SERIES

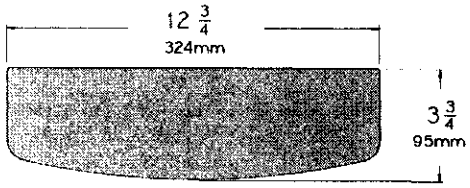
HINGE (PULL) SIDE MOUNTING

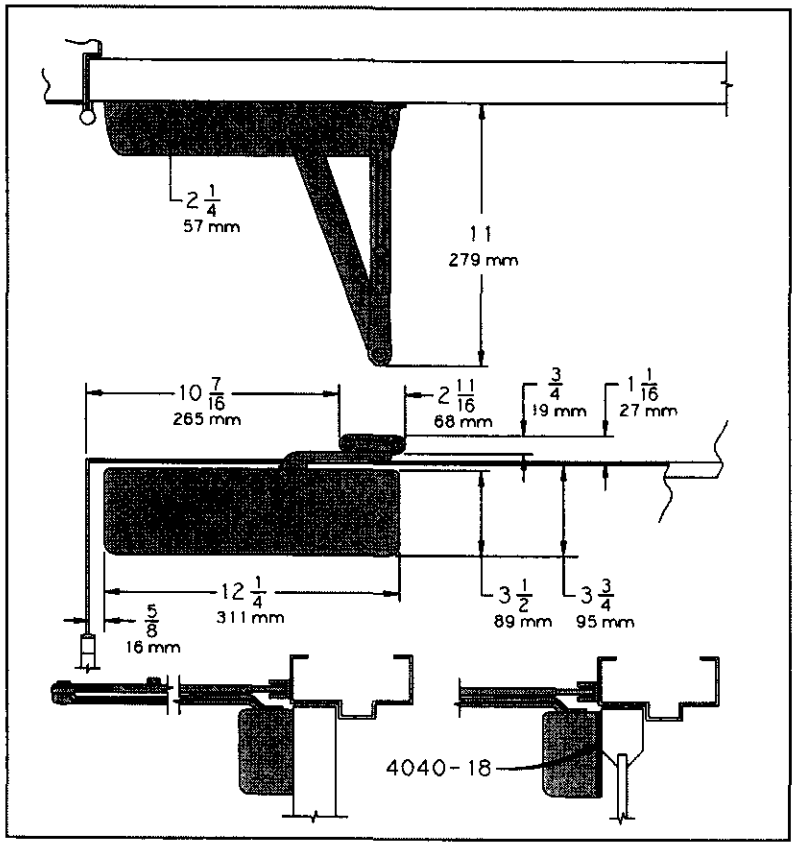
MAXIMUM OPENING

Templating allows up to 120°.

Hold-open points 90° up to 120° with hold-open arm.

Optional, Non-handed Designer Series Metal Cover





Options

- 4040XP cylinder
- 4041 Delayed action cylinder.
- Hold-open arm.
- Metal or lead lined cover.
- Corner bracket.
- Designer Series metal cover.

Special Templates

Customized installation templates or products may be available to solve unusual applications. Contact LCN for assistance.

- **Butt Hinges** should not exceed 5" (127 mm) in width.
- **Auxiliary Stop** is recommended at hold-open point or where a door cannot swing beyond 120°.
- **Reveal** should not exceed 3/4" (19 mm) for regular arm or hold-open arm.
- **Top Rail** less than 3 3/4" (95 mm) requires PLATE, 4040-18. Plate requires 2" (51 mm) minimum. With Designer Series metal cover, use PLATE, 4040-18DS1
- **Clearance** of 2 3/8" (60 mm) behind door required for 90° installation. 2 7/8" (73 mm) for Designer Series metal covers
- **Delayed Action** (not available on 4040XP) Add suffix "DEL" to selected cylinder (eg. 4041 DEL). Delays closing from 120° to 70°. Delay time adjustable up to approximately 1 minute.
- **Bull Nose Trim** requires SOFFIT SHOE, 4040-65.
- **Corner Bracket** available for doors where top jamb or parallel arm mounting can not be used.
  4040-16 allows 110° opening. Projects 5" (127 mm) from stop, 12 13/16" (325 mm) from frame.
  4040-17 allows 100° opening with certain auxiliary door holders (consult factory). Projects 6 3/8" (162 mm) from stop, 13 11/16" (348 mm) from frame.

LCN CLOSERS
121 W. RAILROAD AVE.
P.O. BOX 100
PRINCETON, IL, USA 61356-0100

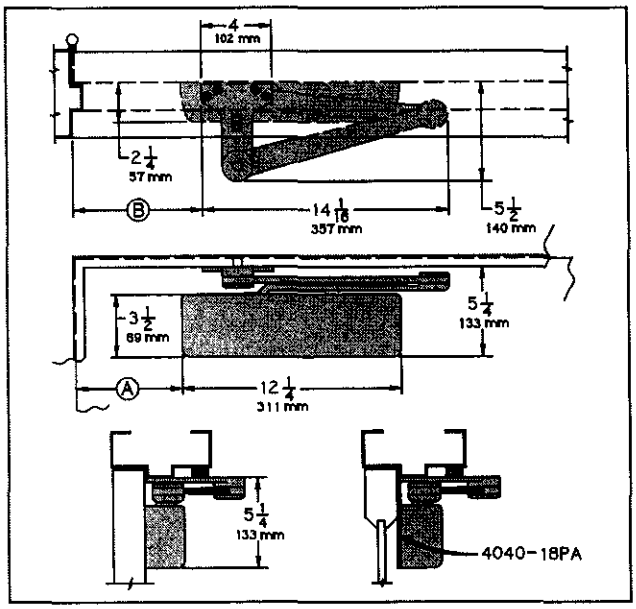
PHONE 800-526-2400
FAX 800-248-1460
www.lcn.ingersollrand.com

3/07

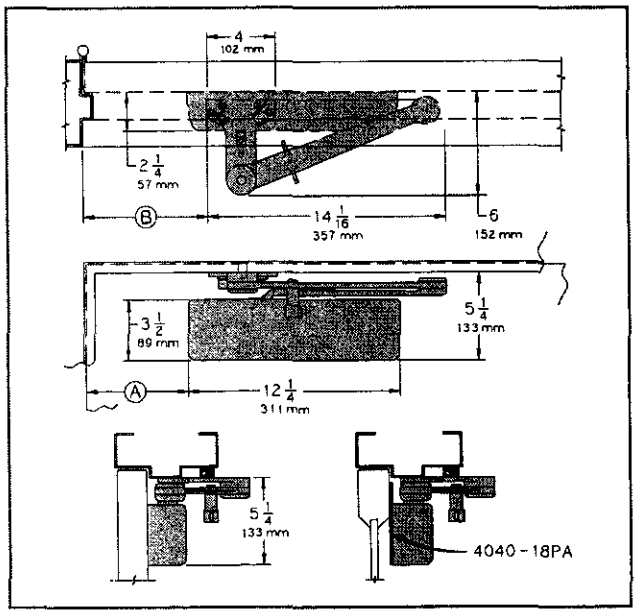
LCN 4040 SERIES

Mounting details are the same as 4040 Series REGULAR or HOLD-OPEN except as listed below. 4040 Series closers ordered with EDA or CUSH arms include 4040-201 FIFTH HOLE SPACER to support the shoe.

4040 SERIES EDA MOUNT



4040 SERIES CUSH MDUNT



- **Clearance** for 4040-62EDA is 5 1/2" (140 mm) from door face. 6" (152 mm) for CUSH.
- **Head Frame** flush or rabetted requires CUSH FLUSH PANEL ADAPTER, 4040-419.
- **CUSH ARM** requires SHDE SUPPDRT, 4040-30 for fifth screw anchorage for narrow frames.
- **Delayed Action** (not available on 4040XP) Add suffix "DEL" to selected cylinder (eg. 4041 DEL). Delays closing from maximum opening to; 115° with 180° template. 95° with 110° template. 85° with 100° template. 75° with 90° template.
  Delay time adjustable up to approximately 1 minute.

MAXIMUM OPENING

EDA arm can be templated for points at: 110°,
Ⓐ = 6 3/8" (162 mm)
Ⓑ = 7 3/4" (197 mm)
or 180°.
Ⓐ = 2 7/8" (73 mm)
Ⓑ = 4 1/4" (108 mm)
Hold-open points up to maximum opening with HEDA arm.

CUSH arms can be templated for opening/hold-open point at:
85°,
Ⓐ = 7 15/16" (202 mm)
Ⓑ = 9 1/8" (232 mm)
90°,
Ⓐ = 7 3/16" (183 mm)
Ⓑ = 8 1/2" (216 mm)
100°,
Ⓐ = 6 1/16" (154 mm)
Ⓑ = 7 1/4" (184 mm)
or 110°.
Ⓐ = 5 1/16" (129 mm)
Ⓑ = 6 3/8" (162 mm)

Spring Cush dead stop points are approximately 5° more than templated stop point. Hold open at templated stop points.

LCN CLOSERS
121 W. RAILROAD AVE.
P.O. BDX 100
PRINCETON, IL, USA 61356-0100

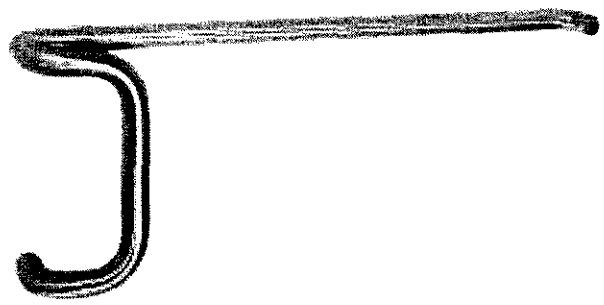
PHONE 800-526-2400
FAX 800-248-1460
www.lcn.ingersollrand.com
3/07

Heading 01 (HwSet 03A)

eyGroup					Hand	Degree Act	Degree InAct
	1	PR	DOOR(S) 107 PARKING FROM LOBBY 110 6'0" x 7'4" x 1-3/4" x A/G x ALF x NON-RTD		LHRA	110	110

Totals	Each Assembly to have:					
(2)	2	EA	TOP-BTM PVT SET	7215	613	IVE
(2)	2	EA	INTERMED PIVOT	7215-INT	613	IVE
(2)	2	EA	PUSH-PULL SET	BF157A47 31"	710	ROC
(1)	1	EA	SURFACE CLOSER	4041-CNS 4040-30 4040-61	695	LCN
(1)	1	EA	MOUNTING PLATE	4040-18PA	695	LCN
(1)	1	EA	AUTO OPERATOR	SEPARATE	695	STA

HARDWARE FINISHES SPECIFIED DO NOT MATCH DOOR/FRAME FINISH



Series 47 Offset Single Bar Sets

Material: Aluminum, Brass, Bronze, or Stainless Steel

Finishes: Available in standard architectural finishes, US32D**BIO**, US32D**316**, US32**316**, white (WPC), red (RPC), and black (BPC) powder coat finishes (see page 7). *US3**LIFETIME** available on select product below.

Mounting:

Door	Pull Free End	Push Free End	Common End	Description	Mounting Spec. No.
Metal & Wood	1	1	5	Back to Back & Thru Bolt	T3**
Metal	17	6	16	Back to Back & Concealed	T4
Wood	B	8	5	Back to Back & Concealed	T5
Metal & Wood	12	12	5	Back to Back & Decorative Bolt	T1
Glass	15	15	13	Back to Back & Thru Bolt	T2

** T3 is the standard mounting method for Metal and Wood Doors.
NOTE: See page A10 for detailed mounting drawings.

Ordering: Specify product number, mounting, door type, push bar CTC, and finish (i.e., BF15747 T3, wood door, 33" CTC, US32D**316**).

Other: See page A1 on "How To" size push bars.

Options:
- Engraving "PUSH" or "PULL" (specify handing).
- Base plates available similar to those shown on page A12 — use BP prefix (BPBF15747) when ordering.
- Heavy duty versions of most fastening types available — use suffix HD to fastening type number (BF15647 T3HD).

No.	Material Size	Pull CTC	Pull Projection	Pull Clearance	Push Projection	Push Clearance	Weight	ANSI 156.6
BF15647	1" dia.	8"	3½"	2½"	2½"	1½"	12.4 lbs.	J504
BF157A47	1" dia.	9"	3½"	2½"	2½"	1½"	12.6 lbs.	J504
BF15747*	1" dia.	10"	3½"	2½"	2½"	1½"	12.8 lbs.	J504
BF15847	1" dia.	12"	3½"	2½"	2½"	1½"	13.3 lbs.	J504
BF15947	1" dia.	18"	3½"	2½"	2½"	1½"	15.0 lbs.	J504

UNIVERSITY OF KENTUCKY
PATIENT CARE FACILITY
PARKING GARAGE

UK Project #: 2239.2

940 Elizabeth Street
Lexington, KY 40506-0293

08800 - Glazing
Submittal Date: February 15, 2007

Construction Manager
Central Kentucky Glass
1123 Versailles Road
Lexington, KY 40508
(859) 253-0710

SUBMITTAL

Glass Submittal

Customer: **Central Kentucky Glass**
Make-up: **1/4"Clear - 1/2"a.s. - 1/4"SolarBan60#3**
Date: **03/01/07**
Job Name: **U of K Parking**

* THIS SAMPLE IS FOR COLOR COMPARISON ONLY*
Full size mock ups of specialty items are highly recommended

SPECIFICATION INFO FOR THIS SAMPLE

Visible Light Trans:	69%
Solar Transmittance:	32%
U-V Transmittance:	14%
Winter Night U-Val:	.29
Summer Day U-Val:	.29
Shading Co-Efficient:	.44

MISC NOTES:
ARCH is fully certified by the Insulated Glass Certification Council (IGCC)

For more information call 1-800-432-8132 or visit www.archaluminum.com

Arch Aluminum & Glass Co., Inc.
Manufacturers of Amerilite® Architectural Products

THIS REVIEW BY GBBN ARCHITECTS, INC., IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND IS NOT AN APPROVAL OF THIS DRAWING OR SET OF DRAWINGS. THE COMMENTS MADE DO NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH THE PROJECT DRAWINGS, SPECIFICATIONS AND OTHER CONTRACT DOCUMENTS. CONTRACTOR IS SOLELY RESPONSIBLE FOR: ALL DIMENSIONS AND QUANTITIES, ALL FABRICATION, DELIVERY AND ERECTION; ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES; ALL COORDINATION WITH ALL OTHER CONTRACTORS, SUPPLIERS AND OTHERS; PERFORMING ALL WORK IN A SAFE AND PROPER MANNER.

NO EXCEPTIONS TAKEN — [X]
FURNISH AS CORRECTED — [ ]
REVISE AND RESUBMIT — [ ]
NO REVIEW - INCOMPLETE — [ ]
SUBMIT SPECIFIED ITEMS — [ ]
REJECTED — [ ]

DATE 3-15-07 BY BK

GBBN ARCHITECTS, INC.
ARCHITECTURE, INTERIORS, PLANNING, ENGINEERING
332 EAST 6TH STREET, CINCINNATI, OHIO 45202-2217 (513) 241-8700
325 WEST MAIN STREET, LEXINGTON, KENTUCKY 40507 (859) 381-8787

Arch Aluminum & Glass Co., Inc.
Manufacturers of Amarlite® Architectural Products

Glass Submittal

Customer: Central Kentucky Glass, Co
Date: 1/26/07

Make up: 1"
1/4 Grey
1/2 A.S.
1/4 Clear With Subdued Grey Ceramic Frit #3

All of Arch's spandrel glass is designed to be glazed against a uniform, opaque background and is not recommended for use in transoms, partitions or other areas where a dark background is not available. Color and reflectance may vary slightly when viewed against a uniform, opaque background is considered acceptable. Small pinholes and scratches viewed in reflectance are considered acceptable. If double coating is required for any reason, additional charges will apply and customer must specify on quote and subsequent order.

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NO EXCEPTIONS TAKEN — X
FURNISH AS CORRECTED
REVISE AND RESUBMIT
NO REVIEW - INCOMPLETE
SUBMIT SPECIFIED ITEMS
REJECTED

DATE 2-15-07 BY BK

GBBN ARCHITECTS, INC.
ARCHITECTURE, INTERIORS, PLANNING, ENGINEERING
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□ 325 WEST MAIN STREET, LEXINGTON, KENTUCKY 40507 (859) 381-8787

Arch Aluminum & Glass Co., Inc.

Glass Submittal

Customer: Central Kentucky Glass
Project: UK PCF Parking Garage
Date: 7/31/06

Make up: 1" 1/4 Grey
1/2 A.S.
1/4 PPG Solarban 60 #3

Visible Light Trans: 35%
Exterior Reflectance: 7%
U-Value (winter) : 0.29
Shading Coefficient: 0.33
Solar Heat Gain Co: 0.29

* THIS SAMPLE IS FOR COLOR COMPARISON ONLY *
All Glass Samples are for provided annealed.
Viewing of full size mock-up is highly recommended

For more information call: 1-800-242-2871 Or visit www.archaluminum.com

ARCH is fully certified by the insulated Glass certification council (IGCC).

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DATE 2-15-07 BY BK

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□ 325 WEST MAIN STREET, LEXINGTON, KENTUCKY 40507 (859) 381-8787

UNIVERSITY OF KENTUCKY
PATIENT CARE FACILITY
PARKING GARAGE

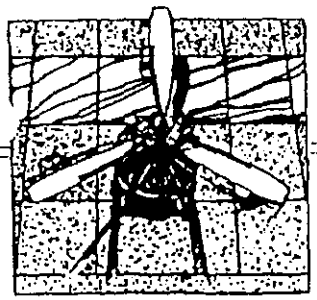
UK Project #: 2239.2

940 Elizabeth Street
Lexington, KY 40506-0293

08900 – Aluminum Curtainwall
Submittal Date: January 15, 2007

Construction Manager
Central Kentucky Glass
1123 Versailles Road
Lexington, KY 40508
(859) 253-0710

SUBMITTAL



MID AMERICA TESTING LABORATORY, INC.

10525 SIGNAL HILL DRIVE · CATAWISSA, MISSOURI 63015
(314) 257-4722 · FAX (314) 257-5425

DATE OF REPORT:	August 31, 2000
LOCATION OF TEST:	Kawneer Company Inc.
DATES OF TESTING:	August 9 and August 18, 2000
SYSTEM NAME:	Series 1600 System 1 and 2 Curtain Wall
PROJECT NUMBER:	20111F
CLIENT:	Kawneer Company, Inc.

The following were present for all or portions of the erection and testing.

Mr. Richard Blaschke	Kawneer Company, Inc.
Mr. Richard Pahmiyer	Kawneer Company, Inc.
Mr. Bill Roden	Kawneer Company, Inc.
Mr. Wayne Whitmyer	Kawneer Company, Inc.
Mr. Greg McKenna	Kawneer Company, Inc.
Mr. Richard Braunstein	Kawneer Company, Inc.
Mr. Gene Keeton	Mid America Testing Laboratory

UNIT DESCRIPTION

The Kawneer Series 1600 System 1 / System 2, 2 1/2" X 7 1/2" curtain wall system measured a nominal 21'-9" wide X 27'-4" high. The system structure is comprised of captured and structurally glazed tubular vertical mullions and captured exterior glazed horizontal mullions.

The horizontal mullions were attached to the vertical mullions with a shear block connection. The shear blocks were attached to the verticals with two (2) #12 sheet metal screws. The horizontals were attached to the shear blocks with two (2) #12 sheet metal screws. The vertical to horizontal joinery was sealed with silicone sealant.

The mock-up was glazed with eight (8) lites of 1" insulated 1/4"-1/4" clear tempered units and twelve (12) lites of 1/4" clear tempered spandrel glass. All of the glass lites were outside glazed, of which one (1) intermediate vertical was structurally glazed.

All glazing was set on 85 durometer setting blocks located at quarter points. Each glass lite had a 65 durometer side block installed at the mid height. A 60 durometer EPDM preset gasket was used at the interior and exterior. Each gasket corner intersection was sealed with silicone sealant.

A pressure plate was applied with a 1/4" EPDM separator and fastened at 9" on center vertically and horizontally with 1/4" sheet metal screws.

Each daylight opening was compartmentalized to control water infiltration. At each horizontal to vertical intersection, a joint plug was sealed into place, with silicone sealant, to divert water to the horizontal weep locations. Each horizontal was weeped 4" from each end with 5/16" diameter holes. Each horizontal cover was also weeped at 2" from each end with a 5/16" diameter hole.

The system anchorage consisted of steel plate anchors welded to the chamber structure and through bolted to the curtain wall system with two (2) 1/2" bolts and lock nuts.

Any item not specifically mentioned in this unit description can be referenced in the mock-up drawings T162-930 sheets 1 through 17, dated 8-9-00.

FORMAL TESTING

1. **PRELOAD** +20.0 PSF static pressure (50% of the positive design load for 10 seconds).

   ALLOWED: No failure of the system

   RESULTS: No failure of the system

   The above result constitutes an acceptable performance.

2. **STATIC AIR INFILTRATION** (ASTM E 283) at 1.57 PSF (25 MPH wind and .3" H_20).

   ALLOWED: .06 CFM per square foot of fixed specimen or 35.7 CFM gross leakage.

RESULTS: Less than .06 CFM per square foot of fixed specimen.

The above results constitute an acceptable performance.

3. **STATIC AIR INFILTRATION** (ASTM E 283) at 6.24 PSF (50 MPH wind and 1.2" H_20).

ALLOWED: .06 CFM per square foot of fixed specimen or 35.7 CFM gross leakage.

RESULTS: Less than .06 CFM per square foot of fixed specimen.

The above results constitute an acceptable performance.

4. **STATIC WATER INFILTRATION** (ASTM E 331) at 15 PSF (77.5 MPH wind and 2.88" H_20) with a water spray rate of five (5) gallons per hour per square foot minimum for fifteen (15) minutes.

ALLOWED: No uncontrolled water leakage shall be allowed.

RESULTS: No uncontrolled water leakage was noted to the room side.

The above result constitutes an acceptable performance.

5. **DYNAMIC WATER INFILTRATION** (AAMA 501) 100 MPH slip stream velocity at the prop creating an equivalent pressure at the wall of 15 PSF. Water was applied at a rate of five (5) gallons per hour per square foot for fifteen (15) minutes.

ALLOWED: No uncontrolled water leakage shall be allowed.

RESULTS: No uncontrolled water leakage was noted to the room side.

The above result constitutes an acceptable performance.

6. **STRUCTURAL DESIGN LOAD** (ASTM E 330) Held for ten (10) seconds duration for both 50% and 100% loads.

+20.0 PSF (50% Positive Design Load)
+40.0 PSF (100% Positive Design Load)
-20.0 PSF (50% Negative Design Load)
-40.0 PSF (100% Negative Design Load)

ALLOWED:	Deflection of framing members shall not exceed L/175 or .75" of the clear span or shall there be any failure of the system.
RESULTS:	No member exceeded the allowable deflection or was there any failure of the system.

The above results constitute an acceptable performance.

7. **SEISMIC RACKING LATERAL** (AAMA 501.4) Three (3) complete cycles at design displacement with each cycle consisting of 1.32" horizontal movement to the left, return to zero (0), 1.32" horizontal movement to the right, return to zero (0).

ALLOWED:	There shall be no failure of the system including anchors, frames, glass, and panels. Gaskets or seals may not fail.
RESULTS:	There was no failure of the system including anchors, frames, glass, and panels. Gaskets and seals did not fail.

The above results constitute an acceptable performance.

8. **STATIC AIR INFILTRATION** (ASTM E 283) at 1.57 PSF (25 MPH wind and .3" H_2O).

ALLOWED:	.06 CFM per square foot of fixed specimen or 35.7 CFM gross leakage.

RESULTS: Less than .06 CFM per square foot of fixed specimen.

The above results constitute an acceptable performance.

9. **STATIC AIR INFILTRATION** (ASTM E 283) at 6.24 PSF (50 MPH wind and 1.2" H_20).

ALLOWED: .06 CFM per square foot of fixed specimen or 35.7 CFM gross leakage.

RESULTS: Less than .06 CFM per square foot of fixed specimen.

The above results constitute an acceptable performance.

10. **STATIC WATER INFILTRATION** (ASTM E 331) at 15 PSF (77.5 MPH wind and 2.88" H_20) with a water spray rate of five (5) gallons per hour per square foot minimum for fifteen (15) minutes.

ALLOWED: No uncontrolled water leakage shall be allowed.

RESULTS: No uncontrolled water leakage was noted to the room side.

The above result constitutes an acceptable performance.

11. **DYNAMIC WATER INFILTRATION** (AAMA 501) 100 MPH slip stream velocity at the prop creating an equivalent pressure at the wall of 15 PSF. Water was applied at a rate of five (5) gallons per hour per square foot for fifteen (15) minutes.

ALLOWED: No uncontrolled water leakage shall be allowed.

RESULTS: No uncontrolled water leakage was noted to the room side.

The above result constitutes an acceptable performance.

12. **STRUCTURAL PROOF LOAD** (ASTM E 330) Held for ten (10) seconds duration for both 75% and 150% loads. Readings were recorded at 150% loads only.

+30.0 PSF (75% Positive Design Load)
+60.0 PSF (150% Positive Design Load)
-30.0 PSF (75% Negative Design Load)
-60.0 PSF (150% Negative Design Load)

ALLOWED: Permanent set of framing members shall not exceed .2% of the clear span or shall there be any failure of the system.

RESULTS: No member exceeded the allowable permanent set criteria or was there any failure of the system.

The above results constitute an acceptable performance.

13. **SEISMIC RACKING LATERAL** (AAMA 501.4) Three (3) complete cycles at 150% of the design displacement with each cycle consisting of 1.98" horizontal movement to the left, return to zero (0), 1.98" horizontal movement to the right, return to zero (0).

ALLOWED: Sealant may tear, metal may yield, and glass may crack, but no components may fall from the test specimen.

RESULTS: Three (3) lites of glass cracked however no glass or any other components fell from the test specimen.

The above results constitute an acceptable performance.

SUMMARY:

The Kawneer 1600 System 1 / System 2 curtain wall mock-up as installed at Kawneer Company, Inc. has met or exceeded the test parameters to which it was subjected.

This report or any portions thereof may not be reproduced by anyone or forwarded to anyone without the written consent of Mid America Testing Laboratory. Participants referenced in this test report are welcome to a copy of this report if so desired by the laboratory's client.

Should you have any question regarding the results of the mock-up in general please feel free to contact the laboratory.

Respectfully Submitted,

Mid America Testing Laboratory

Manager Technical Services

GK: ljk
20111F

GILBANE
University of Kentucky
Patient Care Facility
Gilbane Project No. 18-3956
REVIEWED

Bid Package No. _____
Submittal No. _____
Spec Sect/Para. _____
Reviewed By _____
Date _____

This review does not constitute nor does it assume design responsibility nor does it relieve the trade contractor's supplier from complying with the contract requirements coordinating their work with other trades and verifying field dimensions.

THIS REVIEW BY GBBN ARCHITECTS, INC., IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND IS NOT AN APPROVAL OF THIS DRAWING OR SET OF DRAWINGS. THE COMMENTS MADE DO NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH THE PROJECT DRAWINGS, SPECIFICATIONS AND OTHER CONTRACT DOCUMENTS. CONTRACTOR IS SOLELY RESPONSIBLE FOR: ALL DIMENSIONS AND QUANTITIES, ALL FABRICATION, DELIVERY AND ERECTION; ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES; ALL COORDINATION WITH ALL OTHER CONTRACTORS, SUPPLIERS AND OTHERS; PERFORMING ALL WORK IN A SAFE AND PROPER MANNER.

NO EXCEPTIONS TAKEN — [X]
FURNISH AS CORRECTED — [ ]
REVISE AND RESUBMIT — [ ]
NO REVIEW - INCOMPLETE — [ ]
SUBMIT SPECIFIED ITEMS — [ ]
REJECTED — [ ]

DATE 3-15-07 BY BK

GBBN ARCHITECTS, INC.
ARCHITECTURE, INTERIORS, PLANNING, ENGINEERING
□ 332 EAST 6TH STREET, CINCINNATI, OHIO 45202-2217 (513) 241-6700
□ 335 WEST MAIN STREET, LEXINGTON, KENTUCKY 40507 (859) 381-8787

APPROVED FOR
BONE WHITE COLOR

Submittals

UK Patient Care Facility

Parking Control Equipment

Section 11150

566 Rosedale Avenue
Nashville, TN 37211
Telephone: 615-255-4466
Fax: 615-242-5202

113 Harbor Town Square
Suite 203, Memphis, TN 38103
Telephone: 901-529-0112
Fax: 901-5272-7778

Web Site: www.acs-llc.com
License #0040456

THIS REVIEW BY GBBN ARCHITECTS, INC. IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND IS NOT AN APPROVAL OF THIS DRAWING OR SET OF DRAWINGS. THE COMMENTS MADE DO NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH THE PROJECT DRAWINGS, SPECIFICATIONS AND OTHER CONTRACT DOCUMENTS. CONTRACTOR IS SOLELY RESPONSIBLE FOR: ALL DIMENSIONS AND QUANTITIES, ALL FABRICATION, DELIVERY AND ERECTION, ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES; ALL COORDINATION WITH ALL OTHER CONTRACTORS, SUPPLIERS AND OTHERS PERFORMING ALL WORK IN A SAFE AND PROPER MANNER.

NO EXCEPTIONS TAKEN ☐
FURNISH AS CORRECTED ☒
REVISE AND RESUBMIT ☐
NO REVIEW - INCOMPLETE ☐
SUBMIT SPECIFIED ITEMS ☐
REJECTED ☐

DATE 8/21/06 BY BL

GBBN ARCHITECTS, INC.

ARCHITECTURE, INTERIORS, PLANNING, ENGINEERING
☐ 332 EAST 8TH STREET, CINCINNATI, OHIO 45202-2217 (513) 241-6700
☐ 225 WEST MAIN STREET, LEXINGTON, KENTUCKY 40507 (859) 281-6767
☐ BEIJING IN CHINA DISTRICT YONG LI GE ROAD NO 68, BEIJING, CHINA 100024

SEE ATTACHED Comments.

GILBANE
University of Kentucky
Patient Care Facility
Gilbane Project No. 18-3966

REVIEWED

☐ 010-Huguelet ☒ 020-Garage
☐ 030-Infrastructure ☐ 040-PCF Foundation
☐ 050-PCF Core/Shell ☐ 060-TowerUp Fit

Bid Package No. 110
Submittal No. 110-11150-001.0
Spec. Sect/Para. —
Reviewed By BSH
Date 7-26-06

This review does not constitute nor does it assume design responsibility nor does it relieve the trade contractor's supplier from complying with the contract requirements, coordinating their work with other trade contractors and verifying field dimensions.

Submittal

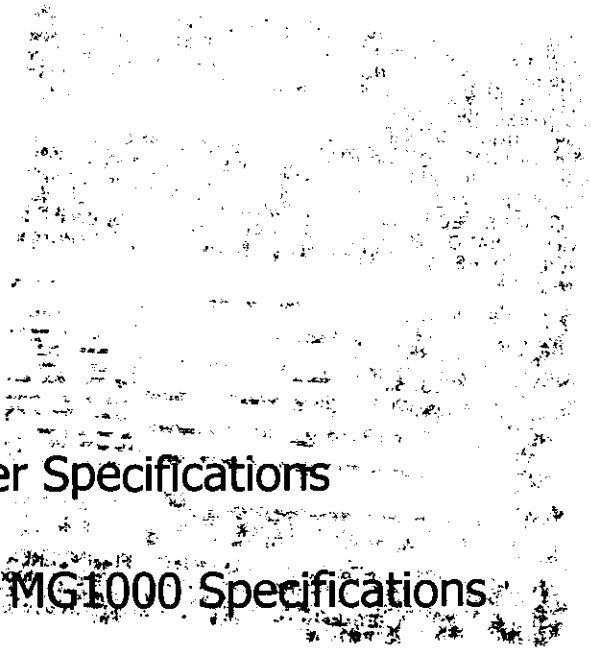
AEI Affiliated Engineers

☐ Approved as Submitted
☐ Approved as Noted ☐ Resubmittal Not Required
☐ Resubmit Noted Portions Only
☐ Not Approved ☐ Resubmit
☒ Reviewed Only/No Approval Action Required
☐ Review Not Required by Contract Documents

Reviewed only for general conformance with design concept and information given in the Contract Documents. Corrections or comments made by reviewer on the submittal do not relieve the contractor from compliance with requirements of the Contract Documents. Approval of a specific item shall not infer approval of an assembly of which the item is a component. The contractor is responsible for all dimensions, field conditions, coordination with other trades, and information that pertains solely to the fabrication process.

By CWH/CAH Date 8/14/06

Index

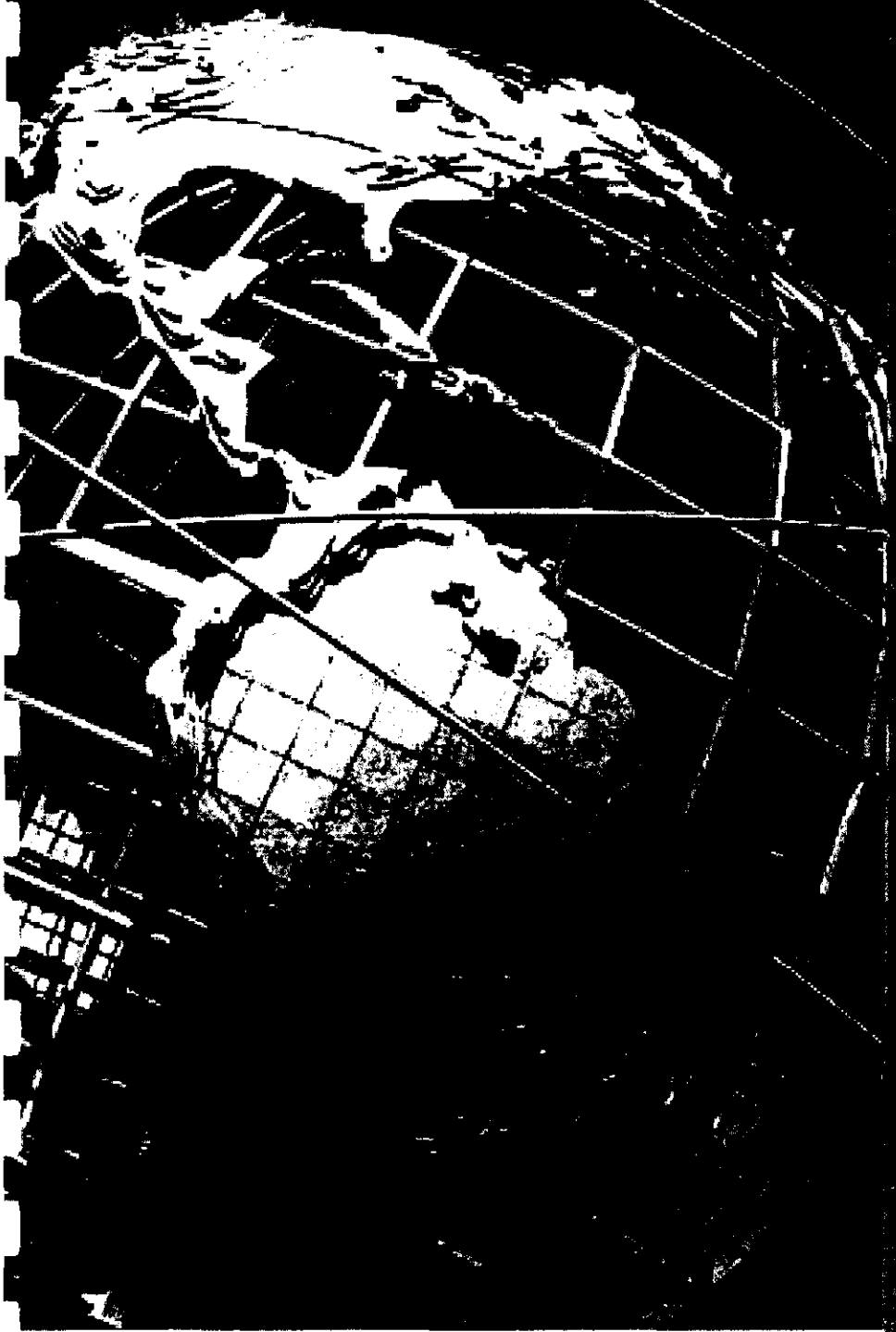


FEDERAL APD

Federal Signal Corporation

Access and Revenue Control Parking Equipment

CERTIFIED ISO 9001:2000



Distributor Agreement

Federal APD, Incorporated 42775 Nine Mile Road • Novi, Michigan
Telephone: (248) 374-9600 • Facsimile: (248) 374-9620 www.FederalAP

2006

This Agreement is effective as of the _____ day of _____ year _____ , between Federal APD, Inc., "Federal APD," and

Access Control Systems LLC (ACS) (the "Distributor").

Appointment

Federal APD hereby appoints Distributor as a nonexclusive distributor of the Products defined herein in the Area set forth below, subject to the terms of this Agreement.

Sales and Service Area

Distributor agrees to aggressively promote and promptly service the Products within the following nonexclusive primary sales and service area:

State of Tennessee, Northern Alabama, Lexington Ky, Northern Miss. also referred to as "Area".

Distributor agrees to maintain adequate sales and service facilities within the Area, as is more fully described in Attachment A hereto. Federal APD reserves the right to maintain Original Equipment Manufacturer (OEM) or House Accounts, to appoint other distributors or dealers, and to take other steps Federal APD deems necessary to develop sales of the Products in the Area.

Distributor agrees that it will not sell Products directly or indirectly to customers located outside its Area without the prior written consent of Federal APD, which may be granted or withheld in its sole and absolute discretion. Distributor further agrees that it shall provide Federal APD with written notice of any and all sales or service opportunities which it becomes aware of outside of its Area. If and to the extent Distributor secures an obligation to deliver Product(s) to a customer located outside its Area, without obtaining Federal APD's prior written consent, Distributor agrees that it shall pay an administrative fee equal to ten percent (10%) of the suggested list price for such Product(s) to Federal APD for ultimate distribution to the Distributor(s) assigned to the sales and service area in which the Product(s) are being sold.

Responsibilities of Federal APD

Federal APD agrees to make available to Distributor, subject to the provisions of this Agreement and appropriate Price Book terms and conditions, the Products and parts listed in the following Federal APD Price Lists, as modified from time to time by Federal APD:

_____ ("Products")

Federal APD will also provide to Distributor:

(i) technical support on major Products by a Federal APD product specialist;
(ii) formal training of Distributor's service personnel, at Distributor's expense, conducted periodically by Federal APD at one of its facilities;
(iii) market development support and informal sales and service training by a Federal APD Regional Sales Manager;
(iv) product literature and specification sheets as well as installation drawings for standard Product applications;
(v) logo, art, and copy for advertising purposes, subject to Distributor's compliance with all Federal APD policies and regulations on such usage. No use of Federal APD logos, trademarks, or advertising is permitted without Federal APD's prior written consent.

In addition, Federal APD will conduct national advertising campaigns, direct marketing campaigns, and participate in national trade shows and exhibitions.

In the event Distributor is responsible for having Federal APD "Products" specified for a project within Distributor's Area, Federal APD will pay Distributor an amount equal to two percent (2%) of the F.O.B. price of those Products so specified which are manufactured by Federal APD, subject to the following terms and conditions:

1. Distributor must be the first to notify Federal APD in writing, at least four weeks in advance of the date bids are first let for any such project, that Distributor is actively working to specify Federal APD for such project;
2. The Federal APD Products so specified must ultimately be sold by Federal APD for the purpose of use on such project;
3. The payment of such two percent shall only be made after Federal APD has received payment for the Federal APD Products delivered for such project.

Responsibilities of Distributor

Distributor agrees to aggressively promote and sell the Products throughout the Area in order to achieve the full sales potential of the Area as contemplated by the parties in Attachment A, as the same may be amended from time to time. Distributor shall properly install and service all Products sold by Distributor and shall be responsible for adequately training its customers on the use of Products. In addition, Distributor shall maintain the number of trained sales and service personnel and the type of advertising set forth in Attachment A hereto, as amended or superseded from time to time.

Distributor also agrees to the following terms and conditions:

(i) to maintain the number of trained sales and service personnel and the type of advertising set forth in Attachment A hereto, as it may be amended or superseded from time to time;
(ii) to provide maintenance and repair work for Federal APD Products sold within the Area. Such service shall include warranty work, at Distributor's expense, and emergency service by trained personnel. Distributor shall have available all equipment, tools, and parts required for such work.

(iii) On or before the 20th calendar day of each month, Distributor shall submit to Federal APD: (A) a written report of sales and service activity for the previous month, and (B) a project tracking report, in each case in the form provided to Distributor by Federal APD, which form may be amended from time to time;

(iv) Distributor shall not advertise prices other than Federal APD's suggested list prices for Products in the public domain (including, but not limited to print, broadcast, internet, or other media);

(v) Distributor shall display a sign representing its business as an Authorized Federal APD Sales and Service Distributor so long as this Agreement or any renewal thereof is in effect;

(vi) Distributor shall provide Federal APD with a list of its employees who are authorized to place orders for Product(s) along with the maximum purchasing limits applicable to such employees, if any. Distributor shall notify Federal APD in writing of any changes, additions, or deletions to the list of authorized employees. Distributor shall be liable for any and all purchase orders submitted by employees or former employees listed as authorized to make purchases on the then most current list of authorized employees delivered to Federal APD;

(vii) Distributor shall not solicit or hire any Federal APD employee or former employee for employment or for any other service for a period of two years following the earlier to occur of the following: (a) the termination of this Agreement, or; (b) the employee's termination of employment with Federal APD;

(viii) Distributor and its employees shall conduct business in a manner which will reflect favorably upon Distributor, Federal APD, and its Products;

(ix) Distributor shall not sell or represent as Federal APD Products, parts or accessories other than genuine Federal APD parts and accessories;

(x) Distributor will make Sales personnel available, at its own expense, for periodic factory visits and training as well as attend Distributor Meetings when held. Service personnel will also be available, at the expense of the Distributor, for periodic training and Product certification (at a minimum of one training per year per individual), and prior to the sale of the first installation in the Area.

(xi) Distributor will equip each service facility in its Area with the minimum service tools, testing devices, and other special equipment specified by Federal APD. Distributor will also upgrade its service tools, testing devices, and other special equipment as necessary from time to time by new product introductions. Federal APD reserves the right to visit and inspect Distributor's service facilities and confirm the availability of minimum service equipment.

(xii) Distributor agrees to execute a mutually formulated business plan to develop Distributor's Area. The business plan will outline and describe the actions required to develop Distributor's Area. Such actions will include, but are not limited to, establishing a distribution network in the Area which will provide acceptable market sales and service support. Federal APD reserves the right to final approval of Distributor's distribution network and/or its members.

Distributors Scope of Authority

Distributor is an independent contractor, and is neither an employee nor an agent of Federal APD. Distributor has no authority and shall not attempt to bind Federal APD nor to incur any liability or obligations, nor to make any commitment on behalf of Federal APD.

Idemnification

Distributor agrees to defend Federal APD against and to indemnify and hold Federal APD harmless from any and all claims, costs, obligations or liabilities (including attorney's fees and costs of litigation) arising by reason of (1) any assembly, repair or modification of Products by Distributor or its agents; (2) any negligent acts or omissions of Distributor or its agents; (3) any representation made by Distributor or its agents regarding any Product function, specification, or capability not contained on printed specifications specifically prepared by Federal APD; and (4) any breach of this Agreement by Distributor.

Federal APD agrees to defend Distributor against and to indemnify and hold Distributor harmless from any and all claims, costs, obligations, or liabilities (including attorneys' fees and cost of litigation) arising by reason of (1) any negligent acts or omissions of Federal APD or its agents; (2) any breach of this Agreement by Federal APD.

Trademarks

Federal APD gives and grants Distributor during the term of this Agreement, a license to use the trade name/trademarks listed in Attachment A, or any variation thereof as may be approved in writing by Federal APD. Federal APD's trademarks, copyrights, insignia, service marks and other proprietary trade names are to be used solely and exclusively for the distribution of Products in the Area by Distributor, and in accordance with the terms and conditions set forth herein. Distributor recognizes and acknowledges that Federal APD is the sole and exclusive owner of its trade name and trademarks. Distributor agrees that it will not register such trade name or trademarks in his own name, or that of any other firm, person or corporation and that it will not use Federal APD trade name and/or trademarks as any part of the corporate name.

Confidential Information

Distributor agrees to hold all "Confidential Information" originated by Federal APD in confidence; and to treat said Confidential Information as proprietary of Federal APD, and not to disclose, market, publish, disseminate, sell, duplicate, manufacture, reproduce or use said Confidential Information without the prior written authorization of Federal APD. Distributor agrees to inform each of its Employees of this agreement and to require them to agree to be bound by its provisions.

"Confidential Information" is defined to include all trade secrets, drawings, specifications, disclosures, designs, data, reports, calculations, models, component parts, dies or molds, patents, patent applications or the like, whether oral or written; but shall not include information which (1) is in the Distributor's knowledge or possession at the time of disclosure to Distributor and written proof thereof is made promptly; (2) is part of the public knowledge or domain

at the time of disclosure; (3) is subsequently received by Distributor from a third party, independently, and without binder or secrecy; or (4) subsequently becomes part of the public knowledge or domain through no act or fault of the Distributor, such as by commercial sale or by the publication of a patent or a technical article.

This agreement shall apply to each and every piece of Confidential Information obtained by the Distributor, and shall continue until said Confidential Information ceases to be confidential as outlined above.

Product Terms and Conditions

Availability of Product: Federal APD will endeavor to make Products available to Distributor in sufficient quantities for Distributor to meet Distributor's sales and service responsibilities. Federal APD does not guarantee the availability of any Products and reserves the right to select manufacturing priorities and to discontinue the manufacture of any Products at any time without incurring any obligation to Distributor. Federal APD shall not be liable for failure or delay of delivery caused by acts of God, strikes, war, lack of products or raw materials, or other factors outside the control of Federal APD. Distributor's performance levels, however, will be adjusted to reflect the unavailability of Products.

Prices: List prices for Products are those in effect at time of shipment and are subject to change by Federal APD without notice. Distributor will receive Federal APD's standard Distributor discount from list price based on appropriate Price Book terms and conditions, which may be modified from time to time by notice to Distributor's address of record. Distributor agrees to pay all taxes, shipping and other ancillary charges incurred in connection with the delivery of the Products.

Orders: All orders are subject to acceptance by Federal APD. Shipment of an order constitutes acceptance.

Payment: Payment for all Products shall be made in U.S. dollars. Standard, open account payment terms for all Products shall be 2%/10 net 30 days from date of invoice. On projects over $50,000, a 10% downpayment is required. A 20% downpayment is required for projects over $100,000. Federal APD reserves the right to ship Products to Distributor on a C.O.D. basis or require payment in advance of shipment if, in Federal APD's sole opinion, it is unwilling to extend standard credit terms. Federal APD may require a Letter of Credit (L/C) for certain transactions. Letters of Credit should be confirmed by a U.S. bank acceptable to Federal APD and should include provisions for payment at sight upon presentation of shipping documents at the U.S. bank counter. Title shall pass to Distributor in U.S.A. at the shipping point. In the event terms are extended and Federal APD is not paid when due, Federal APD may exercise all rights available to it in law and in equity, and all overdue payments shall bear interest at eighteen percent (18%) per year or at the highest rate allowed by law, whichever is lower.

Security Interest: Distributor hereby grants to Federal APD a continuing security interest in the Products sold and delivered to Distributor. Distributor acknowledges that this constitutes a security agreement between the parties and the Distributor hereby agrees to execute any financing statement reasonably requested by Federal APD to evidence its security interests in the Products.

Shipment: All shipments shall be made FOB Federal APD's plant in Michigan, U.S.A. Distributor agrees not to request or direct shipments outside the Area for the purpose of reselling outside the Area. No drop shipments outside the Distributor's Area will be made. Risk of loss will pass upon delivery of goods to the carrier.

Limited Warranty: Federal APD, Inc. warrants that the Products will be free from any defects in material and workmanship under normal use and service, wear and tear excepted, for a period of two years from the date of shipment from Federal APD. Exceptions to this warranty may include any products and/or accessories that are used with Federal APD equipment but are not manufactured by Federal APD Inc. In those instances where Federal APD is not the manufacturer of goods sold hereunder, Federal APD's warranty shall be the lesser of such manufacturers' warranty, or Federal APD's standard warranty.
This warranty shall not apply to Products which have not been properly maintained or have been subject to misuse, neglect, accident or damage, or which have been modified, changed, reworked in any way, without prior written approval of Federal APD. Federal APD's sole obligation shall be to repair or replace, at Federal APD's option, any defective part or parts within such two years period. Upon Federal APD's written instructions, allegedly defective goods shall be returned to Federal APD for inspection. This warranty extends only to the original purchaser from Distributor and shall not cover repair, labor or replacement of parts that are by nature expendable. Distributor agrees to deliver the Federal APD Limited Warranty then in effect to each of its customers at the time of sale. Distributor shall have no authority to bind Federal APD to any warranty beyond that extended herein.

All Products are subject to design and/or appearance modifications which are production standards at the time of shipment. Federal APD may, but shall not be required to, modify or update Products shipped prior to a current production standard.

THERE ARE NO OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT SHALL FEDERAL APD BE LIABLE FOR ANY LOSS OF PROFITS OR ANY INDIRECT OR CONSEQUENTIAL DAMAGES ARISING OUT OF FEDERAL APD'S BREACH OF THIS WARRANTY OR ANY OTHER TERM OR CONDITION OF THIS AGREEMENT.

Modifications: All products are subject to design and/or appearance modifications which are production standards at time of shipment. Products shipped prior to a current production standard will be modified to the current production standard when returned to Federal APD by Distributor, if in the sole opinion of Federal APD, such modifications are necessary.

Competitive Product Lines

Distributor shall not manufacture or produce any products which are similar to or competitive with the Products (as determined by Federal APD in its sole and absolute discretion) during the term of this Agreement, or any renewal thereof, or for a period of two years following the termination of this Agreement for any reason.

Demonstration Kit

Distributor agrees to purchase a Demonstration Kit of any applicable new product as it becomes available.

Software

THE FOLLOWING TERMS AND CONDITIONS APPLY TO ALL SOFTWARE LICENSED OR SUPPLIED IN PRODUCTS UNDER THIS AGREEMENT.

Distributor agrees that all software programs are copyrighted by Federal APD with all rights reserved to Federal APD and that the distribution and sale of these products are intended for the use of the original purchaser only.

Distributor agrees that without Federal APD's permission it will not use, copy, modify or transfer these programs, or any copy, modification or merged portion, in whole or part without Federal APD's prior written consent. Distributor agrees not to disclose or otherwise make available any part of these software programs or associated documentation to any third party, other than Distributor's employees, who have agreed to be bound by these same confidentiality provisions. Distributor shall not remove or obscure Federal APD's notices with respect to its proprietary rights, nor alter or otherwise disassemble the software programs.

Duration of this Agreement

This Agreement shall commence on the effective date first written above and, unless terminated earlier, shall expire automatically on the last day of the calendar year. This Agreement may be automatically renewed on January 1 of the following year if and only if the Distributor and Federal APD agree on revisions in Attachment A on or before December 1 of the then current term. Federal APD reserves the right to change any of the provisions of its Distributor Agreement from year to year.

Termination of this Agreement

Either Federal APD or Distributor may terminate this Agreement at any time, with or without cause, upon sixty (60) days prior written notice. This Agreement may be terminated immediately, without prior notice, by either Federal APD or Distributor in the event of the insolvency of the other party, or the institution of voluntary or involuntary proceedings in bankruptcy.

Federal APD may terminate this Agreement immediately, without prior written notice, for the following additional reasons:

1. The death or incapacity of Distributor, if Distributor is an individual partnership;
2. If Distributor transfers or assigns any part of this Agreement;
3. If Distributor's Ownership or Management changes or the death or incapacity of one or more partners, if the Distributor is a before the word "partnership";
4. If Distributor fails to comply with the requirements of any Federal APD program License Agreement.

Following termination, Federal APD will consider repurchasing any new, current, salable Products or parts held in the Distributor's inventory if requested by Distributor. Federal APD reserves the right to inspect all Products and parts before making payment. Federal APD will continue to sell parts and render repair services for a period of ninety (90) days, at standard Distributor net, from the time of termination subject to customary and standard account and collection practices.

Following termination, Distributor shall:

(i) cease representing itself as a Federal APD Distributor and will remove from its premises, as well as the premises of its distribution network, all signs bearing the name Federal APD and/or its trademarks;

(ii) return to Federal APD all paperwork including or based on Confidential Information as well as papers with respect to trade names, patents, designs, drawings, engineering and other data, photographs, literature, and sales and training aids of any kind furnished to a Distributor by Federal APD and not make or retain copies of any item;

(iii) immediately furnish to Federal APD a complete list of all of Distributor's customers for the Products. List shall include information in appropriate detail concerning all Products which are still under warranty and all Products on order through Distributor;

(iv) deliver to Federal APD, freight collect but otherwise free of charge, all Confidential Information and all price lists, manuals, and other materials relating to the Products and replacement parts as Federal APD may request, and copies of all sales records pertaining to the Products and replacement parts.

Arbitration

All disputes related to this Agreement which cannot be settled amicably by the parties shall be submitted to arbitration. The arbitration shall be conducted in English according to the rules of the American Arbitration Association. The arbitration shall be conducted in Oakland County, Michigan before a panel of three arbitrators The decision of the arbitration tribunal shall be final and binding. The decision may be enforced in any court of competent jurisdiction, including courts of Distributor's jurisdiction of incorporation or where the Distributor has assets.

Attachment A

As an Authorized Distributor for Federal APD Products, the Distributor agrees to complete and sign Attachment A each year including the first year the Distributor Agreement is in effect. Attachment A is part of this Agreement, and provides information on Distributor's specific Sales and Marketing responsibilities for each year. Each year after the Distributor Agreement is in effect, a new Attachment A must be completed, signed and returned to Federal APD by December 1 of the year prior to the effective date established by the new Attachment A, or this Agreement may be terminated at Federal APD's discretion.

Notices

All notices or other communications hereunder shall be deemed given when delivered by facsimile with proof of successful transmission, by overnight courier, or when mailed by registered mail, postage prepaid, to the parties at their addresses set forth herein.

Miscellaneous

Distributor may not assign, transfer or sell its interest in this Agreement to a third party. Distributor agrees to advise Federal APD prior to any change in the senior management or ownership of Distributor. This Agreement constitutes the only agreement and understanding between Distributor and Federal APD, and supersedes any prior oral or written agreement between them. This Agreement cannot be modified without the written consent of an officer of Federal APD. The waiver by any party of a breach of this Agreement shall not constitute a waiver of continuing or succeeding breaches.

In the event Distributor breaches the Agreement, the Distributor agrees to pay Federal's costs, including reasonable attorney's fees, in enforcing this Agreement.

Any claim related to or arising out of Federal APD's breach of this Agreement must be commenced within one year after the cause of action has accrued. All claims arising out of or related to Federal APD's breach of this Agreement shall be brought in state or federal court with situs in Michigan, which the parties agree is the most convenient forum. The parties hereby consent to service of process and submit to jurisdiction of any state or federal court located in Michigan.

The Agreement is made in, and shall be governed by, the laws of Michigan, United States of America, without regard to its laws of conflict.

Upon execution by both parties, this Distributor Agreement is entered into and becomes effective as of the date shown above, or on the date approved by Federal APD, whichever date is later.

Distributor:

Company: Access Control Systems LLC

Address: 5106 Rosedale Ave.

Address:

City: Nashville State/Province: TN Zip/Postal Code: 37211

Telephone: 615 255 4406 Facsimile: 242-5208 E-mail: SHHaley@ACS-LLC.com

Signature:

Date: 11/11/05

Name and Title: Steve Haley - President

Witness: Paula Leavitt

Date:

Recommended by:
Federal APD
Regional Manager

For Office Use Only:

Signature:

Date:

Printed Name and Title:

Federal APD Approval:

Signature:

Date: 2.20.06

Mark D. McNicholas, Vice President of National Sales

Witness:

Date: 2-20-06

2006 Distributor Attachment A

Each year the Distributor Agreement is in effect, a new Attachment A must be completed by the Distributor and Regional Manager and/or Sales Representative. This new Attachment A must be completed for the year shown above and submitted to Federal APD, Inc. by **December 1, 2005**. The "Products" as referred to in the Agreement and this Attachment A shall be modified to mean the products listed in the Price Book Catalog which includes the ScanNet Central Management System and the AutoRead product line.

Please type or print all required information clearly.

Access Control Systems LLC (Distributor), as an Authorized Distributor for Federal APD products and services (the Products), and in accordance with the duties, obligations and responsibilities under the Distributor Agreement effective 01/01/06 (mm/dd/yyyy), Distributor agrees to undertake the following minimum actions during 2006.

Market Development: Distributor agrees to aggressively promote and promptly service the Products within the following nonexclusive primary sales and service Area:

Distributor will establish within assigned Area, adequate market coverage, both sales and service, in the following Second Tier regions of its Area:

1. State of Tennessee by 01/01/06 (mm/dd/yyyy)
2. Lexington KY by 01/01/06 (mm/dd/yyyy)
3. Northern Alabama by 01/01/06 (mm/dd/yyyy)
4. Northern Miss. by 01/01/06 (mm/dd/yyyy)
5. _____ by ___/___/___ (mm/dd/yyyy)
6. _____ by ___/___/___ (mm/dd/yyyy)

Sales Development: Distributor will attain sales of the Products 900,000 for 2006.

And for renewal and evaluation purposes, annualized Product sales of $US 1m for 2007 are projected based on Distributor's analysis.

Demonstration Equipment: Distributor must have at its sales premises, and/or distribution network, one of each Product listed below for demonstration purposes:

1. SST Spitter
2. SST Powerpad
3. ScanNet Software
4. _____
5. _____
6. _____
7. _____
8. _____

Demonstration Products must be purchased or already on hand at the execution of this Attachment. Demonstration Products will be considered part of Distributor's stocking obligation. To assist Distributor with obtaining Demonstration Products, Federal APD may offer special, promotional prices on the Products.

Advertising and Promotion: Distributor will maintain annualized advertising expenditures of at least $US 10,000. In addition to telephone and industrial directories, Distributor will promote Federal APD Products in the following printed mediums:

1. Nashville Yellow Pages/Telephone Directory — Issue Date _____ US $ _____ (Approx.)
2. Memphis Yellow Pages/Telephone Directory — Issue Date _____ US $ _____ (Approx.)
3. Knoxville Trade Directory — Issue Date _____ US $ _____ (Approx.)
4. Lexington KY — Issue Date _____ US $ _____ (Approx.)
5. _____ — Issue Date _____ US $ _____ (Approx.)

Note: ALL printed materials must acknowledge Distributor as "Authorized Federal APD Distributor" or "Sales & Service Representative".

Trademarks:
Distributor may use, subject to the terms specified under "Trademarks" of this Agreement, the following trade names and/or trademarks:
(1) Federal APD; (2) AutoRead™; (3) Model G-90 CD™ Barrier Gate; (4) SST;® (5) Ticket Spitter;®
(6) Auditor PowerPad;™ (7) TD-300 Series™ (8) PosiDRIVE® Security Gate; (9) ScanNet;®
(10) Passport 360;™ (11) ValueCard;™ (12) ValuePass;™ (13) RadioKard;™ (14) Kontrol Kard™

Seminars & Exhibitions: Distributor will hold 2 sales and marketing seminars per year, 2 informal sales training sessions with employees and clients per year. Distributor will also participate in 2 industrial or Product related exhibitions per year. Federal APD will assist Distributor in seminars, informal training, and exhibits if requested, and provide Product information, promotional literature, and other related materials.

Distributor will attend the Federal APD Distributor Meeting in 2006: (Y) N

Sales and Service Personnel: Distributor will dedicate the following sales and service personnel full time to the Products:

	Have Attended Factory Training		
Sales 1. Steve Haley	(Y)	N	Location/Phone 615·255·4466
Sales 2. Phillip Lawson	(Y)	N	Location/Phone 901·529·0112
Sales 3.	Y	N	Location/Phone
Service 1. Mike Spitzler	(Y)	N	Location/Phone 615·255·4466
Service 2. Paul Kahkola	(Y)	N	Location/Phone 865·523·7705
Service 3. Terry Vogt Tim Haley	(Y)	N	Location/Phone 901·529·0112 859·257·3727

Maintenance Contracts: Distributor will promote maintenance and preventative maintenance contracts on all installations transacted by the Distributor.

Distributor:

Company: Access Control Systems LLC
Bill to Address: 5616 Rosedale Ave.
City: Nashville State TN Zip/Postal Code: 37211
Telephone: 615·255·4466 Facsimile: 615·242·5202
Email: SRHALEY@ACS-LLC.com Web Page URL: ACS-LLC.com
Ship to Address: Same
City: State Zip/Postal Code:
Telephone: Facsimile:

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Distributor:

Signature: Date: 11/16/05
Name and Title: Steve Haley - President

Federal APD Approval:

Signature: Date: 2-20-06
Mark D. McNicholas, Vice President of National Sales
Witness: Date: 2-20-06

FEDERAL APD

Federal Signal Corporation

Authorized Distributor

ACCESS CONTROL SYSTEMS

NASHVILLE, TN

is an Authorized
Sales and Service Distributor
for Federal APD, Inc.

Mark W. Cassens, President

Mark D. McNicholas
Vice President of National Sales

DECEMBER 31, 2006

Expiration Date

LITHO. IN U.S.A.

ISO CERTIFIED

QUALITY POLICY:

Quality is... A continuous process implanted in each job function, team and project.

The responsibility of all employees. Applies to all employees. Achieved by prevention of defects, not detection of defects.

Internal processes will be defined, documented, understood and followed at all times.

DNV Certification, Inc.

DET NORSKE VERITAS
MANAGEMENT SYSTEM CERTIFICATE

Certificate No. CERT-05971-2003-AQ-HOU-RvA/RAB
This is to certify that the Quality System
of

FEDERAL APD, INC.

at

42775 W. Nine Mile Road, Novi, MI 48375 USA

Has been found to conform to Quality Management System Standard:

ISO 9001:2000

This Certificate is valid for the following products/service ranges:

THE DESIGN, MANUFACTURE AND SERVICE OF PARKING ACCESS AND REVENUE CONTROL EQUIPMENT

Place and date:
Houston, Texas; 27 October 2003

for the Accredited Unit:
Det Norske Veritas Certification, Inc.
Houston, Texas, USA
DNV Management System Certification
The Netherlands

Ir. J.P. Ruebsaet
Management Representative
Det Norske Veritas Certification, Inc

ANSI-RAB QMS ACCREDITED

MGMT. SYS. RvA C 024

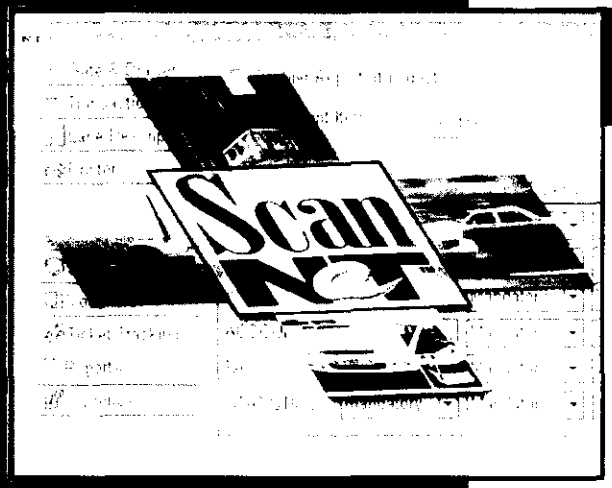
Accredited by the RvA

This certificate is valid until:
28 September 2006

Initial Certification Date:
28 September 2003

James T. Harrison
Lead Auditor

Federal APD, Inc.
42775 Nine Mile Road Novi, Michigan 48375 USA Tel: 248-374-9600 Fax: 248-374-9610 www.federalapd.com

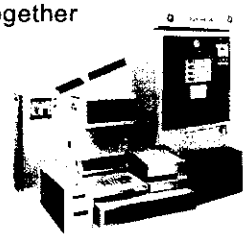


ScanNet® Parking Management Software

ScanNet® Facility Management Parking Control System

An integrated central management system to control and monitor parking and ground transportation systems.

ScanNet® offers central management solutions for parking installations of all sizes, from modest surface lots to city-area networking systems. Parking, access, and revenue controls are bundled together as one seamless enterprise program. Standard or custom designed reports provide comprehensive financial tracking and activity audits.



Integrated System

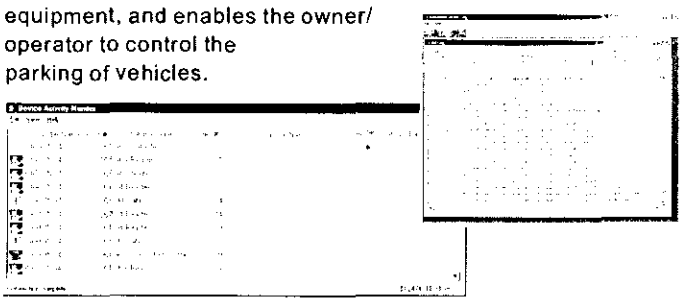
The new technology designed into ScanNet's architecture challenges traditional thinking for central management systems. Parking, access, and revenue controls are no longer separated in different modules– but are bundled together as one seamless enterprise system. Information generated from all the devices in the system, from barrier gates to fee computers, is accessible by ScanNet s Event Control System (ECS).

- **A complete Turnkey Solution**
- **Open System Architecture for System Integration.**

Parking & Count Control

ScanNet makes it easy to set-up and monitor all your traffic lane equipment. The Event Control System defines the variables for each lane controllor in the system and controls the device's tasks-such as monitoring transient and monthly parkers, raising a gate arm, automatically triggering a full sign, or activating a variable message sign while storing all the information in the database for real-time and statistical reporting.

Automated count control, integrated with automated revenue control, eliminates the need to manually read counters in lane equipment, and enables the owner/ operator to control the parking of vehicles.



Access Control

The Access Control System (ACS) enables you to sep up Credentials that will allow patrons and vehicles to enter and exit a facility. A Credential is an instrument, such as an access card or an AVI tag, that uniquely identifies the patron.. When a Credential is set-up, the system automatically places the ID information in all associated Passport Plus, ValuePass, and ValueCard Readers (or other select, third party devices). The Access Control System allows you to associate the Credential with a patron and/or a vehicle - allowing you to assign each to an account for billing and tracking purposes.

Revenue Control

ScanNet provides simple to use tools to manage your revenues from a central location. Pull down menus show remote programming and monitoring of transactions from your revenue control devices. Fee tables, rate structures, and other features can be designed and implemented for your application.

ScanNet provides a complete accounting of all activities in your parking network. The system provides many detailed transaction reports that may be integrated with third-party accounting systems. Crystal Reports Writer allows you to change, modify, and customize standard reports. Information can be exported to a number of different programs, including Microsoft Office, Lotus Notes, WordPerfect, QuickBooks, and a host of other report and accounting packages.

ScanNet

CERTIFIED ISO 9001:2000

FEDERAL APD

Federal Signal Corporation

www.federalapd.com

COMPUTER SPECIFICATIONS

ScanNet®

Parking Management Software

Entry-Level (up to 90 devices)

Processor:
Intel® Pentium® 4 with Hyper-Threading technology. 2.8Ghz, 800MHz Front Side Bus, 1MB L2 cache.

Operating System:
Microsoft® Windows® XP Professional

Memory:
1 GB - DDR 333MHz

Storage:
80 GB Utra ATA Hard Drive

CD-ROM / DVD:
48 x CD-RW or DVD+R

Ports:
Parallel
Series RS-232 - COM1 & COM2
USB 2.0

Networking:
Ethernet - 10/100 Mbps.
(1-2 ports - contingent on the number of 2 way traffic devices).

Graphics:
Graphics Video Interface with 256MB

Monitor:
17" .28 dot pitch or less

Mid-Range (up to 150 devices)

Processor:
Intel® Pentium® 4 with Hyper-Threading technology. 3.0Ghz, 800MHz Front Side Bus, 1MB L2 cache.
(Dual or up to 4 Processors - with affinity consideration)

Operating System:
Microsoft® Windows® XP Professional/ Win2003 Server.

Memory:
2 GB of NEW Dual channel DDR2-533 Mhz SDRAM

Storage:
200 + GB Raid 5 (or Dual 160GB Serial ATA w/Raid 0)

CD-ROM / DVD:
48 x CD-RW or DVD+R

Ports:
Parallel Series RS-232 - COM1 & CDM2
USB 2.0

Networking:
Ethernet - 100 Mbps.
(2-4 ports - contingent on the number of 2 way traffic devices).

Graphics:
Graphics Video Interface with 256MB

Monitor:
17" .28 dot pitch or less

High-End (more than 150 devices)

Processor:
Intel® Pentium® 4 with Hyper-Threading technology. 3.6Ghz, 800MHz Front Side Bus, 2MB L2 cache.
(Dual or up to 8 Processors - with affinity consideration)

Operating System:
Microsoft® Windows® 2003 Server

Memory:
4 GB of NEW Dual channel DDR2-533 Mhz SDRAM

Storage:
200 + GB Raid 5 or Fiber Channel Array

CD-ROM / DVD:
48 x CD-RW or DVD+R

Ports:
Parallel
Series RS-232 - COM1 & COM2
USB 2.0

Networking:
Ethernet - 100/1000 Mbps.
(2-4 ports - contingent on the number of 2 way traffic devices).

Graphics:
Graphics Video Interface with 512MB

Monitor:
19" .28 dot pitch or less

Notes:

1. Always use a communication isolator module to prevent damage due to ground loops and/or lightning and keep the communication line's common "floating."
2. Recommendations when using Host-Based Access, CentralCredit Card, Multiple Consoles and LPR/LPI Systems: When one or more of the above applications are running in the system, the load at the server increases significantly. For an optimal performance under these circumstances, the following configuration and criteria should be applied:
   -Do not connect readers and fee computers devices in the same NetPort/Communication line. (Auditor PowerPad, Automatic Pay Station, Pay-In-Lane, Automatic Cashier Terminal and ML-3500 are considered fee computer devices).
   -Maximum number of devices per NetPort:
   a) Maximum of 16 readers per NetPort - if readers are sharing the same communication line with other devices.
   b) Maximum of 24 readers per NetPort - if readers are the only device type on the communication line.
   c) Maximum of 24 fee computers per NetPort - if fee computers are the only device type on the communication line.
   (Auditor PowerPad, Automatic Pay Station, Pay-In-Lane, Automatic Cashier Terminal and ML-3500 are considered fee computer devices).
   - Computer configuration with one or more of the above applications (as described in number 2 Recommendations):
   a) Entry-Level computer should be used with less then 75 devices.
   b) Mid-Range computer should be used with less then 130 devices.
   - System with one or more of the above applications and more than 30,000 credentials:
   c) Mid-Range computer is the minimum requirement and should be used with less than 100 devices.

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Federal Signal Corporation

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ISO 9001:2000

42775 Nine Mile Road • Novi, Michigan 48375 • U.S.A.
Tel: (248) 374-9600 • Fax: (248) 374-9610
Sales: (800) 521-9330 • Canada: (800) 331-9144
http://www.FederalAPD.com

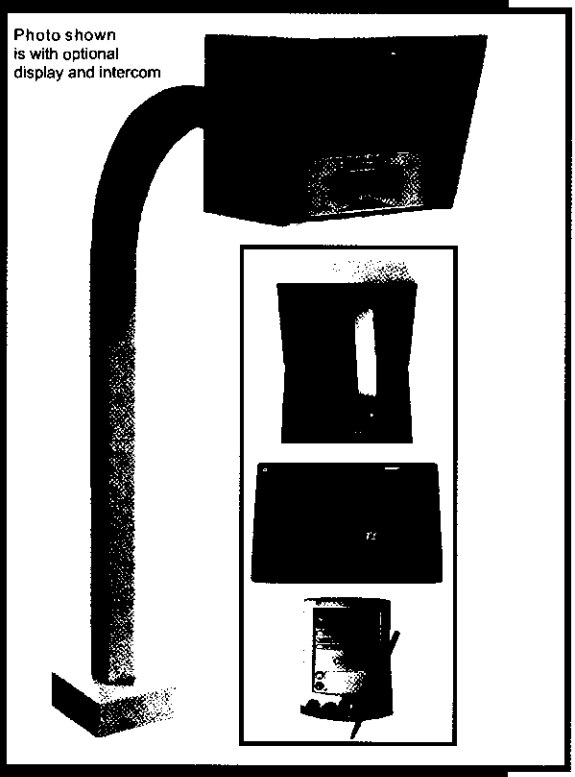
Distributed by:

Subject to design and/or appearance modifications that are production standards at the time of shipment

Scan-Spec 10-28 WL Printed in U.S.A

Passport™ 360

Card Reader System



Features:

Operates with ScanNet for host-based operation or offline for stand-alone operation.

Programmable with a PDA (personal digital assistant) via an infrared (IR) interface or serial connection.

Capacity to store over 100,000 unique ID numbers.

Four relay contact outputs for vend signals.

1. Two may be either pulsed or latched. (The pulse is programmable from 0-98 seconds).
2. Spare output.
3. Alarm when invalid card is inserted. 5 second pulse.

Four programmable 12-24 VDC inputs for digital signals:
Inhibit, Monitor, Egress, or Link.

Messages up to 16 characters long for display option.

Storage for all programming information is retained in static RAM.

Supports Wiegand, Dyna, AVI, Proximity, Bar Code, Magnetic Stripe.

Options:

Keypad
LCD display (2 lines, 16 characters)
Intercom

Passport 360 Reader

The Passport 360 is an access control device that provides a vend signal when a valid access card is presented. The vend signal allows a door lock, barrier gate, or other control device to be actuated allowing patron access to the facility. The Passport 360 controller provides all the functionality you require to control the process. This reader features a wide range of technology and program flexibility to satisfy your access requirements. It allows you to match a variety of configurations and reader technologies to your specific application, including Proximity, Magnetic Stripe, AVI, Bar Code and Dyna Read (barium ferrite).

Intelligent Readers

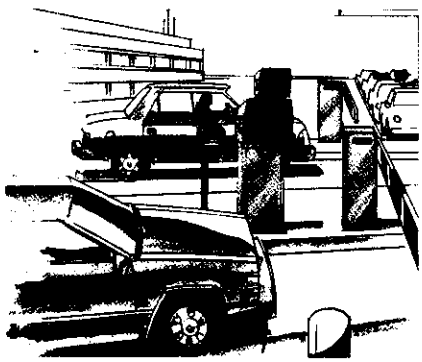
The Passport 360 reader can be a stand-alone off-line device. This fully programmable micro processor-based card reader gives you the security you need with continual and independent operations at all times. Decisions such as ID status, time zones, and issue levels are made at the reader and do not require the ScanNet® Central Parking Management System software.

Central Control

This versatile reader system can also offer the advantage of centralized computer control. By using our ScanNet® Central Parking Management System you can create, store, send, and retrieve all programming from a central desktop computer. With simple keyboard commands you can track monthly patrons, and control access to certain areas, lots, and even entire buildings. You can send commands to generate a remote vend, set the anti-pass back mode, resync a single card pass-back status, and automatically resync all cards on a daily basis. Real-time activity reports can be printed from a central computer.

Reader Programming

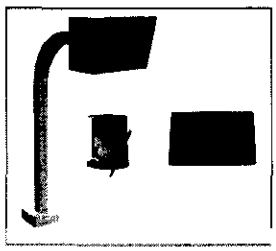
The Passport 360 Card Reader functions offline for stand-alone operation, or online with ScanNet for host-based operation. Programming can be accomplished by using our ScanNet® Central Management System or by using a PDA (personal digital assistant). With the PDA you can load and store all programming information directly on the handheld, and transfer that information to other readers. Processing and storing programmed information can be done locally.



FEDERAL APD
Federal Signal Corporation

Specifications

1. **Purpose:**
   The Federal APD Passport 360 Card Reader is an access control device that provides a vend signal when a valid access card is presented to the read head. The vend signal allows a door lock, barrier gate, or other control device to be actuated.
2. **Features/Functions:**
   - **a.** The Passport 360 Card Reader functions offline for stand-alone operation, or online with ScanNet for host-based operation.
   - **b.** All programming can be accomplished using ScanNet over a network or using a PDA with 8MB internal memory or higher, Palm OS software V4.0 or higher and infrared port or serial connection.
     1. The PDA allows the user to load and store all programming information with simple commands.
     2. The information uploaded from the reader into the PDA can be transported to another reader.
     3. The Passport 360 has the ability to process and hold all of its programming locally.
   - **c.** The Passport 360 Card Reader provides over 100,000 unique ID numbers with the following capabilities:
     1. Each ID number may be individually assigned to any one of 16 groups.
     2. Each of the 100,000 cards may be re-issued up to 16 times without changing the ID number or losing card capacity.
     3. With the optional keypad, ID numbers 1-1,100 may correspond to access codes (PIN numbers).
   - **d.** The reader is capable of storing up to 3,000 card transactions.



   - **f.** The Passport 360 has the capacity to store and accept six different facility codes.
   - **g.** Privilege ID status can be programmed to any of the ID numbers in the system.
     1. Privilege IDs have the ability to override the Anti-Passback system, this enable employees to enter without using a exit reader.
     2. Privilege IDs have the ability to override inputs programmed for inhibit. Cardholders with a privilege ID may vend a gate without a vehicle present.
   - **h.** The Passport 360 has the ability to program up to 16 time zones to limit access to facilities.
   - **i.** The reader has the ability to program up to 16 holidays to control access to facilities.
   - **j.** The Passport 360 Card Reader is capable of performing the following security checks without the assistance of a host computer or central processor:
     1. Alien Card Check
     2. Valid ID Number
     3. Valid Group Number
     4. Valid Issue Number
     5. Valid Time Zone
     6. Timed Passback Status
     7. Valid Facility Code
   - **k.** Four inputs are available on the Passport 360:
     1. Egress
     2. Monitor
     3. Link
     4. Inhibit
   - **l.** Four vend outputs are available on the Passport 360:
     1. Two may be either pulsed or latched.
     2. Spare output.
     3. Alarm when invalid card is inserted.
   - **m.** The Passport 360 has the capability to automatically detect the baud rate.
   - **n.** The Wiegand interface is standard on the Passport 360 Card Reader. This interface can connect with devices that are compatible with the Wiegand interface specifications such as AVI, Proximity, Magnetic Stripe, Bar Code, and Federal APD Dyna (Wiegand).
   - **o.** The reader supports an optional 2 line, 16-position alphanumeric LCD display.
3. **Hardware Dimensions:**
   - **a.** Dyna read head: 3" W x 4 ½" H x 3" D inches (76 mm W x 114 mm H x 76 mm D).
   - **b.** Magnetic Stripe read head: 6¼" W x 1 ¾" H x 1 ½" D inches (159 mm W x 45 mm H x 38 mm D).
   - **c.** Proximity read head: 5½" W x 1 11/16" H x ¾" D inches (5 mm W x 61 mm H 20 mm D).
   - **d.** Bar Code Read Head: 4 7/8" W 1 3/8" H x 1 ¼" D inches (124 mm W x 61mm H x 32 mm D).
   - **e.** Controller: 8 11/16" W x 5½" H x 1 ½" D inches (220 mm W x 140 mm H x 40 mm D).
   - **f.** Power Supply: 2 7/8" W x 4 5/8" H 1 1/4" D inches (64 mm W x 112 mm H 30 mm D).
   - **g.** Metal Enclosure: 10" W x 7 7/8" H 8 ½" D inches (254 mm W x 199 mm H 216 mm D)
   - **h.** Gooseneck Stand: 2 inch (50.8 mm) Square tubing, 35 inches H (889 mm). When mounted on a 6 inch (152.4 mm) curb, center of enclosure mounting plate is 41 inches (1041 mm) from pavement.
4. **Electrical Requirements:**
   - **a.** Dyna Read Head: 0.5 ampere at 5 VDC inputs.
   - **b.** Magnetic Stripe Read Head: 35 mA at +5 volts.
   - **c.** Proximity Read Head: +12 VDC nominal.
   - **d.** Controller: 0.2 Ampere at 12 VDC (input) +/- 10%.
   - **e.** Power Supply: 1 Ampere at 110 VAC input and output of 12 VDC at 2.5 Ampere.
5. **Temperature Requirements:**
   - **a.** Controller: operates at a -40^0 to 140^0 F (-40^0 to 60^0 C).
   - **b.** Display: operates at -5^0 to 122 F (-20^0 to 50^0 C).

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Serving the Parking Professional for over 50 years.
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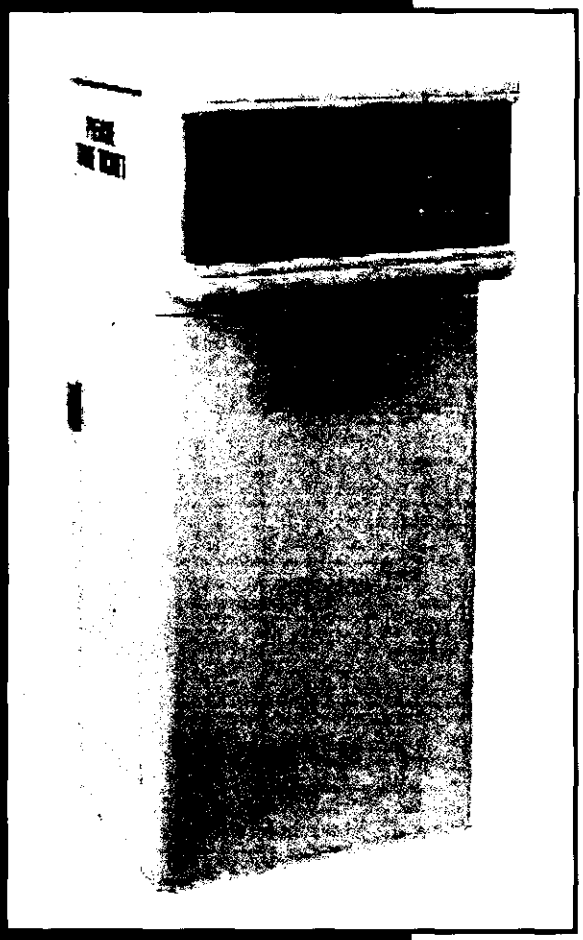
www.federalapd.com

SST Ticket Spitter®
Model MG 1000



Modular SST Ticket Transport Mechanism with magnetic read head, thermal printer and Burster/Feeder Assembly
Rust-resistant aluminum construction
On-line or off-line operation
Backlit LCD message display
Advanced AutoRead Controller with built-in diagnostics and activity reports

Dual ticket stack
Ticket retract capabilities
Backout ticket identification
ValueCard System
Credit Card Processing System

Secure ticket handling system

Secure Ticket Control
Designed to accommodate many different parking applications and configurations, the Federal APD machine readable SST AutoRead System provides the most efficient means of revenue control available today. This closed-loop system begins with the SST Ticket Spitter which can be used to issue a ticket to daily (transient) parkers, or control prepay and cashless transactions.

Smart System Transport (SST®)
The SST Ticket Spitter utilizes contemporary technology to provide you with a completely flexible system for machine readable parking operations. The unit utilizes a modular SST Ticket Transport Mechanism that features robust components, magnetic read/write heads, thermal printer, and a Ticket Burster/Feeder mechanism that snaps apart tickets.

With its innovative design, the SST Transport/Validator Mechanism is capable of processing daily (transient) tickets, access cards, and credit cards.

The transport's clam shell design provides easy access to the ticket stream and magnetic read/write heads, while the detachable Ticket Burster/Feeder Mechanism is easily removed without tools. The SST Transport Mechanism is used throughout the SST product line - which keeps your stocking requirements at a minimum.

Ticket Burster Mechanism
The Ticket Burster/Feeder Mechanism eliminates the need for a cutter assembly by bursting the perforated tickets apart as they ascend into the transport mechanism. This reduces the paper dust and maintenance problems associated with cutter blades.

The Burster Assembly can choose tickets from two ticket stacks. This dual capability substantially increases the number of tickets available (up to 10,000 before refilling).

Recall Capabilities
Occasionally, clients may trigger a ticket dispenser and backout, leaving the ticket in the ticket chute. On other occasions, a ticket is issued and the driver backs out to use it illegally. The SST has the capability of recalling either ticket from the system by either retracting and depositing the ticket into a vault, or if on-line, by flagging an illegal ticket through detector and directional logic for future action.

Thermal Printer
The SST Transport Mechanism has the added benefit of an industrial thermal printer, allowing you to print man-readable and data information as well as other messages or advertisements on the ticket. Thermal printers give you a crisp, well printed ticket and do not need ribbons.

FEDERAL APD
Federal Signal Corporation

SST Ticket Spitter®
Specifications

1. Purpose

The Model MG 1000 SST Ticket Spitter shall be a ticket dispensing, reading, and verification device. As a dispenser device it shall dispense a magnetic striped ticket to incoming parkers, which provides a vend signal. If equipped, the device shall accept magnetically encoded parking passes and credit cards, which provides a vend signal. The vend signal shall activate a barrier gate or other barrier to allow access.

2. Features/Functions
   a. The SST Ticket Spitter shall be designed to dispense a magnetic ticket.
   b. A two-line by 20-character backlit liquid crystal display (LCD) shall be readily visible to the patron when extracting the ticket.
   c. If the device is a push button type, the patron shall push the "Push for Ticket" button to issue a ticket. If the device is used in an automatic issue mode, the ticket shall be issued as the vehicle is detected on the arming loop.
   d. When the ticket is issued, it shall be encoded with the following information: (1) Ticket number, (2) Date and time of issue, (3) Status of the ticket, (4) Fee number, (5) Repay fee number.
   e. If the Retract option is activated and the patron does not take the ticket within the programmed time, or if a backout without ticket occurs, the SST Ticket Spitter shall retract the ticket, encode it as a voided ticket, and deposit the unused ticket in a ticket hopper.
   f. The AutoRead Controller shall allow for local programming of the SST Ticket Spitter via the unit's keypad. Programming information shall include: (1) Starting ticket number, (2) Issue speed, (3) Retract time, (4) Issue fee number, (5) Repay fee number, (6) The first line of print - which may be up to 24 characters long, (7) The first eight characters of the top line of the LCD display.
   g. The AutoRead Controller shall provide the capability to view Total Event and Exception Event reports on its LCD display
   h. Optional Features include (1) Ticket retraction capabilities, (2) Push button operation, (3) Intercom installed on the face plate, and (4) Capabilities to communicate with a Port Controller to provide communications with the PC-based SCAN/Scan Net System.
   i. The SST Ticket Spitter shall be UL Listed (Canada/U.S.), and shall be available with the CE Mark.
3. Dimensions
   a. Maximum overall dimensions for the SST Ticket Spitter shall be 20 in W x 44 in H x 20 in D (508 mm W x 1118 mm H x 508 mm D).
   b. The cabinet base shall be 20 in W x 44 in H x 16 in D (508 mm W x 1118 mm H x 406 mm D).
4. Electrical
   a. Power input requirements shall be 115 VAC at 6 Ampere. Optional power input requirements shall be 220 VAC at 3 Ampere.
   b. The AutoRead Controller shall be powered by the controller power supply assembly.
   c. The SST Transport Mechanism shall be powered by a separate 24 VDC power supply.
5. Construction
   a. The SST Ticket Spitter housing shall be of heavy gauge, all aluminum welded construction, and shall be designed for all weather use.
   b. The cabinet shall be finished in a powder coat paint in either Federal APD Safety Yellow or Federal APD White (as specified) for maximum visibility and safety. Other colors shall be available when specified. The front panel shall be black.
   c. The cabinet shall provide two access doors for easy serviceability and loading of tickets.
   d. The cabinet shall be compartmentalized to allow access to the tickets or to the AutoRead Controller.
   e. The front of the cabinet shall consist of an aluminum cast face plate, 1/4 inches (6.25 mm) thick, molded, and machined to ensure durability and a high level of quality.
   f. The SST Ticket Spitter shall provide one ticket stack standard with an option for two. Each ticket stack shall have a capacity for at least 5,000 tickets.
   g. A 500 watt heater assembly shall be provided in the inside of the cabinet.
   h. The SST Ticket Spitter shall include an SST Transport Mechanism which shall be fastened to the unit's cabinet by a spring-loaded fastener. The device shall be constructed of heavy-gauge aluminum with precision machined parts, sprockets and levers. The SST Transport Mechanism shall be a clam shell design, allowing for quick access by service personnel.
   i. The SST Transport Mechanism shall use a Ticket Burster Mechanism to separate issued tickets from the ticket stack. The Ticket Burster Mechanism shall mate with the Ticket Feeder unit.
   j. The SST Ticket Spitter shall include an AutoRead Controller, power supply, terminal board, and a Configuration Module. The Configuration Module shall be a factory programmed microcontroller (an encapsulated pc board that utilizes surface mounted technology). The Configuration Module plugs into the power board and defines the software options used in the device.
   k. The AutoRead Controller shall provide all logic control and monitoring functions of the SST Ticket Spitter.
6. Reports
   a. The device's SST AutoRead Controller shall provide the capability to view Total Event and Exception Event reports on its visual display. Total Event reports shall provide messages for all conditions in the lane. Exception Event reports shall provide a list of unusual events in the lane.

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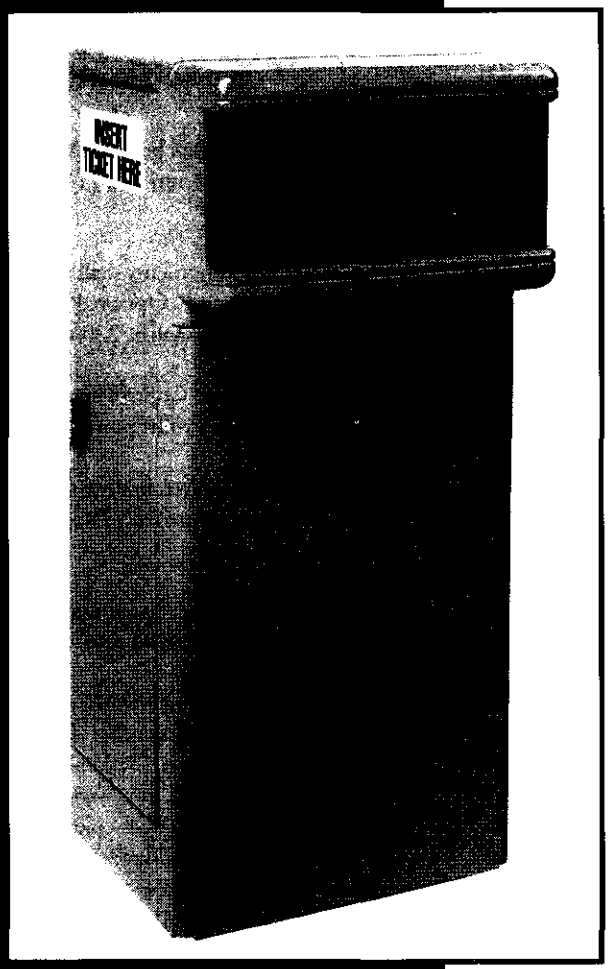
SST® Exit Verifier
Model ML 3000



Features:
- Provides machine readable exit lane control when used with central cashiering systems
- Rust-resistant aluminum construction
- Modular SST Ticket Transport Mechanism with magnetic read head and thermal printer
- On-line or off-line operation
- Programmable grace times
- Backlit LCD message display
- Advanced AutoRead Controller with built-in diagnostics and activity reports

Options:
- ValueCard System
- Credit Card Processing System

Traffic control at the exit lane

Central Cashiering Revenue Control

Located at the exit lane, the SST Exit Verifier is used to control lane traffic with a central cashiering parking system.

With a central cashiering system, the patron receives a magnetic stripe ticket from the SST Ticket Spitter at the entrance. Before returning to their vehicle, the patron stops at the appropriate cashier zone to pay the parking fee. The cashier (or SST Automatic Pay Station) automatically processes the ticket, collects the fee and reassigns the same ticket with a pre-programmed grace time that allows the patron to return to their vehicle and exit.

At the exit lane the patron inserts the ticket into the SST Exit Verifier, which scans the ticket for validity and raises the gate automatically, providing the patron exited with the allotted grace period. If not, the machine requests that the patron return to the cashiering station to pay the amount due.

Smart System Transport (SST®)

The magnetic properties in the SST Transport/Validator mechanism are designed to read magnetic stripe information from SST tickets, ValueCard access cards, and credit cards. Short term tickets, special tickets, and bank cards of all types are processed through the single transport slot.

The transport's clam shell design provides easy access to the ticket stream and magnetic read/write heads. This universal mechanism is used in ticket dispensers, fee computers, automatic pay stations, exit verifiers, and merchant validators – which keeps your stocking requirements at a minimum.

Durable Construction

The unit features durable aluminum construction, armored with an element-resistant enamel finish for years of rust free service. The cabinet front consists of a heavy duty aluminum cast face plate with a two-line by 20-character visual display that provides instruction messages to the parking patron.

Efficient Processing

Federal APD offers you a fully integrated line of access and revenue control products that work together to deliver a true system approach to parking. The SST AutoRead System completely automates your parking operation with machine readable precision. The speed of automated egress processing - using the SST Exit Verifier - eliminates the need for multiple lanes while significantly reducing the congestion found at the exit lanes.

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SST® Exit Verifier
Specifications

1. **Purpose**

The Model ML 3000 SST Exit Verifier shall be an automatic magnetic ticket reading/verification device. It shall accept magnetically encoded SST AutoRead tickets and provide a vend signal when a validated magnetic stripe ticket is inserted. The vend signal shall activate a barrier gate or other barrier to allow access.

2. **Features/Functions**
   a. The SST Exit Verifier shall accept a magnetically encoded ticket. When the patron's vehicle is on the arming loop, the SST Exit Verifier LCD display shall display the message "Please Insert Ticket".
   b. When the ticket is inserted, the SST Exit Verifier shall read the time, date, and other information from the ticket to determine the following: (1) If the data on the ticket is valid, the device will vend the gate, allowing the patron to exit, (2) If the ticket has not been paid, the ticket shall not be accepted and the device shall display the message, "Pay Cashier First", (3) If the facility codes do not match, the ticket will not be accepted and the message "Not A Valid Ticket" will display, (4) If grace time has not lapsed, the SST Exit Verifier shall retain the ticket and allow the patron to exit the facility, (5) If the grace time has lapsed, the device shall display the message "Return To Cashier" and return the ticket to the patron for repayment at the overstay rate.
   c. Once the SST Exit Verifier has performed all the required checks and determines that the ticket is valid, the SST Validator Mechanism shall process the ticket and deposit it in a validated ticket bin.
   d. The gate arm will raise and the device's visual display will show the message "Thank You".
   e. If the ticket is rejected because it is unreadable, the SST Validator Mechanism shall eject the ticket so that the patron may retrieve it and return to the central payment station to repay the parking fee. The message "Cannot Read Ticket" shall be displayed.
   f. When the SST Exit Verifier is not in operation, the LCD display shall show the message "Not In Operation."
   g. The AutoRead Controller shall allow for local programming using the keypad on the controller. These features shall also be programmable from the PC-based SCAN System if the SST Exit Verifier has communication capabilities: (1) Paid Grace Period, (2) Unpaid Grace Period, (3) A three-digit facility code to uniquely identify the device for a particular lane or facility, and (4) The first eight characters of the top line of the LCD display shall be user programmable.
   h. The device's AutoRead Controller shall provide the capability to view Total Event and Exception Event reports on its visual display. Total Event reports shall provide messages for all conditions in the lane. Exception Event reports shall provide a list of unusual events in the lane. Messages which appear in he Exception Event Report shall also be displayed in the Total Event Report. The following types of conditions will be acknowledged by messages in these reports: (1) External loop input was activated, (2) A valid ticket was inserted in the SST Exit Verifier which has expired its grace time, (3) A ticket with an invalid facility code was rejected, (4) A ticket was rejected because it was not paid, (5) A ticket was rejected because it had already been used to exit, (6) A ticket was rejected because the ticket number was invalid.
   i. The SST Exit Verifier shall be UL Listed (Canada/U.S.), and shall be available with the CE Mark.

3. **Dimensions**
   a. Maximum overall dimensions for the SST Exit Verifier shall be 20 in W x 44 in H x 20 in D (508 mm W x 1118 mm H x 508 mm D).
   b. The cabinet base shall be 20 in W x 44 in H x 16 in D (508 mm W x 1118 mm H x 406 mm D).

4. Electrical
   a. Power input requirements shall be 115 VAC at 6 Ampere. Optional power input requirements shall be 220 VAC at 3 Ampere.
   b. The SST AutoRead Controller shall be powered by the controller power supply assembly.
   c. The SST Validator Mechanism shall be powered by a separate 24 VDC power supply.

5. **Construction**
   a. The SST Exit Verifier housing shall be of heavy gauge, all aluminum welded construction.
   b. The cabinet shall be finished in a powder coat paint in either Federal APD Safety Yellow or Federal APD White (as specified) for maximum visibility and safety. Other colors shall be available when specified. The front panel shall be black.
   c. The cabinet shall be compartmentalized to allow access to the tickets or to the AutoRead Controller.
   d. A 500 watt heater assembly shall be provided in the inside of the cabinet.
   e. The SST Exit Verifier shall include an SST Validator Mechanism which shall be fastened to the unit's cabinet by a spring-loaded fastener.
   f. The SST Exit Verifier shall include an AutoRead Controller, Power Supply, Terminal Board and a Configuration Module.
   g. The AutoRead Controller shall plug directly into the connections panel via two keyed, 37-pin and 25-pin connectors.
   h. The Power Board shall provide 14 output terminals and 11 input terminals.
   i. The AutoRead Controller shall provide all logic control and monitoring functions of the Exit Verifier.

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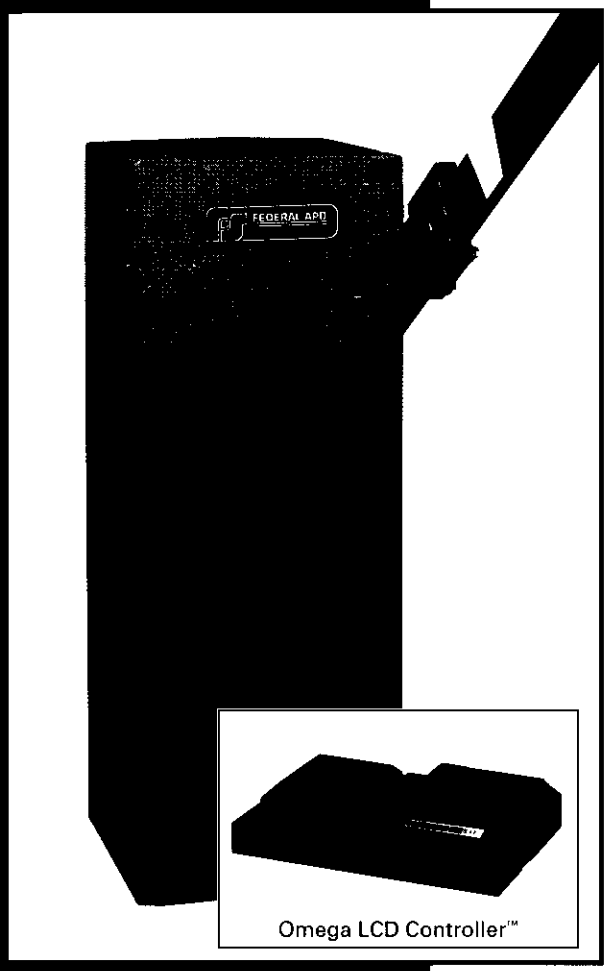
R18.C 4/93-8/99 MKv/WP

Parking Barrier Gate
Model G-90 CD Series™



Omega LCD Controller™

Advanced Omega LCD Controller with visual display
Power Supply Board provides multiple input/output terminals
Total lane management with:
- Two built-in vehicle detectors
- Sensitive Reversing Logic
- Built-in diagnostics
- Event history report
- Back-out timer
- 7 day memory & data storage

Configuration Module
Third built-in vehicle detector
Totalizing & differential counts
Automatic time zone controls
Hourly statistical reports
Directional logic
Broken gate arm alarm
Communications interface

Complete lane management

Design and Function
The Model G-90 CD Series Barrier Gate provides microcomputer intelligence, multiple programming options, and on-board controls for a complete and user-friendly information center providing total lane management.

Protect Your Investment
The Model G-90 CD Series Gate continues the outstanding tradition of high quality that you depend on from Federal APD. The gate is extremely durable, protected from the harshest environments with a heavy-gauge aluminum cabinet armored with an element-resistant finish which keeps your installation looking clean and new for years of rust-free service.

Omega LCD Controller™
The heart of this gate is the Omega LCD Controller. This fully integrated controller provides a systems approach for convenient, accurate and cost-effective lane management.

Lane Configuration
The Model G-90 CD Series Gate can handle any type of lane configuration possible - including reversing lanes and lanes with three vehicle detectors - with software options embedded into the unit's Configuration Module. The Configuration Module is an encapsulated pc board that utilizes surface mounted technology. This factory programmed microcontroller plugs into the power board and defines the software options used in the gate.

Counts You Can Count On
The Model G-90 CD Series allows you to design an on-board information center with counting functions packaged in one self-contained device. The controller's software logic integrates optional counting functions such as resettable and non-resettable totalizing counts, single and dual differential counts, hourly counts, and a host of statistical counts. These counts are displayed on the controller's visual display and are accessed by the user-friendly, menu driven keypad.

Vehicle Detectors
Three built-in and automatically self-tuning vehicle detectors are available. These high-speed detectors provide a sensitive tailgate recognition system that is capable of recognizing two separate vehicles traveling over a detector loop simultaneously. Diagnostics and metering tools are also built into the controller.

Sensitive Reversing Logic™
An advanced, maintenance-free safety and monitoring system is designed into every gate: the Sensitive Reversing Logic (SRL). This system provides safer gate operations by instantly sensing gate arm obstructions, limit switch failures, and gate arm position–without the use of electromechanical systems. The SRL sensing system also features self-tuning capabilities.

FEDERAL APD
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Model G-90 CD Series™ Barrier Gate
Specifications

1. Purpose

The Model G-90 CD Series Barrier Gate shall be a microprocessor-based parking control device that shall restrict access within a vehicle traffic lane by means of a wooden gate arm. The gate shall be activated by a vend signal from an access or revenue control device. The Model G-90 CD Series Barrier Gate shall additionally act as a programmable lane controller, generate and store counts, monitor lane operations, and provide reporting capabilities.

2. Features/Functions

The Model G-90 CD Series Barrier shall contain an Omega LCD Controller that shall provide all logic control and monitoring functions of the gate.

a. The Omega LCD controller shall provide 11 inputs which shall be activated by the Omega LCD logic. It shall provide 14 outputs that shall be dry contact closures that can be used to switch currents through terminal pairs. The output contacts shall be rated at one ampere at 24 VDC/VAC. The Omega LCD shall provide a 16-character LCD display and a 6-button keypad to perform programming, send commands, and monitor lane operations.

b. The Omega LCD shall provide two detectors of a self-tuning type with the capability of activating a third internal loop detector.

c. The Omega LCD shall contain logic for one-way lanes, two-way lanes, operations with automatic ticket dispensers, push-button ticket dispensers, card locks, token units, and shall be easily field programmable through the use of DIP switches or keypad buttons.

d. Lane count signals shall not be issued until the vehicle has moved under the gate arm for maximum accuracy.

e. The Omega LCD controller shall be capable of storing successive vend inputs of any type and of sequentially processing each vend.

f. The Omega LCD controller shall contain LED indicator lights to provide operational status of the detectors and the controller.

g. The Model G-90 CD Series shall provide a Configuration Module which shall be a factory-programmed microcontroller (an encapsulated pc board that utilizes surface mounted technology). This factory programmed microcontroller (a 20-pin, 8-bit, fully static, EPROM/ROM-based microcontroller) plugs into the power board and defines the software options used in the gate.

h. The Omega LCD Controller shall incorporate a diagnostic mode ro facilitate on-site testing of loop detectors, LCD keypad buttons, the LCD display, the internal clock, the configuration module, 115 V power supply line voltage maximums and minimums, Omega LCD communication ports, and controller inputs and outputs.

i. The Model G-90 CD Series Barrier Gate shall be UL Listed (Canada/U.S.) and shall be available with the CE Mark.

3. Dimensions

a. The Model G-90 CD Series Barrier Gate shall be 15 inches W x 40 inches H x 15 inches D (381mm W x 1016mm H x 381mm D) with a flange arm height of 35 $^{1}/_{2}$ inches (902mm) so as to prevent compact or subcompact type vehicles from passing under the arm when in the closed position.

4. Electrical

a. Power input requirements shall be 115 VAC at 15 Amperes as standard. Other power requirements shall be available as specified.

b. The power supply shall consist of a Power Board and a power supply cover.

c. All 115 VAC connections shall be made on the Power Board. Main power, motor contact, heater, and high voltage interface relays shall be located and terminated on the Power Board.

d. One high voltage plug-in relay with two form C contacts shall be provided on the Power Board. A second high voltage relay is optional.

e. A 115 VAC convenience outlet shall be provided on the power board for standard 115 VAC units.

f. An "AUTO-MANUAL" switch shall be provided on the Power Board to test motor and limit switches or to raise the gate arm manually.

g. The Power Board shall provide a three position heater switch with "AUTO", "ON" and "OFF" controls.

h. A Controller Power switch shall be provided with "ON" and "OFF" control.

i. The motor shall have built-in thermal overload switch protection.

5. Construction

a. The Model G-90 CD Series Barrier Gate cabinet shall be constructed of heavy-gauge aluminum and finished in a powder coat paint in either Federal APD Safety Yellow or Federal APD White (as specified) for maximum visibility and safety. Other colors shall be available when specified.

b. All reducers and motors shall be assembled on a single, $^{1}/_{4}$ inch (6.25 mm) unibracket weldment for maximum strength in high load applications.

c. The cabinet shall have one gasketed door with flush-mounted, T-handle lock with one gate door key.

d. The Omega LCD Controller shall plug directly into the connection panel via two keyed, 37-pin and 25-pin connectors.

e. The Power Board shall have three switch banks consisting of a total of 24 DIP Switches, which shall define the modes of lane operation, detector sensitivity, tailgate sensitivity, reset loop safety mode, motor current rebound sensitivity, and device number for communicating gates. A fourth switch bank, with a total of eight DIP Switches, shall allow the gate to operate without a Configuration Module.

f. The Power Board shall provide 14 output terminals and 11 input terminals. The terminals shall be designed to accommodate various features of the gate.

6. Mechanical

a. The Model G-90 CD Series Barrier Gate shall be driven by a $^{1}/_{3}$ HP, heavy-duty, high output torque, 115 VAC, single phase instant reversing motor. Other power requirements shall be available as specified.

b. The motor shall be connected by double V-belts to a heavy-dury, 60:1 single reduction speed reducer. The motor shall provide a breakdown torque of 33.6 ounce foot.

c. Adjustable cams shall be provided to allow adjustment of gate arm travel.

d. Mechanical action shall be such that mechanical stops or braking devices are not necessary.

7. Sensitive Reversing Logic (SRL)

a. The Sensitive Reversing Logic (SRL) shall ensure that the gate arm will automatically reverse its downward motion should any object be struck by the gate arm during its descent and shall immediately return to the upright position and remain up until automatic reset by a variable timer control.

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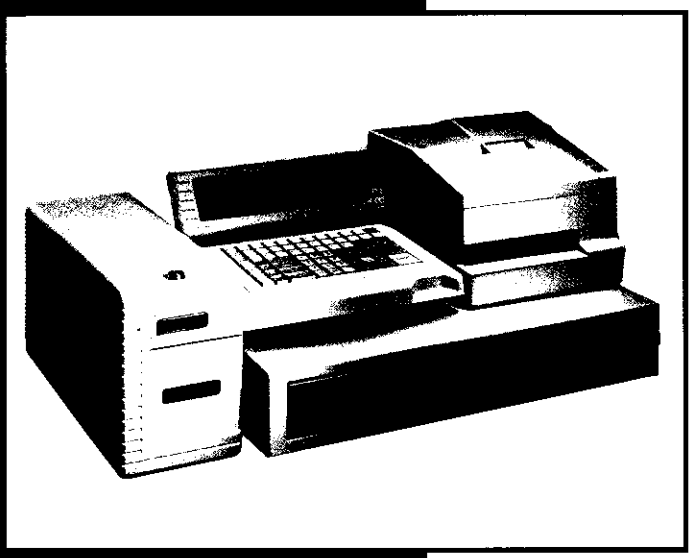
SST Auditor PowerPad™
Fee Computer



SST is a registered trademark of Federal APD Inc.

Features:
- Automatic fee calculations or manual key-in transactions
- Modular SST Ticket Transport Mechanism with magnetic read head and thermal printer
- Multifunction printer validates tickets and prints receipt and journal tapes
- 12 Fee Tables available
- 200 Attendants available
- 208 Merchant Accounts available
- Comprehensive cash audits and reports include:
  - Cashier Reports • Lane Reports
  - Tax Reports • Merchant Reports
  - Time Card Reports
- Statistical reports (with percent analysis) include:
  - Entry Reports • Exit Reports
  - Entry/Exit Reports
  - Revenue Reports • Duration of Stay Reports
- On-line or off-line operation

Options:
- Credit card processing
- ValueCard™ System
- Validation/Voucher Systems
- Currency exchange processing
- Ticket Tracking System
- Networking capabilities

Automatic fee processing

Automatic Fee Calculations

Designed to work with the SST AutoRead System, the SST Auditor PowerPad reads magnetic stripe tickets and provides automatic and exceptionally fast fee calculations with machine readable precision.

The cashier (located at a central or exit cashiering station) simply inserts the ticket in the unit's validator device to automatically compute the fee, which eliminates any possible cashier error or shrinkage.

Magnetic Stripe Technology

The heart of the SST AutoRead System is the magnetic stripe. Magnetic stripe technology allows information to be changed and updated at any time while maintaining a closed-loop ticketing system. Data such as time, date, year, system code, lane number, fee structure, payment data, and status information can all be encoded and read on the ticket itself. This makes the system flexible for a wide variety of applications.

All tickets processed at the cashiering station are validated both magnetically and physically, so tickets cannot be reused or altered. Pertinent information is thermally printed on the ticket, allowing both patrons and staff to verify the data at a glance.

Ticket Options

In addition to short-term transient parking tickets, the SST Auditor PowerPad Fee Computer can be programmed to accept and/or issue prepay (voucher) tickets, special event tickets, advance sale tickets, and monthly cards.

The device's Smart System Transport (SST®) mechanism was designed to meet industry standards with three track read/write magnetic heads. This allows the device to read industry standard encoding track formats, including those used with bank credit cards, debit cards and proprietary tickets - all from one versatile transport/validator mechanism.

Reports Keep You In Control

The SST Auditor PowerPad produces an extensive array of report for detailed analysis of all the sales and lane activities in your facility. Financial reports, such as cash reports and lane reports, summarize the number of transactions, amounts, cashier counts, vehicle counts, and more. Over 40 statistical reports provide entry, exit, duration, and revenue information and can be analyzed in percentage of totals.

Automate Your Operation

The SST Auditor PowerPad automates many of the operations your managers and cashiers are now doing manually. Multiple fee schedules, account validations, currency exchange calculations, taxes, activity reporting, auditing, facility counts, and many other aspects of your business are done quickly and accurately. These features speed up customer processing and give your employees more time to attend to the service aspects of the business.

FEDERAL APD
Federal Signal Corporation

SST Auditor PowerPad™
Specifications

1. Purpose

The Federal APD SST Auditor PowerPad shall be a revenue control device that provides machine readable fee calculation and reporting features at an exit cashiering or central cashiering station of a parking facility. The SST Ticket Validator shall provide for automatic parking fee calculations from the magnetic stripe ticket.

2. Features/Functions

The SST Auditor PowerPad shall be a machine readable fee computer that shall be programmable and operable locally from the unit's keyboard by authorized operators.

a. The Auditor PowerPad operator display shall be a four line by 40 character liquid crystal display (LCD). Menu paths shall display on the bottom line of the visual display during programming and reporting. In transaction mode, the Auditor PowerPad shall provide a concurrent display of the last charge entry, total fee due, change still due, the fee number used to calculate the fee, entry time and date, and any user prompts or messages to the operator.

b. The operator shall be able to print programming either as a report or during the programming of a particular function.

c. Currency exchange processing and reporting shall be available as an optional software package. Up to four different currencies shall be maintainable and reportable.

d. The Auditor PowerPad shall provide user-programmable attendant assignments. There shall be 75 attendants standard, with an option for a total of 200 attendants. Each attendant shall be user assignable as cashier, supervisor, and/or master operator in any combination.

e. The Auditor PowerPad shall provide 26 Merchant Accounts standard, with an option which shall provide for a maximum of 208. Each account shall be uniquely programmable as either a Charge Account, a Validation Account, a Voucher Account, or a combination of Validation and Voucher Account.

f. The Auditor PowerPad shall provide six user-programmable Fee Tables with an option package of twelve Fee Tables. The device shall provide the ability to test fee structures to verify the accuracy of programming.

g. The keyboard for the Auditor PowerPad shall be user-defined. Alpha keys may be defined as QWERTY (typewriter) style keys, ABC style, or custom defined, in which the user shall define placement of each key function on the keyboard.

h. The Auditor PowerPad shall provide user-defined functions for the following under Key Programming (with appropriate software): Cash, Alternate Payment, Date, Time, Fee Select, Prepay, Lost, Deposit/Withdrawal, Debit/Refund, No Sale, Receipt, Recall, Void, Clear, Miscellaneous, Currency Exchange, Ticket Number, License Number, Voucher, ValueCard, Credit Card, Recall, Duress, Issue Ticket, and more.

i. There shall be six programmable taxes available. Each tax shall be programmable as unused, a predetermined flat (fixed) tax amount, a predetermined flat tax amount per day or a percentage from .001% to 100%. There shall be an option for back out or add on taxes. There shall be an option to compound taxes.

j. The Auditor PowerPad shall provide detailed revenue, operational and statistical reports. The Auditor PowerPad shall allow for local requesting of reports and clearing totals from the fee computer. If communication option is included, the reports can be sent to the Federal APD SCAN System. The reports shall include Cash Report, Lane Report, Time Card Report, Merchant Report, Tax Report, Entry Statistics Report (up to eight different reports), Exit Statistics Report (up to eight different reports), Entry/Exit Statistic Report (up to eight different reports), Duration Statistic Report (up to eight different reports), and Revenue Statistic Report (up to eight different reports).

k. The gate and drawer status shall be determined by (1) whether the gate shall open when the fee is paid or when the cash drawer closes, (2) the number of cash drawers used, (3) whether the cash drawer shall remain open between transactions or must be closed between transactions.

l. The SST Auditor PowerPad Fee Computer shall be UL listed.

3. Dimensions

a. The Auditor PowerPad Fee Computer terminal shall be 12 $^{1}/_{4}$ inch W x 6 $^{7}/_{8}$ inch H x 9 $^{3}/_{8}$ inch D (311mm W x 175mm H x 238mm D).

b. The SST Ticket Validator shall be 6 inch W x 8 $^{3}/_{4}$ inch H x 16 $^{1}/_{2}$ D (152mm W x 222mm H x 419mm D).

c. The Auditor PowerPad Printer shall be 10 inch W x 8 inch H x 11 $^{3}/_{4}$ inch D (254mm W x 203mm H x 300mm D).

d. The standard cash drawer (4 coin/4 bill compartments) shall be 13 inch W x 3 $^{1}/_{2}$ inch H x 16 $^{5}/_{16}$ inch D (330mm W x 90mm H x 415mm D).

e. Optional cash drawer with 5 coin/5 bill compartments shall be 18 $^{3}/_{4}$ inch W x 4 inch H x 19 $^{3}/_{4}$ inch D (478mm W x 100mm H x 500mm D).

f. Optional cash drawer with 6 coin/6 bill compartments shall be 22 $^{1}/_{2}$ inch W x 4 in H x 19 $^{3}/_{4}$ inch D (542mm W x 100mm H x 500mm D).

4. Electrical

a. The power supply input to the Auditor PowerPad Fee shall be universal: 90-264 VAC/47-63 Hz. The input voltage to the fee computer terminal shall be +24 VDC or +12VDC.

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R31.C 5/96-10/97 MKv/WP

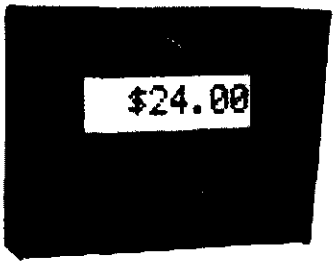
Fee Displays

Desktop Fee Display

Desktop Fee Display

For central cashiering system using the Auditor PowerPad. Easy-to-Read display features 2-line display with blue-green characters (0.5 inch / 11.3 mm). The display height is adjustable. The display panel can also be adjusted up and down and right and left to ensure the best viewing angle and visibility.

Model C-3 Remote Fee Display



Model C3 Remote Fee Display

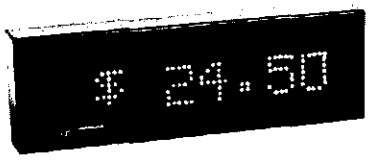
Low profile unit is ideal for booth or pedestal mounting

Wired directly to the fee computer, the Model C3 features a large one-inch LCD dot matrix characters that are easy to read. This Fee Display is programmed to provide your patrons with a number of convenient messages, including the fee due, the current time when idle, a "CLOSED" message when not in use, and a "THANK YOU" message when the fee has been satisfied. A light sensor built into the fee display detects low light conditions and automatically turns on the back light for night viewing.

Features:

- Large one-inch LCD fee display protects against overcharging
- Messages displayed include: AMOUNT DUE, THANK YOU CLOSED, TIME
- Automatically detects low light conditions and turns on back light
- Weather resistant enclosure

LED Fee Display Auditor PowerPad



LED Fee Display

This display show the customer a significant amount of data in large, easy-to-read red LED font measuring 2.3 inches in height. The message display is wired directly to the fee computer and provides a number of messages, including the fee due, the current time when idle, and a "THANK YOU" message when the fee has been satisfied. Overall Dimensions: 18.3" L x 5.83" W x 2.5" D.

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LED FULL Sign

Features:

Activated either manually by pushbutton or by the gate controller, Federal APD Status Scanner, or by ScanNet® Central Management Software System.

When the Full Sign is activated automatically, the transient/ monthly devices may be de-activated to prevent patrons from gaining access.

Highly visible 4 inch LED lettering.

Low voltage DC power.

Weatherproof housing.

Protective high-impact plexi-glass lens cover.

Built-in sun shield.

Options:

Flashing version available.

The Federal APD LED Full Sign is a low-voltage message sign which illuminates when a signal is provided. Located at the entrance lane, the LED Full Sign indicates when the lot or deck is full by displaying the word "FULL". The visual display has 4-inch high (101.6 mm H) letters. The letters are orange in color and are light. The LED display is protected by a high-impact smoked plexiglass cover. A shield connected to the enclosure ensures that the message can be easily read in bright sunlight.

Specifications:

1. Purpose
   The Full Sign is a light emitting diode (LED) message sign which illuminates when a signal is provided to indicate there are no more parking spaces available in a facility.

2. Features/Functions
   - **a.** The sign is activated manually or automatically by a Federal APD Status Scanner or by the ScanNet® Central Management Software Program
   - **b.** When the Full Sign is automatically activated, the transient/mouthly devices can be deactivated to prevent patrons from gaining access.
   - c. An optional flashing package is available.

3. Mechanical
   The Full Sign can be mounted directly onto the gate housing, on a aluminum pedestal stand or on a wall near the entrance lane.

4. Dimensions
   - **a.** Enclosure measures 18 inches W x 5 inches H x 8 inches D, (457mm W x 127mm H x 203mm D).
   - **b.** Pedestal stand measures 42 inches H (1,067mm).

5. Electrical
   The LED Full Sign requires a power feed of 0.5 Ampere, 21 to 30 VDC. An upgrade package 117 VAC (0.2A) power kit is available for retrofitting LED Full Sign into older installations with AC powered Neon Full Signs.

6. Construction
   - **a.** The weatherproof enclosure is made of welded steel.
   - **b.** The enclosure is finished in powder coat paint in either Federal APD Safety Yellow or white for maximum visibility and safety (other colors are available by special order.
   - c. The lettering for the LED Full Sign is 4 inches high (101.6 mm H) and is made of individual orange LEDs arranged to form the word "FULL".
   - **d.** The front of the Full Sign is protected by a high-impact plexiglass lens completely covering the internal components.
   - **e.** Two 1-inch round (25 mm) louvers are provided to help dissipate heat without interfering with visibility in any way.
   - **f.** A built-in shield is provided, which when combined with the high intensity LEDs assure ease-of-visibility in direct sunlight.

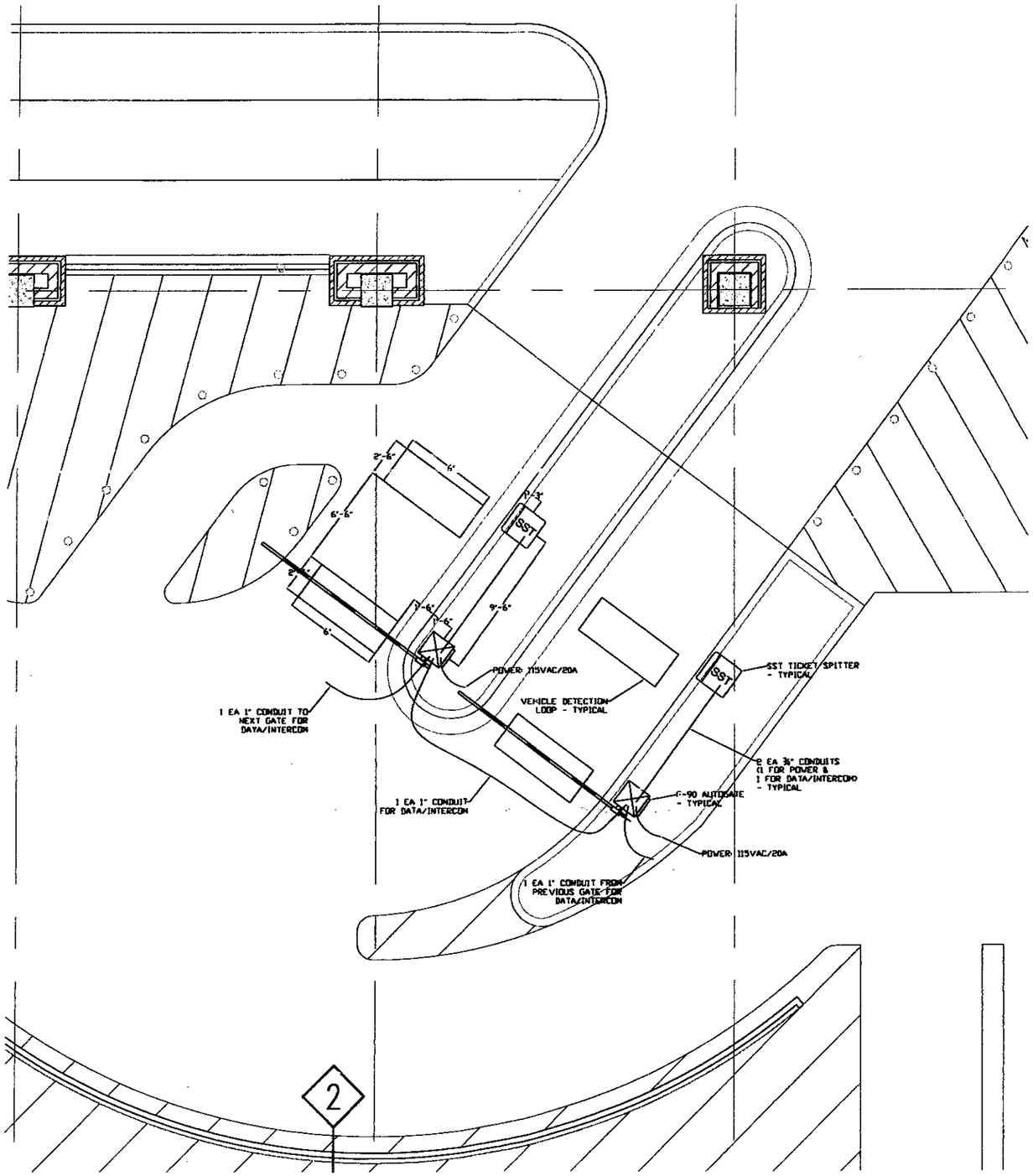
Note: Please see backside for more information on other Fee Displays.

CERTIFIED ISO 9001:2000
FEDERAL APD
Federal Signal Corporation
www.federalapd.com

566 Rosedale Avenue
Nashville, TN 37211
Telephone: 615-255-4466
Fax: 615-242-5202

113 Harbor Town Square
Suite 203, Memphis, TN 38103
Telephone: 901-529-0112
Fax: 901-5272-7778

Web Site: www.acs-llc.com
License #0040456



1 VISITOR ENTRANCE

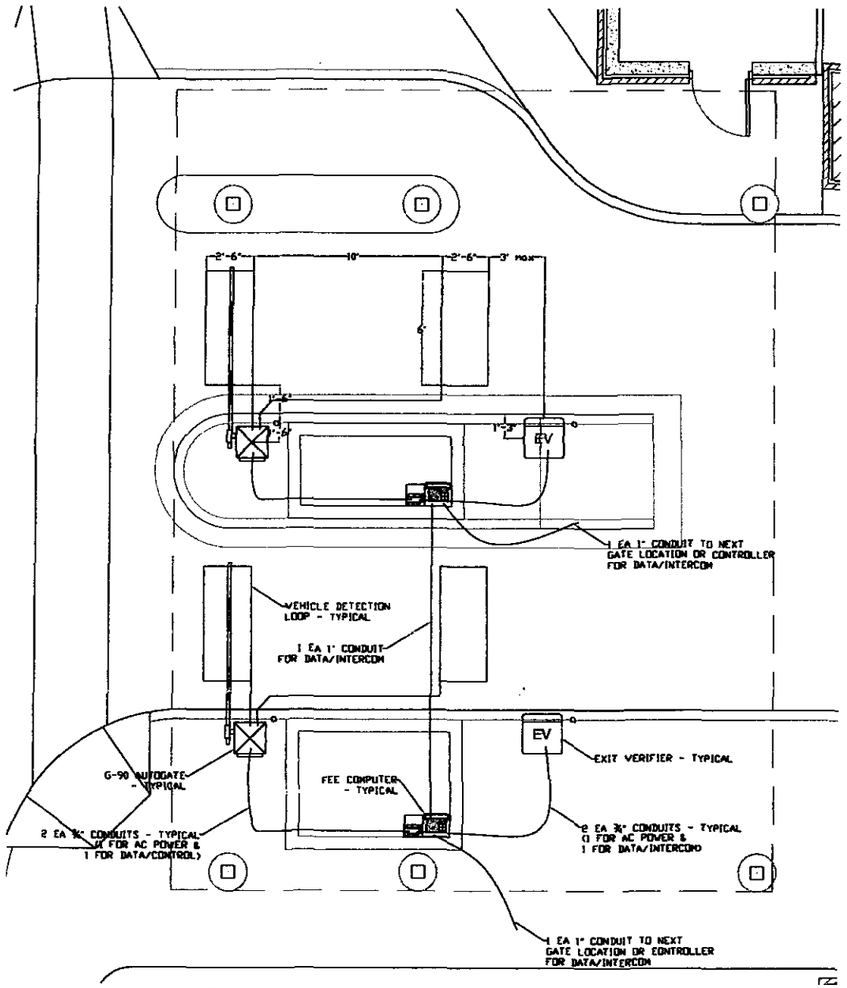
Scale: 1/8" = 1'-0"

ACCESS CONTROL SYSTEMS LLC
NASHVILLE • KNOXVILLE • MEMPHIS

UNIVERSITY OF KENTUCKY
PATIENT CARE FACILITY
NEW GARAGE

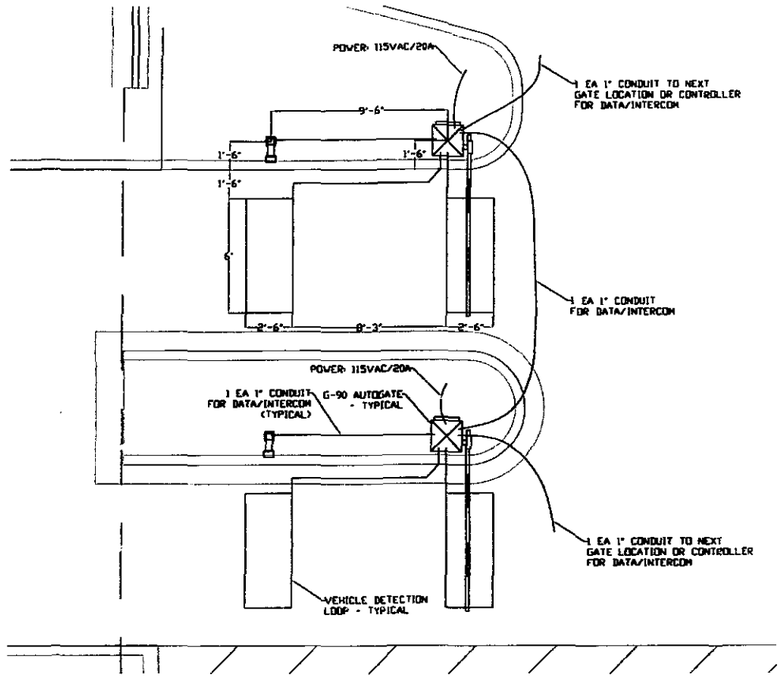
DRAWN BY: C YORK
DATE: 8-15-06
CHECKED BY: S HALEY

PC1



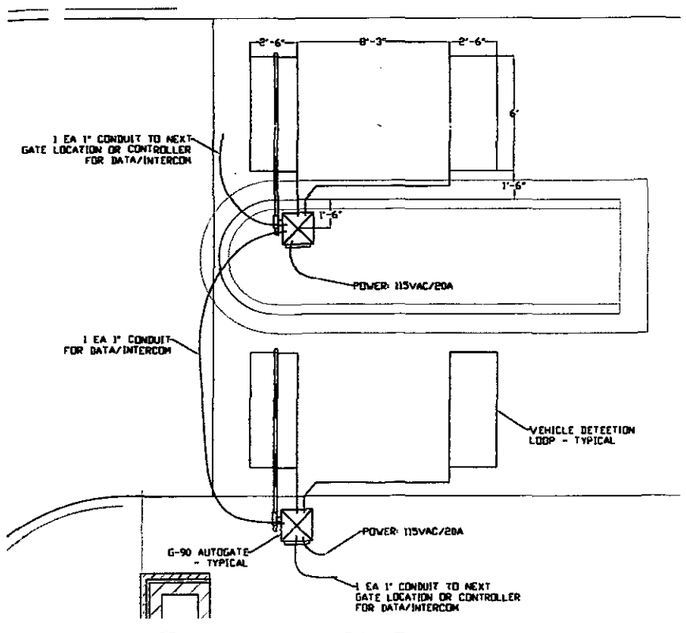
1 VISITOR EXIT

Scale: 1/8" = 1'-0"



2 EMPLOYEE ENTRANCE

Scale: 1/8" = 1'-0"



3 EMPLOYEE EXIT

Scale: 1/8" = 1'-0"

PARKING SYSTEMS
ACCESS CONTROL SYSTEMS
SECURITY & FIRE SYSTEMS
LOCK & DOOR HARDWARE
MAPE BAILEY & ASSOCIATES
BUILDING AUTOMATION
Tel: 615.834.8300
TN License #CH1050

ACS
ACCESS CONTROL SYSTEMS LLC
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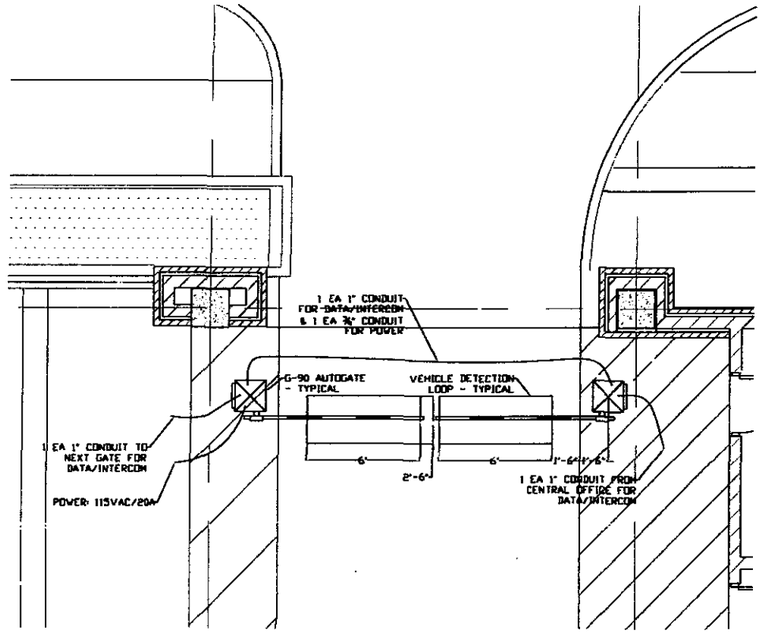
UNIVERSITY OF KENTUCKY
PATIENT CARE FACILITY
NEW GARAGE

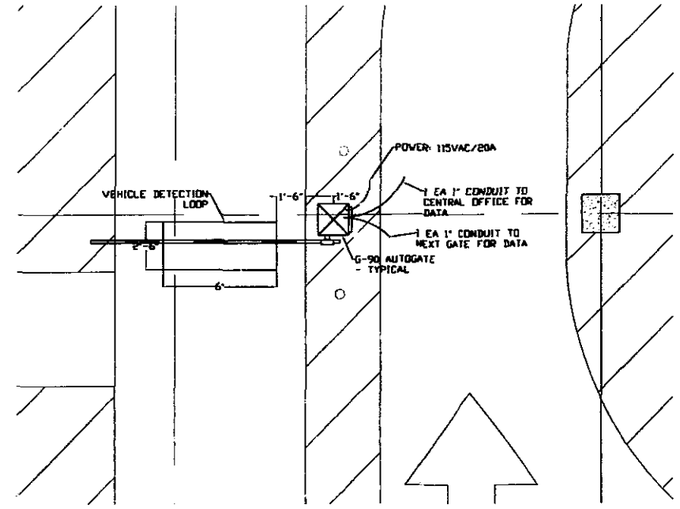
DRAWN BY: C YORK
DATE: 8-15-06
CHECKED BY: S HALEY

PC2



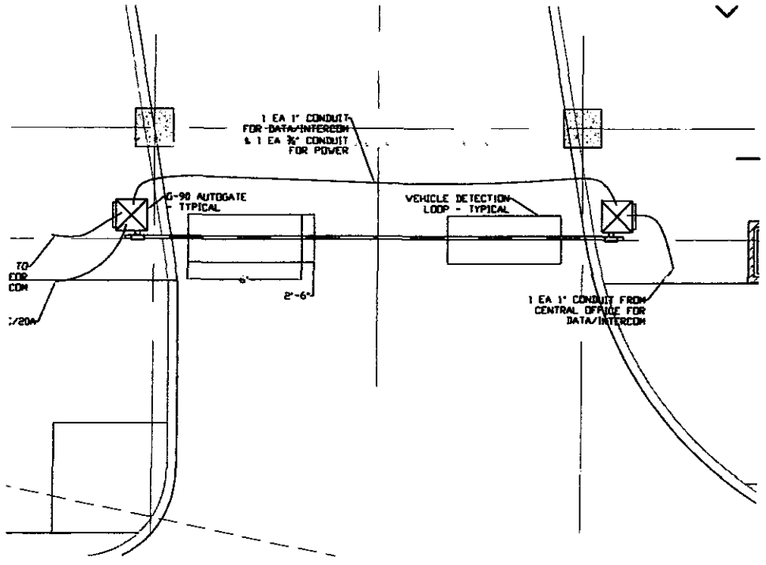
1 SHUTTLE ENTRY GATE

Scale: 1/8" = 1'-0"



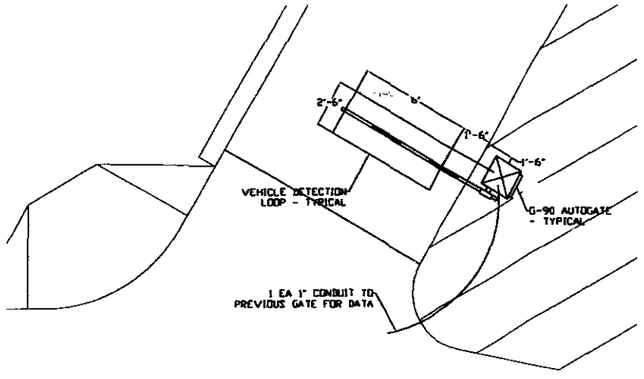
3 VALET ENTRY GATE

Scale: 1/8" = 1'-0"



2 SHUTTLE EXIT GATE

Scale: 1/8" = 1'-0"



4 VALET EXIT GATE

Scale: 1/8" = 1'-0"

ACCESS CONTROL SYSTEMS LLC
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UNIVERSITY OF KENTUCKY
PATIENT CARE FACILITY
NEW GARAGE

DRAWN BY: C YORK
DATE: 8-15-06
CHECKED BY: S HALEY

PC3

SECTION 14 /
CMS Central Monitoring System

14.0 GENERAL

"CMS" Central Monitoring System for Windows® is a comprehensive elevator management tool for institutions, contractors, building managers and owners with many elevators in the same building, in multiple buildings in the same city or even in different cities. CMS provides interactive monitoring and control for elevators. Emergency conditions or events are immediately displayed on the system monitor, maintenance personnel are notified via digital pager activation and a hardcopy is printed. CMS can be used as a data acquisition and adjustment tool and allows monitoring of selected events, emergency reports, analysis of elevator system performance, as well as the retrieval of other system information from a designated central location.

CMS elevator monitoring system consists of following subsystems:

Central Monitoring System (CMS)
Embedded Monitoring Interface (EMI), or Overlay Monitoring Interface (OMI)
Communication Network (CN)

14.1 CMS CENTRAL MONITORING SYSTEM FOR WINDOWS®

CMS is an interactive Microsoft Windows® based system that runs on an IBM-compatible personal computer (PC). CMS can be used for elevator modernizations as well as new installations. CMS can be connected to either an MCE microprocessor-controller or a non-MCE relay logic elevator control system, when either system has the appropriate interface.

IMC controls with an M3 Group System offers the most extensive range of data retrieval and monitoring options. For other types of control systems, the level of available monitoring is dependent on the memory capacity of the controller's microprocessor and its on-line status with the monitoring system. Please contact your MCE Sales Representative for details.

14.2 CMS GENERAL SPECIFICATIONS

The Central Monitoring System shall monitor the elevators attached to the system. When an elevator shutdown occurs, the elevator system shall initiate an emergency call to the elevator command center. The Central Monitoring System shall receive and process any emergency call by displaying the event on the monitor screen, sending a message to a pager, and printing the event on a designated printer.

While connected to the elevator system, the Central Monitoring System shall download and collect available data, which is organized in a database. This software shall provide easy-to-use pull-down menus, using the Microsoft Windows® based operating system, allowing the user to monitor and review the elevator performance database in various formats.

CMS shall also provide proper menus for monitoring the elevator system, and where applicable, for altering various elevator system parameters. The individual user's interaction level with the system shall be defined by the monitoring system manager.

14.3 CMS HARDWARE

Central Monitoring System shall be installed at a designated location for central monitoring. It shall contain all the equipment necessary to maintain the appropriate database as it communicates with and monitors the various attached elevator control systems.

The CMS hardware shall include a personal computer (PC), printer, modems and other peripherals to effectively perform the required functions. As a minimum, the hardware shall include two modems, one parallel printer, two dedicated analog phone lines and a computer as listed in the following table.

Elevator Command Center Computer - Minimum requirements for CMS

IBM compatible PC with:
- Pentium 233MHz Processor
- 32 MB RAM (Recommend 64MB or greater)
- 1GB hard disk (Recommend 2GB or greater)
- serial ports (2 or more)
- parallel port
- 3.5" floppy disk drive
- SVGA card
- SVGA monitor
- Parallel printer with cable (compatible with Microsoft Windows® 95, 98 or NT)
- Hayes Compatible Modems (2 each, 14,400 baud or higher), one for incoming Emergency Report and one for outgoing Automatic Inquiry or On-Demand Inquiry
- Microsoft Windows® 95, 98 or NT operating system software
- Ethernet card (optional)

14.4 CMS FUNCTIONAL SPECIFICATIONS

GRAPHICAL USER INTERFACE - Central Monitoring System shall run under the Microsoft Windows® operating system. The user interface shall be based on the standard Windows interface and shall be similar to other Windows® programs. If the user knows how to use other Windows' programs, he or she essentially knows how to use the monitoring system user interface.

While online with the controller, the Central Monitoring System shall provide various real-time display screens for system monitoring and diagnosis.

Online Help - The Central Monitoring System shall provide a complete and comprehensive online help system. A content-sensitive help program shall be provided to give the users hints and explanations of the current task.

Summary - This menu shall give a brief description of the system, including the job number, job name, number of cars, number of landings, number of openings per landing for each car, car labels, landing labels, fire service options, serial communication port definitions and other system options.

Individual Car Flags - This screen shall display a list of the selected car's internally generated computer flags for diagnostics.

Graphic Hoistway Display - The Central Monitoring System shall display the elevator system hoistway. That is, users shall be able to view a graphical representation of the elevator hoistway.

The graphic hoistway display shall include, but is not limited to, the following:

Simulated Hoistway and Car Configuration
Individual Elevator Position
Individual Elevator Car Calls
Individual Elevator Direction
Individual Elevator Door Position
Individual Elevator Status of Operation
Individual Elevator Communication Status
Registered Up and Down Hall Calls
Controller Real-Time Clock Date and Time
M3 Group Mode of Operation
Estimated Time of Arrival (M3 only)
Assigned Hall Calls to Individual Elevator (M3 only)
Hall Call Waiting Time Per Registered Hall Call (M3 only)
Remote Registration of Car and Hall Calls (M3 Only)

SYSTEM CONTROL AND ADJUSTMENT (M3 ONLY) - While online, the software shall provide various display screens for parameter adjustments.

System Parameter Menu - This menu shall allow the user to view and alter various M3 group system parameters including:

Parking Floors and Their Priorities
Hall Call Priority Times Per Landing
Parking Floor Delay Time
Parking Reassignment (Shuffle) Delay Time
Group Mode of Operation
Parameters Which Define Each Mode of Operation
Parameters For Lobby Up Peak Operation
Parameters For Traffic Identification
Time Actuation of Programmed Group Configurations
Change Lobby Floor or Invocation of Dual Lobby Operation

Individual Car Parameters Menu - This menu shall allow the user to view and alter various individual car parameters.

Door Dwell Times
MG Shut Down Time (If Applicable)
Time Out of Service Time, Nudging Time
Calculated Car Times (Not Adjustable): Door Opening Time, Door Closing Time, Through Time, Deceleration Time.

EMERGENCY NOTIFICATION - In case of elevator shutdown or any other designated emergencies, any attached elevator system shall automatically initiate a call to the Elevator Command Center. The ECC shall be capable of receiving the call, processing the data and routing the received data to the proper storage or output device (computer monitor, hard drive or printer). The system shall have the ability to page designated personnel to notify them of an emergency event.

The ECC shall always be in a ready state to answer an incoming call from any attached elevator system. This will require the system to have more than one dedicated phone line and modem. The ECC shall store, in the database, a chronological listing of the emergency reports received from each attached elevator system. The user shall be able to view or print these reports.

PAGER SUPPORT - A programmable option shall be available to send a coded message to a technician's digital pager when the Elevator Command Center receives an emergency event notification. The system manager shall be able to select the active pagers and shall be able to program pagers to be active based on a time schedule.

PROGRAMMABLE EVENTS (M3 ONLY) - The Central Monitoring System shall provide support for predefined and programmable events. System users shall be able to program the elevator controllers for the events to be monitored. Events shall be programmable to be stored in a controller file or be sent to the Elevator Command Center as an emergency event or both. The user shall be able to define the desired events from a list of controller specific inputs and outputs.

CMS REPORTS - The Central Monitoring System shall provide historical and performance reports for all attached M3 Group Systems. For other controllers, a limited number of reports (the first four in the list below) are available at all times; any additional reports require the controller to be continuously online. While viewing the reports, users shall be able to sort and select data to display the information in which they are interested. In addition to the predefined reports, the Central Monitoring System shall allow users to create customized reports. Reports shall be displayed in graphical and tabular formats. The graph type reports (bar graph, line graph and pie chart) shall be user configurable. Users shall be able to print the available reports. The reports, which are a function of the type of controller being monitored, shall include the following: hall call, car call and miscellaneous reports.

Average Wait Time Per Time and Direction (Graphical) - This report shall graphically display the hall calls average wait time per time and in each direction for the selected time period.

Number of Hall Calls Per Time and Direction (Graphical) - This report shall graphically display the number of hall calls per time and in each direction for the selected time period.

Group System and Car Controller Faults/Events Report - This report lists all the events generated by the group system and car computers. The report shall list the date and time each event has occurred along with a description of the event and its status. System users shall be able to display this report for multiple elevator systems, for particular events, for specific date and/or time.

Emergency Faults/Events Report - For a selected time period, this report shall provide a listing of the emergency events received by the Elevator Command Center. Users shall be able to display the report for multiple jobs, for particular emergency events, specific date and/or time and a specific car. The report shall also provide, for the selected time period, summary information such as the job with most emergencies, car with most emergencies and floors with most emergencies.

Hall Call Response in 15 Second Intervals (Tabular) - This report shall show the response to all hall calls registered for a particular elevator system. This report shall show the percentage of calls responses in 15 second intervals up to 90 seconds, and then greater than 90 seconds.

Hall Call Distribution (Tabular) - This report shall list all the hall calls registered for a particular elevator system for a selected time period. The list shall include, for every hall call, registration date and time, assigned car, car door (front or rear), floor where the call was registered, hall call direction (up or down), hallway (main or auxiliary) and wait time. The report shall also provide, for the displayed time period, a summary of the most used car, most used floor, total number of calls, average wait time, minimum wait time and maximum wait time.

Hall Call Performance (Tabular) - This report shall list, for every floor and in each direction (up and down), number of registered calls, average wait time, maximum wait time and minimum wait time.

Number of Hall Calls Per Landing and Direction (Graphical) - This report shall graphically display the number of hall calls for every landing, in each direction (up and down), for the selected time period.

Average Wait Time Per Landing and Direction (Graphical) - This report shall graphically display the hall calls average wait time for every landing, in each direction, for the selected time period.

Number of Hall Calls Answered Per Car (Graphical) - This report shall graphically display the number of hall calls answered by each car in the system for the specified time period.

Percent of Up and Down Hall Calls (Graphical) - This report shall graphically display the percentage of calls in the up and down directions for the selected time period.

User Customized Hall Call Reports (Tabular and graphical) - Users shall be able to construct tabular or graphical hall call reports from a list of stored data available in the database.

Car Call Distribution (Tabular) - This report shall list all car calls registered for a particular job for a selected time period. The list shall include, for every car call, registration date and time, assigned car, source and destination floors, door (front or rear) and travel time. The report shall also provide for the selected time period, a summary of the most active car, most traveled-from floor and most traveled-to floor.

Car Call Performance (Tabular) - This report shall list, for every car in the system, number of calls, average travel time, minimum travel time and maximum travel time. The user shall be able to select the display time period.

Number of Car Calls per Car (Graphical) - This report shall graphically display the number of car calls per car in a selected time period.

Number of Car Calls Per Landing (Graphical) - This report shall graphically display the number of car calls to every floor for a selected time period.

Average Travel Time Per Car (Graphical) - This report shall graphically display the average travel time for every car for a selected time period.

Average Travel Time Between Source and Destination (Graphical) - This report shall display, for a selected time period, the average travel time between the source and destination for each car.

User Customized Car Call Reports (Tabular or Graphical) - Users shall be able to construct tabular or graphical car call reports from a list of the stored data available in the database.

Access Control for Elevators Reports (Optional) - Several reports shall be available for the Access Control for Elevators (ACE) security. These reports shall display passenger information, secured car calls, hall call and car call security configurations. For details about Access Control for Elevators, refer to Section 14.

OTHER CMS FEATURES - The system shall be programmable to automatically collect data from all the monitored elevator systems and update the database.

The system shall provide a multiple level of password protection for the usage of the system.

The system shall include a built-in relational database. All data collected from the monitored elevator systems shall be stored in the database. Incorporating the relational database shall allow the system to offer numerous search methods and selection criteria for viewing collected data.

Different elevator systems may be attached to the system. Consult your MCE Sales Engineer for details.

14.5 EMBEDDED MONITORING INTERFACE (EMI)

For controllers manufactured by MCE, all the necessary interface to the Central Monitoring System is embedded in the elevator control system. Specify the embedded interface for MCE controllers by requiring the CMS option for each controller. Any existing MCE controller can be upgraded to include the embedded interface.

14.6 OVERLAY MONITORING INTERFACE (OMI)

OMI is a compact microprocessor-based monitoring interface designed to connect to any existing relay logic elevator system (for MCE controllers, the interface is embedded). In a multi-car system, each car and the group dispatcher requires an overlay monitoring unit. These units are connected through a high speed communication link. The OMI unit, connected to the dispatcher or to the common panel, collects all the necessary monitoring data to be transmitted to the CMS.

14.7 OMI HARDWARE FEATURES

OMI hardware shall be microprocessor-based, with on-board programming and diagnostics tool including two lines of 16-character LCD displays, four push-buttons and eight switches. A separate programming tool shall not be required.

Rugged, small enclosure for permanent mounting to the controller.

Optically isolated inputs to accept any signal up to +/- 240 VDC with individually field programmable voltage threshold. Optically isolated inputs provide safe monitoring of elevator circuits.

Separate common to allow grouping of inputs with the same common.

Up to 128 inputs per OMI. To add more inputs, the OMI units can be cascaded, thus virtually no limit on the number of signals to be monitored.

Communication to the CMS can be achieved via modems using telephone phone lines or via line drivers using hardwired connection.

Battery back-up memory retains stored information.

On-board, real time clock keeps current date and time.

14.8 OMI SOFTWARE FEATURES

Shall be capable of monitoring hall calls, car calls, hoistway signals, safety signals, machine room signals, car signals, controller signals and other circuits necessary for monitoring purposes. OMI software:

Allows programming/reprogramming of each input terminal, signal polarity, signal type and signal mnemonics.

Allows programming/reprogramming of system parameters and real time clock.

Allows programming/reprogramming of OMI emergency reporting parameters (such as telephone number and number of attempts) from OMI unit as well as remote CMS station.

Allows predefined emergency events as well as user defined emergency events. User defined emergency event descriptions can be up to 30 characters long.

Allows an event logic equation by programming specific logic conditions. Up to 100 such equations can be programmed on each OMI. This logic equation can use a combination of up to six input signals.

Generates and retains average wait time per time and direction, number of hall calls per time and direction, group system and car controller faults/events and hall call response time within 15 second intervals.

Automatically generates a call to the CMS station upon detection of an emergency event.

OMI diagnostic feature allows user to examine new system flags, old system flags, terminal input status, mnemonics table, terminal definition table, event logic equation and COM port definition.

MONITORING EVENTS LIST - The following is sample listing of the type of events that may be reported by OMI:

System Emergency Events:

Fire Service Main
Fire Service Alternate
Bus Fuse Blown (2F)
Emergency Power System
Bus Fuse Blown (2H)
System Out Service

Car Emergency Events:

Fire Service Phase 2
Inspection
Independent Service
In Car Stop Switch
Time Out of Service
Bus Fuse Blown (2)
Lost Door Lock During Run
Photo Eye Failure
Safety Edge Failure
Emergency Power Car
Load Weigher

Safety Circuit:
- Governor
- Hoistway
- Car
- In-car

Communication Loss
Door Open Limit and Door Lock at the same time
Car Out of Service with Door Lock
Car Out of Service without Door Lock

Additional User Selectable Emergency Events:

Top Floor Demand
Bottom Floor Demand
Door Close Protection
Hall Call Bus Fuse Blown
Car Call Bus Fuse Blown
Security
Excessive Communication Error
Door Zone and Stepping
Hospital Service
Earthquake
Motor Limit Timer
Valve Limit Timer
Power OFF
Power ON
Both Up Slowdown Limit and Down Slowdown Limit Are Active
Fire Service Alternate Without Main

14.9 COMMUNICATION NETWORK

Different communication networks can be used to allow an Embedded Monitoring Interface (EMI) or Overlay Monitoring Interface (OMI) to communicate with the CMS station. The most popular means of communication are phone lines using modems or hardwiring using line drivers.

Overlay Monitoring Interface and CMS can be modified to meet customized communication network requirements. Consult your MCE Sales Representative.

IMPERIAL ELECTRIC
The Driving Force In Motion

AC VVVF Elevator Hoist Motor 1200 RPM Standard Amp Ratings

Low Slip, Single Speed, Ball Bearings, Elevator End Play, 50ºC Rise, 1200RPM, 60 Minute Duty, Open Construction

HP	5	7.5	10	12.5	15	20	25	30	40	50	60	75
Frame	256T	256T	256T	284T	284T	286T	324T	326T	365T	365T	405T	405T
200 V	**15.4**	**24.5**	**30.8**	34.1	43.8	58.3	70.0	80.4	**113.0**	132.2	**152.0**	**189.0**
208 V	14.8	23.5	29.6	32.7	41.9	55.2	67.0	78.4	108.0	129.3	147.0	**182.0**
220 V	14.2	21.5	26.6	30.9	39.3	52.4	65.8	72.5	104.0	122.0	**139.0**	**172.0**
230 V	13.5	21.6	26.4	29.5	39.0	49.8	61.0	70.4	98.2	116.2	132.2	164.0
240 V	13.6	20.4	26.5	28.9	36.0	47.6	58.6	68.6	95.4	114.2	127.0	156.8
440 V	7.1	10.8	13.3	15.6	19.7	26.2	32.9	36.7	52.0	61.0	**69.3**	86.0
460 V	6.8	10.8	13.2	14.8	19.5	24.9	30.5	35.2	49.1	58.1	66.1	82.0
480 V	6.4	10.2	13.3	14.2	18.0	23.8	29.3	34.3	47.7	57.1	63.5	78.4
575 V	**5.4**	**8.5**	10.5	11.9	15.2	20.1	24.8	28.4	38.6	46.5	**53.0**	**65.5**
Effiency	87.1%	86.9%	88.0%	88.9%	89.0%	89.7%	89.5%	90.8%	90.0%	90.4%	91.4%	91.1%
P/F	79.8%	75.8%	72.4%	88.8%	83.1%	82.6%	85.9%	87.9%	85.1%	88.6%	92.7%	94.2%
BTU/HR	566	864	1,042	1,192	1,416	1,754	2,240	2,322	3,395	4,056	4,312	5,596

Bold Numbers are Calculated

For other mechanical and electrical configurations, consult factory.

Imperial Electric
1503 Exeter Road
Akron, OH 44306
Phone: (330) 734-3600
Fax: (330) 734-3601

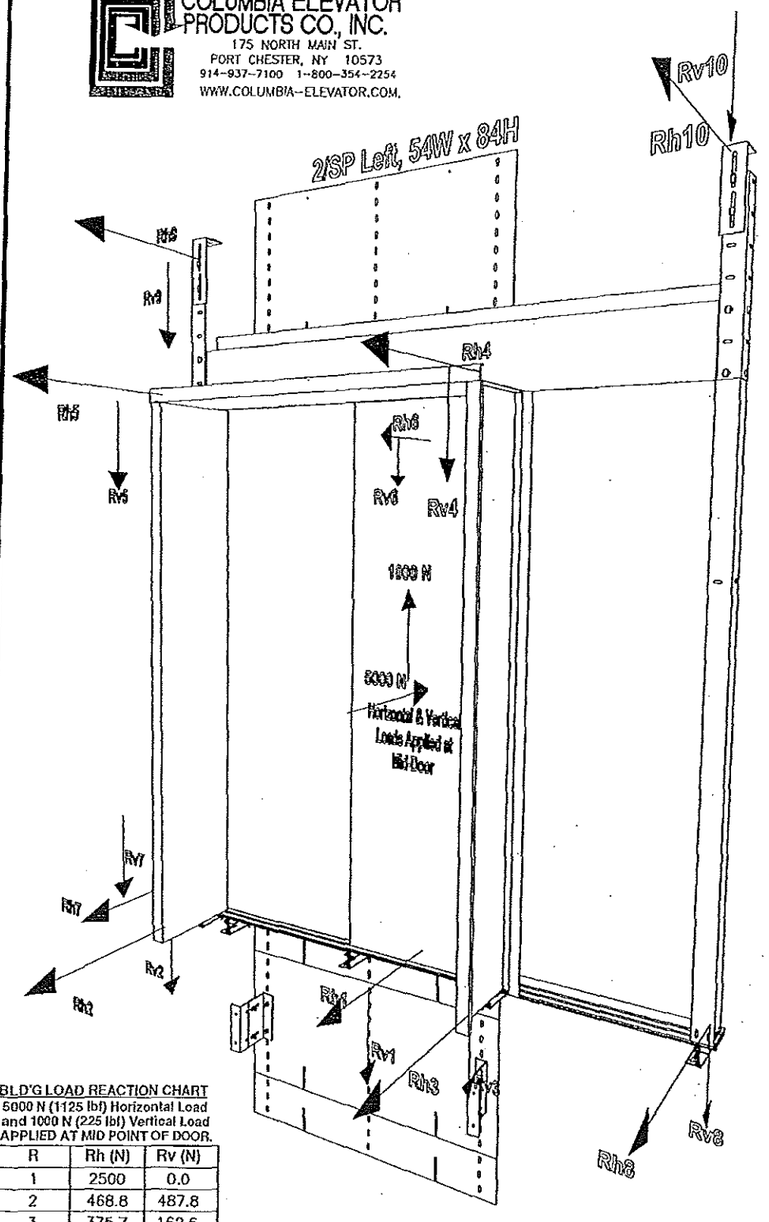
Contact: Dennis Rhodes
Elevator Sales Engineer
Rhodesd@ImperialElectric.com
Ext. 206
www.ImperialElectric.com

03/09/2005

54" x 84", 2/SP Left, GAL 8242

SHAFT 1 OF 2, 7 FRONTS, 0 ALTS. FRONT CONFIG. 19289

COLUMBIA ELEVATOR PRODUCTS CO., INC.
175 NORTH MAIN ST.
PORT CHESTER, NY 10573
914-937-7100 1-800-354-2254
WWW.COLUMBIA-ELEVATOR.COM.

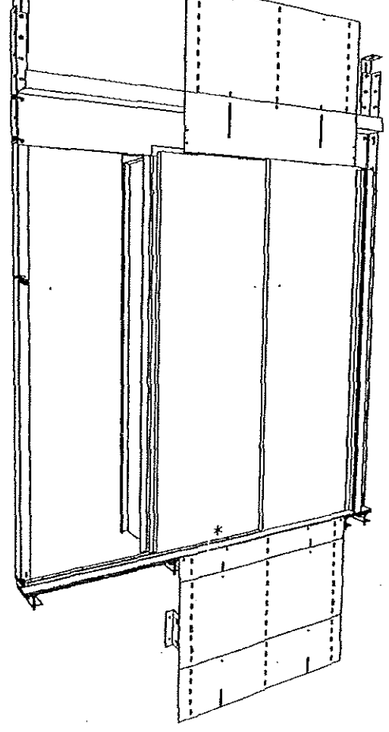


(7) ENTRANCES AS SHOWN

Frame Label, None
Door Label, UL (1) per opening,

Drywall Masonry X=None	SILL TYPE	FLOORS	FLOORS	FLR TO FLR HT	OPN'G HT	10 GA GALV HEADER	STRUT SIZE (2)PER	10 Ga. STRUT EXTENSIONS 93.5"	60"	48"	36"	24"	FACIA LENGTH	60 WIDTH x 7"	12"	24"	FACIA SUPRT SETS
														1	1		
M	GC ANG	F	UP	144	84	1	Std					2	14	DST	CVR		
M	GC ANG	E	F	144	84	1	Std					2	50	1		3	
M	GC ANG	D	E	144	84	1	Std					2	50	1		3	
M	GC ANG	C	D	144	84	1	Std					2	50	1		3	
M	GC ANG	B	C	144	84	1	Std					2	50	1		3	
M	GC ANG	A	B	144	84	1	Std					2	50	1		3	
M	GC ANG	LL	A	150	84	1	Std					2	56	1		3	
		PIT	LL	66									20	Toe	Grd		

* Hoistway Door Safety Retainers:
Per ASME/A17.1 Elevator Safety Code
Rule 110.H (1996) or 2.11.11.8 (2004) tested and
Certified by 3rd Party Independent Laboratory.



BILL OF MATERIALS

ITEM	QTY	MAT'L	FINISHES
BUCKS	7	SEE	FOLLOWING PAGES
H.M. DOORS	14	SEE	FOLLOWING PAGES
HEADERS	7	CRS	GALV
HANGER COVERS	7	CRS	GALV
DUST COVERS	1	CRS	GALV
FACIA	26	CRS	GALV
TOE GUARDS	1	CRS	GALV
STRUTS	14	10 Ga.	GALV
STRUT EXT'N	14	10 Ga.	GALV
SILLS	7	SEE	FOLLOWING PAGES
TACTILES	14 - Standard		

BLD'G LOAD REACTION CHART
5000 N (1125 lbf) Horizontal Load and 1000 N (225 lbf) Vertical Load APPLIED AT MID POINT OF DOOR.

R	Rh (N)	Rv (N)
1	2500	0.0
2	468.8	487.8
3	375.7	162.6
4	0.0	0.0
5	0.0	0.0
6	0.0	0.0
7	182.3	135.6
8	32.3	39.2
9	1224	135.6
10	217	39.2

NOTE 1: IN MULTI-PANELED OPENINGS, TEST LOADS ARE APPLIED TO THE DOOR PANEL THAT ILLUSTRATES THE MAXIMUM BUILDING REACTIONS.

NOTE 2: ALL REACTIONS CALCULATED & VERIFIED BY PROFESSIONAL ENGINEER, LICENSED IN THE STATE OF NEW YORK.

Final As Built - These drawings represent Columbia's interpretation of contract drawings and specifications. Approval by General Contractor, Architect and/or Elevator Contractor constitutes acceptance. Columbia does not warranty components not of its manufacture beyond job completion and acceptance. All repairs and/or replacement of components should be made directly by those individual manufacturers.

Columbia Elevator Products Co., Inc. Entrance construction complies with all requirements as set forth in the 2004 ANSI A17.1 Elevator safety code. Compliance with all Local, State, and other Jurisdictional code interpretations and all other additional federal requirements is the total responsibility of our customers.

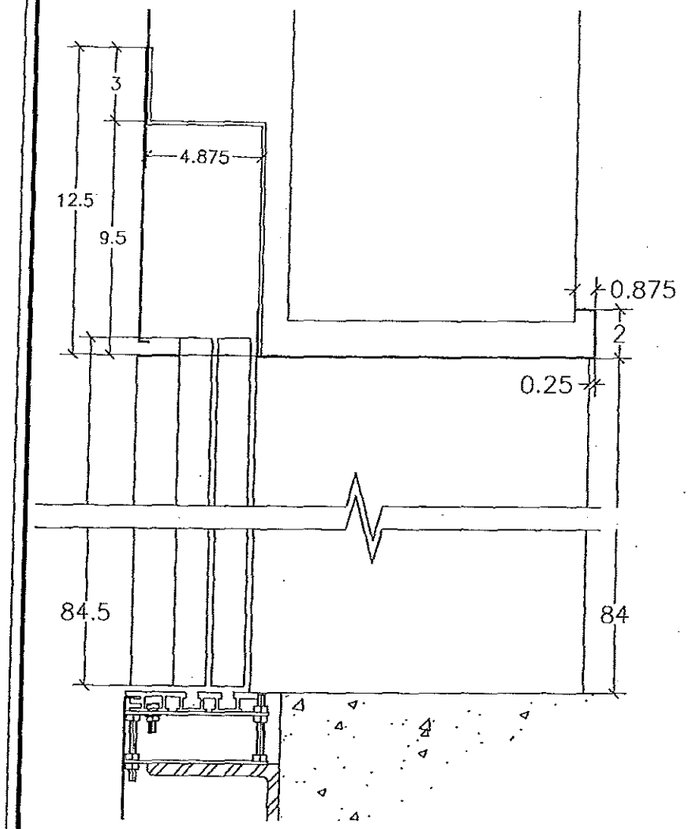
NOTE: LIMITED WARRANTY APPLIES TO ALL PRODUCTS EXPOSED TO EXTERIOR ELEMENTS.

COVER SHEET
TITLE: 19289-1/2-1/1
JOB NO. 1 OF 2
SHEET 6/21/2007 13:44
DATE: 19289.XLS
FILE NO. A.R.
DRAWN BY:
CLIENT #:

UK-PCF-PARKING GARAGE
E-5735
ELEVATOR # 1

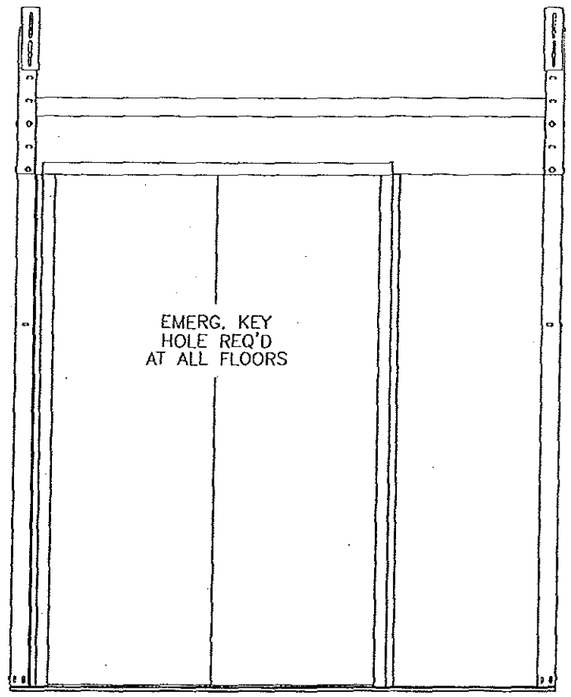
D-C Elevator Co
124 Venture Ct
KY, Lexington 40511

54" x 84", 2/SP Left, GAL 8242



SHAFT 1 OF 2, 7 FRONTS, 0 ALTS. ENTR. CFG. 1 OF 1, 7 EA. 19289

2/SP Left, 54W x 84H



FRAME TYPE: BOLTED CONSTRUCTION WITH PROJECTION

SHAFT CONSTRUCTION: STANDARD - SUPPORT ANGLE PROVIDED BY G.C.

LANDINGS , LL, A, B, C, D, E, F			
ITEM	QTY	MATERIAL	FINISH
BUCKS	7	S/ST	#4,
DOORS	14	S/ST	#4,
SILLS	7	Aluminum	

Custom Designed For D-C Elevator Co By

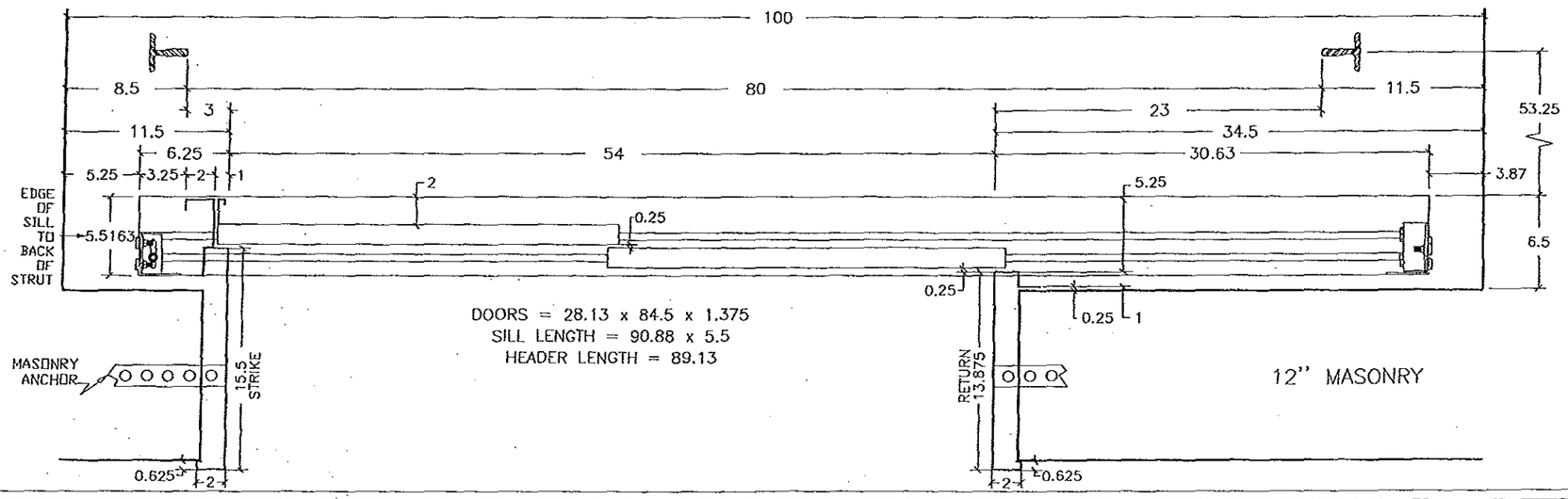
COLUMBIA ELEVATOR PRODUCTS CO., INC.
175 NORTH MAIN ST.
PORT CHESTER, NY 10573
914-937-7100 1-800-354-2254

General Contractor Notes:

1) These drawings have been prepared in full compliance with ASME A17.1 (Latest Edition). Field modifications may affect this compliance (Check local jurisdiction).
2) Hoistway entrances are manufactured in accordance with 1 1/2 Hr. fire rated construction.
3) Hoistway walls to have a fire endurance rating not less than that required by Section 110 (1996) or Section 2.1 (2004) ASME A17.1 Elevator Safety Code.
4) Furnishing, installing and maintaining the required fire rating of elevator hoistway walls, including the penetration of fire wall by elevator fixture boxes, is not the responsibility of the elevator contractor or elevator entrance manufacturer.
5) the interface of the hoistway wall with the hoistway entrance assembly shall be in strict compliance with the entrance manufacturer's requirements in order to retain fire rating and label validity of the elevator hoistway doors and frame.
6) Hoistway walls at entrances are to be built after door sills and frames are set in place. If this is not feasible, leave a 72"W x 96"H rough opening.
7) Filling and grouting by General Contractor.

METRIC CONVERSION (APPROX.)

MM	INCH
3	0.125
6	0.25
13	0.5
25.4	1
51	2
102	4
305	12
508	20
914	36
1067	42
1219	48
1372	54
1524	60
2540	100

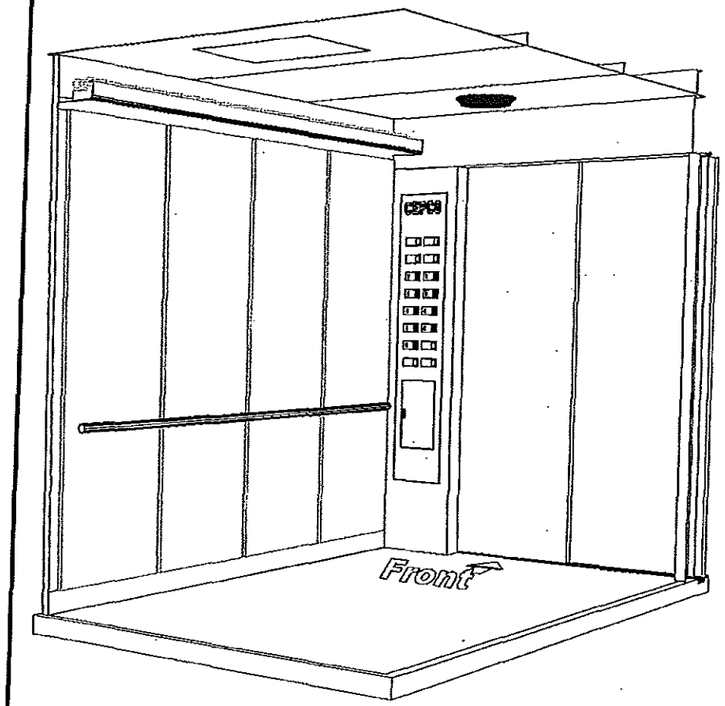


DETAILS
TITLE:
JOB NO. 19289-1/2-1/1
SHEET 2 OF 2
DATE: 6/21/2007 13:44
FILE NO. 19289.XLS
DRAWN BY: A.R.
CLIENT #:

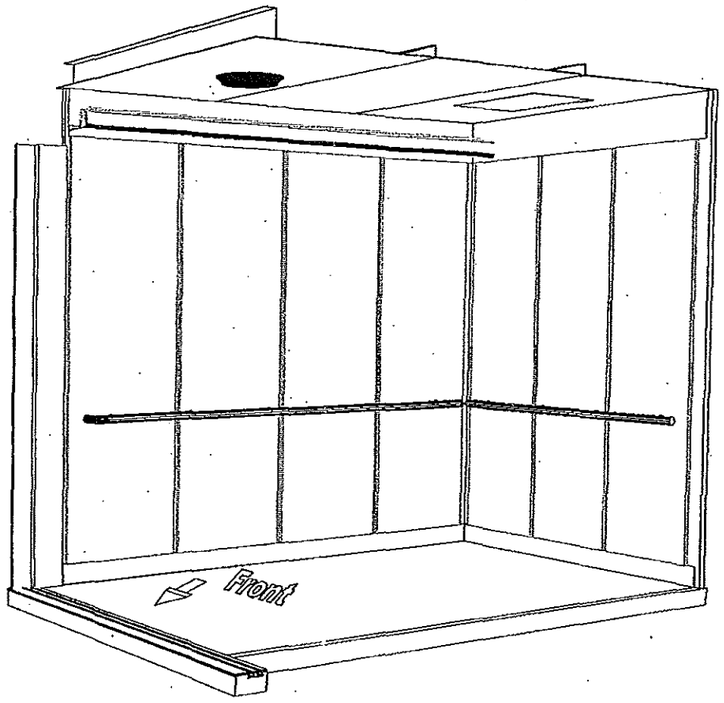
UK-PCF-PARKING GARAGE
E-5735
ELEVATOR # 1

D-C Elevator Co
124 Venture Ct
KY, Lexington 40511

CFG 1 of 2, Shaft 1-----Front Only
Steel Shell Cab



The images on this page are different viewpoints of a single 3-d parametric true scale model of your cab. Car stations, cab lanterns, and car position indicator are representative only and not to scale.



GENERAL INFORMATION	
CAB OPN. TYPE	FRONT OPENING ONLY
CAB RATING	5000 LBS.
CAB WEIGHT	2600.9 LBS.
PLATFORM SIZE	76" WIDE x 112" DEEP
INSIDE CAB SIZE	72" WIDE x 101" DEEP x 95" HIGH'
DOORWAY SIZE	54" WIDE x 84" HIGH
CAR OPERATOR	GAL Manufacturing Corp. - Template #8232
CROSSHEAD CLR.	18' / 8' To Gussets

MATERIAL AND FINISH SPECIFICATIONS		
ITEM	TYPE	MATERIAL/FINISH
DOOR(S)	2/SP Left	S/ST, #4 Satin
WALLS PANEL(S)	Steel Shell	(14) GALVN
TRANSOM(S)	Full	S/ST, #4 Satin
RETURN PANEL(S)	Integral Panel	S/ST, #4 Satin
REMOVEABLE PANELS	S/ST Hanging Panel w/ S/ST Reveals	S/ST Rigid, 5WL
BASE	---	Recessed S/ST
CANOPY	Flat, Rear Exit	CRS CLADD W/ #4 S/ST
CEILING LIGHTING	Light Trought	(4) 2 - 40W Fluorescent(s)
SILL(S)	2SP	Aluminum
FRIEZE	9" HIGH STEEL	S/ST #4
---	---	---

ACCESSORIES (INFO)	
HANDRAIL(S)	(3) 1 1/2" DIA., 1 Round, S/ST #4
(1) FAN - 2SP	(1) 10 IN. DIA. Grille
CERT. FRAME	S/ST #4
PAD BUTTON	None Required
PROTECTION PADS	None Required
---	---
---	---
---	---

NOTES:

(1) Columbia Elevator certifies that all Passenger Elevator Cabs manufacture bearing Underwriter Laboratories Classified Labels have been manufactured in strict accordance with our U.L. Passenger Elevator Car Enclosure Procedure. Cars fabricated using the procedure are subject to independent, third-party factory inspection by a Representative (Inspector) employed by the Underwriters Laboratories, and have been certified as products manufactured in full compliance with section 2 of ANSI A17.1 Elevator & Escalator Safety Code, having had materials tested in their end use configuration to the requirements of ASTM E 84, UL 723, NFPA 252 or CAN/ULCS102.2 and found a flame spread ratings less than or equal to 75 and a smoke development less than or equal to 450. Compliance with all Local, State and other Jurisdictional code interpretations and all additional federal requirements is the responsibility of our customers.

(2) Limited warranty applies to all products exposed to exterior elements.

(3) The total ventilation apertures for this cab are: 266.73 sq. in. OR 3.67 of the actual inside car floor area which complies with the 3.5% requirement of ASME- A17.1 Rule 2.14.2.3 Ventilation.

(4) "Ft" denotes Front
"Rt" denotes Right
"Rr" denotes Rear
"Lt" denotes Left

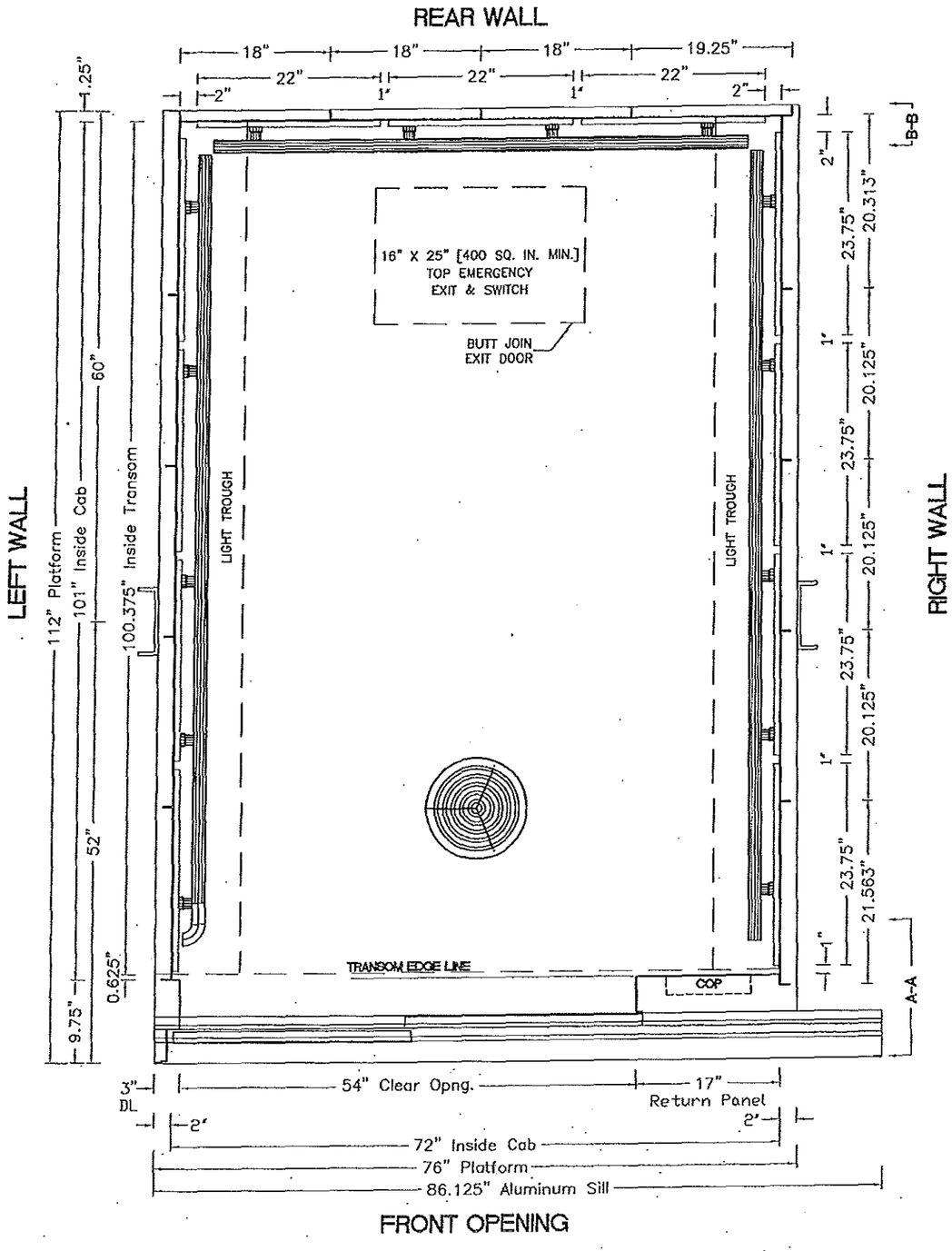
Final As Built - These drawings represent Columbia's interpretation of contract drawings and specifications. Approval by General Contractor, Architect and/or Elevator Contractor constitutes acceptance. Columbia does not warranty components not of its manufacture beyond job completion and acceptance. All repairs and/or replacement of components should be made directly by those individual manufacturers.

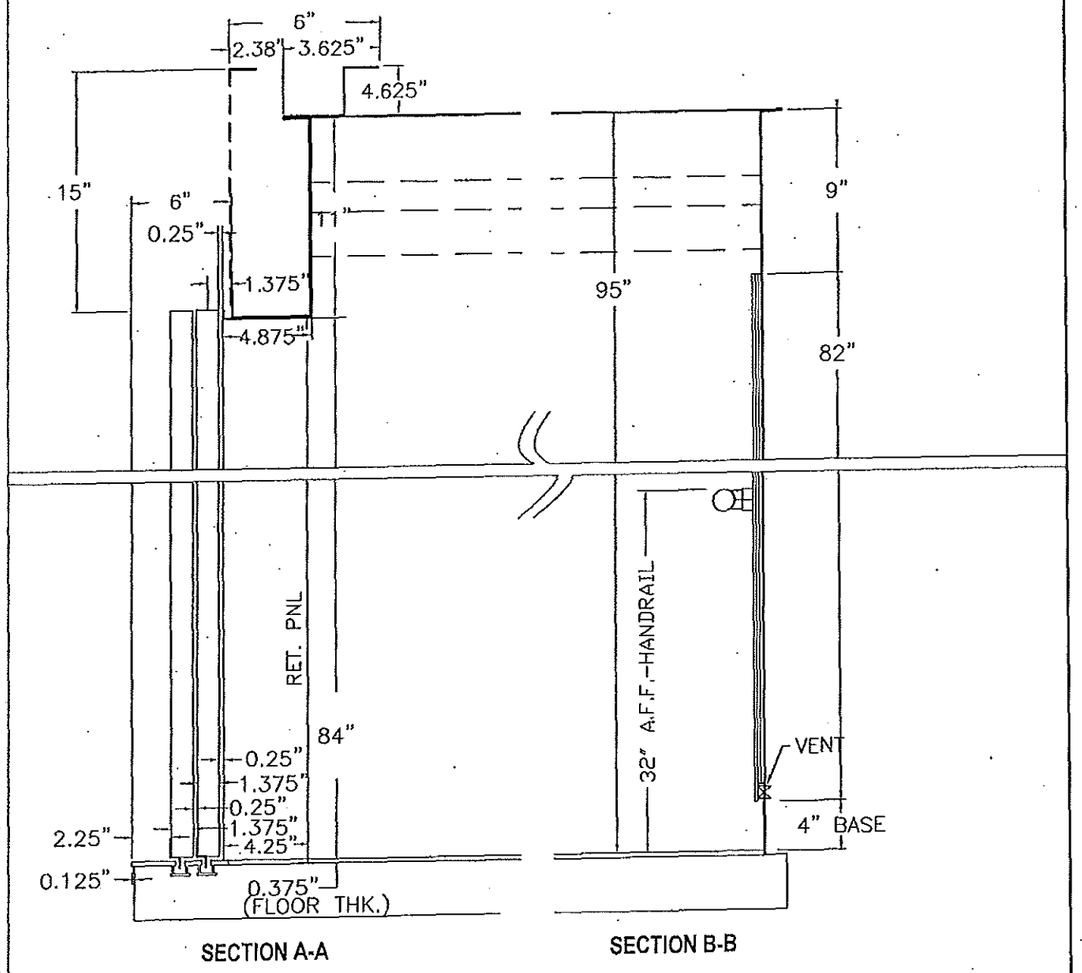
COLUMBIA ELEVATOR PRODUCTS CO., INC.
175 NORTH MAIN ST.
PORT CHESTER, NY 10573
914-937-7100 1-800-354-2264

CUSTOMER:	D-C Elevator Co 124 Venture Ct Lexington, KY 40511
JOB NAME:	UK-PCF-PARKING GARAGE # E-5735 ELEVATOR # 1
CAB LAYOUT SHEET 1 OF 3	CAB INFO. & ISO VIEW 2SP LEFT HAND
DRAWN BY: D.O.	JOB NUMBER: 19289-2/2
CHECKED BY: A.R.	DATE: 6/21/2007 4:12:13 PM

CFG 1 of 2, Shaft 1-----Front Only

Steel Shell Cab



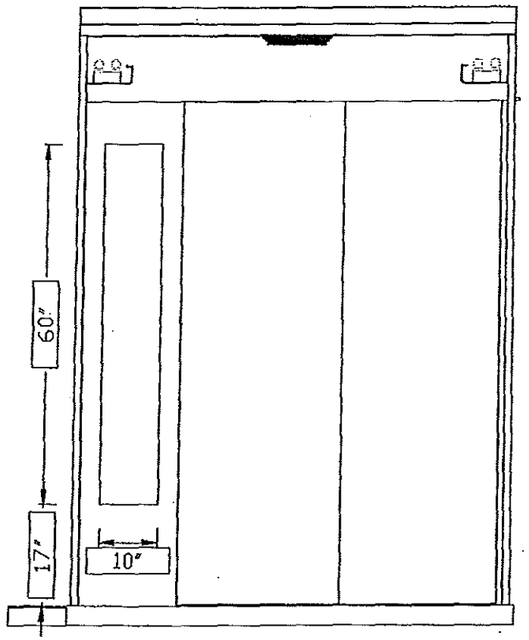


SECTION A-A

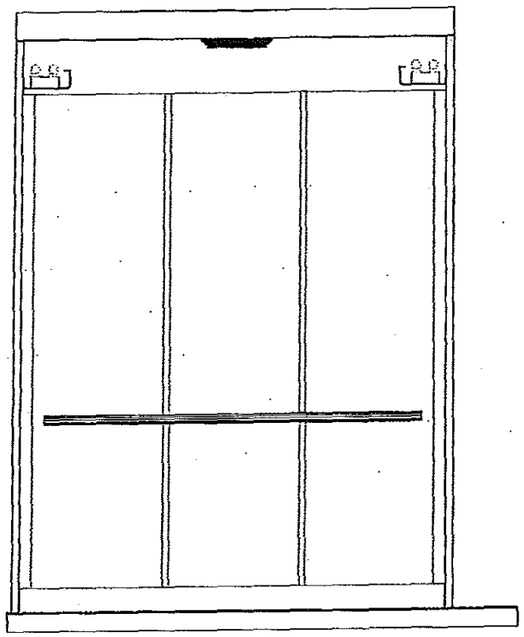
SECTION B-B

COLUMBIA ELEVATOR PRODUCTS CO., INC.
175 NORTH MAIN ST.
PORT CHESTER, NY 10573
914-937-7100 1-800-354-2254

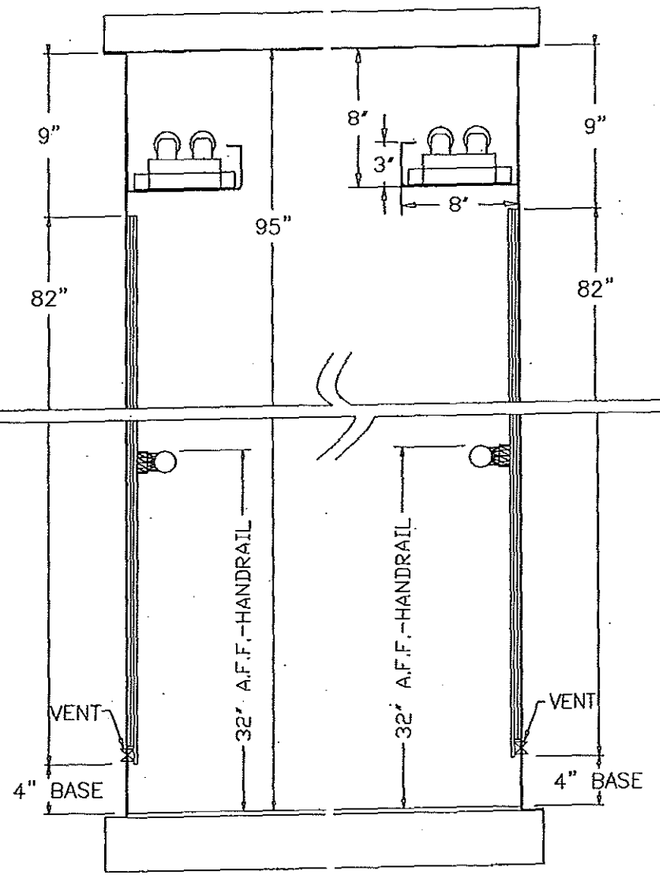
CUSTOMER:	D-C Elevator Co 124 Venture Ct Lexington, KY 40511
JOB NAME:	UK-PCF-PARKING GARAGE # E-5735 ELEVATOR # 1
CAB LAYOUT SHEET 2 OF 3	PLAN & SECTION VIEW 2SP LEFT HAND
DRAWN BY: D.D.	JOB NUMBER: 19289-2/2
CHECKED BY: A.R.	DATE: 6/21/2007 4:12:13 PM



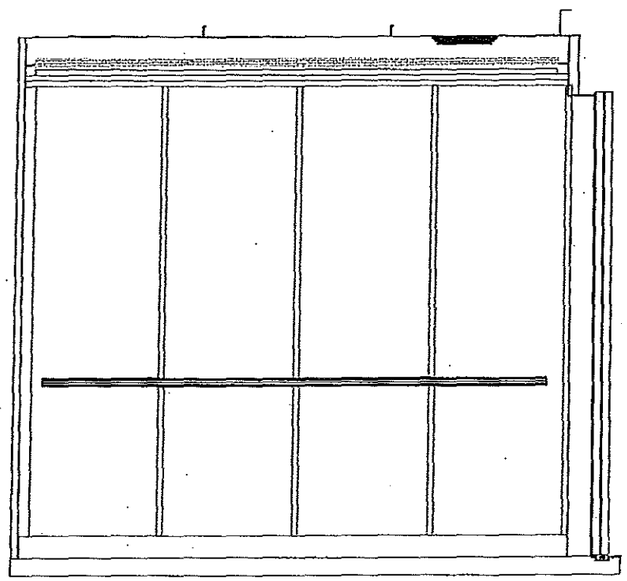
FRONT OPENING



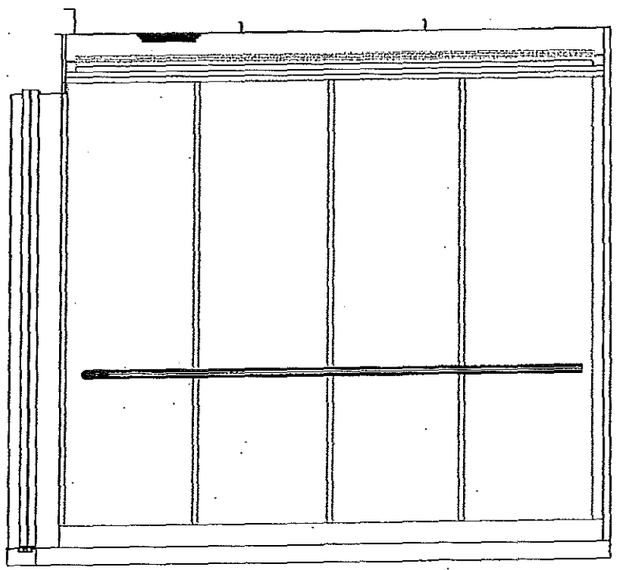
REAR WALL



LEFT WALL RIGHT WALL



RIGHT WALL



LEFT WALL

REQ'D/ASSUMED - ( )

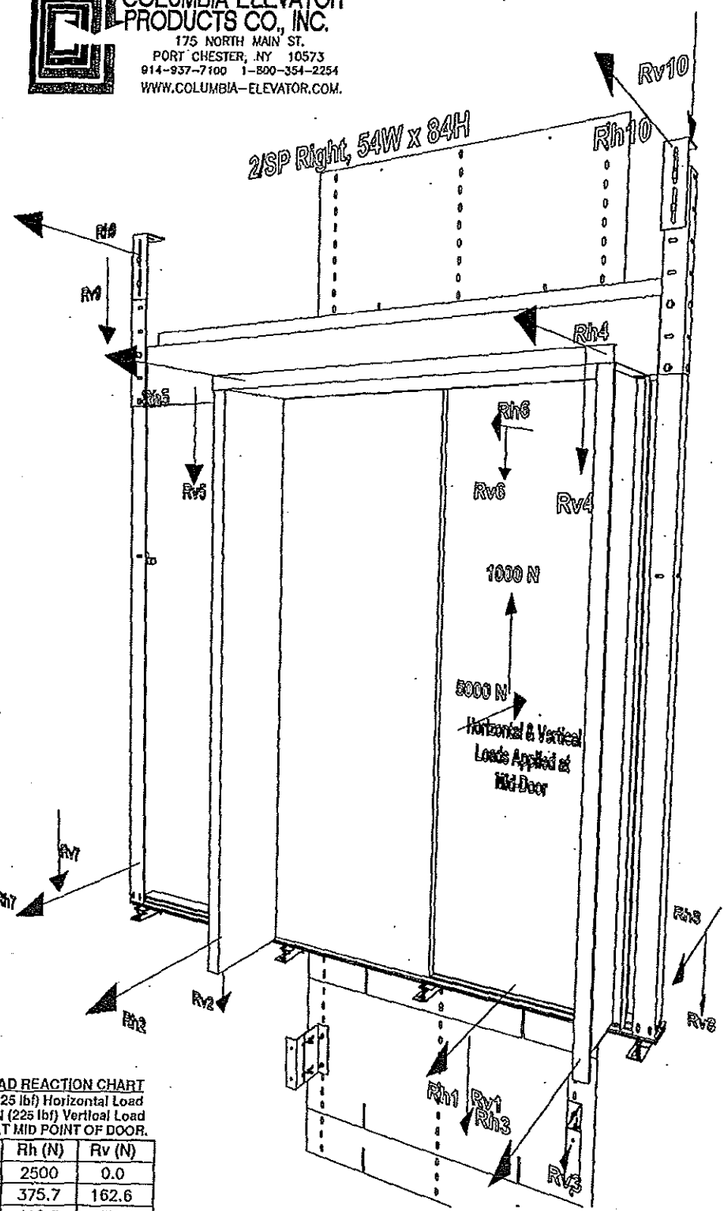
VERIFY LAYOUT DIMS - [ ]

COLUMBIA ELEVATOR PRODUCTS CO., INC.
175 NORTH MAIN ST.
PORT CHESTER, NY 10573
914-937-7100 1-800-354-2254

CUSTOMER:	D-C Elevator Co 124 Venture Ct Lexington, KY 40511
JOB NAME:	UK-PCF-PARKING GARAGE # E-5735 ELEVATOR # 1
CAB LAYOUT	ELEVATION & SECTION VIEW 2SP LEFT HAND
SHEET 3 OF 3	
DRAWN BY: D.D.	JOB NUMBER: 19289-2/2
CHECKED BY: A.R.	DATE: 6/21/2007 4:12:13 PM

54" x 84", 2/SP Right, GAL 8242

COLUMBIA ELEVATOR PRODUCTS CO, INC.
175 NORTH MAIN ST.
PORT CHESTER, NY 10573
914-937-7100 1-800-354-2254
WWW.COLUMBIA-ELEVATOR.COM.



BLD'G LOAD REACTION CHART
5000 N (1125 lbf) Horizontal Load and 1000 N (225 lbf) Vertical Load APPLIED AT MID POINT OF DOOR.

R	Rh (N)	Rv (N)
1	2500	0.0
2	375.7	162.6
3	468.8	487.8
4	0.0	0.0
5	0.0	0.0
6	0.0	0.0
7	32.3	39.2
8	182.3	135.6
9	217	39.2
10	1224	135.6

NOTE 1: IN MULTI-PANELED OPENINGS, TEST LOADS ARE APPLIED TO THE DOOR PANEL THAT ILLUSTRATES THE MAXIMUM BUILDING REACTIONS.

NOTE 2: ALL REACTIONS CALCULATED & VERIFIED BY PROFESSIONAL ENGINEER, LICENSED IN THE STATE OF NEW YORK.

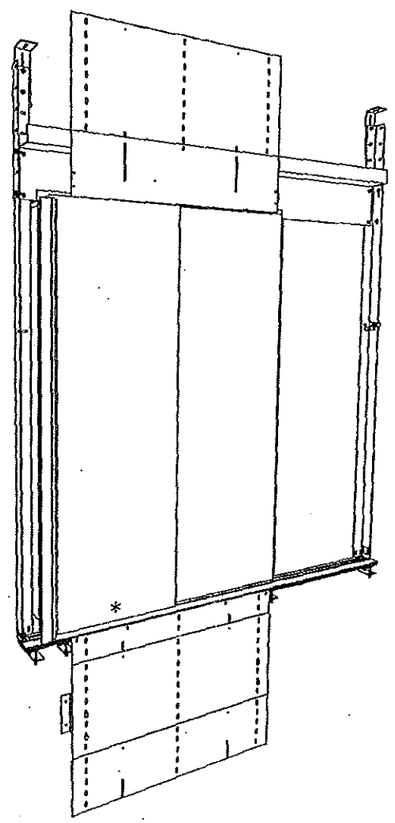
SHAFT 2 OF 2, 7 FRONTS, 0 ALTS. FRONT CONFIG. 19289

(7) ENTRANCES AS SHOWN

Frame Label, None
Door Label, UL (1) per opening,

Drywall Masonry X=None	SILL TYPE	FLOORS	FLOORS	FLR TO FLR HT	OPN'G HT	10 GA GALV HEADER	STRUT SIZE (2)PER	10 Ga. STRUT EXTENSIONS 93.5"	60"	48"	36"	24"	FACIA LENGTH	60 WIDTH x 7"	12"	24"	FACIA SUPRT SETS
														1	1		
M	GC ANG	F	UP	144	84	1	Std					2	14	DST	CVR		
M	GC ANG	E	F	144	84	1	Std					2	50	1		3	
M	GC ANG	D	E	144	84	1	Std					2	50	1		3	
M	GC ANG	C	D	144	84	1	Std					2	50	1		3	
M	GC ANG	B	C	144	84	1	Std					2	50	1		3	
M	GC ANG	A	B	144	84	1	Std					2	50	1		3	
M	GC ANG	LL	A	150	84	1	Std					2	56	1		3	
		PIT	LL	66									20	Toe	Grd		

* Hoistway Door Safety Retainers:
Per ASME/A17.1 Elevator Safety Code
Rule 110.H (1996) or 2.11.11.8 (2004) tested and Certified by 3rd Party Independent Laboratory.



BILL OF MATERIALS

ITEM	QTY	MAT'L	FINISHES
BUCKS	7	SEE	FOLLOWING PAGES
H.M. DOORS	14	SEE	FOLLOWING PAGES
HEADERS	7	CRS	GALV
HANGER COVERS	7	CRS	GALV
DUST COVERS	1	CRS	GALV
FACIA	26	CRS	GALV
TOE GUARDS	1	CRS	GALV
STRUTS	14	10 Ga.	GALV
STRUT EXT'N	14	10 Ga.	GALV
SILLS	7	SEE	FOLLOWING PAGES
TACTILES	14 - Standard		

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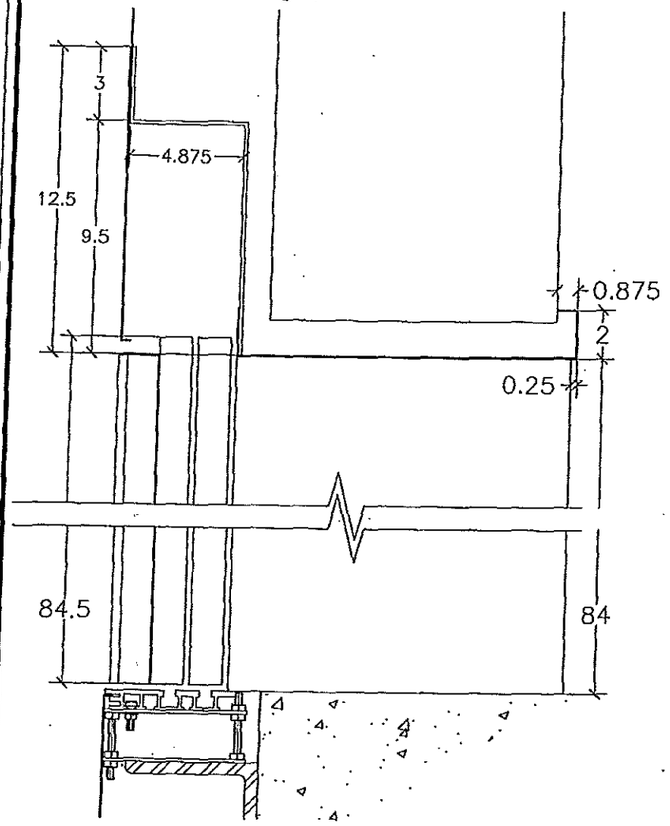
COVER SHEET
TITLE:
JOB NO. 19289-2/2-1/1
SHEET 1 OF 2
DATE: 6/21/2007 14:20
FILE NO. 19289.XLS
DRAWN BY: A.R.
CLIENT #:

UK-PCF-PARKING GARAGE
E-5735
ELEVATOR # 3

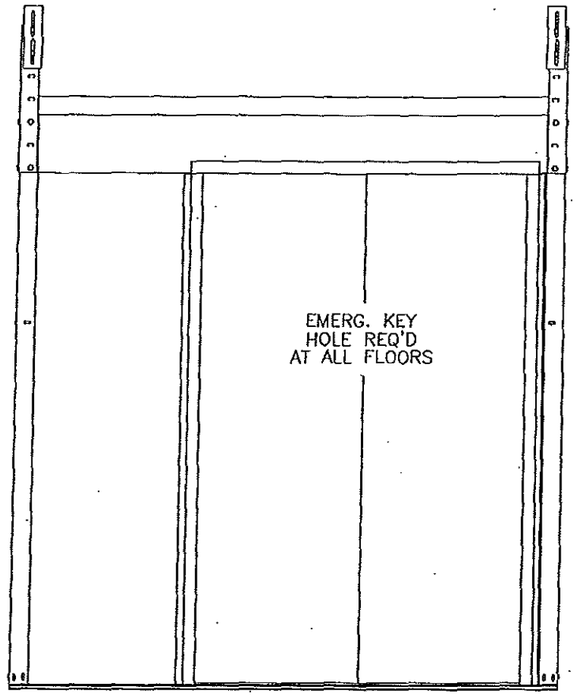
D-C Elevator Co
124 Venture Ct
KY, Lexington 40511

54" x 84", 2/SP Right, GAL 8242



SHAFT 2 OF 2, 7 FRONTS, 0 ALTS. ENTR. CFG. 1 OF 1, 7 EA. 19289

2/SP Right, 54W x 84H



FRAME TYPE: BOLTED CONSTRUCTION WITH PROJECTION

SHAFT CONSTRUCTION: STANDARD - SUPPORT ANGLE PROVIDED BY G.C.

LANDINGS , LL, A, B, C, D, E, F

ITEM	QTY	MATERIAL	FINISH
BUCKS	7	S/ST	#4,
DOORS	14	S/ST	#4,
SILLS	7	Aluminum	

Custom Designed For D-C Elevator Co By

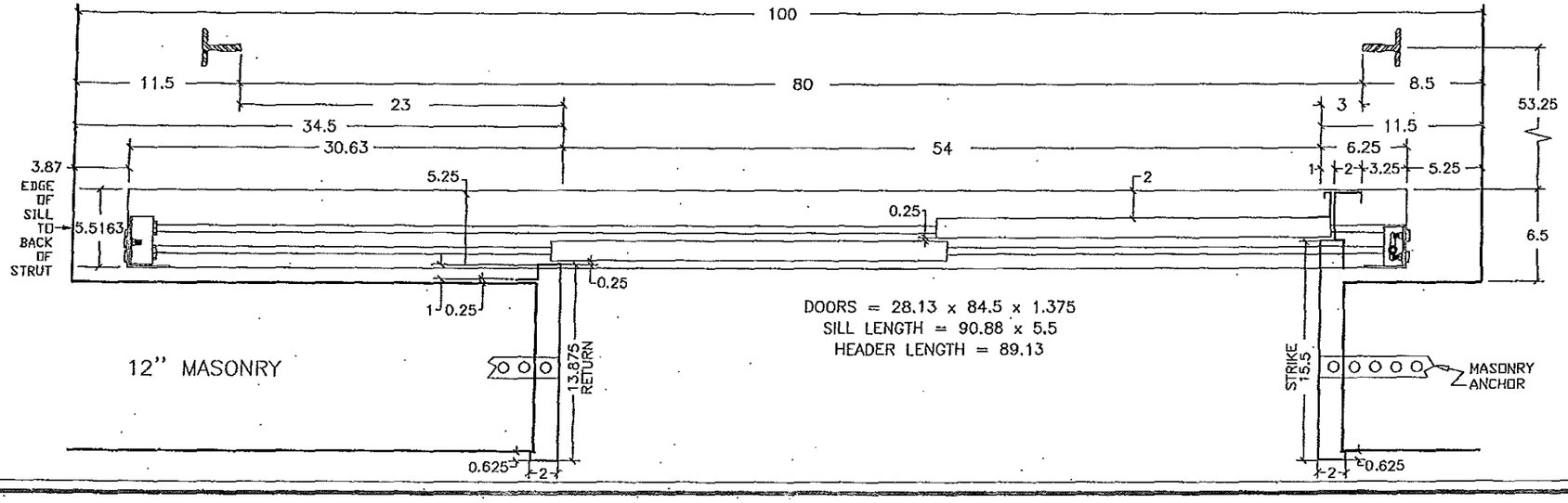
COLUMBIA ELEVATOR PRODUCTS CO., INC.
175 NORTH MAIN ST.
PORT CHESTER, NY 10573
914-937-7100 1-800-354-2254

General Contractor Notes:

1) These drawings have been prepared in full compliance with ASME A17.1 (Latest Edition). Field modifications may affect this compliance (Check local jurisdiction).
2) Hoistway entrances are manufactured in accordance with 1 1/2 Hr. fire rated construction.
3) Hoistway walls to have a fire endurance rating not less than that required by Section 110 (1996) or Section 2.1 (2004) ASME A17.1 Elevator Safety Code.
4) Furnishing, installing and maintaining the required fire rating of elevator hoistway walls, including the penetration of fire wall by elevator fixture boxes, is not the responsibility of the elevator contractor or elevator entrance manufacturer.
5) the interface of the hoistway wall with the hoistway entrance assembly shall be in strict compliance with the entrance manufacturer's requirements in order to retain fire rating and label validity of the elevator hoistway doors and frame.
6) Hoistway walls at entrances are to be built after door sills and frames are set in place. If this is not feasible, leave a 72"W x 96"H rough opening.
7) Filling and grouting by General Contractor.

METRIC CONVERSION (APPROX.)

MM	INCH
3	0.125
6	0.25
13	0.5
25.4	1
51	2
102	4
305	12
508	20
914	36
1067	42
1219	48
1372	54
1524	60
2540	100



DOORS = 28.13 x 84.5 x 1.375
SILL LENGTH = 90.88 x 5.5
HEADER LENGTH = 89.13

TITLE: DETAILS
JOB NO. 19289-2/2-1/1
SHEET 2 OF 2
DATE: 6/21/2007 14:24
FILE NO. 19289.XLS
DRAWN BY: A.R.
CLIENT #:

UK-PCF-PARKING GARAGE
E-5735
ELEVATOR # 3

D-C Elevator Co
124 Venture Ct
KY, Lexington 40511

GOVERNING CODE: ASME A17.1-1996

LOCATED IN SEISMIC RISK ZONE NUMBER: 1

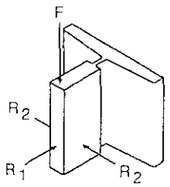
REQUIRED TO ADHERE TO ASME A17.1 CODE "PART XXIV ELEVATOR SAFETY REQUIREMENTS FOR SEISMIC RISK ZONE 2 OR GREATER"? NO

OVERHEAD REACTIONS

ALL LIVE LOADS ARE DOUBLED FOR IMPACT.
REFER TO MACHINE ROOM PLAN FOR LOCATIONS OF REACTIONS.

R1- 60,300#	R2- 8,800#	R3- 13,700#	
R5- 530#			

RAIL REACTIONS AND FORCES



RAIL AND BUFFER REACTIONS DO NOT OCCUR SIMULTANEOUSLY.

REACTIONS ARE PER EACH RAIL.

"F" FORCE IS DOWNWARD ON PIT.

		R_1	R_2	F
CAR	NORMAL LOADING	271#	226#	—
CAR	NORMAL RUNNING	271#	226#	—
CAR	EARTHQUAKE (CAR)	—	—	—
CAR	SAFETY APPLICATION	547#	—	11,500#
CWT.	EARTHQUAKE (CWT.)	—	—	—
CWT.	SAFETY APPLICATION	—	—	—

BUFFER SUPPORT IMPACTS

23,200# ON EACH OF (2) CAR BUFFER SUPPORT(S)

30,800# ON EACH OF (1) CWT. BUFFER SUPPORT(S)

MACHINE UP-PULL FORCES

41,460# DOUBLED FOR IMPACT

PURCHASER TO PROVIDE

1. Complete hoistway, pit and machinery room meeting the requirements of the governing code or authority and the necessary barricades inside and outside of the hoistway. This to include pit ladders, access doors, ventilation, etc. Hoistway to be square and plumb within 1/2".
2. Suitable illumination, convenience outlets, heat and ventilation in the machinery space. Maintain machine room temperature between 50 and 100 degrees F.
3. Power and light switches in accordance with the governing code or authority.
4. Suitable feeder of branch wiring circuits as required to controller, signal systems and power operated doors, including main line switch.
5. A.C. outlet in hoistway for car lighting as located on drawings.
6. Support for guide rail brackets, machine and sheave beams and reinforced concrete machine room floor slab of thickness specified which must not be poured until machine beams are set in place.
7. Hoisting beam or suitable supports for hoisting. (Contractor to provide)
8. Door frames, sills and track supports for freight elevators with counterbalanced doors. Sill recesses and sill supports for elevators with swinging or horizontal sliding doors. Grouting of sills. NOTE: All hatch walls at entrances to be erected after door sills and frames are in place.
9. All cable guards in machine room or secondary decks as required by local authorities.

SYMBOL KEY

(A) HALL STATION
(B) CAR STATION
(C) HALL POSITION INDICATOR
(D) CAR POSITION INDICATOR
(E) LIMIT SWITCHES
(F) LEVELING SWITCHES
(G) TRAVELING CABLES FOR CONTROL
(H) 110 VOLT OUTLET FOR ELEV. LIGHTS (BY OTHERS)
(J) PIT LADDER (BY OTHERS)
(K) ELEV. STOP SWITCH (IN PIT)
(L) PIT LIGHT SWITCH (BY OTHERS)
(M) TENSION WEIGHT
(N) CENTRIFUGAL GOVERNOR (SUPPORT BY OTHERS)
(P) CONTROLLER (82.5"H x 39"W x 16"D)
(Q) ELECTRICAL DISCONNECT SWITCH (BY OTHERS)
(R) OVERHEAD CAR SHEAVE CHANNELS (2 - C15 x 33.9#)
(S) OVERHEAD CWT. SHEAVE CHANNELS (2 - C12 x 30#)
(T) LIGHT SWITCH (BY OTHERS)
(U) SPRING BUFFER
(V) TOP EMERGENCY EXIT (16" x 25" MIN. WITH CONTACT)
(W) HALL LANTERN

FINAL
JAN. 3, 2007

NO.	DATE	BY	REVISIONS
C	1-3-07	VKM	REVISED NOMENCLATURE. (ALL PAGES)
B	5-31-06	VKM	ADDED NOTES FOR FUTURE ELEV. #2 AND REVISED REACTIONS. (ALL PAGES)
A	4-27-06	VKM	ADDED LEVEL 5 & 6. REVISED NOTES. (ALL PAGES)

GENERAL DATA

CAR NO.(S)	#1 & #3
CLASSIFICATION	PASSENGER
CAPACITY	5,000#
SPEED	200 F.P.M.
ROPING	1:1
OPERATION	GROUP
CONTROL	VVVF A/C
LDGS./OPNGS.	7/7 (IN LINE)

CAR AND COUNTERWEIGHT

CAR SAFETY	#4BD TYPE "B" FLEXIBLE GUIDE CLAMP (H-W)
CWT. SAFETY	—
CAR TYPE & MFR.	PASSENGER
GUIDE SHOES-CAR/CWT.	ROLLER - #38D/#379 (H-W)
CAR DOOR/GATE	4'-6" x 7'-0" TWO SPEED SIDE SLIDE
CAR FLOORING	3/8" EPOXY RESIN TERRAZZO TILE (APPROX. 25D#)

HOISTWAY ENCLOSURE

SHAFT DOORS	4'-6" x 7'-0" TWO SPEED SIDE SLIDE

HOISTWAY EQUIPMENT

GUIDE RAILS-CAR/CWT.	15 lbs/ft AND 8 lbs/ft
LIMIT SWITCHES	
BUFFERS/STROKE	SPRING / CAR: 4" COMP. & CWT.: 5" COMP. (H-W)
GOVERNOR/TRP. SPD.	#2D7 CENTRIFUGAL GOVERNOR / 280 F.P.M. (H-W)
HOIST ROPES (8x19)T.S.	(6)-5/8" DIA.
GOV. ROPE (8x19)T.S.	(1)-3/8" DIA.
COMPENSATION	—

MACHINE DATA

MACHINE MFR.	HOLLISTER-WHITNEY ELEVATOR CORPORATION
TYPE & SIZE	#64 O.D. BASEMENT SET GEARED TRACTION MACHINE
W/G RATIO & PITCH	95 TEETH & 3/4" DBL.
TRACTION SHEAVE	32" DIA. (H-W)
IDLER/O.H. SHEAVE(S)	25" DIA. O.D. SHEAVE (H-W)
CAR SHEAVE(S)	(2) - 25" DIA. OVERHEAD SHEAVES (H-W)
CWT. SHEAVE	(1) - 30" DIA. OVERHEAD SHEAVE (H-W)
BRAKE	#112 D.C. DISC (H-W)
HOIST MOTOR	40 H.P. @ 1200 S.R.P.M. (IMPERIAL)
ROPE GRIPPER	—

CONTROLLER DATA

TYPE OR STYLE	MOTION CONTROL ENGINEERING

CAR CONSTRUCTION

PLATFORM	4 1/4" ALL STEEL CONSTRUCTION W/ ISOLATION (H-W)
CROSSHEAD	(2) - C10 x 15.3# (H-W)
STILES	(2) - MC6 x 12.0# (H-W)
BOTTOM CHANNELS	(2) - C10 x 15.3# (H-W)

WEIGHTS

CAR	6,500# (INCL. 2,600# ESTIMATED CAB + DOOR WGT.)
COUNTERWEIGHTS	8,500# (40% COUNTERBALANCE)
MACHINE	4,800# (INCL. 900# MOTOR WGT.)
MACH./O.H. BEAMS	1,200#
IDLER/O.H. SHEAVE(S)	1,750#
CONTROLLER	1,000#

POWER SUPPLY	480 VOLTS	3 PH.	60 CY.

PREPARED BY HOLLISTER-WHITNEY ELEVATOR CORP. FOR:

D-C ELEVATOR COMPANY, INC.
124 VENTURE COURT, SUITE #1; LEXINGTON, KENTUCKY 40511
PHONE: (859)254-8224 FAX: (859)231-8740

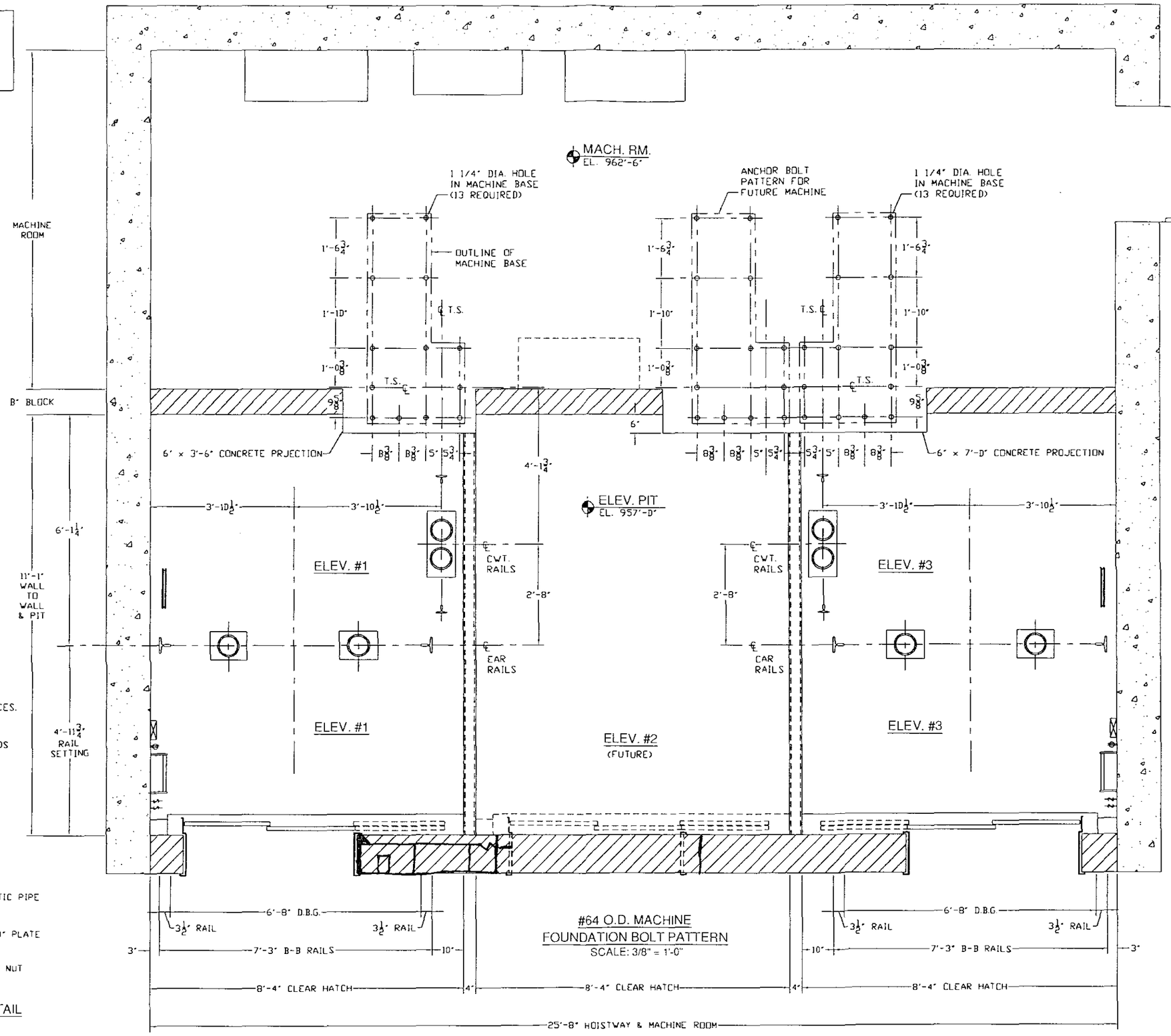
TRACTION ELEVATOR LAYOUT

PROJECT: UK PATIENT CARE FACILITY: PARKING GARAGE
LOCATION: 110 TRANSCRIPT AVENUE; LEXINGTON, KENTUCKY
ARCHITECT: GBBN ARCHITECTS
GEN. CONTR.: GILBANE BUILDING COMPANY

DRAWN BY: V.K.M.	DATE: 4-26-06	SCALE: NOTED
CONTRACT: A-180516	LAYOUT: L-4920	SHEET: 1 of 6

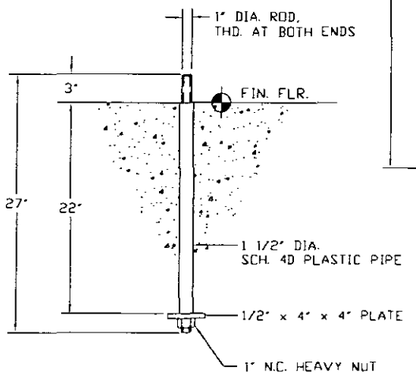
Architect / Engineer Notes:

1. Future Elev. #2 to be similiar to Elev. #1. Provisions for future machine anchorage based on Elev. #1 arrangement.



NOTE:

1. SEE SHEET 1 FOR MACHINE UP-PULL FORCES.



FOUNDATION BOLT DETAIL
SCALE: 3/8" = 1'-0"

#64 O.D. MACHINE
FOUNDATION BOLT PATTERN
SCALE: 3/8" = 1'-0"

FINAL
JAN. 3, 2007

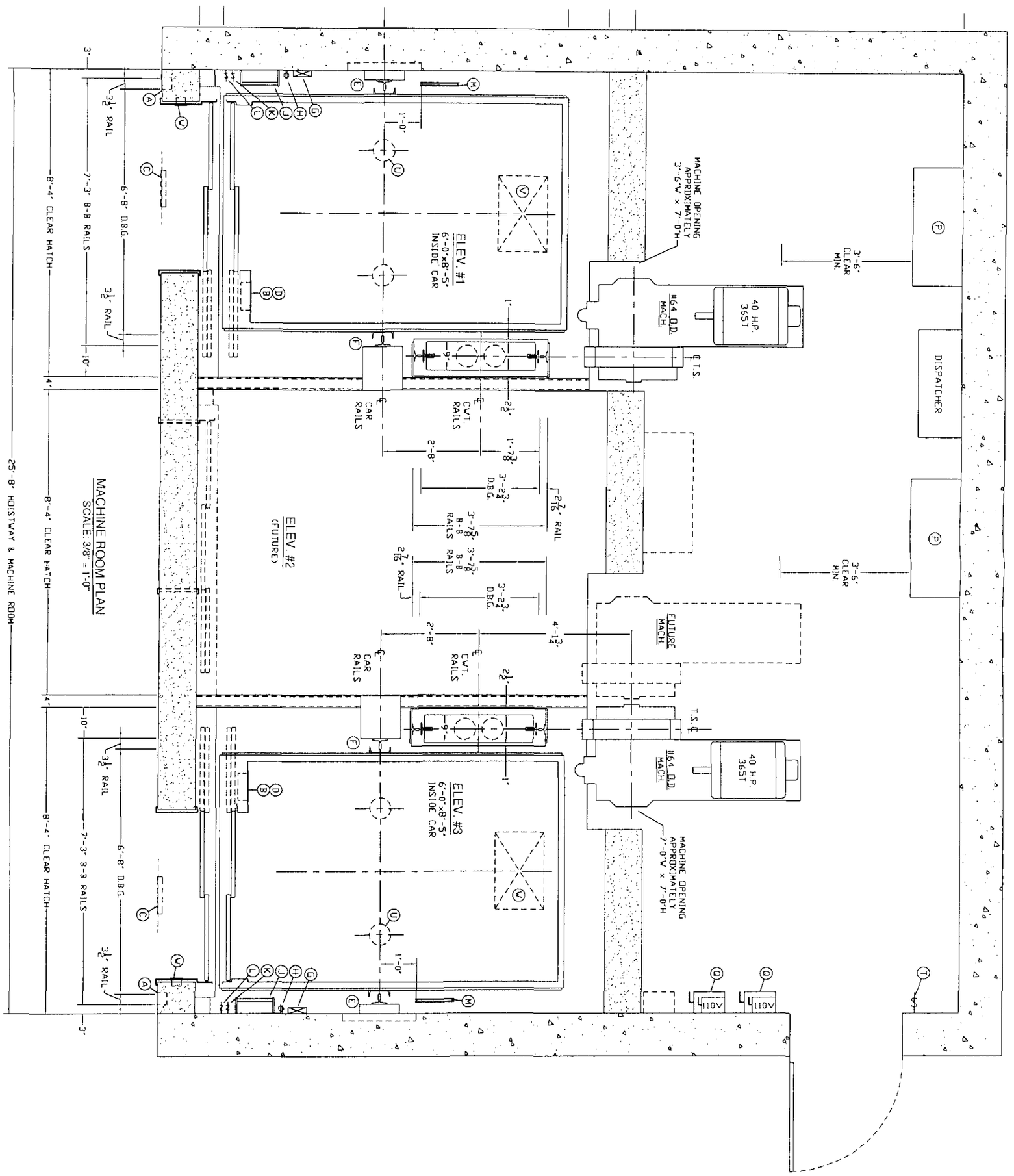
PREPARED BY HOLLISTER-WHITNEY ELEVATOR CORP. FOR:
D-C ELEVATOR COMPANY, INC.
124 VENTURE COURT, SUITE #1; LEXINGTON, KENTUCKY 40511
PHONE: (859)254-8224 FAX: (859)231-8740

TRACTION ELEVATOR LAYOUT

PROJECT: UK PATIENT CARE FACILITY: PARKING GARAGE

DRAWN BY: V.K.M. | DATE: 4-26-06 | SCALE: NOTED

CONTRACT: A-180516 | LAYOUT: L-4920 | SHEET: 2 of 6



PREPARED BY HOLLISTER-WHITNEY ELEVATOR CORP. FOR:

D-C ELEVATOR COMPANY, INC.

124 VENTURE COURT, SUITE #1; LEXINGTON, KENTUCKY 40511

PHONE: (859)254-8224 FAX: (859)231-8740

TRACTION ELEVATOR LAYOUT

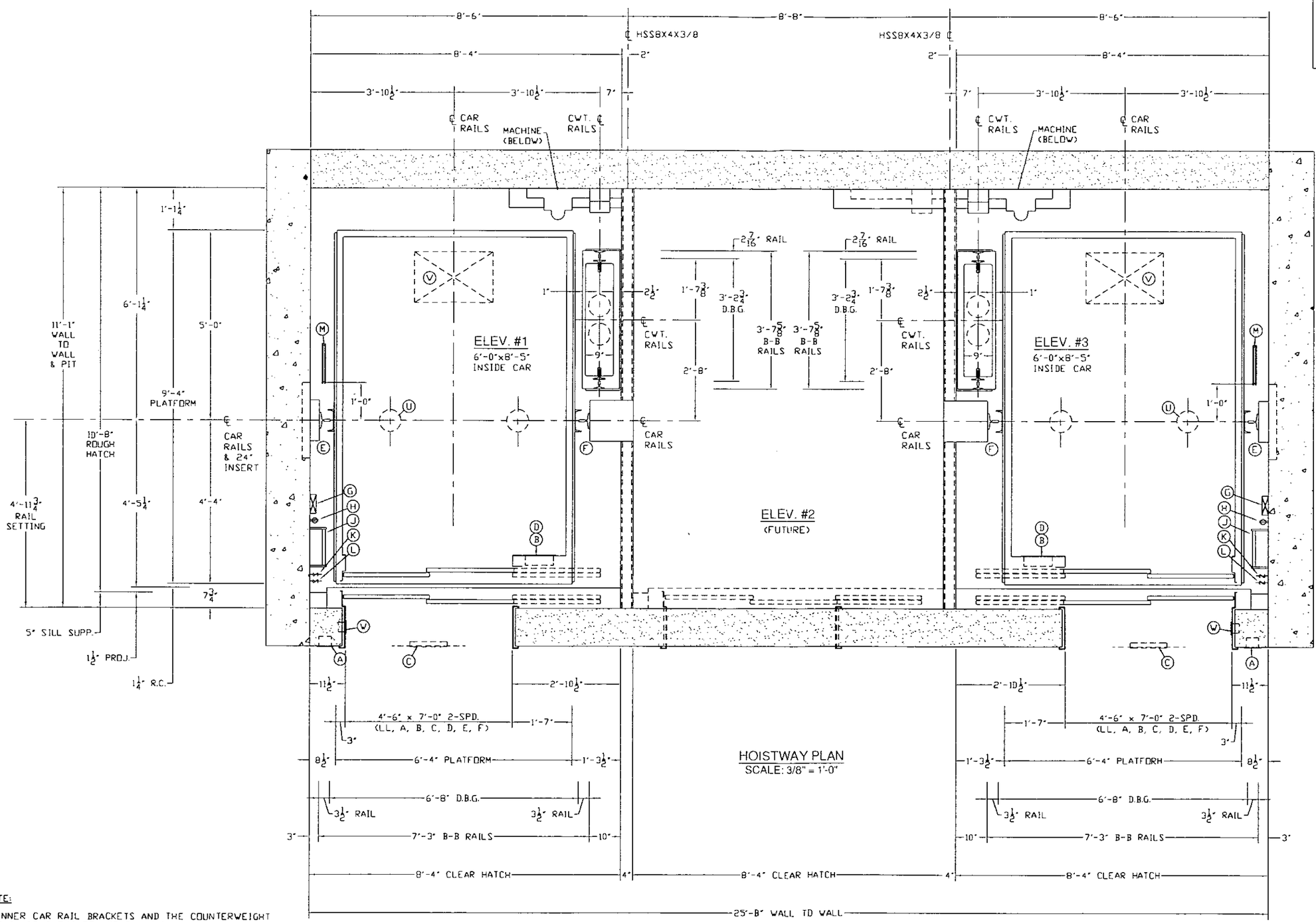
PROJECT: UK PATIENT CARE FACILITY: PARKING GARAGE

DRAWN BY: V.K.M.	DATE: 4-26-06	SCALE: NOTED
CONTRACT: A-180516	LAYOUT: L-4920	SHEET: 3 of 6

FINAL
JAN. 3, 2007

Architect / Engineer Notes:

1. Future Elev. #2 to be similiar to Elev. #1.



HOISTWAY PLAN
SCALE: 3/8" = 1'-0"

NOTE:

1. INNER CAR RAIL BRACKETS AND THE COUNTERWEIGHT RAIL BRACKETS TO ATTACH TO THE STEEL DIVIDERS AT VERTICAL SPACING SHOWN ON SHEET 4.

2. OUTER CAR RAIL BRACKETS TO ATTACH FLUSH TO THE WALL LINE TO C.M.U. INSERTS AT VERTICAL SPACING SHOWN ON SHEET 4.

FINAL
JAN. 3, 2007

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D-C ELEVATOR COMPANY, INC.
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PHONE: (859)254-8224 FAX: (859)231-8740

TRACTION ELEVATOR LAYOUT

PROJECT: UK PATIENT CARE FACILITY: PARKING GARAGE

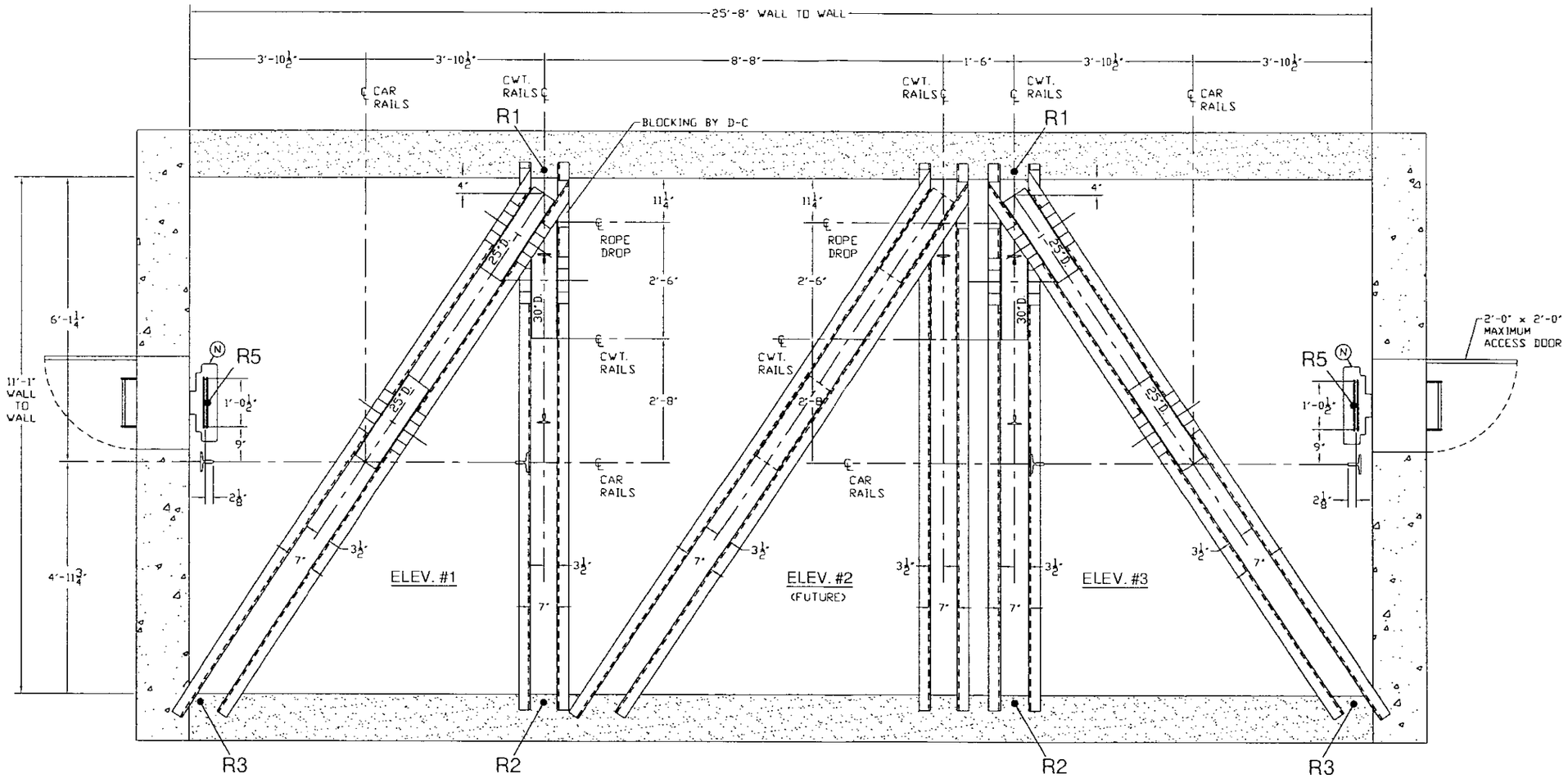
DRAWN BY: V.K.M.	DATE: 4-26-06	SCALE: NOTED	SHEET: 4 of 6
CONTRACT: A-180516	LAYOUT: L-4920		

Architect / Engineer Notes:

1. Future Elev. #2 to be similiar to Elev. #1. Provisions for future overhead sheave channels based on Elev. #1 arrangement.

NOTE:

1. SEE SHEET 1 FOR OVERHEAD REACTIONS "R1" THRU "R5".



OVERHEAD SHEAVE SPACE
SCALE: 3/8" = 1'-0"

FINAL
JAN. 3, 2007

PREPARED BY HOLLISTER-WHITNEY ELEVATOR CORP. FOR:
D-C ELEVATOR COMPANY, INC.
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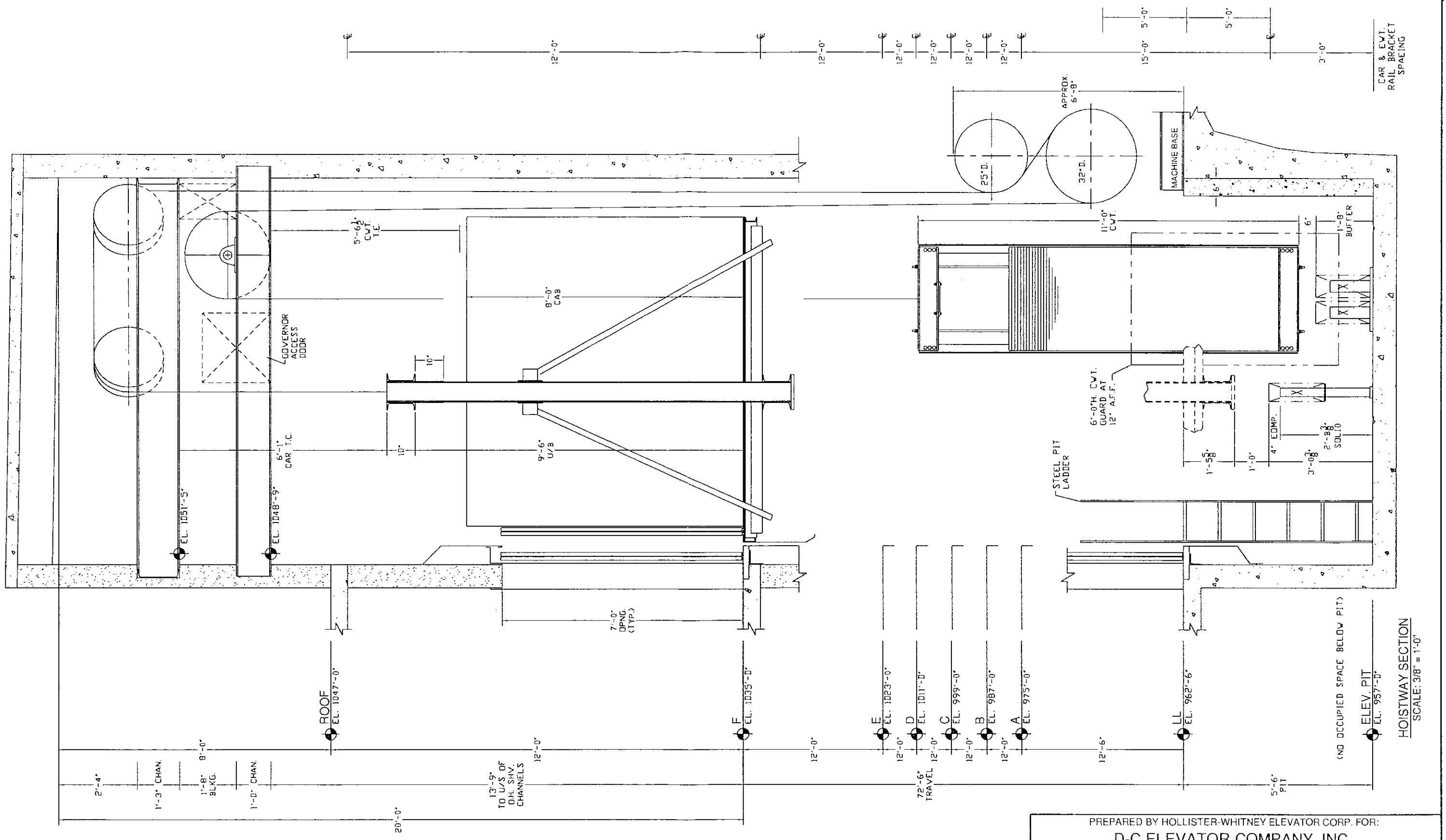
PHONE: (859)254-8224 FAX: (859)231-8740

TRACTION ELEVATOR LAYOUT

PROJECT: UK PATIENT CARE FACILITY: PARKING GARAGE

DRAWN BY: V.K.M.	DATE: 4-26-06	SCALE: NOTED
CONTRACT: A-180516	LAYOUT: L-4920	SHEET: 5 of 6



HOISTWAY SECTION
SCALE: 3/8" = 1'-0"

FINAL
JAN. 3, 2007

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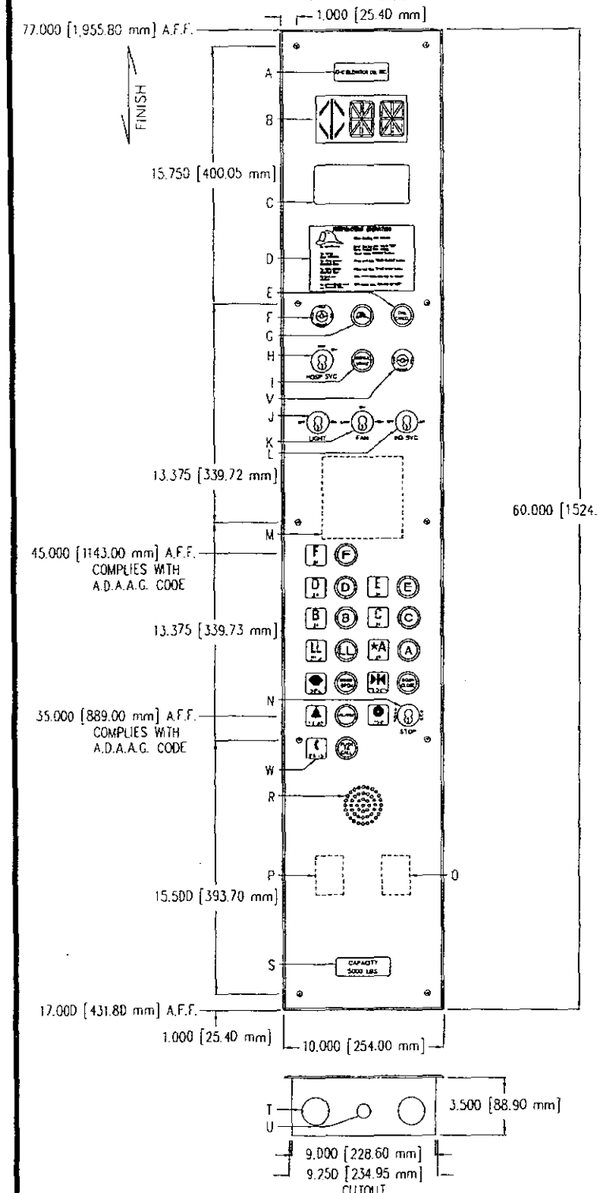
PHONE: (859)254-8224 FAX: (859)231-8740

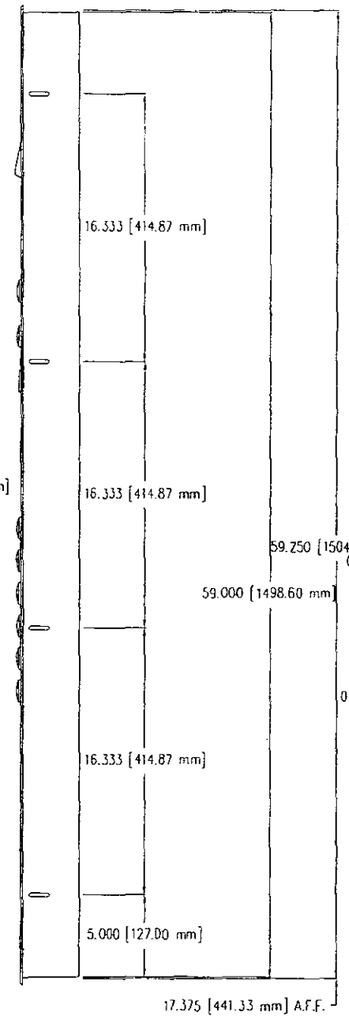
TRACTION ELEVATOR LAYOUT

PROJECT: UK PATIENT CARE FACILITY: PARKING GARAGE

DRAWN BY: V.K.M.	DATE: 4-26-06	SCALE: NOTED
CONTRACT: A-180516	LAYOUT: L-4920	SHEET: 6 of 6

C1
MAIN CAR STATION
ELEVATOR NO. 1,3
QTY: 2 REQ'D

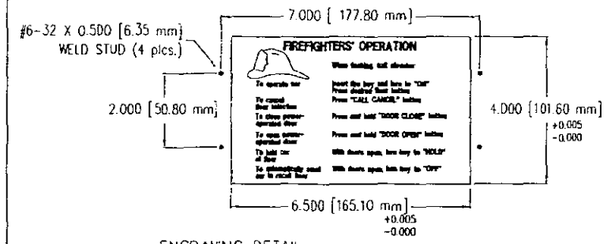




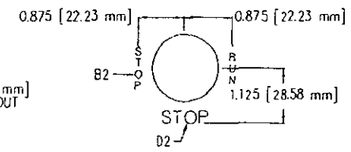
GENERAL NOTES

1. DIGITAL POSITION INDICATOR IS C.E. ELECTRONICS 2" HIGH MICRO COMM. FLOOR MARKINGS ARE: LL,A,B,C,D,E,F W/ DIRECTION ARROWS
2. ●KEYSWITCHES TO BE YALE TYPE LOCKS W/ REMOVABLE CONSTRUCTION CORES. LOCKS TO BE YALE 7-PIN GGMK SYSTEM.
3. HINGE 1 CAR LEFT & 1 RIGHT.
4. III TO MOUNT CSP# 2495 TO COP.
5. ALL PUSHBUTTONS AND INDICATORS TO HAVE MICROTOUCH BASES.

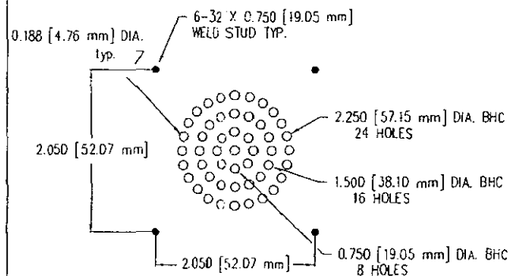
1998 ANSI PHASE II FIRE INSTRUCTIONS DETAIL



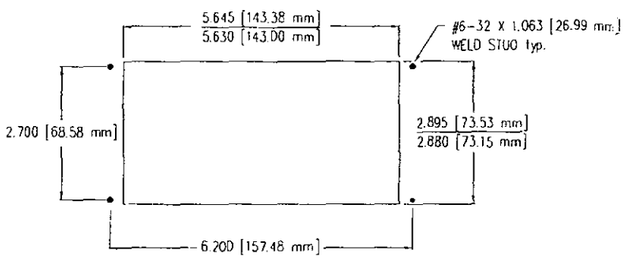
ENGRAVING DETAIL



SPEAKER DETAIL



POSITION INDICATOR
CUTOUT AND STUDDING DETAIL



THESE FIXTURES WILL HAVE THE FIRE OPERATION DEVICES BUILT IN COMPLIANCE WITH ANSI/ASME A-17.1 1998 CODE UNLESS ADVISED OTHERWISE.

DEVICE STYLE	
PUSHBUTTON	PB-1
INDICATOR	PB-1
KEYSWITCH	PB-1
TOGGLE	
HALO	BLACK
LAMPS	BLUE LED

ALL FIRE SERVICE & EMERGENCY OPERATION HALOS ARE RED.

ALL CODE BLUE, MEDICAL EMERGENCY, HOSPITAL EMERGENCY, AND EMERGENCY SERVICE OPERATION HALOS ARE BLUE.

PB CONTACTS	N.O	N.C.
FLOOR BUTTONS (HOR)	2	0
DOOR OPEN (HOR)	2	0
DOOR CLOSE (HOR)	2	0
CALL CANCEL (VER)	2	0
ALARM (HOR)	2	0
EMERG STOP (HOR)	1	2
EMERG TEST (HOR)	2	2

BRAILLE ADA COMPLIANT

- ● 1.250 [31.75 mm] SQ.
- 1.375 [34.93 mm] DIA. CC5-SN-8
- OVAL SURROUND 2.750 [69.85mm] X 1.500 [38.10mm]

BEVELED EDGES

- ● YES
- NO

ENGRAVING FONT

- ● HELVETICA LIGHT (U.N.O.)
- A 0.125 [3.18 mm]
- B 0.156 [3.97 mm]
- C 0.188 [4.76 mm]
- D 0.250 [6.35 mm]
- E 0.375 [9.53 mm]
- F 0.500 [12.70 mm]
- G 0.750 [19.05 mm]
- H 1.000 [25.40 mm]
- 1 FILL BLACK
- 2 FILL RED

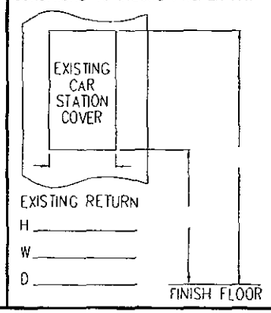
VOLTAGE		PREWIRE		FASTENERS	L	R	SNAP HINGING
ILLUM PB	24 VAC		PER WO-XXXXXXX	SECURITY	●	●	COVERPLATE (3 req'd)
ALL OTHER	24 VAC	●	NOT REQUIRED	● BUTTONHEAD			COMPARTMENTS

KEYSWITCH AND TOGGLE LEGEND

KOS	TOG	IND	SWITCH IDENTIFICATION	OPERATING POSITIONS	KEY REMOVE POSITION	MAINTAINED POSITIONS	MOMEN. POS.	KEY CODE	MOUNT
F		G	FIREMAN	OFF-HOLD-ON	ALL	ALL		515	VER
H		I	HOSPITAL SVC	OFF-ON	OFF	ALL		●	VER
J			LIGHT	ON-OFF	ALL	ALL		●	VER
K			FAN(2 SPEED)	LOW-OFF-HIGH	ALL	ALL		●	VER
L			IND SVC	ON-OFF	ALL	ALL		●	VER
V			INSPECT	RUN-INS	ALL	ALL		514	VER

NOTE: KEY SWITCH FINISH TO MATCH COVERPLATE MATERIAL

NOTE:
IF APPLICABLE, PLEASE ADVISE EXISTING CONDITIONS TO INSURE PROPER FIT.



D.P.I. INFORMATION REQ'D. PRIOR TO MANUFACTURING
PLEASE SPECIFY:

DISPLAY COLOR:
- ■ = BLUE
- □ = GREEN
- □ = AMBER (DOT MATRIX ONLY)

LENS COLOR:
- □ = RED
- ■ = GRAY

SIGNAL VOLTAGE:
- □ = POSITIVE 6-20 VAC/DC, 24 VAC
- □ = POSITIVE 24-48 VDC, 48 VAC
- □ = POSITIVE 120 VAC
- □ = POSITIVE 125 VDC
- □ = NEGATIVE 6-20 VDC
- □ = NEGATIVE 24-48 VDC
- □ = NEGATIVE 125 VDC

SIGNAL FORMAT:
- □ = ONE LINE/FLOOR
- □ = BINARY (START @ 000001)
- □ = BINARY (START @ 000000)
- □ = UNITS & TENS
- □ = GRAY CODE
- □ = INVERTED BINARY
- □ = SPECIAL

NUMBER OF INPUTS:
- □ = 16 INPUTS
- □ = 31 INPUTS

GENERAL LEGEND

A	COMPANY NAME PLATE
B	DIGITAL P.I. CE ELECTRONICS MODEL: MH222-BBG FLOOR PASSING SIGNAL
C	EMERGENCY LIGHT
O	1998 ANSI PHASE II FIRE SERVICE INSTRUCTIONS INSERT
E	CALL CANCEL PUSHBUTTON
M	5 x 5 SPACE FOR CUSTOMER SUPPLIED AND INSTALLED CARD READER
N	PROVISIONS FOR CUSTOMER SUPPLIED AND INSTALLED YALE KOS
P	FIRE BUZZER MOUNTED BEHIND PANEL
Q	NUDGING BUZZER MOUNTED BEHIND PANEL
R	PROVISIONS FOR CUSTOMER SUPPLIED AND III INSTALLED INTERCOM (CSP# 2722)
S	CAPACITY PLATE (5000 LBS.)
T	KNOCKOUT FOR 1.250" CONDUIT
U	KNOCKOUT FOR 0.500" CONDUIT
W	PUSH TO TALK PUSHBUTTON AND BRAILLE

REVISIONS

REV	REVISION DESCRIPTION	DATE	REV. BY
A	PRELIMINARY DRAWING	4-4-06	SKW
B	FINAL: CHANGED FLOOR MARKINGS, D.P.I., VOLTAGE, & LAMP COLOR; ADVISED PHONE DETAILS; ADDED JOB # & W. O. #'S	04/26/07	MLM
C	REV FINAL: REMOVED PHONE & ADDED INTERCOM, CHANGED HOSP SVC TO YALE LOCK, ADDED INSPECTION KOS	9-17-07	HNM
D	REV FINAL: REMOVED PLATE FOR INTERCOM ADDED PUSH TO CALL PUSHBUTTON	09-25-07	ASM

INNOVATION INDUSTRIES INC
3500 E. MAIN ST., RUSSELLVILLE, AR 72802
(479) 968-2232 FAX (479) 968-7986

COMPANY / JOB NAME
D-C ELEVATOR CO., INC. / U OF K-PCF PARKING GARAGE

LOCATION: KY	MATERIAL : 11 GA. [3mm] (TYPE 304) STAINLESS STEEL
P.O. / JOB NO. 16560 / E-5735	FINISH : NO. 4 (150 GRIT) BRUSHED

JOB NO.	WORK ORDER NO.	QUOTE NO.
295523	330575	122805CS3
SALES REP: CS	FILE NAME 295523A	SHEET NO. 1 OF 3

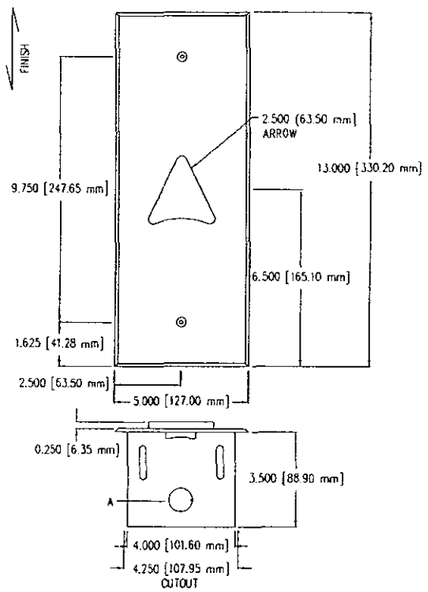
CHECKED : JDM 9-25-07
SCALE : 1[25.4mm] = 1 [25.4mm]
REV D
DO NOT SCALE
SIZE B

TERMINAL HALL DIRECTIONAL LANTERN

QTY: 4 REQ'D. (TOTAL)

H4 / QTY: 2 UP REQ'D @ FLOOR LL

FF0624-001 / QTY: 2 DOWN REQ'D @ FLOOR F

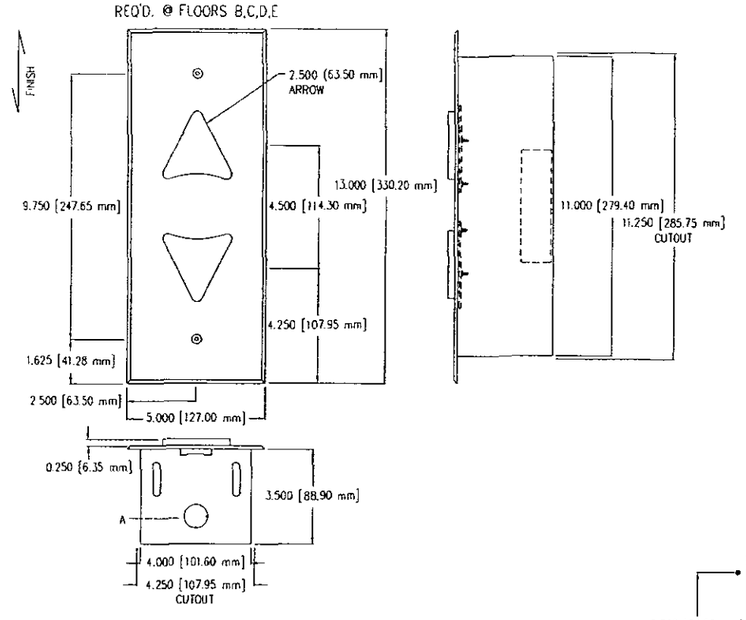


H5

INTERMEDIATE HALL DIRECTIONAL LANTERN

QTY: 8 REQ'D

REQ'D. @ FLOORS B,C,D,E



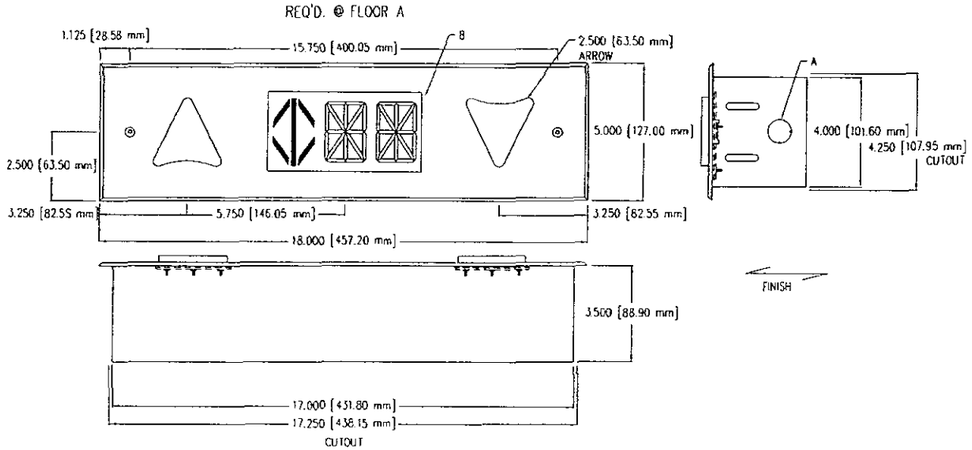
W. O. #330587

H8

CUSTOM HALL POSITION INDICATOR W/LANTERN

QTY: 2 REQ'D.

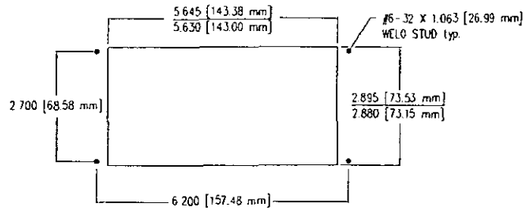
REQ'D. @ FLOOR A



GENERAL NOTES

1. DIGITAL POSITION INDICATOR IS C.E. ELECTRONICS 2" HIGH MICRO COMM. FLOOR MARKINGS ARE: LL,A-F W/ DIRECTION ARROWS

POSITION INDICATOR
CUTOUT AND STUDDING DETAIL



IH320 D.P.I. INFORMATION REQ'D. PRIOR TO MANUFACTURING

PLEASE SPECIFY:

DISPLAY COLOR:
- [x] = BLUE
- [ ] = AMBER
- [ ] = GREEN

LENS COLOR:
- [ ] = RED
- [x] = GRAY

SCROLL:
- [ ] = SCROLLING
- [ ] = NO SCROLLING

SIGNAL VOLTAGE:
- [ ] = POSITIVE 6-20 VDC, 6-24 VAC
- [ ] = POSITIVE 24-48 V DC/AC
- [ ] = 120 VAC
- [ ] = POSITIVE 125 VDC
- [ ] = NEGATIVE 6-20 VDC
- [ ] = NEGATIVE 24-48 VDC
- [ ] = NEGATIVE 125 VDC
- [ ] = IF MICRD COMM

SIGNAL FORMAT:
- [ ] = ONE LINE/FLOOR
- [ ] = BINARY (START @ 000001)
- [ ] = BINARY (START @ 000000)
- [ ] = UNITS & TENS
- [ ] = GRAY CODE
- [ ] = INVERTED BINARY
- [ ] = SPECIAL
- [ ] = IF MICRO COMM

VOLTAGE		FASTENERS		ENGRAVING FONT	
ILLUM. PB		SECURITY		HELVETICA LIGHT (U.N.O.)	
ALL OTHER	24 VAC	● BUTTONHEAD		A 0.125 [3.18 mm]	F 0.500 [12.70 mm]
BEVELED EDGES		● YES	NO	B 0.156 [3.97 mm]	G 0.750 [19.05 mm]
DEVICE STYLE				C 0.188 [4.76 mm]	H 1.000 [25.40 mm]
PUSHBUTTON		KEYSWITCH		D 0.250 [6.35 mm]	1 FILL BLACK
INDICATOR		TOGGLE		E 0.375 [9.53 mm]	2 FILL RED
LAMPS		HALO			

ALL FIRE SERVICE & EMERGENCY OPERATION HALOS ARE RED.
ALL CODE BLUE, MEDICAL EMERGENCY, HOSPITAL EMERGENCY, AND EMERGENCY SERVICE OPERATION HALOS ARE BLUE.

LANTERN COLOR	AUDIBLE SIGNAL
UP: GREEN(LED) DOWN: RED(LED)	● CHIME

PB CONTACTS	N.O.	N.C
CALL PB'S	2	0
COOR OPEN	1	1
DOOR CLOSE	1	1
DOOR STOP	1	1
EMERG. TEST	2	2

BRAILLE ADA COMPLIANT

1.250 [31.75 mm] SQ. | 1.375 [34.93 mm] DIA. CC5-SN-8

KEYSWITCH AND TOGGLE LEGEND

KDS	TOG	IND	SWITCH IDENTIFICATION	OPERATING POSITIONS	KEY REMOVE POSITION	MAINTAINED POSITIONS	MOMEN. PDS.	KEY CODE	MOUNT

NOTE: KEY SWITCH FINISH TO MATCH COVERPLATE MATERIAL

GENERAL LEGEND

A	KNOCKOUT FOR 0.500 CONDUIT
B	DIGITAL P.I. C.E. ELECTRONICS MODEL: MH222-BBG

REVISIONS

REV	REVISION DESCRIPTION	DATE	REV. BY
A	PRELIMINARY DRAWING	4-4-06	SKW
B	FINAL: CHANGED FLOOR MARKINGS, VOLTAGE & D.P.I. MODEL; ADDED JOB # & W. O. #'S	04/27/07	MLM
C	REV FINAL: NO CHANGES	9-17-07	HNM
D	REV FINAL: NO CHANGES	09-25-07	ASM

INNOVATION INDUSTRIES INC

3500 E. MAIN ST., RUSSELLVILLE, AR 72802

(479) 968-2232 FAX (479) 968-7986

COMPANY / JOB NAME	D-C ELEVATOR CO., INC. / U OF K-PCF PARKING GARAGE
LOCATION: KY	MATERIAL : 11 GA. [3mm] (TYPE 304) STAINLESS STEEL
P.O. / JOB NO. 16560 / E-5735	FINISH : NO. 4 (150 GRIT) BRUSHED
JOB NO. 295523	WORK ORDER NO. SEE DWG
QUOTE NO. 122805CS3	
SALES REP: CS	FILE NAME 295523C
SHEET NO. 3 OF 3	
CHECKED : JDM 9-25-07	SCALE : 1[25.4mm] = 1 [25.4mm]
REV D	
DO NOT SCALE	SIZE B

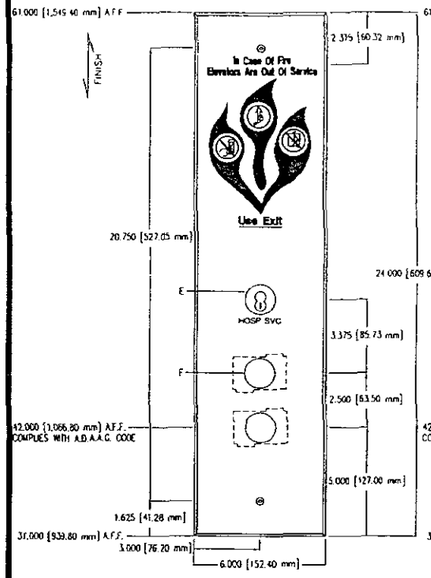
H1

TERMINAL HALL STATION

QTY: 2 REQ'D.

1 UP REQ'D @ FLOOR LL

1 DOWN REQ'D @ FLOOR F



H9

TERMINAL HALL STATION

QTY: 2 REQ'D.

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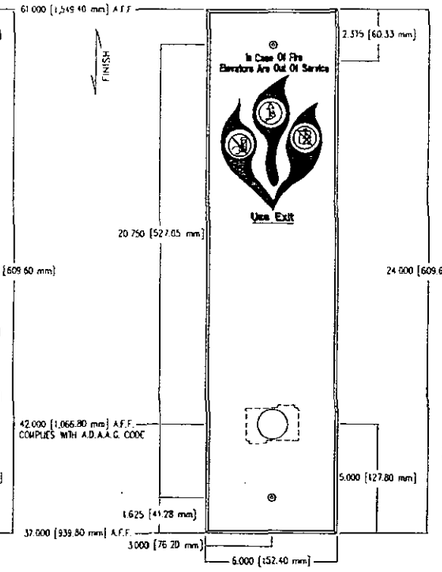
1 DOWN REQ'D @ FLOOR F



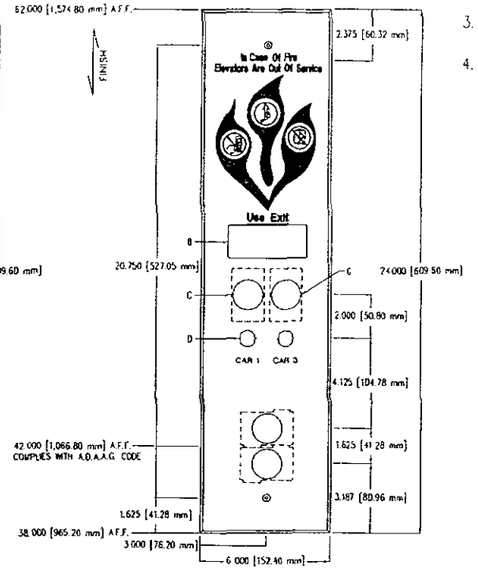
W. O. #330584

H2

INTERMEDIATE HALL STATION

QTY: 1 REQ'D.

REQ'D @ FLOOR A



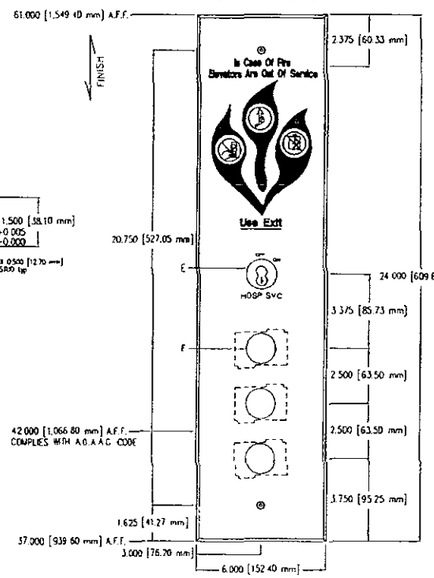
W. O. #330582

H3

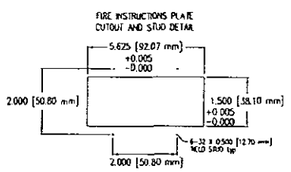
INTERMEDIATE HALL STATION

QTY: 5 REQ'D.

REQ'D @ FLOORS A,B,C,D,E



FIRE INSTRUCTIONS PLATE
CUTOUT AND STUD DETAIL

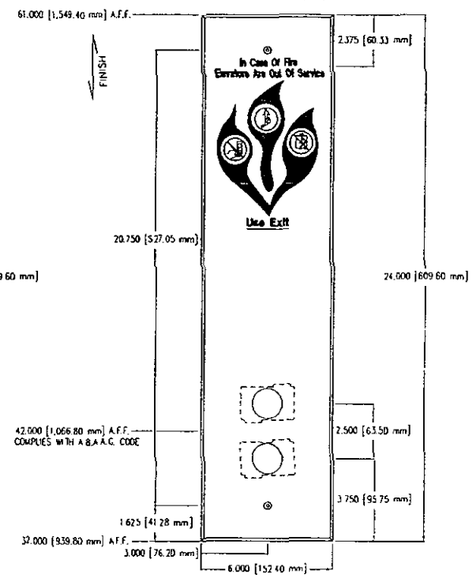


H1D

INTERMEDIATE HALL STATION

QTY: 4 REQ'D.

REQ'D @ FLOORS B,C,D,E

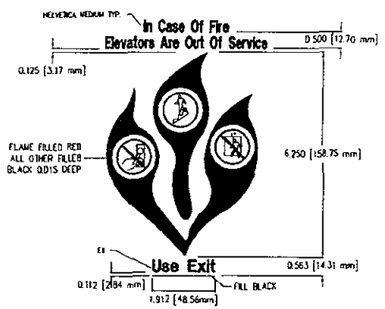


THESE FIXTURES WILL HAVE THE FIRE OPERATION DEVICES BUILT IN COMPLIANCE WITH ANSI/ASME A-17.1 1998 CODE UNLESS ADVISED OTHERWISE.

GENERAL NOTES

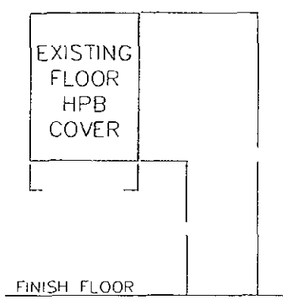
1. ● KEYSWITCHES TO BE YALE TYPE LOCKS W/ REMOVABLE CONSTRUCTION CORES. LOCKS TO BE YALE 7-PIN GGMK SYSTEM.
2. D-C ELEVATOR TO REUSE EXISTING BOXES & DEVICES. INNOVATION TO SUPPLY FACEPLATES & HOSP SVC KOS ONLY.
3. INNOVATION TO SUPPLY 2 #10-24 X 2.000 BUTTONHEAD STAINLESS SCREWS PER FACEPLATE.
4. INNOVATION TO PREP FOR MICROTOUCH BASES.

ANSI APPENDIX H
ENGRAVING DETAIL



NOTE:

TO INSURE THESE HALL STATION COVERS ARE PROPERLY SIZED FOR THE EXISTING CONDITIONS AND COMPLY WITH THE ADA CODE, THE FOLLOWING MUST BE COMPLETED:



VOLTAGE		FASTENERS		ENGRAVING FONT	
ILLUM. PB			SECURITY	●	HELVETICA LIGHT (U.N.O.)
ALL OTHER	24 VAC	●	BUTTONHEAD	A	0.125 [3.18 mm]
BEVELED EDGES		●	YES	NO	B	0.156 [3.97 mm]
DEVICE STYLE				C	0.188 [4.76 mm]
PUSHBUTTON		KEYSWITCH	YALE	D	0.250 [6.35 mm]
INDICATOR		TOGGLE		E	0.375 [9.53 mm]
LAMPS		HALO			

F	0.500 [12.70 mm]
G	0.750 [19.05 mm]
H	1.000 [25.40 mm]
1	FILL BLACK
2	FILL RED

ALL FIRE SERVICE & EMERGENCY OPERATION HALOS ARE RED.
ALL CODE BLUE, MEDICAL EMERGENCY, HOSPITAL EMERGENCY AND EMERGENCY SERVICE OPERATION HALOS ARE BLUE.

PB CONTACTS	N.O.	N.C.
CALL PB'S	2	0
DOOR OPEN	1	1
DOOR CLOSE	1	1
DOOR STOP	1	1
EMERG. TEST	2	2

LANTERN COLOR		AUDIBLE SIGNAL
UP:	DOWN:	CHIME

BRAILLE ADA COMPLIANT

1.250 [31.75 mm] SQ. | 1.375 [34.93 mm] DIA. CCS-SN-B

KEYSWITCH AND TOGGLE LEGEND

KOS	TOG	IND	SWITCH IDENTIFICATION	OPERATING POSITIONS	KEY REMOVE POSITION	MAINTAINED POSITIONS	MOMEN. POS.	KEY CODE	MOUNT
C			FIREMAN	BYP-OFF-ON	OFF-ON	ALL		515	VER
O			CAR TO LOBBY	OFF-ON	ALL	ALL		515	SW
E		F	HOSPITAL SVC	OFF-ON	OFF	OFF	ON	●	VER
G			EMERG POWER	AUTO-1-2-3	ALL	ALL		515	VER

NOTE: KEY SWITCH FINISH TO MATCH COVERPLATE MATERIAL

GENERAL LEGEND

B	PROVISIONS FOR PHASE 1 FIRE INSTRUCTION PLATE

REVISIONS

REV	REVISION DESCRIPTION	DATE	REV. BY
A	PRELIMINARY DRAWING	4-4-06	SKW
B	FINAL: CHANGED FLOOR MARKINGS, VOLTAGE & LAMP COLOR; ADDED E-POWER KOS; ADDED JOB # & W. O. #'S	04/26/07	MLM
C	REV FINAL: CHANGED HOSP SVC KOS TO YALE, REMOVED HOSP SVC FROM H2, CHANGED H1, H3, & H4 QTY, ADDED H9 & H1D, ADDED NOTE 3 &4	9-17-07	HNM
D	REV FINAL: NO CHANGES	09-25-07	ASM

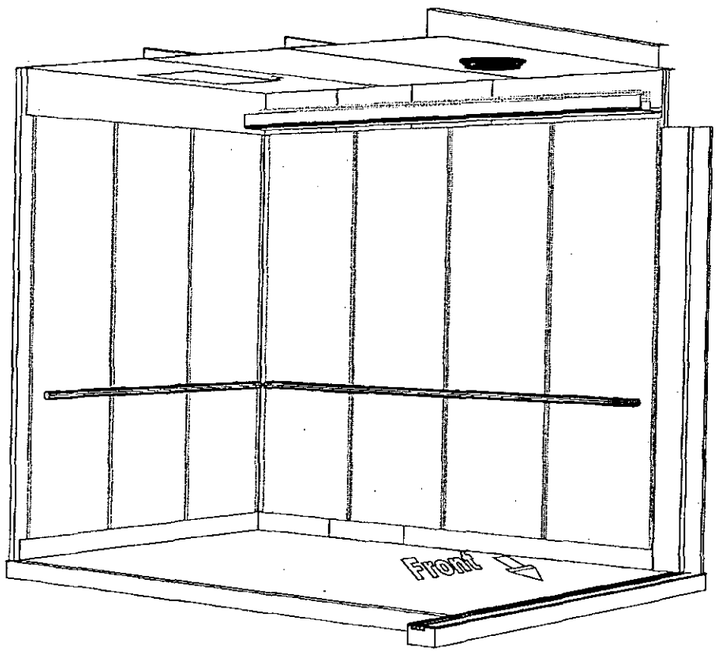
INNOVATION INDUSTRIES INC

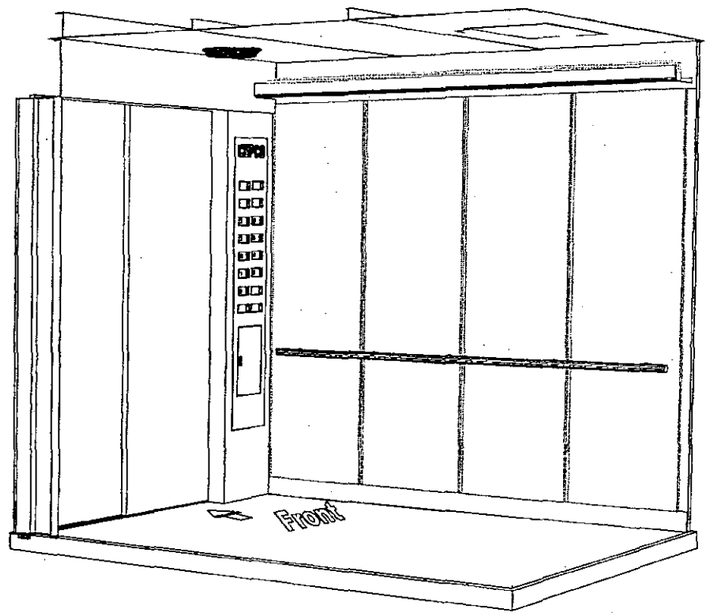
3500 E. MAIN ST., RUSSELLVILLE, AR 72802

(479) 968-2232 FAX (479) 968-7986

COMPANY / JOB NAME: O-C ELEVATOR CO., INC. / U OF K-PCF PARKING GARAGE		
LOCATION: KY	MATERIAL: 11 GA. [3mm] (TYPE 304) STAINLESS STEEL	
P.O. / JOB NO.: 16560 / E-5735	FINISH: NO. 4 (150 GRIT) BRUSHED	
JOB NO.: 295523	WORK ORDER NO.: SEE DWG	QUOTE NO.: 122805CS3
SALES REP.: CS	FILE NAME: 295523B	SHEET NO.: 2 OF 3
CHECKED: JDM 9-25-07	SCALE: 1[25.4mm] = 1 [25.4mm]	REV: D
	DO NOT SCALE	SIZE: B

CFG 2 of 2, Shaft 3-----Front Only
Steel Shell Cab





The images on this page are different viewpoints of a single 3-d parametric true scale model of your cab. Car stations, cab lanterns, and car position indicator are representative only and not to scale.

GENERAL INFORMATION	
CAB OPN. TYPE	FRONT OPENING ONLY
CAB RATING	5000 LBS.
CAB WEIGHT	2600.9 LBS.
PLATFORM SIZE	76" WIDE x 112" DEEP
INSIDE CAB SIZE	72" WIDE x 101" DEEP x 95" HIGH*
DOORWAY SIZE	54" WIDE x 84" HIGH
CAR OPERATOR	GAL Manufacturing Corp. - Template #8232
CROSSHEAD CLR.	18' / 8' To Gussets

MATERIAL AND FINISH SPECIFICATIONS		
ITEM	TYPE	MATERIAL/FINISH
DOOR(S)	2/SP Right	S/ST, #4 Satin
WALLS PANEL(S)	Steel Shell	(14) Galvn
TRANSOM(S)	Full	S/ST, #4 Satin
RETURN PANEL(S)	Integral Panel	S/ST, #4 Satin
REMOVEABLE PANELS	S/ST Hanging Panel w/ S/ST Reveals	S/ST Rigid. 5WL
BASE	---	Recessed S/ST
CANOPY	Flat, Rear Exit	CRS Cladd W/#4 S/ST
CEILING LIGHTING	Light Trought	(4) 2 - 40W Fluorescent(s)
SILL(S)	2SP	Aluminum
FRIEZE	9" HIGH STEEL	S/ST #4
---	---	---

ACCESSORIES (INFO)	
HANDRAIL(S)	(3) 1 1/2" DIA., 1 Round, S/ST #4
(1) FAN - 2SP	(1) 10 IN. DIA. Grille
CERT. FRAME	S/ST #4
PAD BUTTON	_
PROTECTION PADS	None Required
---	---
---	---
---	---

NOTES:

(1) Columbia Elevator certifies that all Passenger Elevator Cabs manufacture bearing Underwriter Laboratories Classified Labels have been manufactured in strict accordance with our U.L. Passenger Elevator Car Enclosure Procedure. Cars fabricated using the procedure are subject to independent, third-party factory inspection by a Representative (inspector) employed by the Underwriters Laboratories, and have been certified as products manufactured in full compliance with section 2 of ANSI A17.1 Elevator & Escalator Safety Code, having had materials tested in their end use configuration to the requirements of ASTM E 84, UL 723, NFPA 252 or CAN/ULCS102.2 and found a flame spread ratings less than or equal to 75 and a smoke development less than or equal to 450.
Compliance with all Local, State and other Jurisdictional code interpretations and all additional federal requirements is the responsibility of our customers.

(2) Limited warranty applies to all products exposed to exterior elements.

(3) The total ventilation apertures for this cab are: 269.54 sq. in. OR 3.71 of the actual inside car floor area which complies with the 3.5% requirement of ASME- A17.1 Rule 2.14.2.3 Ventilation.

(4) "Ft" denotes Front
"Rt" denotes Right
"Rr" denotes Rear
"Lt" denotes Left

Final As Built - **These drawings represent Columbia's interpretation of contract drawings and specifications. Approval by General Contractor, Architect and/or Elevator Contractor constitutes acceptance. Columbia does not warranty components not of its manufacture beyond job completion and acceptance. All repairs and/or replacement of components should be made directly by those individual manufacturers.**

COLUMBIA ELEVATOR PRODUCTS CO., INC.
175 NORTH MAIN ST.
PORT CHESTER, NY 10573
914-937-7100 1-800-354-2254

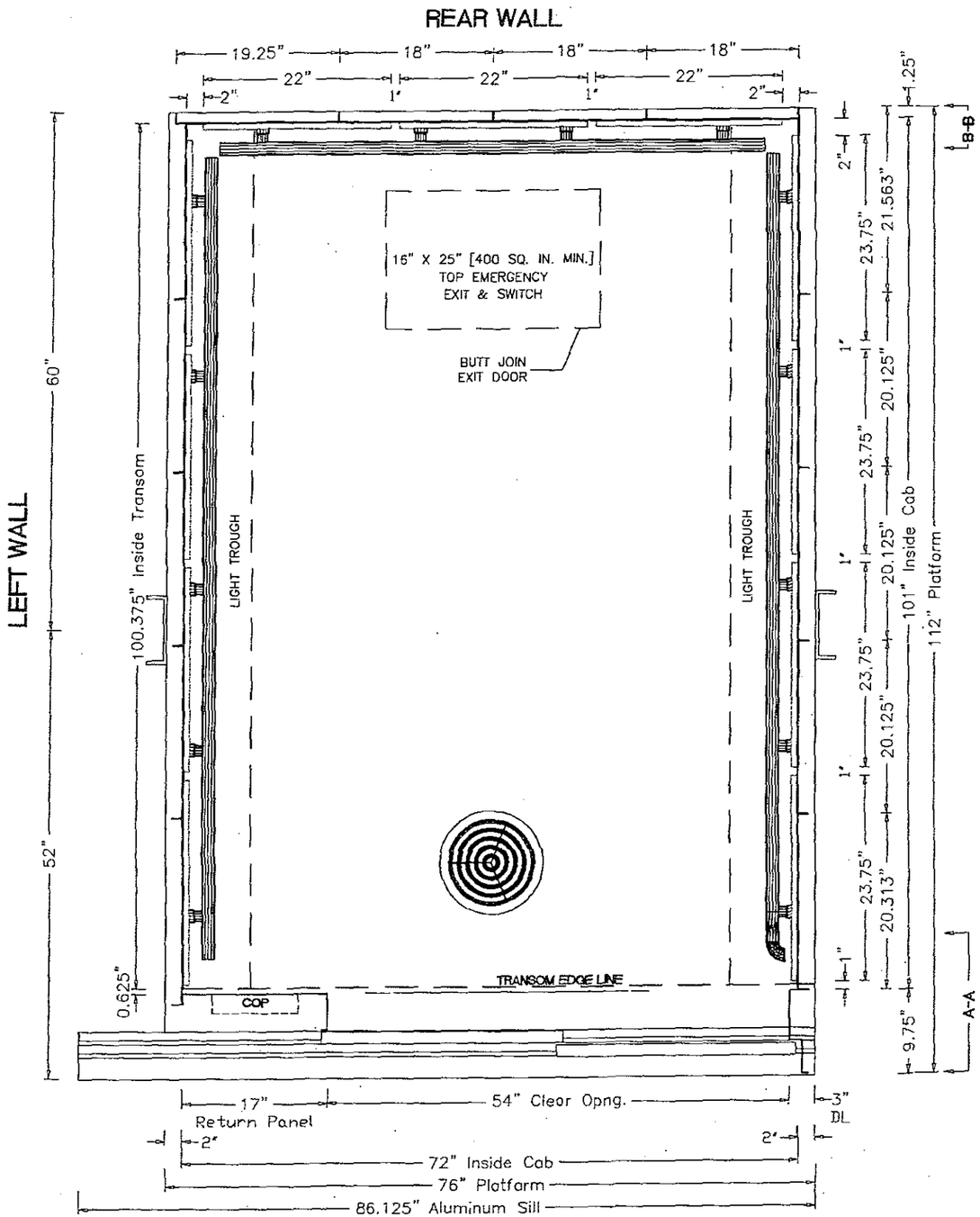
CUSTOMER: D-C Elevator Co
124 Venture Ct
Lexington, KY 40511

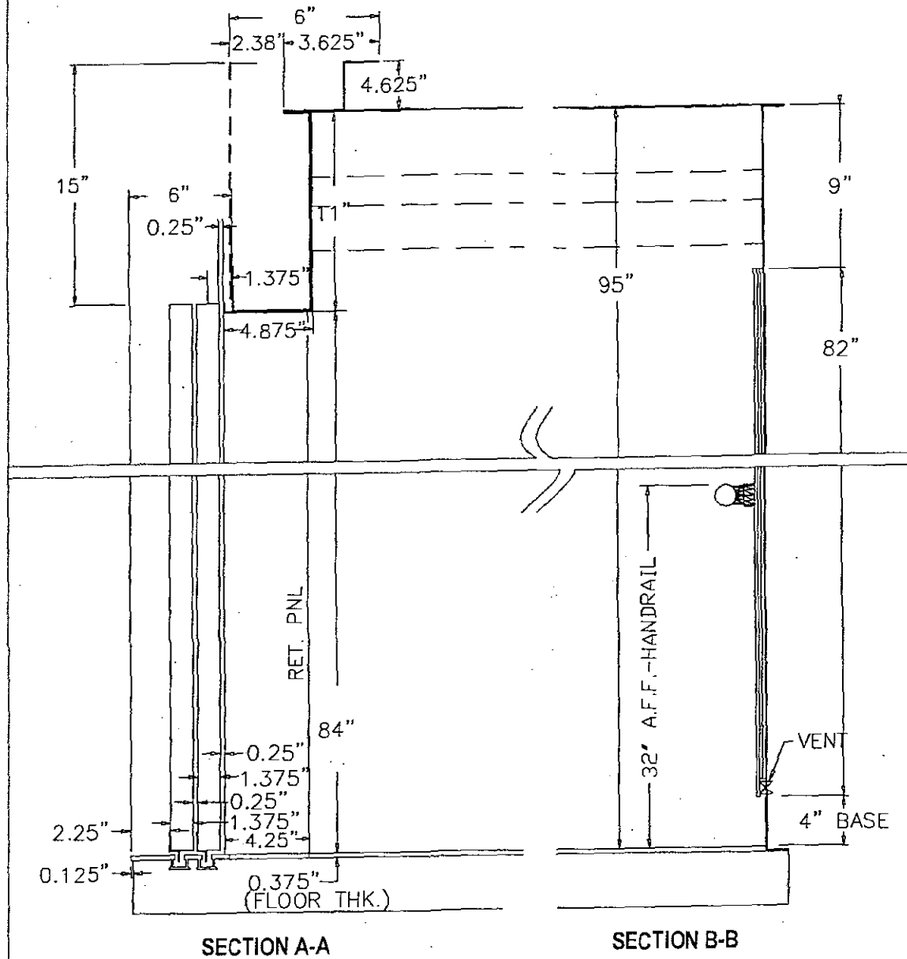
JOB NAME: UK-PCF-PARKING GARAGE
E-5735
ELEVATOR # 3

CAB LAYOUT	CAB INFO. & ISO VIEW 2SP RIGHT HAND		
SHEET 1 OF 3			
DRAWN BY:	D.D.	JOB NUMBER:	19289-2/2
CHECKED BY:	A.R	DATE:	6/28/2007 3:59:45 PM

CFG 2 of 2, Shaft 3-----Front Only

Steel Shell Cab



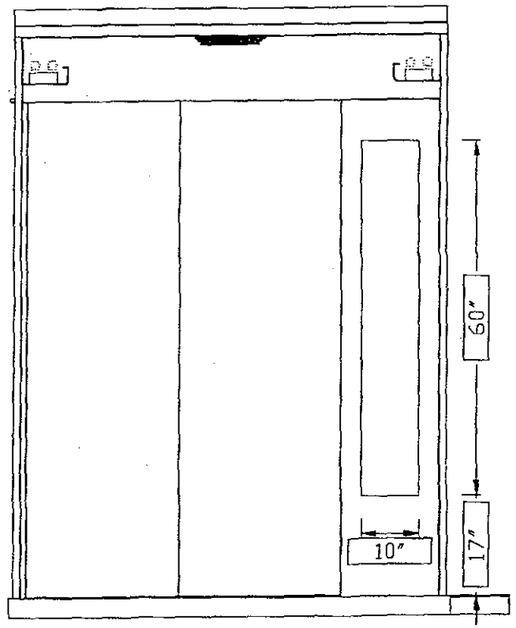


SECTION A-A

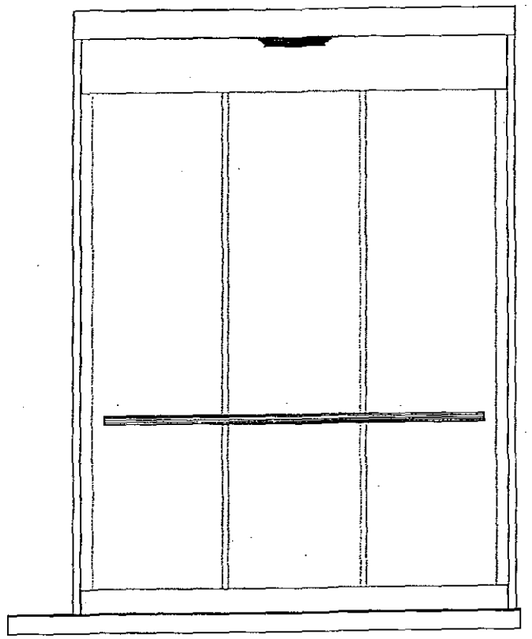
SECTION B-B

COLUMBIA ELEVATOR PRODUCTS CO., INC.
175 NORTH MAIN ST.
PORT CHESTER, NY 10573
914-937-7100 1-800-354-2254

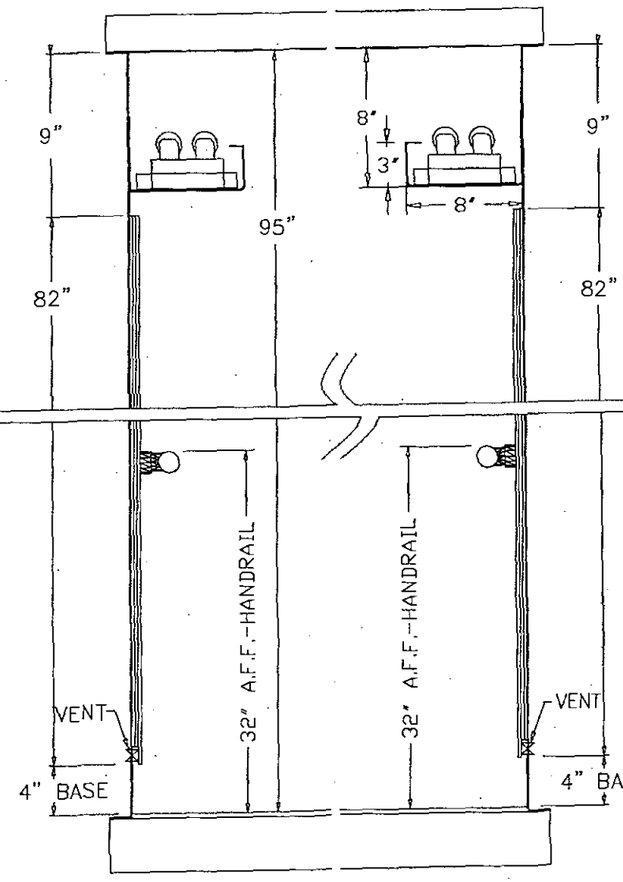
CUSTOMER:	D-C Elevator Co 124 Venture Ct. Lexington, KY 40511
JOB NAME:	UK-PCF-PARKING GARAGE # E-5735 ELEVATOR # 3
CAB LAYOUT SHEET 2 OF 3	PLAN & SECTION VIEW 2SP RIGHT HAND
DRAWN BY: O.D.	JOB NUMBER: 19289-2/2
CHECKED BY: A.R	DATE: 6/28/2007 3:59:45 PM



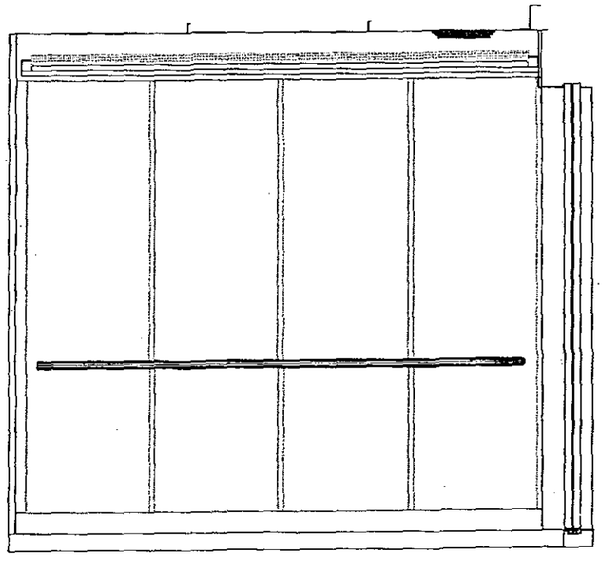
FRONT OPENING



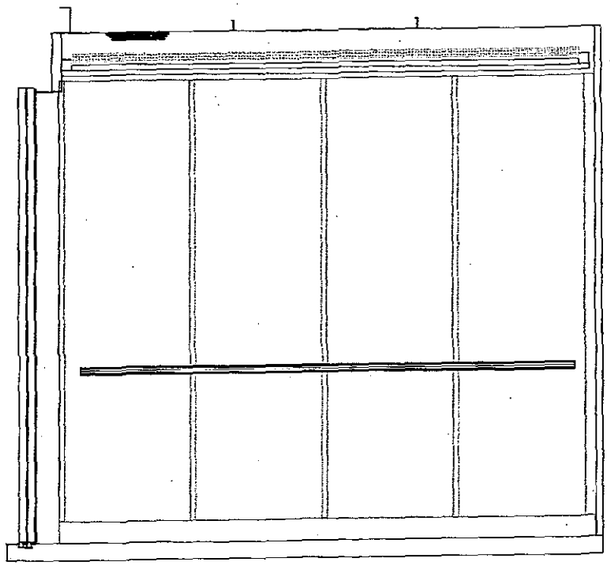
REAR WALL



LEFT WALL RIGHT WALL



RIGHT WALL



LEFT WALL

REQ'D/ASSUMED -

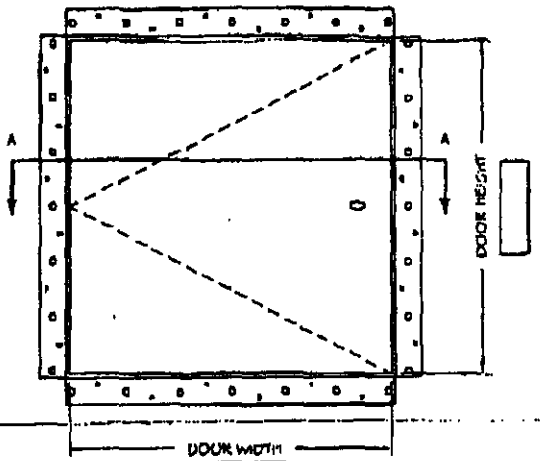
VERIFY LAYOUT DIMS -

COLUMBIA ELEVATOR PRODUCTS CO., INC.
175 NORTH MAIN ST.
PORT CHESTER, NY 10573
914-937-7100 1-800-354-2254

CUSTOMER:	D-C Elevator Co 124 Venture Ct Lexington, KY 40511
JOB NAME:	UK-PCF-PARKING GARAGE # E-5735 ELEVATOR # 3
CAB LAYOUT	ELEVATION & SECTION VIEW 2SP RIGHT HAND
SHEET 3 OF 3	
DRAWN BY: D.D.	JOB NUMBER: 19289-2/2
CHECKED BY: A.R	DATE: 6/28/2007 3:59:45 PM

B-IW SERIES

INSULATED FIRE RATED ACCESS PANEL



FRONT ELEVATION
NOT TO SCALE

SPECIFICATIONS

- 16 GAUGE (1.520 mm) COLD ROLLED STEEL FRAME
- 20 GAUGE (.912mm) COLD ROLLED STEEL DOOR
- 2" (6.25mm) THICK FIRE RATED INSULATION
- 22 GAUGE (.0336mm) GALVANIZED STEEL
- STEEL CONCEALED PIN HINGE
- SPRING DOOR CLOSURE
- FLUSH KEY / METAL KNURLED KNOB OPERATED LOCK
- FRAMES PROVIDED WITH .25" MOUNTING HOLES
- GRAY BAKED ON POWDER COAT FINISH
- INTERIOR RELEASE MECHANISM

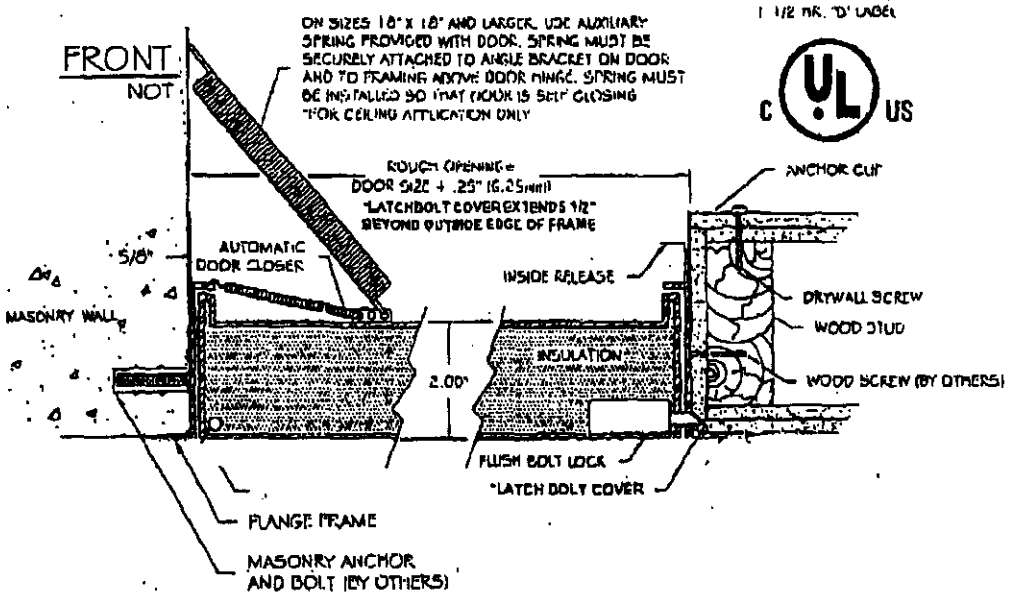
OPTIONS

- ☑ GALVANIZED BONDERIZED STEEL
- ☐ #4 STAINLESS STEEL WITH STAINLESS STEEL CONCEALED PIN HINGE
- ☐ FLUSH STAINLESS STEEL CONTINUOUS PIANO HINGE (AVAILABLE ON STAINLESS STEEL PANELS ONLY)
- ☐ FLUSH STEEL CONTINUOUS PIANO HINGE
- ☑ PREPARATION FOR 1.125" MORTISE CYLINDER (CYLINDER PROVIDED BY OTHERS OR BY FACTORY)
- ☑ WEATHER STRIPPING

Warnock Hersey

LISTINGS

1 1/2 HR. "B" LABEL



Babcock-Davis
Always right there.
Phone: 888-443-9963
Fax: 888-311-3726
Internet: www.babcock-davis.com
E-mail: info@babcock-davis.com

PROJECT: U.K. PCF PARKING GARAGE

CONTRACTOR:

ARCHITECT:

INITIALS: QTY: DATE: PART NUMBER: B-IWM

1 - 30" x 30"
2 - 24" x 24"

rev. 12/06

B-IW SERIES

FIRE RATED ACCESS PANEL

Standard Features:

Door:	20 gauge (.912 mm thick) cold rolled steel
Frame:	16 gauge (1.52 mm thick) cold rolled steel with 22 gauge galvanized drywall bead
Hinge:	Concealed pin hinge
	Optional: Flush continuous piano hinge (standard on panels exceeding 36" hinge dimension)
Latch:	Knurled knob/key operated latch bolt
	Optional: mortise cylinder preparation (cylinder provided by factory or others)
Finish:	Gray baked on powder coat
	Optional: galvanized bonderized steel or stainless steel with #4 satin polish finish
Insulation:	2" thickness fire rated mineral fiber

Specifications:

Frame shall be 16 gauge cold rolled steel with 22 gauge galvanized flange. Door shall be fabricated from 20 gauge cold rolled steel, insulated sandwich type construction. Door shall be self-latching with automatic closer and interior latch release mechanism. Hinge shall be a concealed pin type. Latch(es) shall be a knurled knob/key operated latch bolt (optional: preparation to receive 1-1/8" mortise cylinder – cylinder provided by factory or others). This assembly shall carry a 1-1/2 hour U.L. "B" label for walls (250 degrees maximum temperature rise, 30 minutes) and carry a 3 hour Warnock Hersey label for ceilings rated 3 hours or less. Finish shall be gray baked on powder coat (optional: galvanized bonderized steel or stainless steel with #4 satin polish finish).

Installation shall be in accordance with manufacturer's instructions. Manufacturer shall guarantee against defects in material and workmanship for a period of one year.

Standard Sizes:

Std sizes (in)	Std Sizes (mm)	Weight/Latches	Std Sizes (in)	Std Sizes (mm)	Weight/Latches
08x08	203x203	11/1	22x30	559x762	32/1
10x10	254x254	14/1	22x36	559x914	39/2
12x12	305x305	17/1	24x24	610x610	29/1
12x16	305x457	25/1	24x30	610x762	36/1
12x24	305x610	28/1	24x36	610x914	40/2
14x14	356x356	16/1	24x48*	610x1219	53/2
16x16	406x406	18/1	30x30*	762x762	49/1
18x18	457x457	20/1	32x32*	813x813	51/1
18x24	457x610	39/1	36x36*	914x914	58/2
20x30	508x762	30/1	36x48*	914x1219	79/2
22x22	559x559	27/1	48x48*	1219x1219	100/2

All units are hinged on the second dimension (height). Rough opening is door size plus ¼".
*Exceeds maximum size to carry a Warnock-Hersey label for ceilings.

Babcock-Davis

Always right there.

Gilbane

Transmittal

Project [2239.2] - PCF - Hospital - Garage **View Date** 4/30/2007

Gilbane
940 Elizabeth St
Lexington, KY 40506-0293
Phone: (859) 257-4536
Fax: (859) 323-1331

Transmittal No. 2239.2-00870

To	Mr. Doug Sherwood E. C. Matthews Co., Inc. 2265 Harrodsburg Road Lexington, KY 40504 USA Phone: (859) 278-3131 Fax: (859) 277-7903	**Date**	4/30/2007
		Items listed are being sent	
		☑ Enclosed	
		☐ Under Separate Cover	
		Via	Hold for Pickup
		CSI Code	02800 - Site Improvements
From	Mr. Ryan Maguire (Gilbane)		
Subject	Submittal Package 100-02800-001.1.0		

We are transmitting the following to you:

☐ Product Data ☑ Samples ☐ Shop Drawings ☐ O&M Manuals ☐ Plans
☐ Architectural Drawings ☐ Letters ☐ Specifications ☐ Prints ☐ Addenda
☐ Engineering Drawings ☐ Change Orders ☑ Submittal

Submittals

Pkg. No./Rev.	Item No./Rev.	Description	Copies	Reason	Action
100-02800-001.1.0	100-02800-002.0	Precast Site Concrete Assemblies- Sample	1	Approved as Submitted	

Remarks The Precast smaple marked W/B with a smooth finish is approved by the design team and UK. The drawings are in review at Towers Golde and should be returned this week per Bryan Korb.

From	Mr. Ryan Maguire	4/30/2007
	Printed Name	Date
Received By	Printed Name	Date

Linked Documents

Document Type	Document	Open	Description	Date
Sub. Pkg.	100-02800-001.1.0			

Distribution

Recipient	Company	Method	Date
Doug Sherwood	E. C. Matthews Co., Inc.	Message	4/30/2007

GBBN architects

Transmittal

Project [2239.2] - PCF - Hospital - Garage **View Date** 4/26/2007

GBBN Architects, Inc.
332 East Eighth St
Cincinnati, OH 45202-2217
Phone: (513) 241-8700
Fax: (513) 241-8873

Transmittal No. 2239.2-00865

To	Mr. Brian Hoerr Gilbane 940 Elizabeth St Lexington, KY 40506-0293 USA Phone: (859) 257-4536 Fax: (859) 323-1331
From	Mr. Bryan Korb (GBBN Architects, Inc.)
Subject	Submittal Package 100-02800-001.1.0

Date 4/26/2007
Items listed are being sent
☑ Enclosed
☐ Under Separate Cover
Via Hand Delivered
CSI Code 02800 - Site Improvements

RECEIVED
APR 2 6 2007
GILBANE #3966

We are transmitting the following to you:

☐ Product Data ☑ Samples ☐ Shop Drawings ☐ O&M Manuals ☐ Plans
☐ Architectural Drawings ☐ Letters ☐ Specifications ☐ Prints ☐ Addenda
☐ Engineering Drawings ☐ Change Orders ☑ Submittal

Submittals

Pkg. No./Rev.	Item No./Rev.	Description	Copies	Reason	Action
100-02800-001.1.0	100-02800-002.0	Precast Site Concrete Assemblies- Sample	1	Approved as Submitted	

Remarks Brian

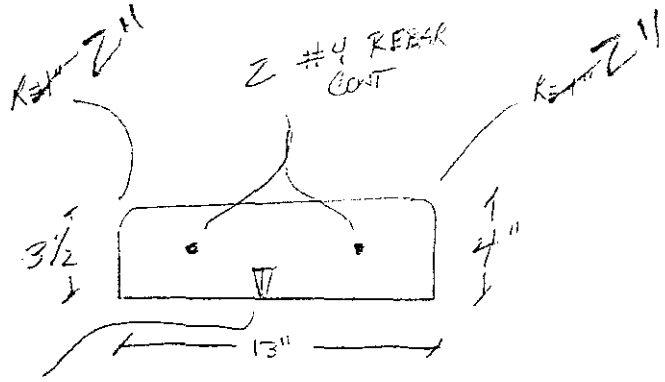
The precast sample marked **W/B** with a **smooth finish** is approved by the design team and UK. The drawings are in review at Towers Golde and should be returned by sometime next week. Please call if you have any questions.

BK

Received By Printed Name Date

Linked Documents

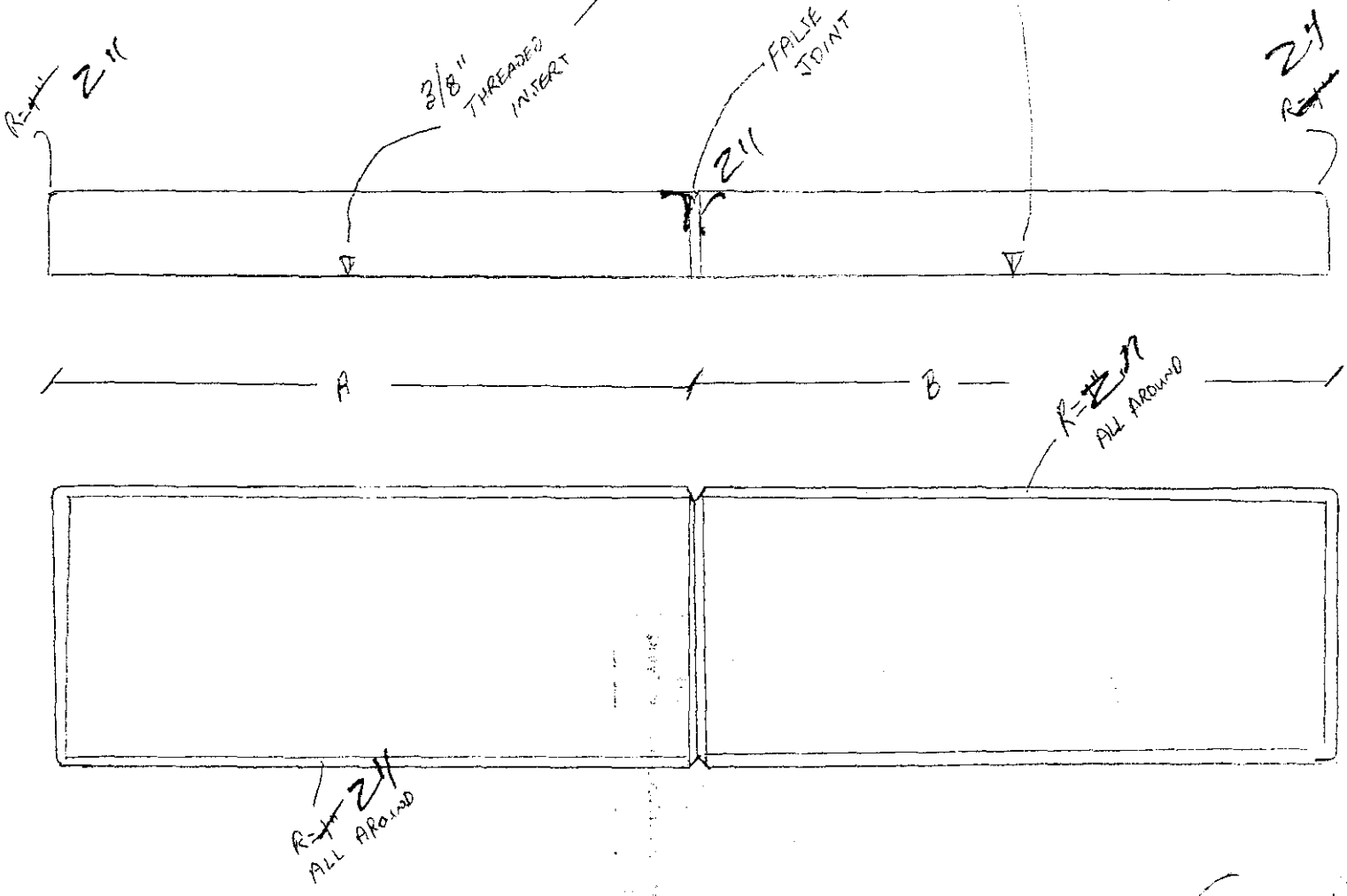
Document Type	Document	Open	Description	Date



3/8" THREADED INSERT
2 PER STONE

	QTY	A	B
[illegible]	40	36"	36"
[illegible]	1	30"	30"
[illegible]	1	30"	20"
S-1	1	30"	30"
S-2	1	30"	30"

FIELD VERIFY ALL DIMENSIONS



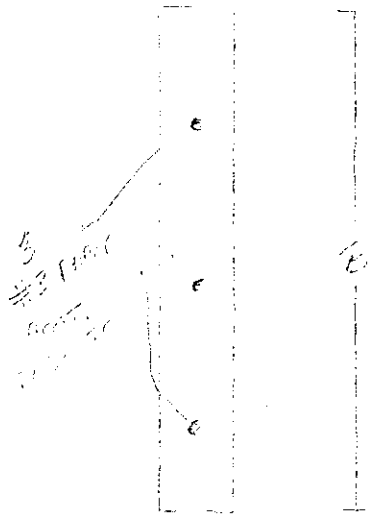
PW1

ALL RADIUS MUST BE CONSISTANT TO TRANSITION AT ENDS

SEE PW[illegible]

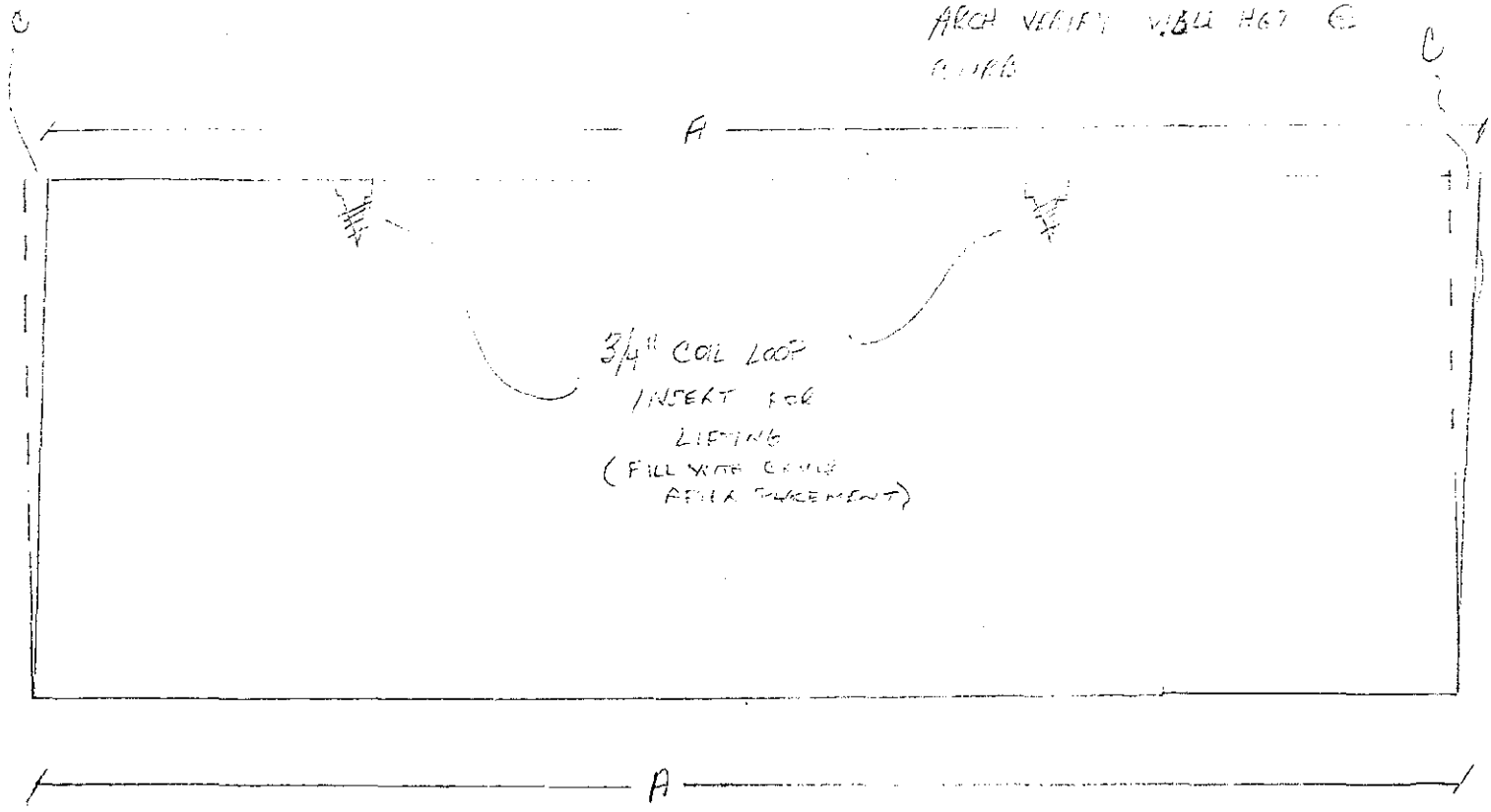
CIP PATIENT CAST FACING GARAGE

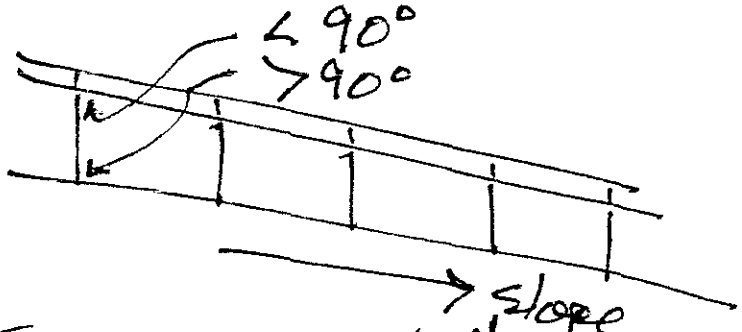
PRECAST WALL CAP



	QTY	A	B	C
[illegible]	10	72"	24"	7/16"
N-1	1	60"	*	0"
N-2	1	60"	*	0"
F-1	1	60"	*	0"
F-2	1	60"	*	0"

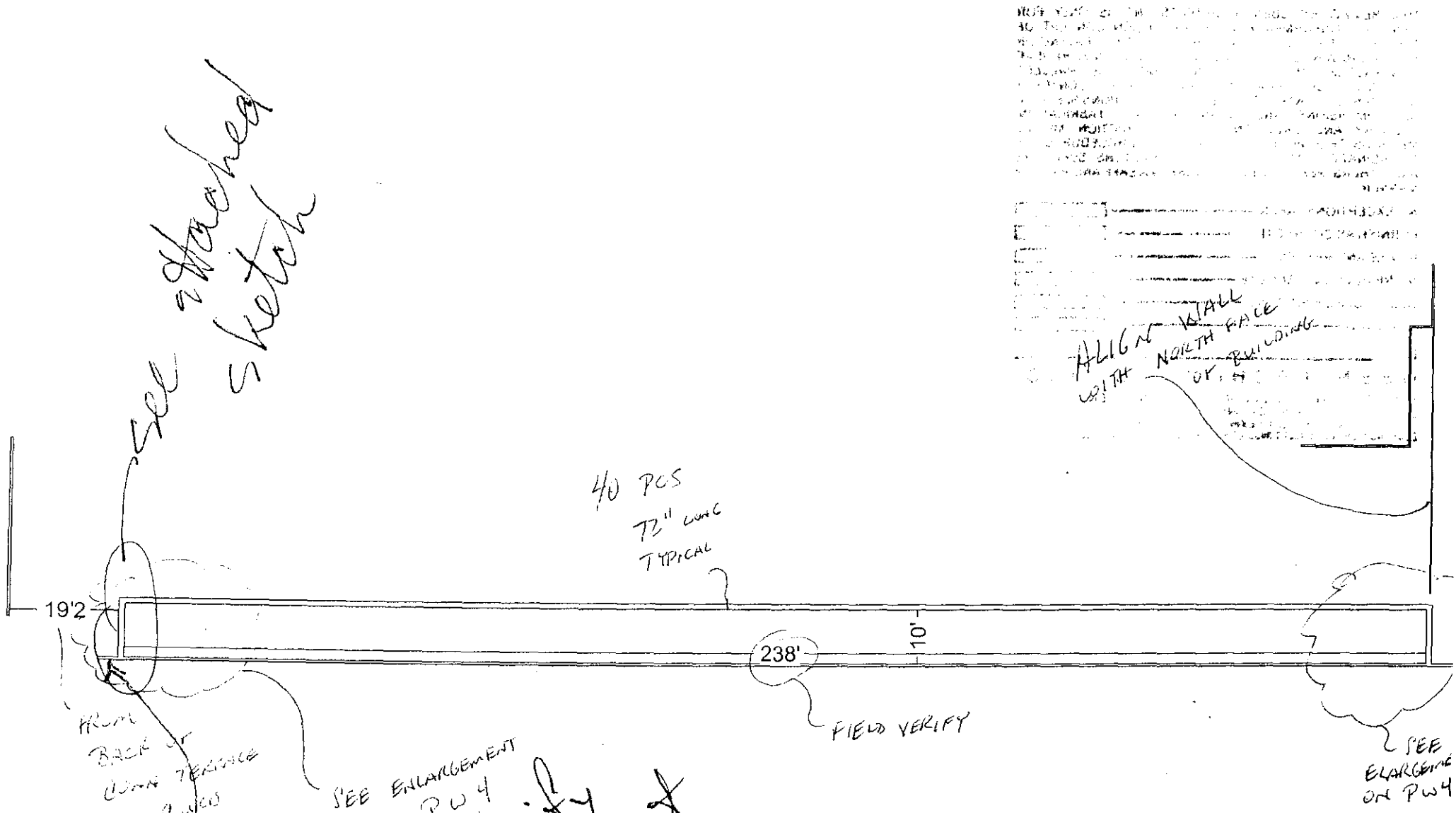
sel attached sketch





Face Elevation

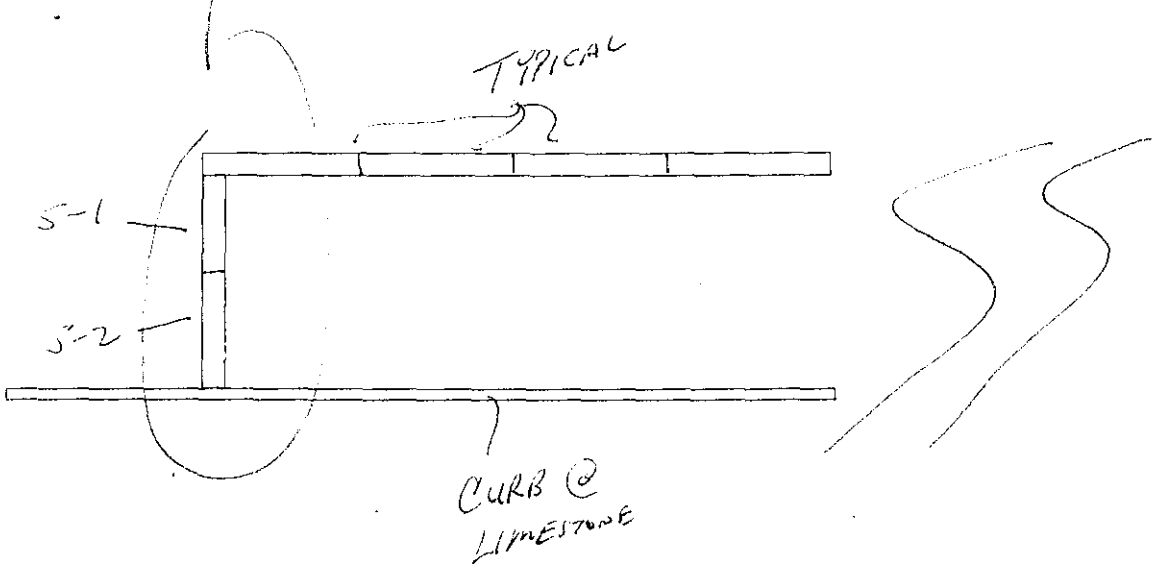
PW 2

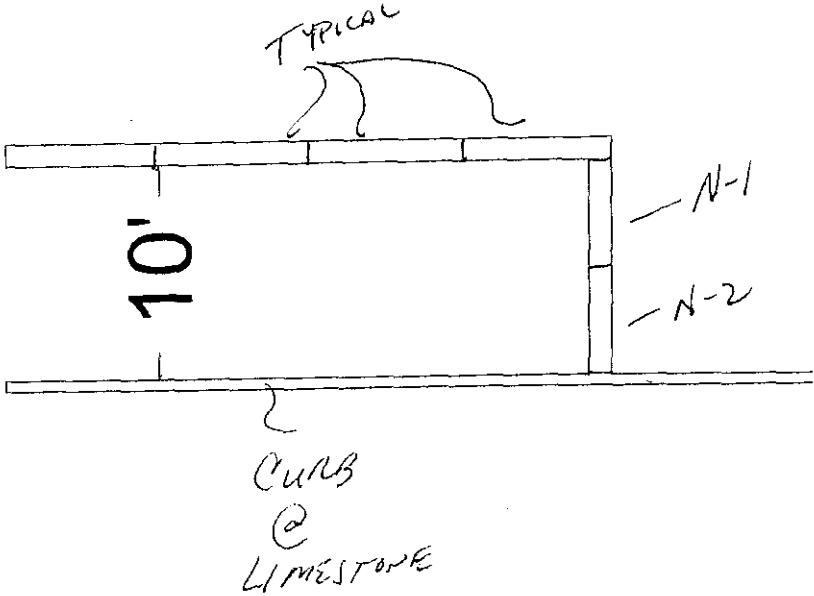


UK PATIENT CARE
PARKING GARAGE
PRECAST WALL VENEER

PW 3

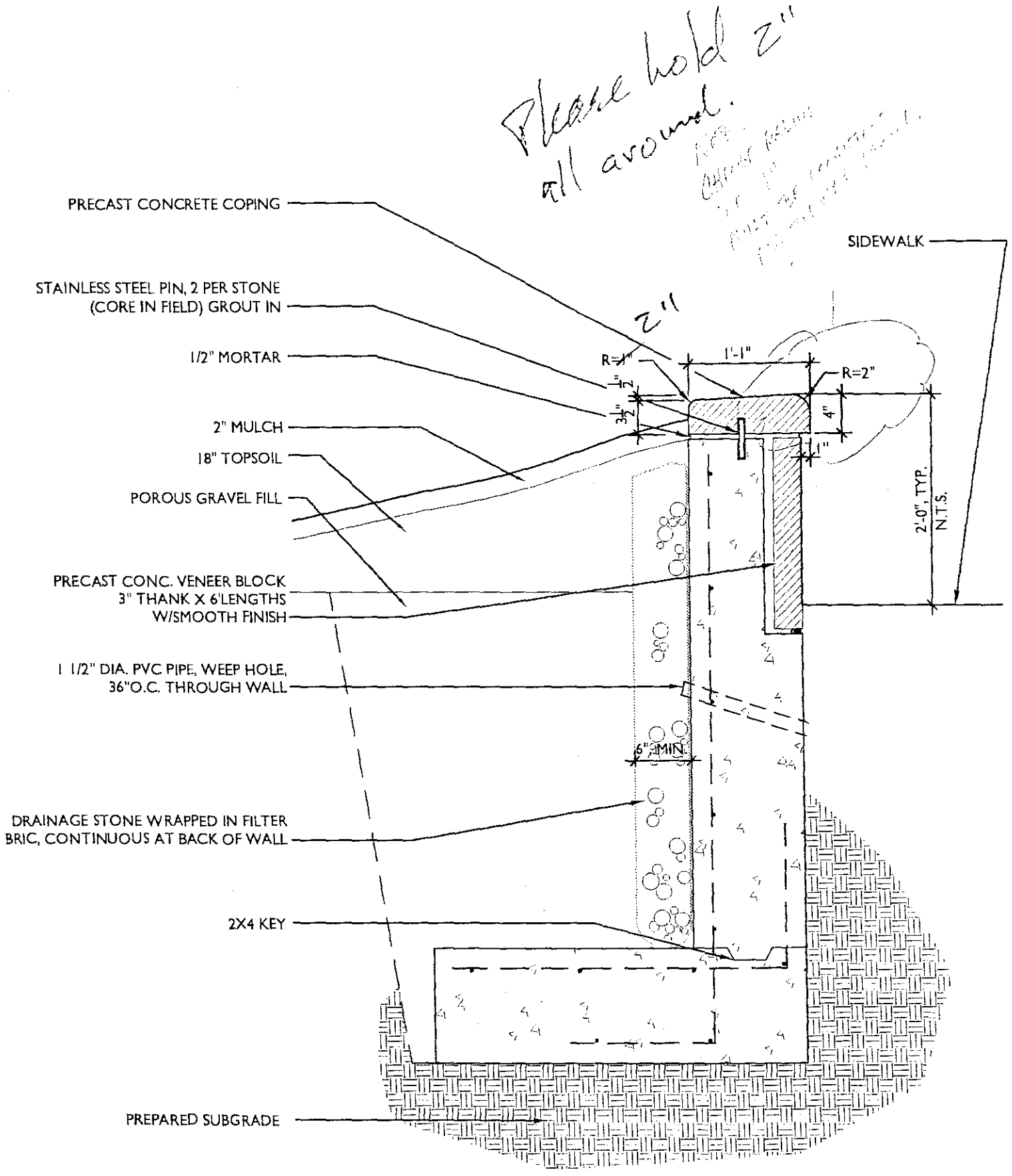
see attached sketch SK-76



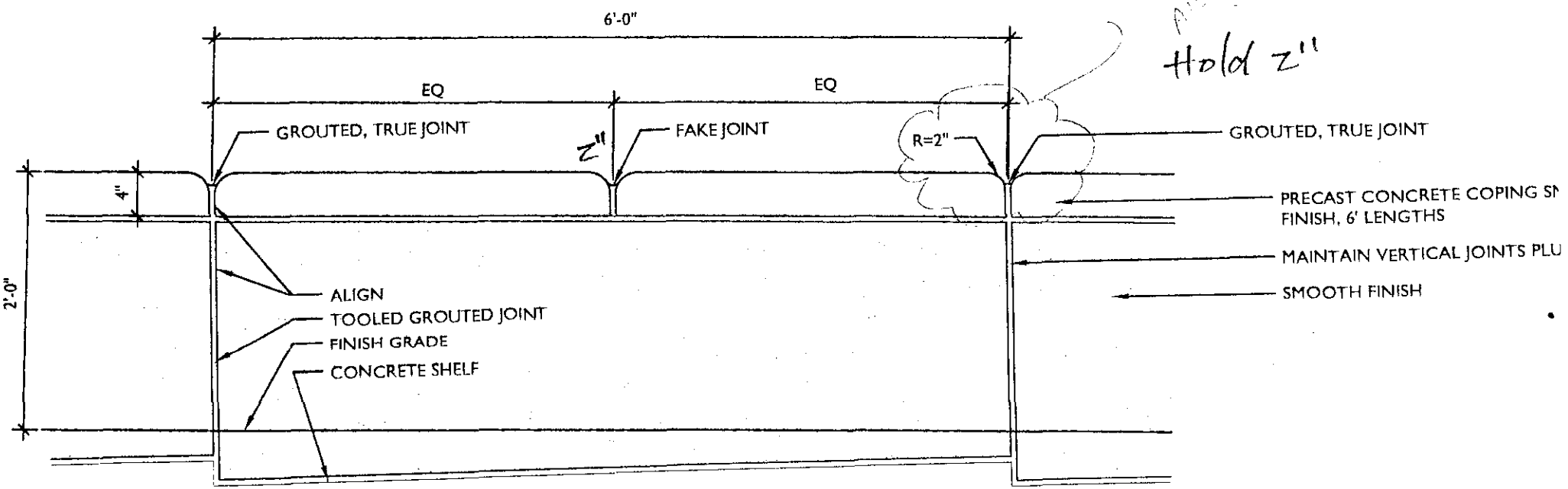


UK PATIENT CARE
PARKING GARAGE
PRECAST WALL VENEER

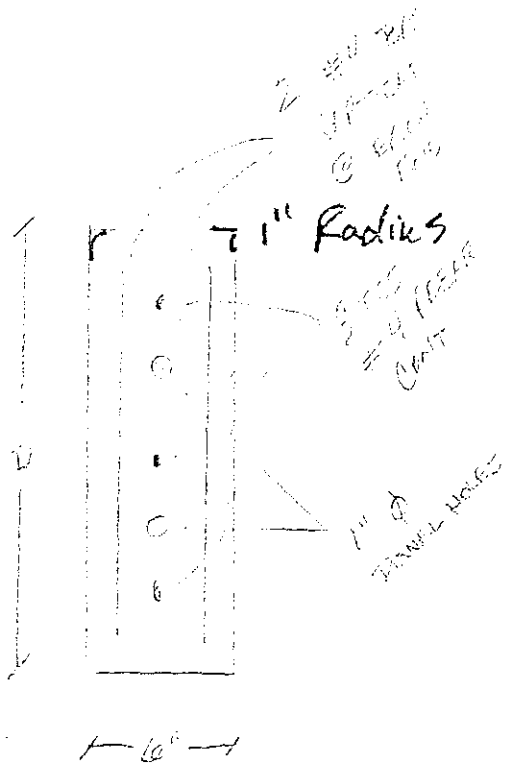
PW4

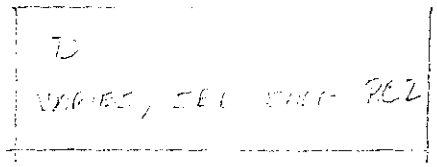

Please hold 2" all around.
PRECAST CONCRETE COPING
STAINLESS STEEL PIN, 2 PER STONE (CORE IN FIELD) GROUT IN
1/2" MORTAR
2" MULCH
18" TOPSOIL
POROUS GRAVEL FILL
PRECAST CONC. VENEER BLOCK 3" THANK X 6'LENGTHS W/SMOOTH FINISH
1 1/2" DIA. PVC PIPE, WEEP HOLE, 36"O.C. THROUGH WALL
DRAINAGE STONE WRAPPED IN FILTER BRIC, CONTINUOUS AT BACK OF WALL
2X4 KEY
PREPARED SUBGRADE
SIDEWALK
2"
R=1"
1'-1"
R=2"
1/2"
3 1/2"
4"
1"
2'-0", TYP.
N.T.S.
6" MIN.

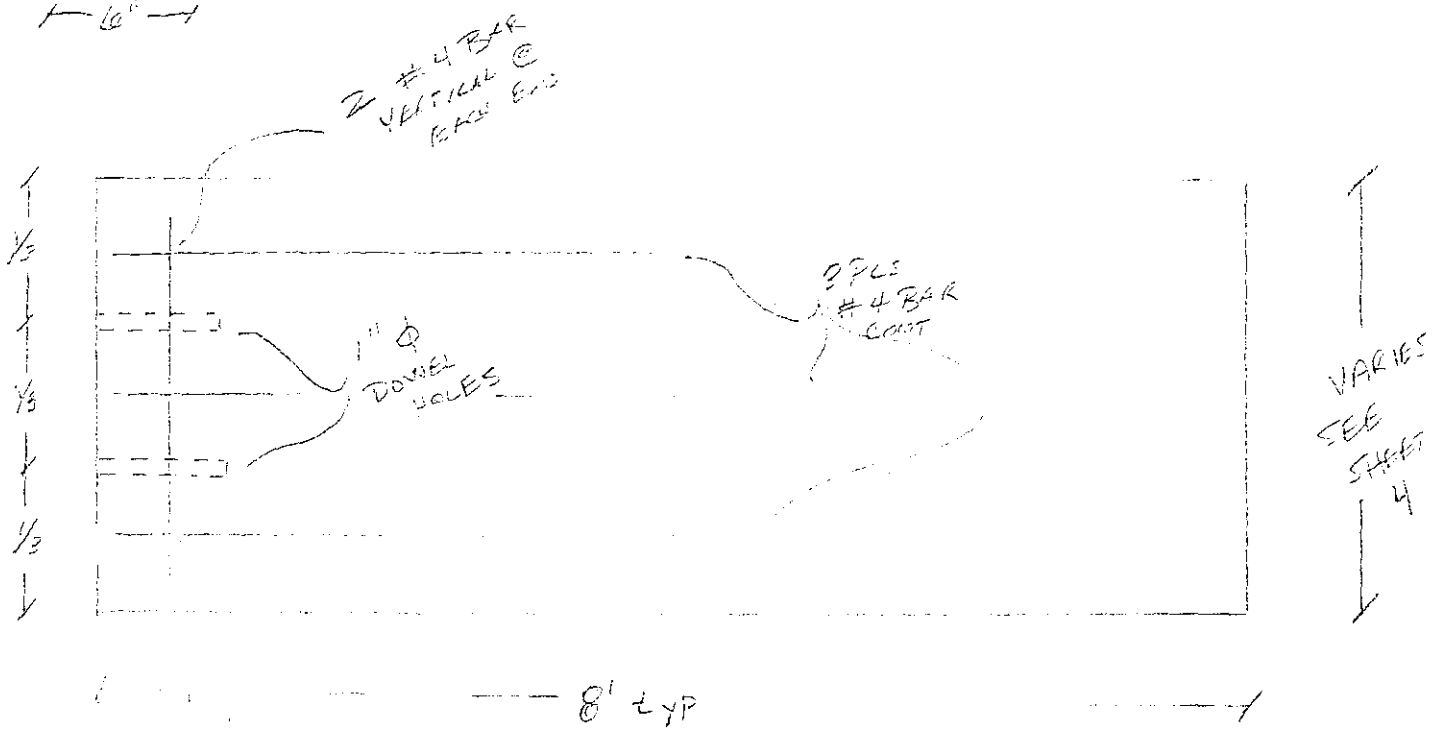
(PW 5)



NOTE: SUBMIT SHOP DRAWINGS
BASED ON FIELD MEASUREMENT



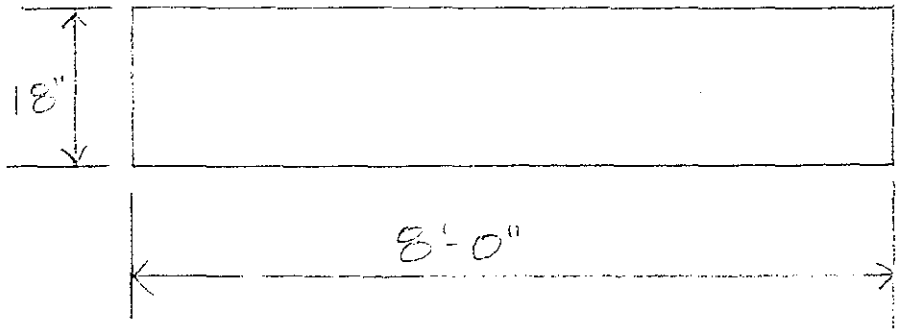




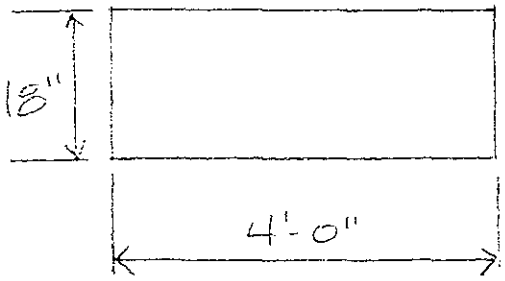
ONE END ONLY SHOWN - TYPICAL OF EACH END.

UK Hathaway Dam Facility
Training Course
Teacher Guide - Transcript Key

PG 1

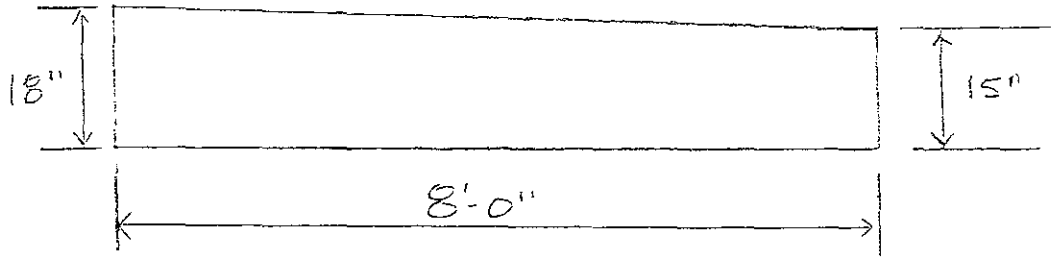


6 PCS

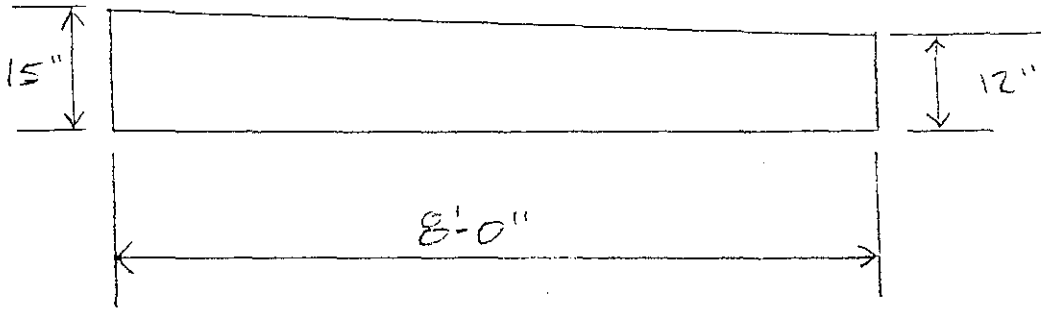


1 PC

NOTE: EMBEDS & REINFORCING NOT SHOWN FOR CLARITY. (REF SHEET S)



1 PC



1 PC

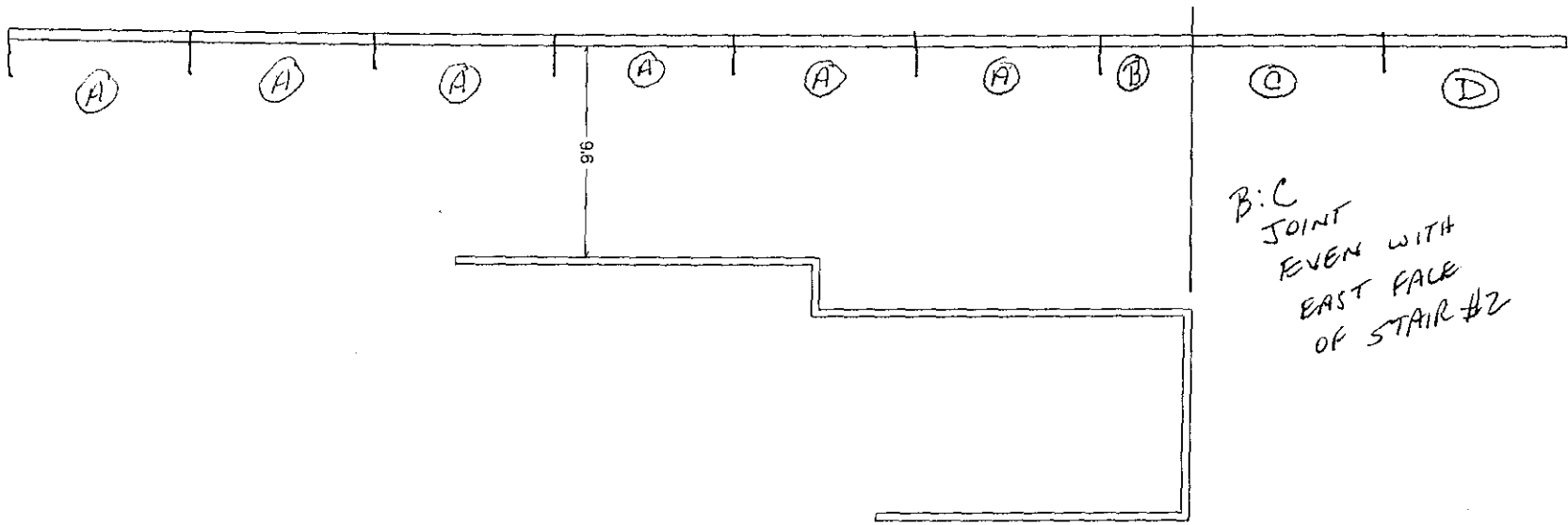
ALL PLANTER UNITS LENGTHS ✓

68'± Total

PRECAST PLANTER CURB

SCALE: 1/2" = 1'-0"

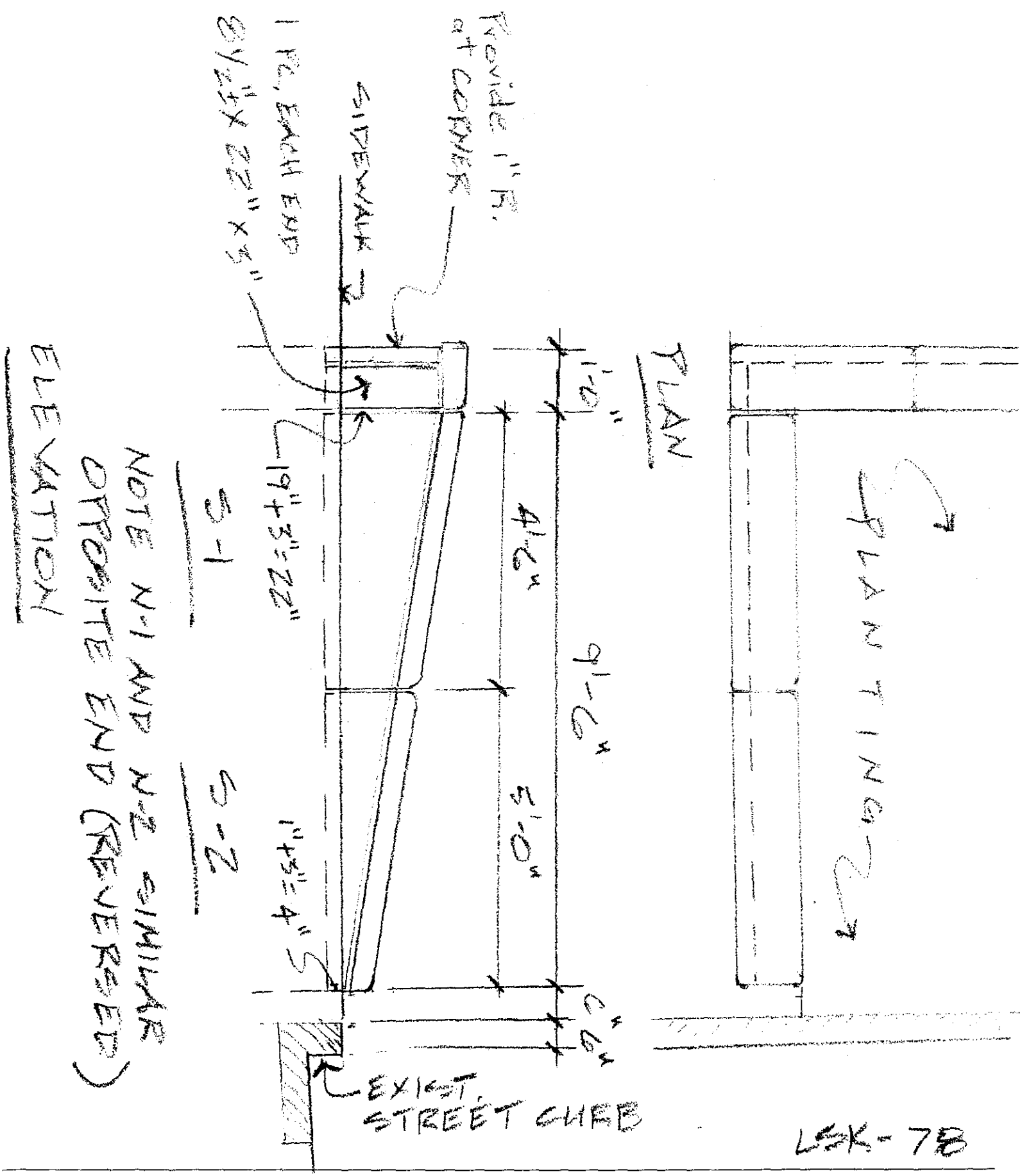
TRANSCRIPT AVE



B:C JOINT EVEN WITH EAST FACE OF STAIR #2

UK PATIENT CARE FACIL.
PARKING GARAGE
PLANTER CURB - TRANSCRIPT

(PC3)



LANDSCAPE ARCHITECTS SITE PLANNERS

TOWERS | GOLDE

85 Willow Street
New Haven, Connecticut 06511

203 773 1153 Fax: 203 865 6411

UK - PCF - GARAGE
SITE - PRECAST WALL
END ELEVA. - CLARIFICATION

DATE: 4/27/07
SCALE: 1/2" = 1'-0"
PROJECT #: 0517-02

THIS REVIEW BY GBBN ARCHITECTS, INC. IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND IS NOT AN APPROVAL OF THIS DRAWING OR SET OF DRAWINGS. THE COMMENTS MADE DO NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH THE PROJECT DRAWINGS, SPECIFICATIONS AND OTHER CONTRACT DOCUMENTS. CONTRACTOR IS SOLELY RESPONSIBLE FOR: ALL DIMENSIONS AND QUANTITIES ALL FABRICATION, DELIVERY AND ERECTION; ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES ALL COORDINATION WITH ALL OTHER CONTRACTORS, SUPPLIERS AND OTHERS; PERFORMING ALL WORK IN A SAFE AND PROPER MANNER.

NO EXCEPTIONS TAKEN ☐

FURNISH AS CORRECTED ☒

REVISE AND RESUBMIT ☐

NO REVIEW - INCOMPLETE ☐

SUBMIT SPECIFIED ITEMS ☐

REJECTED ☐

DATE 05.01.07 BY JAP

GBBN ARCHITECTS, INC.

ARCHITECTURE, INTERIORS, PLANNING, ENGINEERING

☐ 332 EAST 8TH STREET, CINCINNATI OHIO 45202-2217 (513) 241-[illegible]

☒ 325 WEST MAIN STREET, LEXINGTON KENTUCKY 40507 (859) 381-[illegible]

☐ BEIJING XI CHENG DISTRICT TONG LI GE ROAD NO 85 BEIJING CHINA 100031 86-[illegible] 30

GILBANE
University of Kentucky
Patient Care Facility
Gilbane Project No. 18-3966

REVIEWED

- ☐ 010-Huguelet
- ☐ 030-Infrastructure
- ☐ 050-PCF Core-Shell
- ☐ 035-Garage
- ☐ 040-PCF Foundation
- ☐ 060-TowerUp Fit

Bid Package No. 100
Submittal No. 100-02800-0001
Spec. Sect/Para. —
Reviewed By RY
Date 4/11/07

This review does not constitute nor does it assume design responsibility nor does it relieve the trade contractor's supplier from complying with the contract requirements, coordinating their work with other trade contractors and verifying field dimensions.

APPROVED FOR GENERAL CONFORMITY TO PLANS AND SPECIFICATIONS. DETAIL DIMENSIONS AND QUANTITIES NOT COMPLETELY CHECKED. SUBCONTRACTOR'S FULL RESPONSIBILITY IS IN NO WAY RELIEVED BY THIS APPROVAL.

E.C. MATTHEWS CO., INC.

BY: DOS 3-30-07
SIGNATURE DATE

APR 17 2007

TOWERS/GOLDE, LLC

Gilbane

Transmittal

Project [2239.2] - PCF - Hospital - Garage **View Date** 10/22/2007

Gilbane
940 Elizabeth St
Lexington, KY 40506-0293
Phone: (859) 257-4536
Fax: (859) 323-1331

Transmittal No. 2239.2-01101

To	Mr. Doug Sherwood E. C. Matthews Co., Inc. 2265 Harrodsburg Road Lexington, KY 40504 USA Phone: (859) 278-3131 Fax: (859) 277-7903	**Date**	10/22/2007
		Items listed are being sent	
		☑ Enclosed	
		☐ Under Separate Cover	
		Via	Hand Delivered
		CSI Code	02800 - Site Improvements
From	Mr. Brian Hoerr (Gilbane)		
Subject	Submittal Package 100-02800-003.0		

We are transmitting the following to you:

☐ Product Data ☐ Samples ☐ Shop Drawings ☐ O&M Manuals ☐ Plans
☐ Architectural Drawings ☐ Letters ☐ Specifications ☐ Prints ☐ Addenda
☐ Engineering Drawings ☐ Change Orders ☑ Submittal

Submittals

Pkg. No./Rev.	Item No./Rev.	Description	Copies	Reason	Action
100-02800-003.0	100-02800-004.0	Planter Skatboard Stop- Data, Sample	2	Approved as Noted	

Remarks Attached is a different model that GBBN has chosen in lieu of what ECM has submitted. If there is cost associated with this new model, please let Gilbane know within 5 days. Bryan Korb mentioned to me that he did discuss this new model with you.

GBBN retained the original sample.

Thanks.

	Mr. Brian Hoerr	10/22/2007
From	Printed Name	Date
Received By	Printed Name	Date

Linked Documents

Document Type	Document	Open	Description	Date
Sub. Pkg.	100-02800-003.0			

Transmittal

Project [2239.2] - PCF - Hospital - Garage **View Date** 10/19/2007

GBBN Architects, Inc.
332 East Eighth St
Cincinnati, OH 45202-2217
Phone: (513) 241-8700
Fax: (513) 241-8873

Transmittal No. 2239.2-01095

To Mr. Brian Hoerr Gilbane 940 Elizabeth St Lexington, KY 40506-0293 USA Phone: (859) 257-4536 Fax: (859) 323-1331	**Date** 10/19/2007 **Items listed are being sent** ☐ Enclosed ☐ Under Separate Cover **CSI Code** 02800 - Site Improvements
From Mr. Bryan Korb (GBBN Architects, Inc.)	
Subject Submittal Package 100-02800-003.0	

RECEIVED
OCT 19 2007
GILBANE #3966

We are transmitting the following to you:

☐ Product Data ☐ Samples ☐ Shop Drawings ☐ O&M Manuals ☐ Plans
☐ Architectural Drawings ☐ Letters ☐ Specifications ☐ Prints ☐ Addenda
☐ Engineering Drawings ☐ Change Orders ☑ Submittal

Submittals

Pkg. No./Rev.	Item No./Rev.	Description	Copies	Reason	Action
100-02800-003.0	100-02800-004.0	Planter Skatboard Stop- Data, Sample	3	Not Approved	

Remarks

APPROVED AS NOTED

Received By Printed Name Date

Linked Documents

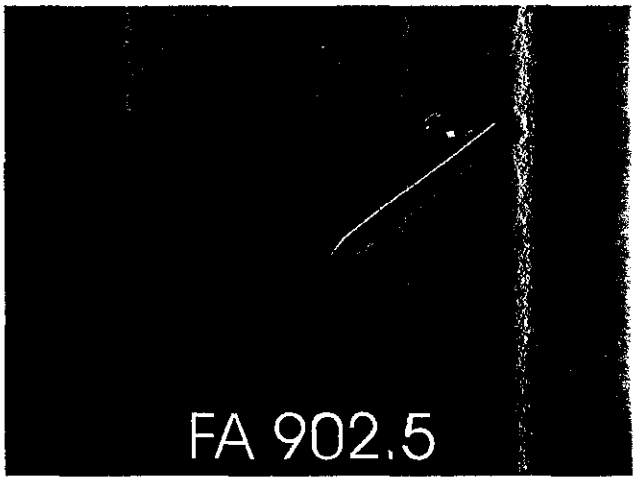
Document Type	Document	Open	Description	Date
Sub. Pkg.	100-02800-003.0			

Distribution

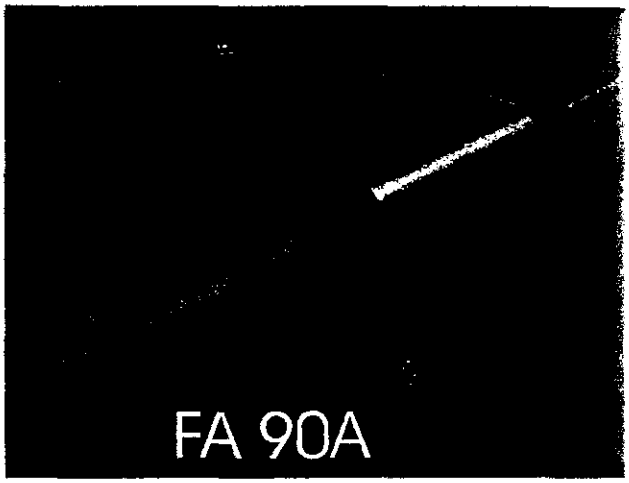
Recipient	Company	Method	Date
Brian Hoerr	Gilbane	Message	10/19/2007

SKATE STOPPERS®

FA-FR Series Products

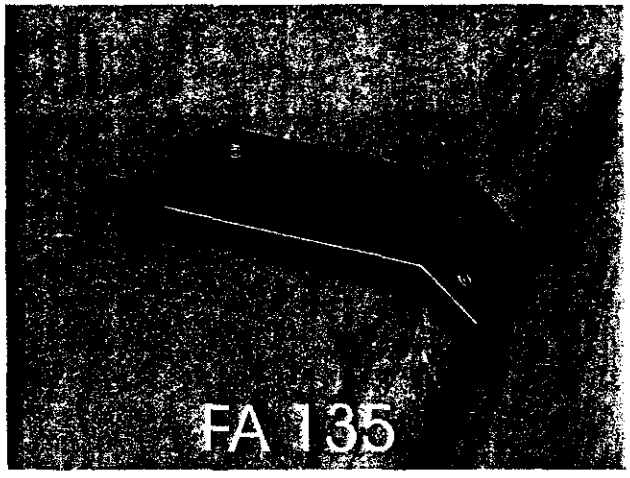


This patented part is designed for 90° edges with a ½" radius. Most commonly used on poured cement applications.



This patented part is designed for 90° edges with a 1/8" radius. Most commonly used on granite, marble, stone, block, or other surfaces with a hard corner.

This part is designed for edges that have a 1/8" radius (may be used in place of FA90). Most commonly used on granite, marble, stone, block, or other substrates with a hard corner. May also be used on wood or aluminum seating.



This patented part is designed for chamfered edges (edge is formed at a 45 degree angle). Most commonly used on poured concrete, but may be found in granite, limestone, and marble.

07/07

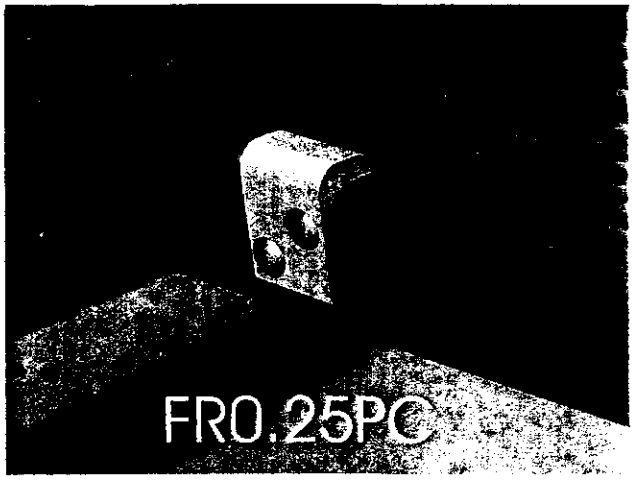
SKATE STOPPERS®

SKATESTOPPERS is a registered trademark of Intellicept

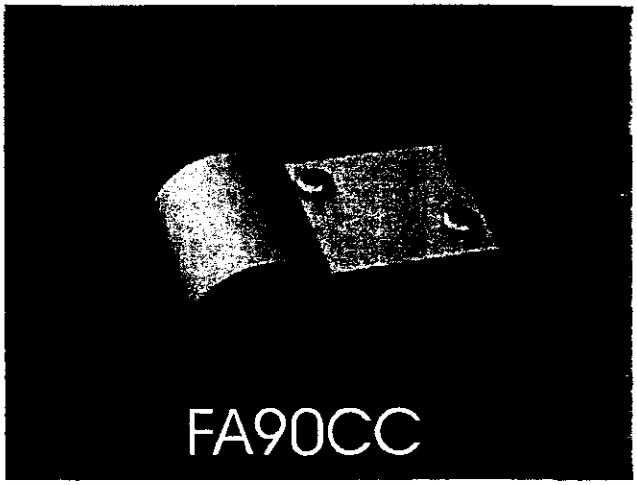
Skatestoppers is a trademark of Intellicept

FA Clip Series Products

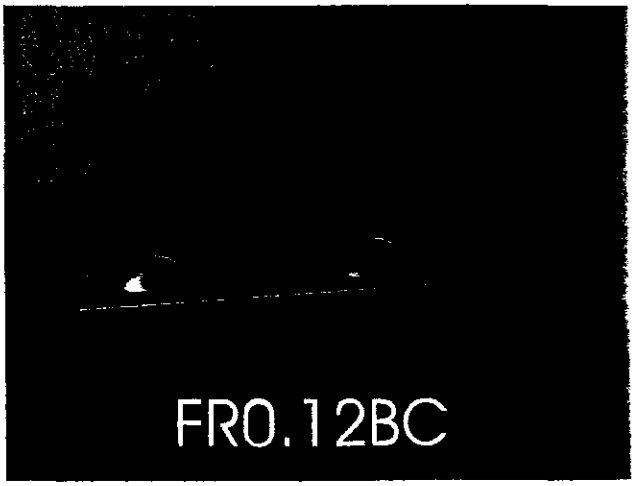
The FA Clip Series parts are a continuation of the FA series line. All clip series parts are extruded from 6061-T6 aluminum. Parts are comparable in price to the Nylon Series, yet they offer the high strength properties found in the standard FA products.



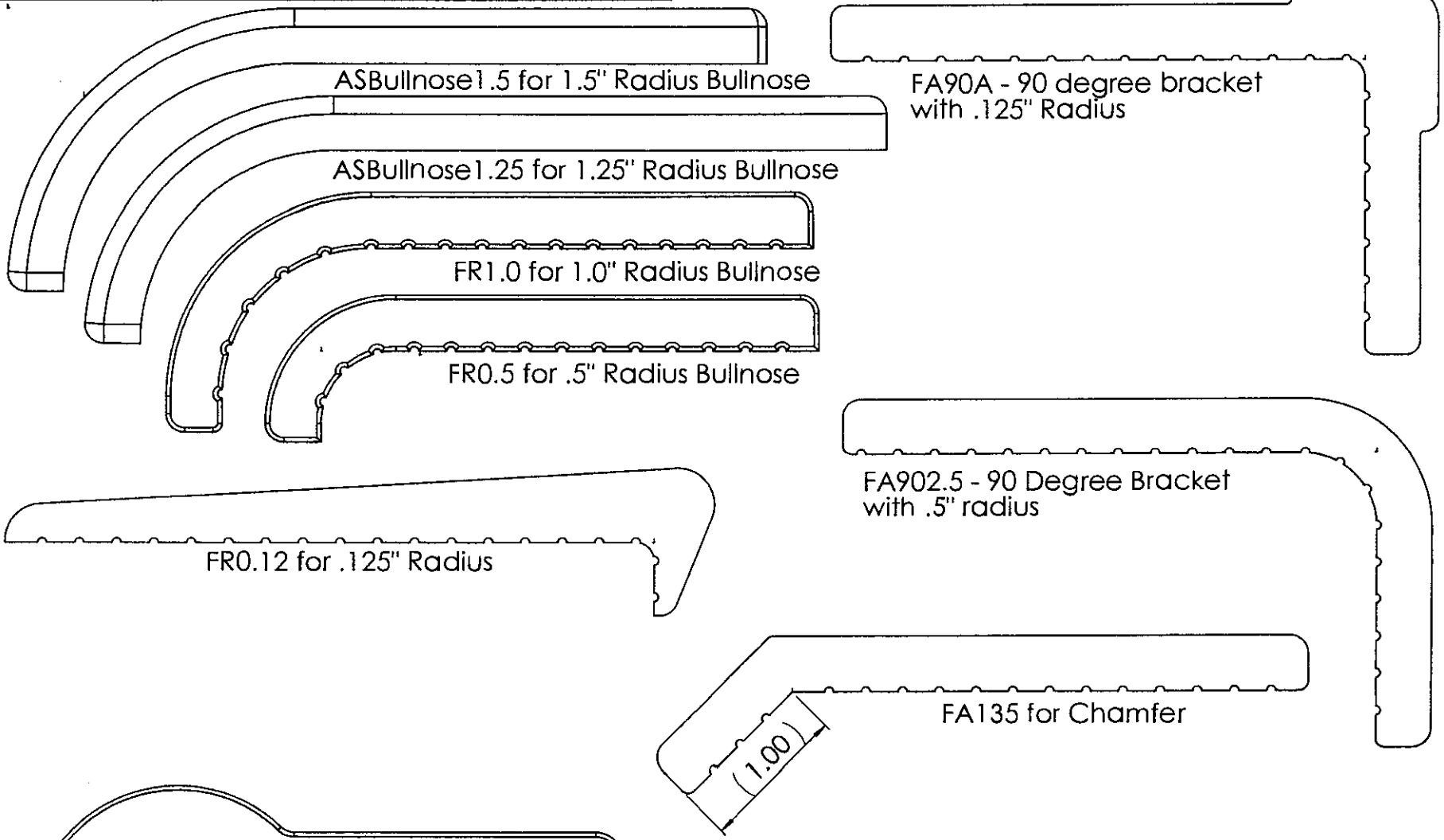
This part is designed to fit plastic coated/ expanded metal benches with a 1/4" radius. Parts are fastened with bolts, washers, nuts, and permanent grade threadlocker.



This part is designed specifically for curb applications or for substrates with ½"radius (NOT FOR USE ON PRECAST BENCHES .) Parts are fastened with Spiral Drive cement anchors and two-part adhesive.



This part is designed wood, fiberglass and aluminum benches with 1/8" radius. Parts are fastened with bolts, washers, nuts, and permanent grade threadlocker.



NOTE: This sheet was generated at full scale. Verify that fax transmission or reproduction did not change scale prior to use of this template set. Measure and verify that the noted 1" dimension of the FA135 above is 1". If the marked dimension is not 1", enlarge/reduce sheet accordingly.

INTELLICEPT, CA USA
tel 619-447-6374

STANDARD PRODUCT PROFILES

Cut out shapes and check which shape fits best prior to ordering.

SCALE	CAD FILE:	SHEET

SKATE STOPPERS®

	Suggested List Price
FA (Fixed Angle) and FR (Fixed Radius) Series - (EXCEPT FA90CC, FA93BC, FR0.25PC, FR0.12BC)	
F__-20 for 50ML	$ 230.02
F__-60 for 400ML	$ 574.52
F__-100 for 400ML	$ 946.58
F__-250 for 400ML	$ 2,294.90
Aluminum AS (Architectural Series in anodize finish)	
AS__-20 for 400ML	$ 328.60
AS__-60 for 400ML	$ 831.04
AS__-100 for 400ML	$ 1,372.70
AS__-250 for 400ML	$ 3,328.40
Aluminum Hand Rail (HRAS, HR, HAND and OAKHAND)	
H__-20	$ 133.56
H__-60	$ 344.50
H__-100	$ 514.10
H__-250	$ 1,221.12
FA90CC Curve Clips	
FA90CC-20-50ML	$ 172.52
FA90CC-60-400ML	$ 438.84
FA90CC-100-400ML	$ 675.22
FA90CC-250-400ML	$ 1,637.70
FA93BC, FR0.25PC, FR0.12BC Bench Clips	
F__BC-20	$ 116.39
F__BC-60	$ 298.70
F__BC-100	$ 408.91
F__BC-250	$ 970.26
Cast Aluminum Flat Caps	
Flat Cap-20	$ 116.39
Flat Cap-60	$ 298.70
Flat Cap-100	$ 408.91
Flat Cap-250	$ 970.26

9212 Stob

Gilbane

Transmittal

Project [2239.2] - PCF - Hospital - Garage

View Date 1/19/2007

Gilbane
940 Elizabeth St
Lexington, KY 40506-0293
Phone: (859) 257-4536
Fax: (859) 323-1331

Transmittal No. 2239.2-00652

To	Mr. Doug Sherwood E. C. Matthews Co., Inc. 2265 Harrodsburg Road Lexington, KY 40504 USA Phone: (859) 278-3131 Fax: (859) 277-7903	**Date**	1/19/2007
		Items listed are being sent	
		☑ Enclosed	
		☐ Under Separate Cover	
		Via	Hand Delivered
		CSI Code	05120 - Structural Steel
From	Mr. Ryan Maguire (Gilbane)		
Subject	Submittal Package 100-05120-002.0		

We are transmitting the following to you:

☐ Product Data	☐ Samples	☐ Shop Drawings	☐ O&M Manuals	☐ Plans
☐ Architectural Drawings	☐ Letters	☐ Specifications	☐ Prints	☐ Addenda
☐ Engineering Drawings	☐ Change Orders	☑ Submittal	☑ Welder Certifications	

Submittals

Pkg. No./Rev.	Item No./Rev.	Description	Copies	Reason	Action
100-05120-002.0	100-05120-012.0	Welder Certification	1	Approved as Submitted	

Remarks

From	Printed Name	Date
Mr. Ryan Maguire	Mr. Ryan Maguire	1/19/2007
Received By	Printed Name	Date

Linked Documents

Document Type	Document	Open	Description	Date
Sub. Pkg.	100-05120-002.0			

Distribution

Recipient	Company	Method	Date
Doug Sherwood	E. C. Matthews Co., Inc.	Message	1/19/2007

Transmittal

Project [2239.2] - PCF - Hospital - Garage

View Date 1/18/2007

GBBN Architects, Inc.
332 East Eighth St
Cincinnati, OH 45202-2217
Phone: (513) 241-8700
Fax: (513) 241-8873

Transmittal No. 2239.2-00644

To	Mr. Brian Hoerr Gilbane 940 Elizabeth St Lexington, KY 40506-0293 USA Phone: (859) 257-4536 Fax: (859) 323-1331
From	Mr. Bryan Korb (GBBN Architects, Inc.)
Subject	Submittal Package 100-05120-002.0

Date 1/18/2007

Items listed are being sent

☐ Enclosed

☐ Under Separate Cover

CSI Code 05120 - Structural Steel

RECEIVED
JAN 10 2007
GILBANE #3986

We are transmitting the following to you:

☐ Product Data ☐ Samples ☐ Shop Drawings ☐ O&M Manuals ☐ Plans
☐ Architectural Drawings ☐ Letters ☐ Specifications ☐ Prints ☐ Addenda
☐ Engineering Drawings ☐ Change Orders ☑ Submittal

Submittals

Pkg. No./Rev.	Item No./Rev.	Description	Copies	Reason	Action
100-05120-002.0	100-05120-012.0	Welder Certification	2	Approved as Submitted	

Remarks

Received By | Printed Name | Date

Linked Documents

Document Type	Document	Open	Description	Date
Sub. Pkg.	100-05120-002.0			

Memorandum

THP Limited, Inc. 100 E. Eighth St. Cincinnati, OH 45202 ph 513-241-3222 fx 241-2981 thpltd.com

To: Bryan Korb - GBBN

From: Julie Pack

Subject: 100-05120-012.0 Welder Certification

Date: January 15, 2007

THP has reviewed Gilbane's Welding specifications and qualifications submittal prepared by Avenue Fabricating and has no additional comments.

If you have any questions, do not hesitate to call.

Thanks,
Julie

WELDING PROCEDURE SPECIFICATION (WPS) YES ☒
PREQUALIFIED X QUALIFIED BY TESTING ___
or PROCEDURE QUALIFICATION RECORDS (PQR) YES ☐

Identification # ME-30
Revision ___ Date 5-8-00 By J. Jones
Company Name MERIT ERECTORS, INC.
Authorized by J. Koenig Date ___
Welding Process(es) SMAW
Type – Manual ☒ Semi-Automatic ☐
Supporting PQR No.(s) PREQUALIFIED
Machine ☐ Automatic ☐

JOINT DESIGN USED
Type: Single ☒ Double Weld ☐
Backing: Yes ☐ No ☒
Backing Material ___
Root Opening 3/16" Root Face Dimension ___
Groove Angle 60° Radius (J-U) ___
Backgouging: Yes ☐ No ☐ Method GRINDING

POSITION
Position of Groove 3G Fillet ___
Vertical Progression: Up ☒ Down ☐

BASE METALS
Material Spec. ASTM A36
Type or Grade N/A
Thickness: Groove 3/8 Fillet ___
Diameter (Pipe) ___

ELECTRICAL CHARACTERISTICS
Transfer Mode (GMAW): ___
Short-Circuiting ☐ Globular ☐ Spray ___
Current: AC ☐ DCEP ☒ DCEN ☐ Pulsed ☐
Other ___
Tungsten Electrode (GTAW): ___
Size ___
Type ___

FILLER METALS
AWS Specification A5.1
AWS Classification E7018

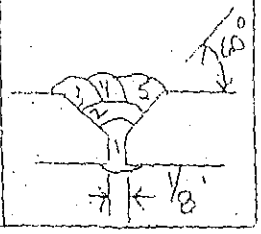
TECHNIQUE
Stringer or Weave Bead STRINGER
Multi-pass or Single Pass (per side) MULTI PASS
Number of Electrodes ___
Electrode Spacing: Longitudinal ___
Lateral ___
Angle ___
Contact Tube to Work Distance 3/8" to 1-1/4"
Peening ___
Interpass Cleaning WIRE BRUSH/GRINDING

SHIELDING
Flux ___ Gas ___
Composition ___
Electrode-Flux (Class) ___ Flow Rate ___
Gas Cup Size N/A

PREHEAT
Preheat Temp., Min. 60° MIN
Interpass Temp., Min. 500°F Max. ___

POSTWELD HEAT TREATMENT
Temp. N/A
Time ___

WELDING PROCEDURE

Pass or Weld Layer(s)	Process	Filler Metals Class	Filler Metals Diam.	Current Type & Polarity	Current Amps or Wire Feed Speed	Volts	Travel Speed	Joint Details
5	SMAW	E7018	3/32	REVERSE ELECTRODE	70 TO 100		1 TO 3*	

Form E-1 (Front)

LIVELY-WIGHT ERECTORS, INC.
structural • miscellaneous • ornamental
5708 SALEM RD. • CINCINNATI, OH 230 • (513) 232-9263 • FAX (513) 232-9274

WELDERS QUALIFICATION RECORD

WPS FOLLOWED	PROCESS	POSITION	MANUAL OR MACHINE		
MSP-1-1	SMAW	3G	MANUAL		
MATERIAL		SHAPE	THICKNESS		RANGE
A36		PLATE	3/8"		1/8 TO 3/4
F-NO.	SPEC NO.	AWS CLASS	A-NO.	DIAMETER	DIRECTION
	5.1	E-7018	1	1/8"	FOREHAND
SPEED	PREHEAT	INTER PASS	POST HEAT	ELECTRODE TYPE	
1 TO 3"	60°	500°	N/A		
DIAMETER	SHAPE	WELD PASS	TYPE JOINT	TYPE ARC	
1/8"	ELECTRODE	MULTIPLE	V-BUTT		
CURRENT TYPE	AMPS	VOLTS	INERT GAS TORCH		
DCRP	85	N/A	N/A		
FLOW RATE	INERT GAS BACK UP		FLOW RATE		
N/A	N/A		N/A		

BEND TEST

ENTIFICATION	TYPE	RESULTS

NONDESTRUCTIVE DESTRUCTIVE

IDENTIFICATION	TYPE	RESULTS
	X RAY	ACCEPTABLE

WELDERS NAME	STAMP	SOCIAL SECURITY NUMBER	
James Raymon		246-71-2358	
TEST CONDUCTED BY	TEST CERTIFIED BY		LAB TEST NUMBER
JEFF KOENIG	JEFF JONES		8398
DATE	REMARKS		
9-25-00			

We certify that the statements in this record are correct and that the test welds were prepared, welded and tested in accordance with the requirements of AWS D.1 and ASME section IX

LIVELWell Erectors, Inc.
structural • miscellaneous • ornamental

WELDERS QUALIFICATION RECORD

WPS FOLLOWED	PROCESS	POSITION	MANUAL OR MACHINE		
MSP-1-1	SMAW	3G	MANUAL		
MATERIAL		SHAPE	THICKNESS		RANGE
A36		PLATE	3/8"		1/8 TO 3/4
F-NO.	SPEC NO.	AWS CLASS	A-NO.	DIAMETER	DIRECTION
	5.1	E-7018	1	1/8"	FOREHAND
SPEED	PREHEAT	INTERPASS	POST HEAT	ELECTRODE TYPE	
3 TO 3"	60°	500°	N/A		
DIAMETER	SHAPE	WELD PASS	TYPE JOINT	TYPE ARC	
1/8"	ELECTRODE	MULTIPLE	V BUTT		
CURRENT TYPE	AMPS	VOLTS	INERT GAS TORCH		
DCRP	35	N/A	N/A		
FLOW RATE	INERT GAS BACK UP		FLOW RATE		
N/A	N/A		N/A		

BEND TEST

ENTIFICATION	TYPE	RESULTS

NONDESTRUCTIVE TEST PERFORMED

IDENTIFICATION	TYPE	RESULTS
	X RAY	ACCEPTABLE

WELDERS NAME	STAMP	SOCIAL SECURITY NUMBER	
ROGER KIDWELL		404-96-0232	
TEST CONDUCTED BY	TEST CERTIFIED BY	LAB TEST NUMBER	
JEFF KOENIG	JEFF JONES	8398	
DATE	REMARKS		
9-25-00			

We certify that the statements in this record are correct and that the test welds were prepared, welded and tested in accordance with the requirements of AWS D1 and ASME section IX

5988 SALEM RD. • CINCINNATI, OHIO 45230 • (513) 232-9263 • FAX (513) 232-9275
structural • miscellaneous • ornamental

WELDERS QUALIFICATION RECORD

WPS FOLLOWED MSP-1-1	PROCESS SMAW	POSITION 3G	MANUAL OR MACHINE MANUAL		
MATERIAL A36		SHAPE PLATE	THICKNESS 3/8"		RANGE 1/8 TO 3/4
F-NO.	SPEC NO. 5.1	AWS CLASS E-7018	A-NO. 1	DIAMETER 1/8"	DIRECTION FOREHAND
SPEED 1 TO 3"	PREHEAT 60°	INTER PASS 500°	POST HEAT N/A	ELECTRODE TYPE	
DIAMETER 1/8"	SHAPE ELECTRODE	WELD PASS MULTIPLE	TYPE JOINT V. BUTT	TYPE ARC	
CURRENT TYPE DCRP	AMPS 95	VOLTS N/A	INERT GAS TORCH N/A		
FLOW RATE N/A	INERT GAS BACK UP N/A		FLOW RATE N/A		

BEND TEST

IDENTIFICATION	TYPE	RESULTS

NONDESTRUCTIVE TEST PERFORMED

IDENTIFICATION	TYPE	RESULTS
	X RAY	ACCEPTABLE

WELDERS NAME CHRIS KOENIG	STAMP	SOCIAL SECURITY NUMBER 275-50-7822	
TEST CONDUCTED BY JEFF KOENIG	TEST CERTIFIED BY JEFF JONES	LAB TEST NUMBER 8398	
DATE 9-25-00	REMARKS		

We certify that the statements in this record are correct and that the test welds were prepared, welded and tested in accordance with the requirements of AWS D1.1 and ASME section IX.

structural • miscellaneous • ornamental
5789 SALEM RD. • CINCINNATI, OHIO 45230 • (513) 232-9263 • FAX (513) 232-9273

WELDERS QUALIFICATION RECORD

WPS FOLLOWED MSP-1-1	PROCESS SMAW	POSITION 3G	MANUAL OR MACHINE MANUAL		
MATERIAL A36		SHAPE PLATE	THICKNESS 3/8"		RANGE 1/8 TO 3/4
F-NO.	SPEC NO. 5.1	AWS CLASS E-7018	A-NO. 1	DIAMETER 1/8"	DIRECTION FOREHAND
SPEED 1 TO 3"	PREHEAT 60°	INTER PASS 500°	POST HEAT N/A	ELECTRODE TYPE	
DIAMETER 1/8"	SHAPE ELECTRODE	WELD PASS MULTIPLE	TYPE JOINT V BUTT	TYPE ARC	
CURRENT TYPE DCRP	AMPS 85	VOLTS N/A	INERT GAS TORCH N/A		
OW RATE N/A	INERT GAS BACK UP N/A		FLOW RATE N/A		

BEND TEST		
IDENTIFICATION	TYPE	RESULTS

NONDESTRUCTIVE TEST PERFORMED		
IDENTIFICATION	TYPE	RESULTS
	X RAY	ACCEPTABLE

WELDERS NAME LEWIS ENGLERT	STAMP	SOCIAL SECURITY NUMBER 407-15-8397	
TEST CONDUCTED BY JEFF KOENIG	TEST CERTIFIED BY JEFF JONES		LAB TEST NUMBER 8397
DATE 9-25-00	REMARKS		

certify that the statements in this record are correct and that the test welds were prepared, welded and tested in accordance with the requirements of AWS D.1 and ASME section IX.

5768 SALEM RD. • CINCINNATI, OHIO 230 • (513) 232-9263 • FAX (513) 232-9273

structural • miscellaneous • ornamental

WELDERS QUALIFICATION RECORD

WPS FOLLOWED	PROCESS	POSITION	MANUAL OR MACHINE		
MSP-1-1	SMAW	3G	MANUAL		
MATERIAL		SHAPE	THICKNESS		RANGE
A36		PLATE	3/8"		1/8 TO 3/4
F-NO.	SPEC NO.	AWS CLASS	A-NO.	DIAMETER	DIRECTION
	5.1	E-7018	1	1/8"	FOREHAND
SPEED	PREHEAT	INTER PASS	POST HEAT	ELECTRODE TYPE	
1 TO 3"	60°	500°	N/A		
DIAMETER	SHAPE	WELD PASS	TYPE JOINT	TYPE ARC	
1/8"	ELECTRODE	MULTIPLE	V BUTT		
CURRENT TYPE	AMPS	VOLTS	INERT GAS TORCH		
DCRP	85	N/A	N/A		
LOW RATE	INERT GAS BACK UP		FLOW RATE		
N/A	N/A		N/A		

BEND TEST

IDENTIFICATION	TYPE	RESULTS

NONDESTRUCTIVE TEST PERFORMED

IDENTIFICATION	TYPE	RESULTS
	X RAY	ACCEPTABLE

WELDERS NAME	STAMP	SOCIAL SECURITY NUMBER
DOUG McDANIEL		400-98-8236

TEST CONDUCTED BY	TEST CERTIFIED BY	LAB TEST NUMBER
JEFF KOENIG	JEFF JONES	8236

DATE	REMARKS
9-25-00	

I certify that the statements in this record are correct and that the test welds were prepared, welded and tested in accordance with the requirements of AWS D1 and ASME section IX

WELDERS QUALIFICATION RECORD

WPS FOLLOWED	PROCESS	POSITION	MANUAL OR MACHINE	
MCT-1-2	SMAW	3G	MANUAL	
MATERIAL		SHAPE	THICKNESS	RANGE
A36		PLATE	3/8"	1/8" TO 3/4
P-NO	SPEC NO.	AWS CLASS	A-NO.	DIAMETER / DIRECTION
		E-7018	1	3/32" / F-BEHIND
SPEED	PREHEAT	INTERPASS	POST HEAT	ELECTRODE TYPE
1" TO 3"	60°	500°	N/A	
DIAMETER	SHAPE	WELD PASS	TYPE JOINT	TYPE M/C
1/8"	ELECTRODE	MULTIPLE	V-BUTT	
CURRENT TYPE	AMPS	VOLTS	INERT GAS TORCH	
DCRP	75	N/A	N/A	
FLOW RATE	INERT GAS BACK UP		FLOW RATE	
N/A	N/A		N/A	

BEND TEST

IDENTIFICATION	TYPE	RESULTS

NONDESTRUCTIVE EXAMINATION

IDENTIFICATION	TYPE	RESULTS
	X RAY	ACCEPTABLE

WELDERS NAME	STAMP	SOCIAL SECURITY NUMBER
Gary Wyatt		269-84-3553

TEST CONDUCTED BY	TEST CERTIFIED BY	LAB TEST NO.
MOS	JEFF JONES	303

DATE	REMARKS
8/2/04	

We certify that the statements in this record are correct and that the test welds were prepared welded and tested in accordance with the requirements of AWS D1.1 and ASME Section IX

WELDERS QUALIFICATION RECORD

WPS FOLLOWED	PROCESS	POSITION	MANUAL OR MACHINE	
ROP-1-2	SMAW	3G	MANUAL	
MATERIAL		SHAPE	THICKNESS	PASS#
A36		PLATE	3/8"	1/8 Pass 1-4
F-NO	SPEC NO	AWS CLASS	A-NO	DIAMETER / DIRECTION
		E-7018	1	1/8" / UPSHAPE
SPEED	PREHEAT	INTER PASS	POST HEAT	ELECTRODE-FLUX
3" TO 5"	60°	500°	N/A	
DIAMETER	SHAPE	WELD PASS	P/P JOINT	TYPE ARC
1/16"	ELECTRODE	MULTIPLE	W. BUTT	
CURRENT TYPE	AMPS	VOLTS	INERT GAS TORCH	
DCRP	75	N/A	N/A	
FLOW RATE	INERT GAS BACK UP		FLOW RATE	
N/A	N/A		N/A	

BEND TEST

IDENTIFICATION	TYPE	RESULTS

NON-DESTRUCTIVE TEST (RT OR UT)

IDENTIFICATION	TYPE	RESULTS
	X RAY	ACCEPTABLE

WELDERS NAME	STAMP	SOCIAL SECURITY NUMBER
Mark Korb		284-76-6567

TEST CONDUCTED BY	TEST CERTIFIED BY	LAB TEST NUMBER
MQS	JEFF JONES	303

DATE	REMARKS
8/2/04	

We certify that the statements in this record are correct and that the test welds were prepared, welded and tested in accordance with the requirements of AWS D1.1 and ASME section IX

WELDERS QUALIFICATION RECORD

WPS FOLLOWED	PROCESS	POSITION	MANUAL OR MACHINE	
MQT-1-2	SMAW	3G	MANUAL	
MATERIAL		SHAPE	THICKNESS	BACKING
A36		PLATE	3/8"	
P-NO	SPEC NO	AWS CLASS	A-NO	DIAMETER / DIRECTION
		E-7018	1	1/8" UPHILL
SPEED	PREHEAT	INTERPASS	POSTHEAT	ELECTRODE TYPE
3"-10"	60°	500°	N/A	
DIAMETER	SHAPE	WELD PASS	TYPE JOINT	TYPE ARC
1/4"	ELECTRODE	MULTIPLE	V BUTT	
CURRENT TYPE	AMPS	VOLTS	INERT GAS TORCH	
DCRP	165	N/A	N/A	
FLOW RATE	INERT GAS BACK UP		FLOW RATE	
N/A	N/A		N/A	

WELD TEST

IDENTIFICATION	TYPE	RESULTS

NONDESTRUCTIVE TESTS PERFORMED

IDENTIFICATION	TYPE	RESULTS
	X-RAY	ACCEPTABLE

WELDERS NAME	STAMP	SOCIAL SECURITY NUMBER	
Carl (Ed) Morgan		406-08-4803	
TEST CONDUCTED BY	TEST CERTIFIED BY		LAB TEST NUMBER
MQS	JEFF JONES		303
DATE	REMARKS		
8/2/04			

We certify that the statements in this record are correct and that the test welds were prepared welded and tested in accordance with the requirements of AWS D1.1 and ASME section IX

WELDERS QUALIFICATION RECORD

WPS FOLLOWED	PROCESS	POSITION	MANUAL OR MACHINE		
WPS-1-1	SMAW	3G	MANUAL		
MATERIAL		SHAPE	THICKNESS		FILLET
A36		PLATE	3/8"		ASME IX QW
P-NO	SFA NO.	AWS CLASS	A-NO	DIAMETER	DIRECTION
		E-7010	1	1/8"	VERTICAL
SPEED	PREHEAT	INTER PASS	POST HEAT	ELECTRODE TYPE	
3 TO 3"	60°	500°	N/A		
DIAMETER	SHAPE	WELD PASS	TYPE JOINT	TYPE ARC	
1/8"	ELECTRODE	MULTIPLE	V BUTT		
CURRENT TYPE	AMPS	VOLTS	INERT GAS TORCH		
DCRP	85	N/A	N/A		
FLOW RATE	INERT GAS BACK UP		FLOW RATE		
N/A	N/A		N/A		

DESTRUCTIVE TEST PROVIDED

IDENTIFICATION	TYPE	RESULTS

NONDESTRUCTIVE TEST PROVIDED

IDENTIFICATION	TYPE	RESULTS
	X RAY	ACCEPTABLE

WELDERS NAME	STAMP	SOCIAL SECURITY NUMBER
Glen Stockman		319-66-4105

TEST CONDUCTED BY	TEST CERTIFIED BY	LAB TEST NUMBER
MQS	JEFF JONES	303

DATE	REMARKS
8/2/04	

We certify that the statements in this record are correct and that the test welds were prepared, welded and tested in accordance with the requirements of AWS D1 and ASME section IX

WELDERS QUALIFICATION RECORD

WPS FOLLOWED	PROCESS	POSITION	MANUAL OR MACHINE		
SSC-1-1	SMAW	3G	MANUAL		
MATERIAL		SHAPE	THICKNESS		LARGE
A36		PLATE	3/8"		1/8" to 2 1/2"
P-NO.	SPEC NO.	AWS CLASS	A-NO.	DIAMETER	DIRECTION
	A	E-7018	1	1/8"	FORE HAND
SPEED	PRE-HEAT	INTER PASS	POST-HEAT	ELECTRODE TYPE	
3" TO 5"	(-) 0°	500°	N/A		
DIAMETER	SHAPE	WELD PASS	TYPE JOINT	TYPE ARC	
1/8"	ELECTRODE	MULTIPLE	V. BUTT		
CURRENT TYPE	AMPS	VOLTS	INERT GAS TORCH		
DCRP	115	N/A	N/A		
FLOW RATE	INERT GAS BACK UP		FLOW RATE		
N/A	N/A		N/A		

DESTRUCTIVE TEST

IDENTIFICATION	TYPE	RESULTS

NON-DESTRUCTIVE TEST PERFORMED

IDENTIFICATION	TYPE	RESULTS
	X RAY	ACCEPTABLE

WELDERS NAME	STAMP	SOCIAL SECURITY NUMBER
Bruce Stamper		288-70-8623

TEST CONDUCTED BY	TEST CERTIFIED BY	LAB TEST NUMBER
MQS	JEFF JONES	303

DATE	REMARKS
8/2/04	

We certify that the statements in this record are correct and that the test welds were prepared welded and tested in accordance with the requirements of AWS D1.1 and ASME section IX

WELDING PROCEDURE SPECIFICATION (WPS) YES ☒
PREQUALIFIED X QUALIFIED BY TESTING
or PROCEDURE QUALIFICATION RECORDS (PQR) YES ☐

Identification # ME-10
Revision Date 5-8-00 By J. JONES
Company Name MERIT ERECTORS, INC Authorized by J. KOENIG Date
Welding Process(es) SMAW Type – Manual ☒ Semi-Automatic ☐
Supporting PQR No.(s) PREQUALIFIED Machine ☐ Automatic ☐

JOINT DESIGN USED
Type: Single ☐ Double Weld ☐
Backing: Yes ☐ No ☐
Backing Material
Root Opening 1/8" Root Face Dimension
Groove Angle 60° Radius (J-U)
Backgouging: Yes ☐ No ☐ Method GRINDING

BASE METALS
Material Spec. ASTM A36
Type or Grade N/A
Thickness: Groove 3/8" Fillet
Diameter (Pipe)

FILLER METALS
AWS Specification A5.1
AWS Classification E7018

SHIELDING
Flux Gas
Composition
Electrode-Flux (Class) Flow Rate
Gas Cup Size N/A

POSITION
Position of Groove 1G Fillet
Vertical Progression: Up ☒ Down ☐

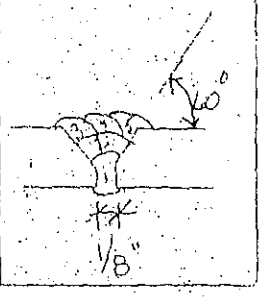
ELECTRICAL CHARACTERISTICS
Transfer Mode (GMAW): Short-Circuiting ☐ Globular ☐ Spray
Current: AC ☐ DCEP ☒ DCEN ☐ Pulsed ☐
Other
Tungsten Electrode (GTAW): Size Type

TECHNIQUE
Stringer or Weave Bead STRINGER
Multi-pass or Single Pass (per side) MULTI PASS
Number of Electrodes
Electrode Spacing: Longitudinal Lateral Angle
Contact Tube to Work Distance 3/8" to 1-1/8"
Peening
Interpass Cleaning WIRE BRUSH/GRINDING

PREHEAT
Preheat Temp., Min. 60° MIN
Interpass Temp., Min. 500°F Max.

POSTWELD HEAT TREATMENT
Temp. N/A
Time

WELDING PROCEDURE

Pass or Weld Layer(s)	Process	Filler Metals Class	Filler Metals Diam.	Current Type & Polarity	Current Amps or Wire Feed Speed	Volts	Travel Speed	Joint Details
5	SMAW	E7018	1/8"	REVERSE ELECTRODE	90 TO 140	N/A	1 TO 3	

Form E-1 (Front)

structural • miscellaneous • ornamental
5788 SALEM RD. • CINCINNATI, OHIO 4[illegible] • PH (513) 232-9263 • FAX (513) 232-9273

WELDERS QUALIFICATION RECORD

WPS FOLLOWED	PROCESS	POSITION	MANUAL OR MACHINE		
MSP-1-1	SMAW	1G	MANUAL		
MATERIAL		SHAPE	THICKNESS		RANGE
A36		PLATE	3/8"		1/8 TO 3/4
F-NO.	SPEC NO.	AWS CLASS	A-NO.	DIAMETER	DIRECTION
	5.1	E-7018	1	1/8"	FOREHAND
SPEED	PREHEAT	INTER PASS	POST HEAT	ELECTRODE TYPE	
1 TO 3"	60°	500°	N/A		
DIAMETER	SHAPE	WELD PASS	TYPE JOINT	TYPE ARC	
1/8"	ELECTRODE	MULTIPLE	V BUTT		
CURRENT TYPE	AMPS	VOLTS	INERT GAS TORCH		
DCRP	85	N/A	N/A		
FLOW RATE	INERT GAS BACK UP		FLOW RATE		
N/A	N/A		N/A		

BEND TEST		
IDENTIFICATION	TYPE	RESULTS

NONDESTRUCTIVE TEST PERFORMED		
IDENTIFICATION	TYPE	RESULTS
	X RAY	ACCEPTABLE

WELDERS NAME	STAMP	SOCIAL SECURITY NUMBER	
DOUG McDANIEL		400-98-8236	
TEST CONDUCTED BY	TEST CERTIFIED BY	LAB TEST NUMBER	
JEFF KOENIG	JEFF JONES	8236	
DATE	REMARKS		
9-25-00			

We certify that the statements in this record are correct and that the test welds were prepared, welded and tested in accordance with the requirements of AWS D.1 and ASME section IX

Weldmen Erectors, Inc.
structural • miscellaneous • ornamental
5788 SALEM RD. • CINCINNATI, OHIO 45 (513) 232-9263 • FAX (513) 232-9273

WELDERS QUALIFICATION RECORD

WPS FOLLOWED	PROCESS	POSITION	MANUAL OR MACHINE		
MSP-1-1	SMAW	1G	MANUAL		
MATERIAL		SHAPE	THICKNESS		RANGE
A36		PLATE	3/8"		1/8 TO 3/8
P-NO.	SPEC NO.	AWS CLASS	A-NO.	DIAMETER	DIRECTION
	5.1	E-7018	1	1/8"	FOREHAND
SPEED	PREHEAT	INTER PASS	POST HEAT	ELECTRODE TYPE	
1 TO 3"	60°	500°	N/A		
DIAMETER	SHAPE	WELD PASS	TYPE JOINT	TYPE ARC	
1/8"	ELECTRODE	MULTIPLE	V BUTT		
CURRENT TYPE	AMPS	VOLTS	INERT GAS TORCH		
DCEP	85	N/A	N/A		
OW RATE	INERT GAS BACK UP		FLOW RATE		
N/A	N/A		N/A		

BEND TEST

IDENTIFICATION	TYPE	RESULTS

NONDESTRUCTIVE TEST PERFORMED

IDENTIFICATION	TYPE	RESULTS
	X RAY	ACCEPTABLE

WELDERS NAME	STAMP	SOCIAL SECURITY NUMBER	
CHRIS KOENIG		275-50-7822	
TEST CONDUCTED BY	TEST CERTIFIED BY		LAB TEST NUMBER
JEFF KOENIG	JEFF JONES		8398
DATE	REMARKS		
9-25-00			

We certify that the statements in this record are correct and that the test welds were prepared, welded and tested in accordance with the requirements of AWS D.1 and ASME section IX

[MEI] Merit Erectors, Inc.
structural • miscellaneous • ornamental
5700 SALEM RD. • CINCINNATI, OHIO 4 • (513) 232-9263 • FAX (513) 232-9271

WELDERS QUALIFICATION RECORD

WPS FOLLOWED	PROCESS	POSITION	MANUAL OR MACHINE		
MSP-1-1	SMAW	1G	MANUAL		
MATERIAL		SHAPE	THICKNESS		RANGE
A36		PLATE	3/8"		1/8 TO 3/4
F-NO.	SPEC NO.	AWS CLASS	A-NO.	DIAMETER	DIRECTION
	5.1	E-7018	1	1/8"	FOREHAND
SPEED	PREHEAT	INTER PASS	POST HEAT	ELECTRODE TYPE	
1 TO 3"	60°	500°	N/A		
DIAMETER	SHAPE	WELD PASS	TYPE JOINT	TYPE ARC	
1/8"	ELECTRODE	MULTIPLE	V. BUTT		
CURRENT TYPE	AMPS	VOLTS	INERT GAS TORCH		
DCRP	85	N/A	N/A		
FLOW RATE	INERT GAS BACK UP		FLOW RATE		
N/A	N/A		N/A		

BEND TEST

IDENTIFICATION	TYPE	RESULTS

NONDESTRUCTIVE TEST PERFORMED

IDENTIFICATION	TYPE	RESULTS
	X RAY	ACCEPTABLE

WELDERS NAME	STAMP	SOCIAL SECURITY NUMBER	
LEWIS ENGLERT		407-15-8397	
TEST CONDUCTED BY	TEST CERTIFIED BY		LAB TEST NUMBER
JEFF ROENIG	JEFF JONES		8397
DATE	REMARKS		
9-25-00			

We certify that the statements in this record are correct and that the test welds were prepared, ...led and tested in accordance with the requirements of AWS D1 and ASME section IX

MEI Merit Erectors, Inc.
structural • miscellaneous • ornamental
5708 SALEM RD. • CINCINNATI, OHIO • (513) 232-9263 • FAX (513) 231-9271

WELDERS QUALIFICATION RECORD

WPS FOLLOWED: MSP-1-1	PROCESS: SMAW	POSITION: 1G	MANUAL OR MACHINE: MANUAL		
MATERIAL: A36		SHAPE: PLATE	THICKNESS: 3/8"		RANGE: 1/8 TO 3/4
F-NO.	SPEC NO.: 5.1	AWS CLASS: E-7018	A-NO.: 1	DIAMETER: 1/8"	DIRECTION: FORHAND
SPEED: 1 TO 3"	PREHEAT: 60°	INTER PASS: 500°	POST HEAT: N/A	ELECTRODE TYPE	
DIAMETER: 1/8"	SHAPE: ELECTRODE	WELD PASS: MULTIPLE	TYPE JOINT: V BUTT	TYPE ARC	
CURRENT TYPE: DCRP	AMPS: 85	VOLTS: N/A	INERT GAS TORCH: N/A		
FLOW RATE: N/A	INERT GAS BACK UP: N/A		FLOW RATE: N/A		

BEND TEST

IDENTIFICATION	TYPE	RESULTS

NONDESTRUCTIVE TEST PERFORMED

IDENTIFICATION	TYPE	RESULTS
	X RAY	ACCEPTABLE

WELDERS NAME: ROGER KIDWELL	STAMP	SOCIAL SECURITY NUMBER: 404-96-0232	
TEST CONDUCTED BY: JEFF KOENIG	TEST CERTIFIED BY: JEFF JONES		LAB TEST NUMBER: 8398
DATE: 9-25-00	REMARKS:		

We certify that the statements in this record are correct and that the test welds were prepared, welded and tested in accordance with the requirements of AWS D.1 and ASME section IX

MEI Merit Erectors, Inc.
structural • miscellaneous • ornamental
5700 SALEM RD. • CINCINNATI, OHIO ... 30 • (513) 232-9263 • FAX (513) 232-9733

WELDERS QUALIFICATION RECORD

WPS FOLLOWED	PROCESS	POSITION	MANUAL OR MACHINE		
MSP-1-1	SMAW	1G	MANUAL		
MATERIAL		SHAPE	THICKNESS		RANGE
A36		PLATE	3/8"		1/8 TO 3/4
F-NO.	SPEC NO.	AWS CLASS	A-NO.	DIAMETER	DIRECTION
	5.1	E-7018	1	1/8"	FOREHAND
SPEED	PREHEAT	INTER PASS	POST HEAT	ELECTRODE TYPE	
1 TO 3"	60°	500°	N/A		
DIAMETER	SHAPE	WELD PASS	TYPE JOINT	TYPE ARC	
1/8"	ELECTRODE	MULTIPLE	V BUTT		
CURRENT TYPE	AMPS	VOLTS	INERT GAS TORCH		
DCRP	85	N/A	N/A		
FLOW RATE	INERT GAS BACK UP		FLOW RATE		
N/A	N/A		N/A		

BEND TEST

IDENTIFICATION	TYPE	RESULTS

NONDESTRUCTIVE TEST PERFORMED

IDENTIFICATION	TYPE	RESULTS
	X RAY	ACCEPTABLE

WELDERS NAME	STAMP	SOCIAL SECURITY NUMBER	
James Haynon		246-71-2358	
TEST CONDUCTED BY	TEST CERTIFIED BY	LAB TEST NUMBER	
JEFF KOENIG	JEFF JONES	8308	
DATE	REMARKS		
9-25-00			

We certify that the statements in this record are correct and that the test welds were prepared, welded and tested in accordance with the requirements of AWS D.1 and ASME section IX

WELDING PROCEDURE SPECIFICATION (WPS) YES ☒
PREQUALIFIED X QUALIFIED BY TESTING ____
or PROCEDURE QUALIFICATION RECORDS (PQR) YES ☐

Identification # MB-3G FC
Revision ____ Date 5-8-00 By J. JONES
Company Name MERIT ERECTORS
Authorized by J. KOENIG Date ____
Welding Process(es) FCAW
Type — Manual ☒ Semi-Automatic ☐
Supporting PQR No.(s) PREQUALIFIED
Machine ☐ Automatic ☐

JOINT DESIGN USED
Type: Single ☒ Double Weld ☐
Backing: Yes ☐ No ☒
Backing Material ____
Root Opening 1/8" Root Face Dimension ____
Groove Angle 60° Radius (J-U) ____
Backgouging: Yes ☐ No ☐ Method ____
GRINDING

POSITION
Position of Groove 3G Fillet ____
Vertical Progression: Up ☒ Down ☐

ELECTRICAL CHARACTERISTICS
Transfer Mode (GMAW):
Short-Circuiting ☐ Globular ☐ Spray ☐
Current: AC ☐ DCEP ☒ DCEN ☐ Pulsed ☐
Other ____

BASE METALS
Material Spec. ASTM A36
Type or Grade N/A
Thickness: Groove .625 Fillet ____
Diameter (Pipe) ____

Tungsten Electrode (GTAW):
Size ____
Type ____

TECHNIQUE
Stringer or Weave Bead STRINGER
Multi-pass or Single Pass (per side) MULTI PASS
Number of Electrodes ____
Electrode Spacing: Longitudinal ____
Lateral ____
Angle ____

FILLER METALS
AWS Specification ____
AWS Classification ____

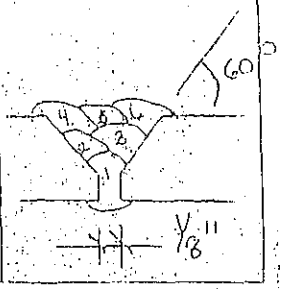
SHIELDING
Flux ____ Gas ____
Composition ____
Electrode-Flux (Class) E-70T
Flow Rate ____
Gas Cup Size N/A

Contact Tube to Work Distance 3/8" to 1-1/4"
Peening ____
Interpass Cleaning WIRE BRUSH/GRINDING

PREHEAT
Preheat Temp., Min. 60° MIN
Interpass Temp., Min. 500°F Max. ____

POSTWELD HEAT TREATMENT
Temp. N/A
Time ____

WELDING PROCEDURE

Pass or Weld Layer(s)	Process	Filler Metals Class	Filler Metals Diam.	Current Type & Polarity	Current Amps or Wire Feed Speed	Volts	Travel Speed	Joint Details
6	FCAW	E70T	.0781	ELECT POSITIVE	450 to 500	27 to 33	4 to 7	

Form E-1 (Front)

WELDING PROCEDURE SPECIFICATION (WPS) YES ☒
PREQUALIFIED X QUALIFIED BY TESTING ____
or PROCEDURE QUALIFICATION RECORDS (PQR) YES ☐

Identification # ME-1C FC
Revision ____ Date 5-8-00 By J. JONES
Company Name MERIT ERECTORS Authorized by J. KOENIG Date ____
Welding Process(es) FCAW Type -- Manual ☒ Semi-Automatic ☐
Supporting PQR No.(s) PREQUALIFIED Machine ☐ Automatic ☐

JOINT DESIGN USED
Type: Single ☒ Double Weld ☐
Backing: Yes ☐ No ☒
Backing Material ____
Root Opening 1/8" Root Face Dimension ____
Groove Angle 60° Radius (J-U) ____
Backgouging: Yes ☐ No ☐ Method GRINDING

POSITION
Position of Groove 1G Fillet ____
Vertical Progression: Up ☒ Down ☐

ELECTRICAL CHARACTERISTICS
Transfer Mode (GMAW):
Short-Circuiting ☐ Globular ☐ Spray ☐
Current: AC ☐ DCEP ☒ DCEN ☐ Pulsed ☐
Other ____
Tungsten Electrode (GTAW):
Size ____
Type ____

BASE METALS
Material Spec. ASTM A36
Type or Grade N/A
Thickness: Groove .325 Fillet ____
Diameter (Pipe) ____

TECHNIQUE
Stringer or Weave Bead STRINGER
Multi-pass or Single Pass (per side) MULTI PASS
Number of Electrodes ____
Electrode Spacing: Longitudinal ____
Lateral ____
Angle ____
Contact Tube to Work Distance 3/8" to 1-1/4"
Peening ____
Interpass Cleaning WIRE BRUSH/GRINDING

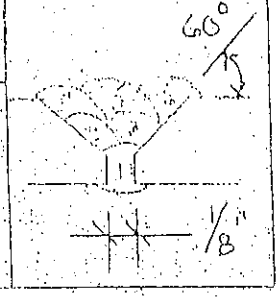
FILLER METALS
AWS Specification A5.20
AWS Classification E70T

SHIELDING
Flux ____ Gas ____
Composition ____
Electrode-Flux (Class) E70T Flow Rate ____
Gas Cup Size N/A

PREHEAT
Preheat Temp., Min. 60° MIN
Interpass Temp., Min. 500° F Max. ____

POSTWELD HEAT TREATMENT
Temp: N/A
Time ____

WELDING PROCEDURE

Pass or Weld Layer(s)	Process	Filler Metals Class	Filler Metals Diam.	Current Type & Polarity	Current Amps or Wire Feed Speed	Volts	Travel Speed	Joint Details
6	FCAW	E70T	.0781	ELECT POSITIVE	450-500	27 to 33	4 to 7	

Form E-1 (Front)

structural • miscellaneous • c mental 5788 SALEM RD. • CINCINNATI, OHIO 45[illegible] • (513) 232-9263 • FAX (513) 232-9273

WELDERS QUALIFICATION RECORD

WPS FOLLOWED MSP1-2	PROCESS FCAW	POSITION 3G	MANUAL OR MACHINE MANUAL		
MATERIAL A36		SHAPE PLATE	THICKNESS .625		RANGE .125 - 1.25"
P-NO.	SPEC NO. A5.20	AWS CLASS E70T	A-NO. 2	DIAMETER .0781	DIRECTION FOREHAND
SPEED 4TO7	PREHEAT 60°	INTER PASS 500°	POST HEAT N/A	ELECTRODE TYPE	
DIAMETER .0781	SHAPE WIRE	WELD PASS MULTIPLE	TYPE JOINT V BUTT	TYPE ARC	
CURRENT TYPE DCRP	AMPS 450 to 500	VOLTS 27 to 33	INERT GAS TORCH N/A		
FLOW RATE N/A	INERT GAS BACK UP N/A		FLOW RATE N/A		

BEND TEST

IDENTIFICATION	TYPE	RESULTS

NONDESTRUCTIVE TEST PERFORMED

IDENTIFICATION	TYPE	RESULTS
	X RAY	ACCEPTABLE

WELDERS NAME LEWIS ENGLERT	STAMP	SOCIAL SECURITY NUMBER 407-15-8397	
TEST CONDUCTED BY JEFF KOENIG	TEST CERTIFIED BY JEFF JONES		LAB TEST NUMBER 8397-A
DATE 9-25-00	REMARKS		

We certify that the statements in this record are correct and that the test welds were prepared, ded and tested in accordance with the requirements of AWS D.1 and ASME section IX

structural • miscellaneous • (amental
6788 SALEM RD. • CINCINNATI, OHIO 45230 • (513) 232-9263 • FAX (513) 232-9273

WELDERS QUALIFICATION RECORD

WPS FOLLOWED	PROCESS	POSITION	MANUAL OR MACHINE		
MSP1-2	FCAW	1G	MANUAL		
MATERIAL		SHAPE	THICKNESS		RANGE
A36		PLATE	.625		.125 - 1.25"
F-NO.	SPEC NO.	AWS CLASS	A-NO.	DIAMETER	DIRECTION
	A5.20	E70T	2	.0781	FOREHAND
SPEED	PREHEAT	INTER PASS	POST HEAT	ELECTRODE TYPE	
4T07	60°	500°	N/A		
DIAMETER	SHAPE	WELD PASS	TYPE JOINT	TYPE ARC	
.0781	MIXE	MULTIPLE	V BUTT		
CURRENT TYPE	AMPS	VOLTS	INERT GAS TORCH		
DCRP	450 to 500	27 to 33	N/A		
FLOW RATE	INERT GAS BACK UP		FLOW RATE		
N/A	N/A		N/A		

BEND TEST

IDENTIFICATION	TYPE	RESULTS

NONDESTRUCTIVE TEST PERFORMED

IDENTIFICATION	TYPE	RESULTS
	X RAY	ACCEPTABLE

WELDERS NAME	STAMP	SOCIAL SECURITY NUMBER	
LEWIS ENGLERT		407-15-8397	
TEST CONDUCTED BY	TEST CERTIFIED BY		LAB TEST NUMBER
JEFF KOENIG	JEFF JONES		8397-A
DATE	REMARKS		
9-25-00			

e certify that the statements in this record are correct and that the test welds were prepared
lded and tested in accordance with the requirements of AWS D.1 and ASME section IX

318/Appendix E

DVS 1.4.07

WELDING PROCEDURE SPECIFICATION (WPS) YES ☒
PREQUALIFIED X QUALIFIED BY TESTING ____
or PROCEDURE QUALIFICATION RECORDS (PQR) YES ☐

Identification # AF-40
Revision ____ Date 10-12-93 By J. WALDEN
Authorized by B. NICHOLS Date ____

Company Name AVENUE FABRICATING, INC.
Welding Process(es) GMAW
Supporting PQR No.(s) PREQUALIFIED

Type — Manual ☒ Semi-Automatic ☐
Machine ☐ Automatic ☐

JOINT DESIGN USED
Type: Single ☒ Double Weld ☐
Backing: Yes ☐ No ☒
Backing Material ____
Root Opening 1/8" Root Face Dimension ____
Groove Angle 60° Radius (J-U) ____
Backgouging: Yes ☐ No ☐ Method GRINDING

BASE METALS
Material Spec. ASTM A36
Type or Grade N/A
Thickness: Groove 5/8" Fillet ____
Diameter (Pipe) ____

FILLER METALS
AWS Specification A5.18
AWS Classification ER70S-6

SHIELDING
Flux ____ Gas X
Composition 75% AR25%CO2
Electrode-Flux (Class) ____ Flow Rate 35 to 38 CFH
Gas Cup Size N/A

POSITION
Position of Groove 4G Fillet ____
Vertical Progression: Up ☒ Down ☐

ELECTRICAL CHARACTERISTICS
Transfer Mode (GMAW): Short-Circuiting ☐ Globular ☐ Spray ☒
Current: AC ☐ DCEP ☒ DCEN ☐ Pulsed ☐
Other ____
Tungsten Electrode (GTAW): Size ____ Type ____

TECHNIQUE
Stringer or Weave Bead STRINGER
Multi-pass or Single Pass (per side) MULTI PASS
Number of Electrodes ____
Electrode Spacing: Longitudinal ____ Lateral ____ Angle ____
Contact Tube to Work Distance 3/8" to 1-1/4"
Peening ____
Interpass Cleaning WIRE BRUSH/GRINDING

PREHEAT
Preheat Temp., Min. 60° MIN
Interpass Temp., Min. 500° F Max. ____

POSTWELD HEAT TREATMENT
Temp. N/A
Time ____

WELDING PROCEDURE

Pass or Weld Layer(s)	Process	Filler Metals		Current		Volts	Travel Speed	Joint Details
		Class	Diam.	Type & Polarity	Amps or Wire Feed Speed			
6	GMAW	ER70S-6	.035	ELECT POSITIVE	162-198	28 to 32	2 to 5	

Form 6-1 (Front)

WELDING PROCEDURE SPECIFICATION (WPS) YES ☐
PREQUALIFIED _____ QUALIFIED BY TESTING _____
or PROCEDURE QUALIFICATION RECORDS (PQR) YES ☐

Identification # AF-30
Revision _____ Date 10-12-93 By J. WALDEN
Company Name AVENUE FABRICATING, INC.
Authorized by B. NICHOLS Date _____
Welding Process(es) GMAW
Type – Manual ☒ Semi-Automatic ☐
Machine ☐ Automatic ☐
Supporting PQR No.(s) PREQUALIFIED

JOINT DESIGN USED
Type: Single ☒ Double Weld ☐
Backing: Yes ☐ No ☐
Backing Material _____
Root Opening 1/8" Root Face Dimension _____
Groove Angle 60° Radius (J-U) _____
Backgouging: Yes ☒ No ☐ Method GRINDING

POSITION
Position of Groove 3G Fillet _____
Vertical Progression: Up ☒ Down ☐

ELECTRICAL CHARACTERISTICS
Transfer Mode (GMAW): Short-Circuiting ☐ Globular ☐ Spray ☐
Current: AC ☐ DCEP ☒ DCEN ☐ Pulsed ☐
Other _____
Tungsten Electrode (GTAW):
Size _____
Type _____

BASE METALS
Material Spec. ASTM A36
Type or Grade N/A
Thickness: Groove 5/8" Fillet _____
Diameter (Pipe) _____

TECHNIQUE
Stringer or Weave Bead STRINGER
Multi-pass or Single Pass (per side) MULTI PASS
Number of Electrodes _____
Electrode Spacing: Longitudinal _____
Lateral _____
Angle _____
Contact Tube to Work Distance 3/8" to 1-1/4"
Peening _____
Interpass Cleaning WIRE BRUSH/GRINDING

FILLER METALS
AWS Specification A5.18
AWS Classification ER 70S-4

SHIELDING
Flux _____ Gas X
Composition 75%AR25%CO2
Electrode-Flux (Class) Flow Rate 35 to 38 CFH
Gas Cup Size _____

PREHEAT
Preheat Temp., Min. 60° MIN
Interpass Temp., Min. 500°F Max. _____

POSTWELD HEAT TREATMENT
Temp. N/A
Time _____

WELDING PROCEDURE

Pass or Weld Layer(s)	Process	Filler Metals		Current		Volts	Travel Speed	Joint Details
		Class	Diam.	Type & Polarity	Amps or Wire Feed Speed			
9	GMAW	ER70S-4	.035	ELECT POSITIVE	135 TO 165	24 TO 28	2 TO 5	

Form E-1 (Front)

AVENUE FABRICATING INC
1281 Clough Pike Batavia, Ohio 45103
(513) 752-1911 Fax (513) 752-0044

WELDERS QUALIFICATION RECORD

WPS FOLLOWED: MSP 1-1	PROCESS: SMAW	POSITION: 3 G	MANUAL OR MACHINE: MANUAL		
MATERIAL: P 1 TO P 1		SHAPE: PLATE	THICKNESS: .625"		RANGE: .125"-1.25"
F-NO.: 6	SPEC NO.: 5.18	AWS CLASS: E-70S	A-NO.: 1	DIAMETER: .035	DIRECTION: FOREHAND
SPEED: 3 TO 4 IPM	PREHEAT: 60°F	INTER PASS: 500°F	POST HEAT: N/A	ELECTRODE TYPE: CONSUMABLE	
DIAMETER: .035	SHAPE: WIRE	WELD PASS: MULTIPLE	TYPE JOINT: V BUTT	TYPE ARC: SINGLE/SPRAY	
CURRENT TYPE: DCRP	AMPS: 190	VOLTS: 26	INERT GAS TORCH: ARGON		
FLOW RATE: 35 TO 38 CFH	INERT GAS BACK UP: N/A		FLOW RATE: N/A		

BEND TEST

IDENTIFICATION	TYPE	RESULTS

NONDESTRUCTIVE TEST PERFORMED

IDENTIFICATION	TYPE	RESULTS
	X-RAY	ACCEPTABLE

WELDERS NAME: STEVE MARSHELL	STAMP:	SOCIAL SECURITY NUMBER: 277-68-8101	
TEST CONDUCTED BY: BOB NICHOLS	TEST CERTIFIED BY: JOE WALDEN		LAB TEST NUMBER: AV-20
DATE: 10-15-93	REMARKS:		

We certify that the statements in this record are correct and that the test welds were prepared, welded and tested in accordance with the requirements of AWS D.1 and ASME section IX

AVENUE FABRICATING INC.
1281 Clough Pike Batavia, Ohio 45103
(513) 752-1911 Fax (513) 752-0044

WELDERS QUALIFICATION RECORD

WPS FOLLOWED	PROCESS	POSITION	MANUAL OR MACHINE		
MSP 1-1	SMAW	3.0	MANUAL		
MATERIAL		SHAPE	THICKNESS		RANGE
P 1 TO P 1		PLATE	.625"		.125"-1.25"
F-NO.	SPEC NO.	AWS CLASS	A-NO.	DIAMETER	DIRECTION
6	5.1B	E-70S	1	.035	FOREHAND
SPEED	PREHEAT	INTER PASS	POST HEAT	ELECTRODE TYPE	
3 TO 4 IPM	60°F	500°F	N/A	CONSUMABLE	
DIAMETER	SHAPE	WELD PASS	TYPE JOINT	TYPE ARC	
.035	WIRE	MULTIPLE	V BUTT	SINGLE/SPRAY	
CURRENT TYPE	AMPS	VOLTS	INERT GAS TORCH		
DCRP	150	26	ARGON		
FLOW RATE	INERT GAS BACK UP		FLOW RATE		
35 TO 38 CFH	N/A		N/A		

BEND TEST

IDENTIFICATION	TYPE	RESULTS

NONDESTRUCTIVE TEST PERFORMED

IDENTIFICATION	TYPE	RESULTS
	X-RAY	ACCEPTABLE

WELDERS NAME	STAMP	SOCIAL SECURITY NUMBER
GEORGE HENDERSON		549-70-3442

TEST CONDUCTED BY	TEST CERTIFIED BY	LAB TEST NUMBER
BOB NICHOLS	JOE WALDEN	AV-14

DATE	REMARKS
10-15-03	

We certify that the statements in this record are correct and that the test welds were prepared, welded and tested in accordance with the requirements of AWS D.1 and ASME section IX

AVENUE FABRICATING, INC.
1281 Clough Pike Batavia, Ohio 45103
(513) 752-1911 Fax (513) 752-0044

WELDERS QUALIFICATION RECORD

WPS FOLLOWED: MSP 1-1	PROCESS: SMAW	POSITION: 3 G	MANUAL OR MACHINE: MANUAL		
MATERIAL: P 1 TO P 1		SHAPE: PLATE	THICKNESS: .625"		RANGE: .125"-1.25"
F-NO.: 6	SPEC NO.: 5.18	AWS CLASS: E-70S	A-NO.: 1	DIAMETER: .035	DIRECTION: FOREHAND
SPEED: 3 TO 4 IPM	PREHEAT: 60°F	INTER PASS: 500°F	POST HEAT: N/A	ELECTRODE TYPE: CONSUMABLE	
DIAMETER: .035	SHAPE: WIRE	WELD PASS: MULTIPLE	TYPE JOINT: V BUTT	TYPE ARC: SINGLE/SPRAY	
CURRENT TYPE: DCRP	AMPS: 150	VOLTS: 26	INERT GAS TORCH: ARGON		
FLOW RATE: 35 TO 38 CFH	INERT GAS BACK UP: N/A		FLOW RATE: N/A		

BEND TEST

IDENTIFICATION	TYPE	RESULTS

NONDESTRUCTIVE TEST PERFORMED

IDENTIFICATION	TYPE	RESULTS
	X-RAY	ACCEPTABLE

WELDERS NAME: TIM LOVINS	STAMP:	SOCIAL SECURITY NUMBER: 281-74-1787
TEST CONDUCTED BY: BOB NICHOLS	TEST CERTIFIED BY: JOE WALKER	LAB TEST NUMBER: AV-16
DATE: 3-15-93	REMARKS:	

We certify that the statements in this record are correct and that the test welds were prepared, welded and tested in accordance with the requirements of AWS D.1 and ASME section IX

AVENUE FABRICATING INC.
1281 Clough Pike Batavia, Ohio 45103
(513) 752-1911 Fax (513) 752-0044

WELDERS QUALIFICATION RECORD

WPS FOLLOWED	PROCESS	POSITION	MANUAL OR MACHINE		
MSP 1-1	GMAW	3 G	MANUAL		
MATERIAL		SHAPE	THICKNESS		RANGE
P 1 TO P 1		PLATE	.625"		.125"-1.25"
F-NO.	SPEC NO.	AWS CLASS	A-NO.	DIAMETER	DIRECTION
6	5.18	E-70S	1	.035	FOREHAND
SPEED	PREHEAT	INTER PASS	POST HEAT	ELECTRODE TYPE	
.3 TO 4 IPM	60°F	500°F	N/A	CONSUMABLE	
DIAMETER	SHAPE	WELD PASS	TYPE JOINT	TYPE ARC	
.035	WIRE	MULTIPLE	V BUTT	SINGLE/SPRAY	
CURRENT TYPE	AMPS	VOLTS	INERT GAS TORCH		
DCRP	150	26	ARGON		
FLOW RATE	INERT GAS BACK UP		FLOW RATE		
35 TO 38 CFH	N/A		N/A		

BEND TEST

IDENTIFICATION	TYPE	RESULTS

NONDESTRUCTIVE TEST PERFORMED

IDENTIFICATION	TYPE	RESULTS
	X-RAY	ACCEPTABLE

WELDERS NAME	STAMP	SOCIAL SECURITY NUMBER	
TOM DENNIS		299-60-9584	
TEST CONDUCTED BY	TEST CERTIFIED BY		LAB TEST NUMBER
BOB NICHOLS	JOE WALDEN		AV-12
DATE	REMARKS		
10-15-93			

We certify that the statements in this record are correct and that the test welds were prepared, welded and tested in accordance with the requirements of AWS D1.1 and ASME [illegible]

AVENUE FABRICATING INC
1281 Clough Pike Batavia, Ohio 45103
(513) 752-1911 Fax (513) 752-0044

WELDERS QUALIFICATION RECORD

WPS FOLLOWED	PROCESS	POSITION	MANUAL OR MACHINE		
MSP 1-1	GMAW	3 G	MANUAL		
MATERIAL		SHAPE	THICKNESS		RANGE
P 1 TO P 1		PLATE	.625"		.125"-1.25"
F-NO.	SPEC NO.	AWS CLASS	A-NO.	DIAMETER	DIRECTION
6	S.18	E-70S	1	.035	FOREHAND
SPEED	PREHEAT	INTER PASS	POST HEAT	ELECTRODE TYPE	
3 TO 4 IPM	60°F	500°F	N/A	CONSUMABLE	
DIAMETER	SHAPE	WELD PASS	TYPE JOINT	TYPE ARC	
.035	WIRE	MULTIPLE	V BUTT	SINGLE/SPRAY	
CURRENT TYPE	AMPS	VOLTS	INERT GAS TORCH		
DCRP	150	26	ARGON		
OW RATE	INERT GAS BACK UP		FLOW RATE		
35 TO 38 CFH	N/A		N/A		

BEND TEST

IDENTIFICATION	TYPE	RESULTS

NONDESTRUCTIVE TEST PERFORMED

IDENTIFICATION	TYPE	RESULTS
	X-RAY	ACCEPTABLE

WELDERS NAME	STAMP	SOCIAL SECURITY NUMBER	
BOB NICHOLS		280-46-5023	
TEST CONDUCTED BY	TEST CERTIFIED BY		LAB TEST NUMBER
JOE WALDEN	JOE WALDEN		AV-22
DATE 10-19-93	REMARKS		

We certify that the statements in this record are correct and that the test welds were prepared, welded and tested in accordance with the requirements of AWS D1 and ASME

AVENUE FABRICATING, INC.
1281 Clough Pike Batavia, Ohio 45103
(513) 752-1911 Fax (513) 752-0044

WELDERS QUALIFICATION RECORD

WPS FOLLOWED: MSP 1-1	PROCESS: GMAW	POSITION: 4 G	MANUAL OR MACHINE: MANUAL		
MATERIAL: P 1 TO P 1		SHAPE: PLATE	THICKNESS: .625		RANGE: .125"-1.25"
F-NO.: 6	SPEC NO.: 5.18	AWS CLASS: E-70S	A-NO.: 1	DIAMETER: .035	DIRECTION: FOREHAND
SPEED: 3 TO 4 IPM	PREHEAT: 60°F	INTER PASS: 500°F	POST HEAT: N/A	ELECTRODE TYPE: CONSUMABLE	
DIAMETER: .035	SHAPE: WIRE	WELD PASS: MULTIPLE	TYPE JOINT: V BUTT	TYPE ARC: SINGLE/SPRAY	
CURRENT TYPE: DCRP	AMPS: 180	VOLTS: 30	INERT GAS TORCH: ARGON		
FLOW RATE: 35 TO 38 CFH	INERT GAS BACK UP: N/A		FLOW RATE: N/A		

BEND TEST

IDENTIFICATION	TYPE	RESULTS

NONDESTRUCTIVE TEST PERFORMED

IDENTIFICATION	TYPE	RESULTS
	X-Ray	ACCEPTABLE

WELDERS NAME: STEVE MARSHELL	STAMP	SOCIAL SECURITY NUMBER: 277-68-8101	
TEST CONDUCTED BY: BOB NICHOLS	TEST CERTIFIED BY: JOE WALDEN		LAB TEST NUMBER: AV-21
DATE: 10-15-93	REMARKS		

We certify that the statements in this record are correct and that the test welds were prepared, welded and tested in accordance with the requirements of AWS D.1 and ASME section IX

AVENUE FABRICATING, INC.
1281 Clough Pike Batavia, Ohio 45103
(513) 752-1911 Fax (513) 752-0044

WELDERS QUALIFICATION RECORD

WPS FOLLOWED	PROCESS	POSITION	MANUAL OR MACHINE		
MSP 1-1	GMAW	4 G	MANUAL		
MATERIAL		SHAPE	THICKNESS		RANGE
P 1 TO P 1		PLATE	.625"		.125"-1.25"
F-NO.	SPEC NO.	AWS CLASS	A-NO.	DIAMETER	DIRECTION
6	S 18	E-70S	1	.035	FOREHAND
SPEED	PREHEAT	INTER PASS	POST HEAT	ELECTRODE TYPE	
3 TO 4 IPM	60°F	500°F	N/A	CONSUMBLE	
DIAMETER	SHAPE	WELD PASS	TYPE JOINT	TYPE ARC	
.035	WIRE	MULTIPLE	V BUTT	SINGLE/SPRAY	
CURRENT TYPE	AMPS	VOLTS	INERT GAS TORCH		
DCRP	180	30	ARGON		
FLOW RATE	INERT GAS BACK UP		FLOW RATE		
35 TO 38 CFH	N/A		N/A		

BEND TEST

IDENTIFICATION	TYPE	RESULTS

NONDESTRUCTIVE TEST PERFORMED

IDENTIFICATION	TYPE	RESULTS
	X-RAY	ACCEPTABLE

WELDERS NAME	STAMP	SOCIAL SECURITY NUMBER
GEORGE HENDERSON		549-70-3442

TEST CONDUCTED BY	TEST CERTIFIED BY	LAB TEST NUMBER
BOB NICHOLS	JOE WALDEN	AV-15

ATE	REMARKS
10-15-93	

We certify that the statements in this record are correct and that the test welds were prepared, welded and tested in accordance with the requirements of AWS D.1 and ASME section IX

AVENUE FABRICATING, INC.
1281 Clough Pike Batavia, Ohio 45103
(513) 752-1911 Fax (513) 752-0044

WELDERS QUALIFICATION RECORD

WPS FOLLOWED	PROCESS	POSITION	MANUAL OR MACHINE		
MSP 1-1	GMAW	4 G	MANUAL		
MATERIAL		SHAPE	THICKNESS		RANGE
P 1 TO P 1		PLATE	.625"		.125"-1.25"
F-NO.	SPEC NO.	AWS CLASS	A-NO.	DIAMETER	DIRECTION
6	5.18	E-70S	1	.035	FOREHAND
SPEED	PREHEAT	INTER PASS	POST HEAT	ELECTRODE TYPE	
3 TO 4 IPM	60°F	500°F	N/A.	CONSUMABLE	
DIAMETER	SHAPE	WELD PASS	TYPE JOINT	TYPE ARC	
.035	WIRE	MULTIPLE	V BUTT	SINGLE/SPRAY	
CURRENT TYPE	AMPS	VOLTS	INERT GAS TORCH		
DCRP	180	30	ARGON		
FLOW RATE	INERT GAS BACK UP		FLOW RATE		
30 TO 35 CFH	N/A		N/A		

BEND TEST

IDENTIFICATION	TYPE	RESULTS

NONDESTRUCTIVE TEST PERFORMED

IDENTIFICATION	TYPE	RESULTS
	X-RAY	ACCEPTABLE

WELDERS NAME	STAMP	SOCIAL SECURITY NUMBER
TIM LOVINS		281-74-1787

TEST CONDUCTED BY	TEST CERTIFIED BY	LAB TEST NUMBER
BOB NICHOLS	JOE WALDEN	AV-17

DATE	REMARKS
10-15-93	

We certify that the statements in this record are correct and that the test welds were prepared, welded and tested in accordance with the requirements of AWS D1 and ASME section IX

AVENUE FABRICATING, INC.
1281 Clough Pike Batavia, Ohio 45103
(513) 752-1911 Fax (513) 752-0044

WELDERS QUALIFICATION RECORD

WPS FOLLOWED	PROCESS	POSITION	MANUAL OR MACHINE		
MSP 1-1	GMAW	4 G	MANUAL		
MATERIAL		SHAPE	THICKNESS		RANGE
P 1 TO P 1		PLATE	.625"		.125"-1.25"
F-NO.	SPEC NO.	AWS CLASS	A-NO.	DIAMETER	DIRECTION
6	5.18	E-70S	1	.035	FOREHAND
SPEED	PREHEAT	INTER PASS	POST HEAT	ELECTRODE TYPE	
3 TO 4 IPM	60°F	500°F	N/A	CONSUMABLE	
DIAMETER	SHAPE	WELD PASS	TYPE JOINT	TYPE ARC	
.035	WIRE	MULTIPLE	V BUTT	SINGLE/SPRAY	
CURRENT TYPE	AMPS	VOLTS	INERT GAS TORCH		
DCRP	180	30	ARGON		
O/W RATE	INERT GAS BACK UP		FLOW RATE		
5 TO 30 CPH	N/A		N/A		

BEND TEST

IDENTIFICATION	TYPE	RESULTS

NONDESTRUCTIVE TEST PERFORMED

IDENTIFICATION	TYPE	RESULTS
	X-RAY	ACCEPTABLE

WELDERS NAME	STAMP	SOCIAL SECURITY NUMBER
TOM DENNIS		299-60-9584

TEST CONDUCTED BY	TEST CERTIFIED BY	LAB TEST NUMBER
BOB NICHOLS	JOE WALDEN	AV-13

	REMARKS
5 -15-93	

...rtify that the statements in this record are correct and that the test welds were prepared, welded and tested in accordance with the requirements of AWS D.1 and ASME section IX

AVENUE FABRICATING, INC.
1281 Clough Pike Batavia, Ohio 45103
(513) 752-1911 Fax (513) 752-0044

WELDERS QUALIFICATION RECORD

WPS FOLLOWED: MSP 1-1	PROCESS: GMAW	POSITION: 4 G	MANUAL OR MACHINE: MANUAL		
MATERIAL: P 1 TO P 1		SHAPE: PLATE	THICKNESS: .625"		RANGE: .125"-1.25"
F-NO.: 6	SPEC NO.: 5.18	AWS CLASS: E-70S	A-NO.: 1	DIAMETER: .035	DIRECTION: FOREHAND
SPEED: 3 TO 4 IPM	PREHEAT: 60°F	INTER PASS: 500°F	POST HEAT: N/A	ELECTRODE TYPE: CONSUMABLE	
DIAMETER: .035	SHAPE: WIRE	WELD PASS: MULTIPLE	TYPE JOINT: V BUTT	TYPE ARC: SINGLE/SPRAY	
CURRENT TYPE: DCRP	AMPS: 130	VOLTS: 30	INERT GAS TORCH: ARGON		
FLOW RATE: 35 TO 38 CFH	INERT GAS BACK UP: N/A		FLOW RATE: N/A		

BEND TEST

IDENTIFICATION	TYPE	RESULTS

NONDESTRUCTIVE TEST PERFORMED

IDENTIFICATION	TYPE	RESULTS
	X-RAY	ACCEPTABLE

WELDERS NAME: BOB NICHOLS	STAMP:	SOCIAL SECURITY NUMBER: 280-48-5023
TEST CONDUCTED BY: JOE WALDEN	TEST CERTIFIED BY: JOE WALDEN	LAB TEST NUMBER: AV-23
DATE: 10-15-93	REMARKS:	

We certify that the statements in this record are correct and that the test welds were prepared,

WELDER, WELDING OPERATOR OR TACK WELDER QUALIFICATION TEST RECORD

Type of Welder MILLER CP-300
Name TOM DENNIS Identification No. AE-SA10-2015
Welding Procedure Specification No. AE-SA10-2000 Rev NEW Date 3/19/98

Variables	Record Actual Values Used in Qualification	Qualification Range
Process/Type (5.16.2)	GMAW SHORT ARC	
Electrode (single or multiple)	MULTI-PASS	MULTI-PASS
Current/Polarity	DC ELEC. POSITIVE	
Position (5.16.5)	1G	1G
Weld Progression (5.16.7)		
Backing (YES or NO) (5.16.16)	NO	NO
Material/Spec. (5.16.1)	A-36 to A-36	
Base Metal		
Thickness: (Plate)		
Groove	1/2"	1/8" TO 1"
Fillet		
Thickness: (Pipe/tube)		
Groove		
Fillet		
Diameter, (Pipe)		
Groove		
Fillet		
Filler Metal (5.16.3)		
Spec. No.	AWS A5.18	
Class	ER-70S-6	
F-No.		
Gas/Flux Type (5.16.4)	75% Ar, 25% CO_2	
Other		

VISUAL INSPECTION (5.12.6 or 5.12.7)
Acceptable YES or NO YES

Guided Bend Test Results (5.28.1/5.29.1)

Type	Result	Type	Result
SIDE, 180°, .750"R	PASS		
SIDE, 180°, .750"R	PASS		

Fillet Test Results (5.28.2/5.28.3; 5.29.3/5.29.4)

Appearance _____ Fillet Size _____
Fracture Test Root Penetration _____ Macroetch _____
(Describe the location, nature, and size of any crack or tearing of the specimen.)

Inspected by ANDREW R. SNOW Test Number 03-98-6241
Organization MOS INSPECTION, INC. Date 3/19/98

RADIOGRAPHIC TEST RESULTS (5.26.4/5.29.2)

Film Identification Number	Results	Remarks	Film Identification Number	Results	Remarks

Interpreted by N/A SHORT ARC Test Number _____
Organization _____ Date _____

We, the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of Section 5, Part C or D of ANSI/AWS D1.1, (1998) Structural Welding Code – Steel
year

Manufacturer or Contractor AVENUE FABRICATING, INC
Authorized By B. NICHOLS
Date

298/Annex E

WELDING PROCEDURE SPECIFICATION (WPS) Yes [X]
PREQUALIFIED _____ QUALIFIED BY TESTING _____
or PROCEDURE QUALIFICATION RECORDS (PQR) Yes [X]

Identification # AF-SAIC-2000
Revision NEW Date 3/19/98. By A. SNOW
Company Name AVENUE FABRICATING, INC. Authorized by B. NICHOLS Date 3-19-98
Welding Process(es) GMAW - SHORT ARC Type—Manual [X] Semi-Automatic [ ]
Supporting PQR No.(s) AF-SAIC-2001 Machine [ ] Automatic [ ]

JOINT DESIGN USED
Type: BUTT SINGLE GROOVE
Single [X] Double Weld [ ]
Backing: Yes [ ] No [X]
Backing Material:
Root Opening 1/8" Root Face Dimension -0-
Groove Angle: 60° Radius (J-U) _____
Back Gouging: Yes [X] No [ ] Method GRINDER

BASE METALS
Material Spec. ASTM A-36
Type or Grade _____
Thickness: Groove 1/2" Fillet _____
Diameter (Pipe) _____

FILLER METALS
AWS Specification A5.18
AWS Classification ER-70S-4

SHIELDING
Flux _____ Gas X
Composition 75%Ar, 25%CO_2
Electrode-Flux (Class) _____ Flow Rate 32 TO 43 CFH
Gas Cup Size N/A

PREHEAT
Preheat Temp., Min 60°F
Interpass Temp., Min 500°F Max _____

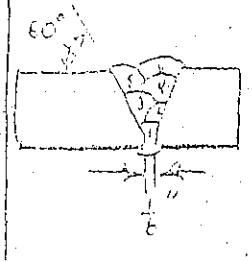
POSITION
Position of Groove: 1G Fillet: _____
Vertical Progression: Up [ ] Down [ ]

ELECTRICAL CHARACTERISTICS
Transfer Mode (GMAW) Short-Circuiting [X]
Globular [ ] Spray [ ]
Current: AC [ ] DCEP [X] DCEN [ ] Pulsed [ ]
Other _____
Tungsten Electrode (GTAW)
Size: _____
Type: _____

TECHNIQUE
Stringer or Weave Bead: STRINGER
Multi-pass or Single Pass (per side) MULTI-PASS
Number of Electrodes _____
Electrode Spacing Longitudinal _____
Lateral _____
Angle _____
Contact Tube to Work Distance 3/8" to 1-1/4"
Peening _____
Interpass Cleaning: WIRE BRUSH - GRINDING

POSTWELD HEAT TREATMENT
Temp. N/A
Time _____

WELDING PROCEDURE

Pass or Weld Layer(s)	Process	Filler Metals		Current		Volts	Travel Speed	Joint Details
		Class	Diam.	Type & Polarity	Amps or Wire Feed Speed			
6	GMAW SHORT ARC	ER70S4	.035"	DC ELEC. POSITIVE	118 TO 133A	19 TO 21.75	3 TO 5	

302/Annex E

Procedure Qualification Record (PQR) # AE-SALC-2001

Test Results

TENSILE TEST

Specimen No.	Width	Thickness	Area	Ultimate tensile load, lb	Ultimate unit stress, psi	Character of failure and location
TS1	.756"	.480"	.3628"	25,500#	70,000 psi	ACC., DUCT, OUTSIDE WELD
TS2	.754"	.422"	.3558"	22,800#	64,000 psi	ACC., DUCT, INSIDE WELD

GUIDED BEND TEST

Specimen No.	Type of bend	Result	Remarks
SIDE 1	180°, .750"R	PASS	NOTE: ALL FOUR BENDS EXHIBITED
SIDE 2	180°, .750"R	PASS	SMALL CRACKS AND OTHER WELD
SIDE 3	180°, .750"R	PASS	DEFECTS WITHIN ALLOWABLE LIMITS.
SIDE 4	180°, .750"R	PASS	

VISUAL INSPECTION

Appearance ACCEPTABLE

Undercut ACCEPTABLE

Piping porosity NONE

Convexity NONE

Test date 3/2/1998

Witnessed by _____

Radiographic-ultrasonic examination

RT report no.: _____ Result _____

UT report no.: _____ Result _____

FILLET WELD TEST RESULTS

Minimum size multiple pass — Macroetch: 1. / 2. / 3. _____

Maximum size single pass — Macroetch: 1. _____ 2. _____ 3. _____

Other Tests

All-weld-metal tension test

Tensile strength, psi _____

Yield point/strength, psi _____

Elongation in 2 in., % _____

Laboratory test no. _____

Welder's name TOM DENNIS Clock no. _____ Stamp no. _____

Tests conducted by MQS INSPECTION, INC. Laboratory

Test number 03-98-6241

Per ANDREW R. SHOW

We, the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of section 4 of ANSI/AWS D1.1, (1998) Structural Welding Code — Steel.
(year)

Signed _____
Manufacturer or Contractor

By R. NICHOLS

WELDER, WELDING OPERATOR OR TACK WELDER QUALIFICATION TEST RECORD

Type of Welder: MILLER CP-200
Name: ROBERT HAUSERMAN Identification No.: AF-SALC-2014
Welding Procedure Specification No.: AF-SALC-2000 Rev: NEW Date: 3/19/98

Variables	Record Actual Values Used in Qualification	Qualification Range
Process/Type (5.16.2)	GMAW SHORT ARC	
Electrode (single or multiple)	MULTI-PASS	MULTI-PASS
Current/Polarity	DC ELEC. POSITIVE	
Position (5.16.5)	1G	
Weld Progression (5.16.7)		
Backing (YES or NO) (5.16.18)	NO	NO
Material/Spec. (5.16.1)	A-36 to A-36	
Base Metal		
Thickness: (Plate)		
Groove	1/2"	1/8" TO 1"
Fillet		
Thickness: (Pipe/tube)		
Groove		
Fillet		
Diameter (Pipe)		
Groove		
Fillet		
Filler Metal (5.16.3)		
Spec. No.	AWS A5.18	
Class	ER-70S-4	
F-No.		
Gas/Flux Type (5.16.4)	75% Ar, 25% CO_2	
Other		

VISUAL INSPECTION (5.12.6 or 5.12.7)
Acceptable YES or NO: YES

Guided Bend Test Results (5.28.1/5.29.1)

Type	Result	Type	Result
SIDE, 180°, .750"R	PASS		
SIDE, 180°, .750"R	PASS		

Fillet Test Results (5.28.2/5.28.3; 5.29.3/5.29.4)

Appearance: Fillet Size:
Fracture Test-Root Penetration: Macroetch:
(Describe the location, nature, and size of any crack or tearing of the specimen.)

Inspected by: ANDREW R. SNOW Test Number: 03-98-6241
Organization: MOS INSPECTION, INC. Date: 3/19/98

RADIOGRAPHIC TEST RESULTS (5.28.4/5.29.2)

Film Identification Number	Results	Remarks	Film Identification Number	Results	Remarks

Interpreted by: Test Number:
Organization: Date:

We, the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of Section 5, Part C or D of ANSI/AWS D1.1, (1998) Structural Welding Code — Steel
year

Manufacturer or Contractor: AVENUE FABRICATING, INC.
Authorized By: B. NICHOLS
Date: 3/19/98

298/Annex E

WELDING PROCEDURE SPECIFICATION (WPS) Yes [X]

PREQUALIFIED _____ QUALIFIED BY TESTING _____

or PROCEDURE QUALIFICATION RECORDS (PQR) Yes [X]

Identification # AP-SA3C-2005

Revision NEW Date 3/19/98 By A. SNOW

Company Name AVENUE FABRICATING, INC.

Authorized by B. NICHOLS Date 3-19-98

Welding Process(es) GMAW - SHORT ARC

Type—Manual [X] Semi-Automatic [ ]

Machine [ ] Automatic [ ]

Supporting PQR No.(s) TA-SA3C-2004

JOINT DESIGN USED

Type: BUTT SINGLE GROOVE

Single [X] Double Weld [ ]

Backing: Yes [ ] No [X]

Backing Material:

Root Opening 1/8" Root Face Dimension -0-

Groove Angle: 60° Radius (J-U) _____

Back Gouging: Yes [X] No [ ] Method GRINDER

POSITION

Position of Groove: 3G Fillet: _____

Vertical Progression: Up [X] Down [ ]

ELECTRICAL CHARACTERISTICS

Transfer Mode (GMAW) Short-Circuiting [X]

Globular [ ] Spray [ ]

Current: AC [ ] DCEP [X] DCEN [ ] Pulsed [ ]

Other _____

Tungsten Electrode (GTAW)

Size: _____

Type: _____

BASE METALS

Material Spec. ASTM A-36

Type or Grade _____

Thickness: Groove 1/2" Fillet _____

Diameter (Pipe) _____

FILLER METALS

AWS Specification A5.18

AWS Classification ER-70S-4

TECHNIQUE

Stringer or Weave Bead: STRINGER

Multi-pass or Single Pass (per side) MULTI-PASS

Number of Electrodes _____

Electrode Spacing Longitudinal _____

Lateral _____

Angle _____

SHIELDING

Flux _____ Gas X

Composition? 75%Ar, 25%CO_2

Electrode-Flux (Class) _____ Flow Rate 32 TO 43 CFH

Gas Cup Size N/A

Contact Tube to Work Distance 3/8" to 1-1/4"

Peening _____

Interpass Cleaning: WIRE BRUSH - GRINDING

PREHEAT

Preheat Temp., Min 60° F

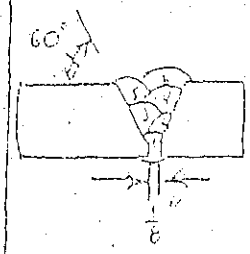
Interpass Temp., Min 500° F Max _____

POSTWELD HEAT TREATMENT

Temp. N/A

Time _____

WELDING PROCEDURE

Pass or Weld Layer(s)	Process	Filler Metals		Current		Volts	Travel Speed	Joint Details
		Class	Diam.	Type & Polarity	Amps or Wire Feed Speed			
6	GMAW SHORT ARC	ER70S6	.035"	DC ELEC. POSITIVE	118, TO 133A	19 TO 21.75	3 TO 5	

302/Annex E

Procedure Qualification Record (PQR) # AF-SA30-2004
Test Results

TENSILE TEST

Specimen No.	Width	Thickness	Area	Ultimate tensile load, lb	Ultimate unit stress, psi	Character of failure and location
TS1	.746"	.466"	.3476"	24,200#	70,000 psi	ACC., DUCT.
						OUTSIDE WELD
TS2	.751"	.472"	.3544"	24,100#	68,000 psi	ACC. DUCT
						OUTSIDE WELD

GUIDED BEND TEST

Specimen No.	Type of bend	Result	Remarks
SIDE 1	180°, .750"R	PASS	NOTE: ALL SIDE BENDS EXHIBITED CRACKS
			AND OTHER WELD DEFECTS WITHIN
			ALLOWABLE LIMITS

VISUAL INSPECTION
Appearance ACCEPTABLE
Undercut ACCEPTABLE
Piping porosity NONE
Convexity NONE
Test date 3/2/98
Witnessed by

Radiographic-ultrasonic examination
RT report no.: _____ Result _____
UT report no.: _____ Result _____

FILLET WELD TEST RESULTS
Minimum size multiple pass Maximum size single pass
Macroetch Macroetch
1. _____ 3. _____ 1. _____ 3. _____
2. _____ 2. _____

Other Tests

All-weld-metal tension test
Tensile strength, psi _____
Yield point/strength, psi _____
Elongation in 2 in., % _____
Laboratory test no. _____

Welder's name ROBERT HAUSSERMAN Clock no. _____ Stamp no. _____

Tests conducted by NDS INSPECTION, INC. Laboratory

Test number 03-98-6241

Per ANDREW R. SNOW

We, the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of section 4 of ANSI/AWS D1.1 (1998 (year)) Structural Welding Code — Steel.

Signed _____
Manufacturer or Contractor

By _____

WELDER, WELDING OPERATOR OR TACK WELDER QUALIFICATION TEST RECORD

Type of Welder MILLER CP-300
Name TOM DENNIS Identification No. AF-SA3G-2016
Welding Procedure Specification No. AF-SA3G-2005 Rev NEW Date 3/19/98

Variables	Record Actual Values Used in Qualification	Qualification Range
Process/Type (5.16.2)	GMAW SHORT ARC	
Electrode (single or multiple)	MULTI-PASS	MULTI-PASS
Current/Polarity	DC ELEC. POSITIVE	
Position (5.16.5)	3G	3G
Weld Progression (5.16.7)	UP	UP
Backing (YES or NO) (5.16.10)	NO	NO
Material/Spec. (5.16.1)	A-36 to A-36	
Base Metal Thickness: (Plate)	1/2"	1/8" TO 1"
Groove		
Fillet		
Thickness: (Pipe/Tube)		
Groove		
Fillet		
Diameter (Pipe)		
Groove		
Fillet		
Filler Metal (5.16.3)		
Spec. No.	AWS A5.18	
Class	ER-70S-4	
F-No.		
Gas/Flux Type (5.16.4)	75% Ar. 25% CO_2	
Other		

VISUAL INSPECTION (5.12.6 or 5.12.7)
Acceptable YES or NO YES

Guided Bend Test Results (5.26.1/5.29.1)

Type	Result	Type	Result
SIDE, 180°, .750"R	PASS		
SIDE, 180°, .750"R	PASS		

Fillet Test Results (5.28.2/5.28.3; 5.39.3/5.39.4)

Appearance Fillet Size
Fracture Test Root Penetration Macroetch
(Describe the location, nature, and size of any crack or tearing of the specimen.)

Inspected by ANDREW R. SNOW Test Number 03-98-6241
Organization MOS INSPECTION, INC. Date 3/19/98

RADIOGRAPHIC TEST RESULTS (5.28.4/5.39.2)

Film Identification Number	Results	Remarks	Film Identification Number	Results	Remarks

Interpreted by N/A SHORT ARC Test Number
Organization Date

We, the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of Section 5, Part C or D of ANSI/AWS D1.1, (1998) Structural Welding Code – Steel
year

Manufacturer or Contractor AVENUE FABRICATING, INC
Authorized By B. NICHOLS
Date 3/19/98

WELDER, WELDING OPERATOR OR TACK WELDER QUALIFICATION TEST RECORD

Type of Welder MILLER CP-300
Name ROBERT HAUSERMAN Identification No. AF-SA3G-2017
Welding Procedure Specification No. AF-SA3G-2005 Rev NEW Date 3/19/98

Variables	Record Actual Values Used in Qualification	Qualification Range
Process/Type (5.16.2)	GMAW SHORT ARC	
Electrode (single or multiple)	MULTI-PASS	MULTI-PASS
Current/Polarity	DC ELEC. POSITIVE	
Position (5.16.5)	3G	3G
Weld Progression (5.16.7)	UP	UP
Backing (YES or NO) (5.16.18)	NO	NO
Material/Spec. (5.16.1)	A-36 to A-36	
Base Metal		
Thickness: (Plate)		
Groove	1/2"	1/8" TO 1"
Fillet		
Thickness: (Pipe/tube)		
Groove		
Fillet		
Diameter (Pipe)		
Groove		
Fillet		
Filler Metal (5.16.3)		
Spec. No.	AWS A5.18	
Class	ER-70S-4	
F-No.		
Gas/Flux Type (5.16.4)	75% Ar, 25% CO_2	
Other		

VISUAL INSPECTION (5.12.6 or 5.12.7)
Acceptable YES or NO YES

Guided Bend Test Results (5.25.1/5.29.1)

Type	Result	Type	Result
SIDE, 180°, .750"R	PASS		
SIDE, 180°, .750"R	PASS		

Fillet Test Results (5.26.2/5.28.3; 5.39.3/5.39.4)

Appearance _____ Fillet Size _____
Fracture Test Root Penetration _____ Macroetch _____
(Describe the location, nature, and size of any crack or tearing of the specimen.)

Inspected by ANDREW B. SNOW Test Number 03-98-6241
Organization MOS INSPECTION, INC. Date 3/19/98

RADIOGRAPHIC TEST RESULTS (5.26.4/5.28.2)

Film Identification Number	Results	Remarks	Film Identification Number	Results	Remarks

Interpreted by _____ Test Number _____
Organization _____ Date _____

We, the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of Section 5, Part C or D of ANSI/AWS D1.1 (1998) Structural Welding Code — Steel
year

Manufacturer or Contractor AVENUE FABRICATING, INC.
Authorized By B. NICHOLS
Date 3/19/98

298/Annex E

WELDING PROCEDURE SPECIFICATION (WPS) Yes [X]
PREQUALIFIED _____ QUALIFIED BY TESTING _____
or PROCEDURE QUALIFICATION RECORDS (PQR) Yes [ ]

Identification # AF-SA2F-2009
Revision NEW Date 3/19/98 By A. SNOW
Authorized by E. NICHOLS Date 3/19/98

Company Name AVENUE FABRICATING, INC.
Welding Process(es) GMAW - SHORT ARC
Supporting PQR No.(s) SA-SA2F-2008

Type—Manual [ ] Semi-Automatic [ ]
Machine [ ] Automatic [ ]

JOINT DESIGN USED
Type:
Single [X] Double Weld [ ]
Backing: Yes [ ] No [ ]
Backing Material:
Root Opening _____ Root Face Dimension _____
Groove Angle: _____ Radius (J-U) _____
Back Gouging: Yes [ ] No [ ] Method _____

POSITION
Position of Groove: _____ Fillet: 2F
Vertical Progression: Up [ ] Down [ ]

ELECTRICAL CHARACTERISTICS
Transfer Mode (GMAW) Short-Circuiting [X]
Globular [ ] Spray [ ]
Current: AC [ ] DCEP [X] DCEN [ ] Pulsed [ ]
Other _____
Tungsten Electrode (GTAW)
Size: _____
Type: _____

BASE METALS
Material Spec. ASTM A-36
Type or Grade _____
Thickness: Groove _____ Fillet 1/4"
Diameter (Pipe) _____

FILLER METALS
AWS Specification A5.18
AWS Classification ER-70S-4

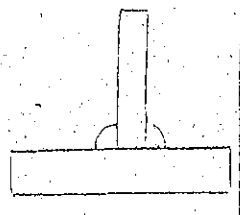
TECHNIQUE
Stringer or Weave Bead: WEAVE BEAD
Multi-pass or Single Pass (per side) SINGLE
Number of Electrodes _____
Electrode Spacing Longitudinal _____
Lateral _____
Angle _____

SHIELDING
Flux _____ Gas 75%Ar, 25% CO_2
Composition _____
Electrode-Flux (Class) _____ Flow Rate 32 TO 43 CFH
Gas Cup Size N/A
Contact Tube to Work Distance 3/8" to 1-1/4"
Peening _____
Interpass Cleaning: _____

PREHEAT
Preheat Temp., Min 60°F
Interpass Temp., Min N/A Max _____

POSTWELD HEAT TREATMENT
Temp. N/A
Time _____

WELDING PROCEDURE

Pass or Weld Layer(s)	Process	Filler Metals		Current		Volts	Travel Speed	Joint Details
		Class	Diam.	Type & Polarity	Amps or Wire Feed Speed			
1	GMAW SHORT ARC	ER70S4	.035"	DC ELECTRODE POSITIVE	138 TO 168A	22 TO 25.18	3 TO 5	

302/Annex E

Procedure Qualification Record (PQR) # AF-SA2F-2006
Test Results

TENSILE TEST

Specimen No.	Width	Thickness	Area	Ultimate tensile load, lb	Ultimate unit stress, psi	Character of failure and location

GUIDED BEND TEST

Specimen No.	Type of bend	Result	Remarks

VISUAL INSPECTION
Appearance ACCEPTABLE
Undercut ACCEPTABLE
Piping porosity NONE
Convexity NONE
Test date 3-19-98
Witnessed by

Radiographic-ultrasonic examination
RT report no.: _____ Result _____
UT report no.: _____ Result: _____

FILLET WELD TEST RESULTS
Minimum size multiple pass: Macroetch 1. _____ 3. _____ 2. _____
Maximum size single pass: Macroetch 1. PASS 3. PASS 2. PASS

Other Tests

All-weld-metal tension test
Tensile strength, psi _____
Yield point/strength, psi _____
Elongation in 2 in., % _____
Laboratory test no. _____

Welder's name TOM DENNIS
Clock no. _____ Stamp no. _____

Tests conducted by MOS INSPECTION, INC. Laboratory

Test number 03-98-6241

Per ANDREW R. SNOW

We, the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of section 4 of ANSI/AWS D1.1 (1998) Structural Welding Code—Steel.

Signed [signature] (Manufacturer or Contractor)

By [signature]

Title Vice President

WELDER, WELDING OPERATOR OR TACK WELDER QUALIFICATION TEST RECORD

Type of Welder MILLER CP-300
Name TOM DENNIS Identification No. AF-SA2F-2018
Welding Procedure Specification No. AF-SA2F-2007 Rev. NEW Date 3/19/98

Variables	Record Actual Values Used in Qualification	Qualification Range
Process/Type (5.16.2)	GMAW SHORT ARC	
Electrode (single or multiple)	SINGLE	SINGLE
Current/Polarity	DC ELEC. POSITIVE	
Position (5.16.5)	2F	2F
Weld Progression (5.16.7)		
Backing (YES or NO) (5.16.18)	NO	
Material/Spec. (5.16.1)	A-36 to A-36	
Base Metal		
Thickness: (Plate)		
Groove		
Fillet	1/2"	
Thickness: (Pipe/tube)		
Groove		
Fillet		
Diameter (Pipe)		
Groove		
Fillet		
Filler Metal (5.16.3)		
Spec. No.	AWS A5.18	
Class	ER-70S-4	
F-No.		
Gas/Flux Type (5.16.4)	75% AR, 25% CO_2	
Other		

VISUAL INSPECTION (5.12.6 or 5.12.7)
Acceptable YES or NO

Guided Bend Test Results (5.28.1/5.29.1)

Type	Result	Type	Result
SIDE, GW, 180°, .750"R	PASS		
SIDE, GW, 180°, .750"R	PASS		

Fillet Test Results (5.28.2/5.28.3; 5.29.2/5.29.4)

Appearance ACCEPTABLE Fillet Size 1/4" to 5/16"
Fracture Test Root Penetration - Macroetch ACCEPTABLE
(Describe the location, nature, and size of any crack or tearing of the specimen.)

Inspected by ANDREW R. SNOW Test Number 03-98-6241
Organization MOS INSPECTION, INC. Date 3/19/98

RADIOGRAPHIC TEST RESULTS (5.28.4/5.29.2)

Film Identification Number	Results	Remarks	Film Identification Number	Results	Remarks

Interpreted by Test Number
Organization Date

We, the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of Section 5, Part C or D of ANSI/AWS D1.1 (1998) Structural Welding Code – Steel
year

Manufacturer or Contractor AVENUE FABRICATING, INC.
Authorized By B. NICHOLS
Date

WELDER, WELDING OPERATOR OR TACK WELDER QUALIFICATION TEST RECORD

Type of Welder MILLER CP-300
Name ROBERT HAUSERMAN Identification No. AF-SA2F-2019
Welding Procedure Specification No. AF-SA2F-2009 Rev. NEW Date 3/19/98

Variables	Record Actual Values Used In Qualification	Qualification Range
Process/Type (5.16.2)	GMAW SHORT ARC	
Electrode (single or multiple)	SINGLE	SINGLE
Current/Polarity	DC ELEC. POSITIVE	
Position (5.16.5)	2F	2F
Weld Progression (5.16.7)		
Backing (YES or NO) (5.16.18)	NO	
Material/Spec. (5.16.1)	A-36 to A-36	
Base Metal		
Thickness: (Plate)		
Groove		
Fillet	1/2"	
Thickness: (Pipe/tube)		
Groove		
Fillet		
Diameter: (Pipe)		
Groove		
Fillet		
Filler Metal (5.16.3)		
Spec. No.	AWS A5.18	
Class	ER-70S-4	
F-No.		
Gas/Flux Type (5.16.4)	75% Ar, 25% CO_2	
Other		

VISUAL INSPECTION (5.12.6 or 5.12.7)
Acceptable YES or NO

Guided Bend Test Results (5.28.1/5.29.1)

Type	Result	Type	Result
SIDE, GW, 180°, .750"R	PASS		
SIDE, GW, 180°, .750"R	PASS		

Fillet Test Results (5.28.2/5.28.3; 5.39.3/5.39.4)

Appearance _____ Fillet Size _____
Fracture Test Root Penetration _____ Macroetch _____
(Describe the location, nature, and size of any crack or tearing of the specimen.)

Inspected by ANDREW R. SNOW Test Number 03-98-6241
Organization MQS INSPECTION, INC. Date 3/19/98

RADIOGRAPHIC TEST RESULTS (5.26.4/5.29.2)

Film Identification Number	Results	Remarks	Film Identification Number	Results	Remarks

Interpreted by _____ Test Number _____
Organization _____ Date _____

We, the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of Section 5, Part C or D of ANSI/AWS D1.1 (1998) Structural Welding Code — Steel
year

Manufacturer or Contractor AVENUE FABRICATING, INC.
Authorized By B. NICHOLS

298/Annex E

WELDING PROCEDURE SPECIFICATION (WPS) Yes ☐
PREQUALIFIED _____ QUALIFIED BY TESTING _____
or PROCEDURE QUALIFICATION RECORDS (PQR) Yes ☒

Identification # SA-SA3F-2013
Revision NEW Date 3/19/98 By A. SNOW
Company Name AVENUE FABRICATING, INC.
Authorized by R. NICHOLS Date 3/19/98
Welding Process(es) GMAW - SHORT ARC
Type—Manual ☒ Semi-Automatic ☐
Machine ☐ Automatic ☐
Supporting PQR No.(s) AF-SA3F-2012

JOINT DESIGN USED
Type:
Single ☒ Double Weld ☐
Backing: Yes ☐ No ☐
Backing Material:
Root Opening _____ Root Face Dimension _____
Groove Angle: _____ Radius (J-U) _____
Back Gouging: Yes ☐ No ☐ Method _____

POSITION
Position of Groove: _____ Fillet: 3F
Vertical Progression: Up ☒ Down ☐

ELECTRICAL CHARACTERISTICS
Transfer Mode (GMAW): Short-Circuiting ☒
Globular ☐ Spray ☐
Current: AC ☐ DCEP ☒ DCEN ☐ Pulsed ☐
Other _____
Tungsten Electrode (GTAW)
Size: _____
Type: _____

BASE METALS
Material Spec. ASTM A-36
Type or Grade _____
Thickness: Groove _____ Fillet 1/4"
Diameter (Pipe) _____

TECHNIQUE
Stringer or Weave Bead: WEAVE BEAD
Multi-pass or Single Pass (per side) SINGLE
Number of Electrodes _____
Electrode Spacing Longitudinal _____
Lateral _____
Angle _____

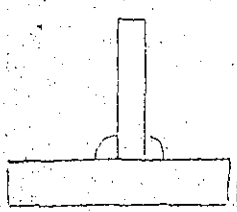
FILLER METALS
AWS Specification A5.18
AWS Classification ER-70S-4

SHIELDING
Flux _____ Gas 75%Ar; 25% CO2
Composition _____
Electrode-Flux (Class) _____ Flow Rate 32 TO 43 CFH
Gas Cup Size N/A
Contact Tube to Work Distance 3/8" to 1-1/4"
Peening _____
Interpass Cleaning: _____

PREHEAT
Preheat Temp., Min 60° F
Interpass Temp., Min N/A Max _____

POSTWELD HEAT TREATMENT
Temp. N/A
Time _____

WELDING PROCEDURE

Pass or Weld Layer(s)	Process	Filler Metals		Current		Volts	Travel Speed	Joint Details
		Class	Diam.	Type & Polarity	Amps or Wire Feed Speed			
1	GMAW SHORT ARC	ER70S-4	.035"	DC ELEC POSITIVE	138 TO 168A	22 TO 25.18	3 TO 5	

302/Annex E

Procedure Qualification Record (PQR) # AF-SA3F-2012
Test Results

TENSILE TEST

Specimen No.	Width	Thickness	Area	Ultimate tensile load, lb	Ultimate unit stress, psi	Character of failure and location

GUIDED BEND TEST

Specimen No.	Type of bend	Result	Remarks

VISUAL INSPECTION
Appearance ACCEPTABLE
Undercut ACCEPTABLE
Piping porosity NONE
Convexity NONE
Test date 3/19/98
Witnessed by

Radiographic-ultrasonic examination
RT report no.: _____ Result _____
UT report no.: _____ Result _____

FILLET WELD TEST RESULTS
Minimum size multiple pass: Maximum size single pass

Macroetch		Macroetch	
1. _____	3. _____	1. PASS	3. PASS
2. _____		2. PASS	

Other Tests

All-weld-metal tension test
Tensile strength, psi _____
Yield point/strength, psi _____
Elongation in 2 in., % _____
Laboratory test no. _____

Welder's name ROBERT HAUSERMAN Clock no. _____ Stamp no. _____

Tests conducted by MQS INSPECTION, INC. Laboratory

Test number 03-98-6241

Per ANDREW R. SNOW

We, the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of section 4 of ANSI/AWS D1.1 (1998 (year)) Structural Welding Code—Steel.

Signed _____
Manufacturer or Contractor

By _____

Title _____

WELDER, WELDING OPERATOR OR TACK WELDER QUALIFICATION TEST RECORD

Type of Welder MILLER CP-300
Name TOM DENNIS Identification No. AF-SA3F-2020
Welding Procedure Specification No. AF-SA3F-2019 Rev NEW Date 3/19/98

Variables	Record Actual Values Used In Qualification	Qualification Range
Process/Type (5.16.2)	GMAW SHORT ARC	
Electrode (single or multiple)	SINGLE	SINGLE
Current/Polarity	DC ELEC. POSITIVE	
Position (5.16.5)	3F	3F
Weld Progression (5.16.7)	UP	
Backing (YES or NO) (5.16.18)	NO	
Material/Spec. (5.16.1) Base Metal	A-36 to A-36	
Thickness: (Plate) Groove		
Fillet	1/2"	
Thickness: (Pipe/Tube) Groove		
Fillet		
Diameter: (Pipe) Groove		
Fillet		
Filler Metal (5.16.3) Spec. No.	AWS A5.18	
Class	ER-70S-4	
F-No.		
Gas/Flux Type (5.16.4)	75% Ar, 25% CO_2	
Other		

VISUAL INSPECTION (5.12.6 or 5.12.7)
Acceptable. YES or NO ____

Guided Bend Test Results (5.26.1/5.29.1)

Type	Result	Type	Result
SIDE, GW, 180°, .750"R	PASS		
SIDE, GW, 180°, .750"R	PASS		

Fillet Test Results (5.26.2/5.28.3; 5.39.3/5.39.4)

Appearance ____ Fillet Size ____
Fracture Test Root Penetration ____ Macroetch ____
(Describe the location, nature, and size of any crack or tearing of the specimen.)

Inspected by ANDREW R. SNOW Test Number 03-98-6241
Organization MOS INSPECTION, INC. Date 3/19/98

RADIOGRAPHIC TEST RESULTS (5.26.4/5.29.2)

Film Identification Number	Results	Remarks	Film Identification Number	Results	Remarks

Interpreted by ____ Test Number ____
Organization ____ Date ____

We, the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of Section 5, Part C or D of ANSI/AWS D1.1, (1998) Structural Welding Code — Steel
year

Manufacturer or Contractor AVENUE FABRICATING, INC.
Authorized By R. NICHOLS
Date 3/19/98

WELDER, WELDING OPERATOR OR TACK WELDER QUALIFICATION TEST RECORD

Type of Welder: MILLER CP-300

Name: ROBERT HAUSERMAN Identification No.: AF-SA3F-2021

Welding Procedure Specification No.: AF-SA3F-2013 Rev.: NEW Date: 3/19/98

Variables	Record Actual Values Used in Qualification	Qualification Range
Process/Type (5.16.2)	GMAW SHORT ARC	
Electrode (single or multiple)	SINGLE	SINGLE
Current/Polarity	DC ELEC. POSITIVE	
Position (5.16.5)	3F	3F
Weld Progression (5.16.7)	UP	
Backing (YES or NO) (5.16.18)	NO	
Material/Spec. (5.16.1)	A-36 to A-36	
Base Metal		
Thickness: (Plate)		
Groove		
Fillet	1/2"	
Thickness: (Pipe/tube)		
Groove		
Fillet		
Diameter: (Pipe)		
Groove		
Fillet		
Filler Metal (5.16.3)		
Spec. No.	AWS A5.18	
Class	ER-70S-4	
F-No.		
Gas/Flux Type (5.16.4)	75% AR; 25% CO2	
Other		

VISUAL INSPECTION (5.12.6 or 5.12.7)
Acceptable: YES or NO: ____

Guided Bend Test Results (5.28.1/5.29.1)

Type	Result	Type	Result
SIDE, GW, 180°, .750"R	PASS		
SIDE, GW, 180°, .750"R	PASS		

Fillet Test Results (5.28.2/5.28.3; 5.39.2/5.39.4)

Appearance: ACCEPTABLE Fillet Size: 1/4" to 5/16"

Fracture Test Root Penetration: - Macroetch: ACCEPTABLE

(Describe the location, nature, and size of any crack or tearing of the specimen.)

Inspected by: ANDREW R. SNOW Test Number: 03-98-6241

Organization: NDS INSPECTION, INC. Date: 3/19/98

RADIOGRAPHIC TEST RESULTS (5.26.4/5.39.2)

Film Identification Number	Results	Remarks	Film Identification Number	Results	Remarks

Interpreted by: _____ Test Number: _____

Organization: _____ Date: _____

We, the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of Section 5, Part C or D of ANSI/AWS D1.1, (1998 year) Structural Welding Code — Steel

Manufacturer or Contractor: AVENUE FABRICATING, INC.

Authorized By: R. NICHOLS

QW-482 SUGGESTED FORMAT FOR WELDING PROCEDURE SPECIFICATION (WPS)
(See QW-201.1, Section IX, ASME Boiler and Pressure Vessel Code)

Company Name AVENUE FABRICATING INC. By GLADSTONE LABS. M. C. BOLINGER JR. AVENUE R. NICHOLS
Welding Procedure Specification No. 8-8-S Date 5/89 Supporting PQR No.(s) 8-8-S
Revision No. _____ Date _____
Welding Process(es) S.M.A.W. Type(s) MANUAL
(Automatic, Manual, Machine, or Semi-Auto.)

ANALYSIS NO.: 9-161

JOINTS (QW-402) NONESSENTIAL VARIABLE

Details

Joint Design AS REQUIRED TO PROVIDE FULL PENETRATION AND SOUND FUSION WELDS
Backing (Yes) OPTIONAL (No) NOT REQUIRED
Backing Material (Type) IF REQUIRED COMPATIBLE P8

Backing may be utilized or gouge 1st pass to sound metal before welding second side.

Sketches, Production Drawings, Weld Symbols or Written Description should show the general arrangement of the parts to be welded. Where applicable, the root spacing and the details of weld groove may be specified.

(At the option of the Mfgr., sketches may be attached to illustrate joint design, weld layers and bead sequence, e.g. for notch toughness procedures, for multiple process procedures, etc.)

*BASE METALS (QW-403) STAINLESS STEEL ALLOYS PER QW-422

P-No. 8 Gr. No. 1 & 2 to P-No. 8 Gr. No. 1 & 2
OR
Specification type and grade ALL LISTED P NO. 8 AUSTENITIC S.S. ALLOYS 65-80 KSI
to Specification type and grade ALL LISTED P NO. 8 AUSTENITIC S.S. ALLOYS 65-80 KSI
OR
Chem. Analysis and Mech. Prop. 16-18 Cr. 8-12 Ni, Mo, Ti, Cb, C; 300 SERIES S.S.
to Chem. Analysis and Mech. Prop. 16-18 Cr. 8-12 Ni, Mo, Ti, Cb, C; 300 SERIES S.S.
Thickness Range:
Base Metal: Groove 3/16" TO 0.864" Fillet ALL THICKNESS, SIZE & DIA.
Deposited Weld Metal WELD LAYERS OF 1/2" OR LESS IN THICKNESS
Pipe Dia. Range: Groove PERFORMANCE ONLY PER QW-403.16 Fillet ALL
Other PLATE AND/OR PIPE PER QW-211

*FILLER METALS (QW-404) Cr & Cr-Ni STEEL COVERED ELECTRODES

F-No. 5 Other N/A
A-No. 8 Other N/A
Spec. No. (SFA) SFA 5.4
AWS No. (Class) E308-15 OR 16, E XXX-15 OR 16
Size of filler metals 3/32" TO 5/32" FOR ALL POSITIONS, 3/16" FOR FLAT POSITION ONLY.
* AWS NUMBERS TO MATCH BASE MATERIAL OR COMPATIBLE.
(Electrode, Cold Wire, Hot Wire, etc.)
Electrode-Flux (Class) LIME OR TITANIA COATING
~~Flux Trade Name~~
Consumable Insert N/A

*Each base metal-filler metal combination should be recorded individually.

BASE METAL TYPE	* FILLER AWS CLASS
304	E 308
304L	E 308L
316	E 316
316L	E 316L

RECEIVED AUG 1989

8-8-S

Analysis 9-161

AVENUE FABRICATING INC. QW-482 (Back)

POSITIONS (QW-405) NONESSENTIAL VARIABLE

Position(s) of Groove ALL POSITIONS QW-405.1

** Welding Progression: Up X Down N/A

Position(s) of Fillet ALL POSITIONS

** NONESSENTIAL PER QW-405.3 FOR PROCEDURE

POSTWELD HEAT TREATMENT (QW-407)

Temperature Range NONE REQUIRED

Time Range N/A

PER TABLE UCS-56 ASME SECT. VIII DIV. 1

PREHEAT (QW-406)

Preheat Temp. Min. 50° F. AMBIENT

Interpass Temp. Max. N/A NOT CONTROLLED

Preheat Maintenance N/A

(Continuous or special heating where applicable should be recorded) SHALL BE CLEAN & DRY

GAS (QW-408)

Shielding Gas(es) N/A

Percent Composition (mixtures) N/A

Flow Rate N/A

Gas Backing N/A

Trailing Shielding Gas Composition N/A

ELECTRICAL CHARACTERISTICS (QW-409) NONESSENTIAL VARIABLE DCRP

Current AC or DC DC Polarity REVERSE (ELECTRODE POSITIVE)

Amps (Range) 70-100 Volts (Range) 21-24 TYPICAL 1/8" DIA.

(Amps and volts range should be recorded for each electrode size, position, and thickness, etc. This information may be listed in a tabular form similar to that shown below.)

Tungsten Electrode Size and Type N/A (Pure Tungsten, 2% Thoriated, etc.)

Mode of Metal Transfer for GMAW N/A (Spray arc, short circuiting arc, etc.)

Electrode Wire feed speed range N/A

TECHNIQUE (QW-410) NONESSENTIAL VARIABLE

String or Weave Bead AS REQUIRED

Orifice or Gas Cup Size N/A

Initial and Interpass Cleaning (Brushing, Grinding, etc.) AS REQUIRED, SOLVENT OR MECHANICAL S.S. BRUSHES DESIRED

Method of Back Gouging AS REQUIRED; CHIPPING, GRINDING

Oscillation AS REQUIRED

Contact Tube to Work Distance N/A

Multiple or Single Pass (per side) MULTIPLE OR SINGLE

Multiple or Single Electrodes SINGLE

Travel Speed (Range) AS REQUIRED

Peening NONE

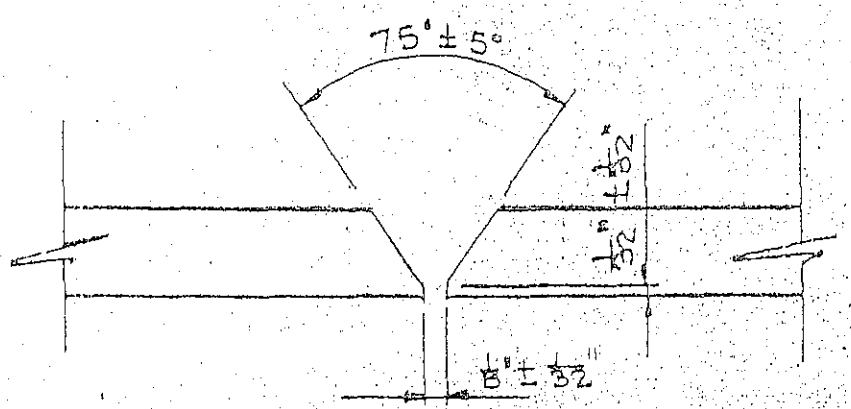
Other FINISHED WELDS SHALL HAVE A UNIFORM CONTOUR WITH THE EDGES OF THE WELD MERGING SMOOTHLY INTO THE BASE METAL.

Weld Layer(s)	Process	Filler Metal Class	Filler Metal Dia.	DC Current Type Polar.	DC Current Amp Range	Volt Range	Travel Speed Range	Other (e.g., Remarks, Comments, Hot Wire Addition, Technique, Torch Angle, Etc.)
TYPICAL	SMAW	E3XX-X	3/32"	REVERSE	60-80	20-22	--	
	SMAW	E308-16	1/8"	REVERSE	70-100	21-24	4 - 8"	
	SMAW	E308-16	5/32"	REVERSE	100-140	22-25	4 - 8"	
	SMAW	E308-16	3/16"	REVERSE	140-180	24-26	--	1G ONLY

QW-483 SUGGESTED FORMAT FOR PROCEDURE QUALIFICATION RECORD (PQR)
(See QW-201.2, Section IX, ASME Boiler and Pressure Vessel Code)

Company Name AVENUE FABRICATING INC. R. NICHOLS
Procedure Qualification Record No. 8-8-S Date 5/89 - 8/89
WPS No. 8-8-S
Welding Process(es) SMAW SHIELDED METAL ARC WELDING
Types (Manual, Automatic, Semi-Auto.) MANUAL ANALYSIS NO. 9-161 & 8/16/89

JOINTS (QW-402)



Groove Design Used

BASE METALS (QW-403) STAINLESS STEEL ALLOYS
Material Spec. SA312
Type or Grade 304 KSI 75
P-No. 8 to P-No. 8
Thickness 0.432" NOMINAL WALL
Diameter 6" SCH. 80
Other QUALIFIES ALL LISTED P8 BASE METALS PER QW-422 PLATE AND/OR PIPE

FILLER METALS (QW-404) Cr & Cr - Ni STEEL COVERED ELECTRODES
Weld Metal Analysis A-No. 8
Size of Electrode 3/32 & 1/8"
Filler Metal F-No. 5
SFA Specification 5.4
AWS Classification E308-16
Other QUALIFIES ALL E3XX AWS CLASS NUMBERS ELECTRODES ROD OVEN CONDITIONED

POSITION (QW-405)
Position of Groove 6G
Weld Progression (Uphill, Downhill) UPHILL
Other QUALIFIES PROCEDURE FOR ALL POSITIONS PLATE AND PIPE

PREHEAT (QW-406)
Preheat Temp. 50° F. MIN.
Interpass Temp. NOT CONTROLLED
Other CLEAN & DRY

POSTWELD HEAT TREATMENT (QW-407)
Temperature NONE
Time N/A
Other NONE

GAS (QW-408)
Type of Gas or Gases N/A
Composition of Gas Mixture N/A
Other N/A

ELECTRICAL CHARACTERISTICS (QW-409) DCRP
Current DC
Polarity REVERSE (ELECTRODE POSITIVE)
Amps. 70-90 Volts 20-23
Other N/A

TECHNIQUE (QW-410)
Travel Speed AS REQUIRED
String or Weave Bead STRING
Oscillation AS REQUIRED
Multipass or Single Pass (per side)
Single or Multiple Electrodes SINGLE ELECTRODE
Other NOTE 1. DATA PER ATTACHMENT

GLADSTONE LABORATORIES, INC.
AREA CODE 513
921-6900 • 6701
PHYSICAL & NON DESTRUCTIVE TESTING - METALLOGRAPHY - WELDING CERTIFICATION
1654 WOODROW STREET • CINCINNATI, OHIO 45204

QW-483 Procedure Qualification Record (PQR) for AVENUE FABRICATING INC. WPS
GMAW-P8 TO P8 8-8-S 8-8-S

Tensile Test (QW-150) QW-462.1 (b)

Specimen No.	Width	Thickness	Area	Ultimate Total Load lb.	Ultimate Unit Stress psi	Character of Failure & Location	E long %
T1	.998"	.405"	.404"	33,600	83,200	BASE METAL	50.0+
T2	1.017"	.421"	.428"	35,250	82,400	THRU WELD	39.0

Guided Bend Tests (QW-160) QW-462.2

	Type and Figure No.		Result W/L = WITHIN LIMITS
1	SIDE	6G UP QW-462.2	NO DEFECTS
2	SIDE	6G UP QW-462.2	NO DEFECTS
3	SIDE	6G UP QW-462.2	1/16" EDGECRACK & PINHOLE = W/L
4	SIDE	6G UP QW-462.2	PINHOLE = W/L

Other Tests

Guided Bend Test (QW-170) N/A Fillet Weld Test (QW-180) N/A

Deposit Analysis E308-16 F NO. SFA 5.4

Other BASE METAL: 6" SCH. 80 TYPE 304 S.S.

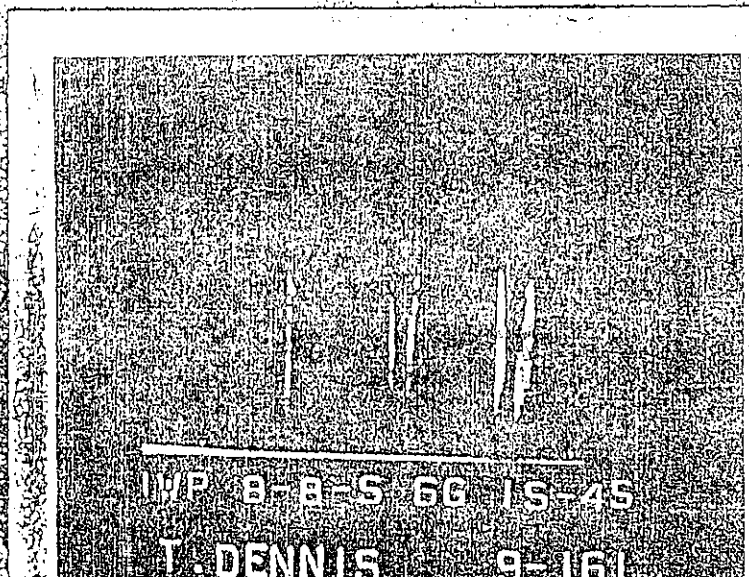
Welder's Name TOM DENNIS SS No. 299-60-9584 Stamp No. TD

Tests conducted by: GLADSTONE LABS, INC. per Tom Williams by Tom Williams Analysis No. 9-161

We certify that the statements in this record are correct and that the test welds were prepared, welded and tested in accordance with the requirements of Section IX of the ASME Code.

Welding Witnessed by: R. NICHOLS Organization AVENUE FABRICATING INC.

AVENUE FABRICATING INC. 8/15/89 By Ronnie Schuerman Date 8/23/89



AVENUE FABRICATING, INC.
1261 Clough Pike Batavia, Ohio 45103
(513) 752-1911 Fax (513) 752-0044

WELDERS QUALIFICATION RECORD

WPS FOLLOWED	PROCESS	POSITION	MANUAL OR MACHINE		
A 8-8	SMAW	6 G	MANUAL		
MATERIAL		SHAPE	THICKNESS		RANGE
P 8 TO P 8		PIPE	.432"		.187"-.864"
F-NO.	SPEC NO.	AWS CLASS	A-NO.	DIAMETER	DIRECTION
5	5.4	E308-16	8	5/32"	FOREHAND
SPEED	PREHEAT	INTER PASS	POST HEAT	ELECTRODE TYPE	
1-3 IPM	60°F	500°F	N/A	CONSUMABLE	
DIAMETER	SHAPE	WELD PASS	TYPE JOINT	TYPE ARC	
5/32"	ROD	MULTIPLE	V BUTT	SINGLE	
CURRENT TYPE	AMPS	VOLTS	INERT GAS TORCH		
DCRP	90	22	N/A		
FLOW RATE	INERT GAS BACK UP		FLOW RATE		
N/A	N/A		N/A		

BEND TEST

IDENTIFICATION	TYPE	RESULTS
	SIDE	ACCEPTABLE

NONDESTRUCTIVE TEST PERFORMED

IDENTIFICATION	TYPE	RESULTS

WELDERS NAME	STAMP	SOCIAL SECURITY NUMBER
GEORGE HENDERSON		549-70-3442
TEST CONDUCTED BY	TEST CERTIFIED BY	LAB TEST NUMBER
BOB NICHOLS	JOE WALDEN	AV-9
DATE	REMARKS	
7-15-93		

We certify that the statements in this record are correct and that the test welds were prepared, welded and tested in accordance with the requirements of AWS D.1 and ASME section IX.

AVENUE FABRICATING INC.
1281 Clough Pike Batavia, Ohio 45103
(513) 752-1911 Fax (513) 752-0044

WELDERS QUALIFICATION RECORD

WPS FOLLOWED	PROCESS	POSITION	MANUAL OR MACHINE		
A 8-8	SMAW	6 G	MANUAL		
MATERIAL		SHAPE	THICKNESS		RANGE
P 8 TO P 8		PIPE	.432"		.187"-.864"
F-NO.	SPEC NO.	AWS CLASS	A-NO.	DIAMETER	DIRECTION
5	5.4	E308-15	8	5/32"	FOREHAND
SPEED	PREHEAT	INTER PASS	POST HEAT	ELECTRODE TYPE	
1-3 IPM	60°F	500°F	N/A	CONSUMABLE	
DIAMETER	SHAPE	WELD PASS	TYPE JOINT	TYPE ARC	
5/32"	ROD	MULTIPLE	V BUTT	SINGLE	
CURRENT TYPE	AMPS	VOLTS	INERT GAS TORCH		
DCRP	90	22	N/A		
FLOW RATE	INERT GAS BACK UP		FLOW RATE		
N/A	N/A		N/A		

BEND TEST

IDENTIFICATION	TYPE	RESULTS
	SIDE	ACCEPTABLE

NONDESTRUCTIVE TEST PERFORMED

IDENTIFICATION	TYPE	RESULTS

WELDERS NAME	STAMP	SOCIAL SECURITY NUMBER
TIM LOVINS		281-74-1787
TEST CONDUCTED BY	TEST CERTIFIED BY	LAB TEST NUMBER
BOB NICHOLS	TOM WILLIAMS	9-161
DATE	REMARKS	
8-15-89		

We certify that the statements in this record are correct and that the test welds were prepared,

VENUE FABRICATING, INC.
1281 Clough Pike Batavia, Ohio 45103
(513) 752-1911 Fax (513) 752-0044

WELDERS QUALIFICATION RECORD

WPS FOLLOWED: A 8-8	PROCESS: SMAW	POSITION: 6 G	MANUAL OR MACHINE: MANUAL		
MATERIAL: P 8 TO P 8		SHAPE: PIPE	THICKNESS: .432"		RANGE: .187" - .864"
F-NO.: 5	SPEC NO.: 5.4	AWS CLASS: E308-15	A-NO.: 8	DIAMETER: 5/32"	DIRECTION: FOREHAND
SPEED: 1-3 IPM	PREHEAT: 60°F	INTER PASS: 500°F	POST HEAT: N/A	ELECTRODE TYPE: CONSUMABLE	
DIAMETER: 5/32"	SHAPE: ROD	WELD PASS: MULTIPLE	TYPE JOINT: V BUTT	TYPE ARC: SINGLE	
CURRENT TYPE: DCRP	AMPS: 90	VOLTS: 22	INERT GAS TORCH: N/A		
FLOW RATE: N/A	INERT GAS BACK UP: N/A		FLOW RATE: N/A		

BEND TEST

IDENTIFICATION	TYPE	RESULTS
	SIDE	ACCEPTABLE

NONDESTRUCTIVE TEST PERFORMED

IDENTIFICATION	TYPE	RESULTS

WELDERS NAME: STEVE MARSHALL	STAMP	SOCIAL SECURITY NUMBER: 277-68-8101	
TEST CONDUCTED BY: BOB NICHOLS	TEST CERTIFIED BY: JOE WALDEN		LAB TEST NUMBER: AV-11
DATE: 7-15-93	REMARKS		

We certify that the statements in this record are correct and that the test welds were prepared, welded and tested in accordance with the requirements of AWS D.1 and ASME section IX.

VENUE FABRICATING, INC.
1281 Clough Pike Batavia, Ohio 45103
(513) 752-1911 Fax (513) 752-0044

WELDERS QUALIFICATION RECORD

WPS FOLLOWED	PROCESS	POSITION	MANUAL OR MACHINE		
A 8-8	SMAW	6 G	MANUAL		
MATERIAL		SHAPE	THICKNESS		RANGE
P 8 TO P 8		PIPE	.432"		.187"-.864"
F-NO.	SPEC NO.	AWS CLASS	A-NO.	DIAMETER	DIRECTION
5	5.4	E308-15	8	5/32"	FOREHAND
SPEED	PREHEAT	INTER PASS	POST HEAT	ELECTRODE TYPE	
1-3 IPM	60°F	500°F	N/A	CONSUMABLE	
DIAMETER	SHAPE	WELD PASS	TYPE JOINT	TYPE ARC	
5/32"	ROD	MULTIPLE	V BUTT	SINGLE	
CURRENT TYPE	AMPS	VOLTS	INERT GAS TORCH		
DCRP	90	22	N/A		
FLOW RATE	INERT GAS BACK UP		FLOW RATE		
N/A	N/A		N/A		

BEND TEST

IDENTIFICATION	TYPE	RESULTS
	SIDE	ACCEPTABLE

NONDESTRUCTIVE TEST PERFORMED

IDENTIFICATION	TYPE	RESULTS

WELDERS NAME	STAMP	SOCIAL SECURITY NUMBER	
TOM DENNIS		299-60-9584	
TEST CONDUCTED BY	TEST CERTIFIED BY	LAB TEST NUMBER	
BOB NICHOLS	TOM WILLIAMS	9-161	
DATE	REMARKS		
8-15-89			

We certify that the statements in this record are correct and that the test welds were prepared, welded and tested in accordance with the requirements of AWS D1 and ASME section IX

QW-482 SUGGESTED FORMAT FOR WELDING PROCEDURE SPECIFICATION (WPS)
(See QW-201.1, Section IX, ASME Boiler and Pressure Vessel Code)

Company Name AVENUE FABRICATING INC. By: AVENUE GLADSTONE LABS BOB NICHOLS H.C. BOLINGER JR.
Welding Procedure Specification No. 23-23W-F22 Date 9/89 Supporting POR No.(s) 23-F22 MS
Revision No. ____ Date ____
Welding Process(es) GMAW SPRAY Type(s) SEMI-AUTOMATIC (Automatic, Manual, Machine, or Semi-Auto.)
ANALYSIS NO. 9-34)

JOINTS (QW-402) NONESSENTIAL VARIABLE Details
Joint Design AS REQUIRED TO PROVIDE FULL PENETRATION, SOUND FUSION WELDS
Backing (Yes) REQUIRED (No) OR GOUGE ROOT TO SOUND METAL BEFORE WELDING
Backing Material (Type) METAL COMPATABLE P23 SECOND SIDE

Sketches, Production Drawings, Weld Symbols or Written Description should show the general arrangement of the parts to be welded. Where applicable, the root spacing and the details of weld groove may be specified.

(At the option of the Mfgr., sketches may be attached to illustrate joint design, weld layers and bead sequence, e.g. for notch toughness procedures; for multiple process procedures, etc.)

*BASE METALS (QW-403) ALUMINUM ALLOYS ALL LISTED P23, SB XXX ALLOYS
P-No. 23 Gr. No. N/A to P-No. 23 Gr. No. N/A
OR
Specification type and grade 6061 AND/OR 6063 PER QW-422
to Specification type and grade 6061 AND/OR 6063
OR
Chem. Analysis and Mech. Prop. 1 Mg - .6 Si - .2 Cr / .7 Mg - .4 Si KSI 24/17
to Chem. Analysis and Mech. Prop. 1 Mg - .6 Si - .2 Cr / .7 Mg - .4 Si KSI 24/17
Thickness Range:
Base Metal: Groove 1/16 TO 3/4" Fillet ALL THICKNESS, SIZE & DIA.
Deposited Weld Metal 3/4" MAX.
Pipe Dia. Range: Groove PRACTICAL LIMIT 2 1/2" OD Fillet ALL / QW - 451.4
Other PLATE AND/OR PIPE/QW-211

*FILLER METALS (QW-404) ALUMINUM ALLOY BARE WELDING RODS
F-No. 22 QW432.2 Other F NO. 22 ONLY **
A-No. N/A Other
Spec. No. (SFA) 5.10
AWS No. (Class) ER 5356 DESIRED
Size of filler metals 3/64 TO 3/32" DIA.
(Electrode, Cold Wire, Hot Wire, etc.)
Electrode-Flux (Class) ** ER 5183, 5554, 5556 & 5654 LISTED F22 MAY BE USED.
Flux Tradename NOTE ER4043 IS AN F23 & REQUIRES ADDITIONAL QUALIFICATION
Consumable Insert NONE

*Each base metal-filler metal combination should be recorded individually.

TYPICAL		KSI	
SB 209	6061 PLATE	24	
SB 210	6061 TUBE	24	DRAWN
SB 241	6061 PIPE/TUBE	24	EXTRUDED
*SB 210	6063 TUBE	17	DRAWN
SB 241	6063 PIPE/TUBE	17	EXTRUDED

(6/30/78) This form (E00006) may be obtained from the Order Dept., ASME, 345 E. 47 St., N.Y., N.Y. 10017

TM 9/89

ANALYSIS NO.: 9-301

WPS 23 - 23H

AVENUE FAB. INC. QW-482 (Back)

POSITIONS (QW-405) NONESSENTIAL VARIABLE

Position(s) of Groove 1, 2, 3 G

Welding Progression: Up X Down

Position(s) of Fillet 1, 2, 3 F

POSTWELD HEAT TREATMENT (QW-407)

Temperature Range NONE REQUIRED

Time Range N/A

PREHEAT (QW-406)

Preheat Temp. Min. 50° F AMBIENT

Interpass Temp. Max. 500° F NOT CONTROLLED

Preheat Maintenance N/A

(Continuous or special heating where applicable should be recorded) CLEAN & DRY

GAS (QW-408)

Shielding Gas(es) ARGON

Percent Composition (mixtures) 100%

WELDING GRADE

Flow Rate 35 - 70 CFH

Gas Backing NONE REQUIRED

Trailing Shielding Gas Composition

ELECTRICAL CHARACTERISTICS (QW-409)

Current AC or DC DC Polarity REVERSE ELECTRODE +

Amps (Range) 160-300 Volts (Range) 25-30

(Amps and volts range should be recorded for each electrode size, position, and thickness, etc. This information may be listed in a tabular form similar to that shown below.)

Tungsten Electrode Size and Type N/A (Pure Tungsten, 2% Thoriated, etc.)

Mode of Metal Transfer for GMAW SPRAY (Spray arc, short circuiting arc, etc.)

Electrode Wire feed speed range 7 - 10

TECHNIQUE (QW-410) ALL NONESSENTIAL VARIABLE

String or Weave Bead STRING & WEAVE

Orifice or Gas Cup Size AS REQUIRED

Initial and Interpass Cleaning (Brushing, Grinding, etc.) CLEANING ESSENTIAL CHEMICAL, SOLVENT AND/OR MECHANICAL AS REQUIRED, SS BRUSH DESIRED

Method of Back Gouging AS REQUIRED

Oscillation AS REQUIRED

Contact Tube to Work Distance AS REQUIRED

Multiple or Single Pass (per side) MULTIPLE AND/OR SINGLE

Multiple or Single Electrodes SINGLE

Travel Speed (Range) AS REQUIRED

Peening NOT PERMITTED

Other FINISHED WELDS SHALL HAVE A UNIFORM CONTOUR WITH THE EDGES OF THE WELD MERGING SMOOTHLY INTO THE BASE METAL.

Weld Layer(s)	GMAW Process	Filler Metal *** ER Class	Filler Metal *** Dia.	Current DC Type Polar.	Current DC Amp Range	Volt Range	Travel Speed Range	Other (e.g., Remarks, Comments, Hot Wire Addition, Technique, Torch Angle, Etc.)
TYPICAL	SPRAY	5356	3/64"	DCRP	170/230	26/28		

*** ANY APPLICABLE F NO. 22:
ER 5183, 5554, 5556 AND/OR 5654

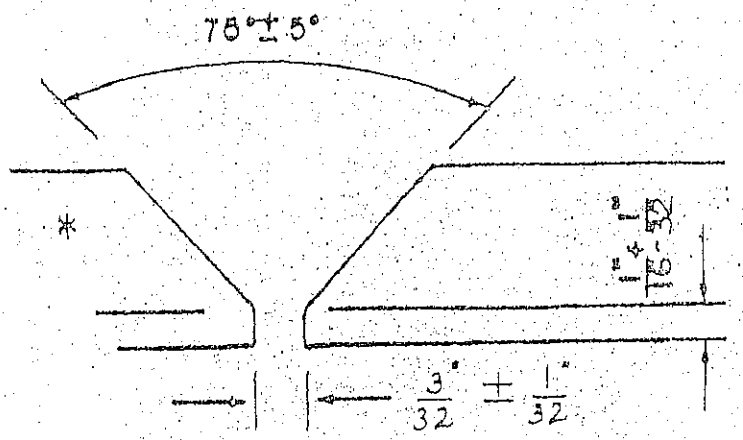
(See QW-201.2, Section IX, 1974 ASME Boiler and Pressure Vessel Code)

Company Name AVENUE FABRICATING INC.
Procedure Qualification Record No. 23 - F22 HS Date 9/89
WPS No. 23 - 23 M - F23
Welding Process(es) GMAW SPRAY TRANSFER
Types (Manual, Automatic, Semi-Auto.) SEMI-AUTOMATIC

ANALYSIS 9-341

JOINTS (QW-402)

3-4 PASS FACE
BACK CHIP ROOT
1 PASS BACK SIDE



Groove Design Used

BASE METALS (QW-403) ALUMINUM ALLOYS
Material Spec. SB 209
Type or Grade 6061-O 22 KSI MAX.
P No. 23 to P No. 23
Thickness 3/8" PLATE
Diameter N/A
Other QUALIFIES WPS FOR ALL LISTED P23 ALLOYS / QW-422
6061 AND/OR 6063
PLATE AND/OR PIPE 2 1/2" NPS & OVER

POSTWELD HEAT TREATMENT (QW-407)
Temperature NONE
Time N/A
Other N/A

GAS (QW-408)
Type of Gas or Gases ARGON
Composition of Gas Mixture 100% WELD GRADE
Other 40-60 CFH
BACKING GAS NONE

ALUMINUM ALLOY BARE ELECTRODE
FILLER METALS (QW-404)
Weld Metal Analysis A No. N/A
Size of Electrode 3/64"
Filler Metal F No. 22
SFA Specification 5.10
AWS Classification ER 5356
Other QUALIFIES WPS FOR ONLY F NO. 22

ELECTRICAL CHARACTERISTICS (QW-409) DCRP
Current DC
Polarity REVERSE-ELECTRODE POSITIVE
Amps. 180 - 220 Volts 26 - 28
Other WIRE FEED 7 - 8
SPRAY MODE OF TRANSFER

POSITION (QW-405)
Position of Groove 3G VERTICAL
Weld Progression (Uphill, Downhill) UPHILL
Other QUALIFIES WPS FOR ALL POSITIONS
GROOVE & FILLET JOINTS
PLATE AND/OR PIPE

TECHNIQUE (QW-410)
Travel Speed AS REQUIRED 16 - 20 IPM
String or Weave Bead STRING
Oscillation AS REQUIRED
Multipass or Single Pass (per side) MULTIPLE & SINGLE
Single or Multiple Electrodes SINGLE
Other CLEANING ESSENTIAL

PREHEAT (QW-406)
Preheat Temp. 50° F MIN. AMBIENT
Interpass Temp. 500° F MAX. NOT CONTROLLED
Other DRY & CLEAN ESSENTIAL

TM 9/89

GLADSTONE LABORATORIES, INC.
PHYSICAL & NON-DESTRUCTIVE TESTING · METALLOGRAPHY · WELDING CERTIFICATION
1224 WODROW STREET · CINCINNATI, OHIO 45204

GLADSTONE LABORATORIES, INC. AREA CODE 513 921-6700 • 6701

PHYSICAL & NON DESTRUCTIVE TESTING · METALLOGRAPHY · WELDING CERTIFICATION

1034 WOODROW STREET • CINCINNATI, OHIO 45204

AVENUE FABRICATING INC.

QW-484 WELDER PERFORMANCE QUALIFICATION TESTS

Welder Name TOM DENNIS SS No. _____ Stamp No. _____

Welding Process GMAW SPRAY Type SEMI-AUTOMATIC

In accordance with Welding Procedure Specification (WPS) WP 23-23M-F22

Backing (QW-402) NONE - WELDED BOTH SIDES

Material (QW-403) Spec. 6061-0 to 6061-0 of P-No. 23 to P-No. 23

Thickness 3/8" PLATE Dia. - Welded. Thickness 3/4" MAX. Dia. - Qual.

Filler Metal (QW-404) Spec. No. SFA 5.10 Class No. ER5356 F-No. 22

Other NOTE: QUALIFIES WELDER FOR ALL F NO. 2X FILLERS/QW 404.16

Position (QW-405) (1G, 2G, 6G) 3G

Gas (QW-408) Type ARGON % Composition 100%

Electrical Characteristics (QW-409) Current DC Polarity REVERSE

Weld Progression (QW-410) VERTICAL UP

Other NONE

Filler Metal Diameter and Trade Name 3/64"

Submerged Arc Flux NOTE: QUALIFIED PRODUCTION BASE METALS. ALL P21 THRU P25/QW-403.18 & 423.

Guided Bend Test Results QW-462.2(a), QW-462.3(a), QW-462.3(b)

	Type and Figure No.			Result W/L = WITHIN LIMITS
1	SIDE	3G UP	QW-462.2	PINHOLE - W/L
	SIDE	3G UP	QW-462.2	PINHOLES - W/L

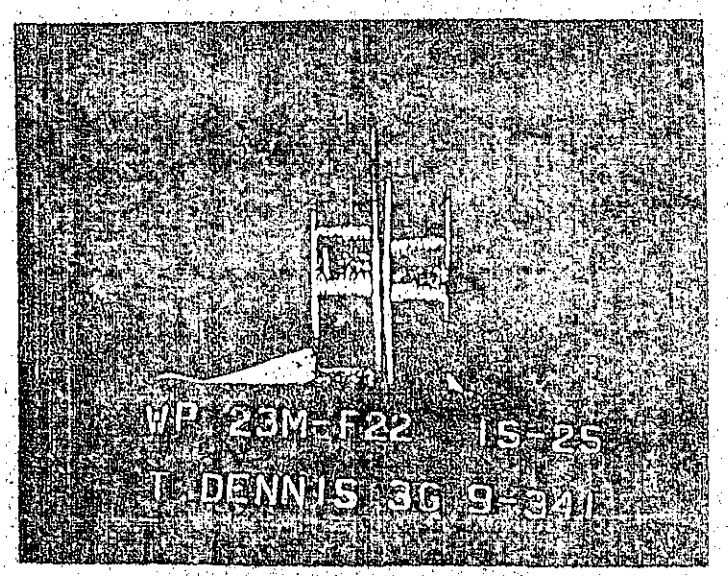
AWS QC 1 FLOYD T. WILLIAMS II 6SU5081H CAWI

Test Conducted by GLADSTONE LABS. INC. per Tom Williams Tom Williams Jr. Analysis No. 9-341

We certify that the statements in this record are correct and that the test welds were prepared, welded and tested in accordance with the requirements of Section IX of the ASME Code.

Welding Witnessed by: BOB NICHOLS Organization AVENUE FABRICATING INC.

AVENUE FABRICATING INC. 9/19/89 By _____ Date _____



GLADSTONE LABORATORIES, INC. AREA CODE 513 921-6700 - 6701

PHYSICAL & NON DESTRUCTIVE TESTING · METALLOGRAPHY · WELDING CERTIFICATION

1034 WOODROW STREET · CINCINNATI, OHIO 45204

AVENUE FABRICATING INC.

Y-484

WELDER PERFORMANCE QUALIFICATION TESTS

der Name TOM DENNIS SS No. _____ Stamp No. _____

ding Process GMAW SPRAY Type SEMI-AUTOMATIC

ccordance with Welding Procedure Specification (WPS) WP 23-23M-F22

cking (QW-402) NONE - WELDED BOTH SIDES

terial (QW-403) Spec. 6061-0 to 6061-0 of P-No. 23 to P-No. 23

ckness 3/8" PLATE Dia. - Welded. Thickness 3/4" MAX. Dia. - Qual.

er Metal (QW-404) Spec. No. SFA 5.10 Class No. ER5356 F-No. 22

Other NOTE: QUALIFIES WELDER FOR ALL F NO.'S 2X FILLERS/QW 404.16

sition (QW-405) (1G, 2G, 6G) 2G HORIZONTAL

s (QW-408) Type ARGON % Composition 100%

ctrical Characteristics (QW-409) Current DC Polarity REVERSE, ELECTRODE +

ld Progression (QW-410) N/A

ner NONE

ler Metal Diameter and Trade Name 3/64"

bmerged Arc Flux NOTE: QUALIFIED PRODUCTION BASE METALS, ALL P21 THRU P25/QW-403.18 & 423.

Guided Bend Test Results QW-462.2(a), ~~QW-462.3(a)~~, ~~QW-462.3(b)~~

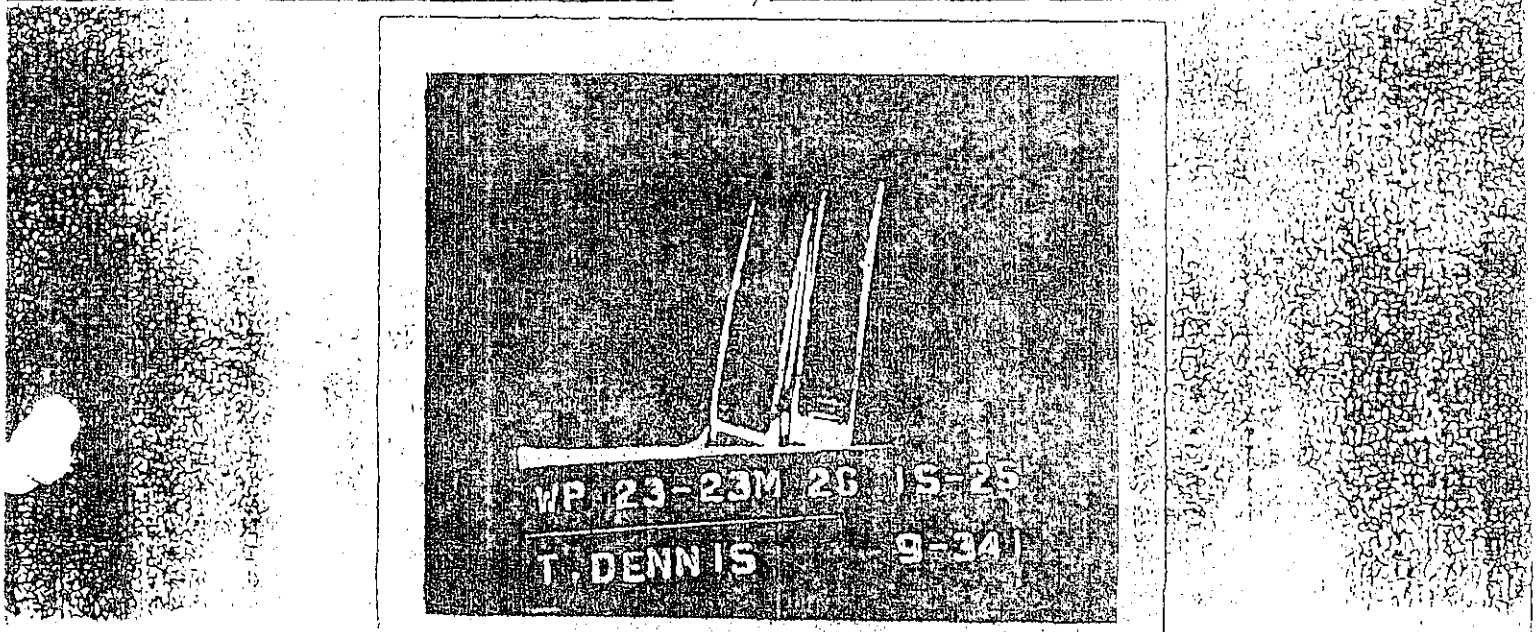
	Type and Figure No.			Result W/L = WITHIN LIMITS
1	IDE	2G HORIZ.	QW-462.2	1/16" CRACK & PINHOLES - W/L
	IDE	2G HORIZ.	QW-462.2	PINHOLES - W/L

st Conducted by GLADSTONE LABS, INC. per Tom Williams Tom Williams Jr. Analysis No. 9-341

e certify that the statements in this record are correct and that the test welds were prepared, welded and tested in accordance with the quirements of Section IX of the ASME Code.

elding Witnessed by: BOB NICHOLS Organization AVENUE FABRICATING INC.

VENUE FABRICATING INC. 10/03/89 By _____ Date _____



GLADSTONE LABORATORIES, INC. AREA CODE 513 921-6700 - 6701

PHYSICAL & NON DESTRUCTIVE TESTING · METALLOGRAPHY · WELDING CERTIFICATION

1054 WOODROW STREET · CINCINNATI, OHIO 45204

AVENUE FABRICATING INC.

QW-484 **WELDER PERFORMANCE QUALIFICATION TESTS**

Welder Name TIM LOVINS SS No. Stamp No.

Welding Process GMAW - SPRAY Type SEMI-AUTOMATIC

In accordance with Welding Procedure Specification (WPS) WP 23-23M-F22

Backing (QW-402) NONE - WELDED BOTH SIDES

Material (QW-403) Spec. 6061-0 to 6061-0 of P-No. 23 to P-No. 23

Thickness 3/8" PLATE Dia. - Welded. Thickness 3/4" MAX. Dia. - Qual.

Filler Metal (QW-404) Spec. No. SFA 5.10 Class No. ER5356 F-No. 22

Other NOTE: QUALIFIES WELDER FOR ALL F NO. 2X FILLERS/QW 404.16

Position (QW-405) (1G, 2G, 6G) 2G HORIZONTAL

Gas (QW-408) Type ARGON % Composition 100%

Electrical Characteristics (QW-409) Current DC Polarity REVERSE, ELECTRODE +

Weld Progression (QW-410) N/A

Other NONE

Filler Metal Diameter and Trade Name 3/64"

Submerged Arc Flux NOTE: QUALIFIED PRODUCTION BASE METALS, ALL P21 THRU P25/QW-403.18 & 423.

Guidad Bend Test Results QW-462.2(a), QW-462.3(a), QW-462.3(b)

Type and Figure No.			Result W/L = WITHIN LIMITS
SIDE	2G HORIZ.	QW-462.2	PINHOLES - W/L
SIDE	2G HORIZ.	QW-462.2	PINHOLES - W/L

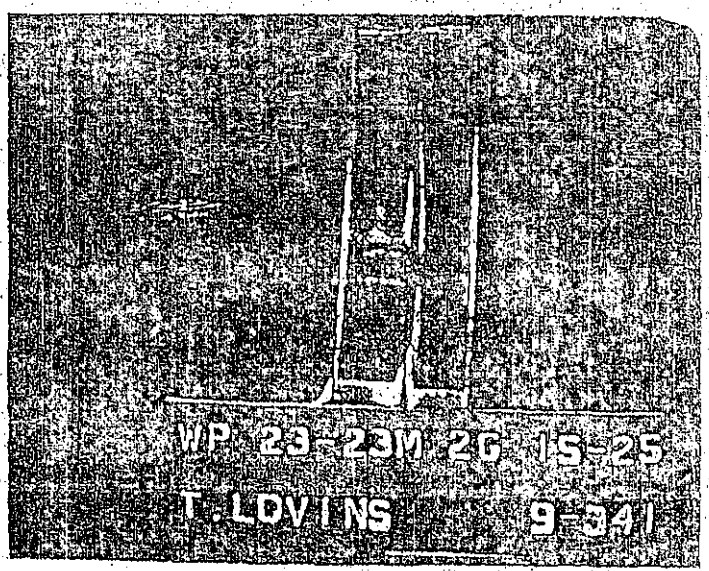
AWS QC 1 LLOYD WILLIAMS II 0305081A CAWI

Test Conducted by GLADSTONE LABS. INC. per Tom Williams Tom Williams III Analysis No. 9-341

We certify that the statements in this record are correct and that the test welds were prepared, welded and tested in accordance with the requirements of Section IX of the ASME Code.

Welding Witnessed by BOB NICHOLS Organization AVENUE FABRICATING INC.

AVENUE FABRICATING INC. 10/03/89 By Date



GLADSTONE LABORATORIES, INC.

AREA CODE 513
921-6700 - 6701

PHYSICAL & NON DESTRUCTIVE TESTING · METALLOGRAPHY · WELDING CERTIFICATION

1034 WOODROW STREET · CINCINNATI, OHIO 45204

AVENUE FABRICATING INC.

QW-484 WELDER PERFORMANCE QUALIFICATION TESTS

Welder Name TIM LOVINS SS No. _____ Stamp No. _____

Welding Process GMAW SPRAY Type SEMI-AUTOMATIC

In accordance with Welding Procedure Specification (WPS) WP 23-23M-F22

Backing (QW-402) NONE - WELDED BOTH SIDES

Material (QW-403) Spec. 6061-0 to 6061-0 of P-No. 23 to P-No. 23

Thickness 3/8" PLATE Dia. - Welded. Thickness 3/4" MAX. Dia. - Qual.

Filler Metal (QW-404) Spec. No. SFA 5.10 Class No. ER5356 F-No. 22

Other NOTE: QUALIFIES WELDER FOR ALL F NO. 2X FILLERS/QW 404.16

Position (QW-405) (1G, 2G, 6G) 3G

Gas (QW-408) Type ARGON % Composition 100%

Electrical Characteristics (QW-409) Current DC Polarity REVERSE

Weld Progression (QW-410) VERTICAL UP

Other NONE

Filler Metal Diameter and Trade Name 3/64"

Submerged Arc Flux NOTE: QUALIFIED PRODUCTION BASE METALS, ALL P21 THRU P25/QW-403.18 & 423.

Guided Bend Test Results QW-462.2(a), QW-462.3(a), QW-462.3(b)

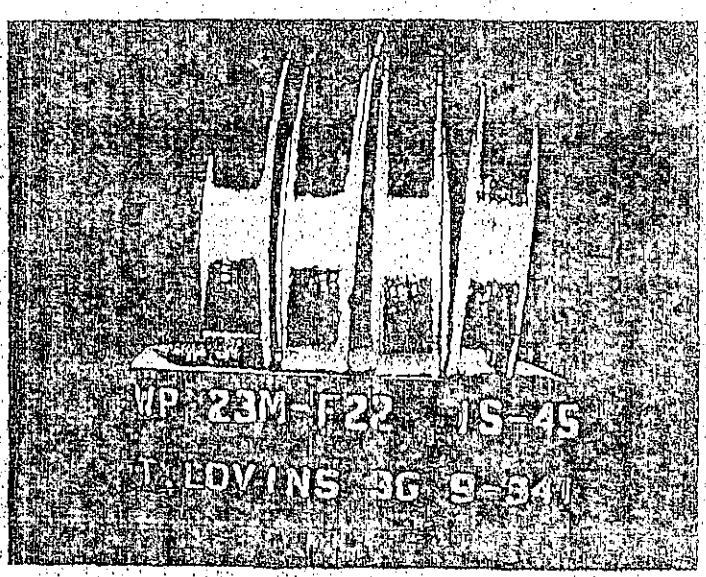
Type and Figure No.			Result (W/L = WITHIN LIMITS)
SIDE	3G UP	QW-462.2	1/16" CRACK & PINNOLES - W/L
SIDE	3G UP	QW-462.2	NO DEFECTS
4 SIDE		OMIT	NOT REQUIRED
			DATA TRANSPOSED FROM PQR RECORD

Test Conducted by GLADSTONE LABS. INC. per Tom Williams Tom Williams JR Analysis No. 9-341

We certify that the statements in this record are correct and that the test welds were prepared, welded and tested in accordance with the requirements of Section IX of the ASME Code.

Welding Witnessed by: BOB NICHOLS Organization AVENUE FABRICATING INC.

AVENUE FABRICATING INC. 9/19/89 By _____ Date _____



281 Clough Pike · Batavia, Ohio 45103
(513) 752-1911 · Fax (513) 752-0044

WELDERS QUALIFICATION RECORD

WPS FOLLOWED: MSP 23-23	PROCESS: GMAW	POSITION: 2G	MANUAL OR MACHINE: MANUAL		
MATERIAL: P23 TO P23		SHAPE: PLATE	THICKNESS: 3/8"		RANGE: 1/16"-3/4"
F-NO.: F 22	SPEC NO.: 5.10	AWS CLASS: ER 53-56	A-NO.: N/A	DIAMETER: 3/64"	DIRECTION: HORIZONTAL
SPEED: 4-8 IPM	PREHEAT: 60°F	INTER PASS: 500°F	POST HEAT: N/A	ELECTRODE TYPE: CONSUMABLE	
DIAMETER: 3/64"	SHAPE: WIRE	WELD PASS: MULTIPLE	TYPE JOINT: V BUTT	TYPE ARC: SINGLE/SPRAY	
CURRENT TYPE: DCRP	AMPS: 190	VOLTS: 25	INERT GAS TORCH: N/A		
FLOW RATE: N/A	INERT GAS BACK UP: N/A		FLOW RATE: N/A		

BEND TEST

IDENTIFICATION	TYPE	RESULTS
	SIDE	ACCEPTABLE

NONDESTRUCTIVE TEST PERFORMED

IDENTIFICATION	TYPE	RESULTS

WELDERS NAME: TOM DENNIS	STAMP	SOCIAL SECURITY NUMBER: 299-60-9584	
TEST CONDUCTED BY: B NICHOLS	TEST CERTIFIED BY: TOM WILLIAMS		LAB TEST NUMBER: 9-341
DATE: 10-3-89	REMARKS		

We certify that the statements in this record are correct and that the test welds were prepared, welded and tested in accordance with the requirements of AWS D.1 and ASME section IX

VENUE FABRICATING, INC.
1281 Clough Pike Batavia, Ohio 45103
(513) 752-1911 Fax (513) 752-0044

WELDERS QUALIFICATION RECORD

WPS FOLLOWED: MSP 23-23	PROCESS: GMAW	POSITION: 3 G	MANUAL OR MACHINE: MANUAL		
MATERIAL: P 23 TO P 23		SHAPE: PLATE	THICKNESS: 3/8"		RANGE: 1/16"-3/4"
F-NO.: 22	SPEC NO.: 5.10	AWS CLASS: ER 5356	A-NO.: N/A	DIAMETER: 3/64"	DIRECTION: HORIZONTAL
SPEED: 4-8 IPM	PREHEAT: 60°F	INTER PASS: 500°F	POST HEAT: N/A	ELECTRODE TYPE: CONSUMABLE	
DIAMETER: 3/64"	SHAPE: WIRE	WELD PASS: MULTIPLE	TYPE JOINT: V BUTT	TYPE ARC: SINGLE/SPRAY	
CURRENT TYPE: DCRP	AMPS: 190	VOLTS: 25	INERT GAS TORCH: N/A ARGON		
FLOW RATE: 30-45 CFH	INERT GAS BACK UP: N/A		FLOW RATE: N/A		

BEND TEST

IDENTIFICATION	TYPE	RESULTS
	SIDE	ACCEPTABLE

NONDESTRUCTIVE TEST PERFORMED

IDENTIFICATION	TYPE	RESULTS

WELDERS NAME: TOM DENNIS	STAMP:	SOCIAL SECURITY NUMBER: 299-60-9584	
TEST CONDUCTED BY: BOB NICHOLS	TEST CERTIFIED BY: TOM WILLIAMS	LAB TEST NUMBER: 9-341	
DATE: 10-3-89	REMARKS:		

We certify that the statements in this record are correct and that the test welds were prepared, welded and tested in accordance with the requirements of AWS D.1 and ASME section IX.

1281 Clough Pike Batavia, Ohio 45103
(513) 752-1911 Fax (513) 752-0044

WELDERS QUALIFICATION RECORD

WPS FOLLOWED	PROCESS	POSITION	MANUAL OR MACHINE		
MSP 23-23	GMAW	2G	MANUAL		
MATERIAL		SHAPE	THICKNESS		RANGE
P23 TO P23		PLATE	3/8"		1/16"-3/4"
F-NO.	SPEC NO.	AWS CLASS	A-NO.	DIAMETER	DIRECTION
F 22	5.10	ER5356	N/A	3/64"	HORIZONTAL
SPEED	PREHEAT	INTER PASS	POST HEAT	ELECTRODE TYPE	
4-8 IPM	60°F	500°F	N/A	CONSUMABLE	
DIAMETER	SHAPE	WELD PASS	TYPE JOINT	TYPE ARC	
3/64"	WIRE	MULTIPLE	V BUTT	SINGLE/SPRAY	
CURRENT TYPE	AMPS	VOLTS	INERT GAS TORCH		
CRP	190	26	N/A		
FLOW RATE	INERT GAS BACK UP		FLOW RATE		
N/A	N/A		N/A		

BEND TEST

IDENTIFICATION	TYPE	RESULTS
	SIDE	ACCEPTABLE

NONDESTRUCTIVE TEST PERFORMED

IDENTIFICATION	TYPE	RESULTS

WELDERS NAME	STAMP	SOCIAL SECURITY NUMBER
TIM LOVINS		281-74-1787

TEST CONDUCTED BY	TEST CERTIFIED BY	LAB TEST NUMBER
BOB NICHOLS	TOM WILLIAMS	9-341

TB	REMARKS
10-3-89	

We certify that the statements in this record are correct and that the test welds were prepared, welded and tested in accordance with the requirements of AWS D.1 and ASME section IX

VENUE FABRICATING, INC.
1281 Clough Pike Batavia, Ohio 45103
(513) 752-1911 Fax (513) 752-0044

WELDERS QUALIFICATION RECORD

WPS FOLLOWED	PROCESS	POSITION	MANUAL OR MACHINE		
MSP 23-23	GMAW	3G	MANUAL		
MATERIAL		SHAPE	THICKNESS		RANGE
P23 TO P23		PLATE	3/8"		1/16"-3/4"
F-NO.	SPEC NO.	AWS CLASS	A-NO.	DIAMETER	DIRECTION
22	5.10	ER5356	N/A	3/64"	VERTICAL
SPEED	PREHEAT	INTER PASS	POST HEAT	ELECTRODE TYPE	
4-8 IPM	60°F	500°F	N/A	CONSUMABLE	
DIAMETER	SHAPE	WELD PASS	TYPE JOINT	TYPE ARC	
3/64"	WIRE	MULTIPLE	V BUTT	SINGLE/SPRAY	
CURRENT TYPE	AMPS	VOLTS	INERT GAS TORCH		
DCRP	190	26	N/A		
FLOW RATE	INERT GAS BACK UP		FLOW RATE		
N/A	N/A		N/A		

BEND TEST

IDENTIFICATION	TYPE	RESULTS
	SIDE	ACCEPTABLE

NONDESTRUCTIVE TEST PERFORMED

IDENTIFICATION	TYPE	RESULTS

WELDERS NAME	STAMP	SOCIAL SECURITY NUMBER	
TIM LOVINS		281-74-1787	
TEST CONDUCTED BY	TEST CERTIFIED BY	LAB TEST NUMBER	
BOB NICHOLS	TOM WILLIAMS	9-341	
DATE	REMARKS		
9/19/89			

We certify that the statements in this record are correct and that the test welds were prepared, welded and tested in accordance with the requirements of AWS D.1 and ASME section IX

QW-482 SUGGESTED FORMAT FOR WELDING PROCEDURE SPECIFICATION (WPS)
(See QW-201.1, Section IX, ASME Boiler and Pressure Vessel Code)

Company Name AVENUE FABRICATING, INC. By AVENUE R. NICHOLS
GLADSTONE LABS. H. C. BOLINGER, JR.
Welding Procedure Specification No. 1-1-S Date 10/74 Supporting PQR No.(s) 1-1-S-P3 & 4
Revision No. FORMAT Date 10/74
Welding Process(es) S.M.A.W. / S.M.A.W. Type(s) MANUAL
(Automatic, Manual, Machine, or Semi-Auto.)
ANALYSIS NO. 1 9-135

JOINTS (QW-402) NONESSENTIAL VARIABLE Details

Joint Design AS REQUIRED TO PROVIDE FULL PENETRATION SOUND FUSION WELDS.
Backing (Yes) OPTIONAL (No) NONE REQUIRED
Backing Material (Type) RING; FIT-UP SNUG & UNIFORM NOTE:

Sketches, Production Drawings, Weld Symbols or Written Description should show the general arrangement of the parts to be welded. Where applicable, the root spacing and the details of weld groove may be specified.

(At the option of the Mfgr., sketches may be attached to illustrate joint design, weld layers and bead sequence, e.g. for notch toughness procedures, for multiple process procedures, etc.)

Backing may be added with elimination of E6010 Root, or gouge E7018 Root Pass to sound metal before welding second side.

SKETCHES ATTACHED

*BASE METALS (QW-403) ALL LISTED P1 STEELS

P-No. 1 Gr. No. 1, 2&3 to P-No. 1 Gr. No. 1, 2 & 3
OR
Specification type and grade STEEL OR STEEL ALLOYS PER QW-422. P No. 1
to Specification type and grade STEEL OR STEEL ALLOYS PER QW-422. P No. 1
OR
Chem. Analysis and Mech. Prop. TYPICALLY CARBON STEEL, C-Si or C-Mn 45-70 KSI
to Chem. Analysis and Mech. Prop. TYPICALLY CARBON STEEL, C-Si or C-Mn 45-70 KSI
Thickness Range:
Base Metal: Groove 3/16" TO 7/8" COMBINED Fillet ALL THICKNESS, WELD SIZE
Deposited Weld Metal WELD LAYERS OF 1/2" OR LESS IN THICKNESS
Pipe Dia. Range: Groove PERFORMANCE ONLY QW-403.16 Fillet ALL/QW-451.4
Other PLATE AND/OR PIPE PER QW-211

*FILLER METALS (QW-404) MILD STEEL COVERED ARC WELDING ELECTRODES

F-No. 3 ROOT EXX10 OR EXX11 Other F4 REMAINDER OR NOTE EXX15, 16 OR 18
A-No. 1 Other AND/OR 2 PER QW-404.5
Spec. No. (SFA) 5.1 5.5
AWS No. (Class) E6010 ROOT & E7018 REMAINDER OR NOTE
Size of filler metals 1/16" TO 5/32"
(Electrode, Cold Wire, Hot Wire, etc.)
Electrode-Flux (Class) HIGH CELLULOSE; IRON POWDER LOW H_2
ROD OVEN CONDITION LOW H_2 ELECTRODES
Consumable Insert N/A

*Each base metal-filler metal combination should be recorded individually.

INITIAL PROCEDURE QUALIFICATION 2G & 5G UP

REF. ANALYSIS NO. 4-869

(6/30/78)

1-1-S

AVENUE FABRICATING, INC.
9-135

QW-482 (Back)

NOT REQUIRED FOR 3/4" OR LESS

POSITIONS (QW-405) NONESSENTIAL VARIABLE
Position(s) of Groove ALL POSITIONS
Welding Progression: Up X Down N/A
Position(s) of Fillet ALL
** NONESSENTIAL QW-405.3 FOR PROCEDURE

POSTWELD HEAT TREATMENT (QW-407) IF REQUIRED
Temperature Range 1100° F. ± 50° F.
Time Range 1 HR/IN. OF WELD THICKNESS
NOTE: QW-407.1

PREHEAT (QW-406)
Preheat Temp. Min. 50° F. AMBIENT ***
Interpass Temp. Max. NOT CONTROLLED 500° F
Preheat Maintenance N/A
(Continuous or special heating where applicable should be recorded)
SHALL BE DRY & CLEAN

GAS (QW-408)
Shielding Gas(es) N/A
Percent Composition (mixtures) N/A
Flow Rate N/A
Gas Backing N/A
Trailing Shielding Gas Composition N/A

ELECTRICAL CHARACTERISTICS (QW-409) NONESSENTIAL VARIABLE
Current AC or DC DC Polarity REVERSE (ELECTRODE POSITIVE) DCRP
Amps (Range) 70-200 Volts (Range) 18-28
(Amps and volts range should be recorded for each electrode size, position, and thickness, etc. This information may be listed in a tabular form similar to that shown below.)
E6011 DESIGNED TO DUPLICATE USABILITY & MECH. PROP. OF #6010, USING AC, WITH DCRP SLIGHT DECREASE IN PENETRATION.
Tungsten Electrode Size and Type N/A (Pure Tungsten, 2% Thoriated, etc.) A & V RANGE SAME AS E6010
Mode of Metal Transfer for GMAW N/A (Spray arc, short circuiting arc, etc.)
Electrode Classification range SEE ANSI/AWS A5.1-78 TABLE I

TECHNIQUE (QW-410) NONESSENTIAL VARIABLE
String or Weave Bead STRING & WEAVE
Orifice or Gas Cup Size N/A
Initial and Interpass Cleaning (Brushing, Grinding, etc.) AS REQUIRED, SOLVENT OR MECHANICAL
Method of Back Gouging AS REQUIRED; ARC-AIR, CHIPPING, GRINDING
Oscillation AS REQUIRED
Contact Tube to Work Distance N/A
Multiple or Single Pass (per side) MULTIPLE OR SINGLE
Multiple or Single Electrodes SINGLE
Travel Speed (Range) AS REQUIRED
Peening NONE
Other FINISHED WELDS SHALL HAVE A UNIFORM CONTOUR WITH THE EDGES OF THE WELD MERGING SMOOTHLY INTO BASE METAL.

Weld Layer(s)	Process	Filler Metal Class	Filler Metal Dia.	DC Current Type Polar.	Amp Range	N/A Volt Range	Travel Speed Range	*** Other (e.g., Remarks, Comments, Hot Wire Addition, Technique, Torch Angle, Etc.)
	SMAW	E6010	3/32	DCRP	50-80			PREHEAT 200° F. IF REQUIRED FOR THICKNESS > 3/4" PER ANSI B31.1
		E6010	1/8		70-120			
		E7018	3/32		70-100			
			1/8		90-140			
			5/32		120-190			
					TYPICAL			

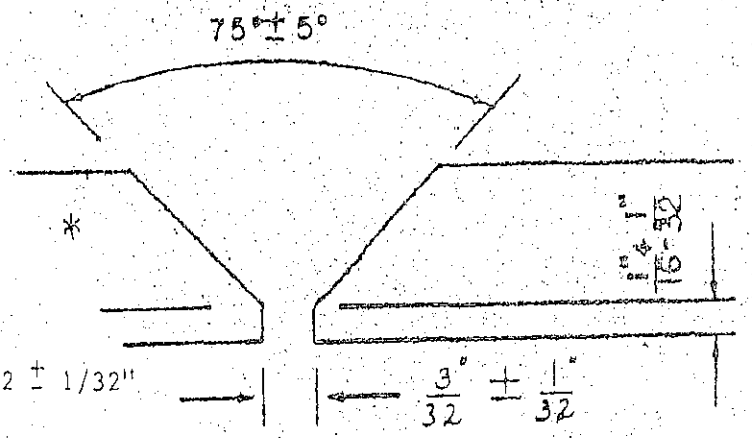
QW-483 PROCEDURE QUALIFICATION RECORD (PQR)

(See QW-201.2, Section IX, 1974 ASME Boiler and Pressure Vessel Code)

Company Name AVENUE FABRICATING, INC.
Procedure Qualification Record No. 1-1-S-F3 & 4 Date 10/74 & 4/89
WPS No. 1-1-S
Welding Process(es) S.M.A.W. / S.M.A.W.
Types (Manual, Automatic, Semi-Auto.) MANUAL

ANALYSIS NO.: 4-869 & 9-135

JOINTS (QW-402)



ROOT PASS E6010 3/32 ± 1/32"
REMAINDER E7018

Groove Design Used

BASE METALS (QW-403) STEEL & STEEL ALLOYS
Material Spec. A53
Type or Grade B 60 KSI
P No. 1 to P No. 1
Thickness .432"
Diameter 6" SCH. 80
Other QUALIFIES PLATE & PIPE FOR ALL LISTED P1 METALS PER QW-422.

POSTWELD HEAT TREATMENT (QW-407)
Temperature NONE
Time N/A
Other N/A

GAS (QW-408)
Type of Gas or Gases N/A
Composition of Gas Mixture N/A
Other N/A

FILLER METALS (QW-404) MILD STEEL COVERED ARC WELDING ELECTRODES
Weld Metal Analysis A. No. 1
Size of Electrode 1/8"
Filler Metal F No. 3 ROOT F4 REMAINDER
SFA Specification 5.1
AWS Classification E6010 & E7018
Other E7018 ROD OVEN CONDITIONED
QUALIFIES PROCEDURE FOR ALL F3 & F4 ELECT.

ELECTRICAL CHARACTERISTICS (QW-409) DCRP
Current DC
Polarity REVERSE (ELECTRODE POSITIVE)
Amps. 80-170 Volts 18-24
Other N/A

POSITION (QW-405)
Position of Groove 6G
Weld Progression (Uphill, Downhill) UP HILL
Other QUALIFIES PROCEDURE FOR ALL POSITIONS.

TECHNIQUE (QW-410)
Travel Speed AS REQUIRED
String or Weave Bead STRING & WEAVE
Oscillation AS REQUIRED
Multipass or Single Pass (per side) MULTIPASS
Single or Multiple Electrodes SINGLE
Other N/A

PREHEAT (QW-406)
Preheat Temp. 50° F. MIN. AMBIENT
Interpass Temp. N/A
Other CLEAN & DRY

GLADSTONE LABORATORIES, INC. AREA CODE 513 921-6700 • 6701

PHYSICAL & NON DESTRUCTIVE TESTING • METALLOGRAPHY • WELDING CERTIFICATION

1034 WOODROW STREET • CINCINNATI, OHIO 45206

QW-483 Procedure Qualification Record (PQR) for AVENUE FABRICATING, INC. WPS
SHAW/SHAW 1-1-S-F3 & 4 1-1-S
P1 & P1

Tensile Test (QW-150) QW-462.1 (b)

Specimen No.	Width	Thickness	Area	Ultimate Total Load lb.	Ultimate Unit Stress psi	Character of Failure & Location	E Long. %
T3	0.745	0.381	0.284	19,800	69,700	BASE METAL	30
						SATISFACTORY	
T4	0.780	0.367	0.286	19,625	68,600	WELD	18
						SATISFACTORY	

Guided Bend Tests (QW-160)

Type and Figure No.			Result W/L = WITHIN LIMITS
1 SIDE	5G UP	QW-462.2	1/8" CRACK W/L
2 SIDE	5G UP	QW-462.2	1/16" & PINHOLE W/L
3 SIDE	5G UP	QW-462.2	PINHOLES W/L
4 SIDE	5G UP	QW-462.2	1/8 & 1/16" CRACKS W/L

Other Tests

Fillet Test (QW-170) N/A Fillet Weld Test (QW-180) N/A

Deposit Analysis F3 E6010 ROOT PASS 3/32 ± 1/32" & F4 E7018 REMAINDER; SFA 5.1

Other 6" SCH. 80, 0.435" WALL A53 GRADE B, 60 KSI

Welder's Name ROBERT NICHOLS SS No. 280-48-5023 Stamp No.

Tests conducted by: GLADSTONE LABS, INC. per T. Williams T Williams Analysis No. 4-869 & 9-135

We certify that the statements in this record are correct and that the test welds were prepared, welded and tested in accordance with the requirements of Section IX of the ASME Code.

Welding Witnessed by: GLADSTONE LABORATORIES, INC. Organization AVENUE

M. G. Bolinger, Jr. By Robert Nichols Date 4/18/69

PHOTOS OF BEND TEST RESULTS WITH INITIAL REPORT 4-869

GLADSTONE LABORATORIES, INC. AREA CODE 513 921-6700 • 6701

PHYSICAL & NON DESTRUCTIVE TESTING · METALLOGRAPHY · WELDING CERTIFICATION

1034 WOODROW STREET • CINCINNATI, OHIO 45204

AVENUE FABRICATING INC.

QW-484

WELDER PERFORMANCE QUALIFICATION TESTS

Welder Name TOM DENNIS SS No. 299-60-9584 Stamp No. TD

Welding Process SMAW/SMAW Type MANUAL

In accordance with Welding Procedure Specification (WPS) WP 1-1-S

Backing (QW-402) NONE

Material (QW-403) Spec. A53/106B to A53/106B of P-No. 1 to P-No. 1

Thickness .0.44" Dia. 2" XXS Welded. Thickness .0.88" COMBINED Dia. 3/4" NPS & OVER Qual.

Filler Metal (QW-404) Spec. No. SFA 5.1 Class No. E6010 & E7018 F-No. 3 & 4

Other ESTIMATED E6010 ROOT DEPOSIT 3/32 - 1/32"; E7018 REMAINDER

Position (QW-405) (1G, 2G, 6G) 6G

Gas (QW-408) Type N/A % Composition N/A

Electrical Characteristics (QW-409) Current DC DCRP Polarity REVERSE ELECTRODE

Weld Progression (QW-410) VERTICAL UP

Other QUANTITIES ALL ELECTRODES P NO. 1 THRU 4

Filler Metal Trade Name 3/32" E6010 ROOT & 3/32 R7018 REMAINDER

Consumable Insert None N/A

Guided Bend Test Results QW-452.2(a) ~~QW-452.3(a), QW-452.5(b)~~

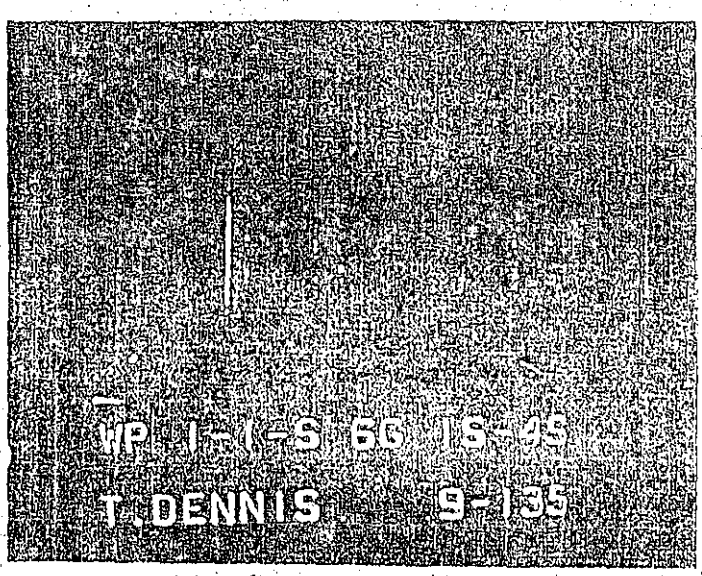
Type and Figure No.		Result W/L = WITHIN LIMITS
SIDE	6G UP QW-462.2	EDGECRACK & PINHOLE = W/L
SIDE	6G UP QW-462.2	EDGECRACK & PINHOLES = W/L
SIDE	6G UP QW-462.2	EDGECRACKS & PINHOLES = W/L
SIDE	6G UP QW-462.2	EDGECRACK & PINHOLES = W/L

Test Conducted by GLADSTONE LABS. INC. per Tom Williams Tom Williams Jr. Analysis No. 79-135

We certify that the statements in this record are correct and that the test welds were prepared, welded and tested in accordance with the requirements of Section IX of the ASME Code.

Witnessed by AVENUE FABRICATING INC. Organization AVENUE FABRICATING INC.

By Robert D Noble Date 8/7/79



GLADSTONE LABORATORIES, INC.

AREA CODE 513 921-6700 - 6701

PHYSICAL & NON DESTRUCTIVE TESTING · METALLOGRAPHY · WELDING CERTIFICATION

1034 WOODROW STREET • CINCINNATI, OHIO 45204

AVENUE FABRICATING INC.

QW-484

WELDER PERFORMANCE QUALIFICATION TESTS

Welder Name TIM LOVINS SS No. 281-74-1787 Stamp No. TAL

Welding Process SMAW/SMAW Type MANUAL

In accordance with Welding Procedure Specification (WPS) WP 1-1-S

Backing (QW-402) NONE

Material (QW-403) Spec. A53/106B to A53/106B of P-No. 1 to P-No. 1

Thickness 0.44" Dia. 2" XXS Welded. Thickness 0.88" COMBINED Dia. 3/4" NPS & OVER Qual.

Filler Metal (QW-404) Spec. No. SFA 5.1 Class No. E6010 & E7018 F-No. 3 & 4

Other ESTIMATED E6010 ROOT DEPOSIT 3/32 - 1/32"; E7018 REMAINDER

Position (QW-405) (1G, 2G, 6G) 6G

Gas (QW-408) Type N/A % Composition N/A

Electrical Characteristics (QW-409) Current DC DCRP Polarity REVERSE ELECTRODE +

Weld Progression (QW-410) VERTICAL UP

Other QUALIFIES ALL ELECTRODES F NO. 1 THRU 4

Filler Metal Diameter and Trade Name 3/32" E6010 ROOT & 3/32" E7018 REMAINDER

Submerged Arc Flux N/A

Guided Bend Test Results QW-462.2(a), ~~QW-462.3(a), QW-462.3(b)~~

Type and Figure No.			Result W/L = WITHIN LIMITS
SIDE	6G UP	QW-462.2	PINHOLE - W/L
SIDE	6G UP	QW-462.2	PINHOLES - W/L
SIDE	6G UP	QW-462.2	1/8" & 1/16" CRACKS & PINHOLES - W/L
SIDE	6G UP	QW-462.2	EDGECRACK - W/L

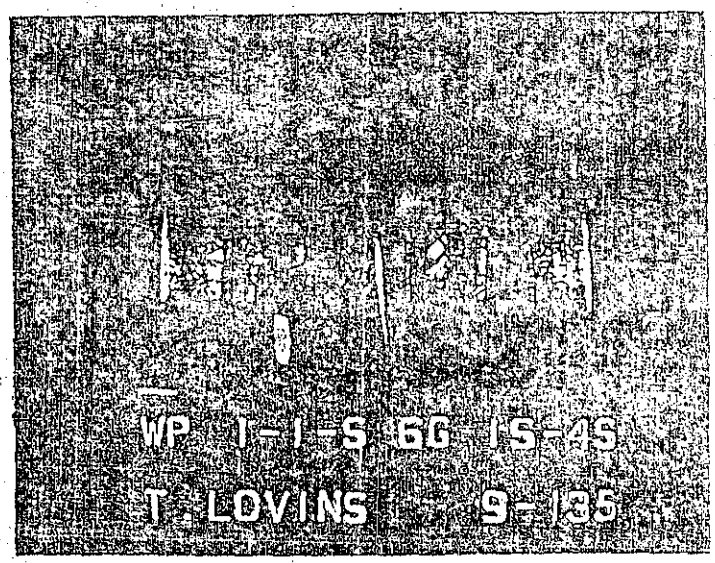
Test Conducted by GLADSTONE LABS. INC. per Tom Williams Tom Williams Analysis No. 9-135

We certify that the statements in this record are correct and that the test welds were prepared, welded and tested in accordance with the requirements of Section IX of the ASME Code.

Welding Witnessed by AVENUE FABRICATING INC.

Organization AVENUE FABRICATING INC.

By Robert D Miller Date 6/14/89



VENUE FABRICATING, INC.
281 Clough Pike Batavia, Ohio 45103
(513) 752-1911 Fax (513) 752-0044

WELDERS QUALIFICATION RECORD

WPS FOLLOWED	PROCESS	POSITION	MANUAL OR MACHINE		
A 1-1	SMAW	6 G	MANUAL		
MATERIAL		SHAPE	THICKNESS		RANGE
P 1 TO P 1		PIPE	.187		.187-.375
F-NO.	SPEC NO.	AWS CLASS	A-NO.	DIAMETER	DIRECTION
4	5.1	E6010	1	1/8"	FOREHAND
SPEED	PREHEAT	INTERPASS	POST HEAT	ELECTRODE TYPE	
1-3 IPM	60°F	500°F	N/A	CONSUMABLE	
DIAMETER	SHAPE	WELD PASS	TYPE JOINT	TYPE ARC	
1/8"	ROD	MULTIPLE	V BUTT	SINGLE	
CURRENT TYPE	AMPS	VOLTS	INERT GAS TORCH		
DCRP	110	22	N/A		
FLOW RATE	INERT GAS BACK UP		FLOW RATE		
N/A	N/A		N/A		

BEND TEST

IDENTIFICATION	TYPE	RESULTS
	SIDE	ACCEPTABLE

NONDESTRUCTIVE TEST PERFORMED

IDENTIFICATION	TYPE	RESULTS

WELDERS NAME	STAMP	SOCIAL SECURITY NUMBER	
TOM DENNIS		299-60-9584	
TEST CONDUCTED BY	TEST CERTIFIED BY	LAB TEST NUMBER	
BOB NICHOLS	TOM WILLIAMS	9-135	
ATE	REMARKS		
5-10-89			

We certifiy that the statements in this record are correct and that the test welds were prepared, welded and tested in accordance with the requirements of AWS D.1 and ASME section IX

VENUE FABRICATING, INC.
1281 Clough Pike Batavia, Ohio 45103
(513) 752-1911 Fax (513) 752-0044

WELDERS QUALIFICATION RECORD

WPS FOLLOWED	PROCESS	POSITION	MANUAL OR MACHINE		
A 1-1	SMAW	6 G	MANUAL		
MATERIAL		SHAPE	THICKNESS		RANGE
P 1 TO P 1		PIPE	.375"		.375"-.750"
F-NO.	SPEC NO.	AWS CLASS	A-NO.	DIAMETER	DIRECTION
4	5.1	E6010	1	1/8"	FOREHAND
SPEED	PREHEAT	INTER PASS	POST HEAT	ELECTRODE TYPE	
1-3 IPM	60°F	500°F	N/A	CONSUMABLE	
DIAMETER	SHAPE	WELD PASS	TYPE JOINT	TYPE ARC	
1/8"	ROD	MULTIPLE	V BUTT	SINGLE	
CURRENT TYPE	AMPS	VOLTS	INERT GAS TORCH		
DCRP	110	22	N/A		
FLOW RATE	INERT GAS BACK UP		FLOW RATE		
N/A	N/A		N/A		

BEND TEST

IDENTIFICATION	TYPE	RESULTS
	SIDE	ACCEPTABLE

NONDESTRUCTIVE TEST PERFORMED

IDENTIFICATION	TYPE	RESULTS

WELDERS NAME	STAMP	SOCIAL SECURITY NUMBER	
TOM DENNIS		299-60-9584	
TEST CONDUCTED BY	TEST CERTIFIED BY	LAB TEST NUMBER	
BOB NICHOLS	TOM WILLIAMS	9-135	
DATE	REMARKS		
5-10-89			

We certify that the statements in this record are correct and that the test welds were prepared, welded and tested in accordance with the requirements of AWS D.1 and ASME section IX

VENUE FABRICATING, INC.
281 Clough Pike Batavia, Ohio 45103
(513) 752-1911 Fax (513) 752-0044

WELDERS QUALIFICATION RECORD

WPS FOLLOWED A 1-1	PROCESS SMAW	POSITION 6 G	MANUAL OR MACHINE MANUAL		
MATERIAL P 1 TO P 1		SHAPE PIPE	THICKNESS .750"		RANGE .750-1.5
F-NO. 4	SPEC NO. 5.1	AWS CLASS E7018	A-NO. 1	DIAMETER 1/8"	DIRECTION FOREHAND
SPEED 1-3 IPM	PREHEAT 60°F	INTER PASS 500°F	POST HEAT N/A	ELECTRODE TYPE CONSUMABLE	
DIAMETER 1/8"	SHAPE ROD	WELD PASS MULTIPL	TYPE JOINT V BUTT	TYPE ARC SINGLE	
CURRENT TYPE DCRP	AMPS 110	VOLTS 22	INERT GAS TORCH N/A		
FLOW RATE N/A	INERT GAS BACK UP N/A		FLOW RATE N/A		

BEND TEST

IDENTIFICATION	TYPE	RESULTS
	SIDE	ACCEPTABLE

NONDESTRUCTIVE TEST PERFORMED

IDENTIFICATION	TYPE	RESULTS

WELDERS NAME TOM DENNIS	STAMP	SOCIAL SECURITY NUMBER 299-60-9584	
TEST CONDUCTED BY BOB NICHOLS	TEST CERTIFIED BY TOM WILLIAMS	LAB TEST NUMBER 9-135	
ATE 5-10-89	REMARKS		

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VENUE FABRICATING, INC.
1281 Clough Pike Batavia, Ohio 45103
(513) 752-1911 Fax (513) 752-0044

WELDERS QUALIFICATION RECORD

WPS FOLLOWED: A 1-1	PROCESS: SMAW	POSITION: 6 G	MANUAL OR MACHINE: MANUAL		
MATERIAL: P 1 TO P 1		SHAPE: PIPE	THICKNESS: .187		RANGE: .187-.375
F-NO.: 4	SPEC NO.: 5.1	AWS CLASS: E6010	A-NO.: 1	DIAMETER: 1/8"	DIRECTION: FOREHAND
SPEED: 1-3 IPM	PREHEAT: 60°F	INTER PASS: 500°F	POST HEAT: N/A	ELECTRODE TYPE: CONSUMABLE	
DIAMETER: 1/8"	SHAPE: ROD	WELD PASS: MULTIPLE	TYPE JOINT: V BUTT	TYPE ARC: SINGLE	
CURRENT TYPE: DCRP	AMPS: 110	VOLTS: 23	INERT GAS TORCH: N/A		
FLOW RATE: N/A	INERT GAS BACK UP: N/A		FLOW RATE: N/A		

BEND TEST

IDENTIFICATION	TYPE	RESULTS
	SIDE	ACCEPTABLE

NONDESTRUCTIVE TEST PERFORMED

IDENTIFICATION	TYPE	RESULTS

WELDERS NAME: TIM LOVINS	STAMP	SOCIAL SECURITY NUMBER: 281-74-1787	
TEST CONDUCTED BY: BOB NICHOLS	TEST CERTIFIED BY: TOM WILLIAMS	LAB TEST NUMBER: 9-135	
DATE: 5-10-89	REMARKS		

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VENUE FABRICATING, INC.
281 Clough Pike Batavia, Ohio 45103
(513) 752-1911 Fax (513) 752-0044

WELDERS QUALIFICATION RECORD

WPS FOLLOWED	PROCESS	POSITION	MANUAL OR MACHINE		
A 1-1	SMAW	6 G	MANUAL		
MATERIAL		SHAPE	THICKNESS		RANGE
P 1 TO P 1		PIPE	.375		.375-.750
F-NO.	SPEC NO.	AWS CLASS	A-NO.	DIAMETER	DIRECTION
4	5.1	E6010	1	1/8"	FOREHAND
SPEED	PREHEAT	INTER PASS	POST HEAT	ELECTRODE TYPE	
1-3 IPM	60°F	500°F	N/A	CONSUMABLE	
DIAMETER	SHAPE	WELD PASS	TYPE JOINT	TYPE ARC	
1/8"	ROD	MULTIPLE	V BUTT	SINGLE	
CURRENT TYPE	AMPS	VOLTS	INERT GAS TORCH		
DCRP	110	22	N/A		
FLOW RATE	INERT GAS BACK UP		FLOW RATE		
N/A	N/A		N/A		

BEND TEST

IDENTIFICATION	TYPE	RESULTS
	SIDE	ACCEPTABLE

NONDESTRUCTIVE TEST PERFORMED

IDENTIFICATION	TYPE	RESULTS

WELDERS NAME	STAMP	SOCIAL SECURITY NUMBER	
TIM LOVINS		281-74-1787	
TEST CONDUCTED BY	TEST CERTIFIED BY		LAB TEST NUMBER
BOB NICHOLS	TOM WILLIAMS		9-135
DATE	REMARKS		
5-10-89			

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VENUE FABRICATING, INC.
1281 Clough Pike Batavia, Ohio 45103
(513) 752-1911 Fax (513) 752-0044

WELDERS QUALIFICATION RECORD

WPS FOLLOWED	PROCESS	POSITION	MANUAL OR MACHINE		
A 1-1	SMAW	6 G	MANUAL		
MATERIAL		SHAPE	THICKNESS		RANGE
P 1 TO P 1		PIPE	.750		.750-1.50
F-NO.	SPEC NO.	AWS CLASS	A-NO.	DIAMETER	DIRECTION
4	5.1	E6010	1	1/8"	FOREHAND
SPEED	PREHEAT	INTER PASS	POST HEAT	ELECTRODE TYPE	
1-3 IPM	60°F	500°F	N/A	CONSUMABLE	
DIAMETER	SHAPE	WELD PASS	TYPE JOINT	TYPE ARC	
1/8"	ROD	MULTIPLE	V BUTT	SINGLE	
CURRENT TYPE	AMPS	VOLTS	INERT GAS TORCH		
DCRP	110	22	N/A		
FLOW RATE	INERT GAS BACK UP		FLOW RATE		
N/A	N/A		N/A		

BEND TEST

IDENTIFICATION	TYPE	RESULTS
	SIDE	ACCEPTABLE

NONDESTRUCTIVE TEST PERFORMED

IDENTIFICATION	TYPE	RESULTS

WELDERS NAME	STAMP	SOCIAL SECURITY NUMBER	
TIM LOVINS		281-74-1787	
TEST CONDUCTED BY	TEST CERTIFIED BY	LAB TEST NUMBER	
BOB NICHOLS	TOM WILLWAMS	9-135	
TE	REMARKS		
5-10-89			

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AVENUE FABRICATING, INC.
1281 Clough Pike Batavia, Ohio 45103
(513) 752-1911 Fax (513) 752-0044

WELDERS QUALIFICATION RECORD

WPS FOLLOWED	PROCESS	POSITION	MANUAL OR MACHINE		
A 1-1	SMAW	6-G	MANUAL		
MATERIAL		SHAPE	THICKNESS		RANGE
P 1 TO P 1		PIPE	.187"		.187"-.375"
F-NO.	SPEC NO.	AWS CLASS	A-NO.	DIAMETER	DIRECTION
4	5.1	E7018	1	1/8"	FOREHAND
SPEED	PREHEAT	INTER PASS	POST HEAT	ELECTRODE TYPE	
1-3 IPM	60°F	500°F	N/A	CONSUMABLE	
DIAMETER	SHAPE	WELD PASS	TYPE JOINT	TYPE ARC	
1/8"	ROD	MULTIPLE	V BUTT	SINGLE	
CURRENT TYPE	AMPS	VOLTS	INERT GAS TORCH		
DCRP	120	23	N/A		
FLOW RATE	INERT GAS BACK UP		FLOW RATE		
N/A	N/A		N/A		

BEND TEST

IDENTIFICATION	TYPE	RESULTS
	SIDE	ACCEPTABLE

NONDESTRUCTIVE TEST PERFORMED

IDENTIFICATION	TYPE	RESULTS

WELDERS NAME	STAMP	SOCIAL SECURITY NUMBER
STEVE MARSHELL		277-68-8101

TEST CONDUCTED BY	TEST CERTIFIED BY	LAB TEST NUMBER
BOB NICHOLS	JOE WALDEN	AV-7

DATE	REMARKS
7-15-93	

We certify that the statements in this record are correct and that the test welds were prepared, welded and tested in accordance with the requirements of AWS D.1 and ASME section IX

VENUE FABRICATING INC.
1281 Clough Pike Batavia, Ohio 45103
(513) 752-1911 Fax (513) 752-0044

WELDERS QUALIFICATION RECORD

WPS FOLLOWED	PROCESS	POSITION	MANUAL OR MACHINE		
A 1-1	SMAW	6 G	MANUAL		
MATERIAL		SHAPE	THICKNESS		RANGE
P 1 TO P 1		PIPE	.375"		.375"-.750"
F-NO.	SPEC NO.	AWS CLASS	A-NO.	DIAMETER	DIRECTION
4	5.1	E7018	1	1/8"	FOREHAND
SPEED	PREHEAT	INTER PASS	POST HEAT	ELECTRODE TYPE	
1-3 IPM	60°F	500°F	N/A	CONSUMABLE	
DIAMETER	SHAPE	WELD PASS	TYPE JOINT	TYPE ARC	
1/8"	ROD	MULTIPLE	V BUTT	SINGLE	
CURRENT TYPE	AMPS	VOLTS	INERT GAS TORCH		
DCRP	120	23	N/A		
FLOW RATE	INERT GAS BACK UP		FLOW RATE		
N/A	N/A		N/A		

BEND TEST

IDENTIFICATION	TYPE	RESULTS
	SIDE	ACCEPTABLE

NONDESTRUCTIVE TEST PERFORMED

IDENTIFICATION	TYPE	RESULTS

WELDERS NAME	STAMP	SOCIAL SECURITY NUMBER
STEVE MARSHELL		277-68-8101

TEST CONDUCTED BY	TEST CERTIFIED BY	LAB TEST NUMBER
BOB NICHOLS	JOE WALDEN	AV-7

DATE	REMARKS
7-15-93	

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AVENUE FABRICATING, INC.
1281 Clough Pike · Batavia, Ohio 45103
(513) 752-1911 Fax (513) 752-0044

WELDERS QUALIFICATION RECORD

WPS FOLLOWED	PROCESS	POSITION	MANUAL OR MACHINE		
A 1-1	SMAW	6 G	MANUAL		
MATERIAL		SHAPE	THICKNESS		RANGE
P 1 TP P 1		PIPE	.750"		.750"-1.5"
F-NO.	SPEC NO.	AWS CLASS	A-NO.	DIAMETER	DIRECTION
4	5.1	E7018	1	1/8"	FOREHAND
SPEED	PREHEAT	INTER PASS	POST HEAT	ELECTRODE TYPE	
1-3 IPM	60°F	500°F	N/A	CONSUMABLE	
DIAMETER	SHAPE	WELD PASS	TYPE JOINT	TYPE ARC	
1/8"	ROD	MULTIPLE	V BUTT	SINGLE	
CURRENT TYPE	AMPS	VOLTS	INERT GAS TORCH		
DCRP	120	23	N/A		
FLOW RATE	INERT GAS BACK UP		FLOW RATE		
N/A	N/A		N/A		

BEND TEST

IDENTIFICATION	TYPE	RESULTS
	SIDE	ACCEPTABLE

NONDESTRUCTIVE TEST PERFORMED

IDENTIFICATION	TYPE	RESULTS

WELDERS NAME	STAMP	SOCIAL SECURITY NUMBER
STEVE MARSHELL		277-68-8101

TEST CONDUCTED BY	TEST CERTIFIED BY	LAB TEST NUMBER
BOB NICHOLS	JOE WALDEN	AV-8

DATE	REMARKS
7-15-93	

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AVENUE FABRICATING, INC.
1281 Clough Pike Batavia, Ohio 45103
(513) 752-1911 Fax (513) 752-0044

WELDERS QUALIFICATION RECORD

WPS FOLLOWED	PROCESS	POSITION	MANUAL OR MACHINE		
A 1-1	SMAW	6 G	MANUAL		
MATERIAL		SHAPE	THICKNESS		RANGE
P 1 TO P 1		PIPE	.187"		.187"-.375"
F-NO.	SPEC NO.	AWS CLASS	A-NO.	DIAMETER	DIRECTION
4	5.1	E7018	1	1/8"	FOREHAND
SPEED	PREHEAT	INTER PASS	POST HEAT	ELECTRODE TYPE	
1-3 IPM	60°F	500°F	N/A	CONSUMABLE	
DIAMETER	SHAPE	WELD PASS	TYPE JOINT	TYPE ARC	
1/8"	ROD	MULTIPLE	V BUTT	SINGLE	
CURRENT TYPE	AMPS	VOLTS	INERT GAS TORCH		
DCRP	130	22	N/A		
FLOW RATE	INERT GAS BACK UP		FLOW RATE		
N/A	N/A		N/A		

BEND TEST

IDENTIFICATION	TYPE	RESULTS
	SIDE	ACCEPTABLE

NONDESTRUCTIVE TEST PERFORMED

IDENTIFICATION	TYPE	RESULTS

WELDERS NAME	STAMP	SOCIAL SECURITY NUMBER	
GEORGE HENDERSON		549-70-3442	
TEST CONDUCTED BY	TEST CERTIFIED BY	LAB TEST NUMBER	
BOB NICHOLS	JOE WALDEN	AV-1	
DATE	REMARKS		
7-15-93			

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AVENUE FABRICATING, INC.
1281 Clough Pike Batavia, Ohio 45103
(513) 752-1911 Fax (513) 752-0044

WELDERS QUALIFICATION RECORD

WPS FOLLOWED: A 1-1	PROCESS: SMAW	POSITION: 6 G	MANUAL OR MACHINE: MANUAL		
MATERIAL: P 1 TO P 1		SHAPE: PIPE	THICKNESS: .375"		RANGE: .375"-.750"
F-NO.: 4	SPEC NO.: 5.1	AWS CLASS: E7019	A-NO.: 1	DIAMETER: 1/8"	DIRECTION: FOREHAND
SPEED: 1-3 IPM	PREHEAT: 60°F	INTER PASS: 500°F	POST HEAT: N/A	ELECTRODE TYPE: CONSUMABLE	
DIAMETER: 1/8"	SHAPE: ROD	WELD PASS: MULTIPLE	TYPE JOINT: V BUTT	TYPE ARC: SINGLE	
CURRENT TYPE: DCRP	AMPS: 130	VOLTS: 22	INERT GAS TORCH: N/A		
FLOW RATE: N/A	INERT GAS BACK UP: N/A		FLOW RATE: N/A		

BEND TEST

IDENTIFICATION	TYPE	RESULTS
	SIDE	ACCEPTABLE

NONDESTRUCTIVE TEST PERFORMED

IDENTIFICATION	TYPE	RESULTS

WELDERS NAME: GEORGE HENDERSON	STAMP	SOCIAL SECURITY NUMBER: 549-70-3442	
TEST CONDUCTED BY: BOB NICHOLS	TEST CERTIFIED BY: JOE WALDEN		LAB TEST NUMBER: AV-2
DATE: 7-15-93	REMARKS		

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AVENUE FABRICATING, INC.
1281 Clough Pike Batavia, Ohio 45103
(513) 752-1911 Fax (513) 752-0044

WELDERS QUALIFICATION RECORD

WPS FOLLOWED	PROCESS	POSITION	MANUAL OR MACHINE		
A 1-1	SMAW	6 G	MANUAL		
MATERIAL		SHAPE	THICKNESS		RANGE
P 1 TO P 1		PIPE	.750"		.750"-1.5"
F-NO.	SPEC NO.	AWS CLASS	A-NO.	DIAMETER	DIRECTION
4	5.1	E7018	1	1/8"	FOREHAND
SPEED	PREHEAT	INTER PASS	POST HEAT	ELECTRODE TYPE	
1-3 IPM	60°F	500°F	N/A	CONSUMABLE	
DIAMETER	SHAPE	WELD PASS	TYPE JOINT	TYPE ARC	
1/8"	ROD	MULTIPLE	V BUTT	SINGLE	
CURRENT TYPE	AMPS	VOLTS	INERT GAS TORCH		
DCRP	130	22	N/A		
FLOW RATE	INERT GAS BACK UP		FLOW RATE		
N/A	N/A		N/A		

BEND TEST

IDENTIFICATION	TYPE	RESULTS
	SIDE	ACCEPTABLE

NONDESTRUCTIVE TEST PERFORMED

IDENTIFICATION	TYPE	RESULTS

WELDERS NAME	STAMP	SOCIAL SECURITY NUMBER	
GEORGE HENDERSON		549-70-3442	
TEST CONDUCTED BY	TEST CERTIFIED BY		LAB TEST NUMBER
BOB NICHOLS	JOE WALDEN		AV-3
DATE	REMARKS		
7-15-93			

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AVENUE FABRICATING, INC.
1281 Clough Pike Batavia, Ohio 45103
(513) 752-1911 Fax (513) 752-0044

WELDERS QUALIFICATION RECORD

WPS FOLLOWED: A 1-1	PROCESS: SMAW	POSITION: 6 G	MANUAL OR MACHINE: MANUAL		
MATERIAL: P 1 TO P 1		SHAPE: PIPE	THICKNESS: .187		RANGE: .187-.375
F-NO.: 4	SPEC NO.: 5.1	AWS CLASS: E7018	A-NO.: 1	DIAMETER: 1/8"	DIRECTION: FOREHAND
SPEED: 1-3 IPM	PREHEAT: 60°F	INTER PASS: 500°F	POST HEAT: N/A	ELECTRODE TYPE: CONSUMABLE	
DIAMETER: 1/8"	SHAPE: ROD	WELD PASS: MULTIPLE	TYPE JOINT: V BUTT	TYPE ARC: SINGLE	
CURRENT TYPE: DCRP	AMPS: 110	VOLTS: 22	INERT GAS TORCH: N/A		
OW RATE: N/A	INERT GAS BACK UP: N/A		FLOW RATE: N/A		

BEND TEST

IDENTIFICATION	TYPE	RESULTS
	SIDE	ACCEPTABLE

NONDESTRUCTIVE TEST PERFORMED

IDENTIFICATION	TYPE	RESULTS

WELDERS NAME: BOB NICHOLS	STAMP	SOCIAL SECURITY NUMBER: 280-48-5023	
TEST CONDUCTED BY: TOM WILLIAMS	TEST CERTIFIED BY: M.G. BOLINGER		LAB TEST NUMBER: 4-869
ATE: 4-18-89	REMARKS		

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AVENUE FABRICATING, INC.
1281 Clough Pike Batavia, Ohio 45103
(513) 752-1911 Fax (513) 752-0044

WELDERS QUALIFICATION RECORD

WPS FOLLOWED	PROCESS	POSITION	MANUAL OR MACHINE		
A 1-1	SMAW	6 G	MANUAL		
MATERIAL		SHAPE	THICKNESS		RANGE
P 1 TO P 1		PIPE	.375		.375-.750
F-NO.	SPEC NO.	AWS CLASS	A-NO.	DIAMETER	DIRECTION
4	5.1	E7018	1	1/8"	FOREHAND
SPEED	PREHEAT	INTER PASS	POST HEAT	ELECTRODE TYPE	
1-3 IPM	60°F	500°F	N/A	CONSUMABLE	
DIAMETER	SHAPE	WELD PASS	TYPE JOINT	TYPE ARC	
1/8"	ROD	MULTIPLE	V BUTT	SINGLE	
CURRENT TYPE	AMPS	VOLTS	INERT GAS TORCH		
DCRP	110	22	N/A		
FLOW RATE	INERT GAS BACK UP		FLOW RATE		
N/A	N/A		N/A		

BEND TEST

IDENTIFICATION	TYPE	RESULTS
	SIDE	ACCEPTABLE

NONDESTRUCTIVE TEST PERFORMED

IDENTIFICATION	TYPE	RESULTS

WELDERS NAME	STAMP	SOCIAL SECURITY NUMBER	
BOB NICHOLS		280-48-5023	
TEST CONDUCTED BY	TEST CERTIFIED BY	LAB TEST NUMBER	
4-18-89 TOM WILLIAMS	M.G. BOLINGER	4-869	
DATE	REMARKS		
4-18-89			

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AVENUE FABRICATING INC
1281 Clough Pike Batavia, Ohio 45103
(513) 752-1911 Fax (513) 752-0044

WELDERS QUALIFICATION RECORD

WPS FOLLOWED	PROCESS	POSITION	MANUAL OR MACHINE		
A 1-1	SMAW	6 G	MANUAL		
MATERIAL		SHAPE	THICKNESS		RANGE
P 1 TO P 1		PIPE	.750		.750-1.50
F-NO.	SPEC NO.	AWS CLASS	A-NO.	DIAMETER	DIRECTION
4	5.1	E7018	1	1/8"	FOREHAND
SPEED	PREHEAT	INTER PASS	POST HEAT	ELECTRODE TYPE	
1-3 IPM	60°F	500°F	N/A	COMSUMABLE	
DIAMETER	SHAPE	WELD PASS	TYPE JOINT	TYPE ARC	
1/8"	ROD	MULTIPLE	V BUTT	SINGLE	
CURRENT TYPE	AMPS	VOLTS	INERT GAS TORCH		
DCRP	110	22	N/A		
FLOW RATE	INERT GAS BACK UP		FLOW RATE		
N/A	N/A		N/A		

BEND TEST

IDENTIFICATION	TYPE	RESULTS
	SIDE	ACCEPTABLE

NONDESTRUCTIVE TEST PERFORMED

IDENTIFICATION	TYPE	RESULTS

WELDERS NAME	STAMP	SOCIAL SECURITY NUMBER	
BOB NICHOLS		280-48-5023	
TEST CONDUCTED BY	TEST CERTIFIED BY		LAB TEST NUMBER
TOM WILLIAMS	M.C. BOLINGER		4-869
DATE	REMARKS		
4-18-89			

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Transmittal

Project [2239.2] - PCF - Hospital - Garage

View Date 2/18/2008

Gilbane
940 Elizabeth St
Lexington, KY 40506-0293
Phone: (859) 257-4536
Fax: (859) 323-1331

Transmittal No. 2239.2-00820

To	Mr. Doug Sherwood E. C. Matthews Co., Inc. 2265 Harrodsburg Road Lexington, KY 40504 USA Phone: (859) 278-3131 Fax: (859) 277-7903
From	Mr. Ryan Maguire (Gilbane)
Subject	Submittal Package 100-05300-001.0

Date	4/4/2007
Items listed are being sent	
☑ Enclosed	
☐ Under Separate Cover	
Via	Hand Delivered
CSI Code	05300 - Steel Decking

We are transmitting the following to you:

☐ Product Data ☐ Samples ☐ Shop Drawings ☐ O&M Manuals ☐ Plans
☐ Architectural Drawings ☐ Letters ☐ Specifications ☐ Prints ☐ Addenda
☐ Engineering Drawings ☐ Change Orders ☑ Submittal

Submittals

Pkg. No./Rev.	Item No./Rev.	Description	Copies	Reason	Action
100-05300-001.0	100-05300-002.0	Shop Drawings: Metal Decking	1	Approved as Noted	

Linked Documents

Document Type	Document	Open	Description	Date
Doc	2239.2-00880		100 05300 002 0	4/13/2007

Remarks

From	Mr. Ryan Maguire	4/4/2007
	Printed Name	Date
Received By	Printed Name	Date

Linked Documents

Document Type	Document	Open	Description	Date
Sub. Pkg.	100-05300-001.0			

Distribution

Recipient	Company	Method	Date
Doug Sherwood	E. C. Matthews Co., Inc.	Message	4/4/2007

WHEELING ROOF DECK GENERAL NOTES

Material:

Steel Roof Decking shall be 1 1/2" deep, 20 gauge, 36" cover, Type BW-36 Deck formed from the following:

☐ Steel conforming to ASTM A611 structural quality cold rolled carbon steel minimum yield strength 33 KSI. Prior to painting, the basic steel shall be chemically cleaned and pre-treated. Following the pre-treatment, the steel shall be roller coat painted to insure an even protective coating with a flexible oven cured primer.

☐ Shop Prime Painted _____ Side(s)

■ Steel conforming to ASTM A653 (formerly A446) structural quality cold rolled carbon steel minimum yield strength 33 KSI. Shop finish shall be hot dipped galvanized by the Cook-Norteman process to conform to ASTM A924 (formerly A525).

☐ G60 ■ G90

Erection:

Deck shall be placed in accordance with this erection diagram. End laps shall be 4" nominal and positioned over supports. Use snap chalk line at reasonable 36" multiples for proper alignment. Deck not promptly erected shall be stored off the ground with one end elevated and protected from the elements with tarpaulin or other weather proof covering.

Wheeling Roof Decks are erected similarly. Begin layout at indicated starting point ↓. Position the first sheet as noted on the drawing at the starting point with the upstanding leg of sheet away from wall.

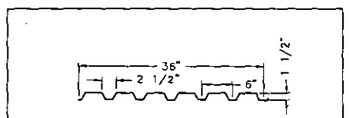
Attachment:

Roof Deck should be attached as soon after placement as possible and all sheets placed should be attached at the end of each working day. Do not use unfastened deck as a work or storage platform.

When welding, all welds are made from the top of the deck down through the laps. Plug welds should penetrate and attach thicknesses of material to the structural supports. A puddle weld should have a minimum effective diameter of at least 5/8 inch.

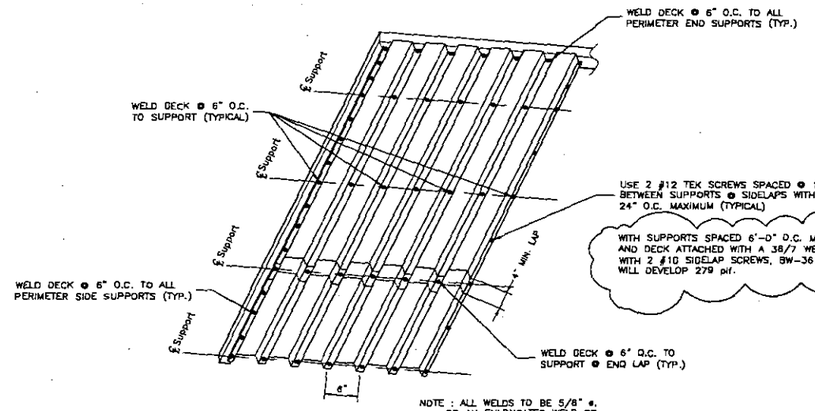
Various mechanical fastening systems other than welding are recognized as viable anchoring methods provided that they are reviewed and approved by the project designer.

All sheets are finished with square ends; beveled cutting is to be done in the field by others, not by Wheeling Corrugating Company. All openings through deck shall be cut in the field by others, unless otherwise noted.



BW-36

SECTIONAL PROPERTIES						
PROFILE	GAGE	DESIGN THICKNESS	Sp in.³/Ft.	Sn in.³/Ft.	Ip in.⁴/Ft.	In in.⁴/Ft.
BW-36	20	0.0358	0.224	0.234	0.203	0.222



36/7 ATTACHMENT PATTERN

PLEASE PROVIDE U.L. DESIGN # THAT BW-36 20GA G90 ROOF DECK IS TO MEET. ARCHITECTURAL DOCUMENTS NOT PROVIDED.

GC / ERECTOR NOTE:

DO NOT ERECT STEEL DECK WITHOUT OBTAINING A COPY AND THOROUGHLY READING "SDI MANUAL OF CONSTRUCTION WITH STEEL DECK". PUBLICATION HOC1

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THIS MANUAL IS AVAILABLE FROM: STEEL DECK INSTITUTE
P.O. BOX 25
FOX RIVER GROVE, IL 60021-0025

PHONE: 847-462-1930
FAX: 847-462-1940
WEB SITE: WWW.SDI.ORG

APPROVED FOR GENERAL CONFORMANCE WITH PLANS AND SPECIFICATIONS. REVIEW FOR DIMENSIONS AND QUANTITIES ARE CORRECTNESS OF FABRICATION SHALL REMAIN WITH SUBCONTRACTOR. FIELD CONDITIONS SHALL BE JOINTLY REVIEWED AT TIME OF INSTALLATION.

E.C. MOTHERS CO., INC.

BY: [signature] 3.7.07
SIGNATURE DATE

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MAR 06 2007
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Wheeling Corrugating Company Since 1890
1134 Wheeling Rd., Wheeling, WV 26003
PHONE: (304) 234-3344
FAX: (304) 234-3243

AVENUE FABRICATING INC
UK PATIENT CARE FACILITY
LEXINGTON, KY
GBBN ARCHITECTS

JOB #
DRAWN BY: SMS | DATE: 2/26/07 | CHECKED | DATE

CUSTOMER:
PROJECT:
LOCATION:
ARCHITECT:

REVISIONS

PRINTS ISSUED

No.	DATE	FOR
1/8	3/8/07	APPROVAL

W.C.Co. SYMBOL LEGEND

EOD = END OF DECK
EOS = END OF SLAB
OSL = DECK OVERLAP
S/P = SEE PLAN

W.C.Co. PROJECT #
CP-07-055

DRAWING
D1

WHEELING ROOF DECK
GENERAL NOTES

Material:

Steel Roof Decking shall be 1 1/2" deep, 20 gauge, 36" cover, Type BW-36 Deck formed from the following:

- ☐ Steel conforming to ASTM A611 structural quality cold rolled carbon steel minimum yield strength 33 KSI. Prior to painting, the basic steel shall be chemically cleaned and pre-treated. Following the pre-treatment, the steel shall be roller coat painted to insure an even protective coating with a flexible oven cured primer.
  - ☐ Shop Prime Painted_____Side(s)
- ■ Steel conforming to ASTM A653 (formerly A446) structural quality cold rolled carbon steel minimum yield strength 33 KSI. Shop finish shall be hot dipped galvanized by the Cook-Norteman process to conform to ASTM A924 (formerly A525).
  - ☐ G60 ■ G90

Erection:

Deck shall be placed in accordance with this erection diagram. End laps shall be 4" nominal and positioned over supports. Use snap chalk line at reasonable 36" multiples for proper alignment. Deck not promptly erected shall be stored off the ground with one end elevated and protected from the elements with tarpaulin or other weather proof covering.

Wheeling Roof Decks are erected similarly. Begin layout at indicated starting point ⊿. Position the first sheet as noted on the drawing at the starting point with the upstanding leg of sheet away from wall.

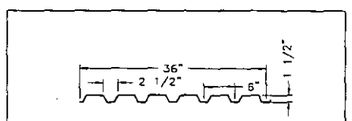
Attachment:

Roof Deck should be attached as soon after placement as possible and all sheets placed should be attached at the end of each working day. Do not use unfastened deck as a work or storage platform.

When welding, all welds are made from the top of the deck down through the laps. Plug welds should penetrate and attach thicknesses of material to the structural supports. A puddle weld should have a minimum effective diameter of at least 5/8 inch.

Various mechanical fastening systems other than welding are recognized as viable anchoring methods provided that they are reviewed and approved by the project designer.

All sheets are finished with square ends; beveled cutting is to be done in the field by others, not by Wheeling Corrugating Company. All openings through deck shall be cut in the field by others, unless otherwise noted.



BW-36

SECTIONAL PROPERTIES						
PROFILE	GAGE	DESIGN THICKNESS	Sp in.³/Ft.	Sn in.³/Ft.	Ip in.⁴/Ft.	In in.⁴/Ft.
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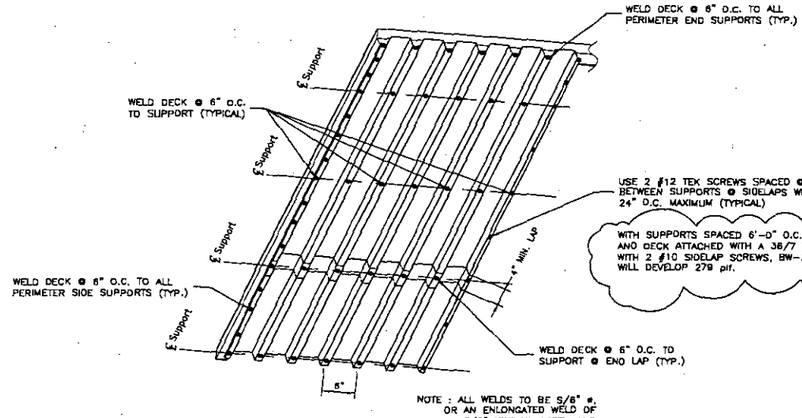

36/7 ATTACHMENT PATTERN

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PHONE (304)-234-2346
FAX (304)-234-2343

AVENUE FABRICATING INC
UK PATIENT CARE FACILITY
LEXINGTON, KY
GBBN ARCHITECTS

JOB #

DRAWN BY:	DATE	CHECKED	DATE
SWS	2/26/07		

CUSTOMER:
PROJECT:
LOCATION:
ARCHITECT:

REVISIONS

PRINTS ISSUED

No.	DATE	FOR
1/8	3/8/07	APPROVAL

W.C.Co. SYMBOL LEGEND

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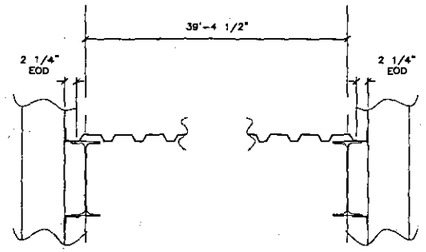
EOS = EDGE OF SLAB
DSL = DECK SIDELAP
S/P = SIDE PLATE

W.C.Co. PROJECT #
CP-07-055

DRAWING
D1

GENERAL NOTES



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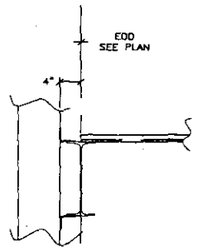

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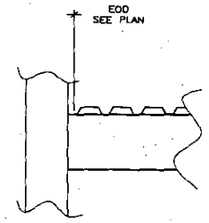

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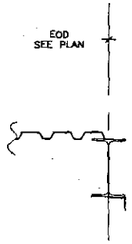

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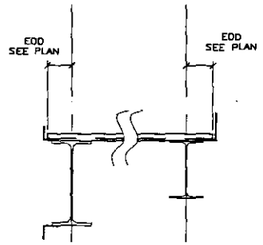

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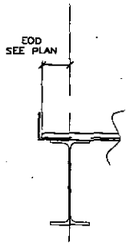

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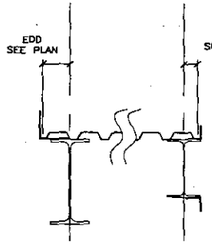

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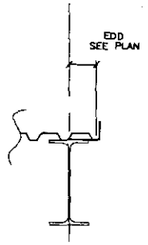

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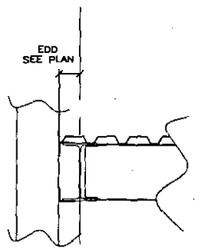

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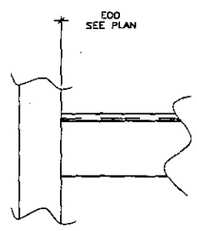

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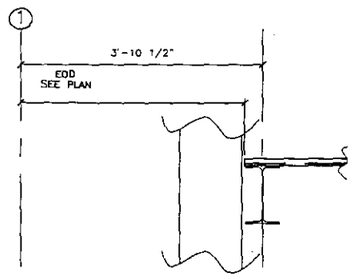

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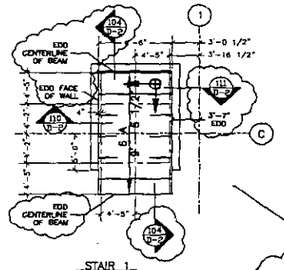

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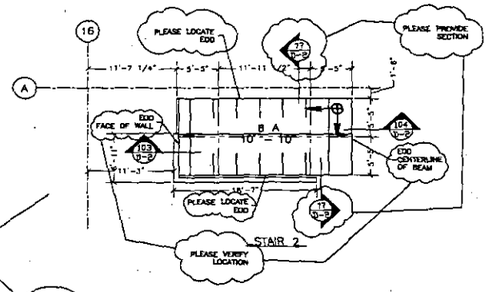

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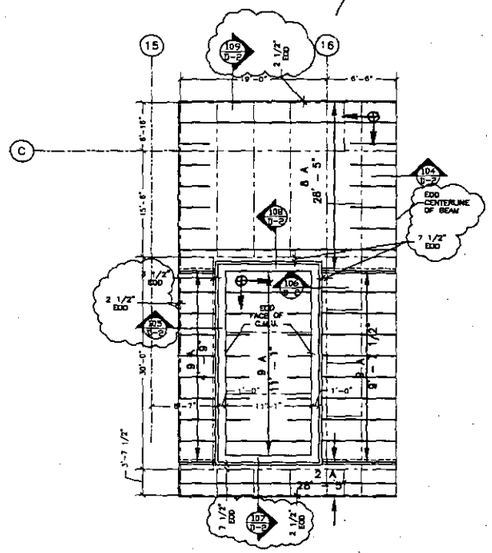
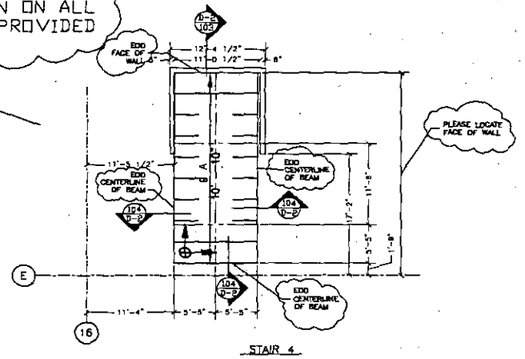


ELEVATOR CORE/ STAIR 3



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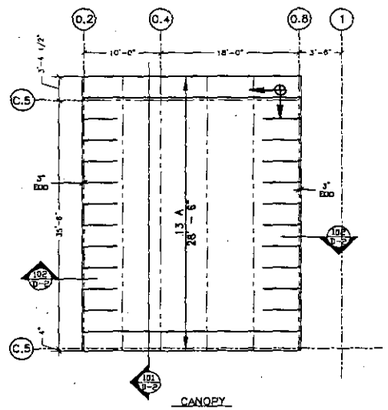

CANOPY

ROOF DECK PLAN

SCALE : 1/8" = 1'-0"

REFERENCE: S501A, S502A, S503A DATED: 8/9/06
BW-36 20GA G90 (MARK A)

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AVENUE FABRICATING INC
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LEXINGTON, KY
GBBN ARCHITECTS

JOB #
DATE
CHECKED
DATE 2/26/07
DRAWN BY: SMS

CUSTOMER
PROJECT
LOCATION
ARCHITECT

REVISIONS

PRINTS ISSUED

No.	DATE	FOR
1/8	3/8/07	APPROVAL

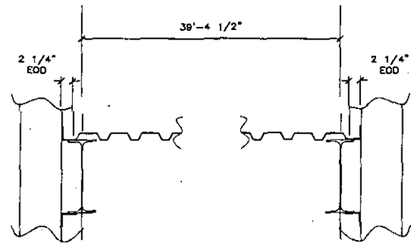
W.C.Co. SYMBOL LEGEND

EOD = EDGE OF DECK
EOS = EDGE OF SLAB
DSL = DECK SKYLIGHT
S/P = SEE PLAN

W.C.Co. PROJECT #
CP-07-055

DRAWING
D2

SECTIONS & PLAN



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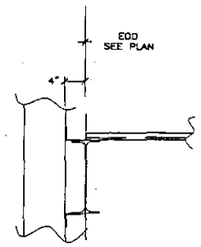

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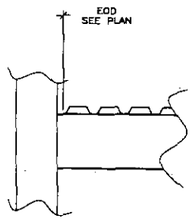

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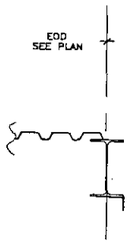

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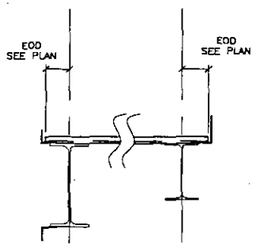

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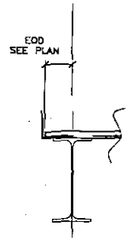

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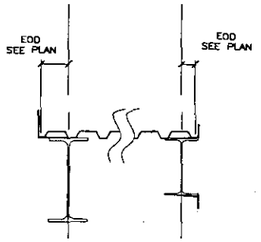

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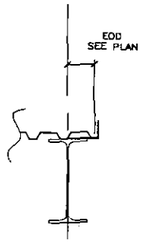

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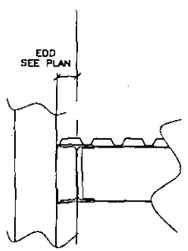

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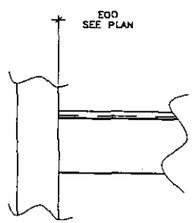

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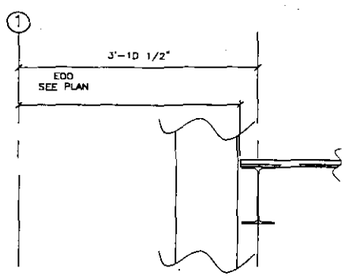

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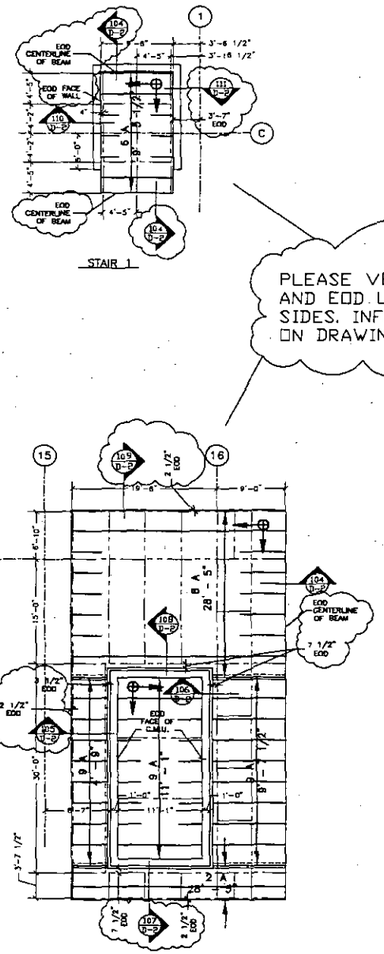

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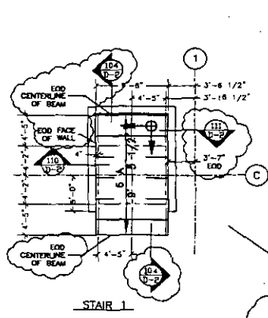
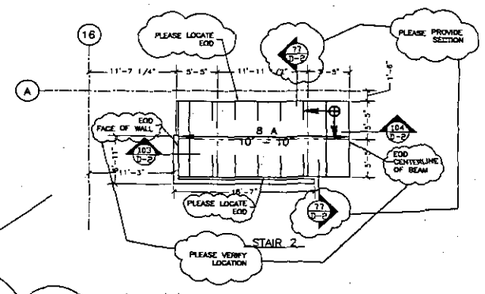


STAIR 1



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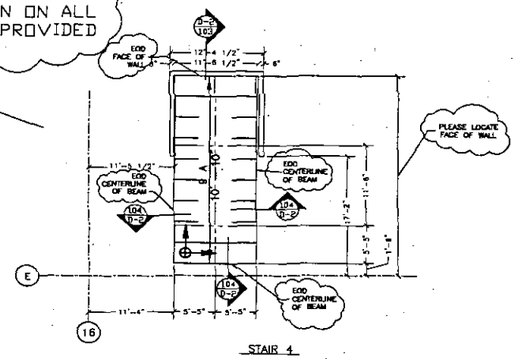

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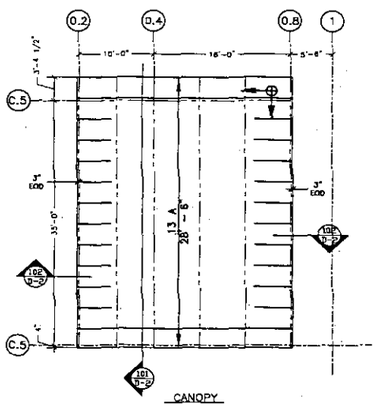

CANOPY

ROOF DECK PLAN

SCALE : 1/8" = 1'-0"

REFERENCE: S501A, S502A, S503A DATED: 6/9/06
BW-35 20GA G90 (MARK A)

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AVENUE FABRICATING INC
UK PATIENT CARE FACILITY
LEXINGTON, KY
GBBN ARCHITECTS

JOB #
DATE
CHECKED
DATE 2/26/07
DRAWN BY: SWS

CUSTOMER
PROJECT:
LOCATION:
ARCHITECT:

REVISIONS

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DSL = DOOR SHELLER
S/P = SIDE PLATE

W.C.Co. PROJECT #
CP-07-055

DRAWING
D2

SECTIONS & PLAN

Gilbane

Transmittal

Project [2239.2] - PCF - Hospital - Garage

View Date 2/18/2008

Gilbane
940 Elizabeth St
Lexington, KY 40506-0293
Phone: (859) 257-4536
Fax: (859) 323-1331

Transmittal No. 2239.2-00468

To	Mr. Doug Sherwood E. C. Matthews Co., Inc. 2265 Harrodsburg Road Lexington, KY 40504 USA Phone: (859) 278-3131 Fax: (859) 277-7903	**Date**	10/30/2006
		Items listed are being sent	
		☑ Enclosed	
		☐ Under Separate Cover	
		Via	U.S. Mail
		CSI Code	05400 - Cold-Formed Metal Framing
From	Mr. Ryan Maguire (Gilbane)		
Subject	Submittal		

We are transmitting the following to you:

☑ Product Data ☐ Samples ☐ Shop Drawings ☐ O&M Manuals ☐ Plans
☐ Architectural Drawings ☐ Letters ☐ Specifications ☐ Prints ☐ Addenda
☐ Engineering Drawings ☐ Change Orders ☐ Submittal

Items

No.	Description	Copies	Reason	Action
100-05400-001	Cold Form Metal Framing- Product Data	2	Approved as Noted	

Remarks See GBBN comments on transmittal sheet.

From	Mr. Ryan Maguire	10/30/2006
	Printed Name	Date
Received By	Printed Name	Date

DIETRICH
DESIGN GROUP
A Worthington Industries Company

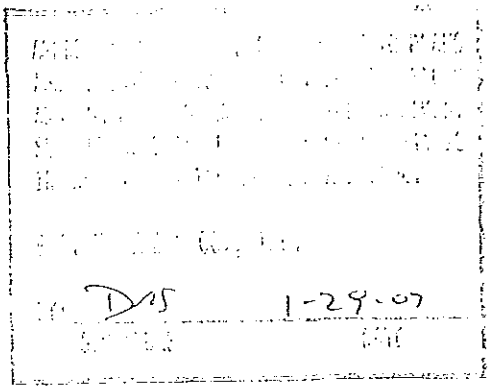
U of K PATIENT CARE FACILITY: NEW GARAGE

LEXINGTON, KY
DATE: 01.11.07 Job# - 61697

Prepared For:
GRAYHAWK
LEXINGTON, KY

DIETRICH PRODUCTS LIST:

S975
S545
6" TSB 18ga., 33ksi
6" TSB 16ga., 33ksi
6" CSJ 18ga., 33ksi



THIS REVIEW BY GBBN ARCHITECTS, INC., IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND IS NOT AN APPROVAL OF THIS DRAWING OR SET OF DRAWINGS. THE COMMENTS MADE DO NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH THE PROJECT DRAWINGS, SPECIFICATIONS AND OTHER CONTRACT DOCUMENTS. CONTRACTOR IS SOLELY RESPONSIBLE FOR: ALL DIMENSIONS AND QUANTITIES, ALL FABRICATION, DELIVERY AND ERECTION; ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES; ALL COORDINATION WITH ALL OTHER CONTRACTORS, SUPPLIERS AND OTHERS; PERFORMING ALL WORK IN A SAFE AND PROPER MANNER.

NO EXCEPTIONS TAKEN — [X]
FURNISH AS CORRECTED — [ ]
REVISE AND RESUBMIT — [ ]
NO REVIEW - INCOMPLETE — [ ]
SUBMIT SPECIFIED ITEMS — [ ]
REJECTED — [ ]

DATE 02.22.07 BY JAF

GBBN ARCHITECTS, INC.
ARCHITECTURE, INTERIORS, PLANNING, ENGINEERING
332 EAST 8TH STREET, CINCINNATI, OHIO 45202-2217 (513) 241-8700
325 WEST MAIN STREET, LEXINGTON, KENTUCKY 40507 (859) 381-8787
BEIJING XI CHENG DISTRICT, TONG LI GE ROAD NO 65, BEIJING, CHINA 100031 86 10 68386730

GILBANE
University of Kentucky
Patient Care Facility
Gilbane Project No. 18-3966

REVIEWED

☐ 010-Huguelet ☒ 020-Garage
☐ 030-Infrastructure ☐ 040-PCF Foundation
☐ 050-PCF Core/Shell ☐ 060-TowerUp Fit

Bid Package No. 100
Submittal No. 100-05400-002
Spec. Sect/Para. 05
Reviewed By JAF
Date 2/22/2007

This review does not constitute nor does it assume design responsibility nor does it relieve the trade contractor's supplier from complying with the contract requirements, coordinating their work with other trade contractors and verifying field dimensions.

1414 Field Street, Building C, Suite 1, Hammond, IN 46320
TEL 219.853.9474 FAX 219.932.4141 WEBSITE www.dietrichmetalframing.com

DIETRICH
METAL FRAMING
A Worthington Industries Company

Project Information:

Project Name:	UK PATIENT CARE FACILITY: NEW GARAGE
Project Number:	616972
Address:	
City:	LEXINGTON
State:	Kentucky

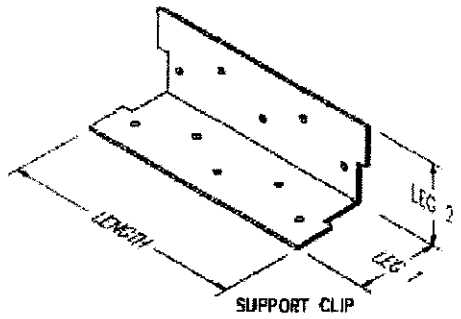
Contractor Information:

Company Name:	GRAYHAWK
Contact Name:	
Address:	
City: LEXINGTON, **State:** KY **Zip:** -	
Phone: **Fax:**	

Support Clip

Product Code: SP
Length: 5"
Leg1: 1-1/2"
Leg2: 1-1/2"
Yield Strength: 50
Gauge: 12
Design Thickness: 0.101"

SSMA Code: N/A
Weight/Piece: 0.43
Product Complies With:
ASTM C-654



SUPPORT CLIP

Dietrich Industries, Inc.
Corporate Headquarters
500 Grant Street/Suite 2226
Pittsburgh, PA 15219
Phone: (412)281-2805

Dietrich Design Group(North)
1414 Field Street Building C, Suite 1
Hammond, IN 46320
Phone: (800) 873-2443 or
(219) 853-9474
Fax:(219) 932-4141

Dietrich Design Group(West)
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Carlsbad, CA 92008
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(760) 931-0465
FAX: (760) 931-9824

Dietrich Design Group(South)
330 Greenwood Place
McDonough, GA 30253
Phone: (800) 873-2443 or
(678) 304-5525
Fax: (678) 304-5556

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A Worthington Industries Company

Project Information:

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Project Number:	616972
Address:	
City:	LEXINGTON
State:	Kentucky

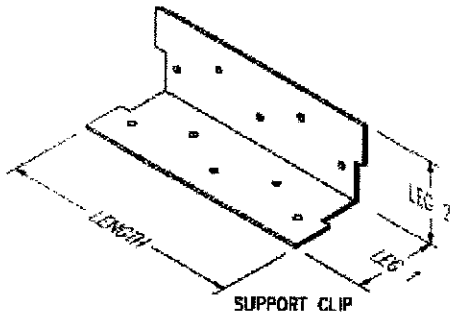
Contractor Information:

Company Name:	GRAYHAWK
Contact Name:	
Address:	
City: LEXINGTON, **State:** KY **Zip:** -	
Phone: **Fax:**	

Support Clip

Product Code: SP
Length: 5"
Leg1: 1-1/2"
Leg2: 1-1/2"
Yield Strength: 50
Gauge: 16
Design Thickness: 0.056"

SSMA Code: N/A
Weight/Piece: 0.21
Product Complies With:
ASTM C-654



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A Worthington Industries Company

Project Information:

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Project Number:	616972
Address:	
City:	LEXINGTON
State:	Kentucky

Contractor Information:

Company Name:	GRAYHAWK
Contact Name:	
Address:	
City: LEXINGTON,	**State:** KY **Zip:** -
Phone:	**Fax:**

Structural Track 1-1/4" Leg

Product Code: TSB
Depth: 6"
Leg Height: 1-1/4" Leg
Yield Strength: 33
Gauge: 18
Design Thickness: 0.0451"

SSMA Code: 600T125-43
Weight/Foot: 1.168
Product Complies With:
ASTM C-955
ASTM C-1007
ICBO 4782P*
See report for specific information.

Gross Section Properties

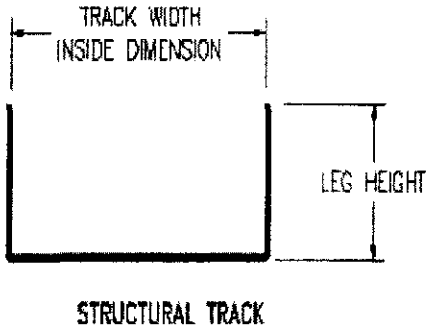
Area: 0.357 in.^2
Moment of inertia about x-x axis (Ix): 1.602 in.^4
Radius of gyration about x-x axis (Rx): 2.119 in.
Moment of inertia about y-y axis (Iy): 0.023 in.^4
Radius of gyration about y-y axis (Ry): 0.253 in.

Effective Section Properties

Fully Braced Allowable Moment (Mall): 9510 in/lbs.
Moment of Inertia about x-x axis (IxEff): 1.563 in.^4
Effective Section Modulus about x-x Axis (SxEff): 0.481 in.^3

Torsional Section Properties

Distance between shear center and centroid (Xo): -0.366 in.
St. Venant torsional constant (Jx1000): 0.241
Warping torsional constant (Cw): 0.161
Polar radius of gyration about principal axis (Ro): 2.165 in.
Beta Equals 1-(Xo/Ro)^2: 0.971



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Fax: (678) 304-5556

DIETRICH
METAL FRAMING
A Worthington Industries Company

Project Information:
Project Name: UK PATIENT CARE FACILITY: NEW GARAGE
Project Number: 616972
Address:
City: LEXINGTON
State: Kentucky

Contractor Information:
Company Name: GRAYHAWK
Contact Name:
Address:
City: LEXINGTON, **State:** KY **Zip:** -
Phone: **Fax:**

Structural Stud

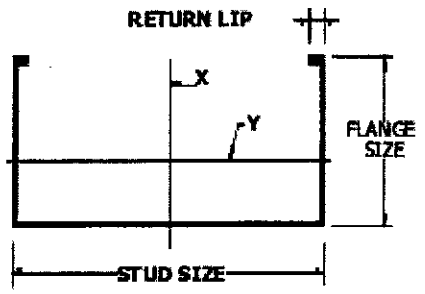
Product Code: CSJ
Depth: 6"
Flange: 1-5/8"
Lip: 1/2"
Yield Strength: 33
Gauge: 18
Design Thickness: 0.0451"

SSMA Code: 600S162-43
Weight/Foot: 1.461
Punched/Unpunched: P
Product Complies With:
A.I.S.I. Specification for the design of Cold-Formed Steel Structural Members
ASTM C-955
ASTM C-1007
ICBO 4784P*
See report for specific information.

Gross Section Properties
Area: 0.447 in.^2
Moment of inertia about x-x axis (Ix): 2.316 in.^4
Radius of gyration about x-x axis (Rx): 2.277 in.
Moment of inertia about y-y axis (Iy): 0.148in.^4
Radius of gyration about y-y axis (Ry): 0.577in.

Effective Section Properties
Fl Braced Allowable Moment (Mall): 16764in/lbs.
Mo...ent of Inertia about x-x axis (IxEff): 2.316in.^4
Effective Section Modulus about x-x Axis (SxEff): 0.772in.^3

Torsional Section Properties
Distance between shear center and centroid (Xo): -1.08 in.
St. Venant torsional constant (Jx1000): 0.302
Warping torsional constant (Cw): 1.082
Polar radius of gyration about principal axis (Ro): 2.585in.
Beta Equals 1-(Xo/Ro)^2: 0.826



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Fax: (678) 304-5556

UK PCF PARKING GARAGE
SECTION 05400 – COLD-FORMED METAL FRAMING
DATE: 10/04/2006

Product Specification

DIETRICH
METAL FRAMING
A Worthington Industries Company

Project Information:
Project Name: UK PCF Parking Garage
Project Number:
Address: 110 Transcript Avenue
City: Lexington
State: Kentucky

Contractor Information:
Company Name: Grayhawk, LLC
Contact Name: Kurt Stenzel
Address:
City: Lexington **State:** KY **Zip:** 40511
Phone: **Fax:**

Structural Stud

Product Code: CSJ
Depth: 3-5/8"
Flange: 1-5/8"
Lip: 1/2"
Yield Strength: 33
Gauge: 18
Design Thickness: 0.0451"

SSMA Code: 362S162-43
Weight/Foot: 1.111
Punched/Unpunched: P
Product Complies With:
A.I.S.I. Specification for the design of Cold-Formed Steel Structural Members
ASTM C-955
ASTM C-1007
ICBO 4784P*
See report for specific information.

Gross Section Properties

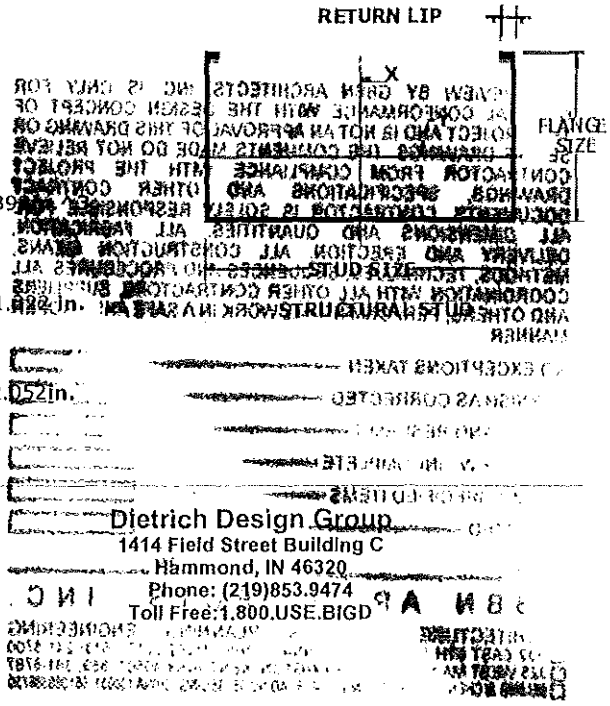
Area: 0.34 in.^2
Moment of inertia about x-x axis (Ix):0.71 in.^4
Radius of gyration about x-x axis (Rx):1.446 in.
Moment of inertia about y-y axis (Iy):0.127in.^4
Radius of gyration about y-y axis (Ry):0.611in.

Effective Section Properties

Fully Braced Allowable Moment (Mall):8505in/lbs.
Moment of Inertia about x-x axis (IxEff):0.71in.^4
Effective Section Modulus about x-x Axis (SxEff):0.39

Torsional Section Properties

Distance between shear center and centroid (Xo):-1.
St. Venant torsional constant (Jx1000): 0.23
Warping torsional constant (Cw):0.371
Polar radius of gyration about principal axis (Ro): 2.052in.
Beta Equals 1-(Xo/Ro)^2:0.585



Dietrich Metal Framing, Inc.
Corporate Headquarters 500 Grant Street/Suite 2226
Pittsburgh, PA 15219
Phone: (412)281.2805

Dietrich Design Group
1414 Field Street Building C
Hammond, IN 46320
Phone: (219)853.9474
Toll Free:1.800.USE.BIGD

APPROVED FOR GENERAL CONFORMITY TO PLANS AND SPECIFICATIONS. DETAIL DIMENSIONS AND QUANTITIES NOT COMPLETELY CHECKED. SUBCONTRACTOR'S FULL RESPONSIBILITY IS NOT RELIEVED BY THIS APPROVAL.

C. MATTHEWS CO., INC.

BY: [signature] 10.9.06
SIGNATURE DATE

Product Specification

DIETRICH
METAL FRAMING
A Worthington Industries Company

Project Information:
Project Name: UK PCF Parking Garage
Project Number:
Address: 110 Transcript Avenue
City: Lexington
State: Kentucky

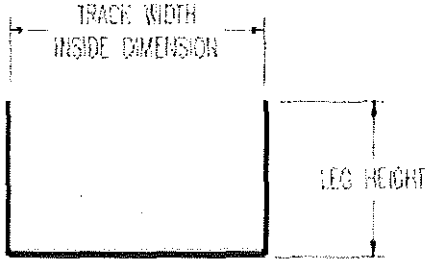
Contractor Information:
Company Name: Grayhawk, LLC
Contact Name: Kurt Stenzel
Address:
City: Lexington **State:** KY **Zip:** 40511
Phone: **Fax:**

Structural Track 2" Leg

Product Code: TSC
Depth: 3-5/8"
Leg Height: 2" Leg
Yield Strength: 33
Gauge: 18
Design Thickness: 0.0451"

SSMA Code: 362T200-43
Weight/Foot: 1.113
Product Complies With:
ASTM C-955
ASTM C-1007
ICBO 4782P*
See report for specific information.

Gross Section Properties
Area: 0.34 in.^2
Moment of inertia about x-x axis (Ix):0.774 in.^4
Radius of gyration about x-x axis (Rx):1.508 in.
Moment of inertia about y-y axis (Iy):0.141 in.^4
Radius of gyration about y-y axis (Ry):0.644 in.



STRUCTURAL TRACK

Effective Section Properties
Fully Braced Allowable Moment (Mall):5184 in/lbs.
Moment of Inertia about x-x axis (IxEff):0.611 in.^4
Effective Section Modulus about x-x Axis (SxEff):0.262 in.^3

Torsional Section Properties
Distance between shear center and centroid (Xo): -1.285 in.
St. Venant torsional constant (Jx1000): 0.23
Warping torsional constant (Cw):0.333
Polar radius of gyration about principal axis (Ro): 2.084 in.
Beta Equals 1-(Xo/Ro)^2: 0.62

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Phone: (219)853.9474
Toll Free:1.800.USE.BIGD

FINISH MUST BE GALVANIZE FOR ALL COLD-FORMED METAL FRAMING PER SPEC SECTION 05400

Product Specification

DIETRICH
METAL FRAMING
A Worthington Industries Company

Project Information:
Project Name: UK PCF Parking Garage
Project Number:
Address: 110 Transcript Avenue
City: Lexington
State: Kentucky

Contractor Information:
Company Name: Grayhawk, LLC
Contact Name: Kurt Stenzel
Address:
City: Lexington **State:** KY **Zip:** 40511
Phone: **Fax:**

Structural Track 1-1/4" Leg

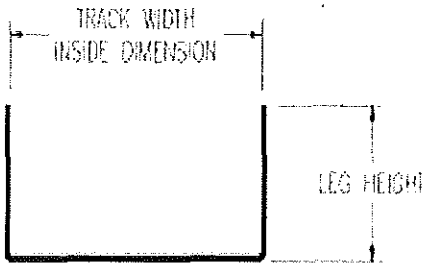
Product Code: TSB
Depth: 3-5/8"
Leg Height: 1-1/4" Leg
Yield Strength: 33
Gauge: 18
Design Thickness: 0.0451"

SSMA Code: 362T125-43
Weight/Foot: 0.891
Product Complies With:
ASTM C-955
ASTM C-1007
ICBO 4782P*
See report for specific information.

Gross Section Properties
Area: 0.272 in.^2
Moment of inertia about x-x axis (Ix): 0.546 in.^4
Radius of gyration about x-x axis (Rx): 1.416 in.
Moment of inertia about y-y axis (Iy): 0.039 in.^4
Radius of gyration about y-y axis (Ry): 0.376 in.

Effective Section Properties
Fully Braced Allowable Moment (Mall): 4696 in/lbs.
Moment of Inertia about x-x axis (IxEff): 0.502 in.^4
Effective Section Modulus about x-x Axis (SxEff): 0.238 in.^3

Torsional Section Properties
Distance between shear center and centroid (Xo): -0.668 in.
St. Venant torsional constant (Jx1000): 0.184
Warping torsional constant (Cw): 0.093
Polar radius of gyration about principal axis (Ro): 1.61 in.
Beta Equals 1-(Xo/Ro)^2: 0.828



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Product Specification

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State: Kentucky

Contractor Information:
Company Name: Grayhawk, LLC
Contact Name: Kurt Stenzel
Address:
City: Lexington **State:** KY **Zip:** 40511
Phone: **Fax:**

Structural Stud

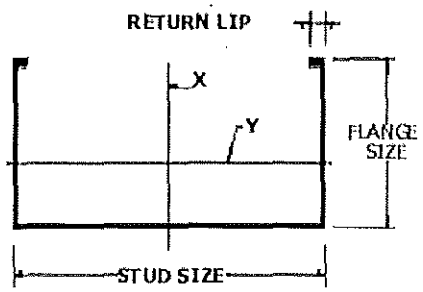
Product Code: CSJ
Depth: 6"
Flange: 1-5/8"
Lip: 1/2"
Yield Strength: 50
Gauge: 14
Design Thickness: 0.0713"

SSMA Code: 600S162-68
Weight/Foot: 2.266
Punched/Unpunched: P
Product Complies With:
A.I.S.I. Specification for the design of Cold-Formed Steel Structural Members
ASTM C-955
ASTM C-1007
ICBO 4784P*
See report for specific information.

Gross Section Properties
Area: 0.693 in.^2
Moment of inertia about x-x axis (Ix): 3.524 in.^4
Radius of gyration about x-x axis (Rx): 2.255 in.
Moment of inertia about y-y axis (Iy): 0.218in.^4
Radius of gyration about y-y axis (Ry): 0.561in.

Effective Section Properties
Fully Braced Allowable Moment (Mall): 39811in/lbs.
Moment of Inertia about x-x axis (IxEff): 4in.^4
Effective Section Modulus about x-x Axis (SxEff): 1in.^3

Torsional Section Properties
Distance between shear center and centroid (Xo): -1.061 in.
St. Venant torsional constant (Jx1000): 1.173
Warping torsional constant (Cw): 1.595
Polar radius of gyration about principal axis (Ro): 2.555in.
Beta Equals 1-(Xo/Ro)^2: 0.828



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Contractor Information:
Company Name: Grayhawk, LLC
Contact Name: Kurt Stenzel
Address:
City: Lexington **State:** KY **Zip:** 40511
Phone: **Fax:**

Structural Track 1-1/4" Leg

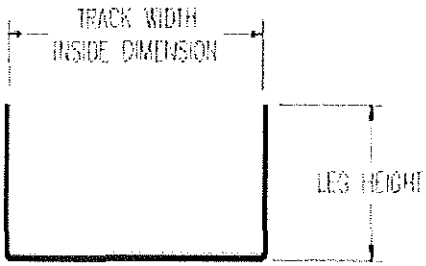
Product Code: TSB
Depth: 6"
Leg Height: 1-1/4" Leg
Yield Strength: 33/50
Gauge: 14
Design Thickness: 0.0713"

SSMA Code: 600T125-68
Weight/Foot: 1.837
Product Complies With:
ASTM C-955
ASTM C-1007
ICBO 4782P*
See report for specific information.

Gross Section Properties
Area: 0.597 in.^2
Moment of inertia about x-x axis (Ix): 2.843 in.^4
Radius of gyration about x-x axis (Rx): 2.182 in.
Moment of inertia about y-y axis (Iy): 0.067 in.^4
Radius of gyration about y-y axis (Ry): 0.334 in.

Effective Section Properties
Fully Braced Allowable Moment (Mall): 18213 in/lbs.
Moment of Inertia about x-x axis (IxEff): 2.843 in.^4
Effective Section Modulus about x-x Axis (SxEff): 0.891 in.^3

Torsional Section Properties
Distance between shear center and centroid (Xo): -0.517 in.
St. Venant torsional constant (Jx1000): 1.011
Warping torsional constant (Cw): 0.461
Polar radius of gyration about principal axis (Ro): 2.267 in.
Beta Equals 1-(Xo/Ro)^2: 0.948



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Contact Name: Kurt Stenzel
Address:
City: Lexington **State:** KY **Zip:** 40511
Phone: **Fax:**

U-Channel

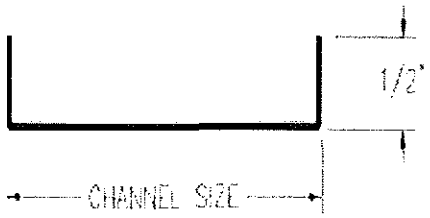
Product Code: CHN2
Width: 1-1/2"
Flange: 1/2"
Yield Strength: 33
Gauge: 16
Design Thickness: 0.056

SSMA Code: 150U50-54
Weight/Foot: 0.424
Product Complies With:
A.I.S.I. Specification for the design of Cold-Formed Steel Structural Members
ASTM C-645
ASTM C-754
ASTM C-955

Gross Section Properties
Area: 0.13 in.^2
Moment of inertia about x-x axis (Ix): 0.039 in.^4
Radius of gyration about x-x axis (Rx): 0.549 in.
Moment of inertia about y-y axis (Iy): 0.003in.^4
Radius of gyration about y-y axis (Ry): 0.145in.

Effective Section Properties
Fully Braced Allowable Moment (Mall): 1027in/lbs.
Moment of Inertia about x-x axis (IxEff): 0.039in.^4
Effective Section Modulus about x-x Axis (SxEff): 0.052in.^3

Torsional Section Properties
Distance between shear center and centroid (Xo): -0.2662 in.
St. Venant torsional constant (Jx1000): 0.1386
Warping torsional constant (Cw): 0.00102
Polar radius of gyration about principal axis (Ro): 0.62667in.
Beta Equals 1-(Xo/Ro)^2: 0.81956



U-CHANNEL

Dietrich Metal Framing, Inc.
Corporate Headquarters 500 Grant Street/Suite 2226
Pittsburgh, PA 15219
Phone: (412)281.2805

Dietrich Design Group
1414 Field Street Building C
Hammond, IN 46320
Phone: (219)853.9474
Toll Free:1.800.USE.BIGD

GILBANE
University of Kentucky
Patient Care Facility
Gilbane Project No. 18-3966

REVIEWED

☐ 010-Huguelet ☒ 020-Garage
☐ 030-Infrastructure ☐ 040-PCF Foundation
☐ 050-PCF Core/Shell ☐ 060-TowerUp Fit

Bid Package No. 100
Submittal No. 100-05400-001
Spec. Sect/Para. —
Reviewed By RET
Date 10/13/2006

This review does not constitute nor does it assume design responsibility nor does it relieve the trade contractor's supplier from complying with the contract requirements, coordinating their work with other trade contractors and verifying field dimensions.

Gilbane

Transmittal

Project [2239.2] - PCF - Hospital - Garage

View Date 6/13/2007

Gilbane
940 Elizabeth St
Lexington, KY 40506-0293
Phone: (859) 257-4536
Fax: (859) 323-1331

Transmittal No. 2239.2-00934

To	Mr. Doug Sherwood E. C. Matthews Co., Inc. 2265 Harrodsburg Road Lexington, KY 40504 USA Phone: (859) 278-3131 Fax: (859) 277-7903	**Date**	6/13/2007
		Items listed are being sent	
		☑ Enclosed	
		☐ Under Separate Cover	
		Via	Hand Delivered
		CSI Code	05400 - Cold-Formed Metal Framing
From	Mr. Brian Hoerr (Gilbane)		
Subject	Submittal Package 100-05400-002.1.0		

We are transmitting the following to you:

☐ Product Data ☐ Samples ☐ Shop Drawings ☐ O&M Manuals ☐ Plans
☐ Architectural Drawings ☐ Letters ☐ Specifications ☐ Prints ☐ Addenda
☐ Engineering Drawings ☐ Change Orders ☑ Submittal

Submittals

Pkg. No./Rev.	Item No./Rev.	Description	Copies	Reason	Action
100-05400-002.1.0	100-05400-002.1.0	Revised Cold Formed Metal Framing Shop DrawingsN	2	Approved as Submitted	

Remarks Pleaase see the remark on the GBBN transmittmital. Please follow up with verification. Thank you.

	Mr. Brian Hoerr	6/13/2007
From	Printed Name	Date
Received By	Printed Name	Date

Linked Documents

Document Type	Document	Open	Description	Date
Sub. Pkg.	100-05400-002.1.0			

Distribution

Recipient	Company	Method	Date
Doug Sherwood	E. C. Matthews Co., Inc.	Message	6/13/2007

Transmittal

Project [2239.2] - PCF - Hospital - Garage **View Date** 6/12/2007

GBBN Architects, Inc.
332 East Eighth St
Cincinnati, OH 45202-2217
Phone: (513) 241-8700
Fax: (513) 241-8873

Transmittal No. 2239.2-00928

To Mr. Brian Hoerr Gilbane 940 Elizabeth St Lexington, KY 40506-0293 USA Phone: (859) 257-4536 Fax: (859) 323-1331	**Date** 6/12/2007 RECEIVED **Items listed are being sent** ☐ Enclosed JUN 12 2007 ☐ Under Separate Cover GILBANE #3966 **Via** Hand Delivered **CSI Code** 05400 - Cold-Formed Metal Framing
From Mr. Bryan Korb (GBBN Architects, Inc.)	
Subject Submittal Package 100-05400-002.1.0	

We are transmitting the following to you:

☑ Product Data ☐ Samples ☑ Shop Drawings ☐ O&M Manuals ☐ Plans
☐ Architectural Drawings ☐ Letters ☐ Specifications ☐ Prints ☐ Addenda
☐ Engineering Drawings ☐ Change Orders ☑ Submittal

Submittals

Pkg. No./Rev.	Item No./Rev.	Description	Copies	Reason	Action
100-05400-002.1.0	100-05400-002.1.0	Revised Cold Formed Metal Framing Shop DrawingsN	3	Approved as Submitted	

Remarks Brian

Please have the engineer verify the loads for the densglass and exterior metal panels where included in their calculations.

Received By Printed Name Date

Linked Documents

Document Type	Document	Open	Description	Date
Sub. Pkg.	100-05400-002.1.0			

Distribution

Recipient	Company	Method	Date

DIETRICH
DESIGN GROUP
A Worthington Industries Company

UK PATIENT CARE FACILITY: NEW GARAGE
LEXINGTON, KY
DATE: 05.11.07 Job# - 616972

Prepared For:
GRAYHAWK
LEXINGTON, KY

DIETRICH PRODUCTS LIST:

S975
S545
6" TSB 18ga., 33ksi
6" CSJ 18ga., 33ksi

1414 Field Street, Building C, Suite 1, Hammond, IN 46320
TEL 219.853.9474 FAX 219.932.4141 WEBSITE www.dietrichmetalframing.com

DIETRICH
METAL FRAMING
A Worthington Industries Company

Project Information:

Project Name:	UK PATIENT CARE FACILITY: NEW GARAGE
Project Number:	616972
Address:	
City:	LEXINGTON
State:	Kentucky

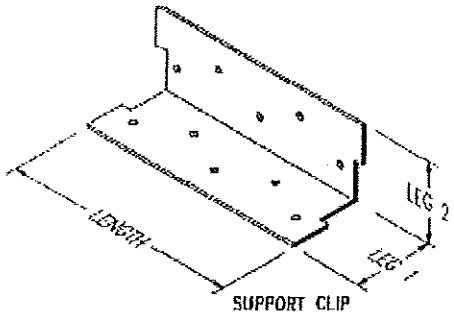
Contractor Information:

Company Name:	GRAYHAWK
Contact Name:	
Address:	
City: LEXINGTON, **State:** KY **Zip:** -	
Phone: **Fax:**	

Support Clip

Product Code: SP
Length: 5"
Leg1: 1-1/2"
Leg2: 1-1/2"
Yield Strength: 50
Gauge: 12
Design Thickness: 0.101"

SSMA Code: N/A
Weight/Piece: 0.43
Product Complies With:
ASTM C-654



SUPPORT CLIP

Dietrich Industries, Inc.
Corporate Headquarters
500 Grant Street/Suite 2226
Pittsburgh, PA 15219
Phone: (412)281-2805

Dietrich Design Group(North)
1414 Field Street Building C, Suite 1
Hammond, IN 46320
Phone: (800) 873-2443 or
(219) 853-9474
Fax:(219) 932-4141

Dietrich Design Group(West)
2262 Rutherford Road, Suite 104
Carlsbad, CA 92008
Phone: (800) 873-2443 or
(760) 931-0465
FAX: (760) 931-9824

Dietrich Design Group(South)
330 Greenwood Place
McDonough, GA 30253
Phone: (800) 873-2443 or
(678) 304-5525
Fax: (678) 304-5556

DIETRICH
METAL FRAMING
A Worthington Industries Company

Project Information:

Project Name:	UK PATIENT CARE FACILITY: NEW GARAGE
Project Number:	616972
Address:	
City:	LEXINGTON
State:	Kentucky

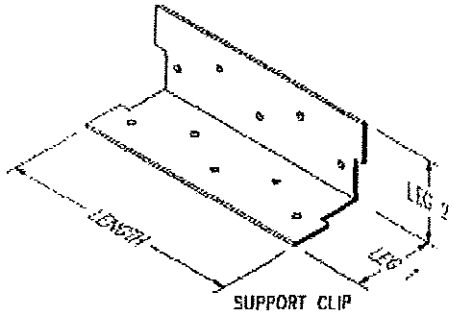
Contractor Information:

Company Name:	GRAYHAWK
Contact Name:	
Address:	
City: LEXINGTON, **State:** KY **Zip:** -	
Phone: **Fax:**	

Support Clip

Product Code: SP
Length: 5"
Leg1: 1-1/2"
Leg2: 1-1/2"
Yield Strength: 50
Gauge: 16
Design Thickness: 0.056"

SSMA Code: N/A
Weight/Piece: 0.21
Product Complies With:
ASTM C-654



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(678) 304-5525
Fax: (678) 304-5556

DIETRICH
METAL FRAMING
A Worthington Industries Company

Project Information:

Project Name:	UK PATIENT CARE FACILITY: NEW GARAGE
Project Number:	616972
Address:	
City:	LEXINGTON
State:	Kentucky

Contractor Information:

Company Name:	GRAYHAWK
Contact Name:	
Address:	
City: LEXINGTON, **State:** KY **Zip:** -	
Phone: **Fax:**	

Structural Track 1-1/4" Leg

Product Code: TSB
Depth: 6"
Leg Height: 1-1/4" Leg
Yield Strength: 33
Gauge: 18
Design Thickness: 0.0451"

SSMA Code: 600T125-43
Weight/Foot: 1.168
Product Complies With:
ASTM C-955
ASTM C-1007
ICBO 4782P*
See report for specific information.

Gross Section Properties

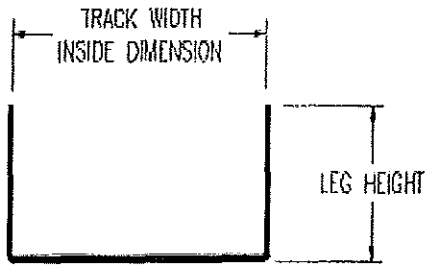
Area: 0.357 in.^2
Moment of inertia about x-x axis (Ix): 1.602 in.^4
Radius of gyration about x-x axis (Rx): 2.119 in.
Moment of inertia about y-y axis (Iy): 0.023 in.^4
Radius of gyration about y-y axis (Ry): 0.253 in.

Effective Section Properties

Fully Braced Allowable Moment (Mall): 9510 in/lbs.
Moment of Inertia about x-x axis (IxEff): 1.563 in.^4
Effective Section Modulus about x-x Axis (SxEff): 0.481 in.^3

Torsional Section Properties

Distance between shear center and centroid (Xo): -0.366 in.
St. Venant torsional constant (Jx1000): 0.241
Warping torsional constant (Cw): 0.161
Polar radius of gyration about principal axis (Ro): 2.165 in.
Beta Equals 1-(Xo/Ro)^2: 0.971



STRUCTURAL TRACK

Dietrich Industries, Inc.
Corporate Headquarters
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Phone: (412)281-2805

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(219) 853-9474
Fax:(219) 932-4141

Dietrich Design Group(West)
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Carlsbad, CA 92008
Phone: (800) 873-2443 or
(760) 931-0465
FAX: (760) 931-9824

Dietrich Design Group(South)
330 Greenwood Place
McDonough, GA 30253
Phone: (800) 873-2443 or
(678) 304-5525
Fax: (678) 304-5556

Product Specification

DIETRICH
METAL FRAMING
A Worthington Industries Company

Project Information:

Project Name:	UK PATIENT CARE FACILITY: NEW GARAGE
Project Number:	616972
Address:	
City:	LEXINGTON
State:	Kentucky

Contractor Information:

Company Name:	GRAYHAWK
Contact Name:	
Address:	
City: LEXINGTON, **State:** KY **Zip:** -	
Phone: **Fax:**	

Structural Stud

Product Code: CSJ
Depth: 6"
Flange: 1-5/8"
Lip: 1/2"
Yield Strength: 33
Gauge: 18
Design Thickness: 0.0451"

SSMA Code: 600S162-43
Weight/Foot: 1.461
Punched/Unpunched: P
Product Complies With:
A.I.S.I. Specification for the design of Cold-Formed Steel Structural Members
ASTM C-955
ASTM C-1007
ICBO 4784P*
See report for specific information.

Gross Section Properties

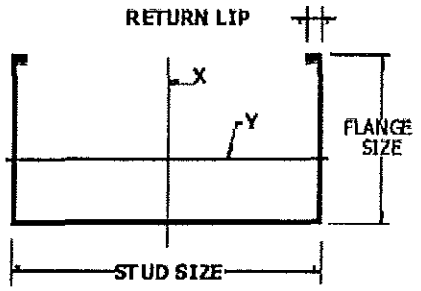
Area: 0.447 in.^2
Moment of Inertia about x-x axis (Ix): 2.316 In.^4
Radius of gyration about x-x axis (Rx): 2.277 In.
Moment of Inertia about y-y axis (Iy): 0.148In.^4
Radius of gyration about y-y axis (Ry): 0.577In.

Effective Section Properties

F[illegible] Braced Allowable Moment (Mall): 16764In/lbs.
M[illegible]ent of Inertia about x-x axis (IxEff): 2.316In.^4
Effective Section Modulus about x-x Axis (SxEff): 0.772In.^3

Torsional Section Properties

Distance between shear center and centroid (Xo): -1.08 In.
St. Venant torsional constant (Jx1000): 0.302
Warping torsional constant (Cw): 1.082
Polar radius of gyration about principal axis (Ro): 2.585In.
Beta Equals 1-(Xo/Ro)^2: 0.826



STRUCTURAL STUD

Dietrich Industries, Inc.
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500 Grant Street/Suite 2226
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Fax:(219) 932-4141

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McDonough, GA 30253
Phone: (800) 873-2443 or
(678) 304-5525
Fax: (678) 304-5556

DIETRICH
DESIGN GROUP
A Worthington Industries Company

SUBJECT_____

PROJECT NO. **61697**

SHEET NO. 1.0 OF

BY:BF DATE: 1/11/07

Revision: BIW - 5/11/07 - per Architect Review

TECHNICAL RECOMMENDATION FOR:

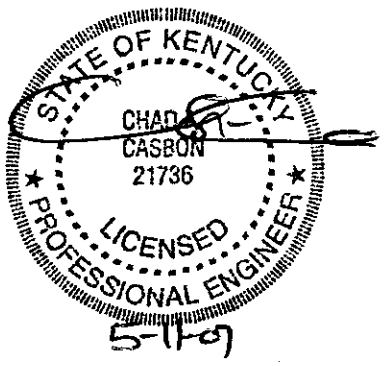
GRAYHAWK
2424 MERCHANT STREET
LEXINGTON, KY 40511

Attn: Kurt D. Stenzel

Phone: (859) 255-2754
Fax: (859) 259-0957

Project: UK Patient Care Facility : New Garage
Location: Lexington , KY

Table of Contents:



Note:

- Engineer of Record please verify design load and deflection criteria.
- The design criteria used in these calculations is based on the Kentucky Building Code 2002. Please notify us for revised calculations if your local code exceeds these design requirements.
- **TO BE APPROVED BY OWNER'S ARCHITECT OR ENGINEER OF RECORD**

DIETRICH
DESIGN GROUP
A Worthington Industries Company

SUBJECT_____

PROJECT NO.:_____

SHEET NO. 1 OF_____

BY_____DATE_____

1.00 GENERAL NOTES

1.01 Contents of this submittal show the intended application of cold formed framing components. Framing erector is to refer to the project contract documents for additional construction assembly requirements.

1.02 Dimensions shown herein have been determined per the contract documents and are for design reference only. All conditions shall be field verified prior to erection.

1.03 The contents of this submittal are subject to the review and approval of the Owner's Structural Engineer and Architect prior to erection. Material selections and connection details shown herein may differ from those shown in the contract documents. The framing erector shall await approval before framing materials are ordered.

1.04 Adequacy of the primary structure and foundation for loads imposed by the cold formed framing system is the responsibility of the Engineer of Record.

1.05 For specific requirements and warranty information on systems or materials connected and appurtenant to the cold-formed steel framing including windows, caulking and flashings, refer to manufacturer's data. It is the responsibility of others for the proper construction or function of the total architectural assembly.

1.06 Details of the wall finishes are for arrangement and reference. For specific requirements, methods, materials, and execution standards, refer to technical data from product manufacturer. In the event of conflict, manufacturer's instructions shall dictate.

1.07 Framing analysis assumes that the exterior cladding is attached to each stud and jamb. Framing analysis is limited to the uniform distribution of load to the studs and does not include review of the effects of local forces resulting from the attachment of exterior cladding (i.e. brick ties, attachment clips, etc.).

1.08 This submittal does not take precedence over the contract documents with regard to minimum yield strength, gauge, web depth, flange width or stud spacing, unless approved by the Engineer of Record.

1.09 It is the responsibility of others to verify that the strength and stiffness of bridging products not manufactured by Dietrich Metal Framing, Inc. are equivalent to Dietrich's standard u-channel bridging detail using clips and screws (Refer to page 15 of the Dietrich Curtain Wall/Light Gage Structural Framing Products Catalog).

1.10 The certifying light gauge steel engineer assumes no liability for failure resulting from incorrect application or installation of the steel framing system. Dietrich Metal Framing, Inc.' steel framing products must not be used in the design of a structure without complete and detailed evaluation to verify any particular product's suitability for use in any structure. This verification must be accomplished by the owner's architect or structural engineer.

1.11 The design of metal framing conditions not specifically shown on these drawings is the responsibility of others.

1.12 Construction loads have not been considered in this submittal.

1.13 It is the responsibility of others to coordinate the locations of finish system control joints with the metal framing slip connections.

2.00 INSTALLATION NOTES

2.01 All framing components shall be cut squarely for attachment to perpendicular members or as required on angular fit against abutting members. Members shall be held positively in place until properly fastened.

2.02 Temporary bracing shall be provided and remain in place until the structure is completely stabilized. Temporary bracing is the responsibility of others.

2.03 All field cutting of studs must be done by sawing or shearing. Torch cutting of cold formed members is unacceptable.

2.04 When required for bridging purposes, the framing fabricator is to ensure punch out alignment when assembling framing and field cutting studs to length. Refer to typical stud/track connection and indexing detail.

2.05 No splices in studs, joists, or other load carrying members may be made without prior engineering review and specific details for any such splice(s).

2.06 No notching or coping of studs, joists or rafters is allowed, unless stated within this drawing package.

2.07 Where splicing of wall track is necessary between studs, a piece of stud shall be placed in the adjoining track sections and fastened to the track flanges at both sides of the wall or the tracks shall be butted tight together and fastened to structure either side of the joint.

2.08 If additional holes are required in the metal studs or joists, contact a licensed professional engineer for guidance before cutting holes.

2.09 Mechanical bridging, spaced at the intervals described herein, shall be installed prior to the attachment of facing materials.

2.10 Installation of sheathing, wallboard or any other collateral material shall be performed in accordance with the product manufacturer's specifications, the current ASTM standard and/or guidelines outlined in the contract documents.

The certifying light gauge steel engineer assumes no liability for failure resulting from incorrect application or installation of the steel framing system. Dietrich Metal Framing, Inc.' steel framing products must not be used in the design of a structure without complete and detailed evaluation to verify any particular product's suitability for use in any structure. This verification must be accomplished by the owner's architect or structural engineer.

2.11 For all tracks used in composite members such as trusses, posts, headers and jambs, the track must be installed as a single piece; no splicing is permitted.

2.12 The maximum allowable gap (measured between the web of the stud and the web of the track) for a stud seated in a track in a non-axial load bearing condition is 1/8" U.N.O. It is recommended that this gap be eliminated in an axial load bearing condition by pre-loading the studs until they are fully seated in the track. Failure to do so could result in serviceability problems in the future.

2.13 Joist and/or roof framing must bear directly over studs. If not, a structural member (by others) is required on top of runner track for proper bearing and anchorage.

2.14 Responsibilities and norms of good practice for fabrication and installation of cold-formed steel structural framing shall be per the requirements of the A.I.S.I. "Code of Standard Practice for Cold-Formed Steel Structural Framing".

3.00 CONNECTION NOTES

3.01 If required, all welded connections are to be performed in accordance with AWS D1.3-81 "Specifications for Welding Sheet Steel in Structures". Consult AWS D19.0-72 "Welding Zinc Coated Steel" and ANSI standard Z49.1 for information regarding safe welding procedures. All welds are to be touched-up with a rust inhibitive galvanizing paint.

3.02 Suggested weld metal and process for shop welding are: 60ksi weld metal strength (minimum). Suggested methods for field welding: 1/8" (unless noted otherwise) E60XX (minimum) electrode - SMAW; or "gasless" MIG. Minimum weld throat thickness (t) must match or exceed the base steel thickness of the thinnest connected part unless noted otherwise.

3.03 All screws shall be of the diameter and size indicated on the drawings, and shall be those manufactured and tested by ITW Buildex or equivalent. A minimum 1/2 inch edge distance and 1/2 inch screw spacing is required, unless noted otherwise on the drawings. Screw penetration through joined materials shall not be less than three exposed threads. Select screws with an adequate cutting tip to accommodate the total thickness to be drilled. Drilling must be completed before the threads engage the material. Consult the contract documents for minimum coating requirements of screws. Where screw attachments are made to framing components of different thicknesses, the thinnest component must be penetrated first. Screw design is based on a type 'T3' screw. (unless noted otherwise)

3.04 All powder actuated fasteners (P.A.F.) shall be those as manufactured and tested by ITW Ramset/Red Head or equal. All pins subjected to tension shall have 15mm (minimum) diameter steel washers. The following minimum edge distances and fastener spacings apply:

Pin Diameter	Min. Edge Distance		Minimum Spacing		Penetration	
	Steel	Concrete	Steel	Concrete	Steel	Concrete
0.145 IN Ø	1/2"	3"	1-1/2"	3"	Full	Varies

Specify the following pin types when ordering:

For attachment to concrete:		For attachment to steel:	
0.145"Ø	1500 Series (Straight Shank Fasteners)	0.145"Ø	1500 Series (Knurled Straight Shank Fasteners)

3.05 All concrete screw fasteners shall be those as manufactured and tested by ITW Ramset/ Red Head (Tapcon) or equal. The following minimum edge distances and fastener spacings apply (unless specifically noted otherwise on drawings):

Diameter	Min. Edge Dist.	Min. Spacing
3/16" Ø	1-7/8"	2-1/4"
1/4" Ø	2-1/2"	3"

Min. Edge Distance = 10 x diameter; Min. Spacing = 12 x diameter.

3.06 The framing contractor may substitute fasteners of equivalent specifications and load carrying capacities. Prior to installation, the framing contractor is to submit the current product literature from the selected manufacturer for approval.

3.07 It is the responsibility of others to verify that fasteners are installed according to manufacturer's instructions. It is also the responsibility of others to verify/ensure the quality of fastener connections.

4.00 MATERIAL NOTES

4.01 Properties used in this submittal are those published by Dietrich Metal Framing, Inc. These properties meet or exceed SSMA properties. Therefore, no other manufacturer's material may be substituted.

4.02 All studs and joist members 16 gauge and heavier shall be formed from steel corresponding to a type listed in the A.I.S.I. "Specification for the Design of Cold-Formed Steel Structural Members", with a minimum yield strength of 33ksi unless specifically noted otherwise.

4.03 All 18 gauge and lighter members, all track, bridging, and accessory items shall be formed from steel "Specification for the Design of Cold-Formed Steel Structural Members", with a minimum yield strength of 33ksi unless specifically noted otherwise.

4.04 All framing products shall be formed from steel possessing a coating corresponding to the minimum requirements of ASTM C955.

4.05 When Dietrich Metal Framing, Inc. steel studs are to be used for a truss, mansard or header application, studs shall be unpunched through the stud web. It is the responsibility of the contractor to specify unpunched studs when ordering materials.

4.06 All slide clips, support clips and clip angles are 50ksi., unless noted otherwise.

5.00 DESIGN CRITERIA

5.01 Design Assumptions

Location: Lexington, KY **Building Code: Kentucky Building Code 2002**			
WIND LOAD PARAMETERS:		Deflection Criteria: L/240 – Wind Load	
Basic Wind Speed (V) =	90.00 mph		
Importance Factor (i) =	1.00	GRAVITY LOAD PARAMETERS:	
Mean Roof Height (h) =	66.00 ft	Wall Dead Load =	12.0psf
Exposure =	C		
Least Building Width =	244.47 ft		
Corner Zone Distance =	19.20		
WL(corner) =	35psf(min)		
WL(Typical) =	25psf(min)		
SEISMIC LOAD PARAMETERS :			
Ss	0.26		
S1	0.11		
Soil Site Class	C		
Seismic Use Group	I		
Seismic Design Category	B		

5.02 Design performed in accordance with the AISI "Specification for the Design of Cold Formed Steel Structural Members".

5.03 Conditions and or sections encircled thus ◯ require special review by the project architect and/or Structural engineer. Additional project detail information and verification of conditions are required.

5.04 Unless noted otherwise, gravity load of brick over windows is assumed to be supported by others. The cold-formed framing is not designed to support these loads.

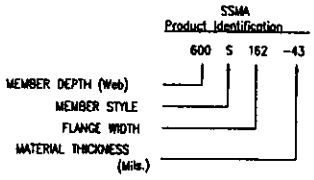
5.05 Spandrel wall studs framing above a window, and having connections to the top and bottom of the same beam, or having a single connection to a beam, and a kicker to another structural element, may require slip connections at the head of the window. In such situations, the engineer of record shall verify that the window system is designed accordingly.

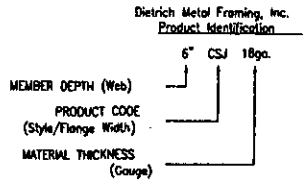
5.06 It is not the responsibility of the light gauge-framing designer to determine the necessity of slip/drift connections to allow for primary structure movement. If the contract documents do not indicate this requirement, the light gauge framing shop drawings will not include slip/drift connections.

5.07 Calculations and shop drawings included in this Technical Recommendation do not take into consideration the overall stability of structure. It is the responsibility of others to design the shear walls, diaphragm, and all relevant connections to complete the building stability load path.

6.00 PRODUCT IDENTIFICATION

6.01 Dietrich Metal Framing, Inc. product geometries meet or exceed the minimum proposed by the Steel Stud Manufacturers Association for industry standardization. For SSMA, Dietrich and Unimast comparison purposes, see tables below.





Member Depth (Web Size) Comparison Table

Member Depth	SSMA Identification	Dietrich Identification
6"	600	6"
3-5/8"	362	3-5/8"
12"	1200	12"

Material Thickness Comparison Table

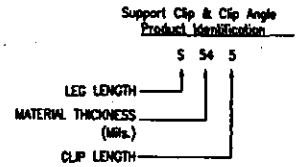
Mils	Gauge	Minimum Delivered Thickness	Design Thickness	Color Coding
33	20	0.0329"	0.0346"	White
43	18	0.0428"	0.0451"	Yellow
54	16	0.0538"	0.0566"	Green
68	14	0.0677"	0.0713"	Orange
97	12	0.0966"	0.1017"	Red

Product Section Comparison Table

Section	SSMA Identification	Dietrich Identification	Flange Width
S-Sections (Studs)	S137	CWN	1-3/8"
	S162	CSJ	1-5/8"
	S200	CSW	2"
	S250	CSE	2-1/2"
T-Sections (Tracks)	T125	TSB	1-1/4"
	T200	TSC	2"
	T300	TSE	3"
U-Sections (U-Channel)	075U50	CHN1	3/4"
	150U50	CHN2	1-1/2"
	200U50	CHN3	2"
	250U50	CHN4	2-1/2"
F-Sections (Furring Channel)	087F125	FCE	7/8"
	150F125	FCED	1-1/2"

6.02 The following registered trademarks used herein are owned by Dietrich Metal Framing:
TradeReady® Load Bearing Header (U.S. Patent No. 5,689,922 and other Patents Pending)
TradeReady® Floor System (U.S. Patent No. 6,301,854 and other Patents Pending)
TradeReady® Spazzer® Bar (U.S. Patent No. 5,784,850 and other Patents Pending)
FastClip®, FastStrut®, Fast Top Clip® and UniClip® (Patents Pending)

6.03 The following are examples of Dietrich Metal Framing, Inc. Connector identification used herein:



Support Clip Leg Lengths –
S = 1-1/2" x 1-1/2"
E = 1-1/2" x 4"

Clip Angle Leg Lengths –
U = 1-1/2" x 1-1/2"
X = 2" x 2"

All slide clips, support clips and clip angles are 50ksi., unless noted otherwise.

Allowable Weld/Screw Design Values (lb.)

Gage	Fy (ksi)	Welds		#10 Screws (.19" Dia.)				#12 Screws (.21" Dia.)				1/4" Dia. Screws			
					Pullover				Pullover				Pullover		
		Fillet	Flare Groove	Shear	1-Side	2-Side	Pullout	Shear	1-Side	2-Side	Pullout	Shear	1-Side	2-Side	Pullout
20	33	***	***	140	116	231	66	147	154	309	73	158	154	309	84
18	33	482	405	208	151	301	86	219	201	401	96	234	201	401	109
16	33	606	510	293	189	378	109	308	252	505	120	329	252	505	137
16	50	721	510	420	287	573	165	467	382	765	182	499	382	765	208
14	33	762	641	414	238	476	137	435	317	635	151	465	317	635	173
14	50	907	641	420	361	722	207	601	481	962	229	705	481	962	262
12	33	1087	915	420	340	680	195	601	453	906	216	781	453	906	246
12	50	1294	915	420	515	1030	296	601	686	1373	327	781	686	1373	373
10	33	1328	1118	420	415	830	238	601	553	1107	263	781	553	1107	301
10	50	1581	1118	420	629	1258	361	601	838	1677	399	781	838	1677	456

Gage	Fy (ksi)	#8 Screws (.16" Dia.)			
			Pullover		
		Shear	1-Side	2-Side	Pullout
20	33	129	77	154	56
18	33	191	100	201	73
16	33	289	126	252	91
16	50	300	191	382	139
14	33	300	159	317	115
14	50	300	241	481	174
12	33	300	227	453	164
12	50	300	343	686	249
10	33	300	277	553	201
10	50	300	419	838	304

Notes:

1) All values are calculated per the 1996 AISI Specification.
2) Weld strength is given in lb./in.
3) Weld strength is based on E60XX electrodes.
4) Shear strength for # 8, #10, #12, and 1/4" screws must be greater than or equal to 1000 lb., 1400 lb., 2000 lb., and 2600 lb. respectively.
5) The minimum head diameter for #8 screws is 1/4". The minimum head diameter for #10 screws is 3/8". The minimum head diameter for #12 and 1/4" screws is 1/2".

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DESIGN GROUP
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Allowable Bearing and Pullover Design Values For Kwik-Cons (Tapcons), PAF, and Bolts (lb.)

Gage	Mils	Fy (ksi)	Fu (ksi)	Bearing 0.145" Dia.	0.177" Dia.	3/16" Dia.	1/4" Dia.	3/8" Dia.	1/2" Dia.	5/8" Dia.	3/4" Dia.	7/8" Dia.	1" Dia.
25	18	33	45	111	135	143	170	192	229	286	343	401	458
22	27	33	45	166	203	215	287	384	427	430	516	602	688
20 DW	30	33	45	183	223	237	315	441	504	524	568	662	757
20 STR	33	33	45	203	248	263	351	511	598	641	643	736	842
18	43	33	45	265	323	342	456	684	879	993	1065	1095	1095
16	54	33	45	333	406	430	573	860	1147	1384	1534	1642	1708
		50	65	480	586	621	828	1242	1656	1999	2216	2372	2467
14	68	33	45	418	511	541	722	1082	1443	1804	2127	2334	2498
		50	65	604	738	782	1042	1563	2084	2606	3072	3371	3609
12	97	33	45	597	729	772	1030	1544	2059	2574	3089	3603	4118
		50	65	863	1053	1115	1487	2231	2974	3718	4461	5205	5949
10	118	33	45	729	890	943	1258	1886	2515	3144	3773	4402	5031
		50	65	1054	1286	1362	1817	2725	3633	4541	5450	6358	7266

Gage	Mils	Fy (ksi)	Fu (ksi)	Pullover: PAF No Washer 1 side	PAF No Washer 2 side	PAF With Washer 1 Side	PAF With Washer 2 Side	Tapcons & Kwik-Cons 1 Side	Tapcons & Kwik-Cons 2 Side	8olts w/ No Washer 1/4" Dia. 1 side	1/4" Dia. 2 side	3/8" Dia. 1 side	3/8" Dia. 2 side	1/2" Dia. 1 side	1/2" Dia. 2 side	5/8" Dia. 1 side	5/8" Dia. 2 side	3/4" Dia. 1 side	3/4" Dia. 2 side	7/8" Dia. 1 side	7/8" Dia. 2 side	1" Dia. 1 side	1" Dia. 2 side
25	18	33	45	53	106	106	212	79	159	93	185	119	238	159	318	199	397	238	477	278	556	318	636
22	27	33	45	80	159	159	319	119	239	139	279	179	358	239	478	299	597	358	717	418	836	478	956
20 DW	30	33	45	88	175	175	351	131	263	153	307	197	394	263	526	329	657	394	789	460	920	526	1052
20 STR	33	33	45	97	195	195	390	146	292	170	341	219	438	292	584	365	731	438	877	511	1023	584	1169
18	43	33	45	127	253	253	507	190	380	222	443	285	570	380	760	475	950	570	1140	665	1330	760	1521
16	54	33	45	159	319	319	637	239	478	279	557	358	717	478	956	597	1195	717	1433	836	1672	956	1911
		50	65	230	460	460	920	345	690	403	805	518	1035	690	1380	863	1725	1035	2071	1208	2416	1380	2761
14	68	33	45	200	401	401	802	301	601	351	701	451	902	601	1203	752	1503	902	1804	1052	2104	1203	2405
		50	65	290	579	579	1158	434	869	507	1013	651	1303	869	1737	1086	2171	1303	2606	1520	3040	1737	3474
12	97	33	45	286	572	572	1144	429	858	500	1001	643	1287	858	1718	1072	2145	1287	2574	1501	3003	1716	3432
		50	65	413	828	826	1652	620	1239	723	1446	929	1859	1239	2479	1549	3098	1859	3718	2169	4337	2479	4957
10	116	33	45	349	699	699	1397	524	1048	611	1223	786	1572	1048	2096	1310	2620	1572	3144	1834	3666	2096	4192
		50	65	505	1009	1009	2018	757	1514	883	1786	1135	2271	1514	3028	1692	3785	2271	4541	2649	5298	3028	6055

Notes:

1) All values are calculated per the AISI NASPEC 2001.

2) The minimum PAF washer diameter is 15mm. The minimum PAF head diameter is 1/4". The minimum Kwik-Con head diameter is 3/8". Bolt Diamters are standard given on page 4-143 of the AISC ASD Steel Construction Manual 9th ed.

3) The tabulated values must be checked against the manufacturer's design values for shear and tension.

DIETRICH DESIGN GROUP
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SUBJECT ITW RAMSET/ RED HEAD PAF(s) INTO STEEL

PROJECT NO. _____

SHEET NO. 2-2 OF _____

BY _____ DATE _____

Performance Tables

STEEL Allowable Working Values

INSTALLED IN A36 STRUCTURAL STEEL
STEEL THICKNESS IN. (mm)

PART NUMBER SERIES	SHANK DIA. IN. (mm)	TYPE OF SHANK	3/16 (4.76)		1/4 (6.35)		3/8 (9.53)		1/2 (12.7)		3/4 (19.1)	
			TENSION Lbs. (kN)	SHEAR Lbs.(kN)	TENSION Lbs. (kN)	SHEAR Lbs.(kN)	TENSION Lbs. (kN)	SHEAR Lbs.(kN)	TENSION Lbs. (kN)	SHEAR Lbs.(kN)	TENSION Lbs. (kN)	SHEAR Lbs.(kN)
1500/ 1600 Series	0.145 (3.7)	smooth	89 (0.40)	408 (1.82)	208 (0.93)	313 (1.39)	434 (1.93)	534 (2.38)	266 (1.18)[7]	303 (1.35)[7]	-- --	-- --
		knurled	327 (1.46)	703 (3.13)	677 (3.01)	784 (3.40)	751 (3.34)	806 (3.59)	280 (1.25)[7]	324 (1.44)[7]	-- --	-- --
SP Series	0.150 (3.8)	smooth	421 (1.87)	724 (3.22)	510 (2.27)	547 (2.43)	429 (1.91)	627 (2.79)	1036 (4.61)	653 (2.91)	249 (1.11)[7]	379 (1.69)[7]
3300 Series	0.180 (4.6)	smooth	307 (1.37)	634 (2.82)	442 (1.98)	581 (2.59)	503 (2.24)	503 (2.24)	700 (3.12)	748 (3.33)	-- --	-- --
9100 Series	0.205 (5.2)	knurled	175 (0.78)	1017 (4.53)	401 (1.79)	708 (3.15)	921 (4.10)	878 (3.91)	617 (2.75)[8]	598 (2.66)[8]	-- --	-- --

STEEL Allowable Working Values

INSTALLED IN A572 STRUCTURAL STEEL
STEEL THICKNESS IN. (mm)

PART NUMBER SERIES	SHANK DIA. IN. (mm)	TYPE OF SHANK	3/16 (4.76)		1/4 (6.35)		3/8 (9.53)		1/2 (12.7)		3/4 (19.1)	
			TENSION Lbs. (kN)	SHEAR Lbs.(kN)	TENSION Lbs. (kN)	SHEAR Lbs.(kN)	TENSION Lbs. (kN)	SHEAR Lbs.(kN)	TENSION Lbs. (kN)	SHEAR Lbs.(kN)	TENSION Lbs. (kN)	SHEAR Lbs.(kN)
1500/ 1600 Series	0.145 (3.7)	knurled	313 (1.39)	602 (2.68)	682 (3.04)	854 (3.80)	442 (1.97)[6]	686 (3.05)[6]	-- --	-- --	-- --	-- --
SP Series	0.150 (3.8)	smooth	425 (1.89)	679 (3.02)	646 (2.88)	742 (3.3)	689 (3.07)	687 (3.06)	895 (3.98)[8]	901 (4.01)[8]	273 (1.22)[7]	428 (1.91)[7]
9100 Series	0.205 (5.2)	knurled	435 (1.94)	1077 (4.8)	812 (3.61)	1057 (4.71)	177 (0.78)[6]	429 (1.91)[6]	-- --	-- --	- --	-- --

Note 1: Testing conducted in accordance with ICBO AC70 & ASTM E1190.
Note 2: Safety factors are based on coefficient of variation. In accordance with ICBO AC70, the safety factor will be no less than 5.
Note 3: Cyclic, fatigue, shock loads and other design criteria may require a different safety factor.
Note 4: Job site testing may be required to determine actual job site values.
Note 5: Values shown are for fastenings that have the entire pointed end of the fastener driven through the steel plate; except as noted below.
Note 6: Fastener penetration is 3/8" minimum
Note 7: Fastener penetration is 7/16" minimum
Note 8: Fastener penetration is 1/2" minimum
Note 9: The above data has been submitted to ICBO.

Performance Tables

CONCRETE Allowable Working Values

	INSTALLED IN STONE AGGREGATE CONCRETE CONCRETE COMPRESSIVE STRENGTH PSI (MPa)								
	PART NUMBER SERIES	SHANK DIAMETER IN. (mm)	MINIMUM PENETRATION IN. (mm)	*2000 PSI (13.8 MPa)*		*4000 PSI (27.6 MPa)*		*6000 PSI (41.4 MPa)*	
				TENSION Lbs. (kN)	SHEAR Lbs.(kN)	TENSION Lbs. (kN)	SHEAR Lbs.(kN)	TENSION Lbs. (kN)	SHEAR Lbs.(kN)
	1500/1600 Series	0.145 (3.7)	3/4 (19.1) 1 (25.4) 1-1/4 (31.8) 1-1/2 (38.1)	50 (0.22) 152 (0.67) 159 (0.70) 154 (0.68)	66 (0.29) 166 (0.74) 265 (1.18) 340 (1.15)	100 (0.44) 157 (0.70) 179 (0.80) 209 (0.93)	104 (0.46) 182 (0.81) 267 (1.19) 342 (1.52)	-- -- -- -- -- -- -- --	-- -- -- -- -- -- -- --
	SP	0.150 (3.8)	3/4 (19.1)	-- --	-- --	150 (0.67)	150 (0.67)	91 (0.36)	82 (0.37)
	SP Series	0.150/.180 (3.8/4.6)	1 (25.4) 1-1/4 (31.8) 1-1/2 (38.1)	154 (.089) 207 (0.92) -- --	200 (.089) 230 (1.02) -- --	243 (1.08) 298 (1.32) 384 (1.71)	175 (0.78) 218 (0.97) 391 (1.74)	189 (.084) 213 (.095) 239 (1.06)	210 (.093) 305 (1.36) 594 (2.64)
	3300 Series	0.180 (4.6)	1 (25.4) 1-1/4 (31.8) 1-1/2 (38.1)	198 (0.87) 241 (1.07) 254 (1.13)	100 (0.44) 329 (1.46) 379 (1.68)	255 (1.13) 294 (1.31) 419 (1.86)	284 (1.26) 373 (1.66) 501 (2.23)	-- -- -- -- -- --	-- -- -- -- -- --
	1900	0.145 (3.7)	3/4 (19.1)	105 (.047)	71 (0.32)	101 (0.45)	99 (.044)	-- --	-- --
	9100 Stud	0.205 (5.2)	1 (25.4) 1-1/4 (31.8)	187 (0.83) 262 (1.16)	212 (0.94) 304 (1.35)	186 (0.83) 335 (1.49)	303 (1.35 400 (1.78)	-- -- -- --	-- -- -- --

Note 1: Testing conducted in accordance with ICBO AC70 & ASTM E1190.
Note 2: Safety factors are based on coefficient of variation. In accordance with ICBO AC70, the safety factor will be no less than 5.
Note 3: Values shown in concrete are for fastener only. Connected members must be investigated separately.
Note 4: Cyclic, fatigue, shock loads and other design criteria may require a different safety factor.
Note 5: Job-site testing may be required to determine actual job site values.
Note 6: Minimum edge distance is 3 inches unless otherwise approved
Note 7: The above data has been submitted to ICBO.

PERFORMANCE TABLE

Tapcon Anchors — *Ultimate Shear and Tension Values (Lbs/kN) in Concrete*

ANCHOR DIA. In. (mm)	MIN. DEPTH OF EMBEDMENT In. (mm)	f'c = 2000 PSI (13.8 MPa)		f'c = 3000 PSI (20.7 MPa)		f'c = 4000 PSI (27.6 MPa)		f'c = 5000 PSI (34.5 MPa)	
		TENSION Lbs. (kN)	SHEAR Lbs. (kN)	TENSION Lbs. (kN)	SHEAR Lbs. (kN)	TENSION Lbs. (kN)	SHEAR Lbs. (kN)	TENSION Lbs. (kN)	SHEAR Lbs. (kN)
3/16 (4.8)	1 (25.4)	240 (1.1)	740 (3.3)	320 (1.4)	840 (3.7)	400 (1.8)	840 (3.7)	440 (2.0)	860 (3.8)
	1-1/4 (31.8)	440 (2.0)	780 (3.5)	560 (2.5)	840 (3.7)	600 (2.7)	840 (3.7)	640 (2.8)	860 (3.8)
	1-1/2 (38.1)	640 (2.8)	820 (3.6)	640 (3.7)	860 (3.8)	880 (3.9)	880 (3.9)	920 (4.1)	900 (4.0)
	1-3/4 (44.5)	760 (3.4)	920 (4.1)	1,040 (4.6)	1,020 (4.5)	1,120 (5.0)	1,020 (4.5)	1,240 (5.5)	1,020 (4.5)
1/4 (6.4)	1 (25.4)	520 (2.3)	1,120 (5.0)	720 (3.2)	1,460 (6.5)	800 (3.6)	1,560 (6.9)	920 (4.1)	1,660 (7.4)
	1-1/4 (31.8)	840 (3.7)	1,280 (5.7)	1,120 (5.0)	1,600 (7.1)	1,240 (5.5)	1,660 (7.4)	1,400 (6.2)	1,740 (7.7)
	1-1/2 (38.1)	1,120 (5.0)	1,280 (5.7)	1,520 (6.8)	1,620 (7.2)	1,600 (7.1)	1,680 (7.5)	1,680 (7.5)	1,760 (7.8)
	1-3/4 (44.5)	1,320 (5.9)	1,500 (6.7)	1,840 (8.2)	2,140 (9.5)	2,040 (9.1)	2,160 (9.6)	2,240 (10.0)	2,200 (9.8)

Safe working loads for single installation under static loading should not exceed 25% of the ultimate load capacity.
The tabulated values are for anchors installed in a minimum of 12 diameters on center and a minimum edge distance of 10 diameters for 100 percent anchor efficiency.

PERFORMANCE TABLE

Tapcon Anchors — *Ultimate Tension Value (Lbs/kN) in Hollow Block*

ANCHOR DIA. In. (mm)	DEPTH OF EMBEDMENT IN SOLID MATERIAL In. (mm)			
	1" (25.4) Lbs. (kN)	1-1/4" (31.8) Lbs. (kN)	1-1/2" (38.1) Lbs. (kN)	1-3/4" (44.5) Lbs. (kN)
3/16 (4.8)	209 (0.8)	357 (1.8)	468 (2.1)	547 (2.4)
1/4 (6.4)	406 (1.8)	615 (2.7)	851 (3.8)	984 (4.4)

Safe working loads for single installation under static loading should not exceed 25% of the ultimate load capacity.

PERFORMANCE TABLE

Tapcon Anchors — *Ultimate Shear Strength*

ANCHOR DIA. In. (mm)	ANCHOR EMBEDMENT In. (mm)	SHEAR STRENGTH LIGHTWEIGHT HOLLOW BLOCK Lbs. (kN)
3/16 (4.8)	1-1/4 (31.8)	731 (3.3)
1/4 (6.4)	1-1/4 (31.8)	1,059 (4.7)

Safe working loads for single installation under static loading should not exceed 25% of the ultimate load capacity.

3.1

LOAD CONDITION: IBC00Dead

Building Code: IBC 00
Load Type: Dead
Description: default
Type: Generic

Dead Load Items

Item Description	User-defined	Unit Load (psf)	Multiplier	Dead Load (psf)
Gypsum board, per 1/8"	No	0.55	5.00	2.75
Gypsum board, per 1/8"	No	0.55	5.00	2.75
Insulation, batt., per inch	No	0.10	6.00	0.60
Self Weight	Yes	2.00	1.00	2.00
Misc.	Yes	3.90	1.00	3.90
			Total dead load:	**12.00**

3,2

LOAD CONDITION: IBC00Wind

Building Code: IBC 00
Load Type: Wind
Description: default
Type: Generic

IBC00 DESIGN WIND LOADS COMPONENTS and CLADDING

Buildings with Mean Height <= 60'

ANALYSIS CRITERIA:

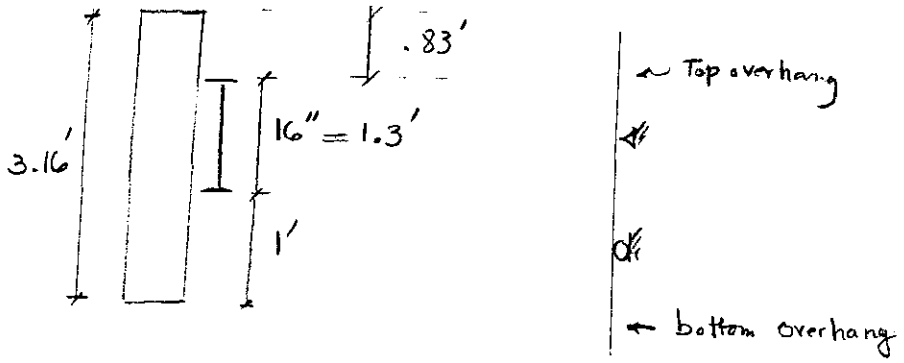
Basic Wind Speed (V) =	90.00 mph	Mean Roof Height (h) =	66.00 ft
Exposure =	C	Internal Coefficients (GCpi) =	+0.18, -0.18
Importance Factor (I) =	1.00	Least Building Width (Wb) =	244.47 ft
Corner Distance (a) =	24.45 ft	Topographic Factor (Kzt) =	1.00
Directionality Factor (Kd) =	0.85		

DIETRICH
DESIGN GROUP
A Worthington Industries Company

SUBJECT CANOPY FASCIA

PROJECT NO. _____
SHEET NO. 4.1 OF _____
BY _____ DATE _____

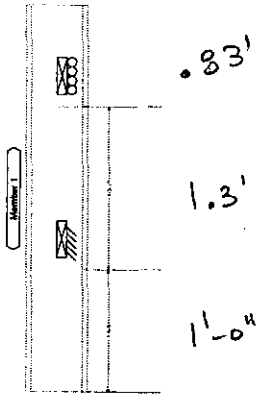
7/A301



COMPONENT ANALYSIS - 7/A301 Fascia @ 16 in. o.c.

MEMBER SIZING

Section Diagram



MEMBER LOADS:

Values in pounds and feet

Case	Member	Load Type	Direction	W1	W2	L1	L2
DL	Member 1	Uniform Area	Global FY	-12.00	-12.00	0.00	1.00

ANALYTICAL MEMBER LOADS:

Values in pounds and feet

Case	Anal. Mbr.	Load Type	Direction	W1	W2	L1	L2
WL(negx)(-)(t	AM03	Uniform Area	Local FY	31.32	31.32	0.00	1.00
WL(negx)(-)(t	AM02	Uniform Area	Local FY	31.32	31.32	0.00	1.00
WL(negx)(-)(t	AM01	Uniform Area	Local FY	31.32	31.32	0.00	1.00
WL(posx)(+)(	AM01	Uniform Area	Local FY	-31.32	-31.32	0.00	1.00
WL(posx)(+)(	AM02	Uniform Area	Local FY	-31.32	-31.32	0.00	1.00
WL(posx)(+)(	AM03	Uniform Area	Local FY	-31.32	-31.32	0.00	1.00
WL(ip)(c&c	AM01	Uniform Area	Local FY	3.68	3.68	0.00	1.00
WL(ip)(c&c	AM02	Uniform Area	Local FY	3.68	3.68	0.00	1.00
WL(ip)(c&c	AM03	Uniform Area	Local FY	3.68	3.68	0.00	1.00
WL(is)(c&c	AM01	Uniform Area	Local FY	-3.68	-3.68	0.00	1.00
WL(is)(c&c	AM02	Uniform Area	Local FY	-3.68	-3.68	0.00	1.00
WL(is)(c&c	AM03	Uniform Area	Local FY	-3.68	-3.68	0.00	1.00

LOAD COMBINATIONS:

Combo	Reference	Load Cases	Stress Increase	Deflection Criteria
dl_ax_cc4_ip	dii	1.00 DL + 1.00 AX+ 1.00	yes	L/360
dl_ax_cc1_is	dii	1.00 DL + 1.00 AX+ 1.00	yes	L/360
dl_ax	dii	1.00 DL + 1.00 AX	no	N/A

MAXIMUM FORCES:

Combo	Axial (lb)	Ecc Mom (in-lb)	Shear (lb)	Pos	Moment (in-lb)	Pos	Deflection (in)	Pos
dl_ax_cc4_ip	34.56	0.00	46.67	0.32	280.00	0.32	0.0004	0.00
dl_ax_cc1_is	34.56	0.00	-46.67	0.32	-280.00	0.32	-0.0004	0.00
dl_ax	34.56	0.00	0.00	0.00	0.00	0.00	0	0.00

REACTIONS:

Joint	Combo	fx (lb)	fy (lb)	mz (in-lb)	Resultant (lb)
2	dl_ax_cc4_ip	83.16	50.56	0.00	97.32
2	dl_ax_cc1_is	-83.16	50.56	0.00	97.32
2	dl_ax	0.00	50.56	0.00	50.56
3	dl_ax_cc4_ip	64.31	0.00	0.00	64.31
3	dl_ax_cc1_is	-64.31	0.00	-0.00	64.31

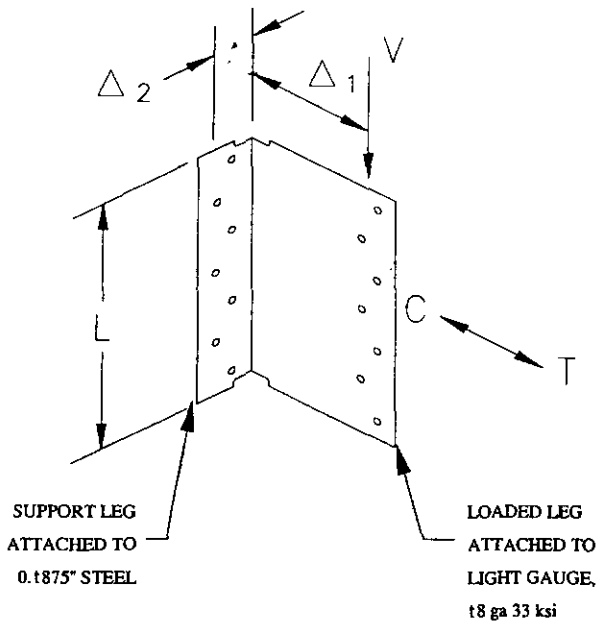
4.3

3	dl_ax	0.00	0.00	0.00	0.00

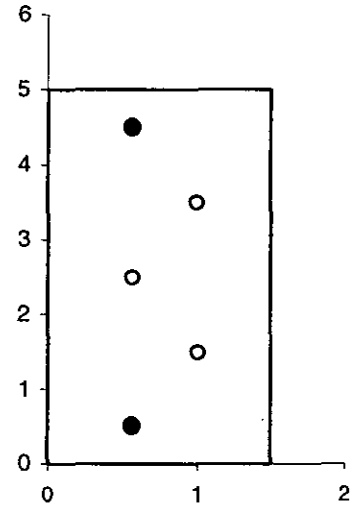
Use:

6" CSJ 18 33 ksi @ 16" o.c.
Ireq = 0.01 in^4, Iactual = 2.32 in^4, Mall = 16764 in-lb,Vall Solid = 1322 lb, Vall Knockout = 959 lb

Job Name:	Section Callout: 7/A301	Engineer:	of
			4.4



LOADED LEG SCREW PATTERN



Clip Width	Clip Type	Clip Gauge	Clip Fy	Clip Length	Δ_1	Δ_2	Loaded Leg Screw	Support Leg Screw
1 1/2" x 1 1/2"	Support Clip	16	50 ksi	5 in	1 In	0.75 in	(2) #10-16, T/3	2) 0.145 Ramset Knurle

Clip= 1 1/2" x 1 1/2" Support Clip 16 ga 50 ksi, L = 5"
Loaded Leg Fastener = (2) #10-16, T/3
Support Leg Fastener = (2) 0.145 Ramset Knurled

Attachment
Loaded Leg = 18 ga 33 ksi light gauge steel
Support Leg = 0.1875" steel

Screw Properties & Capacities
Loaded leg (Attached to 18 ga 33 ksi)
Type = #10-16, T/3
Dia. = 0.19 in
Shear = 263 lb (f.s. = 2.5)

Support Leg
Type = 0.145 Ramset Knurled
Dia. = 0.145 in
Head Dia. = 0.3 in
tsteel = 0.1875 in
Pin V = 764.3 lb (f.s. = 3.75)
Pin T = 1273.9 lb (f.s. = 3.75)
Pullout = 163.5 lb (f.s. = 10)
Pullover = 276.1 lb (f.s. = 3)
mset Shear = 351.5 lb (f.s. = 10)

Clip

	Actual	Allowable	Interaction	
Shear =	51	2843	0.02	<1
Tension =	83	267	0.31	<1
Comp =	0	1091	0.00	<1
V/T=	-	-	0.10	<1
V/C =	-	-	0.02	<1

Screw Loaded Leg (2 fasteners)

	Actual	Allowable	Interaction	
Shear/Rotation =	51	470	0.11	<1
Comp or Tens =	83	498*	0.17	<1
V/(C or T) =	-	-	0.23	<1

*Allowable reserve capacity of fastener group after shear is taken out.

Pin Supporting Leg (2 fasteners)

	Actual	Allowable	Interaction	
Pin Shear =	51	1529	0.03	<1
Pin Tension =	83	2548	0.03	<1
Pin V/T =	-	-	0.07	<1
Pullout =	83	327	0.25	<1
Pullover =	83	552	0.15	<1
Ramset Shear =	51	703	0.07	<1
Ramset V/Pullout =	-	-	0.33	<1
Bearing =	51	960.754737	0.0531	<1

Notes
1.) Screws in loaded leg shall be placed starting from the outside holes and alternating from top to bottom as shown in detail above.
3.) Buckling coefficient, K for calculating comp. capacity = 0.7.
4.) Tension capacity is calculated assuming leg of clip is subject to fixed-fixed bending.
5.) Clip tension capacity is dependent on weak axis bending due to Δ2. Factor of safety clip tension capacity = 1.33. Factor of safety clip compression capacity = 2.0. Factor of safety clip shear capacity = 2.0.
6.) Clip values are based on support clip manufactured by Dietrich Industries.
7.) The clip buckling lengths (Δ1 and Δ2) is the distance from the base of the clip to center of gravity of the screws.
8.) V, C, and T represent shear, compression and tension respectively.
9.) Refer to Ramset Fastening Systems 2002 Book(2002), Page 32.
10.) Minimum edge distance is 1/2".
11.) Minimum fastener spacing without reduction is 1-1/2".

DIETRICH DESIGN GROUP
A Worthington Industries Company

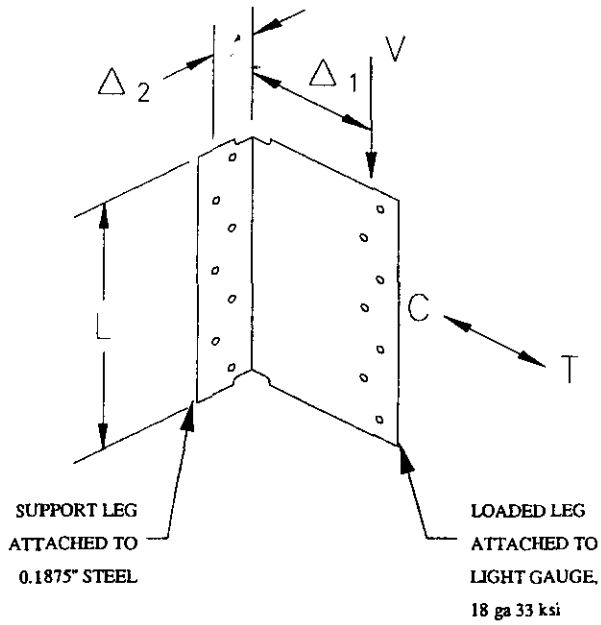
DIETRICH S545 WITH (2) #10-16, T/3 SCREWS TO STUD & (2) 0.145 Ramset Knurled PAFS TO 0.1875" STEEL

Load	
Shear:	51 lb
Tension:	83 lb
Compression:	0 lb
Stress Increase Allowed	
Shear:	no
Compression/Tension:	no

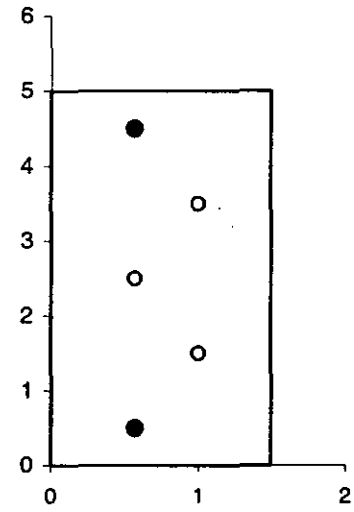
DATE: 5/10/2007 Time: 8:34 am

Job Name:	Section Callout: 7/A301	Engineer:	of

4.5



LOADED LEG SCREW PATTERN



Clip Width	Clip Type	Clip Gauge	Clip Fy	Clip Length	Δ_1	Δ_2	Loaded Leg Screw	Support Leg Screw
1 1/2" x 1 1/2"	Support Clip	16	50 ksi	5 in	1 in	0.75 in	(2) #10-16, T/3	2) 0.145 Ramset Knurle

Clip= 1 1/2" x 1 1/2" Support Clip 16 ga 50 ksi, L = 5"
Loaded Leg Fastener = (2) #10-16, T/3
Support Leg Fastener = (2) 0.145 Ramset Knurled

Attachment
Loaded Leg = 18 ga 33 ksi light gauge steel
Support Leg = 0.1875" steel

Screw Properties & Capacities

Loaded leg (Attached to 18 ga 33 ksi)
Type = #10-16, T/3
Dia. = 0.19 in
Shear = 263 lb (f.s. = 2.5)

Support Leg
Type = 0.145 Ramset Knurled
Dia. = 0.145 in
Head Dia. = 0.3 in
tsteel = 0.1875 in
Pin V = 764.3 lb (f.s. = 3.75)
Pin T = 1273.9 lb (f.s. = 3.75)
Pullout = 163.5 lb (f.s. = 10)
Pullover = 276.1 lb (f.s. = 3)
nset Shear = 351.5 lb (f.s. = 10)

Clip

	Actual	Allowable	Interaction
Shear =	0	2843	0.00 <1
Tension =	64	267	0.24 <1
Comp =	0	1091	0.00 <1
V/T =	-	-	0.06 <1
V/C =	-	-	0.00 <1

Screw Loaded Leg (2 fasteners)

	Actual	Allowable	Interaction
Shear/Rotation =	0	470	0.00 <1
Comp or Tens =	64	526*	0.12 <1
V/(C or T) =	-	-	0.12 <1

*Allowable reserve capacity of fastener group after shear is taken out.

Pin Supporting Leg (2 fasteners)

	Actual	Allowable	Interaction
Pin Shear =	0	1529	0.00 <1
Pin Tension =	64	2548	0.03 <1
Pin V/T =	-	-	0.03 <1
Pullout =	64	327	0.20 <1
Pullover =	64	552	0.12 <1
Ramset Shear =	0	703	0.00 <1
Ramset V/Pullout =	-	-	0.20 <1
Bearing =	0	960.754737	0 <1

Notes
1.) Screws in loaded leg shall be placed starting from the outside holes and alternating from top to bottom as shown in detail above.
3.) Buckling coefficient, K for calculating comp. capacity = 0.7.
4.) Tension capacity is calculated assuming leg of clip is subject to fixed-fixed bending.
5.) Clip tension capacity is dependent on weak axis bending due to Δ2. Factor of safety clip tension capacity = 1.33. Factor of safety clip compression capacity = 2.0. Factor of safety clip shear capacity = 2.0.
6.) Clip values are based on support clip manufactured by Dietrich Industries.
7.) The clip buckling lengths (Δ1 and Δ2) is the distance from the base of the clip to center of gravity of the screws.
8.) V, C, and T represent shear, compression and tension respectively.
9.) Refer to Ramset Fastening Systems 2002 Book(2002), Page 32.
10.) Minimum edge distance is 1/2".
11.) Minimum fastener spacing without reduction is 1-1/2".

DIETRICH DESIGN GROUP
A Worthington Industries Company

DIETRICH S545 WITH (2) #10-16, T/3 SCREWS TO STUD & (2) 0.145 Ramset Knurled PAFS TO 0.1875" STEEL

Load	
Shear:	0 lb
Tension:	64 lb
Compression:	0 lb
Stress Increase Allowed	
Shear:	no
Compression/Tension:	no

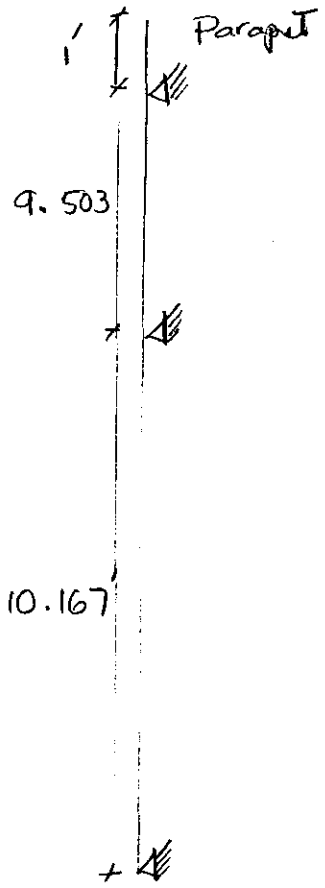
DATE: 5/10/2007 Time: 10:33 am

DIETRICH
DESIGN GROUP
A Worthington Industries Company

SUBJECT _____

PROJECT NO. _____
SHEET NO. 4.6 OF _____
BY _____ DATE _____

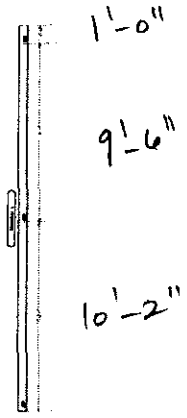
41 / A806 Full Height



COMPONENT ANALYSIS - Full Height 41/A806 @ 16 in. o.c.

MEMBER SIZING

Section Diagram



MEMBER LOADS:

Values in pounds and feet

Case	Member	Load Type	Direction	W1	W2	L1	L2
DL	Member 1	Uniform Area	Global FY	-12.00	-12.00	0.00	1.00

ANALYTICAL MEMBER LOADS:

Values in pounds and feet

Case	Anal. Mbr.	Load Type	Direction	W1	W2	L1	L2
WL(negx)(-)(ty	AM03	Uniform Area	Local FY	21.32	21.32	0.00	1.00
WL(negx)(-)(ty	AM02	Uniform Area	Local FY	21.32	21.32	0.00	1.00
WL(negx)(-)(ty	AM01	Uniform Area	Local FY	21.32	21.32	0.00	1.00
WL(posx)(+)(	AM01	Uniform Area	Local FY	-21.32	-21.32	0.00	1.00
WL(posx)(+)(	AM02	Uniform Area	Local FY	-21.32	-21.32	0.00	1.00
WL(posx)(+)(	AM03	Uniform Area	Local FY	-21.32	-21.32	0.00	1.00
WL(ip)(c&c	AM01	Uniform Area	Local FY	3.68	3.68	0.00	1.00
WL(ip)(c&c	AM02	Uniform Area	Local FY	3.68	3.68	0.00	1.00
WL(ip)(c&c	AM03	Uniform Area	Local FY	3.68	3.68	0.00	1.00
WL(is)(c&c	AM01	Uniform Area	Local FY	-3.68	-3.68	0.00	1.00
WL(is)(c&c	AM02	Uniform Area	Local FY	-3.68	-3.68	0.00	1.00
WL(is)(c&c	AM03	Uniform Area	Local FY	-3.68	-3.68	0.00	1.00

LOAD COMBINATIONS:

Combo	Reference	Load Cases	Stress Increase	Deflection Criteria
dl_ax_cc4_ip	dii	1.00 DL + 1.00 AX+ 1.00	yes	L/360
dl_ax_cc1_is	dii	1.00 DL + 1.00 AX+ 1.00	yes	L/360
dl_ax	dii	1.00 DL + 1.00 AX	no	N/A

MAXIMUM FORCES:

Combo	Axial (lb)	Ecc Mom (in-lb)	Shear (lb)	Pos	Moment (in-lb)	Pos	Deflection (in)	Pos
dl_ax_cc4_ip	330.72	0.00	208.83	0.49	4804.58	0.49	0.0533	0.22
dl_ax_cc1_is	330.72	0.00	-208.83	0.49	-4804.58	0.49	-0.0533	0.22
dl_ax	330.72	0.00	0.00	0.00	0.00	0.00	0	0.00

REACTIONS:

Joint	Combo	fx (lb)	fy (lb)	mz (in-lb)	Resultant (lb)
1	dl_ax_cc4_ip	130.07	330.72	0.00	355.38
1	dl_ax_cc1_is	-130.07	330.72	0.00	355.38
1	dl_ax	0.00	330.72	0.00	330.72
2	dl_ax_cc4_ip	407.59	0.00	-0.00	407.59
2	dl_ax_cc1_is	-407.59	0.00	0.00	407.59

4.8

2	dl_ax	0.00	0.00	0.00	0.00
3	dl_ax_cc4_ir	151.34	-0.00	0.00	151.34
3	dl_ax_cc1_is	-151.34	-0.00	-0.00	151.34
3	dl_ax	0.00	-0.00	0.00	0.00

Use:

6" CSJ 18 33 ksi @ 16" o.c.
Locate Bracing @ 0.24, 0.44, 0.63, 0.82
Ireq = 0.36 in^4, Iactual = 2.32 in^4, Mall = 16764 in-lb,Vall Solid = 1322 lb, Vall Knockout = 959 lb

COMPONENT ANALYSIS - Full Height 41/A806 @ 16 in. o.c.

SUPPLEMENTAL INFORMATION

SELECTIONS:

Size	Shape	Gage	Yield	WtWt	Stab(C5-1) Int	Str(C5-2) Int	Sh Mom Int	Deflection Int	Web Stiff
6	CSJ	18	33	1.46	0.35	0.32	0.13	0.16	No

(Mall = 16764 in-lb, Vsolid = 1322 lb, Vhole = 959 lb, Iactual = 2.32 in^4)

BRACING PARAMETERS:

Combo	Seg	Start (ft)	End (ft)	Cb	Cmx	Cmy	Axial KLx (in)	KLy (in)	KLt (in)	Moment KLy (in)	KLt (in)
dl_ax_cc4_ir	1	0.00	5.00	1.00	1.00	1.00	122.00	60.00	60.00	60.00	60.00
dl_ax_cc1_is	1	0.00	5.00	1.00	1.00	1.00	122.00	60.00	60.00	60.00	60.00
dl_ax	1	0.00	5.00	1.00	1.00	1.00	122.00	60.00	60.00	60.00	60.00
dl_ax_cc4_ir	2	5.00	9.00	1.00	1.00	1.00	122.00	48.00	48.00	48.00	48.00
dl_ax_cc1_is	2	5.00	9.00	1.00	1.00	1.00	122.00	48.00	48.00	48.00	48.00
dl_ax	2	5.00	9.00	1.00	1.00	1.00	122.00	48.00	48.00	48.00	48.00
dl_ax_cc4_ir	3	9.00	10.17	1.00	1.00	1.00	122.00	14.00	14.00	14.00	14.00
dl_ax_cc1_is	3	9.00	10.17	1.00	1.00	1.00	122.00	14.00	14.00	14.00	14.00
dl_ax	3	9.00	10.17	1.00	1.00	1.00	122.00	14.00	14.00	14.00	14.00
dl_ax_cc4_ir	4	10.17	13.00	1.00	1.00	1.00	114.04	34.00	34.00	34.00	34.00
dl_ax_cc1_is	4	10.17	13.00	1.00	1.00	1.00	114.04	34.00	34.00	34.00	34.00
dl_ax	4	10.17	13.00	1.00	1.00	1.00	114.04	34.00	34.00	34.00	34.00
dl_ax_cc4_ir	5	13.00	17.00	1.00	1.00	1.00	114.04	48.00	48.00	48.00	48.00
dl_ax_cc1_is	5	13.00	17.00	1.00	1.00	1.00	114.04	48.00	48.00	48.00	48.00
dl_ax	5	13.00	17.00	1.00	1.00	1.00	114.04	48.00	48.00	48.00	48.00
dl_ax_cc4_ir	6	17.00	19.67	1.00	1.00	1.00	114.04	32.04	32.04	32.04	32.04
dl_ax_cc1_is	6	17.00	19.67	1.00	1.00	1.00	114.04	32.04	32.04	32.04	32.04
dl_ax	6	17.00	19.67	1.00	1.00	1.00	114.04	32.04	32.04	32.04	32.04
dl_ax_cc4_ir	7	19.67	20.67	1.00	1.00	1.00	12.00	12.00	12.00	12.00	12.00
dl_ax_cc1_is	7	19.67	20.67	1.00	1.00	1.00	12.00	12.00	12.00	12.00	12.00
dl_ax	7	19.67	20.67	1.00	1.00	1.00	12.00	12.00	12.00	12.00	12.00

DEFLECTION CHECKS:

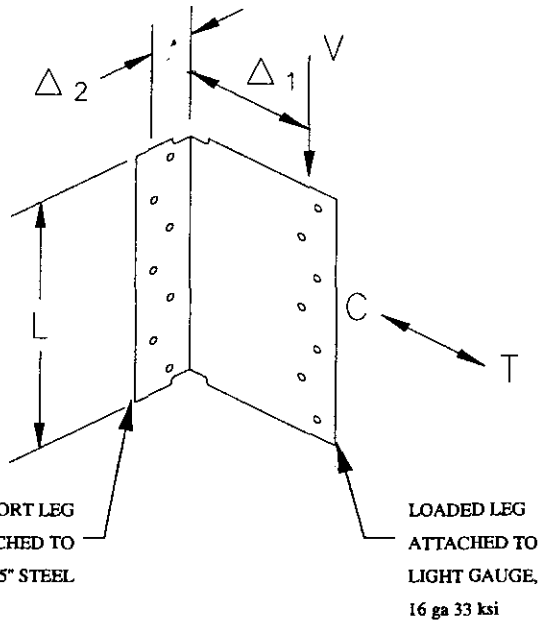
Combo	Pos	Type	Defl (in)	Length (F-I-S)	Dall (F-I-S)	Ireq (in^4)
dl_ax_cc4_ir	0.22	zero to zero	0.0533	10-2-0	0-0-5	0.3641
dl_ax_cc4_ir	0.51	zero to zero	0.0002	0-6-6	0-0-0	0.0233
dl_ax_cc4_ir	0.77	zero to zero	0.0316	8-11-9	0-0-4	0.2449
dl_ax_cc4_ir	0.77	overhang	0.0443	4-9-9	0-0-5	0.3204
dl_ax_cc1_is	0.22	zero to zero	0.0533	10-2-0	0-0-5	0.3641
dl_ax_cc1_is	0.51	zero to zero	0.0002	0-6-6	0-0-0	0.0233
dl_ax_cc1_is	0.77	zero to zero	0.0316	8-11-9	0-0-4	0.2449
dl_ax_cc1_is	0.77	overhang	0.0443	4-9-9	0-0-5	0.3204

WEB CRIPPLING:

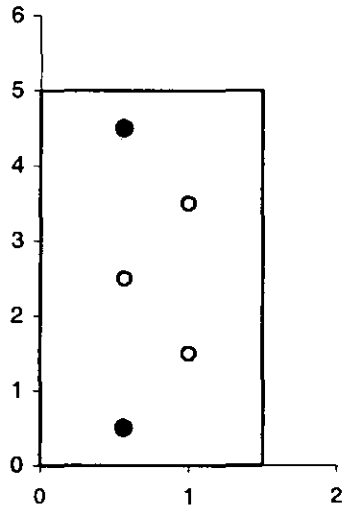
Pos	Combo	Applied	Mag (lb)	Bearing (F-I-S)	Type	Cond	All (lb)	Mom Int	Required
0.00	dl_ax_cc1_is	no	130.07	0-3-10	Single	1	463.169	0.28	no
0.49	dl_ax_cc1_is	no	407.59	0-3-10	Single	2	771.739	0.92	no
0.95	dl_ax_cc1_is	no	151.34	0-3-10	Single	2	771.739	0.25	no

Job Name:	Section Callout: 41/A806 Top	Engineer: BF	of

4.10



LOADED LEG SCREW PATTERN



Clip Width	Clip Type	Clip Gauge	Clip Fy	Clip Length	Δ_1	Δ_2	Loaded Leg Screw	Support Leg Screw
1 1/2" x 1 1/2"	Support Clip	16	50 ksi	5 in	1 in	0.75 in	(2) #10-16, T/3	Ramset Knurled .145

Clip= 1 1/2" x 1 1/2" Support Clip 16 ga 50 ksi, L = 5"
Loaded Leg Fastener = (2) #10-16, T/3
Support Leg Fastener = (2) Ramset Knurled .145 Pin

Attachment
Loaded Leg = 16 ga 33 ksi light gauge steel
Support Leg = 0.1875" steel

Screw Properties & Capacities
Loaded leg (Attached to 16 ga 33 ksi)
Type = #10-16, T/3
Dia. = 0.19 in
Shear = 293 lb (f.s. = 2.5)

Support Leg
Type = Ramset Knurled .145 Pin
Dia. = 0.145 in
Head Dia. = 0.3 in
tsteel = 0.1875 in
Pin V = 764.3 lb (f.s. = 3.75)
Pin T = 1273.9 lb (f.s. = 3.75)
Pullout = 163.5 lb (f.s. = 10)
Pullover = 276.1 lb (f.s. = 3)
mset Shear = 351.5 lb (f.s. = 10)

Clip

	Actual	Allowable	Interaction
Shear =	0	2843	0.00 <1
Tension =	151	267	0.56 <1
Comp =	151	1091	0.14 <1
V/T=	-	-	0.32 <1
V/C =	-	-	0.14 <1

Screw Loaded Leg (2 fasteners)

	Actual	Allowable	Interaction
Shear/Rotation =	0	524	0.00 <1
Comp or Tens =	151	586*	0.26 <1
V/(C or T) =	-	-	0.26 <1

*Allowable reserve capacity of fastener group after shear is taken out.

Pin Supporting Leg (2 fasteners)

	Actual	Allowable	Interaction
Pin Shear =	0	1529	0.00 <1
Pin Tension =	151	2548	0.06 <1
Pin V/T =	-	-	0.06 <1
Pullout =	151	327	0.46 <1
Pullover =	151	552	0.27 <1
Ramset Shear =	0	703	0.00 <1
Ramset V/Pullout =	-	-	0.46 <1
Bearing =	0	960.754737	0 <1

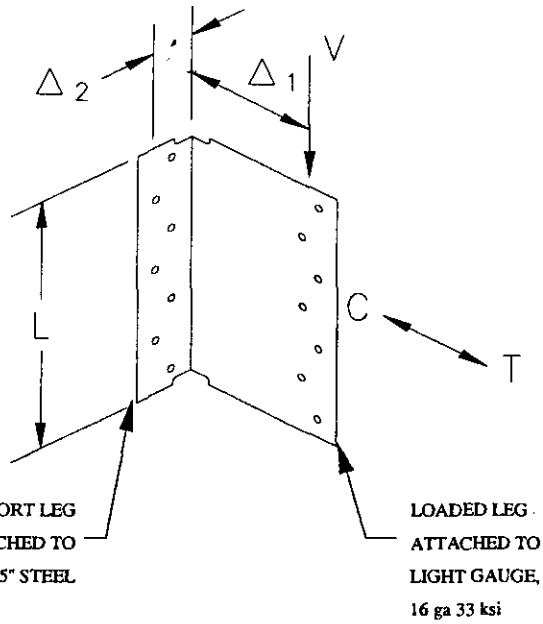
Notes
1.) Screws in loaded leg shall be placed starting from the outside holes and alternating from top to bottom as shown in detail above.
3.) Buckling coefficient, K for calculating comp. capacity = 0.7.
4.) Tension capacity is calculated assuming leg of clip is subject to fixed-fixed bending.
5.) Clip tension capacity is dependent on weak axis bending due to Δ2. Factor of safety clip tension capacity = 1.33. Factor of safety clip compression capacity = 2.0. Factor of safety clip shear capacity = 2.0.
6.) Clip values are based on support clip manufactured by Dietrich Industries.
7.) The clip buckling lengths (Δ1 and Δ2) is the distance from the base of the clip to center of gravity of the screws.
8.) V, C, and T represent shear, compression and tension respectively.
9.) Refer to Ramset Fastening Systems 2002 Book(2002), Page 32.
10.) Minimum edge distance is 1/2".
11.) Minimum fastener spacing without reduction is 1-1/2".

DIETRICH DESIGN GROUP
A Worthington Industries Company

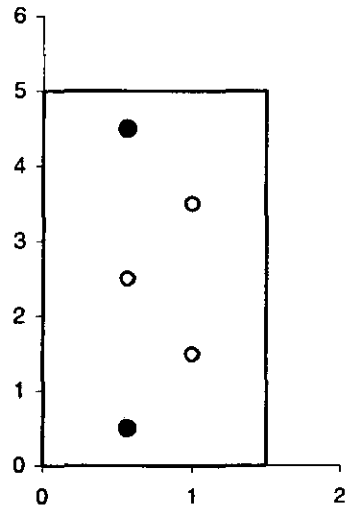
Load	
Shear:	0 lb
Tension:	151 lb
Compression:	151 lb
Stress Increase Allowed	
Shear:	no
Compression/Tension:	no

Job Name:	Section Callout: 41/A806 Mid -H	Engineer: BF	of

4.11



LOADED LEG SCREW PATTERN



Clip Width	Clip Type	Clip Gauge	Clip Fy	Clip Length	Δ_1	Δ_2	Loaded Leg Screw	Support Leg Screw
1 1/2" x 1 1/2"	Support Clip	14	50 ksi	5 in	1 in	0.75 in	(2) #10-16, T/3	Ramset Knurled .145

Clip= 1 1/2" x 1 1/2" Support Clip 14 ga 50 ksi, L = 5"
Loaded Leg Fastener = (2) #10-16, T/3
Support Leg Fastener = (3) Ramset Knurled .145 Pin

Attachment
Loaded Leg = 16 ga 33 ksi light gauge steel
Support Leg = 0.1875" steel

Screw Properties & Capacities
Loaded leg (Attached to 16 ga 33 ksi)
Type = #10-16, T/3
Dia. = 0.19 in
Shear = 293 lb (f.s. = 2.5)

Support Leg
Type = Ramset Knurled .145 Pin
Dia. = 0.145 in
Head Dia. = 0.3 in
tsteel = 0.1875 in
Pin V = 764.3 lb (f.s. = 3.75)
Pin T = 1273.9 lb (f.s. = 3.75)
Pullout = 163.5 lb (f.s. = 10)
Pullover = 347.4 lb (f.s. = 3)
mset Shear = 351.5 lb (f.s. = 10)

Clip

	Actual	Allowable	Interaction
Shear =	0	3581	0.00 <1
Tension =	408	423	0.96 <1
Comp =	408	1753	0.23 <1
V/T=	-	-	0.93 <1
V/C =	-	-	0.23 <1

Screw Loaded Leg (2 fasteners)

	Actual	Allowable	Interaction
Shear/Rotation =	0	524	0.00 <1
Comp or Tens =	408	586*	0.70 <1
V/(C or T) =	-	-	0.70 <1

*Allowable reserve capacity of fastener group after shear is taken out.

Pin Supporting Leg (3 fasteners)

	Actual	Allowable	Interaction
Pin Shear =	0	2293	0.00 <1
Pin Tension =	408	3822	0.11 <1
Pin V/T =	-	-	0.11 <1
Pullout =	408	491	0.83 <1
Pullover =	408	1042	0.39 <1
Ramset Shear =	0	1055	0.00 <1
Ramset V/Pullout =	-	-	0.83 <1
Bearing =	0	1813.46921	0 <1

Notes
1.) Screws in loaded leg shall be placed starting from the outside holes and alternating from top to bottom as shown in detail above.
3.) Buckling coefficient, K for calculating comp. capacity = 0.7.
4.) Tension capacity is calculated assuming leg of clip is subject to fixed-fixed bending.
5.) Clip tension capacity is dependent on weak axis bending due to Δ2. Factor of safety clip tension capacity = 1.33. Factor of safety clip compression capacity = 2.0. Factor of safety clip shear capacity = 2.0.
6.) Clip values are based on support clip manufactured by Dietrich Industries.
7.) The clip buckling lengths (Δ1 and Δ2) is the distance from the base of the clip to center of gravity of the screws.
8.) V, C, and T represent shear, compression and tension respectively.
9.) Refer to Ramset Fastening Systems 2002 Book(2002), Page 32.
10.) Minimum edge distance is 1/2".
11.) Minimum fastener spacing without reduction is 1-1/2".

DIETRICH DESIGN GROUP
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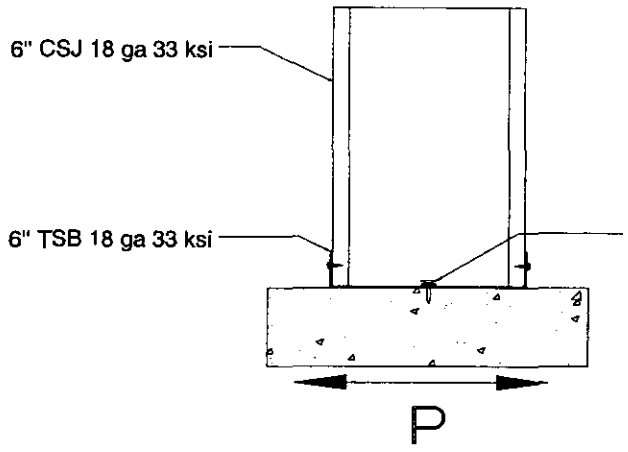
Load	
Shear:	0 lb
Tension:	408 lb
Compression:	408 lb
Stress Increase Allowed	
Shear:	no
Compression/Tension:	no

DIETRICH DESIGN GROUP
A Worthington Industries Company

SUBJECT STUD TO TRACK CONNECTION
DESIGN (RAMSET / RED HEAD)

FACILITY
SHEET NO. 4.12 OF
BY BF DATE 1/11/2007

Section: BT conn. 41/A806 Min 25psf WL



Fastener Description:
Brand = ITW Ramset / Red Head
Type = 1500,1600 Series
Description = Low Velocity Fasteners
Catalog Reference = Ramset Fastening Systems 2002
Dia. = 0.145 in
Embed = 1 in
f'c = 3000 psi
F.S. = 5

Check Shear and Bearing of Pin

P (per foot) =	98.25	plf	(P = 131 lbs)
Pa (Fastener) =	174.00	lbs.	
Pa (Bearing) =	264.57	lbs.	
Pa/P x 12 =	21.252	in.	
Fastener Spacing =	21	in.	USE: 16 in.

Check Web Crippling and Punch Through of Stud to Track Connection

Pa (Stud/Track) =	412.46	lbs.	(1 studs)
P/Pa =	0.32	< 1	

Use: 0.145" Dia. ITW Ramset / Red Head 1500,1600 Series into 3000 psi Concrete, Embed = 1" @ 16 (in.) o.c

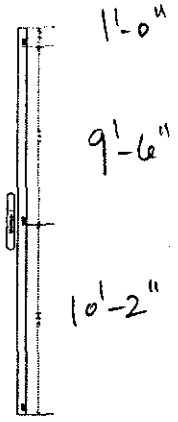
Notes:

1.) Stress increase has not been applied for wind load.
2.) Minimum edge distance is 3".
3.) Minimum fastener spacing without reduction is 3".
4.) Minimum concrete thickness is 3 times the fastener pentration.
5.) Fu = 45ksi, 65ksi for Fy=33ksi, 50ksi respectively.
6.) Stud to track values are calculated according to 2004 Edition of the AISI Wall Stud Design Standard.
7.) The stud distance from the end of the track must be a minimum of 1-1/4" If an end condition occurs and the end condition detail is not used, the stud to track allowable shall be divided by 2. However, if an adaquate track splice is used, the values need not be reduced.
8.) The maximum permissible end gap is 1/8".
9.) Each stud flange must be secured to the track leg.

COMPONENT ANALYSIS - Full Height 41/A806 @ 16 in. o.c.

MEMBER SIZING

Section Diagram



MEMBER LOADS:

Values in pounds and feet

Case	Member	Load Type	Direction	W1	W2	L1	L2
DL	Member 1	Uniform Area	Global FY	-12.00	-12.00	0.00	1.00

ANALYTICAL MEMBER LOADS:

Values in pounds and feet

Case	Anal. Mbr.	Load Type	Direction	W1	W2	L1	L2
WL(negx)(-)(ty	AM03	Uniform Area	Local FY	31.32	31.32	0.00	1.00
WL(negx)(-)(ty	AM02	Uniform Area	Local FY	31.32	31.32	0.00	1.00
WL(negx)(-)(ty	AM01	Uniform Area	Local FY	31.32	31.32	0.00	1.00
WL(posx)(+)(	AM01	Uniform Area	Local FY	-31.32	-31.32	0.00	1.00
WL(posx)(+)(	AM02	Uniform Area	Local FY	-31.32	-31.32	0.00	1.00
WL(posx)(+)(	AM03	Uniform Area	Local FY	-31.32	-31.32	0.00	1.00
WL(ip)(c&c	AM01	Uniform Area	Local FY	3.68	3.68	0.00	1.00
WL(ip)(c&c	AM02	Uniform Area	Local FY	3.68	3.68	0.00	1.00
WL(ip)(c&c	AM03	Uniform Area	Local FY	3.68	3.68	0.00	1.00
WL(is)(c&c	AM01	Uniform Area	Local FY	-3.68	-3.68	0.00	1.00
WL(is)(c&c	AM02	Uniform Area	Local FY	-3.68	-3.68	0.00	1.00
WL(is)(c&c	AM03	Uniform Area	Local FY	-3.68	-3.68	0.00	1.00

LOAD COMBINATIONS:

Combo	Reference	Load Cases	Stress Increase	Deflection Criteria
dl_ax_cc4_ip	dii	1.00 DL + 1.00 AX+ 1.00	yes	L/360
dl_ax_cc1_is	dii	1.00 DL + 1.00 AX+ 1.00	yes	L/360
dl_ax	dii	1.00 DL + 1.00 AX	no	N/A

MAXIMUM FORCES:

Combo	Axial (lb)	Ecc Mom (in-lb)	Shear (lb)	Pos	Moment (in-lb)	Pos	Deflection (in)	Pos
dl_ax_cc4_ip	330.72	0.00	292.36	0.49	6726.42	0.49	0.0746	0.22
dl_ax_cc1_is	330.72	0.00	-292.36	0.49	-6726.42	0.49	-0.0746	0.22
dl_ax	330.72	0.00	0.00	0.00	0.00	0.00	0	0.00

REACTIONS:

Joint	Combo	fx (lb)	fy (lb)	mz (in-lb)	Resultant (lb)
1	dl_ax_cc4_ip	182.10	330.72	0.00	377.54
1	dl_ax_cc1_is	-182.10	330.72	0.00	377.54
1	dl_ax	0.00	330.72	0.00	330.72
2	dl_ax_cc4_ip	570.63	0.00	0.00	570.63
2	dl_ax_cc1_is	-570.63	0.00	0.00	570.63

2	dl_ax	0.00	0.00	0.00	0.00
3	dl_ax_cc4_ir	211.87	-0.00	0.00	211.87
3	dl_ax_cc1_is	-211.87	-0.00	-0.00	211.87
3	dl_ax	0.00	-0.00	0.00	0.00

Use:

6" CSJ 18 33 ksi @ 16" o.c.
Locate Bracing @ 0.24, 0.44, 0.63, 0.82
Ireq = 0.51 in^4, Iactual = 2.32 in^4, Mall = 16764 in-lb,Vall Solid = 1322 lb, Vall Knockout = 959 lb

COMPONENT ANALYSIS - Full Height 41/A806 @ 16 in. o.c.

SUPPLEMENTAL INFORMATION

SELECTIONS:

Size	Shape	Gage	Yield	WtWt	Stab(C5-1) Int	Str(C5-2) Int	Sh Mom Int	Deflection Int	Web Stiff
6	CSJ	18	33	1.46	0.48	0.44	0.25	0.22	No

(Mall = 16764 in-lb, Vsolid = 1322 lb, Vhole = 959 lb, Iactual = 2.32 in^4)

BRACING PARAMETERS:

Combo	Seg	Start (ft)	End (ft)	Ch	Cmx	Cmy	Axial KLx (in)	KLy (in)	KLt (in)	Moment KLy (in)	KLt (in)
dl_ax_cc4_ip	1	0.00	5.00	1.00	1.00	1.00	122.00	60.00	60.00	60.00	60.00
dl_ax_cc1_is	1	0.00	5.00	1.00	1.00	1.00	122.00	60.00	60.00	60.00	60.00
dl_ax	1	0.00	5.00	1.00	1.00	1.00	122.00	60.00	60.00	60.00	60.00
dl_ax_cc4_ip	2	5.00	9.00	1.00	1.00	1.00	122.00	48.00	48.00	48.00	48.00
dl_ax_cc1_is	2	5.00	9.00	1.00	1.00	1.00	122.00	48.00	48.00	48.00	48.00
dl_ax	2	5.00	9.00	1.00	1.00	1.00	122.00	48.00	48.00	48.00	48.00
dl_ax_cc4_ip	3	9.00	10.17	1.00	1.00	1.00	122.00	14.00	14.00	14.00	14.00
dl_ax_cc1_is	3	9.00	10.17	1.00	1.00	1.00	122.00	14.00	14.00	14.00	14.00
dl_ax	3	9.00	10.17	1.00	1.00	1.00	122.00	14.00	14.00	14.00	14.00
dl_ax_cc4_ip	4	10.17	13.00	1.00	1.00	1.00	114.04	34.00	34.00	34.00	34.00
dl_ax_cc1_is	4	10.17	13.00	1.00	1.00	1.00	114.04	34.00	34.00	34.00	34.00
dl_ax	4	10.17	13.00	1.00	1.00	1.00	114.04	34.00	34.00	34.00	34.00
dl_ax_cc4_ip	5	13.00	17.00	1.00	1.00	1.00	114.04	48.00	48.00	48.00	48.00
dl_ax_cc1_is	5	13.00	17.00	1.00	1.00	1.00	114.04	48.00	48.00	48.00	48.00
dl_ax	5	13.00	17.00	1.00	1.00	1.00	114.04	48.00	48.00	48.00	48.00
dl_ax_cc4_ip	6	17.00	19.67	1.00	1.00	1.00	114.04	32.04	32.04	32.04	32.04
dl_ax_cc1_is	6	17.00	19.67	1.00	1.00	1.00	114.04	32.04	32.04	32.04	32.04
dl_ax	6	17.00	19.67	1.00	1.00	1.00	114.04	32.04	32.04	32.04	32.04
dl_ax_cc4_ip	7	19.67	20.67	1.00	1.00	1.00	12.00	12.00	12.00	12.00	12.00
dl_ax_cc1_is	7	19.67	20.67	1.00	1.00	1.00	12.00	12.00	12.00	12.00	12.00
dl_ax	7	19.67	20.67	1.00	1.00	1.00	12.00	12.00	12.00	12.00	12.00

DEFLECTION CHECKS:

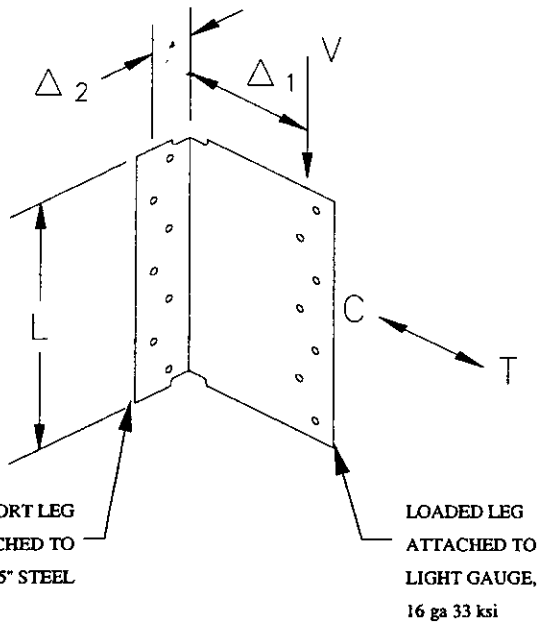
Combo	Pos	Type	Defl (in)	Length (F-I-S)	Dall (F-I-S)	Ireq (in^4)
dl_ax_cc4_ip	0.22	zero to zero	0.0746	10-2-0	0-0-5	0.5097
dl_ax_cc4_ip	0.51	zero to zero	0.0003	0-6-6	0-0-0	0.0326
dl_ax_cc4_ip	0.77	zero to zero	0.0442	8-11-9	0-0-4	0.3429
dl_ax_cc4_ip	0.77	overhang	0.062	4-9-9	0-0-5	0.4485
dl_ax_cc1_is	0.22	zero to zero	0.0746	10-2-0	0-0-5	0.5097
dl_ax_cc1_is	0.51	zero to zero	0.0003	0-6-6	0-0-0	0.0326
dl_ax_cc1_is	0.77	zero to zero	0.0442	8-11-9	0-0-4	0.3429
dl_ax_cc1_is	0.77	overhang	0.062	4-9-9	0-0-5	0.4485

WEB CRIPPLING:

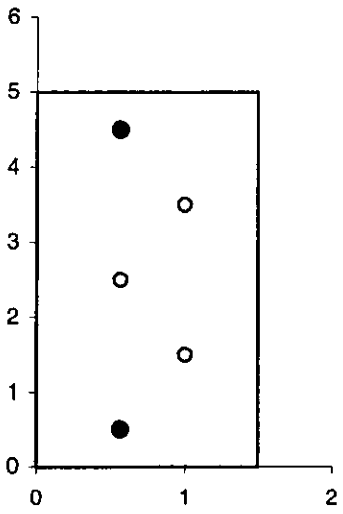
Pos	Combo	Applied	Mag (lb)	Bearing (F-I-S)	Type	Cond	All (lb)	Mom Int	Required
0.00	dl_ax_cc1_is	no	182.10	0-3-10	Single	1	463.169	0.39	no
0.49	dl_ax_cc1_is	no	570.63	0-3-10	Single	2	771.739	1.29	no
0.95	dl_ax_cc1_is	no	211.87	0-3-10	Single	2	771.739	0.35	no

Job-Name:	Section Callout: 41/A806 Mid -H Min 35psf	Engineer: BF	of

4.16



LOADED LEG SCREW PATTERN



Clip Width	Clip Type	Clip Gauge	Clip Fy	Clip Length	Δ_1	Δ_2	Loaded Leg Screw	Support Leg Screw
1 1/2" x 1 1/2"	Support Clip	12	50 ksi	5 in	1 in	0.75 in	(2) #10-16, T/3	Ramset Knurled .t45

Clip= 1 1/2" x 1 1/2" Support Clip 12 ga 50 ksi, L = 5"
Loaded Leg Fastener = (2) #10-16, T/3
Support Leg Fastener = (4) Ramset Knurled .145 Pin

Attachment
Loaded Leg = 16 ga 33 ksi light gauge steel
Support Leg = 0.1875" steel

Screw Properties & Capacities
Loaded leg (Attached to 16 ga 33 ksi)
Type = #10-16, T/3
Dia. = 0.19 in
Shear = 293 lb (f.s. = 2.5)

Support Leg
Type = Ramset Knurled .145 Pin
Dia. = 0.145 in
Head Dia. = 0.3 in
tsteel = 0.1875 in
Pin V = 764.3 lb (f.s. = 3.75)
Pin T = 1273.9 lb (f.s. = 3.75)
Pullout = 163.5 lb (f.s. = 10)
Pullover = 495.7 lb (f.s. = 3)
mset Shear = 351.5 lb (f.s. = 10)

Clip

	Actual	Allowable	Interaction
Shear =	0	5108	0.00 <1
Tension =	571	862	0.66 <1
Comp =	571	3569	0.16 <1
V/T =	-	-	0.44 <1
V/C =	-	-	0.16 <1

Screw Loaded Leg (2 fasteners)

	Actual	Allowable	Interaction
Shear/Rotation =	0	524	0.00 <1
Comp or Tens =	571	586*	0.97 <1
V/(C or T) =	-	-	0.97 <1

*Allowable reserve capacity of fastener group after shear is taken out.

Pin Supporting Leg (4 fasteners)

	Actual	Allowable	Interaction
Pin Shear =	0	3057	0.00 <1
Pin Tension =	571	5095	0.11 <1
Pin V/T =	-	-	0.11 <1
Pullout =	571	654	0.87 <1
Pullover =	571	1983	0.29 <1
Ramset Shear =	0	1406	0.00 <1
Ramset V/Pullout =	-	-	0.87 <1
Bearing =	0	3450.14526	0 <1

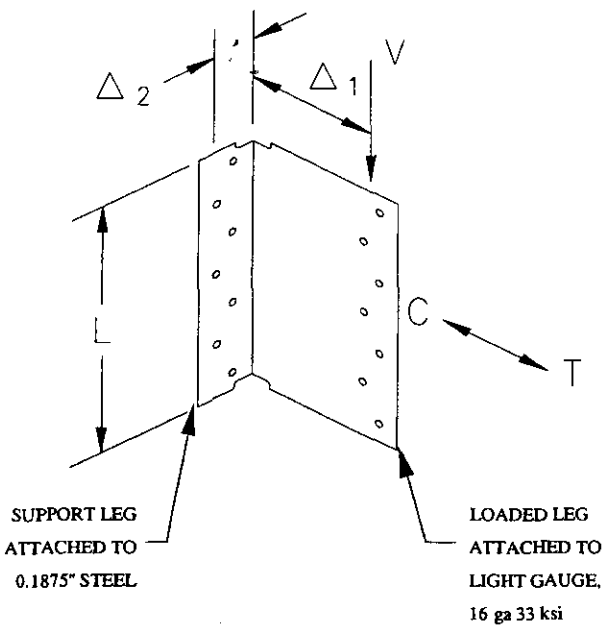
Notes
1.) Screws in loaded leg shall be placed starting from the outside holes and alternating from top to bottom as shown in detail above.
3.) Buckling coefficient, K for calculating comp. capacity = 0.7.
4.) Tension capacity is calculated assuming leg of clip is subject to fixed-fixed bending.
5.) Clip tension capacity is dependent on weak axis bending due to Δ2. Factor of safety clip tension capacity = 1.33. Factor of safety clip compression capacity = 2.0. Factor of safety clip shear capacity = 2.0.
6.) Clip values are based on support clip manufactured by Dietrich Industries.
7.) The clip buckling lengths (Δ1 and Δ2) is the distance from the base of the clip to center of gravity of the screws.
8.) V, C, and T represent shear, compression and tension respectively.
9.) Refer to Ramset Fastening Systems 2002 Book(2002), Page 32.
10.) Minimum edge distance is 1/2".
11.) Minimum fastener spacing without reduction is 1-1/2".

DIETRICH DESIGN GROUP
A Worthington Industries Company

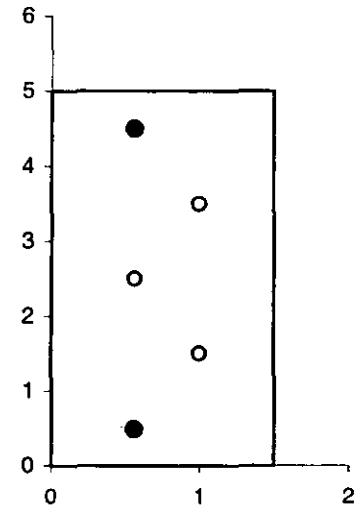
Load	
Shear:	0 lb
Tension:	571 lb
Compression:	571 lb
Stress Increase Allowed	
Shear:	no
Compression/Tension:	no

Job Name.	Section Callout: 41/A806 Top Min 35psf	Engineer: BF	of

4.17



LOADED LEG SCREW PATTERN



Clip Width	Clip Type	Clip Gauge	Clip Fy	Clip Length	Δ_1	Δ_2	Loaded Leg Screw	Support Leg Screw
1 1/2" x 1 1/2"	Support Clip	16	50 ksi	5 in	1 in	0.75 in	(2) #10-16, T/3	Ramset Knurled .145

Clip= 1 1/2" x 1 1/2" Support Clip 16 ga 50 ksi, L = 5"
Loaded Leg Fastener = (2) #10-16, T/3
Support Leg Fastener = (2) Ramset Knurled .145 Pin

Attachment
Loaded Leg = 16 ga 33 ksi light gauge steel
Support Leg = 0.1875" steel

Screw Properties & Capacities
Loaded leg (Attached to 16 ga 33 ksi)
Type = #10-16, T/3
Dia. = 0.19 in
Shear = 293 lb (f.s. = 2.5)

Support Leg
Type = Ramset Knurled .145 Pin
Dia. = 0.145 in
Head Dia. = 0.3 in
tsteel = 0.1875 in
Pin V = 764.3 lb (f.s. = 3.75)
Pin T = 1273.9 lb (f.s. = 3.75)
Pullout = 163.5 lb (f.s. = 10)
Pullover = 276.1 lb (f.s. = 3)
mset Shear = 351.5 lb (f.s. = 10)

Clip

	Actual	Allowable	Interaction
Shear =	0	2843	0.00 <1
Tension =	212	267	0.79 <1
Comp =	212	1091	0.19 <1
V/T=	-	-	0.63 <1
V/C =	-	-	0.19 <1

Screw Loaded Leg (2 fasteners)

	Actual	Allowable	Interaction
Shear/Rotation =	0	524	0.00 <1
Comp or Tens =	212	586*	0.36 <1
V/(C or T) =	-	-	0.36 <1

*Allowable reserve capacity of fastener group after shear is taken out.

Pin Supporting Leg (2 fasteners)

	Actual	Allowable	Interaction
Pin Shear =	0	1529	0.00 <1
Pin Tension =	212	2548	0.08 <1
Pin V/T =	-	-	0.08 <1
Pullout =	212	327	0.65 <1
Pullover =	212	552	0.38 <1
Ramset Shear =	0	703	0.00 <1
Ramset V/Pullout =	-	-	0.65 <1
Bearing =	0	960.754737	0 <1

Notes
1.) Screws in loaded leg shall be placed starting from the outside holes and alternating from top to bottom as shown in detail above.
3.) Buckling coefficient, K for calculating comp. capacity = 0.7.
4.) Tension capacity is calculated assuming leg of clip is subject to fixed-fixed bending.
5.) Clip tension capacity is dependent on weak axis bending due to $\Delta 2$. Factor of safety clip tension capacity = 1.33. Factor of safety clip compression capacity = 2.0. Factor of safety clip shear capacity = 2.0.
6.) Clip values are based on support clip manufactured by Dietrich Industries.
7.) The clip buckling lengths ($\Delta 1$ and $\Delta 2$) is the distance from the base of the clip to center of gravity of the screws.
8.) V, C, and T represent shear, compression and tension respectively.
9.) Refer to Ramset Fastening Systems 2002 Book(2002), Page 32.
10.) Minimum edge distance is 1/2".
11.) Minimum fastener spacing without reduction is 1-1/2".

DIETRICH DESIGN GROUP
A Worthington Industries Company

Load	
Shear:	0 lb
Tension:	212 lb
Compression:	212 lb
Stress Increase Allowed	
Shear:	no
Compression/Tension:	no

DATE: 1/11/2007 Time: 3:15 pm

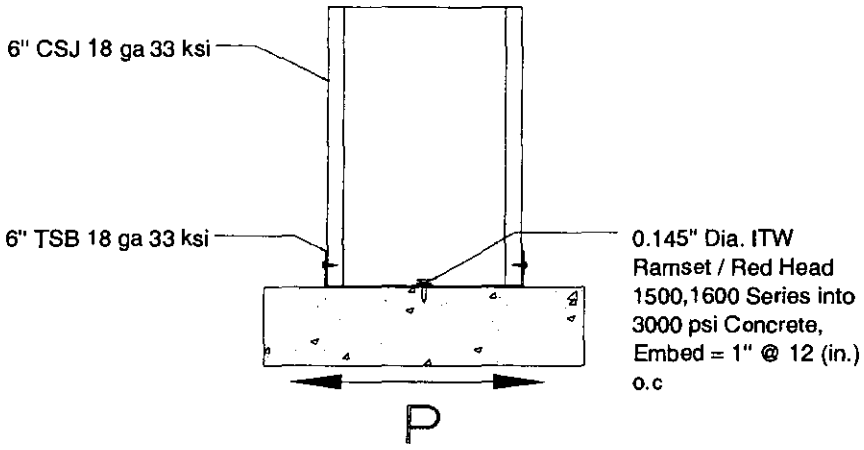
DIETRICH DESIGN GROUP
A Worthington Industries Company

SUBJECT STUD TO TRACK CONNECTION
DESIGN (RAMSET / RED HEAD)

FACILITY
SHEET NO. OF
BY BF DATE 1/11/2007

Section: BT conn. 41/A806 Min 35psf WL

4.18



Fastener Description:
Brand = ITW Ramset / Red Head
Type = 1500,1600 Series
Description = Low Velocity Fasteners
Catalog Reference = Ramset Fastening Systems 2002
Dia. = 0.145 in
Embed = 1 in
f'c = 3000 psi
F.S. = 5

Check Shear and Bearing of Pin

P (per foot) =	137.25	plf	(P = 183 lbs)
Pa (Fastener) =	174.00	lbs.	
Pa (Bearing) =	264.57	lbs.	
Pa/P x 12 =	15.213	in.	
Fastener Spacing =	15	in.	USE: 12 in.

Check Web Crippling and Punch Through of Stud to Track Connection

Pa (Stud/Track) =	412.46	lbs.	(1 studs)
P/Pa =	0.44	< 1	

Use: 0.145" Dia. ITW Ramset / Red Head 1500,1600 Series into 3000 psi Concrete, Embed = 1" @ 12 (in.) o.c

Notes:

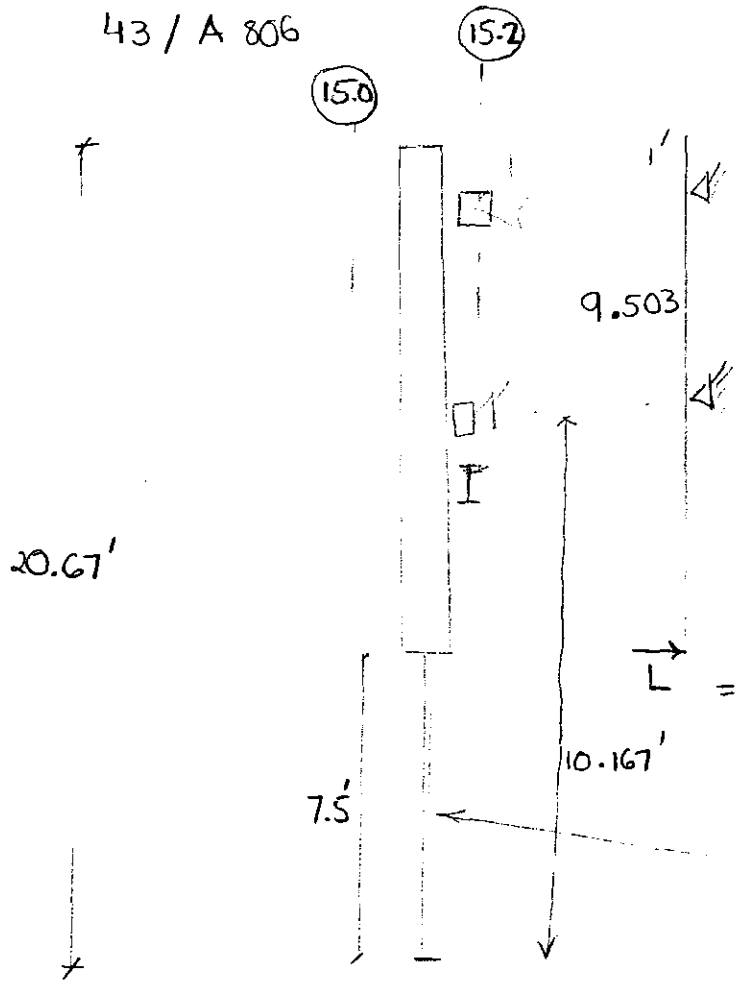
1.) Stress increase has not been applied for wind load.
2.) Minimum edge distance is 3".
3.) Minimum fastener spacing without reduction is 3".
4.) Minimum concrete thickness is 3 times the fastener pentration.
5.) Fu = 45ksi, 65ksi for Fy=33ksi, 50ksi respectively.
6.) Stud to track values are calculated according to 2004 Edition of the AISI Wall Stud Design Standard.
7.) The stud distance from the end of the track must be a minimum of 1-1/4" If an end condition occurs and the end condition detail is not used, the stud to track allowable shall be divided by 2. However, if an adaquate track splice is used, the values need not be reduced.
8.) The maximum permissible end gap is 1/8".
9.) Each stud flange must be secured to the track leg.

DIETRICH
DESIGN GROUP
A Worthington Industries Company

SUBJECT _____

PROJECT NO. _____
SHEET NO. 4.19 OF _____
BY _____ DATE _____

43 / A 806



$\vec{L}$ = door height / 2 * wind load * 1.33

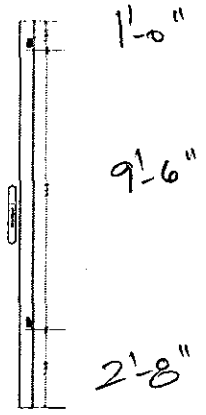
3.75 * 35 * 1.33 = 174.56 → SAY 175

This window is not to be designed.

COMPONENT ANALYSIS - Over window 43/A806 @ 16 in. o.c.

MEMBER SIZING

Section Diagram



MEMBER LOADS:

Values in pounds and feet

Case	Member	Load Type	Direction	W1	W2	L1	L2
WL(negx)(-)(ty	Member 1	Point	Global FX	-175.00	-175.00	0.00	0.00
WL(posx)(+)(	Member 1	Point	Global FX	175.00	175.00	0.00	0.00
DL	Member 1	Uniform Area	Global FY	-12.00	-12.00	0.00	1.00

ANALYTICAL MEMBER LOADS:

Values in pounds and feet

Case	Anal. Mbr.	Load Type	Direction	W1	W2	L1	L2
WL(negx)(-)(ty	AM03	Uniform Area	Local FY	31.32	31.32	0.00	1.00
WL(negx)(-)(ty	AM02	Uniform Area	Local FY	31.32	31.32	0.00	1.00
WL(negx)(-)(ty	AM01	Uniform Area	Local FY	31.32	31.32	0.00	1.00
WL(posx)(+)(	AM01	Uniform Area	Local FY	-31.32	-31.32	0.00	1.00
WL(posx)(+)(	AM02	Uniform Area	Local FY	-31.32	-31.32	0.00	1.00
WL(posx)(+)(	AM03	Uniform Area	Local FY	-31.32	-31.32	0.00	1.00
WL(ip)(c&c	AM01	Uniform Area	Local FY	3.68	3.68	0.00	1.00
WL(ip)(c&c	AM02	Uniform Area	Local FY	3.68	3.68	0.00	1.00
WL(ip)(c&c	AM03	Uniform Area	Local FY	3.68	3.68	0.00	1.00
WL(is)(c&c	AM01	Uniform Area	Local FY	-3.68	-3.68	0.00	1.00
WL(is)(c&c	AM02	Uniform Area	Local FY	-3.68	-3.68	0.00	1.00
WL(is)(c&c	AM03	Uniform Area	Local FY	-3.68	-3.68	0.00	1.00

LOAD COMBINATIONS:

Combo	Reference	Load Cases	Stress Increase	Deflection Criteria
dl_ax_cc4_ip	dii	1.00 DL + 1.00 AX+ 1.00	yes	L/360
dl_ax_cc1_is	dii	1.00 DL + 1.00 AX+ 1.00	yes	L/360
dl_ax	dii	1.00 DL + 1.00 AX	no	N/A

MAXIMUM FORCES:

Combo	Axial (lb)	Ecc Mom (in-lb)	Shear (lb)	Pos	Moment (in-lb)	Pos	Deflection (in)	Pos
dl_ax_cc4_ip	168.05	0.00	299.46	0.20	7592.31	0.20	0.0606	0.00
dl_ax_cc1_is	168.05	0.00	-299.46	0.20	-7592.31	0.20	-0.0606	0.00
dl_ax	168.05	0.00	0.00	0.00	0.00	0.00	0	0.00

REACTIONS:

Joint	Combo	fx (lb)	fy (lb)	mz (in-lb)	Resultant (lb)
2	dl_ax_cc4_ip	585.32	210.72	0.00	622.09
2	dl_ax_cc1_is	-585.32	210.72	0.00	622.09
2	dl_ax	0.00	210.72	0.00	210.72

3	dl_ax_cc4_ip	204.28	0.00	-0.00	204.28
3	dl_ax_cc1_is	-204.28	0.00	0.00	204.28
3	dl_ax	0.00	0.00	0.00	0.00

Use:

6" CSJ 18 33 ksi @ 16" o.c.
Locate Bracing @ 0.38, 0.68, 0.99
Ireq = 0.63 in^4, Iactual = 2.32 in^4, Mall = 16764 in-lb, Vall Solid = 1322 lb, Vall Knockout = 959 lb

COMPONENT ANALYSIS - Over window 43/A806 @ 16 in. o.c.

SUPPLEMENTAL INFORMATION

SELECTIONS:

Size	Shape	Gage	Yield	WtWt	Stab(C5-1) Int	Str(C5-2) Int	Sh Mom Int	Deflection Int	Web Stiff
6	CSJ	18	33	1.46	0.54	0.49	0.30	0.27	No

(Mall = 16764 in-lb, Vsolid = 1322 lb, Vhole = 959 lb, Iactual = 2.32 in^4)

BRACING PARAMETERS:

Combo	Seg	Start (ft)	End (ft)	Cb	Cmx	Cmy	Axial KLx (in)	Axial KLy (in)	Axial KLt (in)	Moment KLy (in)	Moment KLt (in)
dl_ax_cc4_ip	1	0.00	2.67	1.00	1.00	1.00	32.00	32.00	32.00	32.00	32.00
dl_ax_cc1_is	1	0.00	2.67	1.00	1.00	1.00	32.00	32.00	32.00	32.00	32.00
dl_ax	1	0.00	2.67	1.00	1.00	1.00	32.00	32.00	32.00	32.00	32.00
dl_ax_cc4_ip	2	2.67	5.00	1.00	1.00	1.00	114.04	28.00	28.00	28.00	28.00
dl_ax_cc1_is	2	2.67	5.00	1.00	1.00	1.00	114.04	28.00	28.00	28.00	28.00
dl_ax	2	2.67	5.00	1.00	1.00	1.00	114.04	28.00	28.00	28.00	28.00
dl_ax_cc4_ip	3	5.00	9.00	1.00	1.00	1.00	114.04	48.00	48.00	48.00	48.00
dl_ax_cc1_is	3	5.00	9.00	1.00	1.00	1.00	114.04	48.00	48.00	48.00	48.00
dl_ax	3	5.00	9.00	1.00	1.00	1.00	114.04	48.00	48.00	48.00	48.00
dl_ax_cc4_ip	4	9.00	12.17	1.00	1.00	1.00	114.04	38.04	38.04	38.04	38.04
dl_ax_cc1_is	4	9.00	12.17	1.00	1.00	1.00	114.04	38.04	38.04	38.04	38.04
dl_ax	4	9.00	12.17	1.00	1.00	1.00	114.04	38.04	38.04	38.04	38.04
dl_ax_cc4_ip	5	12.17	13.00	1.00	1.00	1.00	12.00	9.96	9.96	9.96	9.96
dl_ax_cc1_is	5	12.17	13.00	1.00	1.00	1.00	12.00	9.96	9.96	9.96	9.96
dl_ax	5	12.17	13.00	1.00	1.00	1.00	12.00	9.96	9.96	9.96	9.96
dl_ax_cc4_ip	6	13.00	13.17	1.00	1.00	1.00	12.00	2.04	2.04	2.04	2.04
dl_ax_cc1_is	6	13.00	13.17	1.00	1.00	1.00	12.00	2.04	2.04	2.04	2.04
dl_ax	6	13.00	13.17	1.00	1.00	1.00	12.00	2.04	2.04	2.04	2.04

DEFLECTION CHECKS:

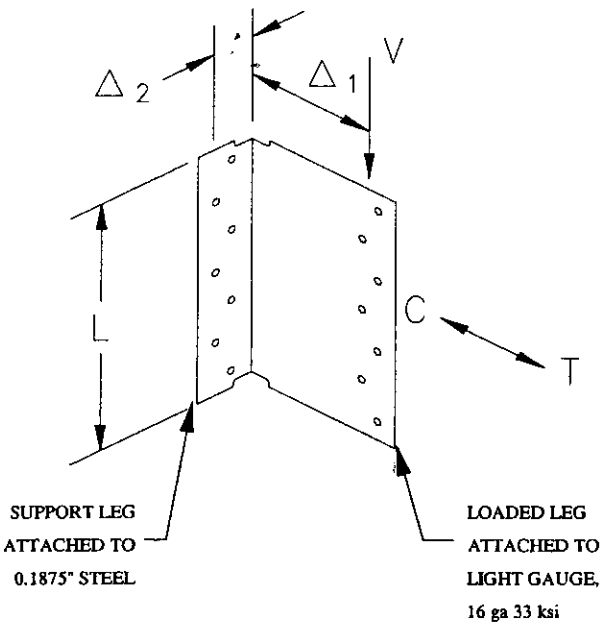
Combo	Pos	Type	Defl (in)	Length (F-I-S)	Dall (F-I-S)	Ireq (in^4)
dl_ax_cc4_ip	0.27	zero to zero	0.003	1-5-12	0-0-0	0.1391
dl_ax_cc4_ip	0.64	zero to zero	0.035	8-0-4	0-0-4	0.3034
dl_ax_cc4_ip	0.00	overhang	0.0635	3-6-0	0-0-3	0.6306
dl_ax_cc4_ip	0.64	overhang	0.0499	4-9-9	0-0-5	0.3608
dl_ax_cc1_is	0.27	zero to zero	0.003	1-5-12	0-0-0	0.1391
dl_ax_cc1_is	0.64	zero to zero	0.035	8-0-4	0-0-4	0.3034
dl_ax_cc1_is	0.00	overhang	0.0635	3-6-0	0-0-3	0.6306
dl_ax_cc1_is	0.64	overhang	0.0499	4-9-9	0-0-5	0.3608

WEB CRIPPLING:

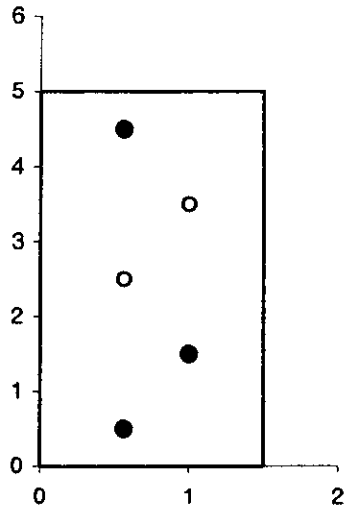
Pos	Combo	Applied	Mag (lb)	Bearing (F-I-S)	Type	Cond	All (lb)	Mom Int	Required
0.00	dl_ax_cc1_is	yes	175.00	0-3-10	Single	1	463.169	0.38	no
0.20	dl_ax_cc1_is	no	585.32	0-3-10	Single	2	771.739	1.36	no
0.92	dl_ax_cc1_is	no	204.28	0-3-10	Single	2	771.739	0.33	no

Job Name.	Section Callout: 43/A806 Conn. Joint 2	Engineer: BF	of

4.23



LOADED LEG SCREW PATTERN



Clip Width	Clip Type	Clip Gauge	Clip Fy	Clip Length	Δ_1	Δ_2	Loaded Leg Screw	Support Leg Screw
1 1/2" x 1 1/2"	Support Clip	12	50 ksi	5 in	0.85 in	0.75 in	(3) #10-16, T/3	Ramset Knurled .145

Clip= 1 1/2" x 1 1/2" Support Clip 12 ga 50 ksi, L = 5"
Loaded Leg Fastener = (3) #10-16, T/3
Support Leg Fastener = (3) Ramset Knurled .145 Pin

Attachment
Loaded Leg = 16 ga 33 ksi light gauge steel
Support Leg = 0.1875" steel

Screw Properties & Capacities
Loaded leg (Attached to 16 ga 33 ksi)
Type = #10-16, T/3
Dia. = 0.19 in
Shear = 293 lb (f.s. = 2.5)

Support Leg
Type = Ramset Knurled .145 Pin
Dia. = 0.145 in
Head Dia. = 0.3 in
tsteel = 0.1875 in
Pin V = 764.3 lb (f.s. = 3.75)
Pin T = 1273.9 lb (f.s. = 3.75)
Pullout = 327 lb (f.s. = 5)
Puilover = 495.7 lb (f.s. = 3)
mset Shear = 703 lb (f.s. = 5)

Clip

	Actual	Allowable	Interaction
Shear =	211	5108	0.04 <1
Tension =	586	862	0.68 <1
Comp =	586	3569	0.16 <1
V/T=	-	-	0.46 <1
V/C =	-	-	0.21 <1

Screw Loaded Leg (3 fasteners)

	Actual	Allowable	Interaction
Shear/Rotation =	211	764	0.28 <1
Comp or Tens =	586	724*	0.81 <1
V/(C or T) =	-	-	0.84 <1

*Allowable reserve capacity of fastener group after shear is taken out.

Pin Supporting Leg (3 fasteners)

	Actual	Allowable	Interaction
Pin Shear =	211	2293	0.09 <1
Pin Tension =	586	3822	0.15 <1
Pin V/T =	-	-	0.25 <1
Pullout =	586	981	0.60 <1
Pullover =	586	1487	0.39 <1
Ramset Shear =	211	2109	0.10 <1
Ramset V/Pullout =	-	-	0.70 <1
Bearing =	211	2587.60895	0.0815 <1

Notes
1.) Screws in loaded leg shall be placed starting from the outside holes and alternating from top to bottom as shown in detail above.
3.) Buckling coefficient, K for calculating comp. capacity = 0.7.
4.) Tension capacity is calculated assuming leg of clip is subject to fixed-fixed bending.
5.) Clip tension capacity is dependent on weak axis bending due to Δ2. Factor of safety clip tension capacity = 1.33. Factor of safety clip compression capacity = 2.0. Factor of safety clip shear capacity = 2.0.
6.) Clip values are based on support clip manufactured by Dietrich Industries.
7.) The clip buckling lengths (Δ1 and Δ2) is the distance from the base of the clip to center of gravity of the screws.
8.) V, C, and T represent shear, compression and tension respectively.
9.) Refer to Ramset Fastening Systems 2002 Book(2002), Page 32.
10.) Minimum edge distance is 1/2".
11.) Minimum fastener spacing without reduction is 1-1/2".

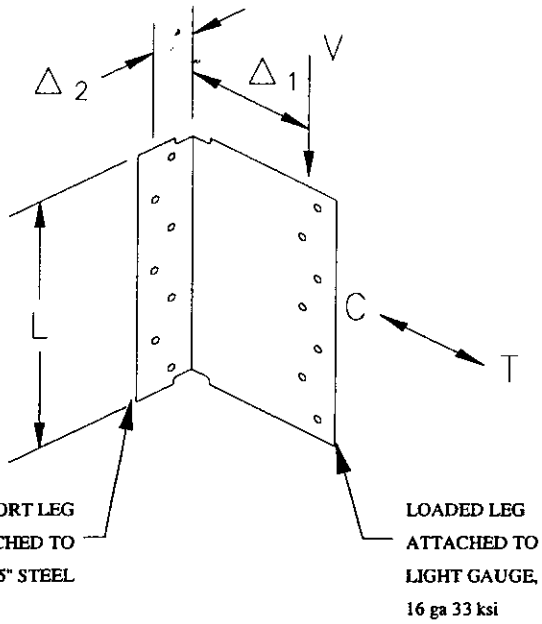
DIETRICH DESIGN GROUP
A Worthington Industries Company

Load
Shear: 211 lb
Tension: 586 lb
Compression: 586 lb
Stress Increase Allowed
Shear: no
Compression/Tension: no

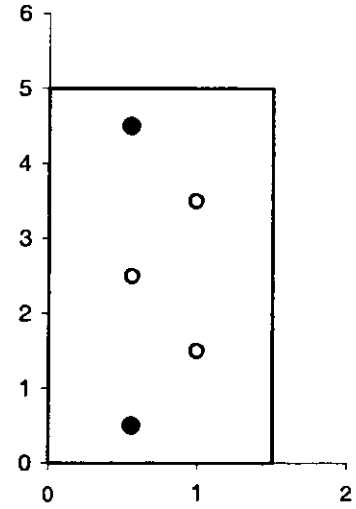
DATE: 1/11/2007 Time: 3:57 pm

Job Name:	Section Callout: 43/A806 Conn. Joint 3	Engineer: BF	of

4.24



LOADED LEG SCREW PATTERN



Clip Width	Clip Type	Clip Gauge	Clip Fy	Clip Length	Δ_1	Δ_2	Loaded Leg Screw	Support Leg Screw
1 1/2" x 1 1/2"	Support Clip	16	50 ksi	5 in	1 in	0.75 in	(2) #10-16, T/3	Ramset Knurled .145

Clip= 1 1/2" x 1 1/2" Support Clip 16 ga 50 ksi, L = 5"
Loaded Leg Fastener = (2) #10-16, T/3
Support Leg Fastener = (2) Ramset Knurled .145 Pin

Attachment
Loaded Leg = 16 ga 33 ksi light gauge steel
Support Leg = 0.1875" steel

Screw Properties & Capacities
Loaded leg (Attached to 16 ga 33 ksi)
Type = #10-16, T/3
Dia. = 0.19 in
Shear = 293 lb (f.s. = 2.5)

Support Leg
Type = Ramset Knurled .145 Pin
Dia. = 0.145 in
Head Dia. = 0.3 in
tsteel = 0.1875 in
Pin V = 764.3 lb (f.s. = 3.75)
Pin T = 1273.9 lb (f.s. = 3.75)
Pullout = 327 lb (f.s. = 5)
Pullover = 278.1 lb (f.s. = 3)
mset Shear = 703 lb (f.s. = 5)

Clip

	Actual	Allowable	Interaction
Shear =	0	2843	0.00 <1
Tension =	205	267	0.77 <1
Comp =	205	1091	0.19 <1
V/T =	-	-	0.59 <1
V/C =	-	-	0.19 <1

Screw Loaded Leg (2 fasteners)

	Actual	Allowable	Interaction
Shear/Rotation =	0	524	0.00 <1
Comp or Tens =	205	586*	0.35 <1
V/(C or T) =	-	-	0.35 <1

*Allowable reserve capacity of fastener group after shear is taken out.

Pin Supporting Leg (2 fasteners)

	Actual	Allowable	Interaction
Pin Shear =	0	1529	0.00 <1
Pin Tension =	205	2548	0.08 <1
Pin V/T =	-	-	0.08 <1
Pullout =	205	654	0.31 <1
Pullover =	205	552	0.37 <1
Ramset Shear =	0	1406	0.00 <1
Ramset V/Pullout =	-	-	0.31 <1
Bearing =	0	960.754737	0 <1

Notes
1.) Screws in loaded leg shall be placed starting from the outside holes and alternating from top to bottom as shown in detail above.
3.) Buckling coefficient, K for calculating comp. capacity = 0.7.
4.) Tension capacity is calculated assuming leg of clip is subject to fixed-fixed bending.
5.) Clip tension capacity is dependent on weak axis bending due to Δ2. Factor of safety clip tension capacity = 1.33. Factor of safety clip compression capacity = 2.0. Factor of safety clip shear capacity = 2.0.
6.) Clip values are based on support clip manufactured by Dietrich Industries.
7.) The clip buckling lengths (Δ1 and Δ2) is the distance from the base of the clip to center of gravity of the screws.
8.) V, C, and T represent shear, compression and tension respectively.
9.) Refer to Ramset Fastening Systems 2002 Book(2002), Page 32.
10.) Minimum edge distance is 1/2".
11.) Minimum fastener spacing without reduction is 1-1/2".

DIETRICH DESIGN GROUP
A Worthington Industries Company

Load	
Shear:	0 lb
Tension:	205 lb
Compression:	205 lb
Stress Increase Allowed	
Shear:	no
Compression/Tension:	no

DATE: 1/11/2007 Time: 4:00 pm

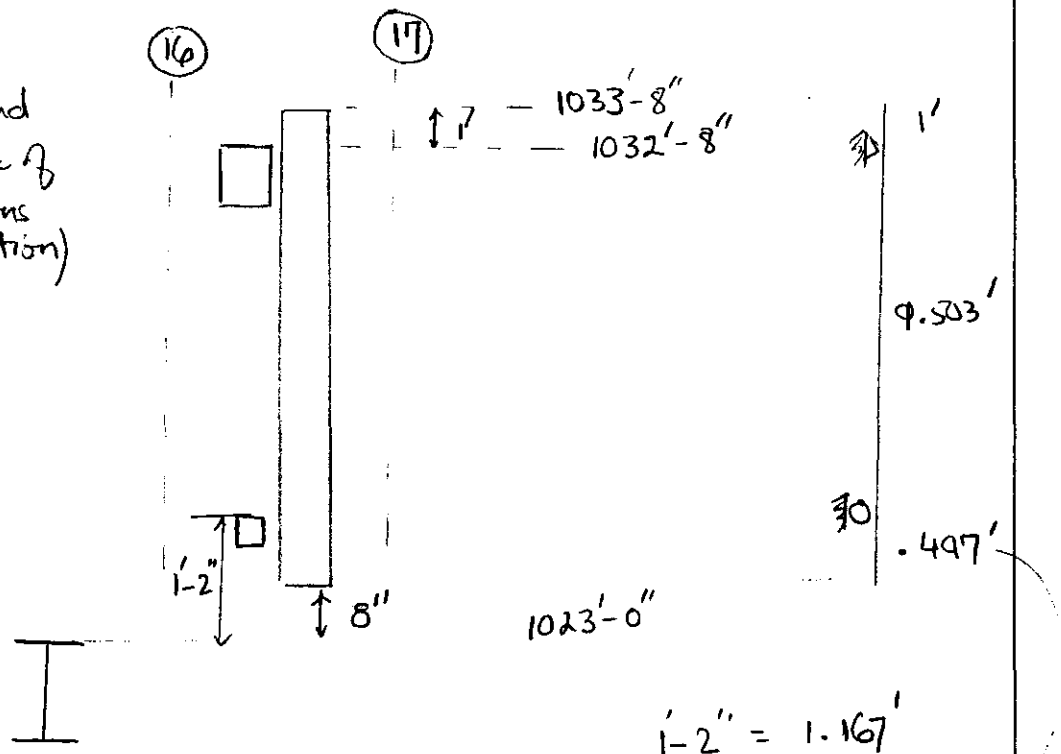
DIETRICH
DESIGN GROUP
A Worthington Industries Company

SUBJECT _____

PROJECT NO. _____
SHEET NO. 4.25 OF _____
BY _____ DATE _____

43 / A806

screen wall stud
(opposite side of
the previous
wall section)



1'-2" = 1.167'
8" = .67'

1.167' - .67' = .497'

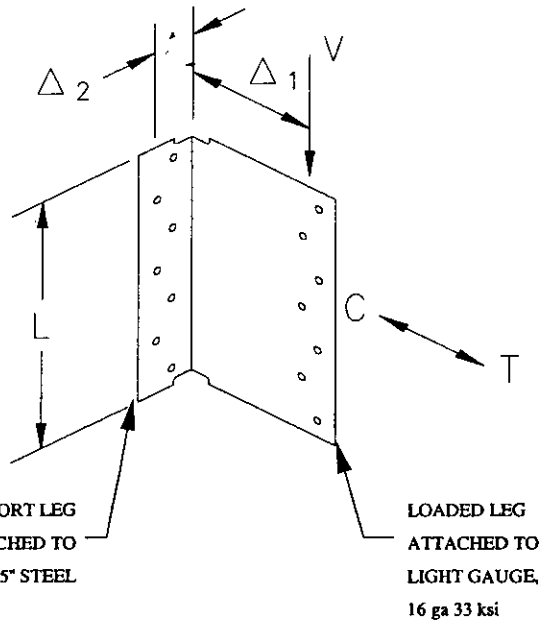
3	dl_ax	0.00	0.00	0.00	0.00

Use:

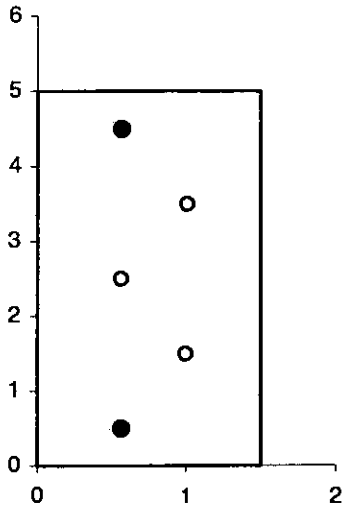
6" CSJ 18 33 ksi @ 16" o.c.
Locate Bracing @ 0.45, 0.82
Ireq = 0.97 in^4, Iactual = 2.32 in^4, Mall = 16764 in-lb,Vall Solid = 1322 lb, Vall Knockout = 959 lb

Job Name:	Section Callout: Screenwall 43/A806 @ 2	Engineer: BF	of

4.28



LOADED LEG SCREW PATTERN



Clip Width	Clip Type	Clip Gauge	Clip Fy	Clip Length	Δ_1	Δ_2	Loaded Leg Screw	Support Leg Screw
1 1/2" x 1 1/2"	Support Clip	16	50 ksi	5 in	1 in	0.75 in	(2) #10-16, T/3	Ramset Knurled .145

Clip= 1 1/2" x 1 1/2" Support Clip 16 ga 50 ksi, L = 5"
Loaded Leg Fastener = (2) #10-16, T/3
Support Leg Fastener = (2) Ramset Knurled .145 Pin

Attachment
Loaded Leg = 16 ga 33 ksi light gauge steel
Support Leg = 0.1875" steel

Screw Properties & Capacities
Loaded leg (Attached to 16 ga 33 ksi)
Type = #10-16, T/3
Dia. = 0.19 in
Shear = 293 lb (f.s. = 2.5)

Support Leg
Type = Ramset Knurled .145 Pin
Dia. = 0.145 in
Head Dia. = 0.3 in
tsteel = 0.1875 in
Pin V = 764.3 lb (f.s. = 3.75)
Pin T = 1273.9 lb (f.s. = 3.75)
Pullout = 327 lb (f.s. = 5)
Pullover = 276.1 lb (f.s. = 3)
mset Shear = 703 lb (f.s. = 5)

Clip

	Actual	Allowable	Interaction	
Shear =	176	2843	0.06	<1
Tension =	244	267	0.91	<1
Comp =	244	1091	0.22	<1
V/T=	-	-	0.84	<1
V/C =	-	-	0.29	<1

Screw Loaded Leg (2 fasteners)

	Actual	Allowable	Interaction	
Shear/Rotation =	176	524	0.34	<1
Comp or Tens =	244	471*	0.52	<1
V/(C or T) =	-	-	0.64	<1

*Allowable reserve capacity of fastener group after shear is taken out.

Pin Supporting Leg (2 fasteners)

	Actual	Allowable	Interaction	
Pin Shear =	176	1529	0.12	<1
Pin Tension =	244	2548	0.10	<1
Pin V/T =	-	-	0.21	<1
Pullout =	244	654	0.37	<1
Pullover =	244	552	0.44	<1
Ramset Shear =	176	1406	0.13	<1
Ramset V/Pullout =	-	-	0.50	<1
Bearing =	176	960.754737	0.1832	<1

Notes
1.) Screws in loaded leg shall be placed starting from the outside holes and alternating from top to bottom as shown in detail above.
3.) Buckling coefficient, K for calculating comp. capacity = 0.7.
4.) Tension capacity is calculated assuming leg of clip is subject to fixed-fixed bending.
5.) Clip tension capacity is dependent on weak axis bending due to Δ2. Factor of safety clip tension capacity = 1.33. Factor of safety clip compression capacity = 2.0. Factor of safety clip shear capacity = 2.0.
6.) Clip values are based on support clip manufactured by Dietrich Industries.
7.) The clip buckling lengths (Δ1 and Δ2) is the distance from the base of the clip to center of gravity of the screws.
8.) V, C, and T represent shear, compression and tension respectively.
9.) Refer to Ramset Fastening Systems 2002 Book(2002), Page 32.
10.) Minimum edge distance is 1/2".
11.) Minimum fastener spacing without reduction is 1-1/2".

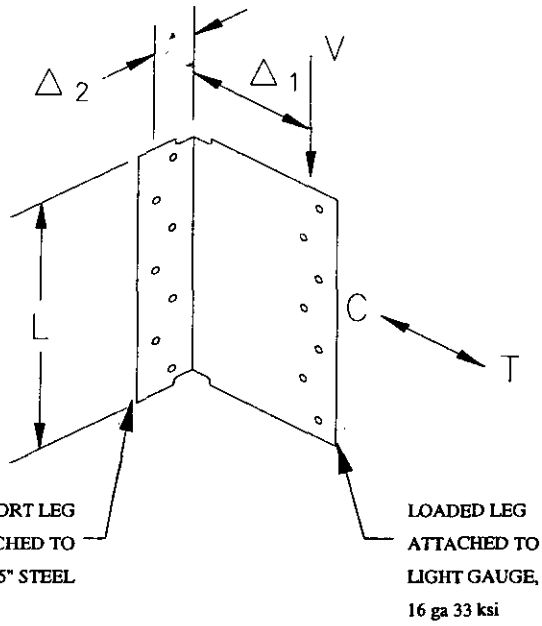
DIETRICH DESIGN GROUP
A Worthington Industries Company

Load	
Shear:	176 lb
Tension:	244 lb
Compression:	244 lb
Stress Increase Allowed	
Shear:	no
Compression/Tension:	no

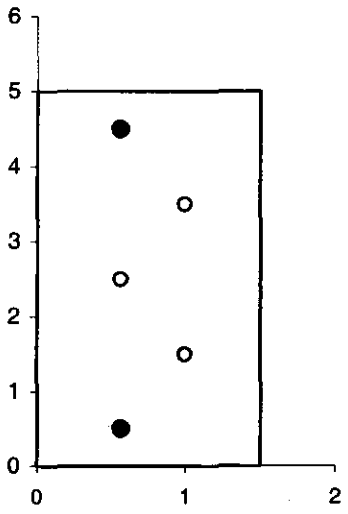
DATE: 1/11/2007 Time: 4:15 pm

Job Name:	Section Callout: Screenwall 43/A806 @ 3	Engineer: BF	of

4.29



LOADED LEG SCREW PATTERN



Clip Width	Clip Type	Clip Gauge	Clip Fy	Clip Length	Δ_1	Δ_2	Loaded Leg Screw	Support Leg Screw
1 1/2" x 1 1/2"	Support Clip	14	50 ksi	5 in	1 in	0.75 in	(2) #10-16, T/3	Ramset Knurled .145

Clip= 1 1/2" x 1 1/2" Support Clip 14 ga 50 ksi, L = 5"
Loaded Leg Fastener = (2) #10-16, T/3
Support Leg Fastener = (2) Ramset Knurled .145 Pin

Attachment
Loaded Leg = 16 ga 33 ksi light gauge steel
Support Leg = 0.1875" steel

Screw Properties & Capacities
Loaded leg (Attached to 16 ga 33 ksi)
Type = #10-16, T/3
Dia. = 0.19 in
Shear = 293 lb (f.s. = 2.5)

Support Leg
Type = Ramset Knurled .145 Pin
Dia. = 0.145 in
Head Dia. = 0.3 in
tsteel = 0.1875 in
Pin V = 764.3 lb (f.s. = 3.75)
Pin T = 1273.9 lb (f.s. = 3.75)
Pullout = 327 lb (f.s. = 5)
Pullover = 347.4 lb (f.s. = 3)
mset Shear = 703 lb (f.s. = 5)

Clip

	Actual	Allowable	Interaction	
Shear =	0	3581	0.00	<1
Tension =	271	423	0.64	<1
Comp =	271	1753	0.15	<1
V/T=	-	-	0.41	<1
V/C =	-	-	0.15	<1

Screw Loaded Leg (2 fasteners)

	Actual	Allowable	Interaction	
Shear/Rotation =	0	524	0.00	<1
Comp or Tens =	271	586*	0.46	<1
V/(C or T) =	-	-	0.46	<1

*Allowable reserve capacity of fastener group after shear is taken out.

Pin Supporting Leg (2 fasteners)

	Actual	Allowable	Interaction	
Pin Shear =	0	1529	0.00	<1
Pin Tension =	271	2548	0.11	<1
Pin V/T =	-	-	0.11	<1
Pullout =	271	654	0.41	<1
Pullover =	271	695	0.39	<1
Ramset Shear =	0	1406	0.00	<1
Ramset V/Pullout =	-	-	0.41	<1
Bearing =	0	1208.97947	0	<1

Notes
1.) Screws in loaded leg shall be placed starting from the outside holes and alternating from top to bottom as shown in detail above.
3.) Buckling coefficient, K for calculating comp. capacity = 0.7.
4.) Tension capacity is calculated assuming leg of clip is subject to fixed-fixed bending.
5.) Clip tension capacity is dependent on weak axis bending due to Δ2. Factor of safety clip tension capacity = 1.33. Factor of safety clip compression capacity = 2.0. Factor of safety clip shear capacity = 2.0.
6.) Clip values are based on support clip manufactured by Dietrich Industries.
7.) The clip buckling lengths (Δ1 and Δ2) is the distance from the base of the clip to center of gravity of the screws.
8.) V, C, and T represent shear, compression and tension respectively.
9.) Refer to Ramset Fastening Systems 2002 Book(2002), Page 32.
10.) Minimum edge distance is 1/2".
11.) Minimum fastener spacing without reduction is 1-1/2".

DIETRICH DESIGN GROUP
A Worthington Industries Company

Load
Shear: 0 lb
Tension: 271 lb
Compression: 271 lb
Stress Increase Allowed
Shear: no
Compression/Tension: no

DATE: 1/11/2007 Time: 4:14 pm

UK PATIENT CARE FACILITY: NEW GARAGE

LEXINGTON, KY

1.00 GENERAL DESIGN NOTES

1.01 Contents of this submittal show the intended application of cold formed framing components. Framing erector is to refer to the project contract documents for additional construction assembly requirements.

1.02 Dimensions shown herein have been determined per the contract documents and are for design reference only. All conditions shall be field verified prior to erection.

1.03 The contents of this submittal are subject to the review and approval of the Owner's Structural Engineer and Architect prior to erection. Material selections and connection details shown herein may differ from those shown in the contract documents. The framing erector shall await approval before framing materials are ordered.

1.04 *Adequacy of the primary* structure and foundation for loads imposed by the cold formed framing system is the responsibility of the Engineer of Record.

1.05 For specific requirements and warranty information on systems or materials connected and appurtenant to the cold-formed steel framing including windows, caulking and flashings, refer to manufacturer's data. It is the responsibility of others for the proper construction or function of the total architectural assembly.

1.06 Details of the wall finishes are for arrangement and reference. For specific requirements, methods, materials, and execution standards, refer to technical data from product manufacturer. In the event of conflict, manufacturer's instructions shall dictate.

1.07 Framing analysis assumes that the exterior cladding is attached to each stud end jamb. Framing analysis is limited to the uniform distribution of load to the studs and does not include review of the effects of local forces resulting from the attachment of exterior cladding (i.e. brick ties, attachment clips, etc.).

1.08 This submittal does not take precedence over the contract documents with regard to minimum yield strength, gauge, web depth, flange width or stud spacing, unless approved by the Engineer of Record.

1.09 It is the responsibility of others to verify that the strength and stiffness of bridging products not manufactured by Dietrich Metal Framing, Inc. are equivalent to Dietrich's standard u-channel bridging detail using clips and screws (Refer to page 15 of the Dietrich Curtain Wall/Light Gage Structural Framing Products Catalog).

1.10 The certifying light gauge steel engineer assumes no liability for failure resulting from incorrect application or installation of the steel framing system. Dietrich Metal Framing, Inc. steel framing products must not be used in the design of a structure without complete and detailed evaluation to verify any particular product's suitability for use in any structure. This verification must be accomplished by the owner's architect or structural engineer.

1.11 The design of metal framing conditions not specifically shown on these drawings is the responsibility of others.

1.12 Construction loads have not been considered in this submittal.

1.13 It is the responsibility of others to coordinate the locations of finish system control joints with the metal framing slip connections.

2.00 INSTALLATION NOTES

2.01 All framing components shall be cut squarely for attachment to perpendicular members or as required on angular fit against abutting members. Members shall be held positively in place until properly fastened.

2.02 Temporary bracing shall be provided and remain in place until the structure is completely stabilized. Temporary bracing is the responsibility of others.

2.03 All field cutting of studs must be done by sawing or shearing. Torch cutting of cold formed members is unacceptable.

2.04 When required for bridging purposes, the framing fabricator is to ensure punch out alignment when assembling framing and field cutting studs to length. Refer to typical stud/track connection and indexing detail.

2.05 No splices in studs, joists, or other load carrying members may be made without prior engineering review and specific details for any such splice(s).

2.06 No notching or coping of studs, joists or rafters is allowed, unless stated within this drawing package.

2.07 Where splicing of wall track is necessary between studs, a piece of stud shall be placed in the adjoining track sections and fastened to the track flanges at both sides of the web or the tracks shall be butted tight together and fastened to structure either side of the joint.

2.08 If additional holes are required in the metal studs or joists, contact a licensed professional engineer for guidance before cutting holes.

2.09 Mechanical bridging, spaced at the intervals described herein, shall be installed prior to the attachment of facing materials.

2.10 Installation of sheathing, wallboard or any other collateral material shall be performed in accordance with the product manufacturer's specifications, the current ASTM standard and/or guidelines outlined in the contract documents.

2.11 For all tracks used in composite members such as trusses, posts, headers and jambs, the track must be installed as a single piece; no splicing is permitted.

2.12 The maximum allowable gap (measured between the web of the stud and the web of the track) for a stud seated in a track in a non-axial load bearing condition is 1/8" U.N.O. It is recommended that this gap be eliminated in an axial load bearing condition by pre-loading the studs until they are fully seated in the track. Failure to do so could result in serviceability problems in the future.

2.13 Joist end/or roof framing must bear directly over studs. If not, a structural member (by others) is required on top of runner track for proper bearing and anchorage.

2.00 INSTALLATION NOTES (cont'd)

2.14 Responsibilities and norms of good practice for fabrication and installation of cold-formed steel structural framing shall be per the requirements of the A.I.S.I. "Code of Standard Practice for Cold-Formed Steel Structural Framing".

3.00 CONNECTION NOTES

3.01 If required, all welded connections are to be performed in accordance with AWS D1.3-81 "Specifications for Welding Sheet Steel in Structures". Consult AWS D19.0-72 "Welding Zinc Coated Steel" and ANSI standard Z49.1 for information regarding safe welding procedures. All welds are to be touched-up with a rust inhibitive galvanizing paint.

3.02 Suggested weld metal and process for shop welding are: 60ksi weld metal strength (minimum). Suggested methods for field welding: 1/8" (unless noted otherwise) E60XX (minimum) electrode - SMAW; or "gasless" MIG. Minimum weld throat thickness (t) must match or exceed the base steel thickness of the thinnest connected part unless noted otherwise.

3.03 All screws shall be of the diameter and size indicated on the drawings, and shall be those manufactured and tested by ITW Buildex or equivalent. A minimum 1/2 inch edge distance and 1/2 inch screw spacing is required, unless noted otherwise on the drawings. Screw penetration through joined materials shall not be less than three exposed threads. Select screws with an adequate cutting tip to accommodate the total thickness to be drilled. Drilling must be completed before the threads engage the material. Consult the contract documents for minimum coating requirements of screws. Where screw attachments are made to framing components of different thicknesses, the thinnest component must be penetrated first. Screw design is based on a type "T3" screw. (unless noted otherwise)

3.04 All powder actuated fasteners (P.A.F.) shall be those as manufactured and tested by ITW Remset/Red Head. All pins subjected to tension shall have 15mm (minimum) diameter steel washers. The following minimum edge distances and fastener spacings apply:

Pin Diameter	Min. Edge Distance		Minimum Spacing		Penetration	
	Steel	Concrete	Steel	Concrete	Steel	Concrete
0.145"ø	1/2"	3"	1-1/2"	3"	FULL	VARIES

Specify the following pin types when ordering:

For attachment to concrete:	For attachment to steel:
0.145"ø 1500 Series (straight shank fasteners)	0.145"ø 1500 Series (knurled straight shank fasteners)

3.05 All concrete screw fasteners shall be those as manufactured and tested by ITW Remset/Red Head (Topcon) or equal. *The following minimum edge distances* and fastener spacings apply (unless specifically noted otherwise on drawings):

Diameter	Min. Edge Distance	Min. Spacing
3/16"ø	1-7/8"	2-1/4"
1/4"ø	2-1/2"	3"

Min. Edge Distance = 10 x diameter; Min. Spacing = 12 x diameter.

3.06 The framing contractor may substitute fasteners of equivalent specifications and load carrying capacities. Prior to installation, the framing contractor is to submit the current product literature from the selected manufacturer for approval.

3.07 It is the responsibility of others to verify that fasteners are installed according to manufacturers instructions. It is also the responsibility of others to verify/ensure the quality of fastener connections.

4.00 MATERIAL NOTES

4.01 Properties used in this submittal are those published by Dietrich Metal Framing, Inc. These properties meet or exceed SSMA properties. Therefore, no other manufacturer's material may be substituted.

4.02 All studs and joist members 16 gauge and heavier shall be formed *from steel* corresponding to a type listed in the A.I.S.I. "Specification for the Design of Cold-Formed Steel Structural Members", with a minimum yield strength of 33ksi unless specifically noted otherwise.

4.03 All 18 gauge and lighter members, track, bridging, end accessory items shall be formed from steel "Specification for the Design of Cold-Formed Steel Structural Members", with a minimum yield strength of 33ksi unless specifically noted otherwise.

4.04 All framing products shall be formed from steel possessing a coating corresponding to the minimum requirements of ASTM C955.

4.05 When Dietrich Metal Framing, Inc. steel studs are to be used for a truss, mansard or header application, studs shall be unpunched through the stud web. It is the responsibility of the contractor to specify unpunched studs when ordering materials.

4.06 All side clips, support clips and clip angles are 50ksi., unless noted otherwise.

5.00 DESIGN CRITERIA

5.01 Design Assumptions

Location: Lexington, KY
Building Code: KENTUCKY BUILDING CODE 2002

WIND LOAD PARAMETERS:		GRAVITY LOAD PARAMETERS:	
Basic Wind Speed (V) =	90.00 mph	Well Dead Load =	12.00 psf
Importance Factor (I) =	1.00		
Mean Roof Height (h) =	65'-0"	SEISMIC LOAD PARAMETERS:	
Exposure =	C	Ss =	0.26
Least Building Width =	244.47 ft	S1 =	0.11
Corner Zone Distance =	19.20 ft	Soil Site Class =	C
WL (Corner) =	35.0 psf (min.)	Seismic Use Group =	I
WL (Typical) =	25.0 psf (min.)	Seismic Design Category =	B
DEFLECTION CRITERIA:			
Wind Load =	L/240		

5.02 Design performed in accordance with the AISI "Specification for the Design of Cold Formed Steel Structural Members".

5.03 Conditions and or sections encircled thus ◯ require special review by the project architect and/or structural engineer. Additional project detail information and verification of conditions are required.

5.04 Unless noted otherwise, gravity load of brick over windows is assumed to be supported by others. The cold-formed framing is not designed to support these loads.

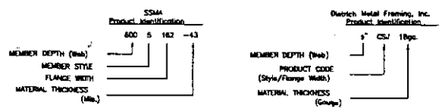
5.05 Spandrel wall studs framing above a window, and having connections to the top and bottom of the same beam, or having a single connection to a beam, and a kicker to another structural element, may require slip connections at the head of the window. In such situations, the engineer of record shall verify that the window system is designed accordingly.

5.06 It is not the responsibility of the light gauge framing designer to determine the necessity of drift connections to allow for primary structure movement. If the contract documents do not indicate this requirement, the light gauge framing shop drawings will not include drift connections.

5.07 Calculations and shop drawings included in this Technical Recommendation do not take into consideration the overall stability of structure. It is the responsibility of others to design the shear walls, diaphragm, and all relevant connections to complete the building stability load path.

6.00 PRODUCT IDENTIFICATION

6.01 Dietrich Metal Framing, Inc. product geometries meet or exceed the minimum proposed by the Steel Stud Manufacturers Association for industry standardization. For SSMA and Dietrich comparison purposes, see tables below.



Member Depth (Web Size) Comparison Table

Member Depth	SSMA Identification	Dietrich Identification
6"	600	6"
3-5/8"	362	3-5/8"
12"	1200	12"

Product Section Comparison Table

Section	SSMA Identification	Dietrich Identification	Flange Width
S-Sections (Studs)	5137	CWN	1-3/8"
	5162	CSJ	1-5/8"
	5200	CSM	2"
	5250	CSE	2-1/2"
T-Sections (Tracks)	T125	TSB	1-1/4"
	T200	TSC	2"
	T300	TSE	3"
U-Sections (U-Channel)	075U50	CHN1	1/4"
	150U50	CHN2	1-1/2"
	200U50	CHN3	2"
	250U50	CHN4	2-1/2"
F-Sections (Furring Channel)	087F125	FCE	7/8"
	150F125	FCED	1-1/2"

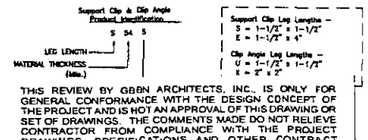
Material Thickness Comparison Table

Mils	Gauge	Minimum Delivered Thickness	Design Thickness	Color Coding
33	20	0.0329"	0.0346"	White
43	18	0.0428"	0.0451"	Yellow
54	16	0.0538"	0.0566"	Green
68	14	0.0677"	0.0713"	Orange
97	12	0.0966"	0.1017"	Red

6.00 PRODUCT IDENTIFICATION (cont'd)

6.02 The following registered trademarks used herein are owned by Dietrich Metal Framing, Inc.:
- TradeReady® Load Bearing Header (U.S. Patent No. 5,689,922 and other Patents Pending)
- TradeReady® Floor System (U.S. Patent No. 6,301,854 and other Patents Pending)
- TradeReady® Spazzer® Bar (U.S. Patent No. 5,784,850 and other Patents Pending)
- FastClips, FastStruts, Fast Top Clips and UniClips (Patents Pending)

6.03 The following are examples of Dietrich Metal Framing, Inc. Connector identification used herein:



THIS REVIEW BY GBBN ARCHITECTS, INC., IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND IS NOT AN APPROVAL OF THIS DRAWING OR SET OF DRAWINGS. THE COMMENTS MADE DO NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH THE PROJECT DRAWINGS, SPECIFICATIONS AND OTHER CONTRACT DOCUMENTS. CONTRACTOR IS SOLELY RESPONSIBLE FOR: ALL DIMENSIONS AND QUANTITIES, ALL FABRICATION, DELIVERY AND ERECTION; ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES; ALL COORDINATION WITH ALL OTHER CONTRACTORS, SUPPLIERS AND OTHERS; PERFORMING ALL WORK IN A SAFE AND PROPER MANNER.

NO EXCEPTIONS TAKEN
FURNISH AS CORRECTED
REVISE AND RESUBMIT
NO REVIEW - INCOMPLETE
SUBMIT SPECIFIED ITEMS
REJECTED
DATE 5-11-07 BY

GBBN ARCHITECTS, INC.
ARCHITECTURE, INTERIORS, PLANNING, ENGINEERING
332 EAST 8TH STREET, CINCINNATI, OHIO 45202-2217 (513) 241-8700
325 WEST MAIN STREET, LEXINGTON, KENTUCKY 40507 (859) 381-8787

REVIEWED

APPROVED FOR GENERAL CONFORMITY TO PLANS AND SPECIFICATIONS. DETAIL DIMENSIONS AND QUANTITIES NOT COMPLETELY CHECKED. SUBCONTRACTOR'S FULL RESPONSIBILITY IS IN NO WAY RELIEVED BY THIS APPROVAL.

E.C. MATTHEWS CO., INC.
BY: SIGNATURE 5-15-07 DATE

Project Designer
BABAK FIROOZI
E-Mail: bfiroozi@dietrichdesigngroup.com
Phone: (800)873-2443 Fax: (219)932-4141

STATE OF KENTUCKY
CARL A. CASDEN
21736
LICENSED PROFESSIONAL ENGINEER
5-11-07

SHEET INDEX

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A Worthington Industries Company
1414 Field Street
Building C - Suite #1
Hammond, IN 46320
Phone: 219.855.947d
Fax: 219.932.4141
dietrich metalframing.com
The place to step... before the building starts!

Revisions
1. BIW/ddp 95.11.97 PER ARCHITECT REVIEW
2.
3.
4.

Project Information
616972

UK PATIENT CARE FACILITY: NEW GARAGE

LEXINGTON, KY

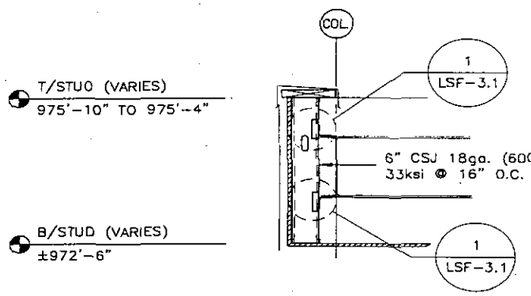
Prepared for
GRAYHAWK
LEXINGTON, KY

Sheet Information
GENERAL NOTES

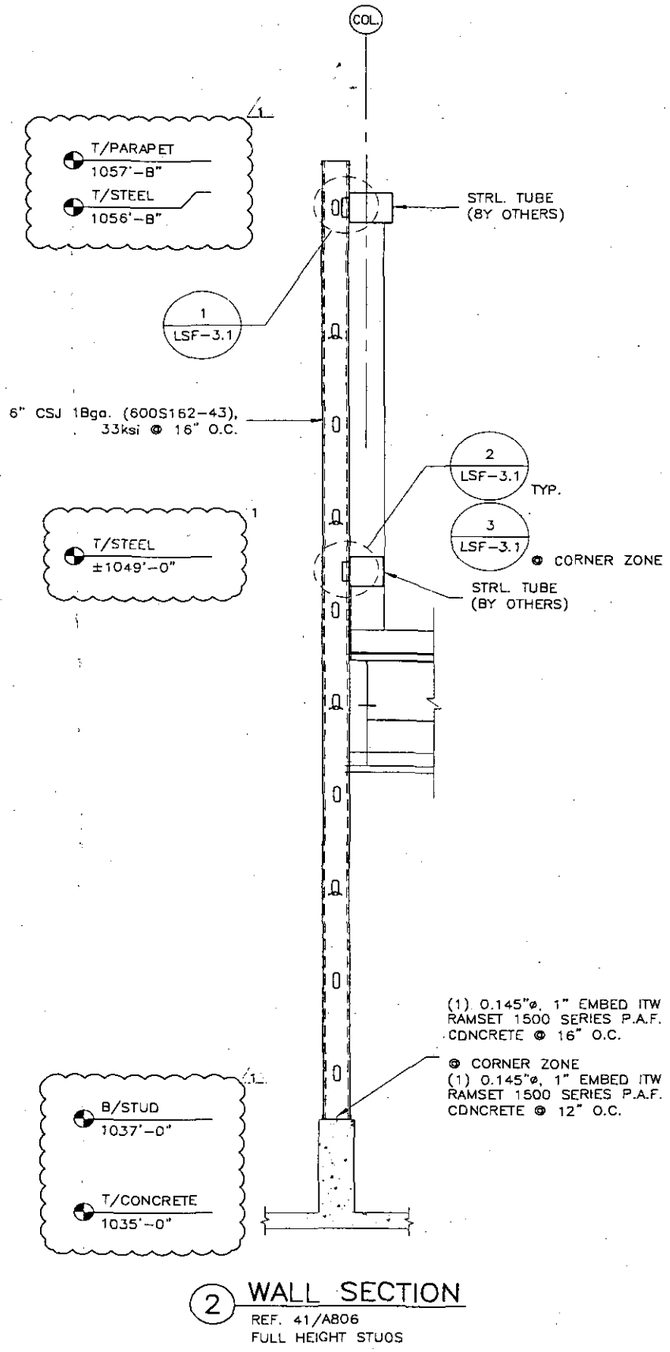
DATE:	01.11.07
SCALE:	N.T.S.
DESIGNED BY:	BF
DRAWN BY:	MSD
CHECKED/sealed BY:	ALS/cec

LSF-1.0

May 11, 2007 - 12:10pm J:\UK Patient Care Facility-- New Garage - BF\Addwork (5.11.07) - BIW\Drawings\61697-1.0.dwg



1 WALL SECTION
REF. 7/A301 – CANOPY FASCIA



2 WALL SECTION
REF. 41/A806
FULL HEIGHT STUDS

GENERAL NOTES:

1) ⌒ – INDICATES LATERAL WALL BRIDGING AT 5'-0" O.C.(MAX) PER 1/LSF-3.0 (U.N.O.).
2) FOR CONNECTIONS OCCURRING AT KNOCKOUTS, SEE REINFORCEMENT DETAIL 2/LSF-3.0.
3) ALL TRACKS ARE TO BE 6" TSB 18ga. (600T125-43), 33ksi W/ (1) #10-16 SCREW PER STUD FLANGE PER 3/LSF-3.0 (U.N.O.).

DIETRICH DESIGN GROUP
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Fax: 219.932.4141

dietrichmetalframing.com

Revisions

1	BW/4dp	05.11.07 PER ARCHITECT REVIEW
2		
3		

Project Information

616972

UK PATIENT CARE FACILITY: NEW GARAGE

LEXINGTON, KY

Prepared for
GRAYHAWK
LEXINGTON, KY

Sheet Information
WALL SECTIONS

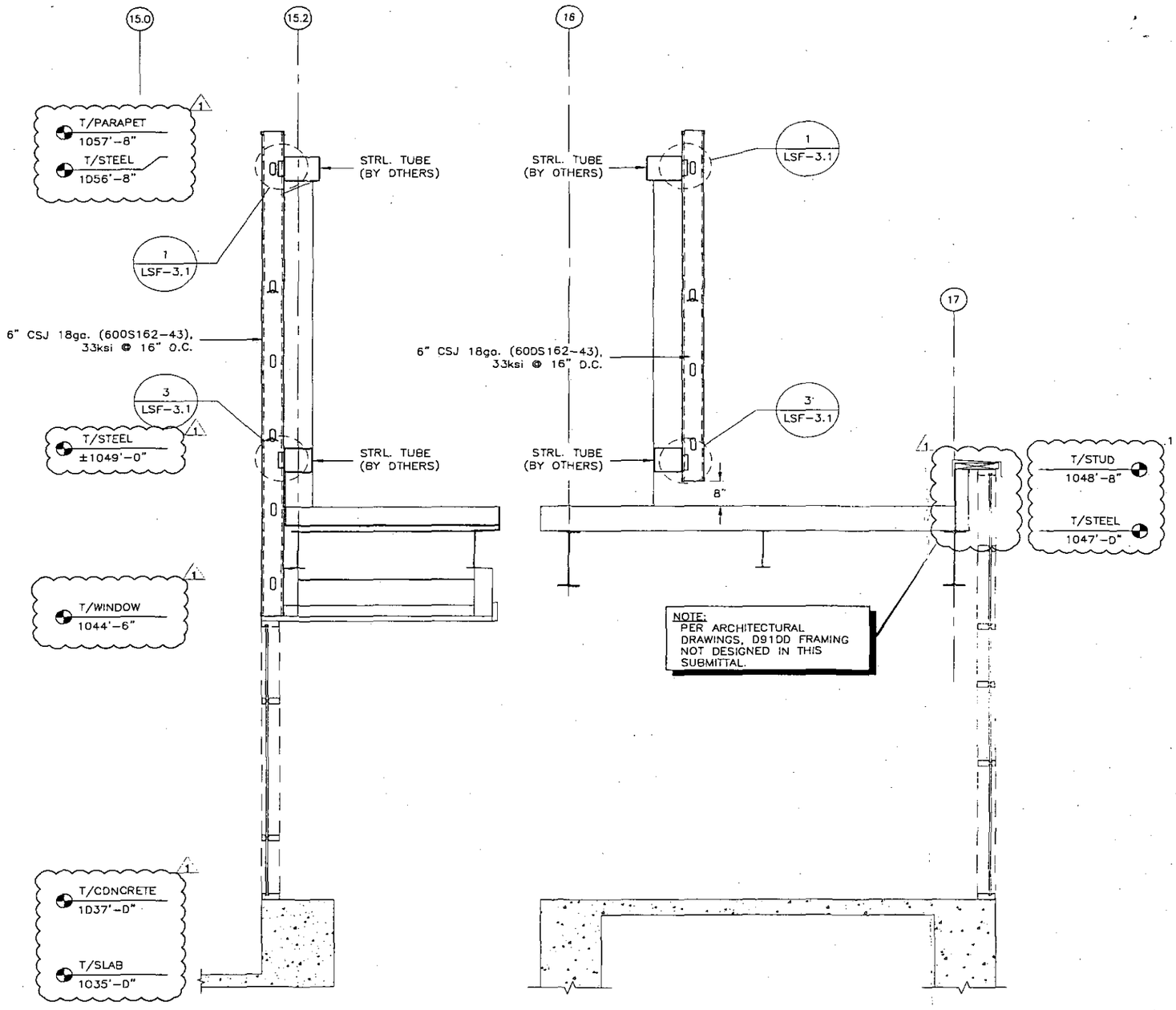
DATE:	01.11.07
SCALE:	N.T.S.
DESIGNED BY:	BF
DRAWN BY:	MSB
CHECKED/sealed BY:	ALS/eac

LSF-2.0

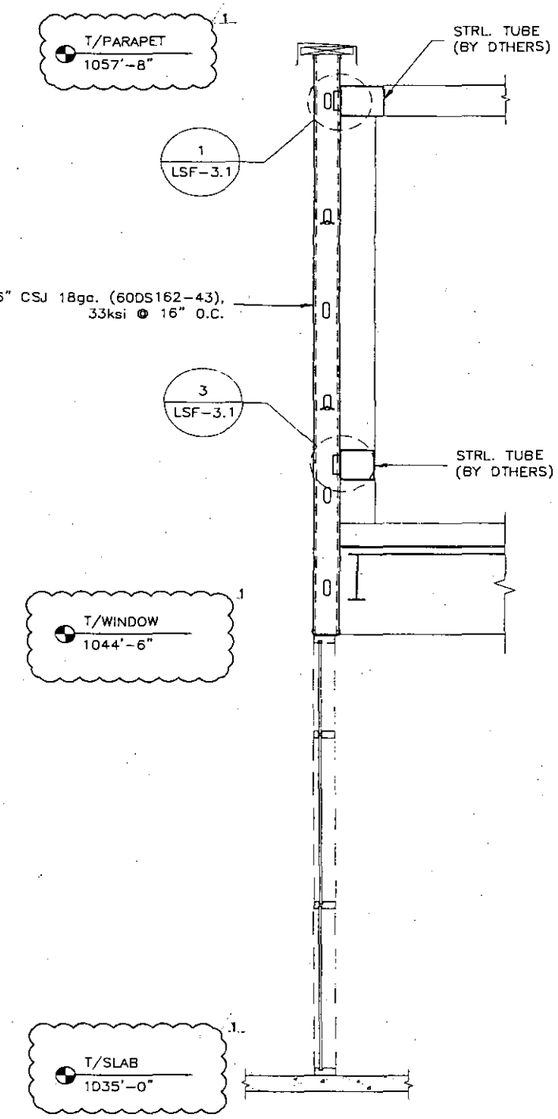
May 11, 2007 – 12:10pm J:\UK Patient Care Facility– New Garage – BF\Addwork (5.11.07) – BIW\Drawings\61697-2.0.dwg

GENERAL NOTES:

1) ⌒ – INDICATES LATERAL WALL BRIDGING AT 5'–0" D.C.(MAX) PER 1/LSF–3.0 (U.N.O.).
2) FOR CONNECTIONS OCCURRING AT KNOCKOUTS, SEE REINFORCEMENT DETAIL 2/LSF–3.0.
3) ALL TRACKS ARE TO BE 6" TSB 18ga. (6DDT125–43), 33ksi W/ (1) #10–16 SCREW PER STUD FLANGE PER 3/LSF–3.0 (U.N.O.).



1 WALL SECTION
REF. 43/A806



2 WALL SECTION
REF. 42/A806

DIETRICH DESIGN GROUP
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Building C – Suite #1
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Revisions

1 BIW/ddp 05.11.07
PER ARCHITECT REVIEW

Project Information

616972

UK PATIENT CARE FACILITY: NEW GARAGE

LEXINGTON, KY

Prepared for
GRAYHAWK
LEXINGTON, KY

Sheet Information
WALL SECTIONS

DATE:	01.11.07
SCALE:	H.T.S.
DESIGNED BY:	BF
DRAWN BY:	MSD
CHECKED/sealed BY:	ALS/cwc

LSF-2.1

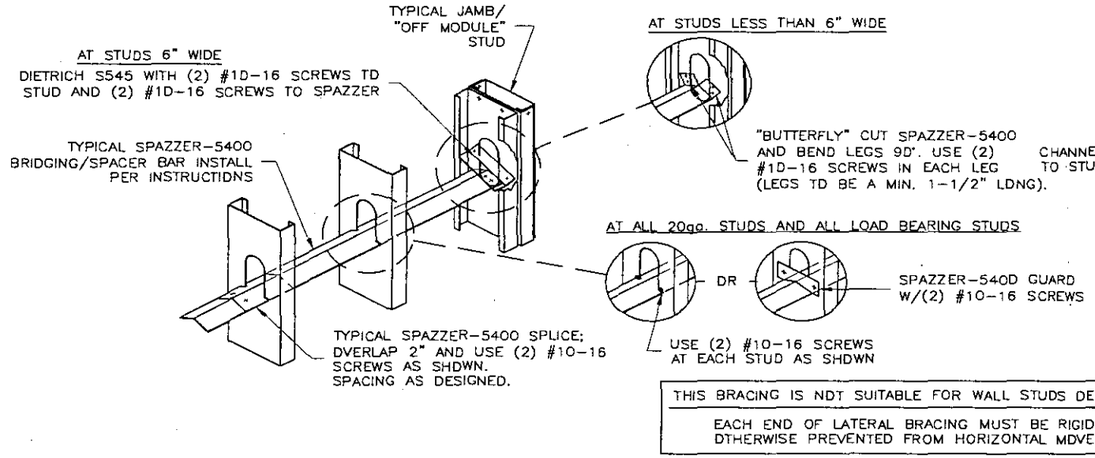


TABLE 1	
STUD WIDTH	CONNECTOR
3-5/8"	DIETRICH U543/X543
4"	DIETRICH U543/X543
6"	DIETRICH U545/X543

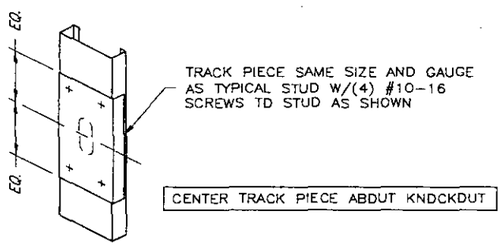
TABLE 2	
STUD WIDTH	CRC
3-1/2" - 6"	DIETRICH 150U50-54
2-1/2"	DIETRICH D75U50-54

TABLE 3	
STUD WIDTH	CONNECTOR
3-5/8"	DIETRICH B543
4"	DIETRICH B543
6"	DIETRICH B545

(A) TradeReady SPAZZER® - 5400

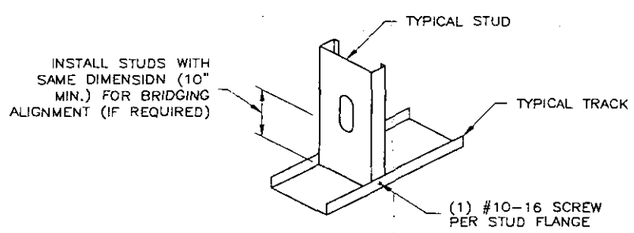
(B) CRC LATERAL BRACING

(1) TYPICAL LATERAL BRACING



(2) KNOCKOUT DETAIL

TYPICAL AT CONNECTIONS



(3) STUD BASE DETAIL

DIETRICH DESIGN GROUP
A Worthington Industries Company

1414 Field Street
Building C - Suite #1
Hammond, IN 46320
Phone: 219.853.9474
Fax: 219.932.4141

dietrichmetalframing.com
The place to step... before the building starts!

Revisions

1. BW/ddp 05.11.07 PER ARCHITECT REVIEW

Project Information

616972

UK PATIENT CARE FACILITY: NEW GARAGE

LEXINGTON, KY

Prepared for

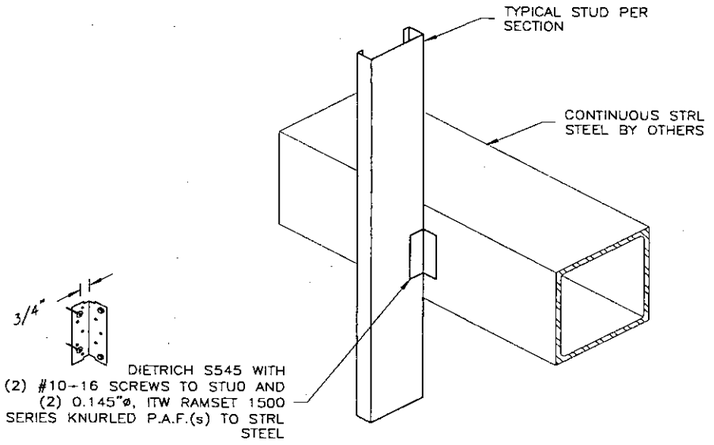
GRAYHAWK
LEXINGTON, KY

Sheet Information

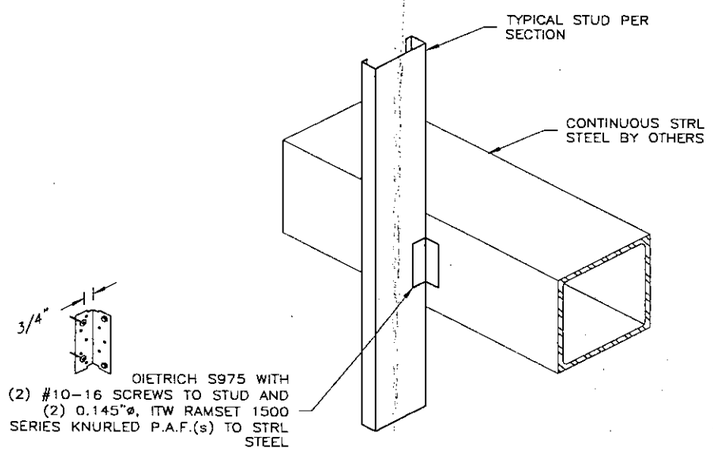
DETAILS

DATE:	01.11.07
SCALE:	N.T.S.
DESIGNED BY:	BF
DRAWN BY:	MSD
CHECKED/sealed BY:	ALS/eac

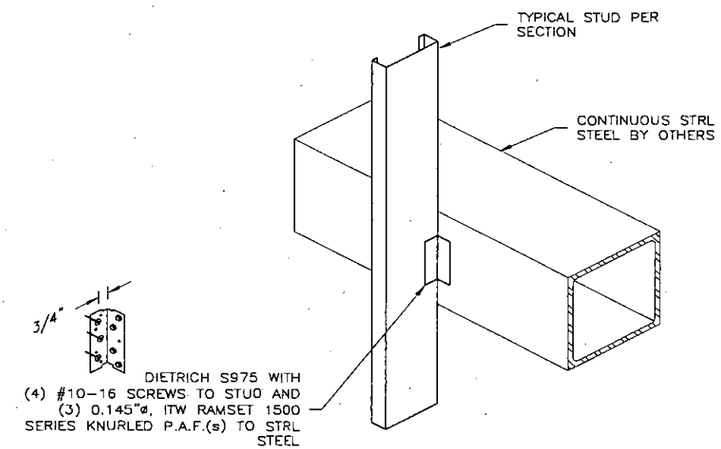
LSF-3.0



1 STUD ATTACHMENT



2 STUD ATTACHMENT



3 STUD ATTACHMENT

GIL BANE
University of Kentucky
Patient Care Facility
Gilbane [illegible] 18-3966
R[illegible]
J010-Hu[illegible] Package
J036-BRIDGE [illegible] J062 Foundation
J050-PCF [illegible] J063 Framing Plt

Bid Package No _____
Submittal No _____
Spec Section/Para _____
Reviewed By _____
Date _____

This review does not constitute nor does it assume design responsibility nor does it relieve the trade contractor's supplier from complying with the contract requirements, coordinating their work with other trade contractors and verifying field dimensions

DIETRICH DESIGN GROUP
A Worthington Industries Company

1414 Field Street
Building C – Suite #1
Hammond, IN 46320
Phone: 219.853.9474
Fax: 219.932.4141

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Revisions

1. BIW/ddp 05.11.07 PER ARCHITECT REVIEW
2.
3.
4.

Project Information

616972

UK PATIENT CARE FACILITY: NEW GARAGE

LEXINGTON, KY

Prepared for

GRAYHAWK
LEXINGTON, KY

Sheet Information

DETAILS

DATE:	01.11.07
SCALE:	N.T.S.
DESIGNED BY:	BF
DRAWN BY:	MSD
CHECKED/sealed BY:	ALS/ddp

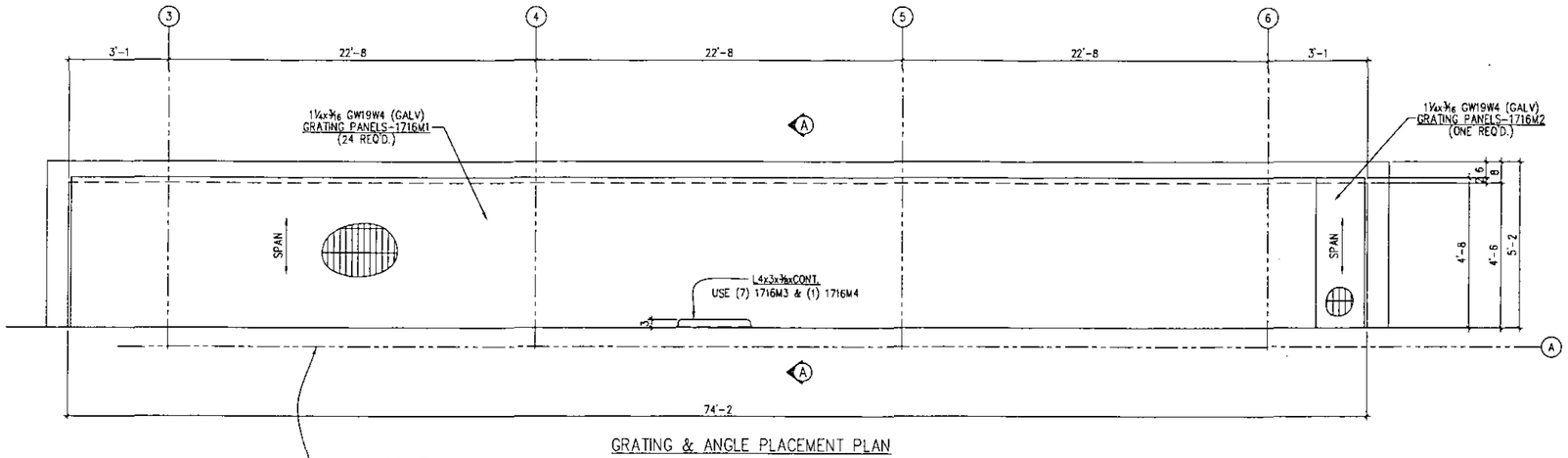
LSF-3.1

AVENUE FABRICATING, INC.

Licensed CadVantage User

DRAWING ISSUE:
FOR APPROVAL 7-19-07

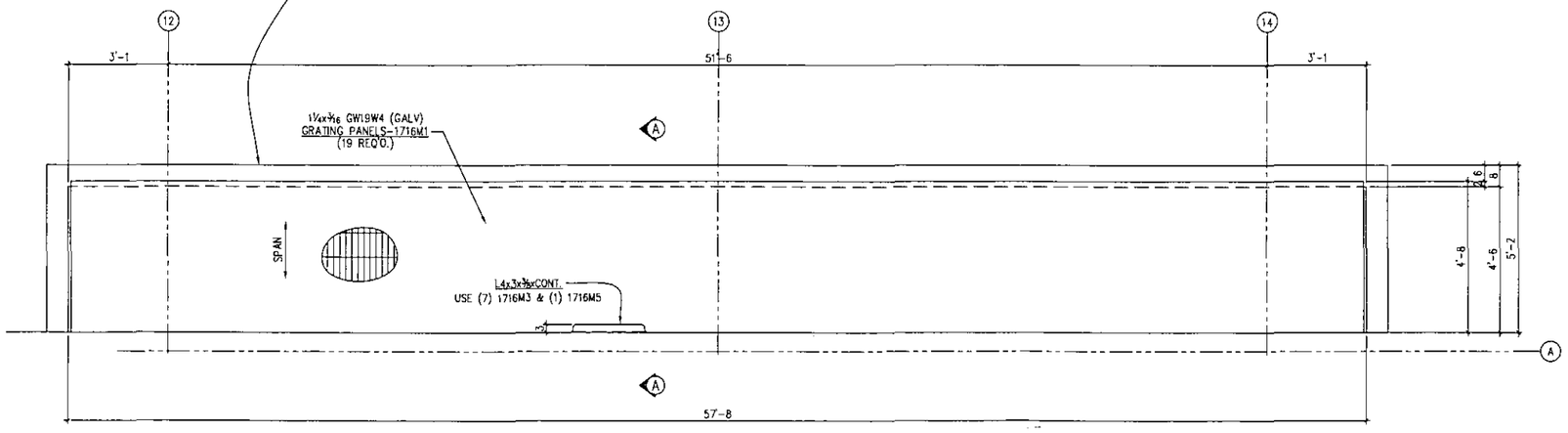
REVISION:
Δ



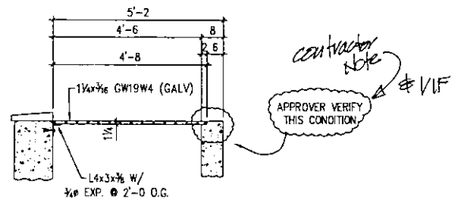
GRATING & ANGLE PLACEMENT PLAN
MECH. AREAWAY 005

APPROVER,
PROVIDE HINGED SECTION
SIZE & LOCATION FOR ACCESS
PER SPECS 05500-6-G

OMIT
NOT
REQD



GRATING & ANGLE PLACEMENT PLAN
MECH. AREAWAY 005A



SECTION A-A

THIS REVIEW BY GBBN ARCHITECTS, INC., IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND IS NOT AN APPROVAL OF THIS DRAWING OR SET OF DRAWINGS. THE COMMENTS MADE DO NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH THE PROJECT DRAWINGS, SPECIFICATIONS AND OTHER CONTRACT DOCUMENTS. CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL DIMENSIONS AND QUANTITIES, ALL FABRICATION, DELIVERY AND ERECTION. ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES; ALL COORDINATION WITH ALL OTHER CONTRACTORS, SUPPLIERS AND OTHERS; PERFORMING ALL WORK IN A SAFE AND PROPER MANNER.

NO EXCEPTIONS TAKEN —
FURNISH AS CORRECTED — X
REVISE AND RESUBMIT —
NO REVIEW - INCOMPLETE —
SUBMIT SPECIFIED ITEMS —
REJECTED —
DATE 8/13/07 BY DSO

GBBN ARCHITECTS INC
ARCHITECTURE, INTERIORS, PLANNING, ENGINEERING
2 333 EAST 8TH STREET CINCINNATI, OHIO 45202-2217 (513) 241-8700
2 335 WEST MAIN STREET LEXINGTON, KENTUCKY 40507 (859) 281-8787

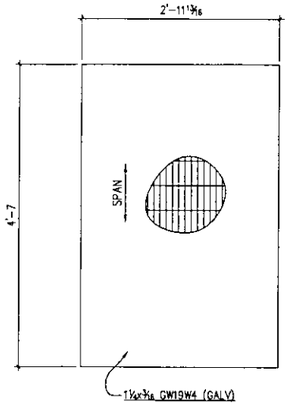
GILBANE
University of Kentucky
Patient Care Facility
Gilbane Project No. 18-3988
REVIEWED
☐ 010-Haguelet ☐ 020-Garage
☐ 030-Infrastructure ☐ 040-PCF Foundation
☐ 050-PCF Core/Shell ☐ 060-Tower/Up Fit
Bid Package No. 100
Submittal No. 05500-007
Spec. Sect/Para
Reviewed By EJF
Date 8/16/07
This review does not constitute nor does it assume design responsibility nor does it relieve the trade contractor's supplier from complying with the contract requirements, coordinating their work with other trade contractors and verifying field dimensions.

REVIEWED FOR GENERAL CONFORMITY TO PLANS AND SPECIFICATIONS. DETAIL DIMENSIONS ARE SUBMITTED NOT COMPLETELY CHECKED. SUBCONTRACTOR IS FULLY RESPONSIBLE TO HIS OWN MEASURES BY THIS APPROVAL.

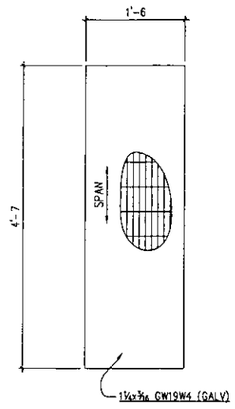
E.C. MATTHEWS CO., INC.
BY: DSO 8-7-07
SIGNATURE DATE

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REFERENCE DWG: A100A, A432A & A511A	DESCRIPTION: MECH. AREAWAY GRATING & ANGLE PLACEMENT PLAN	DRAWN BY: TM	DATE: 7/07	CHECKED BY: DSS	JOB# 06-36	SHEET: E19 Δ

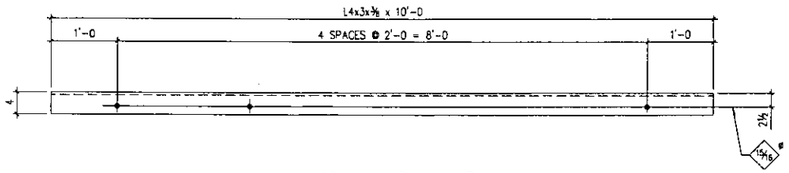
AREA WELL GRATES



43-GRATING PANELS-1716M1

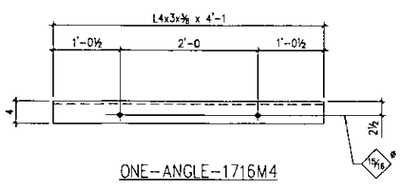


ONE-GRATING PANEL-1716M2



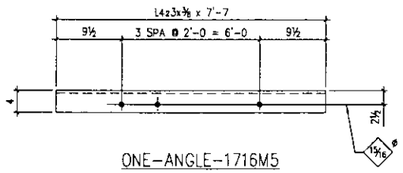
12-ANGLES-1716M3

60-¾ø x 4¼ EXP. ANCHORS
(S.S.)



ONE-ANGLE-1716M4

2-¾ø x 4¼ EXP. ANCHORS
(S.S.)



ONE-ANGLE-1716M5

4-¾ø x 4¼ EXP. ANCHORS
(S.S.)

AVENUE FABRICATING, INC.

Licensed CadVantage User

DRAWING ISSUE:
FOR APPROVAL 7-19-07

REVISION:
△

BILL OF MATERIAL

NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : AS NOTED
3. FINISH : GALVANIZED

Drawing Number	Revision Number	Ship Mark	Piece Mark	Quantity	Type of Material	Size of Material	Grade	Length	Notes
1716	0	1716M1		43	MI	1¼ x 3/16 GW 19W4		4'-7	GALV
1716	0	1716M2		ONE	MI	1¼ x 3/16 GW 19W4		4'-7	GALV
1716	0	1713M3		12	L	4 x 3 x 3/8		10'-0	
1710	0	1716M4		ONE	L	4 x 3 x 3/8		4'-1	
1716	0	1716M5		ONE	L	4 x 3 x 3/8		7'-7	
					FIELD BOLTS				
1716	0			88	EB	¾ø		0'-4½	STAINLESS

NOTE:
HOT DIP GALVANIZE AFTER FABRICATION.
SEAL WELD IN ADDITION TO WELDS SHOWN.
PROVIDE VENT & WEEP HOLES AS REQUIRED.

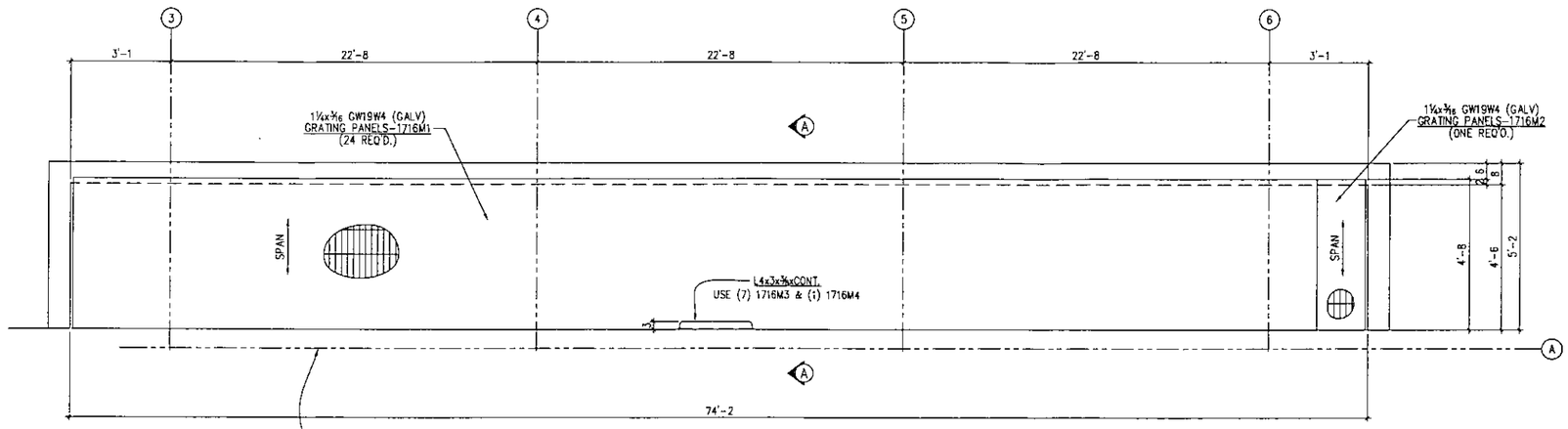
PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REFERENCE DWG: E19	DESCRIPTION: MECH. REAWAY GRATING & ANGLE SUPPORTS	DRAWN BY: TM	DATE: 7/07	CHECKED BY: OSS	JOB# 06-36	SHEET: 1716 △

AVENUE FABRICATING, INC.

Licensed CadVantage User

DRAWING ISSUE:
FOR APPROVAL 7-19-07

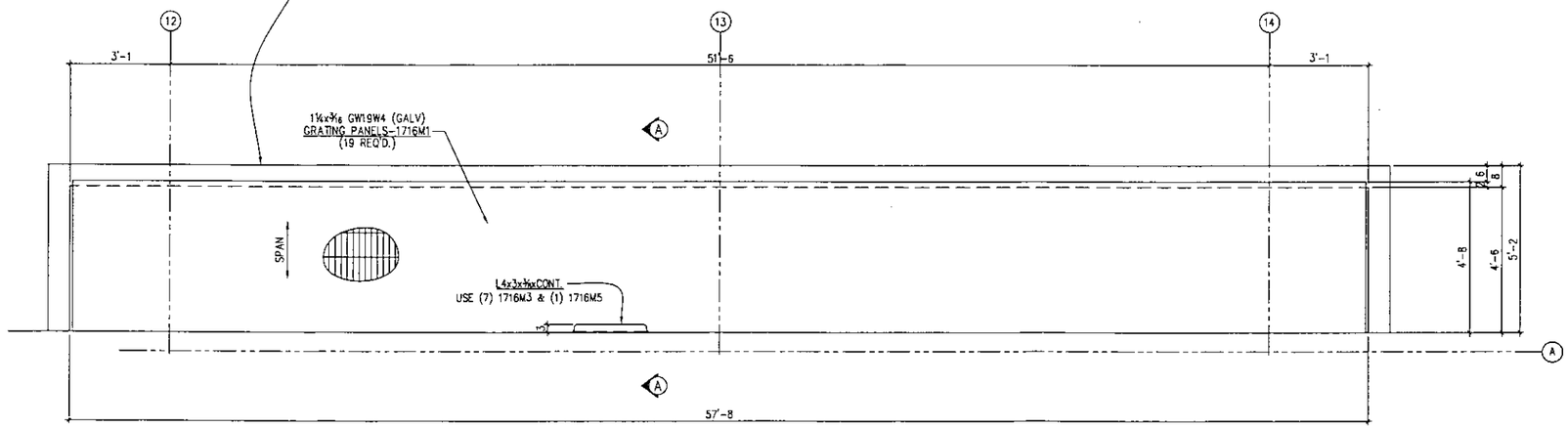
REVISION:
△



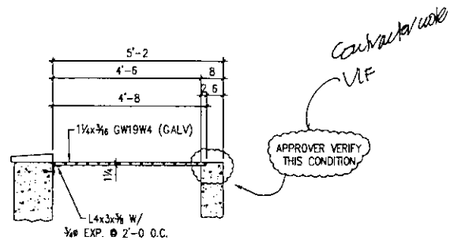
GRATING & ANGLE PLACEMENT PLAN
MECH. AREAWAY 005

APPROVER, PROVIDE HINGED SECTION SIZE & LOCATION FOR ACCESS PER SPECS 05500-6-G

omit Not required per RFI 0500



GRATING & ANGLE PLACEMENT PLAN
MECH. AREAWAY 005A



SECTION A-A

contractor work
VIF

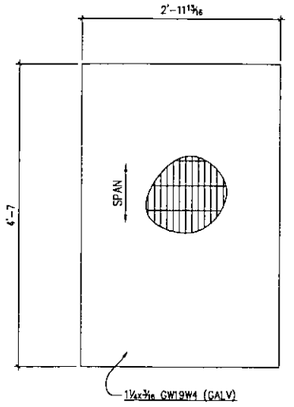
GILBANE
University of Kentucky
Patient Care Facility
Gilbane Project No. 18-3966
REVIEWED
☐010-Hospital ☒020-Garage
☐030-Infrastructure ☐040-PCF Foundation
☐050-PCF Core/Shell ☐060-Tower Up Fit
Bid Package No. 100
Submittal No. 100-05500-B007
Spec. Sect/Para.
Reviewed By RJH
Date 8/15/07
This review does not constitute nor does it assume design responsibility nor does it relieve the trade contractor's supplier from complying with the contract requirements, coordinating their work with other trade contractors and verifying field dimensions.

THIS REVIEW BY GIBBN ARCHITECTS, INC. IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND IS NOT AN APPROVAL OF THIS DRAWING OR SET OF DRAWINGS. THE COMMENTS MADE DO NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH THE PROJECT DRAWINGS, SPECIFICATIONS AND OTHER CONTRACT DOCUMENTS. CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL DIMENSIONS AND QUANTITIES, ALL FABRICATION, DELIVERY AND ERECTION, ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES, ALL COORDINATION WITH ALL OTHER CONTRACTORS, SUPPLIERS AND OTHERS; PERFORMING ALL WORK IN A SAFE AND PROPER MANNER.

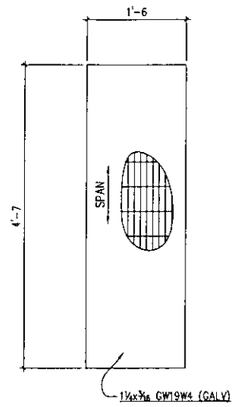
NO EXCEPTIONS TAKEN — X
FURNISH AS CORRECTED —
REVISE AND RESUBMIT —
NO REVIEW - INCOMPLETE —
SUBMIT SPECIFIED ITEMS —
REJECTED — DKP
DATE 8/15/07 BY:
GIBBN ARCHITECTS, INC.
ARCHITECTURE, INTERIORS, PLANNING, ENGINEERING
6 232 EAST 8TH STREET, CINCINNATI, OHIO 45202 (513) 241-6700
325 WEST MAIN STREET, LEXINGTON, KENTUCKY 40507 (859) 281-6787

APPROVED FOR GENERAL CONFORMANCE TO PLANS AND SPECIFICATIONS. REVIEW DOES NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH CONTRACT DOCUMENTS OR FROM RESPONSIBILITY FOR DIMENSIONS AND QUANTITIES.
E.C. MATTHEWS CO., INC.
BY: [signature] 8-7-07
SIGNATURE DATE

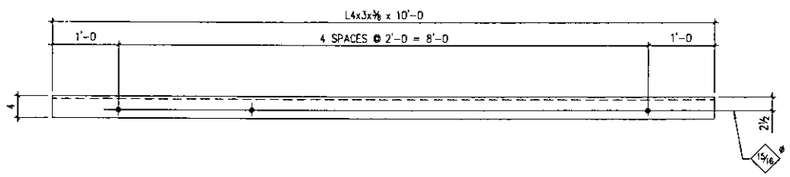
PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REFERENCE DWG: A100A, A432A & A511A	DESCRIPTION: MECH. AREAWAY GRATING & ANGLE PLACEMENT PLAN	DRAWN BY: TM	DATE: 7/07	CHECKED BY: DSS	JOB# 06-36	SHEET: E19 △



43-GRATING PANELS-1716M1

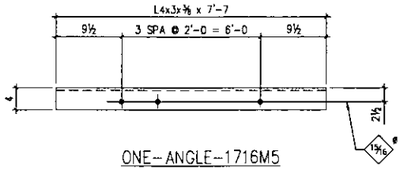


ONE-GRATING PANEL-1716M2



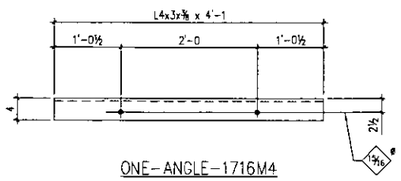
12-ANGLES-1716M3

60-3/4ø x 4¼ EXP. ANCHORS
(S.S.)



ONE-ANGLE-1716M5

4-3/4ø x 4¼ EXP. ANCHORS
(S.S.)



ONE-ANGLE-1716M4

2-3/4ø x 4¼ EXP. ANCHORS
(S.S.)

AVENUE FABRICATING, INC.

Licensed CadVantage User

DRAWING ISSUE:
FOR APPROVAL 7-19-07

REVISION:
△

BILL OF MATERIAL

NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : AS NOTED
3. FINISH : GALVANIZED

Drawing Number	Revision Number	Ship Mark	Piece Mark	Quantity	Type of Material	Size of Material	Grade	Length	Notes
1716	0	1716M1		43	pl	1¼ x 3/16 GW 19W4		4'-7	GALV
1716	0	1716M2		ONE	pl	1¼ x 3/16 GW 19W4		4'-7	GALV
1716	0	1716M3		12	L	4 x 3 x 3/8		10'-0	
1716	0	1716M4		ONE	L	4 x 3 x 3/8		4'-1	
1716	0	1716M5		ONE	L	4 x 3 x 3/8		7'-7	
					FIELD BOLTS				
1716	0			86	EB	3/4ø		0'-4¼	STAINLESS

NOTE:
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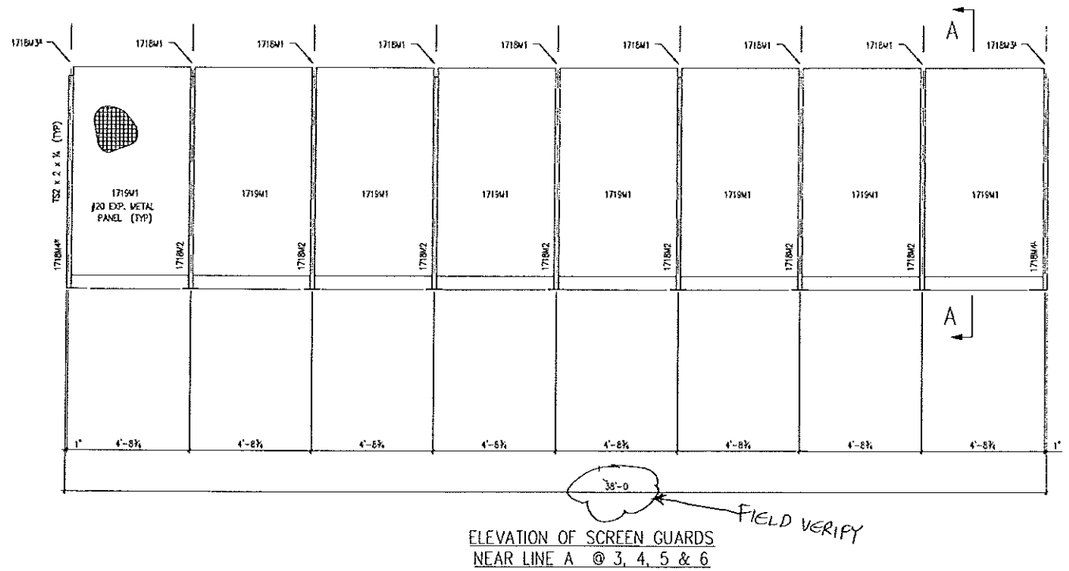
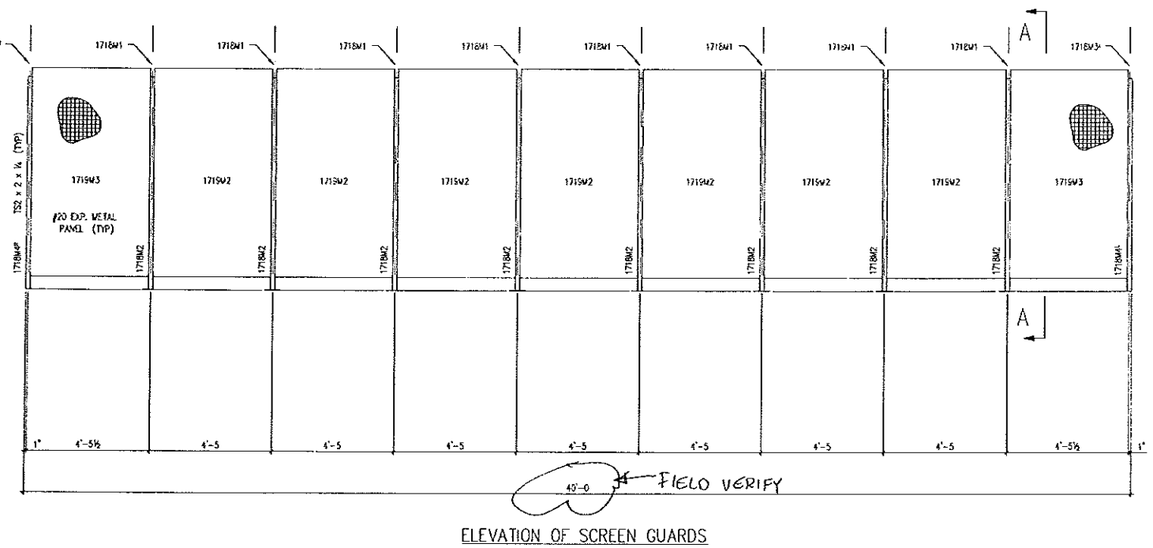
SEAL WELD IN ADDITION TO WELDS SHOWN.
PROVIDE VENT & WEEP HOLES AS REQUIRED.

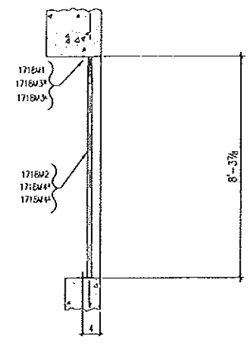
PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REFERENCE DWG: E19	DESCRIPTION: MECH. REAWAY GRATING & ANGLE SUPPORTS	DRAWN BY: TM	DATE: 7/07	CHECKED BY: DSS	JOB# 06-36	SHEET: 1716 △



ELEVATION OF SCREEN GUARDS
NEAR LINE A @ 3, 4, 5 & 6



ELEVATION OF SCREEN GUARDS
NEAR LINE A @ 12, 13 & 14



SECTION A-A

AVENUE FABRICATING, INC.

Licensed CadVantage User

DRAWING ISSUE:
FOR APPVL 01/08/08
.
.
REVISION:

GBBN NOTE

- COMPLETE ONE PANEL OF MESH & HEM PLATE; HOT DIPPED GALV. FOR REVIEW BY ARCHITECT. CONFIRM NO DISTORTION OR OIL CANNING WILL OCCUR DURING HOT DIP GALV. PROCESS. SHOULD DISTORTIONS OCCUR NOTIFY ARCHITECT.

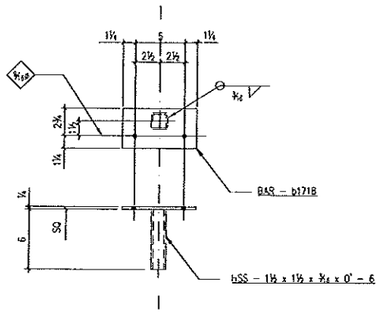
GILBANE
University of Kentucky
Patient Care Facility
Gilbane Project No. 18-3966
REVIEWED
☐ 210-Hospital ☐ 300-Garage
☐ 330-Parking ☐ 340-PCF Foundation
☐ 350-PCF Core Shell ☐ 360-Tower Up Fit
Bid Package No. 160
Submittal No. 160-05500-012
Spec. Sect/Para.
Reviewed By BR
Date 1/29/08
This review does not constitute nor does it assume design responsibility nor does it relieve the trade contractor's supplier from complying with the contract requirements, coordinating their work with other trade contractors and verifying field dimensions.

RECEIVED
JAN 29 2008
E.C. MATTHEWS CO.

NOT FOR CONSTRUCTION
JAN 08 2008
FOR APPROVAL ONLY

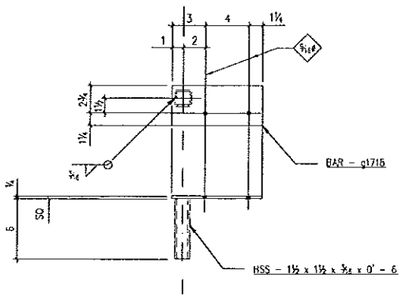
M2 MESH PANEL APPR

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REFERENCE DWG: A100A	DESCRIPTION: SCREEN GUARDS	DRAWN BY: RR	DATE: 01/08	CHECKED BY: JDC	DATE: 01/08	JOB# 06-36	SHEET: E20



FIELD BOLTS
30 – HILTI KWIK BOLT II ½ x 2¾

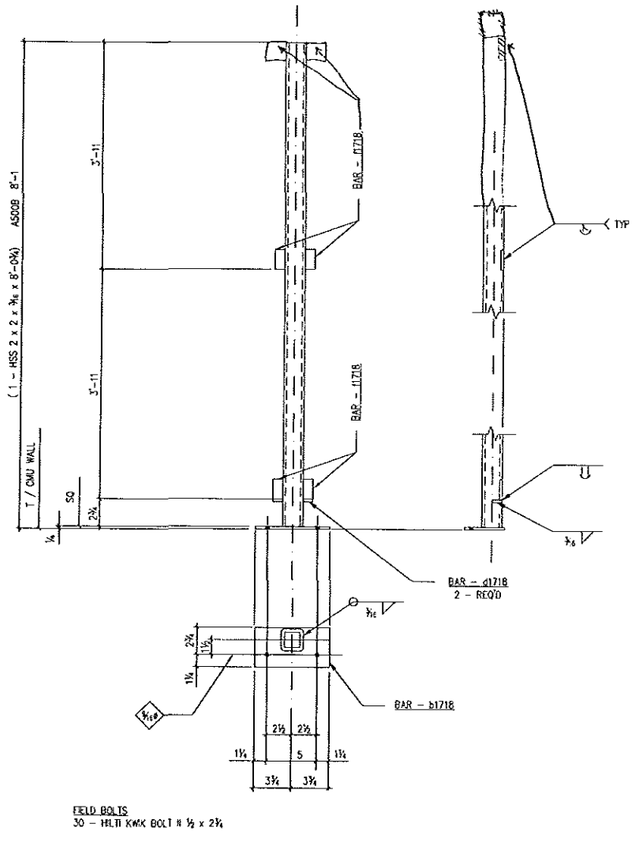
15 – SLEEVES – 1718M1



FIELD BOLTS
8 – HILTI KWIK BOLT II ½ x 2¾

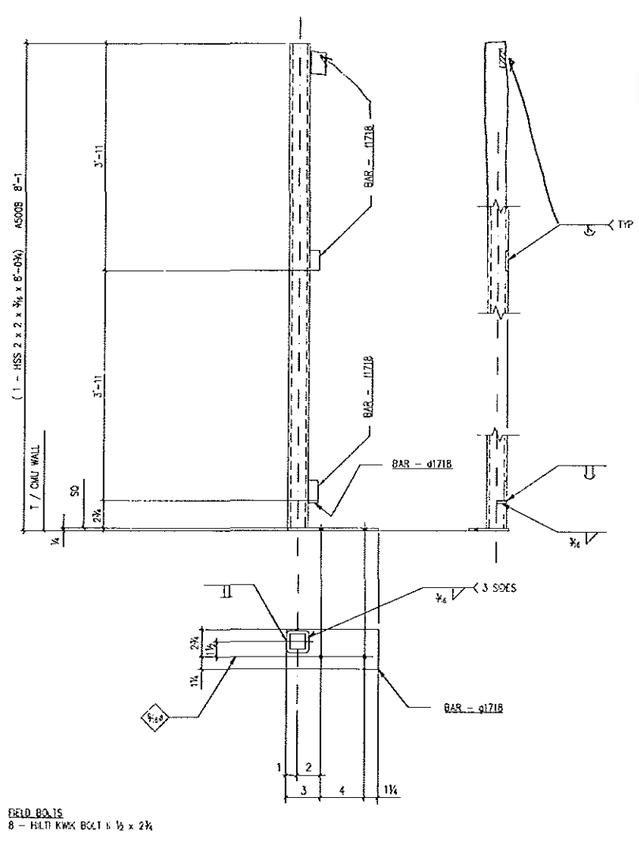
2 – SLEEVES – 1718M3R

2 – SLEEVES – 1718M3L



FIELD BOLTS
30 – HILTI KWIK BOLT II ½ x 2¾

15 – POSTS – 1718M2



FIELD BOLTS
8 – HILTI KWIK BOLT II ½ x 2¾

2 – POSTS – 1718M4R

2 – POSTS – 1718M4L

AVENUE FABRICATING, INC.

Licensed CadVantage User

DRAWING ISSUE:
FOR APPVL 01/08/08

REVISION:

BILL OF MATERIAL

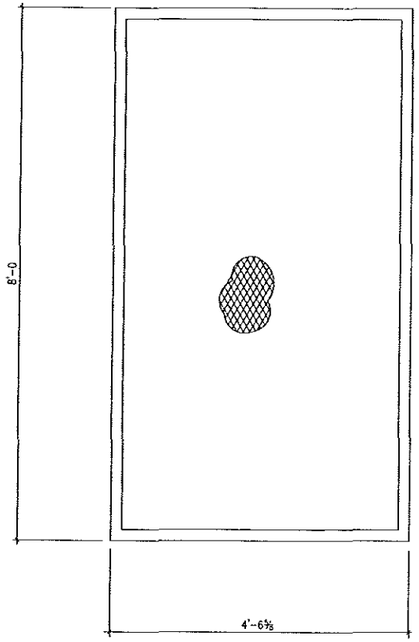
NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : AS NOTED
3. FINISH : GALVANIZED

Drawing Number	Revision Number	Ship Mark	Piece Mark	Quantity	Type of Material	Size of Material	Grade	Length	Notes
1718	0	1718M1		15	HSS	1½ x 1½ x .125	A500-Gr B	0'-6	SIE
1718	0		b1718	15	FB	¼ x 4	A36	0'-7½	
1718	0	1718M2		15	HSS	2 x 2 x .1875	A500-Gr B	8'-1	SIE
1718	0		b1718	15	FB	½ x 4	A36	0'-7½	
1718	0		d1718	30	FB	½ x 1	A36	0'-1	
1718	0		f1718	60	FB	¼ x 1	A36	0'-2	
1718	0	1718M3R		2	HSS	1½ x 1½ x .125	A500-Gr B	0'-6	SIE
1718	0		g1718	2	FB	¼ x 4	A36	0'-8¼	
1718	0	1718M3L		2	HSS	1½ x 1½ x .125	A500-Gr B	0'-6	SIE
1718	0		g1718	2	FB	½ x 4	A36	0'-8¼	
1718	0	1718M4R		2	HSS	2 x 2 x .1875	A500-Gr B	8'-1	SIE
1718	0		d1718	2	FB	¼ x 1	A36	0'-1	
1718	0		f1718	4	FB	¼ x 1	A36	0'-2	
1718	0		g1718	2	FB	¼ x 4	A36	0'-8¼	
1718	0	1718M4L		2	HSS	2 x 2 x .1875	A500-Gr B	8'-1	SIE
1718	0		d1718	2	FB	¼ x 1	A36	0'-1	
1718	0		f1718	4	FB	½ x 1	A36	0'-2	
1718	0		g1718	2	FB	¼ x 4	A36	0'-8¼	
					FIELD BOLTS				
1718	0			76	EB	½ x 2¾			

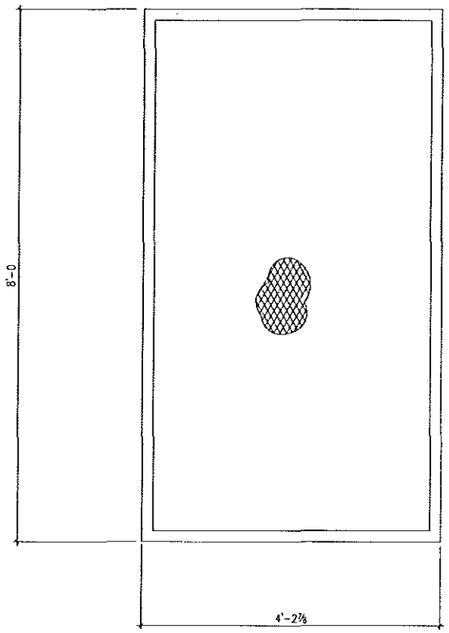
NOTICE TO CONSTRUCTION
JAN 08 2008
NOT FOR FIELD USE

NOTE:
HOT DIP GALVANIZE AFTER FABRICATION.
SEAL WELD IN ADDITION TO WELDS SHOWN.
PROVIDE VENT & WEEP HOLES AS REQUIRED

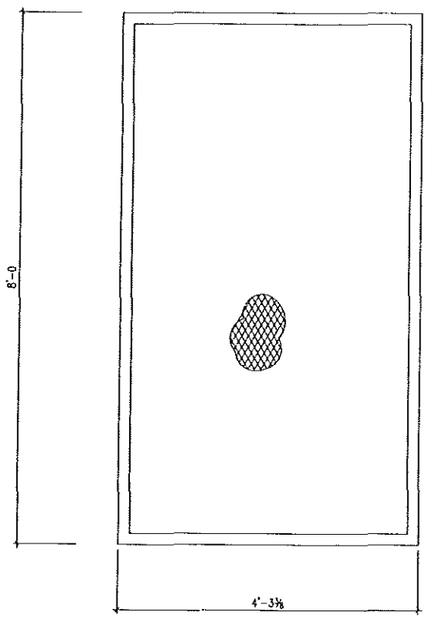
PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REFERENCE DWG: E20	DESCRIPTION: SCREEN GUARD POSTS	DRAWN BY: RR	DATE: 01/08	CHECKED BY: JDC	DATE: 01/08	JOB# 06-36	SHEET: 1718



8 - PANELS - 1719M1



7 - PANELS - 1719M2



2 - PANELS - 1719M3

VERIFY DIST WILL NOT OCCUR
HEM PLATE SHALL BE STRAIGHT
W/ NO TOOL MARKS

TYPICAL FRAME IS 14GA HEM & MESH INFILL
SUPPORT AROUND PERIMETER w/ 1" LEGS
INFILL IS #20 EXP. METAL

AVENUE FABRICATING, INC.

Licensed CadVantage User

DRAWING ISSUE:
FOR APPVL 01/08/08

REVISION:

BILL OF MATERIAL

NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : AS NOTED
3. FINISH : GALVANIZED

Drawing Number	Revision Number	Ship Mark	Piece Mark	Quantity	Type of Material	Size of Material	Grade	Length	Notes
1719	0	1719M1		8	#20 EXP METAL MESH w/ 14GA HEM &			36 SQ FT	
								26'-0	BENT
1719	0	1719M2		7	#20 EXP METAL MESH w/ 14GA HEM &			36 SQ FT	
								25'-0	BENT
1719	0	1719M3		2	#20 EXP METAL MESH w/ 14GA HEM &			36 SQ FT	
								26'-0	BENT

SUBMIT SAMPLE # FOR REVIEW

NOT FOR CONSTRUCTION
JAN 08 2008
FOR APPROVAL ONLY

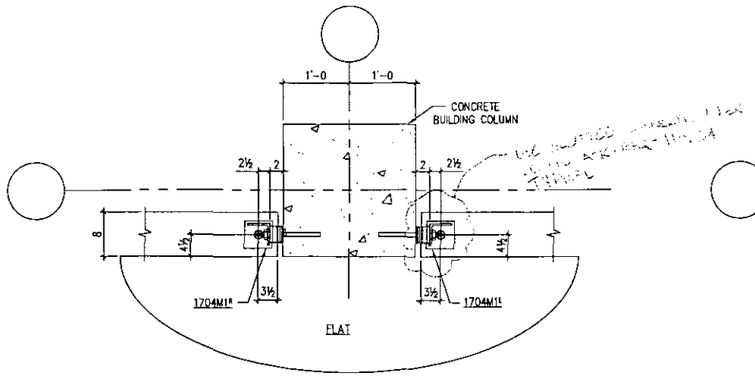
NOTE:
HOT DIP GALVANIZE AFTER FABRICATION.
SEAL WELD IN ADDITION TO WELDS SHOWN.
PROVIDE VENT & WEEP HOLES AS REQUIRED.

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REFERENCE DWG: E20	DESCRIPTION: SCREEN GUARD PANELS	DRAWN BY: RR	DATE: 01/08	CHECKED BY: JDC	DATE: 01/08	JOB# 06-36	SHEET: 1719

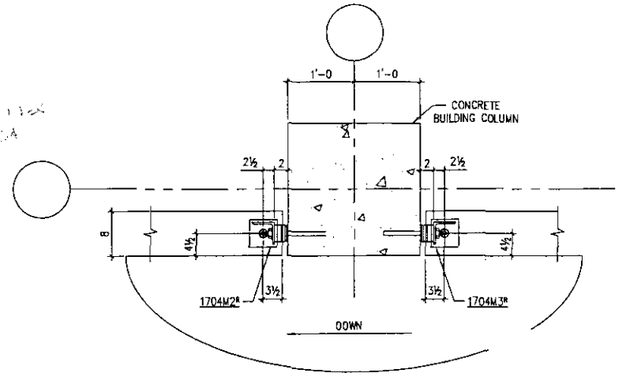
AVENUE FABRICATING, INC.

Licensed CadVantage User

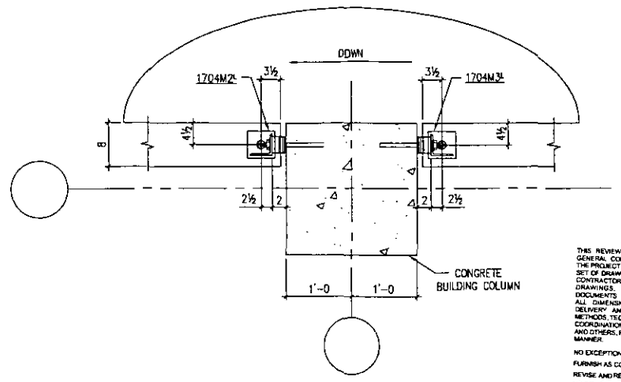
DRAWING ISSUE:
FOR APPROVAL 7-2-07
REVISION:



PLAN VIEW



PLAN VIEW



PLAN VIEW

THIS REVIEW BY GBBN ARCHITECTS, INC., IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND IS NOT AN APPROVAL OF THIS DRAWING OR SET OF DRAWINGS. THE COMMENTS MADE DO NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH THE PROJECT DRAWINGS, SPECIFICATIONS AND OTHER CONTRACT DOCUMENTS. CONTRACTOR IS SOLELY RESPONSIBLE FOR: ALL DIMENSIONS AND QUANTITIES; ALL FABRICATION, DELIVERY AND ERECTION; ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES; ALL COORDINATION WITH ALL OTHER CONTRACTORS, SUPPLIERS AND OTHERS; PERFORMING ALL WORK IN A SAFE AND PROPER MANNER.

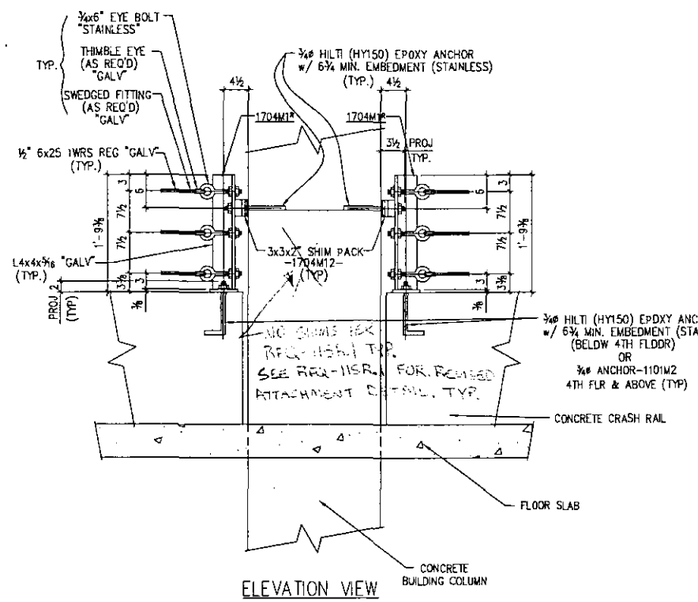
NO EXCEPTIONS TAKEN ——— ☐
FURNISH AS CORRECTED ——— ☒
REVISE AND RESUBMIT ——— ☐
NO REVIEW - W/COMPLETE ——— ☐
SUBMIT SPECIFIED ITEMS ——— ☐
REJECTED ——— ☐
DATE 7/3/07 BY

GBBN ARCHITECTS, INC.
ARCHITECTURE, INTERIORS, PLANNING, ENGINEERING
2132 EAST 9TH STREET, CINCINNATI, OHIO 45202-2217 (513) 241-4700
2365 WEST MAIN STREET, LEXINGTON, KENTUCKY 40507 (859) 381-5757

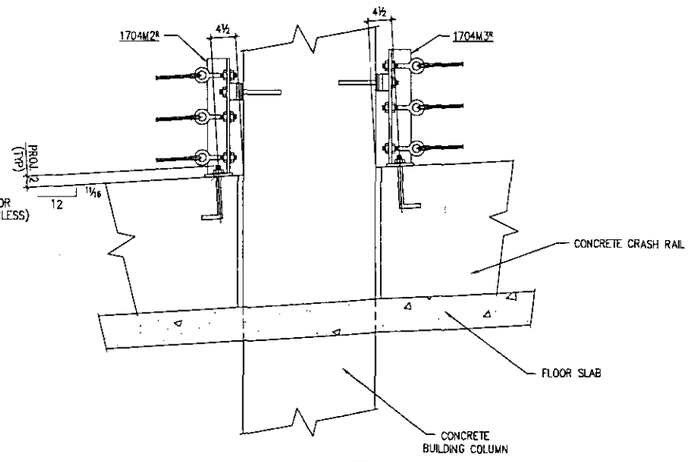
GENERAL NOTES

- Do not drill through existing reinforcing in columns.
- Field bolts shall be H.A.S. rods in lieu of HIT rod.
- Coordinate angle locations with MEP equipment at ramp splits.
- Verify with cable fitting manufacturer that cable and fittings can withstand a safe working load of 7500 lb.
- Verify cable complies with ASTM A 586-98, class A coating throughout.
- All angles and base plates shall be hot dipped galvanized per specification section 05500. Angles and base plates shall be primed and painted per spec. secs. 09900 2.1.5B. Color shall be PPG black (TN#21) or similar. Submit sample for review.
- Submit product data for cable and fasteners.

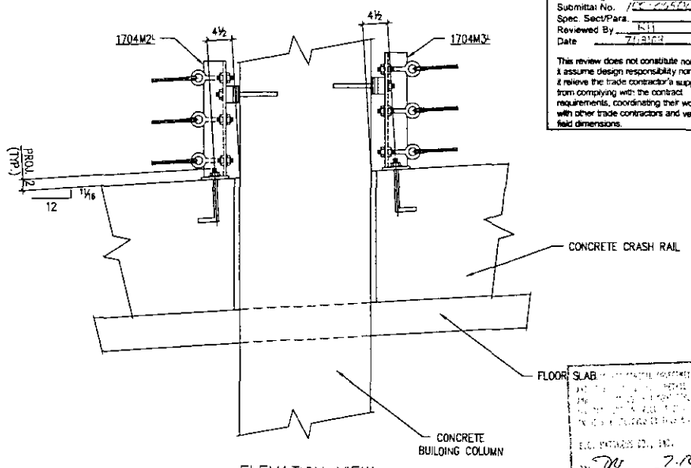
- 05500-2.5-#-11



ELEVATION VIEW



ELEVATION VIEW



ELEVATION VIEW

GILBANE
University of Kentucky
Patient Care Facility
Gilbane Project No. 18-3968
REVIEWED
☐a10-Hugwelt ☐020-Garage
☐030-Infrastructure ☐040-PCF Foundation
☐050-PCF Core/Shell ☐060-TowerUp Fit
Bid Package No. 10/1
Submittal No. PCF-050SH-111
Spec. Sect/Para. 05500
Reviewed By KH
Date 7/13/07
This review does not constitute nor does it assume design responsibility nor does it relieve the trade contractor's supplier from complying with the contract requirements, coordinating their work with other trade contractors and verifying field dimensions.

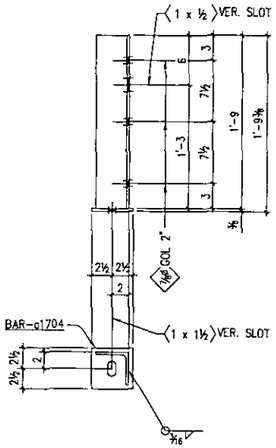
E.C. MATTHEWS CO., INC.
BY DW 7.12.07
SIGNATURE DATE

NOT FOR CONSTRUCTION
JUL 05 2007
FOR APPROVAL ONLY

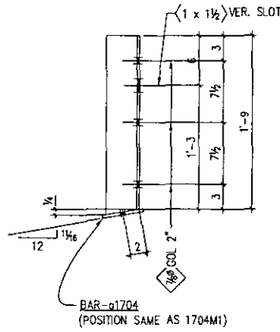
CABLE BARRIER

TYP BARRIER CABLE RAIL POST AND ANCHOR DETAILS

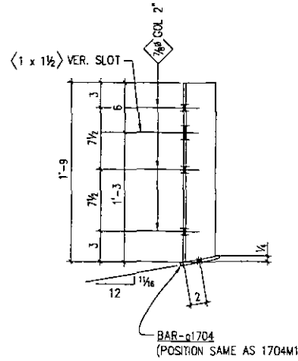
PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REFERENCE DWG: A821A	DESCRIPTION: MISC.(BARRIER CABLE RAIL POST PLACEMENT DETAILS)	DRAWN BY: JG	DATE: 8/06	CHECKED BY: MAD 8/06	JOB# 06-36	SHEET: E2



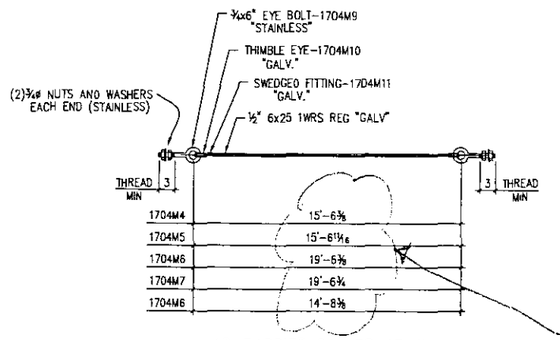
159-BARRIER CABLE POSTS-1704M1R (AS SHOWN)
159-BARRIER CABLE POSTS-1704M1L (OPP HAND)



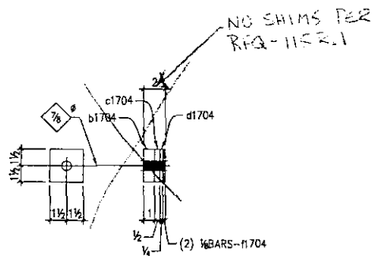
70-BARRIER CABLE POSTS-1704M2R (AS SHOWN)
70-BARRIER CABLE POSTS-1704M2L (OPP HAND)



70-BARRIER CABLE POSTS-1704M3R (AS SHOWN)
70-BARRIER CABLE POSTS-1704M3L (OPP HAND)



48-BARRIER CABLES-1704M4
42-BARRIER CABLES-1704M5
426-BARRIER CABLES-1704M6
378-BARRIER CABLES-1704M7
3-BARRIER CABLES-1704M8
1794-EYE BOLTS-1704M9
1794-THIMBLE EYES-1704M10
1794-SWEDGED FITTING-1704M11



598-SHIM PACKS-1704M12

FIELD VERIFY ALL DIMENSIONS PRIOR TO FABRICATION. TENSION IN ALL CABLES MUST BE EVENLY DISTRIBUTED BY THE CONTRACTOR

TOTAL FIELD BOLTS THIS SHEET
242-⅜ø HILTI HIT ROD W/ HY150 ADHESIVE W/6¾ MIN. EMBED & 2" PROJ. STAINLESS
598-⅜ø HILTI HIT ROD W/ HY150 ADHESIVE W/6¾ MIN. EMBED & 3½" PROJ. STAINLESS

AVENUE FABRICATING, INC.

Licensed CadVantage User

DRAWING ISSUE:
FOR APPROVAL 7-2-07
REVISION:

BILL OF MATERIAL

NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : AS NOTED
3. FINISH : GALV.

Drawing Number	Revision Number	Ship Mark	Piece Mark	Quantity	Type of Material	Size of Material	Grade	Length	Notes
1704	a	1794M11		159	L	4x4x5/16	A36	1'-9	GALV.
1704	a		a1794	159	FB	3/8x5	A36	0'-5	GALV.
1794	a	1704M11		159	L	4x4x5/16	A36	1'-9	
1794	a		a1704	159	FB	3/8x5	A36	0'-5	
1704	a	1704M2R		70	L	4x4x5/16	A36	1'-9⅛	
1704	a		a1704	70	FB	3/8x5	A36	0'-5	
1704	a	1704M2L		70	L	4x4x5/16	A36	1'-9⅛	
1704	a		a1704	70	FB	3/8x5	A36	0'-5	
1704	a	1704M3R		70	L	4x4x5/16	A36	1'-5	
1704	a		a1704	70	FB	3/8x5	A36	0'-5	
1704	a	1704M3L		70	L	4x4x5/16	A36	1'-9	
1704	a		a1704	70	FB	3/8x5	A36	0'-5	
1704	a	1704M4		48	MI	1/2" 6x25 1WRC REG	A586-98	15'-6⅜	GALV.
1704	a	1704M5		42	MI	1/2" 6x25 1WRC REG	A586-98	15'-6¹¹⁄₁₆	GALV.
1704	a	1704M6		426	MI	1/2" 6x25 1WRC REG	A586-98	19'-6⅜	GALV.
1704	a	1704M7		378	MI	1/2" 6x25 1WRC REG	A586-98	19'-6¾	GALV.
1704	a	1704M8		3	MI	1/2" 6x25 1WRC REG	A586-98	14'-8⅜	GALV.
1704	a	1704M9		1794	MI	3/4ø EYE BOLTS w/ 2 NUTS AND WASH. EA.			STAINLESS
1704	a	1704M10		1794	MI	THIMBLE EYE			GALV
1704	a	1704M11		1794	MI	SWEDGED FITTING			GALV
1704	a	1704M12		598	SHIM PACKS				
1704	a		b1704	598	FB	1" x 3	A36	0'-3	GALV
1704	a		c1704	598	FB	1/2" x 3	A36	0'-3	GALV
1704	a		d1704	598	FB	1/4" x 3	A36	0'-3	GALV
1704	a		f1704	1186	FB	1/8" x 3	A36	0'-3	GALV
1704	a				FIELD BOLTS HIT				
1704	a				3/4ø HILTI HIT ROD				STAINLESS
				242	W/HY150 ADHESIVE				
					6 3/4 MIN. EMBED & 2" PROJ				
1704	a								
1704	a				3/4ø HILTI HIT ROD				STAINLESS
				598	W/HY150 ADHESIVE				
					6 3/4 MIN. EMBED & 3½ PROJ				

NOT FOR CONSTRUCTION
JUL 05 2007
FOR APPROVAL ONLY

NOTE:
HOT DIP GALVANIZE AFTER FABRICATION.
SEAL WELD IN ADDITION TO WELDS SHOWN.
UNLESS NOTED

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REFERENCE DWG: E2	DESCRIPTION: MISC.(BARRIER RAIL POSTS & RAILS)	DRAWN BY: RDJ	DATE: 8/06	CHECKED BY: JG	JOB# 06-36	SHEET: 1704

Transmittal

Project [2239.2] - PCF - Hospital - Garage **View Date** 1/29/2008

GBBN Architects, Inc.
332 East Eighth St
Cincinnati, OH 45202-2217
Phone: (513) 241-8700
Fax: (513) 241-8873

Transmittal No. 2239.2-01164

To Mr. Brian Hoerr Gilbane 940 Elizabeth St Lexington, KY 40506-0293 USA Phone: (859) 257-4536 Fax: (859) 323-1331	**Date** 1/29/2008 **Items listed are being sent** ☐ Enclosed ☐ Under Separate Cover **CSI Code** 05500 - Metal Fabrication
From Mr. Bryan Korb (GBBN Architects, Inc.)	
Subject Submittal Package 100-05500-013.0	

RECEIVED
JAN 29 2008
GILBANE #3966

We are transmitting the following to you:

☐ Product Data ☐ Samples ☐ Shop Drawings ☐ O&M Manuals ☐ Plans
☐ Architectural Drawings ☐ Letters ☐ Specifications ☐ Prints ☐ Addenda
☐ Engineering Drawings ☐ Change Orders ☑ Submittal

Submittals

Pkg. No./Rev.	Item No./Rev.	Description	Copies	Reason	Action	Due
100-05500-013.0	100-05500-014.0	RFQ 154, Roof Ladder Shop Drawing	3	Furnish as Corrected		2/7/2008

Remarks

Received By Printed Name Date

Linked Documents

Document Type	Document	Open	Description	Date
Sub. Pkg.	100-05500-013.0			

University of Kentucky
PCF – Parking Garage
940 Elizabeth Street
Lexington, KY 40508
P 859.257.4536
F 859.323.1331

Gilbane

Facsimile Transmittal

To: DOUG SHERWOOD **Fax:** _____

From: BRIAN HOERR **Date:** 1/29/08

Re: _____ **Pages:** (including cover sheet) _____

CC: _____

☐ URGENT ☐ FOR REVIEW ☐ PLEASE COMMENT ☒ PLEASE REPLY ☐ PLEASE RECYCLE

NOTE:

2 SETS - RFQ 154; ROOF CAPPER SHOP DRAWING.

(PLEASE SEE GREEN COMMENTS)

ORIGINAL: ☐ **Will be mailed** ☒ **Will not be mailed**

GILBANE
University of Kentucky
Patient Care Facility
Gilbane Project No. 18-3966

REVIEWED

- ☐ 010-Huguelet
- ☒ 020-Garage
- ☐ 030-Infrastructure
- ☐ 040-PCF Foundation
- ☐ 050-PCF Core/Shell
- ☐ 060-TowerUp Fit

Bid Package No. 100
Submittal No. 100-05500-013
Spec. Sect/Para. _____
Reviewed By BH
Date 1/24/08

This review does not constitute nor does it assume design responsibility nor does it relieve the trade contractor's supplier from complying with the contract requirements, coordinating their work with other trade contractors and verifying field dimensions.

PK-013
Itm-014

THIS REVIEW BY GBBN ARCHITECTS, INC., IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PRDJECT AND IS NOT AN APPROVAL OF THIS DRAWING OR SET OF DRAWINGS. THE COMMENTS MADE DO NOT RELIEVE CONTRACTOR FRDM COMPLIANCE WITH THE PROJECT DRAWINGS, SPECIFICATIONS AND OTHER CONTRACT DOCUMENTS. CONTRACTOR IS SOLELY RESPONSIBLE FOR: ALL DIMENSIONS AND QUANTITIES, ALL FABRICATION, DELIVERY AND ERECTION; ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES; ALL COORDINATION WITH ALL OTHER CONTRACTORS, SUPPLIERS AND OTHERS; PERFORMING ALL WORK IN A SAFE AND PROPER MANNER.

NO EXCEPTIONS TAKEN	
FURNISH AS CDRRECTED	X
REVISE AND RESUBMIT	
NO REVIEW - INCOMPLETE	
SUBMIT SPECIFIED ITEMS	X
REJECTED	

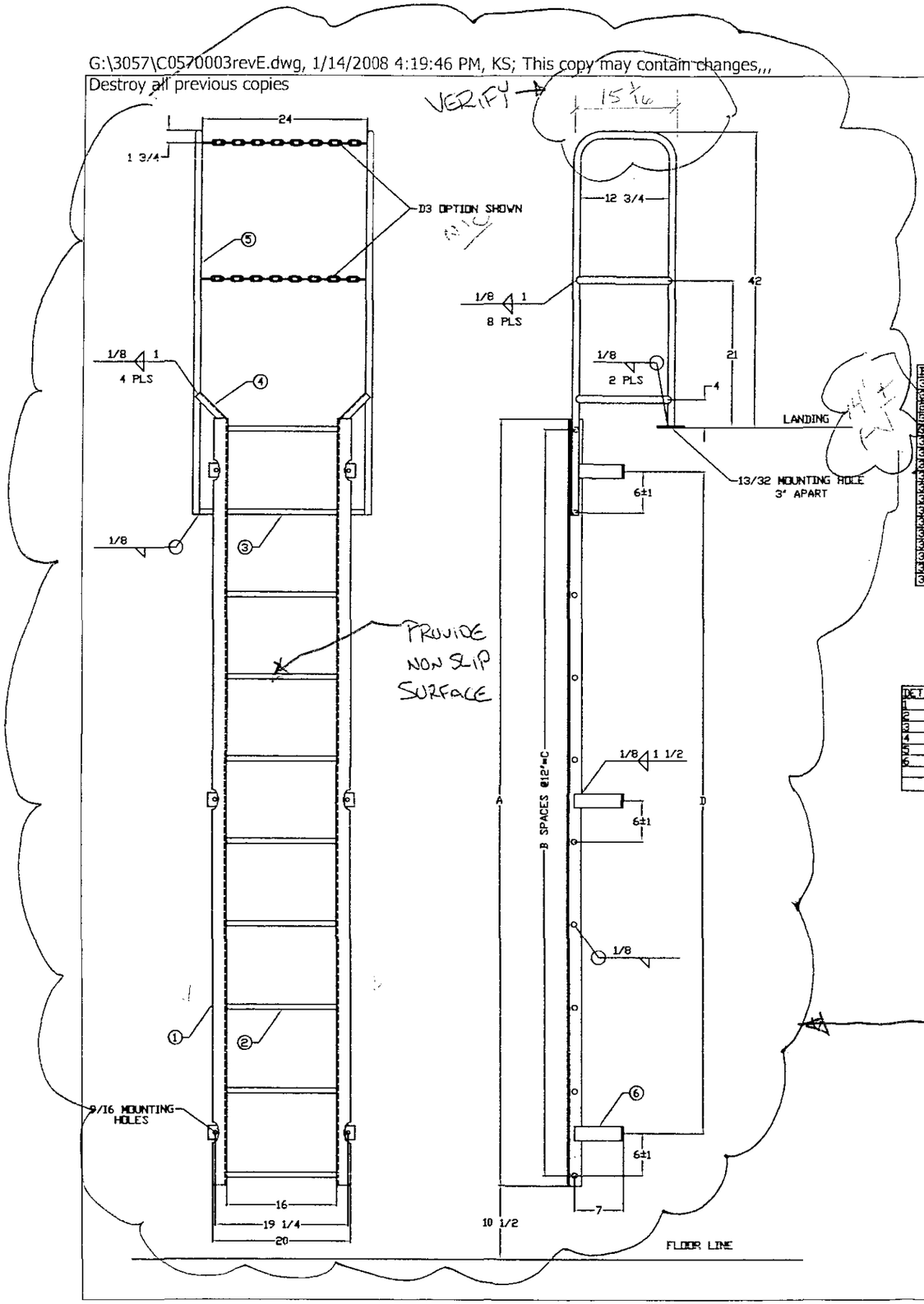
DATE 1-29-08 BY BK

GBBN ARCHITECTS, INC.
ARCHITECTURE, INTERIORS, PLANNING, ENGINEERING
□ 332 EAST 8TH STREET, CINCINNATI, OHIO 45202-2217 (513) 241-8700
□ 325 WEST MAIN STREET, LEXINGTON, KENTUCKY 40507 (859) 381-8787

G:\3057\C0570003revE.dwg, 1/14/2008 4:19:46 PM, KS; This copy may contain changes,,,

Destroy all previous copies

REVISIONS					
REV	E.C.O. NO.	DESCRIPTION	BY	APP'D	DATE
D	0678	REDRAWN TO COMPUTER	EL	JK	6-11-92
E	1045	CHANGED STANDOFF PLACEMENT	TB	JK	1-20-95



BOM No.	LADDER	A'	B	C	D'	E	SA (1)	SA (2)	SF (3)	MT. ABOVE THE FOLLOWING RUNGS			
3570222	F4V	39	3	36	24	4	SA6100	-	-	1	3		
3570223	F5V	51	4	48	36	4	SA6101	-	-	1	4		
3570224	F6V	63	5	60	48	4	SA6102	-	-	1	5		
3570225	F7V	75	6	72	60	4	SA6103	-	-	1	6		
3570226	F8V	87	7	84	72	4	SA6104	-	-	1	7		
3570227	F9V	99	8	96	84	4	SA6105	-	-	1	8		
3570228	F10V	111	9	108	96	6	SA6106	-	-	1	5	9	
3570229	F11V	123	10	120	108	6	SA6107	-	-	1	6	10	
3570230	F12V	135	11	132	120	6	SA6108	-	-	1	6	11	
3570231	F13V	147	12	144	132	6	SA6109	-	-	1	7	12	
3570232	F14V	159	13	156	144	6	SA6110	-	-	1	7	13	
3570233	F15V	171	14	168	156	6	SA6111	-	-	1	8	14	
3570234	F16V	183	15	180	168	6	SA6112	-	-	1	8	15	
3570235	F17V	195	16	192	180	8	SA6113	-	-	1	6	11	16
3570236	F18V	207	17	204	192	8	SA6114	-	-	1	7	12	17
3570237	F19V	219	18	216	204	8	SA6115	-	-	1	7	13	18
3570238	F20V	231	19	228	216	8	SA6116	-	-	1	7	13	19
3570239	F21V	243	20	240	228	8	SA6116	SA6139	SF9126	1	8	14	20

DET	DWG. NO.	PT. NO.	DESCRIPTION	QTY.
1	B-57-1	SA (1)	SIDE RAIL ANGLE	2
2	A-57-80	RB3103	RUNGS	B
3	A-57-81	RB3102	MOUNTING RUNG	1
4	A-57-18	SA4121	SUPPORT ANGLE	2
5	B-57-24	SU2119	HANDRAIL	2
6	A-57-12	SF3103	MOUNTING BRACKETS	E
	B-57-1	SA (2)	SIDE RAIL EXT. ANGLE	2
	A-57-30	SF (3)	SPLICE PLATE	4

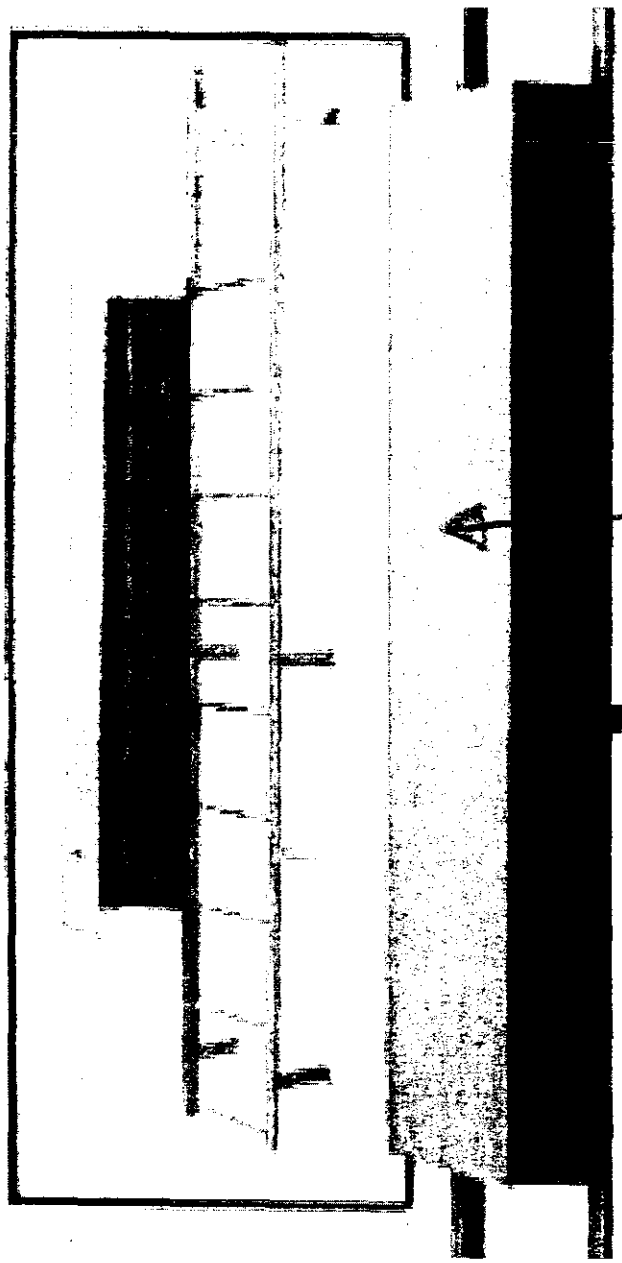
NOTE:
ALL DIMENSIONS ARE IN INCHES

LADDER DIMS DO NOT MATCH DIMS ON SKETCH ISSUED IN RFQ-1SAR.1 TC TO VERIFY LADDER IS OSHA COMPLIANT

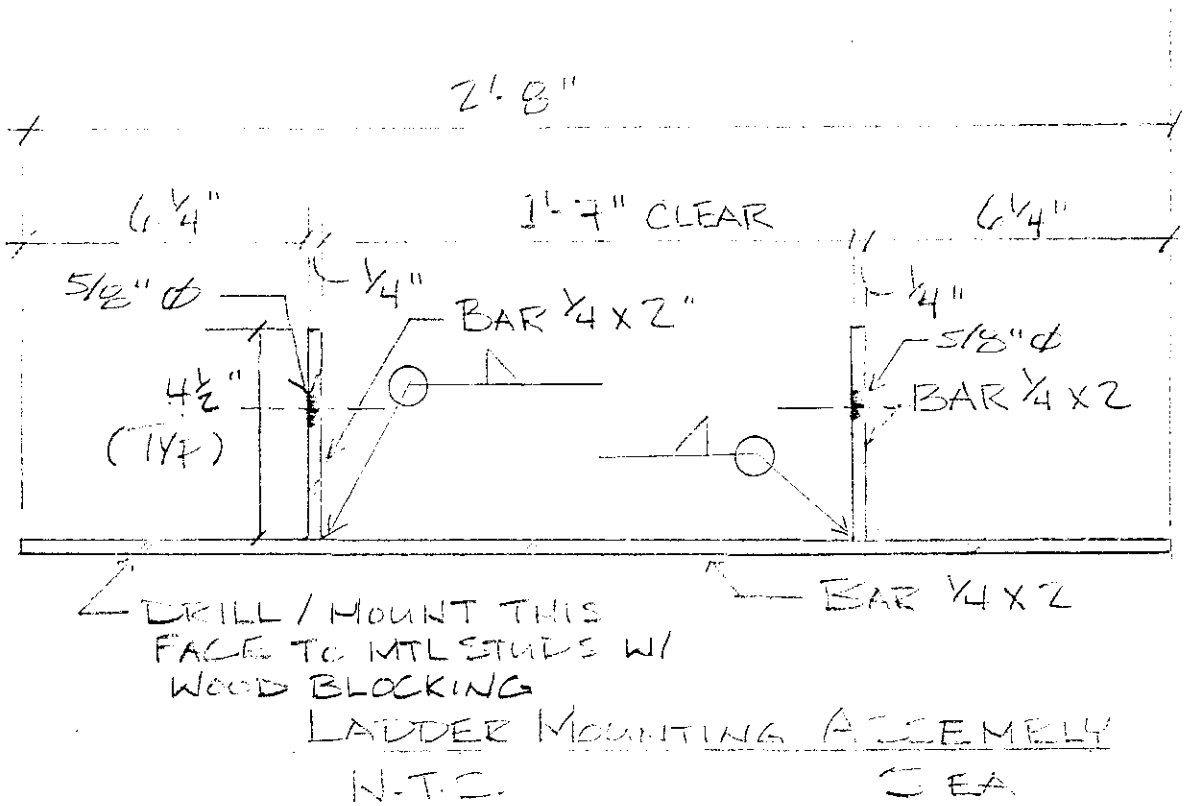
DWG. NO. C-057-0003 SHT. REV. E

DRN CEG	DATE 2-26-82	COTTERMAN COMPANY	
CKD	DATE	130 SELTZER ROAD CROSWELL,MI 48422	
APD JK	DATE 5-22-91	WALK THRU FIXED LADDER ASSEMBLY	
THIS PRINT IS THE PROPERTY OF COTTERMAN CO. AND MUST NOT BE USED IN WHOLE, OR PART WITHOUT WRITTEN PERMISSION. PLEASE RETURN ON DEMAND.		PART NO.	DWG.NO. C-057-0003 REV E
		SCALE	SHT.

AS BUILT TO PLANS
PER DIMENSIONS
PART CHECKED.
ASSEMBLY IS
SATISFACTORY.
BY: DJ 1-22-08
SIGNATURE DATE



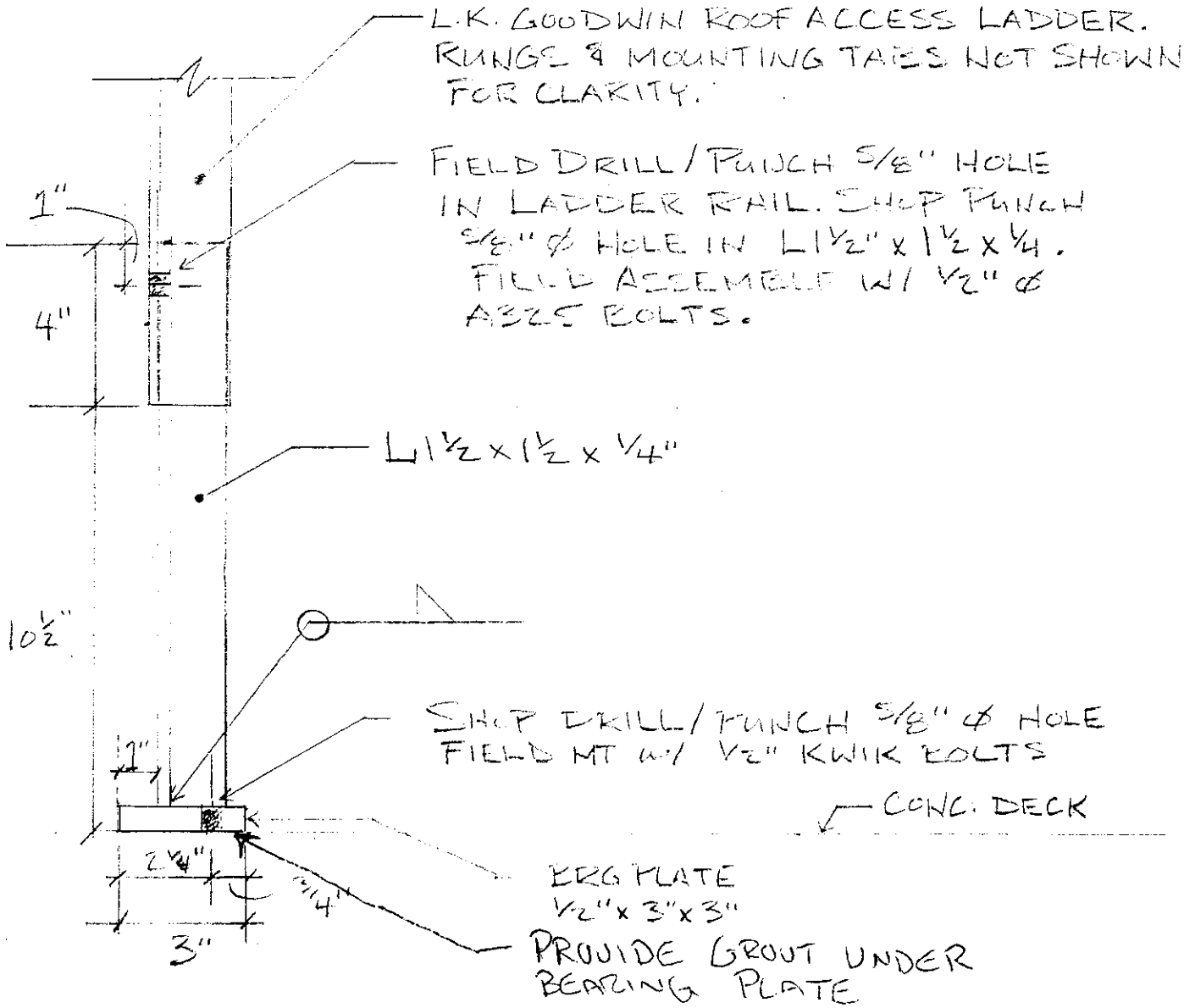
LADDER GUARD



LADDER MOUNTING ASSEMBLY

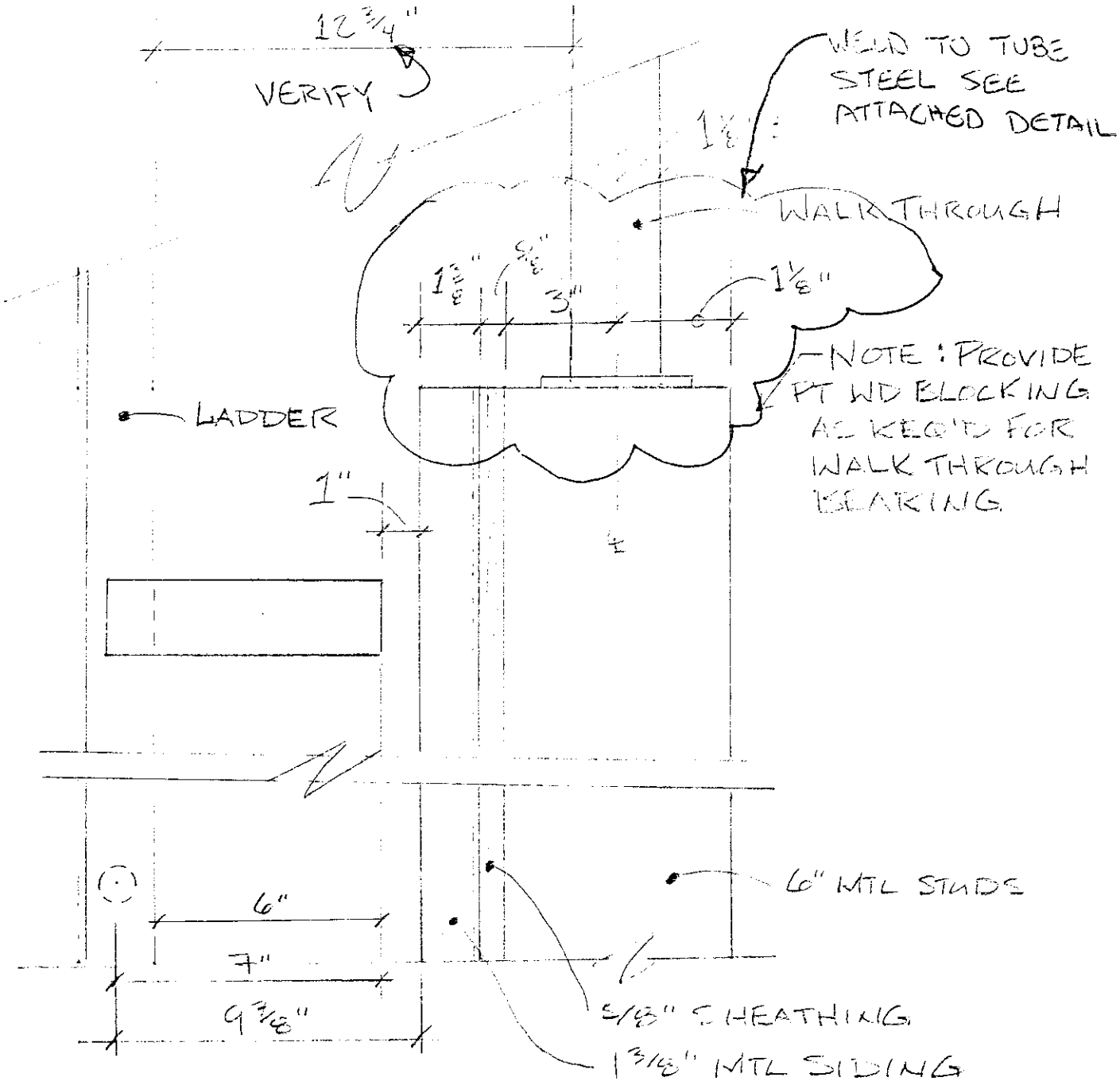
N.T.S.

2 EA

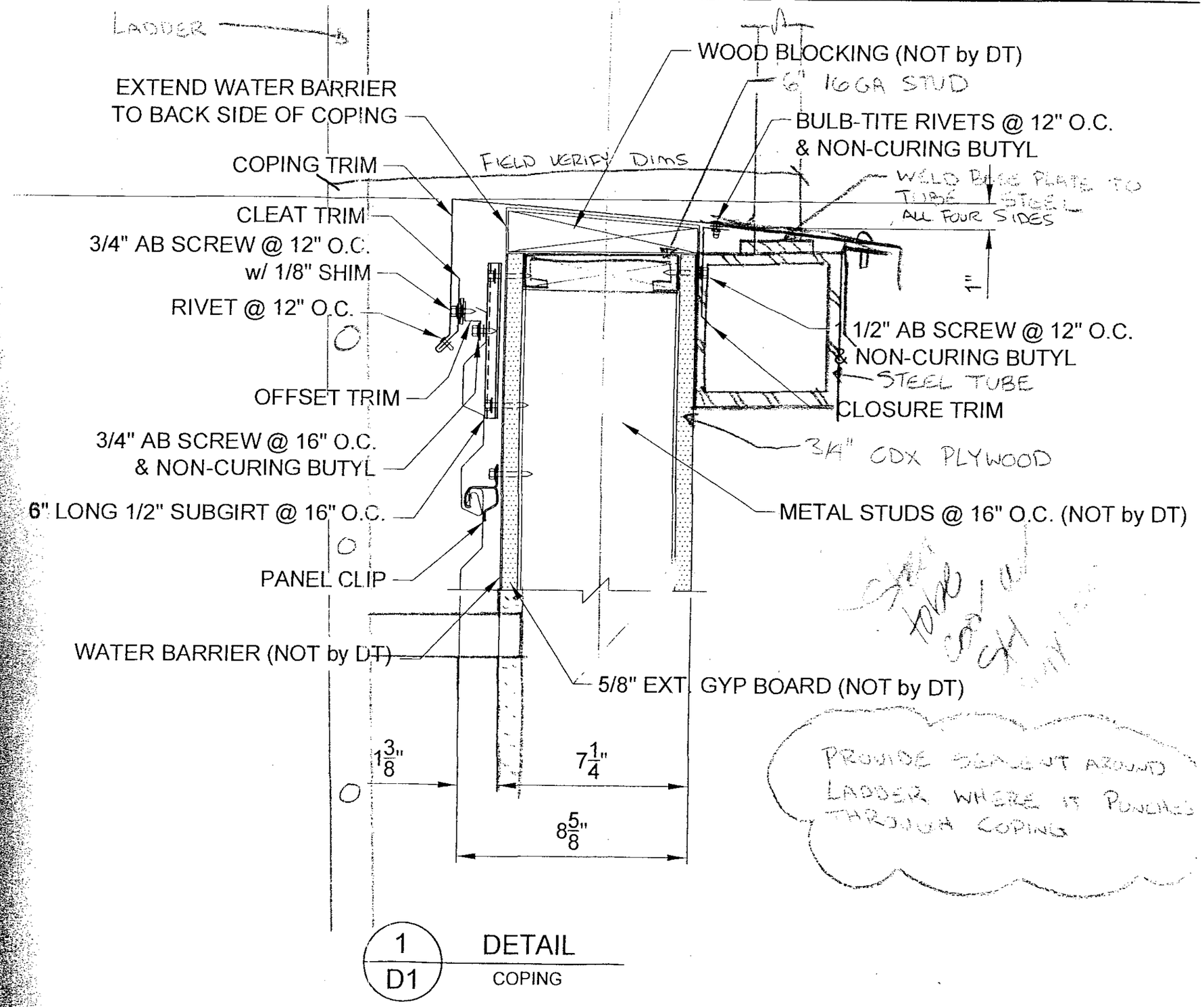


LADDER BEARING ASSEMBLY

N.T.S.



LADDER MOUNTING
N.T.S.



1/D1 DETAIL
COPING

Gilbane

Transmittal

Project [2239.2] - PCF - Hospital - Garage

View Date 9/19/2007

Gilbane
940 Elizabeth St
Lexington, KY 40506-0293
Phone: (859) 257-4536
Fax: (859) 323-1331

Transmittal No. 2239.2-01065

To	Mr. Doug Sherwood E. C. Matthews Co., Inc. 2265 Harrodsburg Road Lexington, KY 40504 USA Phone: (859) 278-3131 Fax: (859) 277-7903
From	Mr. Brian Hoerr (Gilbane)
Subject	Submittal Package 100-05500-008.0

Date 9/19/2007

Items listed are being sent

☑ Enclosed

☐ Under Separate Cover

Via Hand Delivered

CSI Code 05500 - Metal Fabrication

We are transmitting the following to you:

☐ Product Data ☐ Samples ☐ Shop Drawings ☐ O&M Manuals ☐ Plans
☐ Architectural Drawings ☐ Letters ☐ Specifications ☐ Prints ☐ Addenda
☐ Engineering Drawings ☐ Change Orders ☑ Submittal

Submittals

Pkg. No./Rev.	Item No./Rev.	Description	Copies	Reason	Action
100-05500-008.0	100-05500-009.0	Cable Barrier Hardware Data Sheets	2	Approved as Noted	

Remarks The wire rope is approved. The eye bolt submitted is rejected. See the attached eye bolt data from GBBN. If this used, a resubmittal is not required. Please confirm.

	Mr. Brian Hoerr	9/19/2007
From	Printed Name	Date
Received By	Printed Name	Date

Linked Documents

Document Type	Document	Open	Description	Date
Sub. Pkg.	100-05500-008.0			

Distribution

Recipient	Company	Method	Date
Doug Sherwood	E. C. Matthews Co., Inc.	Message	9/19/2007

Transmittal

Project [2239.2] - PCF - Hospital - Garage **View Date** 9/18/2007

GBBN Architects, Inc.
332 East Eighth St
Cincinnati, OH 45202-2217
Phone: (513) 241-8700
Fax: (513) 241-8873

Transmittal No. 2239.2-01064

To Mr. Brian Hoerr Gilbane 940 Elizabeth St Lexington, KY 40506-0293 USA Phone: (859) 257-4536 Fax: (859) 323-1331	**Date** 9/18/2007 **Items listed are being sent** ☐ Enclosed ☐ Under Separate Cover **CSI Code** 05500 - Metal Fabrication
From Mr. Bryan Korb (GBBN Architects, Inc.)	
Subject Submittal Package 100-05500-008.0	

RECEIVED
SEP 18 2007
GILBANE #3966

We are transmitting the following to you:

☐ Product Data ☐ Samples ☐ Shop Drawings ☐ O&M Manuals ☐ Plans
☐ Architectural Drawings ☐ Letters ☐ Specifications ☐ Prints ☐ Addenda
☐ Engineering Drawings ☐ Change Orders ☑ Submittal

Submittals

Pkg. No./Rev.	Item No./Rev.	Description	Copies	Reason	Action
100-05500-008.0	100-05500-009.0	Cable Barrier Hardware Data Sheets	3	Revise and Resubmit +	

Remarks

APPROVED AS SUBMITTED

Received By Printed Name Date

Linked Documents

Document Type	Document	Open	Description	Date
Sub. Pkg.	100-05500-008.0			

Distribution

Recipient	Company	Method	Date
Brian Hoerr	Gilbane	Message	9/18/2007

KENTUCKIANA WIRE ROPE AND SUPPLY

3335 Industrial Parkway
Jeffersonville, IN 47130
Phone (812) 282-3607
Fax (812) 282-4059

Fax Transmittal Form

TO	FROM
Brian Korb	Tim
Company/Dept:	KWR
Phone Number:	
Fax Number: 859-323-1331	

Urgent
For Review
Please Comment
Please Reply

Date Sent:
Time Sent:
No. of pages incl. cover page: 3

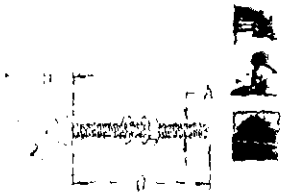
Message

Page 2 shows reg. Stainless eyebolts (standard)
Page 3 shows custom length eyebolts

Thanks
Tim

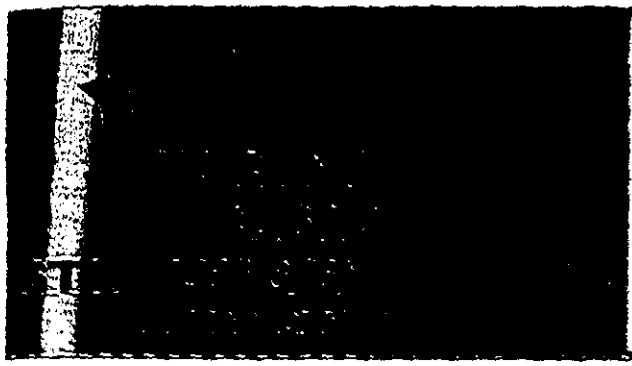
CUSTOM EYE BOLT SET

316 STAINLESS STEEL



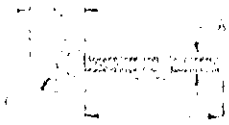
ITEM	A (size)	B	C	D	E	WT (lb)
S0125-SP07	1/4"	1.20"	0.62"	CUSTOM	1/4"-20	400
S0125-SP08	5/16"	1.55"	0.75"	CUSTOM	5/16"-18	700
S0125-SP10	3/8"	1.92"	0.97"	CUSTOM	3/8"-16	1,000
S0125-SP13	1/2"	2.36"	1.17"	CUSTOM	1/2"-13	2,000
S0125-SP16	5/8"	2.81"	1.34"	CUSTOM	5/8"-11	3,200
S0125-SP20	3/4"	3.36"	1.57"	CUSTOM	3/4"-10	4,700
S0125-SP25	1"	3.55"	2.00"	CUSTOM	1"-8	7,500

HOW TO ORDER:
USE ITEM NUMBERS ABOVE, ADDING THE DESIRED LENGTH (EX.) TO ORDER A 3/8" X 9-1/2", USE SP-S0125-SP10-9-1/2. THE 9-1/2" INDICATES THE SHANK LENGTH (D).



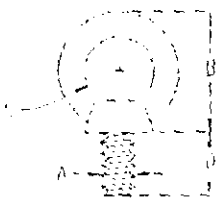
USE ITEM NUMBERS ABOVE, ADDING THE DESIRED LENGTH TO INDICATE YOUR CUSTOM SIZE

EXAMPLE: TO ORDER A 3/8" X 9-1/2", USE SP-S0125-SP10-9-1/2. THE 9-1/2" INDICATES THE SHANK LENGTH (D).



MACHINE EYE BOLT

316 STAINLESS STEEL

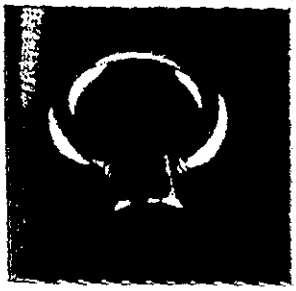


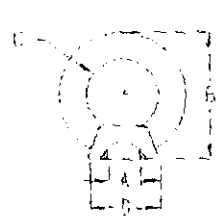
ITEM	A (size)	B	C	D	WLL (lb)	WT (lb)
S0316-0007	1/4"	1.09"	0.62"	0.53"	400	0.05
S0316-0008	5/16"	1.34"	0.75"	0.58"	700	0.07
S0316-0010	3/8"	1.68"	0.95"	0.71"	1,000	0.13
S0316-0013	1/2"	2.00"	1.14"	0.86"	2,000	0.30
S0316-0016	5/8"	2.42"	1.32"	1.02"	3,200	0.45
S0316-0020	3/4"	2.78"	1.57"	1.14"	4,700	0.79
S0316-0025	1"	3.54"	1.95"	1.31"	7,500	1.65

NOTE:
THREADS ARE "UNC".

EYE NUT

316 STAINLESS STEEL



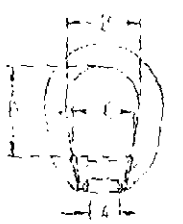


ITEM	A (size)	B	C	D	WLL (lb)	WT (lb)
S0321-0007	1/4"	1.20"	0.62"	0.50"	400	0.04
S0321-0008	5/16"	1.55"	0.75"	0.62"	700	0.08
S0321-0010	3/8"	1.92"	0.97"	0.76"	1,000	0.13
S0321-0013	1/2"	2.36"	1.17"	0.95"	2,000	0.26
S0321-0016	5/8"	2.81"	1.34"	1.18"	3,200	0.53
S0321-0020	3/4"	3.36"	1.57"	1.32"	4,700	0.75
S0321-0025	1"	4.16"	1.95"	1.70"	7,500	1.49

NOTE:
THREADS ARE "UNC".

LIFTING EYE NUT

316-NM STAINLESS STEEL



ITEM	A (size)	B	C	D	WLL (lb)	WT (lb)
S0322-0007	1/4"	0.75"	0.59"	1.06"	460	0.08
S0322-0008	5/16"	0.75"	0.59"	1.06"	780	0.08
S0322-0010	3/8"	1.25"	1.00"	1.50"	1,160	0.26
S0322-0013	1/2"	1.25"	1.00"	1.50"	2,150	0.25
S0322-0016	5/8"	1.50"	1.19"	2.00"	3,440	0.53
S0322-0020	3/4"	1.75"	1.25"	2.37"	5,140	0.95

NOTE:
UNDERSIDE OF SHOULDER IS MACHINED FOR PERFECT SEATING. EYE NUTS HAVE FORGED MARKINGS OF 316-NM, SIZE AND WLL IN TONS. ALL THREADS ARE "UNC".

LIFETIME Warranty

SUNCOR STAINLESS
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www.suncorstainless.com

GILBANE
University of Kentucky
Patient Care Facility
Gilbane Project No. 18-3966

REVIEWED

- ☐ 010-Huguelet
- ☒ 020-Garage
- ☐ 030-Infrastructure
- ☐ 040-PCF Foundation
- ☐ 050-PCF Core/Shell
- ☐ 060-TowerUp Fit

Bid Package No. 100
Submittal No. 100 - 05500 - 008
Spec. Sect/Para
Reviewed By BH
Date 8/30/07

This review does not constitute nor does it assume design responsibility nor does it relieve the trade contractor's supplier from complying with the contract requirements, coordinating their work with other trade contractors and verifying field dimensions.

THIS REVIEW BY GBBN ARCHITECTS, INC., IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND IS NOT AN APPROVAL OF THIS DRAWING OR SET OF DRAWINGS. THE COMMENTS MADE DO NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH THE PROJECT DRAWINGS, SPECIFICATIONS AND OTHER CONTRACT DOCUMENTS. CONTRACTOR IS SOLELY RESPONSIBLE FOR: ALL DIMENSIONS AND QUANTITIES, ALL FABRICATION, DELIVERY AND ERECTION; ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES; ALL COORDINATION WITH ALL OTHER CONTRACTORS, SUPPLIERS AND OTHERS; PERFORMING ALL WORK IN A SAFE AND PROPER MANNER.

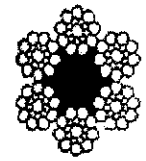
NO EXCEPTIONS TAKEN	
FURNISH AS CORRECTED	
REVISE AND RESUBMIT	X
NO REVIEW - INCOMPLETE	
SUBMIT SPECIFIED ITEMS	
REJECTED	

DATE 8/30/07 BY

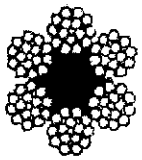
GBBN ARCHITECTS, INC.
ARCHITECTURE, INTERIORS, PLANNING, ENGINEERING
332 EAST 8TH STREET, CINCINNATI, OHIO 45202-2217 (513) 241-8700
325 WEST MAIN STREET, LEXINGTON, KENTUCKY 40507 (859) 381-8787

Phone: (513) 941-2443

Nominal Strengths of Wire Rope



6 x 19 Seale



6 x 21 Filler Wire

6 x 19 Classification/Bright (Uncoated), or Drawn Galvanized, Fiber Core

Nominal Diameter		Nominal Strength*		Approximate Mass	
Improved Plow Steel					
Inches	**MM**	**TONS**	**METRIC TONS**	**LB/FT**	**KG/M**
1/4	6.5	2.74	2.49	0.11	0.16
5/16	8.0	4.26	3.86	0.16	0.24
3/8	9.5	6.10	5.53	0.24	0.35
7/16	11.5	8.27	7.50	0.32	0.48
1/2	13.0	10.70	9.71	0.42	0.63
9/16	14.5	13.50	12.20	0.53	0.79
5/8	16.0	16.70	15.10	0.66	0.98
3/4	19.0	23.80	21.60	0.95	1.41
7/8	22.0	32.20	29.20	1.29	1.92
1	26.0	41.80	37.90	1.68	2.50
1-1/8	29.0	52.60	47.70	2.13	3.17
1-1/4	32.0	64.60	58.60	2.63	3.91
1-3/8	35.0	77.70	70.50	3.18	4.73
1-1/2	38.0	92.00	83.50	3.78	5.63
1-5/8	42.0	107.00	97.10	4.44	6.61
1-3/4	45.0	124.00	112.00	5.15	7.66
1-7/8	48.0	141.00	128.00	5.91	8.80
2	51.0	160.00	145.00	6.72	10.00
2-1/8	54.0	179.00	162.00	7.59	11.30
2-1/4	57.0	200.00	181.00	8.51	12.70
2-3/8	61.0	222.00	201.00	9.48	14.10
2-1/2	64.0	244.00	221.00	10.50	15.60
2-5/8	67.0	268.00	243.00	11.60	17.30

265.00 12.70 18.90

ıs (nominal breaking strength) by 8.896; 1 lb = 4.448
ıths, Deduct 10%.

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5250 River Road
Cincinnati, OH 45233
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ıal@industrialrope.com

SEE APPLICA[illegible] TION[illegible] AND
WARNING INFO[illegible] RMA[illegible] TION

O[illegible]2 Pages
[illegible] 66-167

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www.thecrosbygroup.com

1.
ıg Load Limit at 20,000 cycles
:ading (UNC).
ınized hex nuts.

e requirements of ASME B30.26 including
, proof load and temperature requirements.
:her critical performance requirements including fatigue
:aceability, not addressed by ASME B30.26.

Dimensions (in.)							
A	B	C	D	E	F	G	H
	.50	1.00	.25	1.50	2.00	3.0[illegible]6	.5[illegible]
.25	.50	1.00	.25	2.50	4.00	5.0[illegible]6	.5[illegible]
.31	.62	1.25	.31	1.50	2.25	3.5[illegible]6	.6[illegible]
.31	.62	1.25	.31	2.50	4.25	5.5 6	.6[illegible]
.38	.75	1.50	.38	1.50	2.50	4.1 2	.8[illegible]
.38	.75	1.50	.38	2.50	4.50	6.1 2	.8[illegible]
.38	.75	1.50	.38	2.50	6.00	7.6[illegible]2	.8[illegible]
.50	1.00	2.00	.50	1.50	3.25	5.3[illegible]8	1.[illegible]2
.50	1.00	2.00	.50	3.00	6.00	8.1 2	1.[illegible]2
.50	1.00	2.00	.50	3.00	8.00	10. 12	1.[illegible]2
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1.00	2.00	4.00	1.00	3.00	6.00	10 .31	2.[illegible]1
1.00	2.00	4.00	1.00	4.00	9.00	13 .31	2.[illegible]1
1.00	2.00	4.00	1.00	4.00	12.00	16 .31	2

1 x 18	1043819	13300	650.00	1.00	2.00	4.00	1.00	7.00	18.00	22.31	2.31
1-1/4 x 8	1043837	21000	750.00	1.25	2.50	5.00	1.25	4.00	8.00	13.38	2.88
1-1/4 x 12	1043855	21000	900.00	1.25	2.50	5.00	1.25	4.00	12.00	17.38	2.88
1-1/4 x 20	1043873	21000	1210.00	1.25	2.50	5.00	1.25	6.00	20.00	25.38	2.88

*Ultimate Load is 5 times the Working Load Limit. Working Load Limit shown is for in-line pull. Maximum Proof Load is 2 times the Working Load Limit.

AVENUE FABRICATING, INC.

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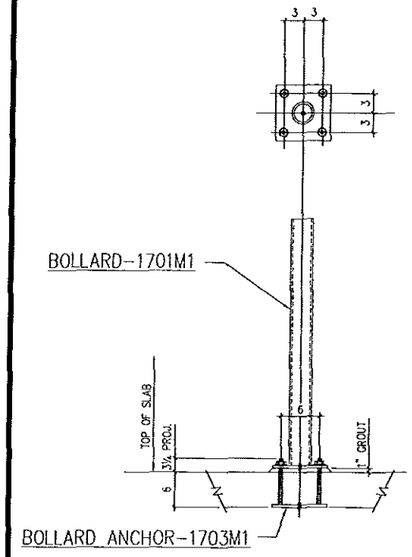
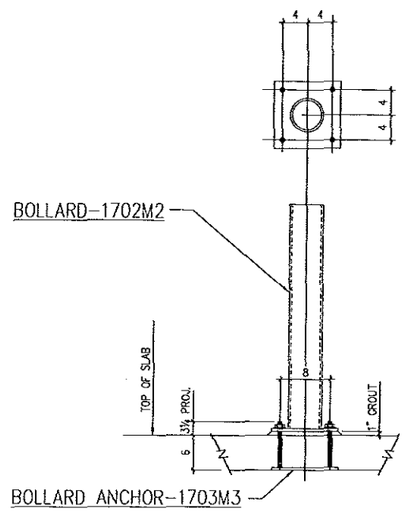
DRAWING ISSUE:

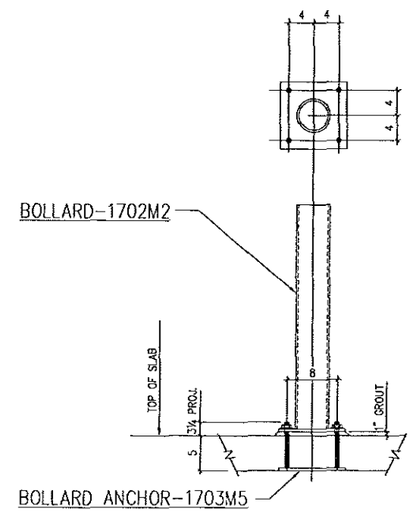
REVISION:



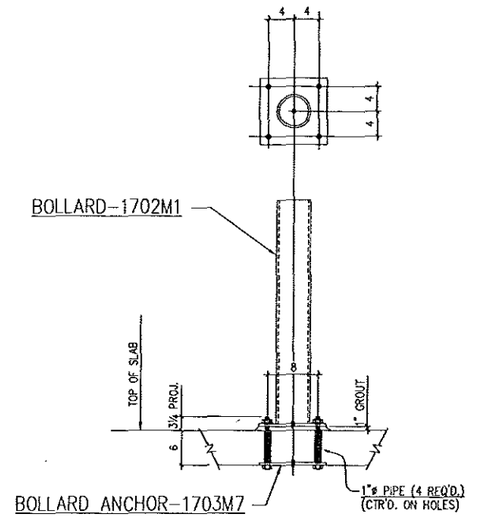
TYP BOLLARD SETTING
@ DET 1 OR 1C ON A821
(16 PLACES 2ND LEVEL)
(16 PLACES 3RD LEVEL)



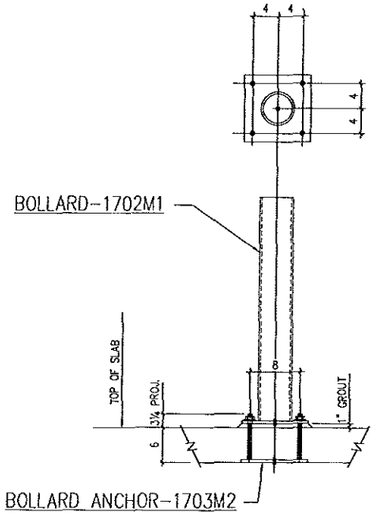
TYP BOLLARD SETTING
@ DET 1B ON A821
(53 PLACES GRADE LEVEL)
(11 PLACES 2ND LEVEL)
(3 PLACES 3RD LEVEL)



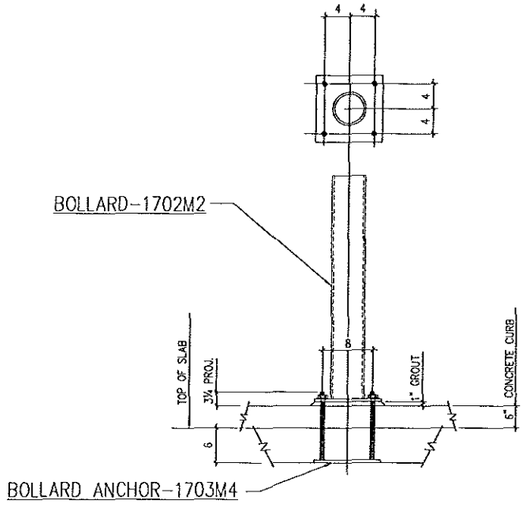
TYP BOLLARD SETTING
@ DET 1B ON A821
(21 PLACES LOWER LEVEL)



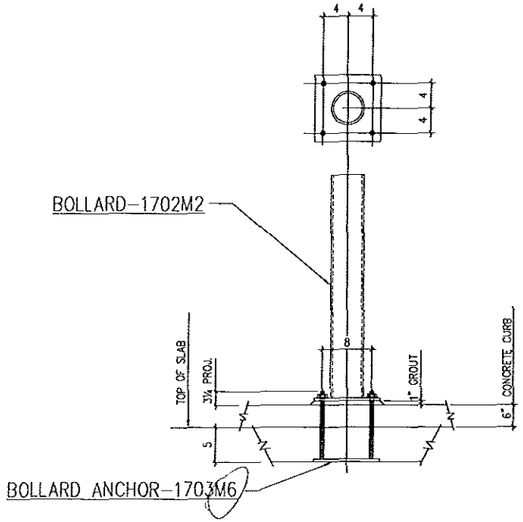
TEMP. BOLLARD SETTING
@ DET 1B ON A821
(6 PLACES GRADE LEVEL)



TYP BOLLARD SETTING
@ DET 1A ON A821
(26 PLACES 4TH LEVEL)
(26 PLACES 5TH LEVEL)
(26 PLACES 6TH LEVEL)



TYP BOLLARD SETTING
@ DET 1B ON A821
(THROUGH SLAB AND CONCRETE ISLAND)
(14 PLACES GRADE LEVEL)

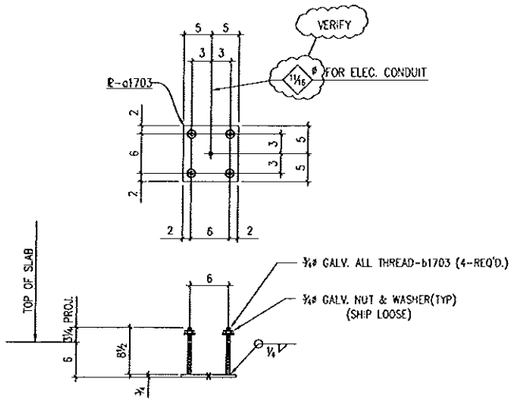


TYP BOLLARD SETTING
@ DET 1B ON A821
(THROUGH SLAB AND CONCRETE ISLAND)
(31 PLACES LOWER LEVEL)

BOLLARDS F&B

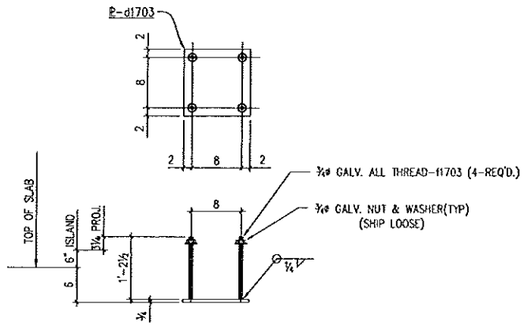
PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHENS CO., INC.	REFERENCE DWG: A821A	DESCRIPTION: MISC.(BOLLARD PLACEMENT DETAILS)	DRAWN BY: JG	DATE: 8/06	CHECKED BY: .	JOB# 06-36	SHEET: E1

9/22/2006 3:55:02 PM, FOR FABRICATION



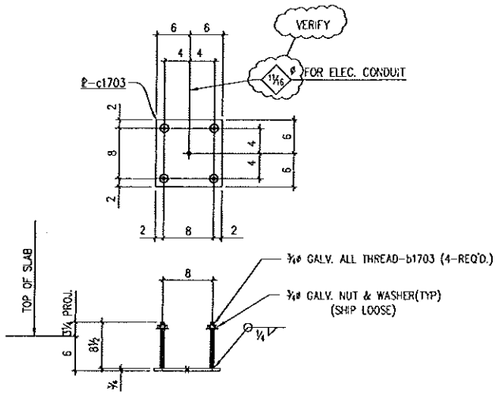
32-BOLLARD ANCHORS-1703M1

(Ref 1 or 1C on A821A)
(16 PLACES 2ND LEVEL)
(16 PLACES 3RD LEVEL)



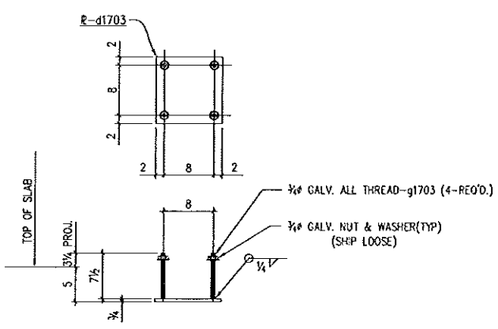
14-BOLLARD ANCHORS-1703M4

(Ref 1B on A821A @ 4" Curb on 6" Slab)
(14 PLACES GRADE LEVEL)



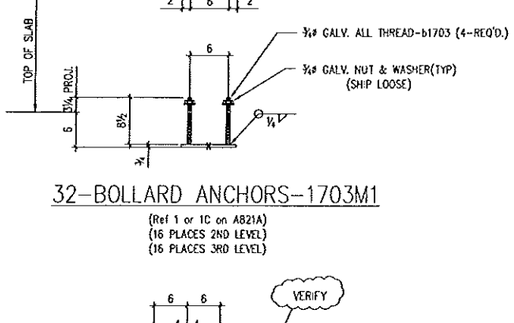
78-BOLLARD ANCHORS-1703M2

(Ref 1A on A821A)
(26 PLACES 4TH LEVEL)
(26 PLACES 5TH LEVEL)
(26 PLACES 6TH LEVEL)



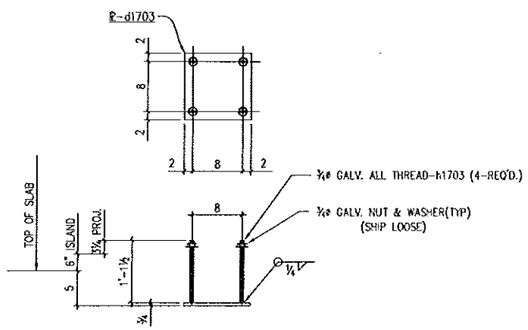
21-BOLLARD ANCHORS-1703M5

(Ref 1B on A821A @ 6" Slab)
(21 PLACES LOWER LEVEL)



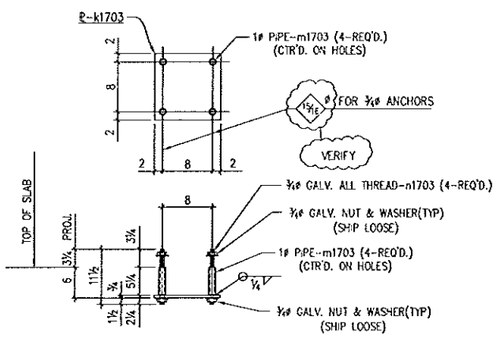
67-BOLLARD ANCHORS-1703M3

(Ref 1B on A821A @ 6" Slab)
(53 PLACES GRADE LEVEL)
(11 PLACES 2ND LEVEL)
(3 PLACES 3RD LEVEL)



31-BOLLARD ANCHORS-1703M6

(Ref 1B on A821A @ 4" Curb on 6" Slab)
(31 PLACES LOWER LEVEL)



6-BOLLARD ANCHORS-1703M7

(Ref 1B on A821A @ 6" Slab)
(6 PLACES GRADE LEVEL)

AVENUE FABRICATING, INC.

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DRAWING ISSUE:

REVISION:

BILL OF MATERIAL

NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : AS NOTED
3. FINISH : NONE - GALVANIZED

Drawing Number	Revision Number	Ship Mark	Piece Mark	Quantity	Type of Material	Size of Material	Grade	Length	Notes
1703	0	1703M1		32	BOLLARD ANCHORS				
1703	0		a1703	32	PL	3/8 x 10	A36	0'-10	
1703	0		b1703	128	RB	3/4	A36	0'-8 1/2	ALL THREAD
1703	0			128	NUT	3/4	A307 GALV		
1703	0			128	FW	3/4	F436 GALV		
1703	0	1703M2		78	BOLLARD ANCHORS				
1703	0		c1703	78	PL	3/8 x 12	A36	1'-0	
1703	0		b1703	312	RB	3/4	A36	0'-8 1/2	ALL THREAD
1703	0			312	NUT	3/4	A307 GALV		
1703	0			312	FW	3/4	F436 GALV		
1703	0	1703M3		67	BOLLARD ANCHORS				
1703	0		d1703	67	PL	3/8 x 12	A36	1'-0	
1703	0		b1703	268	RB	3/4	A36	0'-8 1/2	ALL THREAD
1703	0			268	NUT	3/4	A307 GALV		
1703	0			268	FW	3/4	F436 GALV		
1703	0	1703M4		14	BOLLARD ANCHORS				
1703	0		d1703	14	PL	3/8 x 12	A36	1'-0	
1703	0		f1703	56	RB	3/4	A36	1'-2 1/2	ALL THREAD
1703	0			56	NUT	3/4	A307 GALV		
1703	0			56	FW	3/4	F436 GALV		
1703	0	1703M5		21	BOLLARD ANCHORS				
1703	0		d1703	21	PL	3/8 x 12	A36	1'-0	
1703	0		g1703	84	RB	3/4	A36	0'-7 1/2	ALL THREAD
1703	0			84	NUT	3/4	A307 GALV		
1703	0			84	FW	3/4	F436 GALV		
1703	0	1703M5		31	BOLLARD ANCHORS				
1703	0		d1703	31	PL	3/8 x 12	A36	1'-0	
1703	0		h1703	124	RB	3/4	A36	1'-11 1/2	ALL THREAD
1703	0			124	NUT	3/4	A307 GALV		
1703	0			124	FW	3/4	F436 GALV		
1703	0	1703M7		6	BOLLARD ANCHORS				
1703	0		k1703	6	PL	3/8 x 12	A36	1'-0	
1703	0		m1703	24	PI	1	A53-B	0'-5 1/4	
1703	0		n1703	24	RB	3/4	A36	0'-11 1/2	ALL THREAD
1703	0			24	NUT	3/4	A307 GALV		
1703	0			24	FW	3/4	F436 GALV		

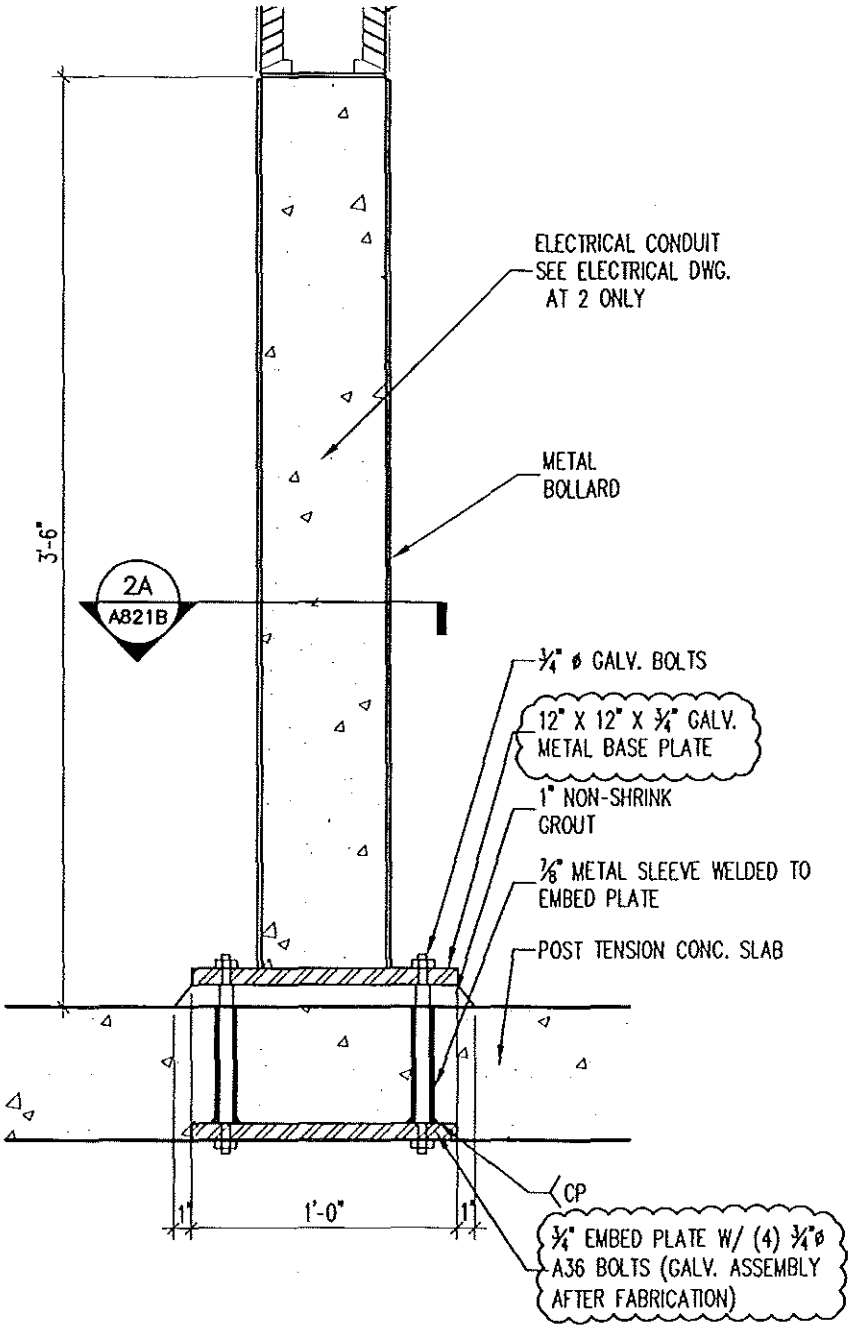
NOTE:
HOT DIP GALVANIZE AFTER FABRICATION.
SEAL WELD IN ADDITION TO WELDS SHOWN.
PROVIDE VENT HOLES AS REQUIRED.

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REFERENCE DWG: E1	DESCRIPTION: MISC.(BOLLARDS ANCHORS)	DRAWN BY: JG	DATE: 8/06	CHECKED BY: GTB	JOB# 06-36	SHEET: 1703

GBBN Architects Inc.

325 West Main Street
Lexington, Kentucky 40507
v 859.381.8787
f 859.381.8873
www.gbbn.com

Job Name:	UNIVERSITY OF KENTUCKY PCF	Job No:	10247.03	Sheet No:	ASK-RFI-088R1.01
	NEW GARAGE - GMP #2	Date:	09.14.06	Sheet Ref:	A821A



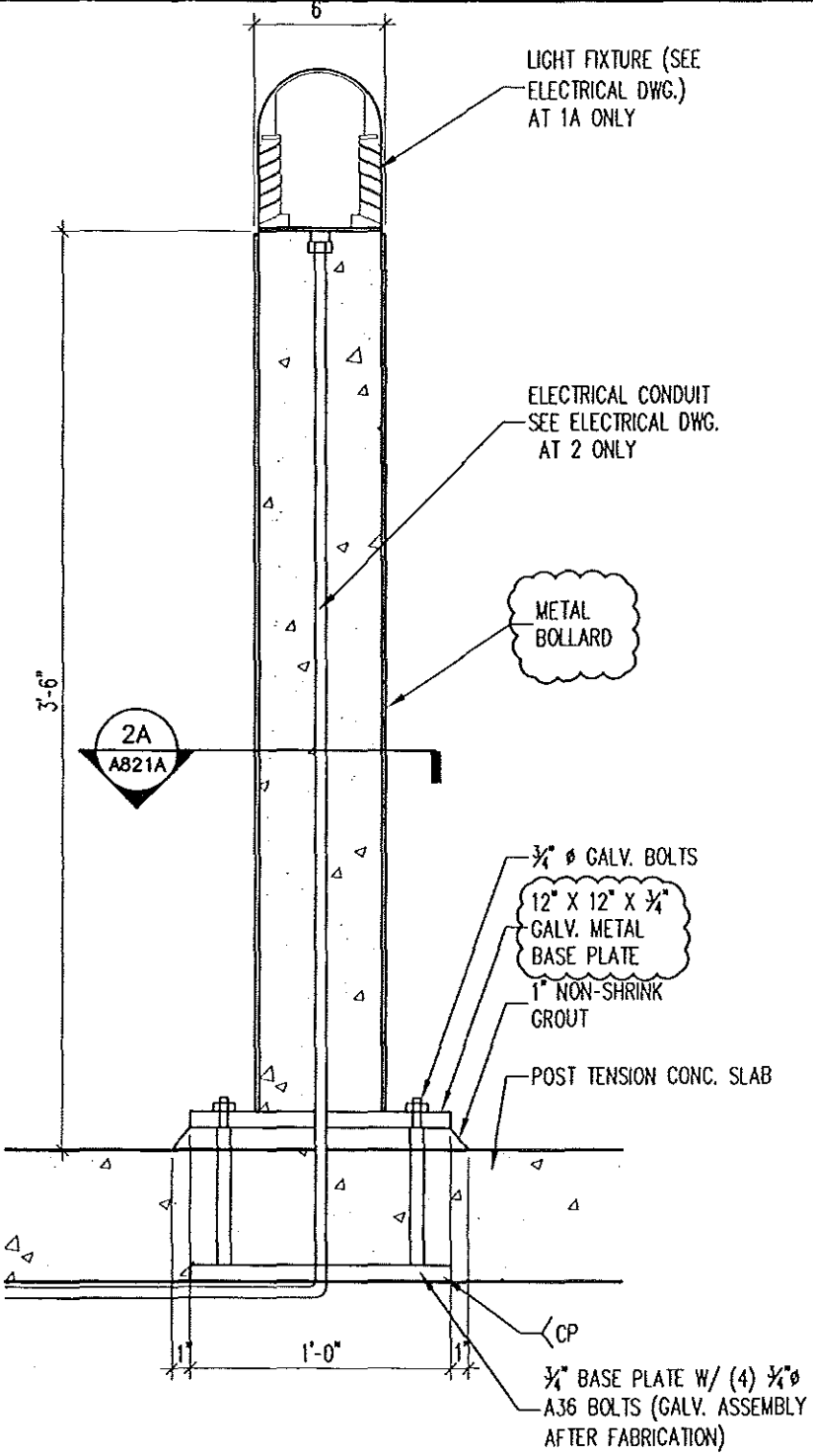
TEMPORARY BOLLARD SECTION

1 1/2" = 1'-0"

1B
A821A

GBBN Architects Inc.
325 West Main Street
Lexington, Kentucky 40507
v 859.381.8787
f 859.381.8873
www.gbbn.com

Job Name:	UNIVERSITY OF KENTUCKY PCF	Job No:	10247.03	Sheet No:	ASK–ASI–010R.1.02
	NEW GARAGE – GMP #2	Date:	09.14.06	Sheet Ref:	A821A



BOLLARD SECTION

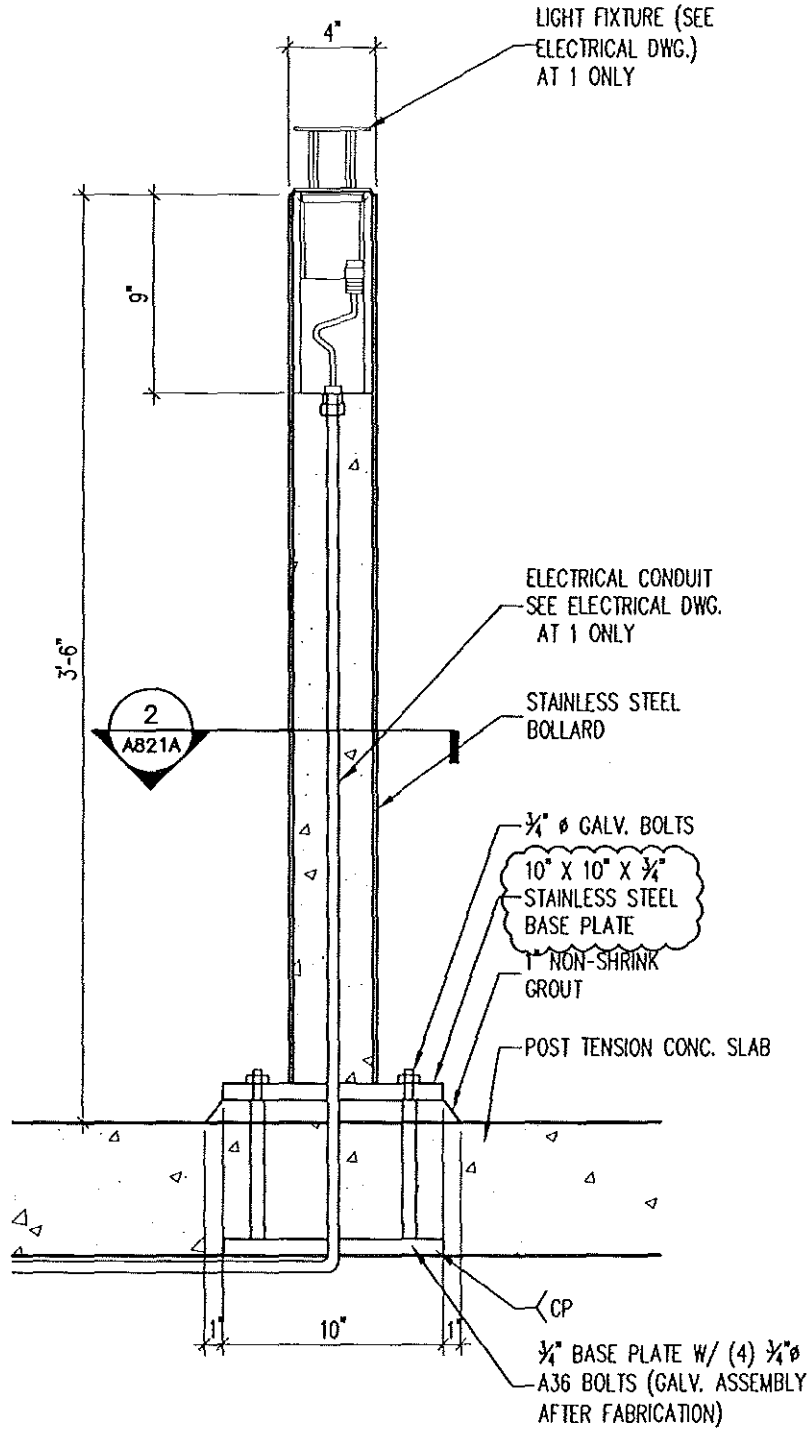
1 1/2" = 1'-0"

1A A821A / 1B A821A

GBBN Architects Inc.

325 West Main Street
Lexington, Kentucky 40507
v 859.381.8787
f 859.381.8873
www.gbbn.com

Job Name: UNIVERSITY OF KENTUCKY PCF	Job No: 10247.03	Sheet No: ASK-ASI-010R.1.01
NEW GARAGE – GMP #2	Date: 09.14.06	Sheet Ref: A821A



BOLLARD SECTION

1 1/2" = 1'-0"

1 A821A / 1C A821A

GBBN Architects Inc.

325 West Main Street
Lexington, Kentucky 40507
v 859.381.8787
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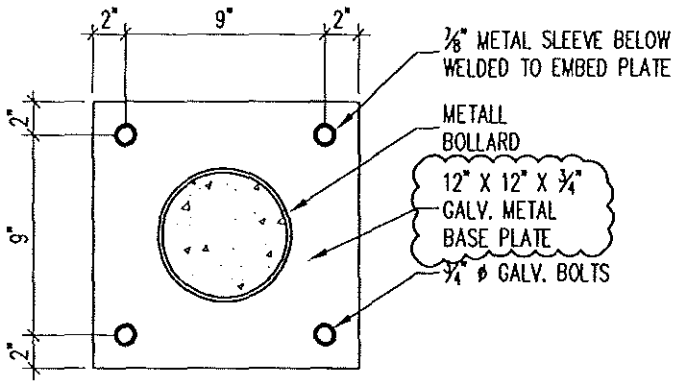
Job Name:	UNIVERSITY OF KENTUCKY PCF	Job No:	10247.03	Sheet No:	ASK-RFI-088R1.02
	NEW GARAGE – GMP #2	Date:	09.14.06	Sheet Ref:	A821A



TEMPORARY BOLLARD
PLAN DETAIL 2B/A821A
1 1/2" = 1'-0"

GBBN Architects Inc.
325 West Main Street
Lexington, Kentucky 40507
v 859.381.8787
f 859.381.8873
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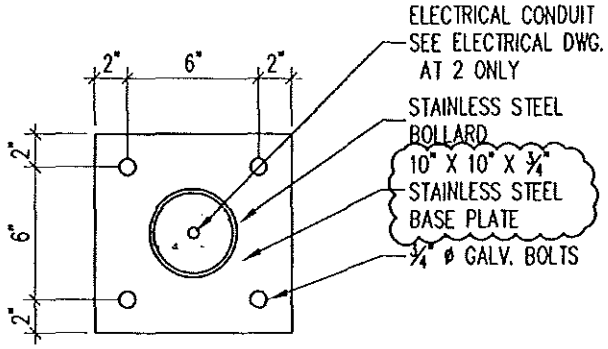
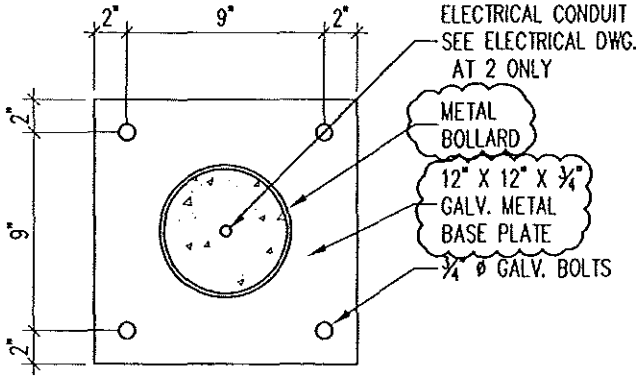
Job Name:	UNIVERSITY OF KENTUCKY PCF	Job No:	10247.03	Sheet No:	ASK-ASI-010R1.03
	NEW GARAGE - GMP #2	Date:	09.14.06	Sheet Ref:	A821A



STAINLESS STEEL BOLLARD
PLAN DETAIL
1 1/2" = 1'-0"

2 / A821A | 2C / A821A

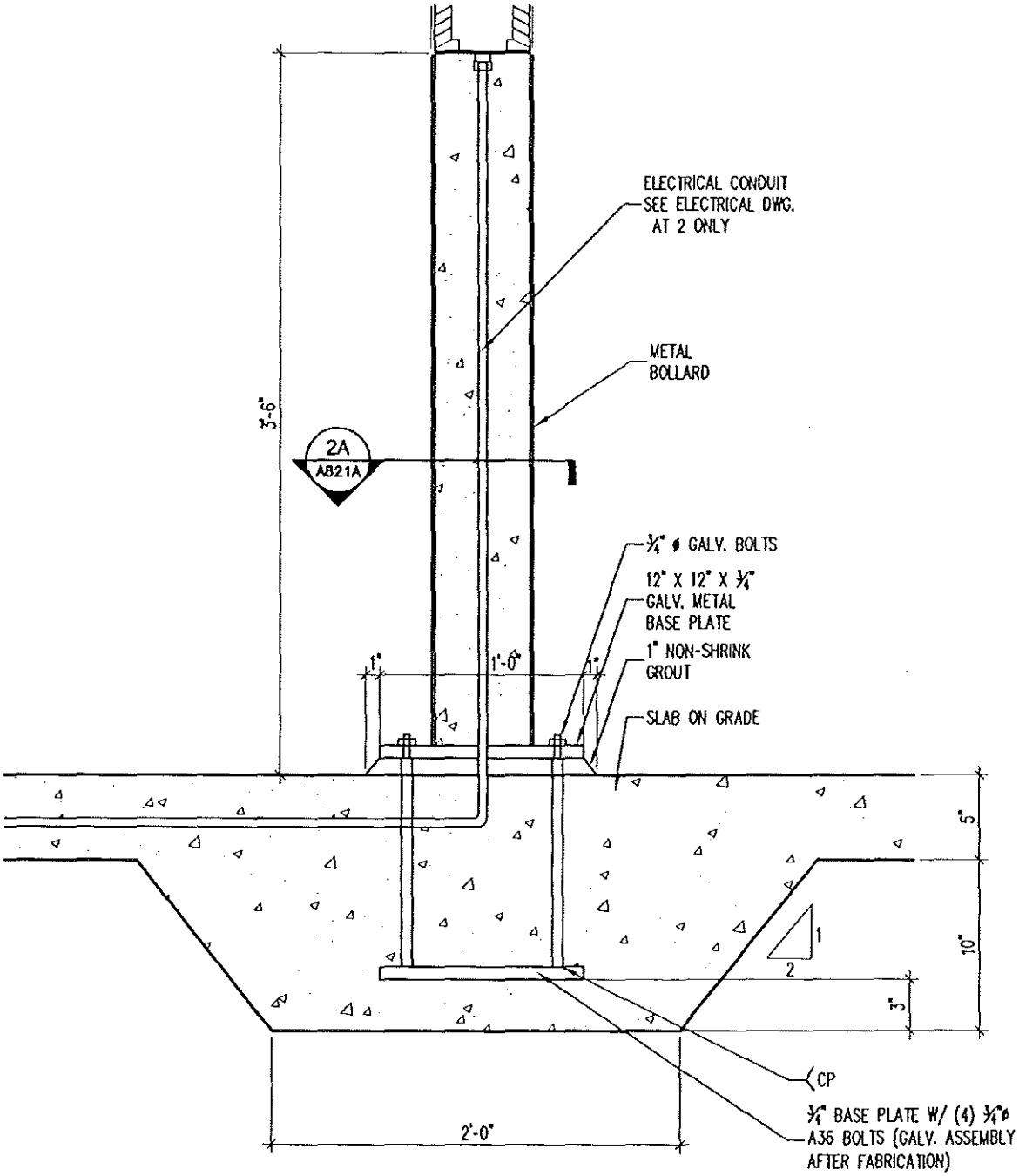


BOLLARD
PLAN DETAIL
1 1/2" = 1'-0"

2A / A821A | 2B / A821A

GBBN Architects Inc.
325 West Main Street
Lexington, Kentucky 40507
v 859.381.8787
f 859.381.8873
www.gbbn.com

Job Name:	UNIVERSITY OF KENTUCKY PCF	Job No:	10247.03	Sheet No:	ASK-RFI-094R.1.01
	NEW GARAGE - GMP #2	Date:	09.14.06	Sheet Ref:	A821A



SLAB ON GRADE

BOLLARD SECTION

1 1/2" = 1'-0"

1A A821A | 1B A821A

GBBN Architects Inc.
325 West Main Street
Lexington, Kentucky 40507
v 859.381.8787
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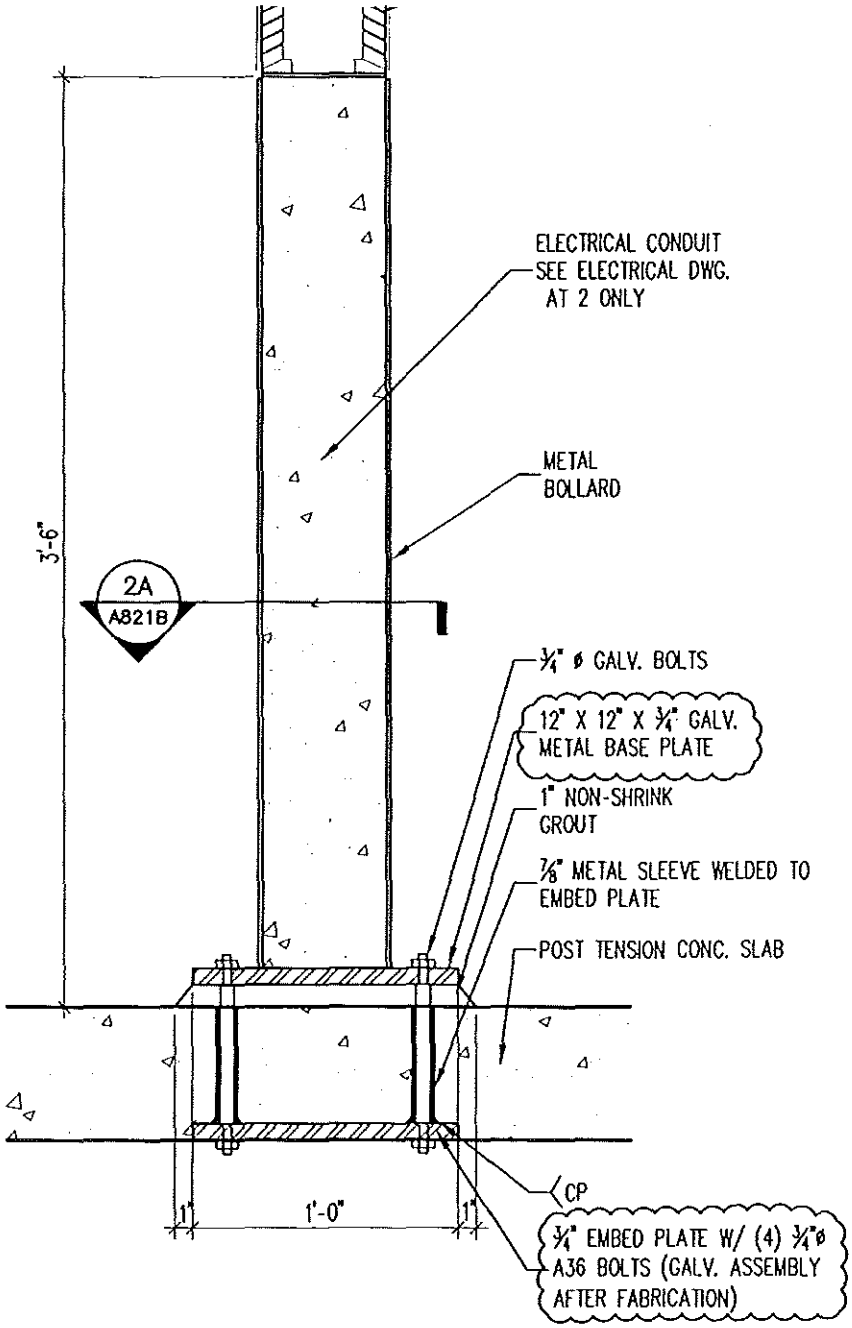
Job Name:	UNIVERSITY OF KENTUCKY PCF	Job No:	10247.03	Sheet No:	ASK-RFI-088R1.01
	NEW GARAGE - GMP #2	Date:	09.14.06	Sheet Ref:	A821A



TEMPORARY BOLLARD SECTION

1 1/2" = 1'-0"

1B
A821A

AVENUE FABRICATING, INC.

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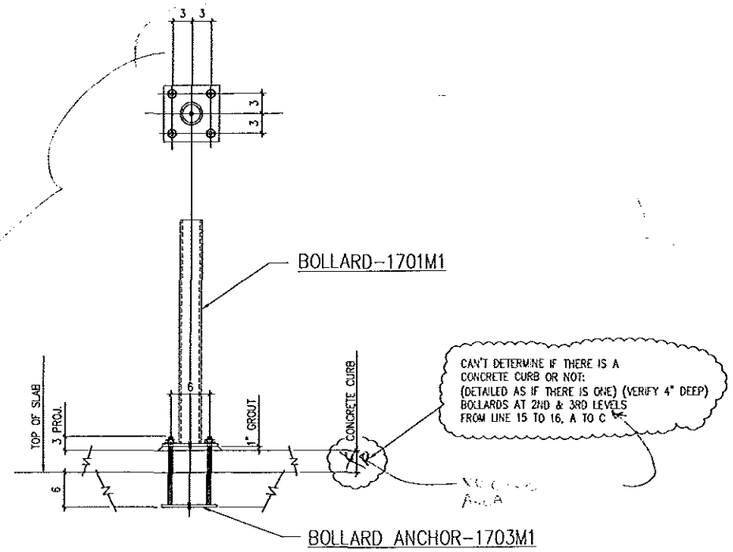
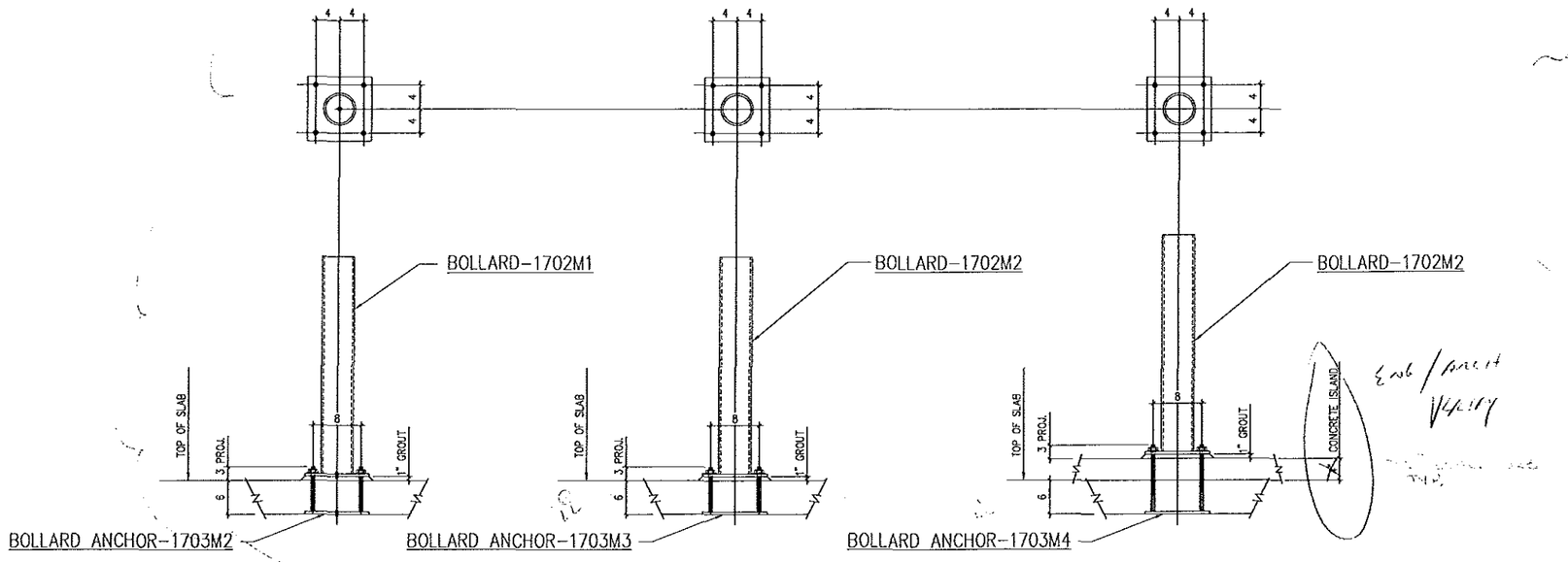
DRAWING ISSUE:

REVISION:



TYP BOLLARD SETTING
@ DET 1 OR 1C ON A821
(16 PLACES 2ND LEVEL)
(16 PLACES 3RD LEVEL)



TYP BOLLARD SETTING
@ DET 1A ON A821
(26 PLACES 4TH LEVEL)
(26 PLACES 5TH LEVEL)
(26 PLACES 6TH LEVEL)

TYP BOLLARD SETTING
@ DET 1B ON A821
2 / ~~12~~ PLACES LOWER LEVEL)
(59 PLACES GRADE LEVEL)
(11 PLACES 2ND LEVEL)
(3 PLACES 3RD LEVEL)

TYP BOLLARD SETTING
@ DET 1B ON A821
(THROUGH SLAB AND CONCRETE ISLAND)
3 / ~~35~~ PLACES LOWER LEVEL)
(14 PLACES GRADE LEVEL)

GENERAL NOTES:
- CONTRACTOR SHALL VERIFY ALL DIMENSIONS OF BOLLARDS W/ A&E PRIOR TO ORDERING. CONTRACTOR IS RESPONSIBLE FOR ALL DIMENSIONS W/ SUBMITTALS. SEE ~~SHEET~~ SHEET A821 FOR TYPICAL BOLLARD DETAILS.
- SEE SHEET A821 FOR TYPICAL BOLLARD DETAILS.

~SEE RFI #28.1

THIS REVIEW BY GBBN ARCHITECTS, INC. IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND IS NOT A APPROVAL OF THIS DRAWING OR SET OF DRAWINGS. THE COMMENTS MADE DO NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH THE PROJECT DRAWINGS, SPECIFICATIONS AND OTHER CONTRACT DOCUMENTS. CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL QUANTITIES, ALL FABRICATION, DELIVERY AND ERECTION OF ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES, ALL COORDINATION WITH ALL OTHER CONTRACTORS, SUPPLIERS AND OTHERS, PERFORMING ALL WORK IN A SAFE AND PROPER MANNER.

NO EXCEPTIONS TAKEN
FURNISH AS CORRECTED
REVISE AND RESUBMIT
NO REVIEW - INCOMPLETE
SUBMIT SPECIFIED ITEMS
REJECTED
DATE 9/16/06 BY

GBBN ARCHITECTS, INC.
ARCHITECTURE, INTERIORS, PLANNING, ENGINEERING
[illegible] STREET, CINCINNATI, OHIO 45202-2317 (513) 241-5725
[illegible] STREET, LEXINGTON, KENTUCKY 40507-1857 (859) 281-1717
[illegible] DISTRICT OFFICE [illegible] (614) 221-1818

GILBANE
University of Kentucky
Patient Care Facility
Gilbane Project No. 18-3966
REVIEWED
Q010-Huguelet Q320-Garage
Q330-Infrastructure Q340-PCF Foundation
Q350-PCF Core/Shell Q360-Tower/Up Fit
Bid Package No. 10D
Submittal No. 10D-0558.00-002
Spec Sect/Para
Reviewed By: GH
Date 9/21/06
This review does not constitute nor does it assume design responsibility nor does it relieve the trade contractor's supplier from complying with the contract requirements, coordinating their work with other trade contractors and verifying field dimensions.

RECEIVED
AUG 25 2006

BOLLARD

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REFERENCE DWG: A821A	DESCRIPTION: MISC.(BOLLARD PLACEMENT DETAILS)	DRAWN BY: JG	DATE: 8/06	CHECKED BY: .	JOB# 06-36	SHEET: E1

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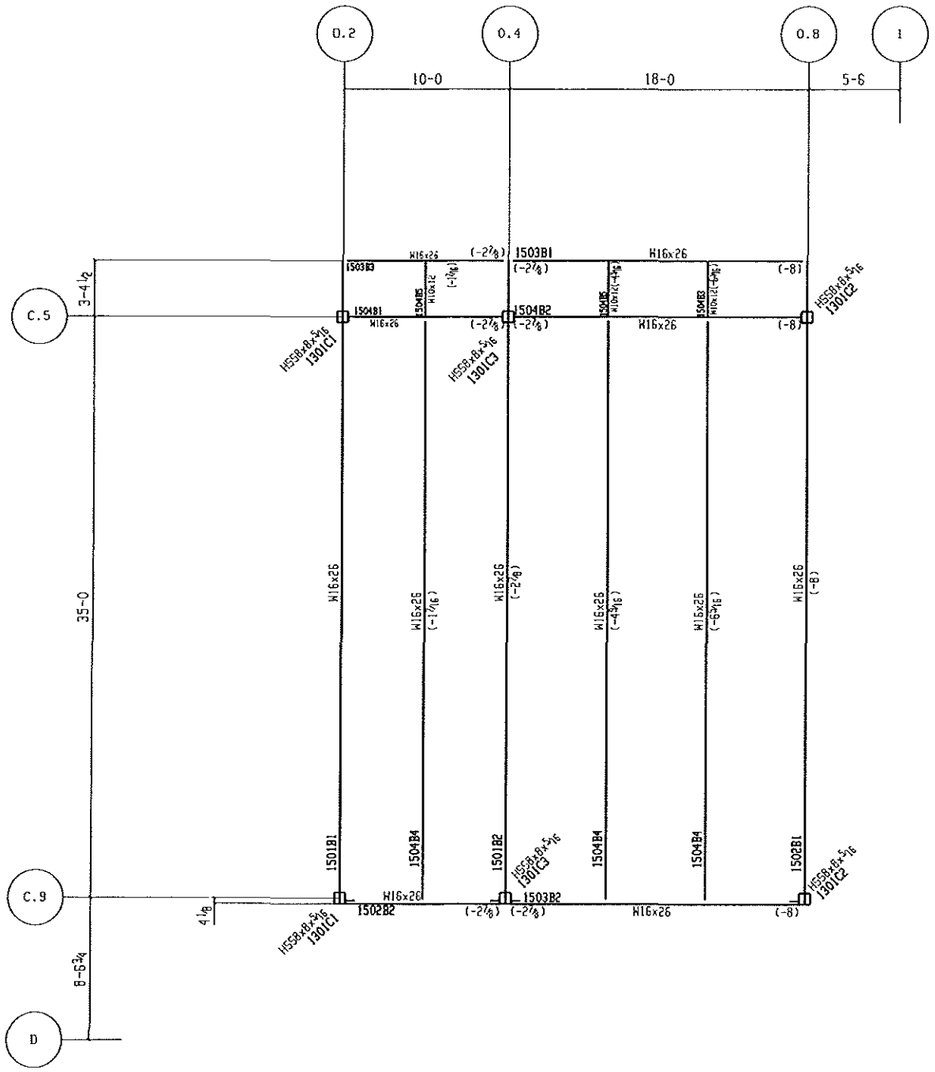
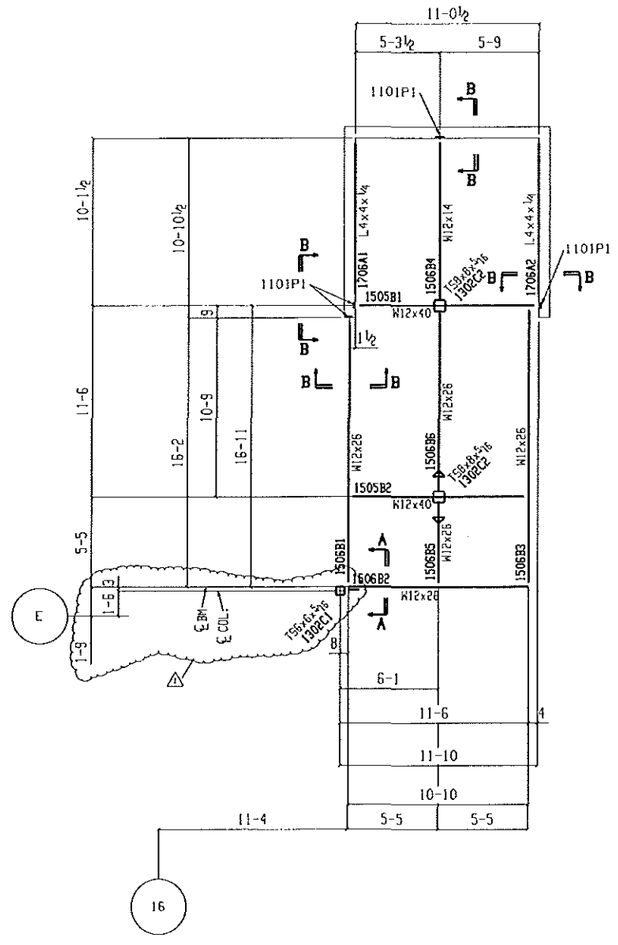
AVENUE FABRICATING, INC.

DRAWING ISSUE:
FOR FIELD USE 6-13-07

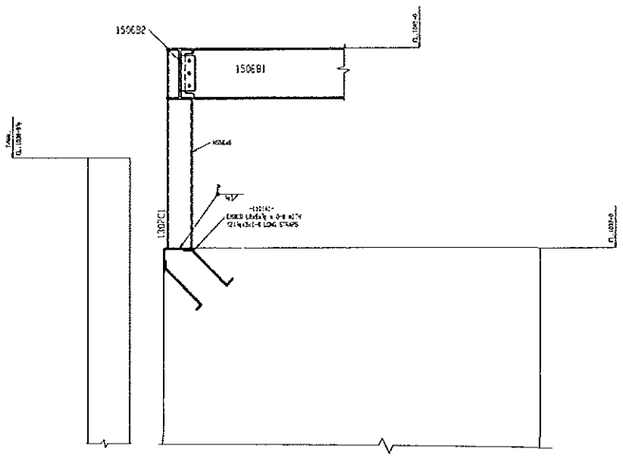
REVISION:
1 9-19-07 JDC AS NOTED



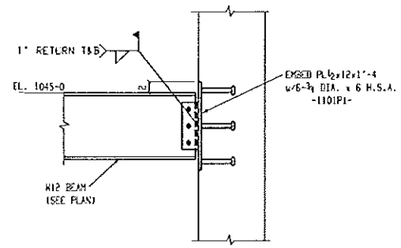
CANOPY ROOF FRAMING PLAN
Elevation: 975-0 (U.N.)



STAIR 4 ROOF FRAMING PLAN
Elevation: 1045-0 (U.N.)



Section A



Section B

NORTH

NORTH

RECEIVED
SEP 7 2007
E.C. MATTHEWS CO.

STAIR 4 CORRECTED

REVISED ISSUE SEP 6 7 2007

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REFERENCE DWG: S503A	DESCRIPTION: CANOPY ROOF & STAIR 4 ROOF FRAMING PLAN	DRAWN BY: AH	DATE: 9-06	CHECKED BY: DSS	JOB# 06-36	SHEET: E3-R1

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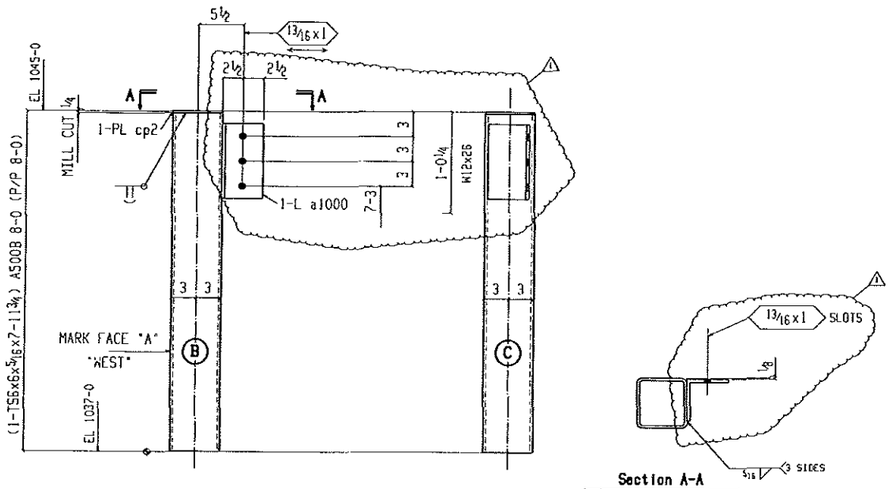
AVENUE FABRICATING, INC.

DRAWING ISSUE:
FOR FABRICATION 7-06-07
REVISION:
⚠ 9-19-07 JDC AS NOTED

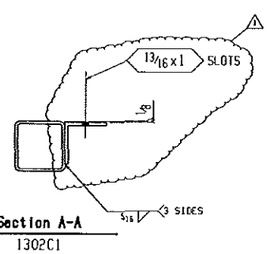
BILL OF MATERIAL

NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : 13/16dia. U.N.
3. FINISH : INTUMESCENT PAINT AS REQ'D. (FIELD APPLY)

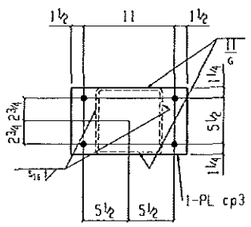


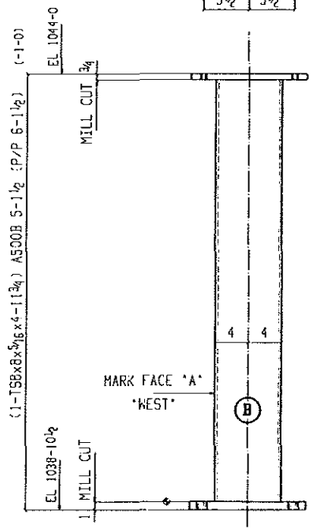
ONE COLUMN 1302C1

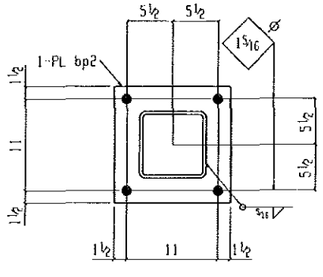
AT GRID:
E.1



Section A-A
1302C1







2 COLUMNS 1302C2

AT GRID:
E.2 & 16.5
E.3 & 16.5

BILL OF MATERIAL

Piece Mark	Minor Mark	Quantity Total	Description	Length		Remarks
1302C1		ONE COLUMN				
	1302C1	1	TS6x6x5/16	7	11 3/4	MCE
	a1000	1	L5x5x3/8	0	9	
	cp2	1	PL3/4x6	0	6	
1302C2		2	COLUMN			
	1302C2	2	TS8x8x5/16	4	11 3/4	SEE
	bp2	2	PL1x11	1	2	
	cp3	2	PL3/8x8	1	2	

REVISED ISSUE SEP 2 4 2007

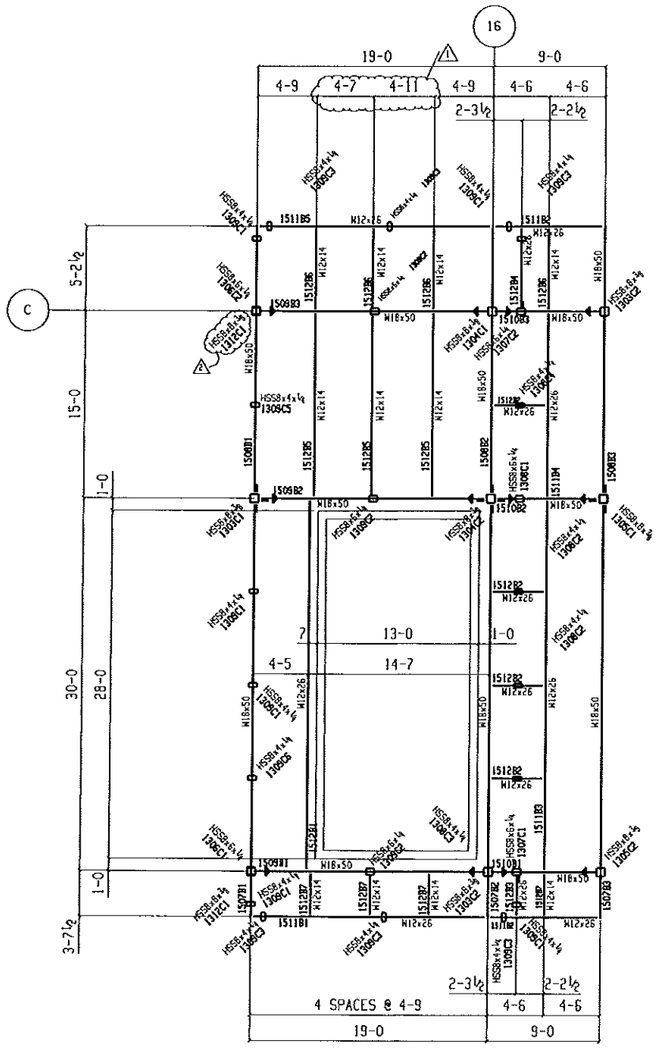
PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC	REFERENCE DWG: E3	DESCRIPTION: COLUMNS	DRAWN BY: AN	DATE: 9-06	CHECKED BY: DSS	JOB# 06-36	SHEET: 1302-R1

Licensed CadVantage User

AVENUE FABRICATING, INC.

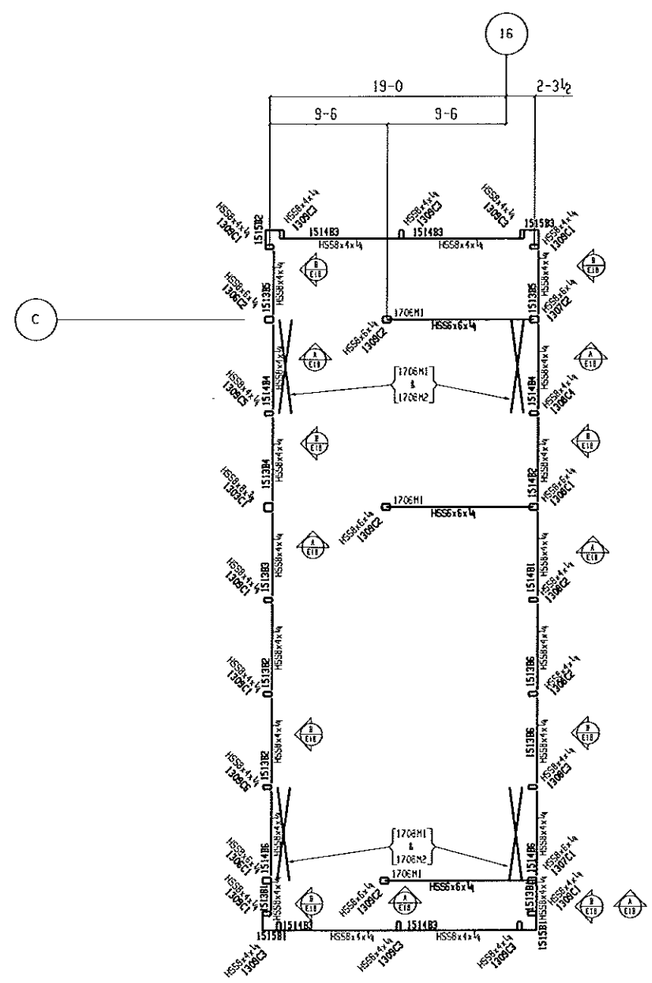
DRAWING ISSUE:
FOR CONSTRUCTION 10-02-07

REVISION:
1 AS NOTED 8-03-07
2 AS NOTED 10-02-07



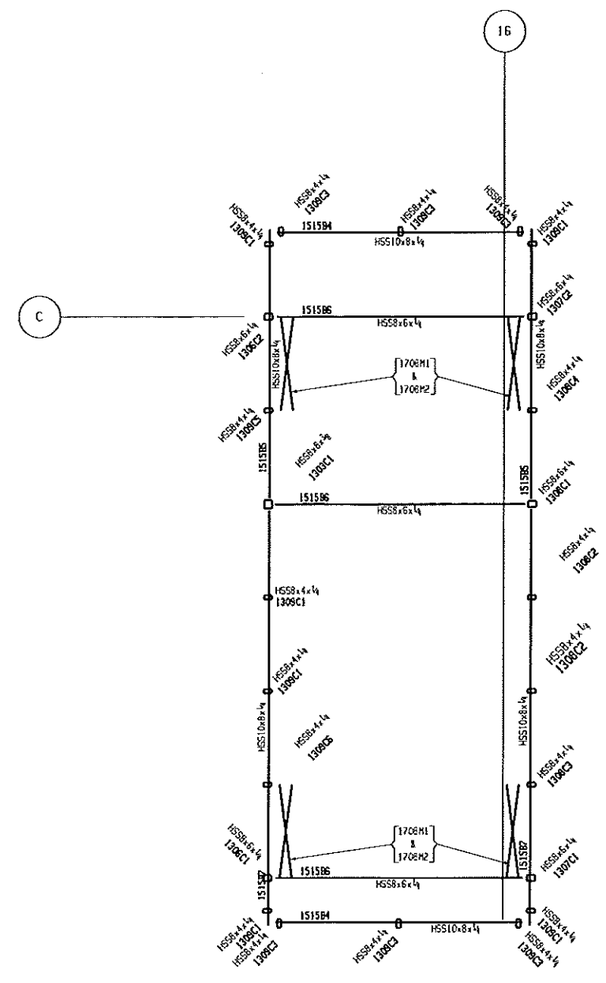
STAIR 3 ROOF FRAMING PLAN

Elevation: 1047-0 (U.N.)



STAIR 3 STEEL FRAMING PLAN

Elevation: 1049-1 (U.N.)



STAIR 3 SCREEN WALL FRAMING PLAN

Elevation: 1056-8 (U.N.)

NORTH

RECEIVED
OCT 04 2007
E. C. MATTHEWS CO.

REVISED ISSUE OCT 04 2007

EDIT

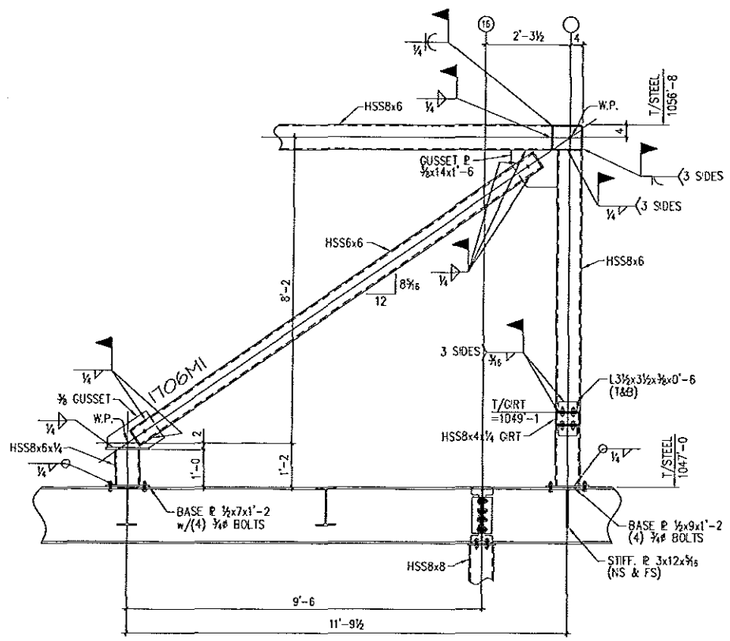
STAIR 3 REVISED

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REFERENCE DWG: 5502A	DESCRIPTION: ERECTION DWG STAIR 3 ROOF TO SCREEN WALL	DRAWN BY: AW	DATE: 9-06	CHECKED BY: DSS	JOB# 06-36	SHEET: E4 REV 2

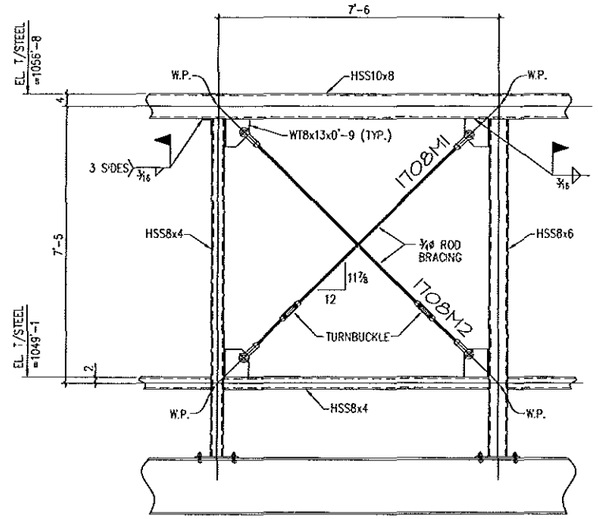
AVENUE FABRICATING, INC.

Licensed CadVantage User

DRAWING ISSUE:
FOR CONST 10/2/07
REVISION:
1.



SECTION A / REF. 25/S513A — E4



SECTION B / REF. 27/S513A — E4

FAB ISSUE OCT 04 2007

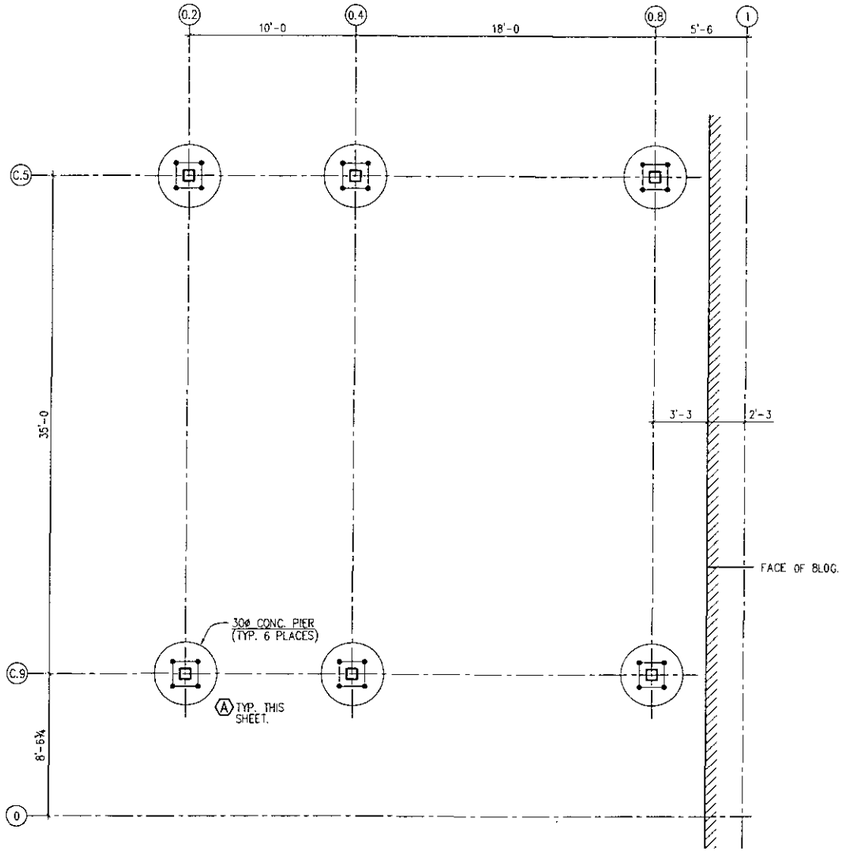
PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REFERENCE DWG: S513A/E4	DESCRIPTION: SECTIONS	DRAWN BY: RDJ	DATE: 2/07	CHECKED BY: DSS	JOB# 06-36	SHEET: E18 1

Licensed CadVantage User

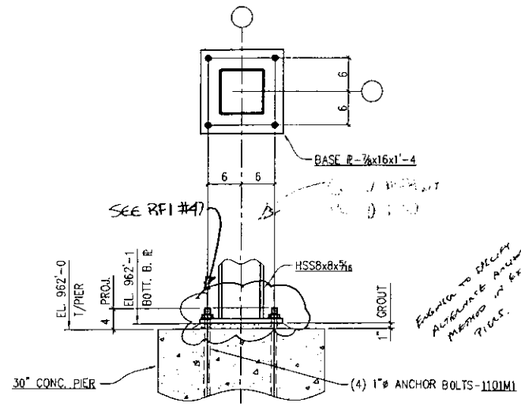
AVENUE FABRICATING, INC.

DRAWING ISSUE:

REVISION:



CANOPY ANCHOR SETTING PLAN



SETTING DETAIL (A) (6 PLACES)

GENERAL NOTES:

1. The trade contractor shall coordinate all surface preparation/finishing with contract documents. See spec. sect. 05120 -2.3 and section 09900 in particular.
2. Field verify all dimensions and elevations before fabrication.
3. Contractor shall coordinate with fabricator all areas that receive fire proofing and intumescent paint. See contract documents for specific requirements.

4) VERIFY PRIMER W/ INTUMESCENT PAINT MANUFACTURER.

EPOXY TO DECAY ALTERNATE ALUMINUM METHOD IN CRITICAL AREAS.

EMBEDDED IN TOP OF CONCRETE PIER.

THIS REVIEW BY GBBN ARCHITECTS, INC. IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND IS NOT AN APPROVAL OF THIS DRAWING OR SET OF DRAWINGS. THE COMMENTS MADE DO NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH THE PROJECT DOCUMENTS' REQUIREMENTS AND OTHER CONTRACT DOCUMENTS. CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL DIMENSIONS AND QUANTITIES. ALL FABRICATION, DELIVERY AND ERECTION, ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES, ALL COORDINATION WITH ALL OTHER CONTRACTORS, SUPPLIERS AND OTHERS, PERFORMING ALL WORK IN A SAFE AND PROPER MANNER.

NO EXCEPTIONS TAKEN
FURNISH AS CORRECTED
REVISE AND RESUBMIT
NO REVIEW - INCOMPLETE
SUBMIT SPECIFIED ITEMS
REJECTED
DATE 1-25-07 BY BK

GBBN ARCHITECTS, INC.
ARCHITECTURE INTERIORS PLANNING ENGINEERING
200 EAST 6TH STREET CINCINNATI, OHIO 45202-3217 (513) 241-6700
1900 KANAWHA BLVD EAST CHARLESTON, WEST VIRGINIA 25311-2204 (304) 343-6700
A MEMBER FIRM OF THE GBBN GROUP OF COMPANIES IN ATLANTA, CHARLESTON, CINCINNATI

GILBANE
University of Kentucky
Patient Care Facility
Gilbane Project No. 18-3086
REVIEWED
☐ 010-Hagwelt ☐ 020-Garage
☐ 030-Infrastructure ☐ 040-PCF Foundation
☐ 050-PCF Core/Shell ☐ 060-Tower/Up Fit
Bid Package No. 100
Submittal No. 100-053-2A-001
Spec. Sect/Para.
Reviewed By
Date 12/5/06
This review does not constitute nor does it assume design responsibility nor does it relieve the trade contractor's supplier from complying with the contract requirements, coordinating their work with other trade contractors and verifying field dimensions.

APPROVED FOR GENERAL CONFORMITY TO PLANS AND SPECIFICATIONS. DETAIL DIMENSIONS AND ACTIVITIES NOT COMPLETELY CHECKED. CONTRACTOR'S FULL RESPONSIBILITY IS IN NO WAY RELIEVED BY THIS APPROVAL.
E.C. MATTHEWS CO., INC.
BY: [signature] 12-5-06
SIGNATURE DATE

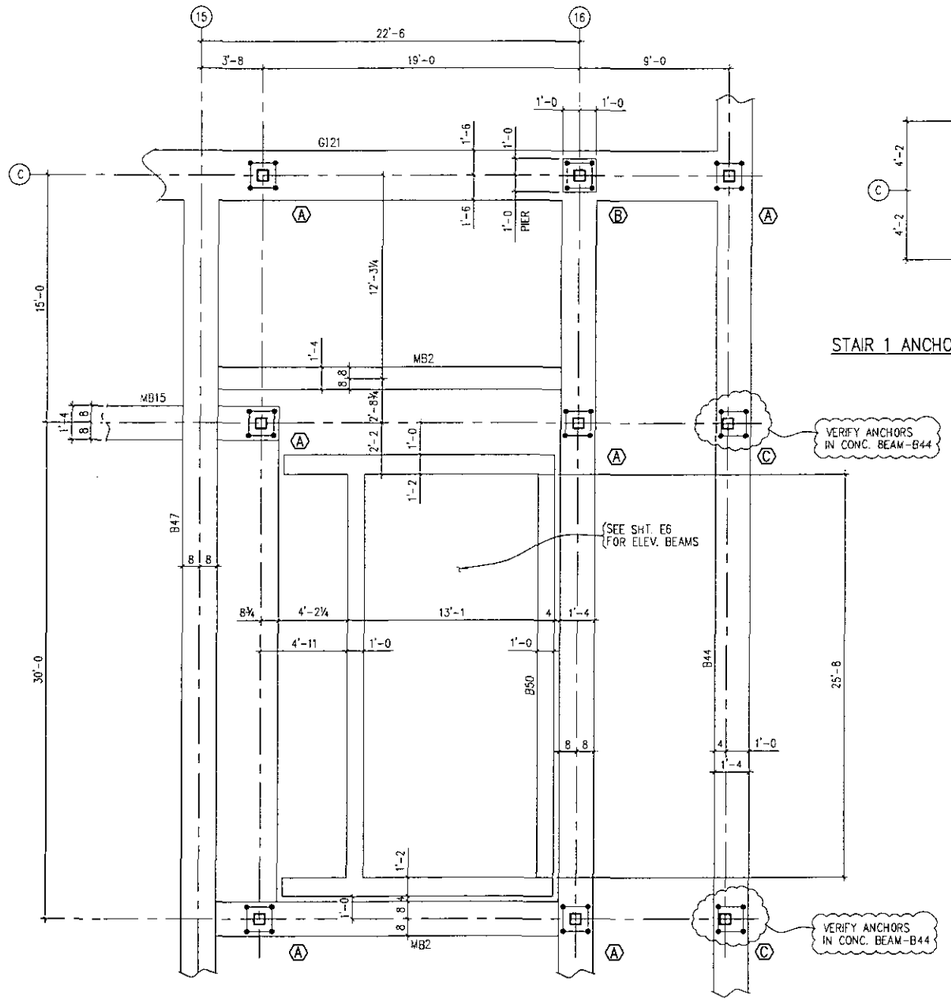
THP LIMITED, INC.
BY:
DATE:
NOTES:
A NO EXCEPTIONS NOTED
B EXCEPTIONS NOTED
C REVISE AND RESUBMIT
D
ANY DIMENSIONS, QUANTITIES OR ITEMS SHOWN ON SHOP DRAWINGS THAT VARY FROM THE CONTRACT DOCUMENTS MAY CAUSE AN EXTRA COST

NOT FOR CONSTRUCTION
OCT 18 2006
FOR APPROVAL ONLY

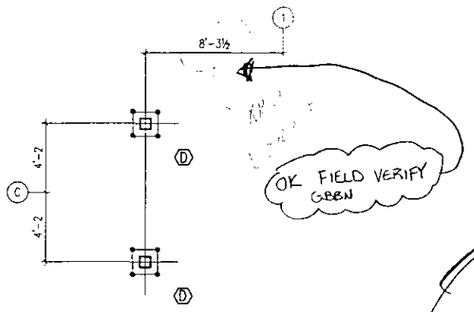
Avenue Steel Shops

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REFERENCE DWG S503A & S513A	DESCRIPTION: CANOPY ANCHOR BOLT SETTING PLAN	DRAWN BY: RDJ	DATE: 9/06	CHECKED BY: DSS	JOB# 06-36	SHEET: A1

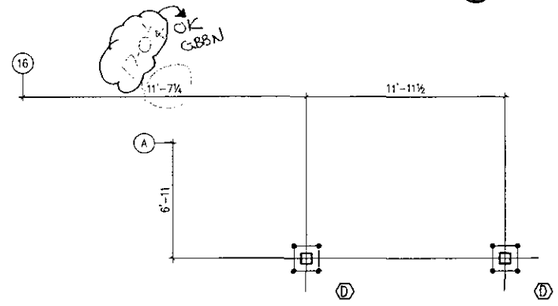
A1



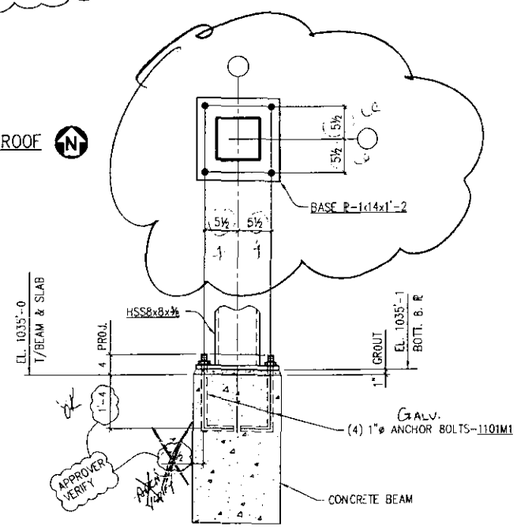
STAIR 3 ANCHOR BOLT SETTING PLAN AT ROOF



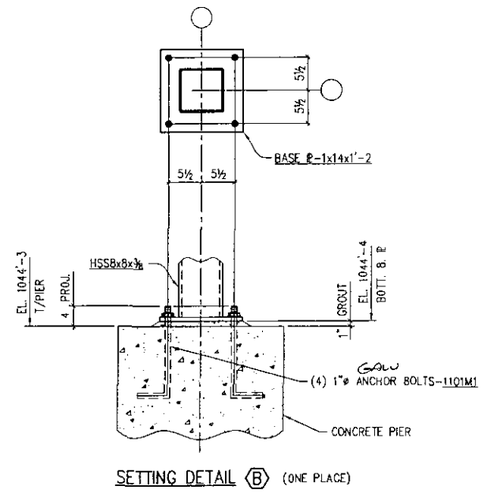
STAIR 1 ANCHOR BOLT SETTING PLAN AT ROOF



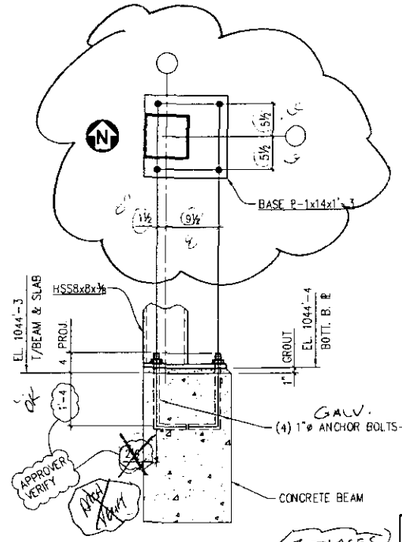
STAIR 2 ANCHOR BOLT SETTING PLAN AT ROOF



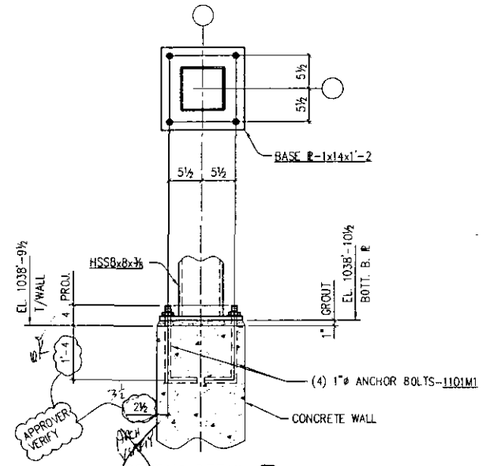
SETTING DETAIL (A) (8 PLACES)



SETTING DETAIL (B) (ONE PLACE)



SETTING DETAIL (C) (2 PLACES) (ONE PLACE)



SETTING DETAIL (D) (4 PLACES)

THP LIMITED, INC.
BY: [illegible]
DATE: 12-21-07
NOT REVIEWED FOR NOTATIONS ON [illegible]
A NO EXCEPTIONS NOTED
B EXCEPTIONS NOTED
C REVISE AND RESUBMIT
D
[illegible] QUANTITIES OF OTHER TRADES. [illegible] EXPENSE COST

NOT FOR CONSTRUCTION
OCT 18 2006
FOR APPROVAL ONLY

Licensed CadVantage User

AVENUE FABRICATING, INC.

DRAWING ISSUE:

REVISION:

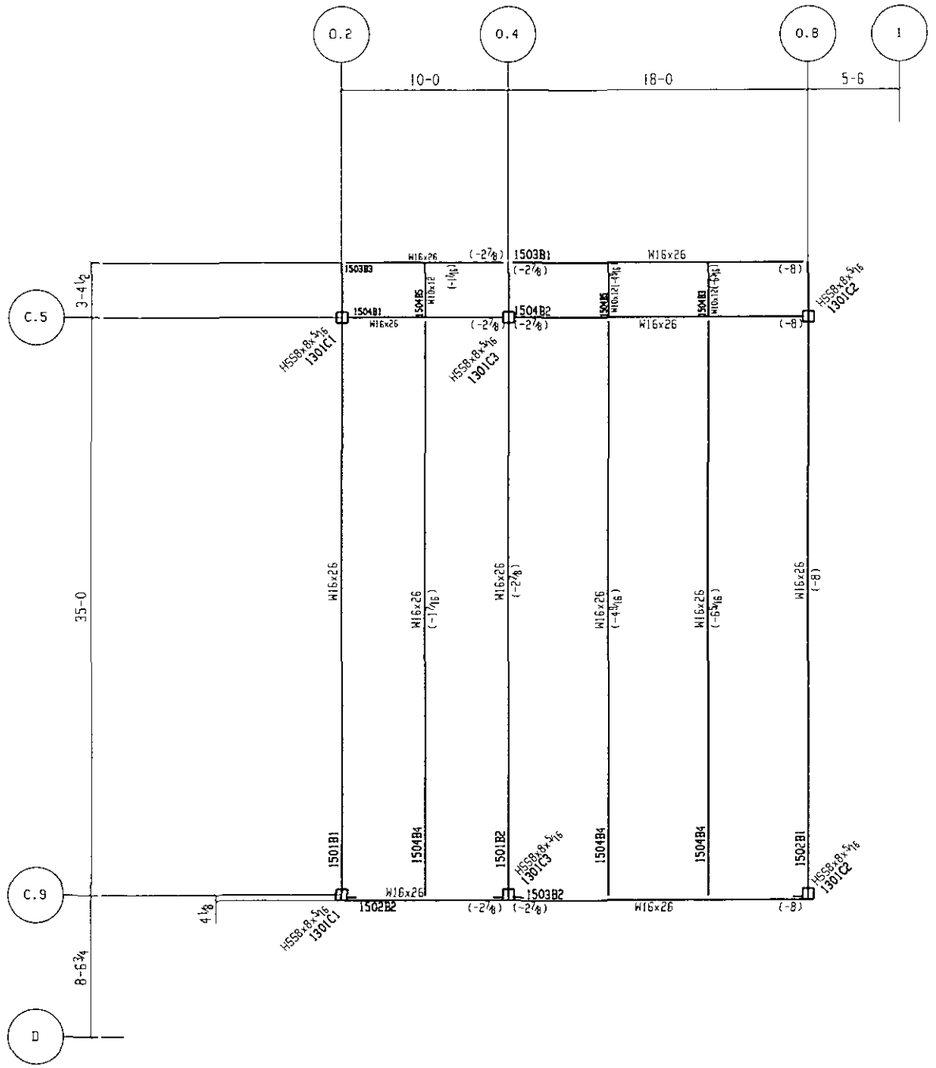
PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REFERENCE DWG: S502A & S511A	DESCRIPTION: CANOPY, STAIR 1 @ ROOF, STAIR 2 @ ROOF ANCHOR BOLT SETTING PLAN	DRAWN BY: AW	DATE: 10/06	CHECKED BY: DSS	JOB# 06-36	SHEET: A2

Licensed CadVantage User

AVENUE FABRICATING, INC.

DRAWING ISSUE:

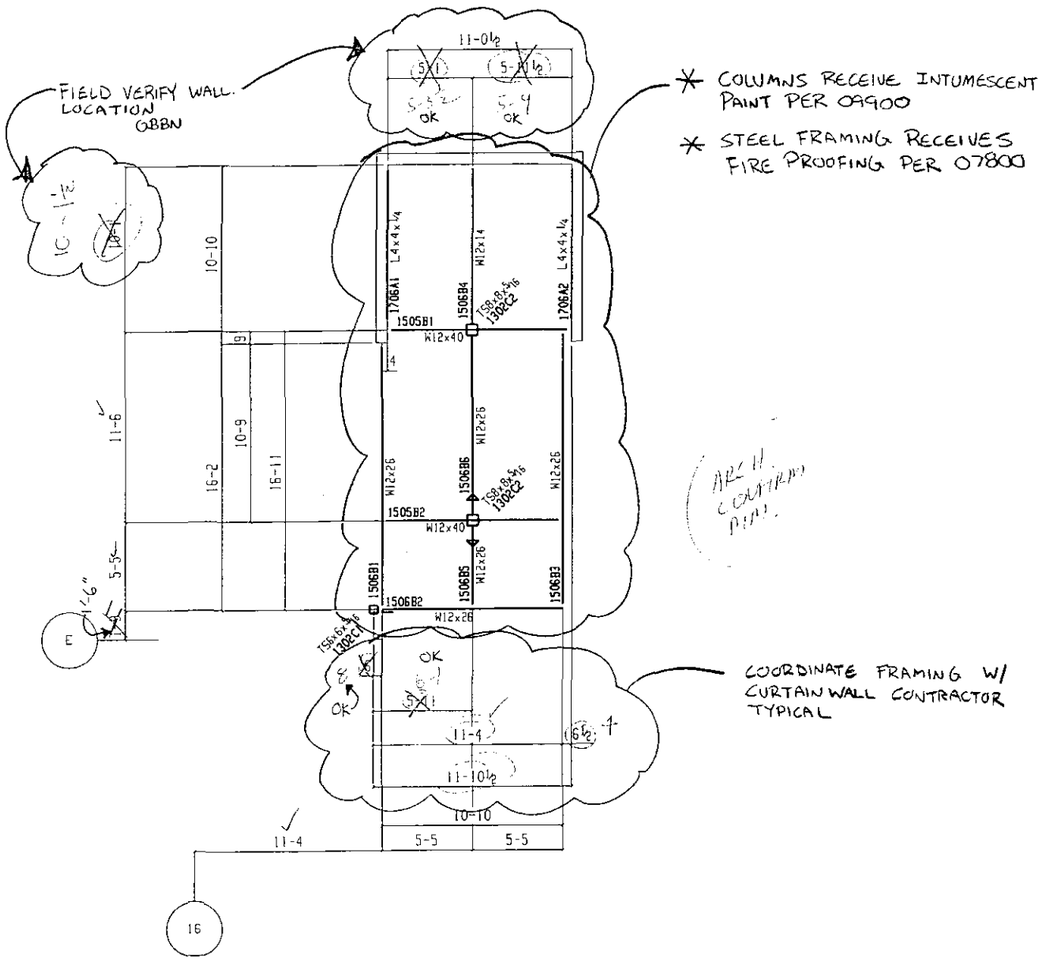
REVISION:



CANOPY ROOF FRAMING PLAN

Elevation: 975-0 (U.N.)

NORTH



STAIR 4 ROOF FRAMING PLAN

Elevation: 1045-0 (U.N.)

NORTH

THP LIMITED, INC. BY: [illegible] DATE: [illegible]
A NO EXCEPTIONS NOTED
B EXCEPTIONS NOTED
C REVISE AND RESUBMIT
D
NOT RESPONSIBLE FOR DIMENSIONS, QUANTITIES OR DETAILS THAT CONFLICT WITH CONTRACT DOCUMENTS OR NOTATIONS MADE BY OTHERS. DO NOT PROCEED IF IT WILL CAUSE AN EXTRA COST.

NOT FOR CONSTRUCTION
OCT 16 2006
FOR APPROVAL ONLY

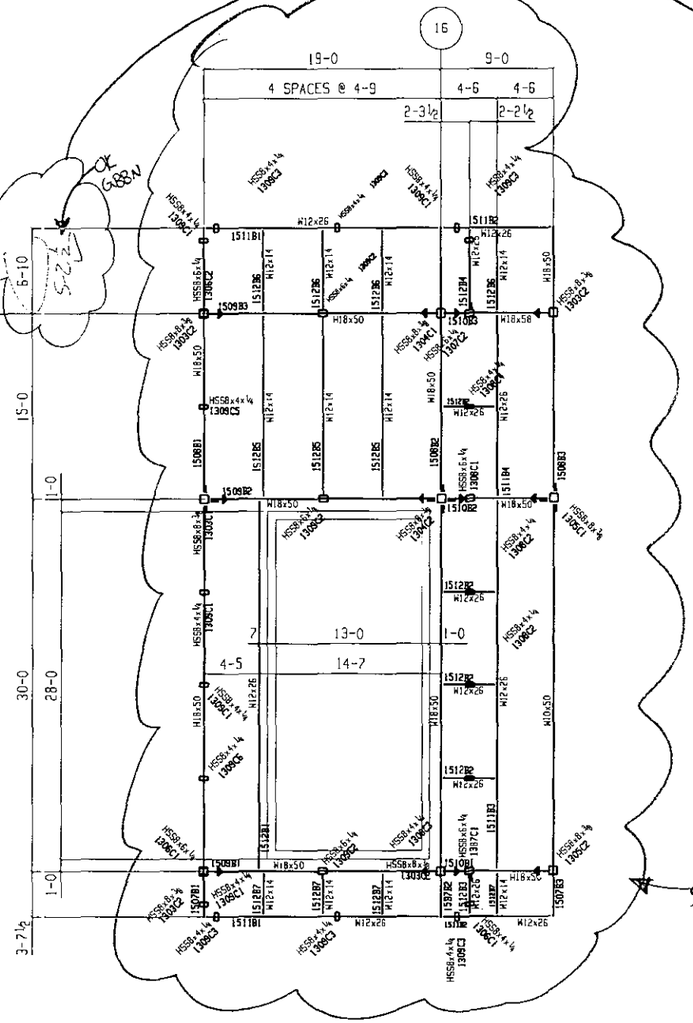
PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REFERENCE DWG: 5503A	DESCRIPTION: CANOPY ROOF & STAIR 4 ROOF FRAMING PLAN	DRAWN BY: AH	DATE: 9-06	CHECKED BY: DSS	JOB#: 06-36	SHEET: E3

Licensed CadVantage User

AVENUE FABRICATING, INC.

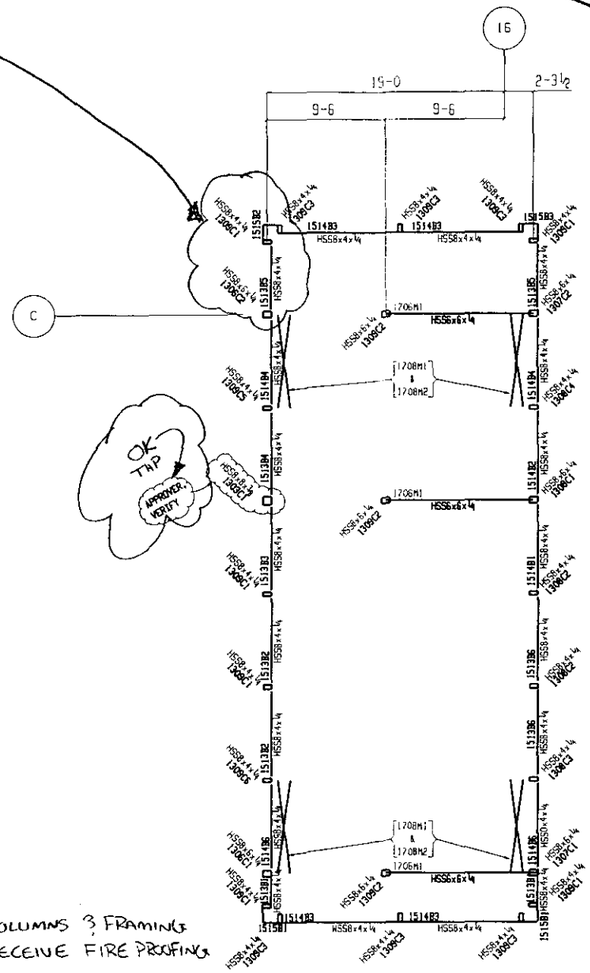
DRAWING ISSUE:

REVISION:



STAIR 3 ROOF FRAMING PLAN

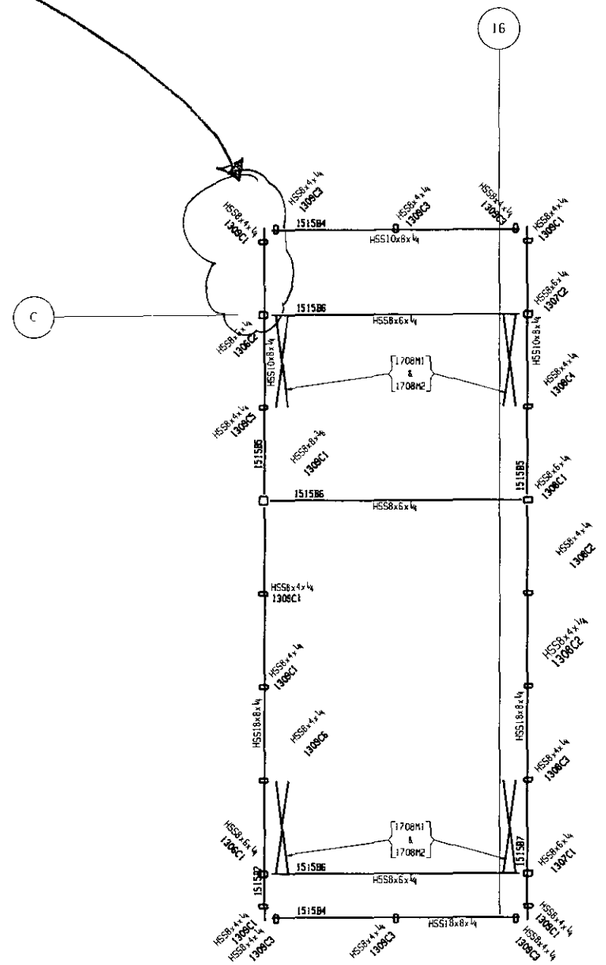
Elevation: 1047-0 (U.N.)



STAIR 3 STEEL FRAMING PLAN

Elevation: 1048-3 (U.N.)

APPROVED VERIFY



STAIR 3 SCREEN WALL FRAMING PLAN

Elevation: 1056-8 (U.N.)

NORTH

THP LIMITED, INC. BY: [illegible] DATE: 10-22-06

A NO EXCEPTIONS NOTED
B MAKE EXCEPTIONS NOTED
C REVISE AND RESUBMIT
D

NOT FOR CONSTRUCTION

OCT 18 2006

FOR APPROVAL ONLY

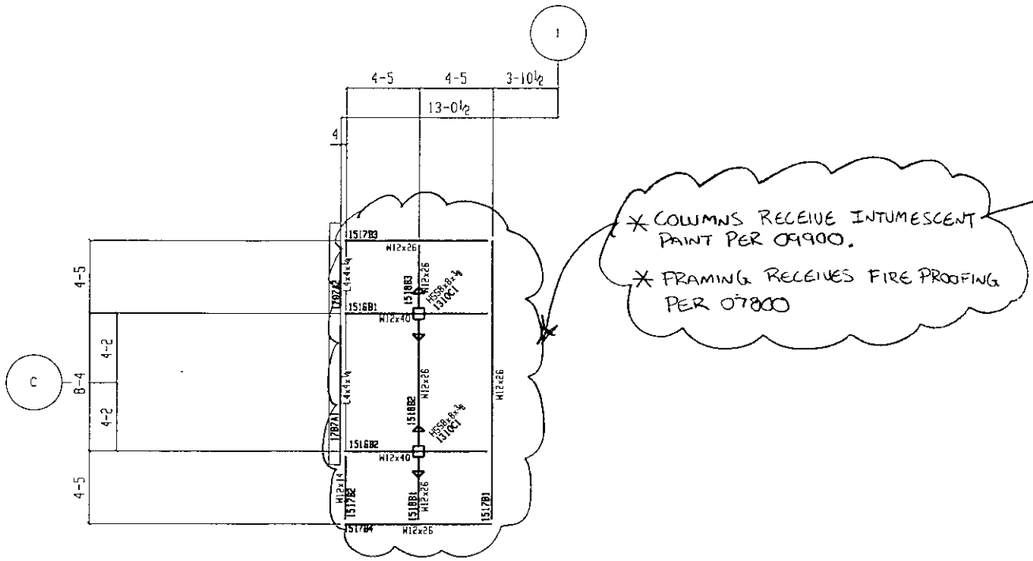
PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REFERENCE DWG: 5502A	DESCRIPTION: ERECTION DWG STAIR 3 ROOF TO SCREEN WALL	DRAWN BY: AM	DATE: 9-06	CHECKED BY: .	JOB# 06-36	SHEET: E4

Licensed CadVantage User

AVENUE FABRICATING, INC.

DRAWING ISSUE:

REVISION:



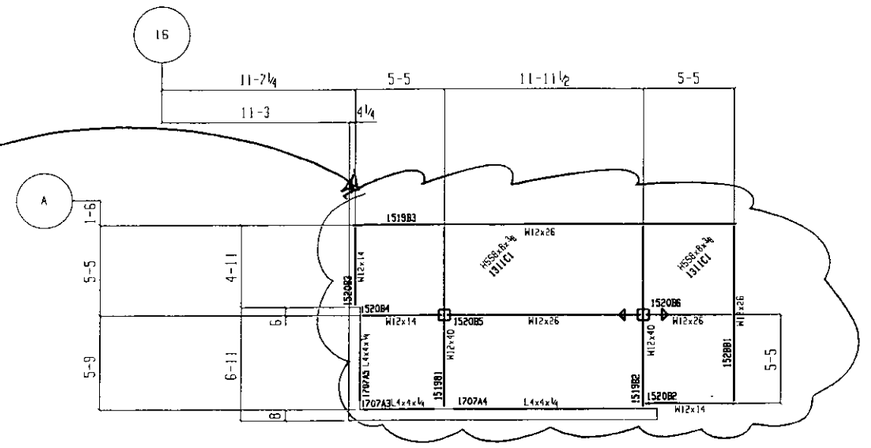
* COLUMNS RECEIVE INTUMESCENT PAINT PER 09900.

* FRAMING RECEIVES FIRE PROOFING PER 07800

STAIR 1 ROOF FRAMING

Elevation: 1045-0 (U.N.)

APPROVED, VERIFY ok



STAIR 2 ROOF FRAMING PLAN

Elevation: 1045-0 (U.N.)

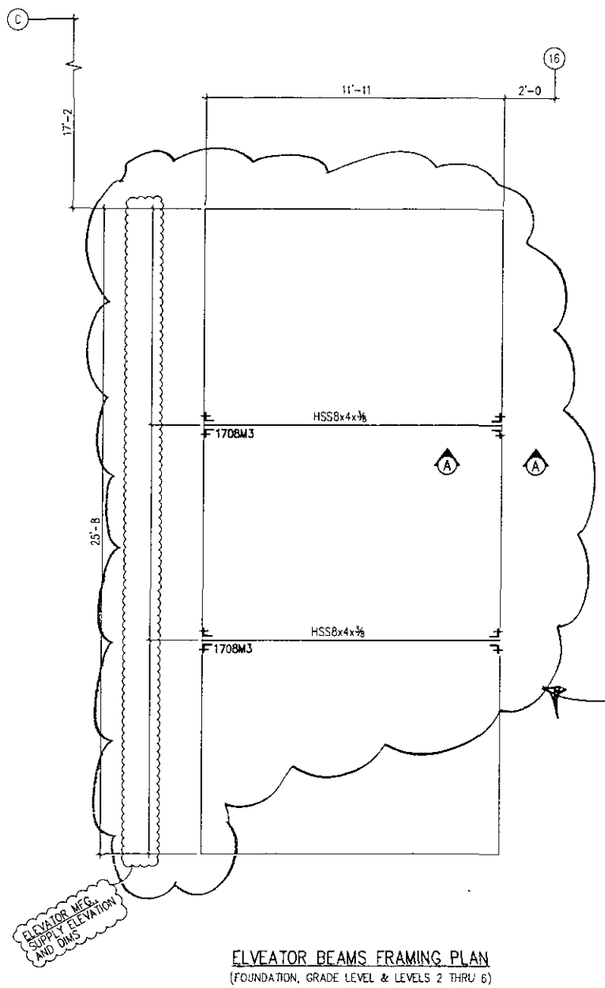
APPROVED, VERIFY ok

NORTH

THP LIMITED, INC. BY: DATE: 10-27-06
A NO EXCEPTIONS NOTED
B EXCEPTIONS NOTED
C REVISE AND RESUBMIT
D
NOT REVIEWED FOR DIMENSIONS, QUANTITIES, FABRICATION PROCESSES, OR SAFETY PRECAUTIONS
NOTATIONS DO NOT AUTHORIZE ANY EXTRA COST

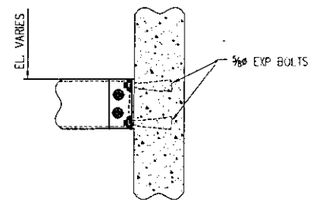
NOT FOR CONSTRUCTION
OCT 18 2006
FOR APPROVAL ONLY

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REFERENCE DWG: 5501A	DESCRIPTION: STAIR 1 & 2 ROOF FRAMING PLAN	DRAWN BY: AH	DATE: 9-06	CHECKED BY: BSS	JOB# 06-36	SHEET: E5



VERIFY BEAM SIZE, DIMS, & ELEVATION WITH ELEVATOR CONTRACTOR

ELVEATOR BEAMS FRAMING PLAN
(FOUNDATION, GRADE LEVEL & LEVELS 2 THRU 6)



SECTION A-A

AVENUE FABRICATING, INC.

Licensed CadVantage User

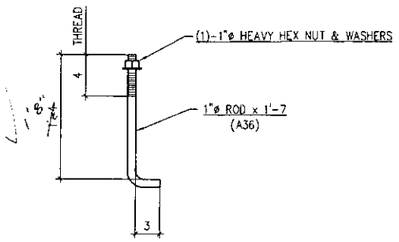
DRAWING ISSUE:

REVISION:
1 REVISED DETAIL

THP LIMITED, INC.
BY:
DATE:
A NO EXCEPTIONS NOTED
B EXCEPTIONS NOTED
C REVISE AND RESUBMIT
D
NOT FOR REVIEW OF DIMENSIONS, QUANTITIES OR FABRICATION PROCESSES
NOTE: CONTRACTOR TO AUTHORIZE ANY EXTRA COST

NOT FOR CONSTRUCTION
OCT 18 2006
FOR APPROVAL ONLY

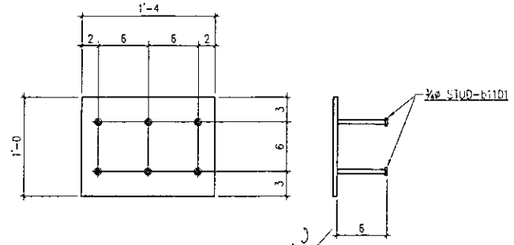
PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REFERENCE DWG: S502A	DESCRIPTION: ERECTION DWG ELEV. SHAFT (FOUNDATION, GRADE LEVEL, LEVELS 2 THRU 6)	DRAWN BY: AW	DATE: 10/06	CHECKED BY: DSS	JOB# 06-36	SHEET: E6



76~ANCHOR BOLTS~1101M1

NO PAINT

GALV

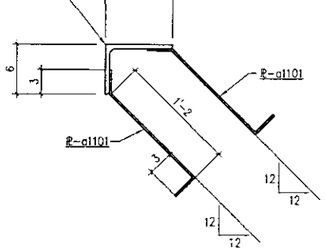


9~PLATES~1101P1

GALV

(3) E3

(6) E5



ONE~ANGLE~1101A1

(E3)

STAIR 4

Licensed CadVantage User

FABRICATING, INC.

DRAWING ISSUE:

REVISION:

BILL OF MATERIAL

NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER :
3. FINISH :

Drawing Number	Revision Number	Ship Mark	Piece Mark	Quantity	Type of Material	Size of Material	Grade	Length	Notes
1101	0	1101M1		76	AB	1¼" x 18 x 4	A36		BENT GALV.
1101	0			76	NUT	1			HVY. HEX GALV.
1101	0			76	FW	1			STD. GALV.
1101	0	1101A1		ONE	L	8 x 6 x 1/2	A36	0'-8	GALV.
1101	0		a1181	2	PL	1/4 x 28	A36	0'-3	BENT GALV.
1101	0	1101P1		9	PL	1/2 x 12	A36	1'-4	GALV.
1181	0		b1101	54	WS	3/4	C1019	8'-6	GALV.

THP LIMITED, INC.
BY: [illegible]
DATE: [illegible]
NOT REVIEWED FOR DIMENSIONS, QUANTITIES, FABRICATION PROCESSES OR SAFETY PRECAUTIONS

A : NO EXCEPTIONS NOTED
B : EXCEPTIONS NOTED
C : REVISE AND RESUBMIT
D : [illegible]

NOT FOR CONSTRUCTION

OCT 18 2006

FOR APPROVAL ONLY

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REFERENCE DWG: A1 & A2	DESCRIPTION: ANCHOR BOLTS & EMBEDS	DRAWN BY: RDJ	DATE: 10/06	CHECKED BY: DSS	JOB# 06-36	SHEET: 1101

Licensed CadVantage User

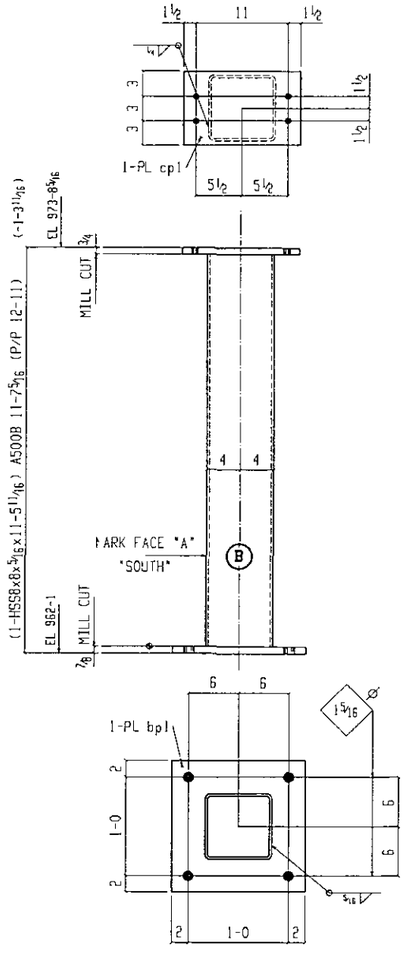
AVENUE FABRICATING, INC.

DRAWING ISSUE:

REVISION:

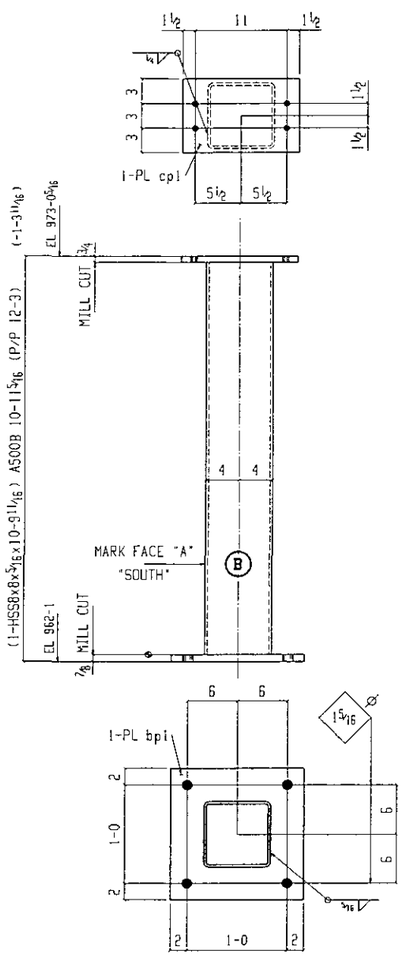
BILL OF MATERIAL

NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : 13/16" Dia. U.N.
3. FINISH :



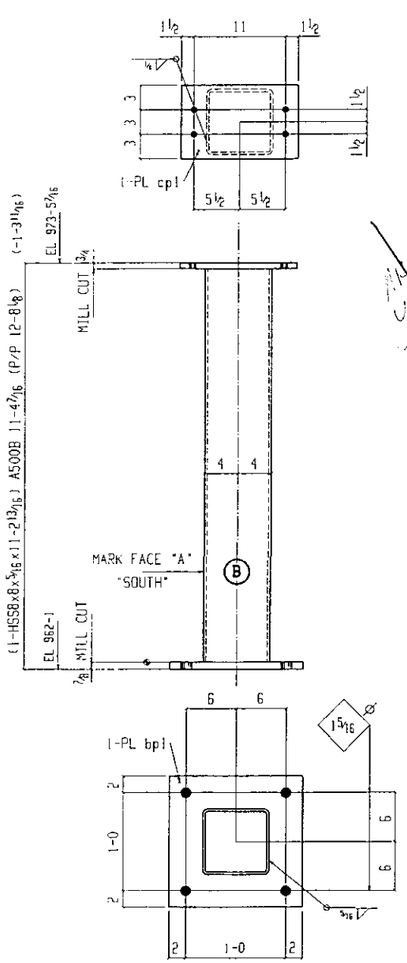
2 COLUMNS 1301C1

AT GRID:
C.9 & D.2
C.5 & D.2



2 COLUMNS 1301C2

AT GRID:
C.9 & 0.8
C.5 & 0.8



2 COLUMNS 1301C3

AT GRID:
C.9 & 0.4
C.5 & 0.4

APPROVED,
PROVIDE FINISH FOR
ENTIRE JOB GALV.
or PAINT UNCLEAR
ON DESIGN AND SPECS

TRADE CONTRACTOR
VERIFY. SEE GENERAL
NOTES

GBBN

OK

BILL OF MATERIAL

Piece Mark	Minor Mark	Quantity Total	Description	Length	Remarks
1301C1		2	COLUMN		GALV.
	1301C1	2	HSS8x8x5/16	11 5 11/16	MCE
	bpl	2	PL 3/4x16	1 4	
	cpl	2	PL 3/4x9	1 2	
1301C2		2	COLUMN		
	1301C2	2	HSS8x8x5/16	18 9 11/16	MCE
	bpl	2	PL 3/4x16	1 4	
	cpl	2	PL 3/4x9	1 2	
1301C3		2	COLUMN		
	1301C3	2	HSS8x8x5/16	11 2 13/16	MCE
	bpl	2	PL 3/4x16	1 4	
	cpl	2	PL 3/4x9	1 2	

THP LIMITED, INC.
BY: (illegible)
DATE: 10-18-06
NOTE: REVIEW NOTES FOR DIMENSIONS, QUANTITIES, ETC.
NOTATIONS DO NOT AUTHORIZE ANY EXTRA COST

A NO EXCEPTIONS NOTED
B EXCEPTIONS NOTED
C REVISE AND RESUBMIT
D

NOT FOR CONSTRUCTION
OCT 18 2006
FOR APPROVAL ONLY

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC	REFERENCE DWG: E3	DESCRIPTION: COLUMNS	DRAWN BY: AH	DATE: 9-06	CHECKED BY: DSS	JOB# 06-36	SHEET: 1301

Licensed CadVantage User

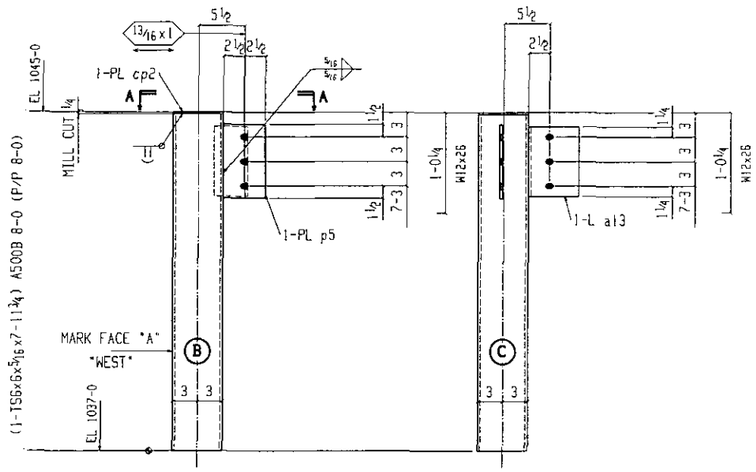
AVENUE FABRICATING, INC.

DRAWING ISSUE

REVISION:

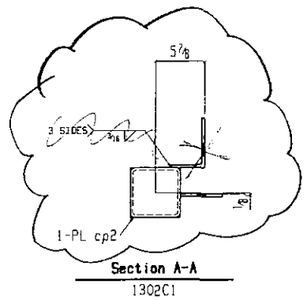
BILL OF MATERIAL

NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : 15/16 Dia. U.N.
3. FINISH :

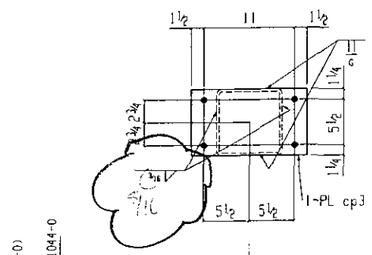


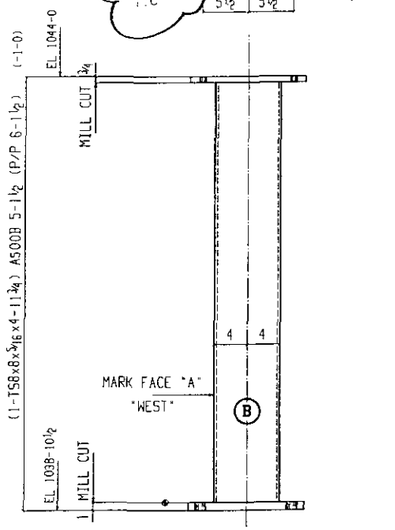
ONE COLUMN 1302C1

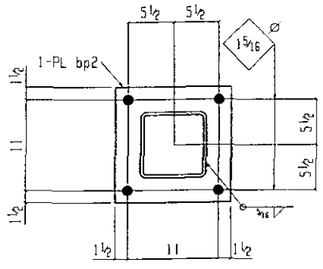
NEAR GRID:
E & 16



Section A-A
1302C1







2 COLUMNS 1302C2

AT GRID:
E.2 & 16.5
E.3 & 16.5

BILL OF MATERIAL

Piece Mark	Minor Mark	Quantity Total	Description	Length		Remarks
1302C1		ONE	COLUMN			PAINT
	1302C1	1	TS6x6x5/16	2	11 3/4	MTE
	a13	1	L6x4x5/16	0	8 1/2	
	p5	1	PL 3/8x5	0	9	
	cp2	1	PL 1/4x6	0	6	
1302C2		2	COLUMN			
	1302C2	2	TS8x8x5/16	4	11 3/4	MTE
	bp2	2	PL1x14	1	2	
	cp3	2	PL 1/4x8	1	2	

INTUMESCENT PAINT - SEE SPEC SECT 09900 - TYPICAL FOR COLUMNS IN STAIRS

THP LIMITED, INC. BY: [illegible] DATE: 1-22-07
A NO EXCEPTIONS NOTED
B EXCEPTIONS NOTED
C REVISE AND RESUBMIT
D
NOT REVIEWED FOR DIMENSIONS OR QUANTITIES
NOTATIONS OR CAUTION OF SAFETY MEASURES

NOT FOR CONSTRUCTION
OCT 18 2006
FOR APPROVAL ONLY

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC	REFERENCE DWG: E3	DESCRIPTION: COLUMNS	DRAWN BY: AW	DATE: 9-06	CHECKED BY: DSS	JOB# 06-36	SHEET: 1302

Licensed CadVantage User

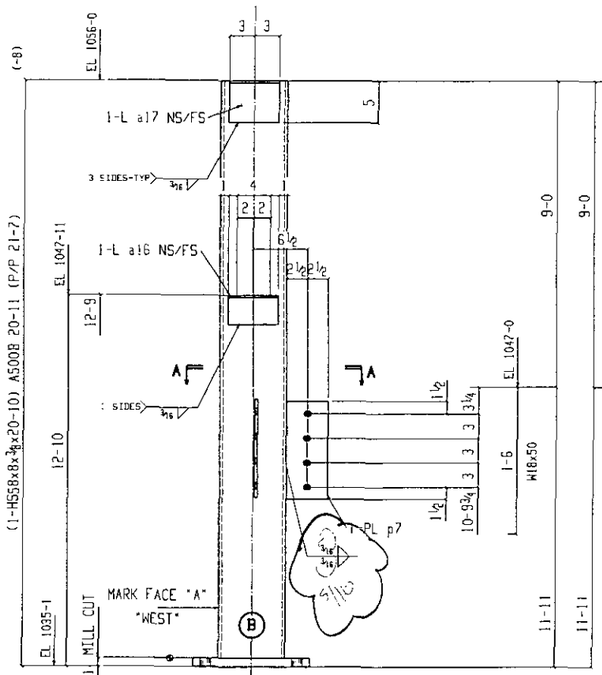
AVENUE FABRICATING, INC.

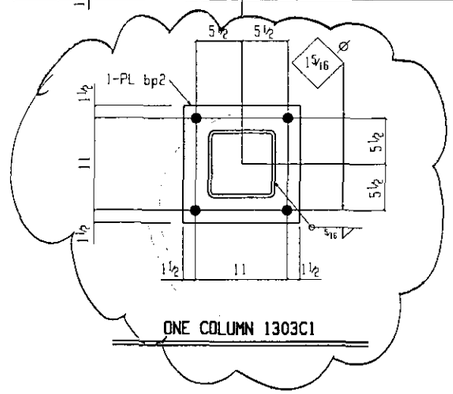
DRAWING ISSUE:

REVISION:

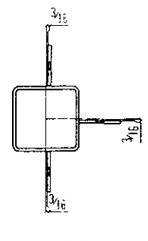
BILL OF MATERIAL

NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : 13/16 Dia U.N.
3. FINISH :

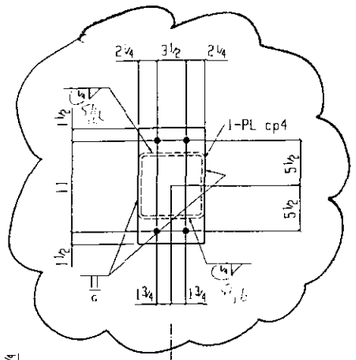


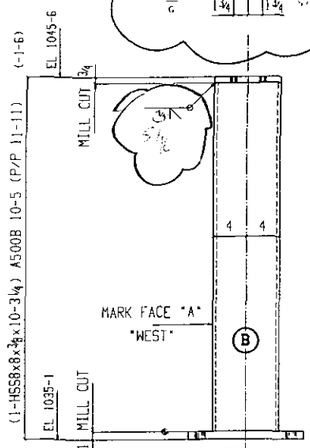


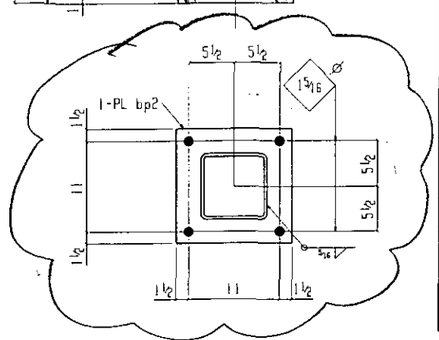
ONE COLUMN 1303C1



Section A-A
1303C1







4 COLUMNS 1303C2

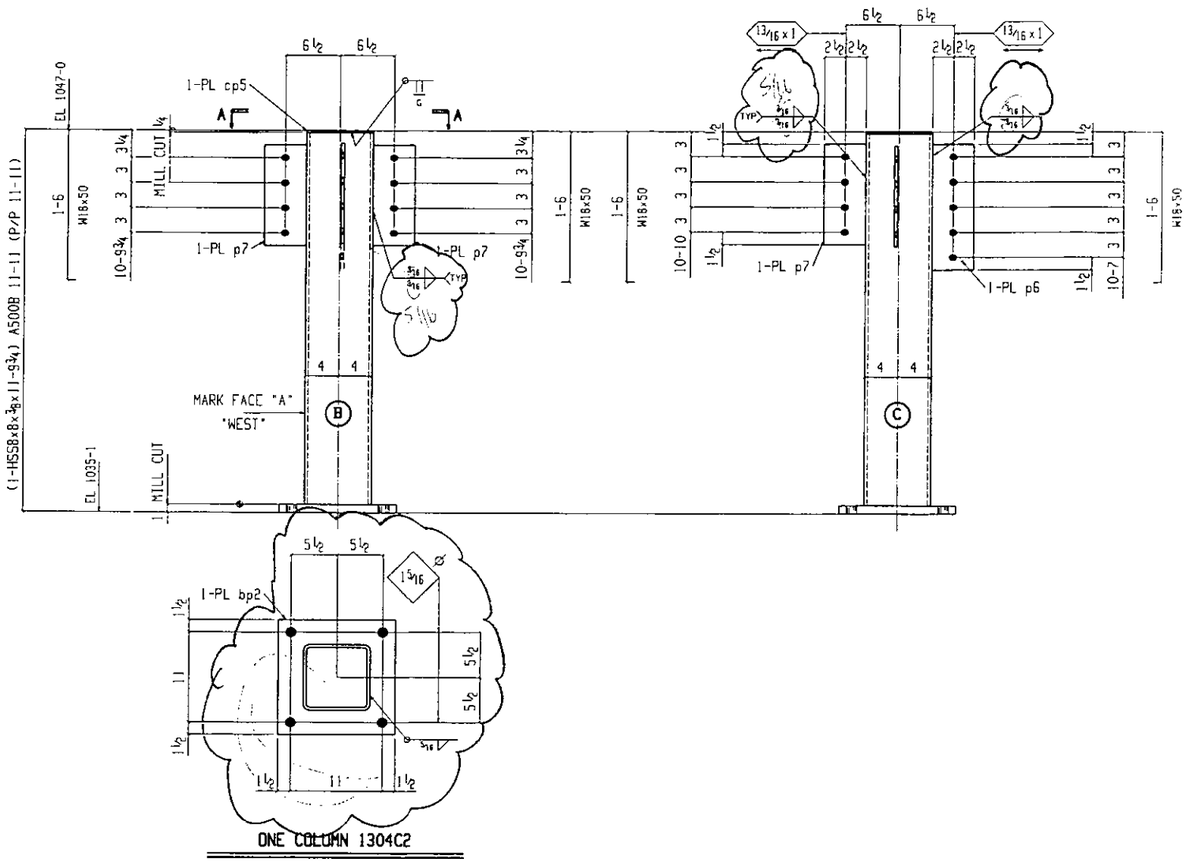
BILL OF MATERIAL

Piece Mark	Minor Mark	Quantity Total	Description	Length		Remarks
1303C1		ONE COLUMN				GALV.
	1303C1	1	HSS8x8x3/16	20	10	MOE
	a17	2	L3x3x1/4	0	5	
	a16	2	L3 1/2x3 1/2x1/4	0	6	
	bp2	1	PL 1x14	1	2	
	p7	3	PL 3/16x5	1	0	
1303C2		4	COLUMN			GALV.
	1303C2	4	HSS8x8x3/16	10	3 1/4	MOE
	bp2	4	PL 1x14	1	2	
	cp4	4	PL 3/16x8	1	2	

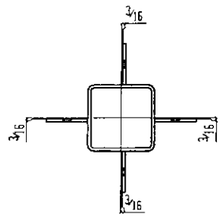
THP LIMITED, INC.
BY: DATE: 1-22-07
A NO EXCEPTIONS NOTED
B EXCEPTIONS NOTED
C REVISE AND RESUBMIT
D
NOT RELEASED FOR DIMENSIONS, QUANTITIES, FABRICATION OR ERECTION METHODS OR TECHNIQUES. THP AUTHORIZES ANY SUCH

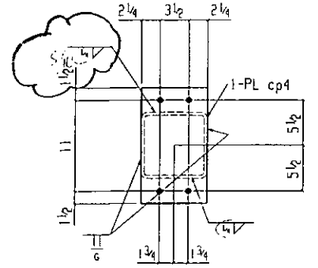
NOT FOR CONSTRUCTION
OCT 18 2006
FOR APPROVAL ONLY

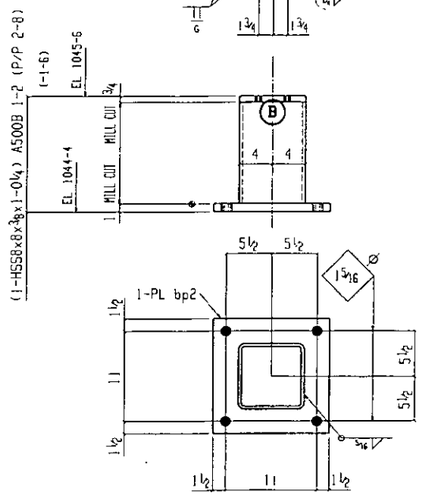
PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC	REFERENCE DWG: L4	DESCRIPTION: COLUMNS	DRAWN BY: AM	DATE: 9-06	CHECKED BY: DSS	JOB# 06-36	SHEET: 1303



ONE COLUMN 1304C2







ONE COLUMN 1304C1

AT GRID:
C & 16

AVENUE FABRICATING, INC.

Licensed CadVantage User

DRAWING ISSUE:

REVISION:

BILL OF MATERIAL

NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : 13/16" Dia. UN
3. FINISH :

BILL OF MATERIAL

Piece Mark	Minor Mark	Quantity Total	Description	Length		Remarks
1304C1		DWG	COLUMN			PAINT
	1304C1	1	HSS8x8x3/8	1	0 3/4	MPE
	bp2	1	PL1x14	1	2	
	cp4	1	PL3/4x8	1	2	
1304C2		DWG	COLUMN			
	1304C2	1	HSS8x8x3/8	11	9 3/4	MPE
	bp2	1	PL1x14	1	2	
	p6	1	PL3/4x5	1	3	
	p7	3	PL3/4x5	1	0	
	cp5	1	PL3/4x8	0	8	

THP LIMITED, INC.
BY:
DATE:
A NO EXCEPTIONS NOTED
B EXCEPTIONS NOTED
C REVISE AND RESUBMIT
D

NOT FOR CONSTRUCTION
OCT 18 2006
FOR APPROVAL ONLY

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC	REFERENCE DWG: E4	DESCRIPTION: COLUMNS	DRAWN BY: AW	DATE: 9-06	CHECKED BY: DSS	JOB# 06-36	SHEET: 1304

Licensed CadVantage User

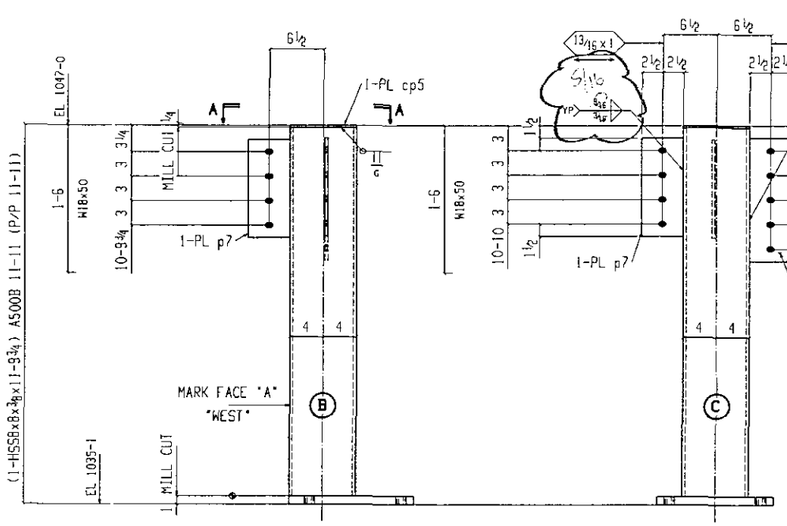
AVENUE FABRICATING, INC.

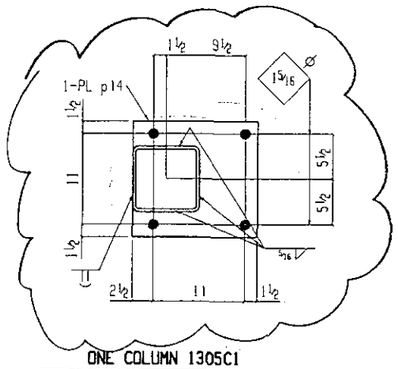
DRAWING ISSUE:

REVISION:

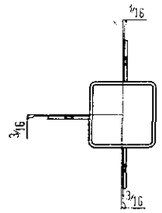
BILL OF MATERIAL

NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : 13/16in Dia. UN
3. FINISH :

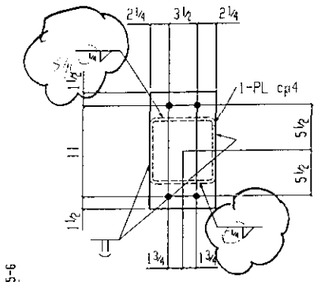


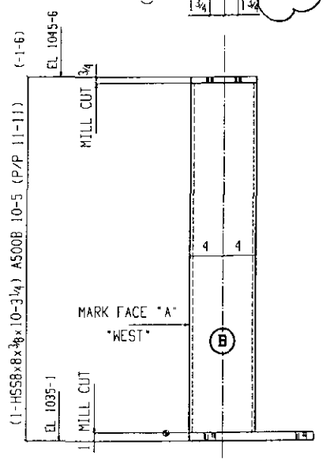


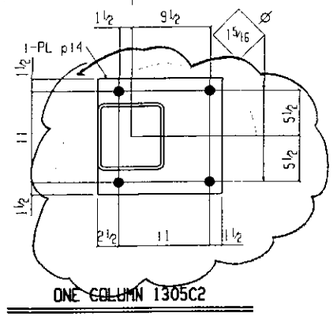
ONE COLUMN 1305C1



Section A-A
1305C1







ONE COLUMN 1305C2

BILL OF MATERIAL

Piece Mark	Minor Mark	Quantity Total	Description	Length	Remarks
1305C1		ONE COLUMN			PAINT
	1305C1	1	HSS8x8x3/8	11 9 3/4	MPE
	p14	1	PL1x14	1 3	
	p6	1	PL3/4x5	1 3	
	p7	2	PL3/4x5	1 8	
	cp5	1	PL1/4x8	8 8	
1305C2		ONE COLUMN			
	1305C2	1	HSS8x8x3/8	18 3 1/4	MPE
	p14	1	PL1x14	1 3	
	cp4	1	PL1/4x8	1 2	

THP LIMITED, INC.
BY:
DATE:
A NO EXCEPTIONS NOTED
B EXCEPTIONS NOTED
C REVISE AND RESUBMIT
D

NOT FOR CONSTRUCTION
OCT 18 2006
FOR APPROVAL ONLY

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC	REFERENCE DWG: E4	DESCRIPTION: COLUMNS	DRAWN BY: AH	DATE: 9-06	CHECKED BY: DSS	JOB# 06-36	SHEET: 1305

Licensed Cadvantage User

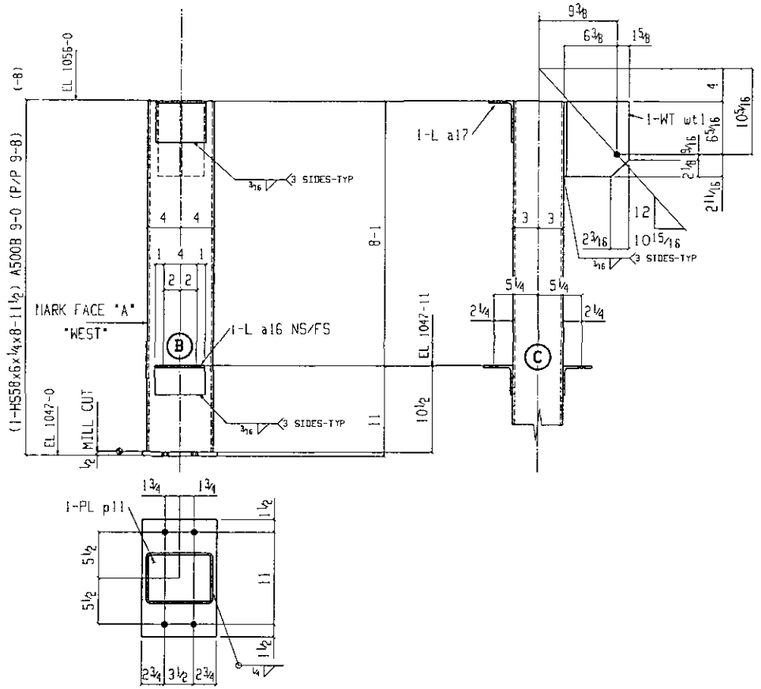
AVENUE FABRICATING, INC.

DRAWING ISSUE:

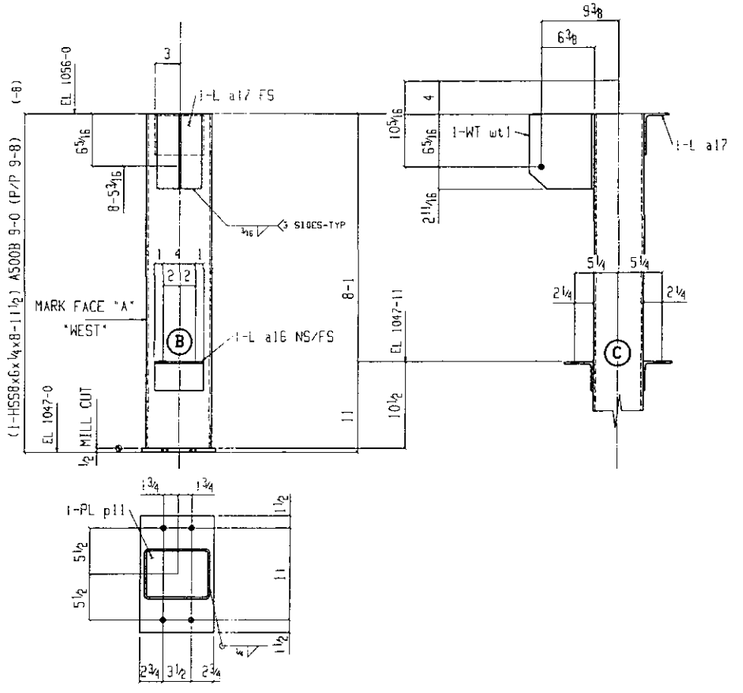
REVISION:

BILL OF MATERIAL

NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : 1/16 in Dia. UN
3. FINISH :



ONE COLUMN 1306C1



ONE COLUMN 1306C2

AT GRID:
C

BILL OF MATERIAL

Piece Mark	Minor Mark	Quantity Total	Description	Length	Remarks
1306C1		ONE COLUMN			GALV.
	1306C1	1	HSS8x6x1/4	8 11 1/2	MIE
	wt1	1	WT8x13	0 9	
	a17	1	L5x3x1/4	0 6	
	a16	2	L3 1/2 x3 1/2 x1/4	8 6	
	p11	1	PL 1/2 x9	1 2	
1306C2		ONE COLUMN			
	1306C2	1	HSS8x6x1/4	8 11 1/2	MIE
	wt1	1	WT8x13	0 9	
	a17	1	L5x3x1/4	0 6	
	a16	2	L3 1/2 x3 1/2 x1/4	8 6	
	p11	1	PL 1/2 x9	1 2	

THP LIMITED, INC.
BY:
DATE:
NOT REVIEWED FOR DIMENSIONS
NOTATIONS DO NOT AUTHORIZE
A NO EXCEPTIONS NOTED
B EXCEPTIONS NOTED
C REVISE AND RESUBMIT
D

NOT FOR CONSTRUCTION
OCT 18 2006
FOR APPROVAL ONLY

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC	REFERENCE DWG: E4	DESCRIPTION: COLUMNS	DRAWN BY: AW	DATE: 9-06	CHECKED BY: DSS	JOB# 06-36	SHEET: 1306

Licensed CadVantage User

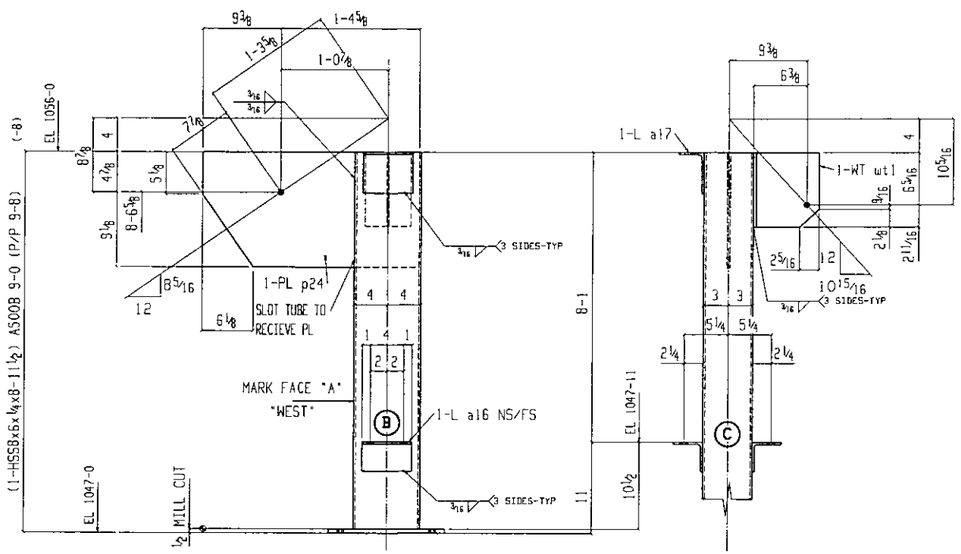
AVENUE FABRICATING, INC.

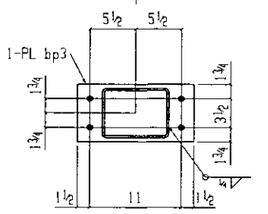
DRAWING ISSUE:

REVISION:

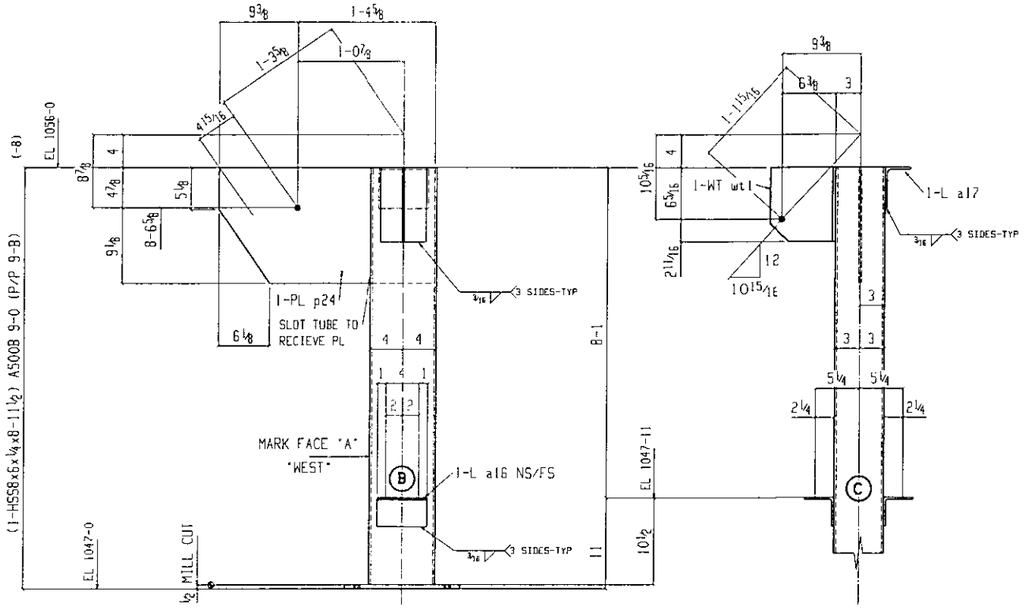
BILL OF MATERIAL

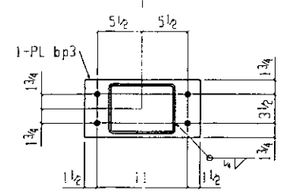
NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : 15/16" Dia. UN
3. FINISH :





ONE COLUMN 1307C1





ONE COLUMN 1307C2

BILL OF MATERIAL

Piece Mark	Minor Mark	Quantity Total	Description	Length	Remarks
1307C1		ONE COLUMN			(3 REQ'D)
	1307C1	1	HSS8x6x1/4	8 11 1/2	MIE
	wt1	1	WT8x13	8 5	
	a17	1	L5x3x1/4	8 6	
	a16	2	L3 1/2x3 1/2x1/4	8 6	
	bp3	1	PL 1/2x7	1 2	
	p24	1	PL 1/4x14	2 2	
1307C2		ONE COLUMN			
	1307C2	1	HSS8x6x1/4	8 11 1/2	MIE
	wt1	1	WT8x13	8 5	
	a17	1	L5x3x1/4	8 6	
	a16	2	L3 1/2x3 1/2x1/4	8 6	
	bp3	1	PL 1/2x7	1 2	
	p24	1	PL 1/4x14	2 2	

THP LIMITED, INC. BY: DATE:
A NO EXCEPTIONS TAKEN
B EXCEPTIONS NOTED
C REVISE AND RESUBMIT
D
NOT REVIEWED FOR DIMENSIONS, QUANTITIES, FABRICATION PROCESSES, OR TO AUTHORIZE ANY EXTRA WORK

NOT FOR CONSTRUCTION
OCT 18 2006
FOR APPROVAL ONLY

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC	REFERENCE DWG: E4	DESCRIPTION: COLUMNS	DRAWN BY: AW	DATE: 9-06	CHECKED BY: DSS	JOB# 06-36	SHEET: 1307

Licensed CadVantage User

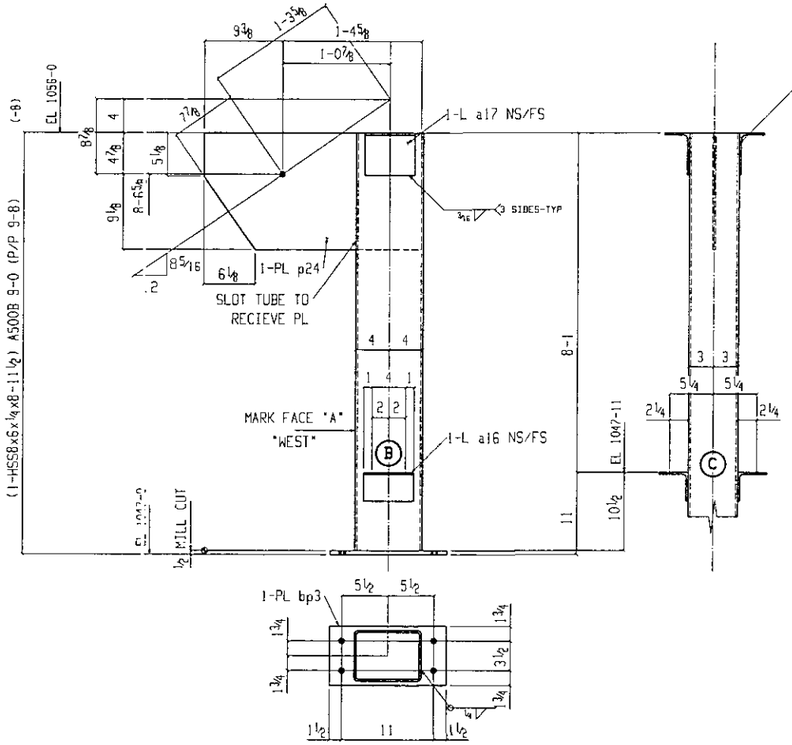
AVENUE FABRICATING, INC.

DRAWING ISSUE:

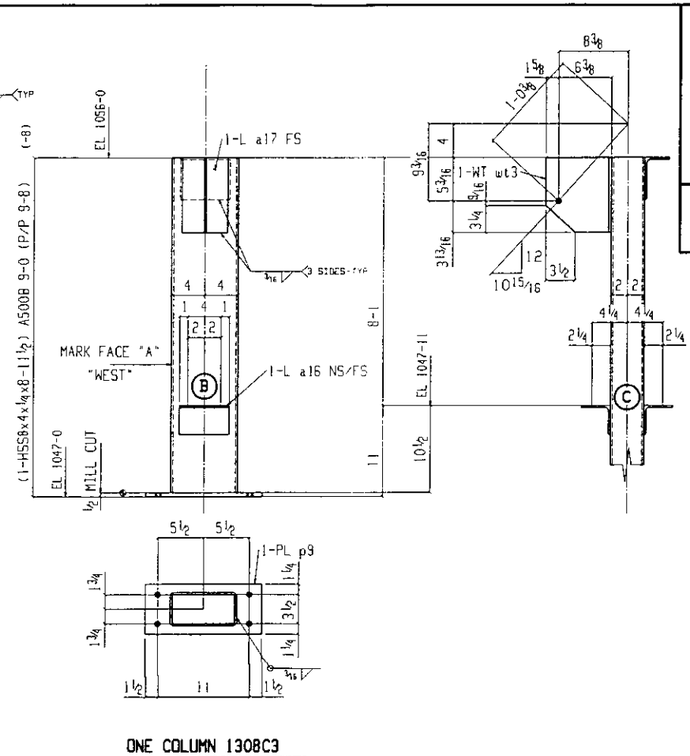
REVISION:

BILL OF MATERIAL

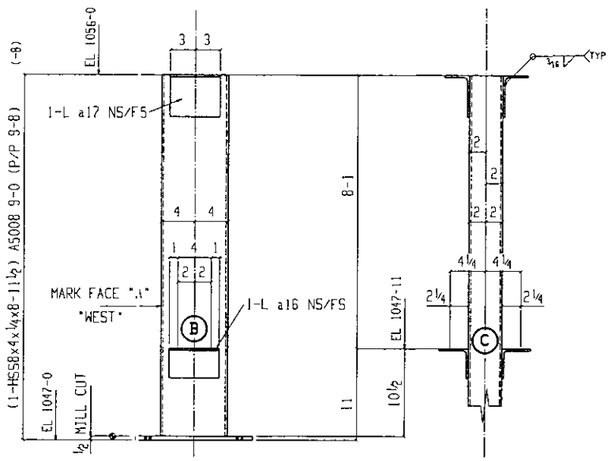
NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : 1/16 in Dia. UN
3. FINISH :



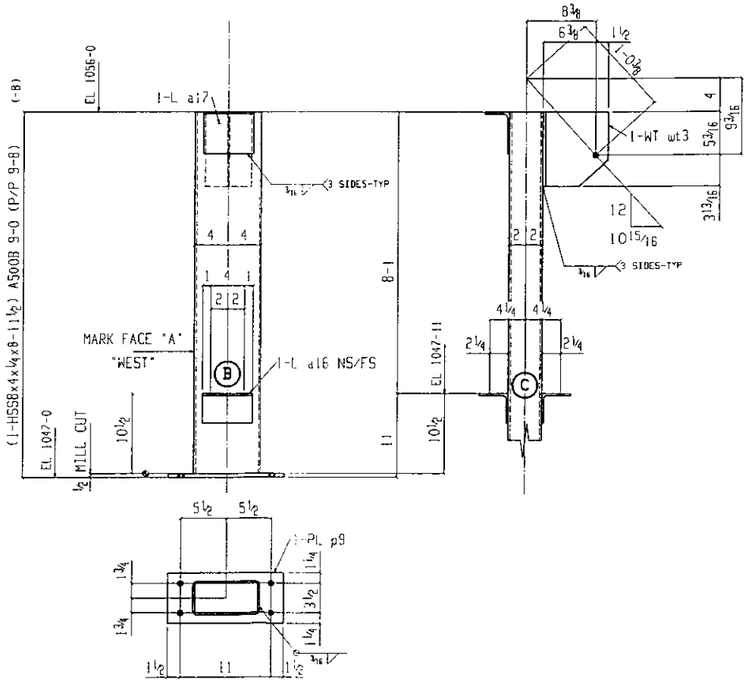
ONE COLUMN 1308C1



ONE COLUMN 1308C3



2 COLUMNS 1308C2



ONE COLUMN 1308C4

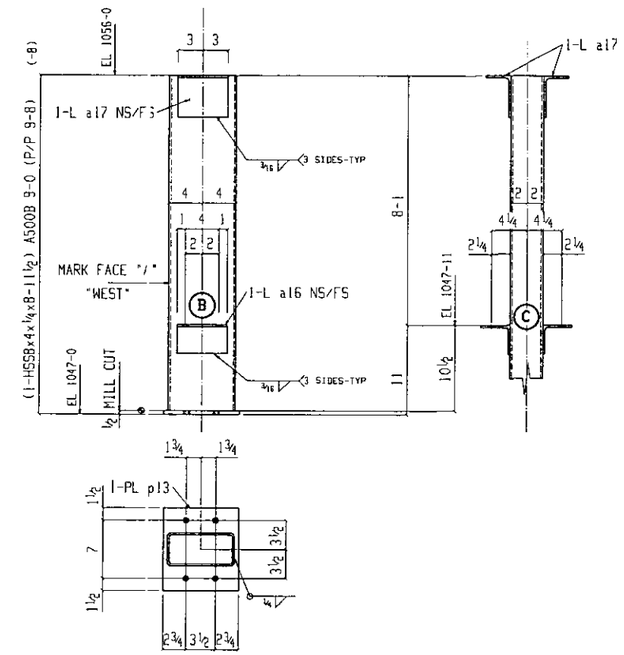
BILL OF MATERIAL

Piece Mark	Minor Mark	Quantity Total	Description	Length		Remarks
1308C1		ONE COLUMN				GALV.
	1308E1	1	HSS8x6x1/4	8	11 1/2	MIE
	a17	2	L5x3x1/4	8	6	
	a16	2	L3 1/2x3 1/2x1/4	8	6	
	bp3	1	PL 1/2x7	1	2	
	p24	1	PL 3/4x14	2	2	
1308C2		2	COLUMN			
	1308C2	2	HSS8x4x1/4	8	11 1/2	MIE
	a17	4	L5x3x1/4	8	6	
	a16	4	L3 1/2x3 1/2x1/4	8	6	
	p9	2	PL 1/2x6	1	2	
1308C3		ONE COLUMN				
	1308C3	1	HSS8x4x1/4	8	11 1/2	MIE
	wt3	1	WT8x13	8	9	
	a17	1	L5x3x1/4	8	6	
	a16	2	L3 1/2x3 1/2x1/4	8	6	
	p9	1	PL 1/2x6	1	2	
1308C4		ONE COLUMN				
	1308C4	1	HSS8x4x1/4	8	11 1/2	MIE
	wt3	1	WT8x13	8	9	
	a17	1	L5x3x1/4	8	6	
	a16	2	L3 1/2x3 1/2x1/4	8	6	
	p9	1	PL 1/2x6	1	2	

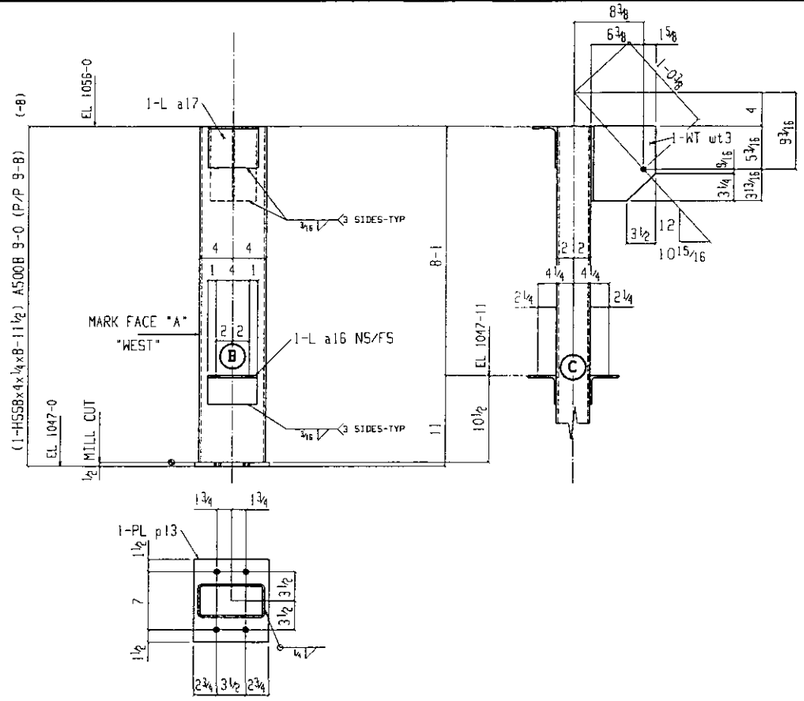
THP LIMITED, INC.
BY:
DATE: 12-22-06
NOT REVIEWED FOR GENERAL NOTATIONS ON SHEET

NOT FOR CONSTRUCTION
OCT 18 2006
FOR APPROVAL ONLY

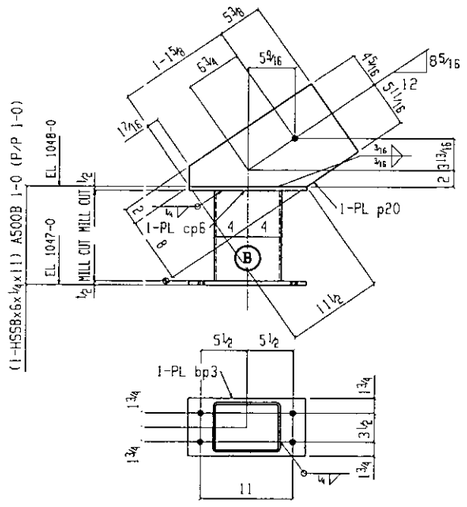
PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC	REFERENCE DWG: E4	DESCRIPTION: COLUMNS	DRAWN BY: AW	DATE: 9-06	CHECKED BY: DSS	JOB# 06-36	SHEET: 1308



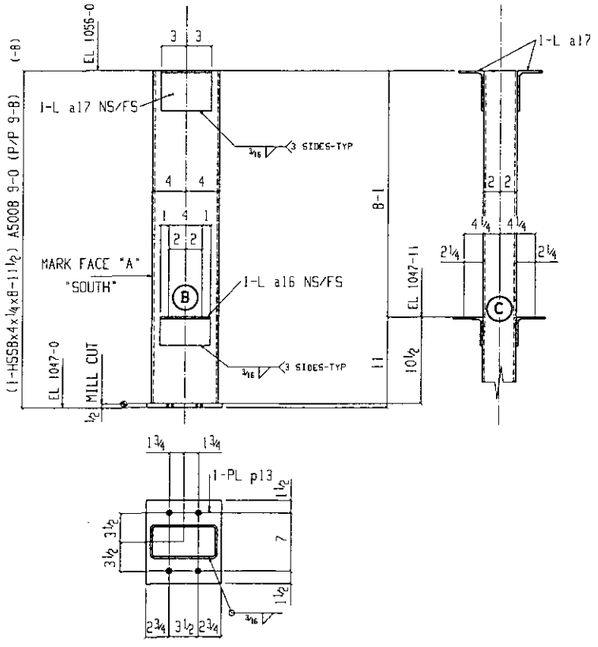
6 COLUMNS 1309C1



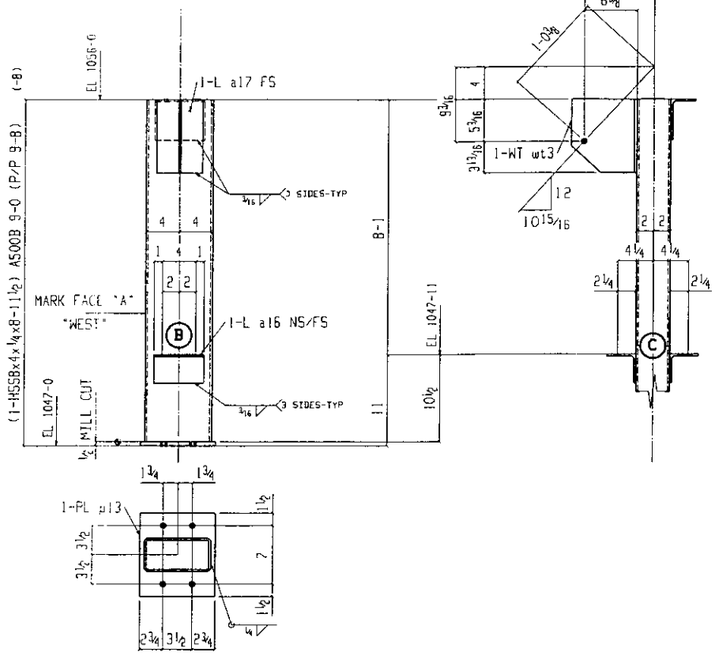
ONE COLUMN 1309C5



3 COLUMNS 1309C2



6 COLUMNS 1309C3



ONE COLUMN 1309C6

Licensed CadVantage User

AVENUE FABRICATING, INC.

DRAWING ISSUE:

REVISION:

BILL OF MATERIAL

NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : 13/16 Dia. UN
3. FINISH :

BILL OF MATERIAL

Piece Mark	Mirror Mark	Quantity Total	Description	Length		Remarks
1309C1		6	COLUMN			GALV.
	1309C1	6	HSSBx4x1/4	8	11 1/2	MIE
	a17	12	L5x3x1/4	8	6	
	a16	12	L3 1/2 x3 1/2 x1/4	8	6	
	p13	6	PL 1/2 x9	8	10	
1309C2		3	COLUMN			
	1309C2	3	HSSBx6x1/4	0	11	M2E
	bp3	3	PL 1/2 x7	1	2	
	cp6	3	PL 1/2 x7	1	2	
	p20	3	PL 1/4 x10	1	7	
1309C3		6	COLUMN			
	1309C3	6	HSSBx4x1/4	8	11 1/2	MIE
	a17	12	L5x3x1/4	0	6	
	a16	12	L3 1/2 x3 1/2 x1/4	0	6	
	p13	6	PL 1/2 x9	0	10	
1309C5		1	ONE COLUMN			
	1309C5	1	HSSBx4x1/4	8	11 1/2	MIE
	wt3	1	WTBx13	0	9	
	a17	1	L5x3x1/4	0	6	
	a16	2	L3 1/2 x3 1/2 x1/4	0	6	
	p13	1	PL 1/2 x9	0	10	
1309C6		1	ONE COLUMN			
	1309C6	1	HSSBx4x1/4	8	11 1/2	MIE
	wt3	1	WTBx13	8	9	
	a17	1	L5x3x1/4	0	6	
	a16	2	L3 1/2 x3 1/2 x1/4	0	6	
	p13	1	PL 1/2 x9	0	10	

THP LIMITED, INC.
BY:
DATE: 1-22-07
NOT REVIEWED FOR DIMENSIONS, QUANTITIES OR FIT OF PIECES
NOTATIONS AS AUTHORIZED BELOW

(A) NO EXCEPTIONS NOTED
(B) EXCEPTIONS NOTED
(C) REVISE AND RESUBMIT
(D)

NOT FOR CONSTRUCTION
OCT 18 2006
FOR APPROVAL ONLY

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC	REFERENCE DWG: E4	DESCRIPTION: COLUMNS	DRAWN BY: AW	DATE: 9-06	CHECKED BY: DSS	JOB# 06-36	SHEET: 1309

Licensed CadVantage User

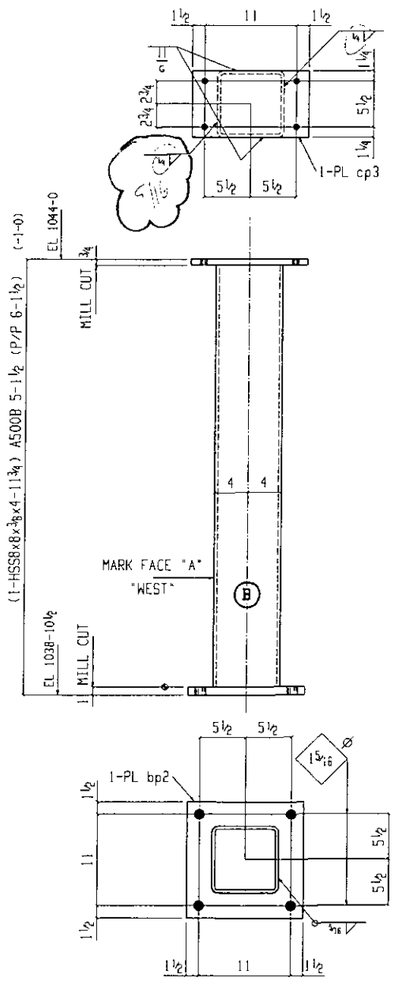
AVENUE FABRICATING, INC.

DRAWING ISSUE:

REVISION:

BILL OF MATERIAL

NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : 13/16 Dia. UN
3. FINISH :



2 COLUMNS 1310C1

BILL OF MATERIAL

Piece Mark	Minor Mark	Quantity Total	Description	Length		Remarks
1310C1		2	COLUMN			PAINT
	1310C1	2	HSS8x8x¾	4	11¾	MPE
	bp2	2	PL1x14	1	2	
	cp3	2	PL¾x8	1	2	

TNP LIMITED, INC.
BY: JMH
DATE: 10-23-06
NOT REVIEWED FOR COMPLIANCE WITH NOTATIONS DON

A NOTE REVISIONS NOTED
B SEE CORRECTIONS NOTED
C REVISE AND RESUBMIT

NOT FOR CONSTRUCTION
OCT 18 2006
FOR APPROVAL ONLY

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC	REFERENCE DWG: E5	DESCRIPTION: COLUMNS	DRAWN BY: AH	DATE: 9-06	CHECKED BY: OSS	JOB# 06-36	SHEET: 1310

Licensed CadVantage User

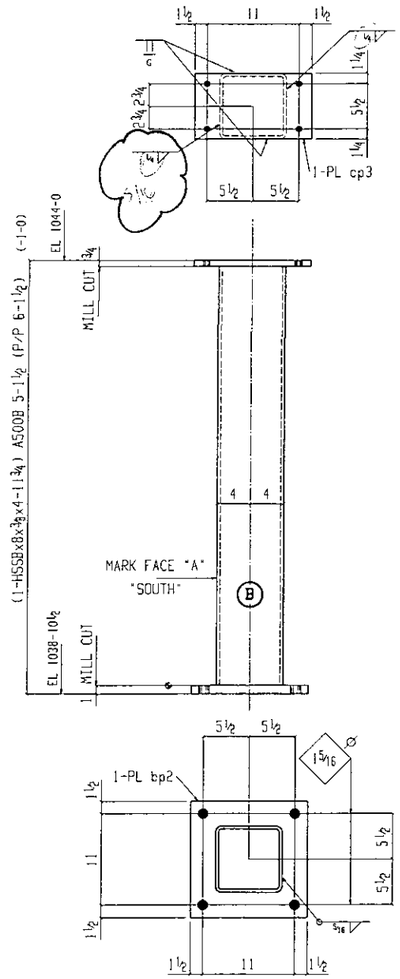
AVENUE FABRICATING, INC.

DRAWING ISSUE:

REVISION:

BILL OF MATERIAL

NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : 15/16ø Dia. UN
3. FINISH :



2 COLUMNS 1311C1

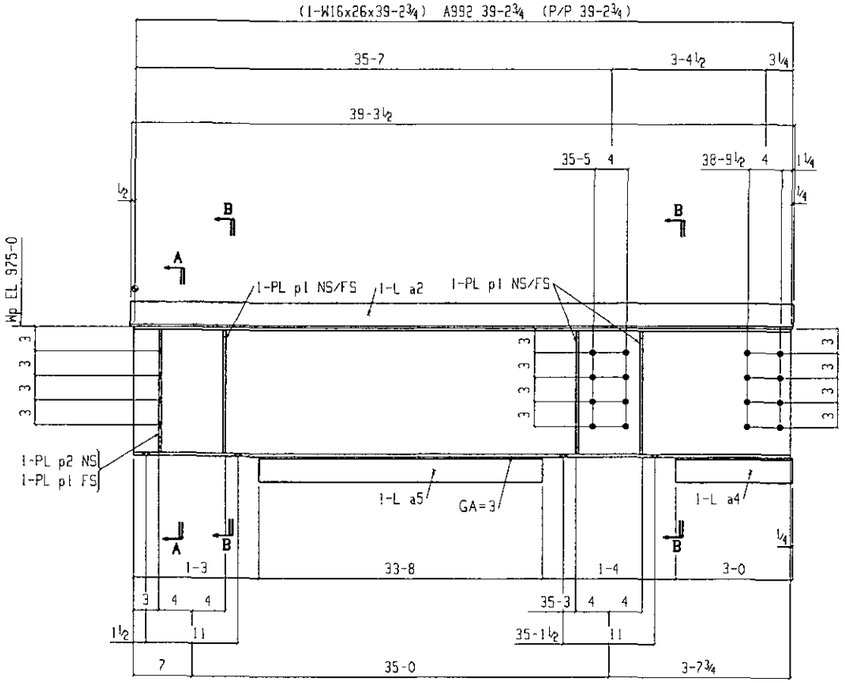
BILL OF MATERIAL

Piece Mark	Minor Mark	Quantity Total	Description	Length		Remarks
1311C1		2	COLUMN			PAINT
	1311C1	2	HSSBx8x¾	4	11¾	MPE
	bp2	2	PL1x14	1	2	
	cp3	2	PL½x8	1	2	

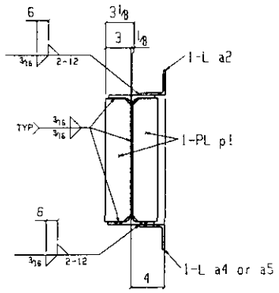
THP LIMITED, INC. A. NO EXCEPTIONS TAKEN
BY: [illegible] B. EXCEPTIONS NOTED
DATE: 10-23-06 C. REVISE AND RESUBMIT
NOT REVIEWED BY COMPANY D.
NOTATIONS ON [illegible]

NOT FOR CONSTRUCTION
OCT 18 2006
FOR APPROVAL ONLY

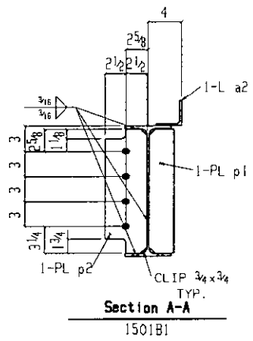
PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC	REFERENCE DWG: E5	DESCRIPTION: COLUMNS	DRAWN BY: AW	DATE: 9-06	CHECKED BY: DSS	JOB# 06-36	SHEET: 1311



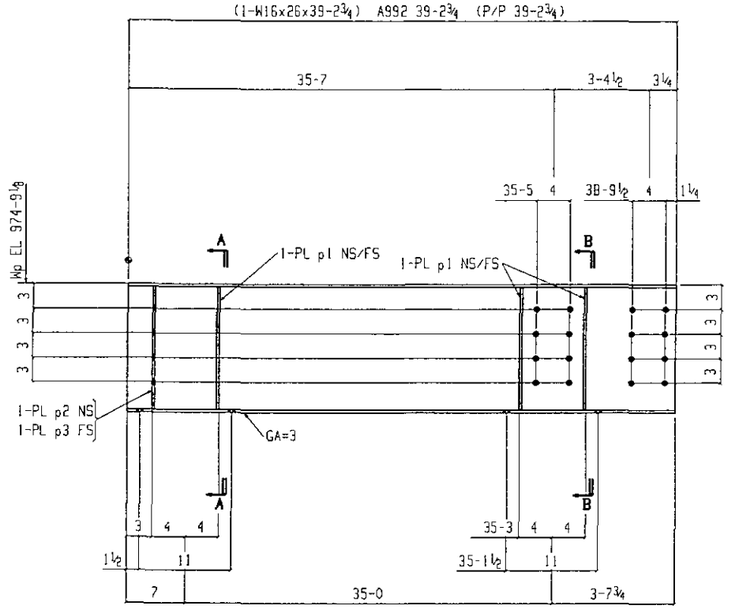
ONE BEAM 1501B1



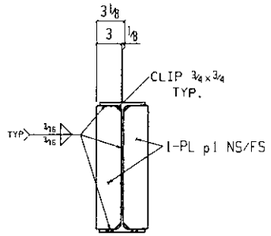
Section B-B
1501B1



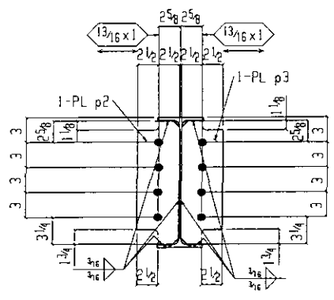
Section A-A
1501B1



ONE BEAM 1501B2



Section B-B
1501B2



Section A-A
1501B2

AVENUE FABRICATING, INC.

Licensed CadVantage User

DRAWING ISSUE:

REVISION:

BILL OF MATERIAL

NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : 15/16Dia. U.N.
3. FINISH :

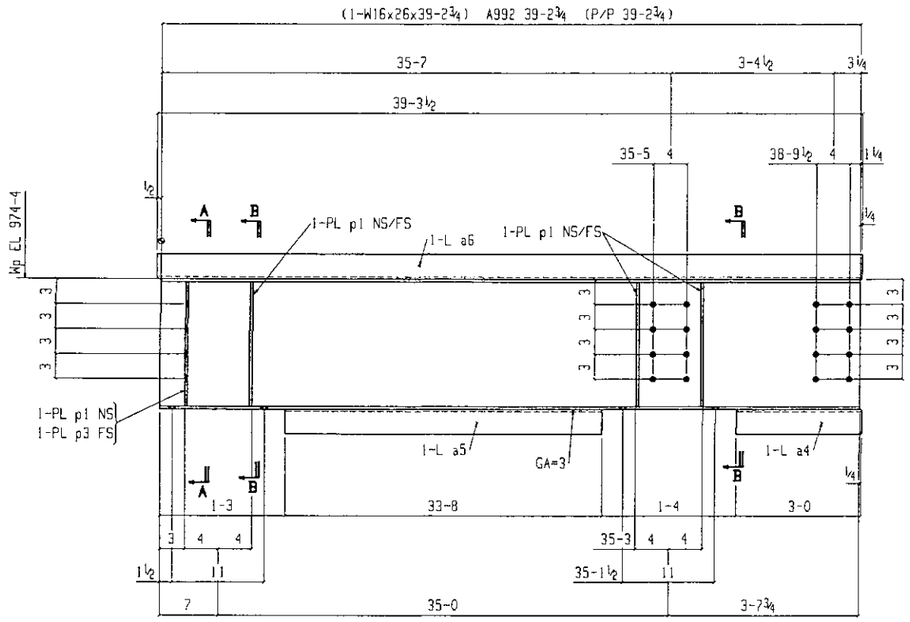
BILL OF MATERIAL

Piece Mark	Minor Mark	Quantity Total	Description	Length		Remarks
1501B1		ONE	BEAM			GALV.
	1501B1	1	W16x26	39	2¾	
	a2	1	L3x3x¼	39	3½	
	a5	1	L3x3x¼	33	8	
	a4	1	L3x3x¼	3	8	
	p2	1	PL5/16x5	1	2⅛	
	p1	7	PL5/16x3	1	2⅛	
			FIELD BOLTS			
		8	¾ Dia A325X	8	2½	INC WASH
1501B2		ONE	BEAM			
	1501B2	1	W16x26	39	2¾	
	p2	1	PL5/16x5	1	2⅛	
	p3	1	PL5/16x5	1	2⅛	
	p1	8	PL5/16x3	1	2⅛	
			FIELD BOLTS			
		8	¾ Dia A325X	0	2½	INC WASH

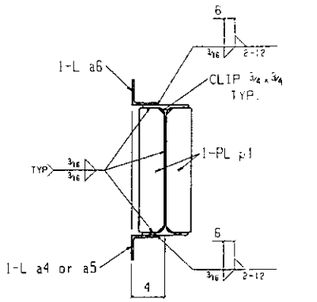
THP LIMITED, INC.
BY: [illegible]
DATE: 1-22-07
NOT REVIEWED FOR DIMENSIONS NOTES, QUANTITIES AND ARRANGEMENT
NOTATIONS ETC.

NOT FOR CONSTRUCTION
OCT 18 2006
FOR APPROVAL ONLY

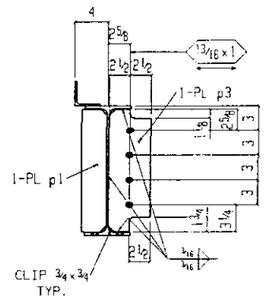
PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC	REFERENCE DWG: E3	DESCRIPTION: BEAMS	DRAWN BY: AW	DATE: 9-06	CHECKED BY: DSS	JOB# 06-36	SHEET: 1501



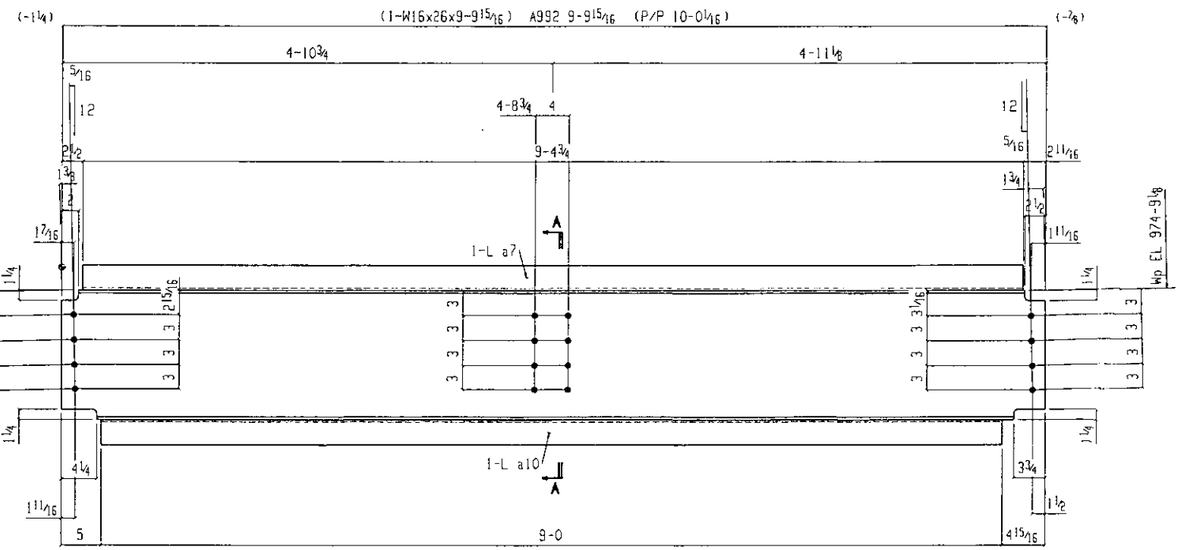
ONE BEAM 1502B1



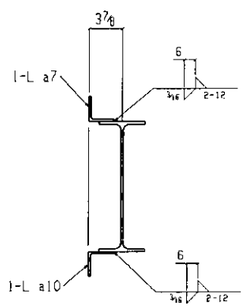
Section B-B
1502B1



Section A-A
1502B1



ONE BEAM 1502B2



Section A-A
1502B2

Licensed CadVantage User

AVENUE FABRICATING, INC.

DRAWING ISSUE:

REVISION:

BILL OF MATERIAL

NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : 13/16 Dia. U.N.
3. FINISH :

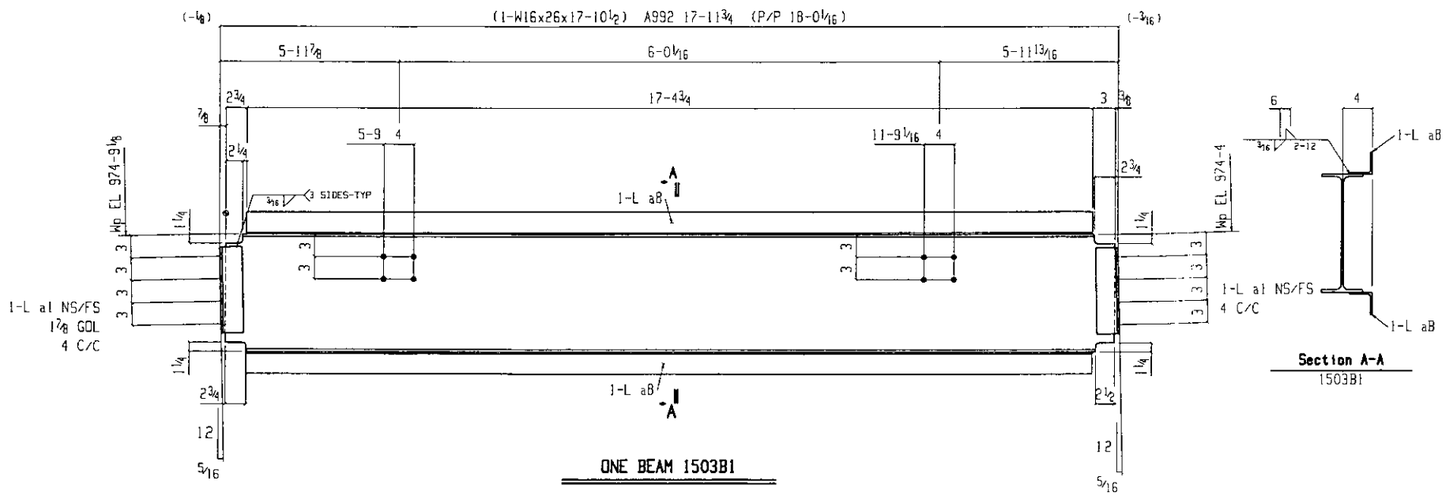
BILL OF MATERIAL

Piece Mark	Minor Mark	Quantity Total	Description	Length		Remarks
1502B1		ONE BEAM				
	1502B1	1	W16x26	39	2¾	GALV
	a6	1	L3x3x¼	39	3½	
	a5	1	L3x3x¼	33	7	
	a4	1	L3x3x¼	3	0	
	p3	1	PL5/16x5	1	2⅝	
	p1	7	PL5/16x3	1	2⅝	
			FIELD BOLTS			
		8	¾ Dia A325X	0	2½	HHD WASH
1502B2		ONE BEAM				
	1502B2	1	W16x26	9	9 15/16	
	a7	1	L3x3x¼	9	4¾	
	a10	1	L3x3x¼	9	0	
			FIELD BOLTS			
		8	¾ Dia A325X	8	1¾	HHD WASH

THP LIMITED, INC. BY: DATE: NOT REVIEWED NOTATIONS:
A NO EXCEPTIONS NOTED
B EXCEPTIONS NOTED
C REVISE AND RESUBMIT

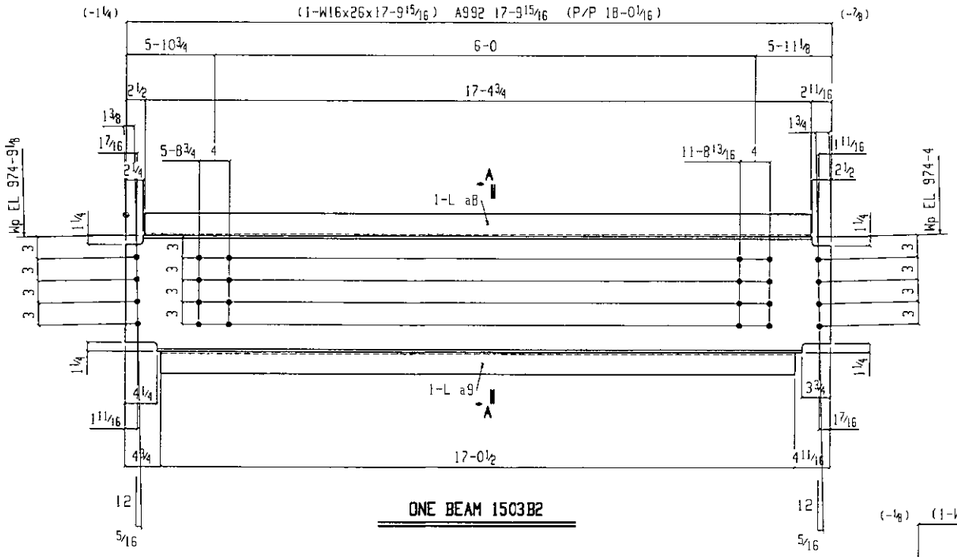
NOT FOR CONSTRUCTION
OCT 16 2008
FOR APPROVAL ONLY

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC	REFERENCE DWG: E3	DESCRIPTION: BEAMS	DRAWN BY: AW	DATE: 9-06	CHECKED BY: DSS	JOB# 06-36	SHEET: 1502

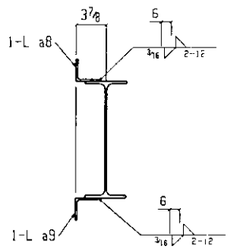


ONE BEAM 1503B1

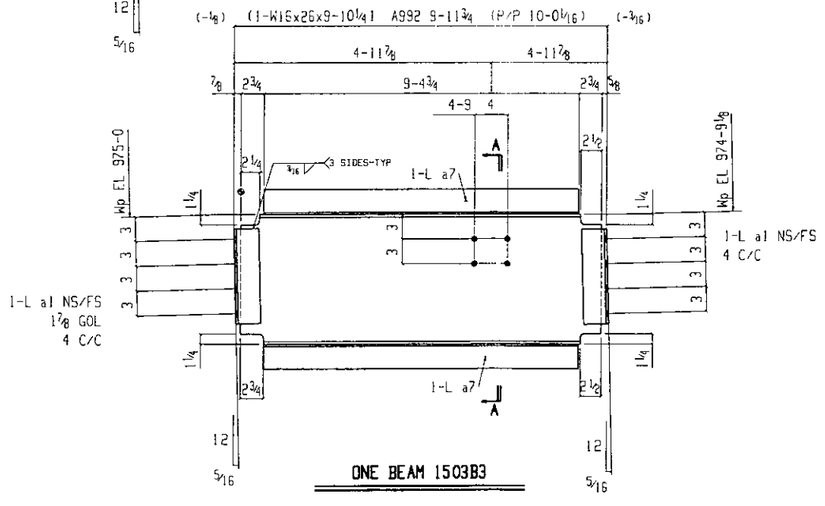
Section A-A
1503B1



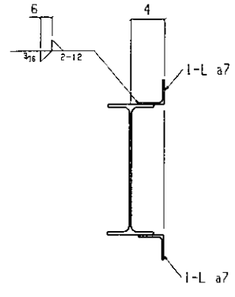
ONE BEAM 1503B2



Section A-A
1503B2



ONE BEAM 1503B3



Section A-A
150383

Licensed CadVantage User

AVENUE FABRICATING, INC.

DRAWING ISSUE:

REVISION:

BILL OF MATERIAL

NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : 1 3/16 Dia. U.N.
3. FINISH :

BILL OF MATERIAL

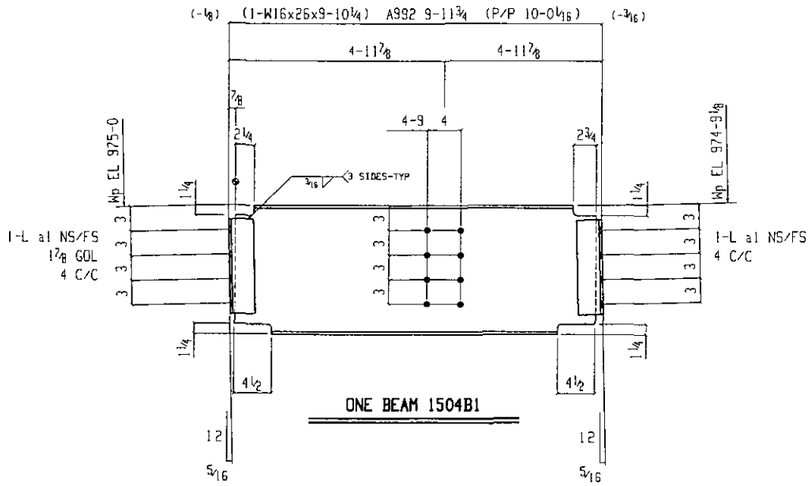
Piece Mark	Minor Mark	Quantity Total		Description	Length		Remarks
1503B1		ONE	BEAM				GALV.
	1503B1	1		W16x26	17	18½	
	a1	4		L3x3x5/16	8	11⅛	
	a8	2		L3x3x¼	17	4⅜	
				FIELD BOLTS			
		8		¾ Dia A325X	8	2⅜	HHD WASH
		8		¾ Dia A325X	8	1⅜	HHD WASH
1503B2		ONE	BEAM				
	1503B2	1		W16x26	17	9 15/16	
	a8	1		L3x3x¼	17	4⅜	
	a3	1		L3x3x¼	17	8½	
				FIELD BOLTS			
		8		¾ Dia A325X	8	1⅜	HHD WASH
1503B3		ONE	BEAM				
	1503B3	1		W16x26	9	10⅜	
	a1	4		L3x3x5/16	8	11⅛	
	a7	2		L3x3x¼	9	4⅜	
				FIELD BOLTS			
		8		¾ Dia A325X	0	1⅜	HHD WASH

THP LIMITED, INC.
BY: [illegible]
DATE: 10-22-07
NOT REVIEWED FOR [illegible] NOTATIONS EACH.

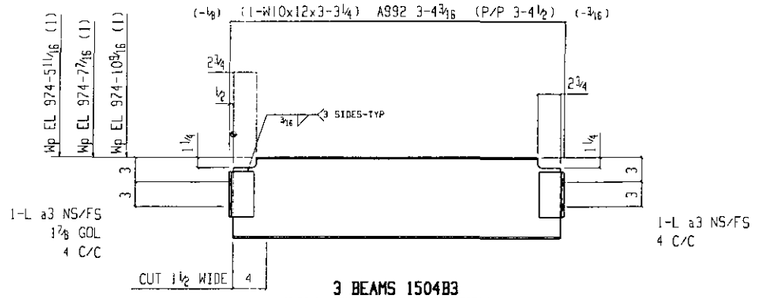
A. NOT EXCEPTIONS NOTED
B. [illegible] NOTATIONS NOTED
C. REVISE AND RESUBMIT
D. [illegible]

NOT FOR CONSTRUCTION
OCT 18 2006
FOR APPROVAL ONLY

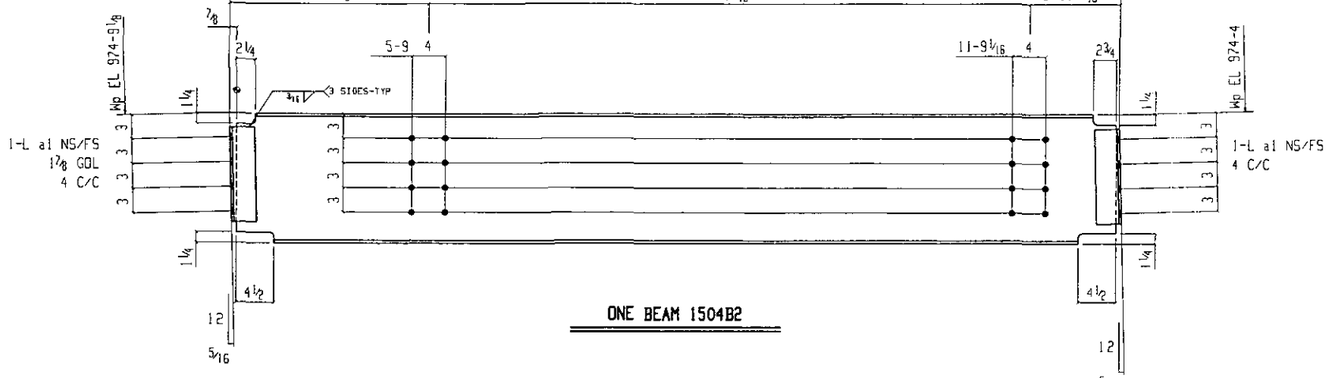
PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC	REFERENCE DWG: E3	DESCRIPTION: BEAMS	DRAWN BY: AN	DATE: 9-06	CHECKED BY: DSS	JOB# 06-36	SHEET: 1503



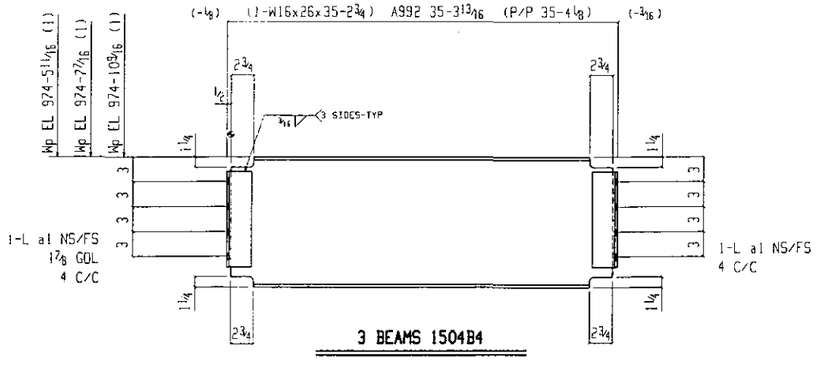
ONE BEAM 1504B1



3 BEAMS 1504B3



ONE BEAM 1504B2



3 BEAMS 1504B4

Licensed CadVantage User

AVENUE FABRICATING, INC.

DRAWING ISSUE:

REVISION:

BILL OF MATERIAL

NOTES: 1. WELD ELECTRODES : E70xx
2. HOLE DIAMETER : 15/16Dia. U.N.
3. FINISH :

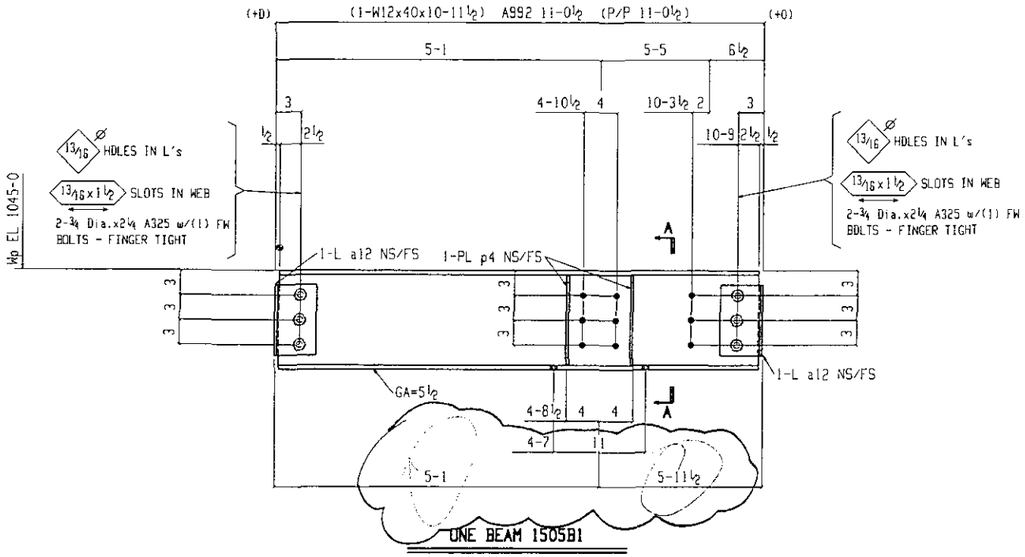
BILL OF MATERIAL

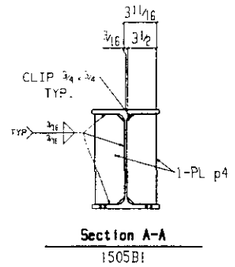
Piece Mark	Minor Mark	Quantity Total	Description	Length		Remarks
1504B1		ONE	BEAM			GALV.
	1504B1	1	W16x26	9	18 3/4	
	a1	4	L3x3x5/16	8	11 1/2	
			FIELD BOLTS			
		8	3/4 Dia A325X	0	3 1/4	1HD WASH
1504B2		ONE	BEAM			
	1504B2	1	W16x26	17	10 1/2	
	a1	4	L3x3x5/16	0	11 1/2	
			FIELD BOLTS			
		8	3/4 Dia A325X	0	2 3/4	1HD WASH
		0	3/4 Dia A325X	8	3 1/4	1HD WASH
1504B3		3	BEAM			
	1504B3	3	W10x12	3	3 3/4	
	a3	12	L3x3x5/16	8	5 1/8	
			FIELD BOLTS			
		12	3/4 Dia A325X	8	2 3/4	1HD WASH
		12	3/4 Dia A325X	0	3 1/4	1HD WASH
1504B4		3	BEAM			
	1504B4	3	W16x26	35	2 3/4	
	a1	12	L3x3x5/16	0	11 1/2	
			FIELD BOLTS			
		36	3/4 Dia A325X	0	3 1/4	1HD WASH

THP LIMITED, INC. BY: [illegible] DATE: 11-22-06 NOT REVIEWED FOR DETAILS OR NOTATIONS SHOWN

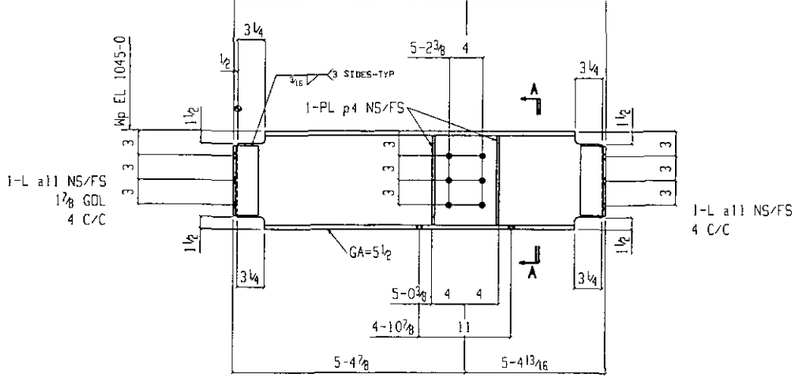
NOT FOR CONSTRUCTION
OCT 18 2006
FOR APPROVAL ONLY

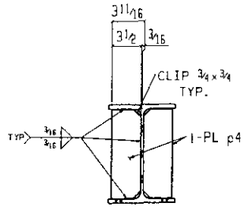
PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC	REFERENCE DWG: E3	DESCRIPTION: BEAMS	DRAWN BY: AH	DATE: 9-06	CHECKED BY: DSS	JOB# 06-36	SHEET: 1504





Section A-A
1505B1





Section A-A
1505B2

AVENUE FABRICATING, INC.

Licensed CadVantage User

DRAWING ISSUE:

REVISION:

BILL OF MATERIAL

NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : 1/16" Dia. U.N.
3. FINISH :

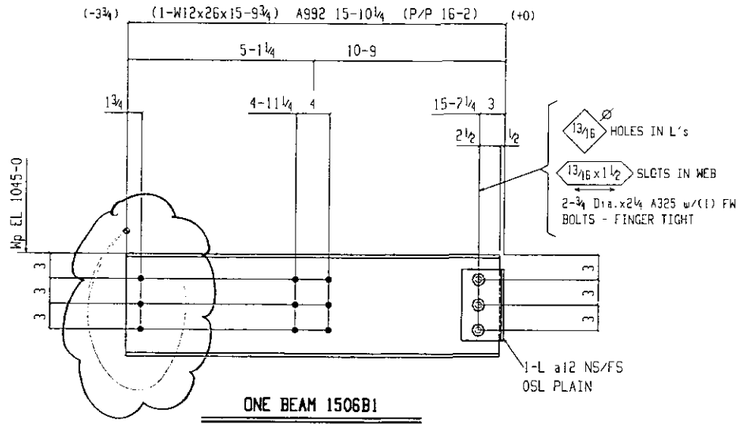
BILL OF MATERIAL

Piece Mark	Minor Mark	Quantity Total	Description	Length		Remarks
1505B1		ONE	BEAM			NO PAINT
	1505B1	1	W12x48	10	11½	SOLVENIT WIPE
	a12	4	L5x3x5/16	0	8½	
	p4	4	PL5/16x3½	8	18 11/16	
		6	¾ Dia A325X	8	2¼	HD WASH
			FIELD BOLTS			
		4	¾ Dia A325X	0	2½	HD WASH
1505B2		ONE	BEAM			
	1505B2	1	W12x40	10	8¾	
	a11	4	L3x3x5/16	8	8½	
	p4	4	PL5/16x3½	8	18 11/16	
			FIELD BOLTS			
		4	¾ Dia A325X	8	2¼	HD WASH
		12	¾ Dia A325X	0	1¾	HD WASH

THP LIMITED, INC.
BY:
DATE:
NOT REVIEWED FOR CONFORMANCE WITH CONTRACT DOCUMENTS NOTED

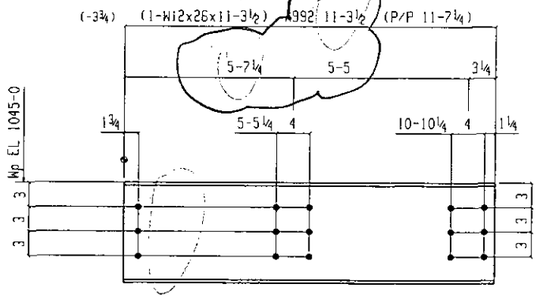
NOT FOR CONSTRUCTION
OCT 18 2006
FOR APPROVAL ONLY

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC	REFERENCE DWG: E3	DESCRIPTION: BEAMS	DRAWN BY: AW	DATE: 9-06	CHECKED BY: DSS	JOB# 06-36	SHEET: 1505

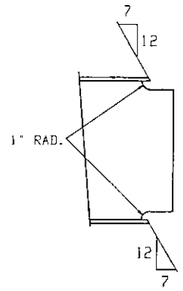


ONE BEAM 1506B1

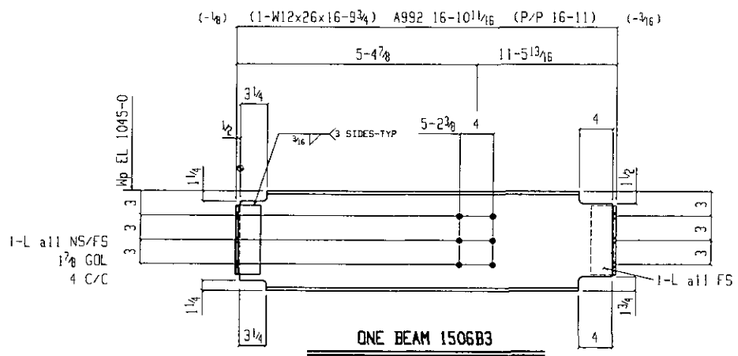
SHOP BOLTS:
3-¾x2¼ A325X w/1HD WASH



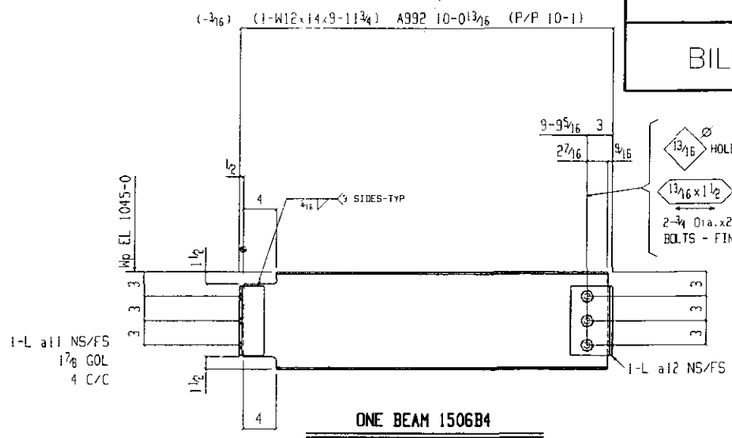
ONE BEAM 1506B2



DETAIL "C"

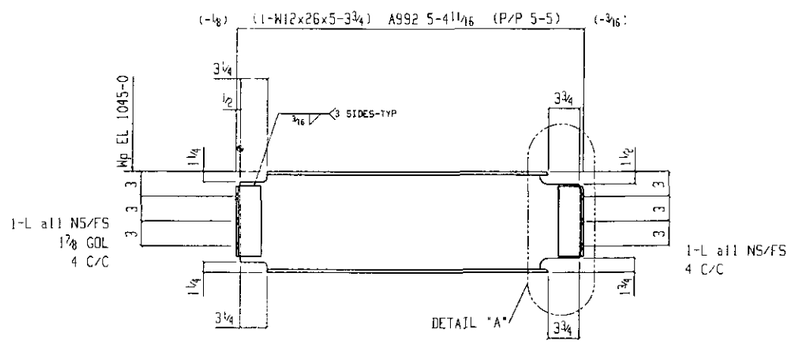


ONE BEAM 1506B3

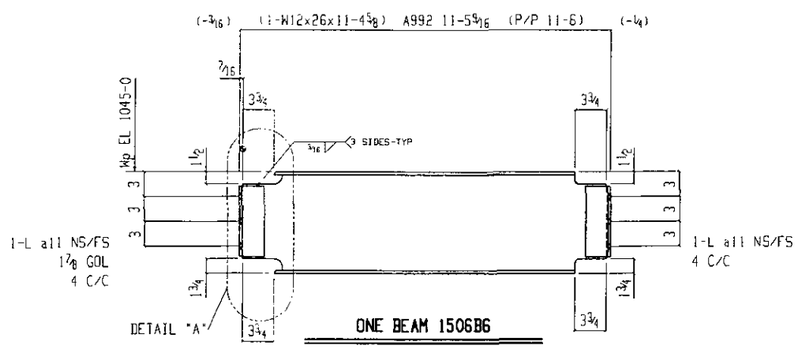


ONE BEAM 1506B4

SHOP BOLTS:
3-¾x2¼ A325X w/1HD WASH



ONE BEAM 1506B5



ONE BEAM 1506B6

Licensed CadVantage User

AVENUE FABRICATING, INC.

DRAWING ISSUE:

REVISION:

BILL OF MATERIAL

NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : 13/16 Dia. U.N.
3. FINISH :

BILL OF MATERIAL

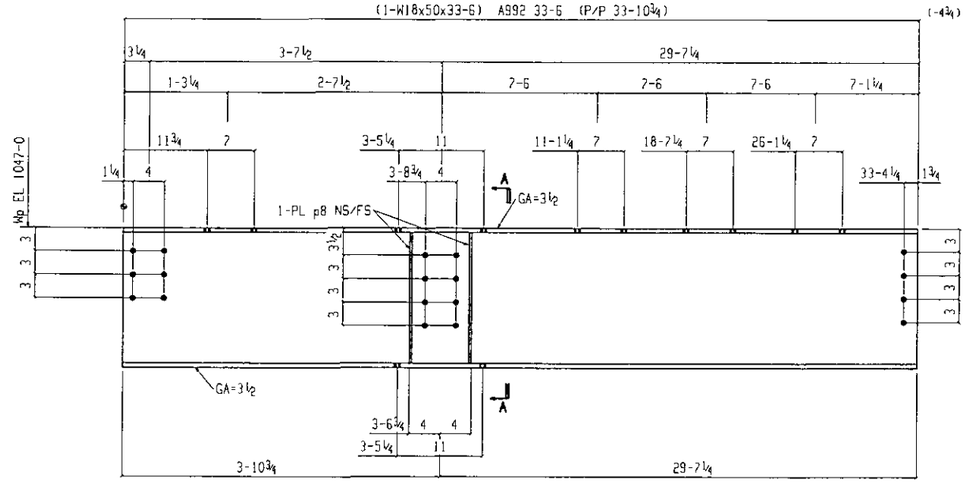
SEE SPEC SECT 05120 - 2.3 FOR SURFACE PREPERATION TYP

Piece Mark	Minor Mark	Quantity Total	Description	Length		Remarks
1506B1		ONE BEAM				NO PAINT A SOLVENT WIPE
	1506B1	1	W12x26	15	9¾	
	a12	2	L5x3½x5/16	0	8½	
		3	¾ Dia A325X	0	2¼	1HD WASH
			FIELD BOLTS			
		3	¾ Dia A325X	0	1¾	1HD WASH
1506B2		ONE BEAM				
	1506B2	1	W12x26	11	3½	
			FIELD BOLTS			
		3	¾ Dia A325X	0	1¾	1HD WASH
1506B3		ONE BEAM				
	1506B3	1	W12x26	16	9¾	
	a11	3	L3x3x5/16	8	8½	
			FIELD BOLTS			
		9	¾ Dia A325X	8	1¾	1HD WASH
1506B4		ONE BEAM				
	1506B4	1	W12x14	9	11¼	
	a12	2	L5x3x5/16	8	8½	
	a11	2	L4.3x3x5/16	8	8½	
		3	¾ Dia A325X	8	2¼	1HD WASH
			FIELD BOLTS			
		6	¾ Dia A325X	8	2¼	1HD WASH
1506B5		ONE BEAM				
	1506B5	1	W12x26	5	3¼	
	a11	4	L3x3x5/16	8	8½	
			FIELD BOLTS			
		6	¾ Dia A325X	8	1¾	1HD WASH
1506B6		ONE BEAM				
	1506B6	1	W12x26	11	6¾	
	a11	4	L3x3x5/16	8	8½	
			FIELD BOLTS			
		6	¾ Dia A325X	8	2¼	1HD WASH

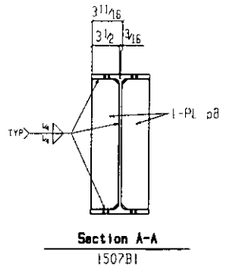
THP LIMITED, INC.
BY: [illegible]
DATE: [illegible]
NOT REVIEWED FOR CONFORMANCE TO CONTRACT DOCUMENTS

NOT FOR CONSTRUCTION
OCT 18 2006
FOR APPROVAL ONLY

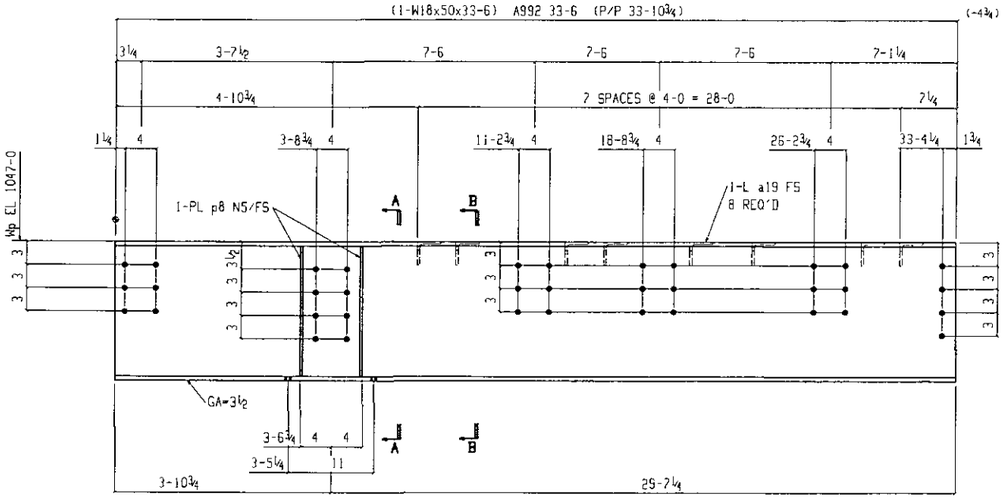
PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC	REFERENCE DWG: E3	DESCRIPTION: BEAMS	DRAWN BY: AW	DATE: 9-06	CHECKED BY: DSS	JOB# 06-36	SHEET: 1506



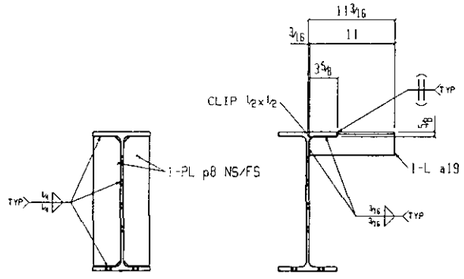
ONE BEAM 1507B1



Section A-A
1507B1

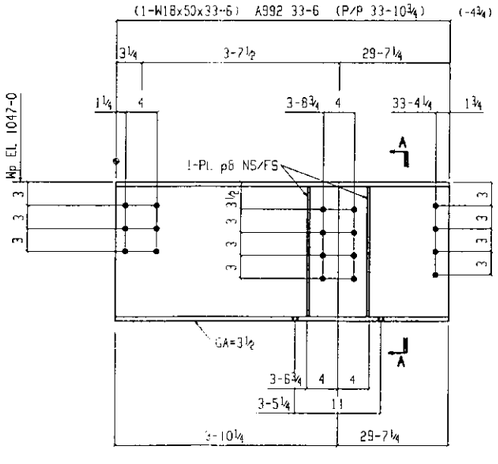


ONE BEAM 1507B2

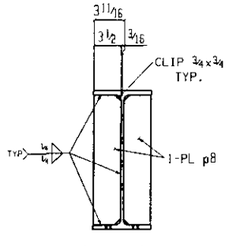


Section B-B
1507B2

Section A-A
1507B2



ONE BEAM 1507B3



Section A-A
1507B3

Licensed CadVantage User

AVENUE FABRICATING, INC.

DRAWING ISSUE:

REVISION:

BILL OF MATERIAL

NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : 13/16 Dia. UN
3. FINISH :

BILL OF MATERIAL

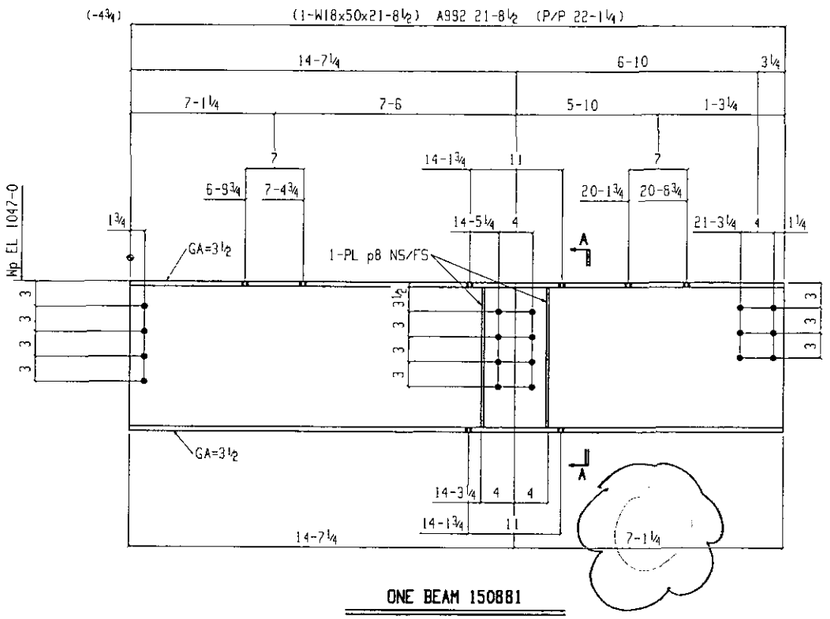
Piece Mark	Minor Mark	Quantity Total	Description	Length		Remarks
1507B1		ONE	BEAM			
	1507B1	1	W18x50	33	6	
	p8	4	PL⅜x3½	1	4¾	
			FIELD BOLTS			
		4	¾ Dia A325X	0	2½	1HD WASH
		28	¾ Dia A325X	8	2¼	1HD WASH
		4	¾ Dia A325X	0	2	1HD WASH
1507B2		ONE	BEAM			
	1507B2	1	W18x58	33	6	
	a19	8	L3x3x⅜	8	11	
	p8	4	PL⅜x3½	1	4¾	
			FIELD BOLTS			
		4	¾ Dia A325X	8	2½	1HD WASH
		4	¾ Dia A325X	0	2	1HD WASH
1507B3		ONE	BEAM			
	1507B3	1	W18x58	33	6	
	p8	4	PL⅜x3½	1	4¾	
			FIELD BOLTS			
		4	¾ Dia A325X	8	2½	1HD WASH
		4	¾ Dia A325X	0	2	1HD WASH

NO PAINT SOLVENT CLEAN

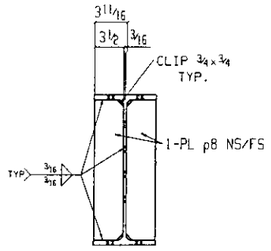
THP LIMITED, INC.
BY:
DATE:
NOT REVIEWED FOR
NOTATIONS DO NOT

NOT FOR CONSTRUCTION
OCT 18 2006
FOR APPROVAL ONLY

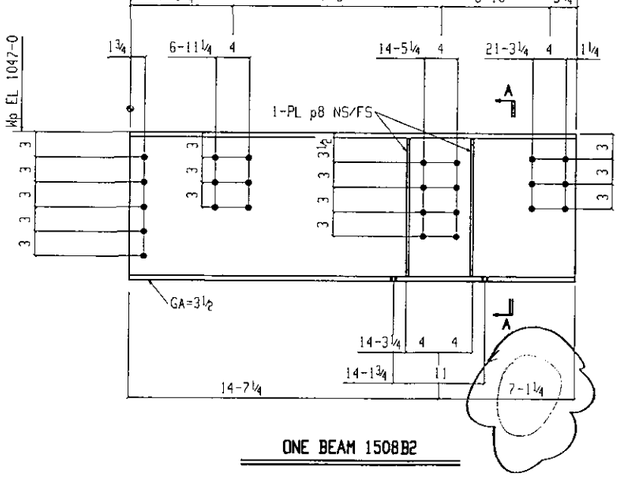
PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC	REFERENCE DWG: E4	DESCRIPTION: BEAMS	DRAWN BY: AW	DATE: 9-06	CHECKED BY: DSS	JOB# 06-36	SHEET: 1507



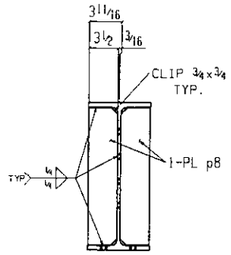
ONE BEAM 150881



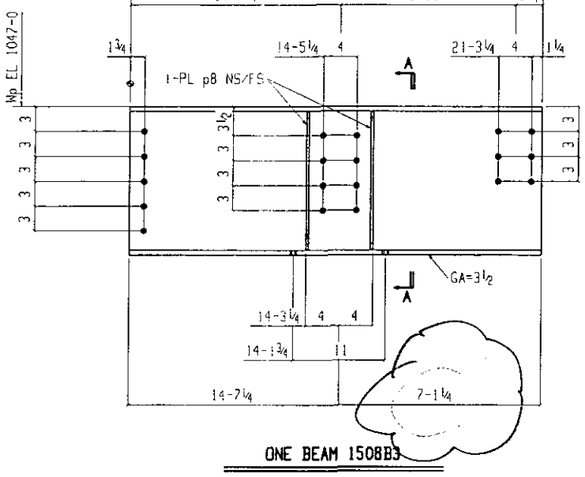
Section A-A
150881



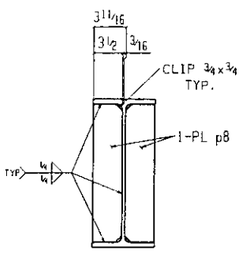
ONE BEAM 1508B2



Section A-A
1508B2



ONE BEAM 1508B3



Section A-A
1508B3

AVENUE FABRICATING, INC.

Licensed CadVantage User

DRAWING ISSUE:

REVISION:

BILL OF MATERIAL

NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : 15/16Dia. UN
3. FINISH :

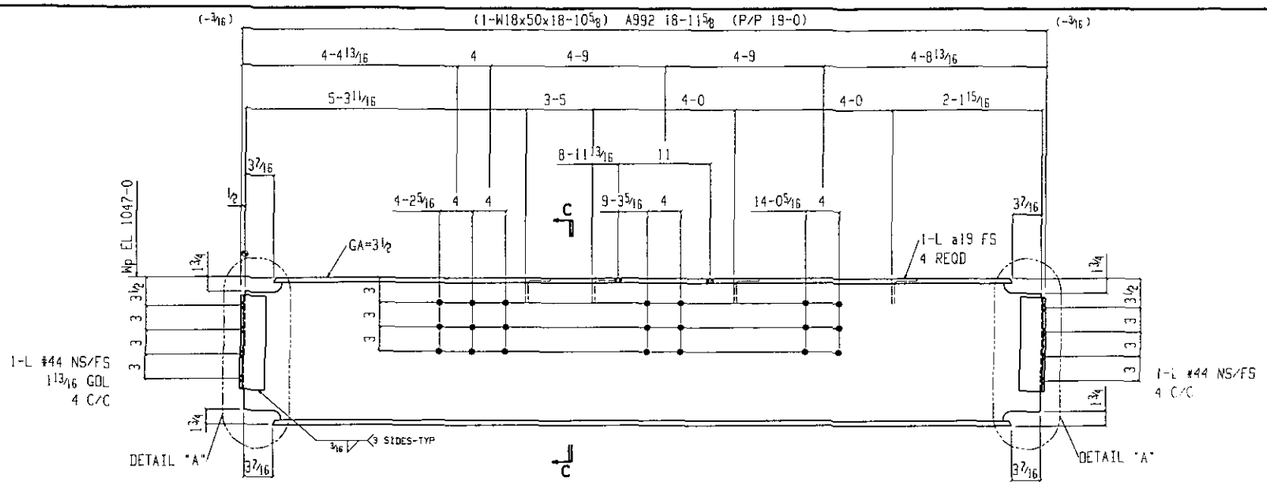
BILL OF MATERIAL

Piece Mark	Minor Mark	Quantity Total	Description	Length		Remarks
150881		ONE	BEAM			NO PRINT
	150881	1	W18x58	21	8½	SOLVENT WIPE
	p8	4	PL⅜x3½	1	4¾	
			FIELD BOLTS			
		4	¾ Dia A325X	8	2½	1HD WASH
		12	¾ Dia A325X	8	2¼	1HD WASH
		4	¾ Dia A325X	8	2	1HD WASH
150882		ONE	BEAM			
	150882	1	W18x58	21	8½	
	p8	4	PL⅜x3½	1	4¾	
			FIELD BOLTS			
		4	¾ Dia A325X	8	2½	1HD WASH
		5	¾ Dia A325X	8	2¼	1HD WASH
150883		ONE	BEAM			
	150883	1	W18x58	21	8½	
	p8	4	PL⅜x3½	1	4¾	
			FIELD BOLTS			
		4	¾ Dia A325X	8	2½	1HD WASH
		5	¾ Dia A325X	8	2¼	1HD WASH

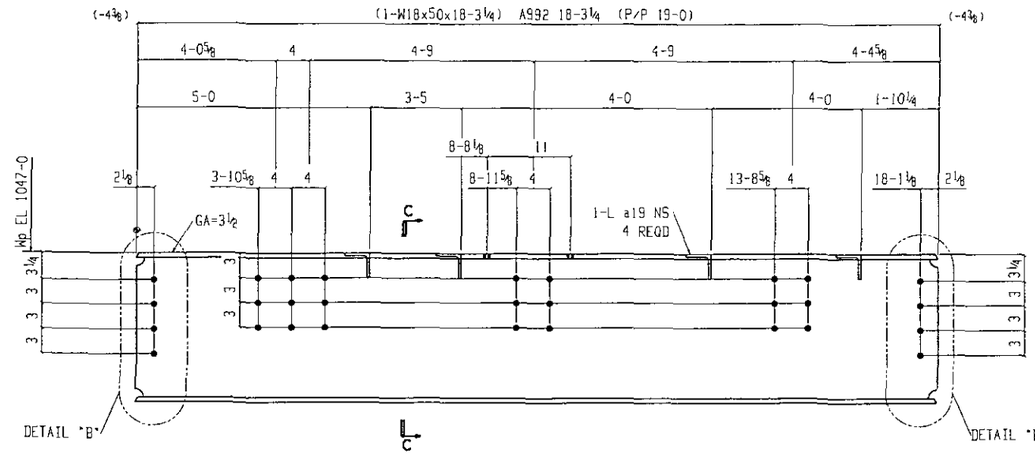
THP LIMITED, INC. REVIEWED AS NOTED
BY: [illegible]
DATE: 11-22-06
NOT REVIEWED FOR [illegible]
NOTATIONS DO NOT RELIEVE [illegible]

NOT FOR CONSTRUCTION
OCT 18 2006
FOR APPROVAL ONLY

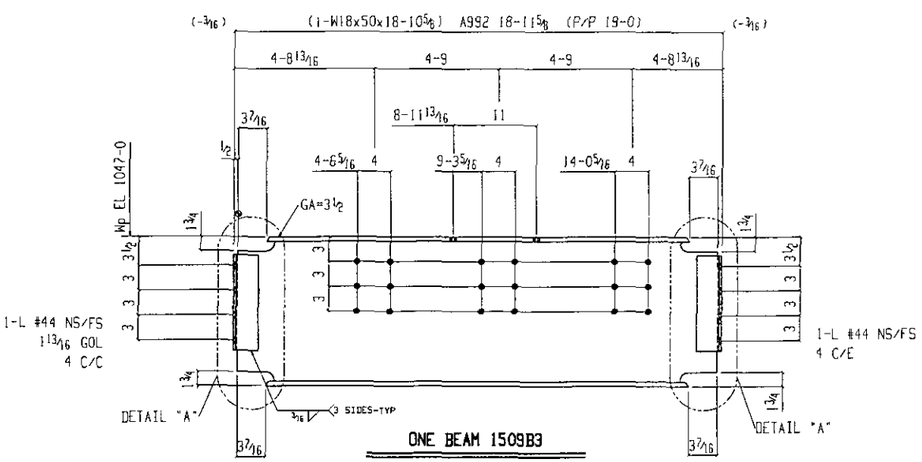
PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC	REFERENCE DWG: E4	DESCRIPTION: BEAMS	DRAWN BY: AW	DATE: 9-06	CHECKED BY: DSS	JOB# 06-36	SHEET: 1508



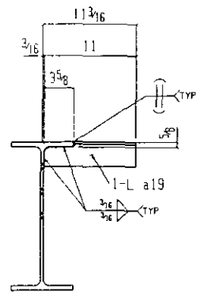
ONE BEAM 1509B1



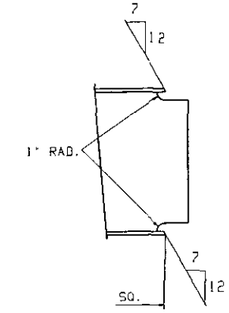
ONE BEAM 1509B2



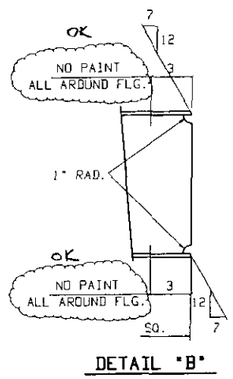
ONE BEAM 1509B3



Section C-C
150982



DETAIL "A"



DETAIL "B"

AVENUE FABRICATING, INC.

Licensed CadVantage User

DRAWING ISSUE:

REVISION:

BILL OF MATERIAL

NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : 13/16 Dia. UN
3. FINISH :

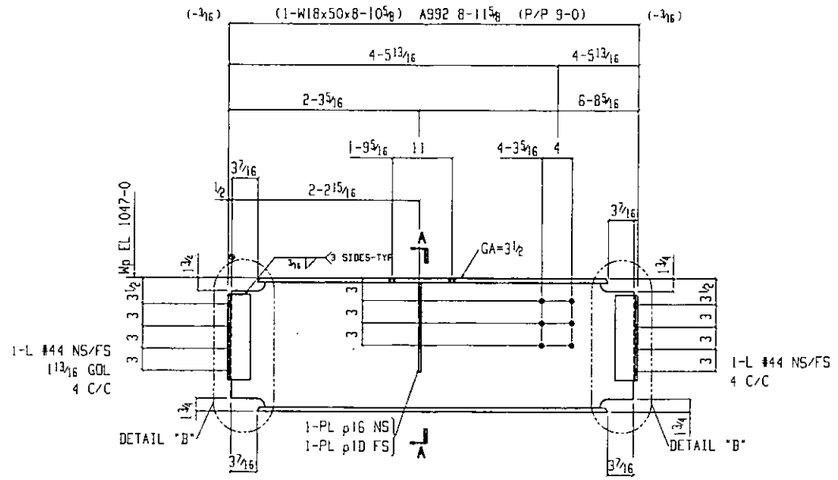
BILL OF MATERIAL

Piece Mark	Minor Mark	Quantity Total	Description	Length		Remarks
150981		ONE	BEAM			NO PAINT SOLVENT WIPE
	150981	1	W18x50	18	10⅝	
	#44	4	L3x3x5/16	8	11½	
	a19	4	L3x3x5/16	8	11	
			FIELD BOLTS			
		4	¾ Dia A325X	0	2½	INCL WASH
		8	¾ Dia A325X	0	2	INCL WASH
150982		ONE	BEAM			
	150982	1	W18x50	18	3¼	
	a19	4	L3x3x5/16	8	11	
			FIELD BOLTS			
		4	¾ Dia A325X	8	2½	INCL WASH
		8	¾ Dia A325X	0	2	INCL WASH
150983		ONE	BEAM			
	150983	1	W10x58	18	10⅝	
	#44	4	L3x3x5/16	8	11½	
			FIELD BOLTS			
		4	¾ Dia A325X	0	2½	INCL WASH
		8	¾ Dia A325X	8	2	INCL WASH

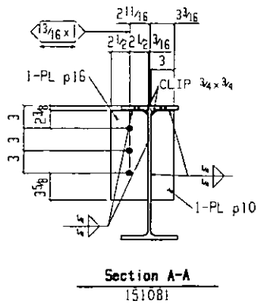
TMP LIMITED, INC. BY: [illegible] DATE: 1-23-07
(A) NOT APPROVED AS NOTED
B EXCEPTIONS NOTED
C REVISE AND RESUBMIT
D [illegible]
NOT REVIEWED FOR DIMENSIONS OR QUANTITIES
NOTATIONS DO NOT AUTHORIZE [illegible]

NOT FOR CONSTRUCTION
OCT 18 2006
FOR APPROVAL ONLY

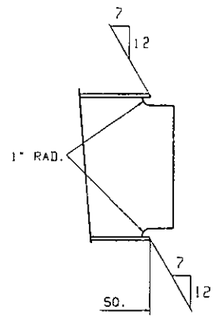
PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC	REFERENCE DWG: E4	DESCRIPTION: BEAMS	DRAWN BY: AW	DATE: 9-06	CHECKED BY: DSS	JOB# 06-36	SHEET: 1509



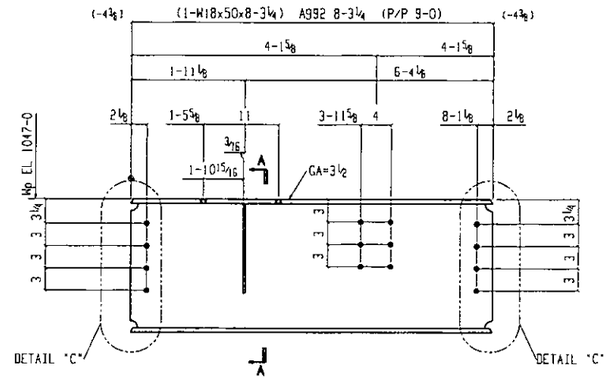
ONE BEAM 1510B1



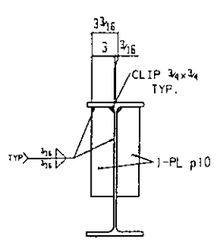
Section A-A
151081



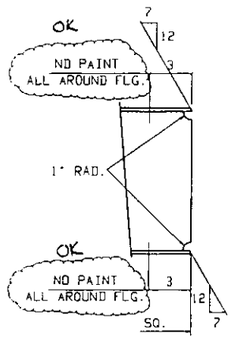
DETAIL "B"



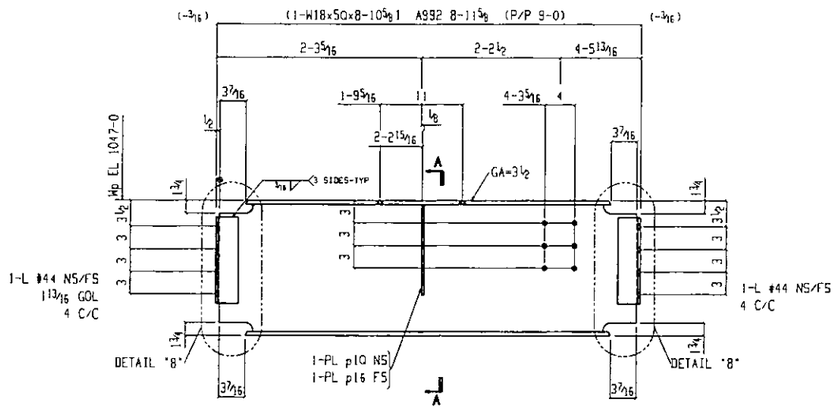
ONE BEAM 1510B2



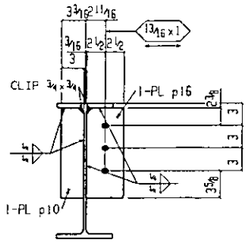
Section A-A
151082



DETAIL "C"



ONE BEAM 1510B3



Section A-A
151083

Licensed CadVantage User

AVENUE FABRICATING, INC.

DRAWING ISSUE:

REVISION:

BILL OF MATERIAL

NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : 1/16" Dia. LRG
3. FINISH :

BILL OF MATERIAL

Piece Mark	Minor Mark	Quantity Total	Description	Length		Remarks
1510B1		ONE	BEAM			NO PAINT
	1510B1	1	W18x50	B	10 5/8	SOLVENT
	#44	4	L3x3x5/16	B	11 1/2	WIPE
	p16	1	PL 5/16 x 5	1	0	
	p18	1	PL 5/16 x 3	1	0	
			FIELD BOLTS			
		4	3/4 Dia A325X	B	2 1/2	HVD WASH
		8	3/4 Dia A325X	0	2 1/2	HVD WASH
		8	3/4 Dia A325X	B	2	HVD WASH
1510B2		ONE	BEAM			
	1510B2	1	W18x50	B	3 1/4	
	p18	2	PL 5/16 x 3	1	8	
			FIELD BOLTS			
		4	3/4 Dia A325X	0	2 1/2	HVD WASH
		8	3/4 Dia A325X	0	2	HVD WASH
1510B3		ONE	BEAM			
	1510B3	1	W18x50	B	10 5/8	
	#44	4	L3x3x5/16	0	11 1/2	
	p16	1	PL 5/16 x 5	1	0	
	p10	1	PL 5/16 x 3	1	0	
			FIELD BOLTS			
		4	3/4 Dia A325X	0	2 1/2	HVD WASH
		8	3/4 Dia A325X	0	2 1/2	HVD WASH
		8	3/4 Dia A325X	0	2	HVD WASH

THP LIMITED, INC. GA APPROVED AS NOTED
BY: B ...
C ...
DATE: ...
NOT REVIEWED FOR NOTATIONS ONLY.

NOT FOR CONSTRUCTION
OCT 18 2006
FOR APPROVAL ONLY

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC	REFERENCE DWG: E4	DESCRIPTION: BEAMS	DRAWN BY: AW	DATE: 9-06	CHECKED BY: DSS	JOB# 06-36	SHEET: 1510

Licensed CadVantage User

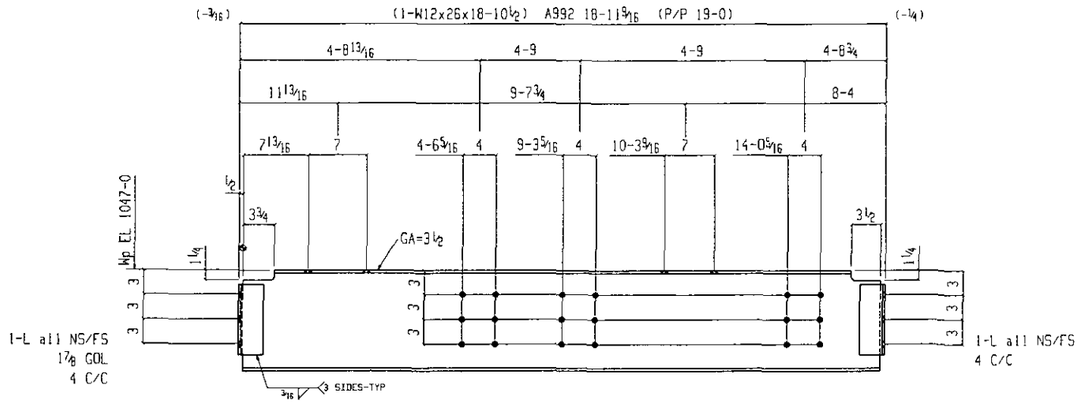
AVENUE FABRICATING, INC.

DRAWING ISSUE:

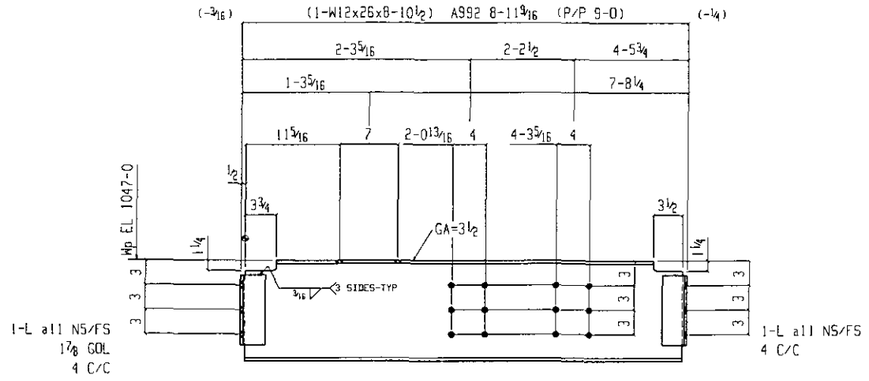
REVISION:

BILL OF MATERIAL

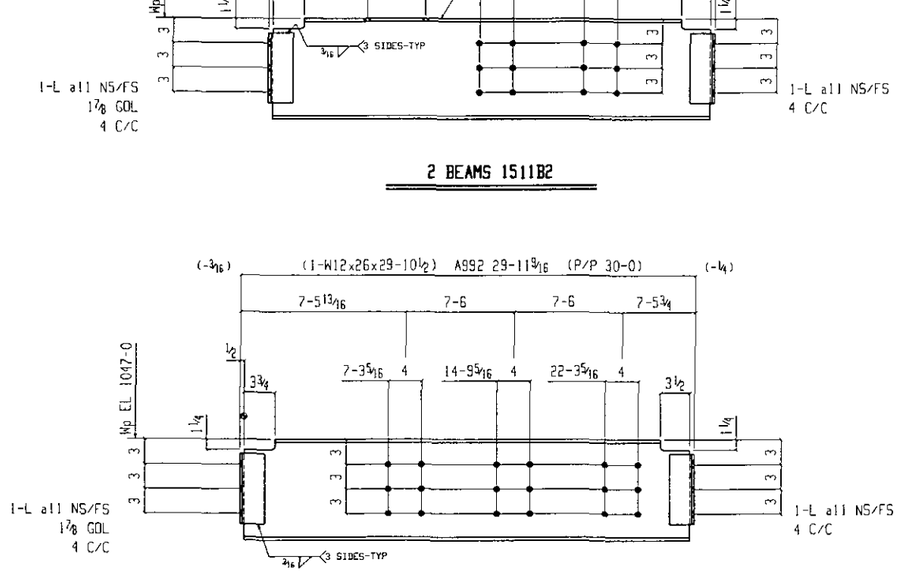
NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : 1/16 in Dia LN
3. FINISH :



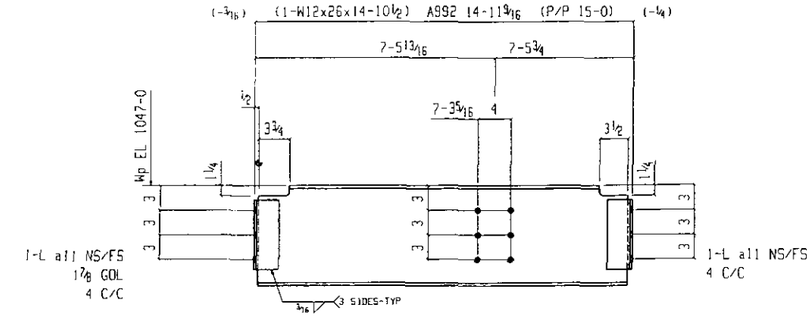
2 BEAMS 1511B1



2 BEAMS 1511B2



ONE BEAM 1511B3



ONE BEAM 1511B4

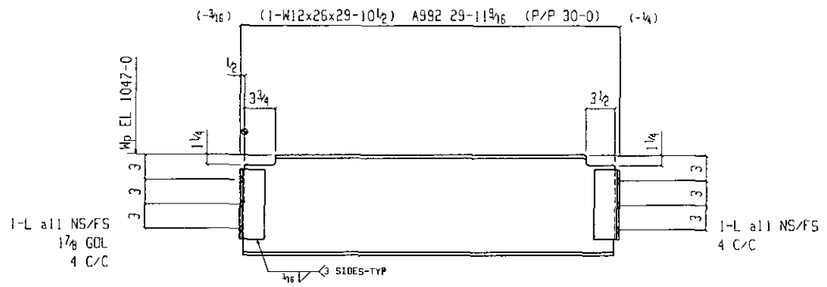
BILL OF MATERIAL

Piece Mark	Minor Mark	Quantity Total	Description	Length		Remarks
1511B1		2	BEAM			NO PAINT SOLVENT WIPE
	1511B1	2	W12x26	18	1 2 9/16	
	all	8	L3x3x5/16	0	8 1/2	
			FIELD BOLTS			
		36	3/4 Dia A325X	0	2 4	HVD WASH
		12	3/4 Dia A325X	0	2	HVD WASH
1511B2		2	BEAM			
	1511B2	2	W12x26	8	10 1/2	
	all	8	L3x3x5/16	0	8 1/2	
			FIELD BOLTS			
		28	3/4 Dia A325X	0	2 4	HVD WASH
		12	3/4 Dia A325X	0	2	HVD WASH
1511B3		ONE	BEAM			
	1511B3	1	W12x26	29	10 1/2	
	all	4	L3x3x5/16	0	8 1/2	
			FIELD BOLTS			
		6	3/4 Dia A325X	0	2 4	HVD WASH
1511B4		ONE	BEAM			
	1511B4	1	W12x26	14	10 1/2	
	all	4	L3x3x5/16	0	8 1/2	
			FIELD BOLTS			
		6	3/4 Dia A325X	0	2 4	HVD WASH

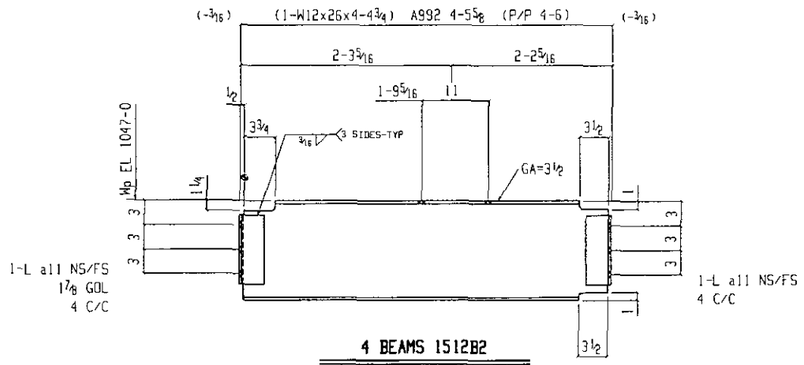
THP LIMITED, INC. BY: DATE: 1-22-07
NOT REVIEWED FOR DIMENSIONS, QUANTITIES, NOTATIONS, OR TO AUTHORIZE AN EXTRA COST
A NO EXCEPTIONS NOTED
B EXCEPTIONS NOTED
C REVISE AND RESUBMIT
D

NOT FOR CONSTRUCTION
OCT 18 2006
FOR APPROVAL ONLY

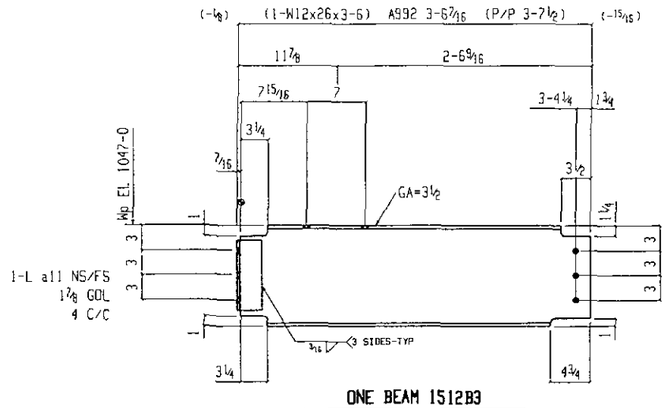
PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC	REFERENCE DWG: E4	DESCRIPTION: BEAMS	DRAWN BY: AW	DATE: 9-06	CHECKED BY: DSS	JOB# 06-36	SHEET: 1511



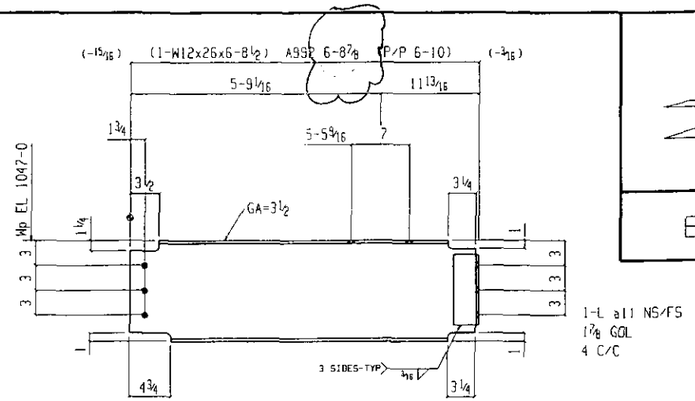
ONE BEAM 1512B1



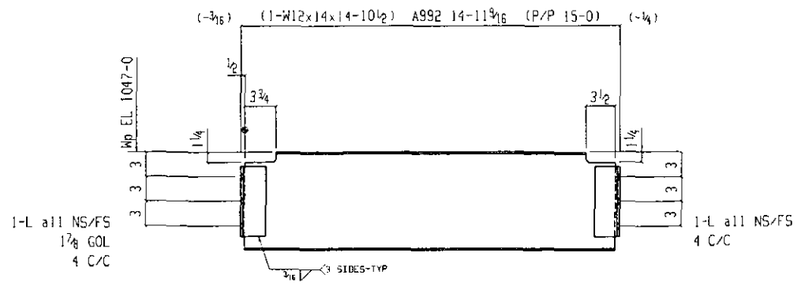
4 BEAMS 1512B2



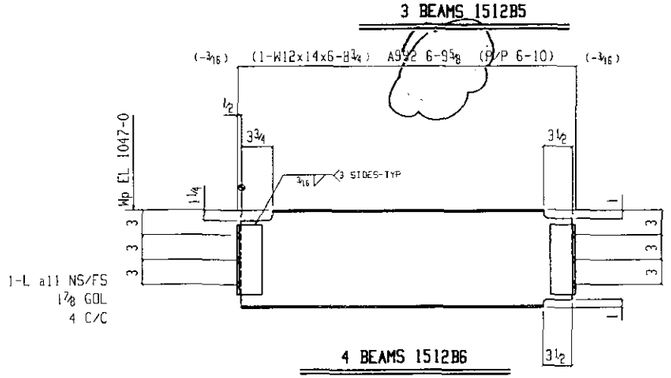
ONE BEAM 1512B3



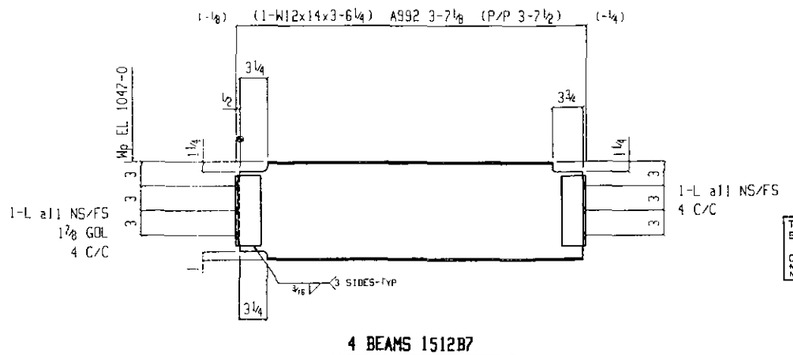
ONE BEAM 1512B4



3 BEAMS 1512B5



4 BEAMS 1512B6



4 BEAMS 1512B7

Licensed CadVantage User

AVENUE FABRICATING, INC.

DRAWING ISSUE:

REVISION:

BILL OF MATERIAL

NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : 1/16in Dia. OVS
3. FINISH :

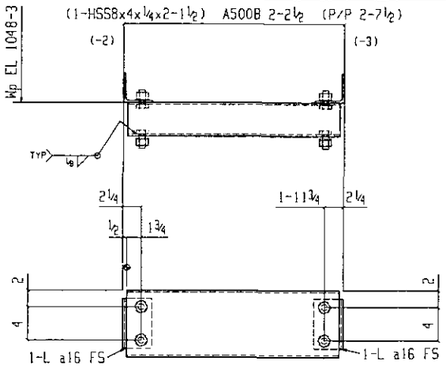
BILL OF MATERIAL

Piece Mark	Minor Mark	Quantity Total	Description	Length		Remarks
1512B1		ONE BEAM				NO PAINT SOLVENT WIPE
	1512B1	1	W12x26	29	10½	
	all	4	L3x3x5/16	3	8½	
			FIELD BOLTS			
		12	¾ Dia A325X	3	2	HD WASH
1512B2		4	BEAM			
	1512B2	4	W12x26	4	4½	
	all	16	L3x3x5/16	3	8½	
			FIELD BOLTS			
		16	¾ Dia A325X	3	2½	HD WASH
		48	¾ Dia A325X	3	2	HD WASH
1512B3		ONE BEAM				
	1512B3	1	W12x26	3	6	
	all	2	L3x3x5/16	3	8½	
			FIELD BOLTS			
		4	¾ Dia A325X	3	2½	HD WASH
		9	¾ Dia A325X	3	1¾	HD WASH
1512B4		ONE BEAM				
	1512B4	1	W12x26	6	8½	
	all	2	L3x3x5/16	6	8½	
			FIELD BOLTS			
		4	¾ Dia A325X	0	2½	HD WASH
		6	¾ Dia A325X	0	2	HD WASH
		3	¾ Dia A325X	0	1¾	HD WASH
1512B5		3	BEAM			
	1512B5	3	W12x14	14	10½	
	all	12	L3x3x5/16	6	8½	
			FIELD BOLTS			
		18	¾ Dia A325X	0	2	HD WASH
1512B6		4	BEAM			
	1512B6	4	W12x14	6	8½	
	all	16	L3x3x5/16	6	8½	
			FIELD BOLTS			
		24	¾ Dia A325X	0	2½	HD WASH
		24	¾ Dia A325X	0	2	HD WASH
1512B7		4	BEAM			
	1512B7	4	W12x14	3	6½	
	all	16	L3x3x5/16	0	8½	
			FIELD BOLTS			
		18	¾ Dia A325X	0	2	HD WASH
		24	¾ Dia A325X	0	1¾	HD WASH

THP LIMITED, INC. BY: [illegible] DATE: 1-22-07
A NO EXCEPTIONS NOTED
B EXCEPTIONS NOTED
C REVISE AND RESUBMIT
D
NOTIFY US WHEN WITH DIMENSIONS, QUANTITIES & NOTATIONS. AUTHORIZE AN EXTRA COST.

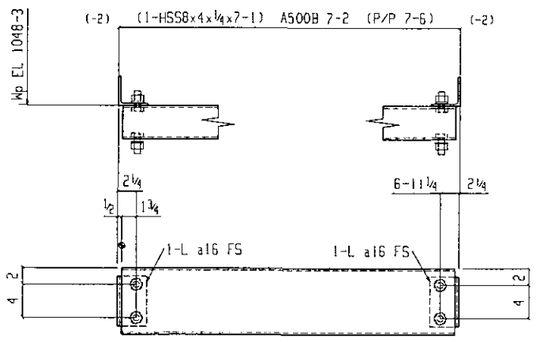
NOT FOR CONSTRUCTION
OCT 18 2006
FOR APPROVAL ONLY

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC	REFERENCE DWG: E4	DESCRIPTION: BEAMS	DRAWN BY: AW	DATE: 9-06	CHECKED BY: DSS	JOB# 06-36	SHEET: 1512



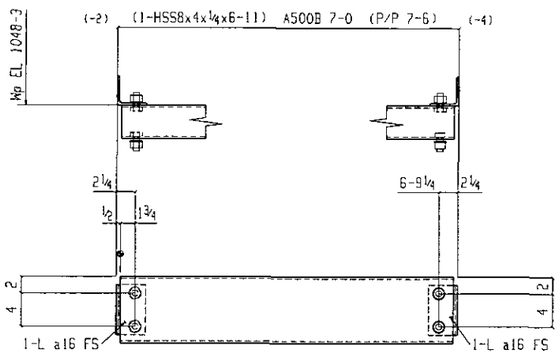
2 BEAMS 1513B1

SHOP BOLTS:
16-¾x1¾ A325X w/1HD WASH



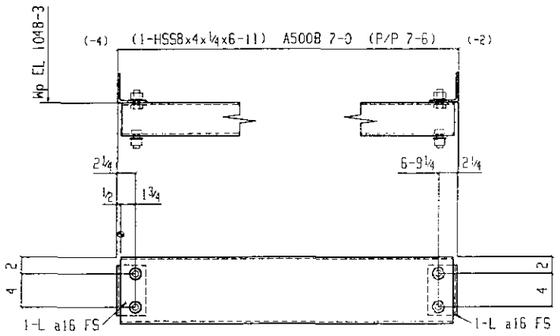
2 BEAMS 1513B2

SHOP BOLTS:
16-¾x1¾ A325X w/1HD WASH



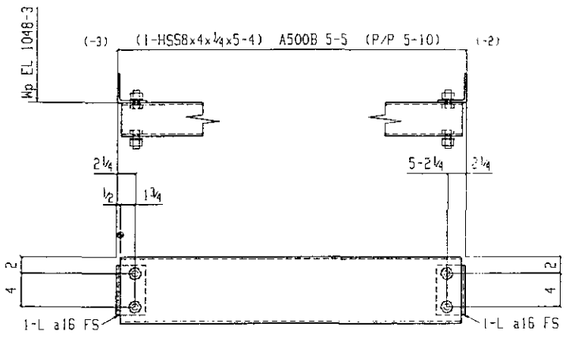
ONE BEAM 1513B3

SHOP BOLTS:
8-¾x1¾ A325X w/1HD WASH



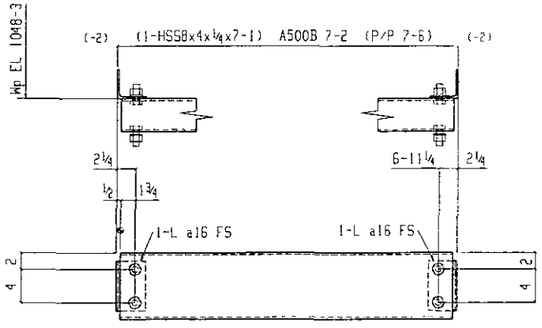
ONE BEAM 1513B4

SHOP BOLTS:
8-¾x1¾ A325X w/1HD WASH



2 BEAMS 1513B5

SHOP BOLTS:
16-¾x1¾ A325X w/1HD WASH



2 BEAMS 1513B6

SHOP BOLTS:
16-¾x1¾ A325X w/1HD WASH

Licensed CadVantage User

AVENUE FABRICATING, INC.

DRAWING ISSUE:

REVISION:

BILL OF MATERIAL

NOTES: 1. WELD ELECTRODES = E70XX
2. HOLE DIAMETER = 13/16" Dia. UN
3. FINISH =

BILL OF MATERIAL

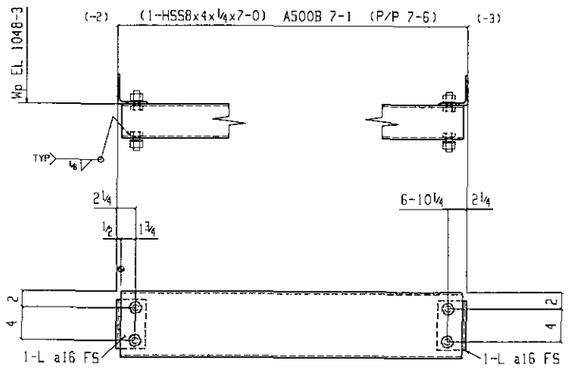
Piece Mark	Minor Mark	Quantity Total	Description	Length		Remarks
1513B1		2	BEAM			GALVANIZE
	1513B1	2	HSS8x4x¼	2	1½	
	a16	4	L3½x3½x¼	0	6	
		16	¾ Dia A325X	0	1¾	1HD WASH
1513B2		2	BEAM			
	1513B2	2	HSS8x4x¼	7	1	
	a16	4	L3½x3½x¼	0	6	
		16	¾ Dia A325X	0	1¾	1HD WASH
1513B3		ONE	BEAM			
	1513B3	1	HSS8x4x¼	6	11	
	a16	2	L3½x3½x¼	0	6	
		8	¾ Dia A325X	0	1¾	1HD WASH
1513B4		ONE	BEAM			
	1513B4	1	HSS8x4x¼	6	11	
	a16	2	L3½x3½x¼	0	6	
		8	¾ Dia A325X	0	1¾	1HD WASH
1513B5		2	BEAM			
	1513B5	2	HSS8x4x¼	5	4	
	a16	4	L3½x3½x¼	0	6	
		16	¾ Dia A325X	0	1¾	1HD WASH
1513B6		2	BEAM			
	1513B6	2	HSS8x4x¼	7	1	
	a16	4	L3½x3½x¼	0	6	
		16	¾ Dia A325X	0	1¾	1HD WASH

THP LIMITED, INC.
BY:
DATE:
NOT REVIEWED FOR DIMENSIONS
NOTATIONS DO NOT AUTHORIZE

(A) RELEASED FOR CONSTRUCTION
(B) RELEASED AS NOTED
(C) RESUBMIT AND RE-RELEASE
(D)

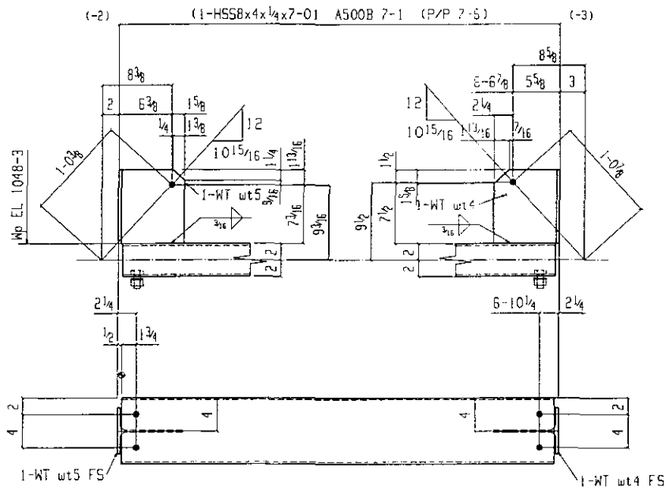
NOT FOR CONSTRUCTION
OCT 16 2006
FOR APPROVAL ONLY

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC	REFERENCE DWG: E4	DESCRIPTION: BEAMS	DRAWN BY: AW	DATE: 9-06	CHECKED BY: DSS	JOB# 06-36	SHEET: 1513



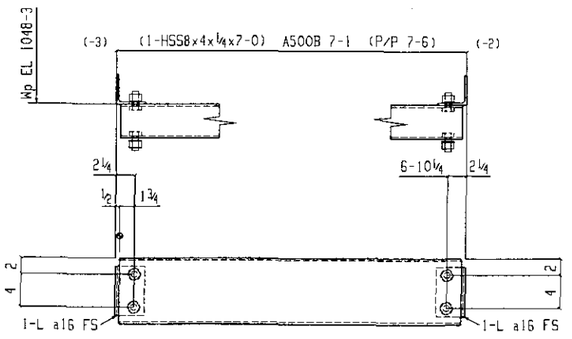
ONE BEAM 1514B1

SHOP BOLTS:
8-¾x1¾ A325X w/1HD WASH



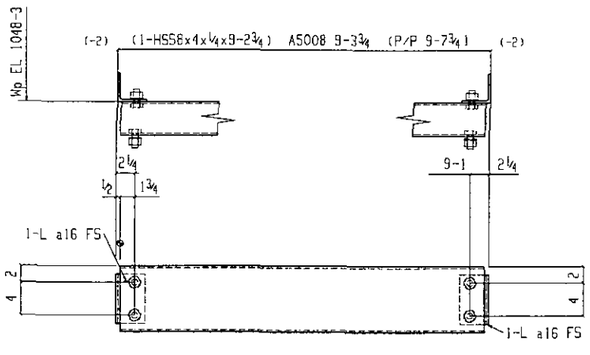
2 BEAMS 1514B4

SHOP BOLTS:
8-¾x1¾ A325X w/1HD WASH



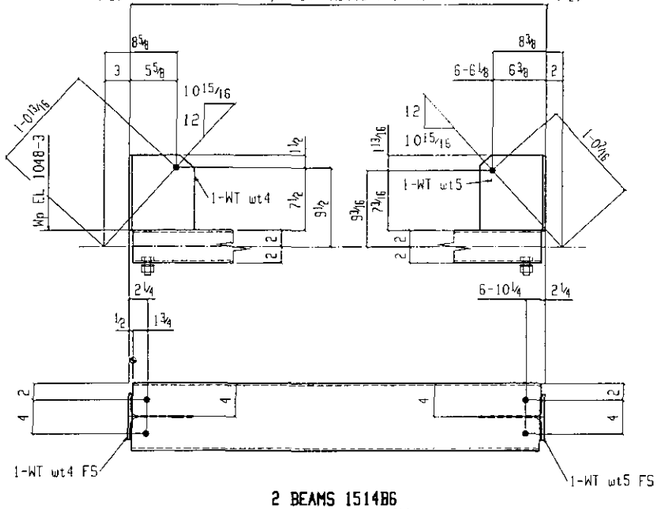
ONE BEAM 1514B2

SHOP BOLTS:
8-¾x1¾ A325X w/1HD WASH



4 BEAMS 1514B3

SHOP BOLTS:
32-¾x1¾ A325X w/1HD WASH



2 BEAMS 1514B6

SHOP BOLTS:
8-¾x1¾ A325X w/1HD WASH

Licensed CadVantage User

AVENUE FABRICATING, INC.

DRAWING ISSUE:

REVISION:

BILL OF MATERIAL

NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : 13/16 DIA UN
3. FINISH :

BILL OF MATERIAL

Piece Mark	Minor Mark	Quantity Total	Description	Length		Remarks
1514B1		ONE BEAM				GA-V.
	1514B1	1	HSS8x4x¼	7	8	
	a16	2	L3½x3½x¼	8	6	
		8	¾ DIA A325X	8	1¾	1HD WASH
1514B2		ONE BEAM				
	1514B2	1	HSS8x4x¼	7	8	
	a16	2	L3½x3½x¼	0	6	
		8	¾ DIA A325X	0	1¾	1HD WASH
1514B3		4	BEAM			
	1514B3	4	HSS8x4x¼	9	2¾	
	a16	8	L3½x3½x¼	8	6	
		32	¾ DIA A325X	8	1¾	1HD WASH
1514B4		2	BEAM			
	1514B4	2	HSS8x4x¼	7	8	
	wt4	2	WT8x13	0	9	
	wt5	2	WT8x13	8	9	
		8	¾ DIA A325X	8	1¾	1HD WASH
1514B6		2	BEAM			
	1514B6	2	HSS8x4x¼	7	8	
	wt5	2	WT8x13	8	9	
	wt4	2	WT8x13	8	9	
		8	¾ DIA A325X	8	1¾	1HD WASH

THP LIMITED, INC.
BY: DKH
DATE: 10/18/06
NOT REVIEWED FOR DIMENSIONS OR INSTALLATION DETAILS AUTHORIZED

A UNO EXCEPTIONS NOTED
B EXCEPTIONS NOTED
C REVISE AS NOTED
D

NOT FOR CONSTRUCTION
OCT 18 2006
FOR APPROVAL ONLY

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC	REFERENCE DWG: E4	DESCRIPTION: BEAMS	DRAWN BY: AH	DATE: 9-06	CHECKED BY: DSS	JOB# 06-36	SHEET: 1514

Licensed CadVantage User

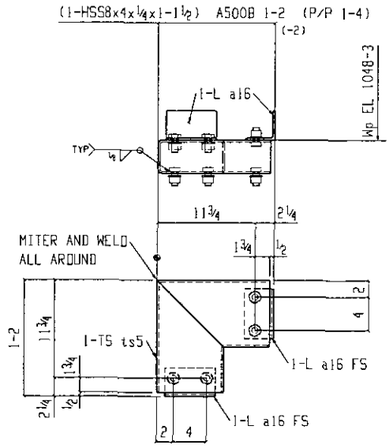
AVENUE FABRICATING, INC.

DRAWING ISSUE:

REVISION:

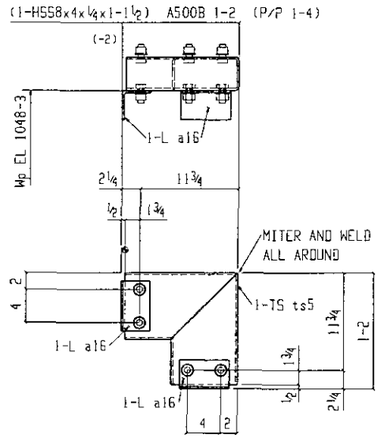
BILL OF MATERIAL

NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : 13/16 Dia. UN
3. FINISH :



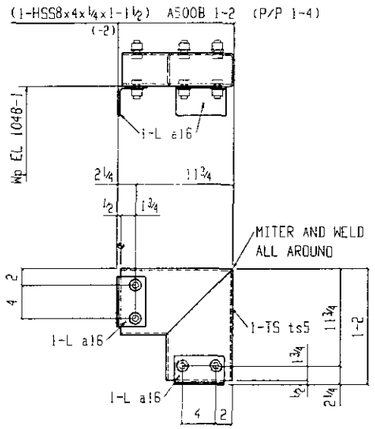
2 BEAMS 1515B1

SHOP BOLTS:
16-¾x1¾ A325X w/1HD WASH



ONE BEAM 1515B2

SHOP BOLTS:
8-¾x1¾ A325X w/1HD WASH



ONE BEAM 1515B3

SHOP BOLTS:
8-¾x1¾ A325X w/1HD WASH

BILL OF MATERIAL

Piece Mark	Minor Mark	Quantity Total	Description	Length		Remarks
1515B1		2	BEAM			GALVANIZE
	1515B1	2	HSS8x4x¼	1	1½	
	ts5	2	HSS8x4x¼	1	1½	
	a16	4	L3½x3½x¼	0	6	
		16	¾ Dia A325X	0	1¾	1HD WASH
1515B2		ONE	BEAM			
	1515B2	1	HSS8x4x¼	1	1½	
	ts5	1	HSS8x4x¼	1	1½	
	a16	2	L3½x3½x¼	0	6	
		8	¾ Dia A325X	0	1¾	1HD WASH
1515B3		ONE	BEAM			
	1515B3	1	HSS8x4x¼	1	1½	
	ts5	1	HSS8x4x¼	1	1½	
	a16	2	L3½x3½x¼	0	6	
		8	¾ Dia A325X	0	1¾	1HD WASH
1515B4		2	BEAM			
	1515B4	2	HSS10x8x¼	20	3½	
1515B5		2	BEAM			
	1515B5	2	HSS18x8x¼	22	2	
1515B6		3	BEAM			
	1515B6	3	HSS8x6x¼	28	3½	
1515B7		2	BEAM			
	1515B7	2	HSS10x10x¼	33	11½	

PLAIN MATERIAL

THP LIMITED, INC. (A
BY:
DATE:
NOT REVIEWED FOR DIMENSIONS
B
C
D

NOT FOR CONSTRUCTION
OCT 18 2006
FOR APPROVAL ONLY

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC	REFERENCE DWG: E4	DESCRIPTION: BEAMS	DRAWN BY: AH	DATE: 9-06	CHECKED BY: DSS	JOB# 06-36	SHEET: 1515

Licensed CadVantage User

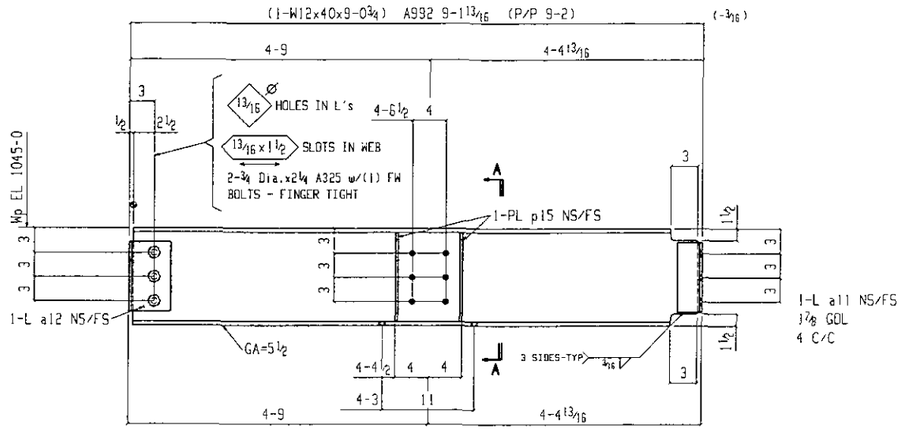
AVENUE FABRICATING, INC.

DRAWING ISSUE:

REVISION:

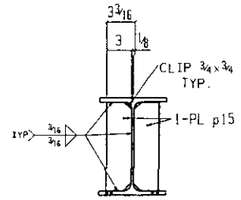
BILL OF MATERIAL

NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : 13/16 Dia. UN
3. FINISH :

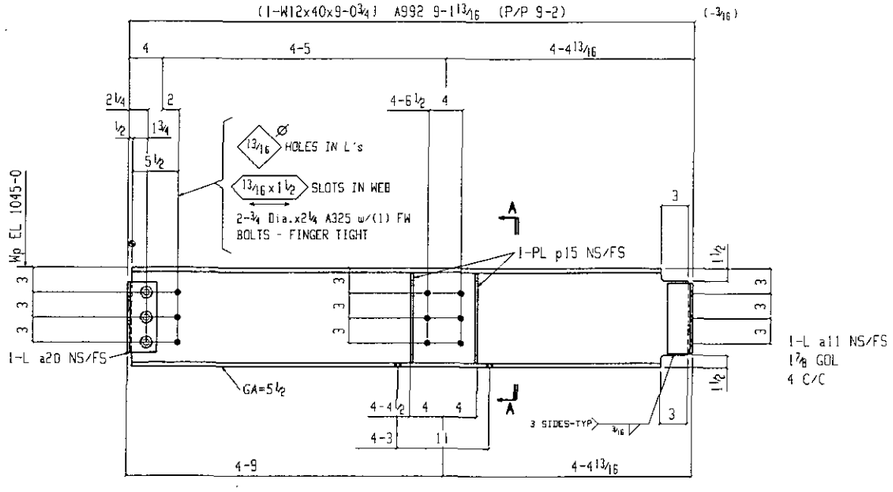


ONE BEAM 1516B1

SHOP BOLTS:
3-3/4x2 1/4 A325X w/1HD WASH

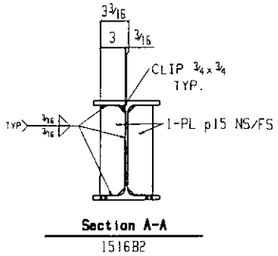


Section A-A
1516B1



ONE BEAM 1516B2

SHOP BOLTS:
3-3/4x2 1/4 A325X w/1HD WASH



Section A-A
1516B2

BILL OF MATERIAL

Piece Mark	Minor Mark	Quantity Total	Description	Length		Remarks
1516B1		ONE	BEAM			NO PAINT SOLVENT WIPE
	1516B1	1	W12x40	9	0 3/4	
	a12	2	L5x3x5/16	0	8 1/2	
	a11	2	L3x3x5/16	0	8 1/2	
	p15	4	PL 5/16 x 3	0	10 13/16	
		3	3/4 Dia A325X	0	2 1/4	1HD WASH
			FIELD BOLTS			
		4	3/4 Dia A325X	0	2 1/2	1HD WASH
		6	3/4 Dia A325X	0	2	1HD WASH
1516B2		ONE	BEAM			
	1516B2	1	W12x48	9	0 3/4	
	a28	2	L3 1/2 x 3 1/2 x 5/16	0	8 1/2	
	a11	2	L3x3x5/16	8	8 1/2	
	p15	4	PL 5/16 x 3	0	10 13/16	
		3	3/4 Dia A325X	0	2 1/4	1HD WASH
			FIELD BOLTS			
		4	3/4 Dia A325A	0	2 1/2	1HD WASH
		6	3/4 Dia A325X	0	2	1HD WASH

THP LIMITED, INC.
BY: (illegible)
DATE: 9.11.07
NOT REVIEWED FOR DIMENSIONS
NOTATIONS DO NOT ALTER CONTRACT

A ...NOT NOTED OTHERWISE
B ...ANY DISCREPANCIES
C ...AND RESOLVE IT

NOT FOR CONSTRUCTION
OCT 16 2006
FOR APPROVAL ONLY

PROJECT: U.K. PARKING GARAGE	CUSTOMER: EC MATTHEWS CO., INC	REFERENCE DWG: E5	DESCRIPTION: BEAMS	DRAWN BY: AM	DATE: 9-06	CHECKED BY: DSS	JOB# 06-36	SHEET: 1516

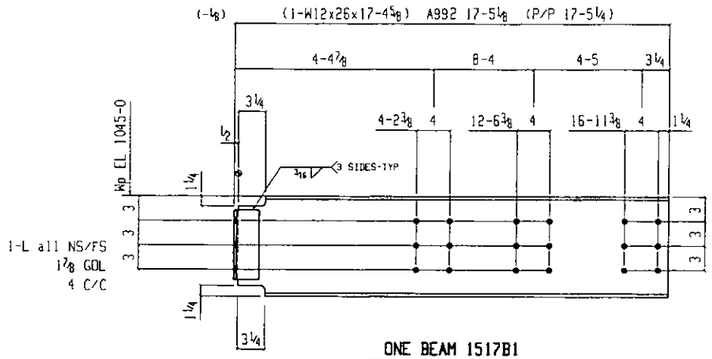
Licensed CadVantage User

AVENUE FABRICATING, INC.

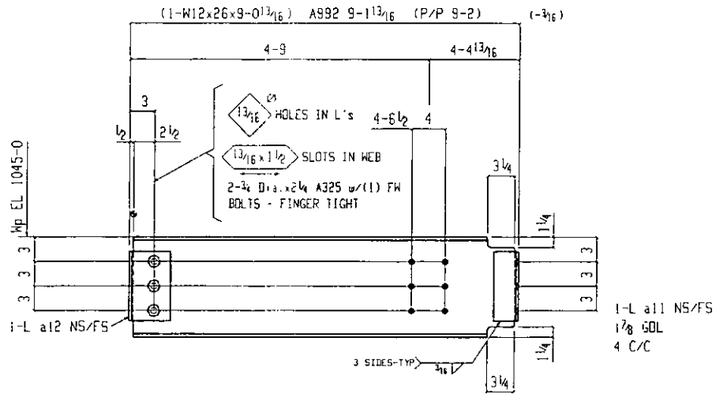
DRAWING ISSUE:
REVISION:

BILL OF MATERIAL

NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : 13/16 Dia. UN
3. FINISH :

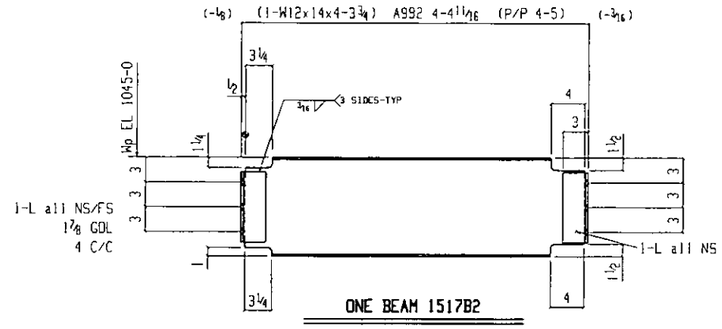


ONE BEAM 1517B1

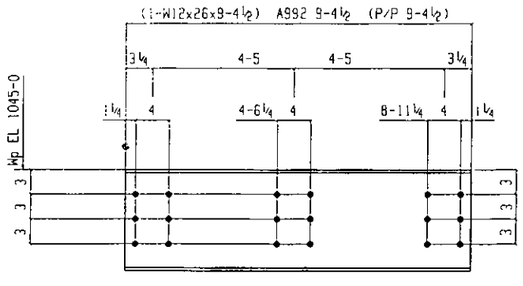


ONE BEAM 1517B3

SHOP BOLTS:
3-3/4 x 2 1/4 A325X w/1HD WASH



ONE BEAM 1517B2



ONE BEAM 1517B4

BILL OF MATERIAL

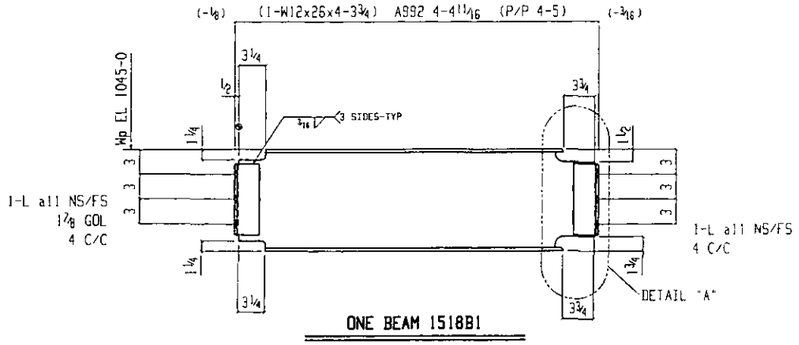
Piece Mark	Minor Mark	Quantity Total	Description	Length		Remarks
1517B1		ONE	BEAM			NO PAINT
	1517B1	1	W12x26	17	4 5/8	CAMBER WISE
	all	2	L3x3x5/16	8	8 1/2	
			FIELD BOLTS			
		6	3/4 Dia A325X	0	1 3/4	1HD WASH
1517B2		ONE	BEAM			
	1517B2	1	W12x14	4	3 3/4	
	all	3	L3x3x5/16	0	8 1/2	
			FIELD BOLTS			
		3	3/4 Dia A325X	0	2	1HD WASH
		8	3/4 Dia A325X	0	1 3/4	1HD WASH
1517B3		ONE	BEAM			
	1517B3	1	W12x26	9	0 13/16	
	all2	2	L5x3x5/16	0	8 1/2	
	all	2	L3x3x5/16	0	8 1/2	
		3	3/4 Dia A325X	0	2 1/4	1HD WASH
			FIELD BOLTS			
		6	3/4 Dia A325X	0	2	1HD WASH
1517B4		ONE	BEAM			
	1517B4	1	W12x26	9	4 1/2	

THP LIMITED, INC.
BY: [illegible]
DATE: 1-23-07
NOT TO BE USED FOR DIMENSIONS, QUANTITIES OR PRICING UNLESS AUTHORIZED AS EXTRA.

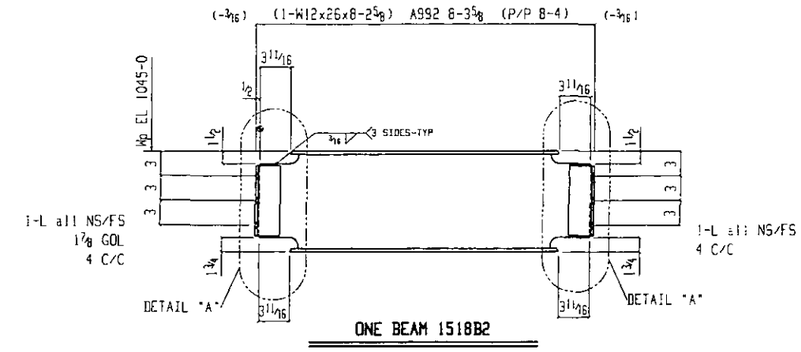
(A NO EXCEPTIONS TAKEN
B EXCEPTIONS NOTED
C REVISE AND RESUBMIT
D

NOT FOR CONSTRUCTION
OCT 18 2006
FOR APPROVAL ONLY

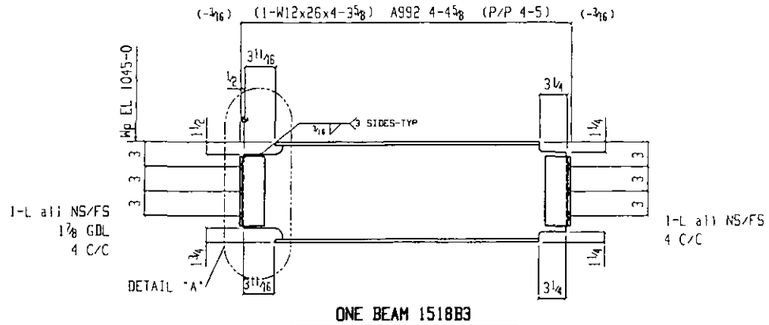
PROJECT: U.K. PARKING GARAGE	CUSTOMER: EC MATTHEWS CO., INC	REFERENCE DWGS:	DESCRIPTION: BEAMS	DRAWN BY: AH	DATE: 9-06	CHECKED BY: DSS	JOB# 06-36	SHEET: 1517



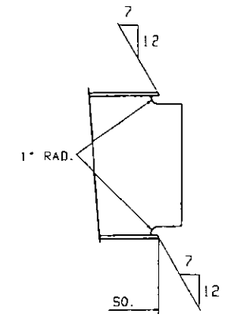
ONE BEAM 1518B1



ONE BEAM 1518B2



ONE BEAM 1518B3



DETAIL "A"

Licensed CadVantage User

AVENUE FABRICATING, INC.

DRAWING ISSUE:

REVISION:

BILL OF MATERIAL

NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : (13/16)in. DIA.
3. FINISH :

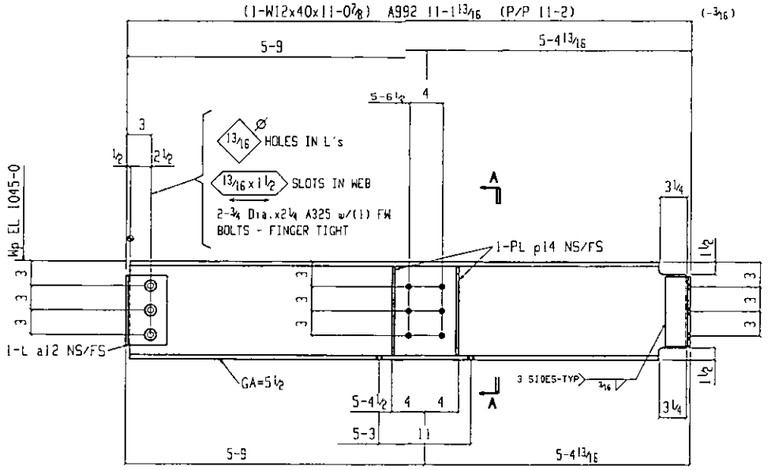
BILL OF MATERIAL

Piece Mark	Miner Mark	Quantity Total	Description	Length		Remarks
1518B1		ONE	BEAM			NO PAINT
	1518B1	1	W12x26	4	3 1/4	SOLVENT WIPE
	all	4	L3x3x5/16	0	8 1/2	
			FIELD BOLTS			
		6	3/4 Dia A325X	0	1 1/4	1HD WASH
1518B2		ONE	BEAM			
	1518B2	1	W12x26	8	2 3/4	
	all	4	L3x3x5/16	8	8 1/2	
			FIELD BOLTS			
		6	3/4 Dia A325X	0	2 1/4	1HD WASH
1518B3		ONE	BEAM			
	1518B3	1	W12x26	4	3 1/4	
	all	4	L3x3x5/16	8	8 1/2	
			FIELD BOLTS			
		6	3/4 Dia A325X	0	2 1/4	1HD WASH
		6	3/4 Dia A325X	0	2	1HD WASH

THP LIMITED, INC. BY: [illegible] DATE: 10-27-06
A NO EXCEPTIONS NOTED
B EXCEPTIONS NOTED
C REVISE AND RESUBMIT
D
NOT EXAMINED FOR DIMENSIONS, QUANTITIES, OR DETAILS
NOTATION IN AUTHORIZES AN EXTRA COST

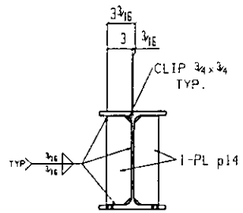
NOT FOR CONSTRUCTION
OCT 18 2006
FOR APPROVAL ONLY

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC	REFERENCE DWG: E5	DESCRIPTION: BEAMS	DRAWN BY: AW	DATE: 9-06	CHECKED BY: DSS	JOB# 06-36	SHEET: 1518

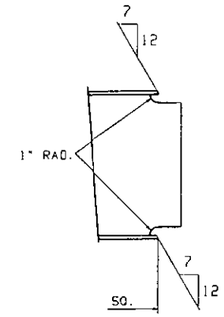


ONE BEAM 1519B1

SHOP BOLTS:
3-3/4x2 1/4 A325X w/1HD WASH



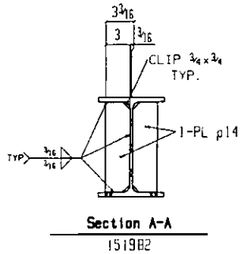
Section A-A
1519B1



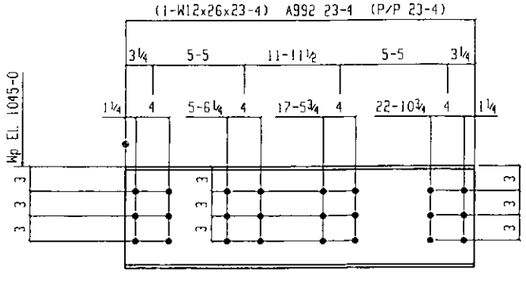
DETAIL "A"

ONE BEAM 1519B2

SHOP BOLTS:
3-3/4x2 1/4 A325X w/1HD WASH



Section A-A
1519B2



ONE BEAM 1519B3

BILL OF MATERIAL

Piece Mark	Minor Mark	Quantity Total	Description	Length	Remarks
1519B1		ONE BEAM			NO PAINT SOLVENT WIPE
	1519B1	1	W12x40	11' 0 1/4	
	a12	2	L5x3x5/16	0' 8 1/2	
	a11	2	L3x3x5/16	0' 8 1/2	
	p15	4	PL3/8x3	0' 10 7/16	
		3	3/4 Dia A325X	0' 2 1/4	1HD WASH
			FIELD BOLTS		
		4	3/4 Dia A325X	0' 2 1/2	1HD WASH
		6	3/4 Dia A325X	0' 2	1HD WASH
1519B2		ONE BEAM			
	1519B2	1	W12x40	11' 0 1/4	
	a20	2	L3 1/2x3 1/2x5/16	0' 8 1/2	
	a11	2	L3x3x5/16	0' 8 1/2	
	p15	4	PL3/8x3	0' 10 7/16	
		3	3/4 Dia A325X	0' 2 1/4	1HD WASH
			FIELD BOLTS		
		4	3/4 Dia A325X	0' 2 1/2	1HD WASH
		6	3/4 Dia A325X	0' 2	1HD WASH
1519B3		ONE BEAM			
	1519B3	1	W12x26	23' 4	

THP LIMITED, INC.
BY: [illegible]
DATE: 1-22-07
NOT REVIEWED FOR SHOP DRAWING NOTATIONS DO NOT AUTHORIZE

NOT FOR CONSTRUCTION
OCT 18 2006
FOR APPROVAL ONLY

PROJECT: U.K. PARKING GARAGE | CUSTOMER: E.C. MATTHEWS CO., INC | REFERENCE DWG: ES | DESCRIPTION: BEAMS | DRAWN BY: AH | DATE: 9-06 | CHECKED BY: OSS | JOB# 06-36 | SHEET: 1519

Licensed CadVantage User

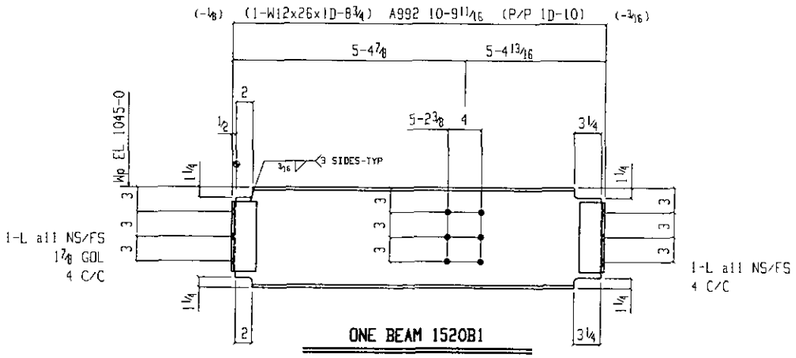
AVENUE FABRICATING, INC.

DRAWING ISSUE:

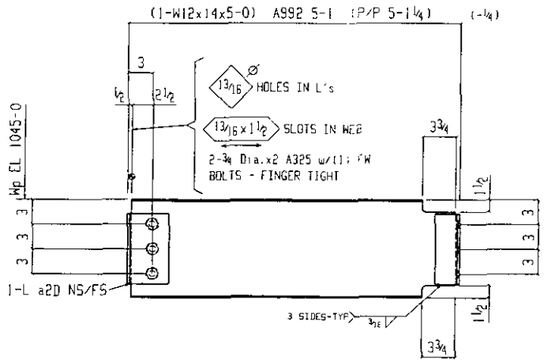
REVISION:

BILL OF MATERIAL

NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : 1/16 Dia. LRN
3. FINISH :

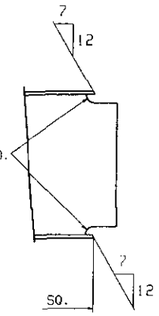


ONE BEAM 1520B1

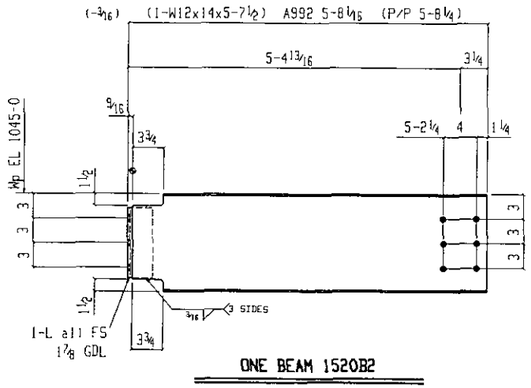


ONE BEAM 1520B4

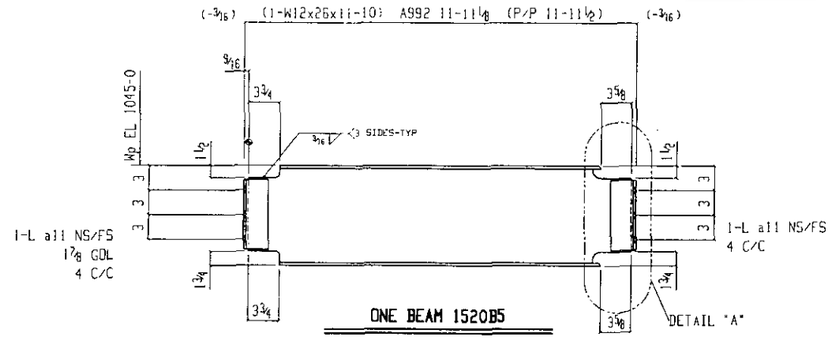
SHOP BOLTS:
3-3/4 x 2 A325X w/1HD WASH



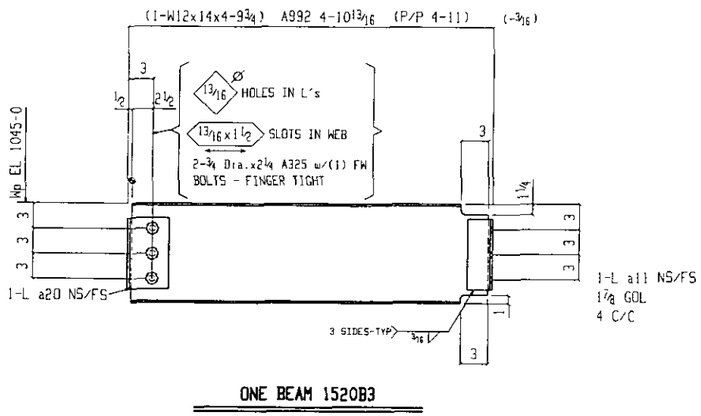
DETAIL "A"



ONE BEAM 1520B2

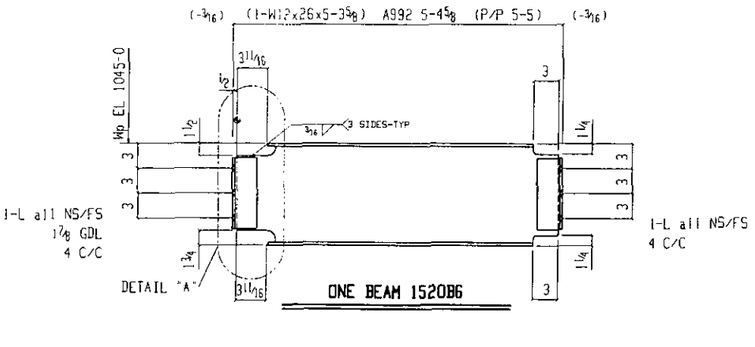


ONE BEAM 1520B5



ONE BEAM 1520B3

SHOP BOLTS:
3-3/4 x 2 A325X w/1HD WASH



DETAIL "A"

ONE BEAM 1520B6

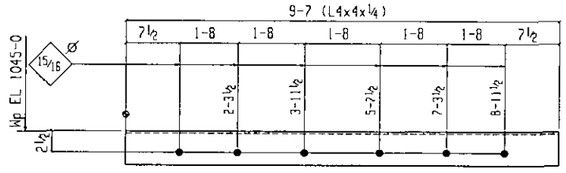
BILL OF MATERIAL

Piece Mark	Minor Mark	Quantity Total	Description	Length		Remarks
1520B1		ONE	BEAM			NO PAINT
	1520B1	1	W12x26	10	8 3/4	SEVENT WIDE
	all	4	L3x3x5/16	0	8 1/2	
			FIELD BOLTS			
		6	3/4 Dia A325X	0	2	1HD WASH
		6	3/4 Dia A325X	0	1 3/4	1HD WASH
1520B2		ONE	BEAM			
	1520B2	1	W12x14	5	7 1/2	
	all	1	L3x3x5/16	0	8 1/2	
			FIELD BOLTS			
		3	3/4 Dia A325X	0	1 3/4	1HD WASH
1520B3		ONE	BEAM			
	1520B3	1	W12x14	4	9 3/4	
	a12	2	L5x3x5/16	0	8 1/2	
	all	2	L3x3x5/16	0	8 1/2	
		3	3/4 Dia A325X	0	2	1HD WASH
			FIELD BOLTS			
		6	3/4 Dia A325X	0	2	1HD WASH
1520B4		ONE	BEAM			
	1520B4	1	W12x14	5	0	
	a12	2	L5x3x5/16	0	8 1/2	
	all	2	L3x3x5/16	0	8 1/2	
		3	3/4 Dia A325X	0	2	1HD WASH
1520B5		ONE	BEAM			
	1520B5	1	W12x26	11	10	
	all	4	L3x3x5/16	0	8 1/2	
			FIELD BOLTS			
		6	3/4 Dia A325X	0	2 1/2	1HD WASH
1520B6		ONE	BEAM			
	1520B6	1	W12x26	5	3 5/8	
	all	4	L3x3x5/16	0	8 1/2	
			FIELD BOLTS			
		6	3/4 Dia A325X	0	2 1/4	1HD WASH
		6	3/4 Dia A325X	0	2	1HD WASH

THP LIMITED, INC.
BY:
DATE:
NOT REVIEWED FOR COMMENTS
NOTATIONS DO NOT AUTHORIZE

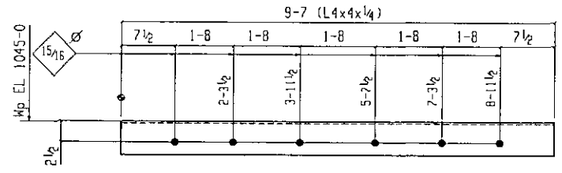
NOT FOR CONSTRUCTION
OCT 16 2006
FOR APPROVAL ONLY

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC	REFERENCE DWG: E5	DESCRIPTION: BEAMS	DRAWN BY: AH	DATE: 9-06	CHECKED BY: DSS	JOB# 06-36	SHEET: 1520



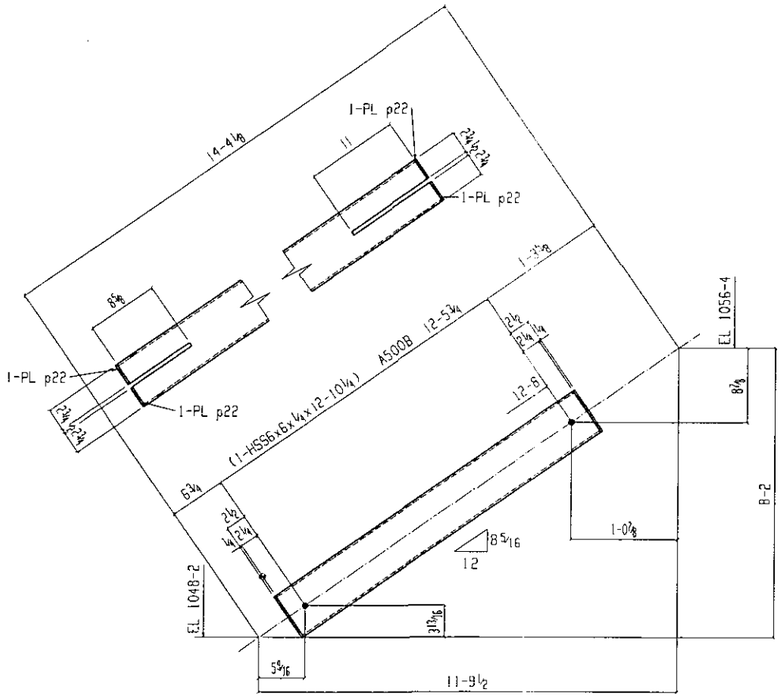
ONE ANGLE 1706A1

E3



ONE ANGLE 1706A2

E3



3 VERTICAL BRACES 1706M1

E4

Licensed CadVantage User

AVENUE FABRICATING, INC.

DRAWING ISSUE:

REVISION:

BILL OF MATERIAL

NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : 15/16ø Dia. UN
3. FINISH :

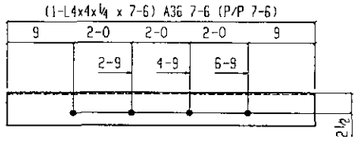
BILL OF MATERIAL

Piece Mark	Minor Mark	Quantity Total	Description	Length		Remarks
1706A1		ONE	ANGLE			PAINT
	1706A1	1	L4x4x¼	9	7	
1706A2		ONE	ANGLE			
	1706A2	1	L4x4x¼	9	7	
1706M1		3	VERTICAL BRACE			
	1706M1	3	HSS6x6x¼	12	10¼	GALV.
	p22	12	PL¼x24	0	6	
			FIELD BOLTS			
		6	¾ Dia A307	0	24	SHD WASH

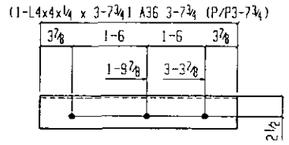
THP LIMITED, INC.
BY:
DATE:
NOT REVIEWED FOR CONFORMANCE WITH CONTRACT DOCUMENTS
NOTATIONS DO NOT RELIEVE

NOT FOR CONSTRUCTION
OCT 18 2006
FOR APPROVAL ONLY

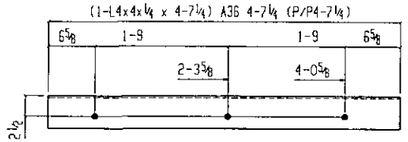
PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC	REFERENCE DWG: E3 & E4	DESCRIPTION: MISC. ITEMS	DRAWN BY: AW	DATE: 9-06	CHECKED BY: DSS	JOB# 06-36	SHEET: 1706



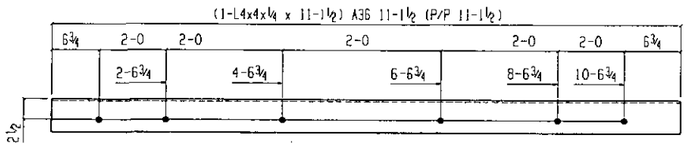
ONE ANGLE 1707A1



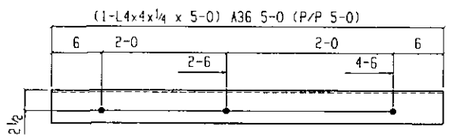
ONE ANGLE 1707A2



ONE ANGLE 1707A3



ONE ANGLE 1707A4



ONE ANGLE 1707A5

Licensed CadVantage User

AVENUE FABRICATING, INC.

DRAWING ISSUE:

REVISION:

BILL OF MATERIAL

NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : 1/16" Dia. UN
3. FINISH :

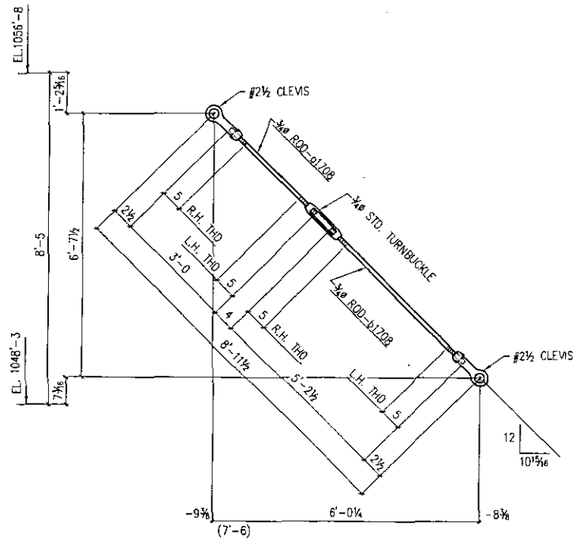
BILL OF MATERIAL

Piece Mark	Minor Mark	Quantity Total	Description	Length		Remarks
1707A1		ONE	ANGLE			NO PAINT SOLVENT WIPE
	1707A1	1	L4x4x¼	7	6	
1707A2		ONE	ANGLE			
	1707A2	1	L4x4x¼	3	7¾	
1707A3		ONE	ANGLE			
	1707A3	1	L4x4x¼	6	7¼	
1707A4		ONE	ANGLE			
	1707A4	1	L4x4x¼	11	1½	
1707A5		ONE	ANGLE			
	1707A5	1	L4x4x¼	5	0	
		19	3/8DIA. HILTI HAS ROD w/ SIO. CAPSULE	0	6¾	

THP LIMITED, INC. (A
BY: DEM (B
(C
DATE: 10/27/06 D
NOT APPROVED IN DRAWING
NOT RESPONSIBLE FOR

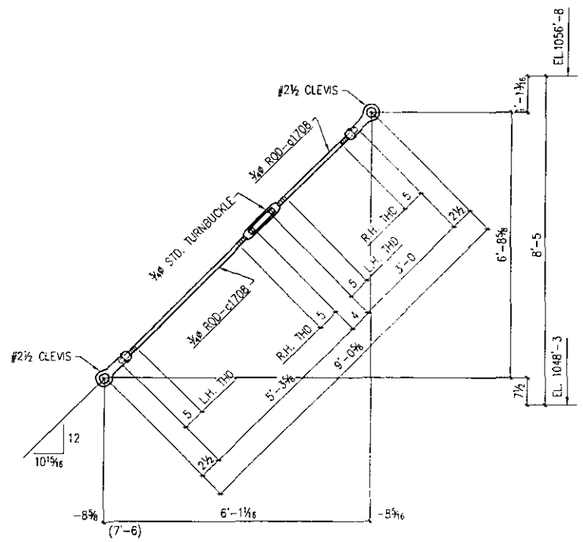
NOT FOR CONSTRUCTION
OCT 18 2006
FOR APPROVAL ONLY

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC	REFERENCE DWG: E5	DESCRIPTION: BEAMS	DRAWN BY: AH	DATE: 9-06	CHECKED BY: OSS	JOB# 06-36	SHEET: 1707



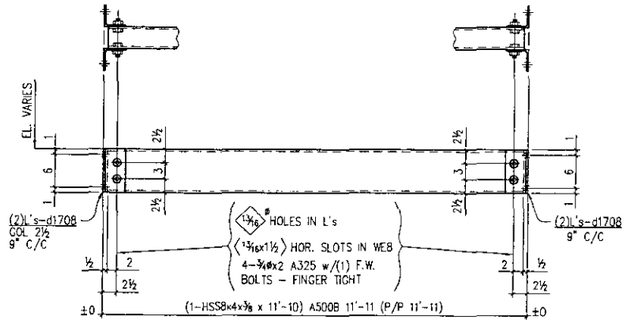
4~DIAGONALS~1708M1

8-¾ø A325 2½



4~DIAGONALS~1708M2

8-¾ø A325 2½



14~BEAMS~1708M3

12-⅝ø x 6⅝ HILTI HAS ROD W/ STD. ADHESIVE CAPSULE

FABRICATING INC.

Licensed CadVantage User

DRAWING ISSUE:

REVISION:

BILL OF MATERIAL

NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : 13/16ø UN
3. FINISH :

Drawing Number	Revision Number	Ship Mark	Piece Mark	Quantity	Type of Material	Size of Material	Grade	Length	Notes
1708	B	1708M1		4	DIAGONAL				GALV
1708	B		a1708	4	RB	¾ø	A36	3'-0	THREAD
1708	B		b1708	4	RB	¾ø	A36	5'-2⅛	THREAD
1708	D			8	MI	#2½ CLEVIS	A36		
1708	D			4	MI	¾ø TURNBUCKLE	A36		
1708	D	1708M1		4	DIAGONAL				
1708	B		a1708	4	RB	¾ø	A36	3'-0	THREAD
1708	B		c1708	4	RB	¾ø	A36	5'-3⅝	THREAD
1708	D			8	MI	#2½ CLEVIS	A36		
1708	B			4	MI	¾ø TURNBUCKLE	A36		
1708	D	1708M3		14	HSS	3 x 3 x ⅜	A500B	11'-10	P/P AT
1708	D		a1708	56	L	4 x 4 x ⅜	A36	0'-8	
1708	D			36	HS	¾ø	A325	8'-2	
1708	B				FIELD BOLTS				
1708	B			16	HS	¾ø	A325	0'-2½	
1708	B			112	EB	⅝ø	HILTI HAS ROD	0'-6⅝	w/STD. CAPSULE

THP LIMITED, INC.
BY: [illegible]
DATE: [illegible]
NOT ATTACHED FOR DIMENSIONS
NOTA - USED ON IF AUTHORIZED

A [illegible]
B [illegible]
C [illegible]
D [illegible]

NOT FOR CONSTRUCTION
OCT 18 2006
FOR APPROVAL ONLY

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REFERENCE DWG: E4 & E6	DESCRIPTION: MISC.	DRAWN BY: RDJ	DATE: 9/06	CHECKED BY: DSS	JOB# 06-36	SHEET: 1708

THIS REVIEW BY GBBN ARCHITECTS, INC., IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND IS NOT AN APPROVAL OF THIS DRAWING OR SET OF DRAWINGS. THE COMMENTS MADE DO NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH THE PROJECT DRAWINGS, SPECIFICATIONS AND OTHER CONTRACT DOCUMENTS. CONTRACTOR IS SOLELY RESPONSIBLE FOR: ALL DIMENSIONS AND QUANTITIES, ALL FABRICATION, DELIVERY AND ERECTION; ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES; ALL COORDINATION WITH ALL OTHER CONTRACTORS, SUPPLIERS AND OTHERS; PERFORMING ALL WORK IN A SAFE AND PROPER MANNER.

NO EXCEPTIONS TAKEN	
FURNISH AS CORRECTED	X
REVISE AND RESUBMIT	
NO REVIEW - INCOMPLETE	
SUBMIT SPECIFIED ITEMS	
REJECTED	

DATE 8.10.06 BY

GBBN ARCHITECTS, INC.
ARCHITECTURE, INTERIORS, PLANNING, ENGINEERING
□ 332 EAST 8TH STREET, CINCINNATI, OHIO 45202-2217 (513) 241-8700
□ 325 WEST MAIN STREET, LEXINGTON, KENTUCKY 40507 (859) 381-8787

GILBANE
University of Kentucky
Patient Care Facility
Gilbane Project No. 18-3966

REVIEWED

- ☐ 010-Huguelet
- ☐ 020-Garage
- ☐ 030-Infrastructure
- ☐ 040-PCF Foundation
- ☐ 050-PCF Core/Shell
- ☐ 060-TowerUp Fit

Bid Package No 100
Submittal No 100-055500-001
Spec Sect/Para.
Reviewed By BH
Date 8/9/06

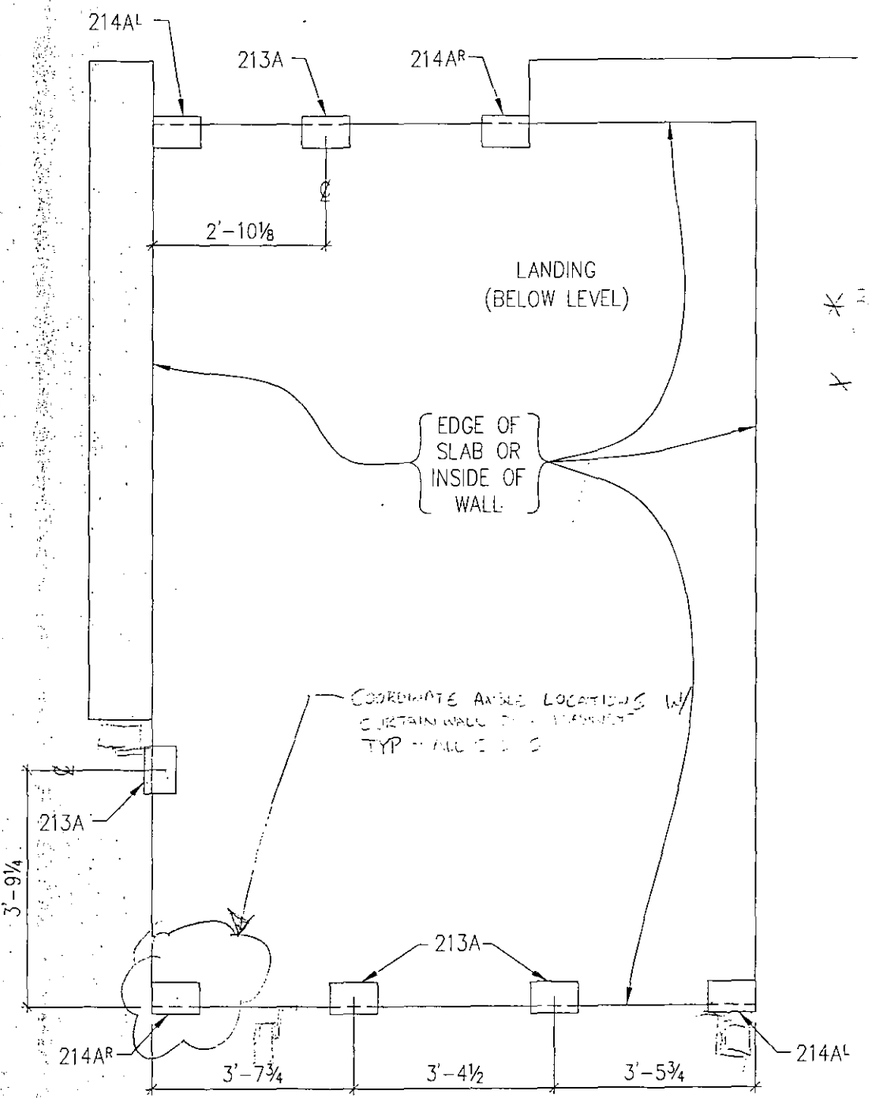
This review does not constitute nor does it assume design responsibility nor does it relieve the trade contractor's supplier from complying with the contract requirements, coordinating their work with other trade contractors and verifying field dimensions.

Licensed CadVantage User

AVENUE FABRICATING, INC.

DRAWING ISSUE:

REVISION:



SEE SK-216 FOR DETAIL SETTING PLAN

16 – 213A REQ'D
8 – 214AR REQ'D
8 – 214AL REQ'D

128-⅜ø HILTI KWIK BOLT III
3½ MIN. EMBED (5/16 GRIP)
(STAINLESS)

ANGLE SETTING PLAN STAIR #1 @ 2nd, 3rd, 4th & 5th LEVELS

THIS REVIEW BY GBBN ARCHITECTS, INC. IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND IS NOT AN APPROVAL OF THE DRAWING OR SET OF DRAWINGS. THE COMMENTS MADE DO NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH THE PROJECT DRAWINGS, SPECIFICATIONS AND OTHER CONTRACT DOCUMENTS. CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL DIMENSIONS AND QUANTITIES, ALL FABRICATION, DELIVERY AND ERECTION, ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES, ALL COORDINATION WITH ALL OTHER CONTRACTORS, SUPPLIERS AND OTHERS, PERFORMING ALL WORK IN A SAFE AND PROPER MANNER.

- NO EXCEPTIONS TAKEN
- FURNISH AS CORRECTED
- REVISE AND RESUBMIT
- NO REVIEW - INCOMPLETE
- SUBMIT SPECIFIED ITEMS
- REJECTED

DATE _____ BY _____

GBBN ARCHITECTS, INC.
ARCHITECTURE, INTERIORS, PLANNING, ENGINEERING
2 EAST 4TH STREET, CINCINNATI, OHIO 45202 (513) 241-6700
325 WEST MAIN STREET, LEXINGTON, KENTUCKY 40507 (859) 381-6787

GILBANE
University of Kentucky
Patient Care Facility
Gilbane Project No. 18-3966
REVIEWED
☐010-Hugasel ☐020-Garage
☐030-Infrastructure ☐040-PCF Foundation
☐050-PCF Core/Shell ☐060-Tower/Up Fit
Bid Package No. 100
Submittal No. 100-035000-010
Spec. Sect/Para. _____
Reviewed By Bbt
Date 10/3/07
This review does not constitute nor does it assume design responsibility nor does it relieve the trade contractor's supplier from complying with the contract requirements, coordinating their work with other trade contractors and verifying field dimensions.

RECEIVED
OCT 03 2007
E. C. MATTHEWS CO.

FAB ISSUE OCT 02 2007

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REF.:	DESC.:	DRN. BY: MAD	DATE: 9/07	CHK'D BY: JDC	JOB# 06-36	SHEET: SK-206

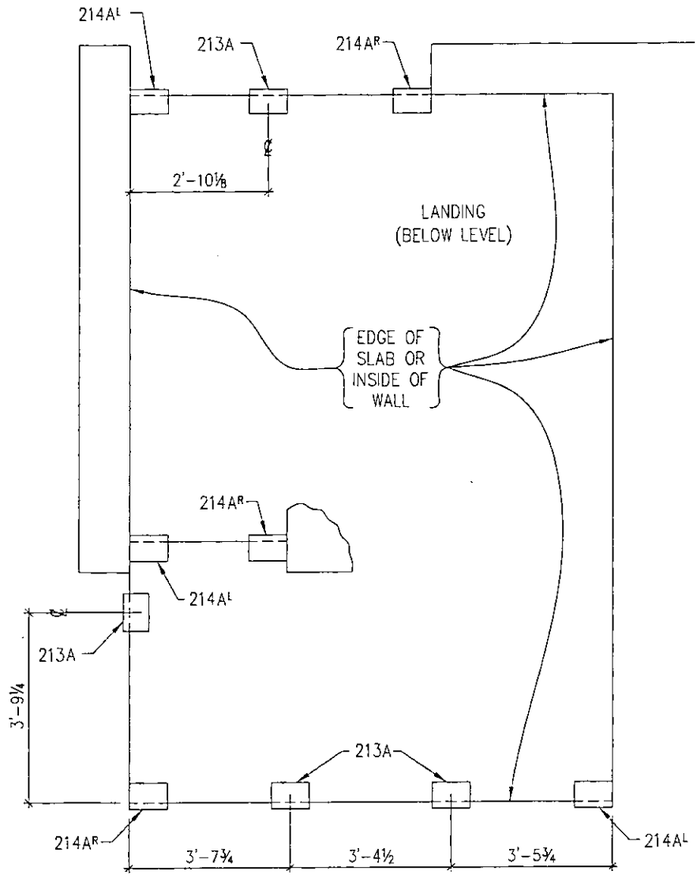
F28 ANGLE CLIPS - APPR
HAND RAIL / GUARD RAIL

Licensed CadVantage User

AVENUE FABRICATING, INC.

DRAWING ISSUE:

REVISION:



SEE SK-216 FOR DETAIL SETTING PLAN

FAB ISSUE OCT 02 2007

4 – 213A REQ'D
3 – 214A^R REQ'D
3 – 214A^L REQ'D

ANGLE SETTING PLAN STAIR #1
6th LEVEL

40-⅜ø HILTI KWIK BOLT III
3½ MIN. EMBED (5/16 GRIP)
(STAINLESS)

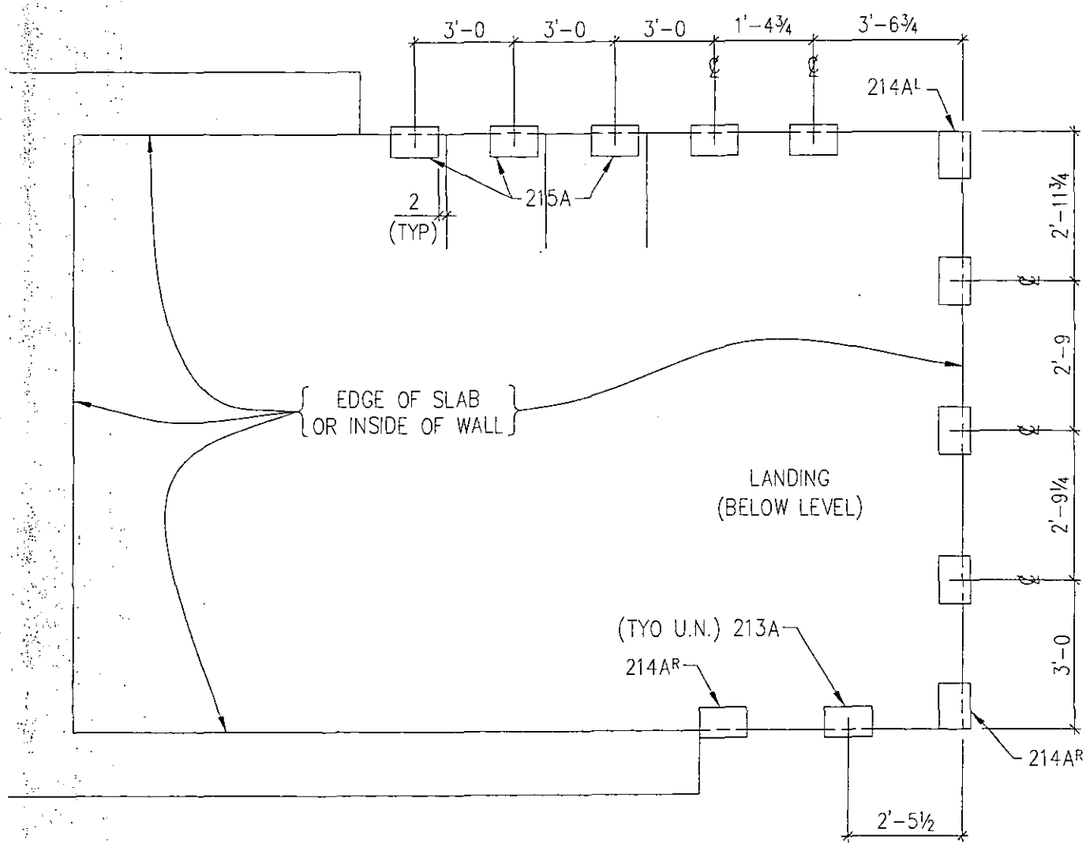
PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REF.:	DESC.:	DRN. BY: MAD	DATE: 9/07	CHK'D BY: JDC	JOB# 06-36	SHEET: SK-207

Licensed CadVantage User

AVENUE FABRICATING, INC.

DRAWING ISSUE:

REVISION:



SEE SK-216 FOR DETAIL SETTING PLAN

24 – 213A REQ'D
8 – 214AR REQ'D
4 – 214AL REQ'D
12 – 215A REQ'D

FAB ISSUE OCT 0 2 2007

ANGLE SETTING PLAN STAIR #2
2nd, 3rd, 4th & 5th LEVEL

192–⅜Ø HILTI KWIK BOLT III
3½ MIN. EMBED (⅝ GRIP)
(STAINLESS)

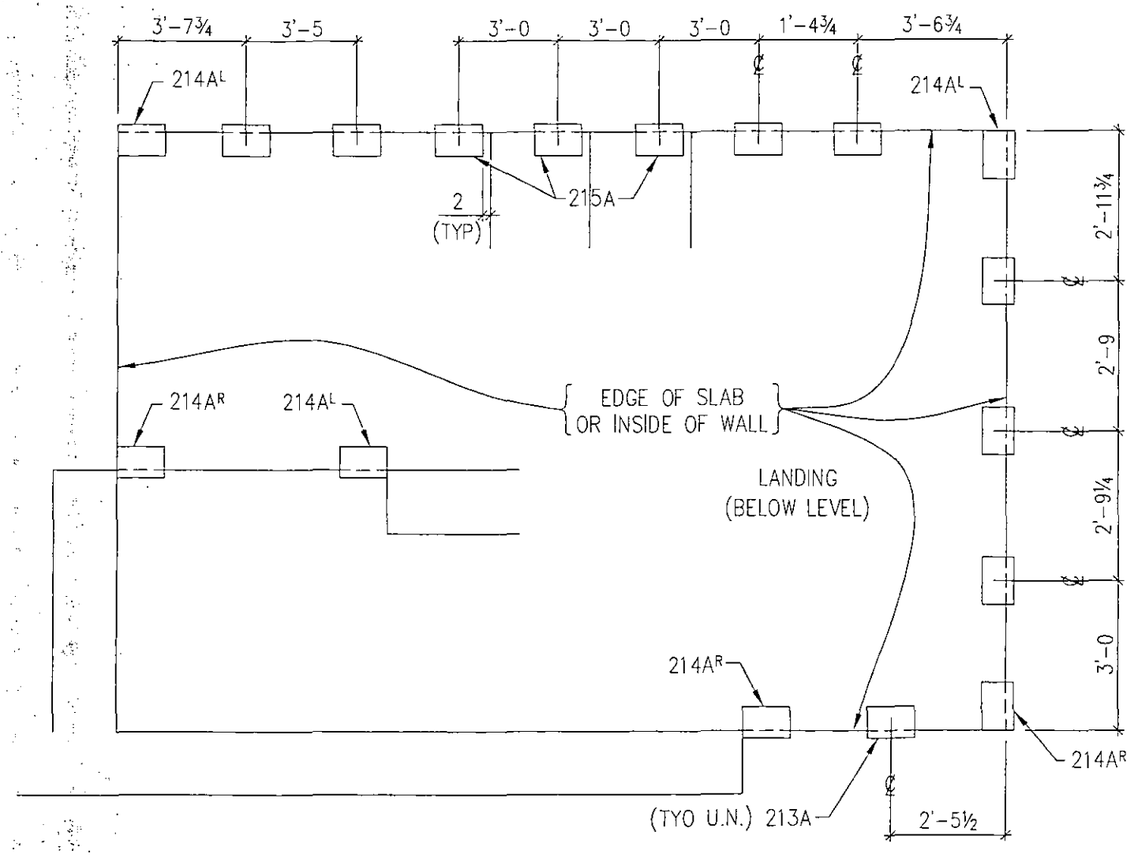
PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REF.:	DESC.:	DRN. BY: MAD	DATE: 9/07	CHK'D BY: JDC	JOB# 06-36	SHEET: SK-208

Licensed CadVantage User

AVENUE FABRICATING, INC.

DRAWING ISSUE:

REVISION:



SEE SK-216 FOR DETAIL SETTING PLAN

8 – 213A REQ'D
3 – 214AR REQ'D
3 – 214AL REQ'D
3 – 215A REQ'D

FAB ISSUE OCT 02 2007

ANGLE SETTING PLAN STAIR #2
6th LEVEL

68–⅜ø HILTI KWIK BOLT III
3½ MIN. EMBED (5/16 GRIP)
(STAINLESS)

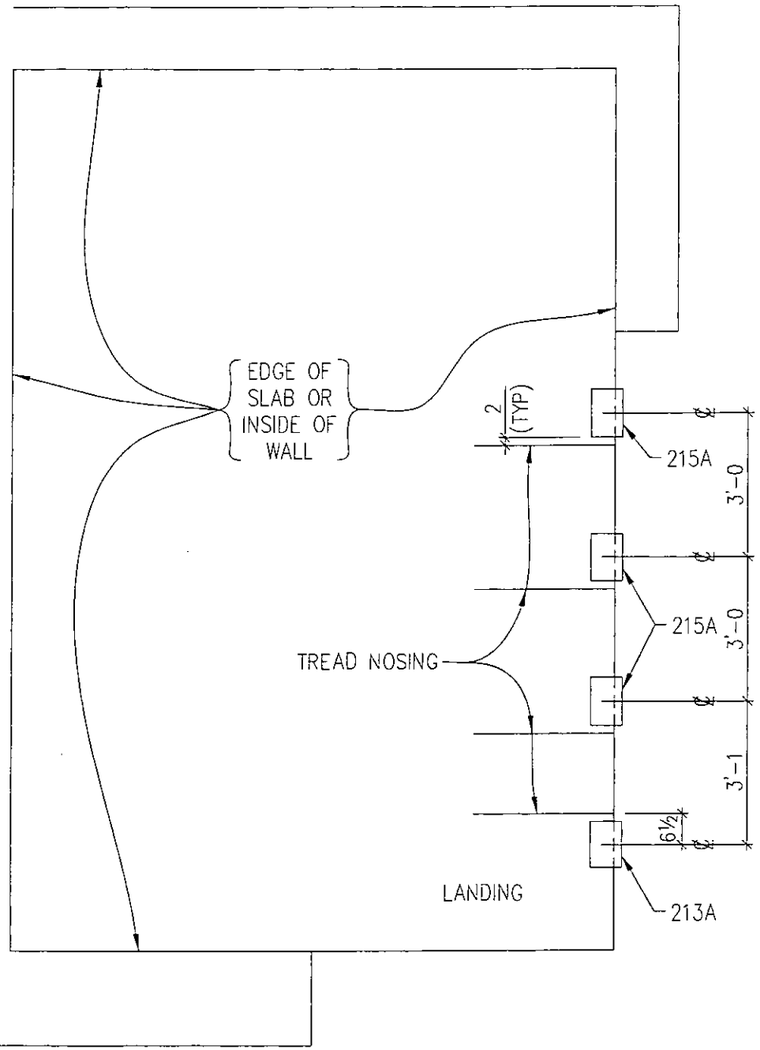
PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REF.:	DESC.:	DRN. BY: MAD	DATE: 9/07	CHK'D BY: JDC	JOB# 06-36	SHEET: SK-209

Licensed CadVantage User

AVENUE FABRICATING, INC.

DRAWING ISSUE:

REVISION:



SEE SK-216 FOR DETAIL SETTING PLAN

3 – 215A REQ'D
ONE – 213A REQ'D

FAB ISSUE OCT 02 2007

ANGLE SETTING PLAN STAIR #4 GRADE LEVEL

16–⅜ø HILTI KWIK BOLT III
3½ MIN. EMBED (5/16 GRIP)
(STAINLESS)

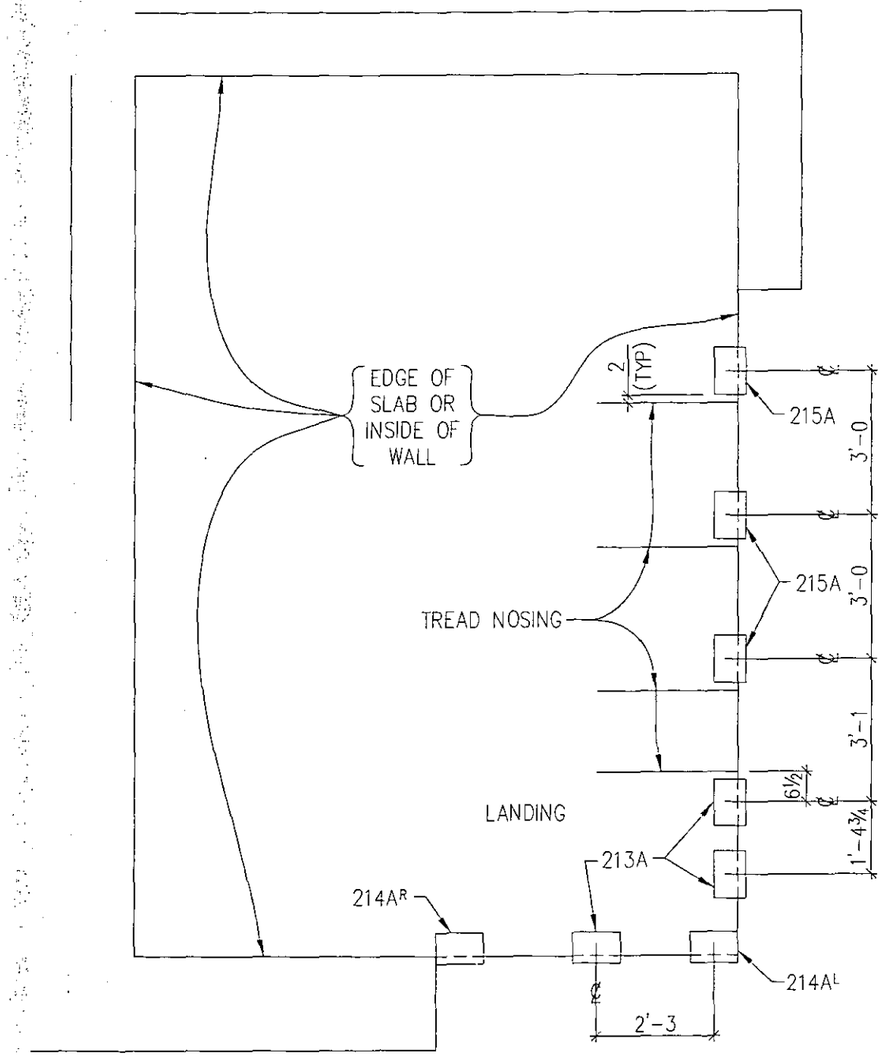
PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REF.:	DESC.:	DRN. BY: MAD	DATE: 9/07	CHK'D BY: JDC	JOB# 06-36	SHEET: SK-210

Licensed CadVantage User

AVENUE FABRICATING, INC.

DRAWING ISSUE:

REVISION:



SEE SK-216 FOR DETAIL SETTING PLAN

12 – 213A REQ'D
4 – 214A^{R} REQ'D
4 – 214A^{L} REQ'D
12 – 215A REQ'D

FAB ISSUE OCT 02 2007

ANGLE SETTING PLAN STAIR #4
2nd, 3rd, 4th & 5th LEVELS

128–$\frac{3}{8}$Ø HILTI KWIK BOLT III
3½ MIN. EMBED ($\frac{5}{16}$ GRIP)
(STAINLESS)

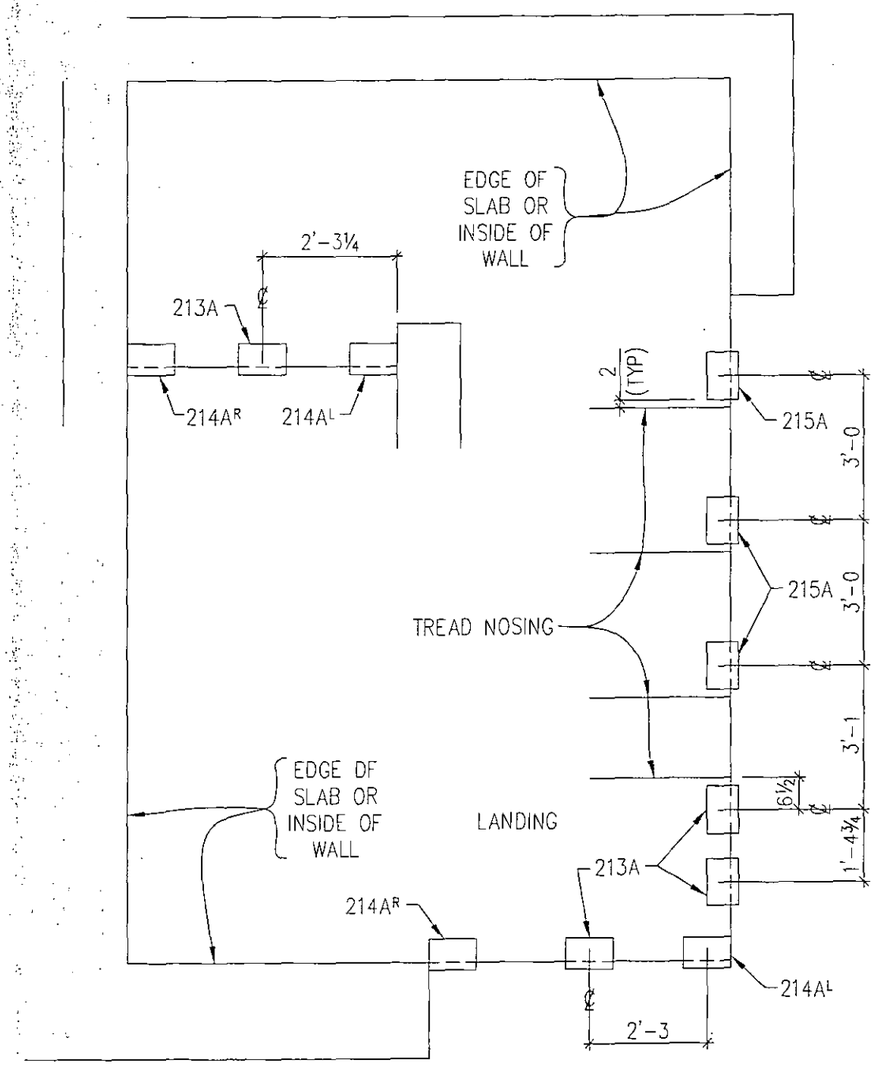
PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REF.:	DESC.:	DRN. BY: MAD	DATE 9/07	CHK'D BY: JDC	JOB# 06-36	SHEET: SK-211

Licensed CadVantage User

AVENUE FABRICATING, INC.

DRAWING ISSUE:

REVISION:



SEE SK-216 FOR DETAIL SETTING PLAN

4 – 213A REQ'D
2 – 214AR REQ'D
2 – 214AL REQ'D
3 – 215A REQ'D

FAB ISSUE OCT 02 2007

44–⅜ø HILTI KWIK BOLT III
3½ MIN. EMBED (5/16 GRIP)
(STAINLESS)

ANGLE SETTING PLAN STAIR #4
6th LEVEL

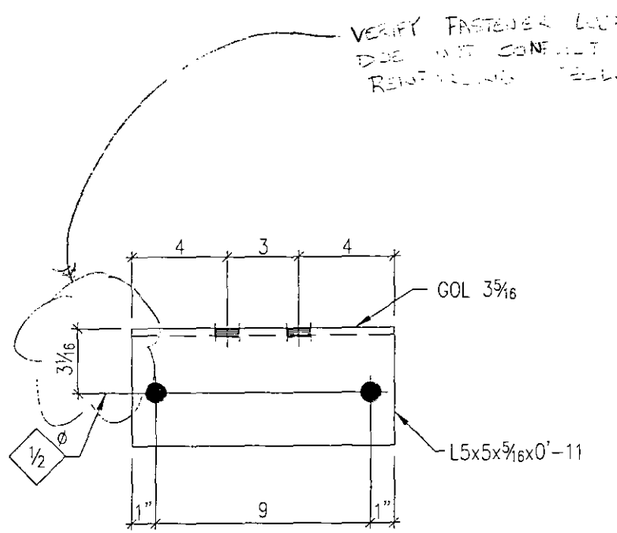
PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REF.:	DESC.:	DRN. BY: MAD	DATE: 9/07	CHK'D BY: JDC	JOB# 06-36	SHEET: SK-212

Licensed CadVantage User

AVENUE FABRICATING, INC.

DRAWING ISSUE:

REVISION:



69~BASE ANGLES~213A

GALVANIZED & SHOP PRIMED
INTUMESCENT SERIES 66
HIGH BUILD EPOXOLINE

79-3/8ø HILTI KWIK BOLT III
316 MIN. EMBED (5/16 GRIP)
(STAINLESS)

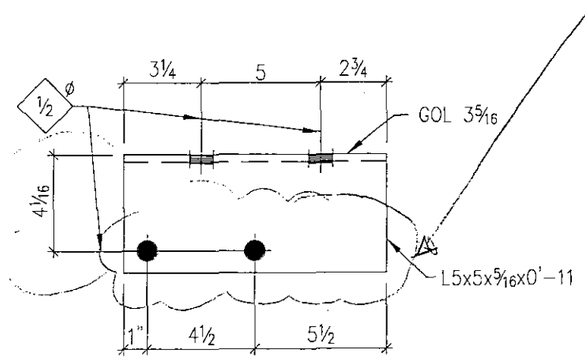
FAB ISSUE OCT 02 2007

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REF.: SK-206 THRU 212	DESC.: BASE PL L's	DRN. BY: MAD	DATE: 9/07	CHK'D BY: JDC	JOB# 06-36	SHEET: SK-213

Licensed CadVantage User

AVENUE FABRICATING, INC.

DRAWING ISSUE:
REVISION:



COORDINATE [illegible]
REINFORCING [illegible]
STRUCTURAL DRAWINGS [illegible]
DO NOT [illegible]
STEEL, TYP

29~BASE ANGLES~214A^{R} (AS SHOWN)

25~BASE ANGLES~214A^{L} (OPP HAND)

GALVANIZED & SHOP PRIMED
INTUMESCENT SERIES 66
HIGH BUILD EPOXOLINE

216-⅜ø HILTI KWIK BOLT III
3½ MIN. EMBED (⅝ GRIP)
(STAINLESS)

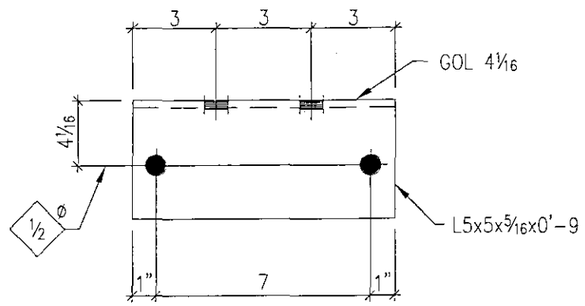
FAB ISSUE OCT 02 2007

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REF.: SK-206 THRU 212	DESC.: BASE PL's	DRN. BY: MAD	DATE 9/07	CHK'D BY: JDC	JOB# 06-36	SHEET: SK-214

Licensed CadVantage User

AVENUE FABRICATING, INC.

DRAWING ISSUE:
REVISION:



56~BASE ANGLES~215A

GALVANIZED & SHOP PRIMED
INTUMESCENT SERIES 66
HIGH BUILD EPOXOLINE

224-3/8Ø HILTI KWIK BOLT III
3 1/2 MIN. EMBED (5/16 GRIP)
(STAINLESS)

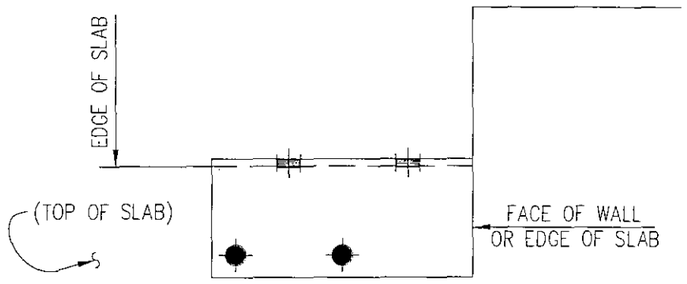
FAB ISSUE OCT 02 2007

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REF.: SK-206 THRU 212	DESC.: BASE PL's	DRN. BY: MAD	DATE: 9/07	CHK'D BY: JDC	JOB# 06-36	SHEET: SK-215

Licensed CadVantage User

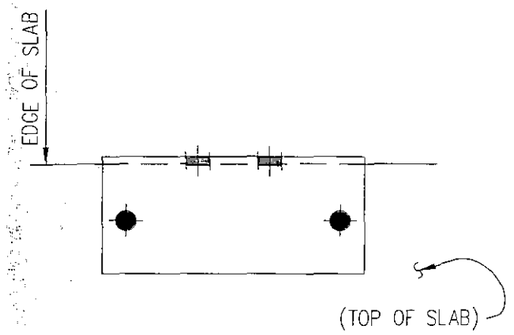
AVENUE FABRICATING, INC.

DRAWING ISSUE:
REVISION:

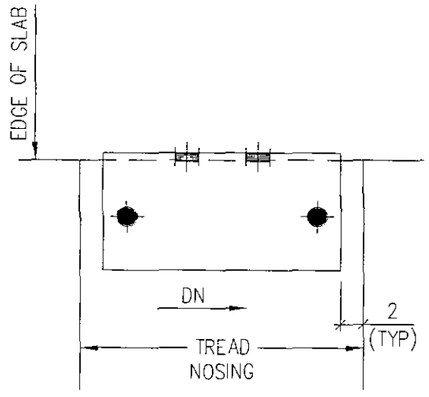


SETTING PLAN DETAIL FOR 214A^{R} (AS SHOWN)

SETTING PLAN DETAIL FOR 214A^{L} (OPP HAND)



SETTING PLAN DETAIL FOR 213A



SETTING PLAN DETAIL FOR 215A

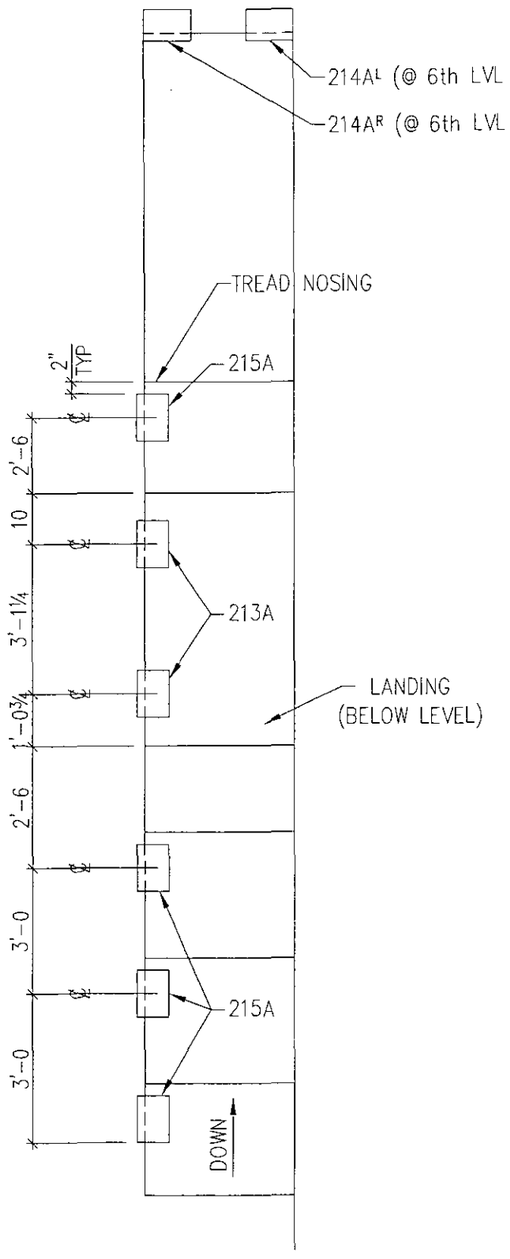
FAB ISSUE OCT 02 2007

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REF.: SK-206 THRU 215	DESC.: SETTING DETAILS	DRN. BY: MAD	DATE: 9/07	CHK'D BY: JDC	JOB# 06-36	SHEET: SK-216

Licensed CadVantage User

AVENUE FABRICATING, INC.

DRAWING ISSUE:
.
.
REVISION:



SEE SK-216 FOR DETAIL SETTING PLAN

ANGLE SETTING PLAN STAIR #4
2nd, 3rd, 4th, 5th & 6th LEVELS

10 – 213A REQ'D
1 – 214AR REQ'D
1 – 214AL REQ'D
20 – 215A REQ'D

FAB ISSUE OCT 02 2007

128–⅜ø HILTI KWIK BOLT III
3½ MIN. EMBED (5/16 GRIP)
(STAINLESS)

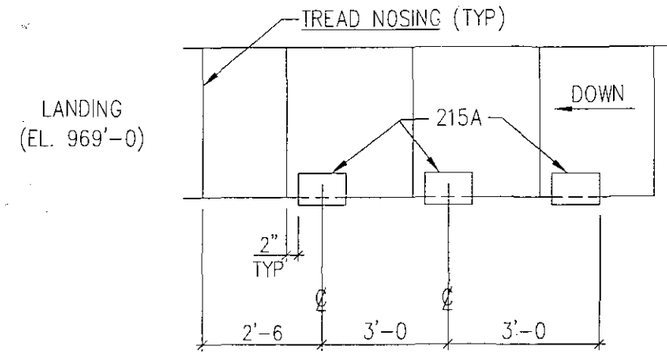
PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REF.:	DESC.:	DRN. BY: MAD	DATE: 9/07	CHK'D BY: JDC	JOB# 06-36	SHEET	SK-217

Licensed CadVantage User

AVENUE FABRICATING, INC.

DRAWING ISSUE:
.
.
REVISION:

SEE SK-216 FOR DETAIL SETTING PLAN



STAFF STAIR

3 - 215A REQ'D

FAB ISSUE OCT 0 2 2007

12-⅜ø HILTI KWIK BOLT III
3½ MIN. EMBED (5/16 GRIP)
(STAINLESS)

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REF.:	DESC.:	DRN. BY: MAD	DATE: 9/07	CHK'D BY: JDC	JOB# 06-36	SHEET: SK-218

Gilbane

Transmittal

Project [2239.2] - PCF - Hospital - Garage

View Date 2/18/2008

Gilbane
940 Elizabeth St
Lexington, KY 40506-0293
Phone: (859) 257-4536
Fax: (859) 323-1331

Transmittal No. 2239.2-01109

To	Mr. Doug Sherwood E. C. Matthews Co., Inc. 2265 Harrodsburg Road Lexington, KY 40504 USA Phone: (859) 278-3131 Fax: (859) 277-7903	**Date**	11/1/2007
		Items listed are being sent	
		☑ Enclosed	
		☐ Under Separate Cover	
		Via	Hand Delivered
		CSI Code	05500 - Metal Fabrication
From	Mr. Brian Hoerr (Gilbane)		
Subject	Submittal Package 100-05500-011.0		

We are transmitting the following to you:

☐ Product Data ☐ Samples ☐ Shop Drawings ☐ O&M Manuals ☐ Plans
☐ Architectural Drawings ☐ Letters ☐ Specifications ☐ Prints ☐ Addenda
☐ Engineering Drawings ☐ Change Orders ☑ Submittal

Submittals

Pkg. No./Rev.	Item No./Rev.	Description	Copies	Reason	Action
100-05500-011.0	100-05500-012.0	Guard Rail Mounting Calculations	2	No Exceptions Taken	

Remarks

	Mr. Brian Hoerr	11/1/2007
From	Printed Name	Date
Received By	Printed Name	Date

Linked Documents

Document Type	Document	Open	Description	Date
Sub. Pkg.	100-05500-011.0			

Distribution

Recipient	Company	Method	Date
Doug Sherwood	E. C. Matthews Co., Inc.	Message	11/1/2007

GOP Limited

SHEET 1 OF 1 — UK parking garage — DESIGNED 5-27-07 BY ...
PROJ. NO. — 5th Avenue — CHECKED ... BY ...
MEMBER — DWG. REFERENCE ...
JOB NO. 07004

Railing HT = 42" - try 3/4" epoxy bolts (HILTI RE-500) ; 3 3/8" embed

11/12/07
REVISION ADD
3-3/8 EPOXY BOLTS
3 3/8" EM EMBEDMENT

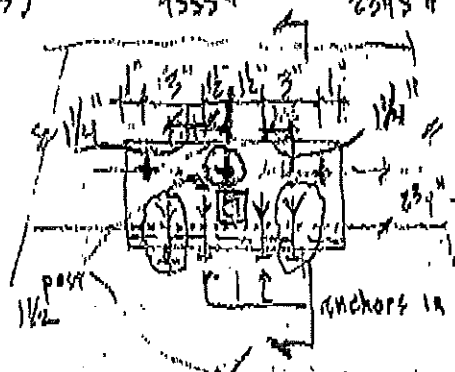
values from HILTI catalog:

	tension	shear
concrete (4000psi)	2505 #	4565 #
steel (ASTM A193)	4555 #	2348 #

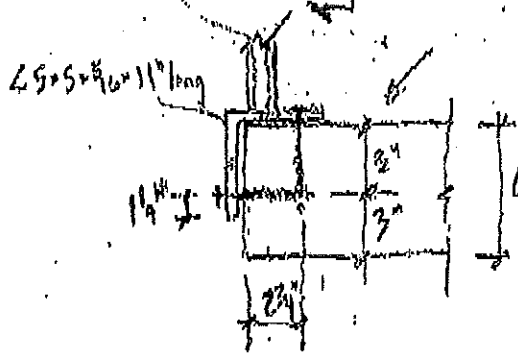
allowables

Not A36 rod!

plan view:



section:



Moment = 40# x 200#
= 8000 #"
÷ 2.75" = 2910 #

bolt reductions (per HILTI - reductions applied to concrete, NOT steel)

spacing reduction (shear/tension) - 3" → 0.82
edge dist (tension) - 2¾" → 0.79
edge dist (shear) - 3" → 0.39

STATE OF KENTUCKY
DOUGLAS ALAN CRAWFORD
23811
LICENSED PROFESSIONAL ENGINEER

Douglas A Crawford 11/20/07

shear value (bolts in edge of slab): 4565 x 0.82 x 0.39 = 1460 #
2910 ÷ 1460 = 2 anchors

tension value (bolts on top of slab): 2505 x 0.82 x 0.79 = 1670 #
2910 ÷ 1670 = 2 anchors

GOP Limited
Structural Engineers

SHEET 1 OF _____ OWNER UK Parking Garage DESIGNED 11/16/07 BY DAC JOB NO. 07084
FLOOR _____ STRUCTURE Railing CHECKED _____ BY _____
MEMBER _____ ARCHITECT Avenue Fab. DWG. REFERENCE _____

As-Built condition

in lieu of 3/8" epoxy anchors (RE-500)

3/8" ϕ Hilti Kwik bolt II's used

Capacity of 3/8 ϕ Hilti Kwik bolt II's (S.S.)

1575 lbs. tension

1070 lbs. shear

bolt reductions

spacing (shear/tension) => 3" => 1.00

edge distance (tension) => 2 3/4 => .90

" " (shear) => 3 => .51

STATE OF KENTUCKY
DOUGLAS ALAN CRAWFORD
23011
LICENSED PROFESSIONAL ENGINEER

11/16/07

shear value (bolts in edge of slab) => 1070 x 1.00 x .51
= 650 lbs

tension value (bolts in top of slab) => 1575 x 1.00 x .90
= 932 lbs

Shear req'd => 2910 # req'd.

650 x 2 provided Kwikbolt II's

1650 #

RE-500

1 1/4" spcg => 1.00

edge => .30

reductions

4565 x .7 x .30 = 960 # / anchor

2 use ϕ => 1920 # 1650 (exp. anchors)

3570 # Capacity

> 2910 lbs

Total Capacity

GOP Limited
Structural Engineers

SHEET 2 OF
FLOOR
MEMBER

OWNER UK Parking Garage
STRUCTURE Railing
ARCHITECT Avenue Fab.

JOB NO. 07084
DESIGNED 11/16/07 BY DAC
CHECKED BY
DWG. REFERENCE

Tension side - toe of angle

2 x 832 = 1664 lbs (provided)

2910 lbs total

1664

1246 lbs short.

Added one 3/8" ϕ RE500

Spec. reduction ⇒ .7 (1¼")

Edge (tension) = .78

2910 x .7 x .78 = 1588.6 lbs

Total Capacity ⇒ 1664 + 1368 = 3032 lbs > 2910 lbs

STATE OF KENTUCKY
DOUGLAS ALAN CRAWFORD
22617
LICENSED PROFESSIONAL ENGINEER
11/20/07

GOP Limited
Structural Engineers

Fax

To: Bob Nichols From: Doug Crawford

Fax: Pages:

Phone: Date: 11/20/07

Re: UK Parking Garage

☐ Urgent ☐ For Review ☐ Please Comment ☐ Please Reply ☐ Please Recycle

I have attached the revised computations and stamped information for your use.

Thanks!
Doug C.

644 Linn Street, Suite 936, Cincinnati, Ohio 45203-1738 PH: 513/ 621-7073 FAX: 513/ 621-0434

9212 SHOP

Gilbane

Transmittal

Project [2239.2] - PCF - Hospital - Garage

View Date 8/16/2006

Gilbane Building Company
940 Elizabeth St
Lexington, KY 40506-0293
Phone: (859) 257-4536
Fax: (859) 323-1331

Transmittal No. 2239.2-00262

To	Mr. Doug Sherwood E. C. Matthews Co., Inc. 2265 Harrodsburg Road Lexington, KY 40504 USA Phone: (859) 278-3131 Fax: (859) 277-7903	**Date**	8/16/2006
From	Mr. Brian Hoerr (Gilbane Building Company)	**Items listed are being sent**	
Subject	Submittal	☐ Enclosed ☐ Under Separate Cover	
		Via	Hand Delivered

We are transmitting the following to you:

☐ Product Data ☐ Samples ☐ Shop Drawings ☐ O&M Manuals ☐ Plans
☐ Architectural Drawings ☐ Letters ☐ Specifications ☐ Prints ☐ Addenda
☐ Engineering Drawings ☐ Change Orders ☑ Submittal

Items

No.	Description	Copies	Reason	Action
100-05500-001	Crash rail, anchor bolt layout- lower level drawing	1	Approved as Noted	

Remarks Copy to Bill Nett, Robert Meyer-Whittenberg

	Mr. Brian Hoerr	8/16/2006
From	Printed Name	Date
Received By	Printed Name	Date

RECEIVED

AUG 1 0 2006

GILBANE
#3966

UNIVERSITY OF KENTUCKY
CAPITAL PROJECT MANAGEMENT DIVISION
SHOP DRAWING TRANSMITTAL

UK PROJECT RE: UK GRADGE UK PROJECT NO. 2239

ATTACHED ARE SUBMITTALS/SHOP DRAWINGS FOR THE ABOVE REFERENCED PROJECT.

*****NO MORE THAN ONE SPECIFICATION REFERENCE PER TRANSMITTAL*****

SECTION A

TO BE COMPLETED BY CONTRACTOR PRIOR TO SUBMISSION TO CONSULTANT

TO: (CONSULTANT)	FROM: (CONTRACTOR)
GILBANE	E.C. MATTHEWS

DATE	NO. OF COPIES	SPECIFICATION REFERENCE	DESCRIPTION:
	2	05500	ANCHOR BOLT LAYOUT FOR CRASH RAILS

COMMENTS:

COPY TO:

SIGNED:

SECTION B

TO BE COMPLETED BY CONSULTANT PRIOR TO SUBMISSION TO CONTRACTOR

TO: (CONTRACTOR)	FROM: (CONSULTANT)
GILBANE	AMK/GIBBN

DATE	NO OF COPIES	APPROVAL STATUS	DESCRIPTION:
8-10-06	1	AN	ANCHOR BOLT LAYOUT FOR CRASH RAILS

A = APPROVED
AN = APPROVED AS NOTED
RR = REVISE AND RESUBMIT
SC = SEE COMMENTS
NA = NOT APPROVED

COMMENTS:

COPY TO: UNIVERSITY OF KENTUCKY W/ONE COPY APPROVED SUBMITTAL

SIGNED:

Gilbane

Transmittal

Project [2239.2] - PCF - Hospital - Garage

View Date 8/9/2006

Gilbane Building Company
940 Elizabeth St
Lexington, KY 40506-0293
Phone: (859) 257-4536
Fax: (859) 323-1331

Transmittal No. 2239.2-00237

To Mr. Bryan Korb GBBN Architects, Inc. 332 East Eighth St Cincinnati, OH 45202-2217 USA Phone: (513) 241-8700 Fax: (513) 241-8873	**Date** 8/9/2006 **Items listed are being sent** ☑ Enclosed ☐ Under Separate Cover **Via** Overnight - Federal Express **CSI Code** 05500 - Metal Fabrication
From Mr. Ryan Maguire (Gilbane Building Company)	
Subject Submittal	
cc Mr. Daniel Ruark (A. M. Kinney, Inc.)	

We are transmitting the following to you:

☐ Product Data ☐ Samples ☐ Shop Drawings ☐ O&M Manuals ☐ Plans
☐ Architectural Drawings ☐ Letters ☐ Specifications ☐ Prints ☐ Addenda
☐ Engineering Drawings ☐ Change Orders ☑ Submittal

Items

No.	Description	Copies	Reason	Action
100-05500-001	Crash Rails, Anchor Bolt Layout- Lower Level Drawings	8	For Approval	

Remarks One submittal copy to Dan Ruark. SEE 8/5/06 ATTACHED EMAIL -

Ryan Maguire	Mr. Ryan Maguire	8/9/2006
From	Printed Name	Date
D Ruark		8/10/06
Received By	Printed Name	Date

SUBMITTAL TRANSMITTAL

E. C. Matthews Company, Inc.
2265 Harrodsburg Road
Lexington, KY 40504
Phone: 859/278-3131
FAX: 859/277-7903
E-Mail: dsherwood@ecmatthews.com

Spec Section [redacted] rails

Initial (I) or Resub (R#) [redacted]

DATE: [redacted] JOB NO. [redacted]

TO: [redacted]

We Are Sending You X Data Sheets X Shop Drawings

Subcontractor or Supplier [redacted]

RECEIVED
AUG 07 2006
GILBANE #3966

COPIES	DATE	DESCRIPTION
9		Anchor Bolt Layout - Crash Rails - Lower Level
9		Anchor Bolt Cert
~~38~~		~~Anchor Bolts w/ nuts and washers~~

Contractors Review:

APPROVED FOR GENERAL CONFORMITY TO PLANS AND SPECIFICATIONS. DETAIL DIMENSIONS AND QUANTITIES NOT COMPLETELY CHECKED. SUBCONTRACTOR'S FULL RESPONSIBILITY IS IN NO WAY RELIEVED BY THIS APPROVAL.

E.C. MATTHEWS CO., INC. BY: [signature] DATE 8-7-06

Construction Manager / Architects Review:

COPY TO: File

SIGNED: Doug Sherwood

Hoerr, Brian C.

From: Tom Matthews [tmatthews@ecmatthews.com]
Sent: Saturday, August 05, 2006 3:11 AM
To: Duncan, Randy
Cc: Hoerr, Brian C.; Johnson, Jimmy; Zellen, Jeff; Robert; dsherwood@ecmatthews.com; dprice@ecmatthews.com
Subject: Crash Rail Anchor Bolt drawing

Attachments: found wall crash rail arlayout.pdf

found wall crash rail arlayout...

Randy-

Per our email we have been in touch with Whittenberg to determine their placement dates for the walls along B&D lines between 5-line and 12.8 line.

We still have nothing from Avenue, so we have produced the drawing in house for use by Whittenberg on Tuesday and attached it as a .pdf file. Although it can be printed on 11x17 paper, but we will be delivering ample copies the first thing Monday morning with the bolts.

Your attention is directed to the only atypical condition, that being where the crash rail is intended to end near the stair wing wall near B-6. We show this crash rail standard 4" outside the wing wall for symmetry.

Note the following:
- Detail 13/S202 depicts the full thickness of the 12" wall, but only 8" protrudes above the deck. For that reason the wall will be flush with the column face;
- Since these bolts go into the top of the 8" wall 24" above the deck, if these first placements are only the 12" thick sections the bolts should not be inserted in these placements;
- The crash rail extends to 3-line along B and to 4-line along D, but only the walls past 5-line are being placed at this time (i.e., those on the foundation wall). For simplicity a second drawing will be provided for those portions of the wall that are placed on the deck.

Tom Matthews
E.C. Matthews Co., Inc.

Vulcan Threaded Products
#10 Crosscreek Trail
Pelham, Al 35124
Ph:(205) 620-5139
Fax:(205) 620-5150

July 2, 2004

RE: Anchor Bolts.

This letter is to certify that the Anchor Bolts supplied by Vulcan Threaded Products will meet the minimum physical and chemical requirements of ASTM A307 Grade C. 3/8" to 5/8" Anchor Bolts are produced from 1006-1010 Steel. 3/4" to 1" Anchor bolts are produced from 1006-1010 and A36 Steel. Anchor Bolts are manufactured in the United States of America and produced to a commercial nut fit.

All Hot-Dip Galvanized Anchor Bolts are plated according to ASTM A153 class C Specifications and all Zinc Anchor Bolts are plated according to ASTM B633.

Best Regards,

Jeff Hayes

Jeff Hayes

GILBANE
University of Kentucky
Patient Care Facility
Gilbane Project No. 18-3966
REVIEWED
☐ 010-Huguelet ☒ 020-Garage
☐ 030-Infrastructure ☐ 040-PCF Foundation
☐ 050-PCF Core/Shell ☐ 060-TowerUp Fit
Bid Package No. 100
Submittal No. 100-05500-00
Spec. Sect/Para.
Reviewed By
Date 8/9/06
This review does not constitute nor does it assume design responsibility nor does it relieve the trade contractor's supplier from complying with the contract requirements, coordinating their work with other trade contractors and verifying field dimensions.

THIS REVIEW BY GBBN ARCHITECTS, INC., IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND IS NOT AN APPROVAL OF THIS DRAWING OR SET OF DRAWINGS. THE COMMENTS MADE DO NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH THE PROJECT DRAWINGS, SPECIFICATIONS AND OTHER CONTRACT DOCUMENTS. CONTRACTOR IS SOLELY RESPONSIBLE FOR: ALL DIMENSIONS AND QUANTITIES, ALL FABRICATION, DELIVERY AND ERECTION; ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES; ALL COORDINATION WITH ALL OTHER CONTRACTORS, SUPPLIERS AND OTHERS; PERFORMING ALL WORK IN A SAFE AND PROPER MANNER. (INFORMATION ONLY)

NO EXCEPTIONS TAKEN X
FURNISH AS CORRECTED
REVISE AND RESUBMIT
NO REVIEW - INCOMPLETE
SUBMIT SPECIFIED ITEMS
REJECTED

DATE 8.10.06 BY

GBBN ARCHITECTS, INC.
ARCHITECTURE, INTERIORS, PLANNING, ENGINEERING
☐ 332 EAST 8TH STREET, CINCINNATI, OHIO 45202-2217 (513) 241-8700
☐ 325 WEST MAIN STREET, LEXINGTON, KENTUCKY 40507 (859) 381-8787

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NO EXCEPTIONS TAKEN	
FURNISH AS CORRECTED	X
REVISE AND RESUBMIT	
NO REVIEW - INCOMPLETE	
SUBMIT SPECIFIED ITEMS	
REJECTED	

DATE 8.10.06 BY

GBBN ARCHITECTS, INC.
ARCHITECTURE, INTERIORS, PLANNING, ENGINEERING
□ 332 EAST 8TH STREET, CINCINNATI, OHIO 45202-2217 (513) 241-8700
□ 325 WEST MAIN STREET, LEXINGTON, KENTUCKY 40507 (859) 381-8787

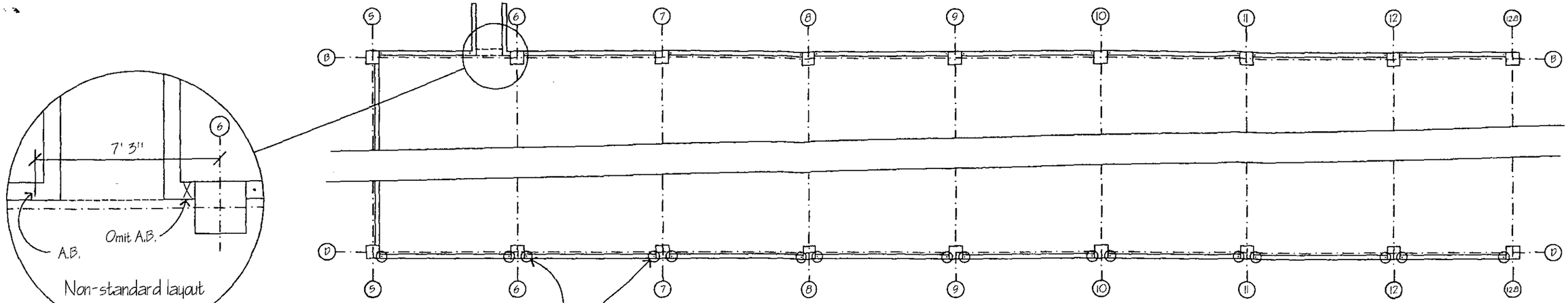
GILBANE
University of Kentucky
Patient Care Facility
Gilbane Project No. 18-3966
REVIEWED

- ☐ 010-Huguele
- ☐ 020-Garage
- ☐ 030-Infrastructure
- ☐ 040-PCF Foundation
- ☐ 050-PCF Core/Shell
- ☐ 060-TowerUp Fit

Bid Package No 100
Submittal No 100-05500-001
Spec Sect/Para.
Reviewed By BH
Date 8/9/06

This review does not constitute nor does it assume design responsibility nor does it relieve the trade contractor's supplier from complying with the contract requirements, coordinating their work with other trade contractors and verifying field dimensions.

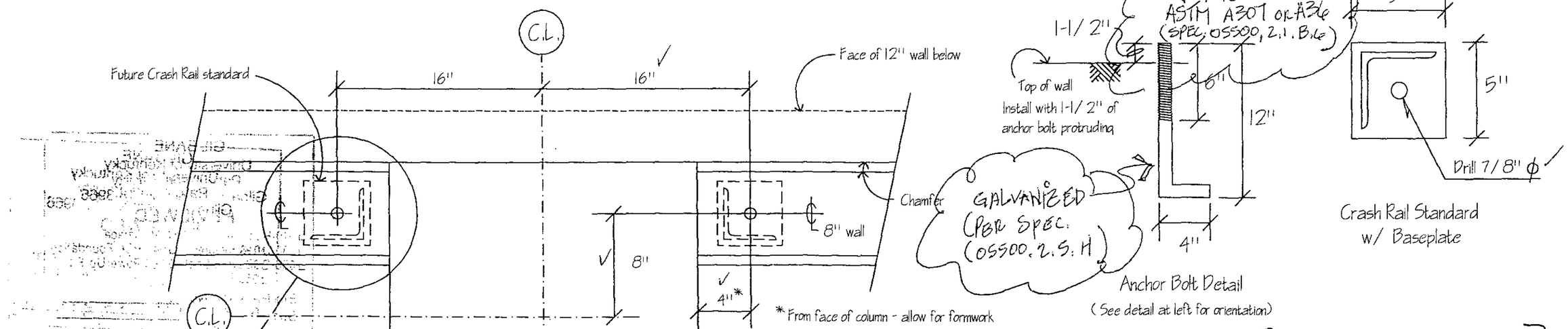
See detail for non-standard layout @ stair



Anchor bolts - 1 pair per bay (see detail below)

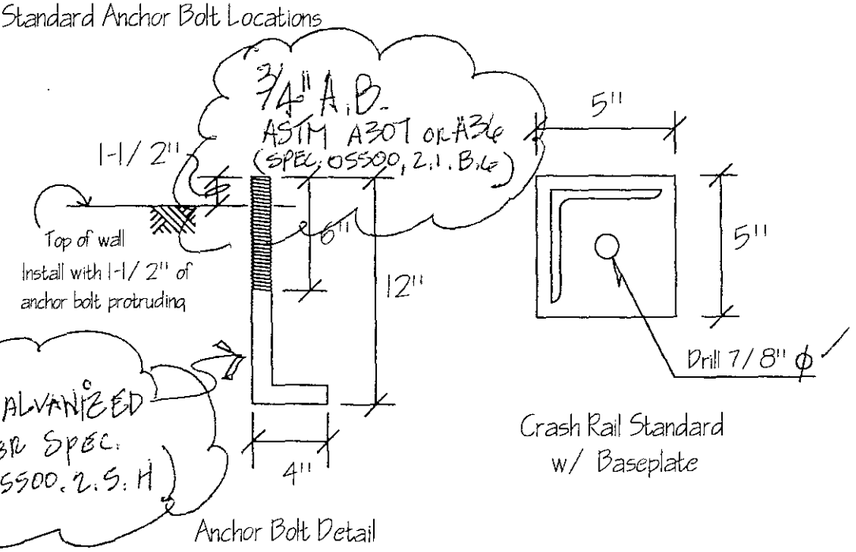
B- Line similar

Ground level Foundation Walls - Crash Rail Standard Anchor Bolt Locations



Typical Layout for Anchor Bolts

N.T.S.



Anchor Bolt Detail

(See detail at left for orientation)

Crash Rail Standard w/ Baseplate

REVIEWED FOR ANCHOR BOLT LAYOUT- CRASH RAILS PER DETAIL 3/A821 - NOT REVIEWED.

D Ruark & Co

{SECOND DRAWING}

E.C. Matthews Co., Inc. 2265 Harrodsburg Road Lexington, Kentucky 40504-3320 Phone (859) 278-3131 Fax 277-7900 engineers • constructors	UK Patient Care Facility Parking Garage
	Anchor Bolt Layout - Crash Rail

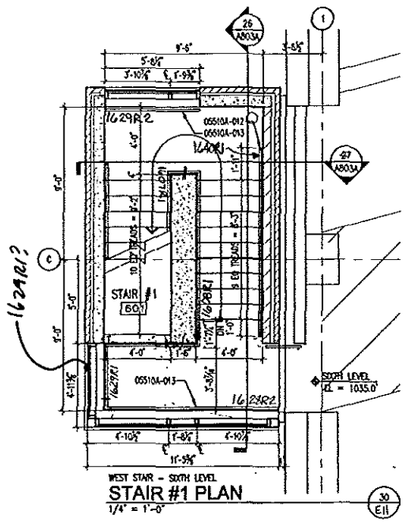
Drawn by : TM	Date : 7/28/06	ECM Job No. : 9212	Sheet CR-1
Checked by : DS	Drawing code : Crash Rail AB	Last revision : 8/7/06	
Approved by :		Sheet 1 of 1	

AVENUE FABRICATING, INC.

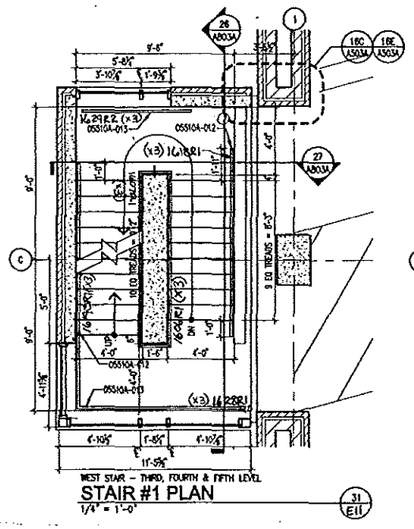
Licensed Contractor User

DRAWING ISSUE:
FOR APPROVAL 11/28/06
FOR APPROVAL 6/22/07

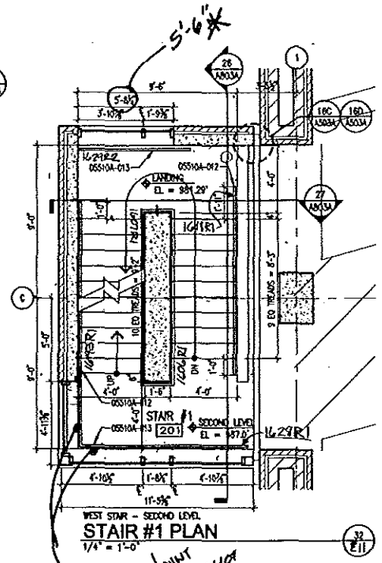
REVISION:
△



STAIR #1 PLAN
1/4" = 1'-0"

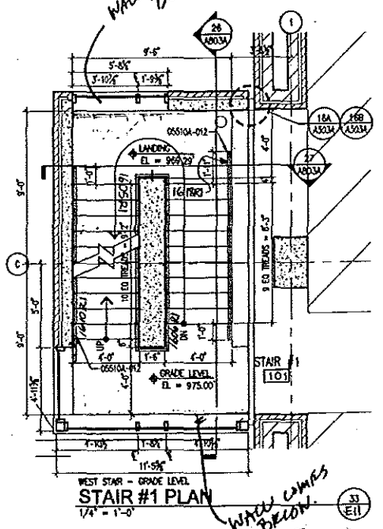


STAIR #1 PLAN
1/4" = 1'-0"



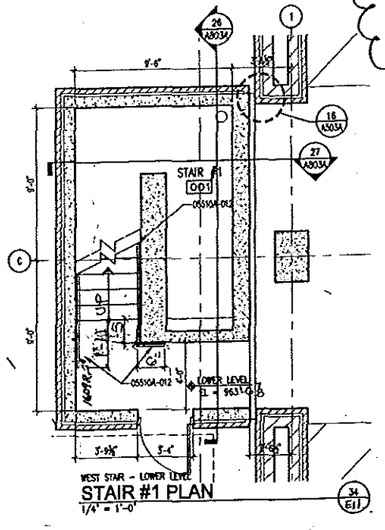
STAIR #1 PLAN
1/4" = 1'-0"

BRACKET MOUNT TO AVOID CONFLICT W/ 1045R1



STAIR #1 PLAN
1/4" = 1'-0"

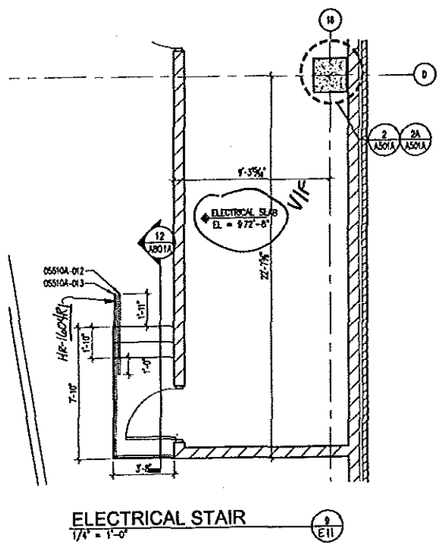
WALL COMES FROM BELOW



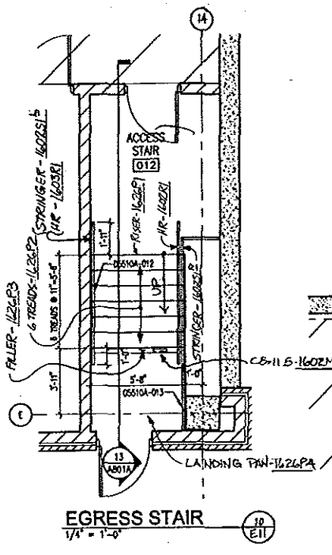
STAIR #1 PLAN
1/4" = 1'-0"

* FIELD VERIFY ALL DIMENSIONS

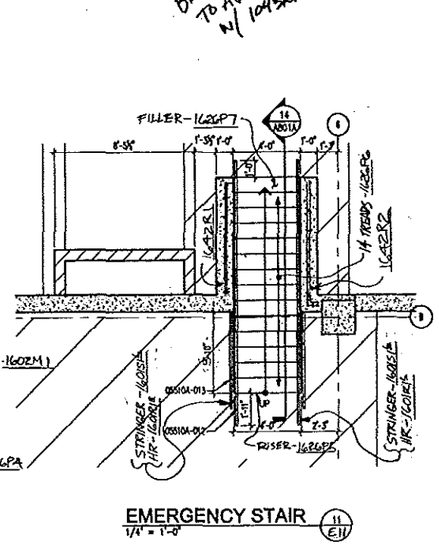
APPROVED



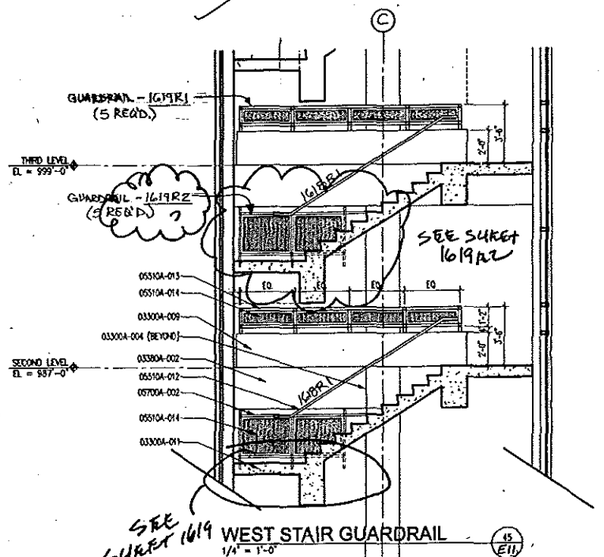
1/4" = 1'-0"



1/4" = 1'-0"



1/4" = 1'-0"



1/4" = 1'-0"

FIELD NOTE:
CORE DRILL CONCRETE TO MATCH FABRICATED H.R. AS REQUIRED

APPROVED AS GENERAL CONFORMANCE TO PLANS AND SPECIFICATIONS. DETAIL DIMENSIONS AND QUANTITIES NOT COMPLETELY CHECKED. SUBCONTRACTOR'S FULL RESPONSIBILITY AS THIS MAY FACILITATE BY THIS APPROVAL.

E.C. MATTHEWS CO., INC.
BY: DJS 7-20-07
SIGNATURE DATE

NOT FOR CONSTRUCTION
JUN 25 2007
FOR APPROVAL ONLY

PROJECT: U.K. PARKING GARAGE | CUSTOMER: E.C. MATTHEWS CO., INC. | REFERENCE DWG: A801, A804, A805 | DESCRIPTION: STAIR #1 & MISC. STAIRS | DRAWN BY: WSE | DATE: 11-06 | CHECKED BY: DJS | JOB# 06-36 | SHEET: E11 △

AVENUE FABRICATING, INC.

Licensed CadVantage User

DRAWING ISSUE:
FOR APPROVAL 11/28/06
FOR APPROVAL 6/22/07

REVISION:
△

SEE 16ST NOT REGARDING PROJECTION OF RAIL ONTO STAIR WIDTH

NORTHEAST STAIR – SIXTH LEVEL
STAIR #2 PLAN
1/4" = 1'-0"

NORTHEAST STAIR – THIRD, FOURTH & FIFTH LEVEL
STAIR #2 PLAN
1/4" = 1'-0"

NORTHEAST STAIR – SECOND LEVEL
STAIR #2 PLAN
1/4" = 1'-0"

VIF LENGTH AVAILABLE.

PLASTER TO WALL

NORTHEAST STAIR – GRADE LEVEL
STAIR #2 PLAN
1/4" = 1'-0"

SLAB OR WALL NOT OPEN.

CONFIRM END CONDITION

NORTHEAST STAIR – LOWER LEVEL
STAIR #2 PLAN
1/4" = 1'-0"

1620 R1

FIELD NOTE:
CORE DRILL CONCRETE TO MATCH FABRICATED H.R. AS REQUIRED

SNOW GATE DETAIL
1/2" = 1'-0"

SNOW GATE JAMB
1/2" = 1'-0"

8'-4 M.O.

SNOW GATES ELEVATION
1/4" = 1'-0"

FOR CONSTRUCTION
JUN 25 2007
FOR APPROVAL ONLY

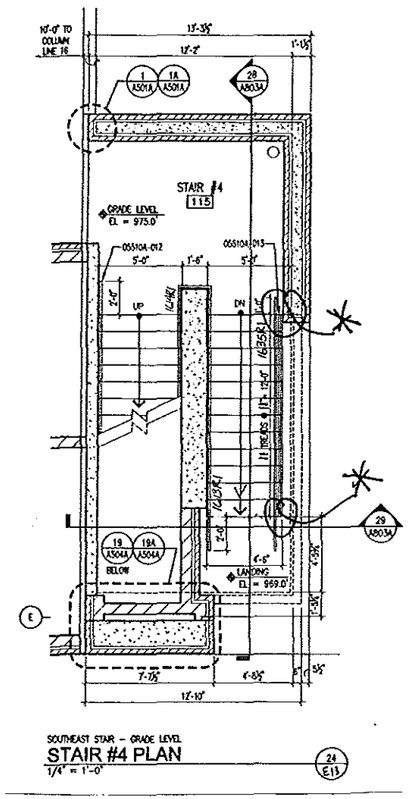
PROJECT: U.K. PARKING GARAGE | CUSTOMER: E.C. MATTHEWS CO., INC. | REFERENCE DWG: A801A & A802A | DESCRIPTION: STAIR #2 & SNOW GATE | DRAWN BY: WSE | DATE: 11-06 | CHECKED BY: | JOB# 06-36 | SHEET: E12 △

AVENUE FABRICATING, INC.

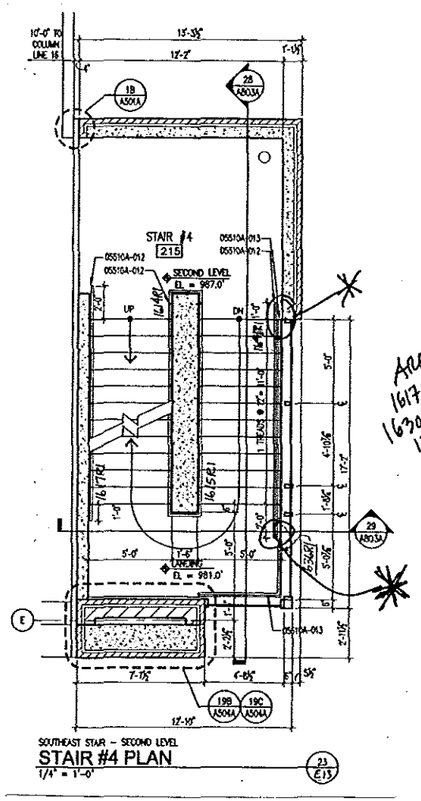
Licensed CadVantage User

DRAWING ISSUE:
FOR APPROVAL 11/20/06
FOR APPROVAL 6/22/07

REVISION:
△

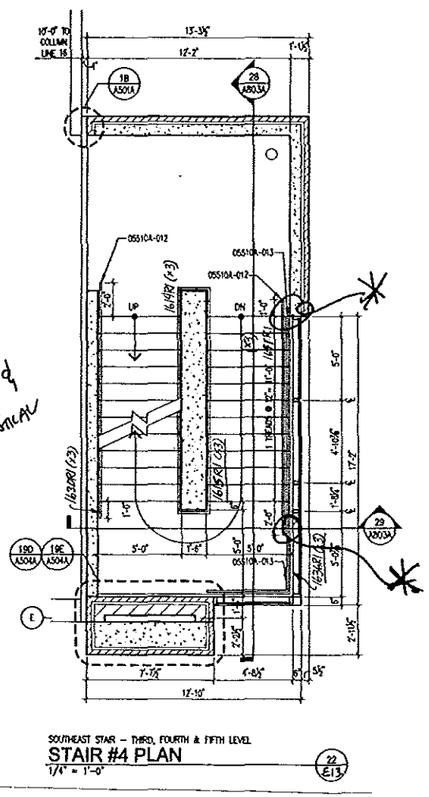


SOUTHEAST STAIR – GRADE LEVEL
STAIR #4 PLAN
1/4" = 1'-0"
24 E13

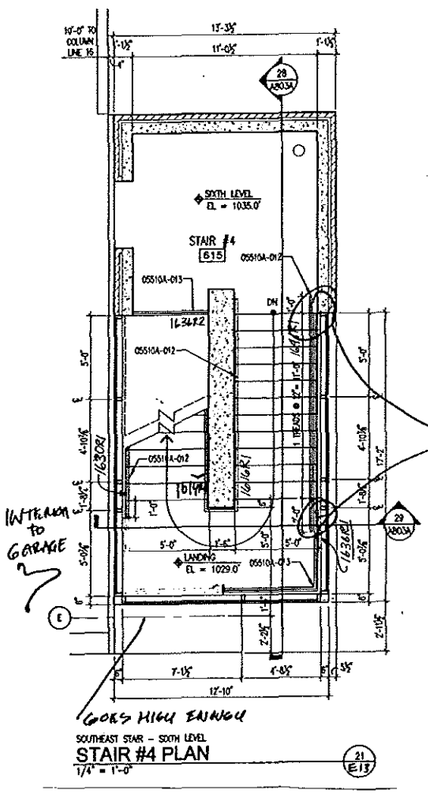


SOUTHEAST STAIR – SECOND LEVEL
STAIR #4 PLAN
1/4" = 1'-0"
23 E13

ALL 16178's & 16301's IDENTICAL



SOUTHEAST STAIR – THIRD, FOURTH & FIFTH LEVEL
STAIR #4 PLAN
1/4" = 1'-0"
22 E13



SOUTHEAST STAIR – SIXTH LEVEL
STAIR #4 PLAN
1/4" = 1'-0"
21 E13

FIELD NOTE:
CORE DRILL CONCRETE TO MATCH FABRICATED H.R. AS REQUIRED

SEE NOTE REGARDING 16141M PROJECTION INTO STAIR WIDTH DWG. 1641 & 1695

NOT FOR CONSTRUCTION
JUN 25 2007
FOR APPROVAL ONLY

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REFERENCE DWG: A802.A	DESCRIPTION: STAIR #4	DRAWN BY: WSE	DATE: 11-06	CHECKED BY:	JOB# 06-36	SHEET: E13 △

FIELD NOTE:
CORE DRILL CONCRETE TO MATCH FABRICATED H.R AS REQUIRED

AVENUE FABRICATING, INC.

Licensed CadVantage User

DRAWING ISSUE:
FOR APPROVAL 11/28/06
FOR APPROVAL 6/22/07
REVISION:
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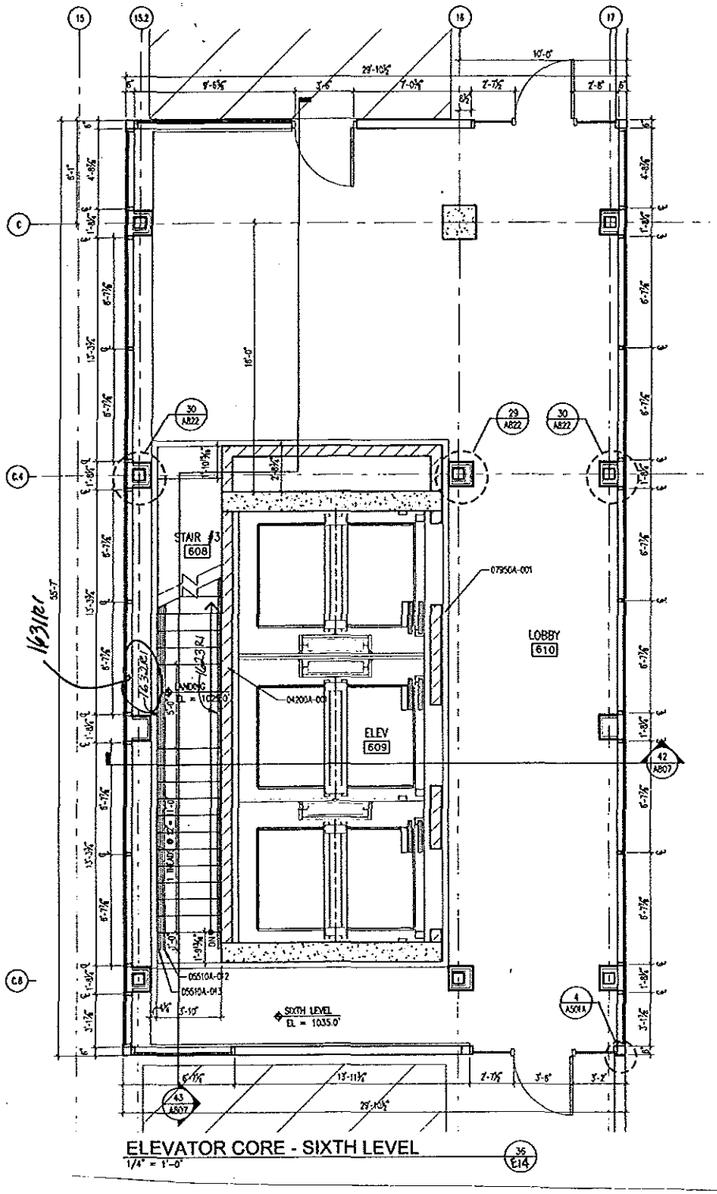
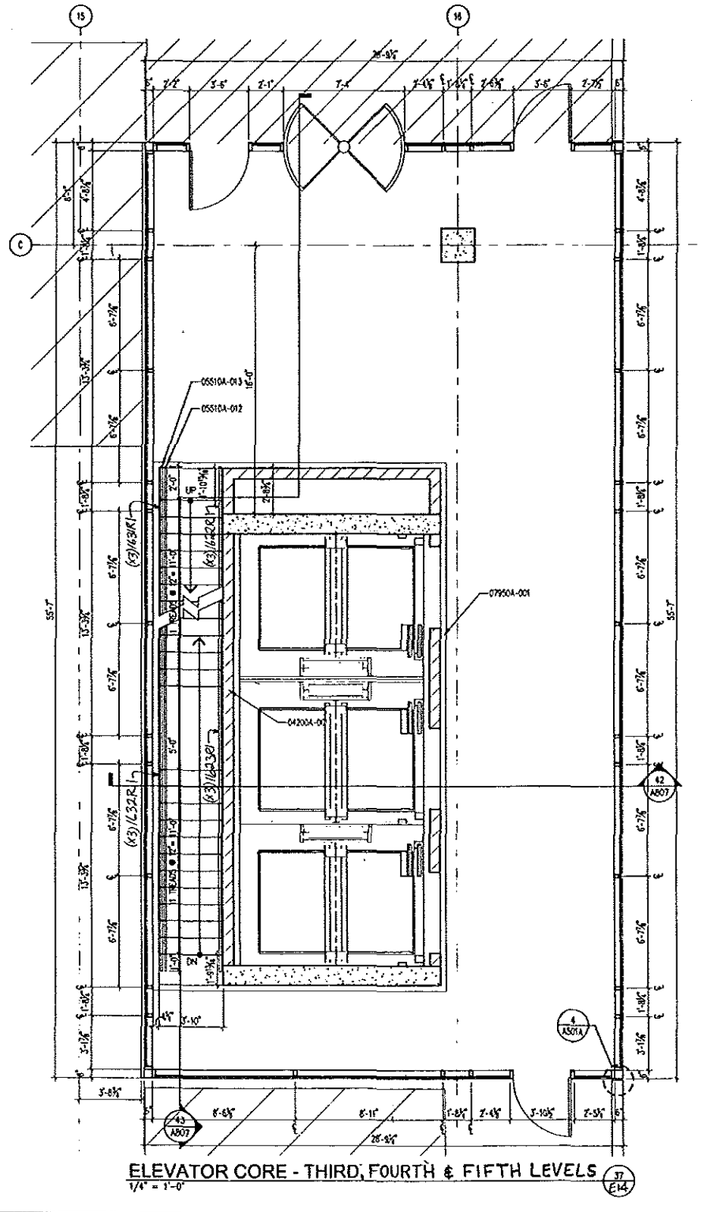
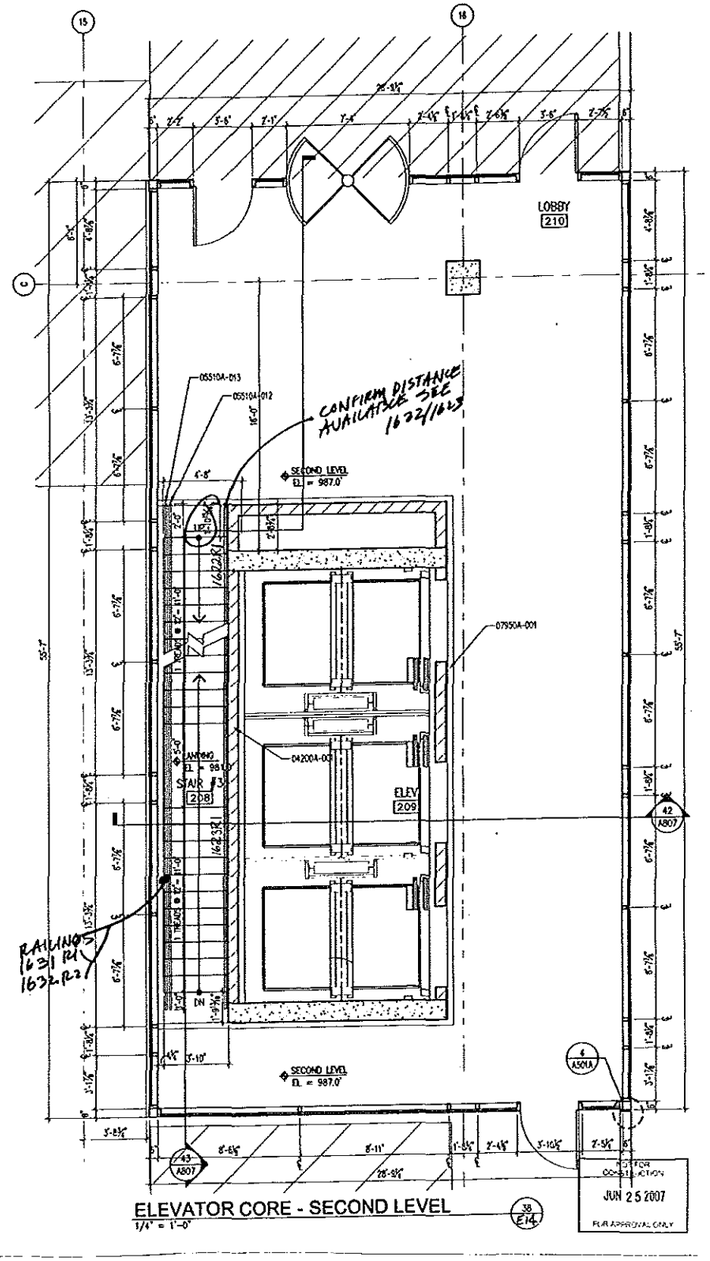


ELEVATOR CORE - SIXTH LEVEL
1/4" = 1'-0"
35 E14



ELEVATOR CORE - THIRD, FOURTH & FIFTH LEVELS
1/4" = 1'-0"
37 E14



ELEVATOR CORE - SECOND LEVEL
1/4" = 1'-0"
38 E14

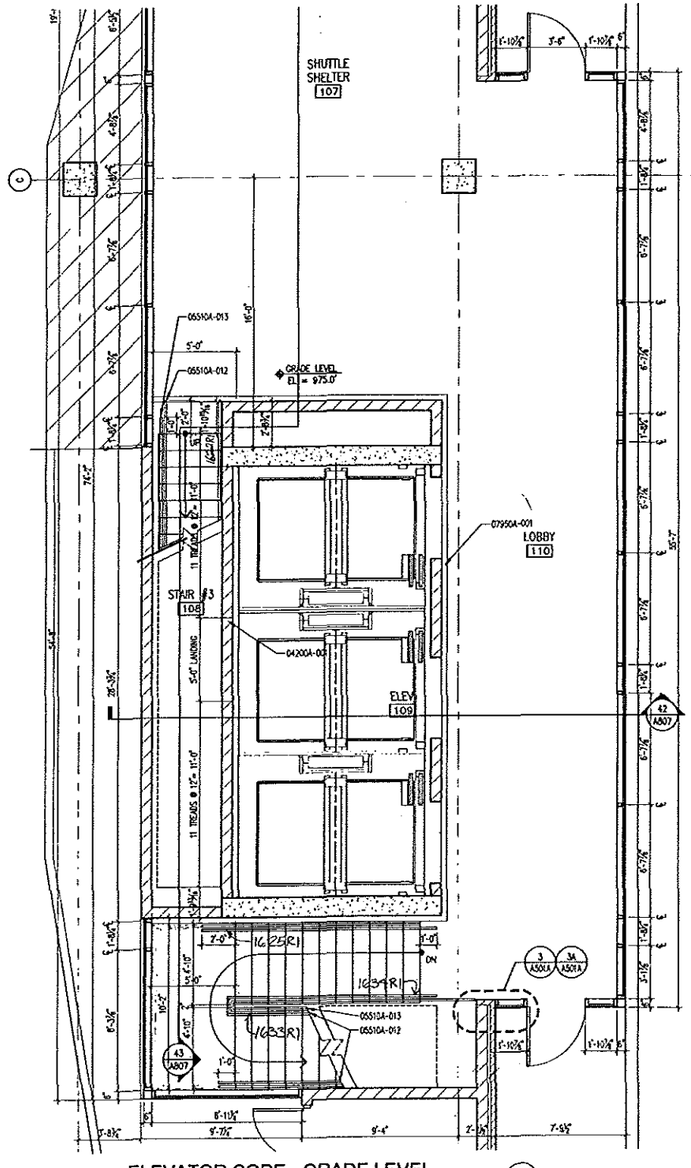
CITY FOR OCCUPANCY
JUN 25 2007
FOR APPROVAL ONLY

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REFERENCE DWG: A805A	DESCRIPTION: STAIR #3	DRAWN BY: WSE	DATE: 11-06	CHECKED BY: DSS	JOB# 06-36	SHEET: E14 △

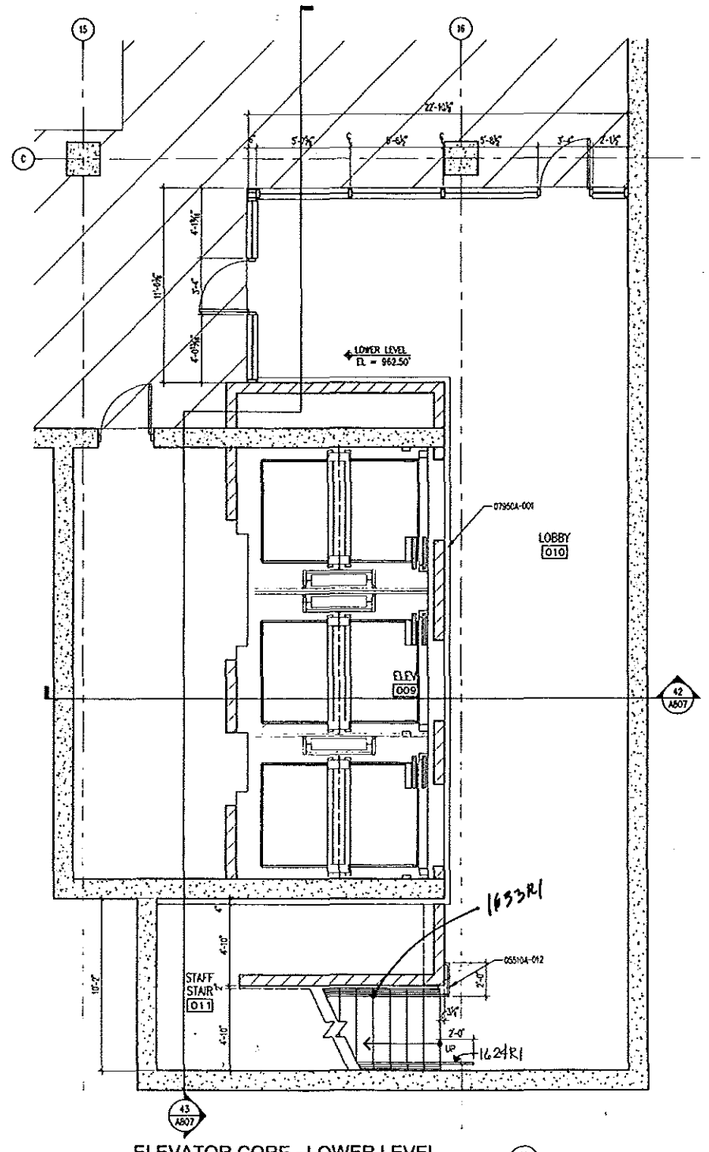
AVENUE FABRICATING, INC.

Licensed CadVantage User

DRAWING ISSUE:
FOR APPROVAL 11/28/06
FOR APPROVAL 6/22/07
REVISION:
△



ELEVATOR CORE - GRADE LEVEL
1/4" = 1'-0"
39 E15

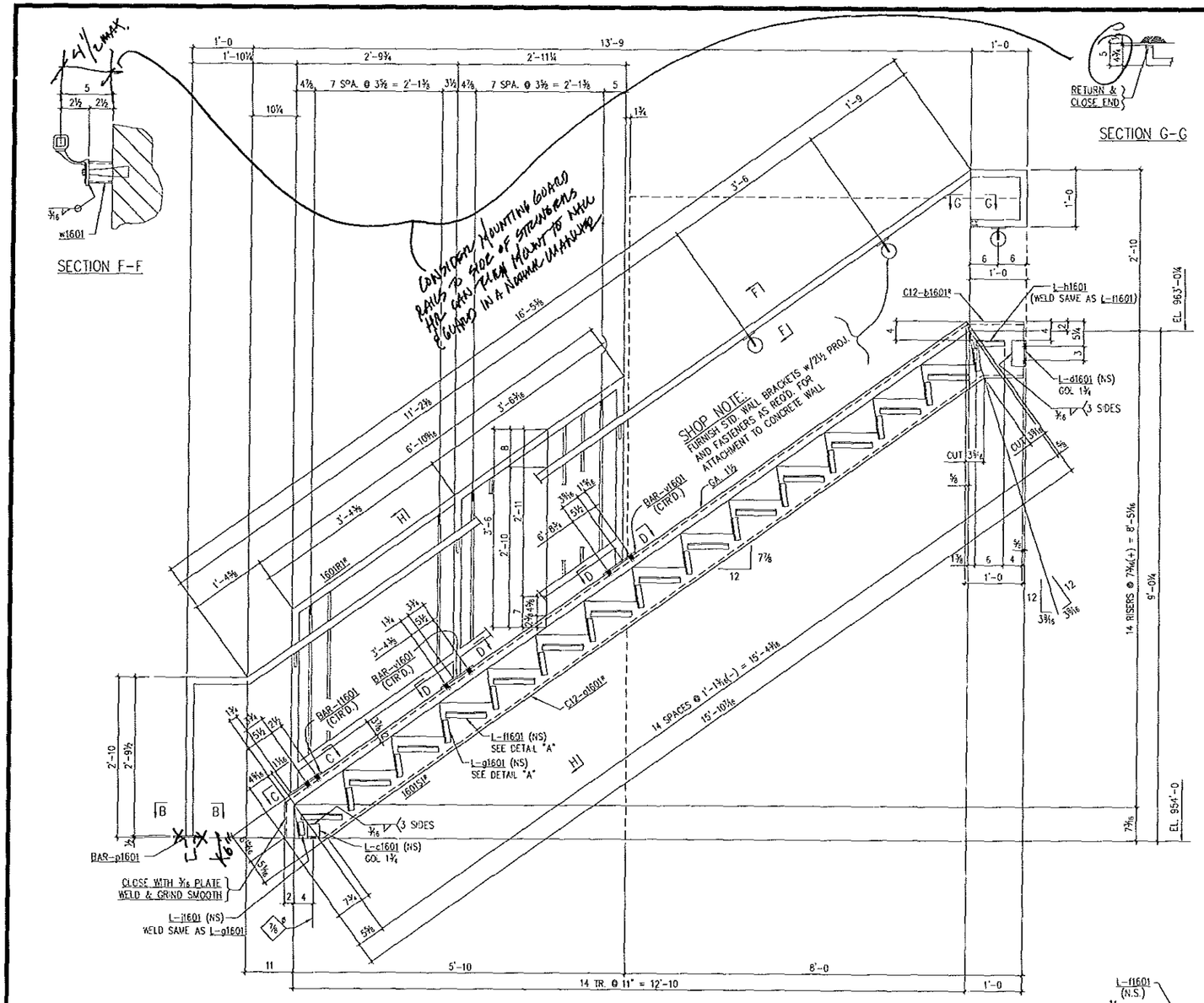


ELEVATOR CORE - LOWER LEVEL
1/4" = 1'-0"
40 E15

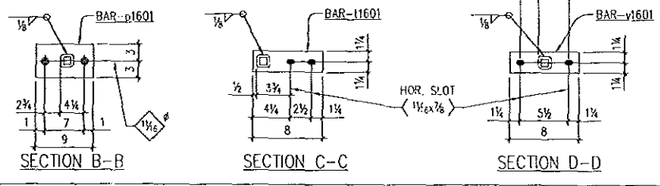
FIELD NOTE:
CORE DRILL CONCRETE TO MATCH FABRICATED H.R. AS REQUIRED

NOT FOR CONSTRUCTION
JUN 25 2007
FOR APPROVAL ONLY

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REFERENCE DWG: A80xA	DESCRIPTION: STAIR #3	DRAWN BY: WSE	DATE: 11-06	CHECKED BY: DSS	JOB# 06-36	SHEET: E15 △



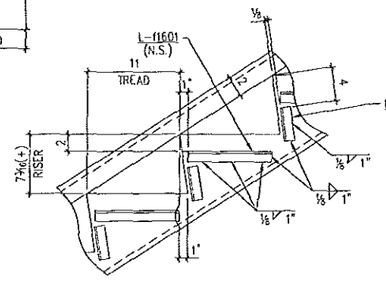
ONE~STRINGER~1601S1R (AS SHOWN)
ONE~STRINGER~1601S1L (OPP HAND)
ONE~GUARDRAIL w/H.R.~1601R1R (AS SHOWN)
ONE~GUARDRAIL w/H.R.~1601R1L (OPP HAND)
(EMERGENCY STAIR)



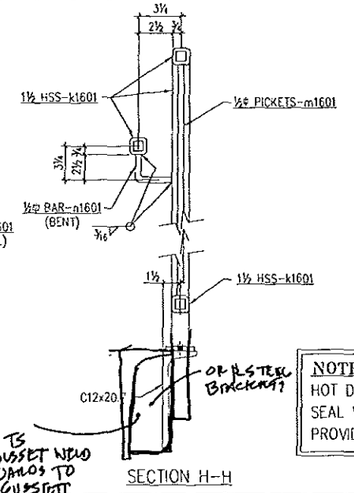
12-½ø A325 x 2 GALV.
12-½ø BEV. WASH. GALV.

4-½ø EXP. ANCHORS 3½ EMBED. (STAINLESS)

6-⅜ø EXP. ANCHORS 3¼ EMBED. (STAINLESS)



DETAIL "A"
TYP. PAN SUPPORT ANGLE DETAIL



NOTE:
HOT DIP GALVANIZE AFTER FABRICATION
SEAL WELD IN ADDITION TO WELDS SHOWN
PROVIDE VENT & WEEP HOLES AS REQUIRED

NOT FOR CONSTRUCTION
JUN 25 2007
FOR APPROVAL ONLY

AVENUE FABRICATING, INC.

Licensed CadVantage User

DRAWING ISSUE:
FOR APPVL 11/28/06
FOR APPVL 06/22/07

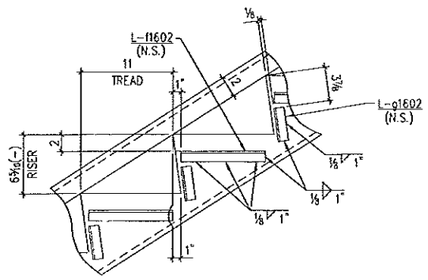
REVISION:

BILL OF MATERIAL

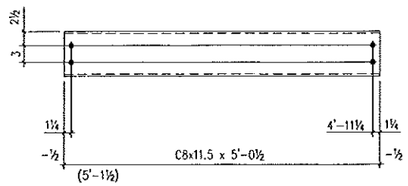
NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : AS NOTED
3. FINISH : GALVANIZED

Drawing Number	Revision Number	Ship Mark	Piece Mark	Quantity	Type of Material	Size of Material	Grade	Length	Notes
1601	0	1601S1R		ONE	STRINGER				
1601	0		a1601R	1	C	12 x 20.7	A36	15'-10¾	
1601	0		b1601R	1	C	12 x 20.7	A36	1'-0	
1601	0		c1601	1	L	3 x 3 x ⅜	A36	0'-2½	
1601	0		d1601	1	L	3 x 3 x ⅜	A36	0'-5½	
1601	0		f1601	14	L	1½ x 1½ x ¾	A36	0'-10	
1601	0		g1601	14	L	1½ x 1½ x ¾	A36	0'-4	
1601	0		h1601	1	L	1½ x 1½ x ¾	A36	0'-8	
1601	0		j1601	1	L	1½ x 1½ x ¾	A36	0'-2	
1601	0	1601S1L		ONE	STRINGER				
1601	0		a1601L	1	C	12 x 20.7	A36	15'-10¾	
1601	0		b1601L	1	C	12 x 20.7	A36	1'-0	
1601	0		c1601	1	L	3 x 3 x ⅜	A36	0'-2½	
1601	0		d1601	1	L	3 x 3 x ⅜	A36	0'-5½	
1601	0		f1601	14	L	1½ x 1½ x ¾	A36	0'-10	
1601	0		g1601	14	L	1½ x 1½ x ¾	A36	0'-4	
1601	0		h1601	1	L	1½ x 1½ x ¾	A36	0'-8	
1601	0		j1601	1	L	1½ x 1½ x ¾	A36	0'-2	
1601	0	1601R1R		ONE	GUARDRAIL w/H.R.				
1601	0		k1601	1	HSS	1½ x 1½ x .125	A500-Gr B	50 LIN. FT.	
1601	0		m1601	1	SQ	½	A36	43 LIN. FT.	
1601	0		n1601	3	SQ	½	A36	0'-4½	BENT
1601	0		p1601	1	FB	½ x 6	A36	0'-9	
1601	0		t1601	1	FB	½ x 2½	A36	0'-8	
1601	0		v1601	2	FB	½ x 2½	A36	0'-8	
1601	0		w1601	3	PL	2"	A53	0'-2½	
1601	0			3	STD WALL BRACKET w/ 2½ PROJECTION				
1601	0	1601R1L		ONE	GUARDRAIL w/H.R.				
1601	0		k1601	1	HSS	1½ x 1½ x ¾	A500-Gr B	50 LIN. FT.	
1601	0		m1601	1	SQ	½	A36	43 LIN. FT.	
1601	0		n1601	3	SQ	½	A36	0'-4½	BENT
1601	0		p1601	1	FB	½ x 6	A36	0'-9	
1601	0		t1601	1	FB	½ x 2½	A36	0'-8	
1601	0		v1601	2	FB	½ x 2½	A36	0'-8	
1601	0		w1601	3	PL	2"	A53	0'-2½	
1601	0			3	STD WALL BRACKET w/ 2½ PROJECTION				
					FIELD BOLTS				
1601	0			12	HS	½	A325	0'-2	GALV.
1601	0			12	NUT	½	A325		GALV.
1601	0			12	FW	½	A325		GALV.
1601	0			12	BW	½	A325		GALV.
1601	0			6	¾ø EXP ANCHORS w/3 1/4 EMBED				STAINLESS
1601	0			4	1/2 EXP ANCHORS w/3½ EMBED				STAINLESS
1601	0			6	NECESSARY FASTENERS FOR WALL BRACKETS TO CONC WALL				STAINLESS

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REFERENCE DWG: E1	DESCRIPTION: STRINGERS & GUARDRAIL w/H.R.	DRAWN BY: MAD	DATE: 10/06	CHECKED BY: DSS	JOB# 06-36	SHEET: 1601

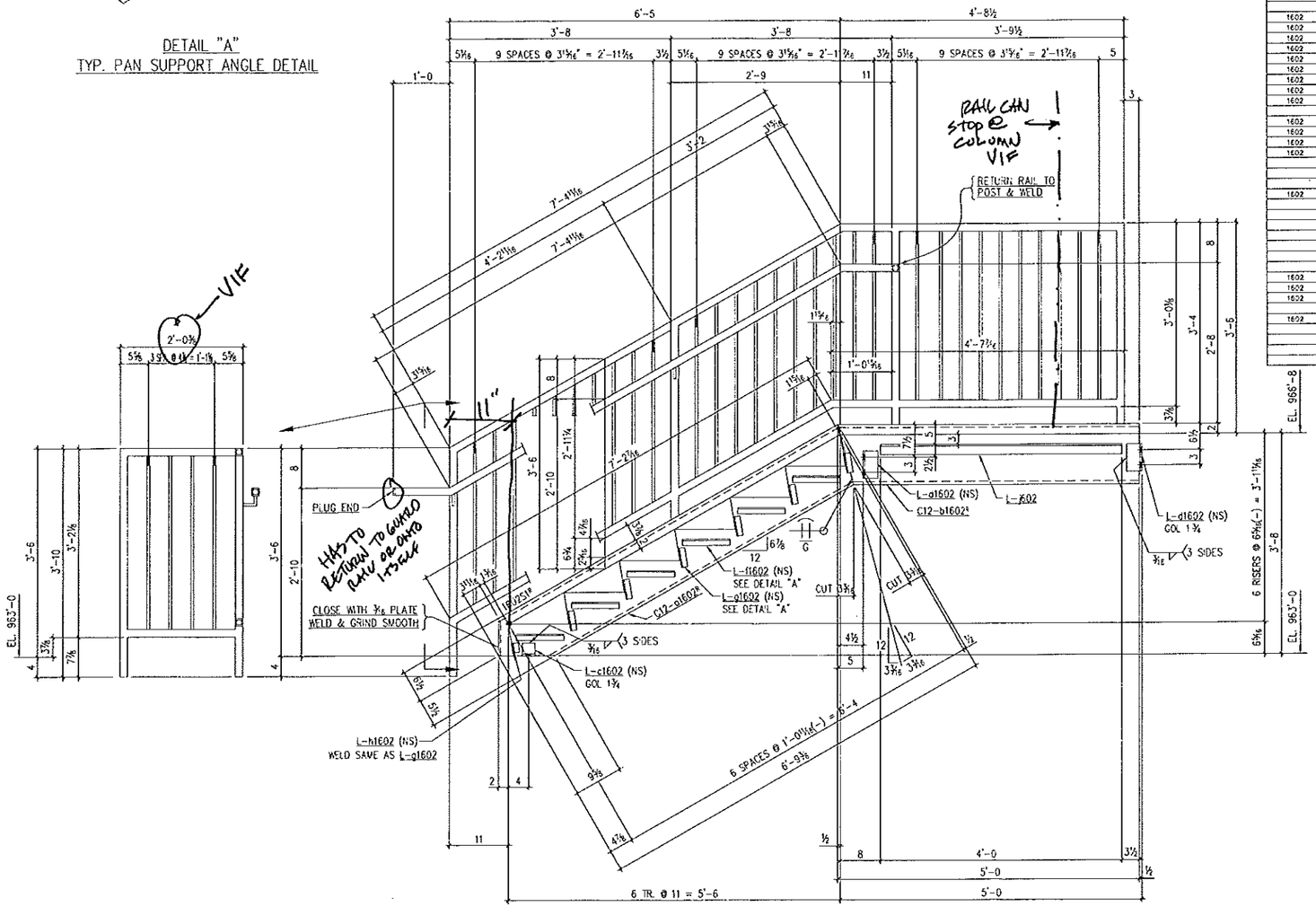


DETAIL "A"
TYP. PAN SUPPORT ANGLE DETAIL



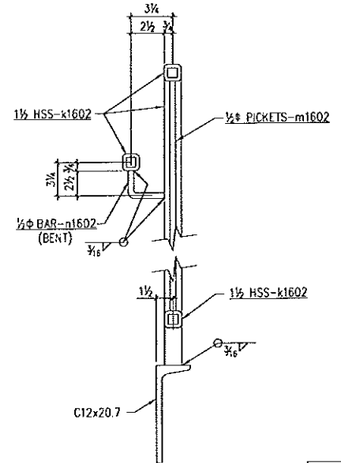
ONE~CHANNEL~1602M1

4-¾ø A325 1¾



6-⅞ø EXP. ANCHORS
3¼ EMBED.

ONE~STRINGER~1602S1ᴿ (AS SHOWN)
ONE~STRINGER~1602S1ᴸ (OPP HAND)
ONE~GUARDRAIL w/H.R.~1602R1 (AS SHOWN)(FOR 1602S1ª)
EGRESS STAIR



TYP. HANDRAIL SECTION

TYPICAL FOR H/R
ALL WELDS & SHARP EDGES TO BE GROUND SMOOTH.

NOT FOR CONSTRUCTION
JUN 25 2007
FOR APPROVAL ONLY

NOTE:
HOT DIP GALVANIZE AFTER FABRICATION.
SEAL WELD IN ADDITION TO WELDS SHOWN.
PROVIDE VENT & WEEP HOLES AS REQUIRED.

Licensed CadVantage User

AVENUE FABRICATING, INC.

DRAWING ISSUE:
FOR APPVL 11/28/06
FOR APPVL 06/22/07

REVISION:

BILL OF MATERIAL

NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : 13/16ø U.N.
3. FINISH : GALVANIZED

Drawing Number	Revision Number	Ship Mark	Piece Mark	Quantity	Type of Material	Size of Material	Grade	Length	Notes
1602	0	1602S1ª		ONE	STRINGER				
1602	0		a1602ª	1	C	12 x 20.7	A36	6'-9⅜	
1602	0		b1602ª	1	C	12 x 20.7	A36	5'-0	
1602	0		c1602	1	L	3 x 3 x 9/16	A36	0'-2½	
1602	0		d1602	2	L	3 x 3 x 9/16	A36	0'-5⅝	
1602	0		f1602	6	L	1½ x 1½ x 3/16	A36	0'-10	
1602	0		g1602	8	L	1½ x 1½ x 3/16	A36	0'-4	
1602	0		h1602	1	L	1½ x 1½ x 3/16	A36	0'-2	
1602	0		j1602	1	L	2 x 2 x ¼	A36	4'-0	
1602	0	1602S1ᴿ		ONE	STRINGER				
1602	0		a1602ᵇ	1	C	12 x 20.7	A36	6'-9⅜	
1602	0		b1602ᵇ	1	C	12 x 20.7	A36	5'-0	
1602	0		c1602	1	L	3 x 3 x 9/16	A36	0'-2½	
1602	0		d1602	2	L	3 x 3 x 9/16	A36	0'-5⅝	
1602	0		f1602	6	L	1½ x 1½ x 3/16	A36	0'-10	
1602	0		g1602	8	L	1½ x 1½ x 3/16	A36	0'-4	
1602	0		h1602	1	L	1½ x 1½ x 3/16	A36	0'-2	
1602	0		j1602	1	L	2 x 2 x ¼	A36	4'-0	
1602	0	1602R1ª		ONE	GUARDRAIL w/H.R.				
1602	0		k1602	1	HSS	1½ x 1½ x ⅛	A500-Gr B	50 LIN. FT.	
1602	0		m1602	1	SQ	½	A36	106 LIN. FT.	
1602	0		n1602	2	SQ	½	A36	0'-4½	BENT
1602	0	1602M1		ONE	C	8 x 11.5	A36	5'-0½	
					FIELD BOLTS				
1602	0			4	HS	⅞	A325	0'-1¾	
1602	0			4	NUT	⅞	A325		
1602	0			4	FW	⅞	A325		
1602	0			6	3/4 EXP ANCHORS w/3 1/4 EMBED				

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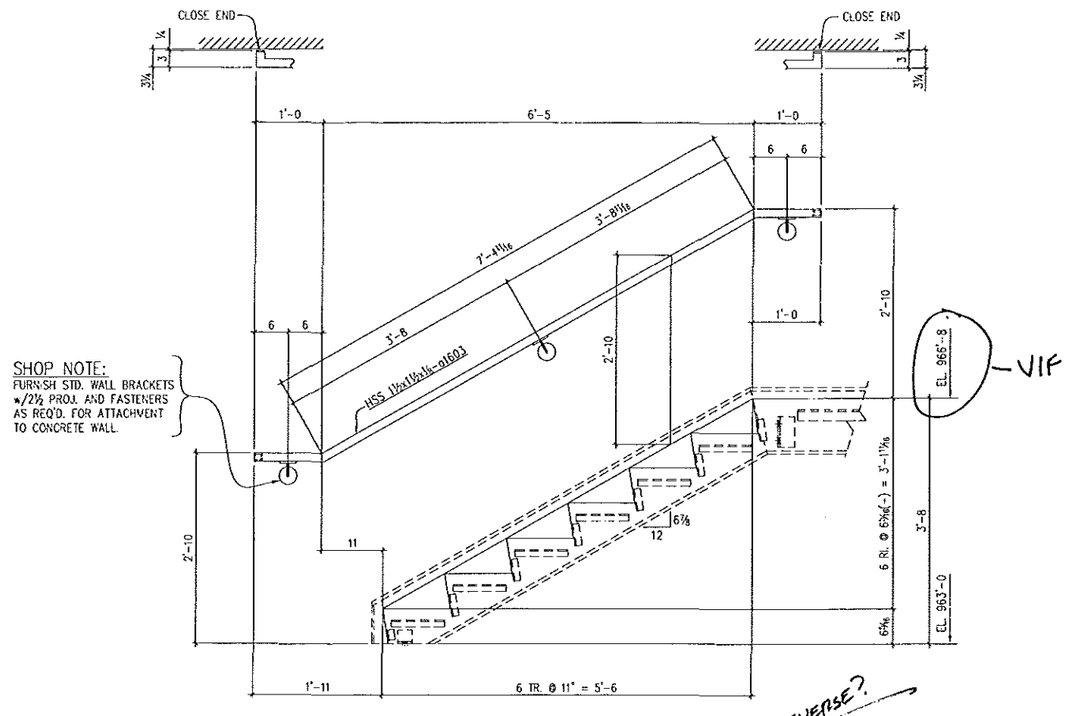
AVENUE FABRICATING, INC.

DRAWING ISSUE:
FOR APPV'L 11/28/06
FOR APPV'L 06/22/07
REVISION:

BILL OF MATERIAL

NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : AS NOTED
3. FINISH : GALVANIZED

Drawing Number	Revision Number	Ship Mark	Piece Mark	Quantity	Type of Material	Size of Material	Grade	Length	Notes
1603	0	1603R1		ONE	HANDRAIL				
1603	0		a*1603	1	HSS	1½ x 1½ x .125	A500-Gr B	10 LIN. FT.	
1603	0			3	STD WALL BRACKET W/ 2½ PROJECTION				
					FIELD BOLTS				
1603	0			3	NECESSARY FASTENERS FOR STD. WALL BRACKET			STAINLESS	



ONE~HANDRAIL~1603R1
EGRESS STAIR

SHOWN REVERSE?

NOT FOR CONSTRUCTION
JUN 25 2007
FOR APPROVAL ONLY

NOTE:
HOT DIP GALVANIZE AFTER FABRICATION.
SEAL WELD IN ADDITION TO WELDS SHOWN.
PROVIDE VENT & WEEP HOLES AS REQUIRED

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REFERENCE DWG: E11	DESCRIPTION: WALL RAIL	DRAWN BY: MAD	DATE: 10/06	CHECKED BY: DSS	JOB# 06-36	SHEET: 1603

Licensed CadVantage User

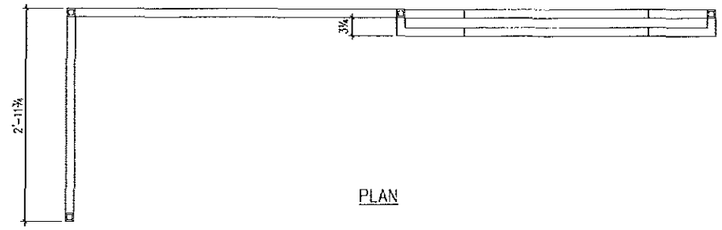
AVENUE FABRICATING, INC.

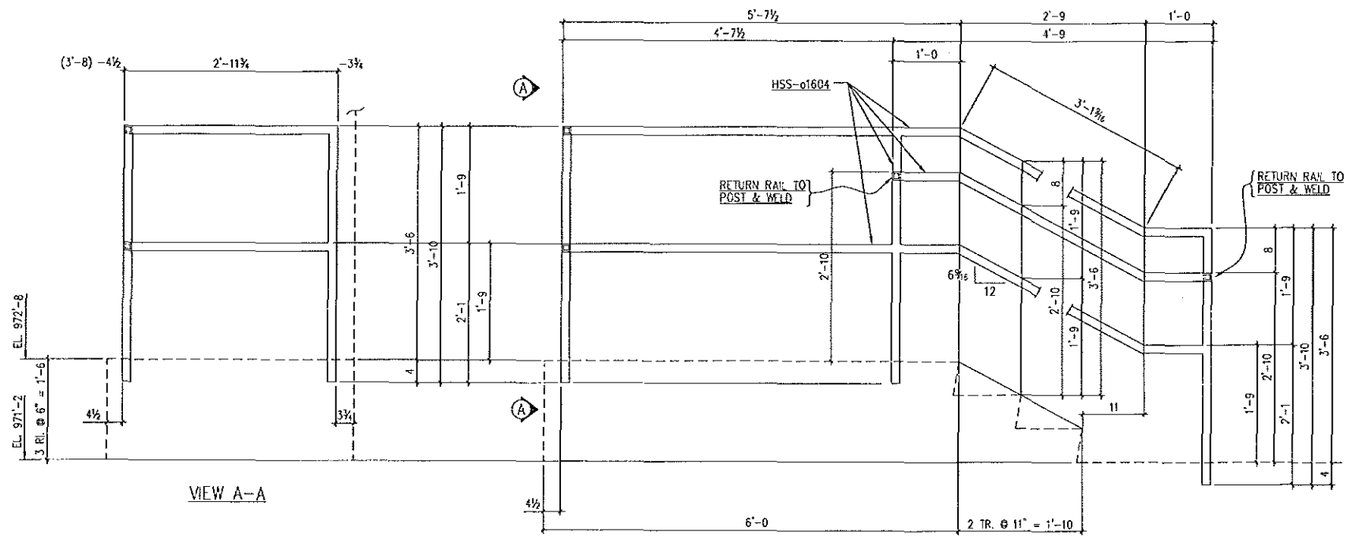
DRAWING ISSUE:
FOR APPVL 11/28/06
FOR APPVL 06/22/07
REVISION:

BILL OF MATERIAL

NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : AS NOTED
3. FINISH : GALVANIZED

Drawing Number	Revision Number	Ship Mark	Piece Mark	Quantity	Type of Material	Size of Material	Grade	Length	Notes	
1604	0	160481		ONE	HANDRAIL					
1604	0		o1604	1	HSS	1½ x 1½ x .125	A500-Gr B	42 LIN. FT.		





VIEW A-A

ONE~HANDRAIL~1604R1
ELECTRICAL STAIR

NOT FOR CONSTRUCTION
JUN 25 2007
FOR APPROVAL ONLY

TYPICAL FOR H/R
ALL WELDS & SHARP EDGES TO BE GROUND SMOOTH.

NOTE:
HOT DIP GALVANIZE AFTER FABRICATION.
SEAL WELD IN ADDITION TO WELDS SHOWN.
PROVIDE VENT & WEEP HOLES AS REQUIRED.

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REFERENCE DWG: E11	DESCRIPTION: HANDRAIL	DRAWN BY: MAD	DATE: 10/06	CHECKED BY: DSS	JOB# 06-36	SHEET: 1604

Licensed CadVantage User

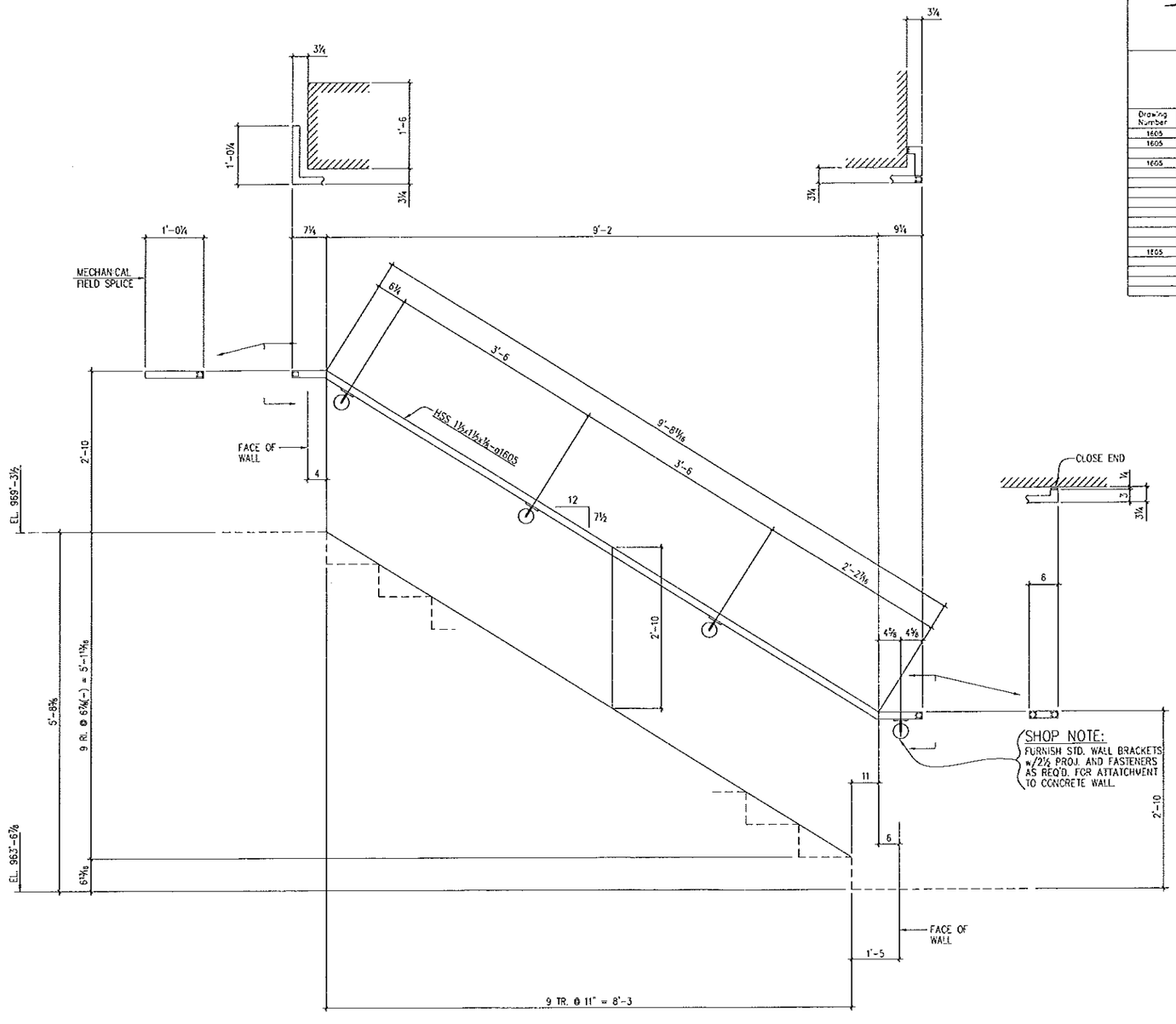
AVENUE FABRICATING, INC.

DRAWING ISSUE:
FOR APPVL 11/28/06
FOR APPVL 06/22/07
REVISION:

BILL OF MATERIAL

NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : AS NOTED
3. FINISH : GALVANIZED

Drawing Number	Revision Number	Ship Mark	Piece Mark	Quantity	Type of Material	Size of Material	Grade	Length	Notes
1605	0	160581		ONE	HANDRAIL				
1605	0		p1605	1	HSS	1 1/2x1 1/2 x .125	A500-Gr B	13 LN. FT.	
1605	0			4	STD. WALL BRACKETS w/ 2 1/2" PROJ.				
1605	0			4	FIELD BOLTS NECESSARY FASTENERS FOR WALL BRACKETS	TO CONC. WALL			



ONE-HANDRAIL-1605R1
STAIR #1

NOTE:
HOT DIP GALVANIZE AFTER FABRICATION.
SEAL WELD IN ADDITION TO WELDS SHOWN.
PROVIDE VENT & WEEP HOLES AS REQUIRED.

NOT FOR CONSTRUCTION
JUN 25 2007
FOR APPROVAL ONLY

TYPICAL FOR H/R
ALL WELDS & SHARP EDGES TO BE GROUND SMOOTH.

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REFERENCE DWG: E11	DESCRIPTION: HANDRAIL	DRAWN BY: RDJ	DATE: 10/06	CHECKED BY: DSS	JOB# 06-36	SHEET: 1605

AVENUE FABRICATING, INC.

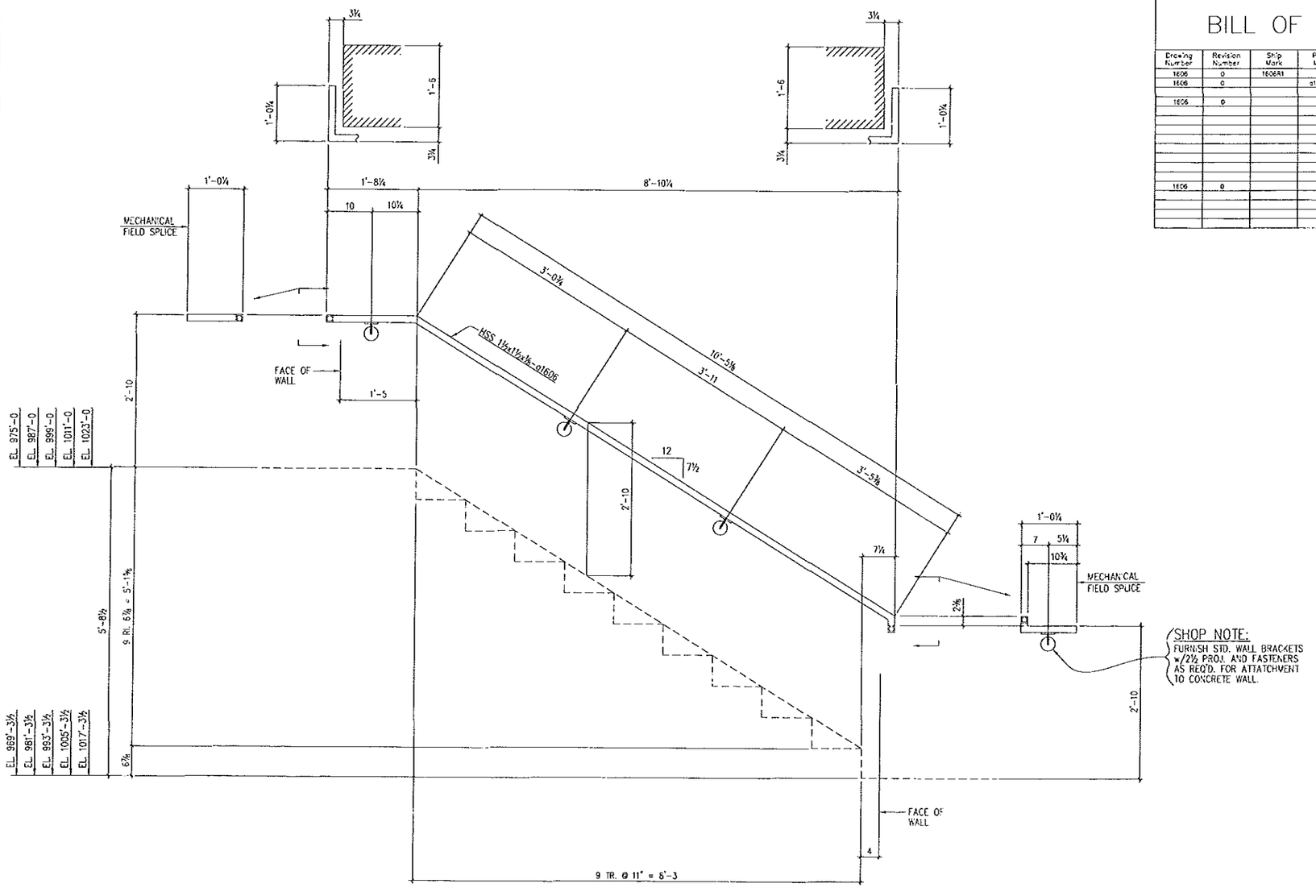
Licensed CadVantage User

DRAWING ISSUE:
FOR APPV'L 11/28/06
FOR APPV'L 06/22/07
REVISION:

BILL OF MATERIAL

NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : AS NOTED
3. FINISH : GALVANIZED

Drawing Number	Revision Number	Ship Mark	Piece Mark	Quantity	Type of Material	Size of Material	Grade	Length	Notes
1606	0	1606R1		5	HANDRAILS				
1606	0		a1606	5	HSS	1 1/2x1 1/2 x .125	A500-Gr B	15 LIN. FT.	
1606	0			20	STD. WALL BRAKETS w/ 2 1/2" PROJ.				
					FIELD BOLTS				
1606	0			20	NECESSARY FASTENERS FOR WALL BRACKETS	TO CONC. WALL			



SHOP NOTE:
FURNISH STD. WALL BRACKETS w/2½ PROJ. AND FASTENERS AS REQ'D. FOR ATTATCHMENT TO CONCRETE WALL.

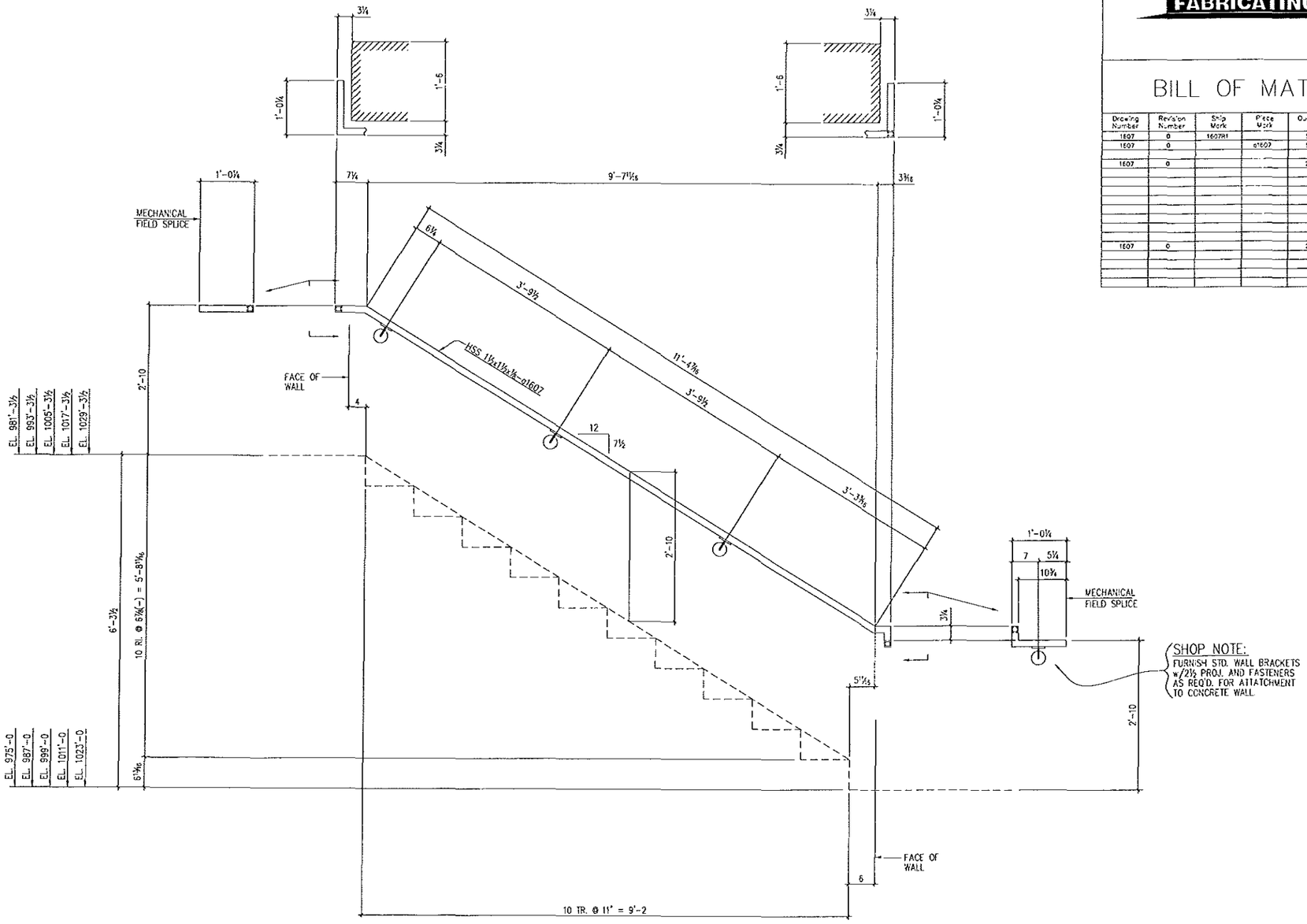
5-HANDRAILS-1606R1
STAR #1

NOT FOR CONSTRUCTION
JUN 25 2007
FOR APPROVAL ONLY

NOTE:
HOT DIP GALVANIZE AFTER FABRICATION.
SEAL WELD IN ADDITION TO WELDS SHOWN.
PROVIDE VENT & WEEP HOLES AS REQUIRED.

TYPICAL FOR H/R
ALL WELDS & SHARP EDGES TO BE GROUND SMOOTH.

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REFERENCE DWG: E11	DESCRIPTION: HANDRAIL	DRAWN BY: RDJ	DATE: 10/06	CHECKED BY: DSS	JOB# 06-36	SHEET: 1606



5-HANDRAILS-1607R1
STAIR #1

Licensed CadVantage User

AVENUE FABRICATING, INC.

DRAWING ISSUE:
FOR APPVL 11/28/06
FOR APPVL 06/23/07
REVISION:

BILL OF MATERIAL

NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : AS NOTED
3. FINISH : GALVANIZED

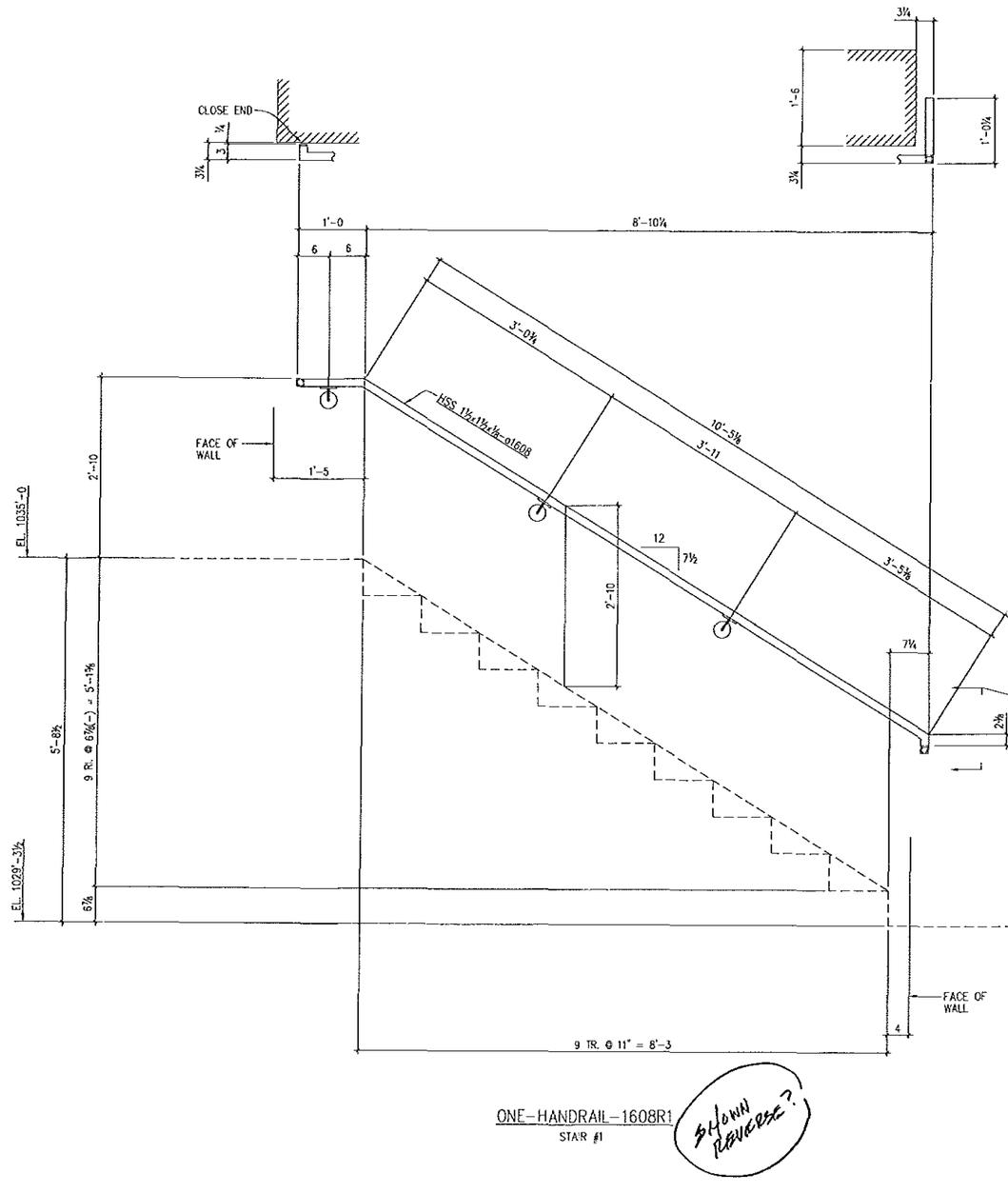
Drawing Number	Revision Number	Ship Mark	Piece Mark	Quantity	Type of Material	Size of Material	Grade	Length	Notes
1607	0	1607R1		5	HANDRAILS				
1607	0		a1607	5	HSS	1 1/2x1 1/2 x .125	A500-Gr B	15 LN. FT.	
1607	0			20	STD. WALL BRAKETS w/ 2 1/2" PROJ.				
1607	0			20	FIELD BOLTS NECESSARY FASTENERS FOR WALL BRACKETS	TO CONC. WALL			

NOTE:
HOT DIP GALVANIZE AFTER FABRICATION.
SEAL WELD IN ADDITION TO WELDS SHOWN.
PROVIDE VENT & WEEP HOLES AS REQUIRED.

RELEASED FOR CONSTRUCTION
JUN 25 2007
FOR APPROVAL ONLY

TYPICAL FOR H/R
ALL WELDS & SHARP EDGES TO BE GROUND SMOOTH.

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REFERENCE DNG: E11	DESCRIPTION: HANDRAIL	DRAWN BY: RDJ	DATE: 10/06	CHECKED BY: DSS	JOB# 06-36	SHEET: 1607



ONE-HANDRAIL-1608R1
STAIR #1

SHOWN REVERSE?

Licensed CadVantage User

AVENUE FABRICATING, INC.

DRAWING ISSUE:
FOR APPVL 11/28/06
FOR APPVL 06/22/07
REVISION:

BILL OF MATERIAL

NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : AS NOTED
3. FINISH : GALVANIZED

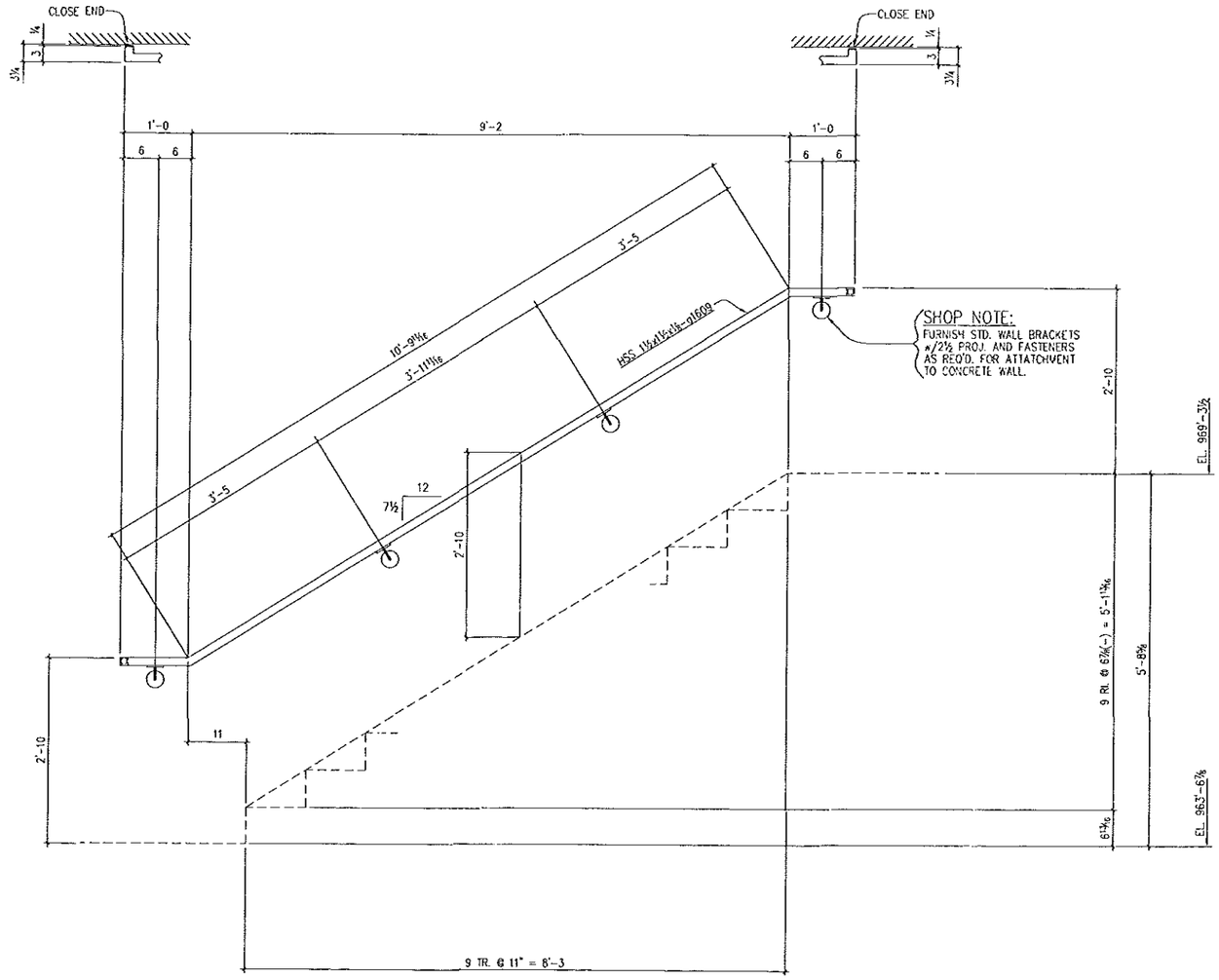
Drawing Number	Revision Number	Ship Mark	Piece Mark	Quantity	Type of Material	Size of Material	Grade	Length	Notes
1608	0	1608R1		ONE	HANDRAIL				
1608	0		a1608	ONE	HSS	1 1/2x1 1/2 x .125	A500-Gr B	14 LN. FT.	
1608	0			4	STD. WALL BRACKETS w/ 2 1/2" PROJ.				
					FIELD BOLTS				
1608	0			4	NECESSARY FASTENERS FOR WALL BRACKETS	TO CONC. WALL			

NOTE:
HOT DIP GALVANIZE AFTER FABRICATION.
SEAL WELD IN ADDITION TO WELDS SHOWN.
PROVIDE VENT & WEEP HOLES AS REQUIRED.

NOT FOR CONSTRUCTION
JUN 25 2007
FOR APPROVAL ONLY

TYPICAL FOR H/R
ALL WELDS & SHARP EDGES TO BE GROUND SMOOTH.

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REFERENCE DWG: E11	DESCRIPTION: HANDRAIL	DRAWN BY: RDJ	DATE: 10/06	CHECKED BY: DSS	JOB# 06-36	SHEET: 1608



ONE-HANDRAIL-1609R1

STAIR #1

Licensed CadVantage User

AVENUE FABRICATING, INC.

DRAWING ISSUE:
FOR APPV'L 11/28/06
FOR APPV'L 06/22/07
REVISION:

BILL OF MATERIAL

NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : AS NOTED
3. FINISH : GALVANIZED

Drawing Number	Revision Number	Ship Mark	Piece Mark	Quantity	Type of Material	Size of Material	Grade	Length	Notes
1609	0	1609R1		1	HANDRAIL				
1609	0		01609	1	HSS	1 1/2x1 1/2 x .125	A500-Gr B	14 LIN. FT.	
1609	0			4	STD. WALL BRAKETS w/ 2 1/2" PROJ.				
					FIELD BOLTS				
1609	0			4	NECESSARY FASTENERS FOR WALL BRACKETS	TO CONC. WALL			

NOT FOR CONSTRUCTION
JUN 25 2007
FOR APPROVAL ONLY

NOTE:
HOT DIP GALVANIZE AFTER FABRICATION.
SEAL WELD IN ADDITION TO WELDS SHOWN.
PROVIDE VENT & WEEP HOLES AS REQUIRED.

TYPICAL FOR H/R
ALL WELDS & SHARP EDGES TO BE GROUND SMOOTH.

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHENS CO., INC.	REFERENCE DWG: E11	DESCRIPTION: HANDRAIL	DRAWN BY: RDJ	DATE: 10/06	CHECKED BY: DSS	JOB# 06-36	SHEET: 1609

AVENUE FABRICATING, INC.

Licensed CadVantage User

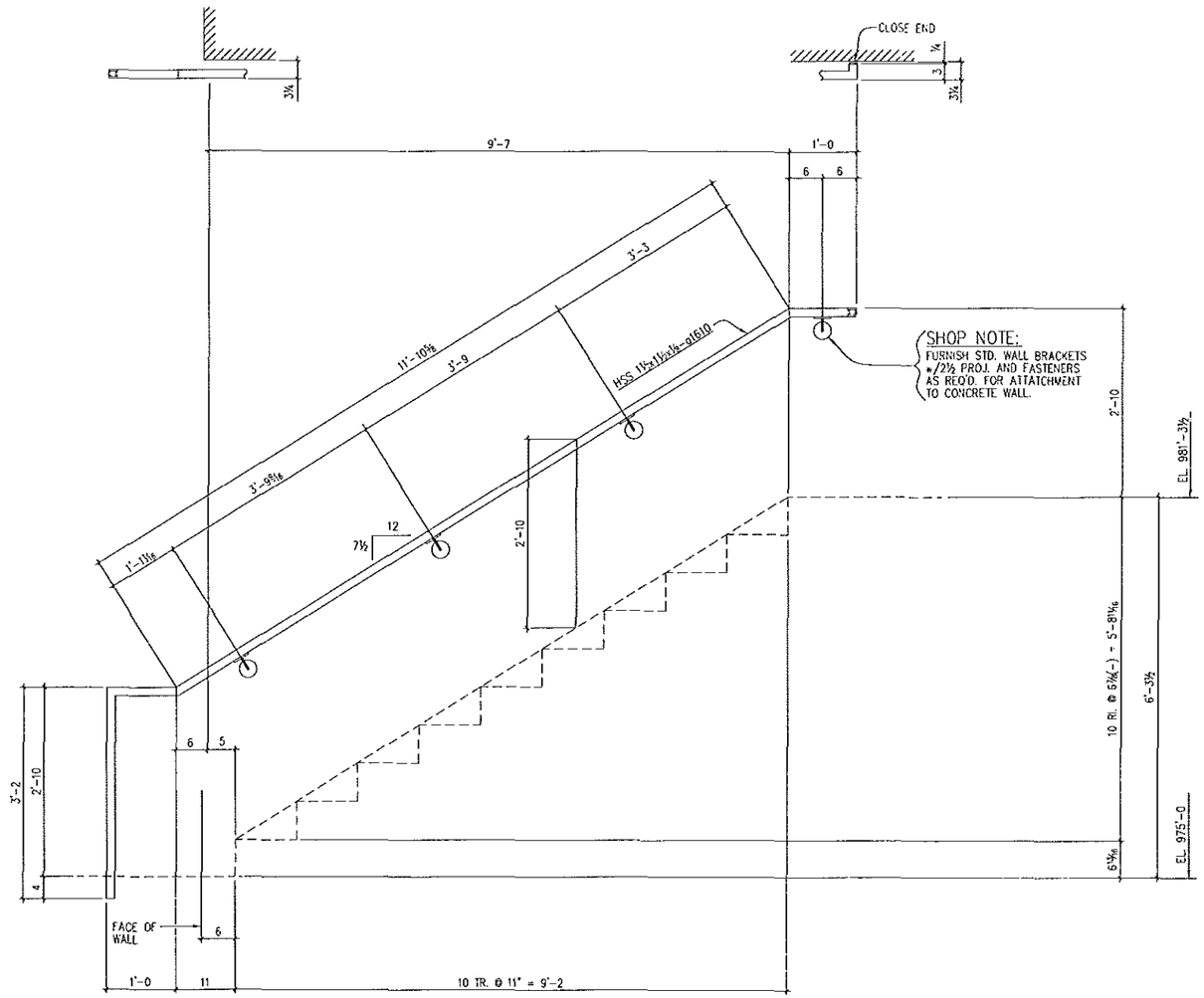
DRAWING ISSUE:
FOR APPV'L 11/28/06
FOR APPV'L 06/22/07

REVISION:

BILL OF MATERIAL

NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : AS NOTED
3. FINISH : GALVANIZED

Drawing Number	Revision Number	Ship Mark	Piece Mark	Quantity	Type of Material	Size of Material	Grade	Length	Notes
1610	0	1610R1		ONE	HANDRAILS				
1610	0		c1610	1	HSS	1 1/2x1 1/2 x .125	A500-Gr B	15 LIN. FT.	
1610	0			4	STD. WALL BRAKETS w/ 2 1/2" PROJ.				
					FIELD BOLTS				
1610	0			4	NECESSARY FASTENERS FOR WALL BRACKETS	TO CONC. WALL			



ONE-HANDRAIL-1610R1
STAIR #1

NOTE:
HOT DIP GALVANIZE AFTER FABRICATION.
SEAL WELD IN ADDITION TO WELDS SHOWN.
PROVIDE VENT & WEEP HOLES AS REQUIRED

KOFFER CONSTRUCTION
JUN 25 2007
FOR APPROVAL ONLY

TYPICAL FOR H/R
ALL WELDS & SHARP EDGES TO BE GROUND SMOOTH.

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REFERENCE DWG: E11	DESCRIPTION: HANDRAIL	DRAWN BY: RDJ	DATE: 10/06	CHECKED BY: DSS	JOB# 06-36	SHEET: 1610

Licensed CadVantage User

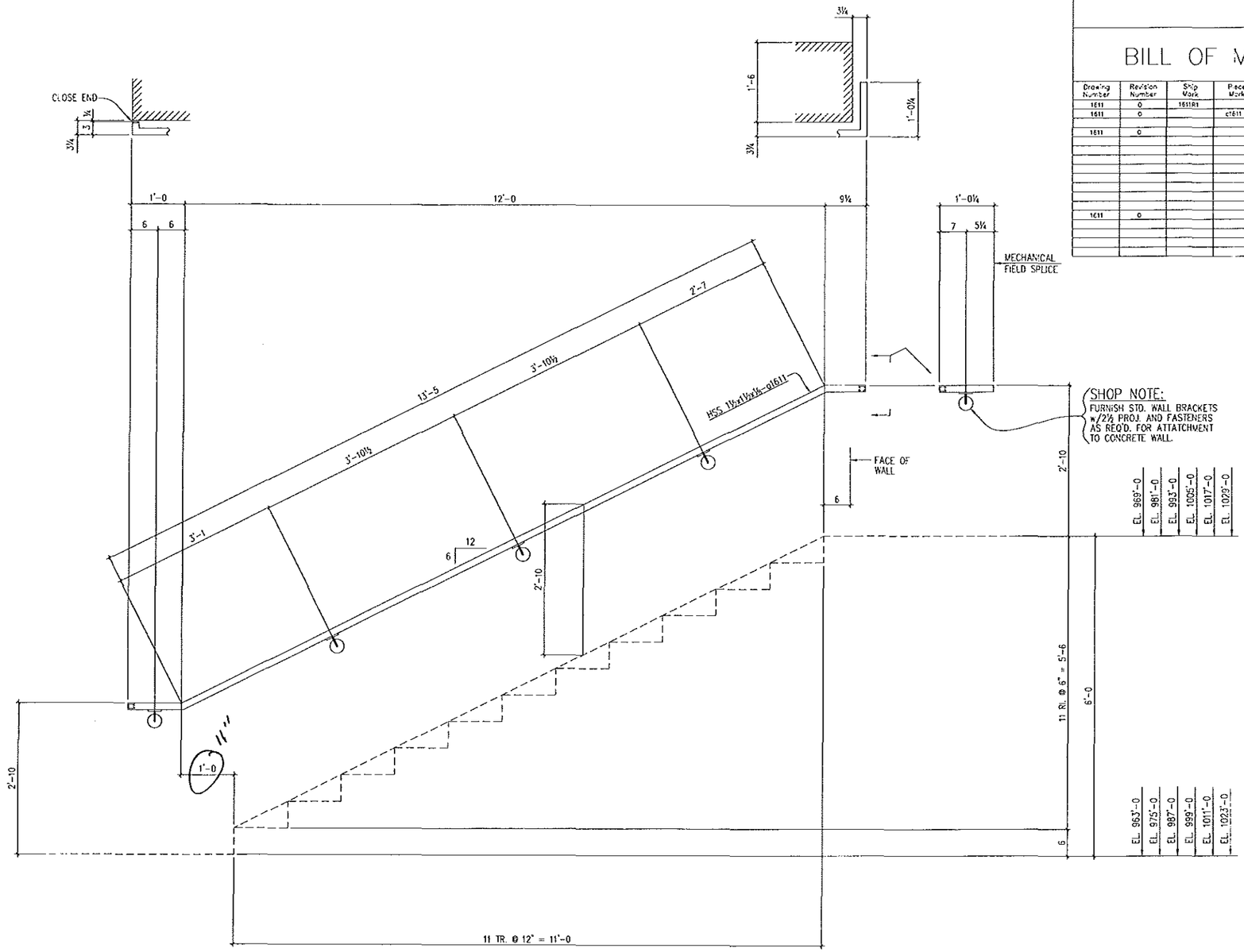
AVENUE FABRICATING, INC.

DRAWING ISSUE:
FOR APPVL 11/28/06
FOR APPVL 06/22/07
REVISION:

BILL OF MATERIAL

NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : AS NOTED
3. FINISH : GALVANIZED

Drawing Number	Revision Number	Ship Mark	Piece Mark	Quantity	Type of Material	Size of Material	Grade	Length	Notes
1611	0	1611R1		6	HANDRAILS				
1611	0		ct611	6	HSS	1 1/2x1 1/2 x .125	A500-Gr B	17 LIN. FT.	
1611	0			30	STD. WALL BRACKETS w/ 2 1/2" PROJ.				
					FIELD BOLTS				
1611	0			30	NECESSARY FASTENERS FOR WALL BRACKETS	TO CONC. WALL			



6-HANDRAILS-1611R1
STAIR #2

NOT FOR CONSTRUCTION
JUN 25 2007
FOR APPROVAL ONLY

NOTE:
HOT DIP GALVANIZE AFTER FABRICATION.
SEAL WELD IN ADDITION TO WELDS SHOWN.
PROVIDE VENT & WEEP HOLES AS REQUIRED.

TYPICAL FOR H/R
ALL WELDS & SHARP EDGES TO BE GROUND SMOOTH.

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REFERENCE DWG: E12	DESCRIPTION: HANDRAIL	DRAWN BY: RDJ	DATE: 10/06	CHECKED BY: DSS	JOB# 06-36	SHEET: 1611

Licensed CadVantage User

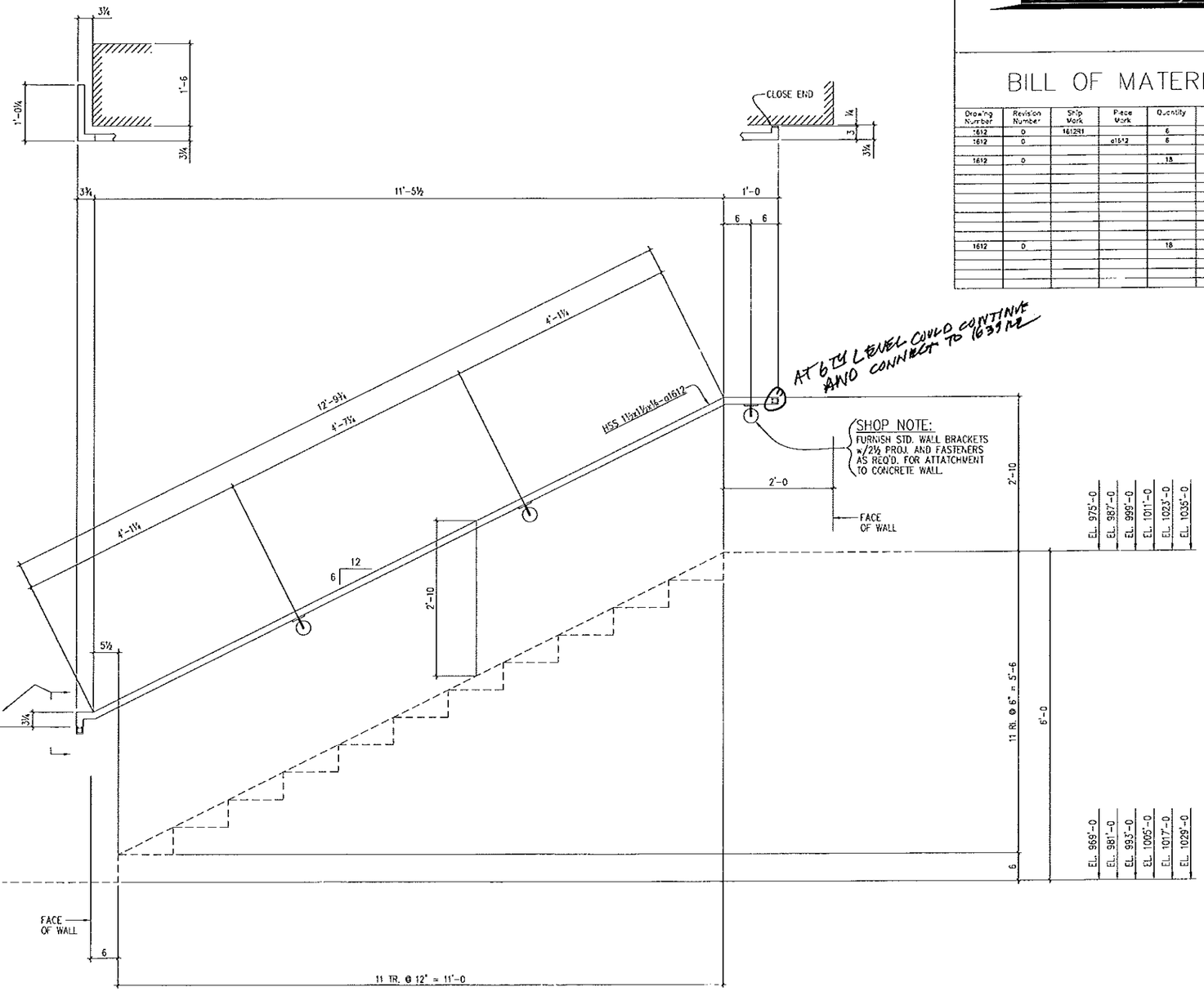
AVENUE FABRICATING, INC.

DRAWING ISSUE:
FOR APPVL 11/28/06
FOR APPVL 06/22/07
REVISION:

BILL OF MATERIAL

NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : AS NOTED
3. FINISH : GALVANIZED

Drawing Number	Revision Number	Ship Mark	Piece Mark	Quantity	Type of Material	Size of Material	Grade	Length	Notes
1612	0	161291		6	HANDRAILS				
1612	0		a1612	6	HSS	1 1/2x1 1/2 x .125	A500-Gr B	16 LIN. FT.	
1612	0			18	STD. WALL BRACKETS w/ 2 1/2" PROJ.				
					FIELD BOLTS				
1612	0			18	NECESSARY FASTENERS FOR WALL BRACKETS	TO CONC. WALL			



6-HANDRAILS-1612R1
STAIR #2

NOT FOR CONSTRUCTION
JUN 25 2007
FOR APPROVAL ONLY

NOTE:
HOT DIP GALVANIZE AFTER FABRICATION.
SEAL WELD IN ADDITION TO WELDS SHOWN.
PROVIDE VENT & WEEP HOLES AS REQUIRED.

TYPICAL FOR H/R
ALL WELDS & SHARP EDGES TO BE GROUND SMOOTH.

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REFERENCE DWG: E12	DESCRIPTION: HANDRAIL	DRAWN BY: RDJ	DATE: 10/06	CHECKED BY: DSS	JOB# 06-36	SHEET: 1612

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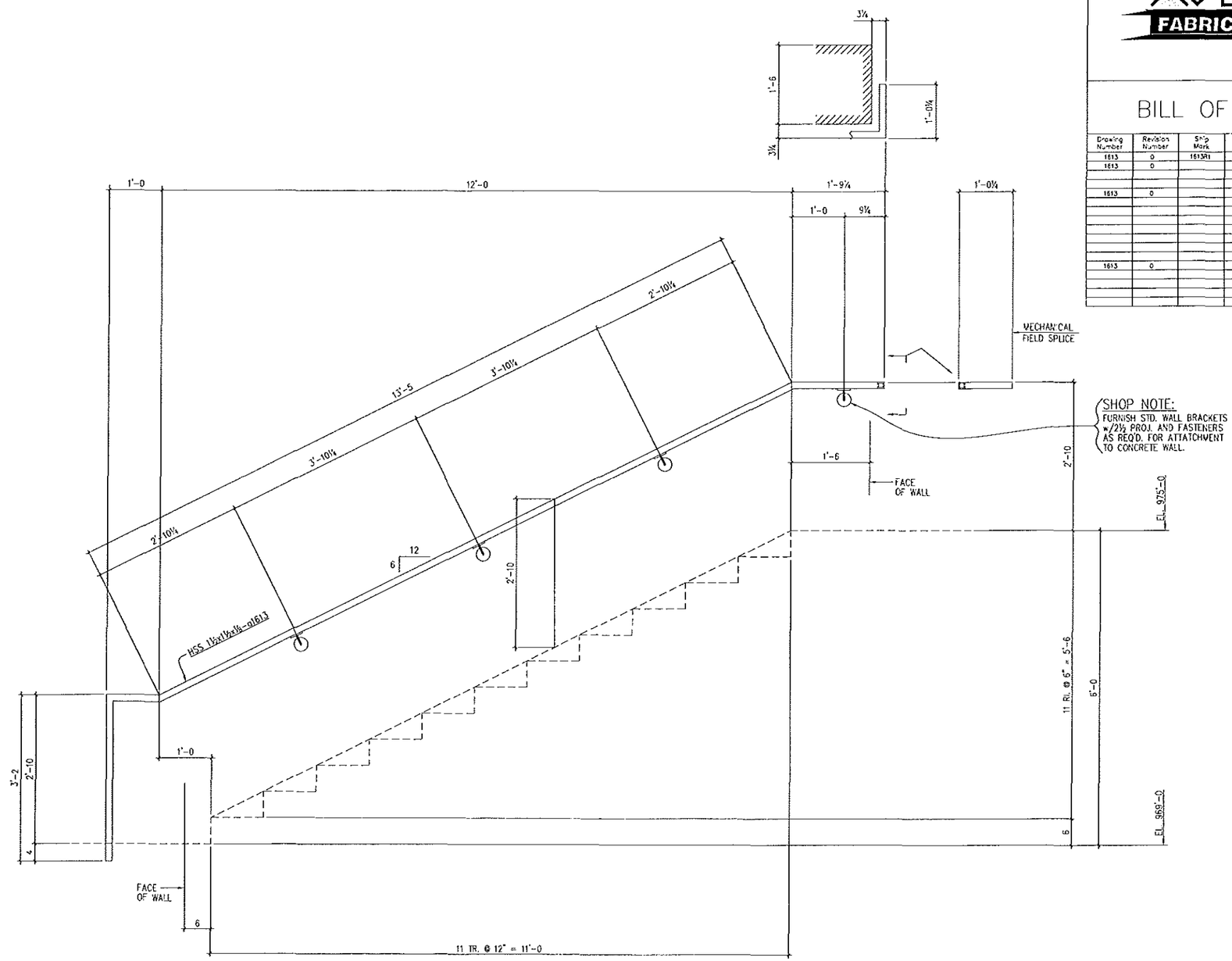
AVENUE FABRICATING, INC.

DRAWING ISSUE:
FOR APPVL 11/28/06
FOR APPVL 06/22/07
REVISION:

BILL OF MATERIAL

NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : AS NOTED
3. FINISH : GALVANIZED

Drawing Number	Revision Number	Ship Mark	Piece Mark	Quantity	Type of Material	Size of Material	Grade	Length	Notes
1613	0	1613R1		ONE	HANDRAIL				
1613	0		a1613	1	HSS	1 1/2 x 1 1/2 x .125	A500-Gr B	21 LIN. FT.	
1613	0			4	STD. WALL BRAKETS w/ 2 1/2" PROJ.				
1613	0			4	FIELD BOLTS NECESSARY FASTENERS FOR WALL BRACKETS	TO CONC. WALL			



ONE-HANDRAIL-1613R1
STAIR #4

NOT FOR CONSTRUCTION
JUN 25 2007
FOR APPROVAL ONLY

NOTE:
HOT DIP GALVANIZE AFTER FABRICATION.
SEAL WELD IN ADDITION TO WELDS SHOWN.
PROVIDE VENT & WEEP HOLES AS REQUIRED

TYPICAL FOR H/R
ALL WELDS & SHARP EDGES TO BE GROUND SMOOTH.

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REFERENCE DWG: E13	DESCRIPTION: HANDRAIL	DRAWN BY: RDJ	DATE: 10/06	CHECKED BY: DSS	JOB# 06-36	SHEET: 1613

AVENUE FABRICATING, INC.

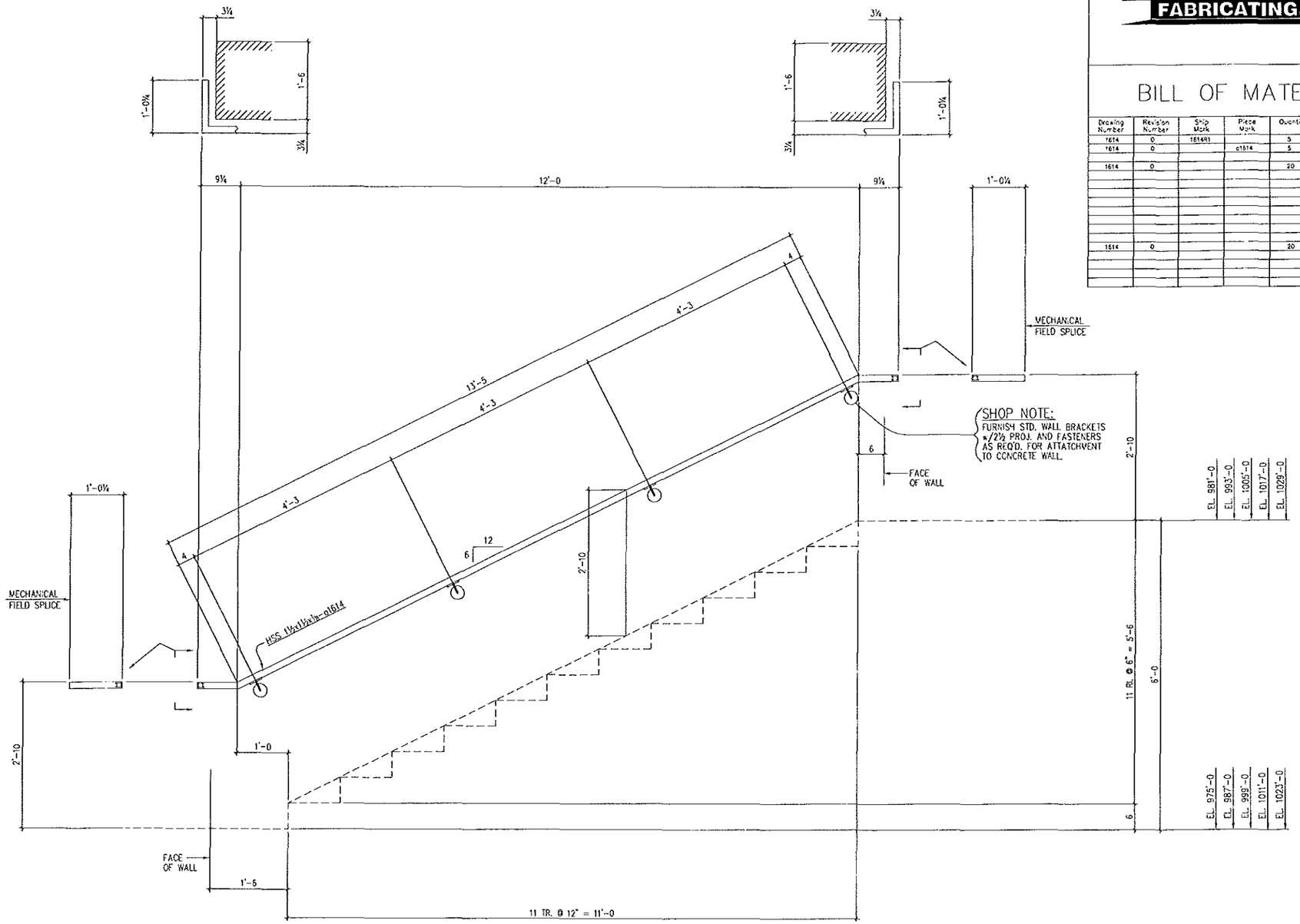
Licensed CadVantage User

DRAWING ISSUE:
FOR APPVL 11/28/06
FOR APPVL 06/22/07
REVISION:

BILL OF MATERIAL

NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : AS NOTED
3. FINISH : GALVANIZED

Drawing Number	Revision Number	Ship Mark	Piece Mark	Quantity	Type of Material	Size of Material	Grade	Length	Notes
1614	0			5	HANDRAILS				
1614	0		c1614	5	HSS	1 1/2 x 1 1/2 x .125	A500-Gr. B	17 LIN. FT.	
1614	0			20	STD. WALL BRACKETS w/ 2 1/2" PROJ.				
					FIELD BOLTS				
1614	0			20	NECESSARY FASTENERS FOR WALL BRACKETS	TO CONC. WALL			



5-HANDRAILS-1614R1
STAIR #4

NOT FOR CONSTRUCTION
JUN 25 2007
FOR APPROVAL ONLY

NOTE;
HOT DIP GALVANIZE AFTER FABRICATION.
SEAL WELD IN ADDITION TO WELDS SHOWN.
PROVIDE VENT & WEEP HOLES AS REQUIRED.

TYPICAL FOR H/R
ALL WELDS & SHARP EDGES TO BE GROUND SMOOTH.

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REFERENCE DWG: E13	DESCRIPTION: HANDRAIL	DRAWN BY: RDJ	DATE: 10/06	CHECKED BY: DSS	JOB# 06-36	SHEET: 1614

Licensed CadVantage User

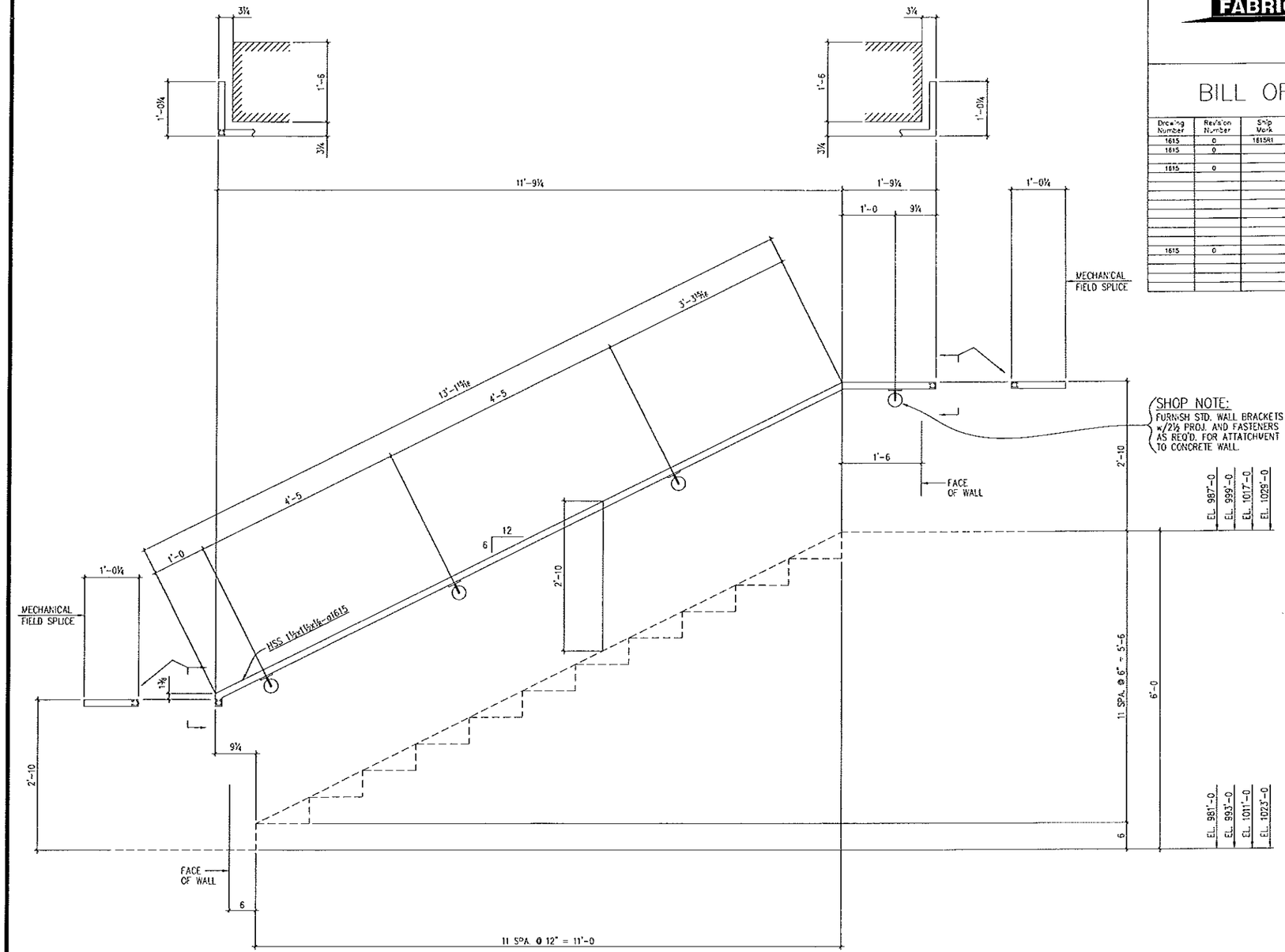
AVENUE FABRICATING, INC.

DRAWING ISSUE:
FOR APPV'L 11/28/06
FOR APPV'L 06/22/07
REVISION:

BILL OF MATERIAL

NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : AS NOTED
3. FINISH : GALVANIZED

Drawing Number	Revision Number	Ship Mark	Piece Mark	Quantity	Type of Material	Size of Material	Grade	Length	Notes
1615	0	1615R1		4	HANDRAILS				
1615	0		a1615	4	HSS	1 1/2 x 1 1/2 x .125	A500-Gr B	18 LIN. FT.	
1615	0			16	STD. WALL BRACKETS w/ 2 1/2" PROJ.				
1615	0			16	FIELD BOLTS NECESSARY FASTENERS FOR WALL BRACKETS	TO CONC. WALL			



4-HANDRAILS-1615R1
STAIR #4

NOTE:
HOT DIP GALVANIZE AFTER FABRICATION.
SEAL WELD IN ADDITION TO WELDS SHOWN.
PROVIDE VENT & WEEP HOLES AS REQUIRED.

NOT FOR CONSTRUCTION
JUN 25 2007
FOR APPROVAL ONLY

TYPICAL FOR H/R
ALL WELDS & SHARP EDGES TO BE GROUND SMOOTH.

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REFERENCE DWG: E13	DESCRIPTION: HANDRAIL	DRAWN BY: RDJ	DATE: 10/06	CHECKED BY: DSS	JOB# 06-36	SHEET: 1615

Licensed CadVantage User

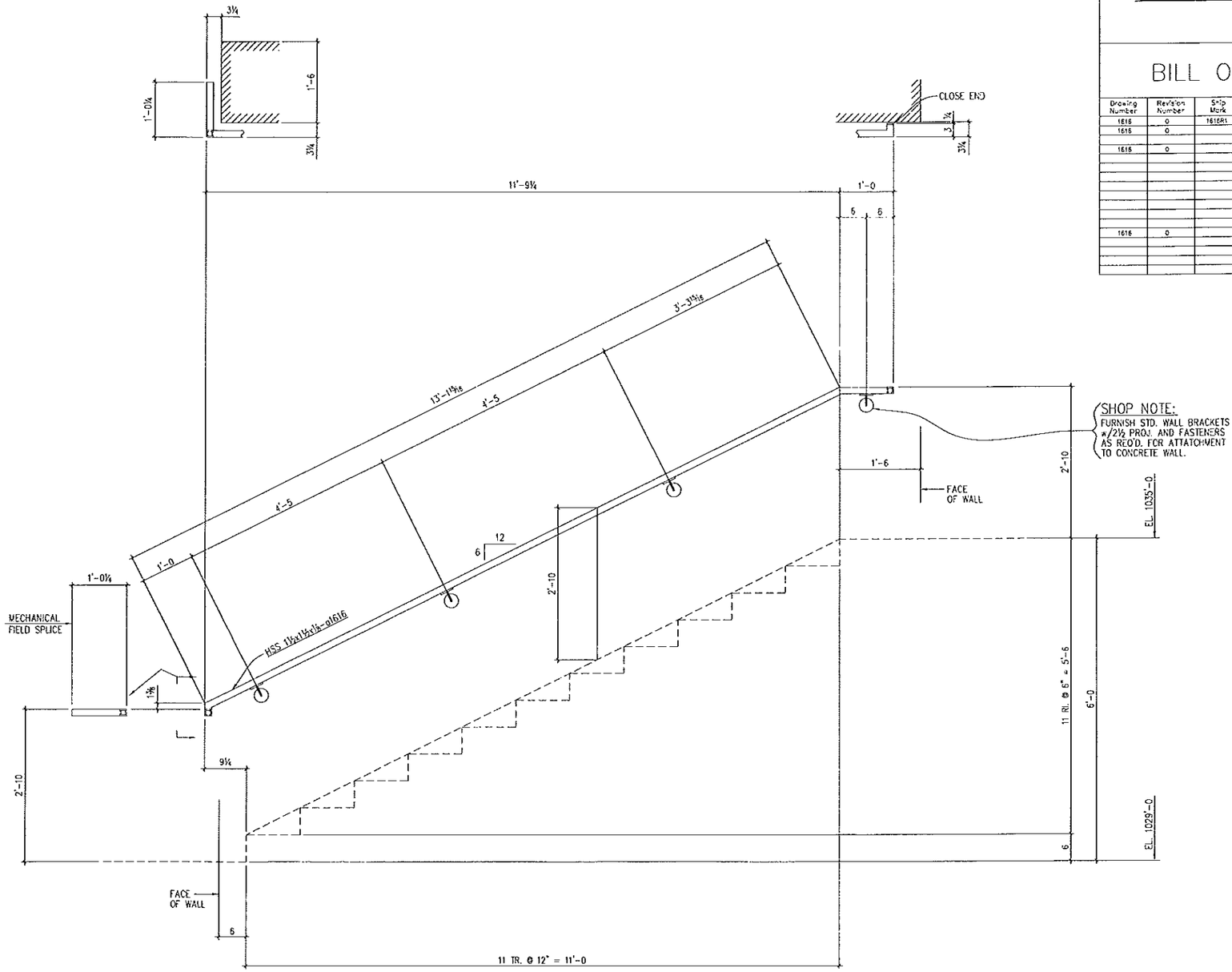
AVENUE FABRICATING, INC.

DRAWING ISSUE:
FOR APPV'L 11/28/06
FOR APPV'L 06/22/07
REVISION:

BILL OF MATERIAL

NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : AS NOTED
3. FINISH : GALVANIZED

Drawing Number	Revision Number	Ship Mark	Piece Mark	Quantity	Type of Material	Size of Material	Grade	Length	Notes
1616	0	1616R1		ONE	HANDRAIL				
1616	0		a1616	1	HSS	1 1/2 x 1 1/2 x .125	A500-Gr B	16 LN. FT.	
1616	0			4	STD. WALL BRACKETS w/ 2 1/2" PROJ.				
					FIELD BOLTS				
1616	0			4	NECESSARY FASTENERS FOR WALL BRACKETS	TO CONC. WALL			



ONE-HANDRAIL-1616R1
STAIR #4

NOTE:
HOT DIP GALVANIZE AFTER FABRICATION.
SEAL WELD IN ADDITION TO WELDS SHOWN.
PROVIDE VENT & WEEP HOLES AS REQUIRED

NOT FOR CONSTRUCTION
JUN 25 2007
FOR APPROVAL ONLY

TYPICAL FOR H/R
ALL WELDS & SHARP EDGES TO BE GROUND SMOOTH.

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REFERENCE DWG: E13	DESCRIPTION: HANDRAIL	DRAWN BY: RDJ	DATE: 10/06	CHECKED BY: DSS	JOB# 06-36	SHEET: 1616

Licensed CadVantage User

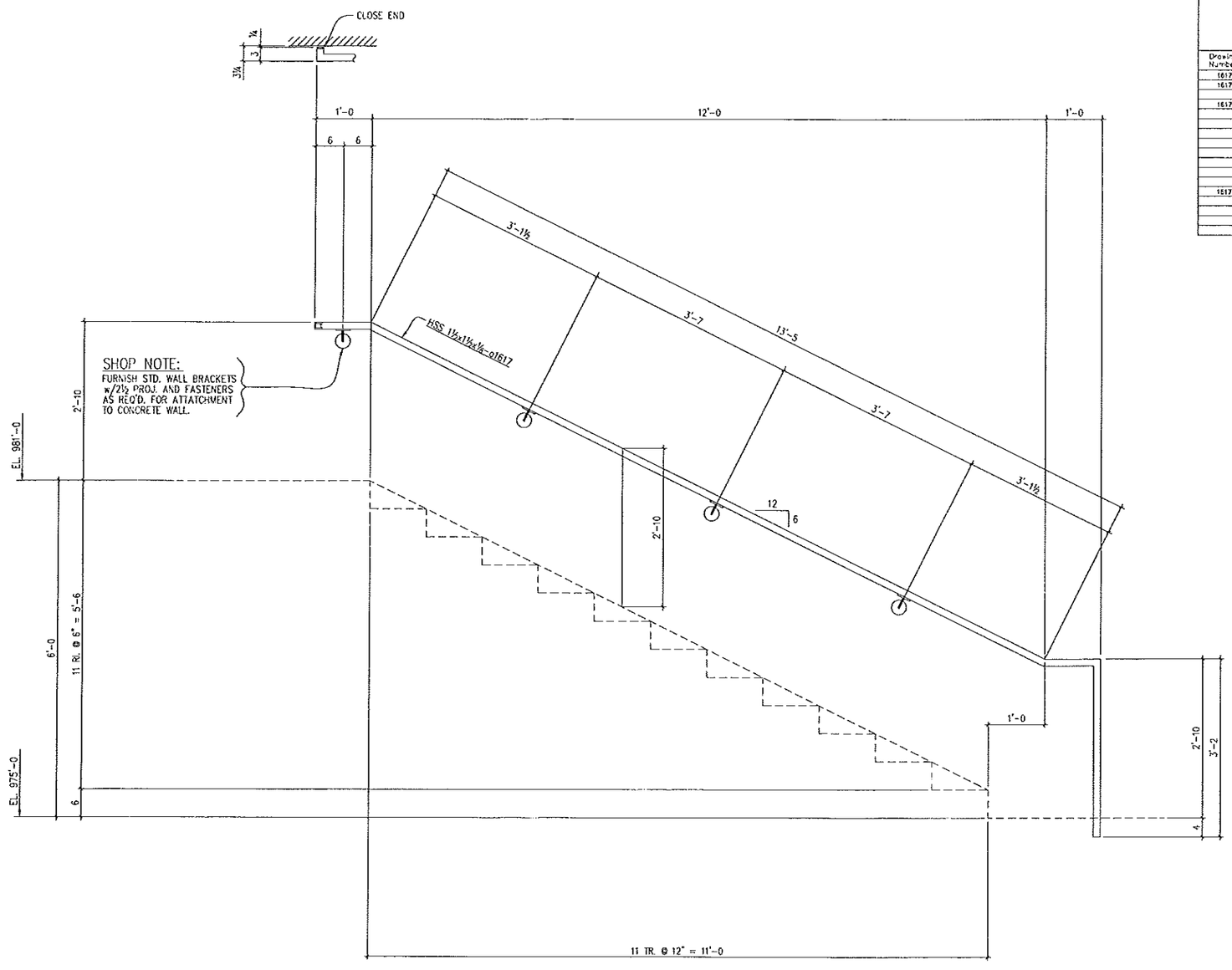
AVENUE FABRICATING, INC.

DRAWING ISSUE:
FOR APPVL 11/28/06
FOR APPVL 06/22/07
REVISION:

BILL OF MATERIAL

NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : AS NOTED
3. FINISH : GALVANIZED

Drawing Number	Revision Number	Ship Mark	Piece Mark	Quantity	Type of Material	Size of Material	Grade	Length	Notes
1617	0	161781		ONE	HANDRAIL				
1617	0		a1617	1	HSS	1 1/2 x 1 1/2 x .125	A500-Gr B	17 LIN. FT.	
1617	0			4	STD. WALL BRACKETS w/ 2 1/2" PROJ.				
1617	0			4	FIELD BOLTS NECESSARY FASTENERS FOR WALL BRACKETS	TO CONC. WALL			



ONE-HANDRAIL-1617R1
STAIR #4

NOTE:
HOT DIP GALVANIZE AFTER FABRICATION.
SEAL WELD IN ADDITION TO WELDS SHOWN.
PROVIDE VENT & WEEP HOLES AS REQUIRED

NOT FOR CONSTRUCTION
JUN 25 2007
FOR APPROVAL ONLY

TYPICAL FOR H/R
ALL WELDS & SHARP EDGES TO BE GROUND SMOOTH.

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REFERENCE DRG: E13	DESCRIPTION: HANDRAIL	DRAWN BY: RDJ	DATE: 10/06	CHECKED BY: DSS	JOB# 06-36	SHEET: 1617

Licensed CadVantage User

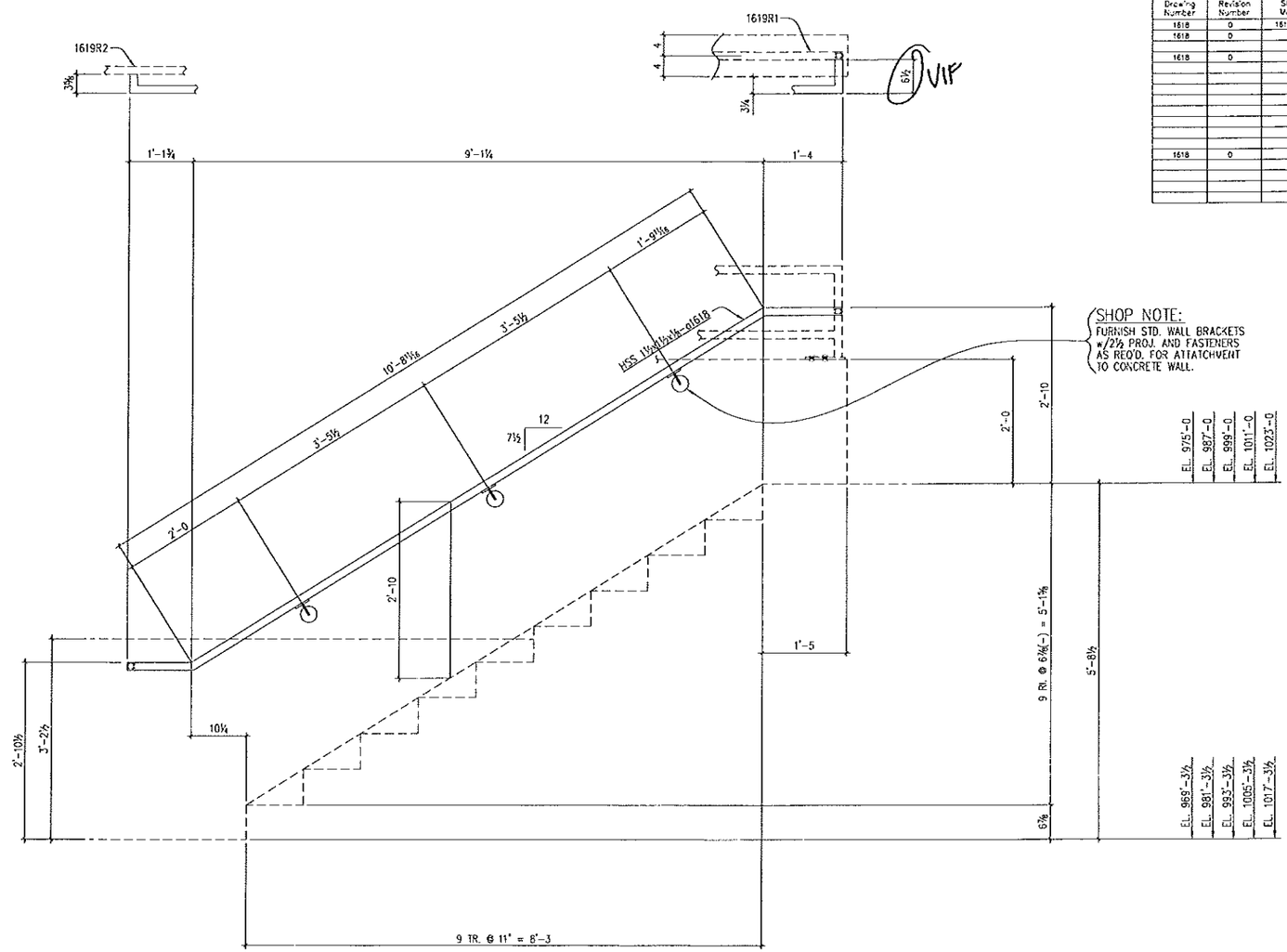
AVENUE FABRICATING, INC.

DRAWING ISSUE:
FOR APPVL 11/28/06
FOR APPVL 06/22/07
REVISION:

BILL OF MATERIAL

NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : AS NOTED
3. FINISH : GALVANIZED

Drawing Number	Revision Number	Ship Mark	Piece Mark	Quantity	Type of Material	Size of Material	Grade	Length	Notes
1618	0		1618R1	5	HANDRAILS				
1618	0		a1618	5	HSS	1 1/2x1 1/2 x .125	A500-Gr B	14 LIN. FT.	
1618	0			15	STD. WALL BRAKETS w/ 2 1/2" PROJ.				
					FIELD BOLTS				
1618	0			15	NECESSARY FASTENERS FOR WALL BRACKETS	TO CONC. WALL			



SHOP NOTE:
FURNISH STD. WALL BRACKETS w/2½ PROJ. AND FASTENERS AS REQ'D. FOR ATTATCHMENT TO CONCRETE WALL.

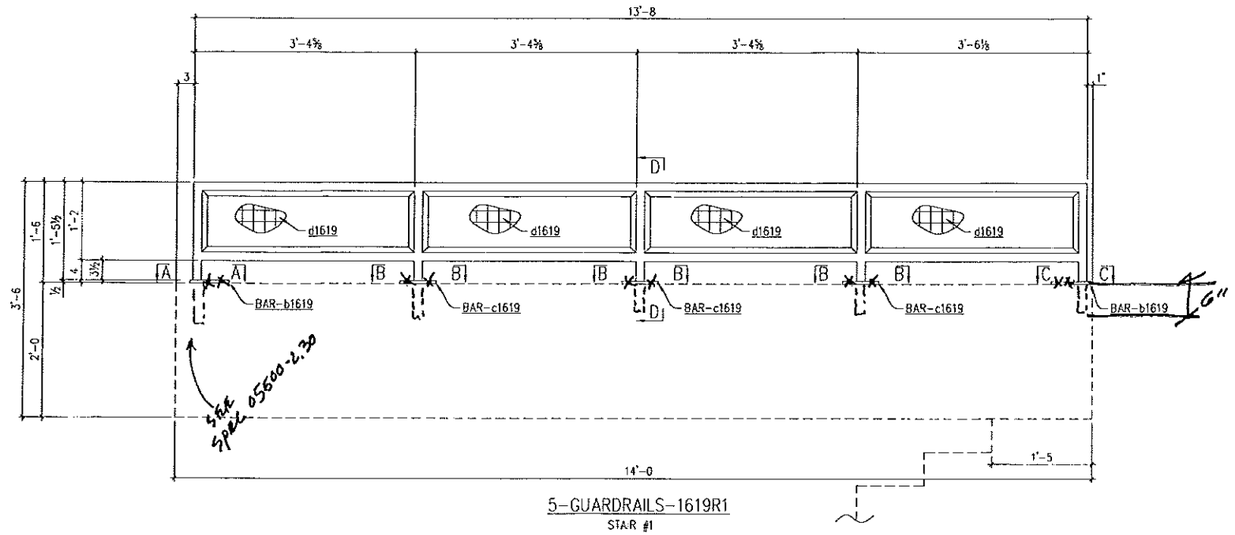
5-HANDRAILS-1618R1
STAIR #1

NOTE:
HOT DIP GALVANIZE AFTER FABRICATION.
SEAL WELD IN ADDITION TO WELDS SHOWN.
PROVIDE VENT & WEEP HOLES AS REQUIRED.

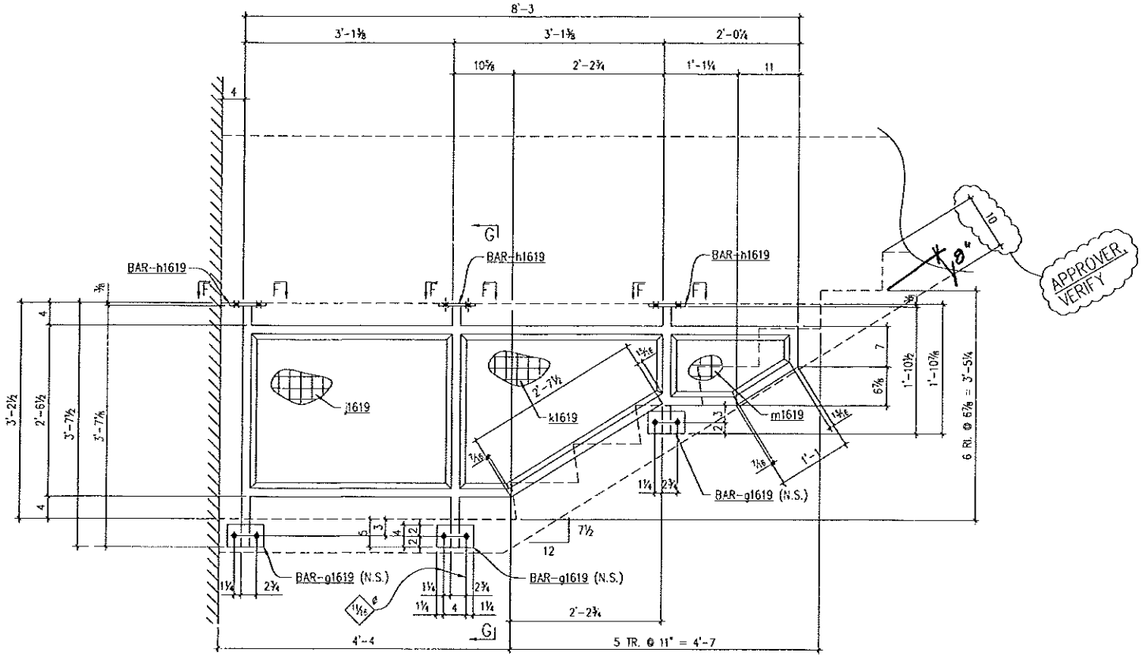
NOT FOR CONSTRUCTION
JUN 25 2007
FOR APPROVAL ONLY

TYPICAL FOR H/R
ALL WELDS & SHARP EDGES TO BE GROUND SMOOTH.

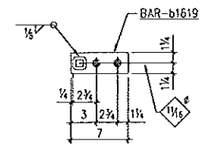
PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REFERENCE DWG: E11	DESCRIPTION: HANDRAIL	DRAWN BY: RDJ	DATE: 10/06	CHECKED BY: DSS	JOB# 06-36	SHEET: 1618



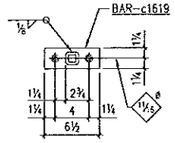
5-GUARDRAILS-1619R1
STAIR #1
50-½ø EXP. ANCH. w/3" EMBED
(STAINLESS)



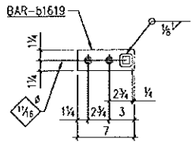
5-GUARDRAILS-1619R2
STAIR #1
60-½ø EXP. ANCH. w/3" EMBED
(STAINLESS)



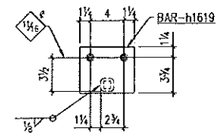
SECTION A-A



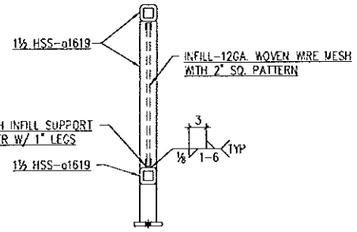
SECTION B-B



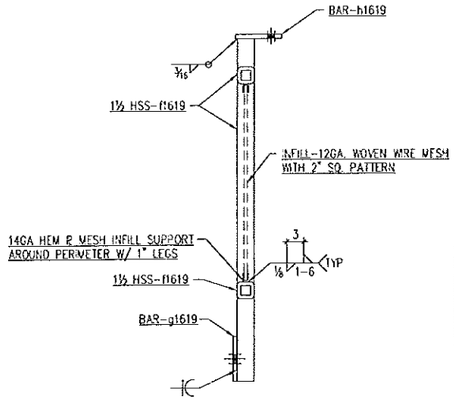
SECTION C-C



SECTION F-F



SECTION D-D



SECTION G-G

NOT FOR CONSTRUCTION
JUN 25 2007
FOR APPROVAL ONLY

NOTE:
HOT DIP GALVANIZE AFTER FABRICATION.
SEAL WELD IN ADDITION TO WELDS SHOWN.
PROVIDE VENT & WEEP HOLES AS REQUIRED.

TYPICAL FOR H/R
ALL WELDS & SHARP EDGES TO BE GROUND SMOOTH.

AVENUE FABRICATING, INC.

Licensed CadVantage User

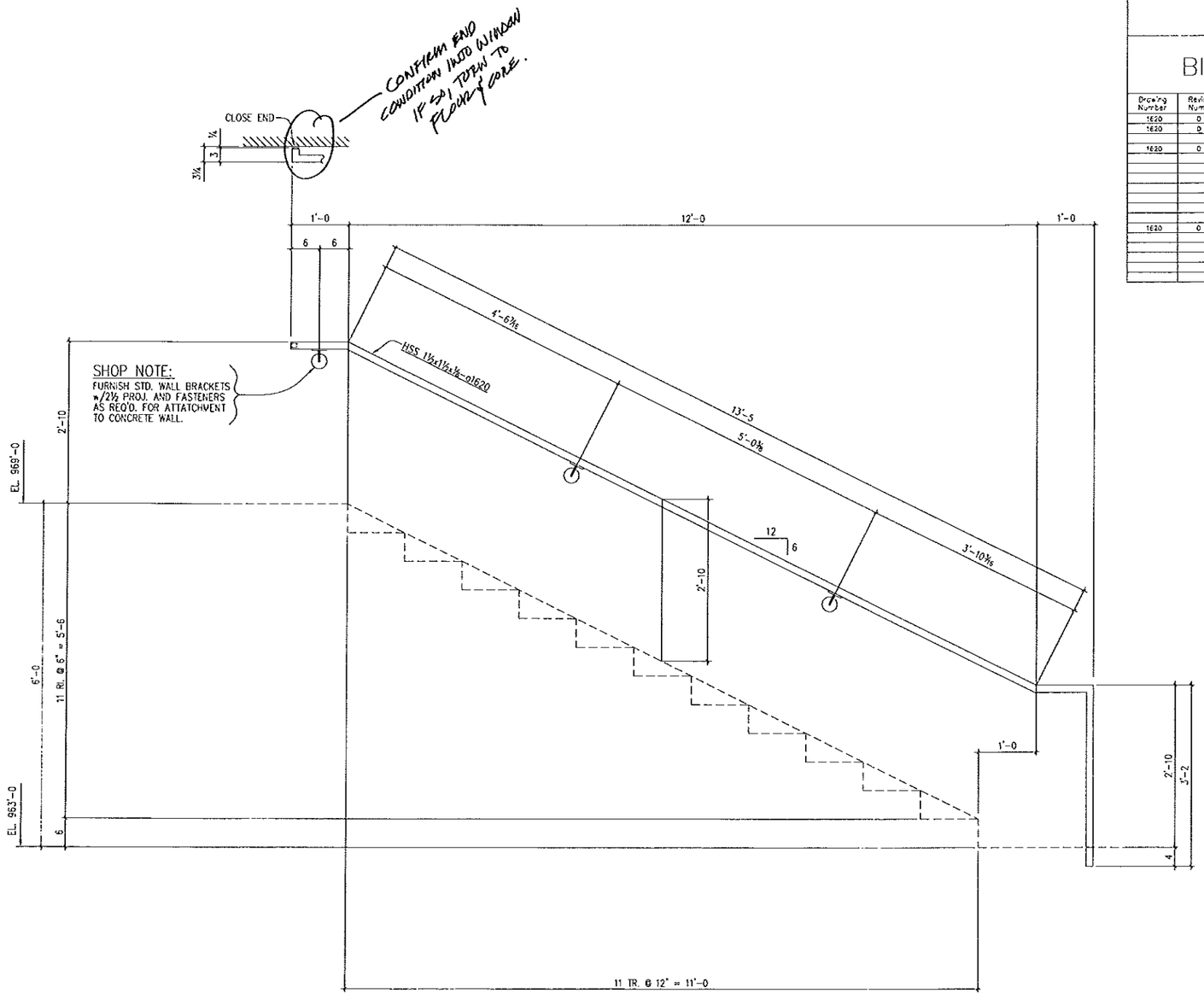
DRAWING ISSUE:
FOR APPV'L 11/28/06
FOR APPV'L 06/22/07
REVISION:

BILL OF MATERIAL

NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : AS NOTED
3. FINISH : GALVANIZED

Drawing Number	Revision Number	Ship Mark	Piece Mark	Quantity	Type of Material	Size of Material	Grade	Length	Notes
1619	0	1619R1		5	GUARDRAILS				
1619	0		a1619	5	HSS	1 1/2x1 1/2 x .125	A500-Gr B	35 LIN. FT.	
1619	0		b1619	10	FB	1/2 x 2 1/2	A36	0'-7	
1619	0		c1619	15	FB	1/2 x 2 1/2	A36	0'-6 1/2	
1619	0		d1619	20	WI	12 GA WOVEN WIRE MESH 2" SQ PATTERN W/ 14 GA HEM &		3 SQ. FT. 9 LIN. FT.	BENT
1619	0	1619R2		5	GUARDRAILS				
1619	0		f1619	5	HSS	1 1/2x1 1/2 x .125	A500-Gr B	27 LIN. FT.	
1619	0		g1619	15	FB	3/8 x 4	A36	0'-5½	
1619	0		h1619	15	FB	3/8 x 5	A36	0'-6½	
1619	0		j1619	5	WI	12 GA WOVEN WIRE MESH 2" SQ PATTERN W/ 14 GA HEM &		6 SQ. FT. 11 LIN. FT.	BENT
1619	0		k1619	5	WI	12 GA WOVEN WIRE MESH 2" SQ PATTERN W/ 14 GA HEM &		5 SQ. FT. 10 LIN. FT.	BENT
1619	0		m1619	5	WI	12 GA WOVEN WIRE MESH 2" SQ PATTERN W/ 14 GA HEM &		2 SQ. FT. 5 LIN. FT.	BENT
1619	0			110	FIELD BOLTS 1/2 EXP ANCHORS w/3" EMBED				STAINLESS

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REFERENCE DWG: E11	DESCRIPTION: GUARDRAIL	DRAWN BY: RDJ	DATE: 10/06	CHECKED BY: DSS	JOB# 06-36	SHEET: 1619



ONE-HANDRAIL-1620R1
STAIR #2

Licensed CadVantage User

AVENUE FABRICATING, INC.

DRAWING ISSUE:
FOR APP'L 11/28/06
FOR APP'L 06/22/07
REVISION:

BILL OF MATERIAL

NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : AS NOTED
3. FINISH : GALVANIZED

Drawing Number	Revision Number	Ship Mark	Piece Mark	Quantity	Type of Material	Size of Material	Grade	Length	Notes
1620	0	1620R1		ONE	HANDRAIL				
1620	0		a1620	1	HSS	1 1/2x1 1/2 x .125	A500-Gr B	19 LIN. FT.	
1620	0			3	STD. WALL BRACKETS w/ 2 1/2" PROJ.				
					FIELD BOLTS				
1620	0			3	NECESSARY FASTENERS FOR WALL BRACKETS	TO CONC. WALL			

NOT FOR CONSTRUCTION
JUN 25 2007
FOR APPROVAL ONLY

NOTE:
HOT DIP GALVANIZE AFTER FABRICATION.
SEAL WELD IN ADDITION TO WELDS SHOWN.
PROVIDE VENT & WEEP HOLES AS REQUIRED.

TYPICAL FOR H/R
ALL WELDS & SHARP EDGES TO BE GROUND SMOOTH.

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REFERENCE DWG: E12	DESCRIPTION: HANDRAIL	DRAWN BY: RDJ	DATE: 10/06	CHECKED BY: DSS	JOB# 06-36	SHEET: 1620

AVENUE FABRICATING, INC.

Licensed CadVantage User

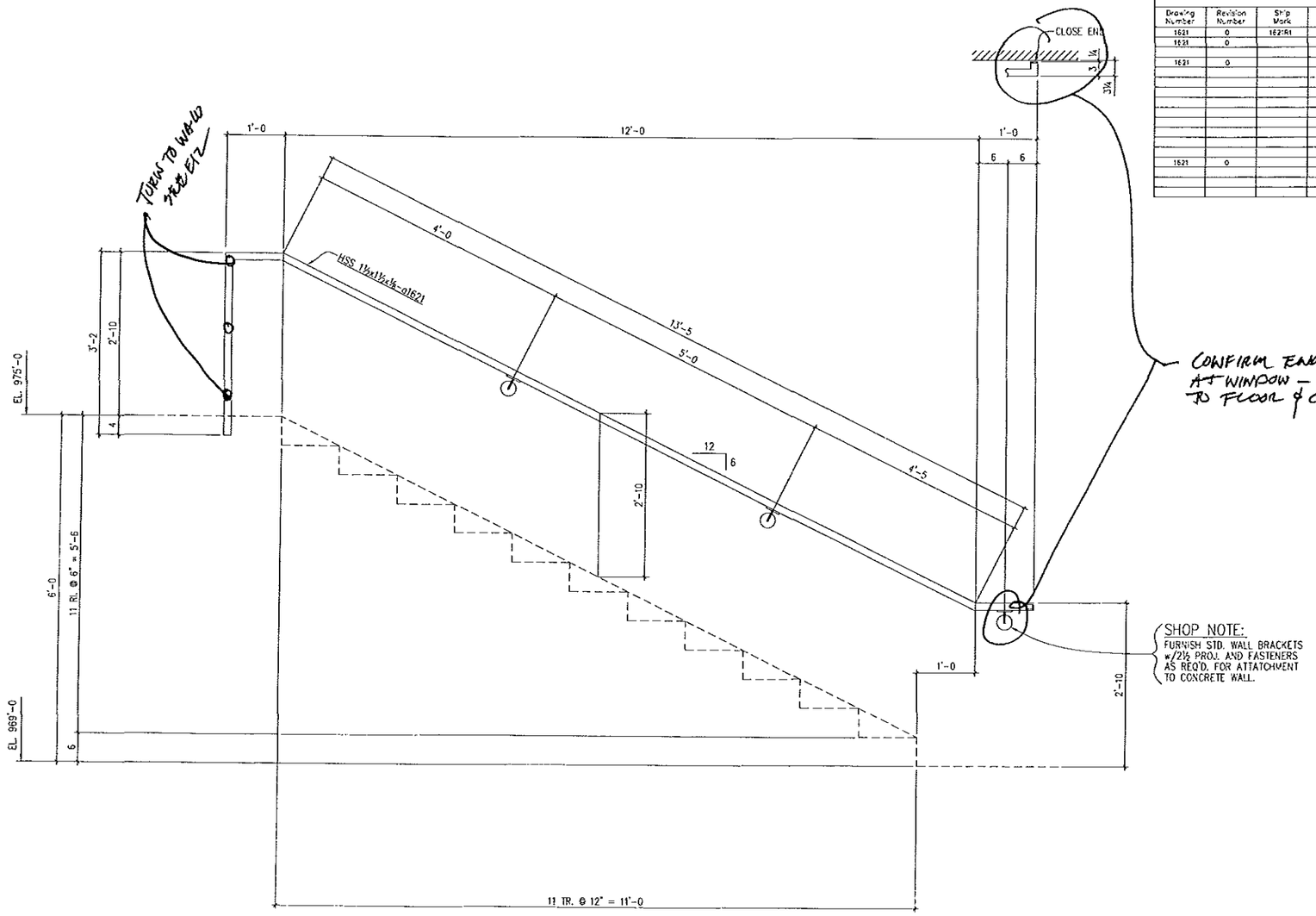
DRAWING ISSUE:
FOR APPVL 11/28/06
FOR APPVL 06/22/07

REVISION:

BILL OF MATERIAL

NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : AS NOTED
3. FINISH : GALVANIZED

Drawing Number	Revision Number	Ship Mark	Piece Mark	Quantity	Type of Material	Size of Material	Grade	Length	Notes
1621	0	1621R1		ONE	HANDRAIL				
1621	0		a1621	1	HSS	1 1/2x1 1/2 x .125	A500-Gr B	19 LN. FT.	
1621	0			3	STD. WALL BRACKETS w/ 2 1/2" PROJ.				
1621	0			3	FIELD BOLTS NECESSARY FASTENERS FOR WALL BRACKETS	TO CONC. WALL			



CONFIRM END CONDITION AT WINDOW - IF SO - TURN TO FLOOR & CONC.

SHOP NOTE:
FURNISH STD. WALL BRACKETS w/2½ PROJ. AND FASTENERS AS REQ'D. FOR ATTATCHMENT TO CONCRETE WALL.

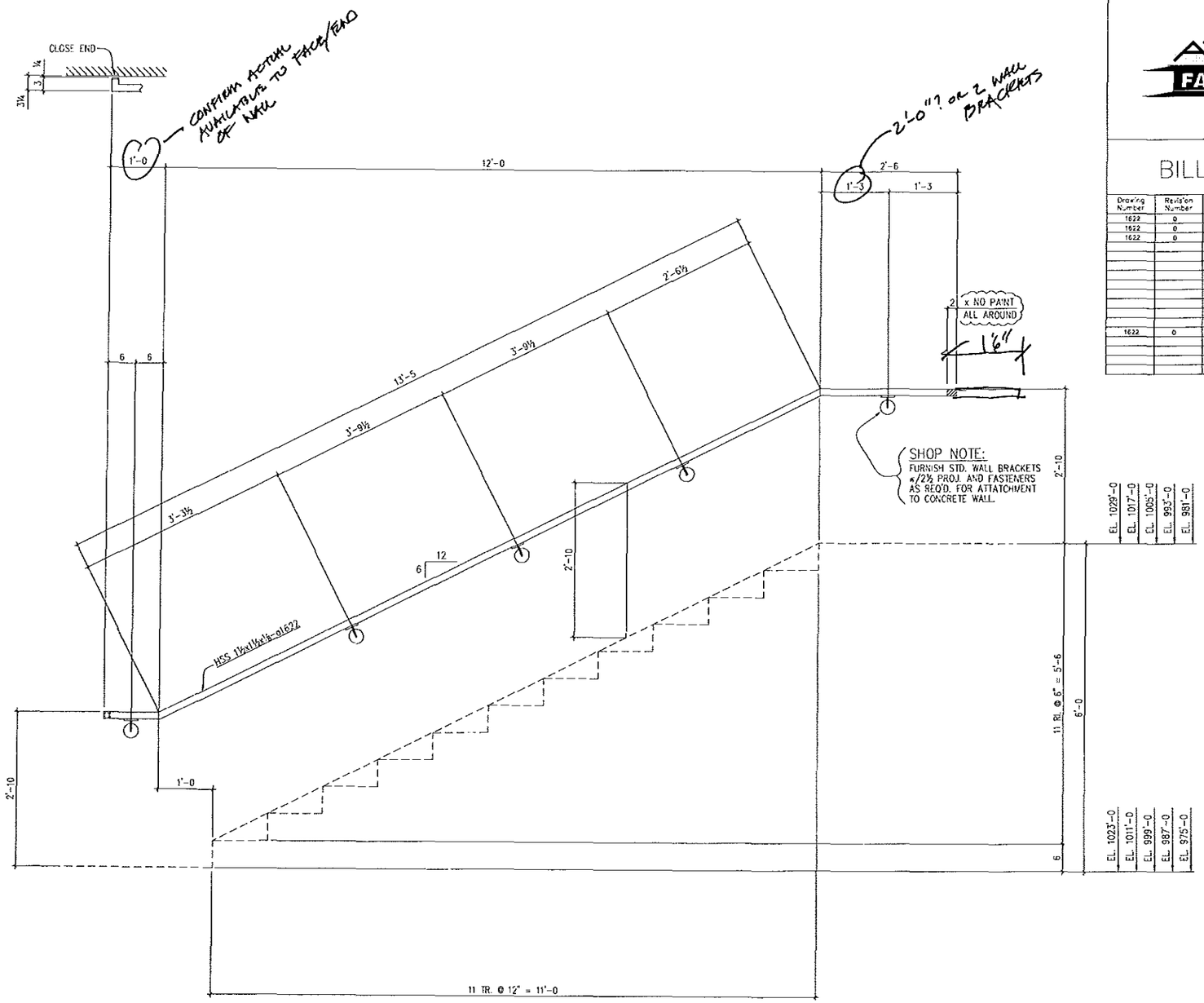
ONE-HANDRAIL-1621R1
STAIR #2

NOTE:
HOT DIP GALVANIZE AFTER FABRICATION.
SEAL WELD IN ADDITION TO WELDS SHOWN.
PROVIDE VENT & WEEP HOLES AS REQUIRED

NOT FOR CONSTRUCTION
JUN 25 2007
FOR APPROVAL ONLY

TYPICAL FOR H/R
ALL WELDS & SHARP EDGES TO BE GROUND SMOOTH.

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REFERENCE DWG: E12	DESCRIPTION: HANDRAIL	DRAWN BY: RDJ	DATE: 10/06	CHECKED BY: DSS	JOB# 06-36	SHEET: 1621



5-HANDRAILS-1622R1
STAIR #3

Licensed CadVantage User

AVENUE FABRICATING, INC.

DRAWING ISSUE:
FOR APPVL 11/28/06
FOR APPVL 06/22/07
REVISION:

BILL OF MATERIAL

NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : AS NOTED
3. FINISH : 1 S/C PRIMER U.N.

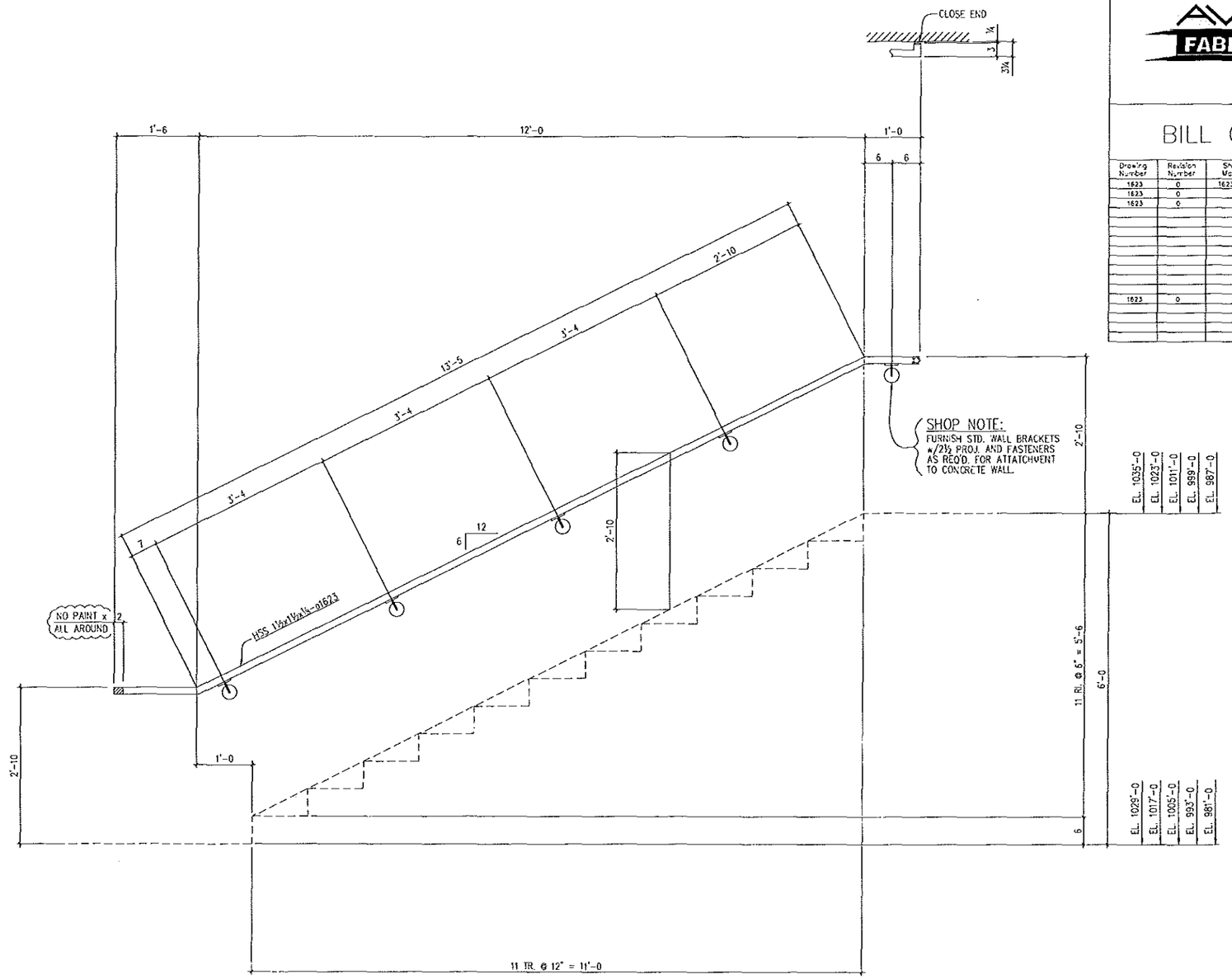
Drawing Number	Revision Number	Ship Work	Piece Mark	Quantity	Type of Material	Size of Material	Grade	Length	Notes
1622	0	162241		5	HANDRAILS				
1622	0		c1622	5	HSS	1 1/2x1 1/2 x .125	A500-Gr B	17 LIN FT.	
1622	0			5	STD. WALL BRACKETS w/ 2 1/2 PROJ				
					FIELD BOLTS				
1622	0			25	NECESSARY FASTENERS FOR WALL BRACKETS	TO CONC. WALL			

APPROVED
VERIFY THAT ALL RAIL IN STAIR-3 & STAFF STAIR NEED NOT BE GALVANIZED FOR IT IS IN A CONTROLLED ENVIRONEMENT

NOT FOR CONSTRUCTION
JUN 25 2007
FOR APPROVAL ONLY

TYPICAL FOR H/R
ALL WELDS & SHARP EDGES TO BE GROUND SMOOTH.

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REFERENCE DWG: E14 & E15	DESCRIPTION: HANDRAIL	DRAWN BY: RDJ	DATE: 10/06	CHECKED BY: DSS	JOB# 06-36	SHEET: 1622



5-HANDRAILS-1623R1
STAIR #3

Licensed CadVantage User

AVENUE FABRICATING, INC.

DRAWING ISSUE:
FOR APPV'L 11/28/06
FOR APPV'L 06/22/07
REVISION:

BILL OF MATERIAL

NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : AS NOTED
3. FINISH : 1 S/C PRIMER U.N.

Drawing Number	Revision Number	Ship Mark	Piece Mark	Quantity	Type of Material	Size of Material	Grade	Length	Notes
1623	0	1623R1		5	HANDRAILS				
1623	0		a1623	5	HSS	1 1/2x1 1/2 x .125	A500-Gr B	16 LIN. FT.	
1623	0				STD. WALL BRACKETS w/ 2 1/2 PROJ.				
					FIELD BOLTS				
1623	0			25	NECESSARY FASTENERS FOR WALL BRACKETS	TO CONC. WALL			

NOT FOR CONSTRUCTION
JUN 25 2007
FOR APPROVAL ONLY

TYPICAL FOR H/R
ALL WELDS & SHARP EDGES TO BE GROUND SMOOTH.

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REFERENCE DWG: E14	DESCRIPTION: HANDRAIL	DRAWN BY: RDJ	DATE: 10/06	CHECKED BY: DSS	JOB# 06-36	SHEET: 1623

Licensed CadVantage User

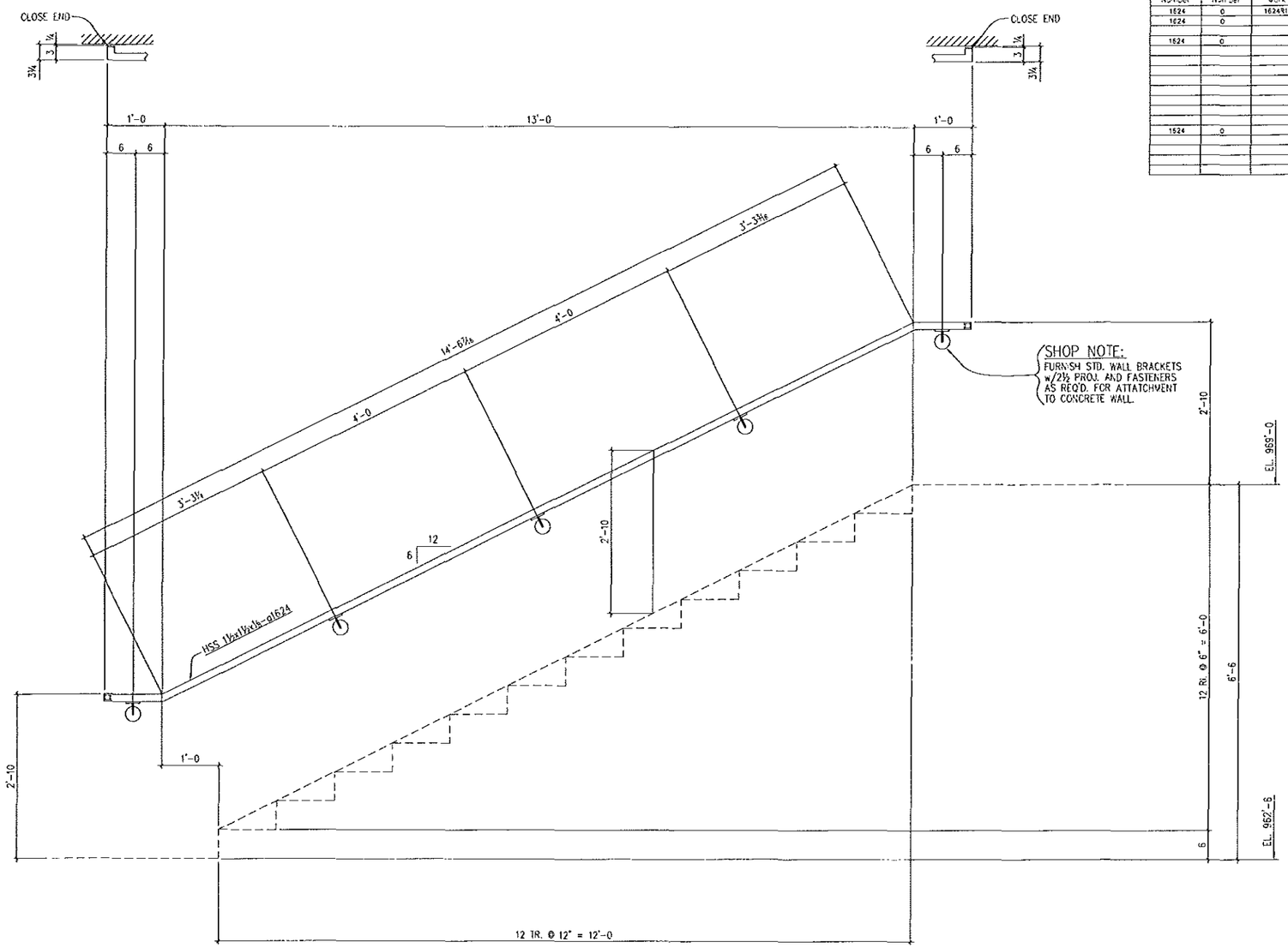
AVENUE FABRICATING, INC.

DRAWING ISSUE:
FOR APPVL 11/28/06
FOR APPVL 06/22/07
REVISION:

BILL OF MATERIAL

NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : AS NOTED
3. FINISH : 1 S/C PRIMER.

Drawing Number	Revision Number	Ship Mark	Piece Mark	Quantity	Type of Material	Size of Material	Grade	Length	Notes
1624	0	1624R1		ONE	HANDRAIL				
1624	0		a1624	1	HSS	1 1/2x1 1/2 x .125	A500-Gr B	17 LNL FT.	
1624	0			5	STD. WALL BRAKETS w/ 2 1/2" PROJ.				
					FIELD BOLTS				
1624	0			5	NECESSARY FASTENERS FOR WALL BRACKETS	TO CONC. WALL			



ONE-HANDRAIL-1624R1
STAFF STAIR

NOT FOR CONSTRUCTION
JUN 25 2007
FOR APPROVAL ONLY

TYPICAL FOR H/R
ALL WELDS & SHARP EDGES TO BE GROUND SMOOTH.

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REFERENCE DWG: E15	DESCRIPTION: HANDRAIL	DRAWN BY: RDJ	DATE: 10/06	CHECKED BY: DSS	JOB# 06-36	SHEET: 1624

Licensed CadVantage User

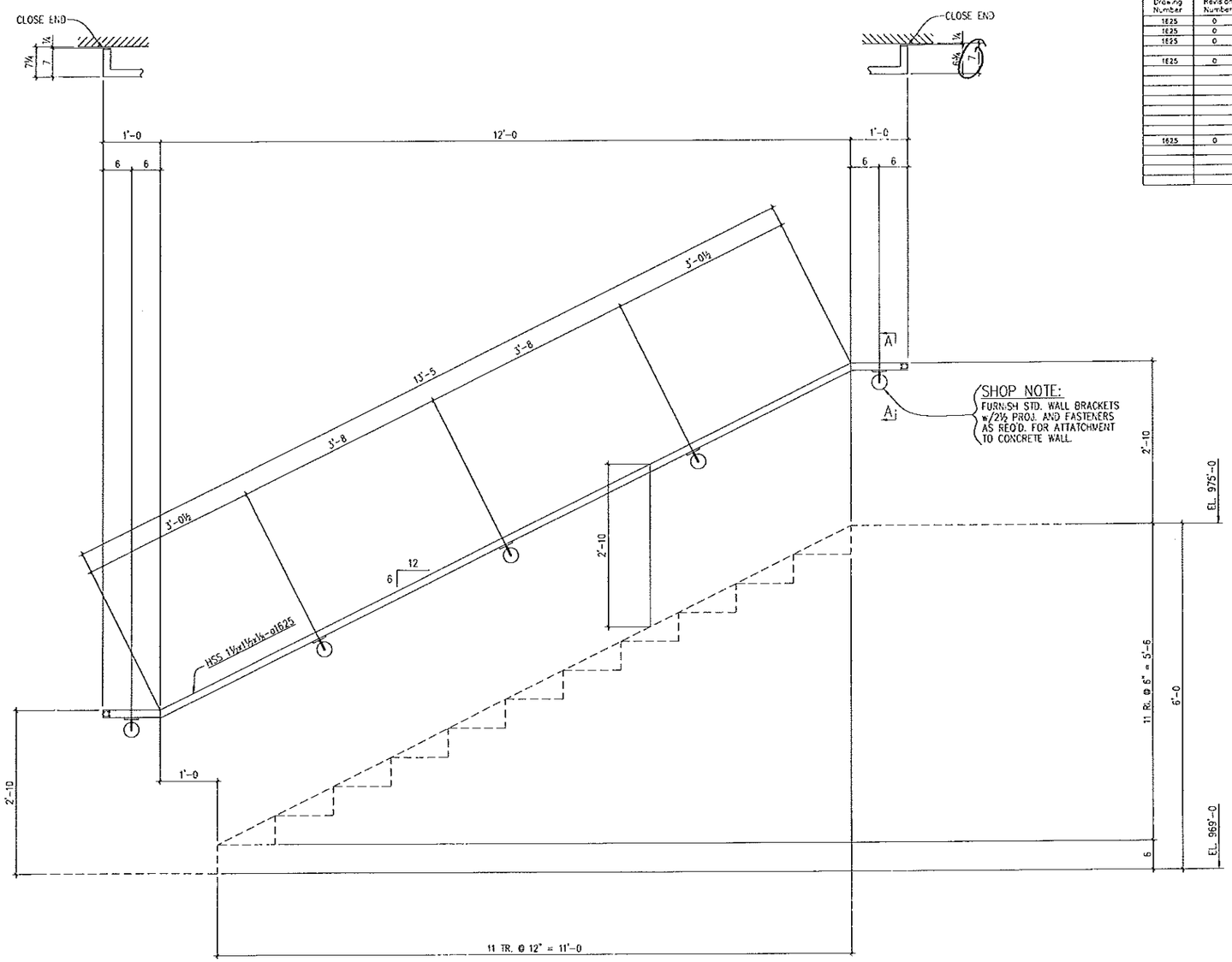
AVENUE FABRICATING, INC.

DRAWING ISSUE:
FOR APPVL 11/28/06
FOR APPVL 06/22/07
REVISION:

BILL OF MATERIAL

NOTES. 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : AS NOTED
3. FINISH : 1 S/C PRIMER

Drawing Number	Revision Number	Ship Mark	Piece Mark	Quantity	Type of Material	Size of Material	Grade	Length	Notes
1625	0	1625R1		ONE	HANDRAIL				
1625	0		a1625	1	HSS	1 1/2x1 1/2 x .125	A500-Gr B	16 LIN. FT.	
1625	0		b1625	5	PL	2	A53	0'-4	
1625	0			5	STD. WALL BRACKETS w/ 2 1/2" PROJ.				
					FIELD BOLTS				
1625	0			5	NECESSARY FASTENERS FOR WALL BRACKETS	TO CONC. WALL			



ONE-HANDRAIL-1625R1
STAFF STAIR

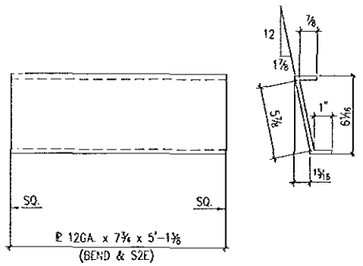
SECTION A-A

CONFIRM WHERE EDGE OF STAIRS BELOW IS IN RELATION TO RAIL.

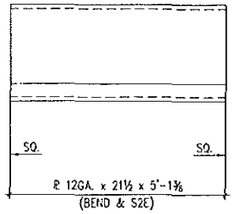
NOT FOR CONSTRUCTION
JUN 25 2007
FOR APPROVAL ONLY

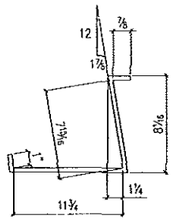
TYPICAL FOR H/R
ALL WELDS & SHARP EDGES TO BE GROUND SMOOTH.

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REFERENCE DWG: E15	DESCRIPTION: HANDRAIL	DRAWN BY: RDJ	DATE: 10/06	CHECKED BY: DSS	JOB# 06-36	SHEET: 1625

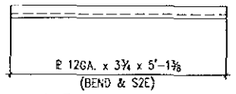


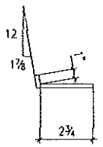
ONE~RISER~1626P1



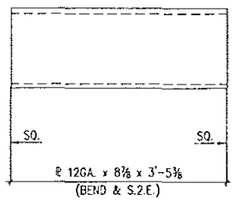


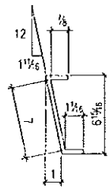
6~TREADS~1626P2



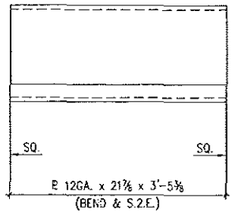


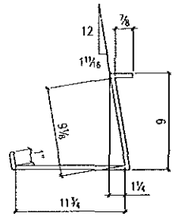
ONE~FILLER~1626P3



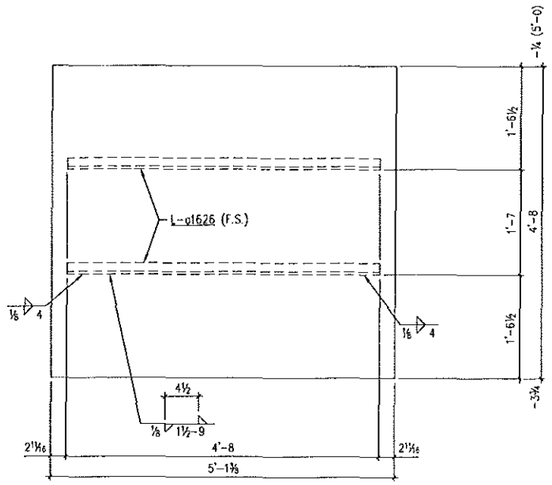


ONE~RISER~1626P5

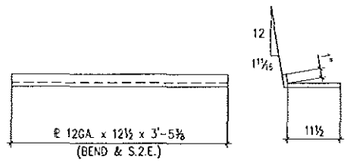




14~TREADS~1626P6



ONE~LANDING PAN~1626P4



ONE~FILLER~1626P7

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AVENUE FABRICATING, INC.

DRAWING ISSUE:
FOR APPVL 11/28/06
FOR APPVL 06/22/07

REVISION:

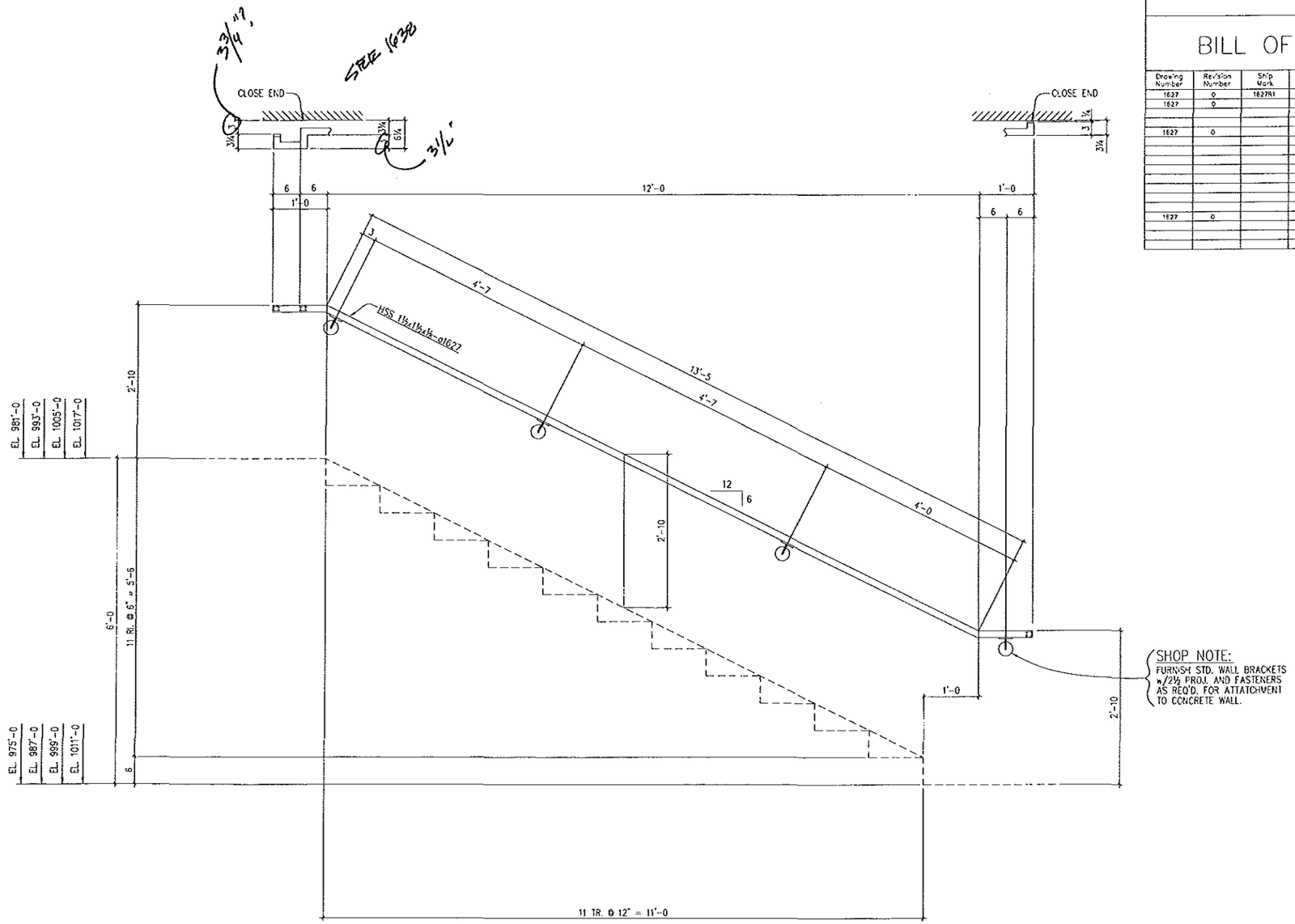
BILL OF MATERIAL

NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : AS NOTED
3. FINISH : GALVANIZED

Drawing Number	Revision Number	Ship Mark	Piece Mark	Quantity	Type of Material	Size of Material	Grade	Length	Notes
1626	0	1626P1		ONE	PL	12 GA. x 7¾	A36	5'-1⅜	BENT
1626	0	1626P2		6	PL	12 GA. x 21½	A36	5'-1⅜	BENT
1626	0	1626P3		ONE	PL	12 GA. x 3¾	A36	5'-1⅜	BENT
1626	0	1626P4		ONE	PL	12 GA. x 56	A36	5'-1⅜	
1626	0		a1626	2	L	2 x 2 x ⅛	A36	4'-8	
1626	0	1626P5		ONE	PL	12 GA. x 8⅞	A36	3'-5⅜	BENT
1626	0	1626P6		14	PL	12 GA. x 21⅞	A36	3'-5⅜	BENT
1626	0	1626P7		ONE	PL	12 GA. x 12½	A36	3'-5⅜	BENT

NOT FOR CONSTRUCTION
JUN 25 2007
FOR APPROVAL ONLY

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REFERENCE DWG: E11	DESCRIPTION: STAIR PANS	DRAWN BY: MAD	DATE: 10/06	CHECKED BY: DSS	JOB# 06-36	SHEET: 1626



SHOP NOTE:
FURNISH STD. WALL BRACKETS w/2½ PROJ. AND FASTENERS AS REQ'D. FOR ATTATCHMENT TO CONCRETE WALL.

5z-HANDRAILS-1627R1
STAIR #2

NOTE:
HOT DIP GALVANIZE AFTER FABRICATION.
SEAL WELD IN ADDITION TO WELDS SHOWN.
PROVIDE VENT & WEEP HOLES AS REQUIRED.

NOT FOR CONSTRUCTION
JUN 25 2007
FOR APPROVAL ONLY

TYPICAL FOR H/R
ALL WELDS & SHARP EDGES TO BE GROUND SMOOTH.

AVENUE FABRICATING, INC.

Licensed CadVantage User

DRAWING ISSUE:
FOR APPVL 11/28/06
FOR APPVL 06/22/07
REVISION:

BILL OF MATERIAL

NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : AS NOTED
3. FINISH : GALVANIZED

Drawing Number	Revision Number	Ship Mark	Piece Mark	Quantity	Type of Material	Size of Material	Grade	Length	Notes
1627	0	1627R1		5	HANDRAILS				
1627	0		c1627	5	HSS	1 1/2x1 1/2 x .125	A500-Gr B	16 LN. FT.	
1627	0			20	STD. WALL BRACKETS w/ 2 1/2" PROJ				
1627	0			20	FIELD BOLTS NECESSARY FASTENERS FOR WALL BRACKETS	TO CONC. WALL			

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REFERENCE DWG: E12	DESCRIPTION: HANDRAIL	DRAWN BY: RDJ	DATE: 10/06	CHECKED BY: DSS	JOB# 06-36	SHEET: 1627

AVENUE FABRICATING, INC.

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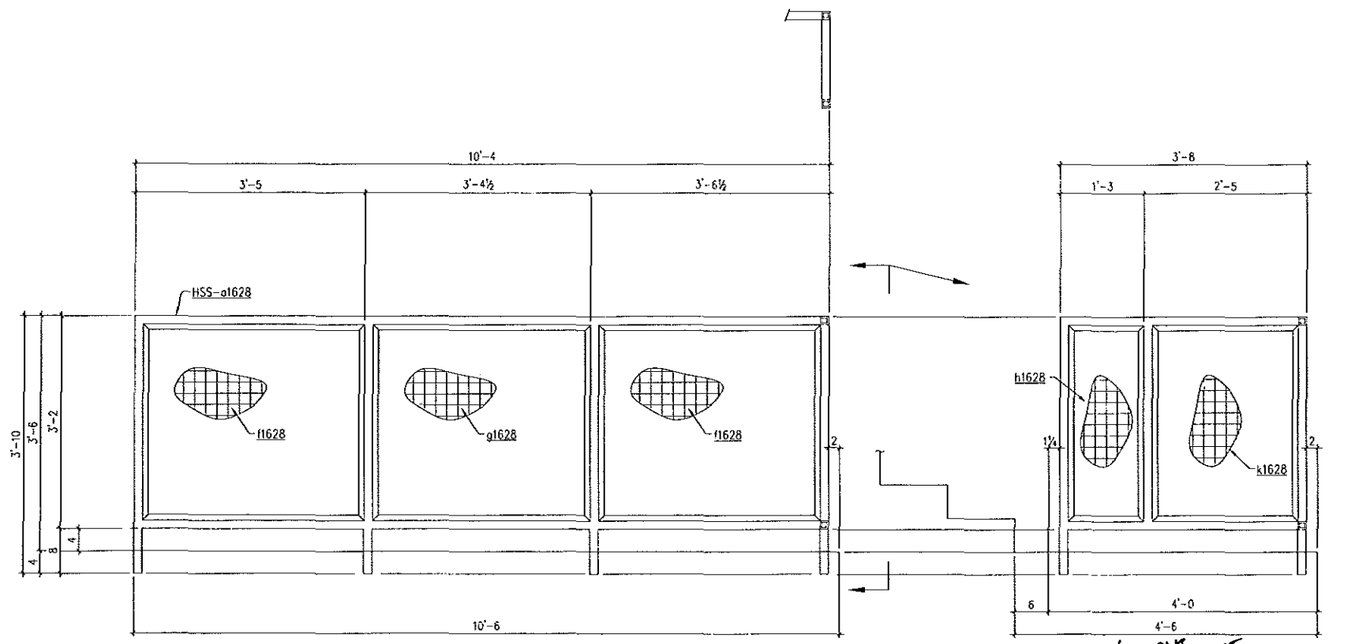
DRAWING ISSUE:
FOR APPVL 11/28/06
FOR APPVL 06/22/07
REVISION:

BILL OF MATERIAL

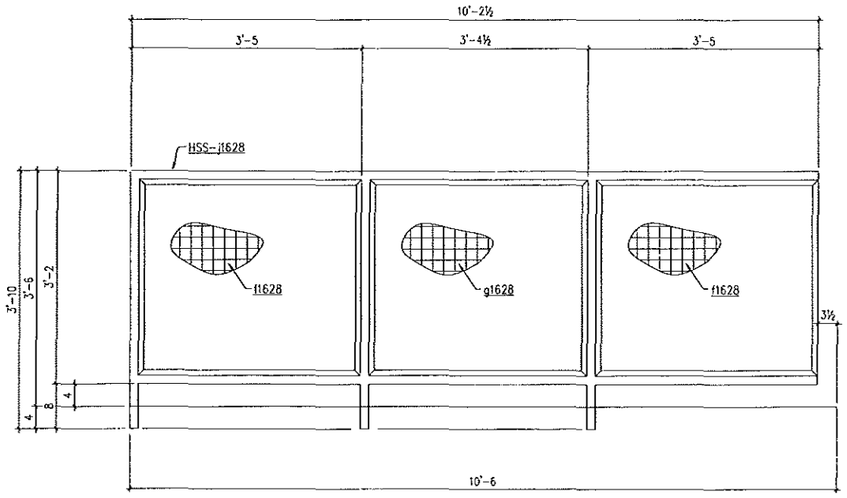
NOTES: 1. WELD ELECTRODES : E70XX
2. POLE DIAMETER : AS NOTED
3. FINISH : GALVANIZED

Drawing Number	Revision Number	Ship Mark	Piece Mark	Quantity	Type of Material	Size of Material	Grade	Length	Notes
1628	0	162891		4	GUARDRAILS				
1628	0		a1628	4	HSS	1 1/2x1 1/2 x .125	A500-Gr B	46 LIN. FT.	
1628	0		f1628	8	M	12 GA WOVEN WIRE MESH 2" SQ PATTERN W/ 14 GA HEM B		10 SQ. FT.	
1628	0							13 LIN. FT.	BENT
1628	0		g1628	4	M	12 GA WOVEN WIRE MESH 2" SQ PATTERN W/ 14 GA HEM B		10 SQ. FT.	
1628	0							13 LIN. FT.	BENT
1628	0		h1628	4	M	12 GA WOVEN WIRE MESH 2" SQ PATTERN W/ 14 GA HEM B		4 SQ. FT.	
1628	0							9 LIN. FT.	BENT
1628	0		k1628	4	M	12 GA WOVEN WIRE MESH 2" SQ PATTERN W/ 14 GA HEM B		7 SQ. FT.	
1628	0							11 LIN. FT.	BENT
1628	0	162892		ONE	GUARDRAILS				
1628	0		j1628	1	HSS	1 1/2x1 1/2 x .125	A500-Gr B	31 LIN. FT.	
1628	0		f1628	2	M	12 GA WOVEN WIRE MESH 2" SQ PATTERN W/ 14 GA HEM B		10 SQ. FT.	
1628	0							13 LIN. FT.	BENT
1628	0		g1628	1	M	12 GA WOVEN WIRE MESH 2" SQ PATTERN W/ 14 GA HEM B		10 SQ. FT.	
1628	0							13 LIN. FT.	BENT

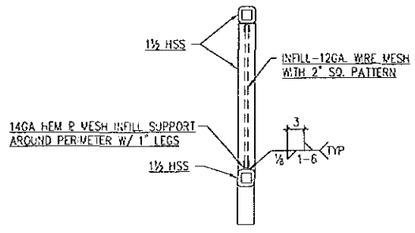


4-GUARDRAILS-1628R1
STAIR #1

SEE DETAIL THIS BR. BRACKET MOUNTED TO SLAB'S EDGE SO AS NOT TO CONFLICT W/ HANDRAIL 164321.?



ONE-GUARDRAIL-1628R2
STAIR #1



TYPICAL SECTION

NOTE:
HOT DIP GALVANIZE AFTER FABRICATION.
SEAL WELD IN ADDITION TO WELDS SHOWN.
PROVIDE VENT & WEEP HOLES AS REQUIRED

NOT FOR CONSTRUCTION
JUN 25 2007
FOR APPROVAL ONLY

TYPICAL FOR H/R
ALL WELDS & SHARP EDGES TO BE GROUND SMOOTH.

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REFERENCE DWG: E11	DESCRIPTION: GUARDRAIL	DRAWN BY: RDJ	DATE: 11/06	CHECKED BY: DSS	JOB# 06-36	SHEET: 1628

Licensed Cadvantage User

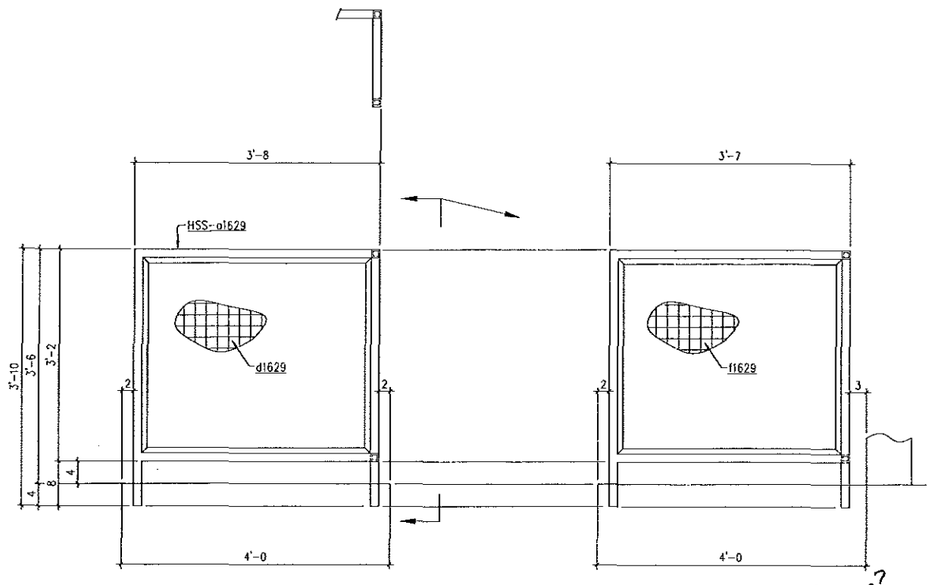
AVENUE FABRICATING, INC.

DRAWING ISSUE:
FOR APPVL 11/28/06
FOR APPVL 06/22/07
REVISION:

BILL OF MATERIAL

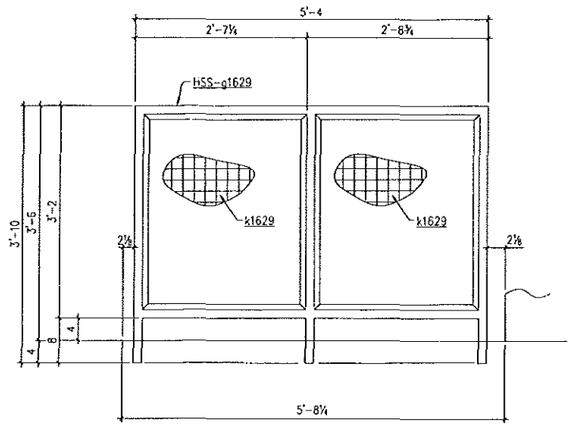
NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : AS NOTED
3. FINISH : GALVANIZED

Drawing Number	Revision Number	Ship Mark	Piece Mark	Quantity	Type of Material	Size of Material	Grade	Length	Notes
1629	0	1629R1		ONE	GUARDRAILS				
1629	0		d1629	1	HSS	1 1/2x1 1/2 x .125	A500-Gr B	25 LIN. FT.	
1628	0		d1629	1	MI	12 GA WOVEN WIRE MESH 2" SQ PATTERN W/ 14 GA HEM B		10 SQ. FT.	
1628	0							13 LIN. FT.	BENT
1628	0		f1629		MI	12 GA WOVEN WIRE MESH 2" SQ PATTERN W/ 14 GA HEM B		10 SQ. FT.	
								13 LIN. FT.	BENT
1629	0	1629R2		5	GUARDRAILS				
1629	0		g1629	5	HSS	1 1/2x1 1/2 x .125	A500-Gr B	21 LIN. FT.	
1628	0		k1629		MI	12 GA WOVEN WIRE MESH 2" SQ PATTERN W/ 14 GA HEM B		8 SQ. FT.	
								11 LIN. FT.	BENT

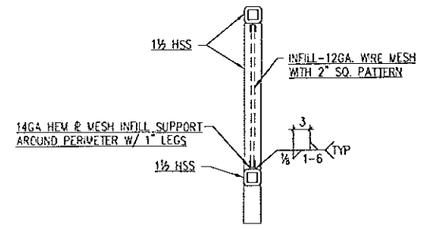


ONE-GUARDRAIL-1629R1
STAIR #1

BRACKET MOUNTED? THIS SHEET SHOWS COARS



5-GUARDRAILS-1629R2
STAIR #1



TYPICAL SECTION

NOTE:
HOT DIP GALVANIZE AFTER FABRICATION.
SEAL WELD IN ADDITION TO WELDS SHOWN.
PROVIDE VENT & WEEP HOLES AS REQUIRED

NOT FOR CONSTRUCTION
JUN 25 2007
FOR APPROVAL ONLY

TYPICAL FOR H/R
ALL WELDS & SHARP EDGES TO BE GROUND SMOOTH.

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REFERENCE DWG: E11	DESCRIPTION: GUARDRAIL	DRAWN BY: RDJ	DATE: 11/06	CHECKED BY: DSS	JOB# 06-36	SHEET: 1629

AVENUE FABRICATING, INC.

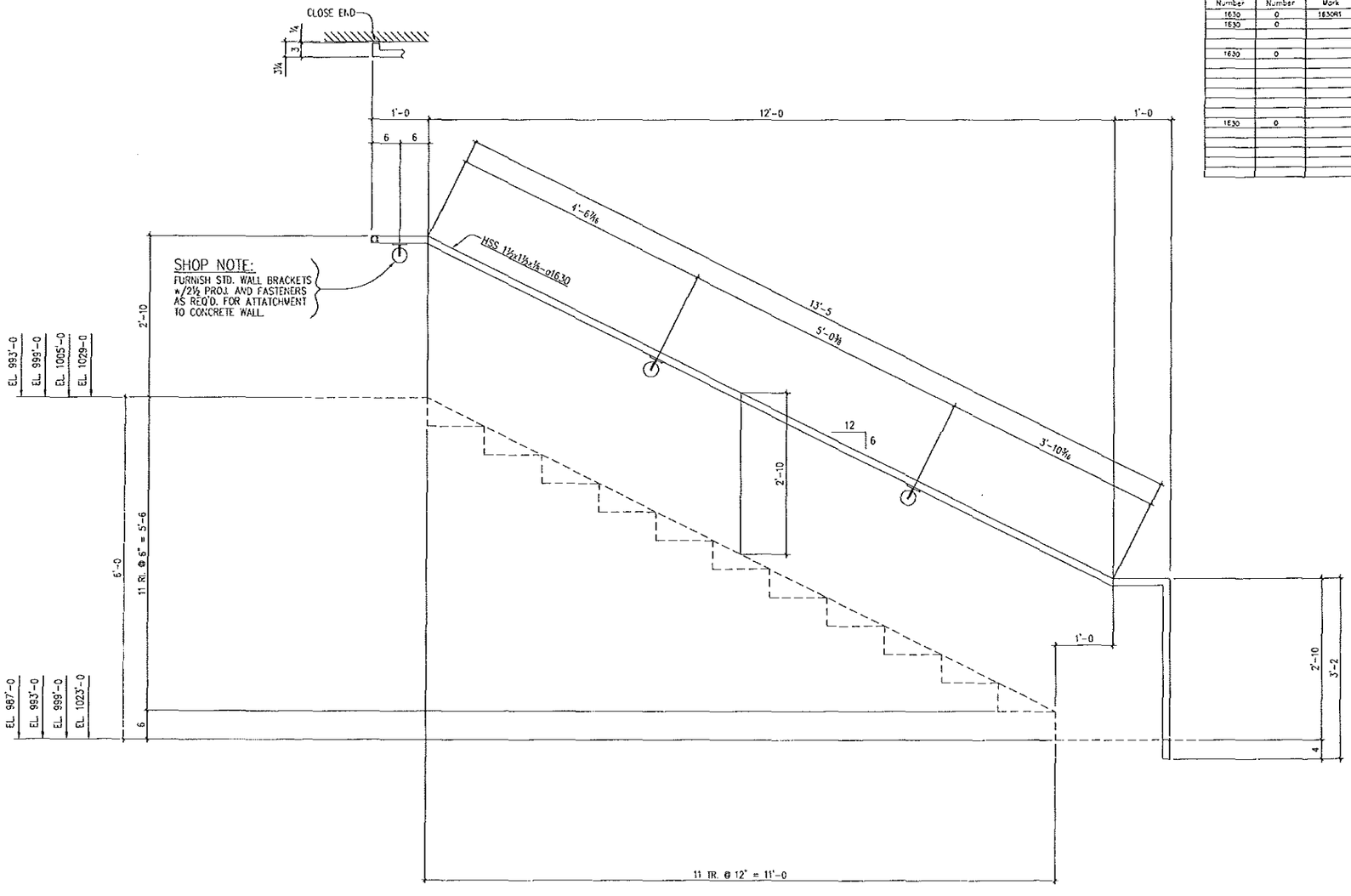
Licensed CadVantage User

DRAWING ISSUE:
FOR APPV'L 11/28/06
FOR APPV'L 06/22/07
REVISION:

BILL OF MATERIAL

NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : AS NOTED
3. FINISH : GALVANIZED

Drawing Number	Revision Number	Ship Mark	Piece Mark	Quantity	Type of Material	Size of Material	Grade	Length	Notes
1630	0	1630R1		4	HANDRAILS				
1630	0		a1633	4	HSS	1 1/2x1 1/2 x .125	A500-Gr B	19 LN. FT.	
1630	0			12	STD. WALL BRACKETS w/ 2 1/2" PROJ.				
1630	0			12	FIELD BOLTS NECESSARY FASTENERS FOR WALL BRACKETS	TO CONC. WALL			



4-HANDRAILS-1630R1
STAIR #4

NOTE:
HOT DIP GALVANIZE AFTER FABRICATION.
SEAL WELD IN ADDITION TO WELDS SHOWN.
PROVIDE VENT & WEEP HOLES AS REQUIRED.

NOT FOR CONSTR. ATION
JUN 25 2007
FOR APPROVAL ONLY

TYPICAL FOR H/R
ALL WELDS & SHARP EDGES TO BE GROUND SMOOTH.

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REFERENCE DWG: E13	DESCRIPTION: HANDRAIL	DRAWN BY: MAD	DATE: 10/06	CHECKED BY: DSS	JOB# 06-36	SHEET: 1630

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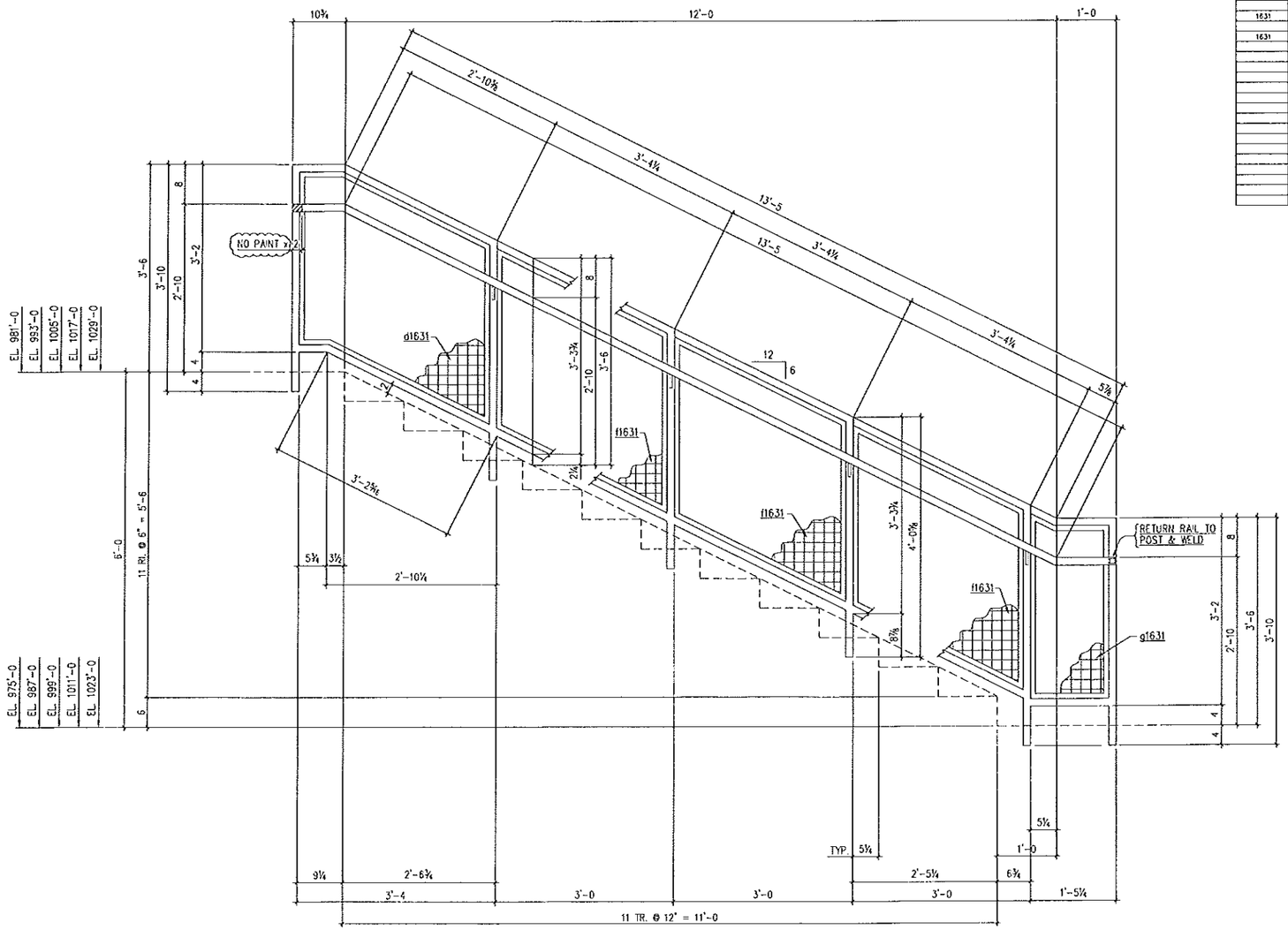
AVENUE FABRICATING, INC.

DRAWING ISSUE:
FOR APPVL 11/28/06
FOR APPVL 06/22/07
REVISION:

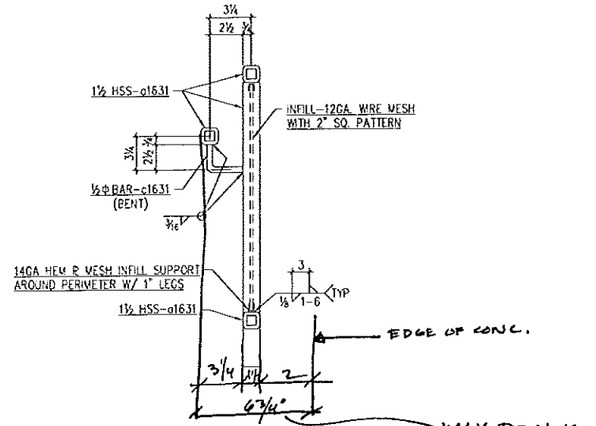
BILL OF MATERIAL

NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : AS NOTED
3. FINISH : 1 S/C PRIMER U.N.

Drawing Number	Revision Number	Ship Mark	Piece Mark	Quantity	Type of Material	Size of Material	Grade	Length	Notes
1631	0	1631R1		5	GUARDRAIL w/H.R.				
1631	0		a1631	5	HSS	1 1/2x1 1/2 x .125	A500-Gr B	67 LIN. FT.	
1631	0		c1631	20	SQ	1/2	A36	0'-4 1/2	BENT
1631	0		e1631	5	12 GA WIRE MESH 2" SQ PATTERN W/ 14 GA HEM R			14 SQ FT 14 LIN. FT	BENT
1631	0		f1631	15	12 GA WIRE MESH 2" SQ PATTERN W/ 14 GA HEM R			13 SQ FT 13 LIN. FT	BENT
1631	0		g1631	5	12 GA WIRE MESH 2" SQ PATTERN W/ 14 GA HEM R			5 SQ FT 9 LIN. FT	BENT



5-GUARDRAIL w/H.R.-1631R1
STAIR #3

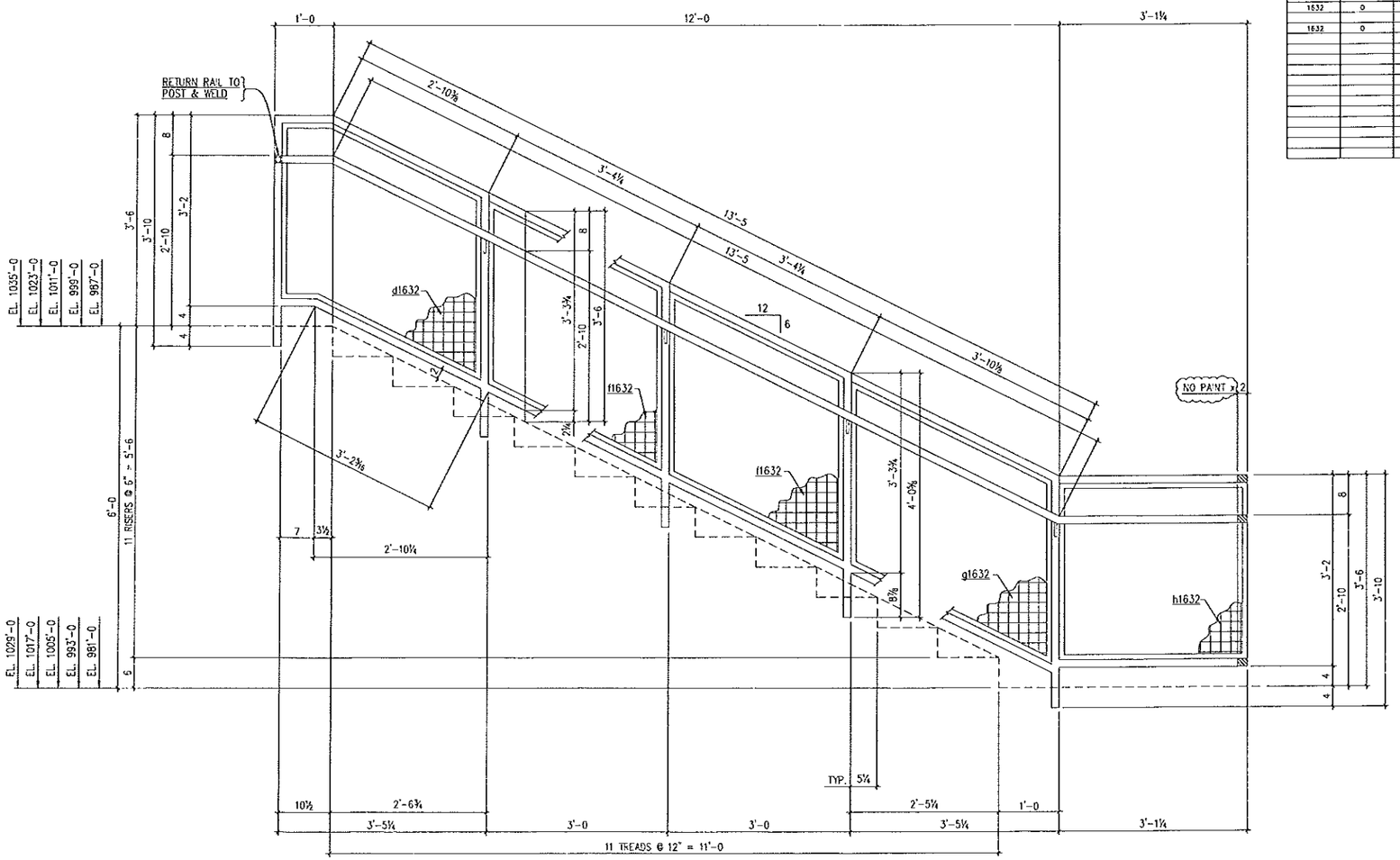


TYP. HANDRAIL SECTION

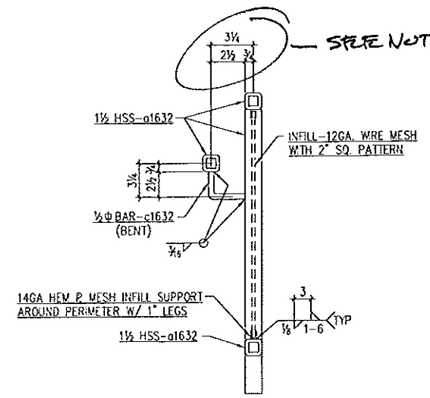
NOT FOR CONSTRUCTION
JUN 25 2007
FOR APPROVAL ONLY

TYPICAL FOR H/R
ALL WELDS & SHARP EDGES TO BE GROUND SMOOTH.

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REFERENCE DWG: E14	DESCRIPTION: GUARDRAIL w/H.R.	DRAWN BY: MAD	DATE: 11/06	CHECKED BY: DSS	JOB# 06-36	SHEET: 1631



5--GUARDRAIL w/H.R.-1632R1
STAIR #3



TYP. HANDRAIL SECTION

AVENUE FABRICATING, INC.

Licensed CadVantage User

DRAWING ISSUE:
FOR APPVL 11/28/06
FOR APPVL 06/22/07
REVISION:

BILL OF MATERIAL

NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : AS NOTED
3. FINISH : 1 S/C PRIMER U.N.

Drawing Number	Revision Number	Strip Mark	Piece Mark	Quantity	Type of Material	Size of Material	Grade	Length	Notes
1632	0	1632R1		5	GUARDRAIL w/H.R.				
1632	0		a1632	5	HSS	1 1/2x1 1/2 x .125	A500-Gr B	70 LIN. FT.	
1632	0		c1632	20	SQ	1/2	A36	0'-4 1/2	BENT
1632	0		d1632	5	12 GA WIRE MESH 2" SQ PATTERN W/ 14 GA HEM B			15 SQ FT 14 LIN. FT	 BENT
1632	0		f1632	10	12 GA WIRE MESH 2" SQ PATTERN W/ 14 GA HEM B			13 SQ FT 13 LIN. FT	 BENT
1632	0		g1632	5	12 GA WIRE MESH 2" SQ PATTERN W/ 14 GA HEM B			15 SQ FT 14 LIN. FT	 BENT
1632	0		h1632	5	12 GA WIRE MESH 2" SQ PATTERN W/ 14 GA HEM B			10 SQ FT 14 LIN. FT	 BENT

NOT FOR CONSTRUCTION
JUN 25 2007
FOR APPROVAL ONLY

TYPICAL FOR H/R
ALL WELDS & SHARP EDGES TO BE GROUND SMOOTH.

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C MATTHEWS CO., INC.	REFERENCE DWG: E14	DESCRIPTION: GUARDRAIL w/H.R.	DRAWN BY: MAD	DATE: 11/06	CHECKED BY: DSS	JOB# 06-36	SHEET: 1632

Licensed CadVantage User

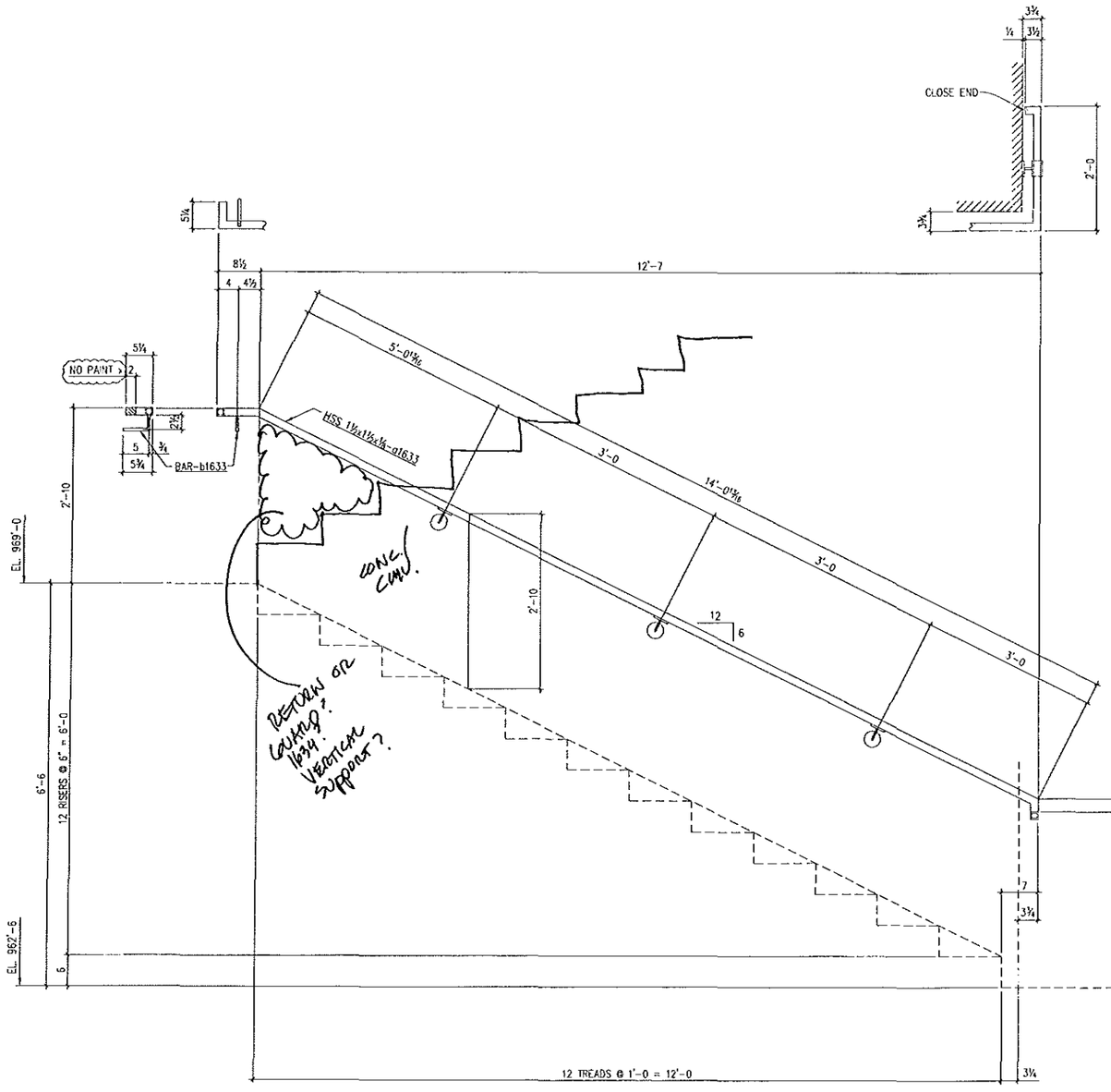
AVENUE FABRICATING, INC.

DRAWING ISSUE:
FOR APPV'L 11/28/06
FOR APPV'L 06/22/07
REVISION:

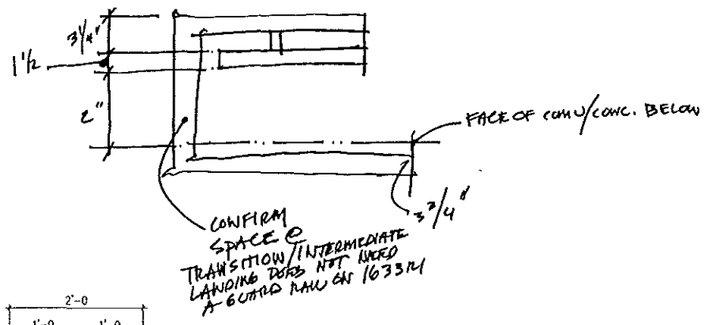
BILL OF MATERIAL

NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : AS NOTED
3. FINISH : 1 S/C PRIMER U.N.

Drawing Number	Revision Number	Ship Mark	Piece Mark	Quantity	Type of Material	Size of Material	Grade	Length	Notes
1633	0	163341		ONE	HANDRAIL				
1633	0		a1633	1	HSS	1 1/2x1 1/2 x .125	A500-Gr B	18 LIN. FT.	
1633	0		b1633	1	SQ	1/2	A36	0'-7	BENT
1633	0		c1633	4	STD. WALL BRACKETS w/ 3" PROJ.				
					FIELD BOLTS				
1633	0			4	NECESSARY FASTENERS FOR WALL BRACKETS TO CONC. WALL				



ONE-HANDRAIL-1633R1
STAFF STAIR



NOT FOR CONSTRUCTION
JUN 25 2007
FOR APPROVAL ONLY

TYPICAL FOR H/R
ALL WELDS & SHARP EDGES TO BE GROUND SMOOTH.

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REFERENCE DWG: E15	DESCRIPTION: HANDRAIL	DRAWN BY: MAD	DATE: 11/06	CHECKED BY: DSS	JOB# 06-36	SHEET: 1633

AVENUE FABRICATING, INC.

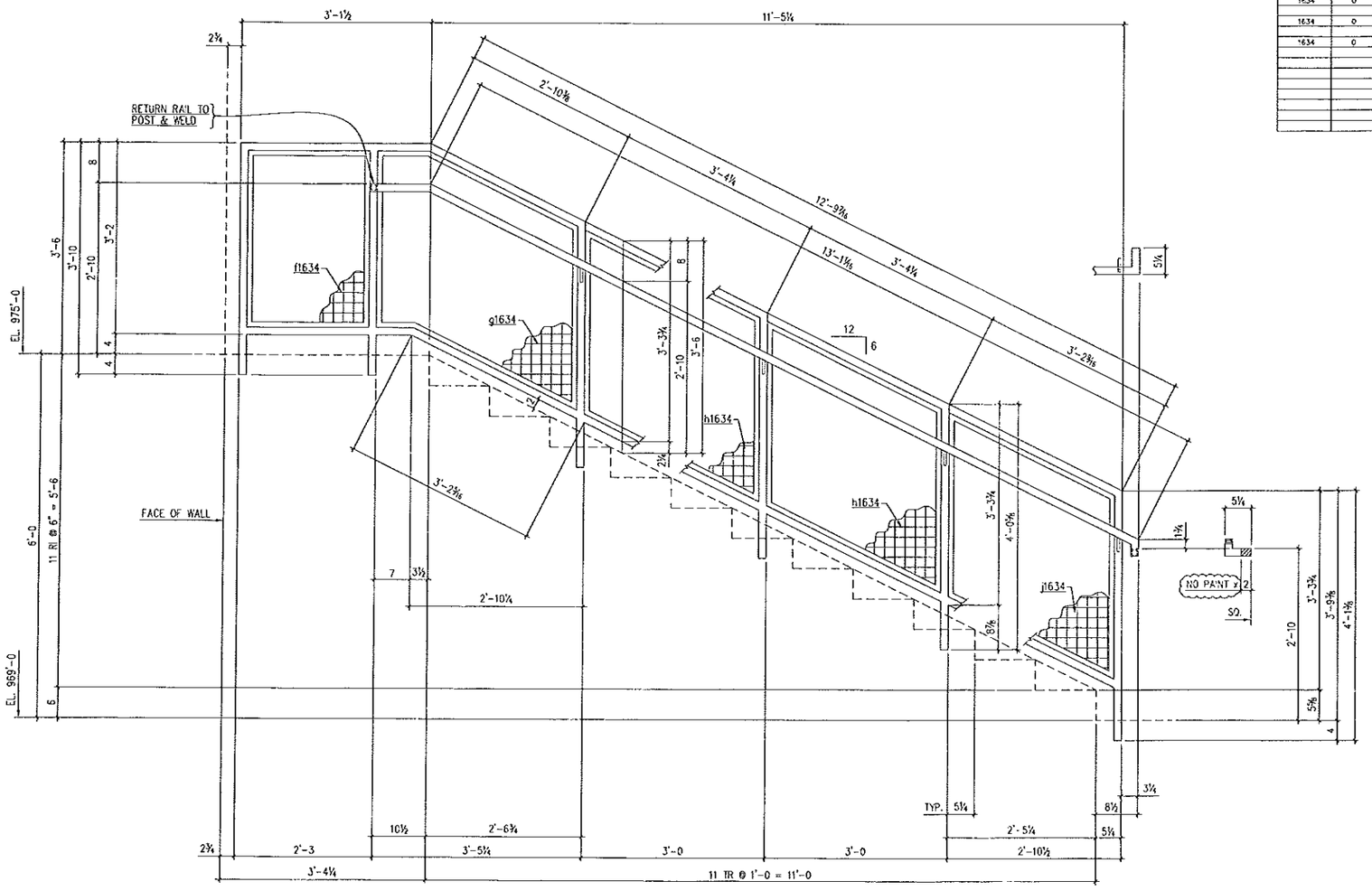
Licensed CadVantage User

DRAWING ISSUE:
FOR APPVL 11/28/06
FOR APPVL 06/22/07
REVISION:

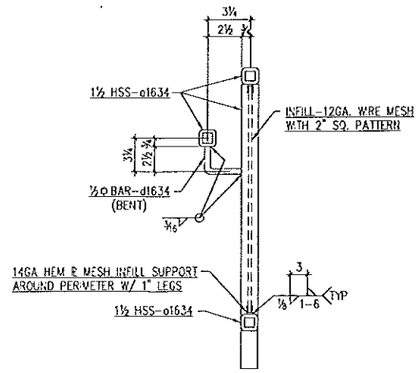
BILL OF MATERIAL

NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : AS NOTED
3. FINISH : 1 S/C PRIMER U.N.

Drawing Number	Revision Number	Ship Mark	Piece Mark	Quantity	Type of Material	Size of Material	Grade	Length	Notes
1634	0	163491		ONE	GUARDRAIL w/H.R.				
1634	0		a1634	1	HSS	1 1/2x1 1/2 x .125	A500-GR B	70 LN. FT.	
1634	0		d1634	4	SQ	1/2	A36	0'-4 1/2	BENT
1634	0		f1634	1	12 GA WIRE MESH 2" SQ PATTERN W/ 14 GA HEM E			7 SQ FT 11 LN. FT	BENT
1634	0		g1634	1	12 GA WIRE MESH 2" SQ PATTERN W/ 14 GA HEM E			13 SQ FT 13 LN. FT	BENT
1634	0		h1634	2	12 GA WIRE MESH 2" SQ PATTERN W/ 14 GA HEM E			13 SQ FT 13 LN. FT	BENT
1634	0		j1634	1	12 GA WIRE MESH 2" SQ PATTERN W/ 14 GA HEM E			13 SQ FT 13 LN. FT	BENT



ONE-GUARDRAIL w/H.R.-1634R1
STAFF STAIR



PROJECTION INTO STAIR ?. MAX 4½"

TYP. HANDRAIL SECTION

NOT FOR CONSTRUCTION
JUN 25 2007
FOR APPROVAL ONLY

TYPICAL FOR H/R
ALL WELDS & SHARP EDGES TO BE GROUND SMOOTH.

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REFERENCE DWG: E15	DESCRIPTION: GUARDRAIL w/H.R.	DRAWN BY: MAD	DATE: 11/06	CHECKED BY: DSS	JOB# 06-36	SHEET: 1634

Licensed CadVantage User

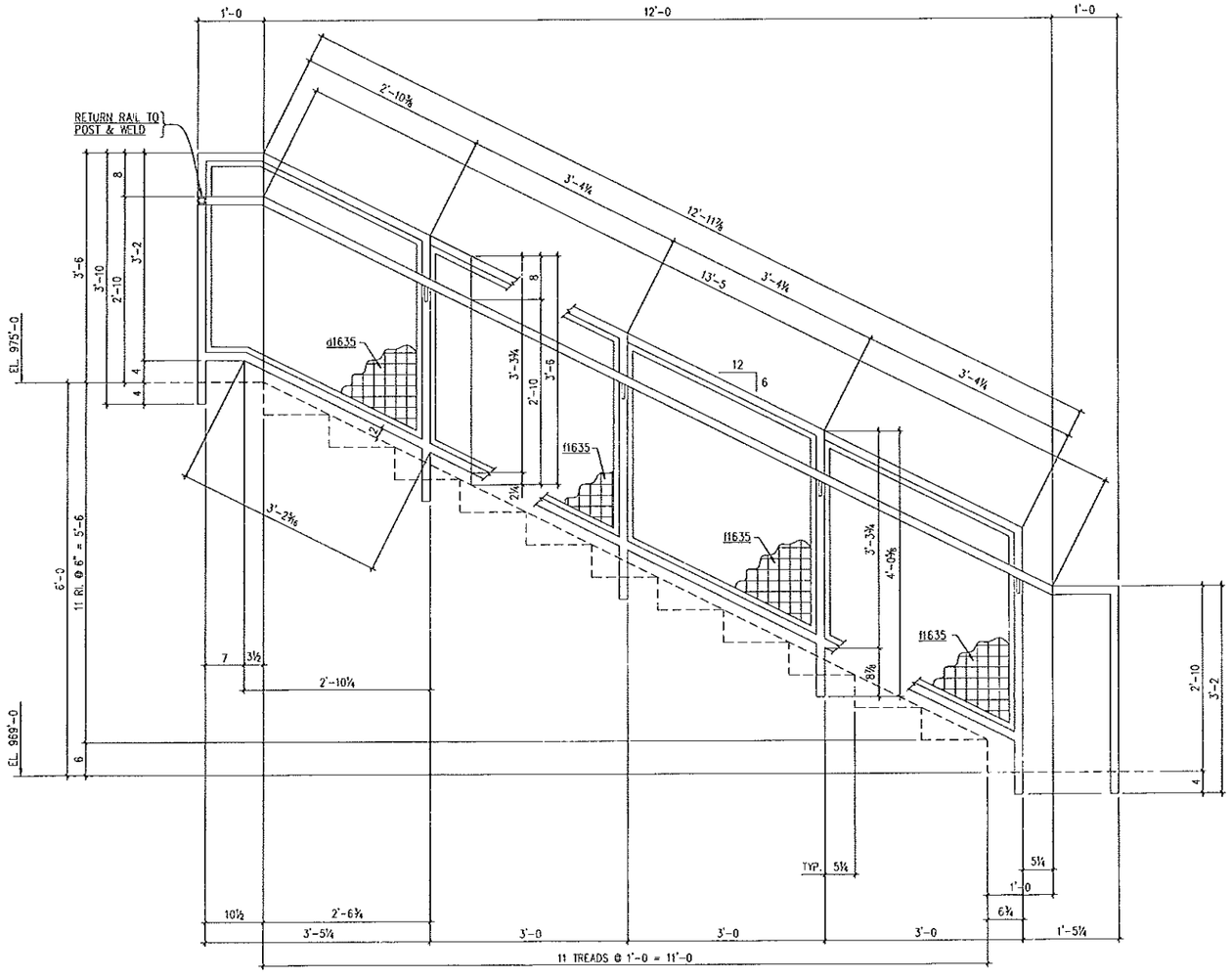
AVENUE FABRICATING, INC.

DRAWING ISSUE:
FOR APPVL 11/28/06
FOR APPVL 06/22/07
REVISION:

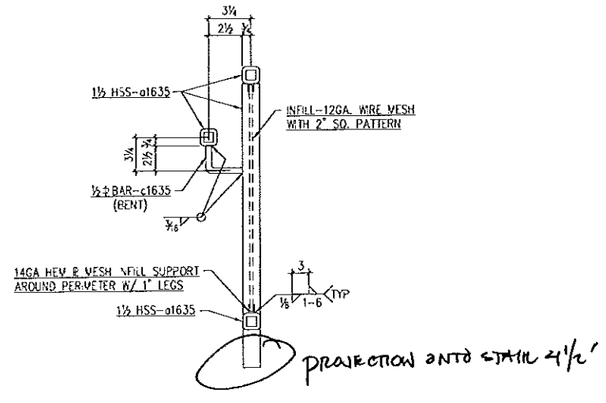
BILL OF MATERIAL

NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : AS NOTED
3. FINISH : GALVANIZED

Drawing Number	Revision Number	Ship Mark	Piece Mark	Quantity	Type of Material	Size of Material	Grade	Length	Notes
1635	0	1635R1		ONE	GUARD RAILS				
1635	0		a1635	1	HSS	1 1/2x1 1/2 x .125	A500-Gr B	50 LIN. FT.	
1635	0		c1635	4	SQ	1/2	A36	0'-4 1/2	BENT
1635	0		d1635	1	12 GA WIRE MESH 2" SQ PATTERN W/ 14 GA HEM E			10 SQ FT 13 LIN. FT	BENT
1635	0		f1635	3	12 GA WIRE MESH 2" SQ PATTERN W/ 14 GA HEM E			12 SQ FT 13 LIN. FT	BENT



ONE-GUARDRAIL w/H.R.-1635R1
STAIR #4



TYP. HANDRAIL SECTION

NOT FOR CONSTRUCTION
JUN 25 2007
FOR APPROVAL ONLY

NOTE:
HOT DIP GALVANIZE AFTER FABRICATION.
SEAL WELD IN ADDITION TO WELDS SHOWN.
PROVIDE VENT & WEEP HOLES AS REQUIRED.

TYPICAL FOR H/R
ALL WELDS & SHARP EDGES TO BE GROUND SMOOTH.

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REFERENCE DWG: E13	DESCRIPTION: WALL RAIL	DRAWN BY: TM	DATE: 11/06	CHECKED BY: DSS	JOB# 06-36	SHEET: 1635

Licensed CadVantage User

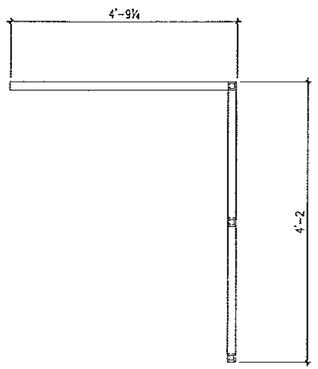
AVENUE FABRICATING, INC.

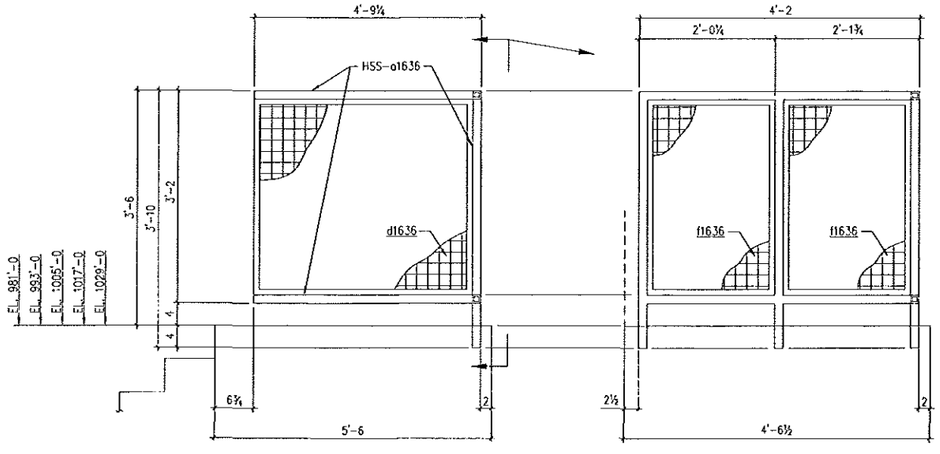
DRAWING ISSUE:
FOR APPV'L 11/28/06
FOR APPV'L 06/22/07
REVISION:

BILL OF MATERIAL

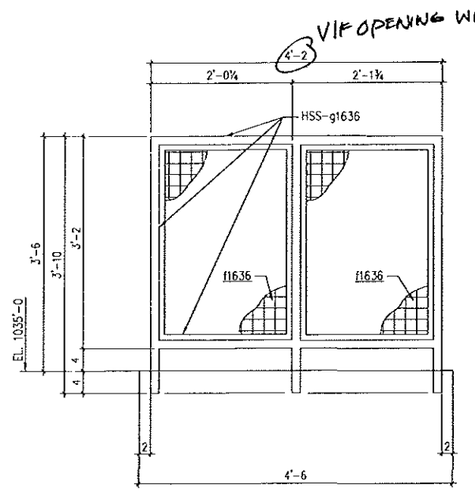
NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : AS NOTED
3. FINISH : GALVANIZED

Drawing Number	Revision Number	Ship Mark	Piece Mark	Quantity	Type of Material	Size of Material	Grade	Length	Notes
1636	0	1636R1		5	GUARDRAILS				
1636	0		a1636	5	HSS	1 1/2x1 1/2 x .125	A500-Gr B	28 LIN. FT.	
1636	0		d1636	5	12 GA WIRE MESH 2" SQ			10 SQ FT	
					PATTERN W/ 14 GA HEM B			13 LIN. FT	BENT
1636	0		f1636	10	12 GA WIRE MESH 2" SQ			6 SQ FT	
					PATTERN W/ 14 GA HEM B			10 LIN. FT	BENT
1636	0	1636R2		ONE	GUARDRAILS				
1636	0		g1636	1	HSS	1 1/2x1 1/2 x .125	A500-Gr B	20 LIN. FT.	
1636	0		f1636	2	12 GA WIRE MESH 2" SQ			6 SQ FT	
					PATTERN W/ 14 GA HEM B			10 LIN. FT	BENT

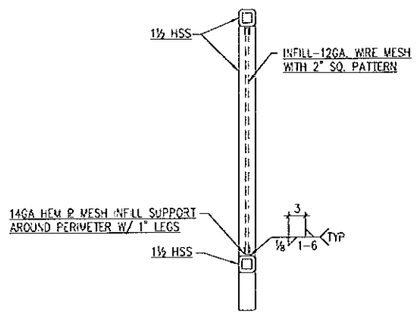




5-GUARDRAILS-1636R1
STAIR #4



ONE-GUARDRAIL-1636R2
STAIR #4



TYP. GUARDRAIL SECTION

NOTE:
HOT DIP GALVANIZE AFTER FABRICATION.
SEAL WELD IN ADDITION TO WELDS SHOWN.
PROVIDE VENT & WEEP HOLES AS REQUIRED

NOT FOR CONSTRUCTION
JUN 25 2007
FOR APPROVAL ONLY

TYPICAL FOR H/R
ALL WELDS & SHARP EDGES TO BE GROUND SMOOTH.

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REFERENCE DWG: E13	DESCRIPTION: GUARDRAIL	DRAWN BY: TM/MAD	DATE: 11/06	CHECKED BY: DSS	JOB# 06-36	SHEET: 1636

Licensed CadVantage User

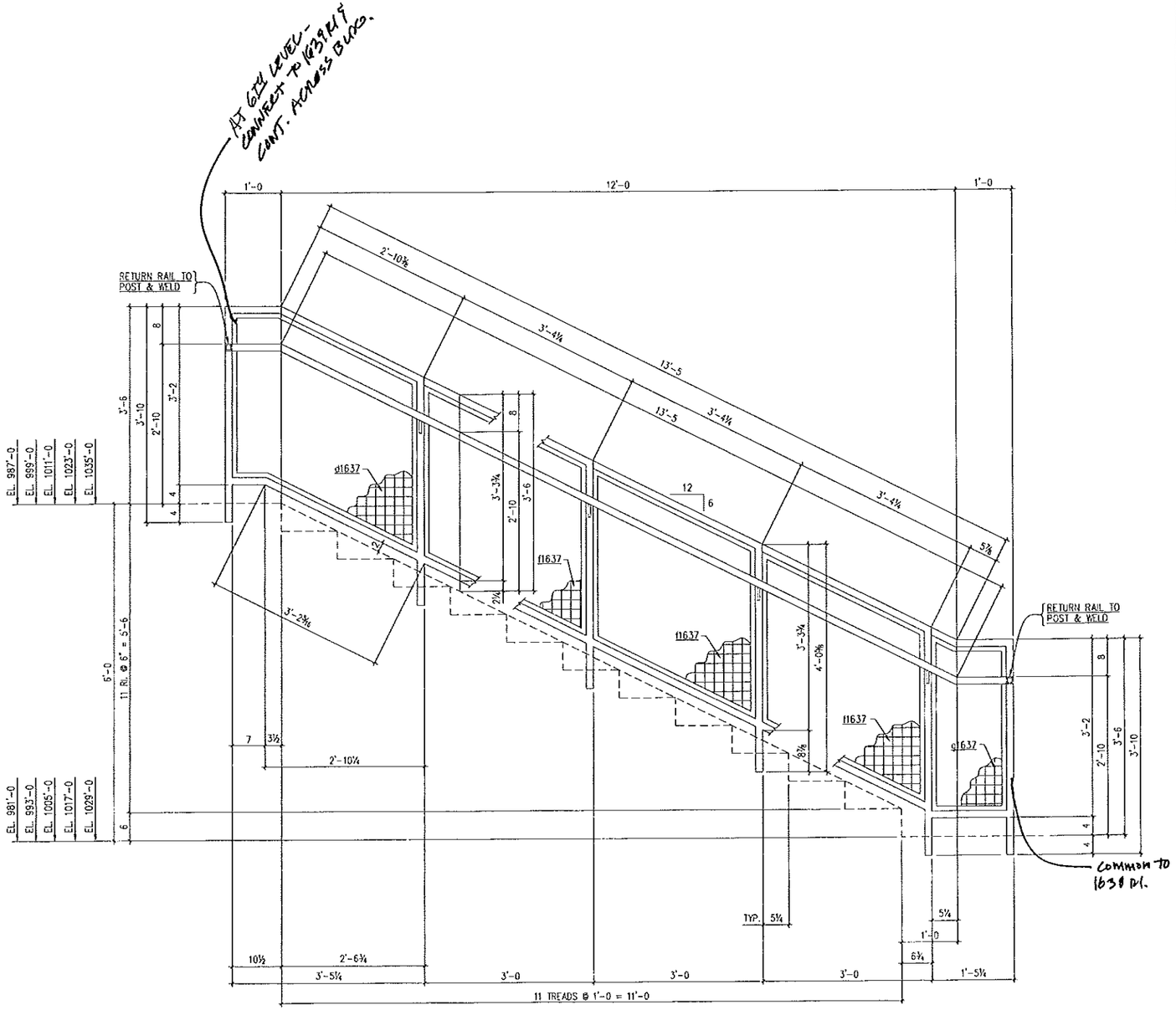
AVENUE FABRICATING, INC.

DRAWING ISSUE:
FOR APPVL 11/28/06
FOR APPVL 06/22/07
REVISION:

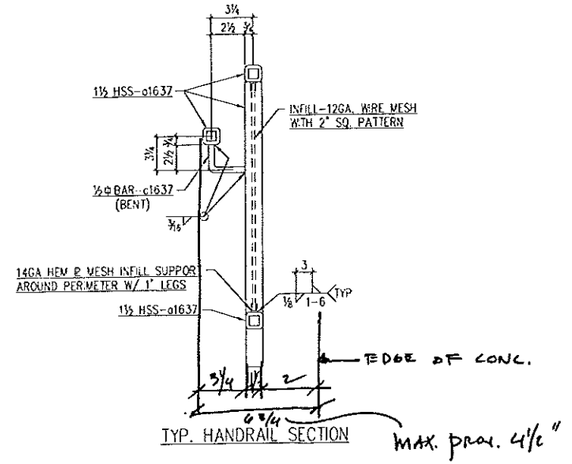
BILL OF MATERIAL

NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : AS NOTED
3. FINISH : GALVANIZED

Drawing Number	Revision Number	Ship Mark	Piece Mark	Quantity	Type of Material	Size of Material	Grade	Length	Notes
1637	0	1637R1		5	GUARDRAIL w/H.R.			62 LIN. FT.	
1637	0		a1637	5	HSS	1 1/2x1 1/2 x .125	A500-GR.B	0'-4 1/2	BENT
1637	0		c1637	20	SQ	1/2	A36	15 SQ FT	
1637	0		e1637	5	12 GA WIRE MESH 2" SQ PATTERN W/ 14 GA HEM B			14 LIN. FT	BENT
								13 SQ FT	
1637	0		f1637	15	12 GA WIRE MESH 2" SQ PATTERN W/ 14 GA HEM E			13 LIN. FT	BENT
								5 SQ FT	
1637	0		g1637	5	12 GA WIRE MESH 2" SQ PATTERN W/ 14 GA HEM B			10 LIN. FT	BENT



5-GUARDRAILS w/H.R.-1637R1
STAIR #2



TYP. HANDRAIL SECTION

MAX. proj. 4½"

NOT FOR CONSTRUCTION
JUN 25 2007
FOR APPROVAL ONLY

NOTE:
HOT DIP GALVANIZE AFTER FABRICATION.
SEAL WELD IN ADDITION TO WELDS SHOWN.
PROVIDE VENT & WEEP HOLES AS REQUIRED

TYPICAL FOR H/R
ALL WELDS & SHARP EDGES TO BE GROUND SMOOTH.

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REFERENCE DWG: E12	DESCRIPTION: GUARDRAIL w/H.R.	DRAWN BY: MAD	DATE: 11/06	CHECKED BY: DSS	JOB# 06-36	SHEET: 1637

Licensed CadVantage User

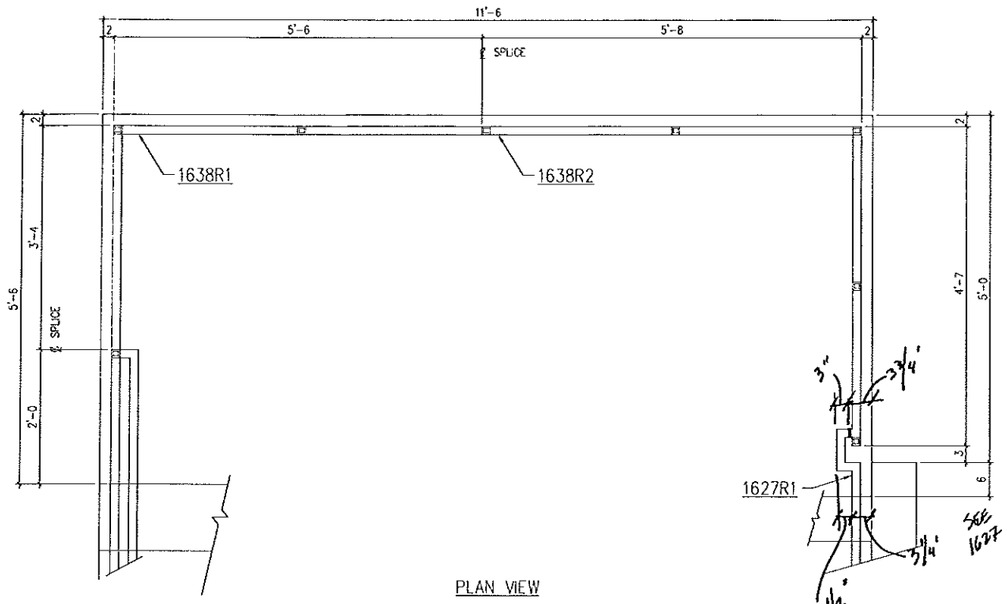
AVENUE FABRICATING, INC.

DRAWING ISSUE:
FOR APPVL 11/28/06
FOR APPVL 06/22/07
REVISION:

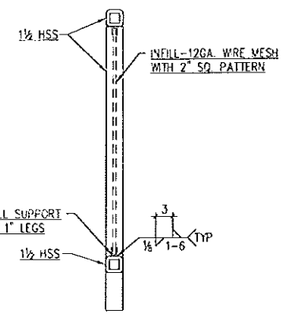
BILL OF MATERIAL

NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : AS NOTED
3. FINISH : GALVANIZED

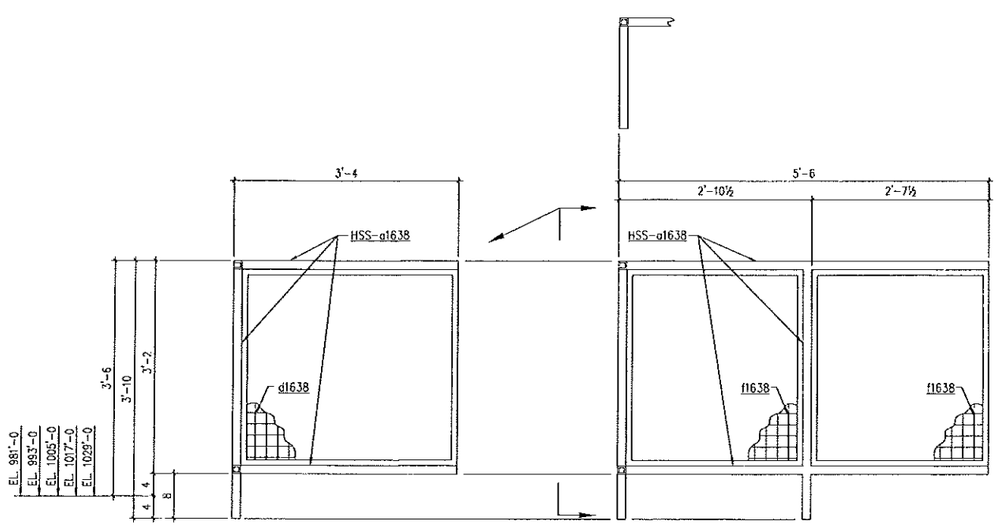
Drawing Number	Revision Number	Ship Mark	Piece Mark	Quantity	Type of Material	Size of Material	Grade	Length	Notes
1638	0	1638R1		5	GUARDRAILS				
1638	0		a1638	5	HSS	1 1/2x1 1/2 x .125	A500-Gr B	28 LIN. FT.	
1638	0		a1638	5	12 GA WIRE MESH 2" SQ PATTERN W/ 14 GA HEM E			10 SQ FT 13 LIN. FT	BENT
1638	0		f1638	10	12 GA WIRE MESH 2" SQ PATTERN W/ 14 GA HEM E			8 SQ FT 12 LIN. FT	BENT
1638	0	1638R2		5	GUARDRAILS				
1638	0		g1638	5	HSS	1 1/2x1 1/2 x .125	A500-Gr B	38 LIN. FT.	
1638	0		h1638	10	12 GA WIRE MESH 2" SQ PATTERN W/ 14 GA HEM E			6 SQ FT 12 LIN. FT	BENT
1638	0		j1638	10	12 GA WIRE MESH 2" SQ PATTERN W/ 14 GA HEM E			8 SQ FT 12 LIN. FT	BENT



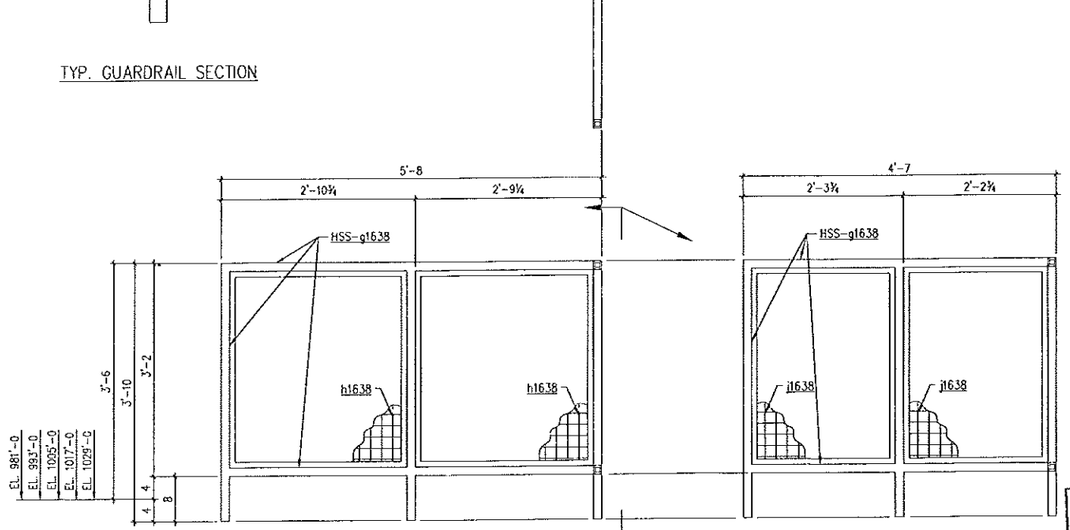
PLAN VIEW



TYP. GUARDRAIL SECTION



5-GUARDRAILS-1638R1
STAIR #2



5-GUARDRAILS-1638R2
STAIR #2

NOT FOR CONSTRUCTION
JUN 25 2007
FOR APPROVAL ONLY

NOTE:
HOT DIP GALVANIZE AFTER FABRICATION.
SEAL WELD IN ADDITION TO WELDS SHOWN.
PROVIDE VENT & WEEP HOLES AS REQUIRED

TYPICAL FOR H/R
ALL WELDS & SHARP EDGES TO BE GROUND SMOOTH.

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REFERENCE DWG: E12	DESCRIPTION: GUARDRAIL	DRAWN BY: MAD	DATE: 11/06	CHECKED BY: DSS	JOB# 06-36	SHEET: 1638

Licensed CadVantage User

AVENUE FABRICATING, INC.

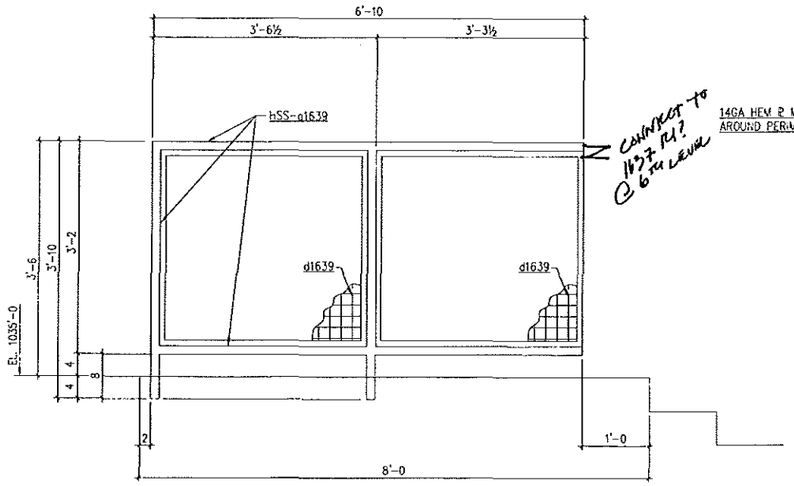
DRAWING ISSUE:
FOR APPVL 11/28/06
FOR APPVL 06/22/07

REVISION:

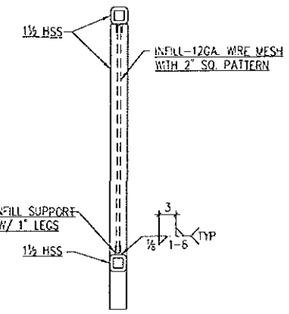
BILL OF MATERIAL

NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : AS NOTED
3. FINISH : GALVANIZED

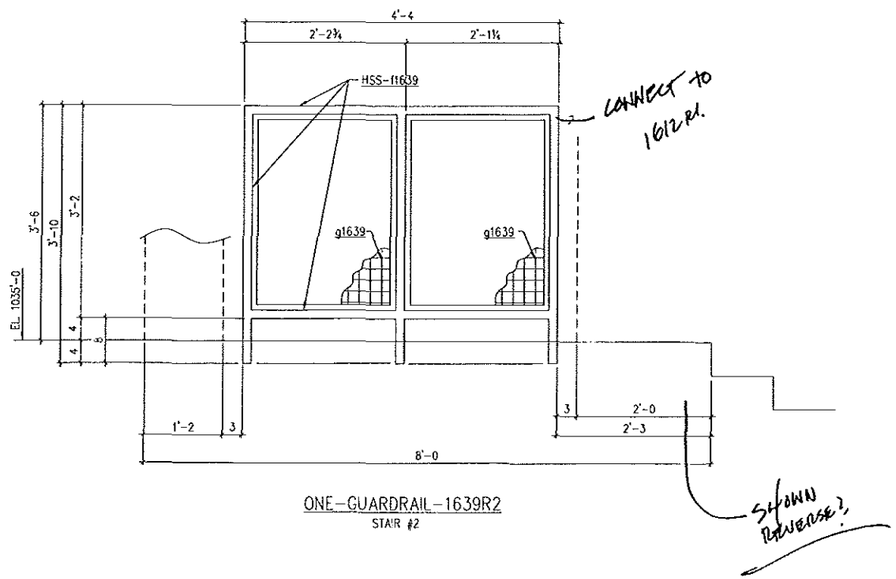
Drawing Number	Revision Number	Ship Mark	Piece Mark	Quantity	Type of Material	Size of Material	Grade	Length	Notes
1639	0	1639R1		ONE	GUARDRAIL				
1639	0		g1639	1	HSS	1 1/2x1 1/2 x .125	A500-Gr B	28 LIN. FT	
1639	0		d1639	2	12 GA WIRE MESH 2" SQ PATTERN W/ 14 GA HEM E			8 SQ FT	
								12 LIN. FT	BENT
1639	0	1639R2		ONE	GUARDRAIL				
1639	0		f1639	1	HSS	1 1/2x1 1/2 x .125	A500-Gr B	8 LIN. FT.	
1639	0		g1639	2	12 GA WIRE MESH 2" SQ PATTERN W/ 14 GA HEM E			7 SQ FT	
								11 LIN. FT	BENT



ONE-GUARDRAIL-1639R1
STAIR #2



TYP. GUARDRAIL SECTION



ONE-GUARDRAIL-1639R2
STAIR #2

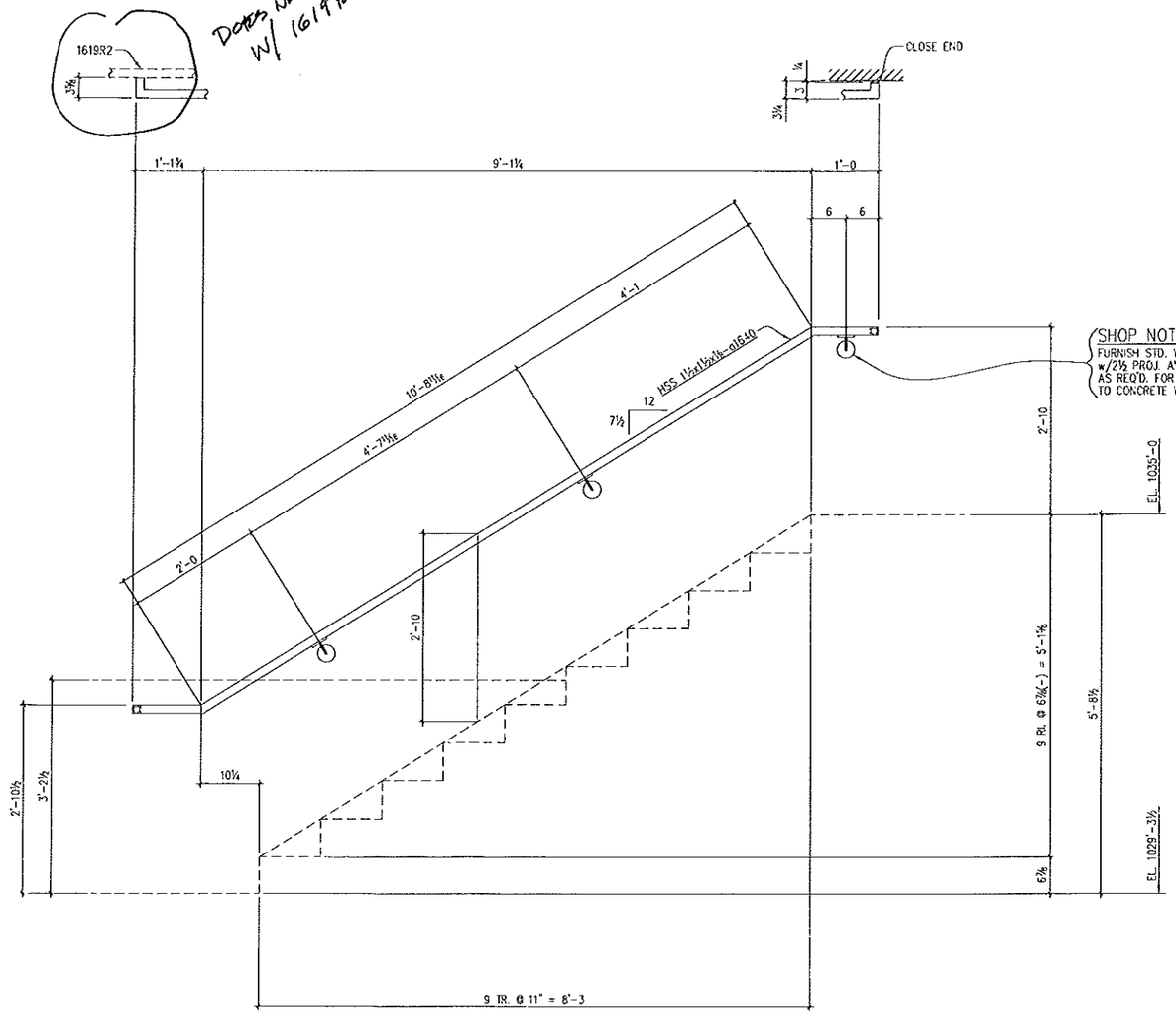
NOTE:
HOT DIP GALVANIZE AFTER FABRICATION.
SEAL WELD IN ADDITION TO WELDS SHOWN.
PROVIDE VENT & WEEP HOLES AS REQUIRED

NOT FOR CONSTRUCTION
JUN 25 2007
FOR FABRICATION ONLY

TYPICAL FOR H/R
ALL WELDS & SHARP EDGES TO BE GROUND SMOOTH.

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REFERENCE DWG: E12	DESCRIPTION: GUARDRAIL	DRAWN BY: MAD	DATE: 11/06	CHECKED BY: DSS	JOB# 06-36	SHEET: 1639

DOES NOT INTERSECT W/ 1619R2 ACCORDING TO PLAN



SHOP NOTE:
FURNISH STD. WALL BRACKETS W/2½ PROJ. AND FASTENERS AS REQ'D. FOR ATTATCHMENT TO CONCRETE WALL.

ONE-HANDRAIL-1640R1
STAIR #1

AVENUE FABRICATING, INC.

Licensed CadVantage User

DRAWING ISSUE:
FOR APPVL 11/28/06
FOR APPVL 06/22/07

REVISION:

BILL OF MATERIAL

NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : AS NOTED
3. FINISH : GALVANIZED

Drawing Number	Revision Number	Ship Mark	Piece Mark	Quantity	Type of Material	Size of Material	Grade	Length	Notes
1640	0	1640R1		ONE	HANDRAIL				
1640	0		a1640	1	HSS	1 1/2x1 1/2 x .125	A500-Gr B	14 LIN. FT.	
1640	0			3	STD. WALL BRACKETS w/ 2 1/2" PROJ.				
					FIELD BOLTS				
1640	0			3	NECESSARY FASTENERS FOR WALL BRACKETS	TO CONC. WALL			

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JUN 25 2007
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NOTE:
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SEAL WELD IN ADDITION TO WELDS SHOWN.
PROVIDE VENT & WEEP HOLES AS REQUIRED

TYPICAL FOR H/R
ALL WELDS & SHARP EDGES TO BE GROUND SMOOTH.

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REFERENCE DWG: E11	DESCRIPTION: HANDRAIL	DRAWN BY: RDJ	DATE: 11/06	CHECKED BY: DSS	JOB# 06-36	SHEET: 1640

Licensed CadVantage User

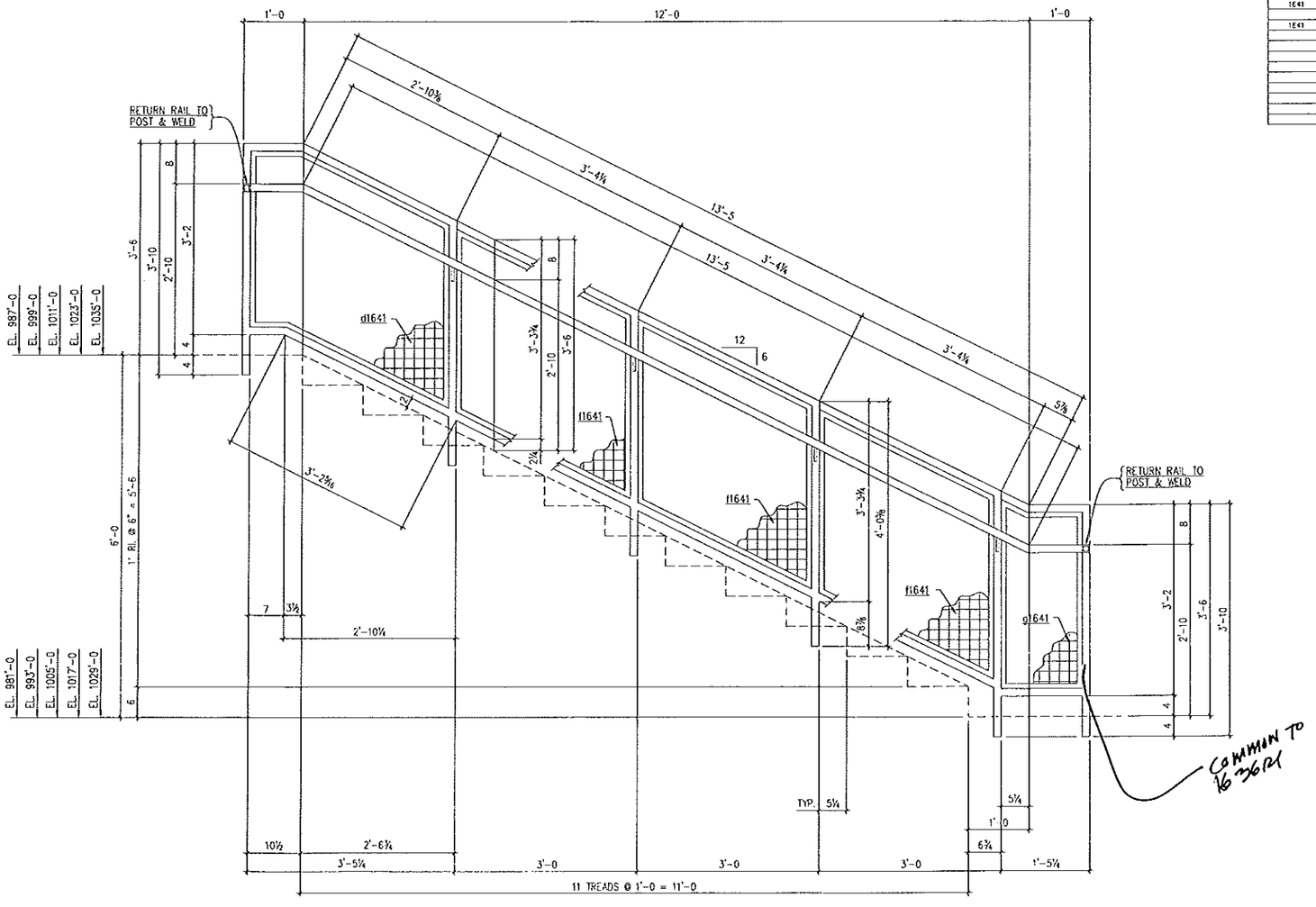
AVENUE FABRICATING, INC.

DRAWING ISSUE:
FOR APPVL 11/28/06
FOR APPVL 06/22/07
REVISION:

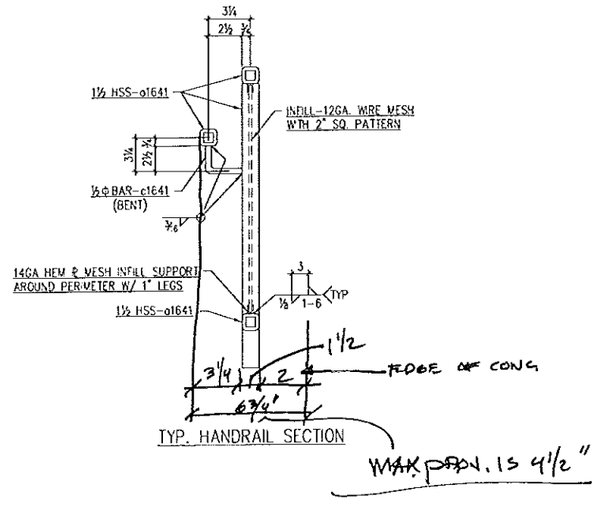
BILL OF MATERIAL

NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : AS NOTED
3. FINISH : GALVANIZED

Drawing Number	Revision Number	Ship Mark	Piece Mark	Quantity	Type of Material	Size of Material	Grade	Length	Notes
1641	0	1641R1		5	GUARDRAIL w/H.R.				
1641	0		a1641	5	HSS	1 1/2x1 1/2 x .125	A500-Gr B	69 LIN. FT.	
1641	0		c1641	20	SQ	1/2	A36	0'-4 1/2	BENT
1641	0		d1641	5	12 GA WIRE MESH 2" SQ. PATTERN W/ 14 GA HEM B			15 SQ FT 14 LIN. FT	BENT
1641	0		f1641	15	12 GA WIRE MESH 2" SQ. PATTERN W/ 14 GA HEM B			13 SQ FT 13 LIN. FT	BENT
1641	0		g1641	5	12 GA WIRE MESH 2" SQ PATTERN W/ 14 GA HEM B			5 SQ FT 10 LIN. FT	BENT



5-GUARDRAILS w/H.R.-1641R1
STAIR #4

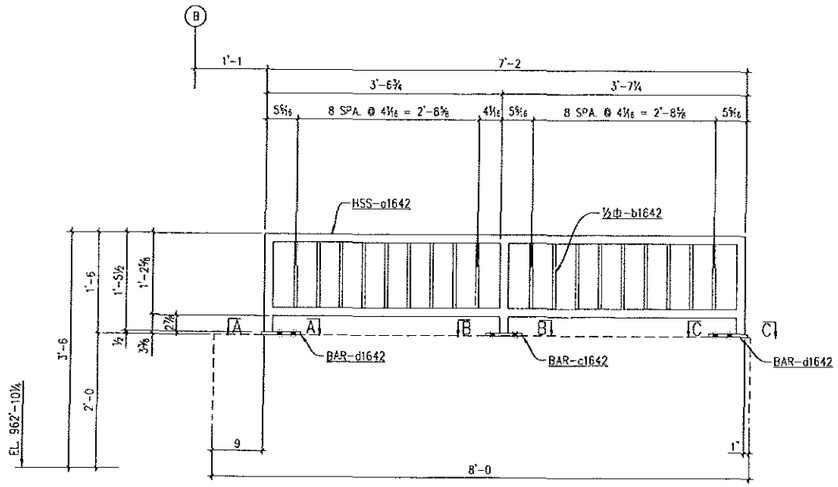


NOT FOR CONSTRUCTION
JUN 25 2007
FOR APPROVAL ONLY

NOTE:
HOT DIP GALVANIZE AFTER FABRICATION.
SEAL WELD IN ADDITION TO WELDS SHOWN.
PROVIDE VENT & WEEP HOLES AS REQUIRED

TYPICAL FOR H/R
ALL WELDS & SHARP EDGES TO BE GROUND SMOOTH.

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REFERENCE DWG: E13	DESCRIPTION: GUARDRAIL w/H.R.	DRAWN BY: RDJ	DATE: 11/06	CHECKED BY: DSS	JOB# 06-36	SHEET: 1641

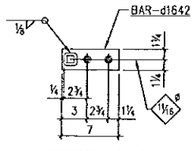


ONE-GUARDRAIL-1642R1

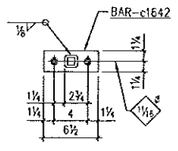
EMERGENCY STAIR

6-½ø EXP. ANCH. w/3" EMBED

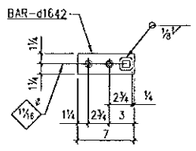
(STAINLESS)



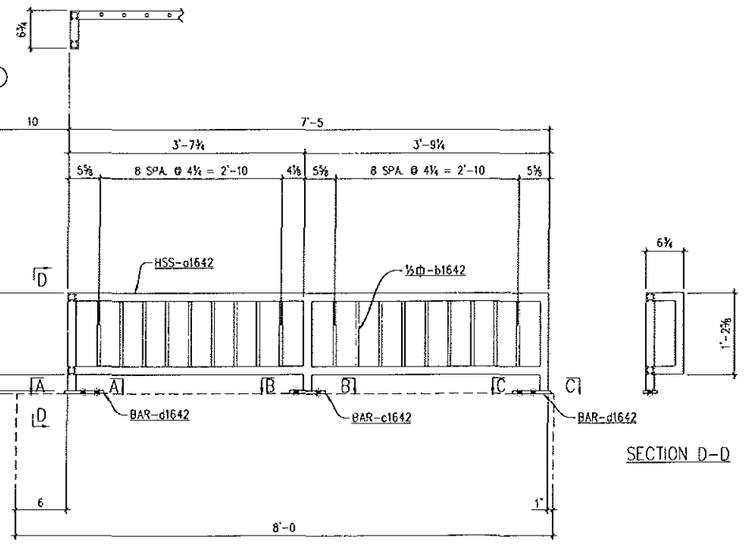
SECTION A-A



SECTION B-B



SECTION C-C



ONE-GUARDRAIL-1642R2

EMERGENCY STAIR

6-½ø EXP. ANCH. w/3" EMBED

(STAINLESS)

SECTION D-D

Licensed CadVantage User

AVENUE FABRICATING, INC.

DRAWING ISSUE:
FOR APPVL 11/28/06
FOR APPVL 06/22/07

REVISION:

BILL OF MATERIAL

NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : AS NOTED
3. FINISH : GALVANIZED

Drawing Number	Revision Number	Ship Mark	Piece Mark	Quantity	Type of Material	Size of Material	Grade	Length	Notes
1642	0	1642R1		ONE	GUARDRAIL				
1642	0		o1642	1	HSS	1 1/2x1 1/2 x .125	A500-Gr B	19 LIN. FT.	
1642	0		b1642	1	SQ	1/2	A36	23 LIN. FT.	
1642	0		c1642	1	FB	1/2 x 2 1/2	A36	0'-6 1/2	
1642	0		d1642	2	FB	1/2 x 2 1/2	A36	0'-7	
1642	0	1642R2		ONE	GUARDRAIL				
1642	0		o1642	1	HSS	1 1/2x1 1/2 x .125	A500-Gr B	20 LIN. FT.	
1642	0		b1642	1	SQ	1/2	A36	23 LIN. FT.	
1642	0		c1642	1	FB	1/2 x 2 1/2	A36	0'-6 1/2	
1642	0		d1642	2	FB	1/2 x 2 1/2	A36	0'-7	
					FIELD BOLTS				
1642	0			8	1/2 EXP ANCHORS w/3" EMBED				STAINLESS

NOT FOR CONSTRUCTION
JUN 25 2007
FOR APPROVAL ONLY

NOTE:
HOT DIP GALVANIZE AFTER FABRICATION.
SEAL WELD IN ADDITION TO WELDS SHOWN.
PROVIDE VENT & WEEP HOLES AS REQUIRED

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REFERENCE DWG: E11	DESCRIPTION: GUARDRAIL	DRAWN BY: RDJ	DATE: 11/06	CHECKED BY: .	JOB# 06-36	SHEET: 1642

Licensed CadVantage User

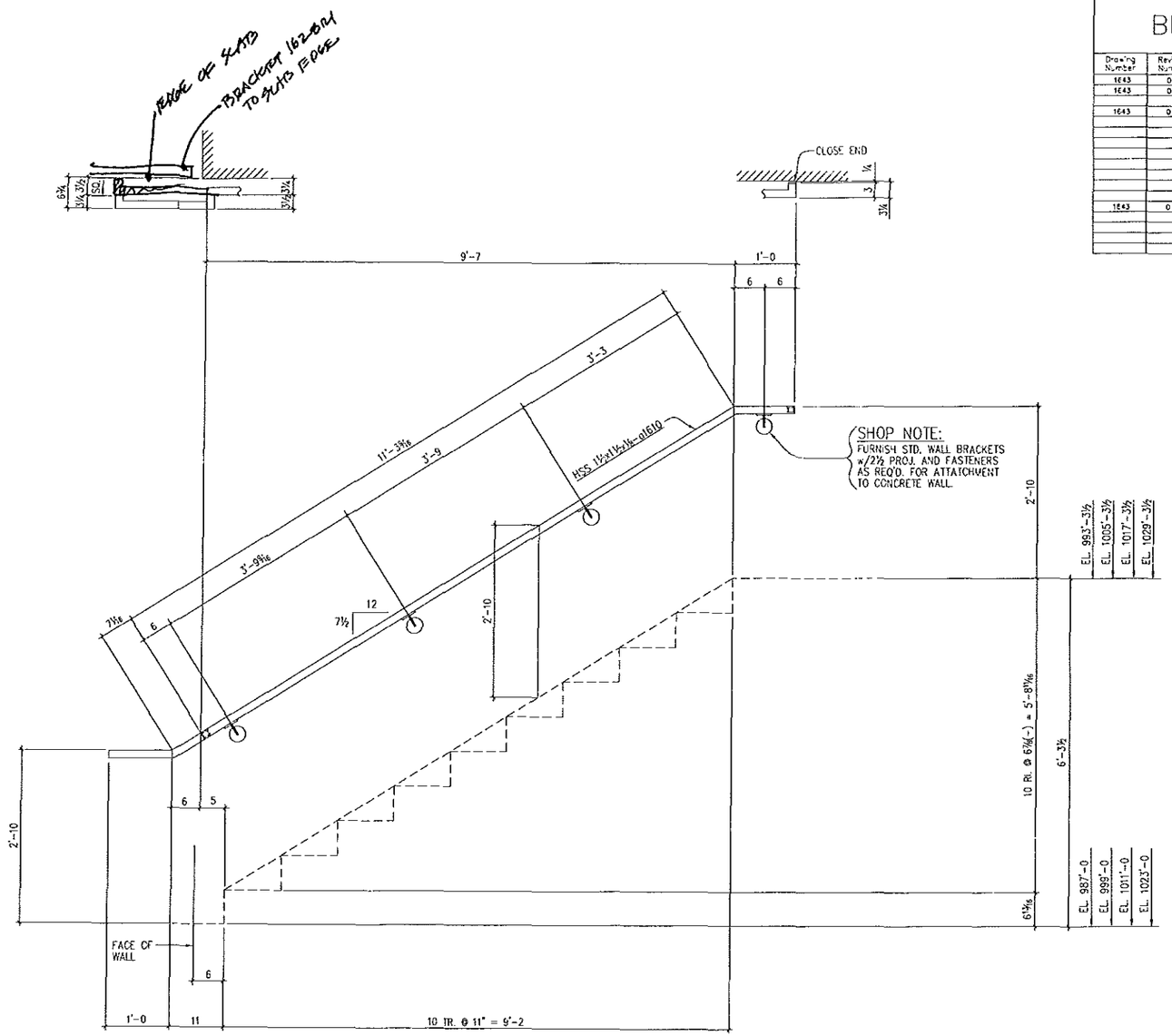
AVENUE FABRICATING, INC.

DRAWING ISSUE:
FOR APP'VL 11/28/06
FOR APP'VL 06/22/07
REVISION:

BILL OF MATERIAL

NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : AS NOTED
3. FINISH : GALVANIZED

Drawing Number	Revision Number	Ship Mark	Piece Mark	Quantity	Type of Material	Size of Material	Grade	Length	Notes
1643	0	164381		4	HANDRAILS				
1643	0		a1E43	4	HSS	3 1/2x1 1/2 x .125	A500-Gr B	14 LIN. FT.	
1643	0			16	STD. WALL BRAKETS w/ 2 1/2" PROJ.				
					FIELD BOLTS				
1643	0			16	NECESSARY FASTENERS FOR WALL BRACKETS	TO CONC. WALL			



4-HANDRAILS-1643R1
STAIR #1

NOT FOR CONSTRUCTION
JUN 25 2007
FOR APPROVAL ONLY

NOTE:
HOT DIP GALVANIZE AFTER FABRICATION.
SEAL WELD IN ADDITION TO WELDS SHOWN.
PROVIDE VENT & WEEP HOLES AS REQUIRED

TYPICAL FOR H/R
ALL WELDS & SHARP EDGES TO BE GROUND SMOOTH.

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REFERENCE DWG: E11	DESCRIPTION: HANDRAIL	DRAWN BY: MAD	DATE: 6/07	CHECKED BY: DSS	JOB# 06-36	SHEET: 1643

GBBN architects

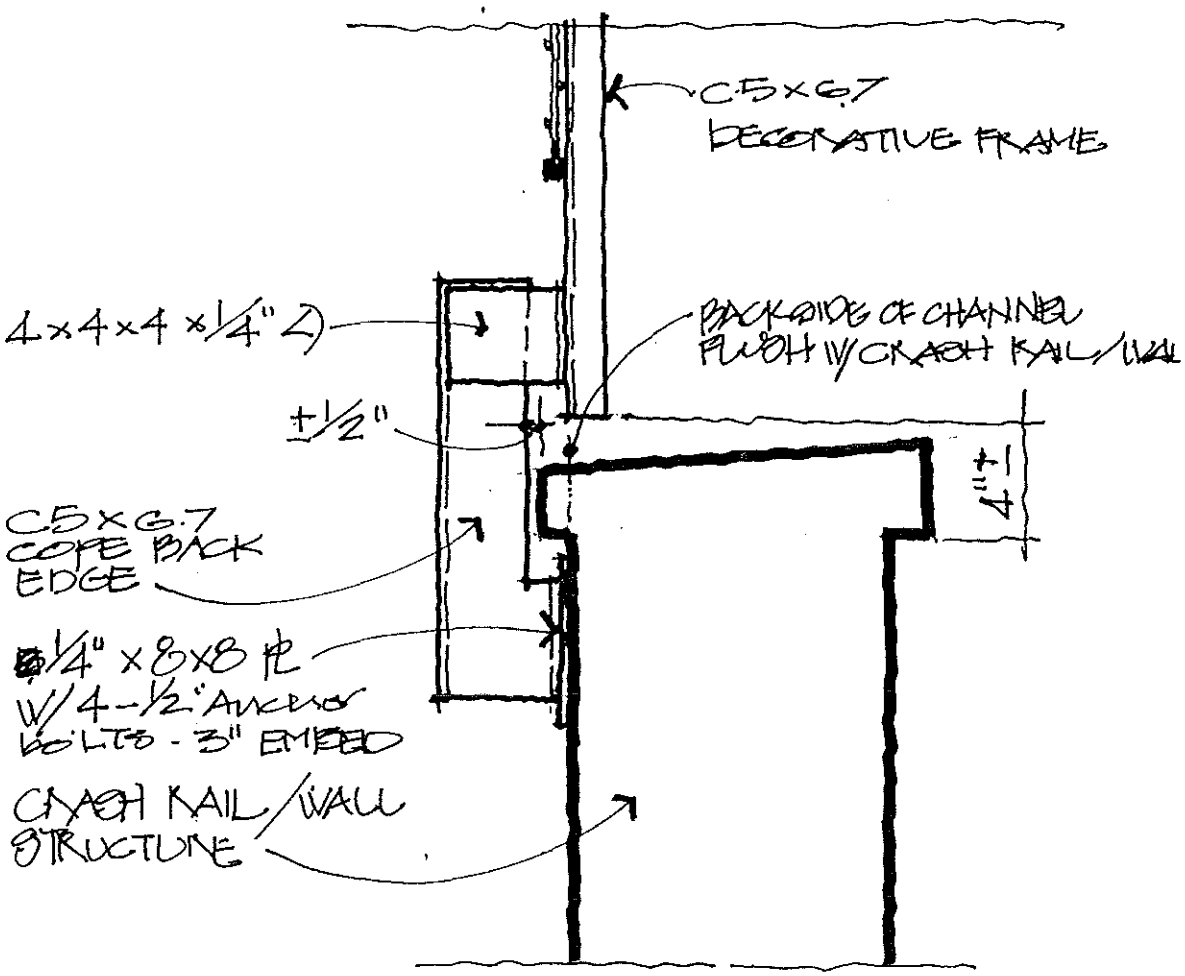
architecture
interiors
planning
engineering

www.gbbn.com

Date: 8/14/07 | Sheet No.

Job Name: CRIPCF - GARAGE | Notes By: DRP

Job No: | Copy To:



PARTIAL SECTION A-A
SHEET 1709 - SECTION A-A

MISC STEEL SHOP DRAWING
DWG DATE 7/18/07
AVENUE FABRICATING, INC

GBBN Architects, Inc.

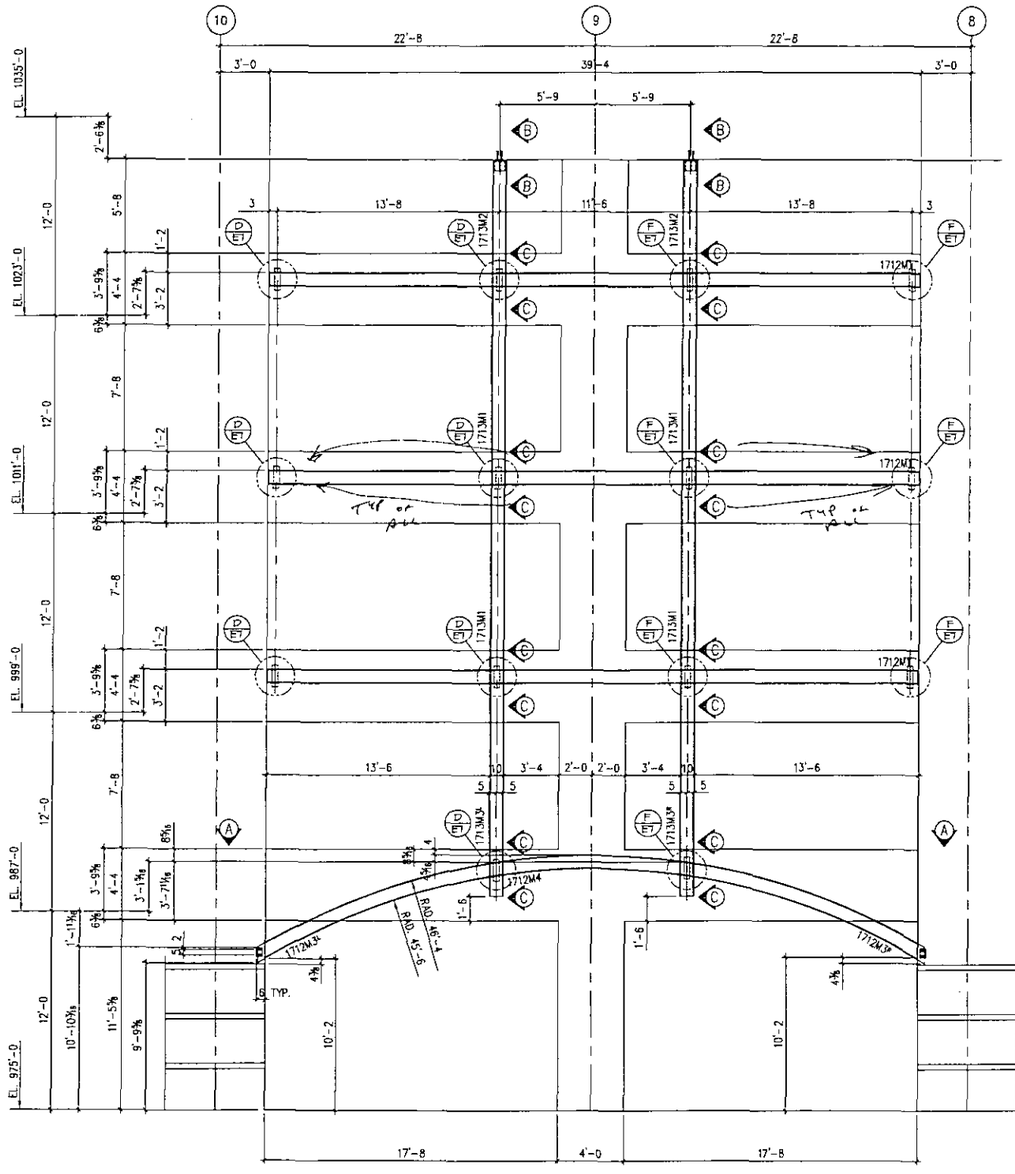
332 East 8th Street Cincinnati, Ohio 45202-2217
T 513.241.8700 F 513.241.8873

325 W Main Suite 280 Lexington, Kentucky 40507-1632
T 859.381.8787 F 859.381.8873

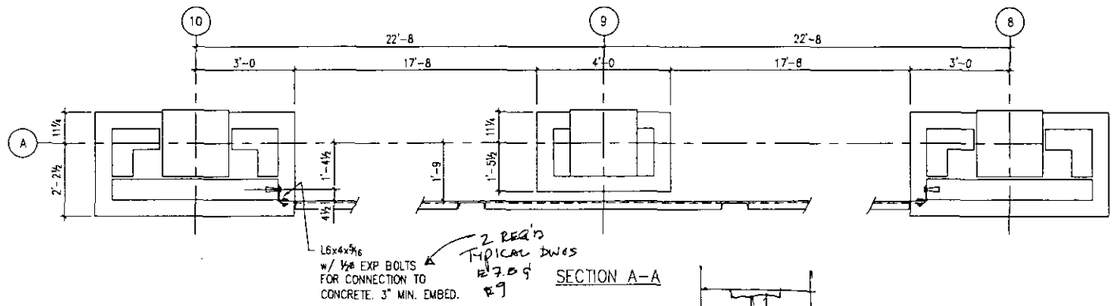
AVENUE FABRICATING, INC.

Licensed CadVantage User

DRAWING ISSUE:
FOR APPVL 11/28/06
FOR APPVL 7/18/07
REVISION:

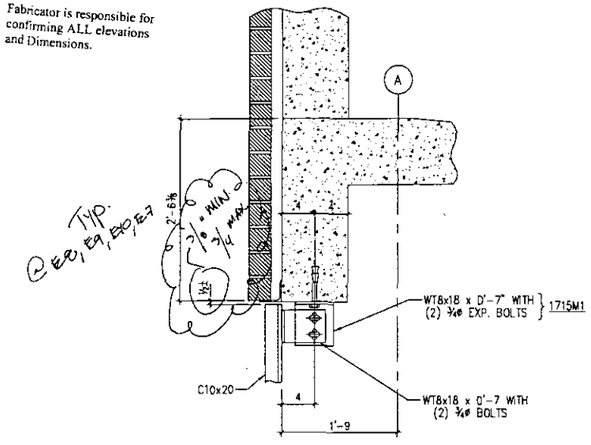


DECORATIVE CHANNEL FRAMING ELEVATION

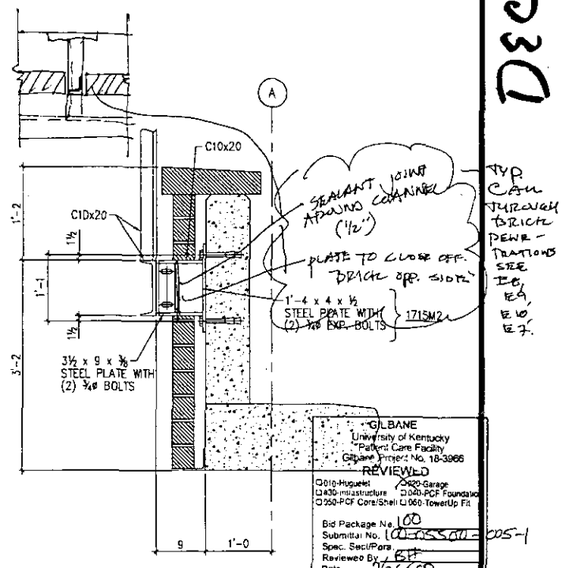


SECTION A-A

Fabricator is responsible for confirming ALL elevations and Dimensions.

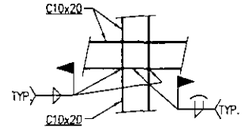


SECTION B-B

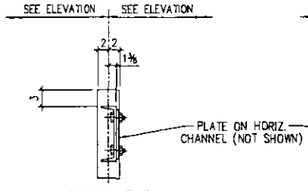


SECTION C-C

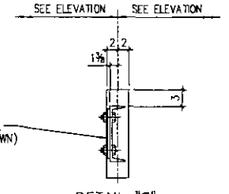
TYP. CAUL THROUGH BRICK PENR - TRATIONS SEE E6, E9, E10, E7.



TYPICAL FIELD WELD DETAIL



DETAIL "D"
HORIZ. CHANNEL NOT SHOWN FOR CLARITY



DETAIL "F"
HORIZ. CHANNEL NOT SHOWN FOR CLARITY

GILBANE
University of Kentucky
Patient Care Facility
Gilbane Project No. 18-3966
REVIEWED
☐010-Huguelet ☐020-Garage
☐430-Infrastructure ☐040-PCF Foundation
☐950-PCF Core/Shell ☐060-Tower Up Fit
Bid Package No. 100
Submittal No. 05155001-005-1
Spec. Sect/Para
Reviewed By BF
Date 7/26/07
This review does not constitute nor does it assume design responsibility nor does it relieve the trade contractor's supplier from complying with the contract requirements, coordinating their work with other trade contractors and verifying field dimensions.

APPROVED FOR GENERAL CONFORMITY TO PLANS AND SPECIFICATIONS. DETAIL DIMENSIONS AND QUANTITIES NOT CHECKED. CHECKED BY: DD DATE: 7.20.07

NOT FOR CONSTRUCTION
JUL 18 2007
FOR APPROVAL ONLY

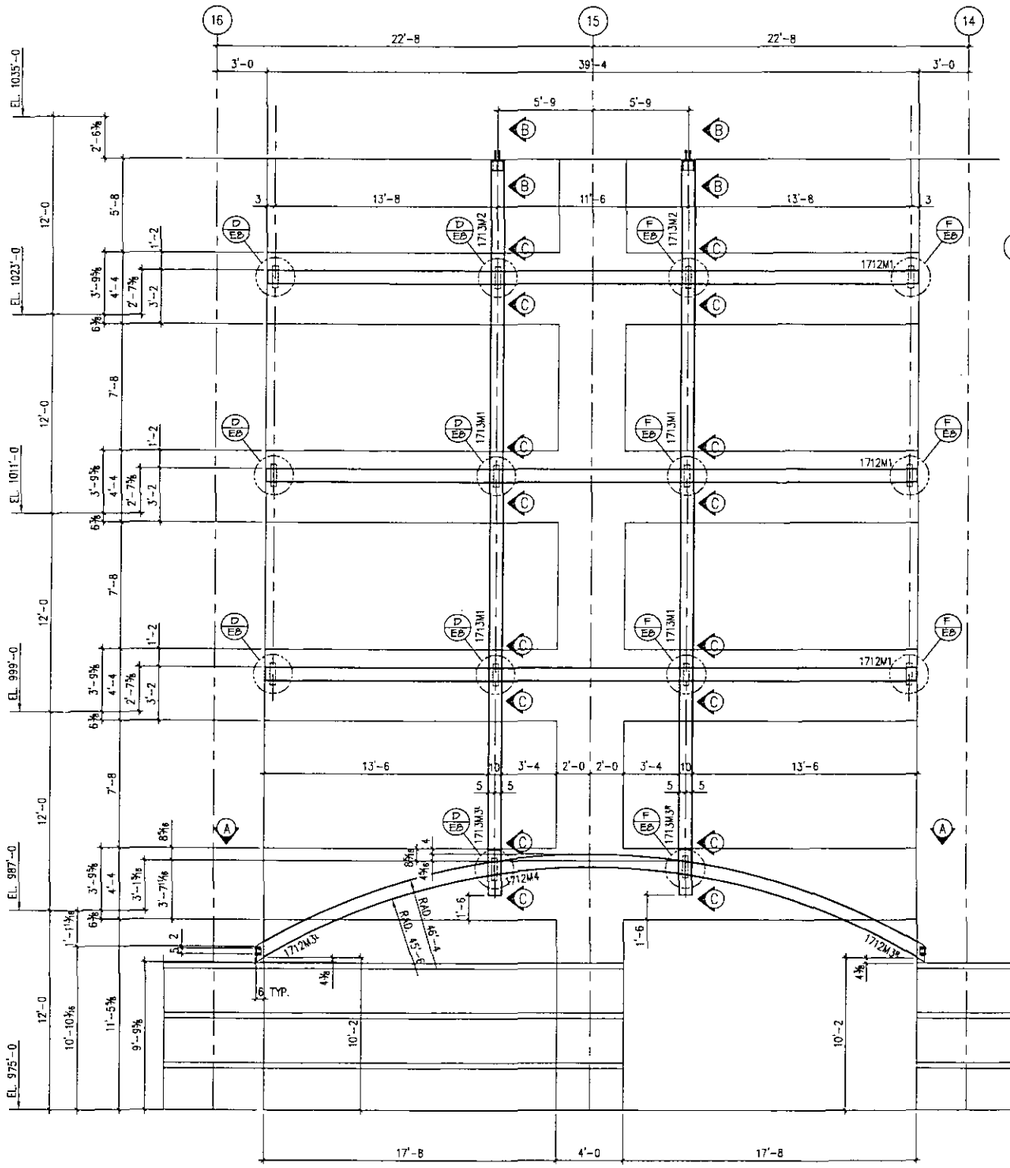
DEC CHANGE #2R

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REFERENCE DWG: A401A, A414A	DESCRIPTION: DECORATIVE CHANNEL FRAMING	DRAWN BY: MAD	DATE: 11/06	CHECKED BY: DSS	JOB# 06-36	SHEET: E7

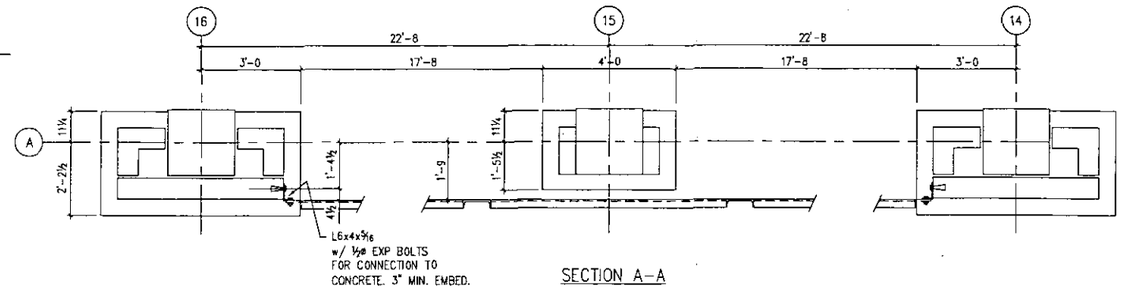
AVENUE FABRICATING, INC.

Licensed CadVantage User

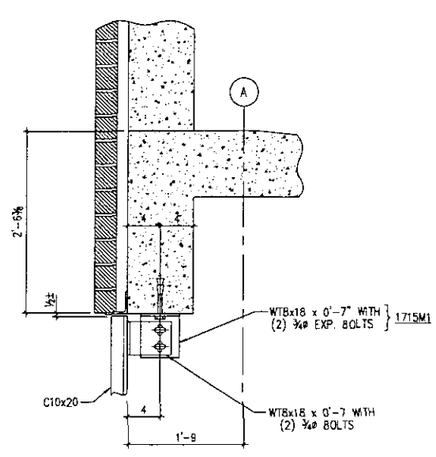
DRAWING ISSUE:
FOR APPVL 11/28/06
FOR APPVL 7/18/07
REVISION:



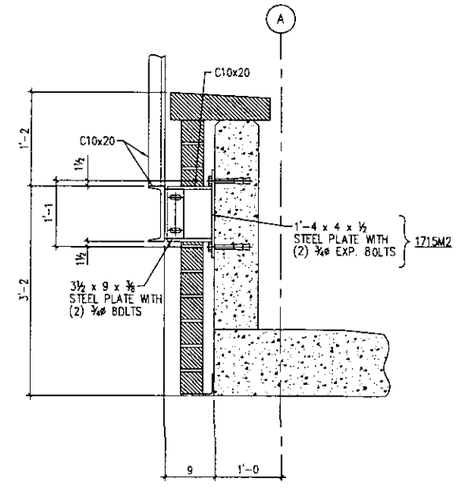
DECORATIVE CHANNEL FRAMING ELEVATION



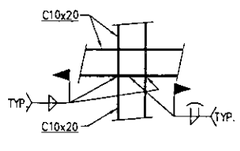
SECTION A-A



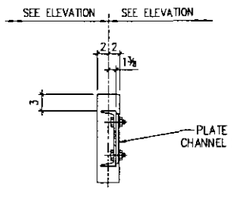
SECTION B-B



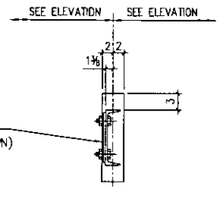
SECTION C-C



TYPICAL FIELD WELD DETAIL



DETAIL "D"
HORIZ. CHANNEL NOT SHOWN FOR CLARITY



DETAIL "F"
HORIZ. CHANNEL NOT SHOWN FOR CLARITY

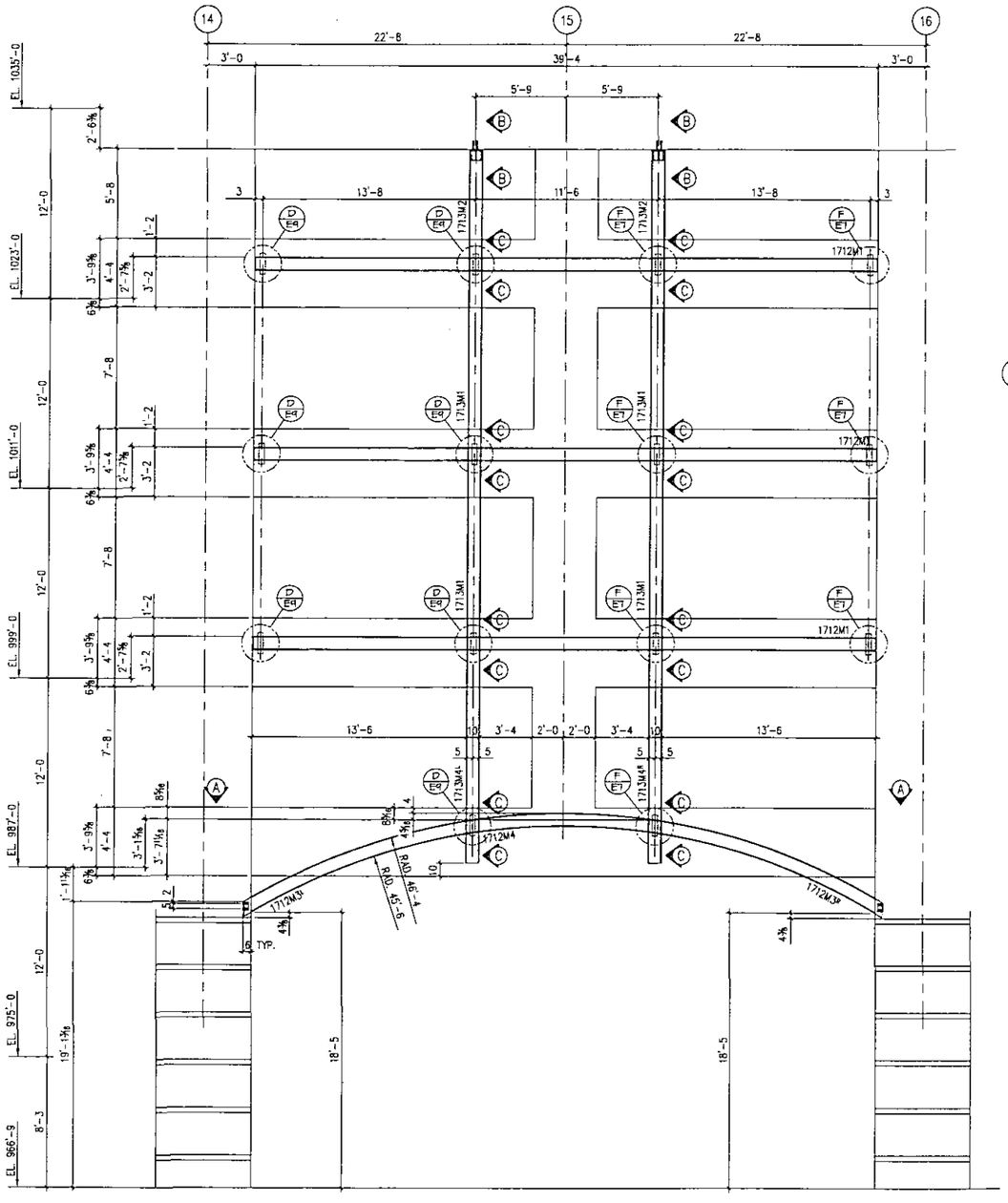
NOT FOR CONSTRUCTION
JUL 18 2007
FOR APPROVAL ONLY

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REFERENCE DWG: A401A, A412A	DESCRIPTION: DECORATIVE CHANNEL FRAMING	DRAWN BY: MAD	DATE: 11/06	CHECKED BY: DSS	JOB# 06-36	SHEET: E8

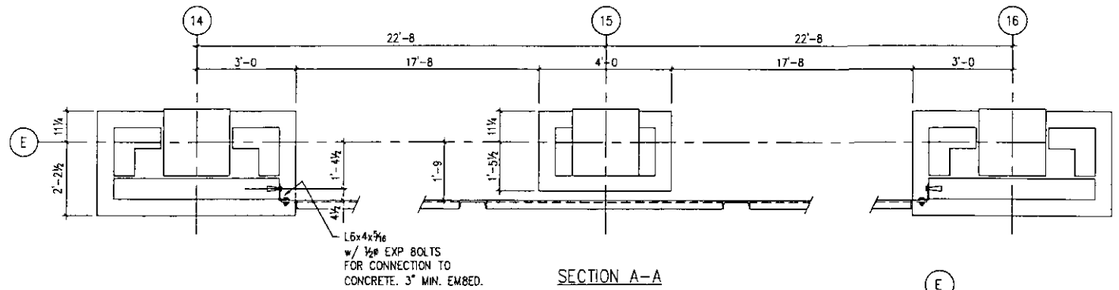
AVENUE FABRICATING, INC.

Licensed CadVantage User

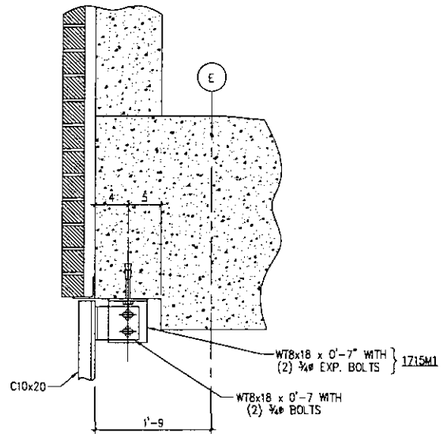
DRAWING ISSUE:
FOR APPVL 11/28/06
FOR APPVL 7/18/07
REVISION:



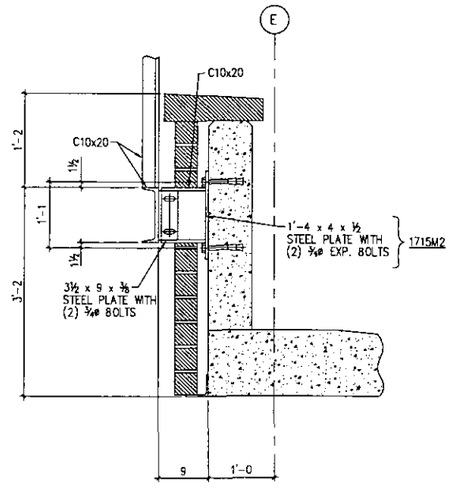
DECORATIVE CHANNEL FRAMING ELEVATION



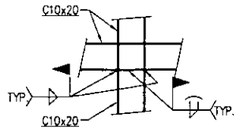
SECTION A–A



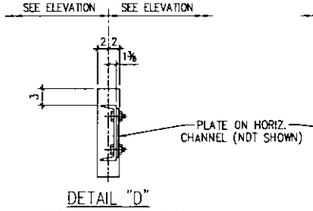
SECTION B–B



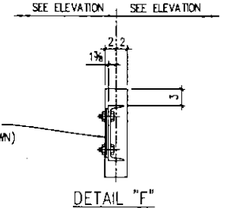
SECTION C–C



TYPICAL FIELD WELD DETAIL



DETAIL "D"
HORIZ. CHANNEL NOT SHOWN FOR CLARITY



DETAIL "F"
HORIZ. CHANNEL NOT SHOWN FOR CLARITY

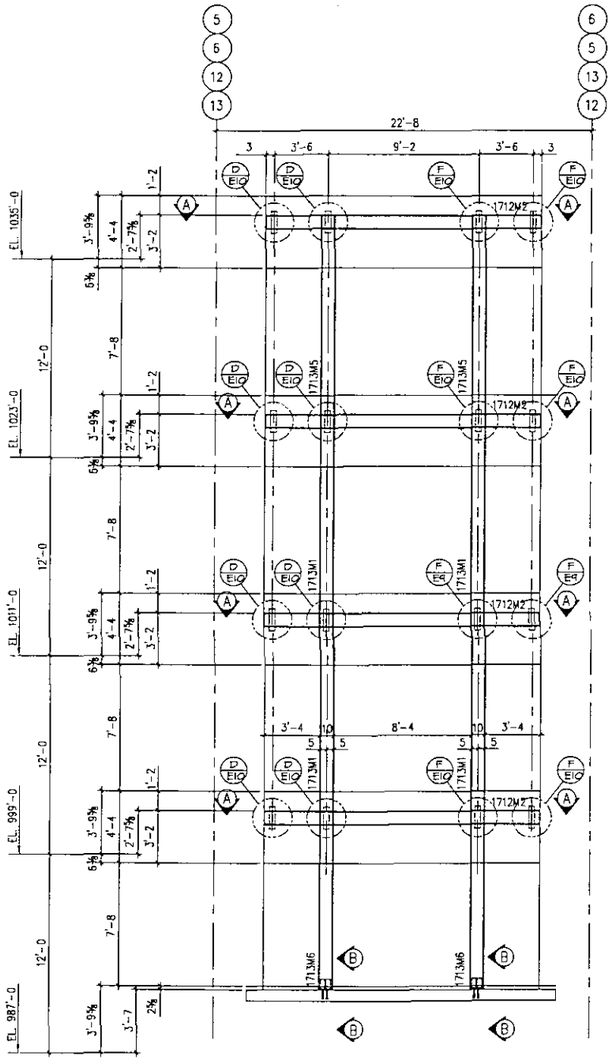
NOT FOR CONSTRUCTION
JUL 18 2007
REGULATORY ONLY

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REFERENCE DWG: A402, A411A	DESCRIPTION: DECORATIVE CHANNEL FRAMING	DRAWN BY: MAD	DATE: 11/06	CHECKED BY: DSS	JOB# 06-36	SHEET: E9

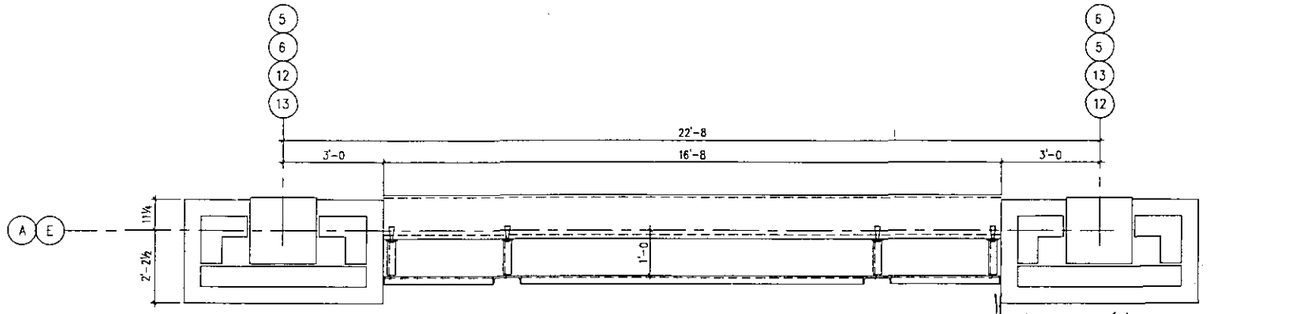
AVENUE FABRICATING, INC.

Licensed CadVantage User

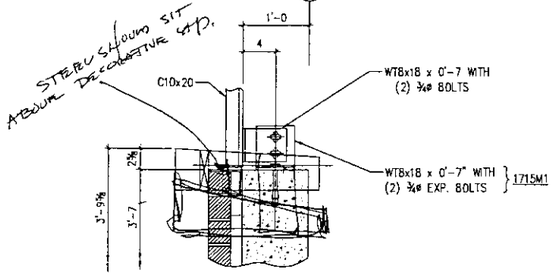
DRAWING ISSUE:
FOR APPVL 11/28/06
FOR APPVL 7/18/07
REVISION:



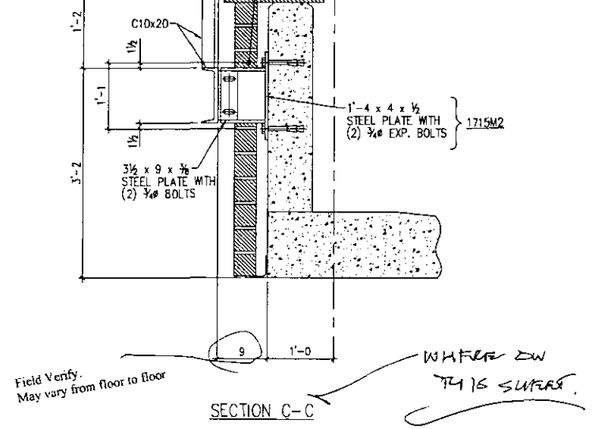
DECORATIVE CHANNEL FRAMING ELEVATION
(4 PLACES)



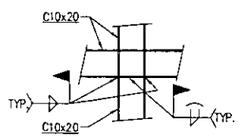
SECTION A-A



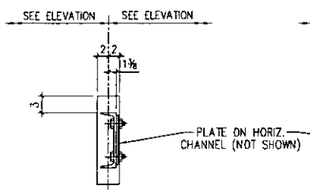
SECTION B-B



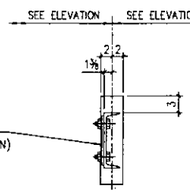
SECTION C-C



TYPICAL FIELD WELD DETAIL



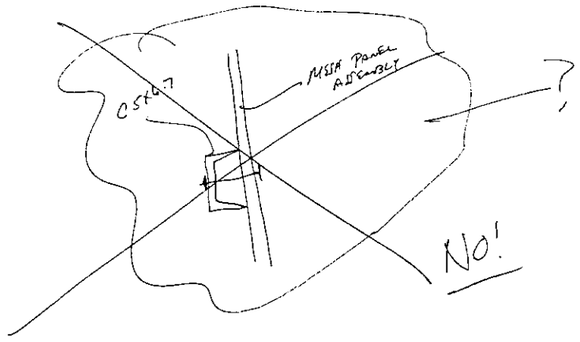
DETAIL "D"
HORIZ. CHANNEL NOT SHOWN FOR CLARITY



DETAIL "E"
HORIZ. CHANNEL NOT SHOWN FOR CLARITY

NOT FOR CONSTRUCTION
JUL 18 2007
FOR REVIEWS ONLY

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REFERENCE DWG: A411A, A414A	DESCRIPTION: DECORATIVE CHANNEL FRAMING	DRAWN BY: MAD	DATE: 11/06	CHECKED BY: DSS	JOB# 06-36	SHEET: E10



AVENUE FABRICATING, INC.

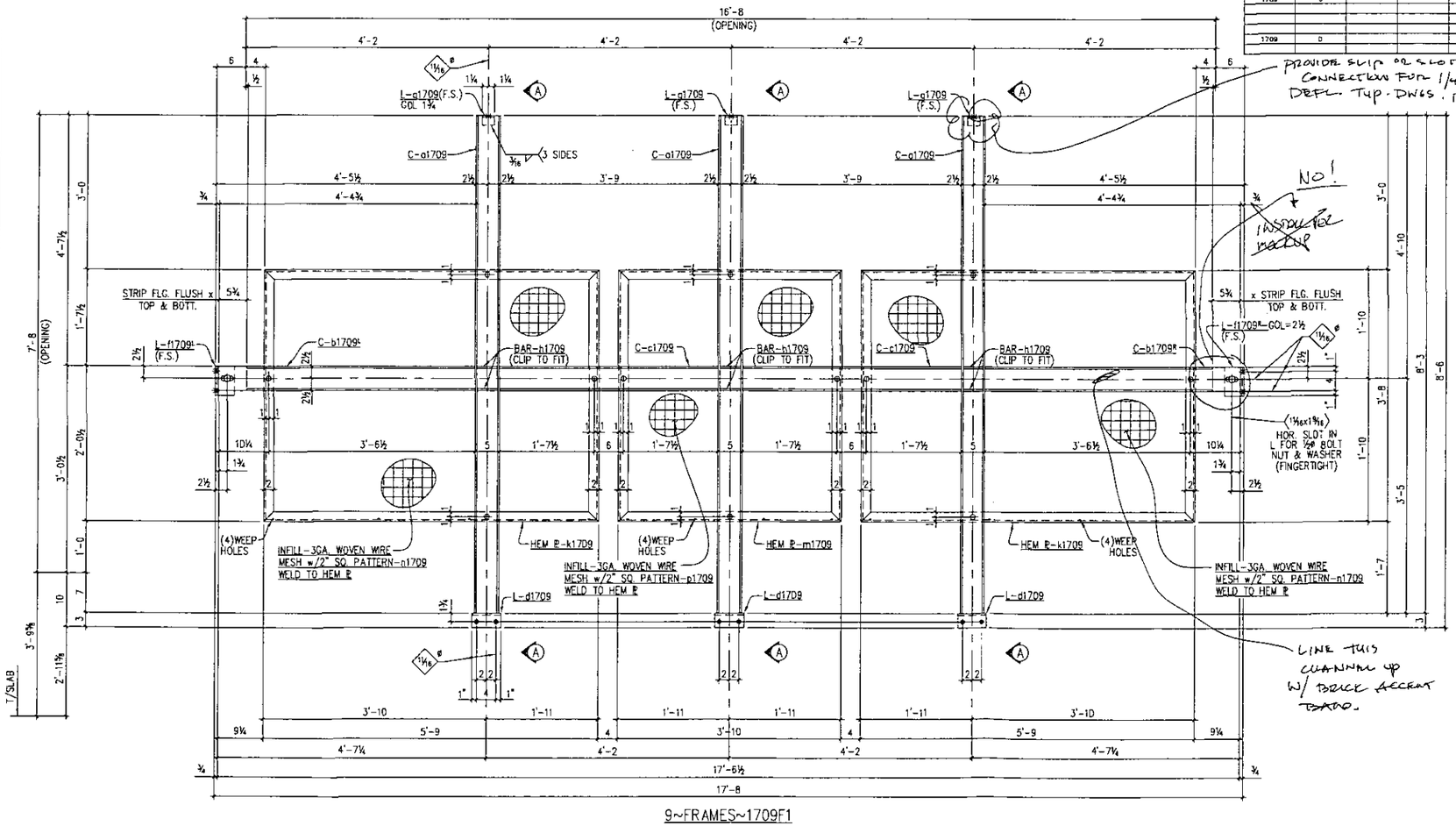
Licensed CadVantage User

DRAWING ISSUE:
FOR APPVL 11/28/06
FOR APPVL 7/18/07
REVISION:

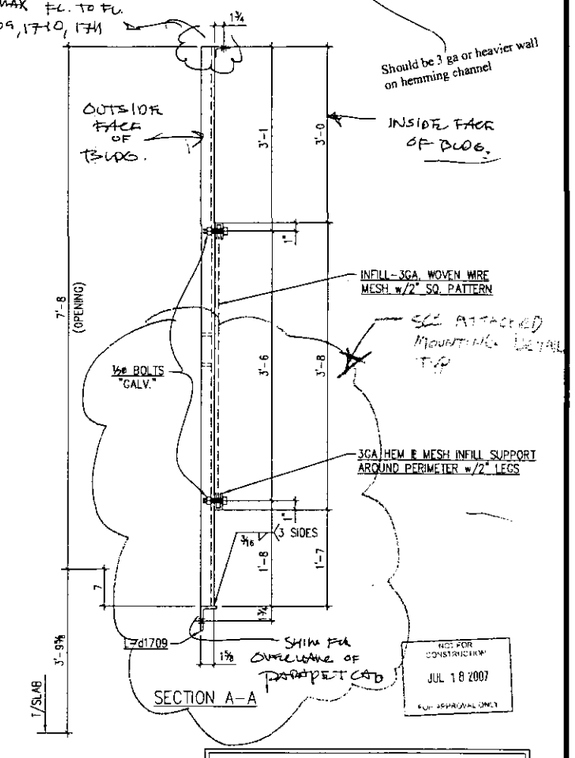
BILL OF MATERIAL

NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : AS NOTED
3. FINISH : GALVANIZED & SHOP PRIMED INTUMESCENT SERIES 68 HI-BUILD EPOXOLINE

Drawing Number	Revision Number	Ship Mark	Piece Mark	Quantity	Type of Material	Size of Material	Grade	Length	Notes	
1709	0	1709F1		9	FRAME					
1709	0		a1709	27	C	5x6.7	A36	6'-3		
1709	0		b1709*	9	C	5x6.7	A36	4'-4 3/4		
1709	0		b1709*	9	C	5x6.7	A36	4'-4 3/4		
1709	0		c1709	18	C	5x6.7	A36	3'-9		
1709	0		d1709	27	L	3x2x1/4	A36	0'-6		
1709	0		f1709*	9	L	4x4x1/4	A36	0'-6		
1709	0		f1709*	9	L	4x4x1/4	A36	0'-6		
1709	0		g1709	27	L	3x2X1/4	A36	0'-2 1/2		
1709	0		h1709	54	PL	3/8x1 3/16	A36	0'-4 3/8		
1709	0		k1709	18	PL	3 GA HEM PL	A36	10 LIN FT	BENT	
1709	0		m1709	9	PL	3 GA HEM PL	A36	15 LIN FT	BENT	
1709	0		n1709	18	MI	WOVEN WIRE MESH 3 GA w/2"@ PATTERN		20 SQ FT		
1709	0		p1709	9	MI	WOVEN WIRE MESH 3 GA w/2"@ PATTERN		14 SQ FT		
1709	0			109	MI	1/2	A307	0'-1 1/2	GALV.	
1709	0			108	NUT	1/2	A307		GALV.	
1709	0			109	WASHER	1/2	A307		GALV.	
					FIELD BOLTS					
1709	0			117	1/2# EXP. ANCH. w/3" EMBED				STAINLESS	



9~FRAMES~1709F1



NOTE:
HOT DIP GALVANIZE AFTER FABRICATION.
SEAL WELD IN ADDITION TO WELDS SHOWN.
PROVIDE VENT HOLES AS REQUIRED.

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REFERENCE DWG: E16	DESCRIPTION: FRAME	DRAWN BY: AW	DATE: 11/06	CHECKED BY: DSS	JOB# 06-36	SHEET: 1709

AVENUE FABRICATING, INC.

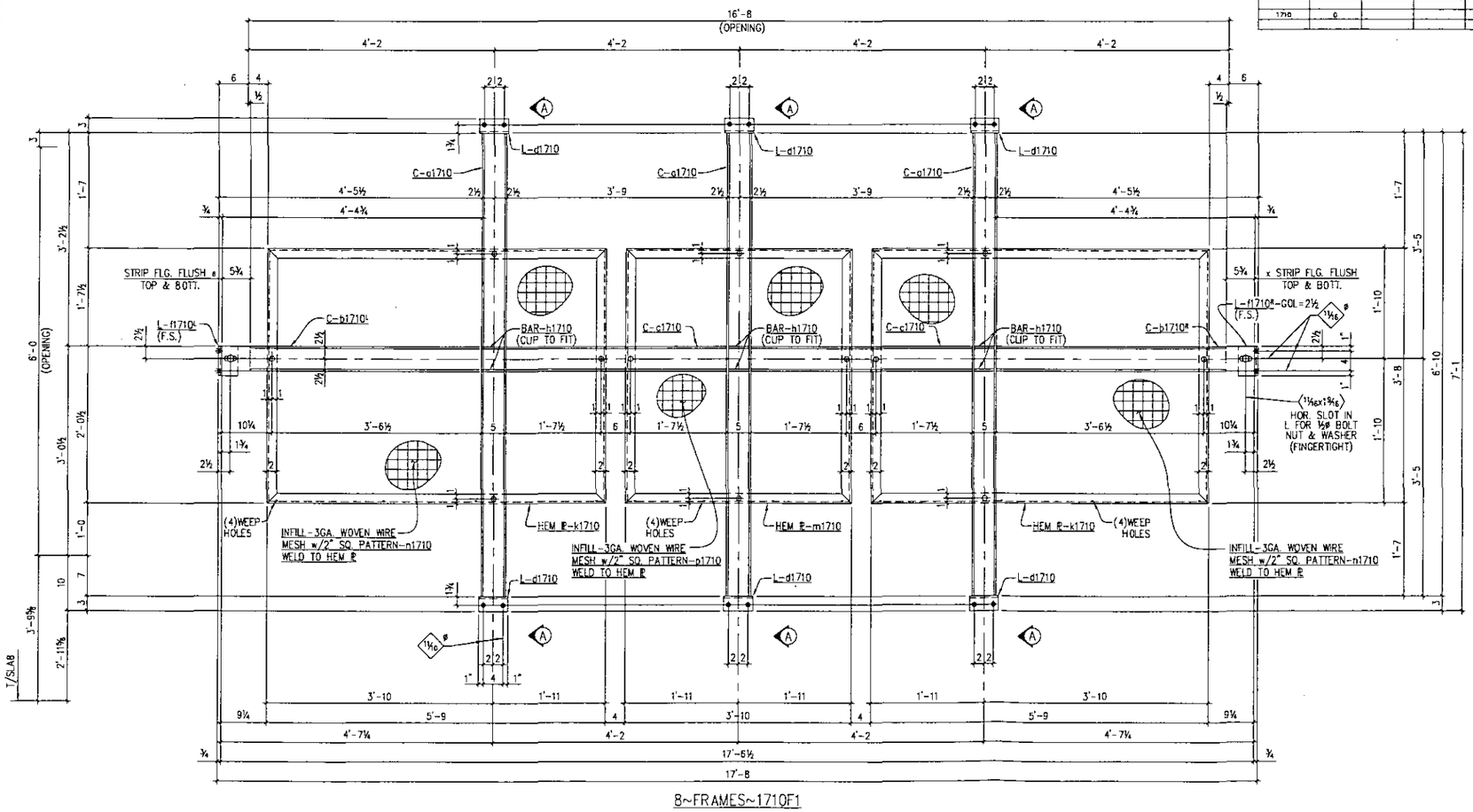
Licensed CadVantage User

DRAWING ISSUE:
FOR APPVL 11/28/06
FOR APPVL 7/18/07
REVISION:

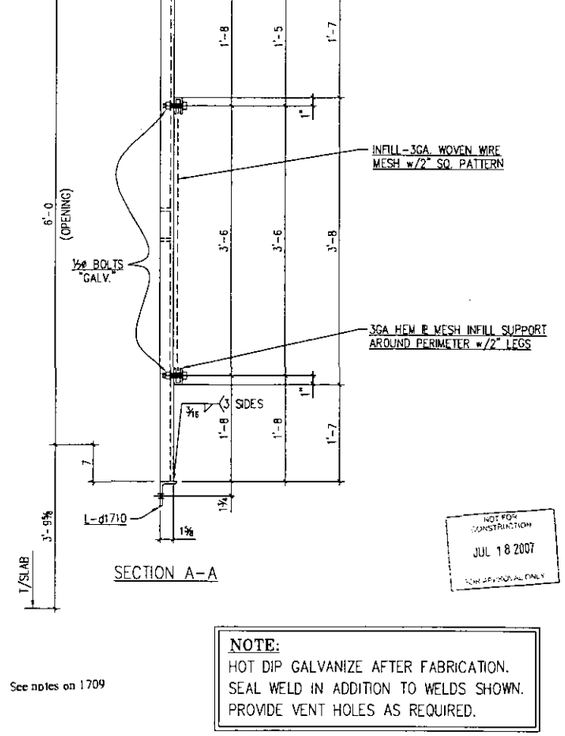
BILL OF MATERIAL

NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : AS NOTED
3. FINISH : GALVANIZED & SHOP PRIMED INTUMESCENT SERIES 66 HI-BUILD EPOXOLINE

Drawing Number	Revision Number	Ship Mark	Piece Mark	Quantity	Type of Material	Size of Material	Grade	Length	Notes
1710	0	1710F1		8	FRAME				
1710	a		a1710	24	C	5x6.7	A36	8'-10	
1710	0		b1710*	8	C	5x6.7	A36	4'-4 3/4	
1710	0		b1710	a	C	5x6.7	A36	4'-9	
1710	0		c1710	16	C	5x6.7	A36	3'-10	
1710	0		d1710	48	L	3x2x1/4	A36	0'-6	
1710	0		f1710*	8	L	4x4x1/4	A36	0'-6	
1710	0		f1710	8	L	4x4x1/4	A36	0'-6	
1710	0		h1710	48	PL	3/8x1 9/16	A36	8'-4 3/8	
1710	0		k1710	16	PL	3 GA HEM PL	A36	20 LIN FT	
1710	0		m1710	8	PL	3 GA HEM PL	A36	16 LIN FT	
1716	0		n1710	16	MI	WOVEN WIRE MESH 3 GA w/2"@ PATTERN		24 SQ FT	
1716	0		p1710	8	MI	WOVEN WIRE MESH 3 GA w/2"@ PATTERN		16 SQ FT	
1710	0			112	MI	1/2	A307	0'-1 1/2	GALV.
1710	0			112	NUT	1/2	A307		GALV.
1710	0			112	WASHER	1/2	A307		GALV.
					FIELD BOLTS				
1710	0			128	1/2ø EXP. ANCH. w/3" EMBED				STAINLESS



8~FRAMES~1710F1



SECTION A-A

NOT FOR CONSTRUCTION
JUL 18 2007
SHOP DRAWINGS ONLY

See notes on 1709

NOTE:
HOT DIP GALVANIZE AFTER FABRICATION.
SEAL WELD IN ADDITION TO WELDS SHOWN.
PROVIDE VENT HOLES AS REQUIRED.

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REFERENCE DWG: E17	DESCRIPTION: FRAME	DRAWN BY: RDJ	DATE: 11/06	CHECKED BY: DSS	JOB# 06-36	SHEET: 1710

AVENUE FABRICATING, INC.

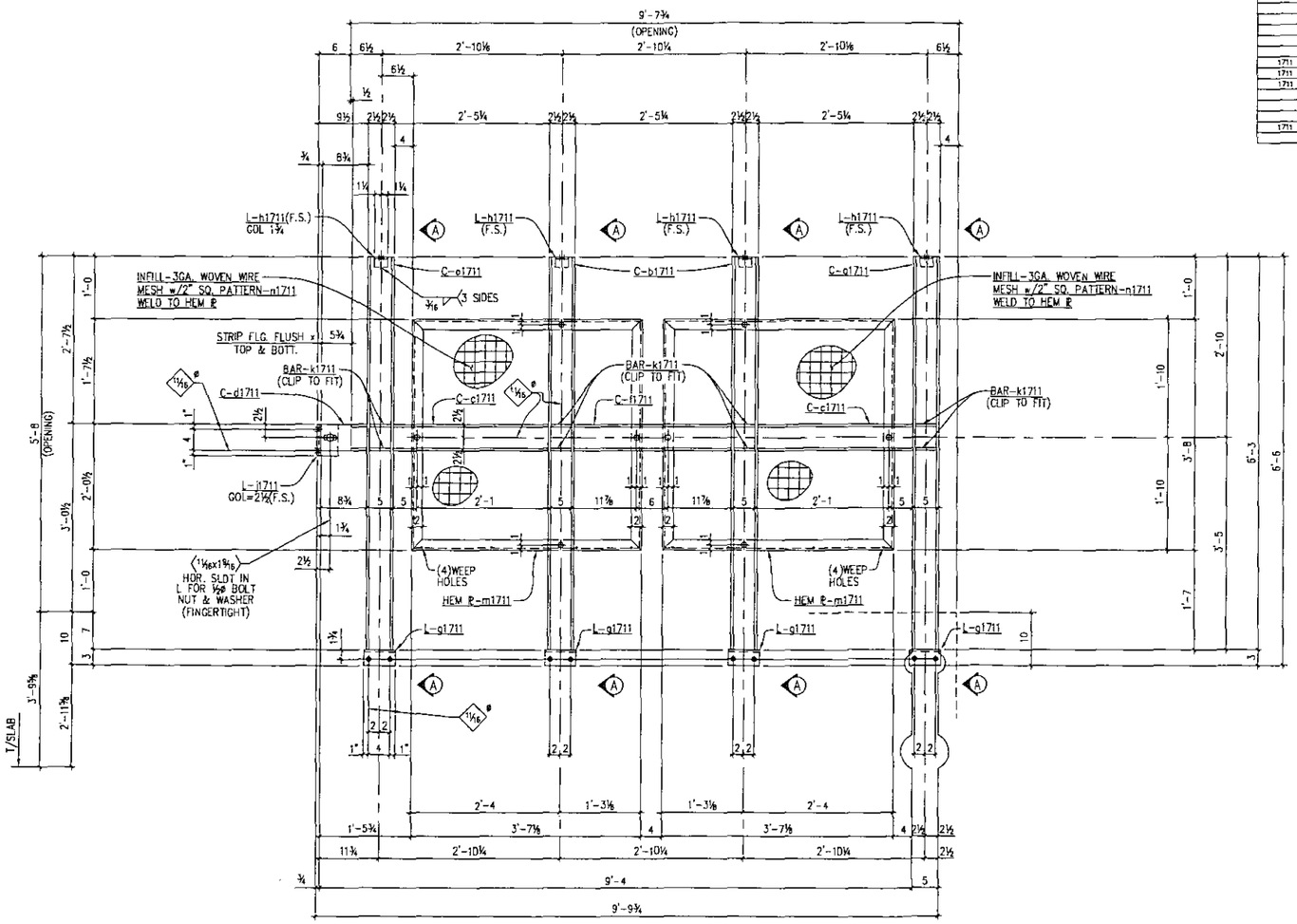
Licensed CadVantage User

DRAWING ISSUE:
FOR APPVL 11/28/06
FOR APPVL 7/18/07
REVISION:

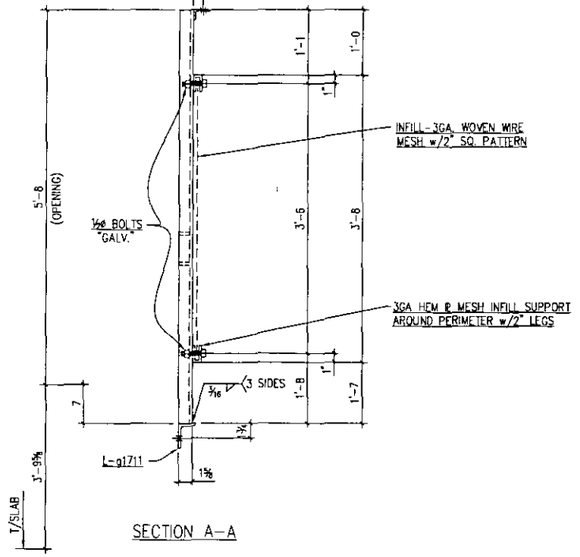
BILL OF MATERIAL

NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : AS NOTED
3. FINISH : GALVANIZED & SHOP PRIMED INTUMESCENT SERIES 88 HI-BUILD EPOXOLINE

Drawing Number	Revision Number	Ship Mark	Piece Mark	Quantity	Type of Material	Size of Material	Grade	Length	Notes
1711	0	1711F1		ONE	FRAME				
1711	0		a1711	2	C	5X6.7	A36	6'-3	
1711	0		b1711	2	C	5X6.7	A36	6'-3	
1711	0		c1711	2	C	5X6.7	A36	2'-5 1/4	
1711	0		d1711	1	C	5X6.7	A36	0'-8 3/4	
1711	8		f1711	1	C	5X6.7	A36	2'-5 1/4	
1711	0		g1711	e	L	3x2x1/4	A36	0'-6	
1711	8		h1711	4	L	3x2X1/4	A36	0'-2 1/2	
1711	0		j1711	1	L	4x4x1/4	A36	6'-6	
1711	0		k1711	8	PL	3/8x1 6/16	A36	0'-4 3/8	
1711	0		m1711	2	PL	3 GA HEM PL	A36	16 LIN FT	
1711	0		n1711	2	MI	WOVEN WIRE MESH 3 GA w/2"ø PATTERN		15 SQ FT	
1711	0			9	MI	1/2	A307	0'-1 1/2	GALV.
1711	0			X	NUT	1/2	A307		GALV.
1711	0			8	WASHEX	1/2	A307		GALV.
					FIELD BOLTS				
1711	0			14	1/2ø EXP. ANCH. w/3" EMBED				STAINLESS



ONE~FRAME~1711F1

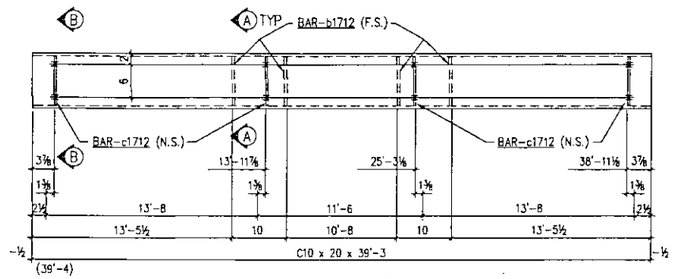


SECTION A-A

See notes on 1709

NOT FOR CONSTRUCTION
JUL 18 2007
FOR APPROVAL ONLY

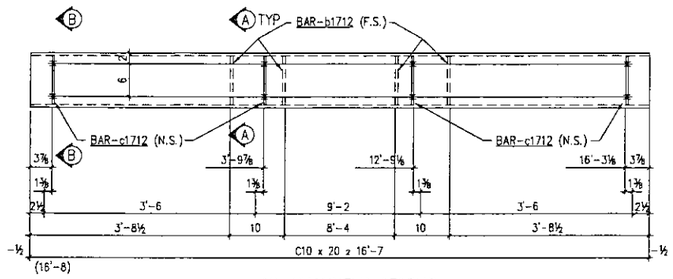
PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REFERENCE DWG: E16	DESCRIPTION: FRAME	DRAWN BY: RDJ	DATE: 11/06	CHECKED BY: DSS	JOB# 06-36	SHEET: 1711



9-CHANNELS-1712M1

36-¾ø A325 2

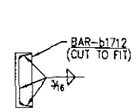
36-¾ø A325 2



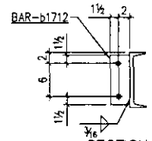
16-CHANNELS-1712M2

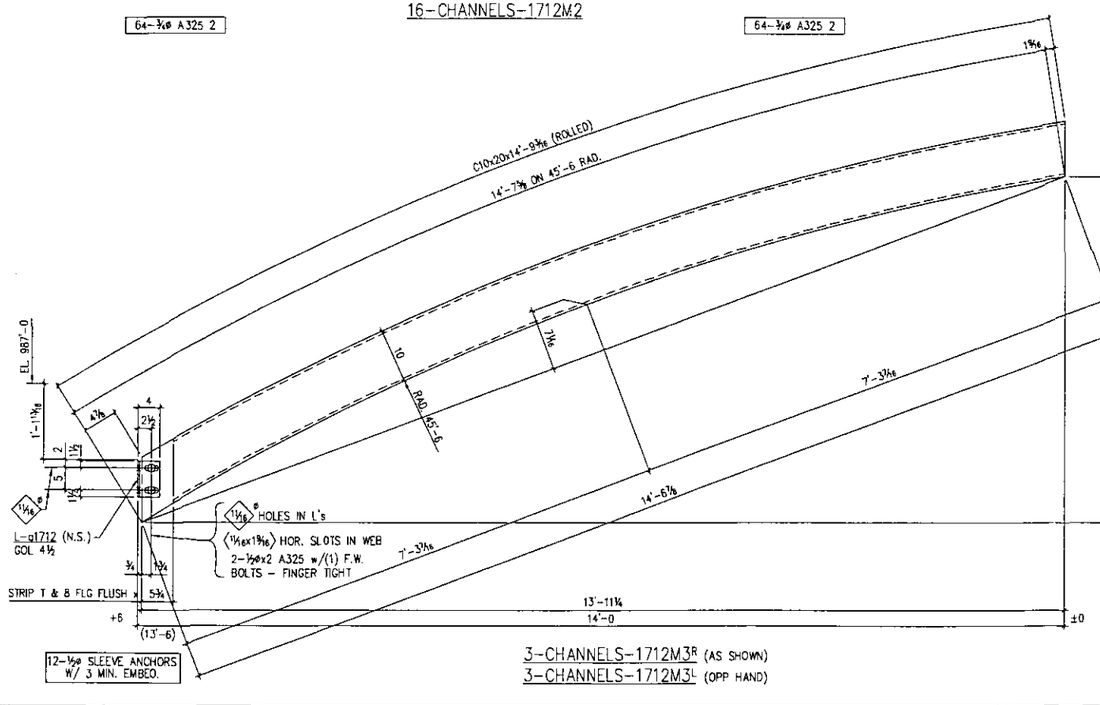
64-⅞ø A325 2

64-⅞ø A325 2

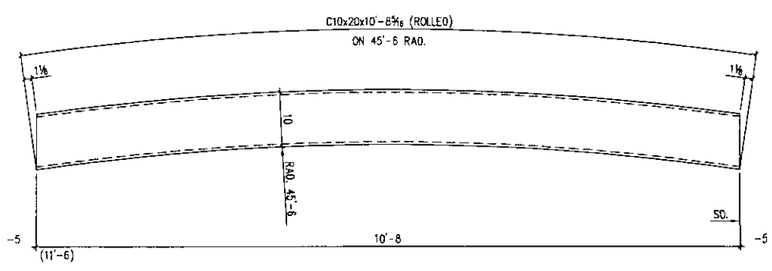


SECTION A-A





3-CHANNELS-1712M3R (AS SHOWN)
3-CHANNELS-1712M3L (OPP HAND)



3-CHANNELS-1712M4

Licensed CadVantage User

AVENUE FABRICATING, INC.

DRAWING ISSUE:
FOR APPV'L 11/28/06
FOR APPV'L 7/18/07
REVISION:

BILL OF MATERIAL

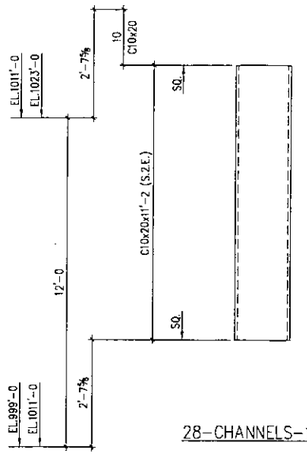
NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : AS NOTED
3. FINISH : GALVANIZED & SHOP PRIMED INTUMESCENT SERIES 86 HI-BUILD EPOXOLINE

Drawing Number	Revision Number	Ship Mark	Piece Mark	Quantity	Type of Material	Size of Material	Grade	Length	Notes
1712	0	1712M1		9	C	10 x 20	A36	39'-3	
1712	0		c1712	36	FB	3/8 x 3 1/2	A36	0'-9	
1712	0		b1712	36	FB	1/2 x 2 3/8	A36	0'-9 1/8	
1712	0	1712M2		16	C	10 x 20	A36	16'-7	
1712	0		c1712	64	FB	3/8 x 3 1/2	A36	0'-9	
1712	9		b1712	64	FB	1/2 x 2 3/8	A36	0'-9 1/8	
1713	0	1712M3R		3	C	10 x 20	A36	14'-9 3/16	ROLL
1712	0		a1712	3	L	6 x 4 x 5/19	A36	9'-9	
1212	0	1712M3L		3	C	10 x 29	A36	14'-9 3/16	ROLL
1712	9		a1712	3	L	6 x 4 x 5/16	A36	0'-8	
1712	9	1712M4		3	C	10 x 20	A36	19'-8 5/16	ROLL
1712	9			13	MB	1/2	A307	0'-2	GALV.
1712	9			12	NUT	1/2	A307		GALV.
1712	9			12	WASHER	1/2	A307		GALV.
					FIELD BOLTS				
1712	9			12	SA	1/2		9'-4 1/2	STAINLESS
1712	9			200	HS	3/4	A325	0'-2	GALV.
1712	9			200	NUT	3/4	A325		GALV.
1712	9			200	WASHER	3/4	A325		GALV.

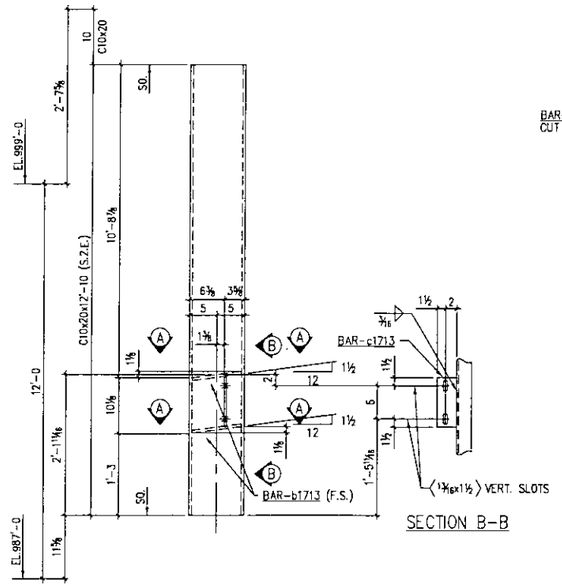
NOT FOR CONSTRUCTION
JUL 18 2007

NOTE:
HOT DIP GALVANIZE AFTER FABRICATION.
SEAL WELD IN ADDITION TO WELDS SHOWN.
PROVIDE VENT HOLES AS REQUIRED.

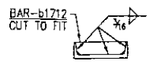
PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REFERENCE DWG: E7 THRU E10	DESCRIPTION: CHANNELS	DRAWN BY: MAD	DATE: 11/06	CHECKED BY: DSS	JOB# 06-36	SHEET: 1712



28-CHANNELS-1713M1



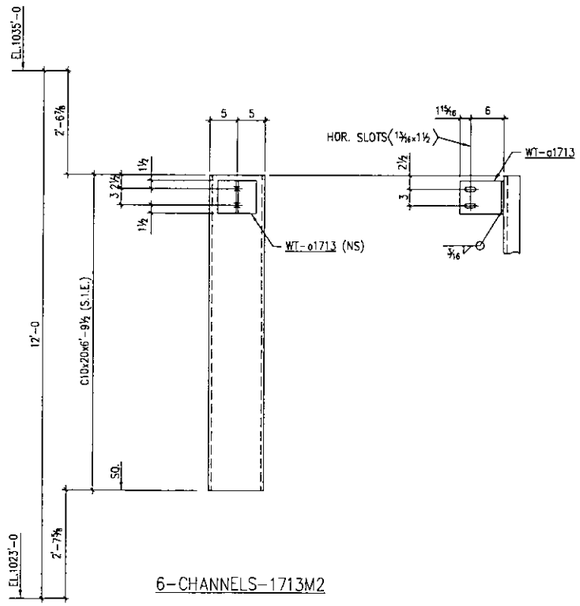
SECTION B-B



SECTION A-A

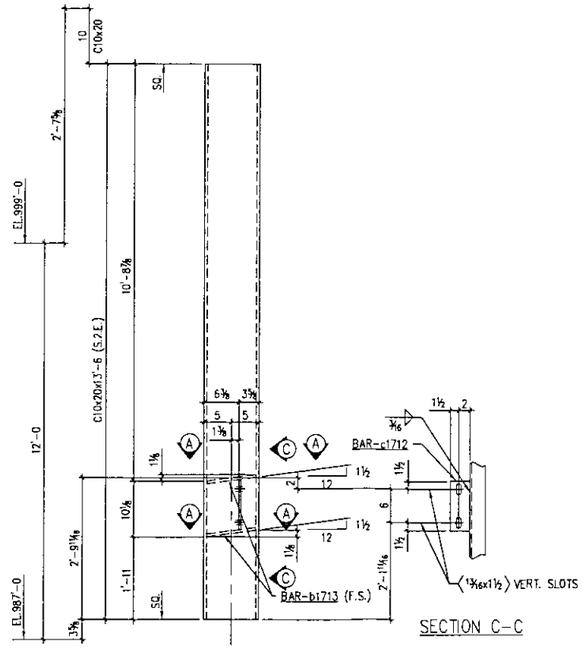
2-CHANNELS-1713M3R (AS SHOWN)
2-CHANNELS-1713M3L (OPP HAND)

8-¾ø A325 2



6-CHANNELS-1713M2

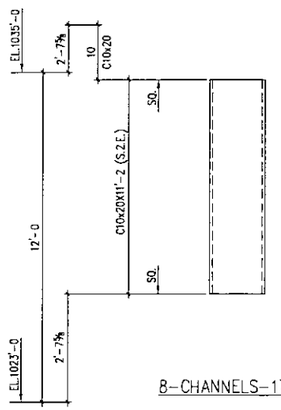
12-¾ø A325 2



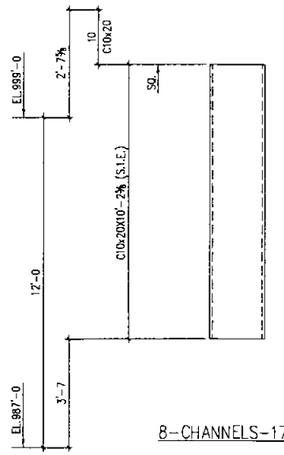
SECTION C-C

ONE-CHANNEL-1713M4R (AS SHOWN)
ONE-CHANNEL-1713M4L (OPP HAND)

4-¾ø A325 2



8-CHANNELS-1713M5



8-CHANNELS-1713M6

NOT FOR CONSTRUCTION
JUL 18 2007
FOR APPROVAL ONLY

NOTE:
HOT DIP GALVANIZE AFTER FABRICATION.
SEAL WELD IN ADDITION TO WELDS SHOWN.
PROVIDE VENT HOLES AS REQUIRED.

AVENUE FABRICATING, INC.

Licensed CadVantage User

DRAWING ISSUE:
FOR APPVL 11/28/06
FOR APPVL 7/18/07

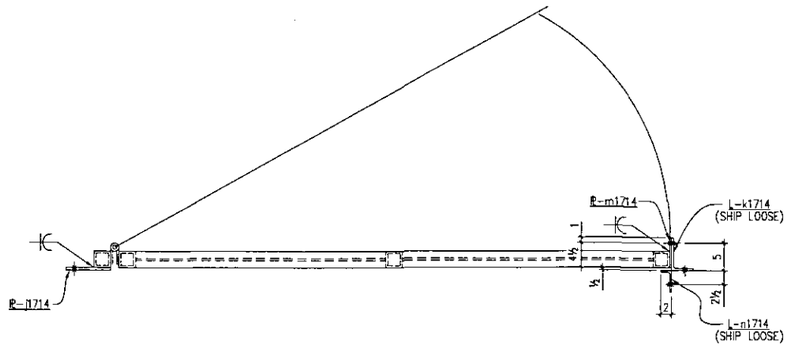
REVISION:

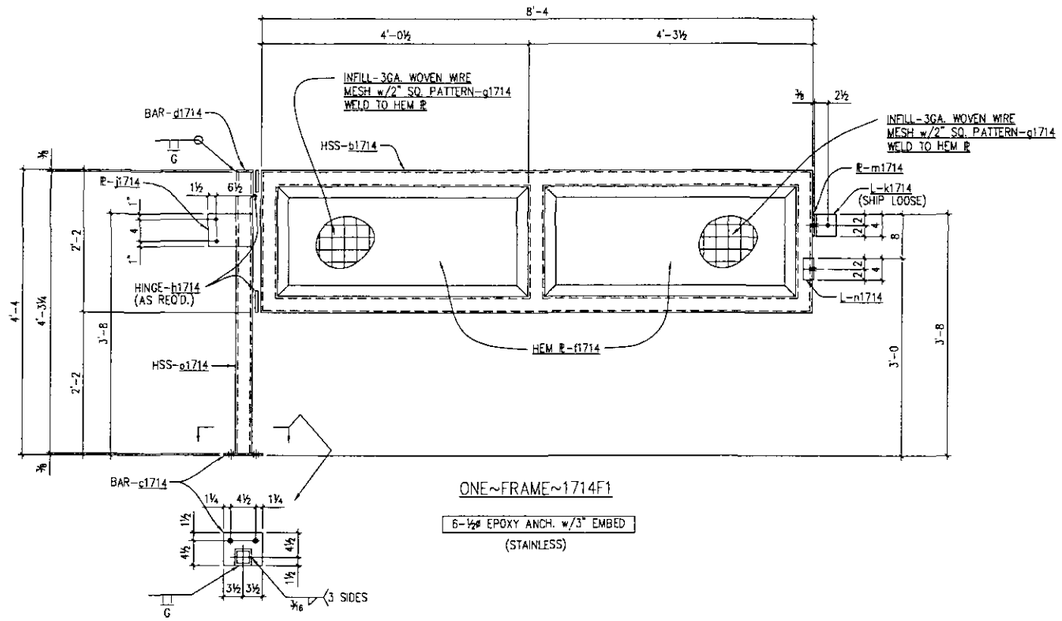
BILL OF MATERIAL

NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : AS NOTED
3. FINISH : GALVANIZED & SHOP PRIMED INTUMESCENT SERIES 66 HI-BUILD EPOXOLINE

Drawing Number	Revision Number	Ship Mark	Piece Mark	Quantity	Type of Material	Size of Material	Grade	Length	Notes
1713	0	1713M1		28	C	10 x 20	A36	11'-2	S.2.E.
1713	0	1713M2		6	C	10 x 20	A36	6'-9 1/2	S.1.E.
1713	0		a1713	6	WT	8 x 18	A36	0'-6	
1713	9	1713M3R		2	C	10 x 20	A36	12'-10	S.2.E.
1713	0		b1713	4	FB	1/2 x 2 3/8	A36	0'-9 1/8	
1713	0		c1713	2	FB	3/8 x 3 1/2	A36	0'-8	
1713	0	1713M3L		2	C	10 x 20	A36	12'-10	S.2.E.
1713	0		b1713	4	FB	1/2 x 2 3/8	A36	0'-9 1/8	
1713	0		a1713	2	FB	3/8 x 3 1/2	A36	0'-8	
1713	9	1713M4R		ONE	C	10 x 20	A36	13'-8	S.2.E.
1713	0		b1713	2	FB	1/2 x 2 3/8	A36	9'-9 1/8	
1713	0		c1713	1	FB	3/8 x 3 1/2	A36	0'-9	
1713	0	1713M4L		ONE	C	10 x 20	A36	13'-6	S.2.E.
1713	9		b1713	2	FB	1/2 x 2 3/8	A36	0'-9 1/8	
1713	0		c1713	1	FB	3/8 x 3 1/2	A36	0'-9	
1713	0	1713M5		8	C	10 x 20	A36	11'-2	S.2.E.
1713	0	1713M6		8	C	10 x 20	A36	18'-2 5/8	S.1.E.
1712	8			24	-S	3/4	A325	0'-2	GALV.
1712	0			24	NUT	3/4	A325		GALV.
1712	8			24	WASHER	3/4	A325		GALV.

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REFERENCE DWG: E7 THRU E10	DESCRIPTION: CHANNELS	DRAWN BY: MAD	DATE: 11/06	CHECKED BY: DSS	JOB# 06-36	SHEET: 1713





ONE~FRAME~1714F1

6-½ø EPOXY ANCH. w/3" EMBED
(STAINLESS)

AVENUE FABRICATING, INC.

Licensed CadVantage User

DRAWING ISSUE:
FOR APPVL 11/28/06
FOR APPVL 7/18/07

REVISION:

BILL OF MATERIAL

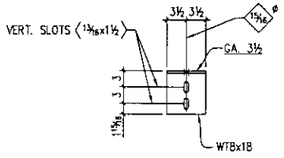
NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : 11/16ø
3. FINISH : GALVANIZED & SHOP PRIMED INTUMESCENT SERIES 66 HI-BUILD EPOXOLINE

Drawing Number	Revision Number	Ship Mark	Piece Mark	Quantity	Type of Material	Size of Material	Grade	Length	Notes
1714	B	1714F1		ONE	FRAME				
1714	D		a1714	1	HSS	3x3x3/16	A500 GR. B	4'-3 1/4	
1714	D		b1714	1	HSS	3x3x3/16	A500 GR. B	23 LIN. FT.	
1714	B		c1714	1	FB	3/8x6	A36	0'-7	
1714	B		d1714	1	FB	-3/8x3	A36	8'-3	
1714	D		f1714	2	PL	3 GA HEM PL		12 LIN FT	
1714	B		g1714	2	MI	WOVEN WIRE MESH 3 GA w/2"ø PATTERN		6 SQ FT	
1714	D		h1714	2		HINGE (AS REQ'D.)			
1714	D		j1714	1	FB	1/2x6	A36	0'-8	
1714	D		k1714	1	L	8x4x3/8	A36	8'-4	LOOSE
1714	D		m1714	1	FB	3/8x4	A36	0'-5 1/2	
1714	D		n1714	1	L	4x2x3/8	A36	8'-4	LOOSE
					FIELD BOLTS				
1714	D			6	1/2ø EPOXY ANCH. w/3" EMBED				STAINLESS

Should be 3 ga or heavier wall on hemming channel

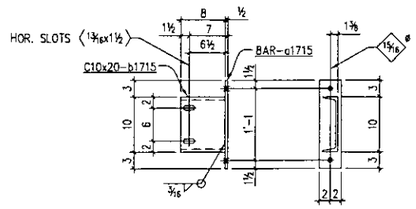
NOT FOR CONSTRUCTION
JUL 18 2007
FOR APPROVAL ONLY

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REFERENCE DWG: E16	DESCRIPTION: FRAME	DRAWN BY: RDJ	DATE: 11/06	CHECKED BY: DSS	JOB# 06-36	SHEET: 1714



14~HANGERS~1715M1

28-¾ø SLEEVE ANCHORS W/3" MIN. EMBED



106~HANGERS~1715M2

212-¾ø SLEEVE ANCHORS W/3" MIN. EMBED

Licensed CadVantage User

AVENUE FABRICATING, INC.

DRAWING ISSUE:
FOR APPROVAL 7-18-07

REVISION:

BILL OF MATERIAL

NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : AS NOTED
3. FINISH : GALVANIZED & SHOP PRIMED INTUMESCENT SERIES 66 HI-BUILD EPOXOLINE

Drawing Number	Revision Number	Ship Mark	Piece Mark	Quantity	Type of Material	Size of Material	Grade	Length	Notes
1715	a	1715M1		14	WT	8x18	A36	0'-7	
1715	0	1715M2		106	HANGER				
1715	0		a1715	106	FB	1/2x4	A36	1'-4	
1715	0		b1715	106	C	10x20	A36	0'-8	
					FIELD BOLTS				
1715	0			240	SA	3/4		0'-4½	

NOT FOR CONSTRUCTION
JUL 18 2007
FOR APPROVAL ONLY

NOTE:
HOT DIP GALVANIZE AFTER FABRICATION.
SEAL WELD IN ADDITION TO WELDS SHOWN.
PROVIDE VENT HOLES AS REQUIRED.

PROJECT: U.K. PARKING GARAGE | CUSTOMER: E.C. MATTHEWS CO., INC. | REFERENCE DWG: E7 THRU E10 | DESCRIPTION: MISC.(HANGERS) | DRAWN BY: AW | DATE: 6-07 | CHECKED BY: DSS | JOB# 06-36 | SHEET: 1715

E.C. Matthews Co., Inc.

2265 Harrodsburg Road
Lexington, KY 40504
Phone: 859.278.3131
FAX: 859.277.7903
E-Mail: dsherwood@ecmatthews.com

Facsimile Transmittal

Date: 12-Feb-2008

To: Gilbane

Attn: Jeff Zellen

From: Doug Sherwood

Re: THP field review of decorative channels

FAX Number: 323-1331

Comments:

Jeff,

Attached is Avenue's response to THP's concerns about the mounting brackets for the decorative steel channels. Avenue has had their engineer review the details and he has provided a stamped statement that the connections are adequte. He has provided his calculations for review.

Please call if you have any questions.

This cover sheet is the first page of **6** pages.

No confirmation is necessary unless otherwise indicated

A copy of this communication is **not** being mailed. (Note: If no mailed copy is indicated but one is needed, kindly call and request same.)

Truman P. Young & Associates
CIVIL & STRUCTURAL ENGINEERS
4225 Malsbary Road Cincinnati, OH 45242
(513) 861-5655 Fax: (513) 861-5658
www.trumanpyoung.com

Transmittal

Client Ph. 752-0044

From: Dennis Scheidt

Date: 2/13/08

Job No.: 08039

Project: U.K. Garage

Please deliver the following pages to:

Attention: Bob Nichols

Company/Dept.: Avenue Fabricating

Comments: I have checked the plate connection as requested. Based on the information provided, the plate calculates to be adequate for the loads applied. I have attached a copy of our calculations for submittal to the project E.O.R.

We are transmitting forthwith 5 page(s), including this page.
If any document is missing from this transmission, kindly notify us at once.

TRUMAN P. YOUNG & ASSOCIATES JOB NO. 08039

SCALE: ____ PROJECT U.K. Garage SHEET 1 OF 4

FLOOR ____ STRUCTURE R K1712 DESIGNED 2/12/08 BY DWS

MEMBER ____ CLIENT Avenue Fabricating DWG. REFERENCE ____

STATE OF KENTUCKY DENNIS W. SCHEIDT 22393 LICENSED PROFESSIONAL ENGINEER

Loads on Connection

Vertical Channels

Length $7.67 + (3 \times 12) + 3.17 = 46.83'$

$Wt = 20(46.83) = 937\#$ / channel

Horiz Channels

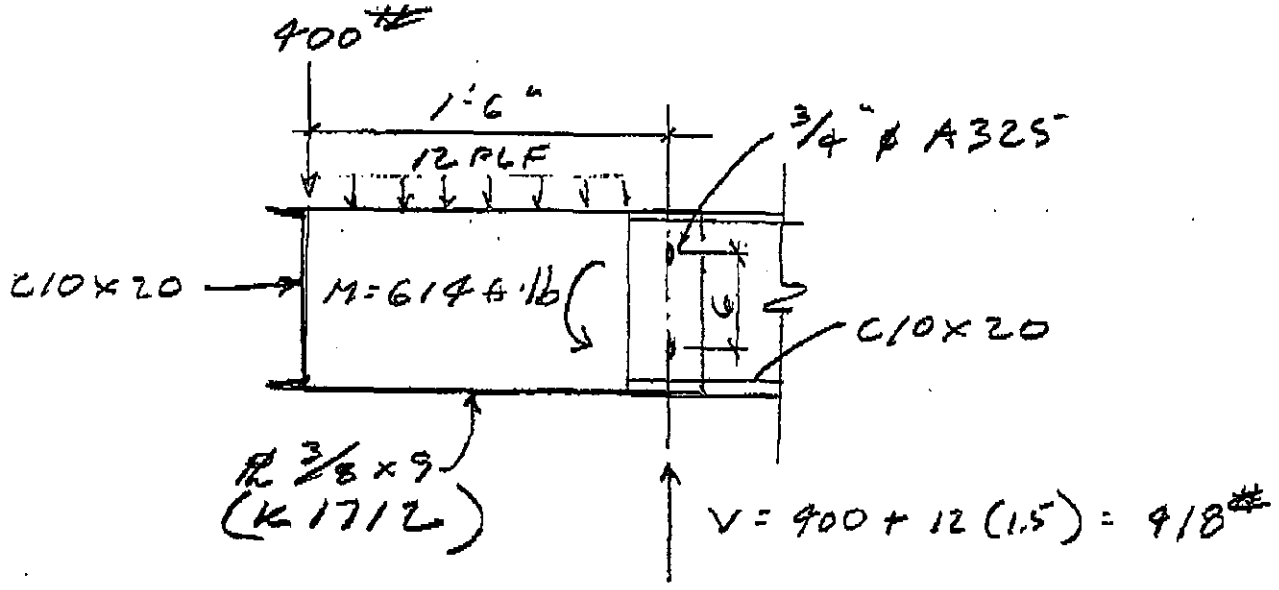
Length $= 16.67'$

$Wt = 20(16.67) = 333\#$

Load applied @ end of Ea R K1712

(4) brackets / side

$\frac{937}{4} + \frac{333}{2} = 400\#$



TRUMAN P. YOUNG & ASSOCIATES JOB NO. 08039

SCALE: _____ PROJECT U.K. Garage SHEET 2 OF 4

FLOOR _____ STRUCTURE HK1712 DESIGNED 2/12/08 BY DWS

MEMBER _____ CLIENT Avenue Fabricating DWG. REFERENCE _____

Plate Bending Strong Axis

PL 3/8 x 9

$L_b = 1.5'$

$d = 9$

$t = .375$

$S_x = 5.06$

$Z_x = 7.59$

$\frac{L_b d}{t^2} = \frac{(18)(9)}{(.375)^2} = 1152$

$\frac{1.9E}{F_y} = \frac{(1.9)(29000)}{36} = 1530$

$\frac{0.08E}{F_y} = \frac{(0.8)(29000)}{36} = 644$

$644 < 1152 < 1530 \Rightarrow$ Use Eq F11-2

$M_n = C_b\left[1.52 - 0.274\left(\frac{L_b d}{t^2}\right)\frac{F_y}{E}\right] M_y \leq M_p$

$M_p = (36)(7.59) = 273$ in-k

$M_y = (36)(5.06) = 182$ in-k

Use $C_b = 1.0$

$1.0\left[1.52 - 0.274(1152)\frac{36}{29000}\right] 182 = 205$ in-k

$M_a = \frac{205}{1.67} = 123$ in-k $= 10.2$ ft-k > 0.6 ft-k

Plate OK in flexure

TRUMAN P. YOUNG & ASSOCIATES JOB NO. 08039

SCALE: ____ PROJECT U.K. Garage SHEET 3 OF 4

FLOOR ____ STRUCTURE Pk K1712 DESIGNED 2/12/93 BY DWS

MEMBER ____ CLIENT Avenue Fabricating DWG. REFERENCE ____

Plate Bending Weak Axis - Seismic

Assume lateral force = 10% Vertical

$H = 40^{\#}$

$M = 40(1.5) = 60$ ft-lb $= 720$ in-lb

$Z = 9.0\frac{(.375)^2}{4} = 0.316 \quad S = 0.21$

$M_n = 36(.32) = 11.4$ in-k $\quad 1.6M_y = 1.6(36)(21) = 12.2$

$M_a = \frac{11,400}{1.67} = 6800$ in-lb > 720 in-lb OK

Plate OK

TRUMAN P. YOUNG & ASSOCIATES JOB NO. 08039

SCALE: PROJECT V. K. Garage SHEET 4 OF 4

FLOOR STRUCTURE Fr K1712 DESIGNED 2/12/08 BY DWS

MEMBER CLIENT Avenue Fabricating DWG. REFERENCE

Check Bolt Shear

Bolt Load

M $\frac{614 \times 12}{6}$ = 1228 #/bolt

V $\frac{418}{2}$ = 209 #

Total = $\sqrt{1228^2 + 209^2}$ = 12.46 #

Bolt Shear Strength 3/4" ø A325

Use Slip Critical Values (conservative)

Single Shear SSLT Table 7-4 Cap = 5.38 k OK

Bearing strength based on edge distance

C10x20 web t = 0.379

3/8" R t = 0.375

Edge Dist. = 1 1/4"

Table 7-6 SSLP 3/4" 26.1 k/in

Bolt cap = 26.1 (.375) = 9.8 k OK

Bolts OK

AVENUE FABRICATING, INC.
1281 Clough Pike Batavia, Ohio 45103
(513) 752-1911 Fax (513) 752-0044

FAX TRANSMITTAL

Date: 2/12/08

To: EC Mathews

Doug Sherrard

From: BE

Fax #: (513) 752-0044

Number of pages including this cover sheet: 6

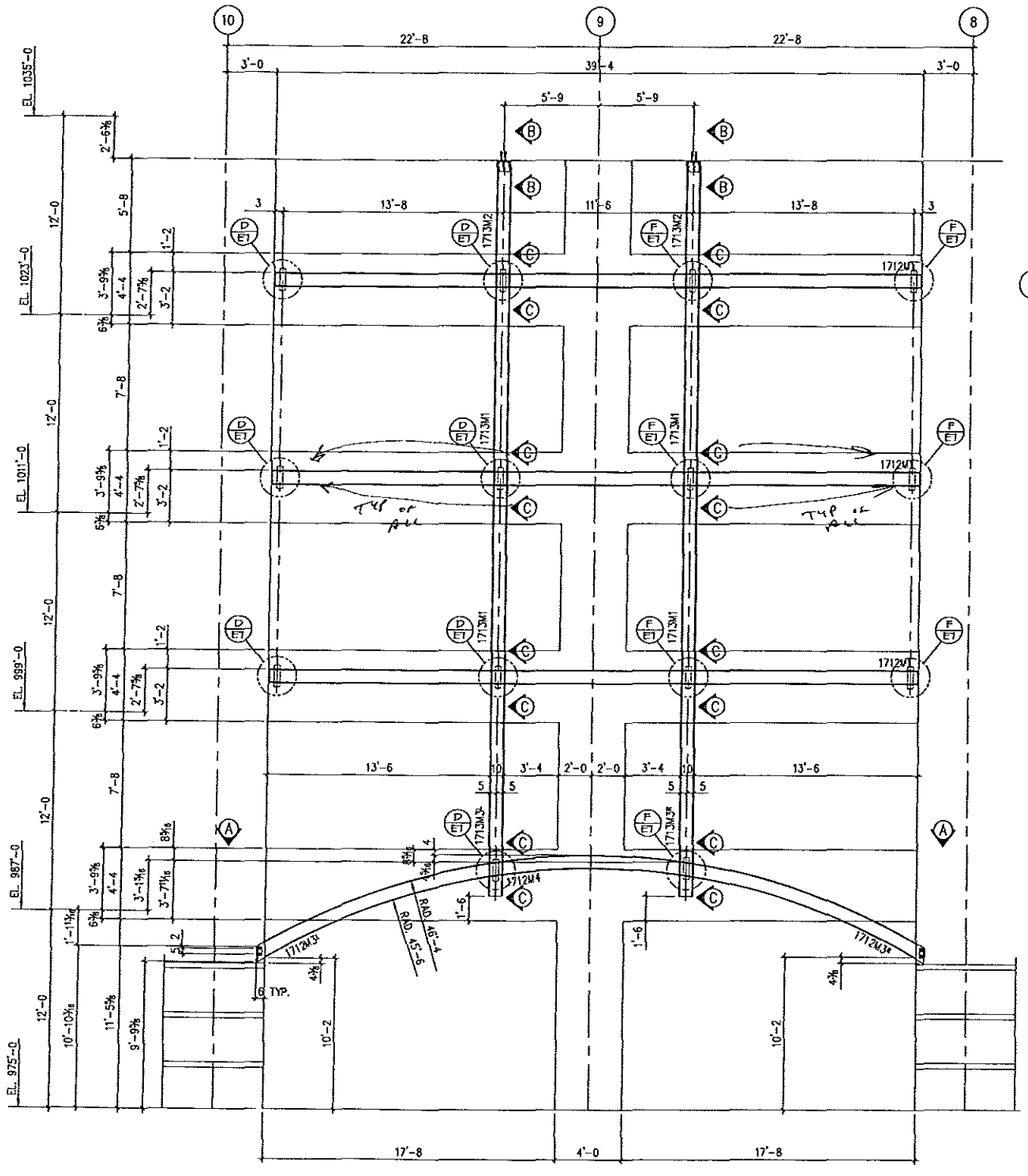
Message: D.K. Garage - Decorative Panels.
Per attached the connections are
adequate.

859-277-7903

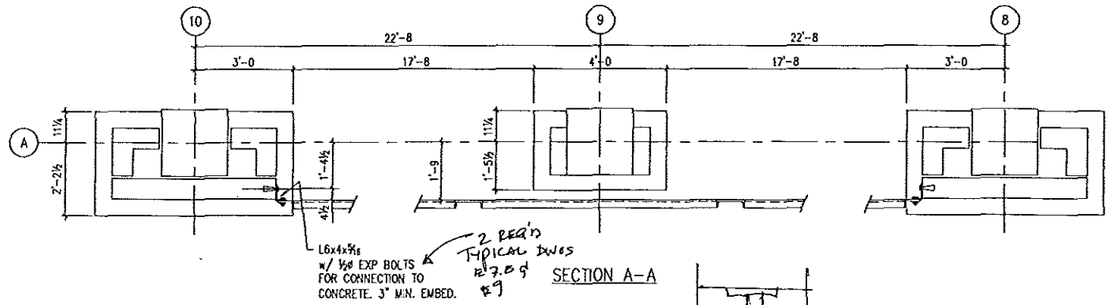
AVENUE FABRICATING, INC.

Licensed CadVantage User

DRAWING ISSUE:
FOR APPVL 11/28/06
FOR APPVL 7/18/07
REVISION:

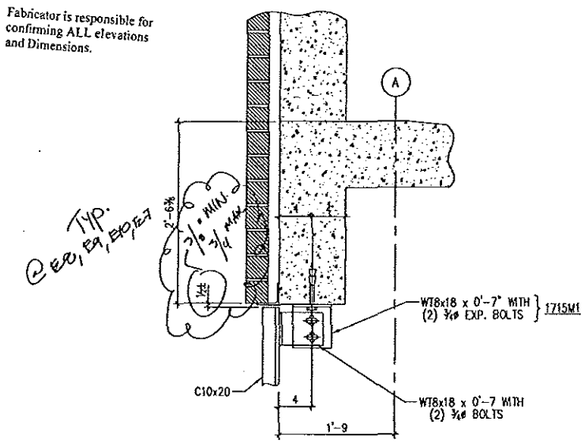


DECORATIVE CHANNEL FRAMING ELEVATION

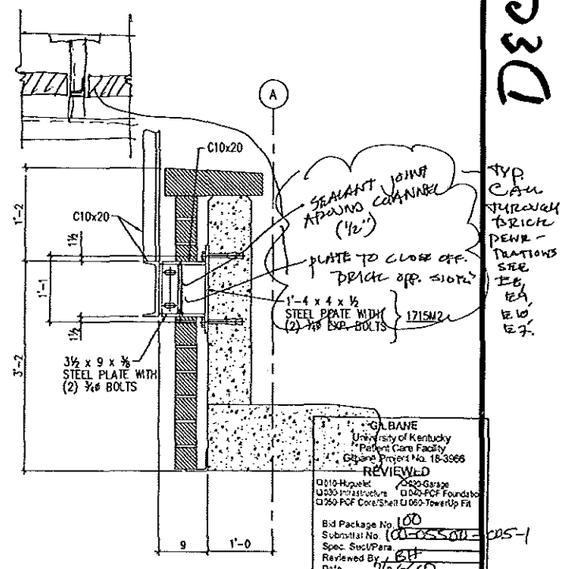


SECTION A-A

Fabricator is responsible for confirming ALL elevations and Dimensions.

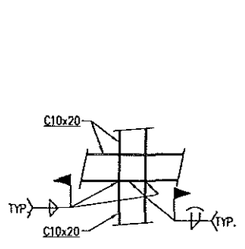


SECTION B-B

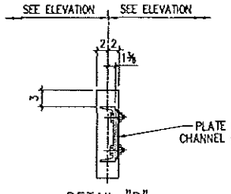


SECTION C-C

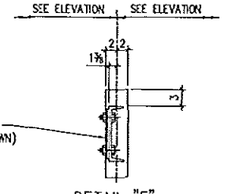
TYP CAN THROUGH BRICK PENE-TRATIONS SEE EB, EA, EE & EF.



TYPICAL FIELD WELD DETAIL



DETAIL "D"
HORIZ. CHANNEL NOT SHOWN FOR CLARITY



DETAIL "F"
HORIZ. CHANNEL NOT SHOWN FOR CLARITY

GALBANE
University of Kentucky
Patient Care Facility
Galbane Project No. 18-3966
REVIEWED
Q010-Hospital Q820-Garage
Q030-Infrastructure Q040-PCF Foundation
Q050-PCF Core/Shell Q060-Tower Up Fit
Bid Package No. 100
Submittal No. 100-055011-005-1
Spec. Sect/Para
Reviewed By: BH
Date 7/20/07
This review does not constitute nor does it assume design responsibility nor does it relieve the trade contractor's supplier from complying with the contract requirements, coordinating their work with other trade contractors and verifying field dimensions.

APPROVED FOR GENERAL CONFORMITY TO PLANS AND SPECIFICATIONS. DETAIL DIMENSIONS AND SHOP DRAWINGS TO BE CHECKED PRIOR TO FABRICATION. E.C. MATTHEWS CO., INC.
BY: DS 7.20.07

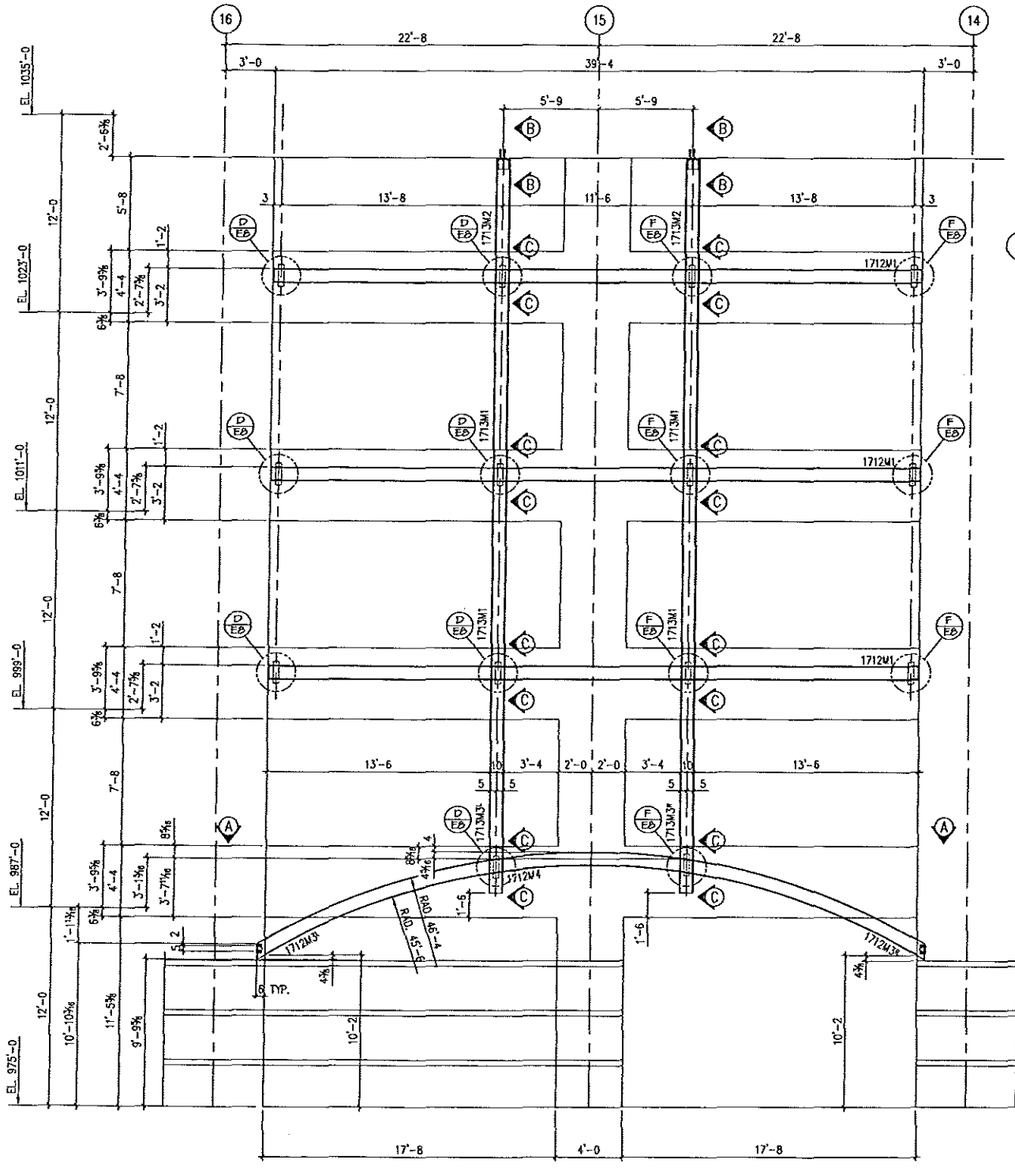
NOT FOR CONSTRUCTION
JUL 18 2007
FOR APPROVAL ONLY

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REFERENCE DWG: A401A, A414A	DESCRIPTION: DECORATIVE CHANNEL FRAMING	DRAWN BY: MAD	DATE: 11/06	CHECKED BY: DSS	JOB# 06-36	SHEET: E7

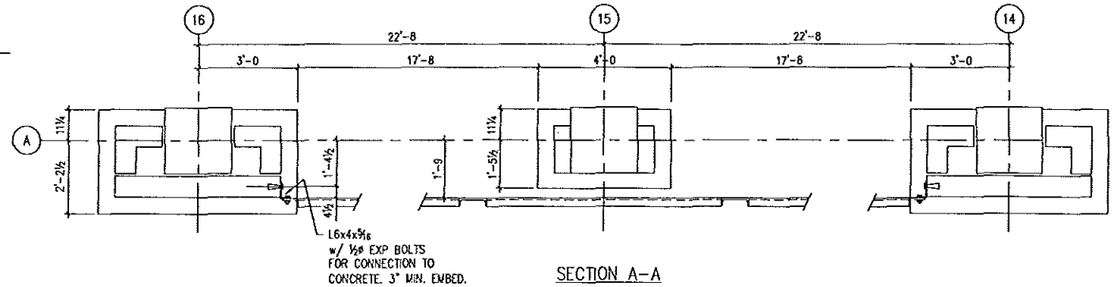
AVENUE FABRICATING, INC.

Licensed CadVantage User

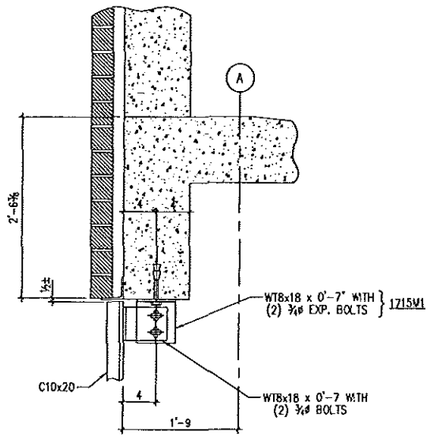
DRAWING ISSUE:
FOR APPVL 11/28/06
FOR APPVL 7/18/07
REVISION:



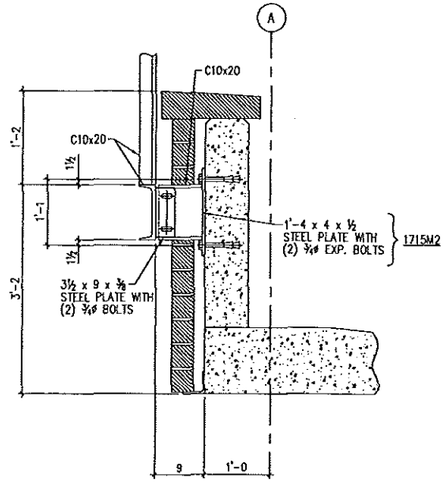
DECORATIVE CHANNEL FRAMING ELEVATION



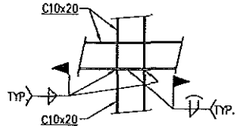
SECTION A-A



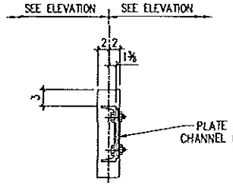
SECTION B-B



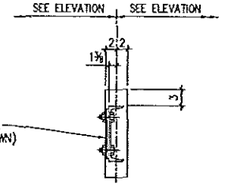
SECTION C-C



TYPICAL FIELD WELD DETAIL



DETAIL "D"
HORIZ. CHANNEL NOT SHOWN FOR CLARITY



DETAIL "F"
HORIZ. CHANNEL NOT SHOWN FOR CLARITY

NOT FOR CONSTRUCTION
JUL 18 2007

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REFERENCE DWG: A401A, A412A	DESCRIPTION: DECORATIVE CHANNEL FRAMING	DRAWN BY: MAD	DATE: 11/06	CHECKED BY: DSS	JOB# 06-36	SHEET: E8

AVENUE FABRICATING, INC.

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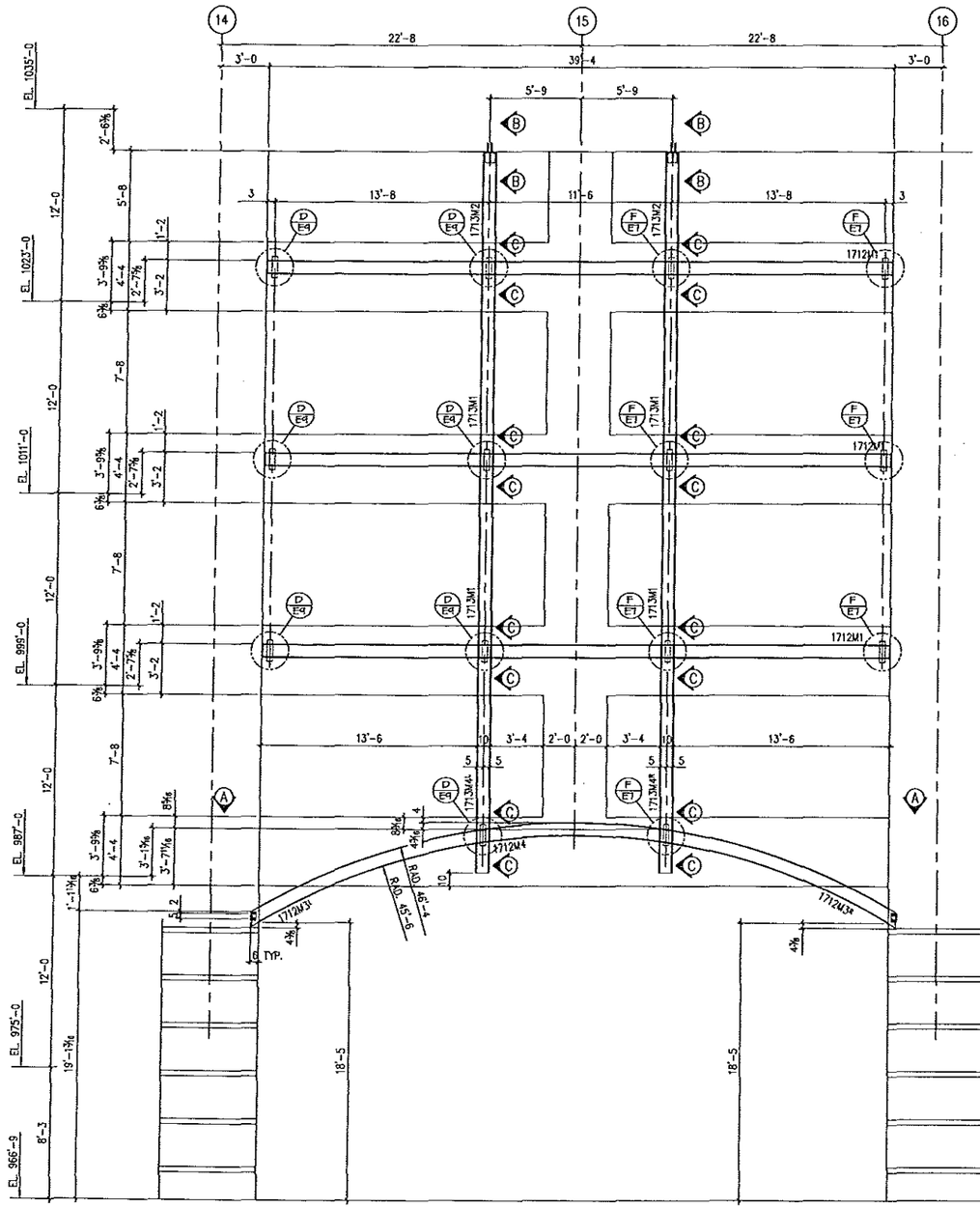
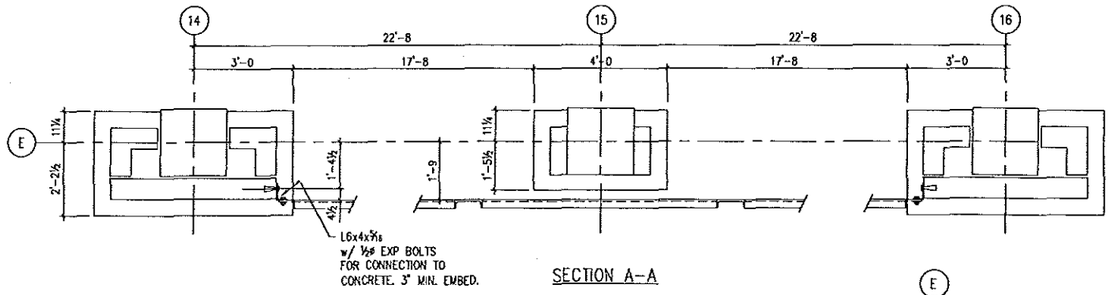
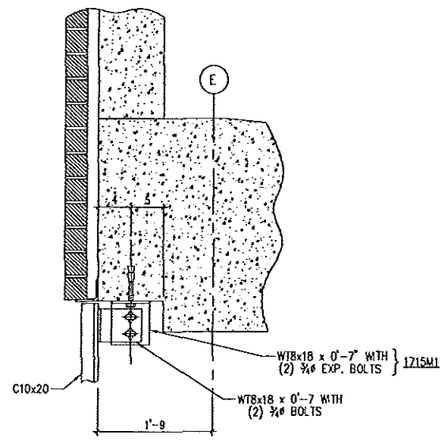
DRAWING ISSUE:
FOR APPVL 11/28/06
FOR APPVL 7/18/07
REVISION:



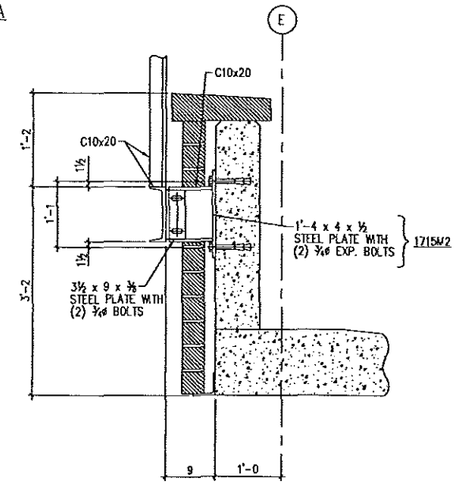
DECORATIVE CHANNEL FRAMING ELEVATION



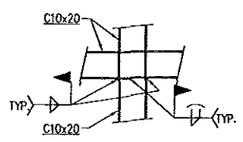
SECTION A–A



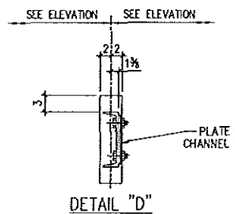
SECTION B–B



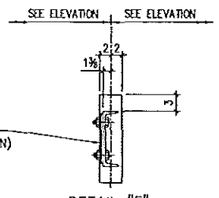
SECTION C–C



TYPICAL FIELD WELD DETAIL



DETAIL "D"
HORIZ. CHANNEL NOT SHOWN FOR CLARITY



DETAIL "F"
HORIZ. CHANNEL NOT SHOWN FOR CLARITY

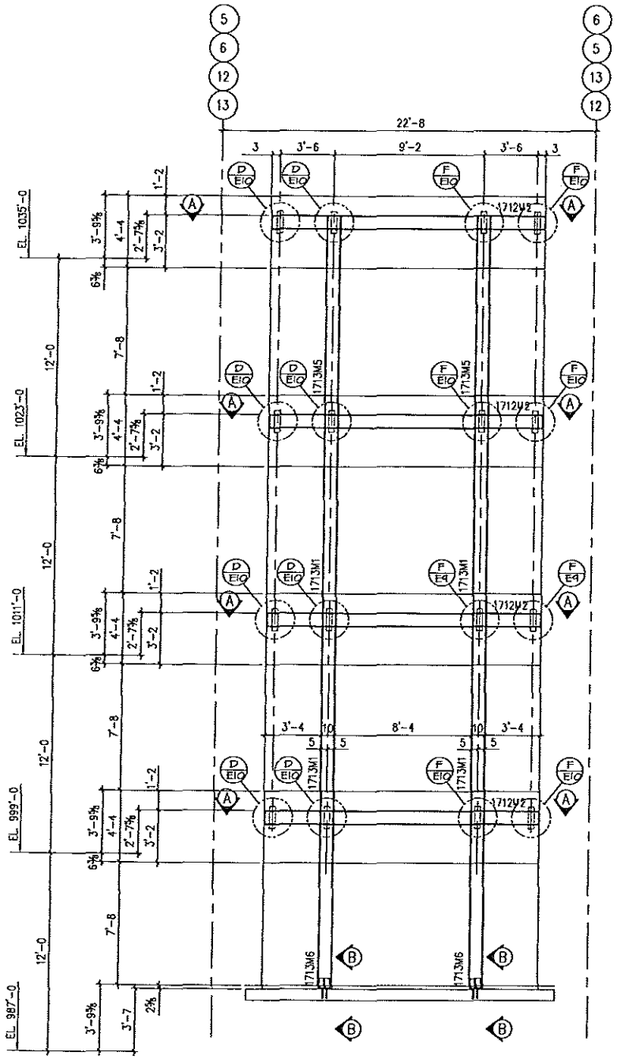
NOT FOR CONSTRUCTION
JUL 18 2007
FOR APPROVAL ONLY

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REFERENCE DWG: A402, A411A	DESCRIPTION: DECORATIVE CHANNEL FRAMING	DRAWN BY: MAD	DATE: 11/06	CHECKED BY: DSS	JOB# 06-36	SHEET: E9

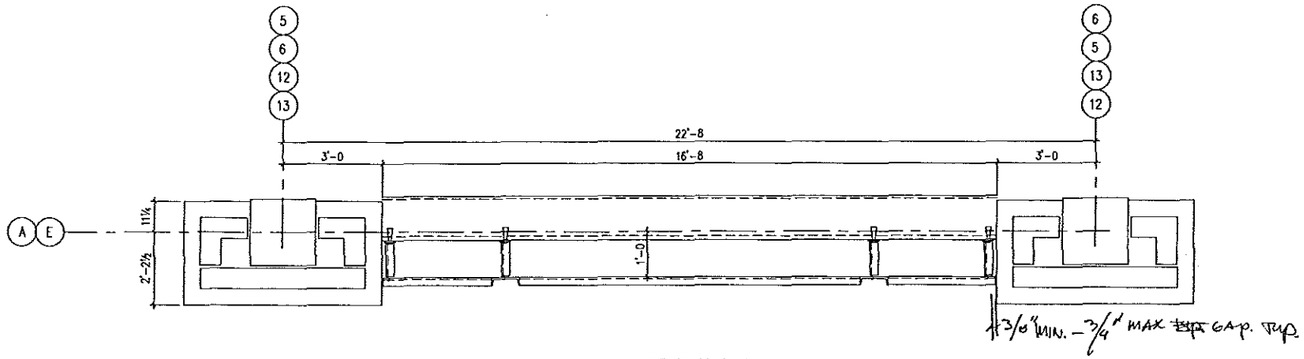
AVENUE FABRICATING, INC.

Licensed CadVantage User

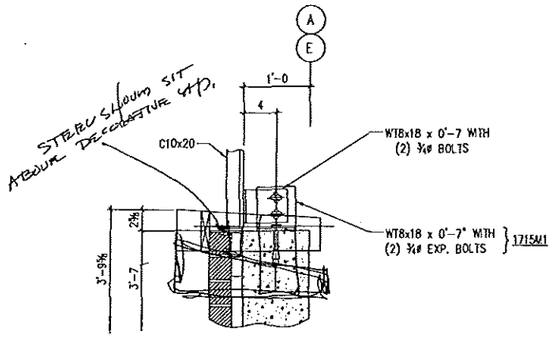
DRAWING ISSUE:
FOR APPVL 11/28/06
FOR APPVL 7/18/07
REVISION:



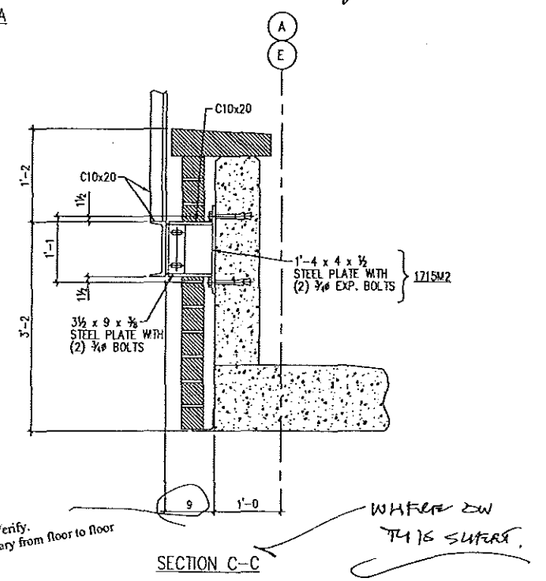
DECORATIVE CHANNEL FRAMING ELEVATION
(4 PLACES)



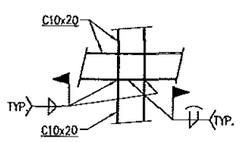
SECTION A-A



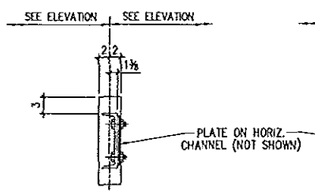
SECTION B-B



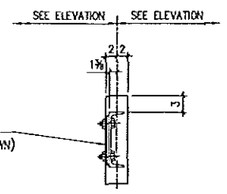
SECTION C-C



TYPICAL FIELD WELD DETAIL



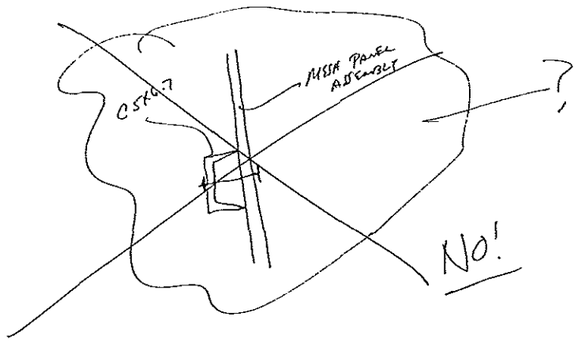
DETAIL "D"
HORIZ. CHANNEL NOT SHOWN FOR CLARITY



DETAIL "F"
HORIZ. CHANNEL NOT SHOWN FOR CLARITY

NOT FOR CONSTRUCTION
JUL 18 2007
FOR APPROVAL ONLY

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REFERENCE DWG: A411A, A414A	DESCRIPTION: DECORATIVE CHANNEL FRAMING	DRAWN BY: MAD	DATE: 11/06	CHECKED BY: DSS	JOB# 06-36	SHEET: E10



AVENUE FABRICATING, INC.

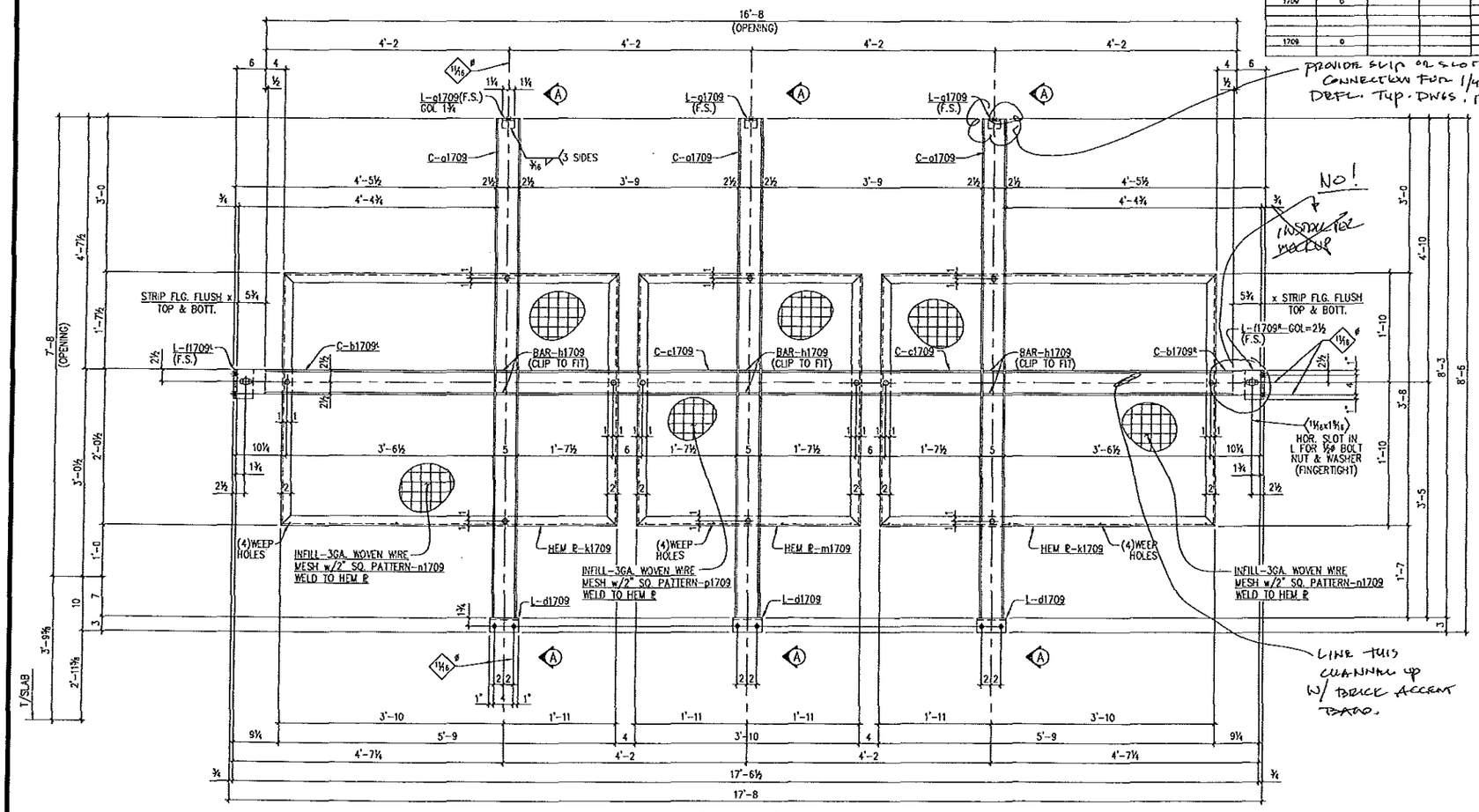
Licensed CadVantage User

DRAWING ISSUE:
FOR APPVL 11/28/06
FOR APPVL 7/18/07
REVISION:

BILL OF MATERIAL

NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : AS NOTED
3. FINISH : GALVANIZED & SHOP PRIMED INTUMESCENT SERIES 68 HI-BUILD EPOXOLINE

Drawing Number	Revision Number	Ship Mark	Piece Mark	Quantity	Type of Material	Size of Material	Grade	Length	Notes
1709	0	1709F1		9	FRAME				
1709	0		a1709	27	C	5x6.7	A36	8'-3	
1709	0		b1709*	9	C	5x6.7	A36	4'-4 3/4	
1709	0		b1709*	9	C	5x6.7	A36	4'-4 3/4	
1709	0		c1709	18	C	5x6.7	A36	3'-9	
1709	0		d1709	27	L	3x2x1/4	A36	0'-6	
1709	0		f1709*	9	L	4x4x1/4	A36	0'-6	
1709	0		f1709*	9	L	4x4x1/4	A36	0'-6	
1709	0		g1709	27	L	3x2x1/4	A36	0'-2 1/2	
1709	0		h1709	54	PL	3/8x4-3/4	A36	0'-4 3/8	
1709	0		k1709	18	PL	3 GA HEM PL	A36	19 LN FT	BENT
1709	0		m1709	9	PL	3 GA HEM PL	A36	15 LN FT	BENT
1709	0		n1709	18	MI	WOVEN WIRE MESH 3 GA w/2"@ PATTERN		20 SQ FT	
1709	0		p1709	9	MI	WOVEN WIRE MESH 3 GA w/2"@ PATTERN		14 SQ FT	
1709	0			108	MI	1/2	A307	0'-1 1/2	GALV.
1709	0			108	NUT	1/2	A307		GALV.
1709	0			108	WASHER	1/2	A307		GALV.
					FIELD BOLTS				
1709	0			117	1/2x EXP. ANCH. w/3" EMBED				STAINLESS



NOT FOR CONSTRUCTION
JUL 18 2007
FOR APPROVAL ONLY

NOTE:
HOT DIP GALVANIZE AFTER FABRICATION.
SEAL WELD IN ADDITION TO WELDS SHOWN.
PROVIDE VENT HOLES AS REQUIRED.

9~FRAMES~1709F1

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REFERENCE DWG: E16	DESCRIPTION: FRAME	DRAWN BY: AN	DATE: 11/06	CHECKED BY: DSS	JOB# 06-36	SHEET: 1709

AVENUE FABRICATING, INC.

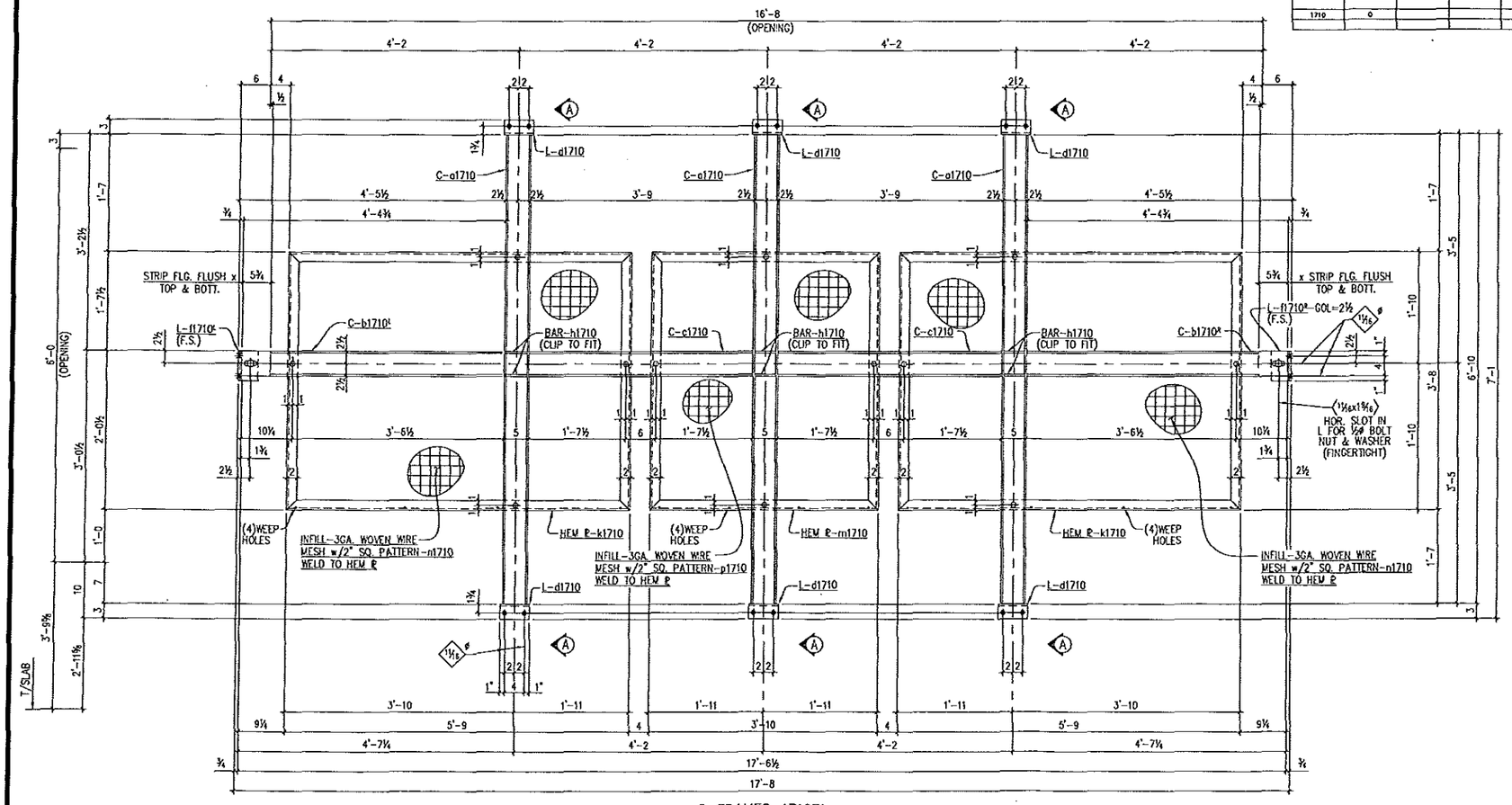
Licensed CadVantage User

DRAWING ISSUE:
FOR APPVL 11/28/06
FOR APPVL 7/18/07
REVISION:

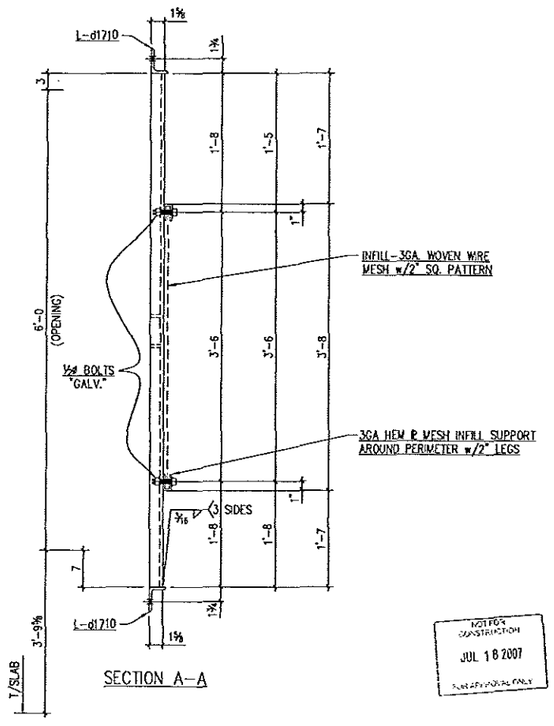
BILL OF MATERIAL

NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : AS NOTED
3. FINISH : GALVANIZED & SHOP PRIMED INTUMESCENT SERIES 66 HI-BUILD EPOXOLINE

Drawing Number	Revision Number	Ship Mark	Piece Mark	Quantity	Type of Material	Size of Material	Grade	Length	Notes
1710	0	1710F1		8	FRAME				
1710	0		a1710	24	C	5x6.7	A36	6'-10	
1710	0		b1710F	8	C	5x6.7	A36	4'-4 3/4	
1710	0		b1710K	8	C	5x6.7	A36	4'-9	
1710	0		c1710	16	C	5x6.7	A36	3'-10	
1710	0		d1710	48	L	3x2x1/4	A36	0'-6	
1710	0		f1710F	8	L	4x4x1/4	A36	0'-6	
1710	0		f1710K	8	L	4x4x1/4	A36	0'-6	
1710	0		k1710	48	PL	3/8x1 9/16	A36	0'-4 3/8	
1710	0		l1710	16	PL	3 GA HEM PL	A36	20 LIN FT	
1710	0		m1710	8	PL	3 GA HEM PL	A36	16 LIN FT	
1710	0		n1710	16	W	WOVEN WIRE MESH 3 GA w/2"@ PATTERN		24 SQ FT	
1710	0		p1710	8	W	WOVEN WIRE MESH 3 GA w/2"@ PATTERN		18 SQ FT	
1710	0			112	W	1/2	A307	0'-1 1/2	GALV.
1710	0			112	NUT	1/2	A307		GALV.
1710	0			112	WASHER	1/2	A307		GALV.
					FIELD BOLTS				
1710	0			128	1/2ø EXP. ANCH. w/3" EMBED				STAINLESS



8~FRAMES~1710F1



SECTION A-A

NOT FOR CONSTRUCTION
JUL 18 2007
FOR APPROVAL ONLY

See notes on 1709

NOTE:
HOT DIP GALVANIZE AFTER FABRICATION.
SEAL WELD IN ADDITION TO WELDS SHOWN.
PROVIDE VENT HOLES AS REQUIRED.

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REFERENCE DWG: E17	DESCRIPTION: FRAME	DRAWN BY: RDJ	DATE: 11/06	CHECKED BY: DSS	JOB# 06-36	SHEET: 1710

AVENUE FABRICATING, INC.

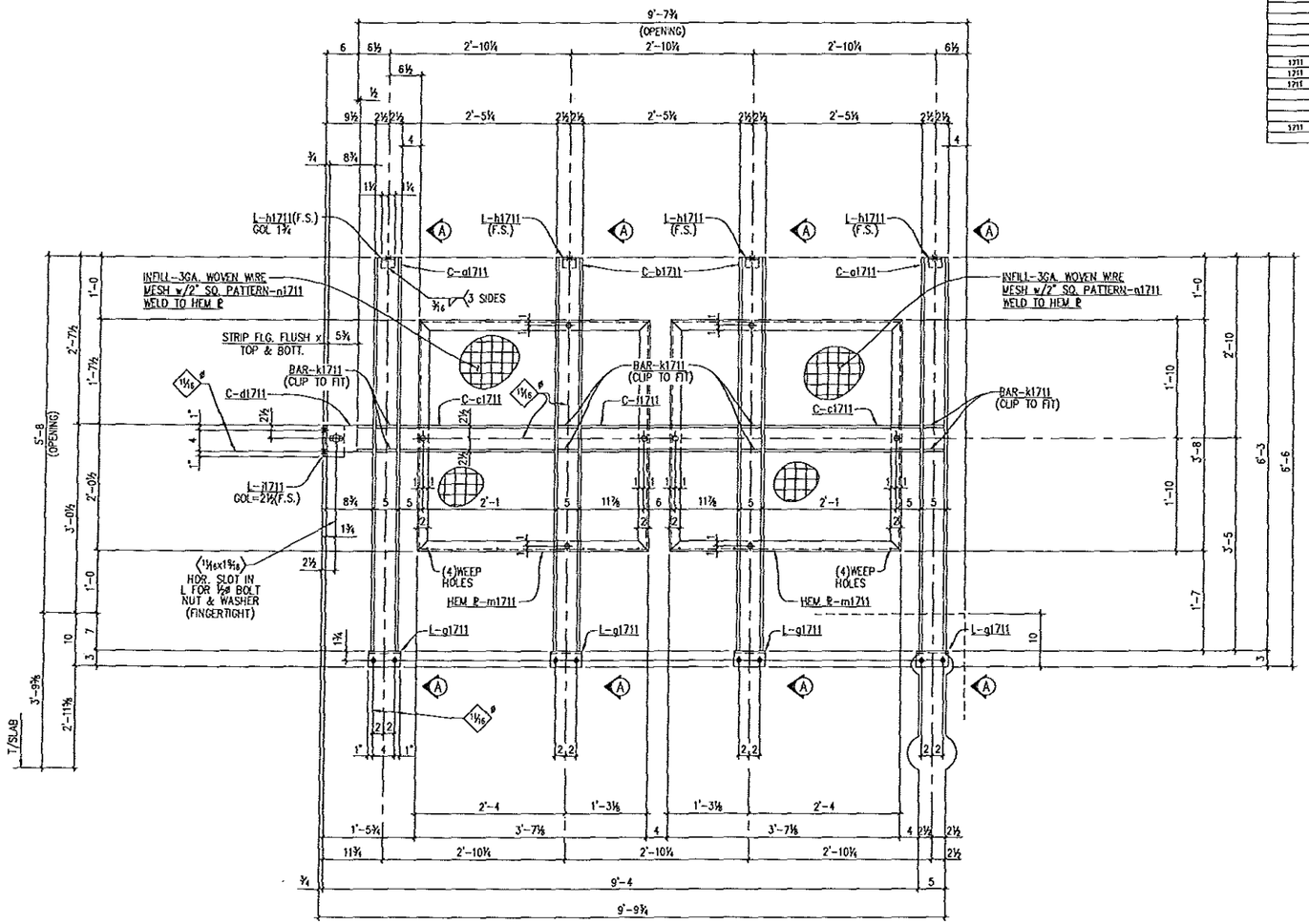
Licensed CadVantage User

DRAWING ISSUE:
FOR APPVL 11/28/06
FOR APPVL 7/18/07
REVISION:

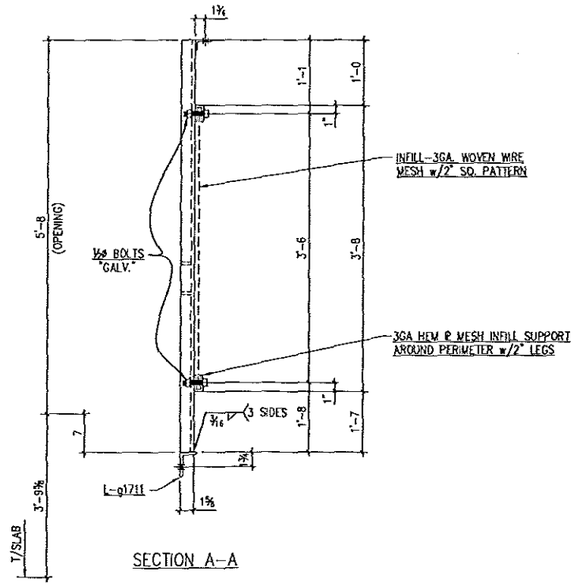
BILL OF MATERIAL

NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : AS NOTED
3. FINISH : GALVANIZED & SHOP PRIMED INTUMESCENT SERIES 66 HI-BUILD EPOXOLINE

Drawing Number	Revision Number	Ship Mark	Piece Mark	Quantity	Type of Material	Size of Material	Grade	Length	Notes
1711	0	1711F1		ONE	FRAME				
1711	0		c1711	2	C	5X6.7	A36	8'-3	
1711	0		b1711	2	C	5X6.7	A36	8'-3	
1711	0		c1711	2	C	5X6.7	A36	2'-5 1/4	
1711	0		d1711	1	C	5X6.7	A36	0'-8 3/4	
1711	0		f1711	1	C	5X6.7	A36	2'-5 1/4	
1711	0		g1711	4	L	3x3x1/4	A36	0'-6	
1711	0		h1711	4	L	3x2X1/4	A36	0'-2 1/2	
1711	0		j1711	1	L	4x4x1/4	A36	0'-6	
1711	0		k1711	8	PL	3/8x1 9/16	A36	0'-4 3/8	
1711	0		m1711	2	PL	3 GA HEM PL	A36	16 LIN FT	
1711	0		n1711	2	MI	WOVEN WIRE MESH 3 GA x/2"0 PATTERN		15 SQ FT	
1711	0			9	MI	1/2	A307	0'-1 1/2	GALV.
1711	0			9	NUT	1/2	A307		GALV.
1711	0			9	WASHER	1/2	A307		GALV.
					FIELD BOLTS				
1711	0			14	1/2# EXP. ANCH. w/3" EMBED				STAINLESS



ONE~FRAME~1711F1

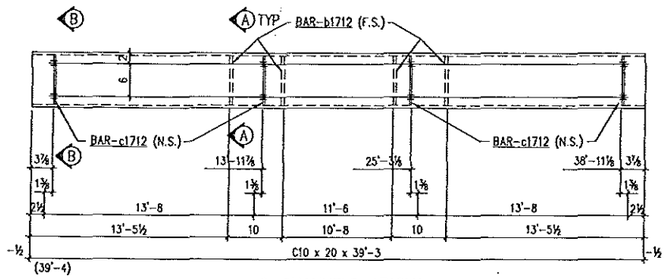


SECTION A-A

See notes on 1709

NOT FOR CONSTRUCTION JUL 18 2007 FOR SHOP DRAWING ONLY

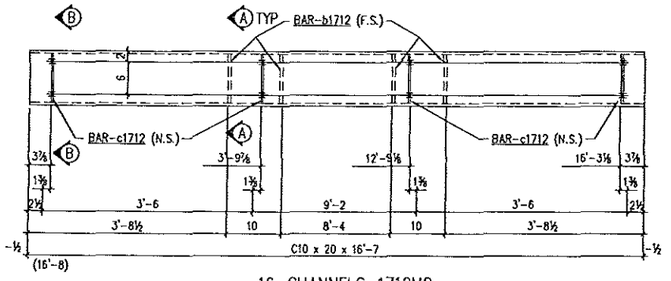
PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REFERENCE DWG: E16	DESCRIPTION: FRAME	DRAWN BY: RDJ	DATE: 11/06	CHECKED BY: DSS	JOB# 06-36	SHEET: 1711



9-CHANNELS-1712M1

36-¾ø A325 2

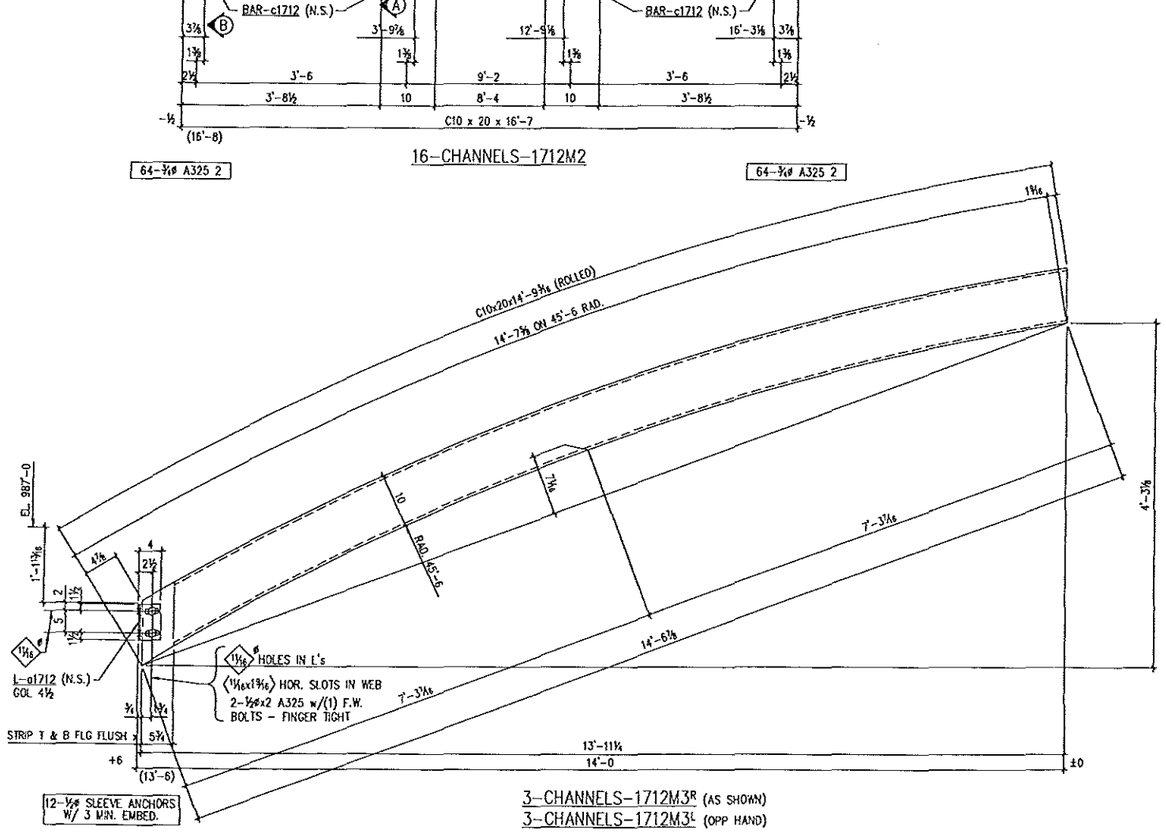
36-¾ø A325 2



16-CHANNELS-1712M2

64-¾ø A325 2

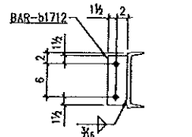
64-¾ø A325 2



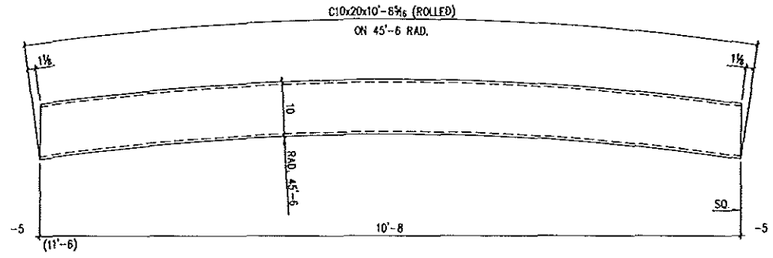
12-⅞ø SLEEVE ANCHORS W/ 3 MIN. EMBED.

3-CHANNELS-1712M3R (AS SHOWN)
3-CHANNELS-1712M3L (OPP HAND)

SECTION A-A



SECTION B-B



3-CHANNELS-1712M4

Licensed CadVantage User

AVENUE FABRICATING, INC.

DRAWING ISSUE:
FOR APPVL 11/28/06
FOR APPVL 7/18/07
REVISION:

BILL OF MATERIAL

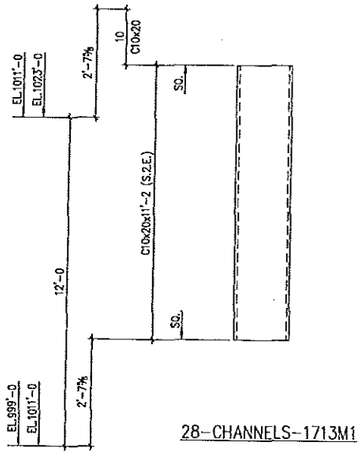
NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : AS NOTED
3. FINISH : GALVANIZED & SHOP PRIMED INTUMESCENT SERIES 66 HI-BUILD EPOXOLINE

Drawing Number	Revision Number	Ship Mark	Piece Mark	Quantity	Type of Material	Size of Material	Grade	Length	Notes
1712	0	1712M1		9	C	10 x 20	A36	39'-3	
1712	0		c1712	36	FB	3/8 x 3 1/2	A36	0'-9	
1712	0		b1712	36	FB	1/2 x 2 3/8	A36	0'-9 1/8	
1712	0	1712M2		16	C	10 x 20	A36	16'-7	
1712	0		c1712	64	FB	3/8 x 3 1/2	A36	0'-9	
1712	0		b1712	64	FB	1/2 x 2 3/8	A36	0'-9 1/8	
1712	0	1712M3R		3	C	10 x 20	A36	14'-9 3/16	ROLL
1712	0		c1712	3	L	6 x 4 x 5/16	A36	0'-8	
1712	0	1712M3L		3	C	10 x 20	A36	14'-9 3/16	ROLL
1712	0		c1712	3	L	6 x 4 x 5/16	A36	0'-8	
1712	0	1712M4		3	C	10 x 20	A36	10'-8 5/16	ROLL
1712	0			12	MB	1/2	A307	0'-2	GALV.
1712	0			12	NUT	1/2	A307		GALV.
1712	0			12	WASHER	1/2	A307		GALV.
					FIELD BOLTS				
1712	0			12	SA	1/2		0'-4 1/2	STAINLESS
1712	0			200	HS	3/4	A325	0'-2	GALV.
1712	0			200	NUT	3/4	A325		GALV.
1712	0			200	WASHER	3/4	A325		GALV.

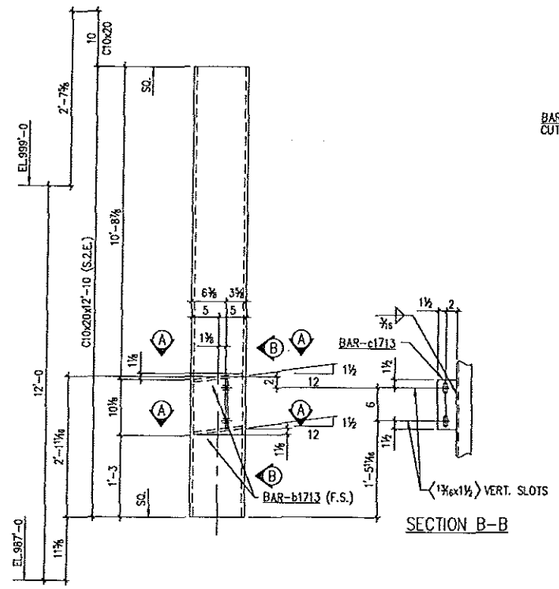
NOT FOR CONSTRUCTION
JUL 18 2007
FOR APPROVAL ONLY

NOTE:
HOT DIP GALVANIZE AFTER FABRICATION.
SEAL WELD IN ADDITION TO WELDS SHOWN.
PROVIDE VENT HOLES AS REQUIRED.

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REFERENCE DWG: E7 THRU E10	DESCRIPTION: CHANNELS	DRAWN BY: MAD	DATE: 11/06	CHECKED BY: DSS	JOB# 06-36	SHEET: 1712



28-CHANNELS-1713M1

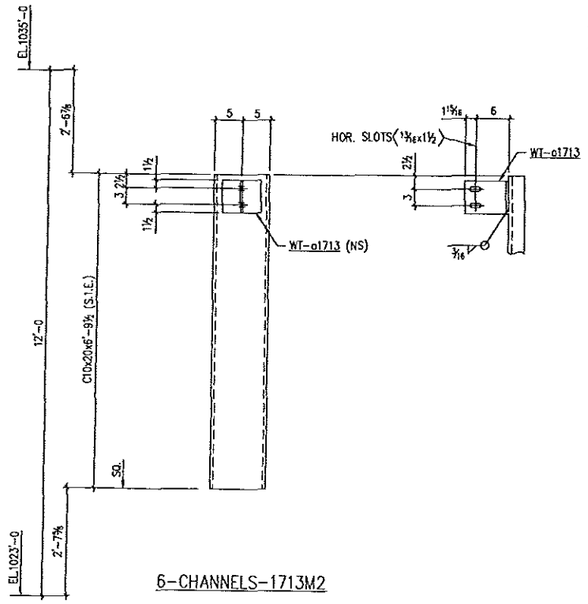


SECTION A-A

SECTION B-B

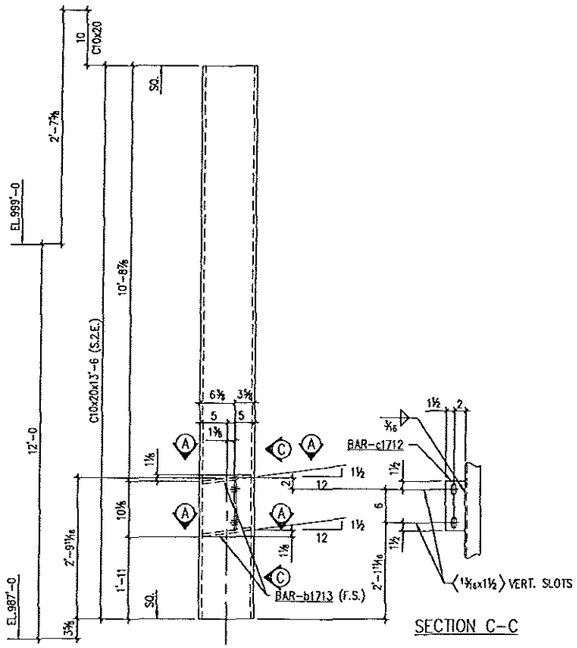
2-CHANNELS-1713M3R (AS SHOWN)
2-CHANNELS-1713M3L (OPP HAND)

8-¾ø A325 2



6-CHANNELS-1713M2

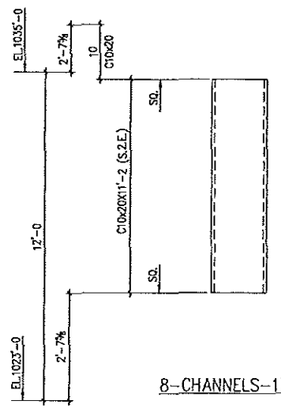
12-¾ø A325 2



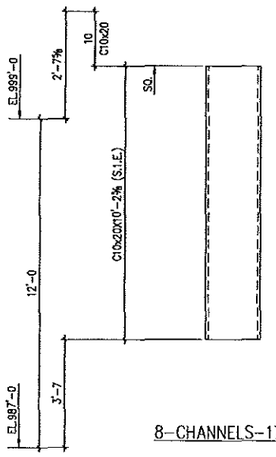
SECTION C-C

ONE-CHANNEL-1713M4R (AS SHOWN)
ONE-CHANNEL-1713M4L (OPP HAND)

4-¾ø A325 2



8-CHANNELS-1713M5



8-CHANNELS-1713M6

NOT FOR CONSTRUCTION
JUL 18 2007

NOTE:
HOT DIP GALVANIZE AFTER FABRICATION.
SEAL WELD IN ADDITION TO WELDS SHOWN.
PROVIDE VENT HOLES AS REQUIRED.

AVENUE FABRICATING, INC.

Licensed CadVantage User

DRAWING ISSUE:
FOR APPVL 11/28/06
FOR APPVL 7/18/07

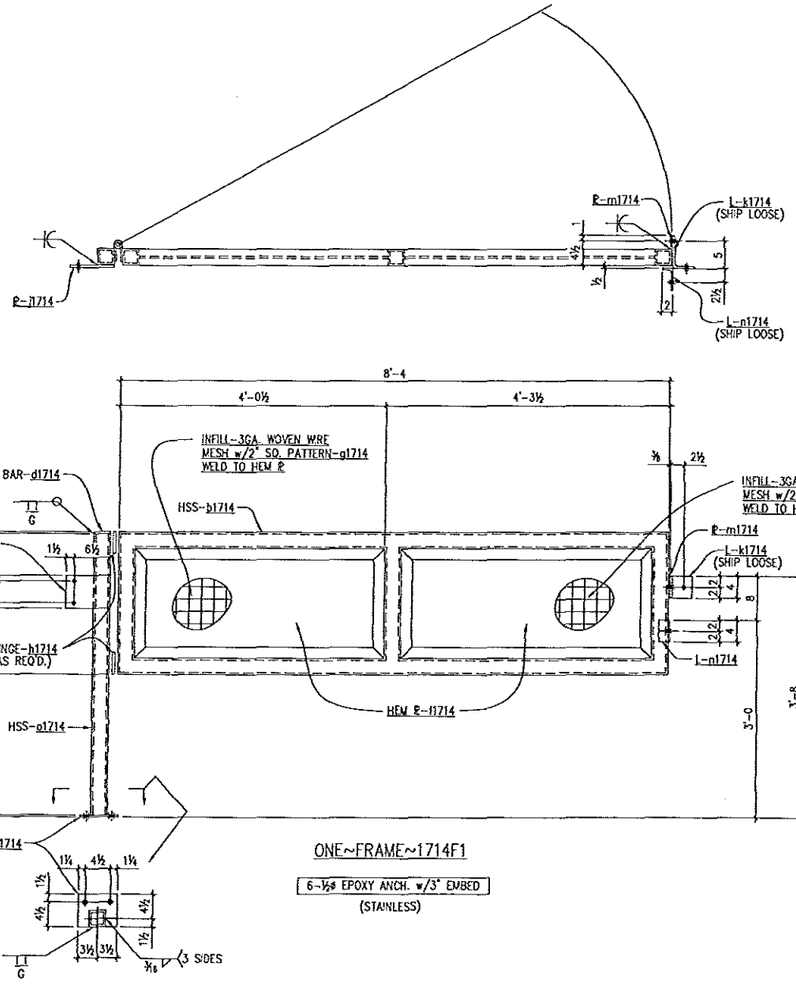
REVISION:

BILL OF MATERIAL

NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : AS NOTED
3. FINISH : GALVANIZED & SHOP PRIMED INTUMESCENT SERIES 66 HI-BUILD EPOXOLINE

Drawing Number	Revision Number	Ship Mark	Place Mark	Quantity	Type of Material	Size of Material	Grade	Length	Notes
1713	0	1713M1		28	C	10 x 20	A36	11'-2	S.2.E.
1713	0	1713M2		6	C	10 x 20	A36	6'-9 1/2	S.1.E.
1713	0		c1713	6	WT	8 x 18	A36	0'-6	
1713	0	1713M3R		2	C	10 x 20	A36	12'-10	S.2.E.
1713	0		b1713	4	FB	1/2 x 2 3/8	A36	0'-9 1/8	
1713	0		c1713	2	FB	3/8 x 3 1/2	A36	0'-9	
1713	0	1713M3L		2	C	10 x 20	A36	12'-10	S.2.E.
1713	0		b1713	4	FB	1/2 x 2 3/8	A36	0'-9 1/8	
1713	0		c1713	2	FB	3/8 x 3 1/2	A36	0'-9	
1713	0	1713M4R		ONE	C	10 x 20	A36	13'-6	S.2.E.
1713	0		b1713	2	FB	1/2 x 2 3/8	A36	0'-9 1/8	
1713	0		c1713	1	FB	3/8 x 3 1/2	A36	0'-9	
1713	0	1713M4L		ONE	C	10 x 20	A36	13'-6	S.2.E.
1713	0		b1713	2	FB	1/2 x 2 3/8	A36	0'-9 1/8	
1713	0		c1713	1	FB	3/8 x 3 1/2	A36	0'-9	
1713	0	1713M5		8	C	10 x 20	A36	11'-2	S.2.E.
1713	0	1713M6		8	C	10 x 20	A36	10'-2 5/8	S.1.E.
1712	0			24	HS	3/4	A325	0'-2	GALV.
1712	0			24	NUT	3/4	A325		GALV.
1712	0			24	WASHER	3/4	A325		GALV.

PROJECT: U.K. PARKING GARAGE | CUSTOMER: E.C. MATTHEWS CO., INC. | REFERENCE DWG: E7 THRU E10 | DESCRIPTION: CHANNELS | DRAWN BY: MAD | DATE: 11/06 | CHECKED BY: DSS | JOB# 06-36 | SHEET: 1713



ONE~FRAME~1714F1

6-⅞ø EPOXY ANCH. w/3" EMBED
(STAINLESS)

AVENUE FABRICATING, INC.

Licensed CadVantage User

DRAWING ISSUE:
FOR APPVL 11/28/06
FOR APPVL 7/18/07
REVISION:

BILL OF MATERIAL

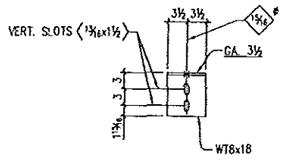
NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : 11/16ø
3. FINISH : GALVANIZED & SHOP PRIMED INTUMESCENT SERIES 66 H-BUILD EPOXOLINE

Drawing Number	Revision Number	Ship Mark	Piece Mark	Quantity	Type of Material	Size of Material	Grade	Length	Notes
1714	0	1714F1		ONE	FRAME				
1714	0		a1714	1	HSS	3x3x3/16	A500 GR. B	4'-3 1/4	
1714	0		b1714	1	HSS	3x3x3/16	A500 GR. B	23 LIN. FT.	
1714	0		c1714	1	FB	3/8x6	A36	0'-7	
1714	0		d1714	1	FB	3/8x2	A36	0'-3	
1714	0		f1714	2	PL	3 GA HEM PL.		12 LIN FT	
1714	0		g1714	2	MI	WOVEN WIRE MESH 3 GA w/2"ø PATTERN		8 SQ FT	
1714	0		h1714	2		HINGE (AS REQ'D.)			
1714	0		j1714	1	FB	1/2x6	A36	0'-8	
1714	0		k1714	1	L	6x4x3/8	A36	0'-4	LOOSE
1714	0		m1714	1	FB	3/8x4	A36	0'-5 1/2	
1714	0		n1714	1	L	4x2x3/8	A36	0'-4	LOOSE
					FIELD BOLTS				
1714	0			6	1/2ø EPOXY ANCH. w/3" EMBED				STAINLESS

Should be 3 ga or heavier wall on hemming channel

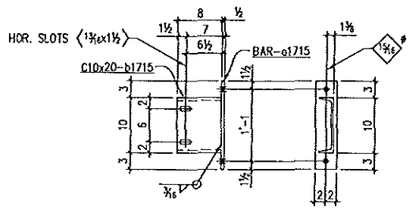
NOT FOR CONSTRUCTION
JUL 18 2007

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REFERENCE DWG: E16	DESCRIPTION: FRAME	DRAWN BY: RDJ	DATE: 11/06	CHECKED BY: DSS	JOB# 06-36	SHEET: 1714



14~HANGERS~1715M1

28-¾ø SLEEVE ANCHORS W/3" MIN. EMBED



106~HANGERS~1715M2

212-¾ø SLEEVE ANCHORS W/3" MIN. EMBED

Licensed CadVantage User

AVENUE FABRICATING, INC.

DRAWING ISSUE:
FOR APPROVAL 7-18-07

REVISION:

BILL OF MATERIAL

NOTES: 1. WELD ELECTRODES : E70XX
2. HOLE DIAMETER : AS NOTED
3. FINISH : GALVANIZED & SHOP PRIMED INTUMESCENT SERIES 66 H-BUILD EPOXOLINE

Drawing Number	Revision Number	Ship Mark	Piece Mark	Quantity	Type of Material	Size of Material	Grade	Length	Notes
1715	0	1715M1		14	WT	8x18	A36	0'-7	
1715	0	1715M2		106	HANGER				
1715	0		a1715	106	PB	1/2x4	A36	1'-4	
1715	0		b1715	106	C	10x20	A36	0'-8	
1715	0			240	FIELD BOLTS SA	3/4		0'-4½	

NOT FOR CONSTRUCTION
JUL 18 2007
FOR APPROVAL ONLY

NOTE:
HOT DIP GALVANIZE AFTER FABRICATION.
SEAL WELD IN ADDITION TO WELDS SHOWN.
PROVIDE VENT HOLES AS REQUIRED.

PROJECT: U.K. PARKING GARAGE	CUSTOMER: E.C. MATTHEWS CO., INC.	REFERENCE DWG: E7 THRU E10	DESCRIPTION: MISC.(HANGERS)	DRAWN BY: AW	DATE: 6-07	CHECKED BY: DSS	JOB# 06-36	SHEET: 1715

Gilbane

Transmittal

Project [2239.2] - PCF - Hospital - Garage **View Date** 11/20/2007

Gilbane
940 Elizabeth St
Lexington, KY 40506-0293
Phone: (859) 257-4536
Fax: (859) 323-1331

Transmittal No. 2239.2-01121

To	Mr. Doug Sherwood E. C. Matthews Co., Inc. 2265 Harrodsburg Road Lexington, KY 40504 USA Phone: (859) 278-3131 Fax: (859) 277-7903	**Date**	11/20/2007
		Items listed are being sent	
		☑ Enclosed	
		☐ Under Separate Cover	
		Via	U.S. Mail
		CSI Code	07200 - Insulation
From	Mr. Brian Hoerr (Gilbane)		
Subject	Submittal Package 100-07200-002.0		

We are transmitting the following to you:

☐ Product Data ☐ Samples ☐ Shop Drawings ☐ O&M Manuals ☐ Plans
☐ Architectural Drawings ☐ Letters ☐ Specifications ☐ Prints ☐ Addenda
☐ Engineering Drawings ☐ Change Orders ☑ Submittal

Submittals

Pkg. No./Rev.	Item No./Rev.	Description	Copies	Reason	Action
100-07200-002.0	100-07200-002.0	Faced Blanket Insulation, RFI 335	2	Approved as Noted	

Remarks

	Mr. Brian Hoerr	11/20/2007
From	Printed Name	Date
Received By	Printed Name	Date

Linked Documents

Document Type	Document	Open	Description	Date
Sub. Pkg.	100-07200-002.0			

GBBN architects

Transmittal

Project [2239.2] - PCF - Hospital - Garage

View Date 11/15/2007

GBBN Architects, Inc.
325 West Main St
Lexington, KY 40507-1632
Phone: (859) 381-8787
Fax: (859) 381-8873

Transmittal No. 2239.2-01116

RECEIVED
NOV 15 2007
GILBANE #3966

To	Mr. Brian Hoerr Gilbane 440 Polaris Parkway Suite 200 Westerville, OH 43082 USA Phone: (614) 418-3000 Fax: (614) 418-3030	**Date**	11/15/2007
From	Ms. Donna Bradshaw (GBBN Architects, Inc.)	**Items listed are being sent**	
Subject	Submittal Pkg 100-07200-002.0	☐ Enclosed	
		☐ Under Separate Cover	
		Via	Hand Delivered
		CSI Code	07200 - Insulation

We are transmitting the following to you:

☐ Product Data ☐ Samples ☐ Shop Drawings ☐ O&M Manuals ☐ Plans
☐ Architectural Drawings ☐ Letters ☐ Specifications ☐ Prints ☐ Addenda
☐ Engineering Drawings ☐ Change Orders ☑ Submittal

Items

No.	Description	Copies	Reason	Action
100-07200-002.0	Faced Blanket Insulation	3	Furnish as Corrected	

Remarks

Received By Printed Name Date

Linked Documents

Document Type	Document	Open	Description	Date
RFI	00335		Insulation Board	10/10/2007
Sub. Pkg.	100-07200-002.0			

GILBANE
University of Kentucky
Patient Care Facility
Gilbane Project No. 18-3966

REVIEWED

☐ 010-Huguelet ☒ 020-Garage
☐ 030-Infrastructure ☐ 040-PCF Foundation
☐ 050-PCF Core/Shell ☐ 060-TowerUp Fit

Bid Package No. 100
Submittal No. 100-07200-002
Spec. Sect/Para. _____
Reviewed By BK
Date 11/5/07

This review does not constitute nor does it assume design responsibility nor does it relieve the trade contractor's supplier from complying with the contract requirements, coordinating their work with other trade contractors and verifying field dimensions.

Hen - 002
package - 002

THIS REVIEW BY GBBN ARCHITECTS, INC., IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND IS NOT AN APPROVAL OF THIS DRAWING OR SET OF DRAWINGS. THE COMMENTS MAOE DO NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH THE PROJECT DRAWINGS, SPECIFICATIONS AND OTHER CONTRACT DOCUMENTS. CONTRACTOR IS SOLELY RESPONSIBLE FOR: ALL DIMENSIONS AND QUANTITIES, ALL FABRICATION, DELIVERY AND ERECTION; ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES; ALL COORDINATION WITH ALL OTHER CONTRACTORS, SUPPLIERS AND OTHERS; PERFORMING ALL WORK IN A SAFE AND PROPER MANNER.

NO EXCEPTIONS TAKEN ☐
FURNISH AS CORRECTED ☒
REVISE AND RESUBMIT ☐
NO REVIEW - INCOMPLETE ☐
SUBMIT SPECIFIED ITEMS ☐
REJECTED ☐
DATE 11/14/07 BY BK

GBBN ARCHITECTS, INC.
ARCHITECTURE, INTERIORS, PLANNING, ENGINEERING
☐ 332 EAST 8TH STREET, CINCINNATI, OHIO 45202-2217 (513) 241-8700
☐ 325 WEST MAIN STREET, LEXINGTON, KENTUCKY 40507 (859) 389-8787

TAPE ALL VERT & HORIZONTAL JOINTS PER RFI-035

Grayhawk, LLC
2424 Merchant St.
P.O. Box 12111 (40580)
Lexington, KY 40511
859/255-2754 FAX 859/259-0957

Project: UK PCF PARKING GARAGE

Section: 07200 - INSULATION

Date: 10/22/2007

KNAUF SUBMITTAL SHEET

BI-SS-6 FEB 2004

SUBMITTAL DATE _____

BUILDING INSULATION

PRODUCT PROVIDED:

Unfaced Batts and Blankets.
Fiber glass insulation designed to be friction fit between framing members. Specifier permitted choice of warm side vapor retarders, including foil backed gypsum board or polyethylene film.
Unfaced fiber glass insulation is also an excellent sound control insulation, designed for installation in floor systems and in partition walls between rooms or dwellings.
When tested in accordance with ASTM E 84, material has Fire Hazard Classification of 25/50 or less.
Complies with the requirements of the applicable ASTM and cancelled federal specifications:
ASTM C 665, Type I, Class A
HH-I-521F, Type I, Class A
ASTM E 136

2½" R-8	8½" R-25
3½" R-11	9" R-26
3½" R-13	10" R-30
6¼" R-19	12" R-36
6½" R-22	

Foil Faced Batts and Blankets.
Fiber glass foil insulation with asphalt-coated kraft/foil facing with flanges. Foil vapor retarder has vapor transmission (permeance) rating of .05 or less. Insulation should not be left exposed. Cover with fire rated finishing surface.
Complies with the requirements of the applicable ASTM and cancelled federal specifications:
ASTM C 665, Type III, Class B
HH-I-521F, Type III, Class B

3½" R-11	9" R-26
3½" R-13	10" R-30
6¼" R-19	12" R-38

Kraft Faced Batts and Blankets.
Fiber glass insulation with asphalted kraft paper with or without stapling flanges. Kraft vapor retarder has vapor transmission (permeance) rating of 1.0 or less.
Kraft faced fiber glass insulation is also an excellent sound control insulation, designed for installation in floor systems and in partition walls between rooms or dwellings. Kraft facing will burn and should be not be left exposed. Install kraft facing in contact with approved finish material.
Complies with the requirements of the applicable ASTM and cancelled federal specifications:
ASTM C 665, Type II, Class C
HH-I-521F, Type II, Class C

3½" R-11	9" R-26
3½" R-13	10" R-30
6¼" R-19	12" R-38
6½" R-22	

FSK-25 Foil Faced Batts and Blankets.
Fiber glass insulation with flanged reinforced foil/scrim/kraft facing with an average vapor transmission (permeance) rating of .04.
When tested in accordance with ASTM E 84, material has Fire Hazard Classification of 25/50 or less.
Complies with the requirements of the applicable ASTM and cancelled federal specifications:
ASTM C 665, Type III, Class A
HH-I-521F, Type III, Class A

3½" R-11	9" R-26
3½" R-13	10" R-30
6¼" R-19	12" R-38
8½" R-15	

Specialty Insulation

Basement Wall Insulation.
A flexible fiber glass blanket with choice of reinforced vapor barrier. It is a cost-effective thermal insulation for low-traffic areas of the home when affixed to the interior side of basement masonry walls.
When tested in accordance with ASTM E 84, material has Fire Hazard Classification of 25/50 or less.
Complies with the requirements of the applicable ASTM and cancelled federal specifications:
FSK Foil Faced:
ASTM C 665, Type III, Class A
HH-I-521F, Type III, Class A
VSK White Vinyl Faced:
ASTM C 665, Type II, Class A
HH-I-521F, Type II, Class A
3½" R-11

Sill Sealer.
A flexible unfaced fiber glass insulation designed for use between the sill plate and the foundation wall to provide an air infiltration barrier.
When tested in accordance with ASTM E 84, material has Fire Hazard Classification of 25/50 or less.
Complies with the requirements of the applicable ASTM and cancelled federal specifications:
ASTM C 665, Type I, Class A
HH-I-521F, Type I, Class A

1¼" x 4"	1¼" x 6"

THERMAL PERFORMANCE
Thermal resistance (R-value) of the insulation only is certified to be as represented above when measured at a mean temperature of 75°F (24°C) and subject to manufacturing and testing tolerances.

FIBER GLASS AND MOLD
Fiber glass insulation will not sustain mold growth. However, mold can grow on almost any material when it becomes wet and contaminated with organic materials. Carefully inspect any insulation that has been exposed to water. If it shows any sign of mold it must be discarded. If the material is wet but shows no evidence of mold, it should be dried rapidly and thoroughly. If it shows signs of facing degradation from wetting, it should be replaced.

QUALITY ASSURANCE
On-line production is periodically tested to ensure that Knauf insulation delivers the stated thermal performance or better when properly installed at the label thickness.

See Knauf Commercial Building Insulation Submittal (BI-SS-7) or High Density Building Insulation Submittal (BI-SS-9) for additional products.

KNAUF INSULATION GmbH
One Knauf Drive, Shelbyville, IN 46176
(800) 825-4434 ext. 8300
FAX (317) 398-3675
www.KnaufUSA.com

E.C. MATTHERS CO., INC.

BY _____ DATE 10.29.07

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Gilbane

Transmittal

Project [2239.2] - PCF - Hospital - Garage

View Date 2/18/2008

Gilbane
940 Elizabeth St
Lexington, KY 40506-0293
Phone: (859) 257-4536
Fax: (859) 323-1331

Transmittal No. 2239.2-00750

To	Mr. Doug Sherwood E. C. Matthews Co., Inc. 2265 Harrodsburg Road Lexington, KY 40504 USA Phone: (859) 278-3131 Fax: (859) 277-7903	**Date**	3/5/2007
		Items listed are being sent	
		☑ Enclosed	
		☐ Under Separate Cover	
		Via	Hand Delivered
		CSI Code	07200 - Insulation
From	Mr. Ryan Maguire (Gilbane)		
Subject	Submittal Package 100-07200-001.1.0		

We are transmitting the following to you:

☐ Product Data ☐ Samples ☐ Shop Drawings ☐ O&M Manuals ☐ Plans
☐ Architectural Drawings ☐ Letters ☐ Specifications ☐ Prints ☐ Addenda
☐ Engineering Drawings ☐ Change Orders ☑ Submittal

Submittals

Pkg. No./Rev.	Item No./Rev.	Description	Copies	Reason	Action
100-07200-001.1.0	100-07200-001.1	Insulation Product Data-RESUBMITTAL	1	Approved as Submitted	

Linked Documents	Document Type	Document	Open	Description	Date
	Doc	2239.2-00904		100-07200-001.1	4/13/2007

Remarks

	Mr. Ryan Maguire	3/5/2007
From	Printed Name	Date
Received By	Printed Name	Date

Linked Documents

Document Type	Document	Open	Description	Date
Sub. Pkg.	100-07200-001.1.0			

Distribution

Recipient	Company	Method	Date
Doug Sherwood	E. C. Matthews Co., Inc.	Message	3/5/2007

Building & Construction

UK PCF PARKING GARAGE
SECTION 07200 – INSULATION
DATE: 01/11/2007

GRAYHAWK, LLC
2424 Merchant Street
P.O. Box 12111 (40580)
Lexington, KY 40511
859/255-2754 FAX 859/259-0957

THERMAX Sheathing

THERMAX* Sheathing polyisocyanurate insulation is a non-structural, rigid board insulation consisting of a glass-fiber-reinforced polyisocyanurate foam core laminated between aluminum foil facers.

Install THERMAX Sheathing in a range of applications including new frame wall construction behind masonry, siding, exterior stucco or other compatible finishes. THERMAX Sheathing may be installed exposed to the interior without a thermal barrier in many applications.

Because of its improved fire performance, THERMAX Sheathing is especially appropriate for hourly rated assemblies. Please check with your local Dow seller.

PROPERTIES

THERMAX insulations are created by an exclusive free-rise manufacturing process, which produces a closed-cell foam that is specially formulated for improved fire performance. The combination of the closed-cell foam core and aluminum facers produces boards that deliver high R-value** (see Table 3) plus excellent dimensional stability and moisture resistance. Used with the appropriate joint closure system for the application, THERMAX Sheathing with its low perm rating helps to prevent moisture condensation within and behind the insulation.

All Dow polyisocyanurate insulations are manufactured with hydrocarbon blowing agents, which have no ozone depletion potential.

For features and benefits of THERMAX Sheathing, refer to Table 1.

THERMAX Sheathing exhibits the properties indicated in Tables 2 and 3 when tested as represented.

For chemical resistance properties of THERMAX Sheathing, see Table 4.

SIZES

Width and length:
4' x 8', 4' x 9', 4' x 10'
Edge treatment:
Square edge

Product thicknesses and R-values are shown in Table 3. Not all products are available in all parts of the country. Additional product sizes are available by custom order. Contact your Dow representative about other sizes and lead-time requirements.

15-YEAR LIMITED THERMAL WARRANTY
THERMAX Sheathing is backed with a 15-year limited thermal performance warranty.

TABLE 1

Features and Benefits of THERMAX Sheathing

Feature	Benefit
High, long-term R-value	Enhances thermal efficiency, reducing energy cost
Glass-fiber-reinforced closed-cell foam with chemical modifications	Contributes to improved fire performance and enhanced dimensional stability
Aluminum facers	Allow product to be detailed as a weather-resistive barrier; prevent air penetration and water vapor intrusion
Hydrocarbon blowing agent	Environmentally friendly (no ozone depletion potential)

TABLE 2

Physical Properties of THERMAX Sheathing

Property and Test Method	Typical Value
Compressive Strength[1], ASTM D1621, psi, min.	25.0
Flexural Strength, ASTM C203, psi, min.	40.0
Water Absorption, ASTM C209, % by volume, max.	1.0
Water Vapor Permeance[2], ASTM E96, perms, max.	0.03
Nominal Density, ASTM D1622, pcf	2.0
Dimensional Stability[2], ASTM D2126 (length or width), % change	200°F: 1.5 max. 158°F at 97% RH: 1.5 max.
Operation Temperature Range, °F	-100 to +250

(1) Vertical compressive strength is measured at 10 percent deformation or yield, whichever occurs first.
(2) Based on 1" thickness.

TABLE 3

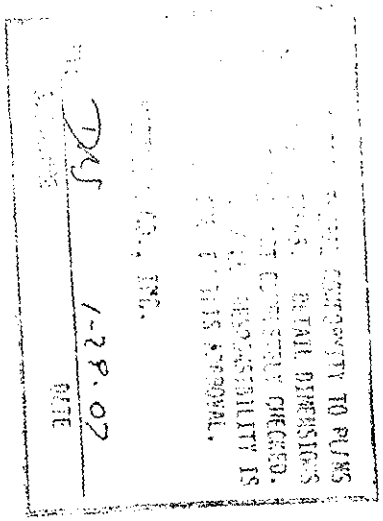
THERMAX Sheathing R-Values

Nominal Board Thickness, in.	R-Value[1,2]
0.5	3.3
0.75	5.0
1.0	6.5
1.25	8.0
1.5	9.8
2.0	13.0

(1) Stabilized R-values of core foam @ 75°F mean temperature determined in accordance with ASTM C518.
(2) R-values expressed in ft²·h·°F/Btu.

*Trademark of The Dow Chemical Company
**R means resistance to heat flow. The higher the R-value, the greater the insulating power.

THERMAX Sheathing



GILBANE
University of Kentucky
Patient Care Facility
Gilbane Project No. 18-3966

REVIEWED

☐ 010-Huguelet ☒ 020-Garage
☐ 030-Infrastructure ☐ 040-PCF Foundation
☐ 050-PCF Core/Shell ☐ 060-TowerUp Fit

Bid Package No. 100
Submittal No. 100-01200-001
Spec. Sect/Para. —
Reviewed By BH
Date 1/31/07

This review does not constitute nor does it assume design responsibility nor does it relieve the trade contractor's supplier from complying with the contract requirements, coordinating their work with other trade contractors and verifying field dimensions.

TABLE 4

Chemical Resistance of THERMAX Sheathing

Acid, inorganic	Not recommended	Hydrocarbons	Excellent
Acid, organic	Excellent	Insecticides	Excellent
Alcohol	Excellent	Kerosene	Excellent
Asphalt, water-based	Good	Mineral oil USP	Excellent
Bases (caustic)	Poor	Naphtha	Excellent
Brines and other salts	Excellent	Paints, alcohol-based	Excellent
Cements and mortar	Poor	Paints, water-based	Excellent
Gases, carbon dioxide (CO_2)	Excellent	Polyglycols, including propylene glycol	Excellent
Gasoline	Excellent	Water[1]	Excellent

(1) Water may cause discoloration of aluminum facers. This does not impact the R-value of dry, core insulation
NOTE: This table should be used as a guide only. For design purposes, specific test data on the intended application may be needed.

INSTALLATION

Boards of THERMAX Sheathing are lightweight and can be sawed or cut with a knife. They install quickly and easily to walls and ceilings using commonly accepted building practices. "Best practice" recommendations for high-humidity environments include continuously sealing the surface of the insulation at all joints with a Dow joint closure system.

CODE COMPLIANCES

THERMAX Sheathing complies with the following codes and standards:

- International Residential Code (IRC) and International Building Code (IBC); see ICC-ES Evaluation Report NER-681
- CCMC – Canadian Construction Materials Centre Evaluation Listing No. 08433-L
- FHA – Federal Housing Administration Minimum Property Standards
- Federal Specification HH-I-1972/1, Class 2
- ASTM C1289, Type I, Class 2
- THERMAX products are classified by Underwriters Laboratories Inc. (UL)
- Factory Mutual approved as "Wall-Ceiling Construction, FM Approvals Standard FM 4880, Metal-Faced – Class 1 Fire Rated to Max. 30' High"

Contact your Dow sales representative or local authorities for state and local building code requirements and related acceptances.

IN THE U.S.:
- For Technical Information: **1-866-583-BLUE (2583)**
- For Sales Information: **1-800-232-2436**

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NO EXCEPTIONS TAKEN — [X]

FURNISH AS CORRECTED — [ ]

REVISE AND RESUBMIT — [ ]

NO REVIEW - INCOMPLETE — [ ]

SUBMIT SPECIFIED ITEMS — [ ]

REJECTED — [ ]

DATE 02.23.07 BY JAP

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325 WEST MAIN STREET, LEXINGTON, KENTUCKY 40507 (859) 381-8787
BEIJING XI CHENG DISTRICT, TONG LI GE ROAD NO 85, BEIJING, CHINA 100031 86 10 88386730

UNIVERSITY OF KENTUCKY
PATIENT CARE FACILITY
PARKING GARAGE

UK Project #: 2239.2

940 Elizabeth Street
Lexington, KY 40506-0293

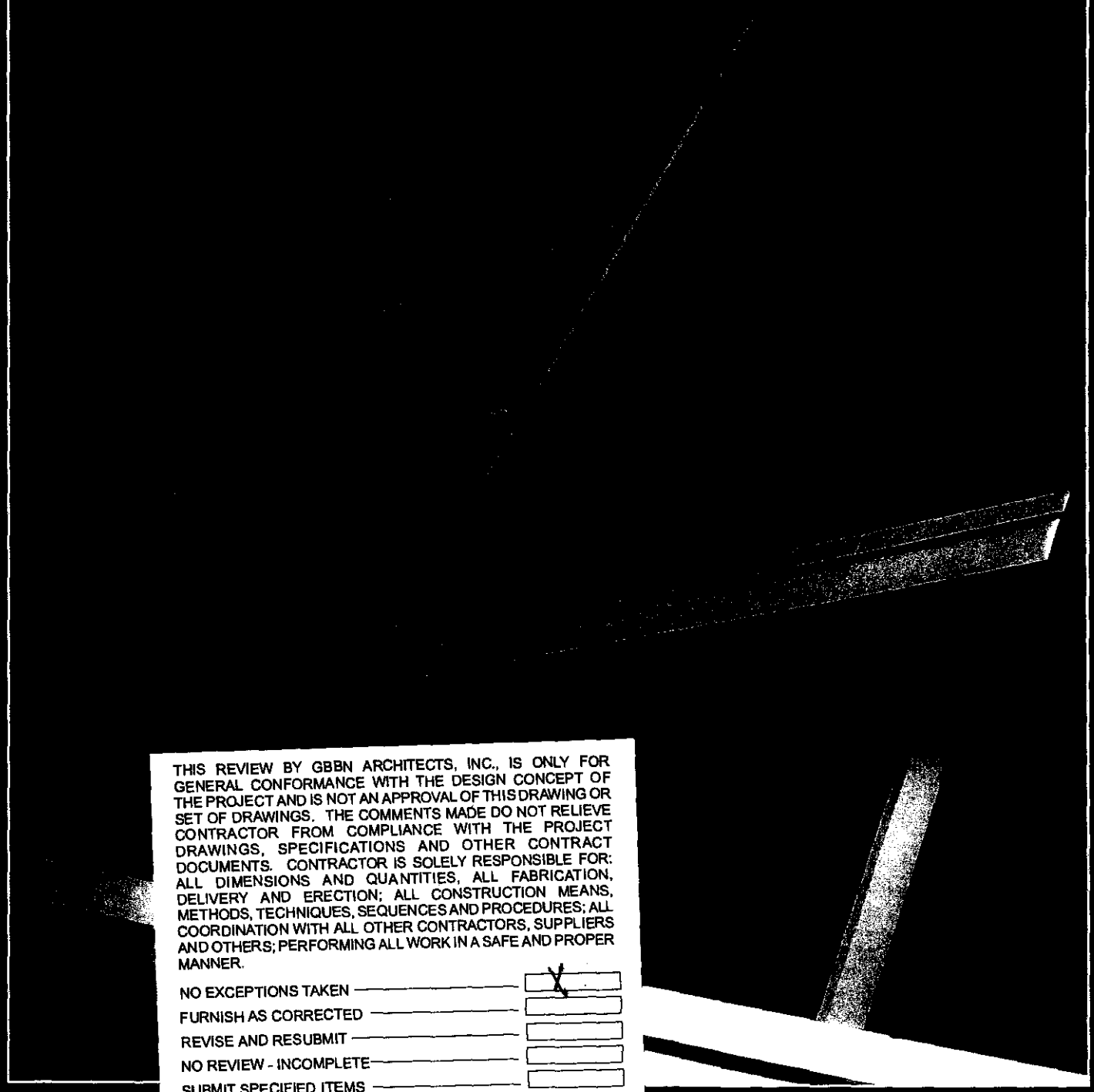
07410 – Metal Panels and Canopies
Submittal Date: January 15, 2007

Construction Manager
Central Kentucky Glass
1123 Versailles Road
Lexington, KY 40508
(859) 253-0710

SUBMITTAL

CENTRIA

Architectural Metal Wall and Roof Systems



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SUBMIT SPECIFIED ITEMS — [ ]
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DATE 11-2-07 BY BK

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CENTRIA produces the world's most extensive line of high-end architectural metal products in the industry including: Formawall™ *Dimension Series*® Factory-foamed Architectural Wall System, *Profile Series* Architectural Wall & Roof Systems, *FormaBond*™ Metal Composite Wall System, and *SRS*® Structural Standing Seam Roof Systems.

CENTRIA systems provide greater design freedom and cost effectiveness than virtually any other building material. Plus, CENTRIA's single-source responsibility offers you the metal building products you need and customized service to meet all your requirements.

CENTRIA also believes in being environmentally responsible. Our recyclable materials, systems design philosophy and life-cycle performance are fully consistent with the principles of sustainable design.

CENTRIA VALUE-ADDED SERVICES

Backed by a century of experience, CENTRIA's unsurpassed design, engineering and sales support includes:

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- Sales service teams committed to total customer satisfaction
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- Design and engineering assistance for standard and custom designs
- Development of details and specifications
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CENTRIA

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Or visit our website at
www.CENTRIA.com

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412.299.8000; Fax: 412.299.8317

Reference PS-1/06-10M LO/LGT Printed in the U.S.A.

431A893

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GILBANE
University of Kentucky
Patient Care Facility
Gilbane Project No. 18-3966

REVIEWED

☐ 010-Huguelet ☒ 020-Garage
☐ 030-Infrastructure ☐ 040-PCF Foundation
☐ 050-PCF Core/Shell ☐ 060-TowerUp Fit

Bid Package No. 080
Submittal No. 080-07410-001-1
Spec. Sect/Para. _____
Reviewed By BH
Date 11/23/07

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Hen #

080-07410-002-1

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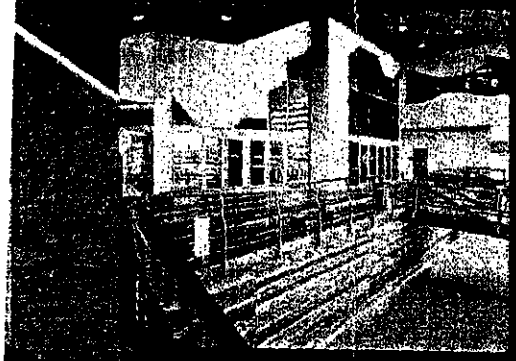
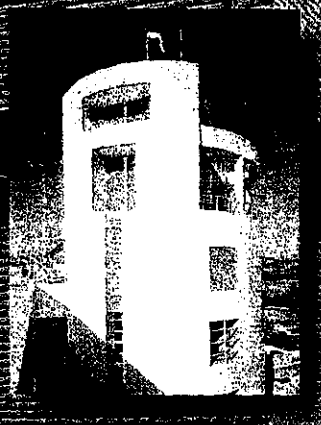
Field

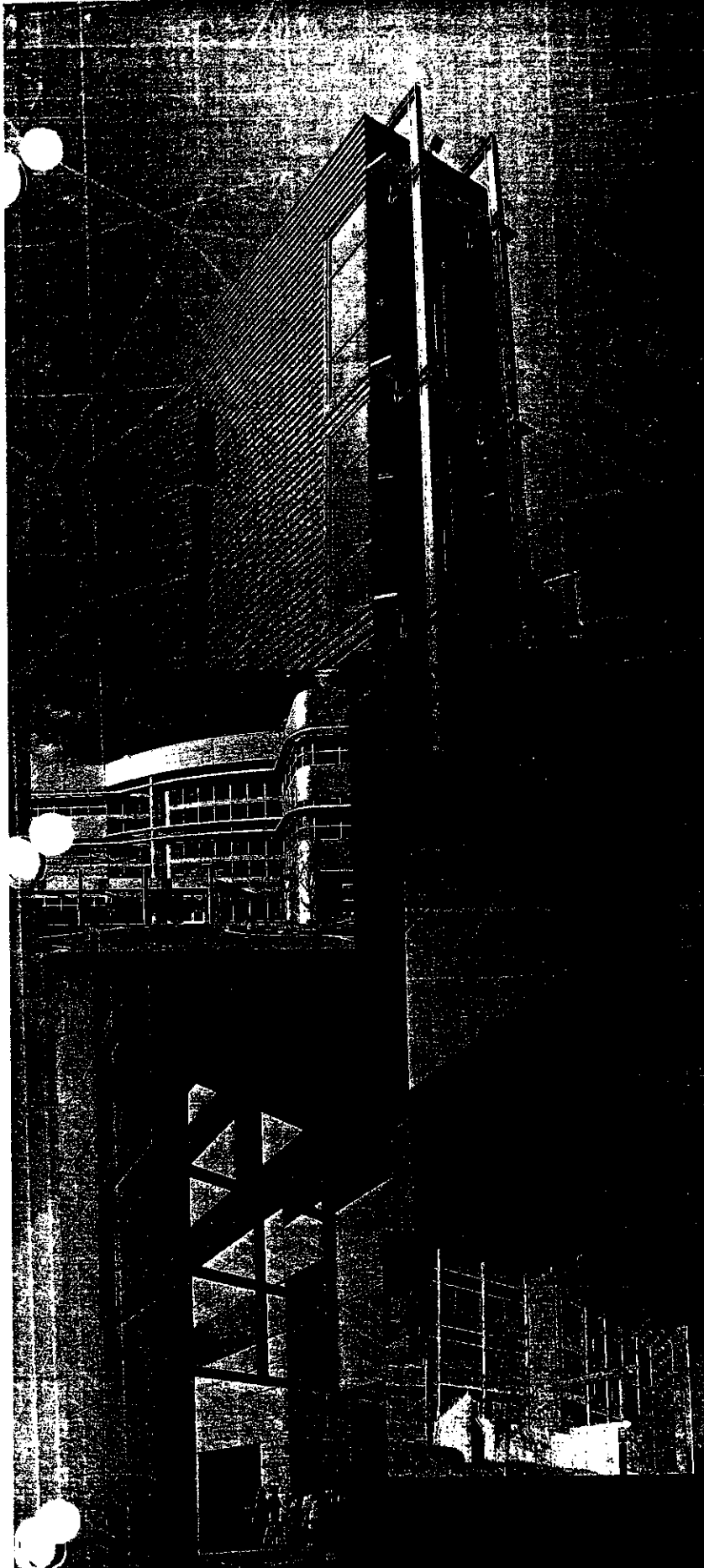
assembled

metal panel

systems







CENTRIA Single-Source Responsibility

Backed by a century of experience, we invite you to take advantage of CENTRIA's unsurpassed design, engineering and sales support.

Wind Load Span Table for CS-200 Wall Panels (3/16" Supports)

CENTRIA
1-800-759-7474

Load	Design Limited By	CS-200 - 24 Span (ft - in)			CS-200 - 22 Span (ft - in)			CS-200 - 20 Span (ft - in)			CS-200 - 18* Span (ft - in)		
		Single	Double	Triple	Single	Double	Triple	Single	Double	Triple	Single	Double	Triple
20 psf	Stress	Not Available			5-10	5-10	6-6	6-8	6-8	7-6	8-4	8-4	9-3
	Defl.				4-8	6-3	5-9	5-0	6-9	6-2	5-9	7-9	7-2
30 psf	Stress				4-9	4-9	5-4	5-5	5-5	6-1	6-9	6-9	7-7
	Defl.				4-1	5-5	5-0	4-5	5-11	5-5	5-1	6-9	6-3
40 psf	Stress				4-2	4-2	4-7	4-9	4-9	5-3	5-10	5-10	6-7
	Defl.				3-8	4-11	4-7	4-0	5-4	4-11	4-7	6-2	5-8
50 psf	Stress				3-8	3-8	4-2	4-3	4-3	4-9	5-3	5-3	5-10
	Defl.				3-5	4-7	4-3	3-8	5-0	4-7	4-3	5-8	5-3
60 psf	Stress				3-4	3-4	3-9	3-10	3-10	4-4	4-10	4-10	5-4
	Defl.				3-3	4-4	4-0	3-6	4-8	4-4	4-0	5-4	4-11
70 psf	Stress				3-1	3-1	3-6	3-7	3-7	4-0	4-5	4-5	5-0
	Defl.				3-1	4-1	3-9	3-4	4-5	4-1	3-10	5-1	4-8

CS-200 Properties:

Nominal Gauge	Thick in	Wgt. psf	I in⁴	S in³
24	Not Available			
22	0.030	1.69	0.023	0.046
20	0.036	2.03	0.029	0.060
18	0.048	2.69	0.044	0.093

Wind Load Span Table for CS-200 Wall Panels (16 Ga. Supports)

Load	Design Limited By	CS-200 - 24 Span (ft - in)			CS-200 - 22 Span (ft - in)			CS-200 - 20 Span (ft - in)			CS-200 - 18* Span (ft - in)		
		Single	Double	Triple	Single	Double	Triple	Single	Double	Triple	Single	Double	Triple
20 psf	Stress	Not Available			5-10	5-10	6-6	6-8	6-8	7-6	8-4	8-4	9-3
	Defl.				4-8	6-3	5-9	5-0	6-9	6-2	5-9	7-9	7-2
30 psf	Stress				4-9	4-9	5-4	5-5	5-5	6-1	6-9	6-9	7-7
	Defl.				4-1	5-5	5-0	4-5	5-11	5-5	5-1	6-9	6-3
40 psf	Stress				4-2	4-2	4-7	4-9	4-9	5-3	5-10	5-10	6-7
	Defl.				3-8	4-11	4-7	4-0	5-4	4-11	4-7	6-2	5-8
50 psf	Stress				3-8	3-8	4-2	4-3	4-3	4-9	5-3	5-3	5-10
	Defl.				3-5	4-7	4-3	3-8	5-0	4-7	4-3	5-8	5-3
60 psf	Stress				3-4	3-4	3-9	3-10	3-10	4-4	4-10	4-7	5-3
	Defl.				3-3	4-4	4-0	3-6	4-8	4-4	4-0	5-4	4-11
70 psf	Stress				3-1	3-1	3-6	3-7	3-7	4-0	4-5	3-11	4-6
	Defl.				3-1	4-1	3-9	3-4	4-5	4-1	3-10	5-1	4-8

Notes for Wind Span Tables:

1. Spans should be limited by the lower of stress, calculated as 0.6 × Fy or deflection @ L/180.
2. For deflection @ L/120, multiply the tabulated L/180 Defl. span by 1.144.
3. Wind span tables are based on using 1/4"-14 fasteners with 5/8" ø combination washers fastened into minimum thickness supports indicated on the tables.
4. Wind span tables are based on single skin with 1 fastener per panel clip per support.
5. *Consult CENTRIA for all 18 gage product lead times.
6. Oil canning within industry standard guidelines as defined by MCA is not a cause for rejection.

SECTION 07410

METAL WALL PANELS

[CENTRIA Concept Series]

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes: All exterior metal wall panels and associated flashing, extruded aluminum trim, insulation, subgirts, sealants, and fasteners necessary to form the exterior metal wall panel system as shown on the contract drawings and/or specified herein.

B. Related Sections:

1. 05100 Structural Metal Framing
2. 05400 Cold-Formed Metal Framing
3. 07210 Building Insulation
4. 07270 Air Barriers
5. 07600 Flashing & Sheet Metal
6. 07900 Joint Sealers
7. 09250 Gypsum Sheathing
8. 10200 Louvers & Vents

1.02 REFERENCES

A. General: Reference latest edition of applicable codes and standards.

B. The Aluminum Association

1. Specification for Aluminum Structures

C. American Society for Testing and Materials (ASTM):

1. ASTM A 653 Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) by the Hot-Dip Process

2. ASTM C 236 Standard Specification for Steady-State Thermal Performance of Building Assemblies by Means of a Guarded Hot Box.[1]

[1] Specify when designing a complete field assembled wall system including liner panel, insulation, subgirts, and Concept Series face panel.

3. ASTM E 283 Standard Test Method for Determining the Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen[1]

4. ASTM E 331 Standard Test Method for Water Penetration of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference[1]

D. American Iron and Steel Institute (AISI):

1. Specification for the Design of Cold-Formed Steel Structural Members

E. American Institute of Steel Construction (AISC):

1. Code of Standard Practice

F. American Society of Civil Engineers (ASCE):

1. ASCE-7, Minimum Design Loads for Buildings and Other Structures

G. [Building Officials and Code Administrators International, Inc. (BOCA)] *or* [International Code Council (ICC)] *or* [Southern Building Code Congress International (SBCCI)] *or* [International Conference of Building Officials (ICBO)]:

1. [BOCA National Building Code] *or* [International Building Code (IBC)] *or* [Standard Building Code (SBC)] *or* [Uniform Building Code (UBC)]

1.03 SYSTEM DESCRIPTION

A. Design Requirements:

1. [Field assembled metal wall panel system including a sealed vapor barrier liner panel, insulation, subgirts and concealed fastener exterior profile.] *or*

[Single-skin concealed fastener metal wall panel applied as the exterior component of an insulated wall system. This system must include an air and water resistant barrier located on the outboard side of the wall supports, that is designed and provided by a subcontractor/supplier other than the metal wall panel manufacturer. The air and water resistant barrier will provide the air and water infiltration performance.[2]] *or*

[Uninsulated single-skin concealed fastener metal wall panel system.]

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[1] Specify when designing a complete field assembled wall system including liner panel, insulation, subgirts, and Concept Series face panel.

[2] The most common system involves the use of CENTRIA wall products over a DensGlass® Gold substrate by G-P Gypsum overlaid with Tyvek® Commercial Wrap®, by DuPont Company. Assemblies utilizing alternate materials are possible and are dependent on building location and type.

2. Wall panel system shall be manufactured and installed to withstand specified design loads and maintain performance requirements without defects, damage, or failure.

B. Performance Requirements:

1. Design wind loads shall be as specified below, acting normal to the plane of the wall, or as indicated on the contract drawings.

   a. Main Wall: + 2.0 psf, - 2.0 psf
   b. Corners: + 3.5 psf, - 3.5 psf

   c. Corner zones shall be defined as 15 feet from building outside corners.

2. Wall panels shall be designed for a maximum deflection under loading of L/180.

3. Air infiltration of the wall panel system shall be limited to 0.06 CFM/ft^2 at a positive pressure differential of 1.57 psf when tested in accordance with ASTM E 283. [3]

4. There shall be no uncontrolled water penetration to the building interior when the wall panel system is tested per ASTM E 331 at a positive pressure differential of 6.24 psf or 20% of the design wind pressure whichever is greater. The test pressure need not exceed 12 psf.

5. Wall panel system shall be tested for thermal transmittance in accordance with ASTM C 236. Thermal transmittance, corrected to 15 mph wind outside and still air inside, shall not exceed 10 Btu/hr-ft^2-°F. [1]

1.04 SUBMITTALS

A. Submit product data, test reports, and certifications in accordance with quality assurance and performance requirements specified herein.

B. Submit panel shop drawings consisting of design and erection drawings, finish specifications, and other data necessary to clearly describe the design, materials, sizes, layouts, construction details, and erection. Submit small-scale layouts of panels and large-scale details of edge conditions, joints, fastener and sealant placement, flashings, penetrations, and special details. Distinction must be made between factory and field assembled work.

   1. Drawings must be approved prior to fabrication.

C. Submit structural design calculations, in accordance with the AISI Specification for the Design of Cold-Formed Steel Structural Members, for the metal wall panel system.

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[3] For "rainscreen" assemblies the air barrier is either the vapor permeable air and water barrier or the vapor barrier component of the wall design.

1. A professional engineer registered in the state where the project is located shall certify the calculations.

D. Samples:

1. Panels: One (1) of each type, full panel width by 12 inches long.
2. Fasteners: Two (2) of each type with statement of intended use.
3. Closures: One (1) of each type metal closure and foam closure as required.
4. Sealants: One (1) sample of each type with statement of intended use.
5. Clips: Two (2) of each type.

1.05 QUALITY ASSURANCE

A. Manufacturers Qualifications: The manufacturer shall have had a minimum of ten (10) years experience in the successful completion of projects employing similar materials, applications, and performance requirements.

1. Manufacturer shall provide a list of five (5) similar completed projects with addresses of the project location, architect, and owner.

B. Installers Qualifications: The wall systems contractor shall have had a minimum of ten (10) years experience in the successful completion of projects employing similar materials, applications, and performance requirements.

1. The wall systems contractor shall provide a list of five (5) similar completed projects with addresses of the project location, architect, and owner.

1.06 DELIVERY, STORAGE, AND HANDLING

A. Materials shall be unloaded and stored per the manufacturer's instructions to prevent damage due to handling and weather.

1.07 WARRANTIES

A. Material Warranty: The manufacturer shall warrant that the materials and accessories furnished in accordance with these specifications shall remain free from defects in material and factory workmanship for a period of one (1) year from date of shipment.

B. [Paint Finish Warranty: The manufacturer shall warrant against fading, chalking, peeling, cracking, checking, chipping, or erosion to base metal of the exterior panel finish, in accordance with the paint supplier's standards.] *or*

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. CENTRIA, 1005 Beaver Grade Road, Moon Township, PA 15108 products and services shall establish the minimum level of quality, performance, dimension, and appearance required.

B. Substitutions: Materials, accessories, and testing specified shall establish the minimum level of quality, performance, dimension, and appearance required of any substitution.

1. No substitution will be considered unless, written request for approval has been received by the specifying architect at least ten (10) days prior to the bid date. Request shall include evidence submitted to demonstrate equivalency to the products and performance levels specified.

   a. A complete description of the substitution including details referenced to the wall conditions shown on the contract drawings.

   b. Independent test reports verifying compliance with specified performance requirements.

   c. Calculations certified by a professional engineer, registered in the state where the project is located, verifying that the proposed substitution meets the specified loading requirements.

   d. A detailed listing of each specification item with which the substitution does not fully comply.

2. The manufacturer or wall systems contractor proposing the substitute shall pay the costs of any other subcontractor affected by the proposed substitute.

2.02 MATERIALS

A. Exterior metal wall panel system shall be Concept Series as manufactured by CENTRIA.

1. Concept Series panel profile(s) shall be [CS-200] *and/or* [CS-210] *and/or* [CS-260] *and/or* [CS-610] *and/or* [CS-620] *and/or* [CS-660]. Wall panel variation shall be as defined on the contract drawings.

   a. Panels shall be nominal 7/8-inches in depth with [12] *and/or* [16] inches of coverage width.

b. Panels shall have identical interlocking side joints to accommodate multiple panel profile integration. [Panel side joints shall have a factory-applied sealant.][4]

c. Panels shall be fastened to the wall girts with minimum 16 gage concealed clips and fasteners to allow for unimpeded thermal movement of the wall system.[4a] Clips shall be designed to hold panel ½" minimum from exterior sheathing. Exposed fastened panels are unacceptable.

d. Panels shall be factory fabricated by roll-forming operations to assure consistency and quality of manufacture. Panels fabricated by press brake or folding machine are unacceptable.

e. Metal panels shall be fabricated from {zinc coated steel conforming to ASTM A 653 SS Grade 37, G90 coating.[4b] Material shall be minimum [22][5] *or* [20] *or* [18] gage with [smooth] *or* [embossed][6] surface texture.}

B. {Liner panel profile shall be [L2 liner as manufactured by CENTRIA. Profile shall be 1-3/8 inches in depth with 24 inches of coverage width. Liner pan shall have two (2) stiffening beads spaced at 8 inches o/c.] *or*

[L2-2 liner as manufactured by CENTRIA. Profile shall be 2 inches in depth with 24 inches of coverage width. Liner pan shall have two (2) stiffening beads spaced at 8 inches o/c.] *or*

[L2-3 liner as manufactured by CENTRIA. Profile shall be 3 inches in depth with 24 inches of coverage width. Liner pan shall have five (5) stiffening beads spaced at 4 inches o/c.] *or*

[L-21A liner as manufactured by CENTRIA. Profile shall be 1-½ inches in depth with 24 inches of coverage width. Liner pan shall have three (3) stiffening beads spaced at 6 inches o/c.]

1. Liner panel side lap shall have a factory-applied sealant.

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[4] Panels may be provided without sealant in the side joint for simple "rain screen" applications or when Concept Series profiles are the exterior metal skin of a field assembled wall system with vapor barrier liner panel.

[4a] For vertical panel applications, soffit applications, and applications where thermal movement is of minimum concern, Concept Series profiles may be specified and/or ordered with an extended fastener leg for concealed and clipless attachment. If this attachment scheme is preferred, delete the first sentence of paragraph "c" and add an "E" suffix to the chosen profile(s) (Ex. CS-12-00E).

[4b] Optional metal substrates such as Galvalume, aluminum, and stainless steel may be available. Contact you CENTRIA sales representative for more information.

[5] CENTRIA recommends minimum 22 gage metal wall panels for enhanced structural performance and optimum aesthetic appearance. Some Concept Series and liner panels are also available in 24 gage.

[6] Embossing is non-directional.

2. Metal liner panels shall be fabricated from zinc coated steel conforming to ASTM 653 SQ Grade 37, G90 coating. Material shall be minimum [22][5] or [20] or [18] gage with [smooth] or [embossed][6] surface texture.}

{Vapor permeable air and water barrier shall consist of [Tyvek® Commercial Wrap®, by Dupont Company, over exterior grade sheathing] *or* [DensGlass® Gold exterior substrate, by G-P Gypsum]. Perimeter conditions, penetrations, laps, and joints shall be sealed to provide a continuous air and water barrier in strict accordance with manufacturer's instructions.}

C. All exterior metal flashing shall be fabricated in the same material, gage, finish, and color as the exterior profile, unless otherwise noted.

D. Extruded aluminum exterior panel trim shall be MicroLine as manufactured by CENTRIA. Extruded trim details shall provide sharp, crisp appearance with maximum 2 inch sight lines with no exposed fasteners, unless otherwise noted. MicroLine details shall be as defined on the contract drawings.

1. Extrusions shall be 6063-T5 aluminum with exposed surfaces painted to match wall panels.

E. Subgirts shall be fabricated from minimum 16 gage zinc coated steel conforming to ASTM A 653 SQ Grade 37, G90 coating.

~~F. Insulation shall be 1.65 pcf density semi-rigid glass fiber type.[8] Insulation thickness shall be ____ inches.~~

2.03 FINISHES

A. {Exterior metal panel material shall be factory coil coated in one of the manufacturer's standard finishes and colors. Manufacturer shall provide a minimum of 25 standard colors for selection.

1. Exposed exterior surface finish shall be [FLUOROFINISH, consisting of 0.2 mil primer with 0.8 mil 70% Kynar 500 or Hylar 5000 color coat.] *or*

[DURAGARD, consisting of 0.8 mil primer with 0.8 mil 70% Kynar 500 or Hylar 5000 color coat.] *or*

[DURAGARD PLUS, consisting of 0.8 mil primer with 0.8 mil 70% Kynar 500 or Hylar 5000 color coat and 0.8 mil 70% Kynar 500 or Hylar 5000 clear coat.] *or*

[MICA, consisting of 0.2 mil primer with 0.8 mil 70% Kynar or Hylar 5000 color coat containing mica pearlescent flakes.] *or*

[8] For horizontal installations of Concept Series systems field assembled with liner panels, insulation must be bagged or a water barrier, such as Tyvek®, must be applied over the insulation and liner prior to application of the subgirt.

[3-Coat METALLIC, consisting of 0.2 mil primer with 0.8 mil 70% Kynar 500 or Hylar 5000 color coat containing metal flakes and 0.5 mil 70% Kynar 500 or Hylar 5000 clear coat.] *or*

[Valflon, consisting of 0.2 mil primer with 0.8 mil 100% fluorocarbon color coat.]

a. Exposed surface color shall be CENTRIA Bone White, color # 30-X035

2. [Concealed interior surface finish shall consist of a 0.2 mil primer and 0.3 mil backer coat] *or*

[Exposed interior surface finish shall match finish and color of specified exterior surface finish and color.]} *or*

B. [Liner panel exterior surface finish shall be factory coil coated Polyester Arctic Ice, consisting of 0.2 mil primer and 0.6 mil polyester color coat. Liner panel interior surface finish shall consist of a 0.2 mil primer and 0.3 mil backer coat.] *or*

[Liner panel material shall be factory coil coated in one of the manufacturer's standard finishes and colors. Manufacturer shall provide a minimum of 25 standard colors for selection.

1. Exposed surface finish shall be [FLUOROFINISH, consisting of 0.2 mil primer with 0.8 mil 70% Kynar 500 or Hylar 5000 color coat.] *or*

[DURAGARD, consisting of 0.8 mil primer with 0.8 mil 70% Kynar 500 or Hylar 5000 color coat.] *or*

[DURAGARD PLUS, consisting of 0.8 mil primer with 0.8 mil 70% Kynar 500 or Hylar 5000 color coat and 0.8 mil 70% Kynar 500 or Hylar 5000 clear coat.] *or*

[MICA, consisting of 0.2 mil primer with 0.8 mil 70% Kynar or Hylar 5000 color coat containing mica pearlescent flakes.] *or*

[3-Coat METALLIC, consisting of 0.2 mil primer with 0.8 mil 70% Kynar 500 or Hylar 5000 color coat containing metal flakes and 0.5 mil 70% Kynar 500 or Hylar 5000 clear coat.] *or*

[Valflon, consisting of 0.2 mil primer with 0.8 mil 100% fluorocarbon color coat.]

a. Exposed surface color shall be CENTRIA _____, color #_____.

2. Concealed surface finish shall consist of a 0.2 mil primer and 0.3 mil backer coat.]

2.04 MITERED CORNERS

A. Horizontal exterior profile panel outside [and/or inside] corners shall be trimless MicroSeam™ [12] corners as manufactured by CENTRIA or equal.

1. Mitered comer assemblies shall match specified exterior profile panel in shape, general appearance, material, and finish.

2. Mitered comer assemblies shall be notched, bent, and structurally bonded by the panel manufacturer. Field fabrication or fabrication by other than the panel manufacturer is not acceptable.

3. Mitered comer assemblies shall be factory coil coated to match adjacent panels. Paint finish shall meet specified warranty requirements.

B. Welded comers or mitered corner assemblies with exposed rivets or fasteners are unacceptable.

2.05 ACCESSORIES

A. Wall panel system fasteners shall be #14 minimum diameter, self-tapping, with hex head.

1. Concealed fasteners shall be cadmium plated carbon steel or 300 series stainless steel with 5/8" bonded neoprene and galvanized or stainless steel washers.

2. Exposed fasteners shall be 300 series stainless steel with 5/8" bonded neoprene and stainless steel washers coated to match the exterior panel color.

B. Closures shall be metal and/or foam as required. Foam shall be a pre-cut profile closure of cross-linked, closed cell foam. Metal closures shall be fabricated from the same material, gage, finish, and color as the exterior metal panel.

C. Sealants:

1. Hidden sealant at all side laps, end laps, and flashing details shall be gun grade non-curing butyl or polymeric non-skinning butyl tape to ensure weather tightness.

2. Exposed sealant shall be one-part moisture curing, gun grade polyurethane.

2.06 FABRICATION

A. Wall panel system components shall be fabricated in the factory for field assembly to the greatest extent possible.

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[12] MicroSeam™ corner assemblies are available for **painted and Durallure** Concept Series only.

PART 3 EXECUTION

3.01 INSPECTION

A. Wall panel systems contractor shall check the alignment of the structural supports. Alignment exceeding tolerances defined in the AISC Code of Standard Practice shall be corrected prior to proceeding with the installation of the wall panel system.

B. Wall panel systems contractor shall inspect installation of vapor permeable air and water barrier for compliance with manufacturers installation instructions. Corrections necessary to ensure specified performance shall be made prior to wall panel installation.

3.02 INSTALLATION

A. Manufacturer shall provide detailed instructions covering the tools, fasteners, sealants, and assembly procedures required to achieve the structural, thermal, and weathering performance specified.

B. Metal filings caused by cutting and drilling shall be immediately removed from finished surfaces to prevent rusting and staining.

C. The wall panel systems contractor shall coordinate work with other trades as required to insure proper flashing and seals with adjoining construction.

3.03 DAMAGED MATERIAL AND CLEANING

A. Damage caused by the manufacturer or wall panel systems contractor shall be repaired or replaced.

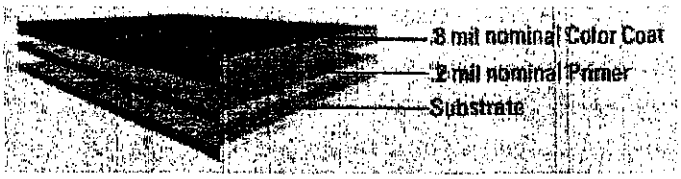
B. The general contractor shall inspect and approve each completed wall area and be responsible for protecting finished work from damage by other trades.

C. The wall panel systems contractor shall remove all protective materials and labels from the wall components as they are installed.

D. The general contractor shall be responsible for final cleaning of the wall panel system due to any conditions that occur after the wall panel systems contractor has completed an area. Cleaning is to be done in accordance with the manufacturer's instructions.

END OF SECTION

FLUOROFINISH



Economical Kynar®500 Hylar®5000 based coatings that provide good durability and is a good choice for architectural applications.

Performance Characteristics
Reflect the following performance characteristics in accordance with ASTM test procedures:

Dew Cycle Weatherometer Test (ASTM D 366T)
Passes 1,000 hours. Color Change: No more than 5 Δ (Hunter) units. Chalk: Rating no less than 8.

Specular Gloss (ASTM D523 at 60°)
Coating shall have a gloss of 20-35 typical.

Chalking Resistance (ASTM D4214)
Maximum rating of 8.

Color Change (ASTM D2247)
Maximum 5 Δ E (Hunter) units change.

Humidity Test (ASTM D2247)
100% relative humidity at 100°F. Passes 2,000 hours. No blisters.

Salt Spray (ASTM B117)
Passes 1,000 hours with less than 1/16" creepage from scribe. No blisters.

Pollution Resistance Test (ASTM D1308)
10% HCL, 15 minutes – no effect.
20% H2SO4, 18 hours – no effect.

T-Bend (ASTM D4145)
0-T to 2-T no loss of adhesion.

Impact Resistance Test (ASTM D2794)
No loss of adhesion.

LINKS TO:

Note: These are preview files only. Log in to the eCENTRIA portal to download files in the .dwg format for use in AutoCAD.

Abrasion Resistance Test Falling Sand (ASTM D968)
Liters to expose 5/329 of substrate – 50 liters.

*Polyvinylidene Fluoride (PVDF) coat contains 70% Kynar 500® or Hylar 5000® resin. Kynar 500 is a registered trademark of Elf Atochem North America, Inc. Hylar 5000 is a registered trademark of Ausimont USA, Inc.

Gilbane

Transmittal

Project [2239.2] - PCF - Hospital - Garage **View Date** 2/8/2008

Gilbane
940 Elizabeth St
Lexington, KY 40506-0293
Phone: (859) 257-4536
Fax: (859) 323-1331

Transmittal No. 2239.2-01173

To	Mr. Doug Sherwood E. C. Matthews Co., Inc. 2265 Harrodsburg Road Lexington, KY 40504 USA Phone: (859) 278-3131 Fax: (859) 277-7903	**Date**	2/8/2008
		Items listed are being sent	
		☑ Enclosed	
		☐ Under Separate Cover	
		Via	Hand Delivered
		CSI Code	07410 - Exterior Metal Panels
From	Mr. Brian Hoerr (Gilbane)		
Subject	Submittal Package 100-07410-001.0		

We are transmitting the following to you:

☐ Product Data ☐ Samples ☐ Shop Drawings ☐ O&M Manuals ☐ Plans
☐ Architectural Drawings ☐ Letters ☐ Specifications ☐ Prints ☐ Addenda
☐ Engineering Drawings ☐ Change Orders ☑ Submittal

Submittals

Pkg. No./Rev.	Item No./Rev.	Description	Copies	Reason	Action	Due
100-07410-001.0	100-07410-001.0	RFQ 125R.1, Corrugated Metal panels, Data, Color Samples	2 copies, 1 sample	Approved as Noted		

Remarks See GBBN review comments.

	Mr. Brian Hoerr	2/8/2008
From	Printed Name	Date
Received By	Printed Name	Date

Linked Documents

Document Type	Document	Open	Description	Date
Sub. Pkg.	100-07410-001.0			

Distribution

Recipient	Company	Method	Date
Doug Sherwood	E. C. Matthews Co., Inc.	Message	2/8/2008

GBBN architects

Transmittal

Project [2239.2] - PCF - Hospital - Garage **View Date** 2/6/2008

GBBN Architects, Inc.
325 West Main St
Lexington, KY 40507-1632
Phone: (859) 381-8787
Fax: (859) 381-8873

Transmittal No. 2239.2-01170

To Mr. Brian Hoerr Gilbane 440 Polaris Parkway Suite 200 Westerville, OH 43082 USA Phone: (614) 418-3000 Fax: (614) 418-3030	**Date** 2/6/2008 **Items listed are being sent** ☐ Enclosed ☐ Under Separate Cover
From Ms. Donna Bradshaw (GBBN Architects, Inc.)	
Subject SUBMITTAL 100-07410-001 RFQ 125R.1, CORRUGATED METAL PANELS DATA, COLOR SAMPLES	

RECEIVED
FEB 07 2008
GILBANE #3966

We are transmitting the following to you:

☐ Product Data	☑ Samples	☐ Shop Drawings	☐ O&M Manuals	☐ Plans
☐ Architectural Drawings	☐ Letters	☐ Specifications	☐ Prints	☐ Addenda
☐ Engineering Drawings	☐ Change Orders	☑ Submittal		

Remarks (APPROVED AS NOTED)

Received By Printed Name Date

Transmittal

Gilbane

To: **GBBN**

Attn: Bryan Korb

From: **Gilbane**

Date: 1/30/08
Job No.:
Project: UK GARAGE
Transmittal #:

Prepared By: Brian Hoerr
Telephone:
Fax:

We are sending the following items: ☒ Attached ☐ Under separate Cover

☒ Shop Drawings ☐ Prints ☐ Originals ☒ Samples
☐ Copy of Letter ☐ Change order ☐ Specifications
☐ Other:

Copy	Date	Drawing No. / Spec. No.	Description
7			RFQ 125R.1, Corrugated Metal Panels, Data
2			Color Samples
			100-07410-001 = package
			100-07400-001 = item
			(GBCO system is down, will enter into CW as soon as possible).

These are transmitted as checked below

☐ For approval ☐ For your use ☐ Approved ☐ Rejected
☐ As requested ☒ For review and comment ☐ Incorporate notations ☐ Revise and resubmit

Copy to:

Signature:

SUBMITTAL TRANSMITTAL

E. C. Matthews Company, Inc.
2265 Harrodsburg Road
Lexington, KY 40504
Phone: 859/278-3131
FAX: 859/277-7903
E-Mail: dsherwood@ecmatthews.com

Spec Section [redacted]

Initial (I) or Resub (R#) [redacted]

DATE: [redacted] JOB NO. [redacted]

TO: [redacted]

We Are Sending You ___ Data Sheets X Shop Drawings

Subcontractor or Supplier [redacted]

RECEIVED
JAN 30 2008
GILBANE
#3966

COPIES		DATE		DESCRIPTION
2		PRQ 1258.1, 07410		MBCI Color Samples - Polar White - CORRUGATED METAL PANELS PRODUCT DATA

Contractors Review:

APPROVED FOR GENERAL CONFORMITY TO PLANS AND SPECIFICATIONS. DETAIL DIMENSIONS AND QUANTITIES NOT COMPLETELY CHECKED. SUBCONTRACTOR'S FULL RESPONSIBILITY IS IN NO WAY RELIEVED BY THIS APPROVAL.

E.C. MATTHEWS CO., INC. BY: [signature] DATE 1.30.08

Construction Manager / Architects Review:

COPY TO: File

SIGNED:
Doug Sherwood

GILBANE
University of Kentucky
Patient Care Facility
Gilbane Project No. 18-3966

REVIEWED

- ☐ 010-Huguelet
- ☒ 020-Garage
- ☐ 030-Infrastructure
- ☐ 040-PCF Foundation
- ☐ 050-PCF Core/Shell
- ☐ 060-TowerUp Fit

Bid Package No. 100
Submittal No. 100-07410-001
Spec. Sect/Para. _____
Reviewed By BH
Date 1/30/08

This review does not constitute nor does it assume design responsibility nor does it relieve the trade contractor's supplier from complying with the contract requirements, coordinating their work with other trade contractors and verifying field dimensions.

pk-001
ct-001

THIS REVIEW BY GBBN ARCHITECTS, INC., IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND IS NDT AN APPRDVAL OF THIS DRAWING OR SET OF DRAWINGS. THE COMMENTS MADE DD NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH THE PROJECT DRAWINGS, SPECIFICATIONS AND OTHER CONTRACT DOCUMENTS. CDNTRACTOR IS SOLELY RESPONSIBLE FOR: ALL DIMENSIONS AND QUANTITIES, ALL FABRICATION, DELIVERY AND ERECTION; ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES; ALL COORDINATION WITH ALL OTHER CONTRACTORS, SUPPLIERS AND OTHERS; PERFORMING ALL WORK IN A SAFE AND PROPER MANNER.

NO EXCEPTIONS TAKEN	☐
FURNISH AS CORRECTED	☒
REVISE AND RESUBMIT	☐
NO REVIEW - INCOMPLETE	☐
SUBMIT SPECIFIED ITEMS	☐
REJECTED	☐

DATE _____ BY _____

GBBN ARCHITECTS, INC.
ARCHITECTURE, INTERIORS, PLANNING, ENGINEERING
☐ 332 EAST 8TH STREET, CINCINNATI, OHIO 45202-2217 (513) 241-8700
☐ 325 WEST MAIN STREET, LEXINGTON, KENTUCKY 40507 (859) 381-8787

ARCHITECT REVIEW NOTES

1) PROVIDE NEOPRENE WASHERS ON ALL EXPOSE FASTENERS.

2) PROVIDE TRIM PIECE AT TOP AND BOTTOM OF PANEL.

3) LAP PANELS AT JOINTS PER MANUFACTURERS INSTALLATION INSTRUCTIONS

4) PROVIDE TRIM PIECE AROUND ALL PENETRATIONS GOING THROUGH METAL WALL PANEL. PROVIDE BACKER ROD & SEALENT TO CLOSE OFF GAPS

E.C. Matthews Co., Inc.

2265 Harrodsburg Road
Lexington, KY 40504
Phone: 859.278.3131
FAX: 859.277.7903
E-Mail: dsherwood@ecmatthews.com

Facsimile Transmittal

Date: 30-Jan-2008

To: Gilbane

Attn: Brian Hoerr

From: Doug Sherwood

Re: MBCI Metal Panels — RFQ 125 R.1

FAX Number: 323-1331

Comments:

Brian

Cut Sheets for panel componenets attached

Please call if you have any questions.

This cover sheet is the first page of **6** pages.

No confirmation is necessary unless otherwise indicated

A copy of this communication is **not** being mailed. (Note: If no mailed copy is indicated but one is needed, kindly call and request same.)

Houston: 877/713-6224
Adel, GA 888/446-6224
Atlanta, GA 877/512-6224
Atwater, CA 800/829-9324
Dallas, TX 800/653-6224
Indianapolis, IN 800/735-6224
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Oklahoma City, OK 800/597-6224
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Richmond, VA 800/729-6224
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Salt Lake City, UT 800/874-2404
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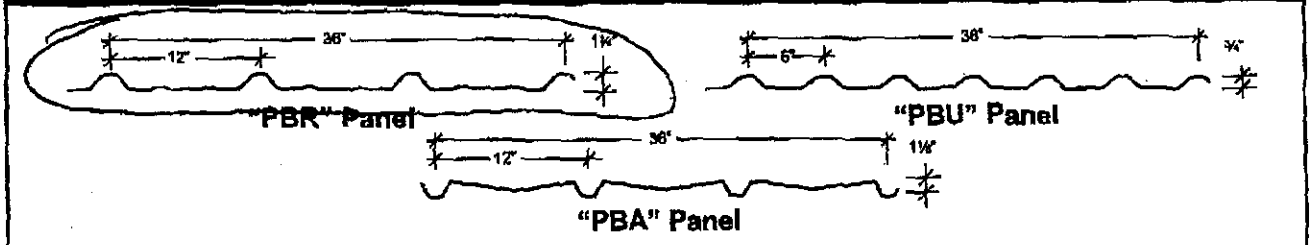
MBCI®
Metal Roof and Wall Systems

COMMERCIAL / INDUSTRIAL PRICING



GAUGE	WIDTH	WEIGHT	COIL WEIGHT	FINISH	1	2	3	4	5
29	36"	80,000	70#	Galvalume Plus®◆	✓	✓	✓	✓	✓
29	36"	80,000	70#	Signature® 200 *	✓	✓	✓	✓	✓
26	36"	80,000	89#	Galvalume Plus®◆	✓	✓	✓	✓	✓
26	36"	80,000	89#	Signature® 200 *	✓	✓	✓	✓	✓
26	36"	80,000	94#	Galvanized	✓	✓	✓	✓	✓
26	36"	80,000	89#	Signature® 300 *	✓	✓	✓	✓	✓
24	36"	50,000	114#	Galvalume Plus®◆	✓	✓	✓	✓	✓
24	36"	50,000	114#	Signature® 200 *	150 Square Minimum Order			✓	✓
22	36"	50,000	144#	Galvalume Plus®◆	✓	✓	✓	✓	✓
22	36"	50,000	144#	Signature® 200 *	100 Square Minimum Order			✓	✓
.024" Alum †	36"	18,000	41#	Signature® 200 - White only	✓	✓	✓	✓	✓

† Perforated only

* See Commercial / Industrial Color Chart for available colors

◆ **The Galvalume Plus® coating is subject to *variances* in spangle *from* coil to coil which may result in noticeable shade variation in installed panels.The Galvalume Plus® coating is also subject to differential weathering after panel installation. Panels may appear to be different shades due to this weathering characteristic. If a consistent appearance is required, MBCI recommends that pre-painted panels be used in lieu of Galvalume Plus®. Shade variation in panels manufactured from Galvalume Plus® coated material do not diminish the structural integrity of the product. These shade variations should be anticipated and are not a cause for rejection.**

Consult the MBCI COMMERCIAL/INDUSTRIAL OR "PBR"/"PBU" TECHNICAL/ERECTION MANUAL for proper product application, design details and other product information.

PANEL PRICING:

1. All "PBR", "PBU" and "PBA" panel pricing is based on a 38¼" sheet width (see chart on opposite page).
2. Add $7.55 per square for embossing.
3. Add $1.05 per sheet for lengths under 4'-0".
4. Add $32.40 set-up charge for reverse run panels (upside down).
5. *Perforated* aluminum is ⅛" round on .324" staggered centers. Approximately 13.5% open area. **Any other color, gauge or perforation pattern - Please Inquire.**

PACKAGING COST:

1. Maximum 3000 pounds or 75 panels per bundle.
2. Block and band only $10.00
3. Block and band, waterproof paper wrap ..... $1.40/linear foot
4. Block and band, waster sheet top only ..... $1.60/linear foot
5. Block and band, waster sheet top and bottom ..... $2.80/linear foot
6. LTL Package - block and band, waster sheet top and bottom, angle board sides and ends ..... $3.50/linear foot
7. Export Package - block and band, waster sheet top and bottom, steel and wood boxed ..... Special Order Only

DELIVERY:

1. 29 and 26 gauge - Stocked Signature® 200 colors (see color chart) ..... Approximately 3 Working Days
2. 22 and 24 gauge - Galvalume Plus® and Signature® 200 White ..... Approximately 3 Working Days
3. 22 and 24 gauge - Signature® 200 colors ..... Approximately 14 Working Days
4. 26 gauge - Signature® 300 colors (see color chart) ..... Approximately 14 Working Days

NOTES:

1. "PBA" panel is striated as a standard.
2. **The aesthetic results of installing "PBA" panels over blanket insulation can have varying degree of success depending upon the insulation thickness and density, as well as, the skill of and techniques used by the installer. However, use of "PBA" panels over blanket insulation thicker than 3" usually results in one or more of the following: (1) Panels will not hold 36" module, (2) Uniform panel side laps will be extremely difficult to maintain and (3) Panels are prone to exhibit oil canning.**
3. Edge of panel in contact with concrete sheeting notch will result in excessive edge creep. Panel corrosion due to contact with concrete or any masonry product is excluded from Panel Warranty.
4. All perforated material comes with a light oil coating. Panels should be wiped clean before installing.

IMPORTANT NOTICE TO INSTALLER/CUSTOMER: Material should be inspected carefully prior to installation for defects including excessive oil canning. *Installation of material constitutes acceptance.*

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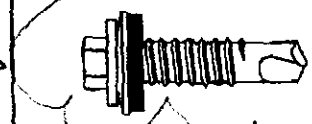
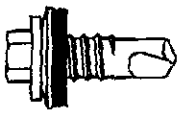
MBCI®
Metal Roof and Wall Systems

COMMERCIAL / INDUSTRIAL PRICING

ITEM	DESCRIPTION					PRICING			
FASTENER #1  ¼" - 14 x 1" Driller 5/16" Hex Washer Head w/ 5/8" O.D. Washer									
	1	5/16"	Driller	2,000	18.50#	✓	✓‡	✓	✓‡
	NOTE: • Fasteners sold in quantities of 250 only • ‡ Add $25.00 paint set-up charge								
FASTENER #1A  12-14 x 1" Driller 5/16" Hex Washer Head									
	1A	5/16"	Driller	2,500	10.00#	✓	✓‡	✓	✓‡
	NOTE: • Fasteners sold in quantities of 250 only • ‡ Add $25.00 paint set-up charge								
FASTENER #1C  ¼" -14 x ¾" Driller 5/16" Hex Washer Head w/ 5/8" O.D. Washer									
	1C	5/16"	Driller	2,500	16.70#	✓	✓‡	✓	✓‡
	NOTE: • Fasteners sold in quantities of 250 only • ‡ Add $25.00 paint set-up charge								
FASTENER #1D  ¼"-14 x 1¼" Driller 5/16" Hex Washer Head w/ 5/8" O.D. Washer									
	1D	5/16"	Driller	2,000	21.00#	✓	✓‡	✓	✓‡
	NOTE: • Fasteners sold in quantities of 250 only • ‡ Add $25.00 paint set-up charge								
FASTENER #1E  ¼"-14 x 1¼" Long Life Driller 5/16" Hex Washer Head w / Sealing Washer									
	1E	5/16"	Long Life Driller	2,000	28.60#	✓	✓‡	✓	✓‡
	NOTE: • Fasteners sold in quantities of 250 only • ‡ Add $25.00 paint set-up charge								
FASTENER #2B  ¼"-14 x 1" Long Life AB 5/16" Hex Washer Head w / Sealing Washer									
	2B	5/16"	Long Life AB	2,000	24.60#	✓	✓‡	✓	✓‡
	NOTE: • Fasteners sold in quantities of 250 only • ‡ Add $25.00 paint set-up charge								
FASTENER #3  12-14 x 1¼" Long Life Driller 5/16" Hex Washer Head w / Sealing Washer									
	3	5/16"	Long Life Driller	2,000	21.50#	✓	✓‡	✓	✓‡
	NOTE: • Fasteners sold in quantities of 250 only • ‡ Add $25.00 paint set-up charge for Sig. 300, Sig. 300 Metallic and special colors								

MBCI recommends the use of a screw gun with a speed range of 0-2000 RPM to properly install all fasteners shown.

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Omaha, NE 800/458-6224
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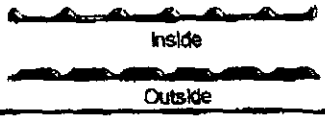
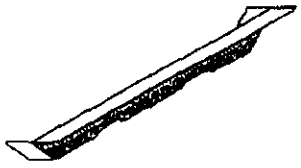
PRICING COMMERCIAL / INDUSTRIAL

ITEM	DESCRIPTION						PRICING		
"PBR" PANEL CLOSURE STRIP  Inside Outside									
	HW-455	Inside	No	1" x 3'-0"	100	.04#	✓	✓	✓
	HW-456	Outside	Yes	1" x 3'-0"	100	.08#	✓	✓	✓
"PBU" PANEL CLOSURE STRIP  Inside Outside									
	HW-459	Inside	No	1" x 3'-0"	100	.04#	✓	✓	✓
	HW-460	Outside	Yes	1" x 3'-0"	100	.06#	✓	✓	✓
"PBA" PANEL CLOSURE STRIP  Inside Outside									
	HW-464	Inside	No	1" x 3'-0"	100	.07#	✓	✓	✓
	HW-465	Outside	Yes	1" x 3'-0"	100	.07#	✓	✓	✓
"PBC" PANEL CLOSURE STRIP  Inside or Outside									
	HW-462	Inside or Outside	Yes	1" x 3'-0"	100	.05#	✓	✓	✓
"PBD" PANEL CLOSURE STRIP  Inside or Outside									
	HW-463	Inside or Outside	Yes	1" x 3'-0"	100	.04#	✓	✓	✓
7.2 PANEL CLOSURE STRIP  Inside or Outside									
	HW-461	Inside or Outside	No	1" x 3'-0"	100	.07#	✓	✓	✓
RETRO-R® CLOSURE STRIP  Inside Outside									
	HW-468	Inside	No	1" x 3'-0"	100	.21#	✓	✓	✓
	HW-469	Outside	Yes	1" x 3'-0"	100	.15#	✓	✓	✓
"PBR" PANEL METAL CLOSURE 									
	HW-4041	Outside	No	10⅞"	N/A	.16#	✓	✓	✓

NOTE: • 26 gauge material
• Galvalume only
• Use with "PBR" Panel - 3 per panel required

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Omaha, NE 800/458-6224
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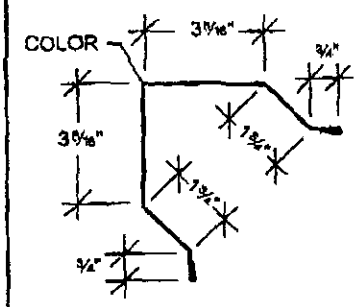
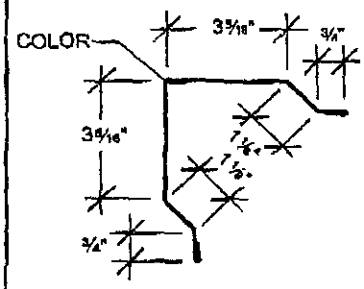
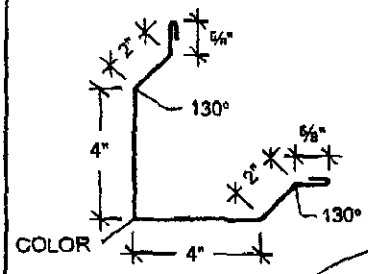
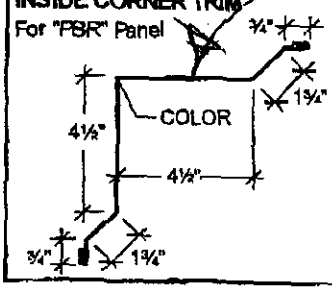
COMMERCIAL / INDUSTRIAL PRICING

ITEM	DESCRIPTION				PRICE PER EACH		
OUTSIDE CORNER TRIM For "PBR" and "PBA" Panel							
	FL-830	10'-2"	12⅝"	8.84#	✓	✓	✓
	FL-831	12'-0"	12⅝"	10.61#	✓	✓	✓
	FL-832	14'-0"	12⅝"	12.38#	✓	✓	✓
	FL-833	16'-0"	12⅝"	14.14#	✓	✓	✓
	FL-834	18'-0"	12⅝"	15.91#	✓	✓	✓
	FL-835	20'-2"	12⅝"	17.68#	✓	✓	✓
OUTSIDE CORNER TRIM For "PBU" Panel							
	FL-840	10'-2"	11⅜"	7.97#	✓	✓	✓
	FL-841	12'-0"	11⅜"	9.56#	✓	✓	✓
	FL-842	14'-0"	11⅜"	11.16#	✓	✓	✓
	FL-843	16'-0"	11⅜"	12.75#	✓	✓	✓
	FL-844	18'-0"	11⅜"	14.35#	✓	✓	✓
	FL-845	20'-2"	11⅜"	15.94#	✓	✓	✓
OUTSIDE CORNER TRIM For 7.2 Panel							
	FL-500	10'-2"	14¼"	9.25#	✓	✓	✓
	FL-500A	12'-0"	14¼"	11.00#	✓	✓	✓
	FL-500B	14'-0"	14¼"	12.80#	✓	✓	✓
INSIDE CORNER TRIM For "PBR" Panel							
	FL-800	10'-2"	15"	9.89#	✓	✓	✓
	FL-801	12'-0"	15"	11.67#	✓	✓	✓
	FL-802	14'-0"	15"	13.62#	✓	✓	✓
	FL-803	16'-0"	15"	15.57#	✓	✓	✓
	FL-804	18'-0"	15"	17.51#	✓	✓	✓
	FL-805	20'-2"	15"	19.62#	✓	✓	✓

COLOR TO MATCH PANEL TYP.

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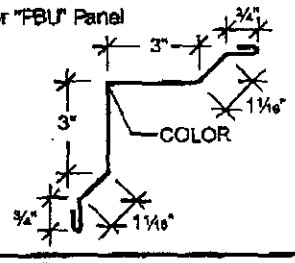
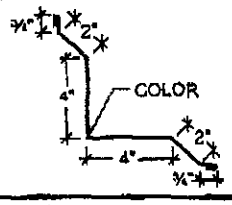
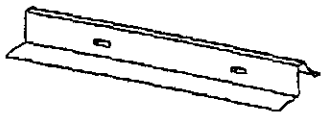
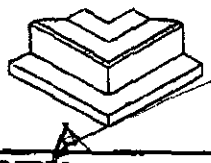
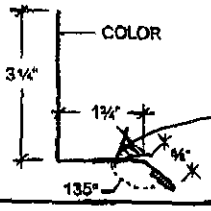
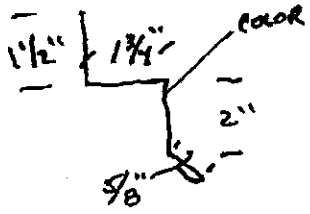
PRICING — COMMERCIAL / INDUSTRIAL

ITEM	DESCRIPTION				PRICE PER EACH		
INSIDE CORNER TRIM For "PBU" Panel 							
	FL-810	10'-2"	10⅜"	7.44#	✓	✓	✓
	FL-811	12'-0"	10⅜"	8.93#	✓	✓	✓
	FL-812	14'-0"	10⅜"	10.42#	✓	✓	✓
	FL-813	16'-0"	10⅜"	11.90#	✓	✓	✓
	FL-814	18'-0"	10⅜"	13.40#	✓	✓	✓
	FL-815	20'-2"	10⅜"	14.88#	✓	✓	✓
INSIDE CORNER TRIM For 7.2 Panel 							
	FL-520	10'-2"	14½"	10.17#	✓	✓	✓
BT-20 BASE TRIM 							
	FL-73	20'-0"	7⅞"	22.00#	N/A	✓	N/A
	NOTE: • 20 gauge material • Burnished Slate only						
BASE ANGLE CORNER 							
	HW-1112	N/A	N/A	.50#	N/A	✓	N/A
	AT TOP & BOTTOM						
	NOTE: • Vinyl material • Burnished Slate only • Inquire for lead time						
BASE TRIM For all Panels 							
	FL-72	10'-2"	6⅛"	3.81#	✓	✓	✓
	COLOR TO MATCH PANEL						
	NOTE: • Use with sheeting notch in concrete						
							
	10'2" 6 3/8				✓	✓	✓
	CUSTOM FLASHING						
	NOTE: • Use without sheeting notch in concrete						

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10-02/15m

Metal Color Chip

For Color And Gloss Match

MBCI®

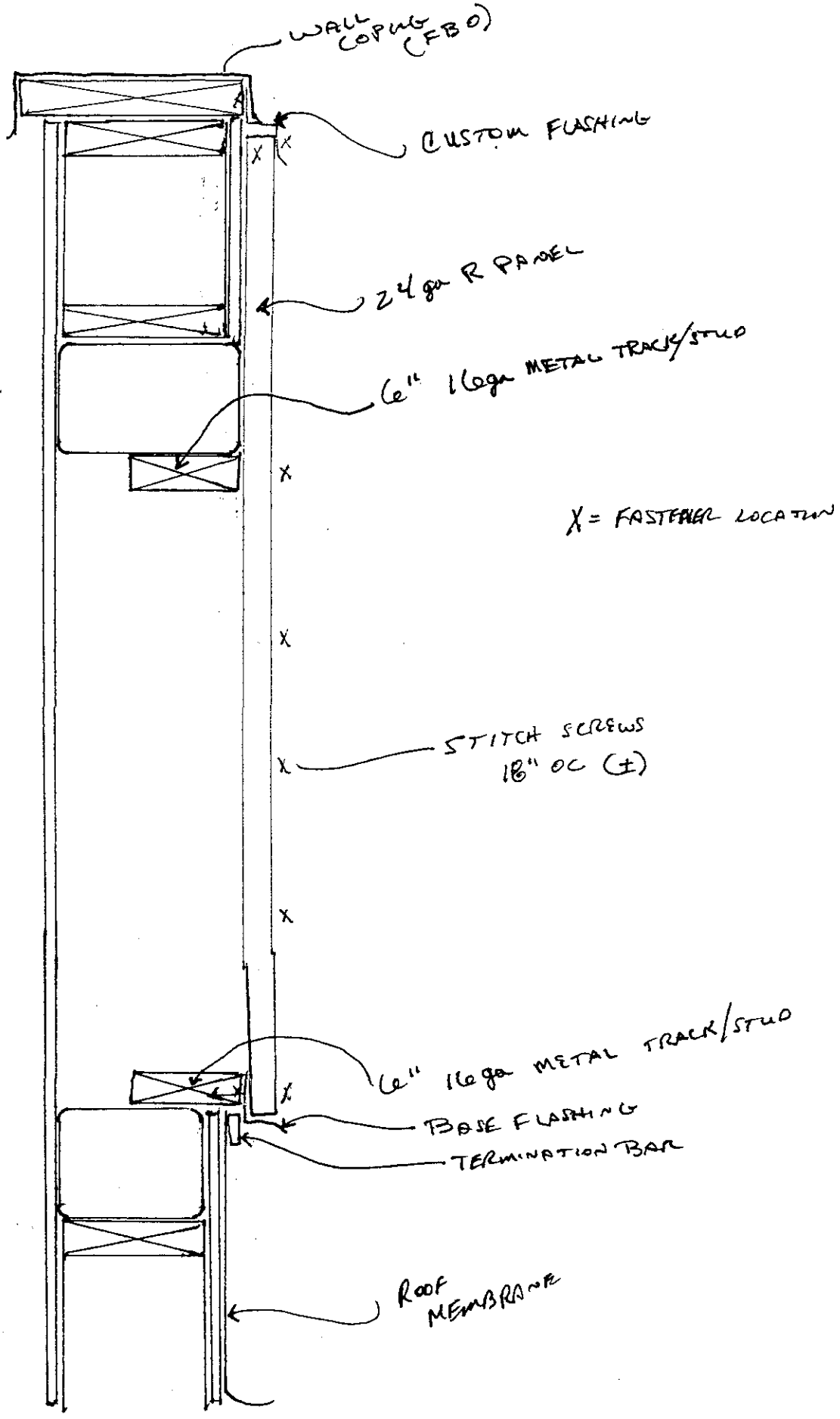
Submitted for your:
☐ Reference
☐ Approval (One sample must be returned)

Paint System Signature - 200
Paint Color Polar White
Project _____

Approved:
Company GRBN
By BK
Title MASTER ARCHITECT
Signature _____
Date 2/5/08

MBCI®
Metal Roof and Wall Systems

Home Office 281/445-8555


WALL COPING (FBO)
CUSTOM FLASHING
24ga R PANEL
6" 16ga METAL TRACK/STUD
X = FASTENER LOCATION
STITCH SCREWS 18" OC (±)
6" 16ga METAL TRACK/STUD
BASE FLASHING
TERMINATION BAR
ROOF MEMBRANE

Transmittal

Gilbane

To: **GBBN**

Attn: Bryan Korb

From: **Gilbane**

Date: 1/30/08
Job No.:
Project: UK GARAGE
Transmittal #:
Prepared By: Brian Hoerr
Telephone:
Fax:

We are sending the following items: ☒ Attached ☐ Under separate Cover

☒ Shop Drawings ☐ Prints ☐ Originals ☒ Samples
☐ Copy of Letter ☐ Change order ☐ Specifications
☐ Other:

Copy	Date	Drawing No. / Spec. No.	Description
7			RFQ 125R.1, Corrugated Metal Panels, Data
2			Color Samples
			100-07410-001 = package
			100-07400-001 = item
			(GBCO system is down, will enter into CW as soon as possible).

These are transmitted as checked below

☐ For approval ☐ For your use ☐ Approved ☐ Rejected
☐ As requested ☒ For review and comment ☐ Incorporate notations ☐ Revise and resubmit

Copy to:

Signature:

SUBMITTAL TRANSMITTAL

E. C. Matthews Company, Inc.
2265 Harrodsburg Road
Lexington, KY 40504
Phone: 859/278-3131
FAX: 859/277-7903
E-Mail: dsherwood@ecmatthews.com

Spec Section [redacted]

Initial(I)or Resub(R#) [redacted]

DATE: [redacted] JOB NO. [redacted]

TO: [redacted]

We Are Sending You __ Data Sheets X Shop Drawings

Subcontractor or Supplier [redacted]

RECEIVED
JAN 30 2008
GILBANE
#3966

COPIES		DATE		DESCRIPTION
2 7		PRQ 1258.1, 07410		MBCI Color Samples - Polar White - CORRUGATED METAL PANELS PRODUCT DATA

Contractors Review:

APPROVED FOR GENERAL CONFORMITY TO PLANS AND SPECIFICATIONS. DETAIL DIMENSIONS AND QUANTITIES NOT COMPLETELY CHECKED. SUBCONTRACTOR'S FULL RESPONSIBILITY IS IN NO WAY RELIEVED BY THIS APPROVAL.

E.C. MATTHEWS CO., INC. BY: [signature] DATE 1.30.08

Construction Manager / Architects Review:

COPY TO: File

SIGNED:

Doug Sherwood

GILBANE
University of Kentucky
Patient Care Facility
Gilbane Project No. 18-3966

REVIEWED

☐ 010-Huguelet ☒ 020-Garage
☐ 030-Infrastructure ☐ 040-PCF Foundation
☐ 050-PCF Core/Shell ☐ 060-TowerUp Fit

Bid Package No. 100
Submittal No. 100-07410-001
Spec. Sect/Para. _____
Reviewed By BH
Date 1/30/08

This review does not constitute nor does it assume design responsibility nor does it relieve the trade contractor's supplier from complying with the contract requirements, coordinating their work with other trade contractors and verifying field dimensions.

THIS REVIEW BY GBBN ARCHITECTS, INC., IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND IS NOT AN APPROVAL OF THIS DRAWING OR SET OF DRAWINGS. THE COMMENTS MADE DO NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH THE PROJECT DRAWINGS, SPECIFICATIONS AND OTHER CONTRACT DOCUMENTS. CONTRACTOR IS SOLELY RESPONSIBLE FOR: ALL DIMENSIONS AND QUANTITIES, ALL FABRICATION, DELIVERY AND ERECTION; ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES; ALL COORDINATION WITH ALL OTHER CONTRACTORS, SUPPLIERS AND OTHERS; PERFORMING ALL WORK IN A SAFE AND PROPER MANNER.

NO EXCEPTIONS TAKEN	
FURNISH AS CORRECTED	X
REVISE AND RESUBMIT	
NO REVIEW - INCOMPLETE	
SUBMIT SPECIFIED ITEMS	
REJECTED	

DATE _____ BY _____

GBBN ARCHITECTS, INC.
ARCHITECTURE, INTERIORS, PLANNING, ENGINEERING
☐ 332 EAST 6TH STREET, CINCINNATI, OHIO 45202-2217 (513) 241-8700
☐ 325 WEST MAIN STREET, LEXINGTON, KENTUCKY 40507 (859) 381-8787

pk-001
lt-001

ARCHITECT REVIEW NOTES

1) PROVIDE NEOPRENE WASHERS ON ALL EXPOSE FASTENERS.

2) PROVIDE TRIM PIECE AT TOP AND BOTTOM OF PANEL.

3) LAP PANELS AT JOINTS PER MANUFACTURERS INSTALLATION INSTRUCTIONS

4) PROVIDE TRIM PIECE AROUND ALL PENETRATIONS GOING THROUGH METAL WALL PANEL. PROVIDE BACKER ROD & SEALENT TO CLOSE OFF GAPS

E.C. Matthews Co., Inc.

2265 Harrodsburg Road
Lexington, KY 40504
Phone: 859.278.3131
FAX: 859.277.7903
E-Mail: dsherwood@ecmatthews.com

Facsimile Transmittal

RECEIVED
JAN 3 0 2008
GILBANE
#3966

Date:	30-Jan-2008
To:	Gilbane
Attn:	Brian Hoerr
From:	Doug Sherwood
Re:	MBCI Metal Panels — RFQ 125 R.1
FAX Number:	323-1331

Comments:

Brian

Cut Sheets for panel componenets attached

Please call if you have any questions.

This cover sheet is the first page of **6** pages.

No confirmation is necessary unless otherwise indicated

A copy of this communication is **not** being mailed. (Note: If no mailed copy is indicated but one is needed, kindly call and request same.)

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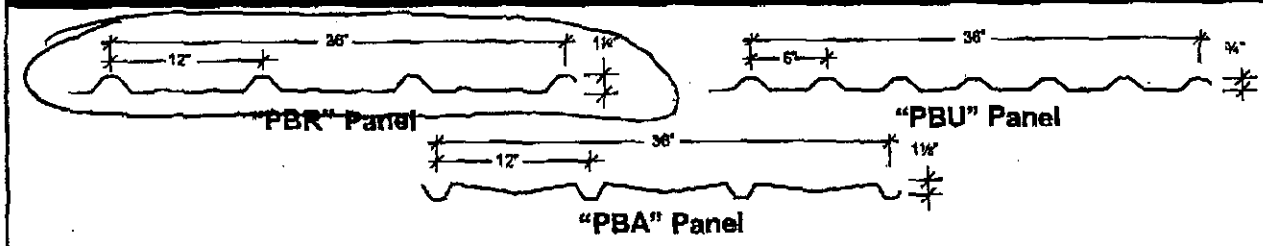
Metal Roof and Wall Systems

COMMERCIAL / INDUSTRIAL PRICING



GAUGE	WIDTH	WEIGHT	STEEL	COATING	BARN RED	CHARCOAL GRAY	DARK BRONZE	GALVALUME	WHITE
29	36"	80,000	70#	Galvalume Plus® ◆	✓	✓	✓	✓	✓
29	36"	80,000	70#	Signature® 200 *	✓	✓	✓	✓	✓
26	36"	80,000	89#	Galvalume Plus® ◆	✓	✓	✓	✓	✓
26	36"	80,000	89#	Signature® 200 *	✓	✓	✓	✓	✓
26	36"	80,000	94#	Galvanized	✓	✓	✓	✓	✓
26	36"	80,000	89#	Signature® 300 *	✓	✓	✓	✓	✓
24	36"	50,000	114#	Galvalume Plus® ◆	✓	✓	✓	✓	✓
24	36"	50,000	114#	Signature® 200 *	150 Square Minimum Order			✓	✓
22	36"	50,000	144#	Galvalume Plus® ◆	✓	✓	✓	✓	✓
22	36"	50,000	144#	Signature® 200 *	100 Square Minimum Order			✓	✓
.024" Alum †	36"	18,000	41#	Signature® 200 - White only	✓	✓	✓	✓	✓

† Perforated only

*See Commercial / Industrial Color Chart for available colors

Signature is a registered trademark of Metal Building Components, L.P. Galvalume Plus is a registered and protected trademark of BIEC International, Inc.

◆ **The Galvalume Plus® coating is subject to variances in spangle from coil to coil which may result in noticeable shade variation in installed panels.The Galvalume Plus® coating is also subject to differential weathering after panel installation. Panels may appear to be different shades due to this weathering characteristic. If a consistent appearance is required, MBCI recommends that pre-painted panels be used in lieu of Galvalume Plus®. Shade variation in panels manufactured from Galvalume Plus® coated material do not diminish the structural integrity of the product. These shade variations should be anticipated and are not a cause for rejection.**

Consult the MBCI COMMERCIAL/INDUSTRIAL OR "PBR"/"PBU" TECHNICAL/ERECTION MANUAL for proper product application, design details and other product information.

PANEL PRICING:

1. All "PBR", "PBU" and "PBA" panel pricing is based on a 38¼" sheet width (see chart on opposite page).
2. Add $7.55 per square for embossing.
3. Add $1.05 per sheet for lengths under 4'-0".
4. Add $32.40 set-up charge for reverse run panels (upside down).
5. Perforated aluminum is ⅛" round on .324" staggered centers. Approximately 13.5% open area. Any other color, gauge or perforation pattern - Please Inquire.

PACKAGING COST:

1. Maximum 3000 pounds or 75 panels per bundle.
2. Block and band only $10.00
3. Block and band, waterproof paper wrap ..... $1.40/linear foot
4. Block and band, waster sheet top only ..... $1.60/linear foot
5. Block and band, waster sheet top and bottom ..... $2.80/linear foot
6. LTL Package - block and band, waster sheet top and bottom, angle board sides and ends ..... $3.50/linear foot
7. Export Package - block and band, waster sheet top and bottom, steel and wood boxed ..... Special Order Only

DELIVERY:

1. 29 and 26 gauge - Stocked Signature® 200 colors (see color chart) ..... Approximately 3 Working Days
2. 22 and 24 gauge - Galvalume Plus® and Signature® 200 White ..... Approximately 3 Working Days
3. 22 and 24 gauge - Signature® 200 colors ..... Approximately 14 Working Days
4. 26 gauge - Signature® 300 colors (see color chart) ..... Approximately 14 Working Days

NOTES:

1. "PBA" panel is striated as a standard.
2. **The aesthetic results of installing "PBA" panels over blanket insulation can have varying degree of success depending upon the insulation thickness and density, as well as, the skill of and techniques used by the installer. However, use of "PBA" panels over blanket insulation thicker than 3" usually results in one or more of the following: (1) Panels will not hold 36" module, (2) Uniform panel side laps will be extremely difficult to maintain and (3) Panels are prone to exhibit oil canning.**
3. Edge of panel in contact with concrete sheeting notch will result in excessive edge creep. Panel corrosion due to contact with concrete or any masonry product is excluded from Panel Warranty.
4. All perforated material comes with a light oil coating. Panels should be wiped clean before installing.

IMPORTANT NOTICE TO INSTALLER/CUSTOMER: Material should be inspected carefully prior to installation for defects including excessive oil canning. Installation of material constitutes acceptance.

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COMMERCIAL / INDUSTRIAL PRICING

ITEM	DESCRIPTION					PRICING			
FASTENER #1  ¼" - 14 x 1" Driller 5/16" Hex Washer Head w / 5/8" O.D. Washer	1	5/16"	Driller	2,000	18.50#	✓	✓‡	✓	✓‡
	NOTE: • Fasteners sold in quantities of 250 only • ‡ Add $25.00 paint set-up charge								
FASTENER #1A  12-14 x 1" Driller 5/16" Hex Washer Head	1A	5/16"	Driller	2,500	10.00#	✓	✓‡	✓	✓‡
	NOTE: • Fasteners sold in quantities of 250 only • ‡ Add $25.00 paint set-up charge								
FASTENER #1C  ¼" -14 x ¾" Driller 5/16" Hex Washer Head w / 5/8" O.D. Washer	1C	5/16"	Driller	2,500	16.70#	✓	✓‡	✓	✓‡
	NOTE: • Fasteners sold in quantities of 250 only • ‡ Add $25.00 paint set-up charge								
FASTENER #1D  ¼"-14 x 1¼" Driller 5/16" Hex Washer Head w / 5/8" O.D. Washer	1D	5/16"	Driller	2,000	21.00#	✓	✓‡	✓	✓‡
	NOTE: • Fasteners sold in quantities of 250 only • ‡ Add $25.00 paint set-up charge								
FASTENER #1E  ¼"-14 x 1¼" Long Life Driller . 5/16" Hex Washer Head w / Sealing Washer	1E	5/16"	Long Life Driller	2,000	28.60#	✓	✓‡	✓	✓‡
	NOTE: • Fasteners sold in quantities of 250 only • ‡ Add $25.00 paint set-up charge								
FASTENER #2B  ¼"-14 x 1" Long Life AB 5/16" Hex Washer Head w / Sealing Washer	2B	5/16"	Long Life AB	2,000	24.60#	✓	✓‡	✓	✓‡
	NOTE: • Fasteners sold in quantities of 250 only • ‡ Add $25.00 paint set-up charge								
FASTENER #3  12-14 x 1¼" Long Life Driller 5/16" Hex Washer Head w / Sealing Washer	3	5/16"	Long Life Driller	2,000	21.50#	✓	✓‡	✓	✓‡
	NOTE: • Fasteners sold in quantities of 250 only • ‡ Add $25.00 paint set-up charge for Sig. 300, Sig. 300 Metallic and special colors								

MBCI recommends the use of a screw gun with a speed range of 0-2000 RPM to properly install all fasteners shown.

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PRICING — COMMERCIAL / INDUSTRIAL

ITEM	DESCRIPTION						PRICING		
"PBR" PANEL CLOSURE STRIP Inside Outside									
	HW-455	Inside	No	1" x 3'-0"	100	.04#	✓	✓	✓
	HW-456	Outside	Yes	1" x 3'-0"	100	.08#	✓	✓	✓
"PBU" PANEL CLOSURE STRIP Inside Outside									
	HW-459	Inside	No	1" x 3'-0"	100	.04#	✓	✓	✓
	HW-460	Outside	Yes	1" x 3'-0"	100	.06#	✓	✓	✓
"PBA" PANEL CLOSURE STRIP Inside Outside									
	HW-464	Inside	No	1" x 3'-0"	100	.07#	✓	✓	✓
	HW-465	Outside	Yes	1" x 3'-0"	100	.07#	✓	✓	✓
"PBC" PANEL CLOSURE STRIP Inside or Outside									
	HW-462	Inside or Outside	Yes	1" x 3'-0"	100	.05#	✓	✓	✓
"PBD" PANEL CLOSURE STRIP Inside or Outside									
	HW-463	Inside or Outside	Yes	1" x 3'-0"	100	.04#	✓	✓	✓
7.2 PANEL CLOSURE STRIP Inside or Outside									
	HW-461	Inside or Outside	No	1" x 3'-0"	100	.07#	✓	✓	✓
RETRO-R® CLOSURE STRIP Inside Outside									
	HW-468	Inside	No	1" x 3'-0"	100	.21#	✓	✓	✓
	HW-469	Outside	Yes	1" x 3'-0"	100	.15#	✓	✓	✓
"PBR" PANEL METAL CLOSURE									
	HW-4041	Outside	No	10⅞"	N/A	.16#	✓	✓	✓

NOTE: • 26 gauge material
• Galvalume only
• Use with "PBR" Panel - 3 per panel required

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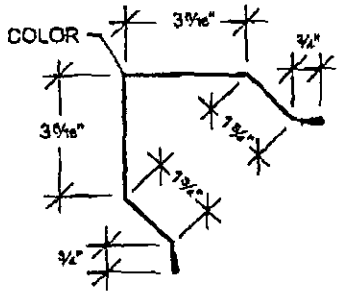
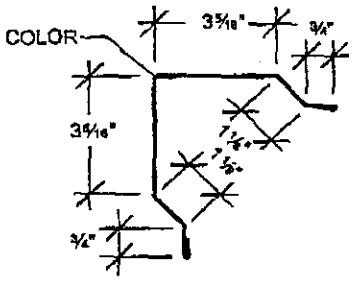
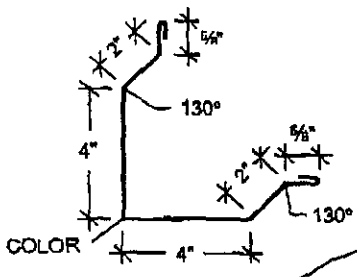
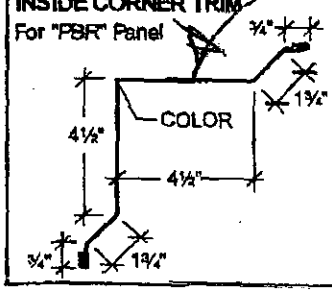
COMMERCIAL / INDUSTRIAL PRICING

ITEM	DESCRIPTION				PRICE PER EACH		
OUTSIDE CORNER TRIM For "PBR" and "PBA" Panel							
	FL-830	10'-2"	12⅜"	8.84#	✓	✓	✓
	FL-831	12'-0"	12⅜"	10.61#	✓	✓	✓
	FL-832	14'-0"	12⅜"	12.38#	✓	✓	✓
	FL-833	16'-0"	12⅜"	14.14#	✓	✓	✓
	FL-834	18'-0"	12⅜"	15.91#	✓	✓	✓
	FL-835	20'-2"	12⅜"	17.68#	✓	✓	✓
OUTSIDE CORNER TRIM For "PBU" Panel							
	FL-840	10'-2"	11⅜"	7.97#	✓	✓	✓
	FL-841	12'-0"	11⅜"	9.56#	✓	✓	✓
	FL-842	14'-0"	11⅜"	11.16#	✓	✓	✓
	FL-843	16'-0"	11⅜"	12.75#	✓	✓	✓
	FL-844	18'-0"	11⅜"	14.35#	✓	✓	✓
	FL-845	20'-2"	11⅜"	15.94#	✓	✓	✓
OUTSIDE CORNER TRIM For 7.2 Panel							
	FL-500	10'-2"	14¼"	9.25#	✓	✓	✓
	FL-500A	12'-0"	14¼"	11.00#	✓	✓	✓
	FL-500B	14'-0"	14¼"	12.60#	✓	✓	✓
INSIDE CORNER TRIM For "PBR" Panel							
	FL-800	10'-2"	15"	9.89#	✓	✓	✓
	FL-801	12'-0"	15"	11.67#	✓	✓	✓
	FL-802	14'-0"	15"	13.62#	✓	✓	✓
	FL-803	16'-0"	15"	15.57#	✓	✓	✓
	FL-804	18'-0"	15"	17.51#	✓	✓	✓
	FL-805	20'-2"	15"	19.62#	✓	✓	✓

COLOR TO MATCH PANEL TYP.

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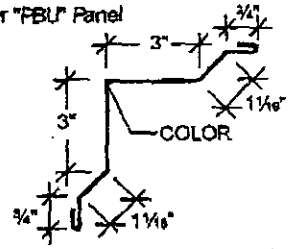
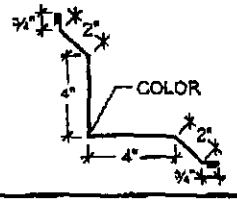
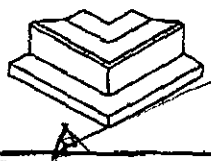
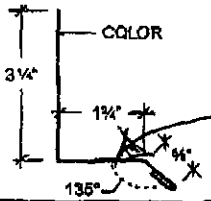
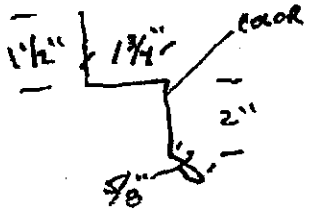
PRICING COMMERCIAL / INDUSTRIAL

ITEM	DESCRIPTION				PRICE PER EACH		
INSIDE CORNER TRIM For "PBU" Panel 							
	FL-810	10'-2"	10⅜"	7.44#	✓	✓	✓
	FL-811	12'-0"	10⅜"	8.93#	✓	✓	✓
	FL-812	14'-0"	10⅜"	10.42#	✓	✓	✓
	FL-813	16'-0"	10⅜"	11.90#	✓	✓	✓
	FL-814	18'-0"	10⅜"	13.40#	✓	✓	✓
	FL-815	20'-2"	10⅜"	14.88#	✓	✓	✓
INSIDE CORNER TRIM For 7.2 Panel 							
	FL-520	10'-2"	14½"	10.17#	✓	✓	✓
BT-20 BASE TRIM 							
	FL-73	20'-0"	7⅞"	22.00#	N/A	✓	N/A
	NOTE: • 20 gauge material • Burnished Slate only						
BASE ANGLE CORNER 							
	HW-1112	N/A	N/A	.50#	N/A	✓	N/A
	AT TOP & BOTTOM						
	NOTE: • Vinyl material • Burnished Slate only • Inquire for lead time						
BASE TRIM For all Panels 							
	FL-72	10'-2"	6⅛"	3.81#	✓	✓	✓
	COLOR TO MATCH PANEL						
	NOTE: • Use with sheeting notch in concrete						
							
	10'2" 6 3/8				✓	✓	✓
	CUSTOM FLASHING						
	NOTE: • Use without sheeting notch in concrete						

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San Antonio, TX
800-598-6224

Tampa, FL/Sales Office
800-359-6224

10-02/15m

Metal Color Chip

For Color And Gloss Match

MBCI®

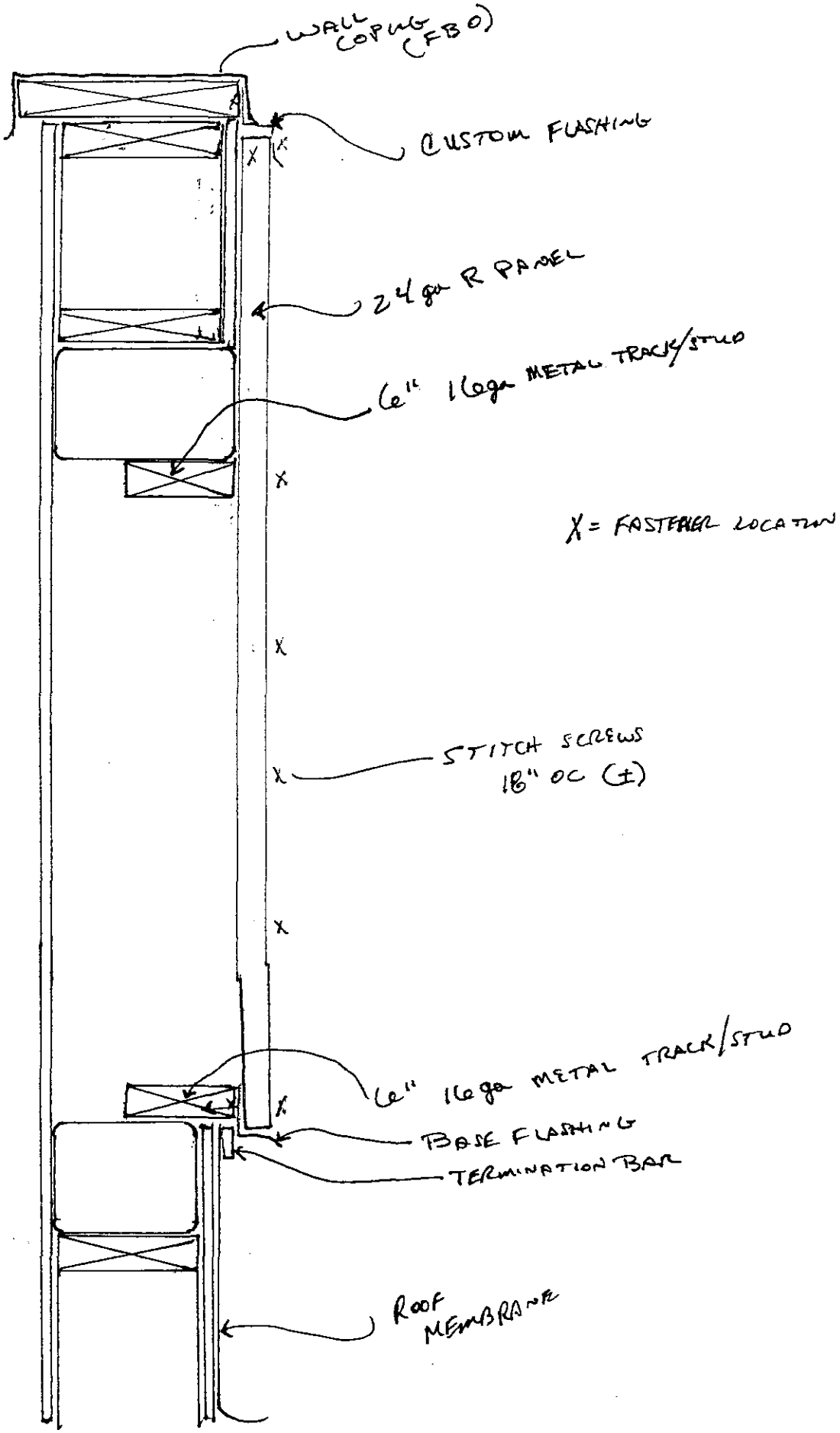
Submitted for your:
[ ] Reference
[ ] Approval (One sample must be returned)

Paint System Signature - 200
Paint Color Polar White
Project _____

Approved:
Company GRBN
By BK
Title MASTER ARCHITECT
Signature _____
Date 2/5/08

MBCI®
Metal Roof and Wall Systems

Home Office 281/445-8555


WALL COPING (FBO)
CUSTOM FLASHING
24ga R PANEL
16" 16ga METAL TRACK/STUD
X = FASTENER LOCATION
STITCH SCREWS 18" OC (±)
16" 16ga METAL TRACK/STUD
BASE FLASHING
TERMINATION BAR
ROOF MEMBRANE

Gilbane

Transmittal

Project [2239.2] - PCF - Hospital - Garage **View Date** 9/13/2007

Gilbane
940 Elizabeth St
Lexington, KY 40506-0293
Phone: (859) 257-4536
Fax: (859) 323-1331

Transmittal No. 2239.2-01061

To	Mr. Doug Sherwood E. C. Matthews Co., Inc. 2265 Harrodsburg Road Lexington, KY 40504 USA Phone: (859) 278-3131 Fax: (859) 277-7903	**Date**	9/12/2007
		Items listed are being sent	
		☑ Enclosed	
		☐ Under Separate Cover	
		Via	Hand Delivered
From	Mr. Brian Hoerr (Gilbane)	**CSI Code**	07530 - Thermoplastic Membrane Roofing
Subject	Submittal Package 100-07530-002.0		

We are transmitting the following to you:

☐ Product Data ☐ Samples ☐ Shop Drawings ☐ O&M Manuals ☐ Plans
☐ Architectural Drawings ☐ Letters ☐ Specifications ☐ Prints ☐ Addenda
☐ Engineering Drawings ☐ Change Orders ☑ Submittal

Submittals

Pkg. No./Rev.	Item No./Rev.	Description	Copies	Reason	Action
100-07530-002.0	100-07530-008.0	Tapered Insulation Layout Plan	2	Approved as Noted	

Remarks Drawing is approved as noted, please see notes on the drawing.

	Mr. Brian Hoerr	9/12/2007
From	Printed Name	Date
Received By	Printed Name	Date

Linked Documents

Document Type	Document	Open	Description	Date
Sub. Pkg.	100-07530-002.0			

Distribution

Recipient	Company	Method	Date

Doug Sherwood	E. C. Matthews Co., Inc.	Message	9/13/2007

Transmittal

Project [2239.2] - PCF - Hospital - Garage **View Date** 9/12/2007

GBBN Architects, Inc.
332 East Eighth St
Cincinnati, OH 45202-2217
Phone: (513) 241-8700
Fax: (513) 241-8873

Transmittal No. 2239.2-01054

RECEIVED
SEP 12 2007
GILBANE #3966

To	Mr. Brian Hoerr Gilbane 940 Elizabeth St Lexington, KY 40506-0293 USA Phone: (859) 257-4536 Fax: (859) 323-1331
From	Mr. Bryan Korb (GBBN Architects, Inc.)
Subject	Submittal Package 100-07530-002.0

Date 9/12/2007

Items listed are being sent

- ☐ Enclosed
- ☐ Under Separate Cover

CSI Code 07530 - Thermoplastic Membrane Roofing

We are transmitting the following to you:

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- ☑ Submittal

Submittals

Pkg. No./Rev.	Item No./Rev.	Description	Copies	Reason	Action
100-07530-002.0	100-07530-008.0	Tapered Insulation Layout Plan	3	Approved as Noted	

Remarks

Received By Printed Name Date

Linked Documents

Document Type	Document	Open	Description	Date
Sub. Pkg.	100-07530-002.0			

Distribution

Recipient	Company	Method	Date
Brian Hoerr	Gilbane	Message	9/12/2007

Gilbane

Transmittal

Project [2239.2] - PCF - Hospital - Garage

View Date 9/10/2007

Gilbane
940 Elizabeth St
Lexington, KY 40506-0293
Phone: (859) 257-4536
Fax: (859) 323-1331

Transmittal No. 2239.2-01053

To	Mr. Bryan Korb GBBN Architects, Inc. 332 East Eighth St Cincinnati, OH 45202-2217 USA Phone: (513) 241-8700 Fax: (513) 241-8873	**Date**	9/10/2007
		Items listed are being sent	
		☑ Enclosed	
		☐ Under Separate Cover	
		Via	Hand Delivered
From	Mr. Brian Hoerr (Gilbane)	**CSI Code**	07530 - Thermoplastic Membrane Roofing
Subject	Submittal Package 100-07530-002.0		

We are transmitting the following to you:

☐ Product Data ☐ Samples ☐ Shop Drawings ☐ O&M Manuals ☐ Plans
☐ Architectural Drawings ☐ Letters ☐ Specifications ☐ Prints ☐ Addenda
☐ Engineering Drawings ☐ Change Orders ☑ Submittal

Submittals

Pkg. No./Rev.	Item No./Rev.	Description	Copies	Reason	Action
100-07530-002.0	100-07530-008.0	Tapered Insulation Layout Plan	7	For Approval	

Remarks As discussed in the 8/31/07 roofing meeting, EC Matthews has submitted the tapered insulation layout plan. David Proffitt is to make "approved as noted" notations on the drawing per his marked up sketch of 8/31/07.

Also as discussed in the meeting, the previously submitted 18 x 24 roofing drawing and product data are "approved as noted" and do not need to be resubmitted.

Brian Hoerr

Received By _____ Printed Name _____ Date _____

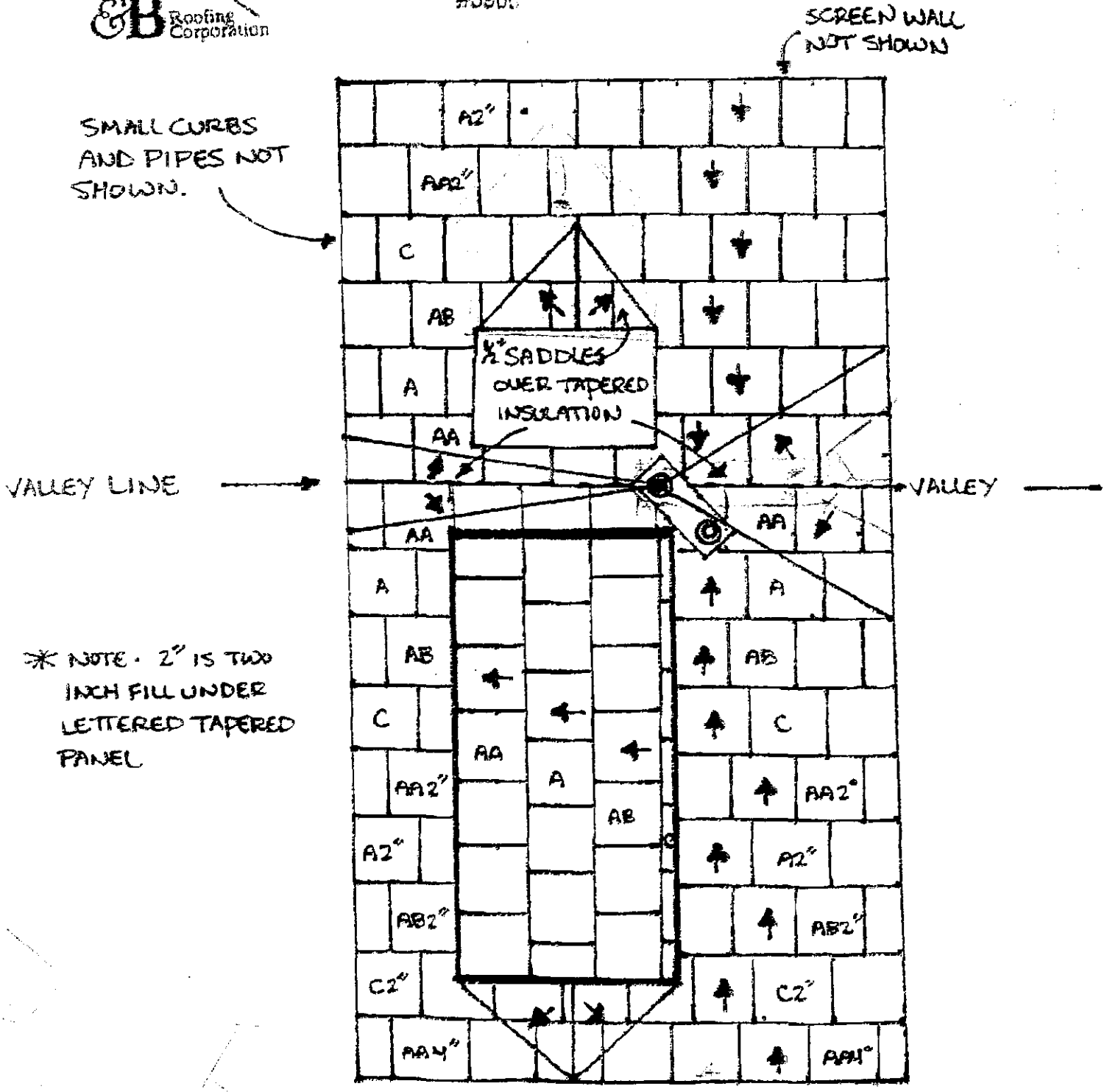
Linked Documents

Document Type	Document	Open	Description	Date
Sub. Pkg.	100-07530-002.0			

Distribution

STEPHAN ROETHKE
PRESIDENT
D & B Roofing Corporation

D & B Roofing Corp.
1819 West Main Street • Louisville, KY 40203
(502) 589-5151 Business
(502) 589-9495 FAX



* NOTE · 2" IS TWO INCH FILL UNDER LETTERED TAPERED PANEL

UK PARKING GARAGE • TAPERED INSUL.

SCALE- ⅛" = 1'-0"

GILBANE
University of Kentucky
Patient Care Facility
Gilbane Project No. 18-3966

REVIEWED

☐ 010-Hugwelet ☒ 020-Garage
☐ 030-Infrastructure ☐ 040-PCF Foundation
☐ 050-PCF Core/Shell ☐ 060-TowerUp Fit

Bid Package No. 100
Submittal No. 100-075530-002
Spec. Sect/Para. _____
Reviewed By BH
Date 9/10/07

This review does not constitute nor does it assume design responsibility nor does it relieve the trade contractor's supplier from complying with the contract requirements, coordinating their work with other trade contractors and verifying field dimensions.

PK-002
item_008

THIS REVIEW BY GBBN ARCHITECTS, INC., IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND IS NOT AN APPROVAL OF THIS DRAWING OR SET OF DRAWINGS. THE COMMENTS MADE DO NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH THE PROJECT DRAWINGS, SPECIFICATIONS AND OTHER CONTRACT DOCUMENTS. CONTRACTOR IS SOLELY RESPONSIBLE FOR: ALL DIMENSIONS AND QUANTITIES; ALL FABRICATION, DELIVERY AND ERECTION; ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES; ALL COORDINATION WITH ALL OTHER CONTRACTORS, SUPPLIERS AND OTHERS; PERFORMING ALL WORK IN A SAFE AND PROPER MANNER.

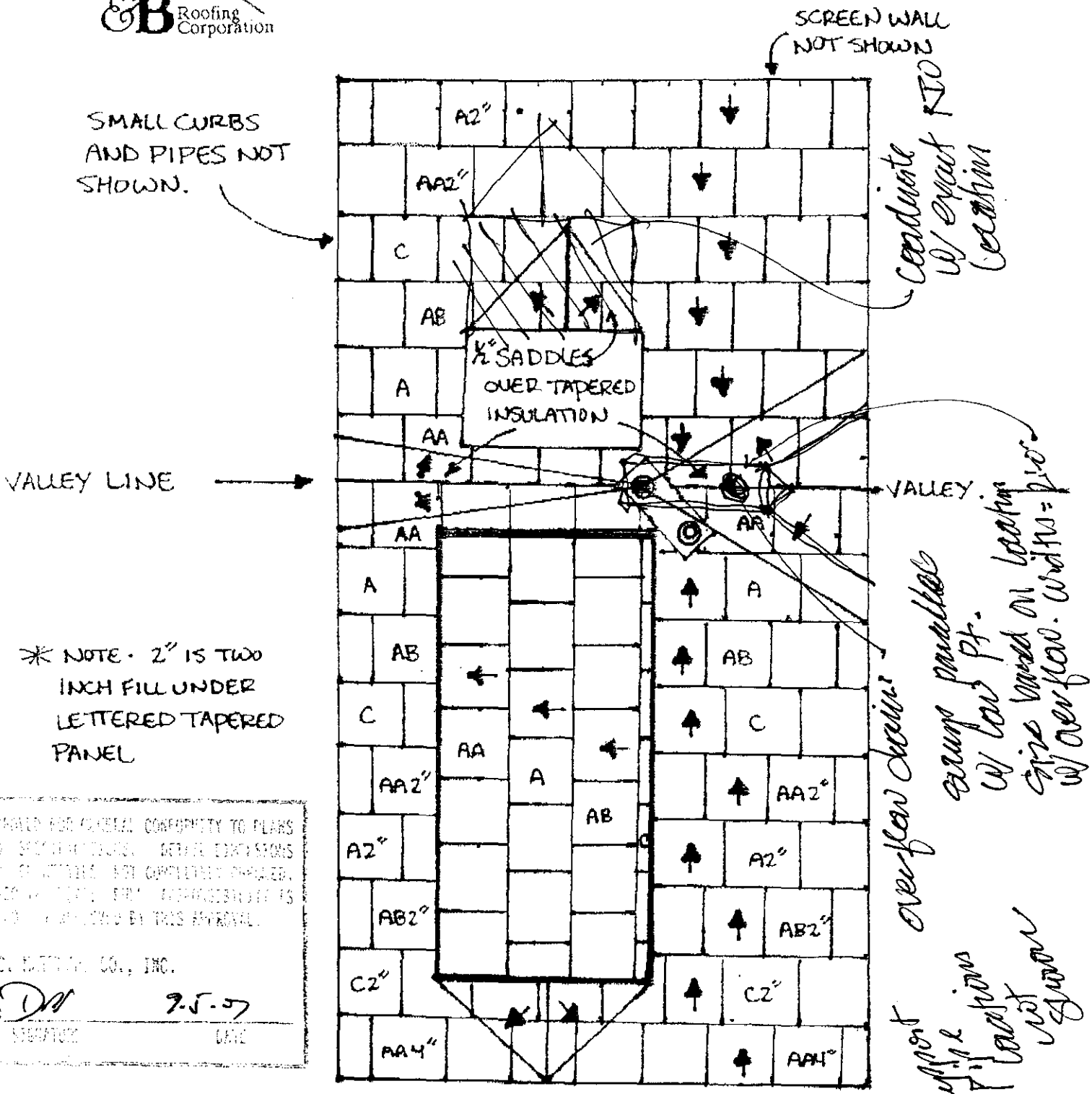
NO EXCEPTIONS TAKEN	
FURNISH AS CORRECTED	✓
REVISE AND RESUBMIT	
NO REVIEW - INCOMPLETE	
SUBMIT SPECIFIED ITEMS	
REJECTED	

DATE 9/11/07 BY DRD

GBBN ARCHITECTS, INC.
ARCHITECTURE, INTERIORS, PLANNING, ENGINEERING
☐ 332 EAST 8TH STREET, CINCINNATI, OHIO 45202-2217 (513) 241-8700
☐ 325 WEST MAIN STREET, LEXINGTON, KENTUCKY 40507 (859) 381-8787

STEPHAN ROETHKE
PRESIDENT

D & B Roofing Corp.
1819 West Main Street • Louisville, KY 40203
(502) 589-5151 Business
(502) 589-9495 FAX



APPROVED FOR GENERAL CONFORMITY TO PLANS AND SPECIFICATIONS. DETAIL DIMENSIONS AND QUANTITIES NOT CHECKED OR CHECKED. SHOP DRAWINGS MUST BE SUBMITTED AS REQUIRED BY THE CONTRACT DOCUMENTS.

E.C. ERTEL CO., INC.

BY: [signature] 7-5-07
SIGNATURE DATE

UK PARKING GARAGE • TAPERED INSUL.

SCALE- 1/8" = 1'-0"

Gilbane

Transmittal

Project [2239.2] - PCF - Hospital - Garage **View Date** 2/18/2008

Gilbane
940 Elizabeth St
Lexington, KY 40506-0293
Phone: (859) 257-4536
Fax: (859) 323-1331

Transmittal No. 2239.2-00795

To	Mr. Doug Sherwood E. C. Matthews Co., Inc. 2265 Harrodsburg Road Lexington, KY 40504 USA Phone: (859) 278-3131 Fax: (859) 277-7903	**Date**	3/18/2007
		Items listed are being sent	
		☑ Enclosed	
		☐ Under Separate Cover	
		Via	U.S. Mail
		CSI Code	07600 - Flashing and Sheet Metal
From	Mr. Ryan Maguire (Gilbane)		
Subject	Submittal Package 100-07600-001.0		

We are transmitting the following to you:

☐ Product Data ☐ Samples ☐ Shop Drawings ☐ O&M Manuals ☐ Plans
☐ Architectural Drawings ☐ Letters ☐ Specifications ☐ Prints ☐ Addenda
☐ Engineering Drawings ☐ Change Orders ☑ Submittal

Submittals

Pkg. No./Rev.	Item No./Rev.	Description	Copies	Reason	Action
100-07600-001.0	100-07600-002.0	Flashing Color Samples	2	Approved as Noted	
100-07600-001.0	100-07600-003.0	Flashing Shop Drawings	2	Approved as Noted	

Remarks

	Mr. Ryan Maguire	3/18/2007
From	Printed Name	Date
Received By	Printed Name	Date

Linked Documents

Document Type	Document	Open	Description	Date
Sub. Pkg.	100-07600-001.0			

Distribution

Recipient	Company	Method	Date
Doug Sherwood	E. C. Matthews Co., Inc.	Message	3/18/2007

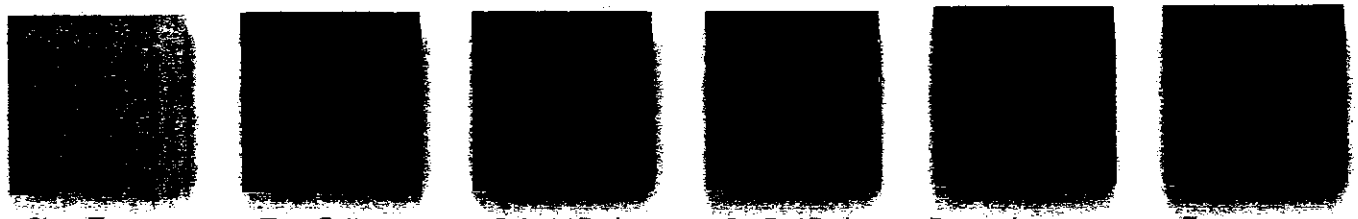
PAC-CLAD

Petersen Aluminum

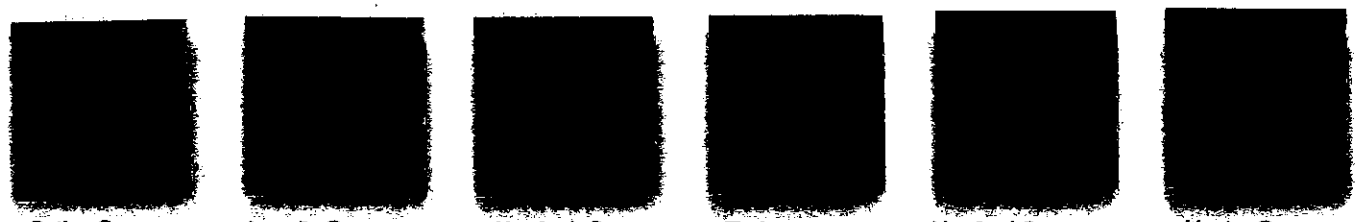
Kynar 500® or Hylar 5000® pre-finished galvanized steel and aluminum for roofing, curtainwall and storefront applications.

▲ Stone White | ▲ Bone White | ▲ Slate Gray | ▲ Musket Gray | ▲ Charcoal | ▲ Matte Black

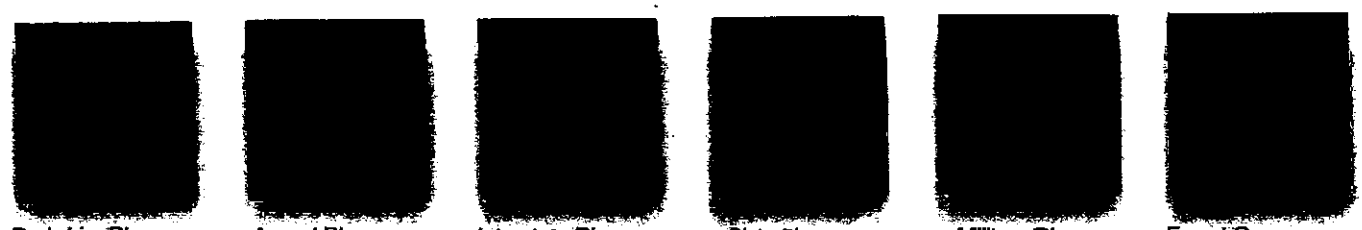
▲ Almond | ▲ Sandstone | ▲ Granite | ▲ Medium Bronze | ▲ Dark Bronze | ▲ Mansard Brown



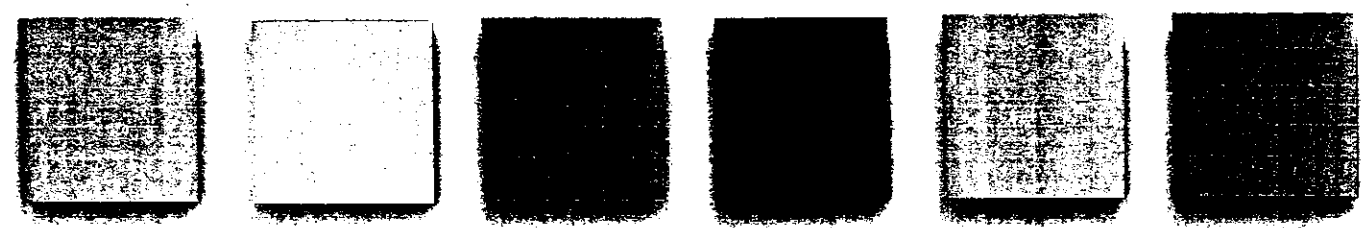
▲ Sierra Tan | ▲ Terra Cotta | ▲ Colonial Red | ▲ Cardinal Red | Burgundy | ▲ Evergreen



▲ Patina Green | Arcadia Green | ▲ Hemlock Green | ▲ Teal | Hartford Green | ▲ Hunter Green



Berkshire Blue | Award Blue | Interstate Blue | ▲ Slate Blue | ▲ Military Blue | Forest Green



●▲ Zinc | ●▲ Silver | ●▲ Copper Penny | ●▲ Aged Copper | ●▲ Champagne | ●▲ Weathered Zinc

▲ PAC-CLAD® Cool Colors ● PAC-CLAD® Metallic Colors

*PAC-CLAD® Metallic finishes are available from stock at a moderate extra cost. PAC-CLAD® Copper Penny is a Non-Weathering finish.

*Chips represent colors on 24 ga. galvanized steel. Consult actual samples for these colors on aluminum sheet.

THIS REVIEW BY GBBN ARCHITECTS, INC., IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND IS NOT AN APPROVAL OF THIS DRAWING OR SET OF DRAWINGS. THE COMMENTS MADE DO NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH THE PROJECT DRAWINGS, SPECIFICATIONS AND OTHER CONTRACT DOCUMENTS. CONTRACTOR IS SOLELY RESPONSIBLE FOR: ALL DIMENSIONS AND QUANTITIES, ALL FABRICATION, DELIVERY AND ERECTION; ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES; ALL COORDINATION WITH ALL OTHER CONTRACTORS, SUPPLIERS AND OTHERS; PERFORMING ALL WORK IN A SAFE AND PROPER MANNER.

NO EXCEPTIONS TAKEN — [X]
FURNISH AS CORRECTED — [ ]
REVISE AND RESUBMIT — [ ]
NO REVIEW - INCOMPLETE — [ ]
SUBMIT SPECIFIED ITEMS — [ ]
REJECTED — [ ]

DATE 03.14.07 BY JAP

GBBN ARCHITECTS, INC.
ARCHITECTURE, INTERIORS, PLANNING, ENGINEERING
332 EAST 8TH STREET, CINCINNATI, OHIO 45202-2217 (513) 241-8700
325 WEST MAIN STREET, LEXINGTON, KENTUCKY 40507 (859) 381-8787

BONE WHITE COLOR
APPROVED

.032 PREFINISHED ALUMINUM THRU-WALL FLASHING UNDER LIMESTONE CAP SEE DETAIL NO. 1 SHEET 4

.032 PREFINISHED ALUMINUM THRU-WALL FLASHING UNDER LIMESTONE CAP SEE DETAIL NO. 1 SHEET 4

.032 PREFINISHED ALUMINUM THRU-WALL FLASHING UNDER LIMESTONE CAP SEE DETAIL NO. 1 SHEET 4

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.032 PREFINISHED ALUMINUM THRU-WALL FLASHING UNDER LIMESTONE CAP SEE DETAIL NO. 1 SHEET 4

SEE NOTE ON PAGE 4, MP

.032 PREFINISHED ALUMINUM THRU-WALL FLASHING UNDER LIMESTONE CAP SEE DETAIL NO. 1 SHEET 4

STAIR #1

STAIR #2

STAIR #3

STAIR #4

GRADE LEVEL PLAN

SCALE: 1/16"=1'-0"

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NO EXCEPTIONS TAKEN
FURNISH AS CORRECTED
REVISE AND RESUBMIT
NO REVIEW - INCOMPLETE
SUBMIT SPECIFIED ITEMS
REJECTED

DATE 03.14.07 BY HP

GBBN ARCHITECTS, INC
ARCHITECTURE, INTERIORS, PLANNING, ENGINEERING
3333 EAST 8TH STREET, CINCINNATI, OHIO 45202-2017 (513) 241-4030
2525 WEST MAIN STREET, LEXINGTON, KENTUCKY 40507 (859) 281-4787

THIS WALL FLASHING PROVIDED UNDER ANOTHER CONTRACT.
RFP-001 DELETES ALUMINUM FLASHING UNDER LIMESTONE CAPS.

PROVIDE SAMPLES PER SECTION 07600 - 1.4.C

GILBANE
University of Kentucky
Patient Care Facility
Gilbane Project No. 18-3986
REVIEWED
☐010-Huguenel ☒020-Garage
☐030-Infrastructure ☐040-PCF Foundation
☐050-PCF Core/Shell ☐060-Tower/Up Fit
Bid Package No. 18D
Submittal No. 18D-07120E001
Spec. Sect/Para.
Reviewed By MH
Date 2/14/07
This review does not constitute nor does it assume design responsibility nor does it relieve the trade contractor's supplier from complying with the contract requirements, coordinating their work with other trade contractors and verifying field dimensions.

APPROVED FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT AND THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS. REVIEW DOES NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH CONTRACT DOCUMENTS. CONTRACTOR IS RESPONSIBLE FOR CONFIRMING AND CORRELATING ALL QUANTITIES AND DIMENSIONS, FABRICATION PROCESSES, TECHNIQUES OF CONSTRUCTION, COORDINATION OF HIS WORK WITH THAT OF ALL OTHER TRADES AND THE SATISFACTORY PERFORMANCE OF HIS WORK.

F.C. TUCKER CO., INC.
BY: [signature] 2-15-07
SIGNATURE DATE

DATE 1/26/2007
SCALE 1/16"=1'-0"
NO.
DRAWN BY
APPROVED BY

REVISIONS

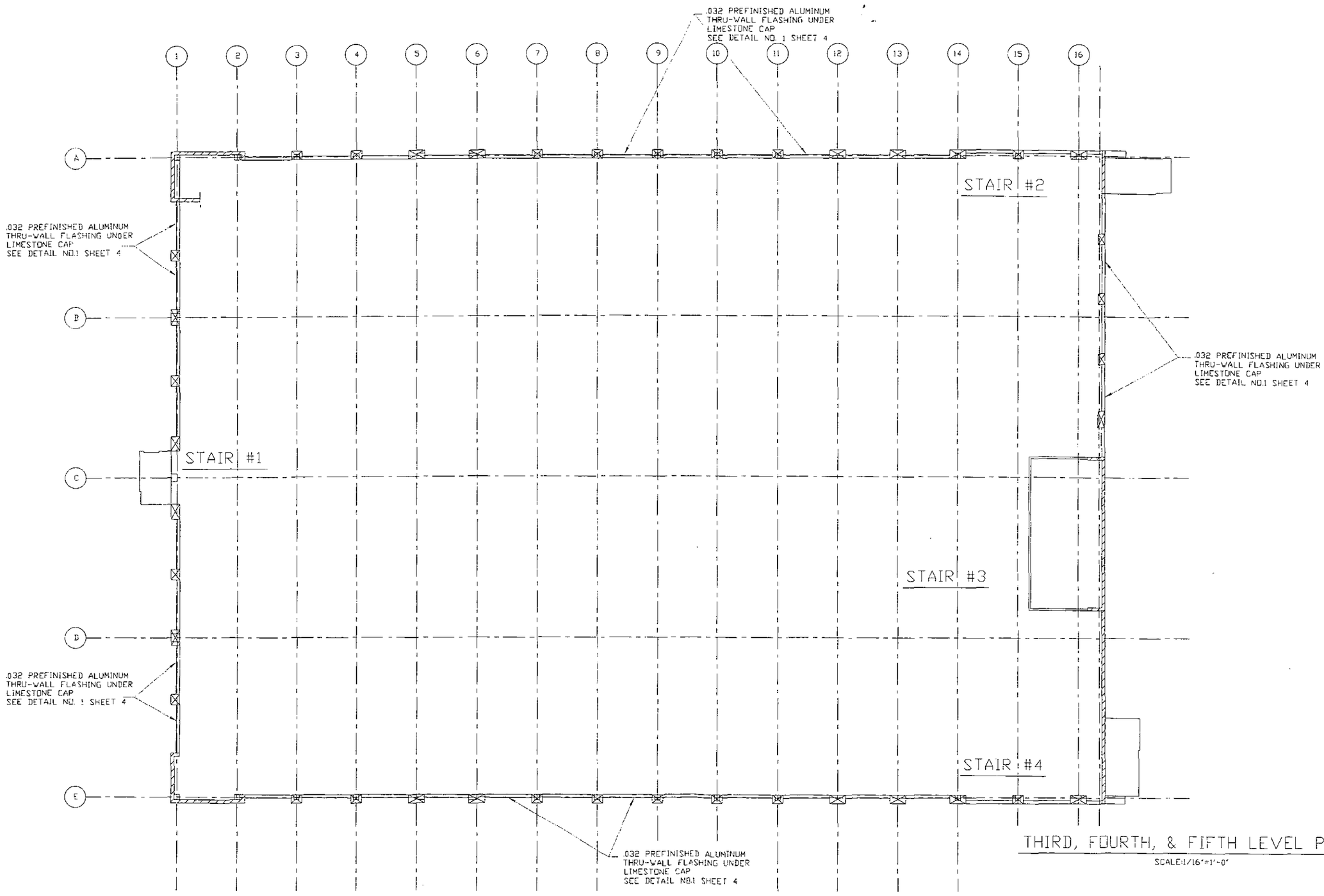
ENGINEER BY JCT

JOB NUMBER 16823

SHEET NUMBER 10f4

TITLE UK PATIENT CARE FACILITY
NEW GARAGE
GRADE LEVEL PLAN

MERRICK-KEMPER
5806 Ralph Avenue P.O. Box 105 Louisville, Kentucky 40201 • (502) 448-1234
SHEET METAL & ROOFING CONTRACTORS
SINCE 1902
ARCHITECTS/ENGINEER
OWNER/CONSTRUCTION MANAGER



THIRD, FOURTH, & FIFTH LEVEL PLAN

SCALE:1/16"=1'-0"

UK PATIENT CARE FACILITY
NEW GARAGE
THIRD, FOURTH, & FIFTH LEVEL PLAN

DATE 1/25/2007
SCALE 1/16"=1'-0"
DRAWN BY
CHECKED BY JCI
REVISIONS
DATE
JOB NUMBER 16823
DWG. NUMBER 2 OF 4

MERRICK-KEMPER
3800 Ralph Avenue, P.O. Box 105, Louisville, Kentucky 40201 • (502) 448-1434
SHEET METAL & ROOFING CONTRACTORS
SINCE 1902

CUSTOMER/CONTRACTOR
ARCHITECT/ENGINEER

.032 PREFINISHED ALUMINUM THRU-WALL FLASHING UNDER LIMESTONE CAP SEE DETAIL NO.1 SHEET 4

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

A B C D E

(TYP.) (TYP.) (TYP.)

EDPING CAP

SCUPPER, WATERHEAD, & DOWNSPOUT

STONE CAP

STAIR #2

(TYP.)

(TYP.)

.032 PREFINISHED ALUMINUM THRU-WALL FLASHING UNDER LIMESTONE CAP SEE DETAIL NO.1 SHEET 4

.032 PREFINISHED ALUMINUM THRU-WALL FLASHING UNDER LIMESTONE CAP SEE DETAIL NO. 1 SHEET 4

(TYP.)

(TYP.)

STAIR #1

COPING CAP

STONE CAP

SCUPPER, WATERHEAD, & DOWNSPOUT

STONE CAP

COPING CAP

DOWNSPOUT

GUTTER

SIDING & COPING CAP BY OTHERS

GROUND LEVEL ENTRANCE CANOPY

DOWNSPOUT

SCREEN WALL BY OTHERS

COPING CAP

DOWNSPOUT

GUTTER

COPING CAP

ELEVATOR ROOF REVISED PER RFQ-059

STAIR #3

.032 PREFINISHED ALUMINUM THRU-WALL FLASHING UNDER LIMESTONE CAP

SCUPPER, WATERHEAD, & DOWNSPOUT

STONE CAP

COPING CAP

.032 PREFINISHED ALUMINUM THRU-WALL FLASHING UNDER LIMESTONE CAP SEE DETAIL NO. 1 SHEET 4

(TYP.)

STAIR #4

(TYP.) (TYP.) (TYP.)

.032 PREFINISHED ALUMINUM THRU-WALL FLASHING UNDER LIMESTONE CAP SEE DETAIL NO. 1 SHEET 4

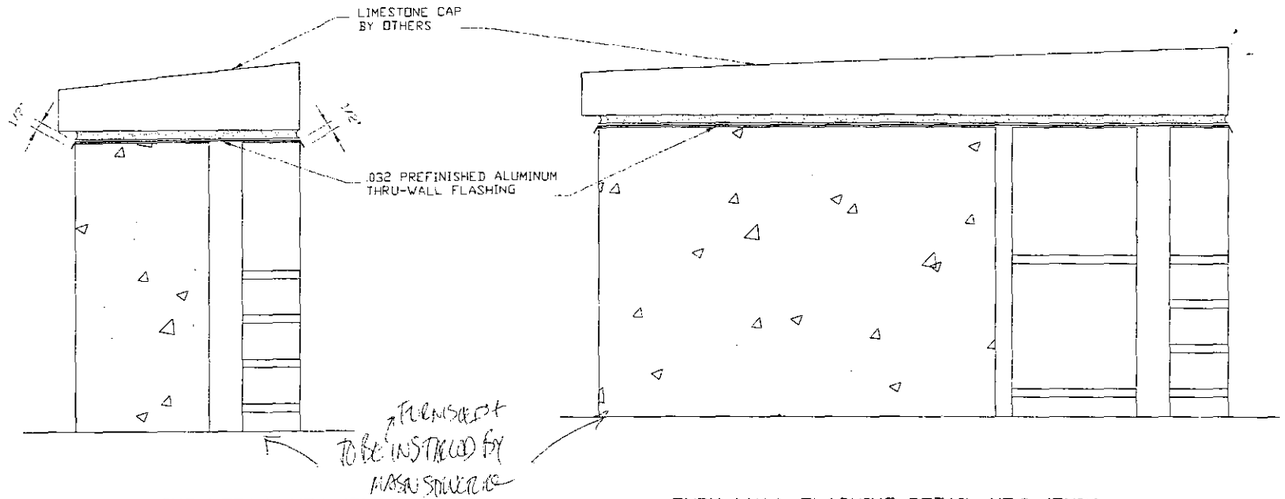
SIXTH LEVEL & ROOF PLAN

SCALE: 1/16"=1'-0"

MERRICK-KEMPER
3808 Poplar Avenue, P.O. Box 155, Lewisville, Kentucky 41050 • (502) 449-1234
SHEET METAL & ROOFING CONTRACTORS
SINCE 1902

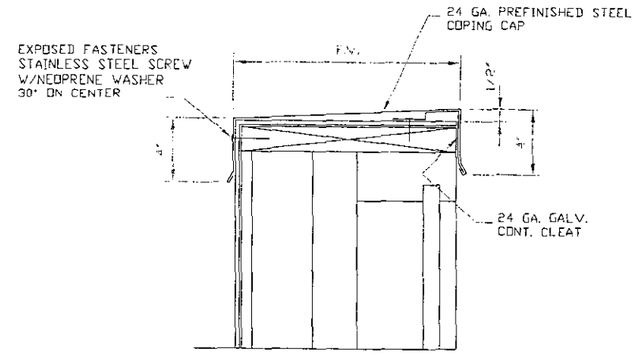
UK PATIENT CARE FACILITY
NEW GARAGE
SIXTH LEVEL & ROOF PLAN

NO.	DATE	REVISIONS	DRAWN BY	CHECKED BY	JOB NUMBER	DWG NUMBER
	1/29/2007	SCALE: 1/16"=1'-0"		JCT	16823	3of4



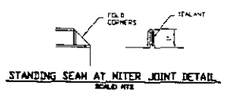
THRU-WALL FLASHING DETAIL NO.1 (TYP.)
SCALE: 3"=1'-0"

THRU-WALL FLASHING DETAIL NO.2 (TYP.)
SCALE: 3"=1'-0"

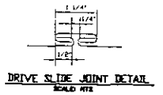


COPING CAP DETAIL NO.3
SCALE: 3"=1'-0"

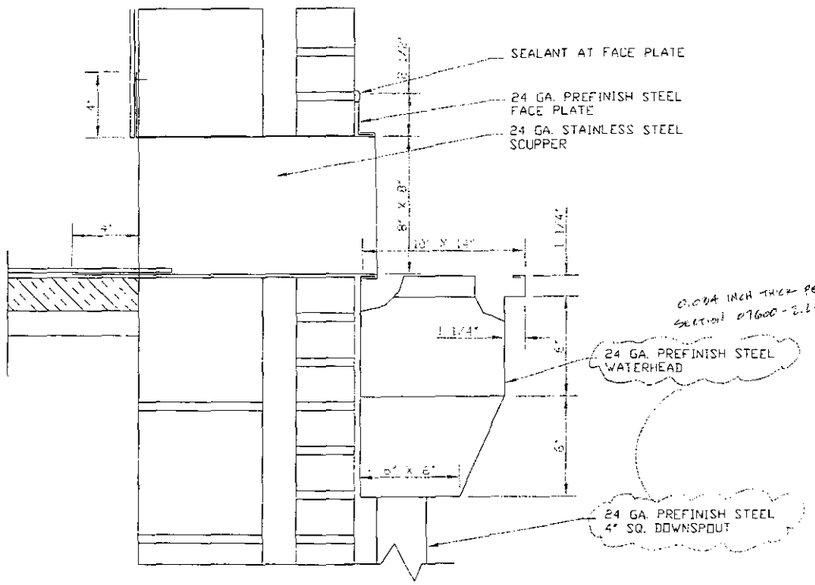
COPING CAP NOTES:
1. JOINTS - DRIVE SLIDES
2. MITERS - STANDING SEAM



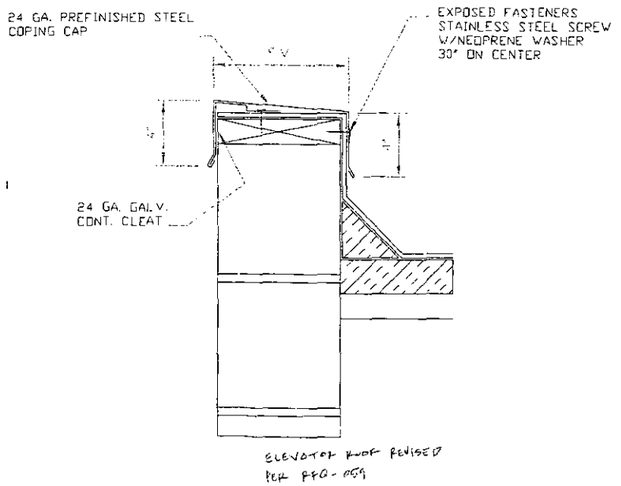
STANDING SEAM AT MITER JOINT DETAIL
SCALE: NTS



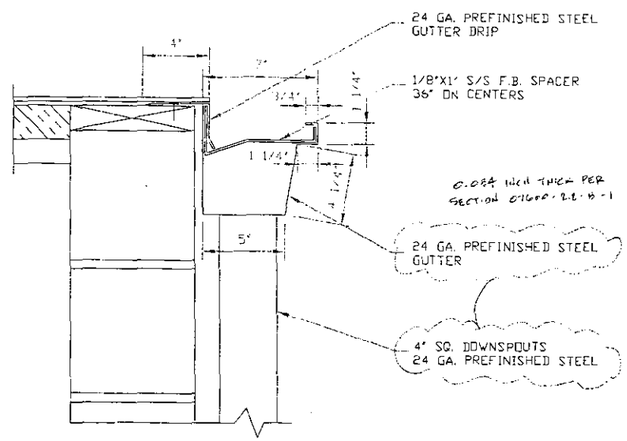
DRIVE SLIDE JOINT DETAIL
SCALE: NTS



WATERHEAD & SCUPPER DETAIL NO. 4
SCALE: 3"=1'-0"



COPING CAP DETAIL NO.5
SCALE: 3"=1'-0"



GUTTER DETAIL NO.6
SCALE: 3"=1'-0"

UK PATIENT CARE FACILITY
NEW GARAGE
SHEET METAL DETAILS

DATE: 1/25/2007
SCALE: 1/16"=1'-0"
DRAWN BY:
APPROVED BY:
REVISIONS
DESIGNED BY: JCT
DRAWN BY:
JOB NUMBER: 16823
SHT. NUMBER: 4 of 4

MERRICK-KEMPER
3909 Ralph Avenue P.O. Box 100, Louisville, Kentucky 40201 • (502) 448-1324
SHEET METAL & ROOFING CONTRACTORS
SINCE 1902

Gilbane

Transmittal

Project [2239.2] - PCF - Hospital - Garage

View Date 2/18/2008

Gilbane
940 Elizabeth St
Lexington, KY 40506-0293
Phone: (859) 257-4536
Fax: (859) 323-1331

Transmittal No. 2239.2-00932

To Mr. Doug Sherwood E. C. Matthews Co., Inc. 2265 Harrodsburg Road Lexington, KY 40504 USA Phone: (859) 278-3131 Fax: (859) 277-7903	**Date** 6/13/2007 **Items listed are being sent** ☑ Enclosed ☐ Under Separate Cover **Via** Hand Delivered **CSI Code** 07800 - Spray Applied Fireproofing
From Mr. Brian Hoerr (Gilbane)	
Subject Submittal Package 100-07800-002.0	

We are transmitting the following to you:

☐ Product Data ☐ Samples ☐ Shop Drawings ☐ O&M Manuals ☐ Plans
☐ Architectural Drawings ☐ Letters ☐ Specifications ☐ Prints ☐ Addenda
☐ Engineering Drawings ☐ Change Orders ☑ Submittal

Submittals

Pkg. No./Rev.	Item No./Rev.	Description	Copies	Reason	Action
100-07800-002.0	100-07800-009.0	Misc. Fireproffing Resubmittal	2	Approved as Noted	

Remarks Please see GBBN remarks on their transmittal. Thank you.

	Mr. Brian Hoerr	6/13/2007
From	Printed Name	Date
Received By	Printed Name	Date

Linked Documents

Document Type	Document	Open	Description	Date
Sub. Pkg.	100-07800-002.0			

Distribution

Recipient	Company	Method	Date
Doug Sherwood	E. C. Matthews Co., Inc.	Message	6/13/2007

Gilbane

Transmittal

Project [2239.2] - PCF - Hospital - Garage

View Date 2/18/2008

Gilbane
940 Elizabeth St
Lexington, KY 40506-0293
Phone: (859) 257-4536
Fax: (859) 323-1331

Transmittal No. 2239.2-00636

To	Mr. Doug Sherwood E. C. Matthews Co., Inc. 2265 Harrodsburg Road Lexington, KY 40504 USA Phone: (859) 278-3131 Fax: (859) 277-7903	**Date**	1/15/2007
		Items listed are being sent	
		☑ Enclosed	
		☐ Under Separate Cover	
		Via	U.S. Mail
		CSI Code	07800 - Spray Applied Fireproofing
From	Mr. Ryan Maguire (Gilbane)		
Subject	Submittal Package 100-07800-001.0.0		

We are transmitting the following to you:

☐ Product Data ☐ Samples ☐ Shop Drawings ☐ O&M Manuals ☐ Plans
☐ Architectural Drawings ☐ Letters ☐ Specifications ☐ Prints ☐ Addenda
☐ Engineering Drawings ☐ Change Orders ☑ Submittal

Submittals

Pkg. No./Rev.	Item No./Rev.	Description	Copies	Reason	Action
100-07800-001.0.0	100-07800-001.0	Fireproofing Product Data	2	Approved as Noted	

Linked Documents	Document Type	Document	Open	Description	Date
	Doc	2239.2-00924		100-07800-001.0	4/16/2007

Pkg. No./Rev.	Item No./Rev.	Description	Copies	Reason	Action
100-07800-001.0.0	100-07800-002.0	Fireproofing Shop Drawings	2	Approved as Noted	

Linked Documents	Document Type	Document	Open	Description	Date
	Doc	2239.2-00925		100-07800-001.0	4/16/2007

Pkg. No./Rev.	Item No./Rev.	Description	Copies	Reason	Action
100-07800-001.0.0	100-07800-003.0	Fireproofing Product Certification	2	Approved as Noted	

Linked Documents	Document Type	Document	Open	Description	Date
	Doc	2239.2-00926		100-07800-001.0	4/16/2007

Pkg. No./Rev.	Item No./Rev.	Description	Copies	Reason	Action
100-07800-001.0.0	100-07800-005.0	Fireproofing Compatibility Test Reports	2	Approved as Noted	

Linked Documents	Document Type	Document	Open	Description	Date
	Doc	2239.2-00927		100-07800-001.0	4/16/2007

Pkg. No./Rev.	Item No./Rev.	Description	Copies	Reason	Action
100-07800-001.0.0	100-09900-006.0	Intumescent Paints	2	Approved as Noted	

Remarks See comments on GBBN transmittal sheet. Resubmit items noted.

From	Printed Name	Date
	Mr. Ryan Maguire	1/15/2007

Received By	Printed Name	Date

Linked Documents

Document Type	Document	Open	Description	Date
Sub. Pkg.	100-07800-001.0.0			

Distribution

Recipient	Company	Method	Date
Doug Sherwood	E. C. Matthews Co., Inc.	Message	1/15/2007

Submittal Package

Project Title: UK PCF Parking Garage

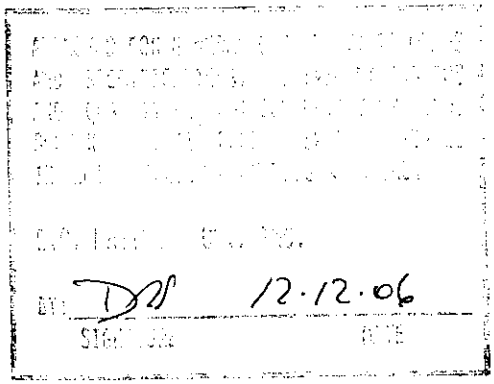
Contractor: AES, LLC Specialty Contractors

General Contractor: E.C. Matthews Co., Inc

Date: September 18, 2006

Product Submitted: Spray on Intumescent Fireproofing
Spray on Cementitious Fireproofing

Number of Copies: 9

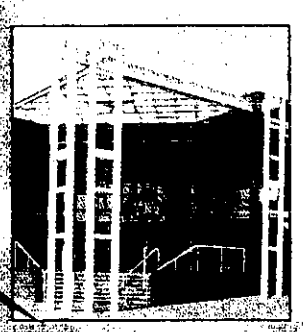


Cementitious Fireproofing:
1 Hour Roof Design P741
Thickness 3/8 inch on beams
Thickness 11/16 inch on deck

Intumescent Fireproofing:
2 hour Fireproofing on Tube columns
There are a total of six (6) columns that receive intumescent located at stairwell #1, #2, #4
Thickness per UL Design x638

FIREPROOFING SYSTEMS

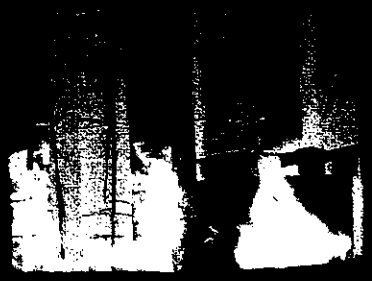
AD and Carboline fireproofing systems offer solutions for all types of projects where steel is required to be protected from fire. We have the range and depth of product offering to solve some of the toughest design challenges facing the industry.



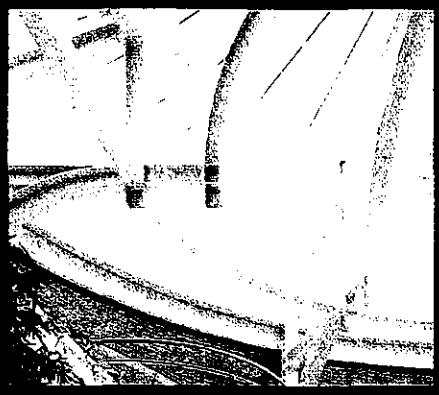
Why Protect Steel from Fire?

Steel retains only about half (50%) of its strength when it reaches 1100°F (600°C). Temperatures during fires can be much hotter - a standard fire test reaches 1300°F (704°C) in the first 10 minutes. If left unprotected, the structure may collapse when exposed to fire.

Building codes require certain beam, column, floor, wall and roof assemblies to have fire-resistance ratings which are determined on the basis of standard fire tests. Fire resistance ratings can be accomplished with the application of sprayed fire resistive materials (fireproofing) to those assemblies.



Columns exposed to a standard ASTM E119 (UL263) fire exposure



A/D FIREFILM II on structural steel

Southwest Fireproofing Type 5GP on steel beams & decking

Performance Requirements	Nullifire® S605	Nullifire® S606	Nullifire® S607	A/D FIREFILM II	A/D Type 5 GP®	A/D Type 5 MD®	Pyrolite® 15	Pyrolite® 15 High Yield	A/D Type 7 GP®	A/D Type 7 HD®	Pyrolite® 22	Pyrocrete® 40	Pyrocrete® 239	Pyrocrete® 241
Up to 2 hrs Fire Rating	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Up to 3 hrs Fire Rating		•		•	•	•	•	•	•	•	•	•	•	•
Up to 4 hrs Fire Rating		•			•	•	•	•	•	•	•	•	•	•
Internal Steelwork	•	•	•	•	•	•	•	•	•	•	•	•	•	
External Steelwork	•											•		•
High Humidity	•								•	•		•	•	•
Semi-External Steelwork	•	•			2	2	2	2	2	•	2	•	•	•
Steel Exposed to View	•	•	•	•	•	•			•	•	•	•	•	•
Steel Hidden from View	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Highly Decorative Finish	•	•	•	•										
Non-Dusting Finish	•	•	•	•										
Impact Resistant	1	1	1	1	•	•	•	•	•	•	•	•	•	•
Suitable for Shop Application	•	•	•	•								•		•
Acoustic Requirement									•				•	

1 = Intumescent coatings can be easily repaired if damaged.
2 = Suitable for construction.

intumescent cementitious industrial

...Right Where You Need It!

Carboline Company, a world leader in industrial fire protection and high performance coatings, and A/D Fire Protection Systems, a world leader in intumescent fire resistive coatings, have joined to offer the most complete fireproofing package available from any single source.

Where Do YOU Need Fireproofing?

A
Atrium/Steel

B
Elevator Shaft/Stairwell

C
Support Structural Steel

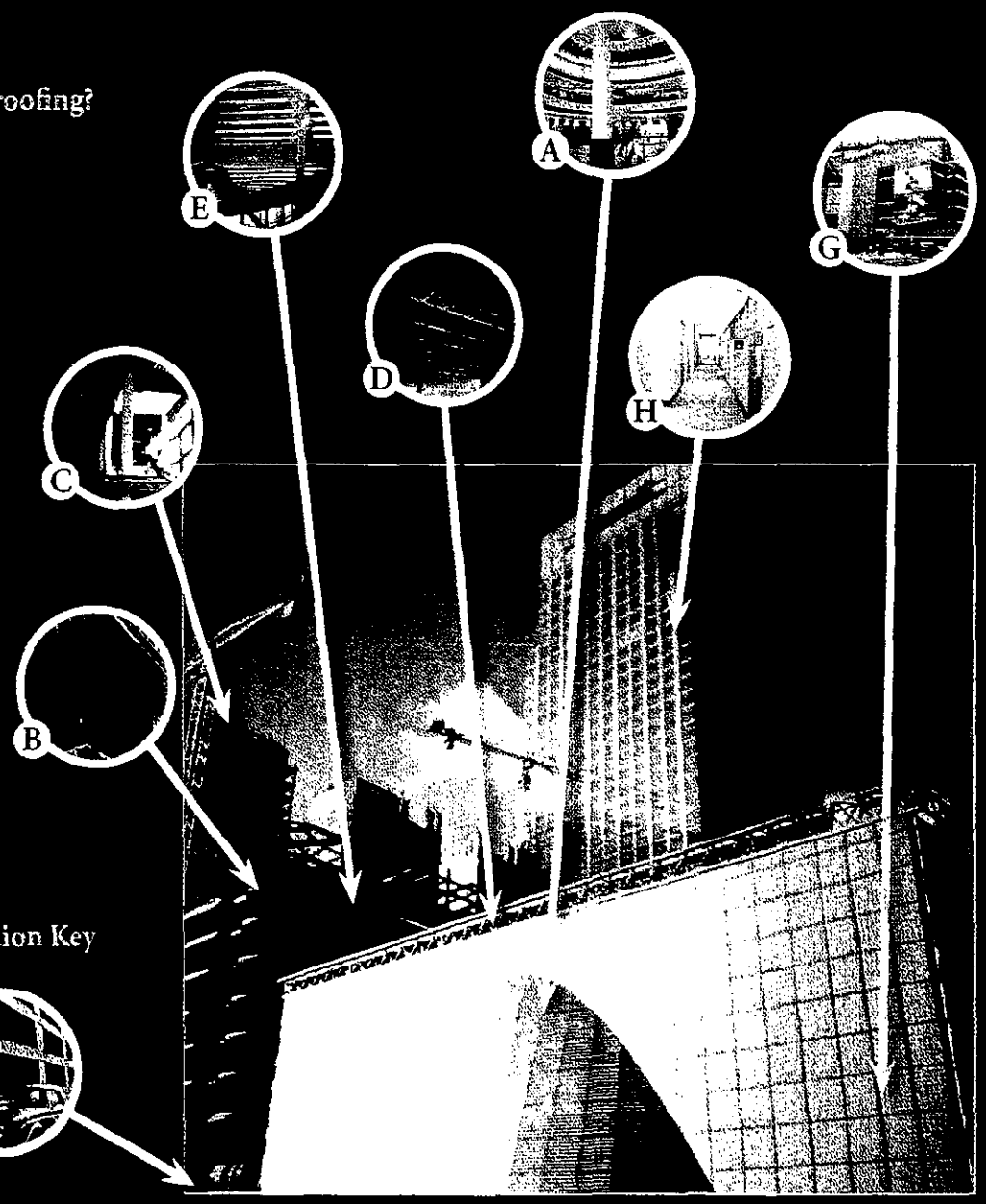
D
Roof Truss

E
Floor/Beam Assembly

F
Parking Garage

G
Arenas/Mechanical Room

H
Drop Ceiling



Fireproofing Product Selection Key

- Intumescent
- High Density
- Low/Med Density

Just Call Us (In USA: 800-848-4645 - In Canada: 800-263-4087)

We have a team of trained applicators available to apply the products ensuring a high quality of workmanship. In addition, a helpful and knowledgeable technical staff is always available to help you plan your project, or to answer any questions that you may have.

A/D FIREFILM II Nullifire®

Decorative, Intumescent Fire Resistive Coatings for Structural Steel

A/D FIREFILM II and Nullifire Intumescent Fireproofing Systems allow designers to express the steel structure as an art form in buildings where fire resistance ratings are required. With multiple product choices and a wide spectrum of primers and finishes, specifications can be developed for all building types, project requirements and conditions.

Project planners now have flexibility to create unique exposed steel designs where fire resistance ratings are required, with aesthetically pleasing, durable and cost effective alternatives.

- Thin-Film
- Virtually unlimited colors
- Painted steel appearance
- Smoothest fire protection finish

- Superior bond strength
- Hammer hand
- High impact resistance
- Abrasion resistance
- High compressive strength

- Space-saving, smaller column footprints for ease of pedestrian movement
- Lightweight
- Low-maintenance
- Water- and solvent-based available

- Extensive approvals - UL, ULC, ITS, FM, MEA, LA
- Fire ratings up to 3 hours
- VOC compliant (water-based)

Centennial HP Science and Technology Centre, Toronto, Ontario
Architect: Kuwabara Payne McKenna Blumberg (KPMB). Photo: Gil Alkin

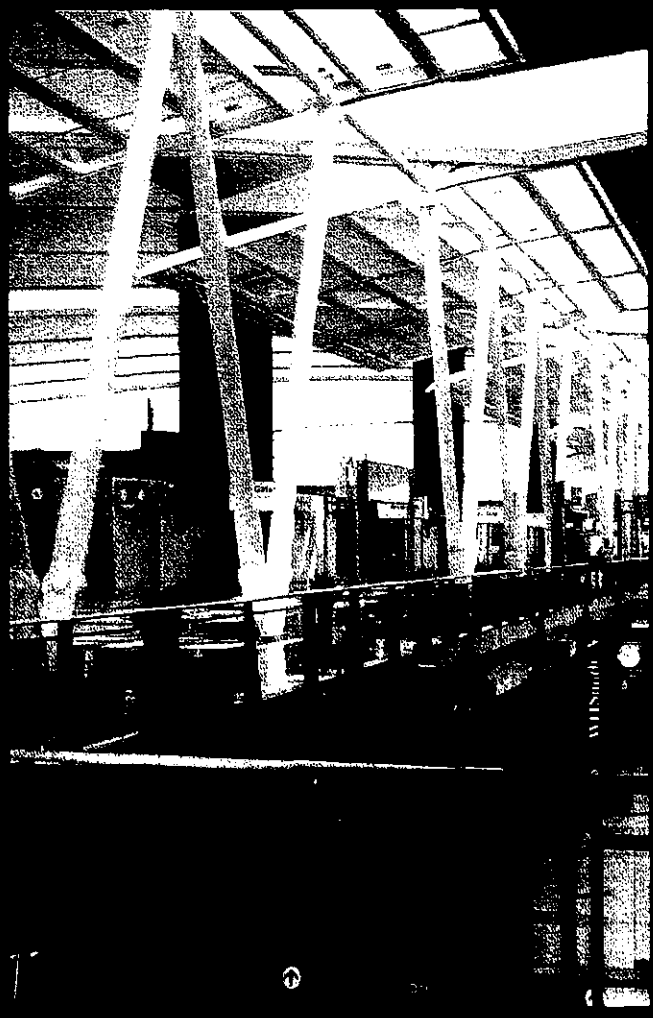
Product Comparison

	A/D FIREFILM II	Nullifire S607	Nullifire S606	Nullifire S605
Fire Ratings (Columns)	Up to 3 hours	Up to 2 hours	Up to 4 hours	Up to 2 hours
Fire Rating (Beams)	Up to 2 hours	Up to 2 hours	Up to 4 hours	Up to 2 hours
Color*	White	White	Pale Pink	Pale Green
Hardness (Shore D)	80	75	70	70
VOC lbs/gal	.17	.44	2.49	2.44
Primer Required	Yes	Yes	Yes	Yes
Topcoat - Interior General Purpose	Required	Required	Required	Required
Topcoat - Interior Conditioned Space	Required	Optional	Optional	Optional

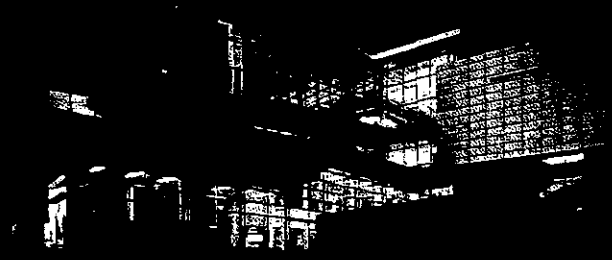
*Topcoats available in wide range of colors.

Fire Test Designs and Approvals

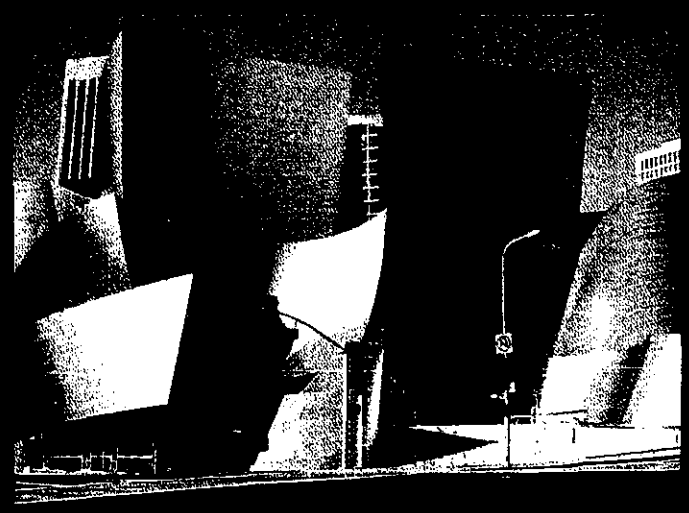
Steel Member	A/D FIREFILM II	Nullifire S607	Nullifire S606	Nullifire S605
W-Shape Columns	UL X641, X643, X639, X640 ULC Z610, Z612, Z608, Z609	UL X635	UL X632	UL X629
Tube Columns	UL X642, X644 ULC Z611, Z616	UL X636	UL X633	UL X630
Pipe Columns	UL X642, X645 ULC Z611, Z617	UL X637	UL X634	UL X631
Beams	WH AD/FCA 120-01 ULC F906, F910, F912	UL N611, D786 & D937	UL N610, D785 & D936	UL N609, D784 & D935
MEA (New York City)	108-94-S, 242-92-S, 304-98-S	176-00-M, 177-00-M 178-00-M	174-00-M, 175-00-M 97-00-M	171-00-M, 172-00-M 173-00-M
City of Los Angeles	RR 25440	RR25464	RR25464	RR25464
Factory Mutual	Column Protection Methods 3, 4 & 5			



JFK International Arrivals, New York, NY
Architect: Skidmore Owings & Merrill, Photo: A/D Fire Protection Systems



Centennial HP Science and Technology Centre, Toronto, Ontario
Architect: Kuwabara Payne McKenna Blumberg (KPMB), Photo: Gill Alkin

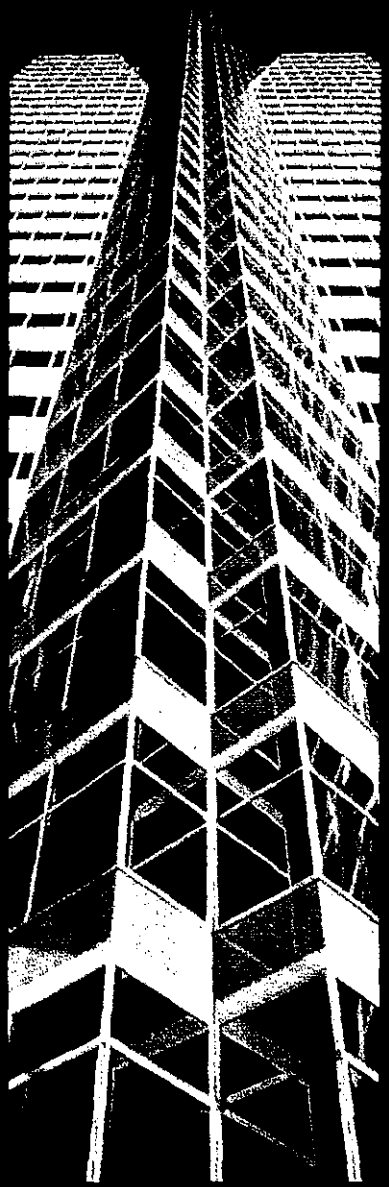


Walt Disney Concert Hall, Los Angeles, CA
Architect: Frank Gehry, Photo: Bruno Stieg

Pyrolite

...Listed in Over 150 U.L. Designs

Southwest Fireproofing Type 5GP, Pyrolite 15/15 High Yield and Pyrolite 22 are listed in over 150 U.L. Designs, offering the specifier flexibility in design and construction.



- 15 lb. Low density, cementitious, spray on fireproofing for structural steel columns, beams, joists, floor deck, roof deck and walls.
- Single component, user friendly, good film build and manufactured under strict Quality Standards with U.L. Follow Up Service for consistent quality in every bag.
- Used in a variety of commercial applications including hospitals, schools, parking structures, pharmaceutical plants and other commercial buildings.

- 22 lb. Medium density, cementitious, spray on fireproofing for structural steel columns, beams, joists, floor deck, roof deck and walls.
- Single component, user friendly, good film build and manufactured under strict Quality Standards with U.L. Follow Up Service for consistent quality in every bag.
- Used in a variety of commercial applications where a more durable fireproofing is required such as, elevator shafts, mechanical rooms, warehouse areas, parking structures.

- 28 lb. Medium density, portland cement base fireproofing can be sprayed or trowelled for protection for structural steel columns, beams, joists, floor deck, roof deck or walls.
- Single component, user friendly, good film build and manufactured under strict ISO 9000 Quality Standards with U.L. Follow Up Service for consistent quality in every bag.
- Used in a variety of commercial applications where a more durable fireproofing is required such as, elevator shafts, mechanical rooms, warehouse areas, parking structures.
- U.L. Exterior Rated - Requires no topcoat
- Factory Mutual Approval for 15 minute protection of urethane foam.
- Excellent Acoustical Ratings - NRC (Noise Reduction Co-efficient) 0.75

Product Comparison

		Type 5GP™	Pyrolite 15/15 High Yield	Pyrolite 22	Type 5MD™	Type 7GP™	Pyrocrete 239
Density	ASTM E605	15	15.5	22	22-26	22	28
Shore "D" Hardness	ASTM D2240	N/A	N/A	N/A	N/A	20.1	N/A
Bond Strength	ASTM E736	>200 psf	515 / 314 psf	653 psf	400 psf	>2000 psf	550 psf
Compressive Strength	ASTM E761	2,340 psf	2,232 psf	6,019 psf	16,992 psf	17,136 psf	15,120 psf
Impact Resistance	ASTM E760	Pass	Pass	Pass	Pass	Pass	Pass
Deflection	ASTM E759	Pass	Pass	Pass	Pass	Pass	Pass
Corrosion	ASTM E937	0.00 g/mm	0.00 g/mm	0.00 g/mm	0.00 g/mm	0.00 g/mm	0.00 g/mm
Flame Spread	ASTM E84	0	10	10	0	0	2
Smoke Development	ASTM E84	0	0	0	0	0	0

...The Best Protection Under Fire

Carboline's Pyrocrete products offer a level of unparalleled performance in the refinery and petrochemical industries.

Pyrocrete 241 has been the industry leader for over 29 years and is the most widely specified fireproofing product in the industry today. Pyrocrete 240 High Yield and Pyrocrete 40 offer the same level of fire resistance at a more competitive price.

Pyrocrete products are UL "Exterior Rated", hard, durable and impact resistant.

Pyrocrete 241 - UL1709 Rapid Temperature Rise Ratings:

XR701- (contour design) 1-4 hour protection

XR702- (boxed design) 1-4 hour protection
Three Bar Overblast Test
Jet Fire Test
Factory Mutual Approved for 2-hour protection of LP Gas Vessels

Bulkhead Ratings - Tested by FIRTO
Approved by: Det Norske Veritas
Approved by: Lloyd's Register of Shipping

Pyrocrete 240 High Yield - UL1709 Rapid Temperature Rise Ratings:

XR716- (contour design) 1-4 hour protection

XR717- (boxed design) 1-4 hour protection

Pyrocrete 40 - UL1709 Rapid Temperature Rise Ratings:

XR705- (contour design) 1-4 hour protection

XR706- (boxed design) 1-4 hour protection

XR707- (contour / no lath design) 1-4 hour protection

Pyrocrete Type 7HD™

Listed in more then 100 UL Designs. Higher density, harder and stronger than general fireproofing, for those demanding building construction uses that require the physical properties of a high density product, but without the extra requirements of petrochemical environments.

Product Comparison

		Pyrocrete 241	Pyrocrete 240HY	Pyrocrete 40	Type 7HD™
Density	ASTM E605	55	47-50	40	40
Shore "D" Hardness	ASTM D2240	55	50-55	40	40
Bond Strength	ASTM E736	1146 psf	2097 psf	1317 psf	>6000 psf
Compressive Strength	ASTM E761	817 psi	836 psi	594 psi	350 psi
Impact Resistance	ASTM E760	Pass	Pass	Pass	Pass
Deflection	ASTM E759	Pass	Pass	Pass	Pass
Corrosion	ASTM E937	0.00 g/mm	0.00 g/mm	0.00 g/mm	0.00 g/mm
Flame Spread	ASTM E84	0	0	0	0
Smoke Development	ASTM E84	0	0	0	0

AD Fire and Carboline

Protective Coatings and Linings

Together, we offer the specifying community and the specialty applicator:

The Best Technology

The Most Products

The Best Ratings

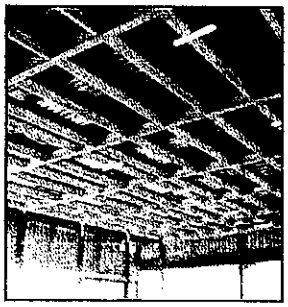
The Best Appearance

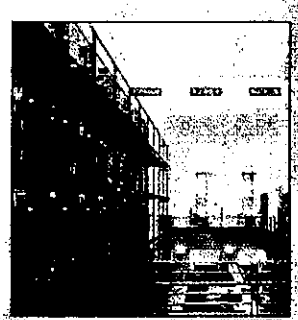
The Best Service

The Best Technical Support

low-risk solutions...

for high-risk environments





In the USA contact:

Protective Coatings and Linings

Carboline Company
350 Hanley Industrial Court
St. Louis, MO 63144-1599
800-848-4645
314-644-1000
FAX 314-644-4617
www.carboline.com

In Canada contact:

Fire Protection Systems
part of the Carboline Company

AD Fire Protection
420 Tapscott Road
Scarborough, Ontario M1B 1Y4
800-263-4087
416-292-2361
FAX 416-298-5887
www.adfire.com

UL Online Certifications Directory

BXUV.P741
Fire Resistance Ratings - ANSI/UL 263

Page Bottom

Fire Resistance Ratings - ANSI/UL 263

See General Information for Fire Resistance Ratings - ANSI/UL 263

Design No. P741

September 13, 2006

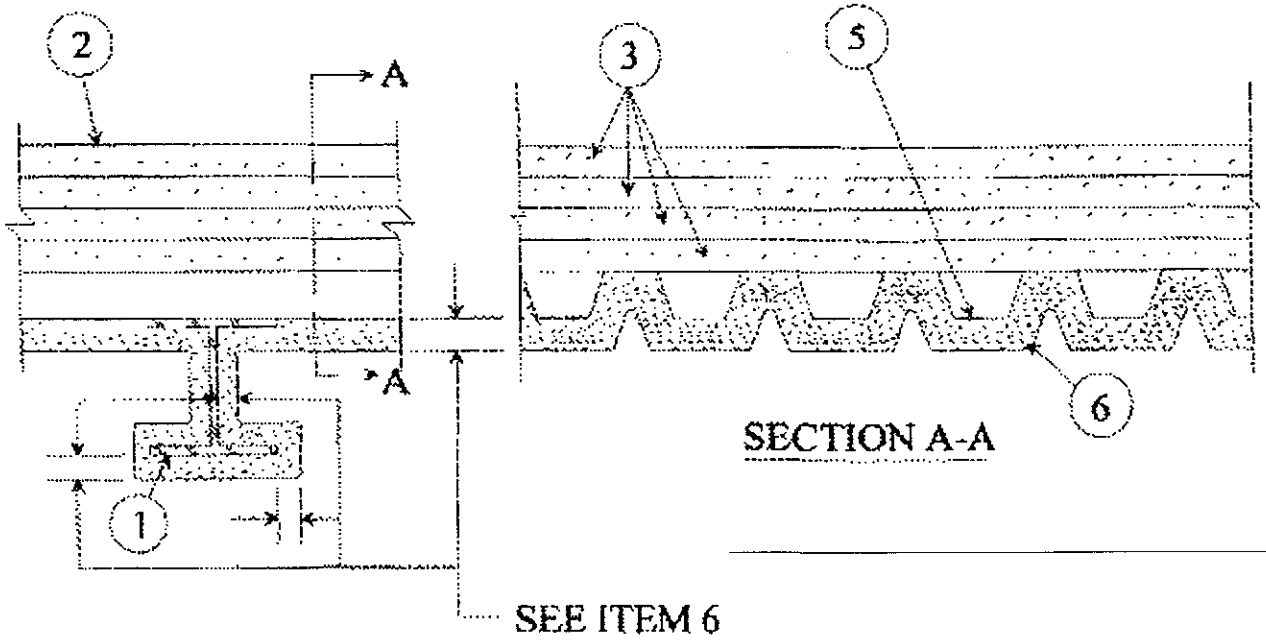
Restrained Assembly Ratings — 1, 1-1/2 or 2 Hr (See Items 6 and 6A)

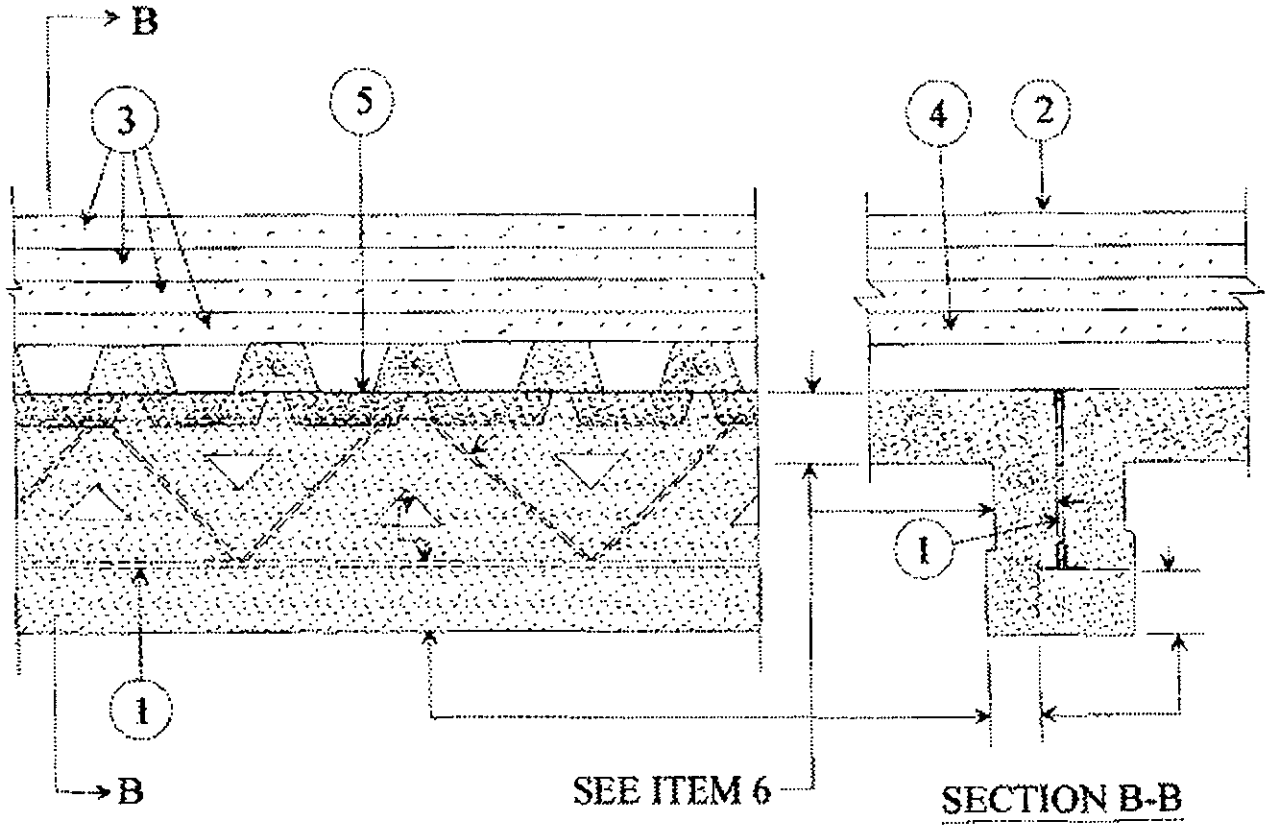
Unrestrained Assembly Ratings — 0, 1, 1-1/2 or 2 Hr (See Items 6 and 6A)

Unrestrained Beam Ratings — 1, 1-1/2 or 2 Hr (See Items 6 and 6A)

Restricted Load Condition — See Item 1

Load Restricted for Canadian Applications — See Guide BXUV7





1. **Beam** — Min W6x16 or Steel Joist - Min 10K1. Max tensile stress of 24 KSI.

2. **Roof Covering*** — Consisting of hot mopped or cold application bituminous materials compatible with the insulation(s) described herein which provide Class A, B or C coverings. See Roofing Materials and Systems Directory - Roof Covering Materials (TEVT).

2A. In lieu of Item 2, roof covering consisting of single-ply Roofing Membrane* that is either ballasted, adhered or mechanically attached as permitted under the respective manufacturer's Classification. See Fire Resistance Directory - Roof Membrane (CHCI).

2B. **Metal Roof Deck Panels*** — (Not shown) — In addition to or in lieu of Item 2 or 2A, the roof covering may consist of a mechanically fastened metal roof deck panel assembly. See Fire Resistance Directory — Metal Roof Deck Panels (CETW).

3. **Roof Insulation** — Foamed Plastic — Polyisocyanurate foamed plastic insulation boards nom 48 by 48 or 96 in., to be applied in one or more layers. Boards to be installed with end joints staggered a min of 6 in. No limit on max overall thickness.

ATLAS ROOFING CORP — ACFoam II, ACFoam III.

CARLISLE SYNTEC INCORPORATED — Types HP, HP-H, HP-N, HP-W.

THE DOW CHEMICAL CO — Types Hy-Therm AP, Hy-Therm Tapered.

FIRESTONE BUILDING PRODUCTS CO, DIV

OF BFS DIVERSIFIED PRODUCTS L L C — "ISO 95+GL", "ISO 300".

GAF MATERIALS CORP — Isotherm R.

HUNTER PANELS — H Shield.

JOHNS MANVILLE INTERNATIONAL INC — ENRGY 3, ISO-1, PSI 25.

LOADMASTER SYSTEMS INC — Loadmaster Polyisocyanurate Insulation.

RMAX INC — Multi-Max-3, Multi-Max FA-3, Ultra-Max.

STEVENS ROOFING SYSTEMS, DIV OF JPS

ELASTOMERICS CORP — "Stevens ISO 2000".

3A. **Building Units* —** Not Shown — As an alternate to Item 3, composite polyisocyanurate foamed plastic insulation board with an adhered nailing surface, nom 48 by 48 or 96 in. may be used with the following limitations. These composite building units have ventilation slots internal to the panels. The thickness of the panel depends upon the thinnest portion of the polyisocyanurate insulation. The minimum thickness shall follow table under item 6. There is no limit on the max insulation thickness.

GAF MATERIALS CORP — Type INSUL-AIR

JOHNS MANVILLE INTERNATIONAL INC — Type ISO-VENT.

3B. **Building Units* —** Not Shown — As an alternate to Item 3, Polyisocyanurate foamed plastic insulation boards, nom 48 by 48 or 96 in., faced on the top surface with oriented strand board. Min thickness of the polyisocyanurate core shall follow table under item 6. No limit on max overall thickness. Boards to be installed with end joints staggered a min of 6 in. in adjacent rows. Adhesive (Item 8) may be applied between the building units and/or the gypsum board (if used).

ATLAS ROOFING CORP — ACFoam Nailbase Insulation and Vented R.

THE DOW CHEMICAL CO — Hy-Therm Nail-Line.

FIRESTONE BUILDING PRODUCTS CO, DIV

OF BFS DIVERSIFIED PRODUCTS L L C — Nail Base.

MARTIN FIREPROOFING GEORGIA INC — Perform-A-Deck Nailable Roof Insulation.

3C. **Roof Insulation-Mineral and Fiber Boards* —** (Not Shown) - Optional, Applied in one or more layers over the Foamed Plastic (Item 3) to be applied with adhesive, asphalt or coal tar pitch (Item 9) or mechanically fastened (Item 10).

JOHNS MANVILLE INTERNATIONAL INC

3D. **Building Units* —** As an alternate to Item 3, polyisocyanurate foamed plastic insulation boards, nom 48 by 48 or 96 in., faced on the top surface with oriented strand board. Min thickness of the polyisocyanurate core shall follow table under item 6. No limit on max overall thickness. Boards to be installed with end joints staggered a min of 6 in. in adjacent rows.

JOHNS MANVILLE INTERNATIONAL INC — Nailboard.

3E. **Building Units*** — As an alternate to Item 3, polyisocyanurate foamed plastic insulation boards faced on the underside (or both sides) with mineral fiber board. Min thickness of the polyisocyanurate core shall follow table under item 6. No limit on max overall thickness. Boards to be installed with end joints staggered a min of 6 in. adjacent rows. Adhesive (Item 8) may be applied between the building units and/or the gypsum board (if used).

FIRESTONE BUILDING PRODUCTS CO, DIV

OF BFS DIVERSIFIED PRODUCTS L L C — "ISO 95+ Composite"

JOHNS MANVILLE INTERNATIONAL INC — Fesco-Foam.

3F. **Building Units*** — As an alternate to Item 3, polyisocyanurate foamed plastic insulation boards faced on the underside with wood fiber board. Min thickness of the polyisocyanurate core shall follow table under item 6. No limit on max overall thickness. Boards to be installed with end joints staggered a min of 6 in. in adjacent rows.

FIRESTONE BUILDING PRODUCTS CO, DIV

OF BFS DIVERSIFIED PRODUCTS L L C — "ISO 95+ Composite".

JOHNS MANVILLE INTERNATIONAL INC — ENRGY-2 Plus.

3G. **Building Units*** — As an alternate to Item 3, polyisocyanurate foamed plastic insulation boards, nom 48 by 48 or 96 in., faced on the top surface with gypsum board. Min thickness of the polyisocyanurate core shall follow table under item 6. No limit on overall thickness. Boards to be installed with end joints staggered min of 6 in. in adjacent rows. Adhesive (Item 8) may be applied between the building units and/or the gypsum board (if used).

JOHNS MANVILLE INTERNATIONAL INC — ENRGY 2 Gypsum Composite.

3H. **Roof Insulation - Mineral and Fiber Boards*** — As an alternate to Item 3 , to be applied in one or more layers with or without adhesive. When more than one layer is required, each layer of board to be offset in both directions from layer below a min of 6 in. in order to lap all joints. Min thickness is 2 in. when Item 2 or 2A is used. Min thickness is 1 in. otherwise.

BMCA INSULATION PRODUCTS INC — Permalite

FIBREX INSULATIONS INC — FBX Baseboard and FBX Capboard.

GAF MATERIALS CORP — GARTEMP Perlite.

JOHNS MANVILLE INTERNATIONAL INC

ROXUL INC — Toprock.

3I. **Roof Insulation - Foamed Plastic*** — (Not Shown) As an alternate to Item 3 through 3H, polystyrene foamed plastic insulation boards, applied in one or more layers over gypsum wallboard. Min. thickness is 1.0 in. with no max overall thickness. Max density 2.5 pcf. When applied in more than one layer, each layer to be offset in both directions from layer below a min. of 6 in. in order to lap all joints. Boards secured to gypsum wallboard (if used) with asphalt glaze coat or adhesive (Item 8). Adhesive and/or asphalt glaze coat may be omitted when Item 2A is used. See Foamed Plastic (BRYX) category in the Building Materials Directory or Foamed Plastic (CCVW) category in the Fire Resistance Directory of for names of manufacturers.

4. **Gypsum Board** — (Not Shown) — (Classified or Unclassified) — May be used to obtain various Restrained or Unrestrained Assembly Ratings as described in Item 6. Supplied in sheets nom 4 by 8 or 12 ft by 5/8 in. thick. Min weight 2.2 psf. Applied perpendicular to steel roof deck direction with end joints staggered 2 ft in adjacent rows. End joints to occur over crests of steel roof units. See **Gypsum Board (CKNX)** category for names of manufacturers.

5. **Steel Roof Deck** — (Unclassified) — Min 1-1/2 in. deep and 36 in. wide galv fluted steel deck. Min gauge is No. 22 MSG. Ends overlapped at supports a min 2 in. and welded to supports 6 in. OC. Sidelaps button-punched together 24 in. OC at midspan. As an alternate to button-punching, adjacent units may be welded or fastened with 1/2 in. long hex head, self-drilling, self-tapping steel screws, 24 in. OC at midspan.

5A. **Steel Roof Deck** — (Unclassified) — Min 1-1/2 in. deep and 36 in. wide galv fluted steel deck. Min gauge is No. 22 MSG. Ends overlapped at supports a min 1-1/2 in. and welded to supports 12 in. OC and at side laps. Side laps fastened with 1/2 in. long hex head, self-drilling, self-tapping steel screws spaced a max of 36 in. OC. **Classified Steel Floor and Form Units*** Noncomposite 1-1/2 to 3 in. deep, 24 to 36 in. wide, min 22 MSG galvanized steel fluted units. Ends overlapped at supports a min 1-1/2 in. and welded to supports 12 in. OC and at side laps. Side laps fastened with 3/4 in. long No. 12 self-drilling, self-tapping steel screws at 36 in. OC. As alternate to screw fasteners adjacent units may be button-punched or welded together 36 in. OC along side joints.

CANAM STEEL CORP — Type P-3606 or P-3615

UNITED STEEL DECK INC — Types B, BI, F, NS and NI. Units may be ptd/ptd.

VULCRAFT, DIV OF NUCOR CORP — Galv Types 1.5B, 1.5BI, 1.5F, 3N and 3NI, ptd/ptd units may be used for ratings up to 2 h.

VERCO MFG CO — Types PLB, PLB Formlok, HSB, PLN, PLN Formlok, N, N Formlok, and B Formlok. Units may be ptd/ptd.

WHEELING-PITTSBURGH STEEL CORP, DIV

OF WHEELING CORRUGATING CO — Type BW, F, High Strength B, High Strength BW, or N. Types BW, F, High Strength B, High Strength BW, N units may be ptd/ptd.

6. **Spray-Applied Resistive Material*** — Applied by mixing with water and spraying in more than one coat to final thicknesses as shown in the illustration above and in the table below to steel surfaces which must be clean and free of dirt, loose scale and oil. Steel deck surface must be "spatter" coated with Type DK2 Spray-Applied Fire Resistive Materials prior to application of spray-applied resistive material. Spray-applied resistive materials applied in accordance with the manufacturer's application instructions. Min average and min individual density of 15/14 pcf, respectively. For method of density determination, see Design Information Section. Thickness of the spatter coat is included in the total final thickness of the protection material.

Restrained Assembly Rating	Unrestrained Assembly Rating	Unrestrained Beam Rating	On Beam	On 10K1 Joist	On 10K1 Joist at 4ft or less OC
1	0**	1	3/8	11/16	5/8
1	1	1	3/8	11/16	5/8
1	1	1	3/8	11/16	5/8
1	1	1	3/8	11/16	5/8
1	1	1	3/8	11/16	5/8
1-1/2	1	1	3/8	11/16	5/8
1-1/2	1	1	3/8	11/16	5/8
1-1/2	1	1	3/8	11/16	5/8

1-1/2	1	1	3/8	11/16	5/8
1-1/2	1-1/2	1-1/2	5/8	1-3/16	1
1-1/2	1-1/2	1-1/2	5/8	1-3/16	1
1-1/2	1-1/2	1-1/2	5/8	1-3/16	1
1-1/2	1-1/2	1-1/2	5/8	1-3/16	1
2	1	1	3/8	1-3/8	1-3/8
2	1	1	3/8	1-3/8	1-3/8
2	1	1	3/8	1-3/8	1-3/8
2	1	1	3/8	1-3/8	1-3/8
2	2	2	7/8	1-1/2	1-3/8
2	2	2	7/8	1-1/2	1-3/8
2	2	2	7/8	1-1/2	1-3/8
2	2	2	7/8	1-1/2	1-3/8

Restrained Assembly Rating	Unrestrained Assembly Rating	Unrestrained Beam Rating	Minimum Insulation Thickness	On Deck with Gypsum Board#	On Deck with out Gypsum Board#
1	0**	1	3	N/A	13/16
1	1	1	3	3/4	1
1	1	1	2	3/4	1
1	1	1	1	1	1-1/8
1	1	1	0	1-1/2	1-1/2
1-1/2	1	1	3	1	1-1/4
1-1/2	1	1	2	1	1-5/16
1-1/2	1	1	1	1	1-9/16
1-1/2	1	1	0	2-1/8	2-1/8
1-1/2	1-1/2	1-1/2	3	1	1-1/4
1-1/2	1-1/2	1-1/2	2	1	1-5/16
1-1/2	1-1/2	1-1/2	1	1-1/2	1-9/16
1-1/2	1-1/2	1-1/2	0	2-1/8	2-1/8
2	1	1	3	1-1/4	1-9/16
2	1	1	2	1-1/4	1-3/4
2	1	1	1	2-1/16	2-1/16
2	1	1	0	2-11/16	2-11/16
2	2	2	3	1-1/4	1-9/16
2	2	2	2	1-1/4	1-3/4
2	2	2	1	2-1/16	2-1/16
2	2	2	0	2-11/16	2-3/4

#The required minimum thickness of Spray-Applied Fire Resistive Materials on the steel deck is increased by 1/16 in. for 1-1/2 hr Unrestrained Assembly Rating and 1/4 in. for 2 hr Unrestrained Assembly Rating when Item 8 is used.

**When the maximum clear span of the steel decking is 5 ft. 3 in. or less, the Unrestrained Assembly Rating is 1 hr.

SOUTHWEST FIREPROOFING PROOUCTS CO -- Types DK, 4, 5, 5EF, 5GP, 5MD, 8GP, 8EF, 8MD, 9GP, 9EF, 9MD.

6A. **Spray-Applied Resistive Material*** -- Applied by mixing with water and spraying in more than one coat to final thicknesses as shown in the illustration above and in the table below to steel surfaces which must be clean and free of dirt, loose scale and oil. Steel deck surface must be "spatter" coated with Type DK3 Spray-Applied Fire Resistive Material prior to application of spray-applied resistive material. Types 7GP and 7HD spray-applied resistive material applied in accordance with the manufacturer's application instructions. Min average and min individual density of 19/18 pcf, respectively. For method of density determination, see Design Information Section. Thickness of the spatter coat is included in the total final thickness of the protection material.

Restrained Assembly Rating	Unrestrained Assembly Rating	Unrestrained Beam Rating	On Beam	On 10K1 Joist	On 10K1 Joist at 4ft or less OC
1	0**	1	3/8	11/16	5/8
1	1	1	3/8	11/16	5/8
1	1	1	3/8	11/16	5/8
1	1	1	3/8	11/16	5/8
1	1	1	3/8	11/16	5/8
1-1/2	1	1	3/8	11/16	5/8
1-1/2	1	1	3/8	11/16	5/8
1-1/2	1	1	3/8	11/16	5/8
1-1/2	1	1	3/8	11/16	5/8
1-1/2	1-1/2	1-1/2	5/8	1-3/16	1
1-1/2	1-1/2	1-1/2	5/8	1-3/16	1
1-1/2	1-1/2	1-1/2	5/8	1-3/16	1
1-1/2	1-1/2	1-1/2	5/8	1-3/16	1
2	1	1	3/8	1-3/8	1-3/8
2	1	1	3/8	1-3/8	1-3/8
2	1	1	3/8	1-3/8	1-3/8
2	1	1	3/8	1-3/8	1-3/8
2	2	2	7/8	1-1/2	1-3/8
2	2	2	7/8	1-1/2	1-3/8
2	2	2	7/8	1-1/2	1-3/8
2	2	2	7/8	1-1/2	1-3/8

Restrained Assembly Rating	Unrestrained Assembly Rating	Unrestrained Beam Rating	Minimum Insulation Thickness	On Oeck with Gypsum Board#	On Oeck with out Gypsum Board#
1	0**	1	3	N/A	13/16

1	1	1	3	3/4	1
1	1	1	2	3/4	1
1	1	1	1	1	1-1/8
1	1	1	0	1-1/2	1-1/2
1-1/2	1	1	3	1	1-1/4
1-1/2	1	1	2	1	1-5/16
1-1/2	1	1	1	1	1-9/16
1-1/2	1	1	0	2-1/8	2-1/8
1-1/2	1-1/2	1-1/2	3	1	1-1/4
1-1/2	1-1/2	1-1/2	2	1	1-5/16
1-1/2	1-1/2	1-1/2	1	1-1/2	1-9/16
1-1/2	1-1/2	1-1/2	0	2-1/8	2-1/8
2	1	1	3	1-1/4	1-9/16
2	1	1	2	1-1/4	1-3/4
2	1	1	1	2-1/16	2-1/16
2	1	1	0	2-11/16	2-11/16
2	2	2	3	1-1/4	1-9/16
2	2	2	2	1-1/4	1-3/4
2	2	2	1	2-1/16	2-1/16
2	2	2	0	2-11/16	2-3/4

#The required minimum thickness of Spray-Applied Fire Resistive Materials on the steel deck is increased by 1/16 in. for 1-1/2 hr Unrestrained Assembly Rating and 1/4 in. for 2 hr Unrestrained Assembly Rating when Item 8 is used.

**When the maximum clear span of the steel decking is 5 ft. 3 in. or less, the Unrestrained Assembly Rating is 1 hr.

SOUTHWEST FIREPROOFING PRODUCTS CO — Types 7GP and 7HD.

7. **Metal Lath (Optional, not shown)** — Metal lath may be used to facilitate the spray application of spray-applied resistive materials on steel bar joists and trusses. The diamond mesh, 3/8 in. expanded steel lath, 1.7 to 3.4 lb/sq yd is secured to one side of each steel joist with No. 18 SWG galv steel wire at joist web and bottom chord members, spaced 15 in. O.C. max. When used, the metal lath is to be fully covered with spray-applied resistive materials with no min thickness requirements.

7A. **Nonmetallic Fabric Mesh (Optional, not shown)** — As an alternate to metal lath, glass fiber fabric mesh, weighing approximately 2.5 oz/sq yd, polypropylene fabric mesh, weighing approximately 1.25 oz/sq yd or equivalent, may be used to facilitate the spray application. The mesh is secured to one side of each joist web member. The method of attaching the mesh must be sufficient to hold the mesh and the spray-applied resistive materials in place during application until it has cured. An acceptable method to attach the mesh is by embedding the mesh in minimum 1/4 in. long beads of hot melted glue. The beads of glue shall be spaced a maximum of 12 in. O.C. along the top chord of the bar joist. Another method to secure the mesh is by 1-1/4 in. long by 1/2 in. wide hairpin clips formed from No. 18 SWG or heavier steel wire.

8. **Adhesive* -(Optional)** — (Bearing the UL Classification Marking for Roof Systems (TGFU)) - The gypsum wallboard or the first layer of roof insulation may be secured with adhesive to the steel crest surfaces. Also used to attach the gypsum wallboard to the first layer of insulation and each additional layer of insulation. Applied at a max rate of 19.8 g/ft^2. When FAST 100 adhesive is used, additional **Spray-Applied Fire Resistance Materials* (CHPX)** is required on the deck for the 1-1/2 and 2 hr Unrestrained

Assembly Ratings. The thickness specified for the deck shall be increased by 1/16 in. for 1-1/2 hr Unrestrained Assembly Rating and 1/4 in. for 2 hr Unrestrained Assembly Rating.

CARLISLE SYNTEC INCORPORATED — FAST 100

9. **Asphalt or Coal Tar Pitch*** — (Optional) - (Not shown) - The gypsum board (item 4) or the first layer of roof insulation may be secured with asphalt or coal tar pitch to the steel crest surfaces at a max rate of 15 lb/100 sq ft. Also used to attach the first layer of insulation to gypsum board (item 4) and each additional layer of roof insulation, applied at a max rate of 25 lb/100 sq ft.

10. **Mechanical Fasteners - (Optional)** — (Not shown) - Mechanical screw-type fastener with metal or plastic washer designed for the purpose may be used to attach one or more layers of insulation to steel roof deck.

*Bearing the UL Classification Mark

Last Updated on 2006-09-13

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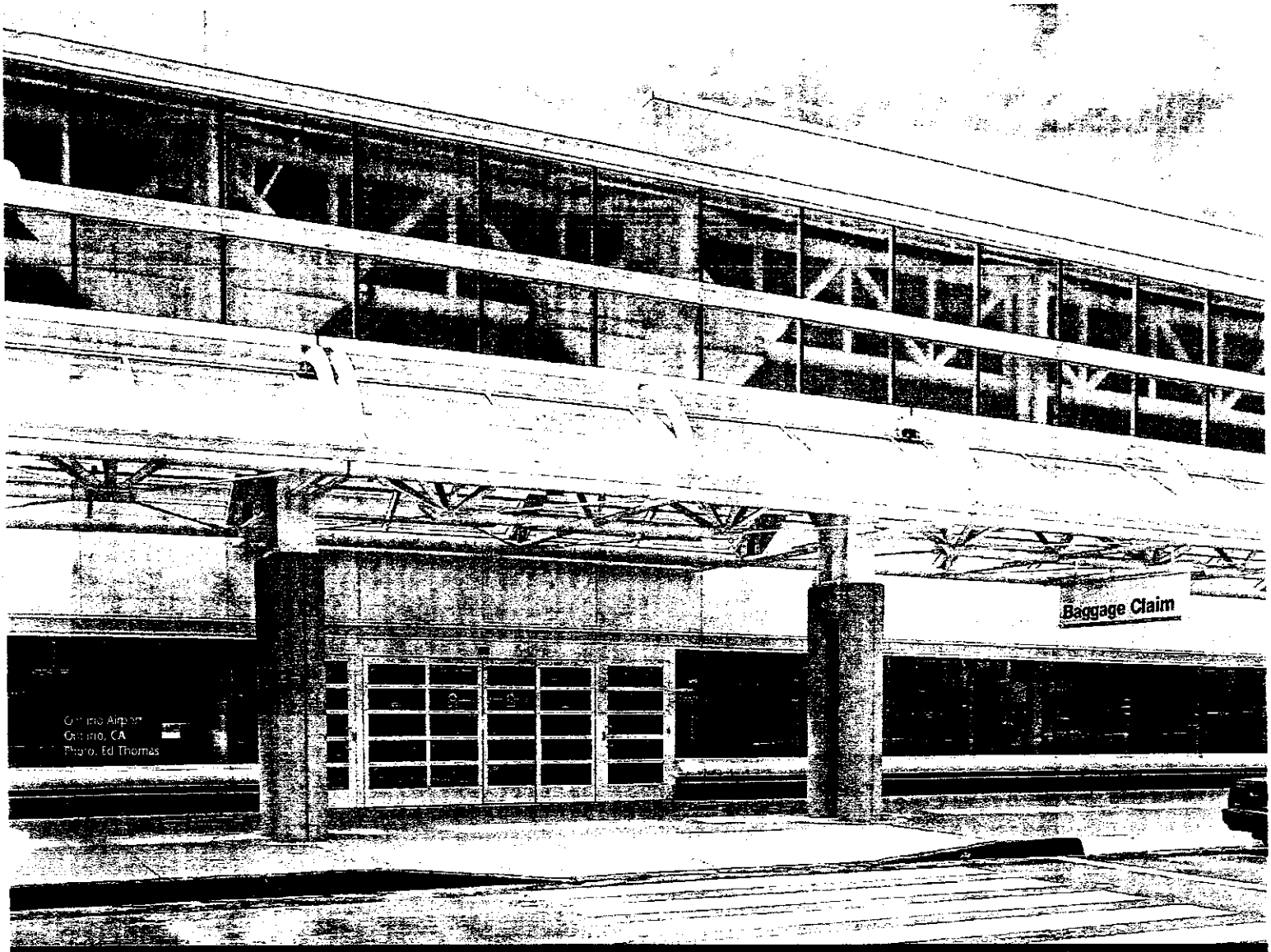


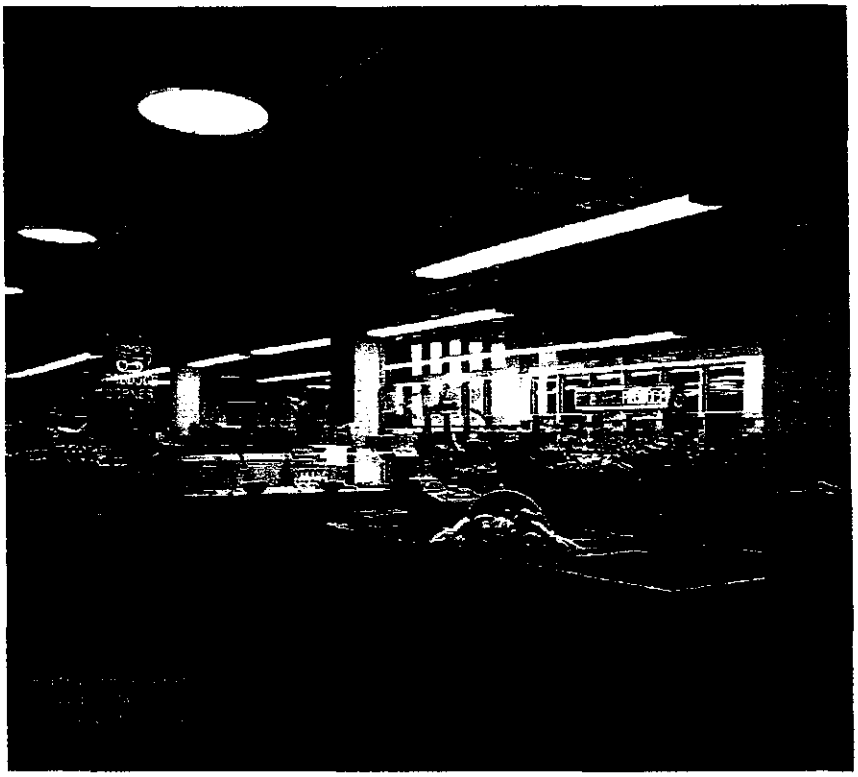
- Water-based, Thin-film Intumescent Fireproofing
- Architectural Finish for Exposed Interior Structural Steel
- Complies with All VOC Air Quality Standards
- UL Classified for Up to 3-1/2 Hours

Albi

ALBI CLAD TF

DESCRIPTION

Albi Clad TF (Thin Film) is a water-based intumescent material for interior structural steel. Unlike ordinary fireproofing, Albi Clad TF is applied at minimum thickness for a smooth, architectural finish. It represents a breakthrough in interior fire protection. Albi Clad TF is spray-applied and offers up to 3-1/2 hours fire protection. Architects and other specifiers can use Albi Clad TF as an attractive interior finish, but still conform to building codes and insurance requirements.



ALBI CLAD TF ADVANTAGES

- UL Classified for 1 to 3-1/2 hours to ASTM E119
- Water based: solvent and asbestos free
- Lightweight, thin-film application
- Maintains contour of substrate
- Architectural, decorative finish
- Factory formulated, single component
- UL tested for resistance to high humidity, aging, industrial atmosphere (CO_2/SO_2), chlorine and washing

WHERE TO SPECIFY

Albi Clad TF is applied in commercial buildings where architectural designs call for an aesthetic, thin, decorative finish. Albi Clad TF is ideal for interior steel columns, beams, tubes, trusses and other exposed structural members.

PROVEN PERFORMANCE

For over four decades, Albi fireproofing materials have demonstrated superior performance worldwide in a range of extreme environments. Lightweight, ultrathin Albi Clad TF delivers long-term protection with outstanding hardness and durability. Albi Clad TF is the first water-based, thin film intumescent fireproofing material classified by Underwriters Laboratories, Inc. UL's rigorous environmental and laboratory testing procedures assure you of a durable, high-performance intumescent fireproofing product.

EASY APPLICATION

Apply Albi Clad TF directly from the shipping container by means of standard or airless spray equipment. The fire endurance rating specification determines the thickness of the coating. Alibi Clad TF must be applied by qualified, factory-trained applicators in accordance with the manufacturer's printed instructions, and in compliance with specific test requirements. As a water-based compound, Albi Clad TF must be protected from freezing during shipping, storage, application and curing. Contact the manufacturer for specific application parameters.

[illegible] UL FIRE-RESISTANCE LISTINGS [illegible] FIRE TEST AST[illegible] M E-119

Typical System	Hourly Rating	Material Thickness	UL Design N[illegible].
E [illegible] (Wide Flange) W8 x 31	1 (unrestrained)	.090 in. dft	N-607
	1-1/2 (restrained)	.090 in. dft	N-607
	2 (restrained)	.140 in. dft	N-607
Beam W10 x 88	1-1/2 (unrestrained)	.149 in. dft	N-607
	3 (restrained)	.400 in. dft	UL 11-29-99[illegible]
Column (Wide Flange) W8 x 24	2	.313 in. dft	X-625
W10 x 49	1	.055 in. dft	X-625
	1-1/2	.132 in. dft	X-625
	2	.310 in. dft	X-625
	2-1/2	.430 in. dft	X-625
	3	.550 in. dft	X-625
	3-1/2	.670 in. dft	X-625
W12 x 120	1-1/2	.108 in. dft	X-625
	2	.192 in. dft	X-625
Column (Hollow Section) 8-inch pipe	1	.120 in. dft	X-628
(schedule 60)	1-1/2	.230 in. dft	X-628
	2	.370 in. dft	X-628
	2-1/2	.520 in. dft	X-628
	3	.660 in. dft	X-628
(schedule 100)	3	.625 in. dft	X-628
4 [illegible] 3/8"	2	.431 in. dft	X-638
8 [illegible] 3/8"	1	.119 in. dft	X-638
8 x 8 x 1/2"	2	.334 in. dft	X-638
10 x 10 x 5/8"	1	.065 in. dft	X-638
	2	.265 in. dft	X-638
16 x 16 x1/2"	1	.065 in. dft	X-638
	2	.334 in. dft	X-638
16 x 16 x 5/8"	1	.065 in. dft	X-638
	2	.265 in. dft	X-638

TYPICAL INSTALLATIO[illegible]NS

- Hospitals
- Hotel Atriums
- Warehouses
- Parking Garages
- School Gymnasiums
- Clean Rooms
- Convention Centers

PHYSICAL PROPERTIES

PROPERTY	VALUE
Dry Applied Density	85 PCF
Hardness	45-50
Compressive Strength	300 psi
Cohesive/Adhesion Strength	190 psi (cohesive failure)
Abrasion Resistance	0 grams loss
Impact	0.77-ft lbs./inch of notch
Weight per Gallon	11.90 + 0.20 lbs./gals
% Solids by Weight	70% + 2.0%
Flame Spread	2 - Class A
Smoke Developed	5 - Class A

* See complete marking on package

Made in the USA

Other Albi TF Literature

- Albi Clad TF Long Form Guide Specification
- Albi Fireproofing Catalog
- Albi Clad TF Field Application Manual
- Albi Clad TF CSI SPEC-DATA®
- Albi Clad TF CSI MANU-SPEC®

Also inquire about these fireproofing products from Albi:

Albi Clad 800
Intumescent fireproofing, withstands severe weathering and abuse

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Low-cost, uniform density mineral board that installs dry year-round

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For more than four decades, Albi fireproofing materials have demonstrated superior performance and reliability under a range of extreme environments worldwide. These proprietary formulations also meet global building codes and insurance requirements. Lightweight Albi materials provide long-term protection, outstanding durability, aesthetic properties and are completely free from asbestos.

Albi

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Division of StanChem, Inc.
401 Berlin Street
East Berlin, Connecticut 06023 U.S.A.
Tel: (B60) 82B-0571
Fax: (860) 828-3297
www.albi.com
info@albi.com

CITEX Limited[1]
71-75 High Street
Chislehurst, Kent BR7 5AG
United Kingdom
Tel / Fax 44 1B1 467 2606

[1] A wholly-owned subsidiary of StanChem, Inc.

UL Online Certifications Directory

BXUV.X638
Fire Resistance Ratings - ANSI/UL 263

Page Bottom

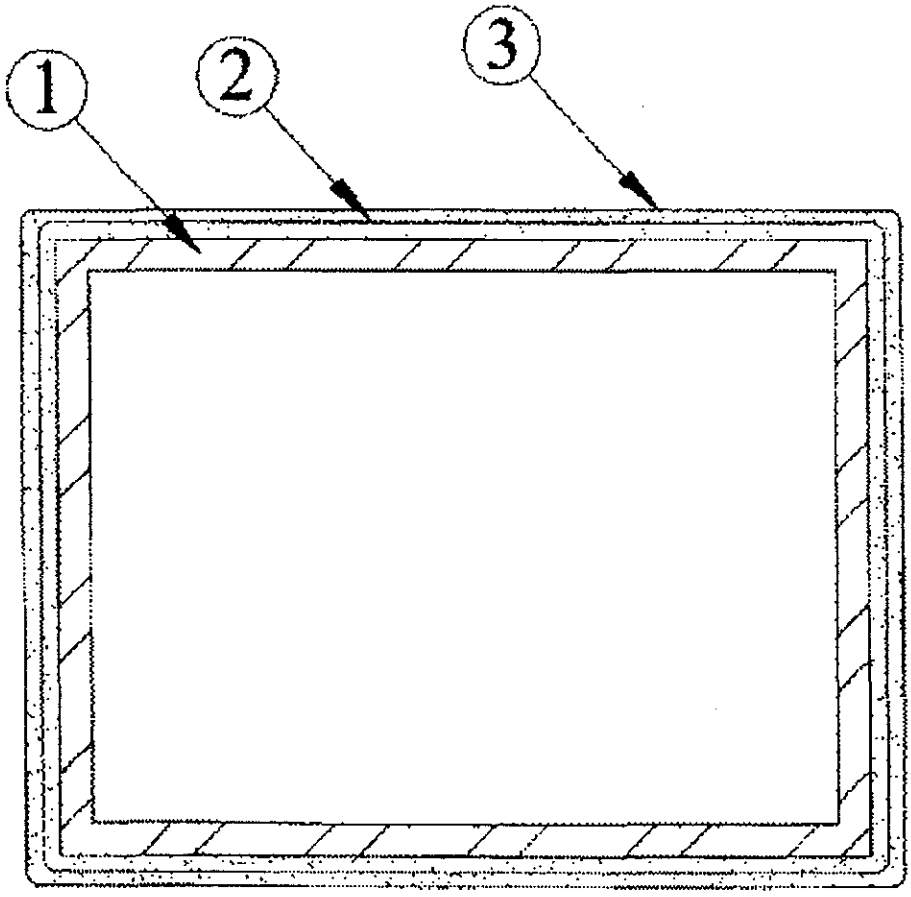
Fire Resistance Ratings - ANSI/UL 263

See General Information for Fire Resistance Ratings - ANSI/UL 263

Design No. X638

June 16, 2003

Rating-1 and 2 Hr



1. **Steel Column** — Steel tube columns with the minimum sizes shown in the tables below. Columns shall be free of dirt, loose scale and oil and primed with a red oxide primer.

2. **Reinforcing Mesh** — When total coating thickness exceeds 0.130 in. Glass fiber mesh, 3/16 by 3/16 in. square pattern weighing 147 g per sq m. Glass fiber mesh to be applied at mid depth of the coating.

3. **Mastic coating** — Coating spray applied directly from containers to desired thickness. See table below for appropriate final dry thickness. After each coat, the surface shall be lightly rolled with a paint roller.

Hourly Rating - 1 HR		
Size	**A/P**	**Thickness Required**
8x8x3/8	0.36	0.119
10x10x5/8	0.6	0.065
16x16x1/2	0.48	0.065
16x16x5/8	0.6	0.065
Hourly Rating - 2 HR		
Size	**A/P**	**Thickness Required**
4x4x3/8	0.34	0.431
8x8x1/2	0.47	0.334
10x10x5/8	0.6	0.265
16x16x1/2	0.48	0.334
16x16x5/8	0.6	0.265

ALBI MFG, DIV OF STANCHEM INC — Types ACTF, CITEX TF.

Investigated for Interior General Purpose only.

*Bearing the UL Classification Mark

Last Updated on 2003-06-16

Questions? Notice of Disclaimer Page Top

Gilbane

Transmittal

Project [2239.2] - PCF - Hospital - Garage **View Date** 11/20/2006

Gilbane
940 Elizabeth St
Lexington, KY 40506-0293
Phone: (859) 257-4536
Fax: (859) 323-1331

Transmittal No. 2239.2-00527

RECEIVED
NOV 21 2006
MATTHEWS CO.

To	Mr. Doug Sherwood E. C. Matthews Co., Inc. 2265 Harrodsburg Road Lexington, KY 40504 USA Phone: (859) 278-3131 Fax: (859) 277-7903
From	Mr. Ryan Maguire (Gilbane)
Subject	Submittal Package 023-02751-004.2.0

Date 11/20/2006

Items listed are being sent

☑ Enclosed

☐ Under Separate Cover

Via U.S. Mail

CSI Code 02751 - Site Concrete

We are transmitting the following to you:

☐ Product Data ☐ Samples ☐ Shop Drawings ☐ O&M Manuals ☐ Plans
☐ Architectural Drawings ☐ Letters ☐ Specifications ☐ Prints ☐ Addenda
☐ Engineering Drawings ☐ Change Orders ☑ Submittal

Submittals

Pkg. No./Rev.	Item No./Rev.	Description	Copies	Reason	Action
023-02751-004.2.0	023-02751-007.1	Joint Sealant- Sikaflex-2c SL	2	Approved as Submitted	

Remarks

From	Mr. Ryan Maguire Printed Name	11/20/2006 Date
Received By	Printed Name	Date

Linked Documents

Document Type	Document	Open	Description	Date
Sub. Pkg.	023-02751-004.2.0			

Transmittal

Project [2239.2] - PCF - Hospital - Garage **View Date** 11/17/2006

GBBN Architects, Inc.
332 East Eighth St
Cincinnati, OH 45202-2217
Phone: (513) 241-8700
Fax: (513) 241-8873

Transmittal No. 2239.2-00521

To	Mr. Brian Hoerr Gilbane 940 Elizabeth St Lexington, KY 40506-0293 USA Phone: (859) 257-4536 Fax: (859) 323-1331	**Date**	11/17/2006
		Items listed are being sent	
		☐ Enclosed	
		☐ Under Separate Cover	
		CSI Code	02751 - Site Concrete
From	Mr. Bryan Korb (GBBN Architects, Inc.)		
Subject	Submittal Package 023-02751-004.2.0		

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☐ Product Data ☐ Samples ☐ Shop Drawings ☐ O&M Manuals ☐ Plans
☐ Architectural Drawings ☐ Letters ☐ Specifications ☐ Prints ☐ Addenda
☐ Engineering Drawings ☐ Change Orders ☑ Submittal

Submittals

Pkg. No./Rev.	Item No./Rev.	Description	Copies	Reason	Action
023-02751-004.2.0	023-02751-007.1	Joint Sealant- Sikaflex-2c SL	3	Approved as Submitted	

Remarks

Received By Printed Name Date

Linked Documents

Document Type	Document	Open	Description	Date
Sub. Pkg.	023-02751-004.2.0			

Product Data Sheet
Edition 3.2004
Identification no. 465
Sikaflex-2c SL

Sikaflex®-2c SL

Two-component, self-leveling, polyurethane elastomeric sealant

Description	Sikaflex-2c SL is a 2-component, premium-grade, polyurethane-based, elastomeric sealant. It is principally a chemical cure in a self-leveling consistency. Meets ASTM C-920, Type M, Grade P, Class 25, use T, NT, M, G, A, O, I and Federal Specification TT-S-00227E, Type I, Class A.
Where to use	■ Intended for use in all properly designed working joints with a minimum depth of ¼ inch. ■ Ideal for horizontal applications. ■ Placeable at temperatures as low as 40°F. ■ Adheres to most substrates commonly found in construction. ■ Submerged conditions, such as canal and reservoir joints.
Advantages	■ True self-leveling properties. ■ Capable of ±50% joint movement. ■ Chemical cure allows the sealant to be placed in joints exceeding ½ in. in depth. ■ High elasticity with a tough, durable, flexible consistency. ■ Exceptional cut and tear resistance. ■ Exceptional adhesion to most substrates without priming. ■ Available in 40 architectural colors. ■ Color uniformity assured via Color-pak system. ■ Available in pre-pigmented Limestone Gray (no Color-pak needed). ■ Self-leveling consistency, easy to apply in horizontal joints. ■ Easy to mix. ■ Paintable with water-, oil-, and rubber-base paints. ■ Jet fuel resistant. ■ USDA approved. ■ No color-pak needed in pre-pigmented Limestone.
Coverage	1 gal. yields 231 cu. in. or 154 lin. ft. of a 1/2 in. X 1/4 in. joint.
Packaging	1.5 gal. unit. 3 gal. units. Color-pak is purchased separately. Limestone Gray color available pre-pigmented.

GILBANE
University of Kentucky
Patient Care Facility
Gilbane Project No. 18-3966
REVIEWED
☐ 010-Huguelet ☒ 020-Garage
☐ 030-Infrastructure ☐ 040-PCF Foundation
☐ 050-PCF Core/Shell ☐ 060-TowerUp Fit

Bid Package No. 023
Submittal No. 023-0275-0042
Spec. Sect/Para. —
Reviewed By [illegible]
Date 10/30/2006

This review does not constitute nor does it assume design responsibility nor does it relieve the trade contractor's supplier from complying with the contract requirements coordinating their work with other trades and verifying field dimensions.

Typical Data *(Material and curing conditions 73°F (23°C) and 50% R.H.)*

Shelf life	One year in original, unopened containers.
Storage Conditions	Store dry at 40°-95°F (4°-35°C). Condition material to 65°-75°F before using.
Colors	A wide range of architectural colors are available. Special colors available on request.
Application Temperature	40° to 100°F, ambient and substrate temperatures. Sealant should be installed when joint is at mid-range of its anticipated movement.
Service Range	-40° to 170°F (-40°-75°C).
Curing Rate (ASTM C-679)	
Tack-free Time	6-8 hrs.
Final Cure	3 days
Application Life	TT-S-00227E 4 hrs.
Tear Strength	ASTM D-624 100 lb./in.
Shore A Hardness	ASTM D-2240 40 ± 5
Tensile Properties (ASTM D412)	
Tensile Strength at Break	175 psi
Tensile Elongation	650%
100% Modulus	100 psi

Adhesion in Peel (Fed Spec. TT-S-00227E)

Substrate	Peel Strength	% Adhesion Loss
Concrete	30 lb.	Zero

Weathering Resistance	Excellent
Chemical Resistance	Good resistance to water, diluted acids, diluted alkalines, and residential sewage. Consult Technical Service for specific data.

[illegible] CONFORMITY TO PLANS ARE [illegible] DIMENSIONS AND [illegible] CHECKED. [illegible] IS [illegible]

E.C. KISTNER CO., INC.

BY: [illegible] 10.24.06
SIGNATURE DATE

How to Use

Surface Preparation All joint-wall surfaces must be clean, sound, and frost-free. Joint walls must be free of oils, grease, curing compound residues, and any other foreign matter that might prevent bond. Ideally this should be accomplished by mechanical means.

Bond breaker tape or backer rod must be used in bottom of joint to prevent bond.

Linear Feet of Sealant per Gallon

Width \ Depth	1/4	1/2	3/4	1	1.25	1.5
1/4	308.0					
1/2	154.0	77.0				
3/4	102.7	51.3	34.2			
1	77.0	38.5	25.7	19.3		
1.25	61.6	30.8	20.5	15.4	12.3	
1.5	51.3	25.7	17.1	12.8	10.3	8.6

Priming Priming is typically not necessary. Most substrates only require priming if sealant will be subjected to water immersion after cure. Testing should be done, however, on questionable substrates, to determine if priming is needed.

Consult Technical Service or Sikaflex Primer Technical Data Sheet for additional information on priming.

Mixing Pour entire contents of Component 'B' into pail of Component 'A'. Add entire contents of Color-pak into pail and mix with a low-speed drill (400-600 rpm) and Sikaflex paddle. * Mix for 3-5 minutes to achieve a uniform color and consistency. Scrape down sides of pail periodically. Avoid entrapment of air during mixing.

Color-pak must be used with tint base.

Note: When mixing 3 gal. unit, two containers of Component B and two color-paks must be used.

*For pre-pigmented Limestone base, just mix with low speed drill and Sikaflex paddle (no Color-pak needed).

Application Recommended application temperatures 40°-100°F. Pre-conditioning units to approximately 70°F is necessary when working at extremes. Move pre-conditioned units to work areas just prior to application.

Apply sealant only to clean, sound, dry, and frost-free substrates. Sikaflex-2c should be applied into joints when joint slot is at mid-point of its designed expansion and contraction.

To place, pour or extrude the SL grade in one direction and allow it to flow and level as necessary. If extruding, load mixed sealant directly into bulk gun or use follower plate loading system. Place nozzle of gun into bottom of joint and fill entire joint. Keeping the nozzle deep in the sealant, continue with a steady flow of sealant preceding nozzle to avoid air entrapment. Also, avoid overlapping of sealant since this also entraps air. Tool as required. Joint dimension should allow for 1/4 inch minimum and 1/2 inch maximum thickness for sealant. Proper design is 2:1 width to depth ratio.

Limitations

- The ultimate performance of Sikaflex-2c, depends on good joint design and proper application.
- Minimum depth in working joint is 1/4 in.
- Maximum expansion and contraction should not exceed 50% of average joint width.
- Do not cure in the presence of curing silicones.
- Avoid contact with alcohol and other solvent cleaners during cure.
- Allow 3 day cure before subjecting sealant to total water immersion.
- Avoid exposure to high levels of chlorine. (Maximum level is 5 ppm).
- Do not apply when moisture vapor transmission exists since this can cause bubbling within the sealant.
- Avoid over-mixing sealant.
- Light color shades tend to yellow over time when exposed to ultraviolet rays.
- When overcoating: an on-site test is recommended to determine actual compatibility.
- The minimum depth of sealant in horizontal joints subject to traffic is 1/2 inch.
- Do not tool with detergent or soap solution.

Caution

Component 'A'; Irritant - Avoid contact. Product is a skin, respiratory and eye irritant. Use of safety goggles and chemical resistant gloves recommended. Use of a NIOSH approved respirator required if PELs are exceeded. Use with adequate ventilation.

Component 'B'; Combustible; Sensitizer; Irritant - Contains Xylene. Keep away from heat, sparks and open flame. Use with adequate ventilation. Product is a respiratory and skin sensitizer. Avoid contact. Product is an eye, skin, and respiratory irritant. Use of safety goggles and chemical resistant gloves recommended. Use of a NIOSH approved respirator required if PELs are exceeded.

First Aid In case of skin contact, wash thoroughly with soap and water. For eye contact, flush immediately with plenty of water for at least 15 minutes; contact physician. For respiratory problems, remove to fresh air. Wash clothing before re-use. Discard contaminated shoes.

Clean Up Uncured material can be removed with approved solvent. Cured material can only be removed mechanically. For spillage, collect, absorb and dispose of in accordance with current, applicable local, state, and federal regulations.

KEEP CONTAINER TIGHTLY CLOSED
NOT FOR INTERNAL CONSUMPTION
KEEP OUT OF REACH OF CHILDREN
FOR INDUSTRIAL USE ONLY
CONSULT MATERIAL SAFETY DATA SHEET FOR MORE INFORMATION

Sika warrants this product for one year from date of installation to be free from manufacturing defects and to meet the technical properties on the current technical data sheet if used as directed within shelf life. User determines suitability of product for intended use and assumes all risks. Buyer's sole remedy shall be limited to the purchase price or replacement of product exclusive of labor or cost of labor.

NO OTHER WARRANTIES EXPRESS OR IMPLIED SHALL APPLY INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. SIKA SHALL NOT BE LIABLE UNDER ANY LEGAL THEORY FOR SPECIAL OR CONSEQUENTIAL DAMAGES.

Visit our website at www.sikausa.com 1-800-933-SIKA NATIONWIDE
Regional Information and Sales Centers. For the location of your nearest Sika sales office, contact your regional center.

Sika Corporation
201 Polito Avenue
Lyndhurst, NJ 07071
Phone: 800-933-7452
Fax: 201-933-6225

Sika Canada Inc.
601 Delmar Avenue
Pointe Claire
Quebec H9R 4A9
Phone: 514-697 2610
Fax: 514-694-2792

Sika Mexicana S.A. de C.V.
Carretera Libre Celaya Km. 8.5
Corregidora, Queretaro
C.P. 76920 A.P. 136
Phone: 52 42 25 0122
Fax: 52 42 25 0537

QUALITY ISO 9001 9002 ACHIEVEMENT

Quality Certification Numbers: Lyndhurst: FM 69711 (ISO 9000), FM 70421 (QS 9000), Marion: FM 69715, Kansas City: FM 69107, Santa Fe Springs: FM 69400

UNIVERSITY OF KENTUCKY
PATIENT CARE FACILITY
PARKING GARAGE

UK Project #: 2239.2

940 Elizabeth Street
Lexington, KY 40506-0293

07900 – Joint Sealants
Submittal Date: July 26, 2006

Construction Manager
Central Kentucky Glass
1123 Versailles Road
Lexington, KY 40508
(859) 253-0710

SUBMITTAL

degussa.
Construction Chemicals

SONOLASTIC® NP 1™

One-component, elastomeric gun-grade polyurethane sealant

PRODUCT DATA

7 07920 **Joint Sealants**

Description

NP 1™ is a one-component, high-performance, non-priming, gun-grade, elastomeric polyurethane sealant. It requires no mixing and typically requires no priming to bond to many materials, including concrete, masonry and metals.

Yield

See page 3 for charts.

Packaging

300 ml (10.1 fl oz) cartridges, 30 cartridges per carton

20 fl oz (590 ml) ProPaks, 20 per carton

2 gallons (7.6 L) pails; available on special order only

For color availability in bulk packaging, call Customer Service.

Color

White, off-white, limestone, stone, tan, aluminum gray, hunter green, medium bronze, special bronze, redwood tan, and black.

Shelf Life

Cartridges and ProPaks:
1 year when properly stored

Pails:
4 months when properly stored

Storage

Store in original, unopened containers away from heat and direct sunshine. Storing at elevated temperatures will reduce the shelf life.

Sonneborn®

Features

- Ready to use
- Joint movement capability ±25%
- Easy to gun and tool
- Available in cartridges, 20 ounce ProPaks, and in bulk
- Eleven standard colors
- No primer required for most construction materials
- Weather resistant
- Wide temperature-application range
- Compatible with nonrigid paints
- UL listed
- Low VOC content

Benefits

Requires no mixing; reduces labor costs

Provides excellent flexibility for keeping moving joints tight

Speeds application and makes neater joints

Reduces jobsite waste, lowers disposal costs

Matches common substrates

Lowers installation costs

Produces long-lasting weather-tight seals

Suitable for all climates

May be painted

Passes 4 hour, 4 inch, fire and hose stream test when used with Ultra Block® or mineral wool

Meets VOC requirements in all 50 states

Where to Use

APPLICATION

- Expansion joints
- Curtain wall construction
- Panel walls
- Precast units
- Aluminum and wood window frames
- Fascia
- Parapets
- Structural components
- Vinyl siding

LOCATION

- Interior and exterior
- Above grade

SUBSTRATE

- Concrete
- Masonry
- Aluminum
- Wood

How to Apply

Joint Preparation

1. The number of joints and the joint width should be designed for a maximum of ±25% movement.

2. The depth of the sealant should be 1/2 the width of the joint. The maximum depth is 1/2" (13 mm) and the minimum is 1/4" (6 mm). Refer to Table 1.

TABLE 1

Joint Width and Sealant Depth

JOINT WIDTH, IN (MM)	SEALANT DEPTH AT MIDPOINT, IN (MM)
1/4 – 1/2 (6 – 13)	1/4 (6)
1/2 – 3/4 (13 – 19)	1/4 – 3/8 (6 – 10)
3/4 – 1 (19 – 25)	3/8 – 1/2 (10 – 13)
1 – 1-1/2 (25 – 38)	1/2 (13)

Yield

LINEAR FEET PER GALLON*

JOINT DEPTH (INCHES)	JOINT WIDTH (INCHES) 1/4	3/8	1/2	5/8	3/4	7/8	1
1/4	308	205	154	122	–	–	–
3/8	–	–	–	82	68	58	51
1/2	–	–	–	–	51	44	38

*One gallon equals approximately 12 cartridges or 6 ProPaks

METERS PER LITER

JOINT DEPTH (MM)	JOINT WIDTH (MM) 6	10	13	16	19	22	25
6	24.8	16.5	12.4	9.8	–	–	–
10	–	–	–	6.6	5.5	4.7	4.1
13	–	–	–	–	4.1	3.5	3.0

3. In deep joints, the sealant depth must be controlled by Closed-Cell Backer-Rod or Soft Backer-Rod. Where the joint depth does not permit the use of backer-rod, a bondbreaker (polyethylene strip) must be used to prevent three-sided adhesion.

4. To maintain the recommended sealant depth, install backer-rod by compressing and rolling it into the joint channel without stretching it lengthwise. Closed-Cell Backer-Rod should be about 1/8" (3 mm) larger in diameter than the width of the joint to allow for compression. Soft Backer-Rod should be approximately 25% larger in diameter than the joint width. The sealant does not adhere to it, and no separate bondbreaker is required. Do not prime or puncture the backer-rod.

Surface Preparation

Surfaces must be structurally sound, fully cured, dry, clean, free of dirt, moisture, loose particles, oil, grease, asphalt, tar, paint, wax, rust, waterproofing or curing and parting compounds, and membrane materials.

CONCRETE, STONE, AND OTHER MASONRY

Clean by grinding, sandblasting, or wire brushing to expose a sound surface free of contamination and laitance.

WOOD

New and weathered wood must be clean and sound. Scrape away loose paint to bare wood. Any coating that cannot be removed must be tested to verify adhesion of sealant or to to determine an appropriate primer.

METAL

Remove scale, rust, and coatings from metal to expose a bright white surface. Remove protective coatings as well as any chemical residue or film. Aluminum window frames are frequently coated with a clear lacquer that must be removed before the application of NP 1™. Any coating that cannot be removed must be tested to verify adhesion of sealant or determine an appropriate primer. Remove any other protective coatings or finishes that could interfere with adhesion.

Priming

1. NP 1™ is generally considered a nonpriming sealant, but special circumstances or substrates may require a primer. It is the user's responsibility to check the adhesion of the cured sealant on typical test joints at the project site before and during application. Refer to product data sheet on Primer 733 or 766, and consult Technical Services for additional information.

2. Apply primer full strength with a brush or clean cloth. A light, uniform coating is sufficient for most surfaces. Porous surfaces require more primer; however, do not overapply.

3. Allow primer to dry before applying NP 1™. Depending on temperature and humidity, primer will be tack free in 15 – 120 minutes. Priming and sealing must be done on the same work day.

Application

1. NP 1™ comes ready to use. Apply by professional caulking gun. Do not open cartridges, sausages, or pails until preparatory work has been completed.

2. Fill joints from the deepest point to the surface by holding a properly sized nozzle against the back of the joint.

3. Dry tooling is recommended. DO NOT use soapy water when tooling. Tooling results in the correct bead shape, a neat joint, and maximum adhesion.

Clean Up

1. Immediately after use, clean equipment with Reducer 990 or xylene. Use proper precautions when handling solvents.

2. Remove cured sealant by cutting with a sharp-edged tool.

3. Remove thin films by abrading.

Curing Time

The cure of NP 1™ varies with temperature and humidity. The following times assume 75° F (24° C), 50% relative humidity, and a joint 1/2" width by 1/4" depth (13 by 6 mm).

Skins: overnight or within 24 hours

Functional: within 3 days

Full cure: approximately 1 week

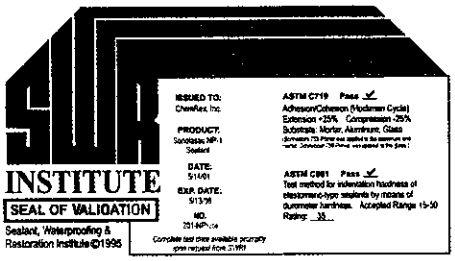
Technical Data

Composition

Sonolastic® NP 1™ is a one-component moisture-curing polyurethane.

Compliances

- ASTM C 920, Type S, Grade NS, Class 25, Use T, NT, M, A, G, and O
- Federal Specification TT-S- 00230C, Type II, Class A
- Corps of Engineers CRD-C- 541, Type II, Class A
- Canadian Specification CAN/CGSB-19.13-M87, Classification MCG-2-25-A-N, No. 81026
- USDA compliant for use in meat and poultry areas
- Underwriters Laboratories Inc.® classified (fire resistance only)
- Canadian approval for use in establishments that handle food
- ISO 11600-F-25LM
- SWRI Validated



Typical Properties

PROPERTY	VALUE
Service temperature range, ° F (° C)	-40 to 180 (-40 to 82)
Expected life	Up to 15 years
Shrinkage	None

Test Data

PROPERTY	RESULTS	TEST METHODS
Movement capability, %	±25	ASTM C 719
Tensile strength, psi (MPa)	350 (2.4)	ASTM D 412
Tear strength, pli	50	ASTM D 1004
Ultimate elongation at break, %	800	ASTM D 412
Rheological, (sag in vertical displacement) at 120° F (49° C)	No sag	ASTM C 639
Extrudability, 3 seconds	Passes	ASTM C 603
Hardness, Shore A		ASTM C 661
At standard conditions	25 – 30	
After heat aging (max Shore A: 50)	25	
Weight loss, after heat aging, %	3	ASTM C 792
Cracking and chalking, after heat aging	None	ASTM C 792
Tack-free time, hrs, (maximum 72 hrs)	Passes	ASTM C 679
Stain and color change	Passes (no visible stain)	ASTM C 510
Bond durability,* on glass, aluminum, and concrete	Passes ±25% movement	ASTM C 719
Adhesion* in peel, pli (min. 5 pli)	30	ASTM C 794
Adhesion* in peel after UV radiation through glass (min. 5 pli)	Passes	ASTM C 794
Artificial weathering, Xenon arc, 250 hours	Passes	ASTM C 793
Artificial weathering, Xenon arc, 3,000 hours	No surface cracking	ASTM G 26

*Primed for water immersion dictated by ASTM C 920. Concrete and aluminum primed with 733; glass primed with 766.

Test results are typical values obtained under laboratory conditions. Reasonable variations can be expected.

For Best Performance

- Do not allow uncured NP 1™ to come into contact with alcohol-based materials or solvents.
- Do not apply polyurethane sealants in the vicinity of uncured silicone sealants or uncured Sonolastic® 150 or 150 Tint Base.
- NP 1™ should not come in contact with oil-based caulking, uncured silicone sealants, polysulfides, or fillers impregnated with oil, asphalt, or tar.
- Protect unopened containers from heat and direct sunshine.
- In cool or cold weather, store container at room temperature for at least 24 hours before using.
- NP 1™ should not be used for continuous immersion in water. Call Technical Services for recommendations.
- Do not apply over freshly treated wood; treated wood must have weathered for at least 6 months.
- Substrates such as copper, stainless, and galvanized may require the use of a primer; Primer 733 or 766 is acceptable. For Kynar 500 based coatings use Primer 733 only. An adhesion test is recommended for any questionable substrate.
- Do not use as a cap, heel, or toe bead for exterior glazing. Refer to Sonolastic® 150 product data sheet (see Form No. 1017910).
- UV exposure may cause white NP 1™ to discolor. This does not affect sealant performance; where maintaining a true white appearance is critical, use Ultra (see Form No. 1017894) or Sonolastic® 150 (see Form No. 1017910) sealants.
- NP 1™ can be applied below freezing temperatures only if substrates are completely dry, free of moisture, and clean. Contact Technical Service for more information.
- Lower temperatures and humidities will extend curing times.
- NP 1™ can be painted over provided it is fully cured and clean. When painting over any elastomeric sealant, use a paint that is also elastomeric. (If movement occurs, the paint will also move.)
- Make certain the most current versions of product data sheet and MSDS are being used; call Customer Service (1-800-433-9517) to verify the most current versions.
- Proper application is the responsibility of the user. Field visits by Degussa personnel are for the purpose of making technical recommendations only and not for supervising or providing quality control on the jobsite.

Health and Safety

NP 1™

Warning

NP 1™ (all colors) contains stoddard solvent and crystalline (quartz) silica.

Risks

May cause skin, eye and respiratory irritation. May cause dermatitis and allergic responses. Potential skin and/or respiratory sensitizer. Ingestion may cause irritation. Reports associate repeated or prolonged occupational overexposure to solvents with permanent brain, nervous system, liver and kidney damage. INTENTIONAL MISUSE BY DELIBERATELY INHALING THE CONTENTS MAY BE HARMFUL OR FATAL.

Precautions

KEEP OUT OF THE REACH OF CHILDREN. Use only with adequate ventilation. Keep container closed. Prevent contact with skin, eyes and clothing. Wash thoroughly after handling. Avoid breathing vapors. DO NOT take internally. Use impervious gloves, eye protection and if the TLV is exceeded or used in a poorly ventilated area, use NIOSH/MSHA approved respiratory protection in accordance with applicable federal, state and local regulations.

First Aid

In case of eye contact, flush thoroughly with water for at least 15 minutes. SEEK IMMEDIATE MEDICAL ATTENTION. In case of skin contact, wash affected areas with soap and water. If irritation persists, SEEK MEDICAL ATTENTION. Remove and wash contaminated clothing. If inhalation causes physical discomfort, remove to fresh air. If discomfort persists or any breathing difficulty occurs, or if swallowed, SEEK IMMEDIATE MEDICAL ATTENTION.

Refer to Material Safety Data Sheet (MSDS) for further information.

Proposition 65

This product contains materials which have been listed by the state of California as known to cause cancer, birth defects, or other reproductive harm.

VOC Content

NP 1™ contains 0.36 lbs/gal or 43 g/L, less water and exempt solvents.

For medical emergencies only, call ChemTrec (1-800-424-9300).

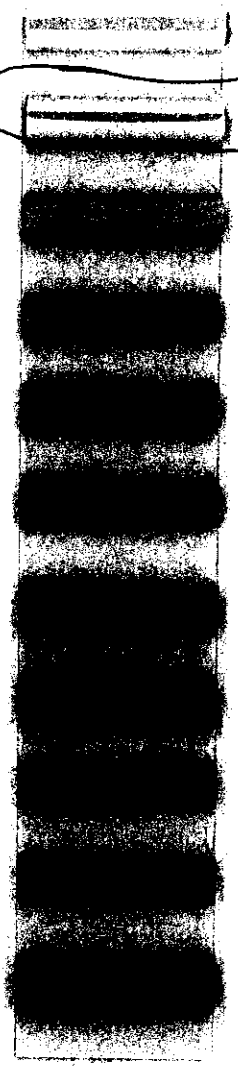
Degussa Building Systems
889 Valley Park Drive
Shakopee, MN, 55379
www.degussabuildingsystems.com
Customer Service 800-433-9517
Technical Service 800-243-6739

For professional use only. Not for sale to or use by the general public.

Form No. 1017906 9/04 (Replaces 9/03)
Printed on recycled paper including 10% post-consumer fiber.

creating essentials

Sonolastic® NP 1™ & NP 2™



White

Off White

APPROVED

Limestone

Tan

Stone

Aluminum Gray

Redwood Tan

Hunter Green

Medium Bronze

Special Bronze

Black

Colors are typical. Field conditions may result in slight variations from that represented.

Sonneborn

Form No. 1018181

GILBANE
University of Kentucky
Patient Care Facility
Gilbane Project No. 18-3986
REVIEWED

J010-Hupac J020-Garage
J030-Pour Fdn J040-POF Foundation
J050-POF Conc Slab J060-Towerup Fd

Sid Package No _____
Submittal No _____
Spec Section _____
Reviewed By _____
Date _____

This review does not relieve the contractor from complying with the contract requirements concerning their work with other trade contractors and verifying field dimensions

Gilbane

Transmittal

Project [2239.2] - PCF - Hospital - Garage

View Date 2/8/2008

Gilbane
940 Elizabeth St
Lexington, KY 40506-0293
Phone: (859) 257-4536
Fax: (859) 323-1331

Transmittal No. 2239.2-01172

To	Mr. Doug Sherwood E. C. Matthews Co., Inc. 2265 Harrodsburg Road Lexington, KY 40504 USA Phone: (859) 278-3131 Fax: (859) 277-7903	**Date**	2/8/2008
		Items listed are being sent	
		☑ Enclosed	
		☐ Under Separate Cover	
		Via	Hand Delivered
		CSI Code	07950 - Expansion Control
From	Mr. Brian Hoerr (Gilbane)		
Subject	Submittal Package 100-07950-002.0		

We are transmitting the following to you:

☐ Product Data ☐ Samples ☐ Shop Drawings ☐ O&M Manuals ☐ Plans
☐ Architectural Drawings ☐ Letters ☐ Specifications ☐ Prints ☐ Addenda
☐ Engineering Drawings ☐ Change Orders ☑ Submittal

Submittals

Pkg. No./Rev.	Item No./Rev.	Description	Copies	Reason	Action	Due
100-07950-002.0	100-07950-007.0	RFQ 125R.1, Bellow Flashing Data	2	Approved as Noted		

Remarks Submit product data on Metaflex Fire Barrier per RFQ 125R.1.

	Mr. Brian Hoerr	2/8/2008
From	Printed Name	Date
Received By	Printed Name	Date

Linked Documents

Document Type	Document	Open	Description	Date
Sub. Pkg.	100-07950-002.0			

Distribution

Recipient	Company	Method	Date
Doug Sherwood	E. C. Matthews Co., Inc.	Message	2/8/2008

GBBN architects

Transmittal

Project [2239.2] - PCF - Hospital - Garage **View Date** 2/6/2008

GBBN Architects, Inc.
325 West Main St
Lexington, KY 40507-1632
Phone: (859) 381-8787
Fax: (859) 381-8873

Transmittal No. 2239.2-01171

To	Mr. Brian Hoerr Gilbane 440 Polaris Parkway Suite 200 Westerville, OH 43082 USA Phone: (614) 418-3000 Fax: (614) 418-3030	**Date**	2/6/2008
From	Ms. Donna Bradshaw (GBBN Architects, Inc.)	**Items listed are being sent**	
Subject	submittal item 100-07950-007 RFQ 125R.1, BELLAW FLASHING DATA	☐ Enclosed ☐ Under Separate Cover	

RECEIVED
FEB 07 2008
GILBANE #3966

We are transmitting the following to you:

☐ Product Data	☐ Samples	☐ Shop Drawings	☐ O&M Manuals	☐ Plans
☐ Architectural Drawings	☐ Letters	☐ Specifications	☐ Prints	☐ Addenda
☐ Engineering Drawings	☐ Change Orders	☑ Submittal		

Remarks (APPROVED AS NOTED)

Received By	Printed Name	Date

Transmittal

Gilbane

To: **GBBN**

Attn: Bryan Korb

From: **Gilbane**

Date: 1/30/08
Job No.:
Project: UK GARAGE
Transmittal #:

Prepared By: Brian Hoerr
Telephone:
Fax:

We are sending the following items: ☒ Attached ☐ Under separate Cover

☒ Shop Drawings ☐ Prints ☐ Originals ☐ Samples
☐ Copy of Letter ☐ Change order ☐ Specifications
☐ Other:

Copy	Date	Drawing No. / Spec. No.	Description
6			RFQ 125R.1, Bellow Flashing Data
			100-07950-002 = package
			100-07950-007 = item
			(GBCO system is down, will enter into CW as soon as possible).
			This submittal is for the record. It was approved on 1/15/07 during a conversation between Doug Sherwood and David Proffitt. The flashing has been installed.

These are transmitted as checked below

☐ For approval ☐ For your use ☐ Approved ☐ Rejected
☐ As requested ☒ For review and comment ☐ Incorporate notations ☐ Revise and resubmit

Copy to:

Signature:

SUBMITTAL TRANSMITTAL

E. C. Matthews Company, Inc.
2265 Harrodsburg Road
Lexington, KY 40504
Phone: 859/278-3131
FAX: 859/277-7903
E-Mail: dsherwood@ecmatthews.com

Spec Section RFQ 125
Sec. # Bellows flashing
Initial (I) or Resub (R#) I

DATE: 01/15/2008 JOB NO. 9212

Brad Fiser
University of Kentucky
Ref: Parking Garage

TO: Gilbane Building Company
940 Elkhorn Street
Lexington, KY 40508

We Are Sending You ___ Data Sheets X Shop Drawings

Subcontractor or Supplier: [redacted]

COPIES		DATE		DESCRIPTION
7		RFQ 1252I, 07950		Data sheets - bellows flashing

Contractors Review:

APPROVED FOR GENERAL CONFORMITY TO PLANS AND SPECIFICATIONS. DETAIL DIMENSIONS AND QUANTITIES NOT COMPLETELY CHECKED. SUBCONTRACTOR'S FULL RESPONSIBILITY IS IN NO WAY RELIEVED BY THIS APPROVAL.

E.C. MATTHEWS CO., INC. BY: [signature] DATE 1-17-08

Construction Manager / Architects Review:

RK - 002
Hen - 007

RECEIVED
JAN 18 2008
GILBANE
#3966

COPY TO: File

SIGNED:
Doug Sherwood

GILBANE
University of Kentucky
Patient Care Facility
Gilbane Project No. 18-3966

REVIEWED

☐ 010-Huguelet ☒ 020-Garage
☐ 030-Infrastructure ☐ 040-PCF Foundation
☐ 050-PCF Core/Shell ☐ 060-TowerUp Fit

Bid Package No. 100
Submittal No. 100-07950-002
Spec. Sect/Para. _____
Reviewed By BH
Date 1/30/08

This review does not constitute nor does it assume design responsibility nor does it relieve the trade contractor's supplier from complying with the contract requirements, coordinating their work with other trade contractors and verifying field dimensions.

Pk - 002
It - 007

THIS REVIEW BY GBBN ARCHITECTS, INC., IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND IS NOT AN APPROVAL OF THIS DRAWING OR SET OF DRAWINGS. THE COMMENTS MADE DO NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH THE PROJECT DRAWINGS, SPECIFICATIONS AND OTHER CONTRACT DOCUMENTS. CONTRACTOR IS SOLELY RESPONSIBLE FOR: ALL DIMENSIONS AND QUANTITIES, ALL FABRICATION, DELIVERY AND ERECTION; ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES; ALL COORDINATION WITH ALL OTHER CONTRACTORS, SUPPLIERS AND OTHERS; PERFORMING ALL WORK IN A SAFE AND PROPER MANNER.

NO EXCEPTIONS TAKEN	
FURNISH AS CORRECTED	X
REVISE AND RESUBMIT	
NO REVIEW - INCOMPLETE	
SUBMIT SPECIFIED ITEMS	X
REJECTED	

DATE BK BY 2-5-08

GBBN ARCHITECTS, INC.
ARCHITECTURE, INTERIORS, PLANNING, ENGINEERING
☐ 332 EAST 8TH STREET, CINCINNATI, OHIO 45202-2217 (513) 241-8700
☐ 325 WEST MAIN STREET, LEXINGTON, KENTUCKY 40507 (859) 381-8787

ARCHITECT NOTES

1) ROOF EJ HAS ALREADY BEEN INSTALLED AT TIME OF REVIEW.

2) SUBMIT PRODUCT DATA ON METAFLEX FIRE BARRIER

Gilbane

Transmittal

Project [2239.2] - PCF - Hospital - Garage **View Date** 2/18/2008

Gilbane
940 Elizabeth St
Lexington, KY 40506-0293
Phone: (859) 257-4536
Fax: (859) 323-1331

Transmittal No. 2239.2-01172

To	Mr. Doug Sherwood E. C. Matthews Co., Inc. 2265 Harrodsburg Road Lexington, KY 40504 USA Phone: (859) 278-3131 Fax: (859) 277-7903	**Date**	2/8/2008
		Items listed are being sent	
		☑ Enclosed	
		☐ Under Separate Cover	
		Via	Hand Delivered
		CSI Code	07950 - Expansion Control
From	Mr. Brian Hoerr (Gilbane)		
Subject	Submittal Package 100-07950-002.0		

We are transmitting the following to you:

☐ Product Data ☐ Samples ☐ Shop Drawings ☐ O&M Manuals ☐ Plans
☐ Architectural Drawings ☐ Letters ☐ Specifications ☐ Prints ☐ Addenda
☐ Engineering Drawings ☐ Change Orders ☑ Submittal

Submittals

Pkg. No./Rev.	Item No./Rev.	Description	Copies	Reason	Action	Due
100-07950-002.0	100-07950-007.0	RFQ 125R.1, Bellow Flashing Data	2	Approved as Noted		

Linked Documents

Document Type	Document	Open	Description	Date
Doc	2239.2-02021		Submittal 100-07950-007 REVIEWED	2/13/2008

Remarks Submit product data on Metaflex Fire Barrier per RFQ 125R.1.

	Mr. Brian Hoerr	2/8/2008
From	Printed Name	Date
Received By	Printed Name	Date

Linked Documents

Document Type	Document	Open	Description	Date
Sub. Pkg.	100-07950-002.0			

Distribution

Recipient	Company	Method	Date
Doug Sherwood	E. C. Matthews Co., Inc.	Message	2/8/2008

E.C. Matthews Co., Inc.

2265 Harrodsburg Road
Lexington, KY 40504
Phone: 859.278.3131
FAX: 859.277.7903
E-Mail: dsherwood@ecmatthews.com

Facsimile Transmittal

Date:	15-Jan-2008
To:	GBBN
Attn:	David Proffitt
From:	Doug Sherwood
Re:	Flashing UK Parking Garage
FAX Number:	381-8873

Comments:

Dave

Here it is. Call Me ASAP

Approved
DP 4/15/08

Please call if you have any questions.

This cover sheet is the first page of **4** pages.

No confirmation is necessary unless otherwise indicated

A copy of this communication is **not** being mailed. (Note: If no mailed copy is indicated but one is needed, kindly call and request same.)

Manville

Expand-O-Flash Roof Expansion Joint Covers

Design and Installation Considerations

Design and Installation Considerations
Comments below are typical for roofs only. For product details and installation instructions, request the "Expand-O-Flash Applications and Installation Manual," BU-292.

A. Expansion joint bellows width should be specified to allow for joint opening at mean temperature plus anticipated movement across and along the joint.

Recommended Cover Size (bellows width) for standard applications is approximately 1.5 times the joint opening or distance spanned.

When the curb width exceeds 2," two options are available. The style EJ/WC option provides a low profile bellows with an integral flashing system for the top of the curbs. The style CF or CF-EJ option spans the joint from the outside edge of the curb to the outside edge of the curb or to the wall and, thus, also forms a flashing for the curb.

A1. Style EJ/WC size selection: See the product selection chart opposite page for bellows and flashing width selections.


Style EJ/WC

A2. Style CF or CF-EJ size selection: The cover size for CF and CF-EJ are not solely a function of the expansion joint opening. For these situations the term "span" is used rather than joint opening. To calculate the span, use the method described below, then select the proper cover size from the chart on page 5.


Style CF

Span for Roof to Roof (CF) = Outside Curb to Outside Curb Minus 4"
Span for Roof to Wall (CF-EJ) = Outside Curb to Wall Minus 2".

B. TL-6 is available in one size to cover a maximum 4" opening.

C. To shed water properly and to maximize service life, Expand-O-Flash covers should form an approximate half circle when installed roof-to-roof and an approximate quarter circle when installed roof-to-wall.

D. If bellows damage from oil is a concern, Neoprene (Type N) is recommended since it is more resistant to oil than EPDM.

E. Expansion joints must extend through roof edges and fascias.

F. Insulation or lightweight insulating concrete is not suitable as a nailing base.

G. Except for Style TL-6, Expand-O-Flash must be installed above the roof level, never flush with the roof surface.

Although discouraged, to promote drainage or for other extenuating circumstances, TL-6 may be installed directly to the roof without raised cants. Special care should be taken when stripping in.

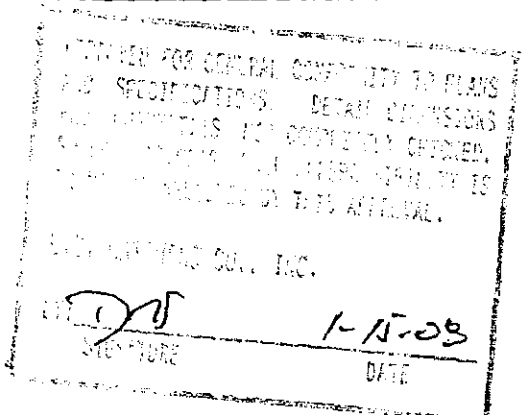
H. Expand-O-Flash flanges must be solidly, mechanically fastened a maximum of 8" on center on curbs, walls and parapets and 2" to 4" on center on cants.

I. When Expand-O-Flash with 8" or wider bellows is installed, the edges of the foam must be supported by the curb or cant. The recommended minimum curb width for these situations is 2¼."

Guide Specifications
Expansion joint cover shall be a non-reinforced, foam-supported elastomeric bellows with a bifurcated waterproof attachment to metal flanges. It shall be... (insert one of the following).

1. For Expand-O-Flash styles CF, EJ or CF-EJ insert: Expand-O-Flash Style (CF) (EJ) (CF-EJ) with bellows type (N) (E) and flange metal of (16 oz. copper) (0.018" stainless steel) (26-ga. galvanized steel) (0.032" aluminum) "...(continue below)"
2. For Style TL-6 insert: "Style TL-6"...(continue below)
3. For Expand-O-Flash EJ/WC and CF-EJ/WC "Expand-O-Flash EJ/WC with bellows covers of (black) (white) (Tedlar/Nitrile) (EPDM) and of sufficient width to extend over the tops of the curbs and down the curb side(s) a minimum of 2." Flange metal shall be (16-oz. copper) (0.018" stainless steel) (26-ga. galvanized steel) (0.032" aluminum)... (continue below.)

As manufactured by Manville, P.O. Box 5108, Denver, CO 80217. They shall be installed where indicated on plans in accordance with the manufacturer's recommendations and good roofing practices. All intersections shall be prefabricated by the manufacturer. All splices shall be made with materials supplied for this purpose by the manufacturer. Expansion joint covers shall be included in the Manville Roofing System Guarantee.

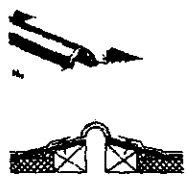


Manville

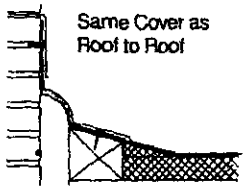
Expand-O-Flash Roof Expansion Joint Covers

Selection Charts

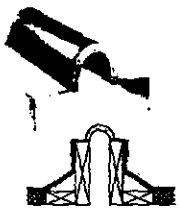
Styles CF, EJ and CF-EJ



Style EJ
Roof to Roof



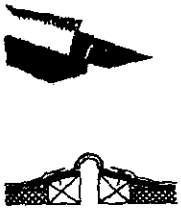
Style EJ
Roof to Wall



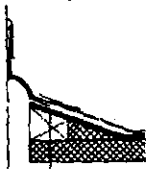
Style CF
Roof to Roof

For additional, larger scale, detailed drawings, see pages 12 and 13.

Style CF-EJ
Roof to Wall



Type TL-6
Roof to Roof



Type TL-6
Roof to Wall

Selection Chart No. 1 for Standard Products (Sizes 2" Thru 54" Available on Request)
Type N (Neoprene) Available 4"-12" Bellows Widths | Standard Color: Black
Type E (EPDM) Available 4"-8" Bellows Widths | White Available on Request

Joint Opening Or Span	Bellows Width*	Foam Thickness	Style EJ Style	Style EJ Length	Style CF and CF-EJ Style	Style CF and CF-EJ Length
1½ to 2½"	4"	⅜"	EJ-4	10ft./50ft.	CF-4, CF-EJ-4	10ft.
2½ to 4"	6"	½"	EJ-6	10ft./50ft.	CF-6, CF-EJ-6	10ft.
4 to 5"	8"	½"	EJ-8	10ft./50ft.	CF-8, CF-EJ-8	10ft.
5 to 6½"	10"	⅝"	EJ-10	10ft.	CF-10, CF-EJ-10	10ft.
6½ to 8"	12"	¾"	EJ-12	10ft.	CF-12, CF-EJ-12	10ft.

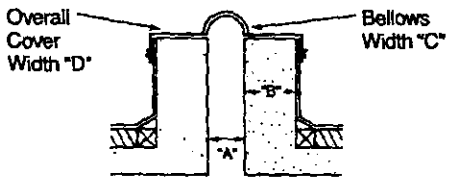
*Based on the rule of thumb method to determine bellows width for joint openings for CF (Curb Form) and CF-EJ styles: Roof to Roof = 1.5 (outside of wood curb to outside of wood curb minus 4 inches); Roof to Wall: Bellows width = 1.5 (outside of wood curb to wall minus 2 inches). For curb widths greater than 2", see "Design Considerations," page 8. In all cases, anticipated movement should be considered for proper sizing.

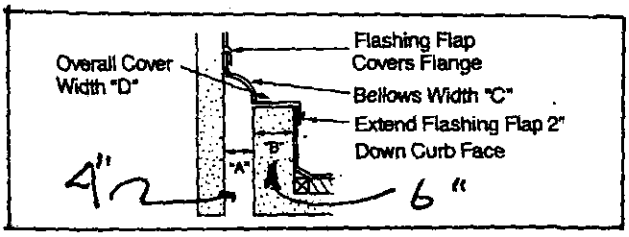
Selection Chart TL-6

Joint Opening			
Roof to Roof	Roof to Wall	Bellows Width	Length
1" to 4"	1" to 3½"	6"	100 ft.

Available in Black (BTL) or White (WTL)

Style EJ/WC





***Standard Product Selection Chart No. 2—Curb-to-Curb**

C/D "C"—EJ Bellows Width (inches)
****"D"—Cover Overall Width (inches)**

Joint Opening "A"	Curb Width "B" 4" C/D	5" C/D	6" C/D	7" C/D	8" C/D	9" C/D	10" C/D	12" C/D
1½ to 2½"	4/16	4/24	4/24	4/24	4/24	4/32	4/32	4/32
2½ to 4"	6/24	6/24	6/24	6/24	6/32	6/32	6/32	
4 to 5"	8/24	8/24	8/24	8/24	8/32	8/32	8/32	
5 to 6½"	10/24	10/24	10/32	10/32	10/32	10/32		
6½ to 8"	12/24	12/32	12/32	12/32	12/32			

***Standard Product Selection Chart No. 2—Curb-to-Wall**

C/D "C"—EJ Bellows Width (inches)
****"D"—Cover Overall Width (inches)**

Joint Opening "A"	Curb Width "B" 4" C/D	5" C/D	6" C/D	7" C/D	8" C/D	9" C/D	10" C/D	12" C/D
1½ to 2½"	4/16	4/16	4/16	4/20	4/20	4/20	4/20	4/24
2½ to 4"	6/16	6/20	6/20	6/20	6/20	6/24	6/24	4/24
4 to 5"	8/20	8/20	8/20	8/24	8/24	8/24	8/24	8/32
5 to 6½"	10/24	10/24	10/24	10/24	10/24	10/32	10/32	10/32
6½ to 8"	12/24	12/24	12/24	12/32	12/32	12/32	12/32	12/32

***Note: Other sizes and configurations are available upon request.**
****Flashing Width: Roof to Roof = Bellows Width + 2 × Curb Width + 4".**
Roof to Wall = 4" (Flange Width) + Bellows Width + Curb Width + 2".
Other configurations are available. Call Technical Service.

1. Slope curbs away from joint.
2. Embed flashing flaps in a sealant compatible with the roof membrane and secure it to the curb with an anchor bar. The Tedlar/Nitrile cover is compatible with all currently used roofing membranes. EPDM covers should not be installed to be in contact with asphalt, or Industrial Roof Cement.

Gilbane

Transmittal

Project [2239.2] - PCF - Hospital - Garage **View Date** 10/22/2007

Gilbane
940 Elizabeth St
Lexington, KY 40506-0293
Phone: (859) 257-4536
Fax: (859) 323-1331

Transmittal No. 2239.2-01103

To	Mr. Doug Sherwood E. C. Matthews Co., Inc. 2265 Harrodsburg Road Lexington, KY 40504 USA Phone: (859) 278-3131 Fax: (859) 277-7903	**Date**	10/22/2007
		Items listed are being sent	
		☑ Enclosed	
		☐ Under Separate Cover	
		Via	Hand Delivered
		CSI Code	07950 - Expansion Control
From	Mr. Brian Hoerr (Gilbane)		
Subject	Submittal Package 100-07950-001.0		

We are transmitting the following to you:

☐ Product Data ☐ Samples ☐ Shop Drawings ☐ O&M Manuals ☐ Plans
☐ Architectural Drawings ☐ Letters ☐ Specifications ☐ Prints ☐ Addenda
☐ Engineering Drawings ☐ Change Orders ☑ Submittal

Submittals

Pkg. No./Rev.	Item No./Rev.	Description	Copies	Reason	Action
100-07950-001.0	100-07950-006.0	Expansion Joints, RFQ 112R.1	2	Approved as Noted	

Remarks Advanced copy of submittal was sent 10/19/07 to ECM.

Wabo 400C is to be used with standard white color.

Brian Hoerr

	Mr. Brian Hoerr	10/22/2007
From	Printed Name	Date
Received By	Printed Name	Date

Linked Documents

Document Type	Document	Open	Description	Date

Sub. Pkg.	100-07950-001.0			

Distribution

Recipient	Company	Method	Date
Doug Sherwood	E. C. Matthews Co., Inc.	Message	10/22/2007

Transmittal

Project [2239.2] - PCF - Hospital - Garage **View Date** 10/18/2007

GBBN Architects, Inc.
332 East Eighth St
Cincinnati, OH 45202-2217
Phone: (513) 241-8700
Fax: (513) 241-8873

Transmittal No. 2239.2-01094

RECEIVED
OCT 18 2007
GILBANE #3966

To	Mr. Brian Hoerr Gilbane 940 Elizabeth St Lexington, KY 40506-0293 USA Phone: (859) 257-4536 Fax: (859) 323-1331
From	Mr. Bryan Korb (GBBN Architects, Inc.)
Subject	Submittal Package 100-07950-001.0

Date 10/18/2007

Items listed are being sent

☐ Enclosed
☐ Under Separate Cover

CSI Code 07950 - Expansion Control

We are transmitting the following to you:

☐ Product Data ☐ Samples ☐ Shop Drawings ☐ O&M Manuals ☐ Plans
☐ Architectural Drawings ☐ Letters ☐ Specifications ☐ Prints ☐ Addenda
☐ Engineering Drawings ☐ Change Orders ☑ Submittal

Submittals

Pkg. No./Rev.	Item No./Rev.	Description	Copies	Reason	Action
100-07950-001.0	100-07950-006.0	Expansion Joints, RFQ 112R.1	3	Approved as Noted	

Remarks

Received By Printed Name Date

Linked Documents

Document Type	Document	Open	Description	Date
Sub. Pkg.	100-07950-001.0			

Distribution

Recipient	Company	Method	Date
Brian Hoerr	Gilbane	Message	10/18/2007

Hoerr, Brian C.

From: dsherwood@ecmatthews.com
Sent: Friday, October 19, 2007 4:53 PM
To: Hoerr, Brian C.
Subject: Fw: EJ Submittal, Advanced Copy
Attachments: WABO 400C.pdf

Brian,

Here is shop drawing for WABO 400C

----- Original Message -----

From: "Hoerr, Brian C."
To: dsherwood@ecmatthews.com
Subject: EJ Submittal, Advanced Copy
Date: Fri, 19 Oct 2007 13:46:08 -0400

<<EJ Submittal.pdf>>

Doug,

Attached is an advanced copy of the EJ submittal that has been returned from GBBN. I will hand deliver he originals on Monday to you.

I added a data sheet for this submittal. GBBN kept the sample.

Brian Hoerr

Senior Project Engineer

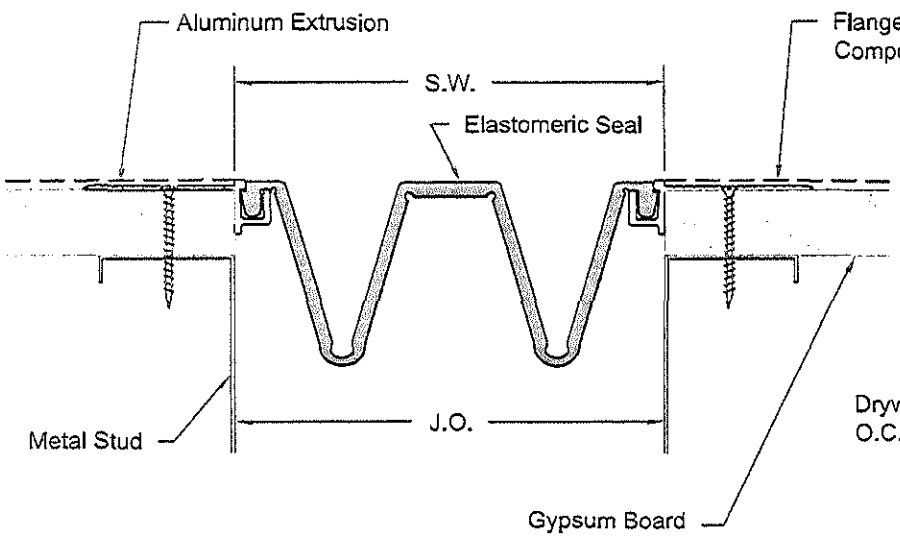
Gilbane Building Company

phone: 859.257.4536

mobile:859.983.3085

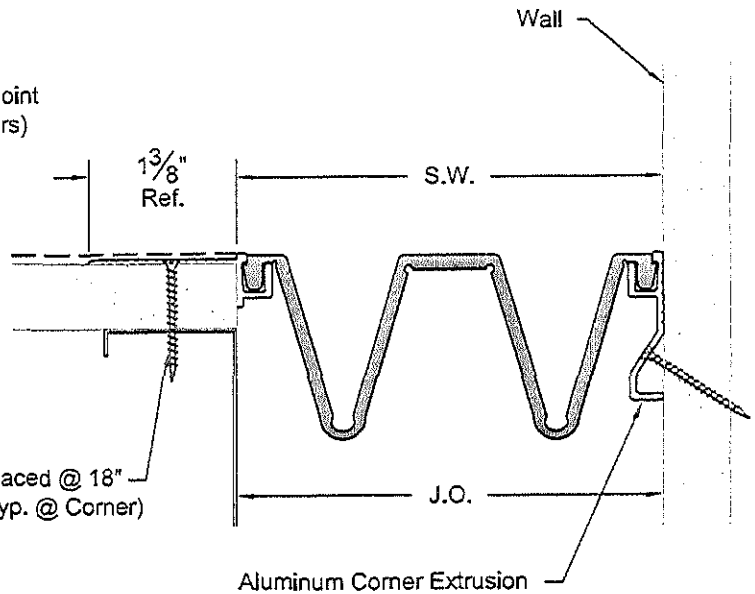
Doug Sherwood

E. C. Matthews Co.
2265 Harrodsburg Road
Lexington, KY 40504
859-278-3131



Typical Section

Wall to Wall



Typical Section

Wall to Wall (Corner)

Dimension Chart

Model	Joint Opening (J.O)						Total movement		S.W.	
	at install		allow min.		allow max.				at install	
	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm
FSW-400	4	102	2	51	6	152	4	102	4	102
FSW-500	5	127	2 1/2	64	7 1/2	191	5	127	5	127
FSW-600	6	152	3	76	9	229	6	152	6	152
FSW-400C	4	102	2	51	6	152	4	102	4	102
FSW-500C	5	127	2 1/2	64	7 1/2	191	5	127	5	127
FSW-600C	6	152	3	76	9	229	6	152	6	152

Note: J.O. minimum and maximum values are after thermal movement occurs.

Wabo®FinishSeam

Model: FSW

Watson Bowman Acme Corp.
96 Pineview Drive Amherst, NY 14228
phone: (716) 691-7566 fax: (716) 691-6239
www.wbacorp.com

DETAILED BY: CTW	DATE: 8/14/01
CHECKED BY: WBA	CURRENT ISSUE: 12/14/06
SHEET NO: 1	DRAWING NO: C - 21134

GILBANE
University of Kentucky
Patient Care Facility
Gilbane Project No. 18-3966

REVIEWED

☐ 010-Huguelet ☒ 020-Garage
☐ 030-Infrastructure ☐ 040-PCF Foundation
☐ 050-PCF Core/Shell ☐ 060-TowerUp Fit

Bid Package No. 100
Submittal No. 100-07950-001
Spec. Sect/Para. _____
Reviewed By BH
Date 10/12/07

This review does not constitute nor does it assume design responsibility nor does it relieve the trade contractor's supplier from complying with the contract requirements, coordinating their work with other trade contractors and verifying field dimensions.

Item - 006

package - 001

THIS REVIEW BY GBBN ARCHITECTS, INC., IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND IS NOT AN APPROVAL OF THIS DRAWING OR SET OF DRAWINGS. THE COMMENTS MADE DO NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH THE PROJECT DRAWINGS, SPECIFICATIONS AND OTHER CONTRACT DOCUMENTS. CONTRACTOR IS SOLELY RESPONSIBLE FOR: ALL DIMENSIONS AND QUANTITIES, ALL FABRICATION, DELIVERY AND ERECTION; ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES; ALL COORDINATION WITH ALL OTHER CONTRACTORS, SUPPLIERS AND OTHERS; PERFORMING ALL WORK IN A SAFE AND PROPER MANNER.

NO EXCEPTIONS TAKEN	
FURNISH AS CORRECTED	X
REVISE AND RESUBMIT	
NO REVIEW - INCOMPLETE	
SUBMIT SPECIFIED ITEMS	
REJECTED	

DATE 10/8/07 BY DK

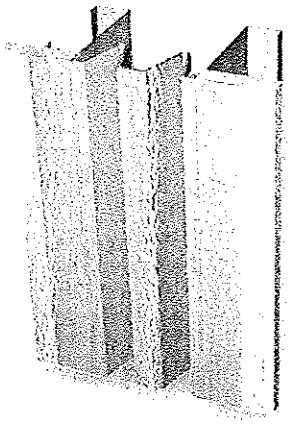
GBBN ARCHITECTS, INC.
ARCHITECTURE, INTERIORS, PLANNING, ENGINEERING
332 EAST 8TH STREET, CINCINNATI, OHIO 45202-2217 (513) 241-8700
325 WEST MAIN STREET, LEXINGTON, KENTUCKY 40507 (859) 381-8787

PROVIDE STANDARD WHITE COLOR

Wabo®FinishSeam

Wall, Soffit & Ceiling Expansion Joint

Features	Benefits
• Durable and time tested	Low maintenance
• No visible fasteners	Aesthetically attractive
• Surface mount system	Surface mounts directly to edge of drywall with minimal components. Saves time and labor costs
• Colorable snap-lock seal	Fast, simple installation
• Versatile	Accommodates change in direction and adapts to a variety of site conditions.



DESCRIPTION:

Wabo®FinishSeam is an interior wall, soffit and ceiling expansion control system that accommodates both thermal and multidirectional seismic movement. The system is engineered for drywall applications and easily mounts directly to the edge of the wall opening utilizing minimal components and traditional drywall screws. Once mounted the aluminum extrusions simply receive drywall compound. Wabo®FinishSeam is available for openings of 1 through 6 inches. Attractive in design, the colorable elastomeric seals can easily accommodate changes in direction by heat welding or utilizing the manufacturer's user friendly adhesive.

RECOMMENDED FOR:

- All Interior wall, ceiling, and soffit expansion joint applications.
- For use in various construction projects including:
  - Health-Care
  - Transportation
  - Recreation
  - Retail
  - Commercial
  - Educational
  - Parking Garage (interior areas)

PACKAGING/COVERAGE:

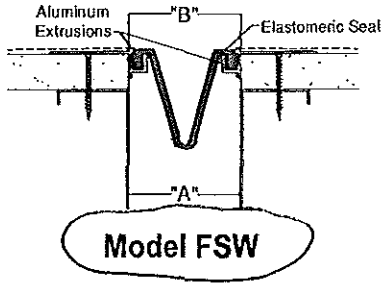
- Aluminum Profiles: bundled in standard 10-foot lengths.
- Elastomeric Seals: Shipped in longest practical continuous length.
- Accessories: In manufacturer's standard labeled carton.

BASF

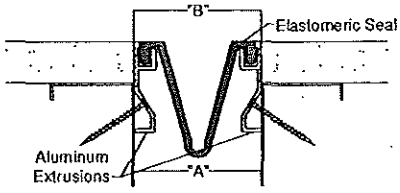
The Chemical Company

TECHNICAL DATA:

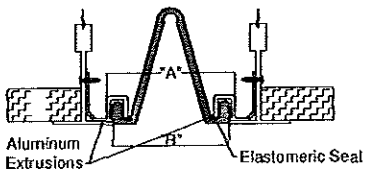
Design Information:
Wabo®FinishSeam is available in 3 models; Model FSC has been designed to accommodate typical ceiling applications, Model FSW has been designed to accommodate typical wall applications utilizing a front mounted base members and Model FSE for wall applications utilizing in-joint base members.



Model FSW



Model FSE



Model FSC

Note: All systems are illustrated with the WaboFinishSeam 200-300 elastomeric seal. See sales drawings for additional details

Movement Table

Model Number	JT. Opening "A"		System Width "B"		Total Movement	
FSC, FSE, FSW	inches	mm	inches	mm	inches	mm
100	1.0	25	1.0	25	0.5	13
200	2.0	51	2.0	51	2.0	51
300	3.0	76	3.0	76	3.0	76
400	4.0	102	4.0	102	4.0	102
500	5.0	127	5.0	127	5.0	127
600	6.0	152	6.0	152	6.0	152
100-C	1.0	25	1.0	25	0.5	13
200-C	2.0	51	2.0	51	2.0	51
300-C	3.0	76	3.0	76	3.0	76
400-C	4.0	102	4.0	102	4.0	102
500-C	5.0	127	5.0	127	5.0	127
600-C	6.0	152	6.0	152	6.0	152

PHYSICAL PROPERTIES

Metal Components: Extrusions shall be aluminum conforming to ASTM B221, alloy 6063-T5. Mill finish supplied.

Anchors: Drywall screws of sufficient length for gypsum wallboard construction. Supplied by installing contractor.

Elastomeric Seal: Material shall be extruded polyvinyl chloride (PVC) designed to mechanically lock into continuous channel of aluminum extrusion. Durometer: 60-70 Shore A hardness. Standard color: black. Other colors available.

SCHEDULE OF FINISH HARDWARE

FOR

NEW GARAGE-UK PATIENT CARE FACILITY
110 TRANSCRIPT AVENUE
LEXINGTON, KY

110-0442

REVISED 09/18/06
FINAL

ARCHITECT/DESIGNER:

GBBN ARCHITECTS
325 WEST MAIN STREET
LEXINGTON, KY 40507
PHONE - 859-381-8787
FAX - 859-381-8873

GENERAL CONTRACTOR:

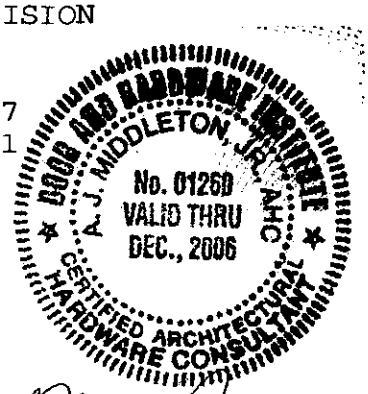
E C MATTHEWS CO
2265 HARRODSBURG RD
LEXINGTON , KY 40504
PHONE - (859) 278-3131
FAX - (859) 277-7903

SCHEDULE BY:

SCHILLER ARCHITECTURAL HARDWARE
LEXINGTON SALES DIVISION
1032 MAJAUN DRIVE
LEXINGTON, KY 40511
PHONE - 859-233-4427
FAX - 859-253-2831

CONSULTANT:

002 CALDWELL, MARK



A. J. Middleton Jr., AHC

Gilbane

Transmittal

Project [2239.2] - PCF - Hospital - Garage **View Date** 9/11/2006

Gilbane Building Company
940 Elizabeth St
Lexington, KY 40506-0293
Phone: (859) 257-4536
Fax: (859) 323-1331

Transmittal No. 2239.2-00332

To	Mr. Doug Sherwood E. C. Matthews Co., Inc. 2265 Harrodsburg Road Lexington, KY 40504 USA Phone: (859) 278-3131 Fax: (859) 277-7903	**Date**	9/11/2006
From	Mr. Ryan Maguire (Gilbane Building Company)	**Items listed are being sent**	
Subject	Submittal	☑ Enclosed ☐ Under Separate Cover	
		Via	Hand Delivered
		CSI Code	08700 - Door Hardware

We are transmitting the following to you:

☐ Product Data ☐ Samples ☐ Shop Drawings ☐ O&M Manuals ☐ Plans
☐ Architectural Drawings ☐ Letters ☐ Specifications ☐ Prints ☐ Addenda
☐ Engineering Drawings ☐ Change Orders ☑ Submittal

Items

No.	Description	Copies	Reason	Action
100-08700-001	Metal Door and Frame Schedule	2	Approved as Noted	
100-08700-001	Finish Hardware Schedule	2	Approved as Noted	

Remarks See notes on GBBN transmittal.

	Mr. Ryan Maguire	9/11/2006
From	Printed Name	Date
Received By	Printed Name	Date

Transmittal

Project [2239.2] - PCF - Hospital - Garage

View Date 9/11/2006

RECEIVED
SEP 11 2006
GILBANE
#3966

GBBN Architects, Inc.
332 East Eighth St
Cincinnati, OH 45202-2217
Phone: (513) 241-8700
Fax: (513) 241-8873

Transmittal No. 00330

To	Mr. Brian Hoerr Gilbane Building Company 940 Elizabeth St Lexington, KY 40506-0293 USA Phone: (859) 257-4536 Fax: (859) 323-1331	**Date**	9/11/2006
From	Mr. Bryan Korb (GBBN Architects, Inc.)	**Items listed are being sent**	
Subject	Metal Door, Frame, and Hardware submittal	☑ Enclosed ☐ Under Separate Cover	
		Via	Hand Delivered
		CSI Code	08700 - Door Hardware

We are transmitting the following to you:

☑ Product Data	☐ Samples	☐ Shop Drawings	☐ O&M Manuals	☐ Plans
☐ Architectural Drawings	☐ Letters	☐ Specifications	☐ Prints	☐ Addenda
☐ Engineering Drawings	☐ Change Orders	☑ Submittal		

Items

No.	Description	Copies	Reason	Action
100-08700-001	Metal Door and Frame schedule	3	Approved as Noted	
100-08700-001	Finish Hardware schedule	3	Approved as Noted	

Remarks Brian

Please submit a record copy of this submittal once its revised. The design team also needs to see the hardware for the aluminum doors.

Received By _____ Printed Name _____ Date _____

Distribution

Recipient	Company	Method	Date
Brian Hoerr	Gilbane Building Company	Message	9/11/2006

CODE	MANUFACTURERS NAME
HA	HAGER
LC	LCN CLOSERS
NA	NATIONAL GUARD
VO	VON DUPRIN
YA	YALE

DOOR NO.	LOCATION	KEYING	HEADING#	LOCK#
001	EXTERIOR FROM STAIR 1		3	
002	PARKING GARAGE FROM 002 CMA STORAGE		1A	JNR 8805FL RHR
003	PARKING GARAGE FROM 003 PUMP ROOM		2A	JNR 8805FL RHR
004	STAIR 2 FROM PARKING GARAGE		3	
005	PARKING GARAGE TO 005 MECH AREAWAY		1	JNR 8805FL LH
005A	PARKING GARAGE TO 005 MECH AREAWAY		1	JNR 8805FL RH
008	PARKING GARAGE FROM 008 ELEVATOR MACH ROOM		2	JNR 8805FL LHR
012	012 ACCESS STAIR FROM PARKING GARAGE		3	
012A	EXTERIOR FROM 012 ACCESS STAIR		3	
013	PARKING GARAGE FROM 013 ELEC ENTRANCE SERVICE		8A	1193 7 PIN 99L-F X 996L-R&V LHR 99L-F X 996L-R&V RHR
013A	PARKING GARAGE FROM 013 ELEC ENTRANCE		8	1193 7 PIN 99L-F X 996L-R&V LHR
014	PARKING GARAGE FROM 014 MECH CLOSET		1	JNR 8805FL LHR
017	PARKING GARAGE FROM 017 SUMP ROOM		1	JNR 8805FL LHR
018	018 ROLLUP DOOR		10	1193 7 PIN
018A	PARKING GARAGE FROM 018 SWEEPER ROOM		9	JNR 8805FL RHR
019	EXTERIOR FROM 019 ELECTRICAL DISTRIBUTION		2A.1	JNR 8805FL LHR
019A	PARKING GARAGE FROM 019 ELECTRICAL DISTRIBUTION		2A.1	JNR 8805FL RHR
020	PARKING GARAGE FROM 020 EMERGENCY DISTRIBUTION		2.1	JNR 8805FL LHR
021	PARKING GARAGE TO 021 UTILITY		1	JNR 8805FL LH
022	022 ROLLUP DOOR		10	1193 7 PIN
022A	022 ROLLUP DOOR		10	1193 7 PIN
022B	PARKING GARAGE FROM 022 GATOR BOBCAT		9	JNR 8805FL LHR

DOOR NO.	LOCATION	KEYING	HEADING#	LOCK#
100	100 CORRIDOR FROM PARKING GARAGE		3	
103	PARKING GARAGE TO 103 UTILITY		2	JNR 8805FL LH
104	100 CORRIDOR FROM STAIR 2		3.1	
105	PARKING GARAGE TO 105 VALET		5	JNR 8808FL LH
106	PARKING GARAGE TO 106 OFFICE		4	JNR 8822FL RH
106A	106 OFFICE TO 106A TOILET		6	
106B	105 VALET TO 106 OFFICE		7	JNR 8822FL RH
112	PARKING GARAGE FROM 112 ELEC DISTRIBUTION		8	1193 7 PIN 99L-F X 996L-R&V LHR
112A	PARKING GARAGE FROM 112 ELEC DISTRIBUTION		8	1193 7 PIN 99L-F X 996L-R&V RHR
113	CORRIDOR FROM 113 COMMUNICATION		2.1	JNR 8805FL RHR
114	PARKING GARAGE FROM 114 COMMUNICATION		2.1	JNR 8805FL LHR
302	PARKING GARAGE FROM 032 FACILITY SPACE		2A	JNR 8805FL RHR
313	313 ROLLUP DOOR		10	1193 7 PIN
313A	313 ROLLUP DOOR		10	1193 7 PIN
313B	PARKING GARAGE FROM 313 CART STORAGE		9	JNR 8805FL LHR

NEW GARAGE-UK PATIENT CARE FACILITY
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Heading # 1
Group # 1

1 SGL DOOR 005 PARKING GARAGE TO 005 MECH AREAWAY 90-LH
DOOR: HMD LF 16 4 3070 F GALV STY LH (86S[Mfg/Hdw# = YA JNR 8805FL 2197] ; TCS ; C ; TAG)
FRAME: SGL F 16 4 834 3070 GALV KD LH 4HS (UB ; PA ; ASA ; WM ; SUA-3SIDE)

1 SGL DOOR 005A PARKING GARAGE TO 005 MECH AREAWAY 90-RH
DOOR: HMD LF 16 4 3070 F GALV STY RH (86S[Mfg/Hdw# = YA JNR 8805FL 2197] ; TCS ; C ; TAG)
FRAME: SGL F 16 4 834 3070 GALV KD RH 4HS (UB ; PA ; ASA ; WM ; SUA-3SIDE)

1 SGL DOOR 014 PARKING GARAGE FROM 014 MECH CLOSET 90-LHR
DOOR: HMD LF 16 4 3070 F GALV STY LHR (86S[Mfg/Hdw# = YA JNR 8805FL 2197] ; TCS ; C ; TAG)
FRAME: SGL F 16 4 834 3070 GALV KD RH 4HS (UB ; PA ; ASA ; WM ; SUA-3SIDE)

1 SGL DOOR 017 PARKING GARAGE FROM 017 SUMP ROOM 90-LHR
DOOR: HMD LF 16 4 3070 F GALV STY LHR (86S[Mfg/Hdw# = YA JNR 8805FL 2197] ; TCS ; C ; TAG)
FRAME: SGL F 16 4 834 3070 GALV KD RH 4HS (UB ; PA ; ASA ; WM ; SUA-3SIDE)

1 SGL DOOR 021 PARKING GARAGE TO 021 UTILITY 90-LH
DOOR: HMD LF 16 4 3070 F GALV STY LH (86S[Mfg/Hdw# = YA JNR 8805FL 2197] ; TCS ; C ; TAG)
FRAME: SGL F 16 4 834 3070 GALV KD LH 4HS (UB ; PA ; ASA ; WM ; SUA-3SIDE)

15	HINGE	BB1168 4 1/2 X 4 1/2		US26D	HA
2	LOCKSET	JNR 8805FL 2197 (005,021)	LH	630	YA
1	LOCKSET	JNR 8805FL 2197 (005A)	RH	630	YA
2	LOCKSET	JNR 8805FL 2197 (014,017)	LHR	630	YA
5	CLOSER	4041 REG/62A TBMS		AL	LC

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5	PROTECTION PLATE	194S 12" X 34"	US32D	HA
5	GASKETING	2525 B-21 X 21'		NA
5	DOOR SWEEP	756S V X 36"	MIL	HA

CLOSERS FOR DOORS 014 & 017 TO BE

INSTALLED ON PUSH SIDE OF DOOR.

NEW GARAGE-UK PATIENT CARE FACILITY
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Heading # 1A
Group # 1A
1 PR DOORS 002 PARKING GARAGE FROM 002 CMA STORAGE 90-RHRA
DOOR: HMD LF 16 4 3070\3070 F GALV STY RHR (86S[Mfg/Hdw# = YA JNR 8805FL 2197] ; TCS ; C ; TAG\TCS ; C ; TAG)
FRAME: DBL F 14 4 834 6070 GALV KD RHRA 4HD (UB ; PA ; WM ; SUA-3SIDE)

6	HINGE	BB1191 4 1/2 X 4 1/2 NRP		US26D	HA
1	LOCKSET	JNR 8805FL 2197 (002)	RHR	630	YA
2	CLOSER	4041 REG/62A TBMS		AL	LC
2	PROTECTION PLATE	194S 12" X 34"		US32D	HA
1	SADDLE THRESHOLD	425 HD X 72"		AL	NA
2	FLUSH BOLT	282D		US26D	HA
1	DUST PROOF STRIKE	280X		US26D	HA
2	GASKETING	2525 B-21 X 21'			NA
2	DOOR SWEEP	756S V X 36"		MIL	HA

DOOR CLOSER TO BE INSTALLED ON PUSH SIDE

OF DOOR

NEW GARAGE-UK PATIENT CARE FACILITY
110 TRANSCRIPT AVENUE

Heading # 2
Group # 2

1 SGL DOOR 008 PARKING GARAGE FROM 008 ELEVATOR MACH ROOM 90-LHR
DOOR: HMD LF 16 UL B 4 3070 F GALV STY LHR (86S[Mfg/Hdw# = YA JNR 8805FL 2197] ; TCS ; C ; TAG)
FRAME: SGL F 14 ULF 4 834 3070 GALV KD RH (UB ; PA ; ASA ; WM ; SUA-3SIDE)

1 SGL DOOR 103 PARKING GARAGE TO 103 UTILITY 90-LH
DOOR: HMD LF 16 UL B 4 3070 F GALV STY LH (86S[Mfg/Hdw# = YA JNR 8805FL 2197] ; TCS ; C ; TAG)
FRAME: SGL F 16 ULF 4 834 3070 GALV KD LH 4HS (UB ; PA ; ASA ; WM ; SUA-3SIDE)

B

6	HINGE	BB1279 4 1/2 X 4 1/2 NRP		US26D	HA
1	LOCKSET	JNR 8805FL 2197 (008)	LHR	630	YA
1	LOCKSET	JNR 8805FL 2197 (103)	LH	630	YA
2	CLOSER	4041 REG/62A TBMS		AL	LC
2	PROTECTION PLATE	194S 12" X 34"		US32D	HA
2	SADDLE THRESHOLD	425 HD X 36"		AL	NA
2	GASKETING	2525 B-21 X 21'			NA
2	DOOR SWEEP	756S V X 36"		MIL	HA

CLOSER FOR DR 008 TO BE INSTALLED ON

PUSH SIDE OF DOOR.

NEW GARAGE-UK PATIENT CARE FACILITY
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Heading # 2A
Group # 2A

1 PR DOORS 003 PARKING GARAGE FROM 003 PUMP ROOM 90-RHRA
DOOR: HMD LF 16 UL B 4 3070\3070 F GALV STY RHR (86S[Mfg/Hdw# = YA JNR 8805FL 2197] ; TCS ; C ; TAG\TCS ; C ; TAG ; ZFB)
FRAME: DBL F 14 UFD 4 834 6070 GALV KD RHRA 4HD (UB ; PA ; FB ; WM ; SUA-3SIDE)

1 PR DOORS 302 PARKING GARAGE FROM 032 FACILITY SPACE 90-RHRA
DOOR: HMD LF 16 UL B 4 3070\3070 F GALV STY RHR (86S[Mfg/Hdw# = YA JNR 8805FL 2197] ; TCS ; C ; TAG\TCS ; C ; TAG ; ZFB)
FRAME: DBL F 14 UFD 4 834 6070 GALV KD RHRA 4HD (UB ; PA ; FB ; WM ; SUA-3SIDE)

B

12	HINGE	BB1168 4 1/2 X 4 1/2	US26D	HA
2	LOCKSET	JNR 8805FL 2197 (003,302) RHR	630	YA
4	CLOSER	4041 S-CUSH TBMS	AL	LC
4	PROTECTION PLATE	194S 12" X 34"	US32D	HA
4	SET AUTO FLUSH BOLT	293D	US26D	HA
2	DUST PROOF STRIKE	280X	US26D	HA
2	SADDLE THRESHOLD	425 HD X 72"	AL	NA
4	GASKETING	2525 B-21 X 21'		NA
4	DOOR SWEEP	756S V X 36"	MIL	HA
2	ASTRAGAL SET	9605 DKB (SET) X 84"		NA
2	COORDINATING DEVICE	297D X 72"	USP	HA
4	MOUNTING BRACKET	297N	USP	HA

INSTALL COORDINATOR BEFORE INSTALLING

CLOSERS.

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Heading # 2A.1
Group # 2A.1

1 PR DOORS 019 EXTERIOR FROM 019 ELECTRICAL DISTRIBUTION 90-LHRA
DOOR: HMD LF 16 4 3070\3070 F GALV STY LHR (86S[Mfg/Hdw# = YA JNR 8805FL 2197] ; TCS ; C ; TAG\TCS ; C ; TAG ; ZFB)
FRAME: DBL F 14 4 834 6070 GALV KD LHRA 4HD (UB ; PA ; ASA ; WM ; SUA-3SIDE)

1 PR DOORS 019A PARKING GARAGE FROM 019 ELECTRICAL DISTRIBUTION 90-RHRA
DOOR: HMD LF 16 4 3070\3070 F GALV STY RHR (86S[Mfg/Hdw# = YA JNR 8805FL 2197] ; TCS ; C ; TAG\TCS ; C ; TAG)
FRAME: DBL F 14 4 834 6070 GALV KD RHRA 4HD (UB ; PA ; ASA ; WM ; SUA-3SIDE)

12	HINGE	BB1168 4 1/2 X 4 1/2		US26D	HA
1	LOCKSET	JNR 8805FL 2197 (019)	LHR	630	YA
1	LOCKSET	JNR 8805FL 2197 (019A)	RHR	630	YA
4	CLOSER	4041 S-CUSH TBMS		AL	LC
4	PROTECTION PLATE	194S 12" X 34"		US32D	HA
2	DUST PROOF STRIKE	280X		US26D	HA
2	SADDLE THRESHOLD	425 HD X 72"		AL	NA
2	GASKETING	2525 B-21 X 21'			NA
4	DOOR SWEEP	756S V X 36"		MIL	HA
4	FLUSH BOLT	282D		US26D	HA

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Heading # 2.1
Group # 2

1 SGL DOOR 020 PARKING GARAGE FROM 020 EMERGENCY DISTRIBUTION 90-LHR
DOOR: HMD LF 16 4 3070 F GALV STY LHR (86S[Mfg/Hdw# = YA JNR 8805FL 2197] ; TCS ; C ; TAG)
FRAME: SGL F 16 4 834 3070 GALV KD RH 4HS (UB ; PA ; ASA ; WM ; SUA-3SIDE)

1 SGL DOOR 113 CORRIDOR FROM 113 COMMUNICATION 90-RHR
DOOR: HMD LF 16 4 3070 F GALV STY RHR (86S[Mfg/Hdw# = YA JNR 8805FL 2197] ; TCS ; C ; TAG)
FRAME: SGL F 16 4 834 3070 GALV KD LH 4HS (UB ; PA ; ASA ; WM ; SUA-3SIDE)

1 SGL DOOR 114 PARKING GARAGE FROM 114 COMMUNICATION 90-LHR
DOOR: HMD LF 16 4 3070 F GALV STY LHR (86S[Mfg/Hdw# = YA JNR 8805FL 2197] ; TCS ; C ; TAG)
FRAME: SGL F 16 4 834 3070 GALV KD RH 4HS (UB ; PA ; ASA ; WM ; SUA-3SIDE)

9	HINGE	BB1279 4 1/2 X 4 1/2 NRP		US26D	HA
2	LOCKSET	JNR 8805FL 2197 (020,114)	LHR	630	YA
1	LOCKSET	JNR 8805FL 2197 (113)	RHR	630	YA
3	CLOSER	4041 REG/62A TBMS		AL	LC
3	PROTECTION PLATE	194S 12" X 34"		US32D	HA
3	SADDLE THRESHOLD	425 HD X 36"		AL	NA
3	GASKETING	2525 B-21 X 21'			NA
3	DOOR SWEEP	756S V X 36"		MIL	HA

CLOSER FOR DR 008 TO BE INSTALLED ON

PUSH SIDE OF DOOR.

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Heading # 3
Group # 3

1 SGL DOOR 001 EXTERIOR FROM STAIR 1 90-RHR
DOOR: HMD LF 16 4 3070 V GALV STY RHR (TCS ; C ; TAG)
FRAME: SGL F 16 4 834 3070 GALV KD LH 4HS (UB ; PA ; WM ; SUA-3SIDE)

1 SGL DOOR 004 STAIR 2 FROM PARKING GARAGE 90-RHR
DOOR: HMD LF 16 4 3070 V GALV STY RHR (TCS ; C ; TAG)
FRAME: SGL F 16 4 834 3070 GALV KD LH 4HS (UB ; PA ; WM ; SUA-3SIDE)

1 SGL DOOR 012 012 ACCESS STAIR FROM PARKING GARAGE 90-RHR
DOOR: HMD LF 16 4 3070 V GALV STY RHR (TCS ; C ; TAG)
FRAME: SGL F 16 4 834 3070 GALV KD LH 4HS (UB ; PA ; WM ; SUA-3SIDE)

1 SGL DOOR 012A EXTERIOR FROM 012 ACCESS STAIR 90-LHR
DOOR: HMD LF 16 4 3070 V GALV STY LHR (TCS ; C ; TAG)
FRAME: SGL F 16 4 834 3070 GALV KD RH 4HS (UB ; PA ; WM ; SUA-3SIDE)

1 SGL DOOR 100 100 CORRIDOR FROM PARKING GARAGE 90-RHR
DOOR: HMD LF 16 4 3070 F GALV STY RHR (TCS ; C ; TAG)
FRAME: SGL F 16 4 834 3070 GALV KD LH 4HS (UB ; PA ; WM ; SUA-3SIDE)

15	HINGE	BB1191 4 1/2 X 4 1/2 NRP	US26D	HA
5	CLOSER	4041 S-CUSH TBMS	AL	LC
5	PUSH PLATE	A30S 4 X 16 TORX HEAD SCREWS	US32D	HA
5	PULL PLATE	A30S X 12G X TBMS	US32D	HA
5	GASKETING	2525 B-21 X 21'		NA
5	DOOR SWEEP	756S V X 36"	MIL	HA

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Heading # 3.1
Group # 3.1
1 SGL DOOR 104 100 CORRIDOR FROM STAIR 2 90-LHR
DOOR: HMD LF 16 UL B 4 3070 F GALV STY LHR (TCS ; C ; TAG)
FRAME: SGL F 16 ULF 4 834 3070 GALV KD RH 4HS (UB ; PA ; WM ; SUA-3SIDE)

B

3	HINGE	BB1279 4 1/2 X 4 1/2 NRP		US26D	HA
1	CLOSER	4041 S-CUSH TBMS		AL	LC
1	FIRE EXIT DEVICE	99L-F X 996L-R&V-BE 425-SNB 07 (104)	LHR	US26D	VO
1	GASKETING	2525 B-21 X 21'			NA
1	DOOR SWEEP	756S V X 36"		MIL	HA

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Heading # 4
Group # 4
1 SGL DOOR 106 PARKING GARAGE TO 106 OFFICE 90-RH
DOOR: HMD LF 16 4 3070 F GALV STY RH (86S[Mfg/Hdw# = YA JNR 8822FL 2197] ; TCS ; TAG)
FRAME: SGL F 16 4 834 3070 GALV KD RH 4HS (UB ; ASA ; WM ; SUA-3SIDE)

3	HINGE	BB1191 4 1/2 X 4 1/2 NRP		US26D	HA
1	LOCKSET	JNR 8822FL 2197 (106)	RH	630	YA
1	CLOSER	4041 REG TBMS		AL	LC
1	SADDLE THRESHOLD	425 HD X 36"		AL	NA
1	GASKETING	2525 B-21 X 21'			NA
1	DOOR SWEEP	756S V X 36"		MIL	HA

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Heading # 5
Group # 5
1 SGL DOOR 105 PARKING GARAGE TO 105 VALET 90-LH
DOOR: HMD LF 16 4 3070 F GALV STY LH (86S[Mfg/Hdw# = YA JNR 8808FL 2197] ; TCS ; TAG)
FRAME: SGL F 16 4 834 3070 GALV KD LH 4HS (UB ; ASA ; WM ; SUA-3SIDE)

3	HINGE	BB1191 4 1/2 X 4 1/2 NRP		US26D	HA
1	LOCKSET	JNR 8808FL 2197 (105)	LH	630	YA
1	CLOSER	4041 REG TBMS		AL	LC
1	SADDLE THRESHOLD	425 HD X 36"		AL	NA
1	GASKETING	2525 B-21 X 21'			NA
1	DOOR SWEEP	756S V X 36"		MIL	HA

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Heading # 6
Group # 6
1 SGL DOOR 106A 106 OFFICE TO 106A TOILET 90-LH
DOOR: HMD LF 16 4 3070 F GALV STY LH (86S[Mfg/Hdw# = YA JNR 8802FL] ; TCS ; TAG)
FRAME: SGL F 16 4 834 3070 GALV KD LH 4HS (UB ; ASA ; WM ; SUA-3SIDE)

3	HINGE	BB1168 4 1/2 X 4 1/2		US26D	HA
1	PRIVACY SET	JNR 8802FL (106A)	LH	630	YA
3	DOOR SILENCER	307D		GREY	HA
1	CLOSER	4041 REG TBMS		AL	LC
1	PROTECTION PLATE	194S 12" X 34"		US32D	HA
1	WALL STOP	236W		US32D	HA

NEW GARAGE-UK PATIENT CARE FACILITY
110 TRANSCRIPT AVENUE

Heading # 7
Group # 7
1 SGL DOOR 106B 105 VALET TO 106 OFFICE 90-RH
DOOR: HMD LF 16 4 3070 F GALV STY RH (86S[Mfg/Hdw# = YA JNR 8822FL 2197] ; TCS ; TAG)
FRAME: SGL F 16 4 834 3070 GALV KD RH 4HS (UB ; ASA ; WM ; SUA-3SIDE)

3	HINGE	BB1168 4 1/2 X 4 1/2		US26D	HA
1	LOCKSET	JNR 8822FL 2197 (106B)	RH	630	YA
3	DOOR SILENCER	307D		GREY	HA
1	CLOSER	4041 REG TBMS		AL	LC
1	PROTECTION PLATE	194S 12" X 34"		US32D	HA
1	WALL STOP	236W		US32D	HA

NEW GARAGE-UK PATIENT CARE FACILITY
110 TRANSCRIPT AVENUE

Heading # 8
Group # 8

1 SGL DOOR 013A PARKING GARAGE FROM 013 ELEC ENTRANCE 90-LHR
DOOR: HMD LF 16 UL B 4 3070 F GALV STY LHR (TCS ; C ; TAG ; RPDI[Mfg/Hdw# = VO 99L-F X 996L-R&V 425-SNB])
FRAME: SGL F 16 ULF 4 834 3070 GALV KD RH 4HS (UB ; PA ; RPD ; WM ; SUA-3SIDE)

1 SGL DOOR 112 PARKING GARAGE FROM 112 ELEC DISTRIBUTION 90-LHR
DOOR: HMD LF 16 UL B 4 3070 F GALV STY LHR (TCS ; C ; TAG ; RPDI[Mfg/Hdw# = VO 99L-F X 996L-R&V 425-SNB])
FRAME: SGL F 16 ULF 4 834 3070 GALV KD RH 4HS (UB ; PA ; RPD ; WM ; SUA-3SIDE)

1 SGL DOOR 112A PARKING GARAGE FROM 112 ELEC DISTRIBUTION 90-RHR
DOOR: HMD LF 16 UL B 4 3070 F GALV STY RHR (TCS ; C ; TAG ; RPDI[Mfg/Hdw# = VO 99L-F X 996L-R&V 425-SNB])
FRAME: SGL F 16 ULF 4 834 3070 GALV KD LH 4HS (UB ; PA ; RPD ; WM ; SUA-3SIDE)

B

9	HINGE	BB1279 4 1/2 X 4 1/2 NRP		US26D	HA
3	RIM CYLINDER	1193 7 PIN		626	YA
3	CYLINDER RING	1765		630	YA
3	CLOSER	4041 S-CUSH TBMS		AL	LC
2	FIRE EXIT DEVICE	99L-F X 996L-R&V 425-SNB 07 (013A,112)	LHR	US26D	VO
1	FIRE EXIT DEVICE	99L-F X 996L-R&V 425-SNB 07 (112A)	RHR	US26D	VO
3	PROTECTION PLATE	194S 12" X 34"		US32D	HA
3	SADDLE THRESHOLD	425 HD X 36"		AL	NA
3	GASKETING	2525 B-21 X 21'			NA
3	DOOR SWEEP	756S V X 36"		MIL	HA

NEW GARAGE-UK PATIENT CARE FACILITY
110 TRANSCRIPT AVENUE

NEW GARAGE-UK PATIENT CARE FACILITY
110 TRANSCRIPT AVENUE

Heading # 8A
Group # 8A
1 PR DOORS 013 PARKING GARAGE FROM 013 ELEC ENTRANCE SERVICE 90-LHR\RHR
DOOR: HMD LF 16 UL B 4 3070\3070 F GALV STY LHR (TCS ; C ; TAG ; RPDI[Mfg/Hdw# = VO 99L-F X 996L-R&V 425-SNB]\TCS ; C ; TAG ; RPDI [Mfg/Hdw# = VO 99L-F X 996L-R&V 425-SNB])
FRAME: DBL F 14 UFD 4 834 6070 GALV KD LHR\RHR 4HD (UB ; PA ; RHM ; WM ; SUA-3SIDE)

B

6	HINGE	BB1168 4 1/2 X 4 1/2		US26D	HA
3	RIM CYLINDER	1193 7 PIN		626	YA
3	CYLINDER RING	1765		630	YA
1	FIRE EXIT DEVICE	99L-F X 996L-R&V 425-SNB 07 (013)	LHR	US26D	VO
1	FIRE EXIT DEVICE	99L-F X 996L-R&V 425-SNB 07 (013)	RHR	US26D	VO
1	MULLION	KR9954 X 7'5"		SP28	VO
2	CLOSER	4041 S-CUSH TBMS		AL	LC
2	PROTECTION PLATE	194S 12" X 34"		US32D	HA
1	SADDLE THRESHOLD	425 HD X 72"		AL	NA
2	GASKETING	2525 B-21 X 21'			NA
2	DOOR SWEEP	756S V X 36"		MIL	HA

NEW GARAGE-UK PATIENT CARE FACILITY
110 TRANSCRIPT AVENUE

Heading # 9
Group # 9

1 SGL DOOR 018A PARKING GARAGE FROM 018 SWEEPER ROOM 90-RHR
DOOR: HMD LF 16 4 3070 F GALV STY RHR (86S[Mfg/Hdw# = YA JNR 8805FL 2197] ; TCS ; C ; TAG)
FRAME: SGL F 16 4 834 3070 GALV KD LH 4HS (UB ; PA ; ASA ; WM ; SUA-3SIDE)

1 SGL DOOR 022B PARKING GARAGE FROM 022 GATOR BOBCAT 90-LHR
DOOR: HMD LF 16 4 3070 F GALV STY LHR (86S[Mfg/Hdw# = YA JNR 8805FL 2197] ; TCS ; C ; TAG)
FRAME: SGL F 16 4 834 3070 GALV KD RH 4HS (UB ; PA ; ASA ; WM ; SUA-3SIDE)

1 SGL DOOR 313B PARKING GARAGE FROM 313 CART STORAGE 90-LHR
DOOR: HMD LF 16 4 3070 F GALV STY LHR (86S[Mfg/Hdw# = YA JNR 8805FL 2197] ; TCS ; C ; TAG)
FRAME: SGL F 16 4 834 3070 GALV KD RH 4HS (UB ; PA ; ASA ; WM ; SUA-3SIDE)

9	HINGE	BB1168 4 1/2 X 4 1/2		US26D	HA
1	LOCKSET	JNR 8805FL 2197 (018A)	RHR	630	YA
2	LOCKSET	JNR 8805FL 2197 (022B, 313B)	LHR	630	YA
3	CLOSER	4041 REG/62A TBMS		AL	LC
3	PROTECTION PLATE	194S 12" X 34"		US32D	HA
3	SADDLE THRESHOLD	425 HD X 36"		AL	NA
3	GASKETING	2525 B-21 X 21'			NA
3	DOOR SWEEP	756S V X 36"		MIL	HA

DOOR CLOSER TO BE INSTALLED ON PUSH SIDE

OF DOOR.

NEW GARAGE-UK PATIENT CARE FACILITY
110 TRANSCRIPT AVENUE

Heading # 10
Group # 10

1 SGL DOOR 018 018 ROLLUP DOOR
DOOR: ALUM BY OTHERS

1 SGL DOOR 022 022 ROLLUP DOOR
DOOR: ALUM BY OTHERS

1 SGL DOOR 022A 022 ROLLUP DOOR
DOOR: ALUM BY OTHERS

1 SGL DOOR 313 313 ROLLUP DOOR
DOOR: ALUM BY OTHERS

1 SGL DOOR 313A 313 ROLLUP DOOR
DOOR: ALUM BY OTHERS

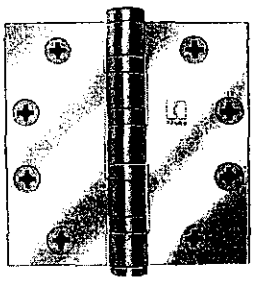
5	RIM CYLINDER	1193 7 PIN	626	YA
5	CYLINDER RING	1765	630	YA

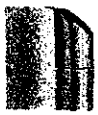
Full Mortise Hinges

HAGER COMPANIES

Ball Bearing • Heavy Weight • Template

For use on Heavy Weight Doors or Doors Requiring High Frequency Service





For Hospital type prefix "HT" to catalog number

* BB1168 *

Steel with steel pin ANSI A8111

BB1199

Brass with stainless steel pin ANSI A2111

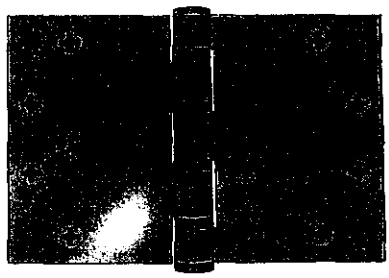
Stainless Steel with stainless steel pin ANSI A5111

Five knuckle four ball bearings non-rising removable pin with button tip and plug. Specify screw requirements.

Hinge Size		Gauge of metal	Number of holes	Screw Size		Quantity		Avg weight per case (lbs)	
Inches	Millimeters			Machine	Wood	Box	Case	Steel	SSteel/Brass
4½ x 4	114 x 102	0.180	8	½ x 12-24	1¼ x 12	3 each	24 each	35	38
* 4½ x 4½	114 x 114	0.180	8	½ x 12-24	1¼ x 12	3 each	24 each	35	38
5 x 4	127 x 102	0.190	8	½ x 12-24	1¼ x 12	3 each	24 each	44	48
5 x 4½	127 x 114	0.190	8	½ x 12-24	1¼ x 12	3 each	24 each	44	48
5 x 5	127 x 127	0.190	8	½ x 12-24	1¼ x 12	3 each	24 each	44	48
6 x 4½	152 x 114	.203 Steel & Brass							
		.203 SS	10	½ x ¼-20	1½ x 14	3 each	24 each	70	65
6 x 5	152 x 127	.203 Steel & Brass							
		.203 SS	10	½ x ¼-20	1½ x 14	3 each	24 each	70	65
6 x 6	152 x 152	.203 Steel & Brass							
		.203 SS	10	½ x ¼-20	1½ x 14	3 each	24 each	70	65
8 x 6	203 x 152	.203 Steel & Brass							
		.203 SS	16	½ x ¼-20	1½ x 14	3 each	12 each	67	62
8 x 8	203 x 203	.203 Steel & Brass							
		.203 SS	16	½ x ¼-20	1½ x 14	3 each	12 each	67	62

Ball Bearing • Heavy Weight • Template • Wide Throw

For use on Heavy Weight door or doors Requiring High Frequency Service



BB1168 – Wide Throw

Steel with steel pin ANSI A5111

BB1199 – Wide Throw

Brass with brass pin ANSI A2111

Stainless Steel with stainless steel pin ANSI A5111

Five knuckle four ball bearings non-rising removable pin with tip and plug. Specify Screw Requirements.

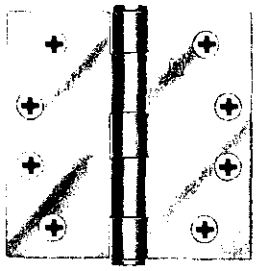
Hinge Size		Gauge of metal	Number of holes	Screw Size		Quantity		Avg weight per case (lbs)	
Inches	Millimeters			Machine	Wood	Box	Case	Steel	SSteel/Brass
4½ x 5	114 x 127	0.180	8	½ x 12-24	1¼ x 12	3 each	24 each	55	60
4½ x 6	114 x 152	0.180	8	½ x 12-24	1¼ x 12	3 each	24 each	55	60
4½ x 7	114 x 178	0.180	8	½ x 12-24	1¼ x 12	3 each	24 each	55	60
4½ x 8	114 x 203	0.180	8	½ x 12-24	1¼ x 12	3 each	24 each	55	60
5 x 6	127 x 152	0.190	8	½ x 12-24	1¼ x 12	3 each	12 each	32	35
5 x 7	127 x 178	0.190	8	½ x 12-24	1¼ x 12	3 each	12 each	32	35
5 x 8	127 x 203	0.190	8	½ x 12-24	1¼ x 12	3 each	12 each	32	35

Hinge testing conforms to ANSI A156.1. Furnished with screw hole locations that conform to standards approved by ANSI A156.7.

Full Mortise Hinges

Plain Bearing • Standard Weight • Template

For use on Medium Weight Doors Requiring Low Frequency Service (Not for use with Door Closer)



For Hospital type prefix "HT" to catalog number

1279

Steel with steel pin ANSI A8133

1191

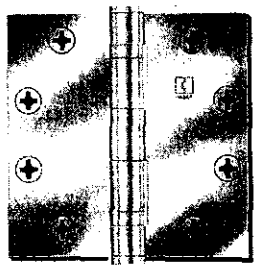
Brass with stainless steel pin ANSI A2133
Stainless Steel with stainless steel pin ANSI A5133

Five knuckle non-rising removable pin with button tip and plug.
Specify screw requirements.

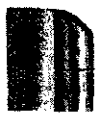
Hinge Size		Gauge of metal	Number of holes	Screw Size		Quantity		Avg weight per case (lbs)	
Inches	Millimeters			Machine	Wood	Box	Case	Steel	SSteel/Brass
2 x 2	51 x 51	0.083	4	½ x8-32	¾ x 8	10 each	200 each	32	35
2½ x 2½	64 x 64	0.089	6	½ x8-32	¾ x 8	10 each	200 each	34	39
3 x 3	76 x 76	0.097	6	½ x10-24	1x 9	2 each	100 each	37	40
3½ x 3½	89 x 89	0.119	6	½ x10-24	1x 9	2 each	100 each	66	72
4 x 4	102 x 102	0.129	8	½ x12-24	1¼ x 12	3 each	48 each	43	47
4½ x 4	114 x 102	0.134	8	½ x12-24	1¼ x 12	3 each	48 each	49	53
4½ x 4½	114 x 114	0.134	8	½ x12-24	1¼ x 12	3 each	48 each	55	60
5 x 4	127 x 102	0.145	8	½ x12-24	1¼ x 12	3 each	24 each	37	40
5 x 4½	127 x 114	0.145	8	½ x12-24	1¼ x 12	3 each	24 each	37	40
5 x 5	127 x 127	0.145	8	½ x12-24	1¼ x 12	3 each	24 each	37	40
6 x 4½	152 x 114	0.160	10	½ x ¼-20	1½ x 14	3 each	24 each	61	66
6 x 5	152 x 127	0.160	10	½ x ¼-20	1½ x 14	3 each	24 each	61	66
6 x 6	152 x 152	0.160	10	½ x ¼-20	1½ x 14	3 each	24 each	61	66

Ball Bearing • Standard Weight • Template

For use on Medium Weight Doors or Doors Requiring Medium Frequency Service



BB1279 or BB1191



For Hospital type prefix "HT" to catalog number

BB1279

Steel with steel pin ANSI A8112

BB1191

Brass with stainless steel pin ANSI A2112
Stainless Steel with stainless steel pin ANSI A5112

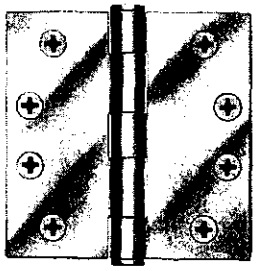
Five knuckle two ball bearings non-rising removable pin with button tip and plug.
Specify screw requirements.

CB1191

Stainless Steel with stainless steel pin ANSI A5112

Available in Hager's New SecureCoat Lifetime Finish in Bright Brass. ***Specify US3SC when ordering. Contact Hager Engineering for special applications.***

Five knuckle concealed bearings non-rising removable pin with button tip and plug.
Specify screw requirements.



CB1191 SecureCoat Lifetime Finish

NEW PRODUCT!

Hinge Size		Gauge of metal	Number of holes	Screw Size		Quantity		Avg weight per case (lbs)	
Inches	Millimeters			Machine	Wood	Box	Case	Steel	SSteel/Brass
3½ x 3½	89 x 89	0.119	6	½ x 10-24	1 x 9	2 each	100 each	66	72
4 x 4	102 x 102	0.129	8	½ x 12-24	1¼ x 12	3 each	48 each	43	47
4½ x 4	114 x 102	0.134	8	½ x 12-24	1¼ x 12	3 each	48 each	55	60
4½ x 4½	114 x 114	0.134	8	½ x 12-24	1¼ x 12	3 each	48 each	55	60
5 x 4	127 x 102	0.145	8	½ x 12-24	1¼ x 12	3 each	24 each	37	40
5 x 4½	127 x 114	0.145	8	½ x 12-24	1¼ x 12	3 each	24 each	37	40
5 x 5	127 x 127	0.145	8	½ x 12-24	1¼ x 12	3 each	24 each	37	40
6 x 4½	152 x 114	0.160	10	½ x 1/4-20	1½ x 14	3 each	24 each	57	62
6 x 5	152 x 127	0.160	10	½ x 1/4-20	1½ x 14	3 each	24 each	57	62
6 x 6	152 x 152	0.160	10	½ x 1/4-20	1½ x 14	3 each	24 each	57	62

Hinge testing conforms to ANSI A156.1. Furnished with screw hole locations that conform to standards approved by ANSI A156.7.

Yale®

A member of the Yale Security Group

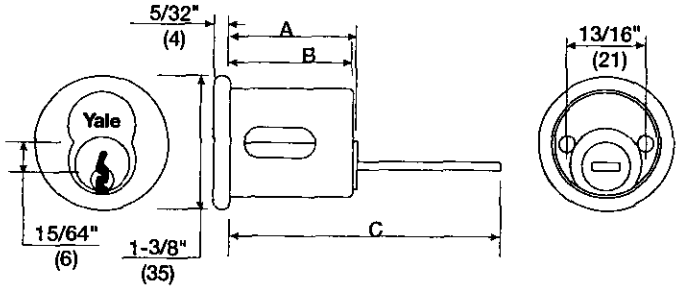
AUXILIARY LOCK / RIM CYLINDERS

List No. 1193 Rim Cylinder

Furnished where interchangeable core cylinders are used for all rim auxiliary locks and rim exit devices.

To Order Specify:

- List Number 1193
- Keying
  - Number of pins (6 or 7 pin).
  - Keyway
- Connecting Bar (#1145 or #1147)
- Finish (US3, US4, US10, US26, US26D or US32D Standard)
- Number of control keys required (None furnished unless ordered.)



List No.	No. of Pins	Core List No.	Housing List No.	Dim. A	Dim. B	Dim. C Connecting Bar List No.	
						#1145	#1147
1193	6	1210	1212	1-7/16 (37)	1-3/8 (27)	2-15/16 (75)	3-3/4 (95)
1193	7	1220	1212B	1-5/8 (27)	1-9/16 (40)	3-1/8 (79)	4-5/16 (110)

List No. 1193L Rim Cylinder

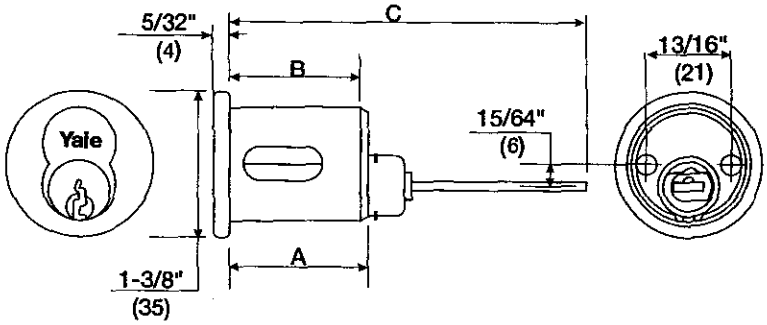
Used as an optional cylinder for auxiliary locks or exit devices when a lazy cam operation is required.

To Order Specify:

- List Number 1193L
- Keying
  - Level of Keying
  - Key Section
- Finish (US3, US4, US10, US26, or US26D Standard)

Example:

1193MK x GA x US26D



Application	Material	No. of Pins	Dim. A	Dim. B	Dim. C	Standard Cylinder Ring
Standard Rim Locks Exit Device Trims	Brass	6 (uses #1210 I. Core)	1-3/4 (45)	1-3/8 (35)	3-1/2 (89)	1762

Cyls. for 3300 Series Deadlocks

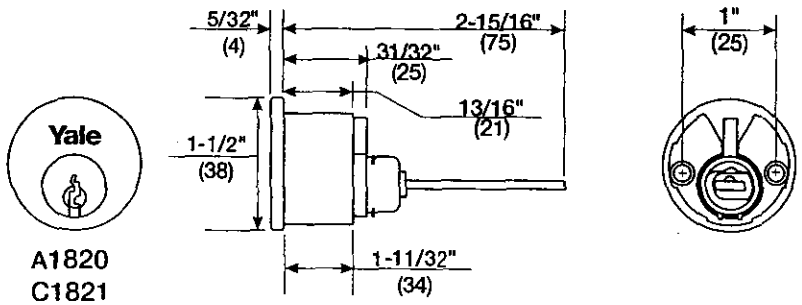
Used only for 3300 Series Deadlocks.

To Order Specify:

- List Number A1820, A1821, C1821
- Keying
  - Level of Keying
  - Key Section
- Finish (US3, US4, US10, US26, or US26D Standard)

Example:

A1820MK x GA x US26D



A1820
C1821

A1821

Application	List No. Outside Cylinder	List No. Inside Cylinder	Connecting Bar
Cyl. x T.T. Cyl. x School T.T. Cyl. x Blank Rose	A1820	----	14-3211-1111-048
Cyl. x Cyl.	C1821	A1821	14-3211-1111-048 I/S only
Blank Plate x Cyl.	—	A1821	14-3211-1111-048

Yale®

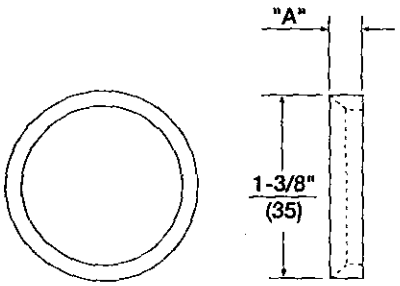
A member of the Yale Security Group

CYLINDER RINGS (COLLARS)

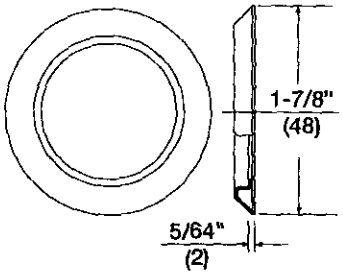
Cylinder Rings (Collars)

Cylinder Rings are supplied as standard with Yale cylinders ordered for replacement in Yale auxiliary rim and mortise locks. They are supplied as required with the original cylinder in the locks. The size and thickness of the cylinder rings is supplied to suit the length of the cylinder, the thickness of the door and the specific lock. See charts on pages 28-32.

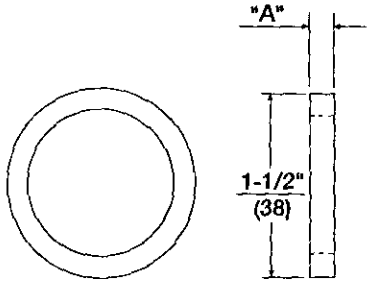
1134 Tubular Cylinder Ring for Mortise Cylinders
Material: Brass Only: "A" Dimension thickness from 1/16" to 15/16" as required. Bronze "A" Dimension thickensses from 1/16" to 1/2" as required.



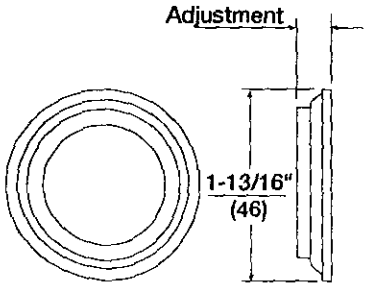
1762 Cylinder Ring for Rim Cylinders
Material: Brass, Bronze.



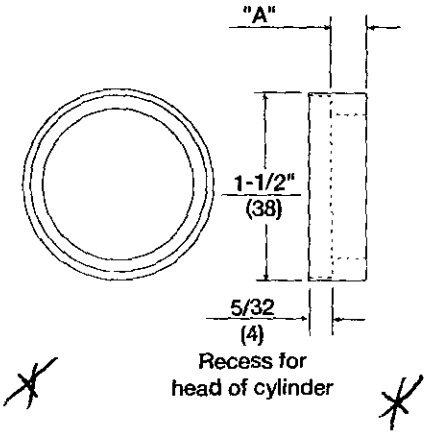
1767 Tubular Spacer Ring for Adjustable Head Cylinders
Material: Brass, Bronze
"A" Dimension: 1/16", 3/16", and 5/16".



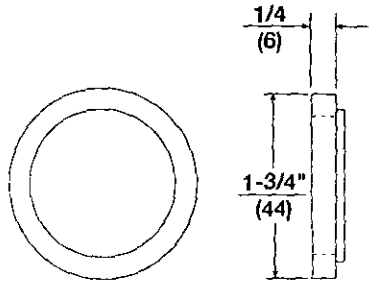
1135 Adjustable Cylinder Ring for Mortise Cylinders
Material: Brass, Bronze
3/16" Size: Adjusts from .22" to .30".
1/4" Size: Adjusts from .26" to .34".
5/16" Size: Adjusts from .30" to .38".



1765 Recessed Cylinder Ring for Mortise and Rim Cylinders
Material: Brass, Bronze
"A" Dimension: Thickness from 1/16" to 15/16" as required.



1766 Cylinder ring for U5109 and U5153 High Security Cylinders.



All Dimension are given in inches (mm).

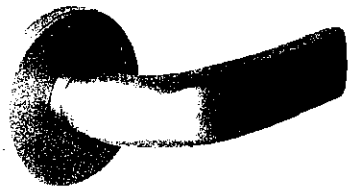
Yale®

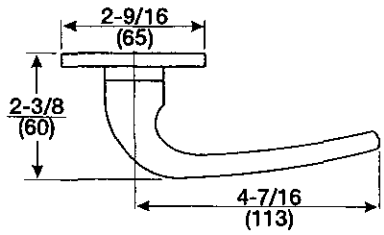
LEVER TRIM

JEFFERSON - JNR

JN Lever Handle: Solid Cast
***CO Rose:** Cold forged, reinforced
Cylinder Ring: Standard, No. 1765
Material: Brass, Bronze, Stainless Steel

*Optional rose: See page 8 for description and material.

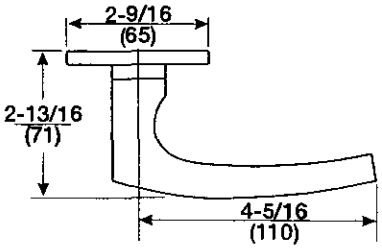




MONROE - MOR

MO Lever Handle: Solid Cast
***CO Rose:** Cold forged, reinforced
Cylinder Ring: Standard, No. 1765
Material: Brass, Bronze, Stainless Steel

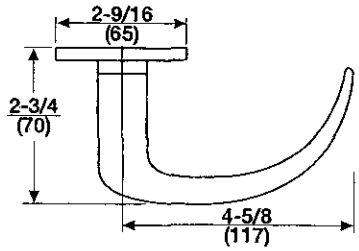
*Optional rose: See page 8 for description and material.



PACIFIC BEACH - PBR

PB Lever Handle: Solid Cast
***CO Rose:** Cold forged, reinforced
Cylinder Ring: Standard, No. 1765
Material: Brass, Bronze, Stainless Steel

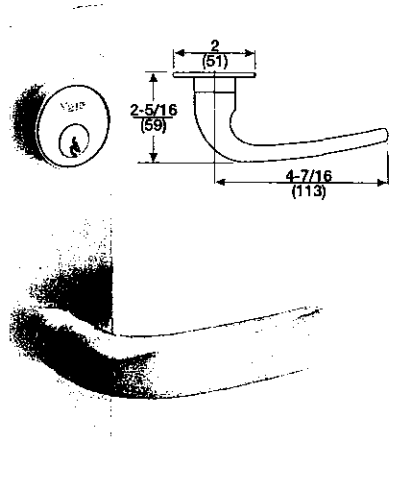
*Optional rose: See page 8 for description and material.



JEFFERSON - JNE

JN Lever Handle: Solid Cast
***CO Escutcheon:** Heavy cold forged
Cylinder Ring: Standard, No. 1765
Material: Brass, Bronze, Stainless Steel

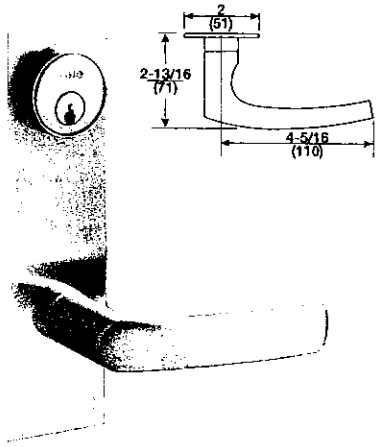
*Optional escutcheon: LN. See page 8 for description and material.



MONROE - MOE

MO Lever Handle: Solid Cast
***CO Escutcheon:** Heavy cold forged
Cylinder Ring: Standard, No. 1765
Material: Brass, Bronze, Stainless Steel

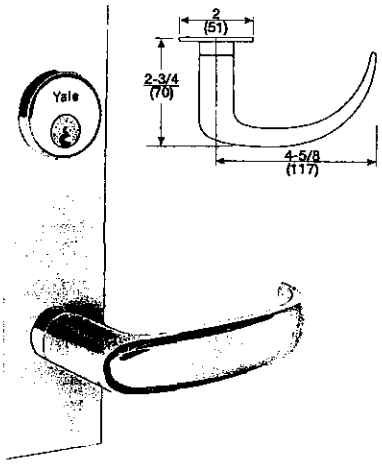
*Optional escutcheon: LN. See page 8 for description and material.



PACIFIC BEACH - PBE

PB Lever Handle: Solid Cast
***CO Escutcheon:** Heavy cold forged
Cylinder Ring: Standard, No. 1765
Material: Brass, Bronze, Stainless Steel

*Optional escutcheon: LN. See page 8 for description and material.



Yale®

LOCKSET FEATURES

WARRANTY

Yale 8800 series mechanical mortise locks carry a 7-year warranty.

LEAD SHIELDING

All *Yale* 8800 Series Mortise Locks are available with a lead shield for installation in lead-lined doors.

BEVEL FRONT

Yale 8800 Series fronts are free-floating to adjust from flat to the standard bevel of 1/8" in 2".

DOOR THICKNESS

8800 Series Mortise Locks are to be supplied as standard for 1-3/4" - 3-1/4" thick doors. For other than standard, specify the door thickness on the order: (i.e. 1-1/2", 2", 2-1/4", etc.)

FEDERAL SPECIFICATIONS

Yale 8800 Series Mortise Locks conform to Federal Specifications FF-H-106C/GEN and FF-H-106/2.

QUICK REVERSIBILITY

Yale mortise locks with the same trim on both sides (knob x knob or lever x lever) are field reversible. These locks can be converted to accommodate the hand of the door. However, to reduce installation costs, it is recommended that the hand of the door be specified for each lockset ordered. If the hand of the door is not specified, RH will be furnished.

AMERICAN NATIONAL STANDARD INSTITUTE (ANSI)

ANSI A115 Specifications for Door and Frame Preparation 8800 Series Mortise Locks conform to ANSI Specifications A115.1 and ANSI A115.11, which cover hollow metal door and frame preparation for mortise locks.

ANSI 156.13 Standards for Mortise Locks and Latches Yale® 8800 Series Mortise Locks conform to ANSI Series 1000 mortise lock functions (F01, F04, etc.) Operational and Security Grade 1.

KNURLED KNOB DESIGNS

Where required by the local authority, knob trim can be knurled to be identifiable to the touch for blind persons. All knob designs except CA may be ordered knurled; all lever designs except CR bronze 611, 612, 613, and PN may be ordered knurled.

Only the outside knob or lever will be knurled or abrasive coated unless specified otherwise. To order a complete lockset knurled or abrasive coated, suffix the Lockset Model Number with "Knurled" or "Abrasive Coated," i.e. LF8807 x "Knurled," LF8817-2 x "Knurled Inside Only," FNE 8828FL x "Knurled Inside Only."

UNDERWRITERS LABORATORIES (U.L.)

Yale 8800 Series Mortise Locks have been listed by Underwriters Laboratories Inc. for use on fire doors having a rating up to and including 3 hours. This pertains to single swing doors not exceeding 4 feet in width and 8 feet in height and in doors mounted in pairs not exceeding 8 feet in either direction (unless otherwise noted in the individual listings.)

In general, single-point mortise locks or latches with 3/4" minimum latch throw are intended for the active leaf of doors mounted in pairs, with the inactive leaf provided with top and bottom flush or surface bolts of the manual, automatic, or self-latching type. The door Classification Marking specifies the minimum latch throw required for the individual door.

Yale 8800 Series Mortise Locks with 3/4" throw latchbolts may also be used on single swing doors rated 1-1/2 hours or less, up to 4 feet in width and 9 feet in height. This is in addition to the rating mentioned above. All *Yale* 8800 Series Mortise Locks with Lever Handle Trim are UL listed for fire door applications. Underwriters Laboratories does not list locks with rabbeted fronts, locks with deadbolt only, or locks with hold-back feature on the latchbolt.

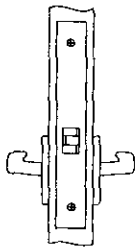
ISO 9001

Designed and manufactured in a certified ISO 9001 facility.

LOCKSET FUNCTIONS

PASSAGE LATCH (F01)

- For doors that do not require locking.
- Either knob/lever operates the latchbolt at all times.

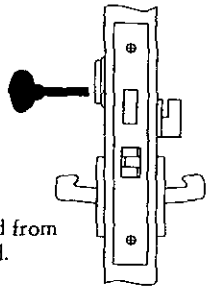


Spindles:
Knobs, 3/8" (10mm), N1170-1/2.
Levers, 3/8" (10mm), 1173L.

Model Numbers		Throw Latchbolt
Knobs	Levers	
8801	8801FL	3/4"
	SL8801FL	3/4"

PRIVACY LOCK (F19)

- Latchbolt by knob/lever either side.
- Deadbolt by thumbturn inside.
- When the deadbolt is projected, outside knob/lever is automatically made rigid.
- Anti-panic operation. Turning inside knob/lever retracts the latchbolt and deadbolt simultaneously, automatically unlocking outside knob/lever.
- In emergency, deadbolt may be unlocked from outside by E203 emergency key supplied.

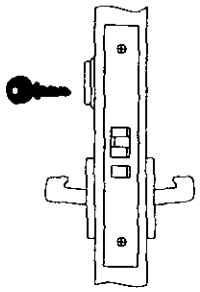


Spindles:
Knobs, 3/8" (10mm), 1175K.
Levers, 3/8" (10mm), 1178L.

Model Numbers		Throw	
Knobs	Levers	Latchbolt	Deadbolt
8802	8802FL	3/4"	1"
	SL8802FL	3/4"	1"

STOREROOM OR CLOSET LOCK (F07)

- For use on storeroom, utility, exit doors.
- Deadlocking latchbolt.
- Latchbolt by key outside, knob/lever inside.
- Outside knob/lever rigid at all times.

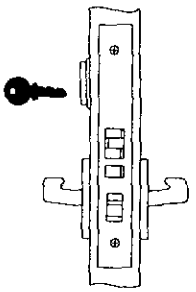


†Cylinder Code: A
Spindles:
Knobs, 3/8" (10mm), 1175K.
Levers, 3/8" (10mm), 1178L.

Model Numbers		Throw Latchbolt
Knobs	Levers	
8805	8805FL	3/4"
	SL8805FL	3/4"

ENTRANCE LOCK (F04)

- For office doors where locking is required.
- Deadlocking latchbolt.
- Latchbolt by knob/lever either side, except when outside knob/lever is set by stopwork activator.
- When outside knob/lever is set, latchbolt is operated by key outside and knob/lever inside.

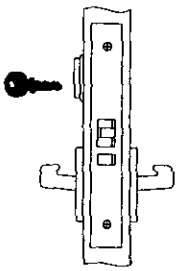


†Cylinder Code: A
Spindles:
Knobs, 3/8" (10mm), 1175K.
Levers, 3/8" (10mm), 1178L.

Model Numbers		Throw Latchbolt
Knobs	Levers	
8807	8807FL	3/4"
	SL8807FL	3/4"

CLASSROOM LOCK (F05)

- For classroom, office, or utility room doors.
- Deadlocking latchbolt.
- Latchbolt by knob/lever either side, except when outside knob/lever is set by key outside.
- Inside knob/lever always active.

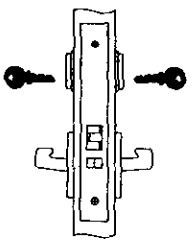


†Cylinder Code: A
Spindles:
Knobs, 3/8" (10mm), 1175K.
Levers, 3/8" (10mm), 1178L.

Model Numbers		Throw Latchbolt
Knobs	Levers	
8808	8808FL	3/4"
	SL8808FL	3/4"

CLASSROOM LOCK

- Guardbolt deadlocks latchbolt.
- Latchbolt retracted by either trim unless outside trim is locked by key.
- Either cylinder locks or unlocks outside trim.
- Latchbolt can be retracted by key when outside trim is locked.
- Operating inside trim retracts latchbolt, but outside trim remains locked.



†Cylinder Code: B
Spindles:
Knobs, 3/8" (10mm), 1175K.
Levers, 3/8" (10mm), 1178L.

Model Numbers		Throw Latchbolt
Knobs	Levers	
8808-2	8808-2FL	3/4"
	SL8808-2FL	3/4"

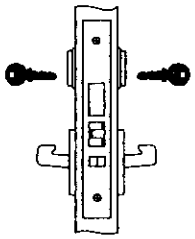
†Cylinder Code defines the cylinder supplied as standard for each lock and the optional cylinder available. See Page 18.

Yale®

LOCKSET FUNCTIONS

CLASSROOM SECURITY INTRUDER LOCK

- Guardbolt deadlocks latchbolt.
- Latchbolt retracted by either trim unless outside trim is locked by key.
- Deadbolt operated by key on either side.
- When deadbolt is projected, outside trim is automatically locked.
- Anti-panic operation. Operating inside trim automatically retracts deadbolt and latchbolt, and outside trim remains locked.
- Key retraction of latchbolt either side unlocks outside trim.

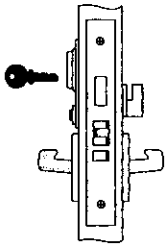


†Cylinder Code: B
Spindles:
Knobs, 3/8" (10mm), 1175K.
Levers, 3/8" (10mm), 1178L.

Model Numbers		Throw	
Knobs	Levers	Latchbolt	Deadbolt
8818-2	8818-2FL	3/4"	1"
	SL8818-2FL	3/4"	1"

HOTEL/MOTEL LOCK (F15)

- Deadlocking latchbolt.
- Outside knob/lever rigid at all times.
- Latchbolt by key outside, knob/lever inside.
- Guest room and master keys retract the latchbolt, only when the deadbolt is NOT projected.
- Deadbolt by emergency/shut-out or display key only outside, thumbturn inside.
- When deadbolt is projected, the indicator button projects out (indicating room is occupied). Access from outside can be gained only with an emergency/shut-out or display key.
- Anti-panic operation. Turning the inside knob/lever retracts both the latchbolt and deadbolt simultaneously.

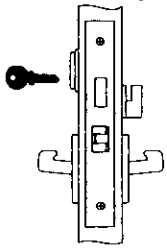


†Cylinder Code: E
Spindles:
Knobs, 3/8" (10mm), 1175K.
Levers, 3/8" (10mm), 1178L.

Model Numbers		Throw	
Knobs	Levers	Latchbolt	Deadbolt
8820	8820FL	3/4"	1"
	SL8820FL	3/4"	1"

DORMITORY LOCK (F13)

- Latchbolt by knob/lever either side.
- Deadbolt by key outside and thumbturn inside.
- When the deadbolt is projected, outside knob/lever is automatically made rigid.
- Anti-panic operation. Turning inside knob/lever retracts the latchbolt and deadbolt simultaneously, automatically unlocking outside knob/lever.

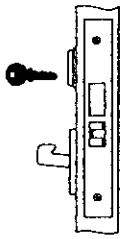


†Cylinder Code: A
Spindles:
Knobs, 3/8" (10mm), 1175K.
Levers, 3/8" (10mm), 1178L.

Model Numbers		Throw	
Knobs	Levers	Latchbolt	Deadbolt
8822	8822FL	3/4"	1"
	SL8822FL	3/4"	1"

STOREROOM LOCK

- Deadbolt operated by key from outside
- Latchbolt retracted by outside trim except when deadbolt is projected, outside trim is automatically locked
- No inside cylinder or trim

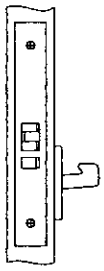


†Cylinder Code: A
Spindles:
Knobs, 3/8" (10mm), F1198.
Levers, 3/8" (10mm), F1198.

Model Numbers		Throw	
Knobs	Levers	Latchbolt	Deadbolt
8823	8823FL	3/4"	1"
	SL8823FL	3/4"	1"

EXIT LATCH (F31)

- For twin communicating or exit doors where one-sided operation is required.
- Deadlocking latchbolt.
- Inside knob/lever operates the latchbolt at all times.
- No outside operations.



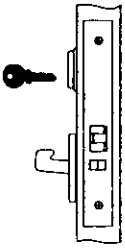
Spindles:
Knobs, 3/8" (10mm), F1198
Levers, 3/8" (10mm), F1198.

NOTE: The Finlandia (FN) escutcheon will be supplied on all escutcheon trim for hollow metal door installations.

Model Numbers		Throw
Knobs	Levers	Latchbolt
8828	8828FL	3/4"
	SL8828FL	3/4"

CLOSET LOCK

- Guardbolt deadlocks latchbolt.
- Latchbolt retracted by outside trim.
- Outside cylinder locks or unlocks outside trim.
- No inside cylinder or trim.



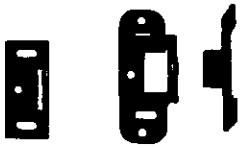
†Cylinder Code: A
Spindles:
Knobs, 3/8" (10mm), F1198.
Levers, 3/8" (10mm), F1198.

Model Numbers		Throw
Knobs	Levers	Latchbolt
8829	8829FL	3/4"
	SL8829FL	3/4"

†Cylinder Code defines the cylinder supplied as standard for each lock and the optional cylinder available, see Page 18.

VON DUPRIN®
98/99 Fire Exit Rim Devices

98-F and 99-F fire exit rim devices for all types of 4′ × 8′ *(1219mm × 2438mm)* single doors or 8′ × 8′ *(2438mm × 2438mm)* double doors with 9954 or 9854 mullion, UL listed for fire exit hardware, 3 hour rating.



299F 499F

FEATURES

- Nonhanded
- Field sizeable
- 3/4″ *(19mm)* throw, latch bolt
- Latch bolt deadlocking
- Eight popular finishes

DIMENSIONS

Touchbar height to finished floor	39 13/16″ *(935mm)* at center
Touchbar projection — neutral	3 13/16″ *(97mm)*
depressed	3 1/16″ *(78mm)*
Center case	8″ × 2 1/4″ × 2 3/4″ *(203mm × 57mm × 70mm)*
Device length — Short 3′	2′6″ to 3′ *(762mm* to *914mm)* door size
Long 4′	3′1″ to 4′ *(940mm* to *1219mm)* door size

STRIKES AND FASTENERS

Device is furnished with standard 299F strike in dull black finish (optional finishes are available) for single door applications. All necessary fasteners are included. Optional 499F strike is **required** on double doors. For strike applications, dimensions, and minimum door stile information refer to pages 22, 23.

A combination of fasteners are included for surface mounting and through bolting to trim on 1 3/4″ *(44mm)* and 2 1/4″ *(57mm)* thick doors.

DEVICE OPTIONS

Electric latch retraction, page 24
Pneumatic latch retraction, page 27
Electric rim device, page 25
Request to exit switch, page 26
Latch bolt monitoring, page 26
Signal switch, page 26
Double cylinder, page 27

OUTSIDE TRIM

Standard

990NL-R/V
990TP-R/V
110NL-MD
991K-R/V
992L-R/V

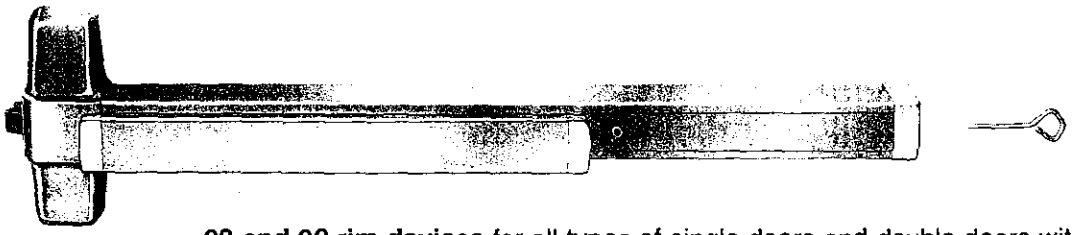
Optional

990EO
696NL-R/V
696TP-R/V
697NL-R/V
697TP-R/V
KP992L-R/V
994L-R/V
110NL-WD

For complete outside trim information, see pages 18-19.

For How-To-Order Information on all devices, see page 35.

VON DUPRIN®
98/99 Rim Devices



98 and 99 rim devices for all types of single doors and double doors with mullion, UL listed for accident hazard installations. Covers stock hollow metal doors with 86 or 161 cutouts.


299

FEATURES

- Nonhanded
- Field sizeable
- 3/4" *(19mm)* throw, latch bolt
- Latch bolt deadlocking
- Eight popular finishes
- Hex key dogging

DIMENSIONS

Touchbar height to finished floor	39 13/16" *(935mm)* at center
Touchbar projection —	
neutral	3 13/16" *(97mm)*
depressed	3 1/16" *(78mm)*
Center case	8" × 2 1/4" × 2 3/4" *(203mm × 57mm × 70mm)*
Device length — Short 3'	2'6" to 3' *(762mm* to *914mm)* door size
Long 4'	3'1" to 4' *(940mm* to *1219mm)* door size

OUTSIDE TRIM

Standard

990NL-R/V
990TP-R/V
990DT
110NL-MD
991K-R/V
992L-R/V

Optional

990EO
696NL-R/V
696TP-R/V
696DT
697NL-R/V
697TP-R/V
697DT
KP992L-R/V
994L-R/V
110NL-WD
392-7

For complete outside trim information, see pages 18-19.

STRIKES AND FASTENERS

Device is furnished with standard 299 strike in dull black finish. All necessary fasteners are included. Optional strikes and finishes are available. For strike applications, dimensions, and minimum door stile information refer to pages 22, 23.

A combination of fasteners are included for surface mounting and through bolting to trim on 1 3/4" *(44mm)* and 2 1/4" *(57mm)* thick doors.

DEVICE OPTIONS

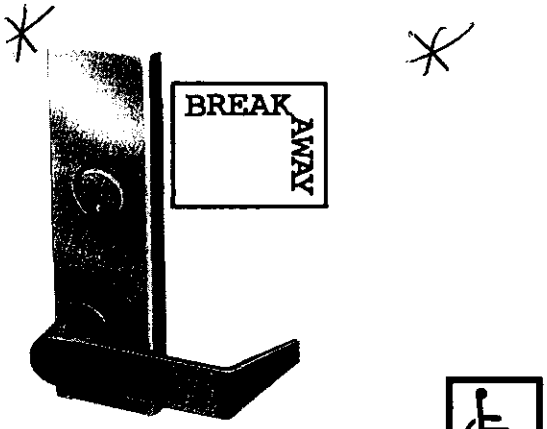
Electric latch retraction, page 24
Pneumatic latch retraction, page 27
Electric rim device, page 25
Request to exit switch, page 26
Latch bolt monitoring, page 26
Signal switch, page 26
Cylinder dogging, page 30
Double cylinder, page 27

For How-To-Order Information on all devices, see page 35.

VON DUPRIN®
98/99 Trim Selection

Function		01 Exit Only	02 Pull When Dogged	03 Key Retracts Latch Bolt	03 Key Retracts Latch Bolt	05 Key Locks Thumbpiece	08* Key Locks Knob	08* Key Locks Lever	11 Key Locks Thumbturn
Trim Number and Dimensions			**990DT** 14 3/16" (360mm) 3" (76mm)	**990NL** 14 3/16" (360mm) 3" (76mm)	**110NL** (Pull Required) Cylinder Only 1 1/4" (32mm) Rim	**990TP** 14 3/16" (360mm) 3" (76mm)	**991K** 10 5/8" (270mm) 2 5/8" (67mm)	**992L** 10 5/8" (270mm) 2 5/8" (67mm)	**374T** 7 1/8" (181mm) 1 3/4" (44mm)
Device/Trim Center Line To Finished Floor									
Projection		—	*2" (51mm)*	*2" (51mm)*	—	*2" (51mm)*	*3 3/4" (95mm)*	*2 3/4" (70mm)*	*1 3/4" (44mm)*
Rim	Panic	98EO 99ED	98DT 99DT	98NL 99NL	98NL-OP 99NL-OP	98TP 99TP	98K 99K	98L 99L	—
	Fire	98EO-F 99EO-F	—	98NL-F 99NL-F	98NL-OP-F 99NL-OP-F	98TP-F 99TP-F	98K-F 99K-F	98L-F 99L-F	—
	Ctr. Line	A 39 13/16" — *1011mm*	A 39 13/16" B 33 7/8" *1011mm 860mm*	A 39 13/16" B 33 7/8" *1011mm 860mm*	A 39 13/16" B 40 1/16" *1811mm 1018mm*	A 39 13/16" B 33 7/8" *1011mm 860mm*	A 39 13/16" B 37 3/16" *1011mm 945mm*	A 39 13/16" B 39 13/16" *1011mm 945mm*	— —
Mortise Lock	Panic	9875EO 9975ED	9875OT 9975ST	9875NL 9975NL	—	9875TP 9975TP	9875K 9975K	9875L 9975L	—
	Fire	9875EO-F 9975ED-F	—	9875NL-F 9975NL-F	—	9875TP-F 9975TP-F	9875K-F 9975K-F	9875L-F 9975L-F	—
	Ctr. Line	A 39 5/8" — *1006mm*	A 39 5/8" B 33 11/16" *1006mm 856mm*	A 39 5/8" B 33 11/16" *1006mm 856mm*	A 39 5/8" B 39 7/8" *1006mm 1012mm*	A 39 5/8" B 33 11/16" *1006mm 856mm*	A 39 5/8" B 37" *1006mm 940mm*	A 39 5/8" B 37" *1006mm 940mm*	— —
Surface Mounted Vertical Rod	Panic	9827ED 9927EO	9827ST 9927OT	9827NL 9927NL	9827NL-OP 9927NL-OP	9827TP 9927TP	9827K 9927K	9827L 9927L	9827TL 9927TL
	Fire	9827EO-F 9927EO-F	—	9827NL-F 9927NL-F	9827NL-OP-F 9927NL-OP-F	9827TP-F 9927TP-F	9827K-F 9927K-F	9827L-F 9927L-F	9827TL-F 9927TL-F
	Ctr. Line	A 39 5/8" — *1006mm*	A 39 5/8" B 33 11/16" *1006mm 856mm*	A 39 5/8" B 33 11/16" *1006mm 856mm*	A 39 5/8" B 39 7/8" *1006mm 1012mm*	A 39 5/8" B 33 11/16" *1006mm 856mm*	A 39 5/8" B 37" *1006mm 940mm*	A 39 5/8" B 37" *1006mm 940mm*	A 39 5/8" B 53 1/2" *1006mm 1359mm*
Concealed Vertical Rod	Panic	9847EO 9947EO	9847OT 9947OT	9847NL 9947NL	9847NL-DP 9947NL-OP	9847TP 9947TP	9847K 9947K	9847L 9947L	—
	Fire	9847EO-F 9947EO-F 9848EO-F 9948EO-F	—	9847NL-F 9947NL-F 9848NL-F 9948NL-F	9847NL-OP-F 9947NL-OP-F 9848NL-OP-F 9948NL-OP-F	9847TP-F 9947TP-F 9848TP-F 9948TP-F	9847K-F 9947K-F 9848K-F 9948K-F	9847L-F 9947L-F 9848L-F 9948L-F	—
	Ctr. Line	A 39 5/8" — *1006mm*	A 39 5/8" B 33 11/16" *1006mm 856mm*	A 39 5/8" B 33 11/16" *1006mm 856mm*	A 39 5/8" B 39 7/8" *1006mm 1012mm*	A 39 5/8" B 33 11/16" *1006mm 856mm*	A 39 5/8" B 37" *1006mm 940mm*	A 39 5/8" B 37" *1006mm 940mm*	A 39 5/8" B 53 1/2" *1006mm 1359mm*
Concealed Vertical Rod Wood Door	Panic	9847WDC-EO 9947WDC-EO	9847WDC-OT 9947W8C-OT	9847WDC-NL 9947WDC-NL	9847WDC-NL-OP 9947WDC-NL-OP	9847WDC-TP 9947WDC-TP	9847WDC-K 9947WDC-K	9847WDC-NL 9947WDC-NL	9847WDC-TL 9947WDC-TL
	Fire	9847WDC-EO-F 9947WDC-EO-F	—	9847WDC-NL-F 9947WDC-NL-F	9847WDC-NL-OP-F 9947WDC-NL-OP-F	9847WDC-TP-F 9947WDC-TP-F	9847WDC-K-F 9947WDC-K-F	9847WDC-L 9947WDC-L	—
	Ctr. Line	A 39 5/8" — *1006mm*	A 39 5/8" B 33 11/16" *1006mm 856mm*	A 39 5/8" B 33 11/16" *1006mm 856mm*	A 39 5/8" B 39 7/8" *1006mm 1012mm*	A 39 5/8" B 33 11/16" *1006mm 856mm*	A 39 5/8" B 37" *1006mm 940mm*	A 39 5/8" B 37" *1006mm 940mm*	A 39 5/8" B 53 1/2" *1006mm 1359mm*
Three Point Latch	Panic	9857EO 9957EO	9857OT 9957ST	—	—	9857TP 9957TP	9857K 9957K	9857L 9957L	—
	Fire	9857EO-F 9957EO-F	—	—	—	9857TP-F 9957TP-F	9857K-F 9957K-F	9857L-F 9957L-F	—
	Ctr. Line	A 39 5/8" — *1006mm*	A 39 5/8" B 33 11/16" *1006mm 856mm*	A 39 5/8" B 33 11/16" *1006mm 856mm*	A 39 5/8" B 39 7/8" *1006mm 1012mm*	A 39 5/8" B 33 11/16" *1006mm 856mm*	A 39 5/8" B 37" *1006mm 940mm*	A 39 5/8" B 37" *1006mm 940mm*	A 39 5/8" B 53 1/2" *1006mm 1359mm*
Additional SNB requirements		6	2	2	6	2	2	2	2

*Refer to additional lever or knob information, page 19.



BREAKAWAY™ LEVER TRIM

Breakaway Lever Trim Series 994L will significantly reduce damage from vandalism and abuse, while helping meet ADA-mandated accessibility standards. The patented Breakaway trim is available for Von Duprin Series 98 and 99 exit devices and can be installed on existing 992L lever trim prep for retrofit applications.

Lever trim, mandated on public buildings since January 26, 1992, is vulnerable to vandalism and abuse that can cause the lever or internal trim parts to break, rendering the door inoperable and necessitating costly, recurring repairs. The Breakaway design allows the lever to break away and drop into a "down" position when abused, discouraging further abuse and protecting its internal parts. Further, it can be easily reset to its operating position by a simple uplift motion.

When unlocked, the unit operates as a normal lever trim. When locked, the lever feels locked but when more than 35 pounds of torque are applied, the lever breaks away and travels to a 90-degree down position. To prevent further damage to internal trim parts or to the exit device, an easily replaced shear pin breaks at 65 to 75 pounds of torque.

Series 994L trim features a smooth precise operation and a flip cam design to allow easy handing in the field. Installation or repairs are simple. An embossed cylinder improves aesthetics and security.

The Breakaway design was lab tested to 500,000 cycles in the unlocked position and to 10,000 "break" cycles, after which it still maintained the required 35 pounds torque to break away.

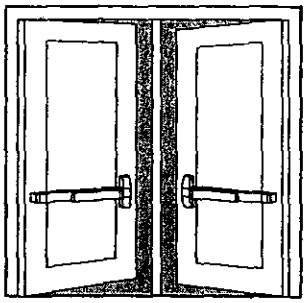
All standard lever designs and function options are available.

To order specify:
1. 994L Trim.
2. Function option, NL, BE, or DT (see page 19).
3. Lever style, other than #06 (see page 19).

Note: Night latch and dummy trims have rigid levers and do not break away.

VON DUPRIN®
Auxiliary Hardware and General Information

REMOVABLE MULLIONS



Mullions provide single door performance in double door openings with rim devices. Mullions are easily removed by loosening bottom set screw and removing top fitting cover.

The top mullion fitting is attached to the frame and is concealed by the fitting cover.

Mullions are shipped presized, with mounting screws and prepared for strikes.

Strikes are not included except where indicated.

To order, specify:

1. Model number.
2. Height of opening.
3. Finish.
4. Handing as required.
5. Center line deviation (refer to device template for standard centerline).
6. Strikes, when required, should be ordered with device.

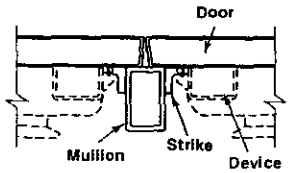
Stock Hollow Metal Applications

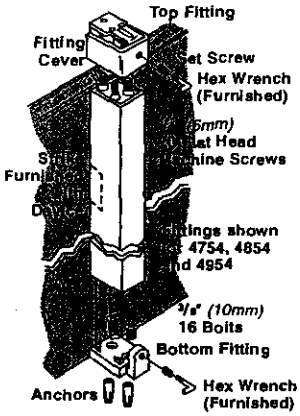
Devices mounted to cover ANSI 161 cutouts are higher than the standard mullion strike location. Consult the factory for special strike preparation or order a blank mullion.

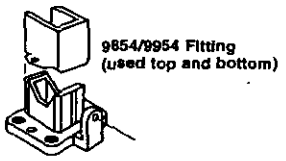
Blank Mullions

Furnished without strike preparation and without fittings or stabilizers. Used to mount devices at a strike height different from the standard mullion preparation. Note: 9954 blank mullion is furnished less UL label.

SIX STEEL MULLIONS





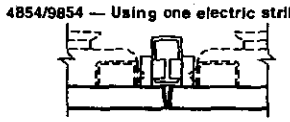


Electric and Monitor Strikes

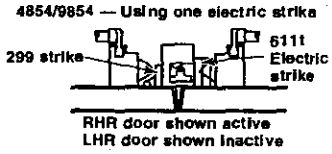
Includes an electric cable for transferring power from frame to strikes. The cable has five wires to a twist-apart plug that is connected to a mating socket through a hole in the top fitting.

For use with all Von Duprin panic exit rim devices.

4754 — Prepared for two 4263 monitor strikes.



4854 — Prepared for one 299 and one 6111 electric strike. Indicate handing for electric strike.



Standard Doors

4954 — Prepared for two 264 or 299 strikes. For use with all Von Duprin panic rim devices. Note: specify strike choice with device.

9854 — Prepared for one 499-F and one 6111 electric strike. Indicate handing for electric strike UL fire label mullion for 90 minute openings up to 8′ ×8′ *(2438mm×2438mm)*. This mullion is not easily removed due to special fittings.

1654 — Prepared for two 1606 strikes.

Fire Doors

9954 — UL fire label mullion for up to 3 hour openings up to 8′ ×8′ *(2438mm×2438mm)* using Von Duprin fire exit rim devices. Must be used with two 268 (for 88-F) or two 499F (for 22-F, 98-F, 99-F) strikes. This mullion is not easily removed due to special fittings.

Sizes — 4754, 4854, 4954, 1654 — 7′2″ *(2184mm)*, 8′2″ *(2489mm)*, 10′2″ *(3099mm)*. 9854/9954 — 7′3″ *(2209mm)*, 8′ *(2438mm)*, 10′3″ *(3124mm)* (no UL label on 10′ *(3048mm)*.

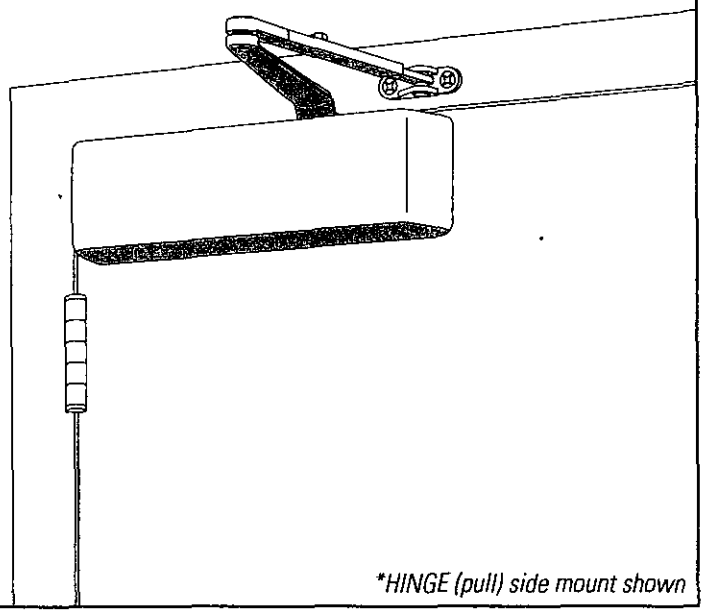
Finishes

SP28 (sprayed aluminum), SP313 (sprayed dark bronze) or sprayed black.

LCN 4040 SERIES

FEATURES

CLOSER MOUNTS
***HINGE (PULL) SIDE**
TOP JAMB (PUSH SIDE)
PARALLEL ARM (PUSH SIDE)

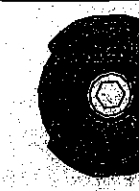


**HINGE (pull) side mount shown*

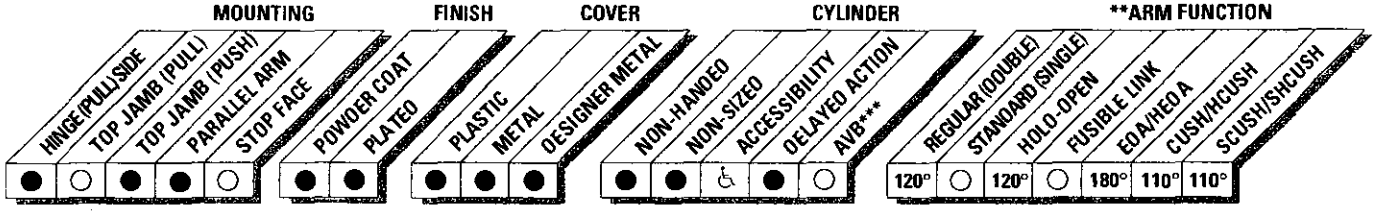
The 4040 SUPER SMOOTHEE® is LCN's most flexible heavy duty closer designed for institutional and other rugged high traffic applications.

- **Ten Million Cycles**
- **Cast Iron**
- **Forged Steel Arm**
- **Double Heat Treated Steel Pinion**
- **All Weather Fluid**
- **Non-Handed**
- **LCN® Fast™ Power Adjust**
- **Fast & Accurate Installation**
- **UL & ULC Listed**

- Standard 4040 series closer shipped with regular arm, standard plastic cover, and self reaming and tapping screws. See 4040 Series pages 34 & 35 for options.
- Non-sized cylinder is adjustable for interior doors to 5'0" and exterior doors to 4'0".
- Closer mounts hinge side, top jamb, and parallel arm w/PA Shoe on either right or left swinging doors.
- Closers to meet ADA requirements. See 4040 Series page 36.
- Standard or optional custom powder coat finish.
- Optional plated finish on cover, arm, and fasteners.
- Optional SRI primer for installations in corrosive conditions.
- Optional designer series metal cover
- UL and ULC listed for self-closing doors without hold-open.
- Tested and certified under ANSI Standard A156.4, grade one.



The 4041 includes the **LCN. FAST™ Power Adjust,** *a revolutionary visual indicator for Spring Power Adjustment.*



● *Available*
○ *Not available*

♿ *Closer available with less than 5.0 lbs. opening force on 36" door.*
***Maximum opening/hold-open point with standard template.*
**** Advanced Variable Backcheck*

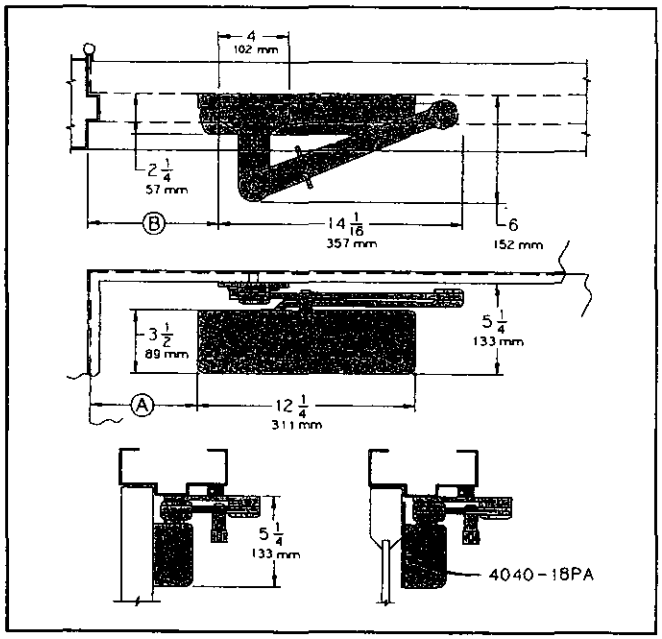
LCN CLOSERS
121 W. RAILROAD AVE
P.O. BOX 100
PRINCETON, IL, USA 61356-0100

PHONE 800-526-2400
FAX 800-248-1460
www.lcnclosers.com
3/04

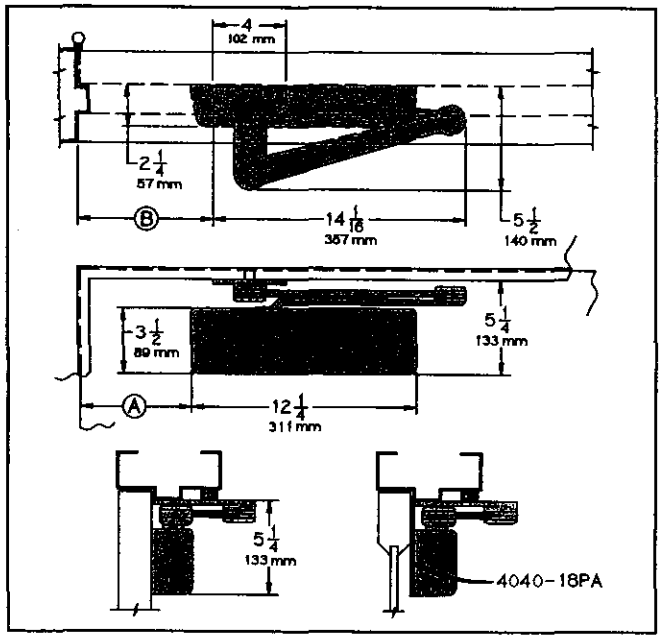
LCN 4040 SERIES

Mounting details are the same as 4040 REGULAR or HOLO-OPEN except as listed below. 4040 closers ordered with EOA or CUSH arms include 4040-201 FIFTH HOLE SPACER to support the shoe.

4040 EDA MOUNT



4040 CUSH MOUNT



- **Clearance** for 4040-62EDA is 5 1/2" (140 mm) from door face. 6" (152 mm) for CUSH.
- **Head Frame** flush or rabetted requires CUSH FLUSH PANEL ADAPTER, 4040-419.
- **CUSH ARM** requires SHOE SUPPORT, 4040-30 for fifth screw anchorage for narrow frames.
- **Delayed Action** Add suffix "DEL" to selected cylinder (eg. 4041 DEL). Delays closing from maximum opening to;
  115° with 180° template.
  95° with 110° template.
  85° with 100° template.
  75° with 90° template.
  Delay time adjustable up to approximately one minute.

MAXIMUM OPENING

EDA arm can be templated for points at: 110°,
Ⓐ = 6 3/8" (162 mm)
Ⓑ = 7 3/4" (197 mm)
or 180°.
Ⓐ = 2 7/8" (73 mm)
Ⓑ = 4 1/4" (108 mm)
Hold-open points up to maximum opening with HEDA arm.

CUSH arms can be templated for opening/hold-open point at:
85°,
Ⓐ = 7 15/16" (202 mm)
Ⓑ = 9 1/8" (232 mm)
90°,
Ⓐ = 7 3/16" (183 mm)
Ⓑ = 8 1/2" (216 mm)
100°,
Ⓐ = 6 1/16" (154 mm)
Ⓑ = 7 1/4" (184 mm)
or 110°.
Ⓐ = 5 1/16" (129 mm)
Ⓑ = 6 3/8" (162 mm)

Spring Cush dead stop points are approximately 5° more than templated stop point. Hold open at templated stop points.

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PRINCETON, IL, USA 61356-0100

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3/04

Door Trim and Auxiliary

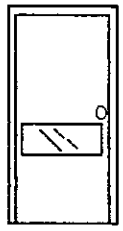
Door Protection Plate

Meets ANSI A156.6 J101 Metal Armor Plate; J102 Metal Kickplate; J103 Metal Mop Plate.

190S, 193S, 194S

Mop Plate: 4" (102 mm) and 6" (152 mm) high, 1" (25 mm) less than door width
Kick Plate: 8" (203 mm), 10" (254 mm), and 12" (305 mm) high, 2" (51 mm) less than door width
Armor Plate: 14" (356 mm) to 48" (1219 mm) high
.050" (1.3 mm) Gauge Metal

Material: Aluminum, Brass, Bronze, or Stainless Steel (301 grade Stainless Steel)
Finishes: All standard, see page F3. (Note: US3 plates are not recommended for exterior application)
Options: May be ordered with counter sunk holes (specify "CSK") at extra charge.
Order: Furnish item number, height, width, and finish (i.e., 190S – 6" x 30", US32D).
Plates are sized on even inches. Odd size available and priced to next larger size.



Stretcher Plate

198S

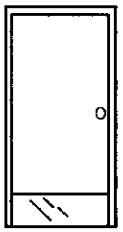
.038" (0.8 mm) Gauge Stainless Steel

Material: Stainless Steel only.
Finishes: US32D.

199B

.038" (0.8 mm) Gauge Gold Anodized Aluminum

Material: Gold Anodized Aluminum only.



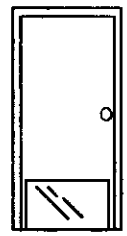
Mop Plate

220S, 223S, 224S

.062" (1.6 mm) Gauge Metal

Material: Aluminum, Brass, Bronze, or Stainless Steel
Finishes: All standard, see page F3. (Note: US3 plates are not recommended for exterior application)

Item No.	US Gauge	Bevel	Fasteners	Quantity Bag
190S	18	none	#6 x 5/8 truss head screws	1 each
193S	18	B3E	#6 x 5/8 truss head screws	1 each
194S	18	B4E	#6 x 5/8 truss head screws	1 each
198S	20	none	#6 x 5/8 truss head screws	1 each
199B	38	none	#6 x 5/8 truss head screws	1 each
220S	16	none	#6 x 5/8 truss head screws	1 each
223S	16	B3E	#6 x 5/8 truss head screws	1 each
224S	16	B4E	#6 x 5/8 truss head screws	1 each



Kick Plate

Door Protection Plate

Meets ANSI A156.6 J105 Plastic Armor Plate; J106 Plastic Kickplate; J107 Plastic Mop Plate.

204S

Mop Plate: 4" (102 mm) and 6" (152 mm) high, 1" (25 mm) less than door width
Kick Plate: 8" (203 mm), 10" (254 mm), and 12" (305 mm) high, 2" (51 mm) less than door width
Armor Plate: 14" (356 mm) to 48" (1219 mm) high
.125" (3.2 mm) Gauge Clear Plastic

Material: Clear plastic.
Finishes: Clear (specify "PC").
Options: May be ordered with counter sunk holes (specify "CSK") at extra charge.
Order: Furnish item number, height, width, and finish (i.e., 204S – 6" x 30", PC).
Plates are sized on even inches. Odd size available and priced to next larger size.

214S

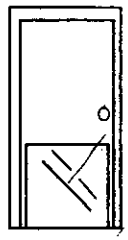
.125" (3.2 mm) Gauge Plastic Laminate

Material: Plastic laminate.
Finishes: Black (specify "PK"), Brown (specify "CO"), Grey ("PG").
Color selection for other than standard colors, are subject to minimum order quantity, priced on application.

225S

.081" (2.1 mm) Gauge Kydex®

Material: Kydex®.
Finishes Color selection for other than standard colors, are subject to minimum order quantity, priced on application.



Armor Plate

Item No.	US Gauge	Bevel	Fasteners	Quantity Bag
204S	—	B4E	#6 x 5/8 truss head screws	1 each
214S	—	B4E	#6 x 5/8 truss head screws	1 each
225S	—	none	#6 x 5/8 truss head screws	1 each

Door Trim and Auxiliary

Lever Extension Flush Bolt

For use on hollow metal/fire rated doors

Meets ANSI A156.16 for L04251

282D

1" x 6 3/4" (25 mm x 172 mm) Face
1/2" (12.5 mm) Flattened Round Bolt Head
3/4" (19 mm) Bolt Throw
12" (305mm) Rod Length (center of face to corner of door)
3/4" (19 mm) Rod Backset
1" x 2" (25 mm x 51 mm) Guide
15/16" x 2 /4" (24 mm x 57 mm) Strike

Material: Extruded Brass
Finishes: US3, US4, US10, US10B, US15A, US19, US26, and US26D only.
Options: Standard rod length 12" (305 mm), 18" (457 mm), 25" (635 mm), and 30" (762 mm) available. I other lengths, specify "282R". Bolt head not included.

Fasteners	Quantity	
	Box	Case
#8 combination screws	2 each	80 each

File # R13676 (N)

282D
Fits ANSI A115
door and frame prep.

Rod 1/4" Dia.
1/4 - 20 Thread

282R

Lever Extension Flush Bolt

For use on wood composite/fire rated doors

Meets ANSI A156.16 for L04251

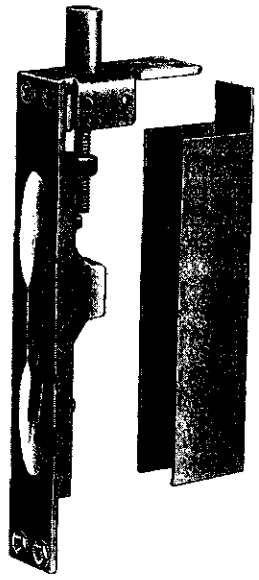
283D

1" x 6 3/4" (25 mm x 172 mm) Face
1/2" (12.5 mm) Flattened Round Bolt Head
3/4" (19 mm) Bolt Throw
3/4" (19 mm) Rod Backset
15/16" x 2 1/4" (24 mm x 57 mm) Strike

Material: Extruded Brass
Finishes: US3, US4, US10, US10B, US15A, US19, US26, and US26D only.
For use on wood composite doors.

Fasteners	Quantity	
	Box	Case
#8 combination screws	1 each	80 each

File # R13676 (N)



Automatic Flush Bolt Set for Wood Covered Composite Doors

B, C, D, and E Label.
Type #25 ANSI A156.3

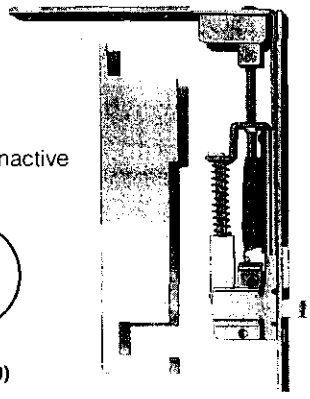
291D

1" x 8 1/2" (25 mm x 216 mm) Face Plate

Finishes: US3, US4, US10, US10B, US26, and US26D only.
Thermal Lock: Automatically locks inactive door under high fire/heat conditions.
Used in pairs at top and bottom of inactive door. Fully automatic, when active door is opened, inactive door is free.
Note: 280X Dust Proof Strikes (p. F22) are recommended for use with these sets. May be used on doors 4 ft. wide and 9 ft. high.

Fasteners	Quantity	
	Box	Case
2 bolts per set, #8 x 3/4" tapping screws	1 set	10 sets

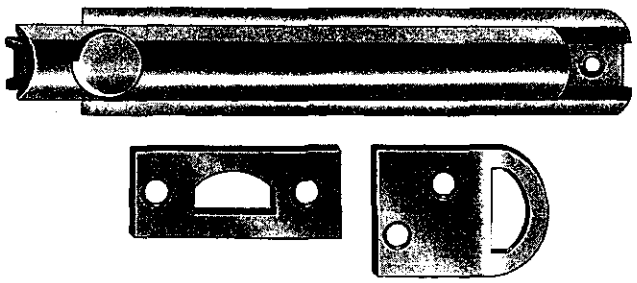
File # R7912 (N)



Door Trim and Auxiliary

Surface Bolt
Meets ANSI A156.16 for L04151

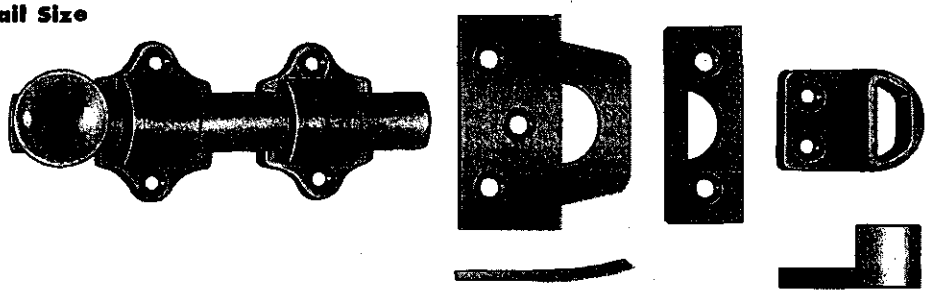
278D-6
6" (152 mm) Bolt Length
1/2" (12.5 mm) Bolt Width
1 5/16" (24 mm) Bolt Throw
1 1/16" (17 mm) Base Width
1/2" (12.5 mm) Diameter of Knob
1 1/16" (17 mm) Surface Bolt Projection
Material: Brass
Finishes: US3, and US26D only.
Mortise and Universal strikes included.



Quantity	
Box	Case
10 each	100 each

Surface Bolt for Dutch Doors

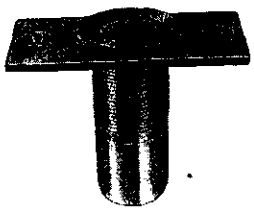
279D
1 5/8 x 4 3/8" (41 mm x 111 mm) Bolt Overall Size
5/8" (16 mm) Half Round Bolt Size
9/16" (14 mm) Bolt Throw
Material: Brass
Finishes: US3, and US26D only.
Mortise and Universal strikes included.



Quantity	
Box	Case
10 each	100 each

Dust Proof Strike
Meets ANSI A156.16 for L04021

280X
1 3/8" x 2 7/8" (35 mm x 73 mm) Face Plate
1" (25 mm) Diameter Barrel
2 3/16" (56 mm) Depth
Material: Cast Brass
Finishes: US3, US4, US10, US15A, US19, US26, and US26D only.
May be used with carpet or threshold application by omitting face plate.
Packed unassembled with plate, strike, fasteners, and spanner wrench.



Fasteners	Quantity	
	Box	Case
#8 x 1 wood screws and anchors	10 each	100 each

Slide Flush Bolt
Meets ANSI A156.16 for L04201

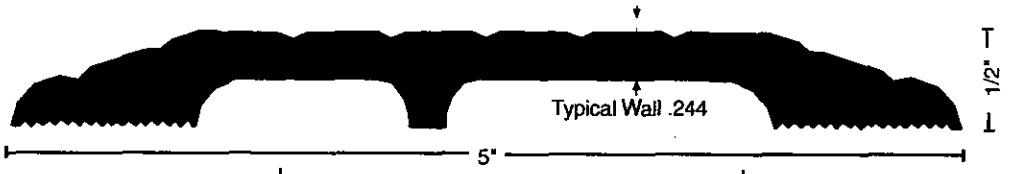
281D
3/4" x 6" (19 mm x 152 mm) Face
1/2" (12.5 mm) Bolt Head
7/8" x 1 3/4" (22 mm x 45 mm) Strike
Material: Brass
Finishes: US3, US4, US10, US10B, US15A, US19, US26, and US26D only.

Fasteners	Quantity	
	Box	Case
#6 FHWS	10 each	100 each

SpecRite

September, 2005 from National Guard Products, Inc.

The BAD BOY is Here!
Introducing the NEW **425HD** Threshold



That's right, its as Bad as they ıme. For years people have called and asked what Threshold they need to use for locations that will have heavy loads being wheeled over them. Up until now our recommendations have been limited to use of solid 1/8" thick or ¼" thick cover plate material (818 or 814), but if they wanted ½" thickness our only choice was to recommend a very expensive cast abrasive threshold that was next to impossible to cut and only available in certain stock lengths (we wouldn't even cut one for you).

We are proud to announce our newest family member, the BAD BOY, 425HD, and his Hawaiian tropic tanned brother the 425HD DKB (Dark Bronze Finish). These are ***extra heavy duty*** extruded aluminum thresholds with arched support legs for use in areas requiring a durable ½" high threshold that may be subject to being driven over with loaded two wheelers, forklifts, carts and even vehicles. They exceed ANSI/BHMA A156.21-2001 threshold strength requirements.

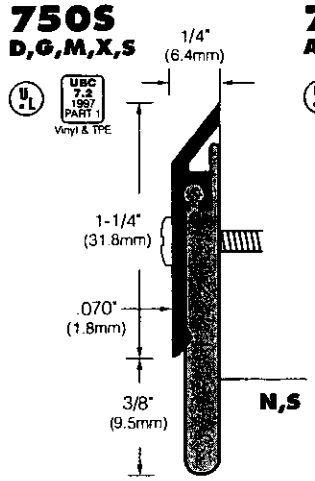
Use it and abuse it, but to prevent liability from slipping on it in areas which may have liquid spills, especially oil or hydraulic fluid that may leak from equipment, specify our highly-recommended optional "SIA" (Slick-It-Ain't) fused metallic finish. This finish process bonds and embeds bits of hot nickel and titanium into the surface of the threshold for a slip and skid-resistant finished surface like the navy uses on the deck of its aircraft carriers. This finish can be added to any NGP threshold by specifying the suffix "SIA" to the threshold number.

For a sample of this Bad Boy, please fax your request toll-free to us at 800-255-RUSH (7874).

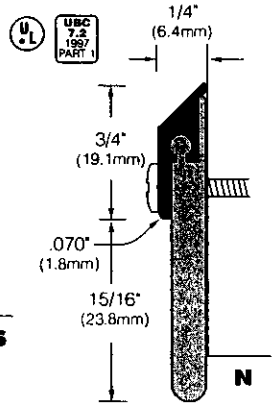
Written by Roger Skold,AHC, Technical Director at NGP.

Door Bottom Sweeps

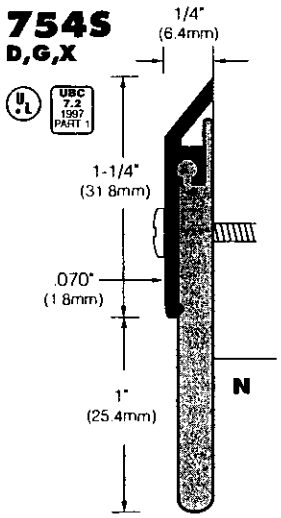
750S
D,G,M,X,S



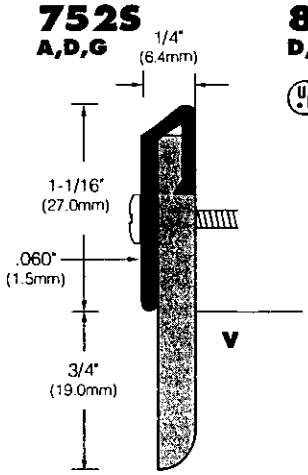
753S
A,D,G



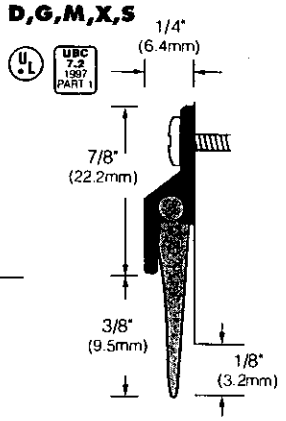
754S
D,G,X



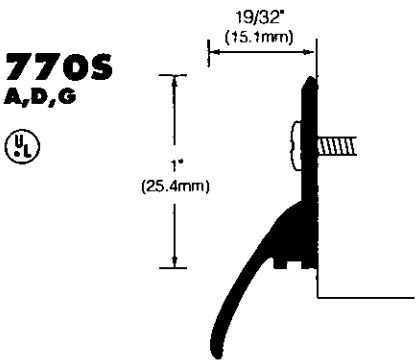
752S
A,D,G

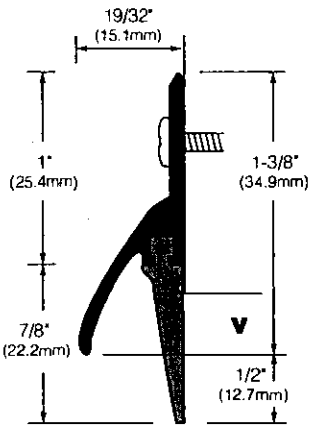


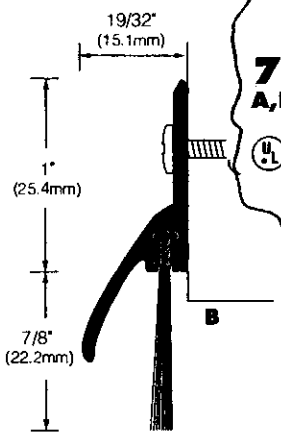
872S
D,G,M,X,S



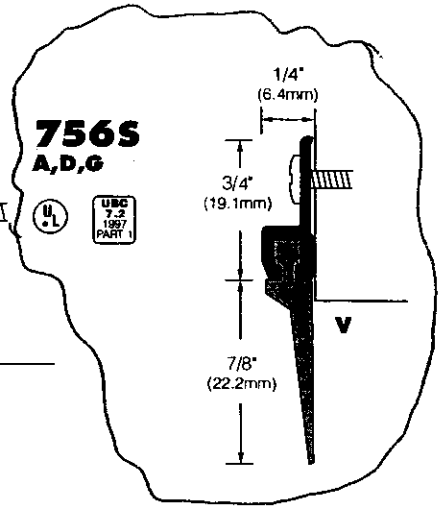
770S
A,D,G



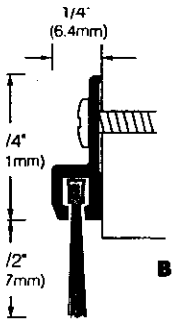




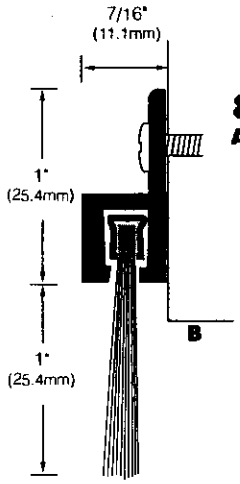
756S
A,D,G



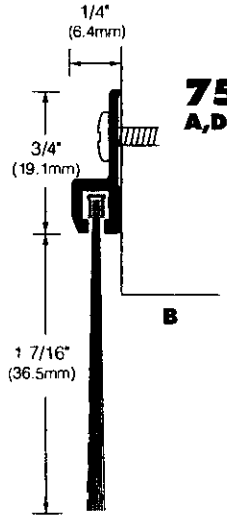
802S
A,D,G



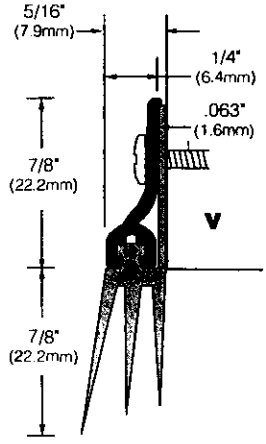
801S
A,D,G



806S
A,D,G

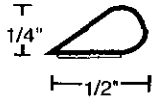


759S
A,D,G

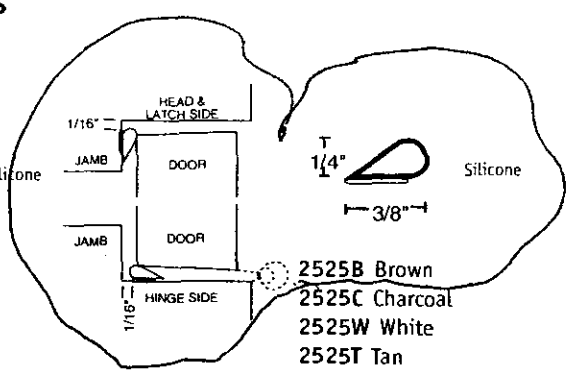


Insert Codes • **V-** Vinyl • **N-** TPE • **S-** Silicone • **B-** Brush Nylon
Finishes Codes • **A-** Mill Finish Aluminum • **D-** Dark Bronze Anodized Aluminum • **G-** Gold Anodized Aluminum • **M-** Mill Finish Brass (Bronze) **S-** Stainless Steel • **X-** Clear Anodized Aluminum

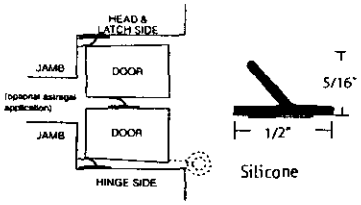
Self Adhesive Seals



5050B Brown
5050C Charcoal
5050W White
5050T Tan
5050CL Clear



2525B Brown
2525C Charcoal
2525W White
2525T Tan



5060B Brown
5060CL Clear

BHMA

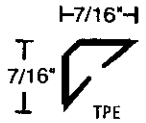
* *NGP-Edge Sealing System on 20 min rated wood doors up to 4'0 x 8'0 single, 8'0 x 8'0 std. pair with 9550 at meeting edge.

Available in 17', 20', 21', 25' and 300' rolls.

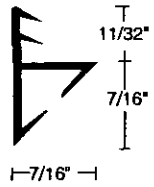
Available in 17', 20', 21', 25' and 300' rolls.

BHMA

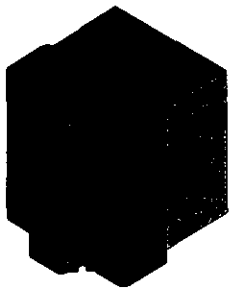
Available in 7', 8', 9', 17', and 21' rolls



5020B Brown
5020C Charcoal
5020W White



Kerf Application
5021B Brown
5021C Charcoal
5021W White

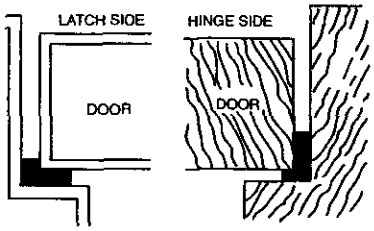


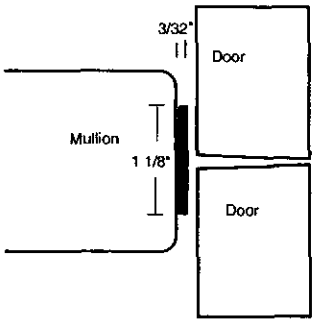
BHMA

Available in 36", 48", 84", 96" and 108" lengths.

Neoprene Sponge Self-Adhesive Gasketing

		width	thickness
361	21' rolls	3/8"	x 3/16"
362	21' rolls	1/2"	x 1/4"





Seal for Mullion Applications

5100

Sponge neoprene strip 1-1/8" wide x 3/32" thick with an adhesive strip for mounting directly to the face of the mullion that doors close against.

Available in 86" and 96" lengths.

Door Trim and Auxiliary

HAGER COMPANIES

3" (76 mm) Wire Pull
Meets ANSI A156.9 for B02011

305D - 3"
5/16" (7.9 mm) Diameter of Rod
1 1/4" (32 mm) Projection
3" (76 mm) CTC
Material: Solid Brass
Finish: US3, US26, and US26D.

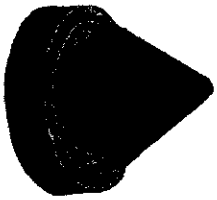
305D - 3-1/2"
Same as 305D except:
3 1/2" (89 mm) CTC

305D - 4"
Same as 305D except:
4" (102 mm) CTC

Fasteners	Quantity	
	Box	Case
8/32" x 1" combination truss head MS	10 each	100 each

Door Silencer
For use with metal frames. Meets ANSI A156.16 for L03011

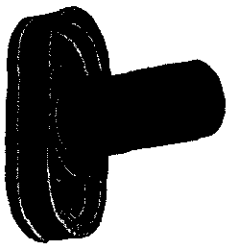
307D
1/2" (12.5 mm) Diameter Base
1 1/16" (27 mm) Length
Material: Rubber



Quantity	
Box	Case
1 each	100 each

Door Silencer
For use with wood frames. Meets ANSI A156.16 for L03021

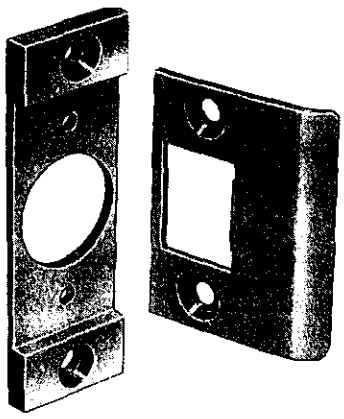
308D
3/8" x 3/4" (9.5 mm x 19 mm) Base
3/4" (19 mm) Length
Material: Rubber



Quantity	
Box	Case
1 each	100 each

Conversion Kit
Change door from Roller Latch to Push/Pull Latch.

310C
1 1/8" x 3 3/8" (29 mm x 86 mm) Filler Plate
1 11/16" x 2 1/4" (43 mm x 57 mm) Strike
Packed with filler plate, strike, and fasteners.



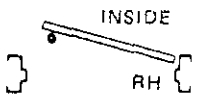
Quantity	
Box	Case
5 each	50 each

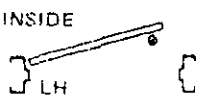
STEELCRAFT®

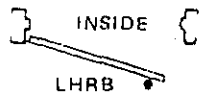
9017 BLUE ASH ROAD CINCINNATI, OHIO 45242

DOOR HANDING CHART

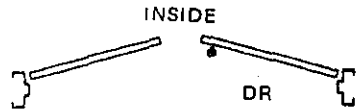
SINGLE DOORS

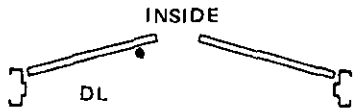


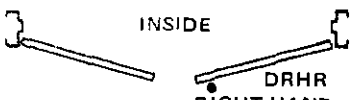




PAIRS OF DOORS







REVISION	DATE

DISTRIBUTOR

SCHILLER
Architectural Hardware And Door Systems
1032 Majaun Dr., Lexington, KY 40511
Ph: 859-233-4427 Fax: 859-253-2831

JOB
PATIENT CARE FACILITY
PARKING GARAGE

LOCATION
110 TRANSCRIPT AVE.
LEXINGTON, KY

ARCHITECT
GBBN ARCHITECTS

CONTRACTOR
E. C. MATTHEWS CO.

DRAWN BY
MARK CALDWELL

SHEET 1 OF

STEEL DOORS AND FRAMES

COVER SHEET
APP. DWG. NO. 1 OF 8

GENERAL NOTES:

1. These shop drawings were prepared for SCHILLER HARDWARE use only. Other suppliers using these drawings for their products do so at their own risk.
2. Material shown on these drawings will be fabricated only after formal approval by the architect, receipt of approved hardware schedule and all necessary hardware templates.
3. Doors and frames will be reinforced for surface mounted hardware as required. Drilling and tapping for attaching of surface mounted hardware by others. Doors and frames will be prepared and reinforced for mortised hardware. Holes for this hardware will be drilled and tapped at the factory except for trim mounting holes and thru bolt holes.
4. All doors and frames will be phosphatized and receive one coat of baked on prime paint.
5. All frames are supplied "SUA" - SET UP ARC WELDED
6. All frames will be supplied with jamb and base anchors as shown.
7. All frames will be furnished with three rubber bumpers per strike jamb for single frames or two per head for double frames. Bumpers are omitted when PS074 weatherstripping is furnished.
8. Glass, glazing and installation of glass by others. Use glass cutting sizes shown on Steelcraft Technical Data Sheet 114 and 115 for standard doors. Use field dimensions for all other glass cutting sizes.
9. All frames in masonry construction to be filled with grout. If anti-freeze additives are used in the mortar, the inside of the jamb members shall be coated with a bituminous asphalt material in the field, by the contractor.
10. Unless otherwise indicated hardware will be furnished by SCHILLER HARDWARE
11. All doors and frames will be marked with ARCHITECT'S NOS.
12. The hardware columns of the door and frame schedule sheets are for future shop fabrication purposes only and are determined after receipt of the approved hardware schedule furnished by the hardware contractor.
13. The hardware locations indicated on the door and frame elevations are Steelcraft's standard location for "standard type" hardware only. Other hardware, such as deadlocks, will be located at Steelcraft's standard locations for that specific hardware. Panic exit devices will be located per the paper templates received.
14. When steel doors or frames are used in conjunction with aluminum or structural steel products, it will be the responsibility of the General Contractor to coordinate hardware locations.

DOOR OR FRAME SERIES AND GAGE DESIGNATION
- DW18 = DRYWALL FRAME, 18 GA.
- F16 = FLUSH FRAME, 16 GA.
- FE16 = DOUBLE EGRESS FRAME, 16 GA.
- FN14 = 1" FACE FLUSH FRAME, 14 GA.
- FS16 = FLUSH FRAME, 16 GA., STAINLESS STEEL
- K18 = EASY-SET™ FRAME, 18 GA.
- MU16 = MULTI-USE, 16 GA.
- L18 = FLUSH DOOR, 18 GA.
- LS18 = FLUSH DOOR, 18 GA., STAINLESS STEEL
- MS16 = MEDIUM STILE & RAIL DOOR, 16 GA.
- S16 = STILE & RAIL DOOR, 16 GA.
- G20 = DRYWALL FRAME, 20 GA.
- F-12 = FLUSH FRAME, 12 GA.
- D-14 = FLUSH DOOR, 14 GA.
- CE20 = EMBOSSED DOOR, 20 GA.
- C24 = FLUSH DOOR, 24 GA.
- CE24 = EMBOSSED DOOR, 24 GA.
- TB16 = THERMAL BREAK FRAME, 16 GA.

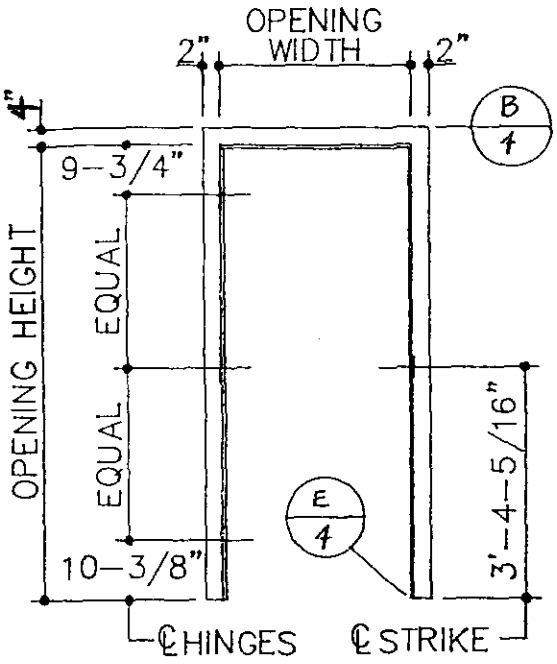
ABBREVATIONS
- ABO = ALUMINUM BY OTHERS
- B/L = BORROWED LITE
- CIF = CHANNEL IRON FRAME
- CO = CASED OPENING
- D = DOUBLE (PAIR)
- DA = DOUBLE ACTING (SINGLE)
- KD = KNOCKED DOWN
- NIC = NOT IN CONTRACT
- S/L = SIDELITE
- SUA = SET UP ARCWELD
- T = TRANSOM
- TFW/OTB = TRANSOM FRAME WITHOUT TRANSOM BAR
- T/S = TRANSOM SIDELITE
- WBO = WOOD BY OTHERS
- 4 = 1-3/4" THICK DOOR
- 8 = 1-3/8" THICK DOOR

SECTION OR DETAIL
SHEET NUMBER

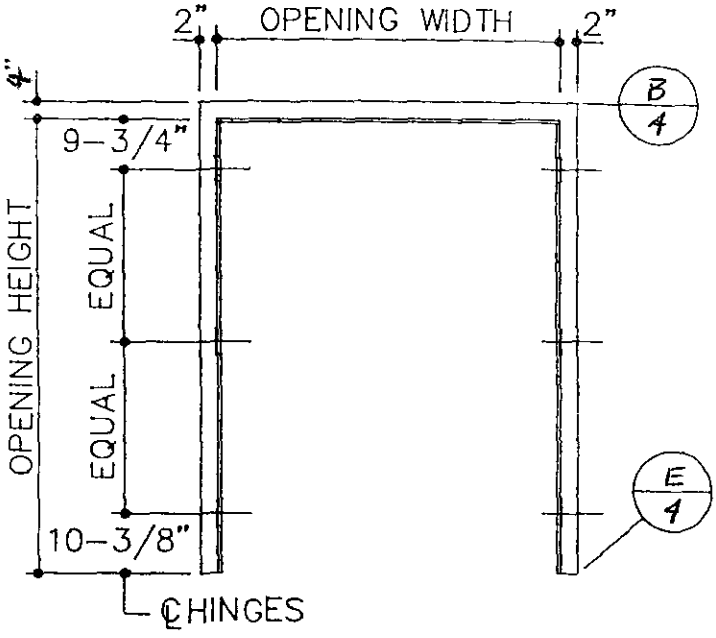
DOOR TYPES
- F = FLUSH DOOR
- FG = FULL GLASS
- G = HALF GLASS
- G2-G4 = HALF GLASS DIVIDED INTO SMALL LITES
- V = VISION LITE
- N = NARROW LITE
- N_1 = NARROW LITE (4 x 25)

GENERAL INFORMATION AND NOTES

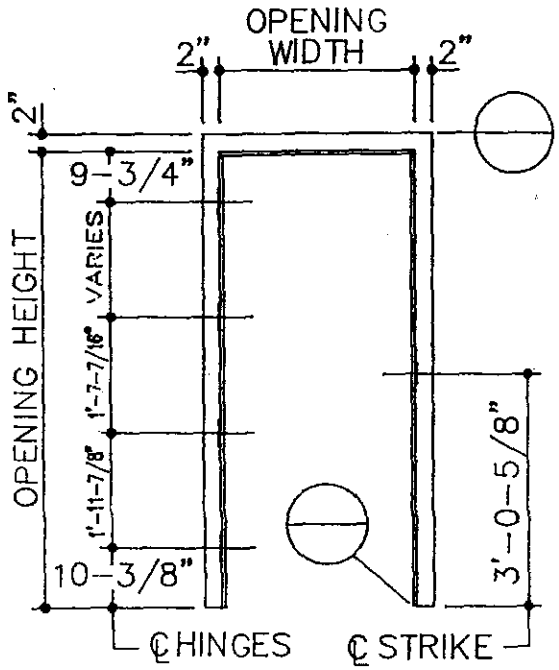
DATE	DRAWN BY	SHEET	OF
07/28	JMC	2	—



ELEVATION 1

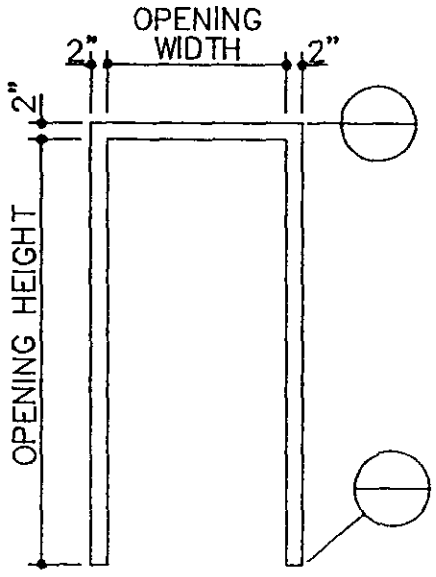


ELEVATION 1A



DUTCH DOOR FRAME

ELEVATION

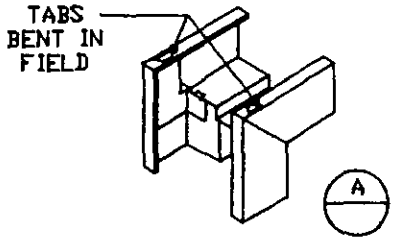


ELEVATION

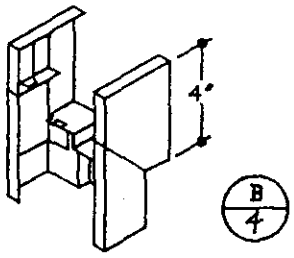
1. OMIT CENTER HINGE ON 1-3/8" THICK, 6' 8" NOMINAL HEIGHT DOORS. FOR DOORS OVER 7' 6" NOMINAL HEIGHT, 2 PAIRS OF HINGES ARE USED.

THREE SIDED FRAMES	STEELCRAFT.	DRAWN BY	JOB NO.	SHEET NO.	DATE
		jmc	442	3	7/28

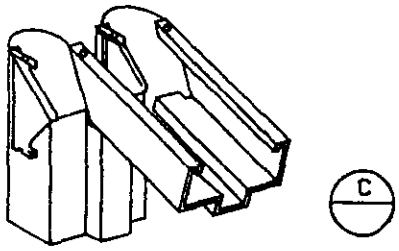
APP. DWG. NO. 22 10/89



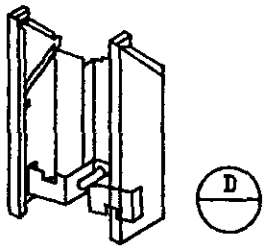
KNOCKED DOWN (KD)
CORNER DETAIL
(F, FN & FS SERIES)



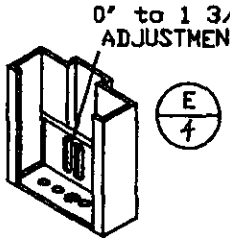
4" FACE HEAD
CORNER DETAIL (K.D.)
(F & FS SERIES)



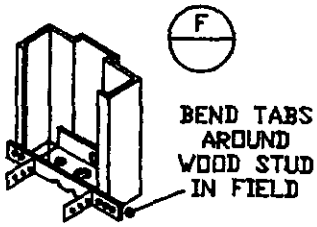
WEDGE LOCK CORNER
(DW, MU & K SERIES)
PATENTED



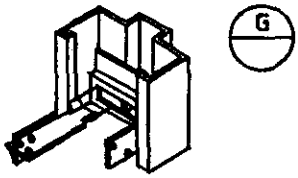
ADJUSTABLE
JAMB ANCHOR
(DW & K SERIES)
PATENTED



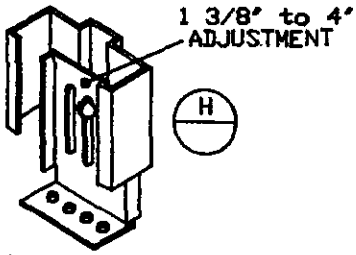
ADJUSTABLE BASE ANCHOR
FOR MASONRY OR STEEL
STUD CONSTRUCTION
(STANDARD FOR F, FS & MU SERIES)



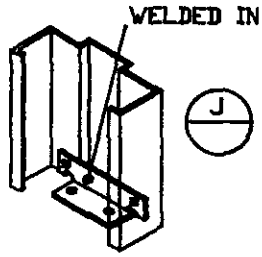
WOOD STUD BASE ANCHOR
(OPTIONAL FOR F & FS SERIES)



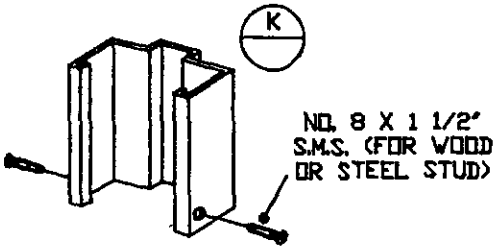
ADJUSTABLE BASE ANCHOR
(DW & LABEL K SERIES)



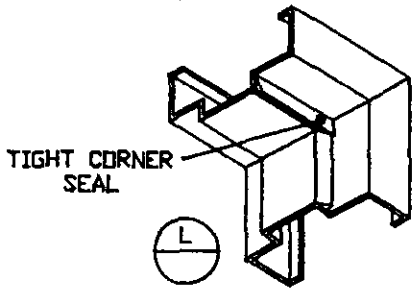
EXTENDED BASE ANCHOR
FOR MASONRY OR STEEL
STUD CONSTRUCTION
(STANDARD FOR F, FS & MU SERIES)



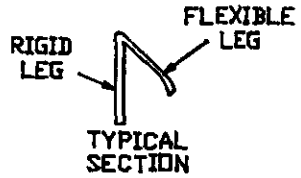
FIXED BASE ANCHOR
(STANDARD FOR FN SERIES
OPTIONAL FOR F, FS & MU SERIES)



BASE ANCHORING
FOR K SERIES
(NON-LABEL & 20 MIN. LABEL



FRAME SECTION



TYPICAL
SECTION

Although small amounts of oil based paint will not affect the weatherstrip, we recommend that it not be painted. If frames are to be painted, the weatherstrip should be protected from paint.

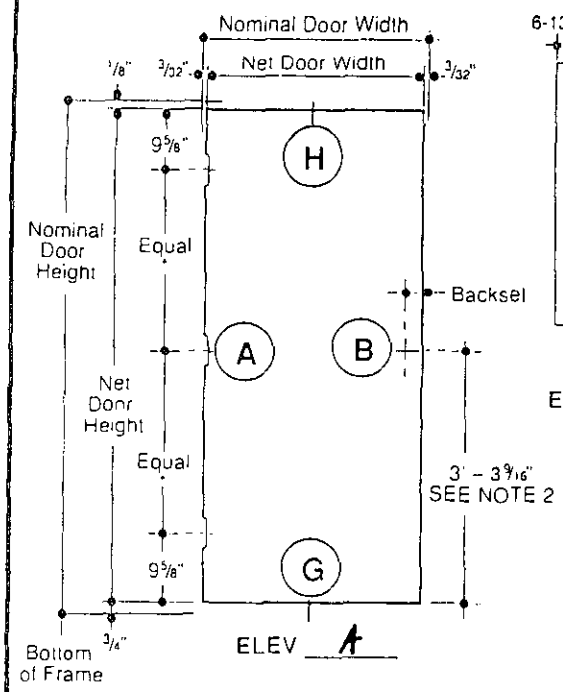
PS074 WEATHERSTRIP

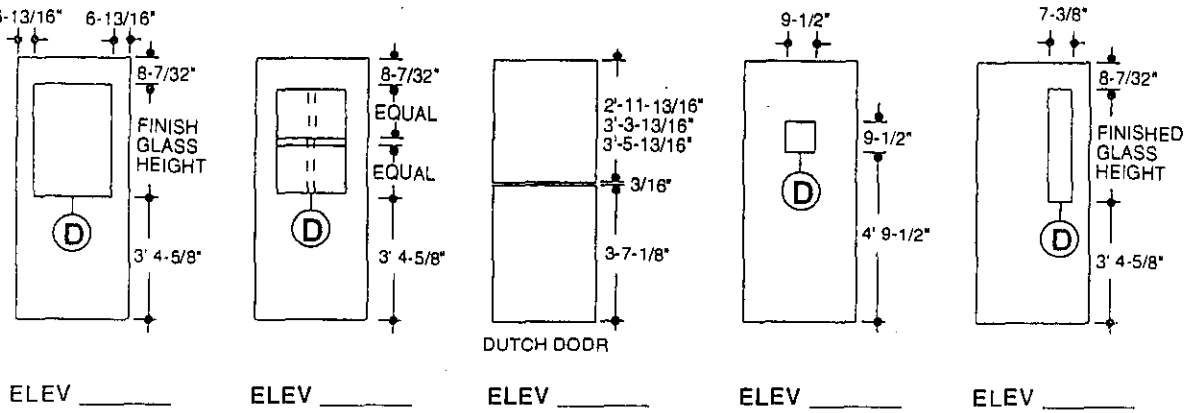
FRAME DETAILS

STEELCRAFT.

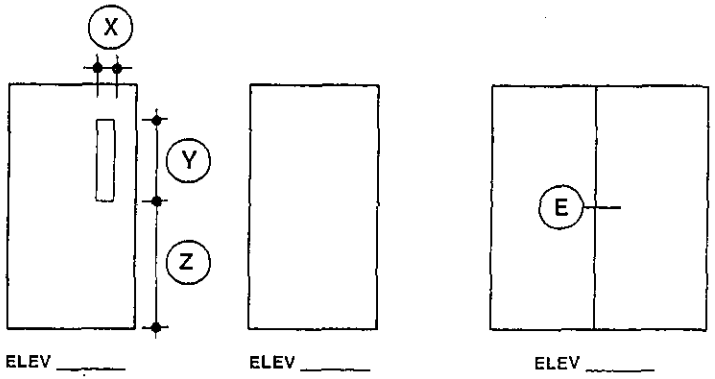
DRAWN BY	JOB NO.	SHEET NO.	DATE
Jmc	442	4	7/28

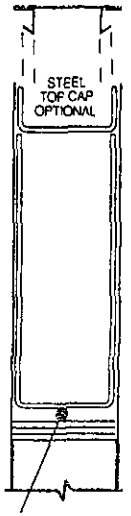
APP. DWG. NO. 24 10/89





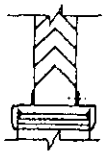
LITE	X	Y	Z	
			68	70
N1	4"	25	44 1/2	46 1/2
N5	5"	20	49 1/2	51 1/2
N3	3"	33	36 1/2	40 1/2



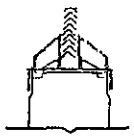


LOUVERS & GRILLES NOT RECOMMENDED FOR EXTERIOR APPLICATIONS

Stamped
26% Free Air Area
J



Inverted "V" Blade Louver
Fixed: Free Air 55% Total Area
K



Grille Louver
81.5% Free Air Area
L

Louver is equipped with 135° F. Fusible Link & Automatic Closing Mechanism

M

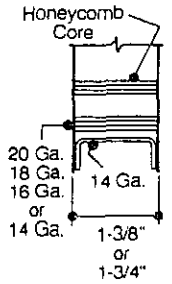
Fusible Link Inverted "V" Blade
(3/4 or 1-1/2 Hr. UL Door)
30% Free Air Area

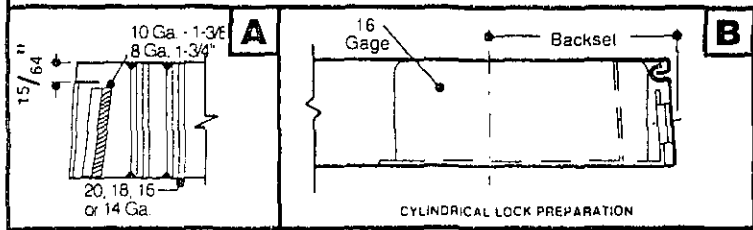
NOTES:

*1. 1 Pair of hinges standard on 1-3/8" thick, 6'8" nominal height doors. 2 Pair of hinges on all doors over 7'6" nominal height.

2. Dimension shown for lock preparation is for Gov't 160-4, 160, 161 and unit locks. When Gov't 86 (ANSI A115.1) lock is to be used, dimension to center of lock is 3/8" less than indicated.

3. 1/2" thick insulated glass uses trim similar to Section O.





FULL FLUSH "L" DOOR ELEVATIONS & DETAILS

DATE 07/28 | DRAWN BY Jmc | SHEET — 5 — OF —

STEELCRAFT.

PRINTED IN U.S.A.

APP. DWG. NO. 12 REV. 4/95

STEELCRAFT®

FINISHES

GENERAL:

Commercial steel frames and doors are designed to meet the requirements of ANSI A250.8 (previously known as SDI 100), and must receive a factory applied primer. The applied primer must be tested and meet the passing criteria of ANSI A250.10-1998 *Test Procedure and Acceptance Criteria for Prime Painted Steel Doors and Frames.*

SURFACE PREPARATION (PRETREATMENT):

To insure proper prime paint adhesion and performance, all steel frames and doors are pretreated prior to applying the prime paint. The proper pretreatment systems are critical. Refer to Page P7-2 for information on Steelcraft pretreatment process used.

STEELCRAFT PRIMERS:

All Steelcraft Frames, Doors and Architectural Stick components shall be cleaned, phosphatized and finished a standard with one coat of factory baked-on, rust-inhibited primer in accordance with ANSI A250.10-1998 *Test Procedure and Acceptance Criteria for Prime Painted Steel Doors and Frames.*

Primer Paint Testing:

The industry standard ANSI A250.10-1998 *Test Procedure and Acceptance Criteria for Prime Painted Steel Doors and Frames* is comprised of the following paint surface tests:

- Salt spray testing in accordance with ASTM B117-1985.
- Condensation testing (humidity) in accordance with ASTM D4585-1992.
- Impact test (no ASTM designation)
- Film adhesion test in accordance with ASTM D3359-1983.

Primer Test Results:

Steelcraft factory applied baked-on primers conform to the industry standard ANSI A250.10-1998 with the following performance:

Test	Standard	Hours	Results
Salt Spray	ASTM B117	120	Passed
Condensation	ASTM D4585-1992	240	Passed
Impact Test	Gardner Direct 20 in. lbs. with ½" ball	N.A.	Passed
Adhesion	ASTM D3359	N.A.	See Note 1

STEELCRAFT FINISH PAINTS:

Steelcraft L-Series Doors and Drywall (DW and K-Series) Frames are available as optional factory finished products. The products are cleaned, phosphatized and finished with a factory baked-on, rust-inhibited finish paint in accordance with ANSI A250.3-1998 *Test Procedure and Acceptance Criteria for Factory Applied Finish Painted Steel Surfaces for Steel doors and Frames.*

- Gloss shall be 20°+/-5° in accordance with ASTM Method Test D523.
- Ten (10) standard finish paint colors are available.
- Special colors are available.

Finish Paint Testing:

The industry standard ANSI A250.3-1998 *Test Procedure and Acceptance Criteria for Factory Applied Finish Painted Steel Surfaces for Doors and Frames* is comprised of the following paint surface tests:

- Salt spray testing in accordance with ASTM B117-1985.
- Condensation testing (humidity) in accordance with ASTM D4585-1992.
- Impact test (no ASTM designation)
- Film adhesion test in accordance with ASTM D3359-1983.

Finish Paint Test Results:

Steelcraft factory applied baked-on primers conform to the industry standard ANSI 250.3 with the following performance:

Test	Standard	Hours	Results
Salt Spray	ASTM B117	120	Passed
Condensation	ASTM D4585-1992	480	Passed
Impact Test	Gardner Direct 20 in. lbs. with ½" ball	N.A.	Passed
Adhesion	ASTM D3359	N.A.	See Note 1

Notes: 1. 4B adhesion, which exceeds the test acceptance level of 3B.

Details are subject to change without prior notice.

Printed in USA

FIELD PAINT PROCEDURES:

Steelcraft frames and doors are furnished with a high grade, low gloss, baked-on prime paint that provides the best possible protection against corrosion, abrasion and weather, and is an excellent base for finish paint.

This is a primer and requires field finishing. If the primed surface is removed or damaged, the exposed metal must be reprimed with a suitable rust inhibitive primer before top coating with a latex finish paint. The application of the paint, using either a brush, roller or spray equipment, shall be in accordance with the paint manufacturer's recommendations. If spray equipment is used, consult with the paint supplier on recommendations for correct thinner or solvents. Do not use lacquer thinner or other solvents that may react on the primer coat.

AIR DRY APPLICATIONS:

To obtain the best results, use the following procedures:

1. Avoid painting in extremely cold or damp weather. Suggested temperature range 50°F to 90°F.
2. Sand door surfaces lightly with No. 300 or 320 emery cloth or steel wool.
3. Clean door surfaces using a mild solvent such as mineral spirits or a mild citrus cleaner. ***Do not use strong cleaning agents, acids or lacquer thinner.***
4. Dry door surfaces. ***Do not use oiled or tack rags to dry door surfaces.***
5. Apply finish paint following manufacturer's recommendations.

Notes:
1. Latex paints may require, depending on atmospheric conditions, up to 30 days before the paint is fully cured.
2. To avoid rusting with latex topcoat paints, it is recommended to sand and re-prime with a rust inhibitive primer any areas where the factory applied primer has bean removed or scratched through.

FIELD BAKED-ON FINISHES:

To obtain the best results, use the following procedures:

1. Avoid painting in extremely cold or damp weather. Suggested temperature range 50°F to 90°F.
2. Sand door surfaces lightly with No. 300 or 320 emery cloth or steel wool.
3. Clean door surfaces using a mild solvent such as mineral spirits or a mild citrus cleaner. ***Do not use strong cleaning agents, acids or lacquer thinner.***
4. Dry door surfaces. ***Do not use oiled or tack rags to dry door surfaces.***
5. Apply finish paint following manufacturer's recommendations.
6. Bake frames and doors as specified by paint manufacturer and outlined below:

Oven Temperatures

Frames . . . . . .300° F
. . . . . .or as specified by paint manufacturer

Doors
L (honeycomb core), T, B, A & AN-Series doors . . .300°F
L (polyurethane, polystyrene core) doors . . . . . .160°F
CE doors . . . . . .160°F

PRODUCTS:

These procedures apply to the following Steelcraft products:

- **Frames:** F, FN, FE, DW, K and MU-Series
- **Doors:** L, B, T, CE, A and AN-Series

SCHILLER HARDWARE
11525 BLANKENBAKER ACCESS DR
LOUISVILLE, KY 40299

TEL (502) 584-5301 FAX (502) 587-7088

PAGE NO: 8

OPENING SCHEOULE FOR: NEW GARAGE-UK PATIENT CARE FACILITY (110-044)

			DOOR OATA												FRAME DATA						
TAG #	LOCATION	QTY	DOOR SIZE	THICKNESS	HAND	LABEL	SERIES	GAUGE	MATERIAL	ELEV.	FINISH	ELEVATION	REMARKS-NOTES	FRAME SIZE	JAMB DEPTH	SERIES	GAUGE	GALV	ELEV	4HD	WELDED
001	EXTERIOR From STAIR 1	1	3070	4	RHR		LF	16	GALV	V				3070	834	F	16	GALV		Y	Y
002	PARKING GARAGE From 002 CMA STORAGE	1	3070	4	RHRA		LF	16	GALV	F				6070	834	F	14	GALV		Y	Y
		1	3070	4			LF	16	GALV	F											
003	PARKING GARAGE From 003 PUMP ROOM	1	3070	4	RHRA	B	LF	16	GALV	F				6070	834	F	14	GALV		Y	Y
		1	3070	4		B	LF	16	GALV	F											
004	STAIR 2 From PARKING GARAGE	1	3070	4	RHR		LF	16	GALV	V				3070	834	F	16	GALV		Y	Y
005	PARKING GARAGE To 005 MECH AREAWAY	1	3070	4	LH		LF	16	GALV	F				3070	834	F	16	GALV		Y	Y
005A	PARKING GARAGE To 005 MECH AREAWAY	1	3070	4	RH		LF	16	GALV	F				3070	834	F	16	GALV		Y	Y
008	PARKING GARAGE From 008 ELEVATOR MACH ROOM	1	3070	4	LHR	B	LF	16	GALV	F				3070	834	F	14	GALV			Y
012	012 ACCESS STAIR From PARKING GARAGE	1	3070	4	RHR		LF	16	GALV	V				3070	834	F	16	GALV		Y	Y
012A	EXTERIOR From 012 ACCESS STAIR	1	3070	4	LHR		LF	16	GALV	V				3070	834	F	16	GALV		Y	Y
013	PARKING GARAGE From 013 ELEC ENTRANCE SERVICE	1	3070	4	LHR\ RHR	B	LF	16	GALV	F				6070	834	F	14	GALV		Y	Y
		1	3070	4		B	LF	16	GALV	F											
013A	PARKING GARAGE From 013 ELEC ENTRANCE	1	3070	4	LHR	B	LF	16	GALV	F				3070	834	F	16	GALV		Y	Y
014	PARKING GARAGE From 014 MECH CLOSET	1	3070	4	LHR		LF	16	GALV	F				3070	834	F	16	GALV		Y	Y
017	PARKING GARAGE From 017 SUMP ROOM	1	3070	4	LHR		LF	16	GALV	F				3070	834	F	16	GALV		Y	Y
018	018 ROLLUP DOOR	1	3070						ALUM				ALUM BY OTHERS								

SCHILLER HARDWARE
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LOUISVILLE, KY 40299

TEL (502) 584-5301 FAX (502) 587-7088

OPENING SCHEDULE FOR: NEW GARAGE-UK PATIENT CARE FACILITY (110-044)

			DOOR DATA											FRAME DATA						
TAG #	LOCATION	QTY	DOOR SIZE	THICKNESS	HAND	LABEL	SERIES	GAUGE	MATERIAL	ELEV.	FINISH	ELEVATION	REMARKS-NOTES	FRAME SIZE	JAMB DETAIL	SERIES	GAUGE	MATERIAL	ELEV	4W HEAD DETAIL
018A	PARKING GARAGE From 018 SWEEPER ROOM	1	3070	4	RHR		LF	16	GALV	F				3070	834	F	16	GALV		Y Y
019	EXTERIOR From 019 ELECTRICAL DISTRIBUTION	1	3070	4	LHRA		LF	16	GALV	F				6070	834	F	14	GALV		Y Y
		1	3070	4			LF	16	GALV	F										
019A	PARKING GARAGE From 019 ELECTRICAL DISTRIBUTION	1	3070	4	RHRA		LF	16	GALV	F				6070	834	F	14	GALV		Y Y
		1	3070	4			LF	16	GALV	F										
020	PARKING GARAGE From 020 EMERGENCY DISTRIBUTION	1	3070	4	LHR		LF	16	GALV	F				3070	834	F	16	GALV		Y Y
021	PARKING GARAGE To 021 UTILITY	1	3070	4	LH		LF	16	GALV	F				3070	834	F	16	GALV		Y Y
022	022 ROLLUP DOOR	1	3070						ALUM				ALUM BY OTHERS							
022A	022 ROLLUP DOOR	1	3070						ALUM				ALUM BY OTHERS							
022B	PARKING GARAGE From 022 GATOR BOBCAT	1	3070	4	LHR		LF	16	GALV	F				3070	834	F	16	GALV		Y Y
100	100 CORRIDOR From PARKING GARAGE	1	3070	4	RHR		LF	16	GALV	F				3070	834	F	16	GALV		Y Y
103	PARKING GARAGE To 103 UTILITY	1	3070	4	LH	B	LF	16	GALV	F				3070	834	F	16	GALV		Y Y
104	100 CORRIDOR From STAIR 2	1	3070	4	LHR	B	LF	16	GALV	F				3070	834	F	16	GALV		Y Y
105	PARKING GARAGE To 105 VALET	1	3070	4	LH		LF	16	GALV	F				3070	834	F	16	GALV		Y Y
106	PARKING GARAGE To 106 OFFICE	1	3070	4	RH		LF	16	GALV	F				3070	834	F	16	GALV		Y Y
106A	106 OFFICE To 106A TOILET	1	3070	4	LH		LF	16	GALV	F				3070	834	F	16	GALV		Y Y
106B	105 VALET To 106 OFFICE	1	3070	4	RH		LF	16	GALV	F				3070	834	F	16	GALV		Y Y

SCHILLER HARDWARE
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LOUISVILLE, KY 40299
TEL (502) 584-5301 FAX (502) 587-7088

OPENING SCHEDULE FOR: NEW GARAGE-UK PATIENT CARE FACILITY (110-044)

			DOOR DATA											FRAME DATA						
TAG #	LOCATION	QTY	DOOR SIZE	THICKNESS	HAND	LABEL	SERIES	GAUGE	MATERIAL	ELEV.	FINISH	ELEVATION	REMARKS-NOTES	FRAME SIZE	JAMB DEPTH	SERIES	GAUGE	MATERIAL	ELEV	4HD	WELDED
112	PARKING GARAGE From 112 ELEC DISTRIBUTION	1	3070	4	LHR	B	LF	16	GALV	F				3070	834	F	16	GALV		Y	Y
112A	PARKING GARAGE From 112 ELEC DISTRIBUTION	1	3070	4	RHR	B	LF	16	GALV	F				3070	834	F	16	GALV		Y	Y
113	CORRIDOR From 113 COMMUNICATION	1	3070	4	RHR		LF	16	GALV	F				3070	834	F	16	GALV		Y	Y
114	PARKING GARAGE From 114 COMMUNICATION	1	3070	4	LHR		LF	16	GALV	F				3070	834	F	16	GALV		Y	Y
302	PARKING GARAGE From 032 FACILITY SPACE	1	3070	4	RHRA	B	LF	16	GALV	F				6070	834	F	14	GALV		Y	Y
		1	3070	4		B	LF	16	GALV	F					834	F	16	GALV		Y	Y
313	313 ROLLUP DOOR	1	3070						ALUM				ALUM BY OTHERS								
313A	313 ROLLUP DOOR	1	3070						ALUM				ALUM BY OTHERS								
3138	PARKING GARAGE From 313 CART STORAGE	1	3070	4	LHR		LF	16	GALV	F				3070	834	F	16	GALV		Y	Y

SUBMITTAL TRANSMITTAL

E. C. Matthews Company, Inc.
2265 Harrodsburg Road
Lexington, KY 40504
Phone: 859/278-3131
FAX: 859/277-7903
E-Mail: dsherwood@ecmatthews.com

Spec Section	08360
	Sectional Overhead Doors
Initial(I)or Resub(R#)	I

DATE: 08/31/2006 JOB NO. 9212

TO: Gilbane Building Company
940 Elizabeth Street
Lexington, KY 40508

Brian Hoerr

University of Kentucky
PCF Parking Garage

We Are Sending You X Data Sheets X Shop Drawings

Subcontractor or Supplier: Overhead Door Company of Lexington
181 Trade Street
Lexington, KY 40511

COPIES		DATE		DESCRIPTION
9				Data Sheets and Shop Drawing

Contractors Review:
APPROVED FOR GENERAL CONFORMITY TO PLANS AND SPECIFICATIONS. DETAIL DIMENSIONS AND QUANTITIES NOT COMPLETELY CHECKED. SUBCONTRACTOR'S FULL RESPONSIBILITY IS IN NO WAY RELIEVED BY THIS APPROVAL.

E.C. MATTHEWS CO., INC. BY: DATE 8.31.06

Construction Manager / Architect Review:

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NO EXCEPTIONS TAKEN
FURNISH AS CORRECTED X
REVISE AND RESUBMIT
NO REVIEW - INCOMPLETE
SUBMIT SPECIFIED ITEMS
REJECTED

DATE 9/12/06 BY

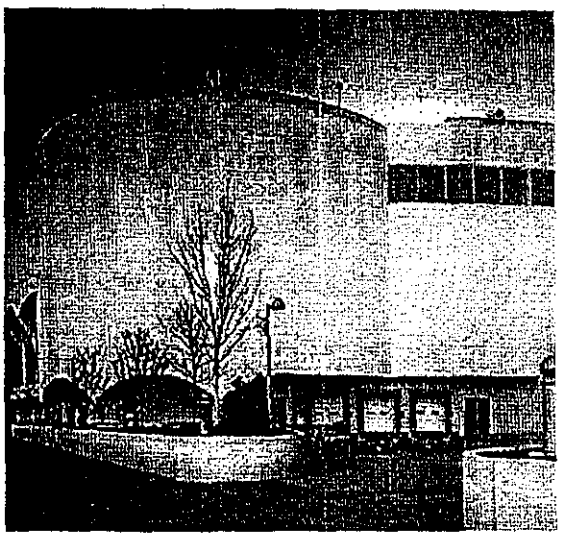
GBBN ARCHITECTS, INC.
ARCHITECTURE, INTERIORS, PLANNING, ENGINEERING
222 EAST 6TH STREET, CINCINNATI, OHIO 45202-2217 (513) 241-6700
225 WEST MAIN STREET, LEXINGTON, KENTUCKY 40507 (859) 381-6787

COPY TO: File

Doug Sherwood

Sectional Steel

418



UK Parking Garage

The 418 Series is a high-quality, heavy-duty insulated door that provides protection against heat and cold environments. Fabricated of 16-gauge, flush galvanized steel exterior and 26-gauge steel backcover, these 2" (51mm) thick doors offer the choice of expanded polystyrene or isocyanurate insulation for R-value's up to 11.69 (2.06 W/Msq). A wide array of options allows these doors to meet the most stringent project requirements that call for a degree of thermal efficiency.

Standard Features At a Glance

Nominal thickness	2" (51 mm)
Door Width	8' 2"
Door Height	8' 1"
Exterior steel	16-gauge galvanized steel
Back cover	26-gauge galvanized steel
Insulation	Expanded polystyrene
R-value	Polystyrene - 7.35 (1.29 W/Msq)
Exterior surface	Flush
End stiles	16-gauge steel
Center stiles	16-gauge steel
Standard mounting	Angle mount
Standard track	2" (51 mm)
Standard springs	10,000 cycle
Weatherstripping	Standard on bottom
Operation	Manual pull rope
Finish	White baked-on polyester
Lock	Interior-mounted slide lock

CYLINDER LOCK SEE RFQ-001R.1

SUBMIT SAMPLE OF FINISH.

GILBANE
University of Kentucky
Patient Care Facility
Gilbane Project No. 18-3966

REVIEWED

☐ 010-Huguelet ☒ 020-Garage
☐ 030-Infrastructure ☐ 040-PCF Foundation
☐ 050-PCF Core/Shell ☐ 060-TowerUp Fit

Bid Package No. 100
Submittal No. 100-08360-001
Spec Sect/Para. —
Reviewed By RY
Date 9/11/06

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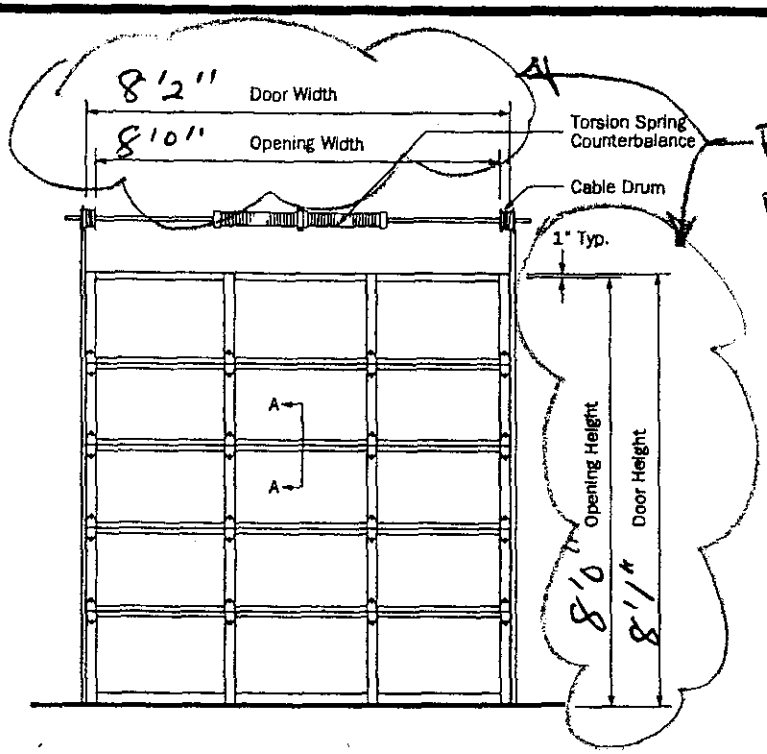
418 Series
Insulated Steel Doors

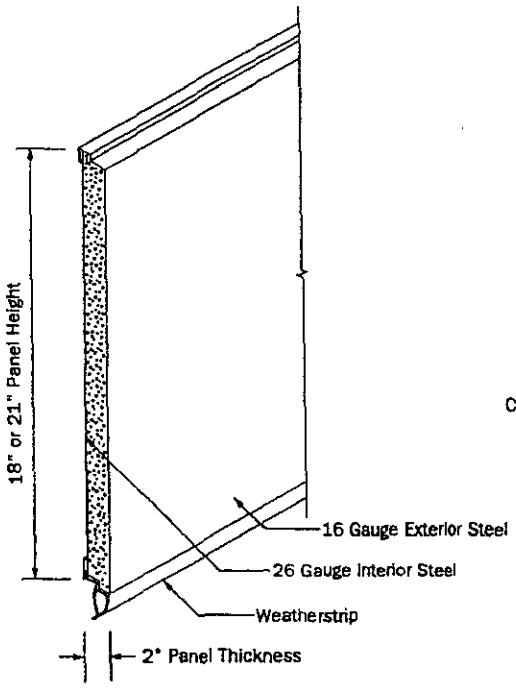
Interior Elevation

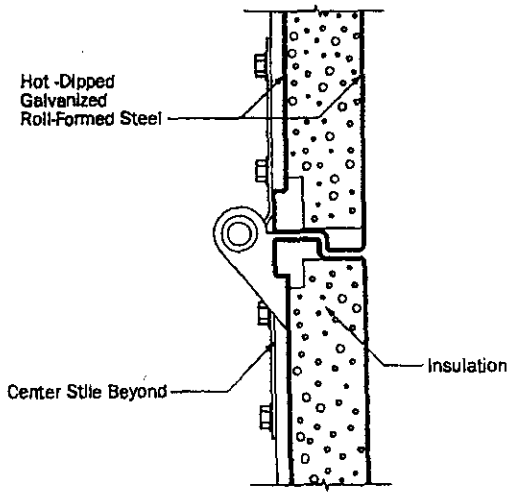
For clearance details on electrically operated doors, see Motor Operator section.



1 ea doors for 8'0" x 8'0" high openings

Panel Detail



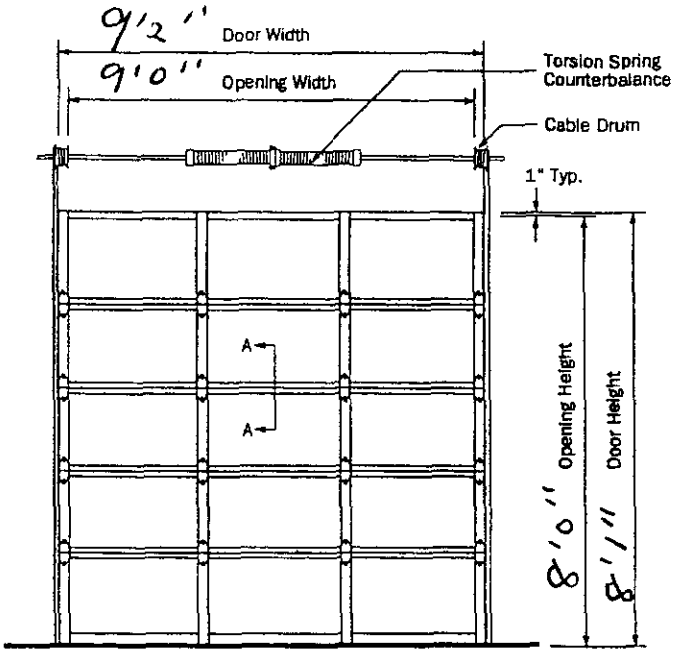


Section A-A

418 Series
Insulated Steel Doors

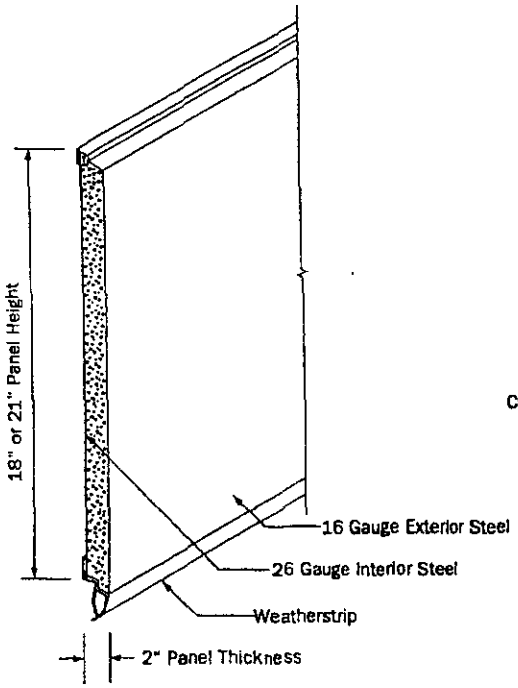
Interior Elevation

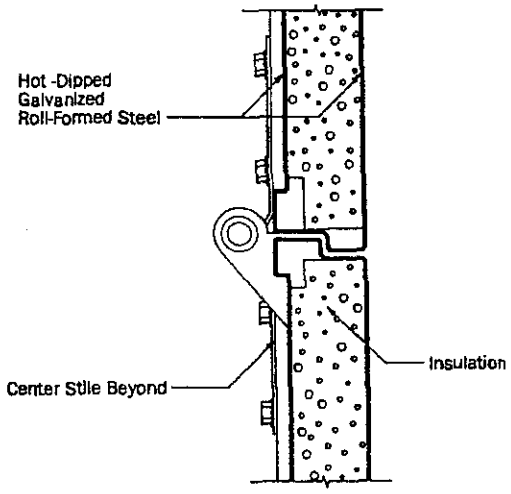
For clearance details on electrically operated doors, see Motor Operator section.



2-doors for 9'0" wide by 8'0" high openings

Panel Detail





Section A-A

418 Series
Insulated Steel Doors

Interior Elevation

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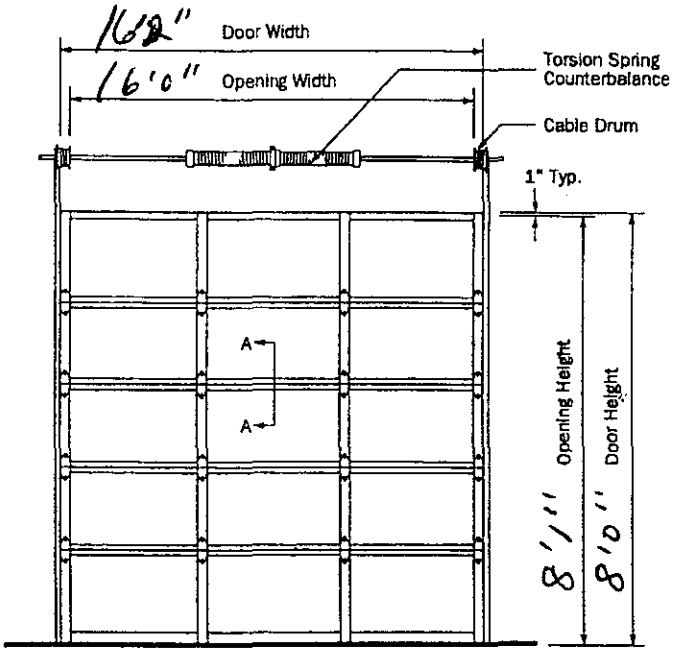
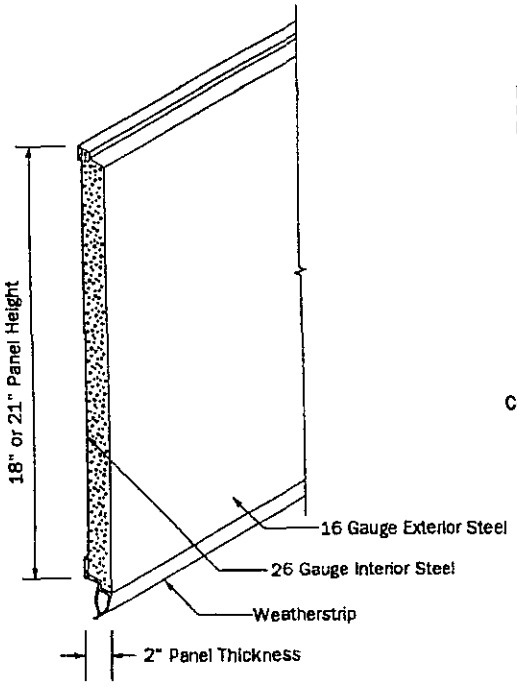
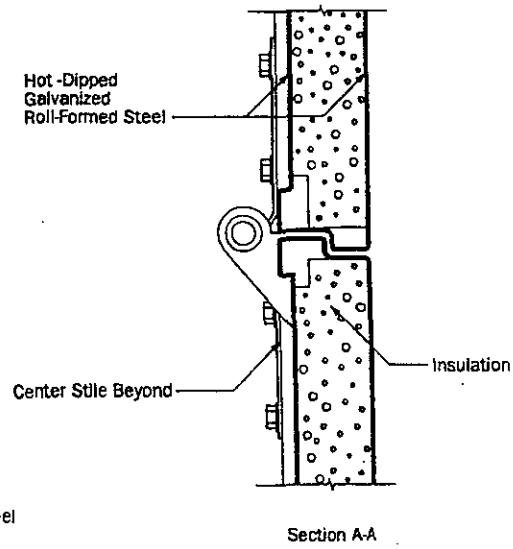


(2) door For 16'0" x 8'0" opening

Panel Detail

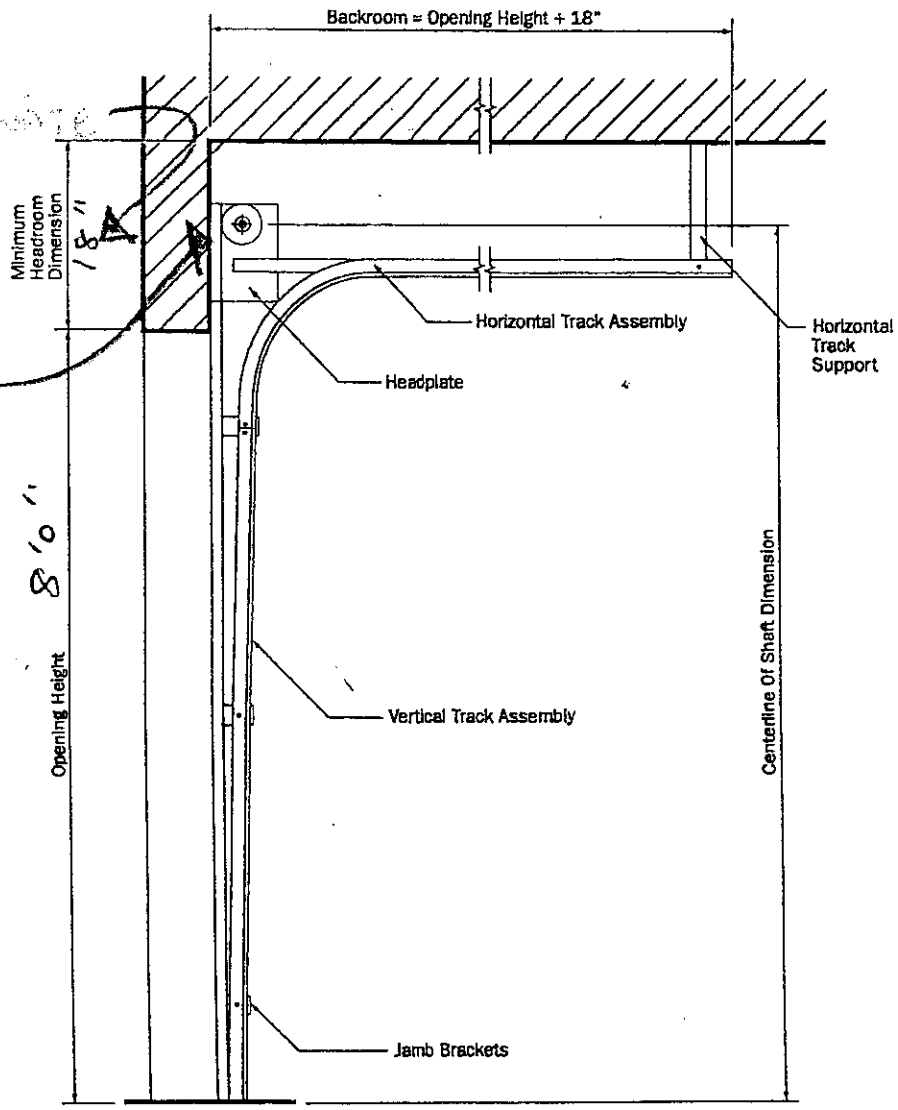




Section A-A

Track
Headroom and Backroom Clearance

Standard Lift Track



VERIFY & COORDINATE W/ STRUCTURAL DRAWINGS

COORDINATE ANCHORING REQUIRMENTS W/ MASONRY CONTRACTOR TYPICAL

16 x 8

Headroom Clearance Dimensions

2" Track
15" Radius

Door Height	Centerline of Shaft	Minimum Headroom
Thru 12'0"	O.H. + 11 5/8"	14 1/4"
Thru 16'0"	O.H. + 12 5/8"	20 1/2"

3" Track
15" Radius

Door Height	Centerline of Shaft	Minimum Headroom
Thru 18'0"	O.H. + 14 5/8"	18"
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O.H. = Opening Height

Gilbane

Transmittal

Project [2239.2] - PCF - Hospital - Garage **View Date** 2/18/2008

Gilbane
940 Elizabeth St
Lexington, KY 40506-0293
Phone: (859) 257-4536
Fax: (859) 323-1331

Transmittal No. 2239.2-00356

To	Mr. Doug Sherwood E. C. Matthews Co., Inc. 2265 Harrodsburg Road Lexington, KY 40504 USA Phone: (859) 278-3131 Fax: (859) 277-7903	**Date**	9/22/2006
From	Mr. Ryan Maguire (Gilbane)	**Items listed are being sent**	
Subject	Submittal	☑ Enclosed ☐ Under Separate Cover	
		Via	U.S. Mail
		CSI Code	08360 - Sectional Overhead Doors

We are transmitting the following to you:

☑ Product Data ☐ Samples ☐ Shop Drawings ☐ O&M Manuals ☐ Plans
☐ Architectural Drawings ☐ Letters ☐ Specifications ☐ Prints ☐ Addenda
☐ Engineering Drawings ☐ Change Orders ☐ Submittal

Items

No.	Description	Copies	Reason	Action
100-08360-001	Sectional Overhead Door	2	Approved as Noted	

Remarks

	Mr. Ryan Maguire	9/22/2006
From	Printed Name	Date
Received By	Printed Name	Date

SUBMITTAL TRANSMITTAL

E. C. Matthews Company, Inc.
2265 Harrodsburg Road
Lexington, KY 40504
Phone: 859/278-3131
FAX: 859/277-7903
E-Mail: dsherwood@ecmatthews.com

Spec Section	08360
	Sectional Overhead Doors
Initial(I)or Resub(R#)	I

5 Nos

DATE: 08/31/2006 JOB NO. 9212

Brian Hoerr

University of Kentucky
PCF Parking Garage

TO: Gilbane Building Company
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Lexington, KY 40508

We Are Sending You X Data Sheets X Shop Drawings

Subcontractor or Supplier: Overhead Door Company of Lexington
181 Trade Street
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NO EXCEPTIONS TAKEN
FURNISH AS CORRECTED X
REVISE AND RESUBMIT
NO REVIEW - INCOMPLETE
SUBMIT SPECIFIED ITEMS
REJECTED
DATE 9/12/06 BY

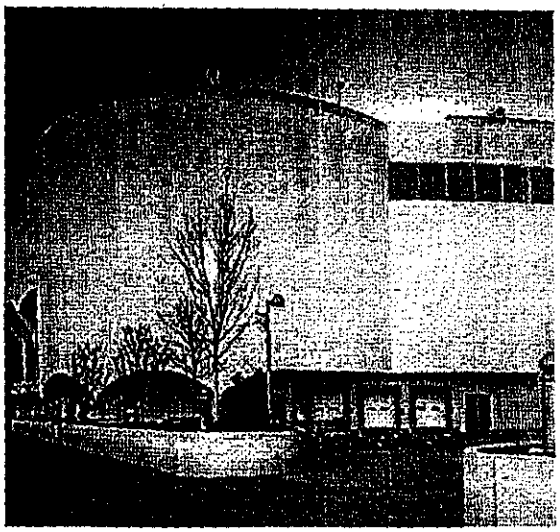
GBBN ARCHITECTS, INC.
ARCHITECTURE, INTERIORS, PLANNING, ENGINEERING
332 EAST 6TH STREET, CINCINNATI, OHIO 45202-2717 (513) 241-4700
235 WEST MAIN STREET, LEXINGTON, KENTUCKY 40507 (859) 281-4707
DELIVER TO CINCINNATI OFFICE ADDRESS, ZIP CODE, PHONE NUMBER

COPY TO: File

SIGNED:
Doug Sherwood

Sectional Steel

418



UK Parking Garage

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R-value	Polystyrene - 7.35 (1.29 W/Msq)
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End stiles	16-gauge steel
Center stiles	16-gauge steel
Standard mounting	Angle mount
Standard track	2" (51 mm)
Standard springs	10,000 cycle
Weatherstripping	Standard on bottom
Operation	Manual pull rope
Finish	White baked-on polyester
Lock	Interior-mounted slide lock

CYLINDER LOCK SEE RFQ-001R.1

SUBMIT SAMPLE OF FINISH.

GILBANE
University of Kentucky
Patient Care Facility
Gilbane Project No. 18-3966

REVIEWED

☐ 010-Hugueiet ☒ 020-Garage
☐ 030-Infrastructure ☐ 040-PCF Foundation
☐ 050-PCF Core/Shell ☐ 060-TowerUp Fit

Bid Package No. 100
Submittal No. 100-083600-001
Spec Sect/Para. —
Reviewed By RY
Date 9/11/06

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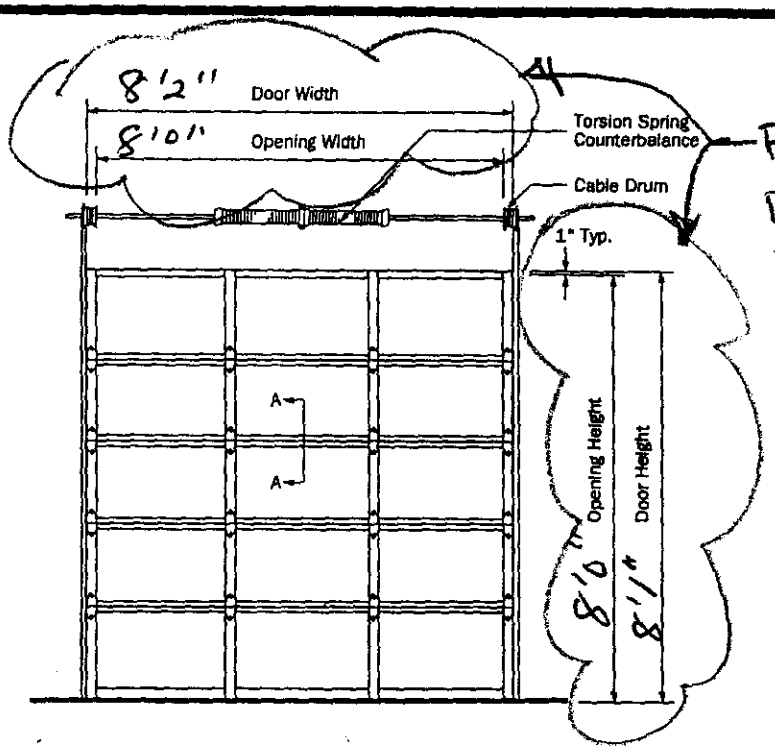
418 Series
Insulated Steel Doors

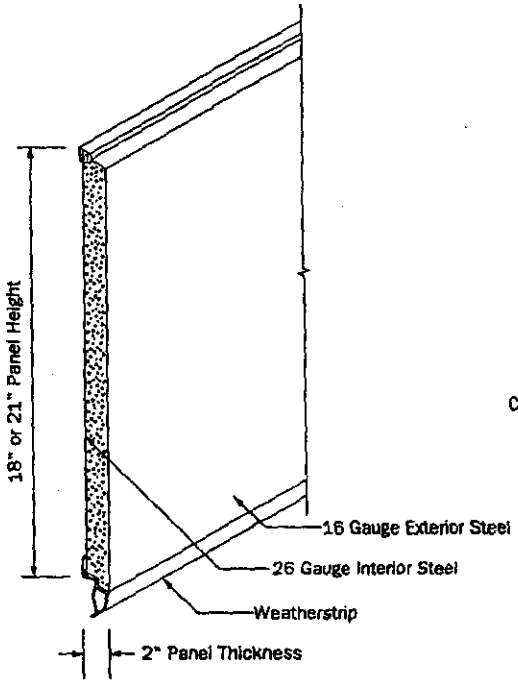
Interior Elevation

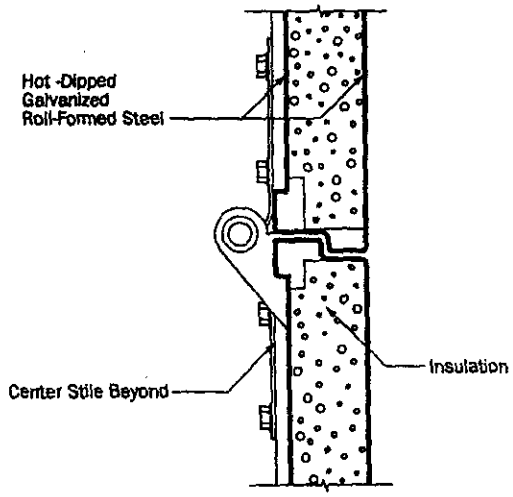
For clearance details on electrically operated doors, see Motor Operator section.



1 ea doors For 8'0" x 8'0" high openings

Panel Detail





Section A-A

418 Series
Insulated Steel Doors

Interior Elevation

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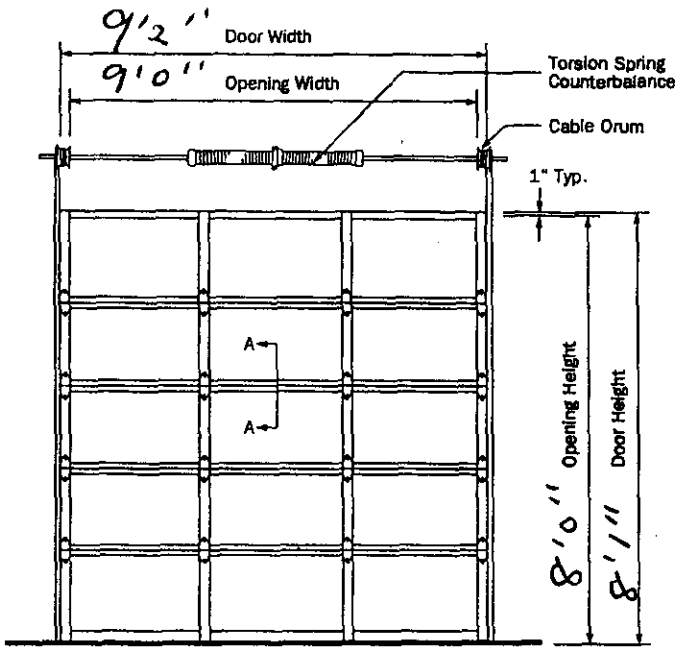
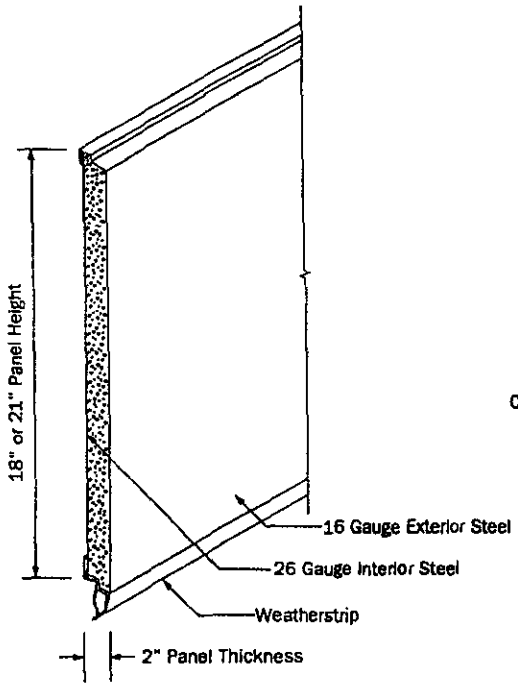
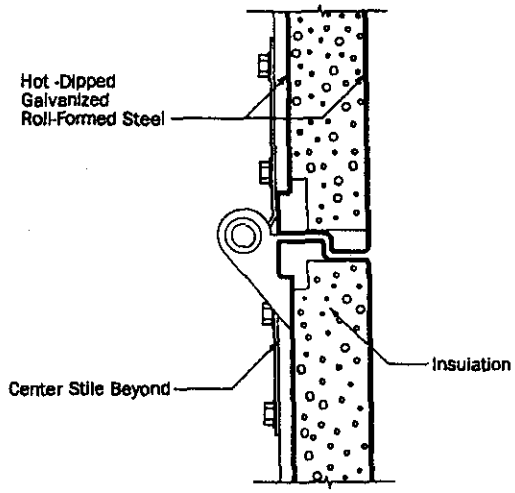


2-doors for 9'0" wide by 8'6" high openings

Panel Detail





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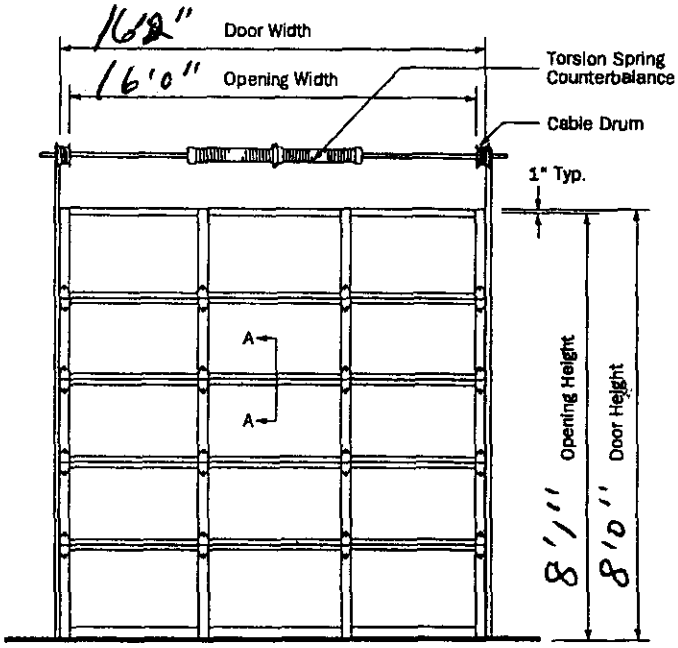
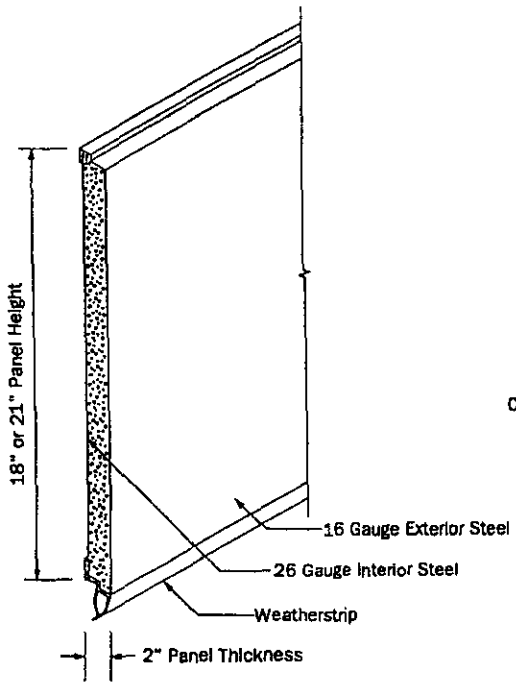
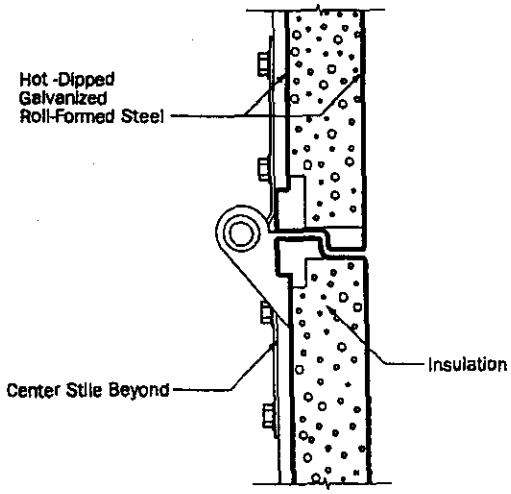


2 door For 16'0" x 8'0" opening

Panel Detail

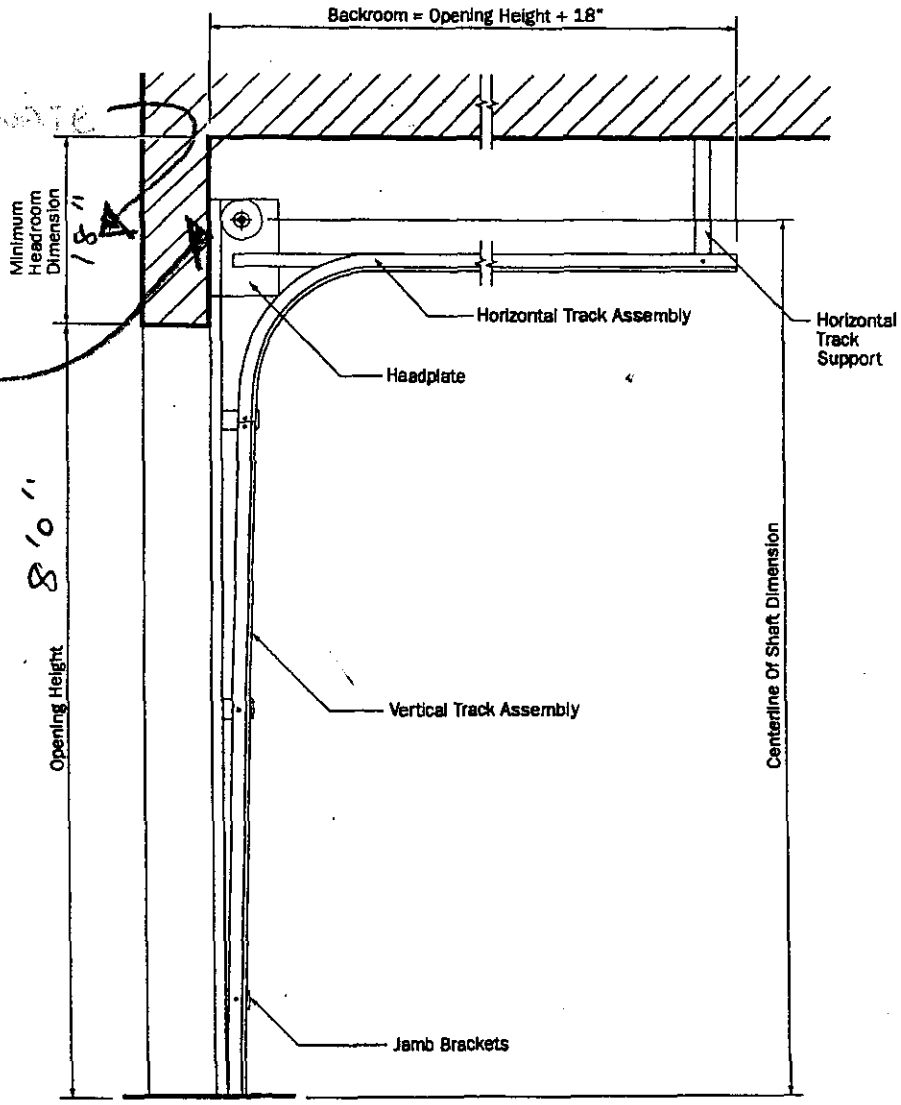




Section A-A

Track
Headroom and Backroom Clearance

Standard Lift Track



VERIFY & COORDINATE W/ STRUCTURAL DRAWINGS

COORDINATE ANCHORING REQUIRMENTS W/ MASONRY CONTRACTOR TYPICAL

16 x 8

Headroom Clearance Dimensions

2" Track
15" Radius

Door Height	Centerline of Shaft	Minimum Headroom
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O.H. = Opening Height

UNIVERSITY OF KENTUCKY
PATIENT CARE FACILITY
PARKING GARAGE

UK Project #: 2239.2

940 Elizabeth Street
Lexington, KY 40506-0293

08470 – Revolving Door Entrances
Submittal Date: November 21, 2006

Construction Manager
Central Kentucky Glass
1123 Versailles Road
Lexington, KY 40508
(859) 253-0710

Sub-Contractor
Stanley Access Technologies
3949 Zoneton Road
Sheperdsville, KY 40165
(502) 955-5589

SUBMITTAL

GILBANE
University of Kentucky
Patient Care Facility
Gilbane Project No. 18-3966

REVIEWED

☐ 010-Huguelet ☒ 020-Garage
☐ 030-Infrastructure ☐ 040-PCF Foundation
☐ 050-PCF Core/Shell ☐ 060-TowerUp Fit

Bid Package No. 080
Submittal No. 080-08450-001-1
Spec. Sect/Para. _____
Reviewed By BH
Date 11/21/06

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NO EXCEPTIONS TAKEN ☐
FURNISH AS CORRECTED ☒
REVISE AND RESUBMIT ☐
NO REVIEW - INCOMPLETE ☐
SUBMIT SPECIFIED ITEMS ☒
REJECTED ☐

DATE 1-5-07 BY BK

GBBN ARCHITECTS, INC.
ARCHITECTURE, INTERIORS, PLANNING, ENGINEERING

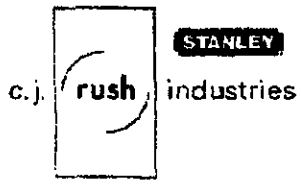
Central Kentucky Glass Company

1123 Versailles Road Lexington. KY 40508
Phone: 859-253-0710 Fax: 859-255-7317

Re: University of Kentucky
Patient Care Facility-Parking Garage
Lexington, KY

The attached shop drawings and data are for spec section 08470 revolving entrance doors, 08700 door hardware-2.9 Automatic Door Operators.

1) Finish for revolving entrance door to be Kynar painted to match curtainwall-color "Bone White"
2) Finish for automatic door operators to be clear anodized finish.
3) Aluminum doors and frames are by Kawneer
4) All automatic door operators are for single leaf doors as shown on drawings.
5) Stanley is an approved supplier per 08470 (C.J. Rush Industries) and 08700.
6) Revolving door to have 5/16" curved clear laminated glass for outer walls and 1/4" clear tempered for wing doors.



Fact Sheet

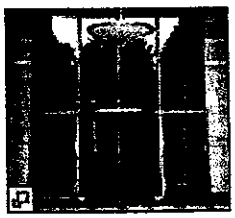
Division and Focus:	c.j. rush industries, established in 1965, is recognized around the world as the preeminent Canadian designer and manufacturer of custom architectural entrance systems. Its products include manual and automatic revolving doors, extra large revolving doors, security revolving doors, balanced doors and pivot/swing doors, along with coordinated architectural metal work such as canopies, screens, windows, glass walls and handrails. The company is skilled and experienced in interpretive design and produces custom solutions to architectural design criteria. c.j. rush provides a single source of solutions for the finest products and leading technology in complete entrance systems. Its technologically advanced engineering, design and materials provide whisper quiet, high endurance automatic revolving doors.
Headquarters:	Toronto, Ontario
Founded:	1965 (Acquired by Stanley Security Solutions in 2003)
Executives:	Frank Luke, COO
Solutions:	Services and manufactures custom revolving door systems. Installations performed by Stanley Access Technologies
Product Offerings:	Revolving Doors, Security Revolving Doors, XL Revolving Doors, Balanced Doors, Pivot/Swing/Hinged Doors, and a complete offering of preventative maintenance and service programs
Markets Served:	Healthcare, Government, Commercial and Industrial
Web Site:	www.cjrush.com

c.j. rush industries™ STANLEY

Click here for a free on-line quote!

revolving doors

Series 1500



Full framed featuring narrow 1 9/16" (40mm) stiles fully weather stripped and integrated to a fluted metal clad centre shaft. With the patented, door wing, pressure release mechanism concealed below the floor and within the canopy ceiling, stile to rail connection is crisp and clean. Three-wing or four-wing design. Various heights of door rails are available to suit any design requirement. Available in standard 7'-0" (2134mm) models or custom models ranging from (but not limited to) 6'-6" (1981mm) diameter to 12'-0" (3657mm) diameter.

Features

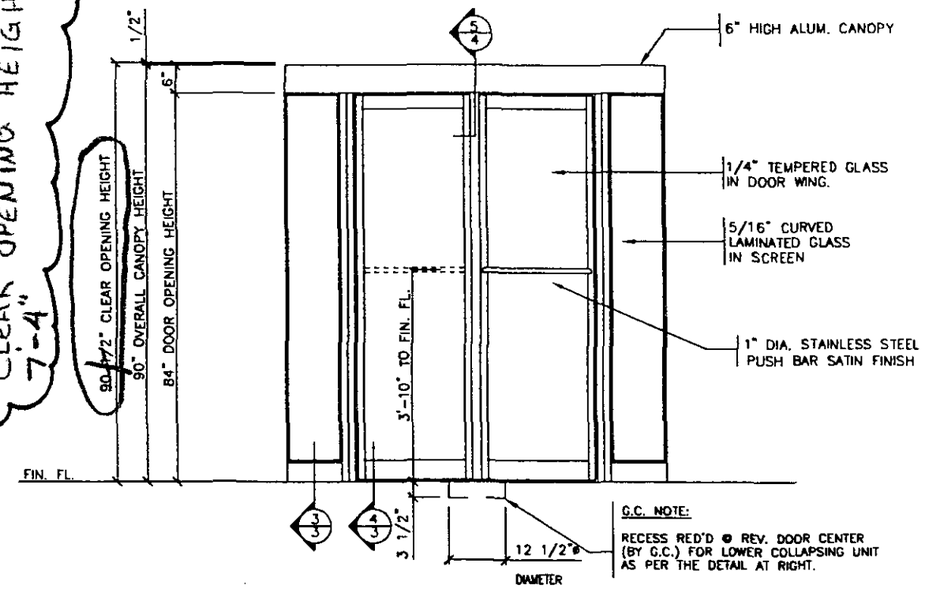
- Narrow line flush glazing door and enclosure sections
- Concealed collapsing mechanism and speed control
- Concealed fasteners - snap-on glass stops throughout
- Bookfold wing position factory set for emergency egress
- Conforms to all North American building codes
- Conforms to ASTM E283 for air tightness
- Standard and custom models available
- Easily removed door wings to provide fast and efficient service
- Curved laminated glass in enclosure
- Tempered glass in door wings
- Sliding dead bolt lock
- Overhead or floor mounted speed controls

Options

- Double wall glass enclosure for air plenum and grilles
- Cladding in stainless or bronze sheet (see Architectural Metal Products)
- All glass canopy
- Tinted glass (wings and enclosure)
- Vertical and/or horizontal muntins

- Curved metal panels in place of glass enclosure
- Curved tempered glass
- Custom designed push bars and plates. (some design limitations)
- Manual or automatic operation
- Canopy lighting
- Maintenance and Service contracts available (some limitations apply)
- Quarter-point closing

CLEAR OPENING HEIGHT 7'-4"

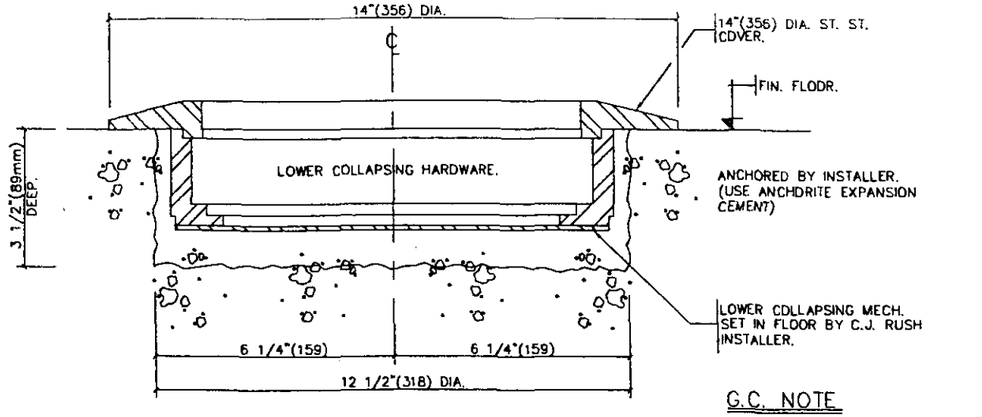


REVOLVING DOOR ENTRANCE ELEVATION

SCALE: NONE

2 (4) REQUIRED

⚠ DOOR # 210A, 310A, 410A, 510A

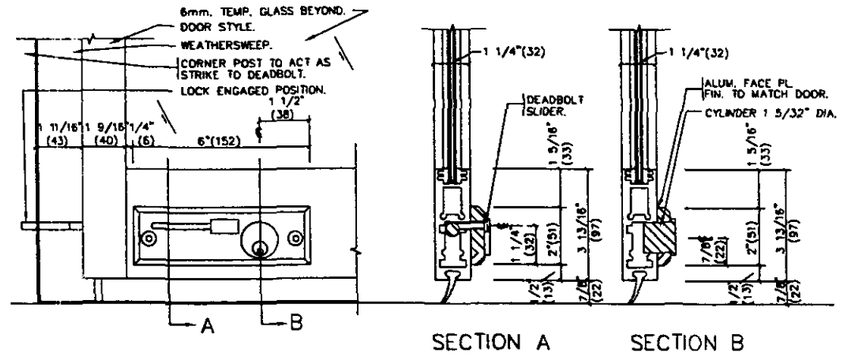


DETAIL ~ 4 WING LOWER COLLAPSING MECH.

NOT TO SCALE

G.C. NOTE

GENERAL CONTRACTOR TO PROVIDE 3 1/2"(89) DEEP x 12 1/2"(318) DIA. RECESS IN SLAB FOR COLLAPSING MECH. ALL PREPARATORY WORK TO FLOOR & SLAB BY OTHERS.



STD. DEADBOLT DETAILS

SCALE: NONE

Date	REVISIONS	By	Issue

No.	ISSUED	Date
	FOR APPROVAL	MAY.16/06
⚠1	REVISED AS USED	JUN.16/06

IMPORTANT NOTICE

C.J.Rush Industries wishes to bring to your attention the following, for which we assume NO RESPONSIBILITY:

(1) The use of these drawings by other parties is the sole responsibility of that party as to site conditions, measurements, etc.,

(2) Movement of structures by forces causing mis-alignment and improper function of our product.

(3) Results of glass breakage causing bodily harm through improper use or mischief.

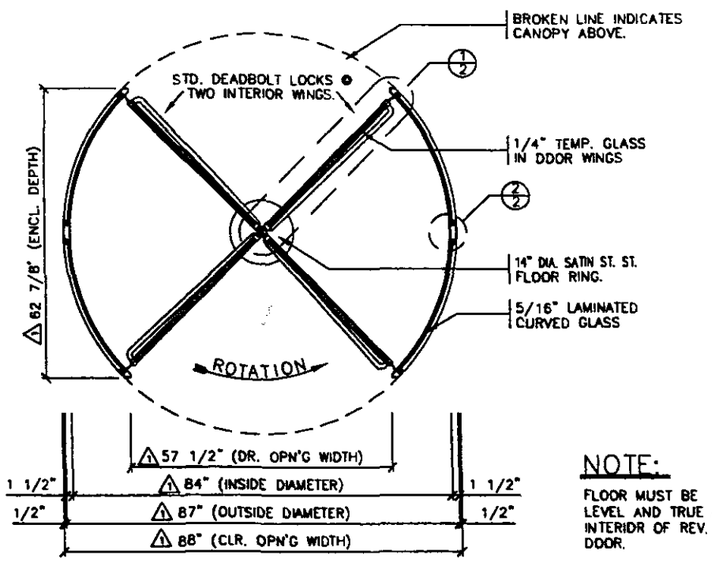
NOTE–Available for use in limited sizes are bent laminated glass in lieu of bent annealed plate glass.

–Specifications prevail at time of quotation issued by C.J.Rush Industries.

SPECIAL REFERENCE NOTE

Very often the method of manufacturing as shown on these shop drawings are a development of the skills of the company. Any reproduction and or distribution in whole or in part, without expressed or written consent is strictly prohibited.

C.J.Rush Industries.



G.C. NOTE:
ALL DIMENSIONS TO BE SITE CONFIRMED PRIOR TO FABRICATION.

SHOP NOTE: ⚠

FINISH= KYNAR PAINT TO MATCH CW. (PLEASE PROVIDE COLOR SAMPLE)

CURVED GLASS TINT= CLEAR
DR. WG. GLASS TINT= CLEAR

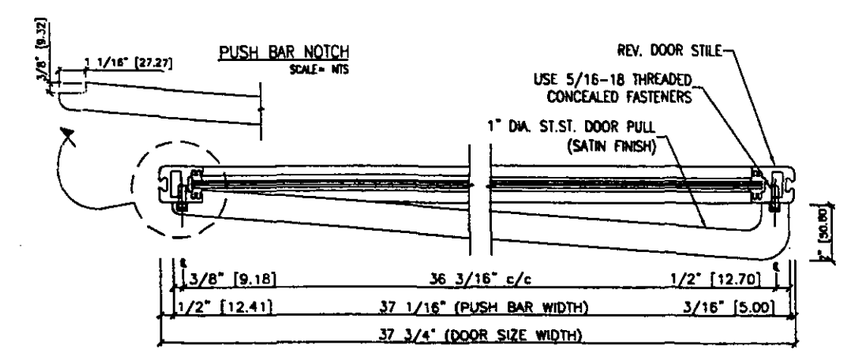
OVERHEAD MANUAL SPEED CONTROL

REVOLVING DOOR ENTRANCE PLAN

SCALE: NONE

NOTE:

FLOOR MUST BE LEVEL AND TRUE AT INTERIOR OF REV. DOOR.



1" DIA. ST.ST. PUSHBAR DETAIL

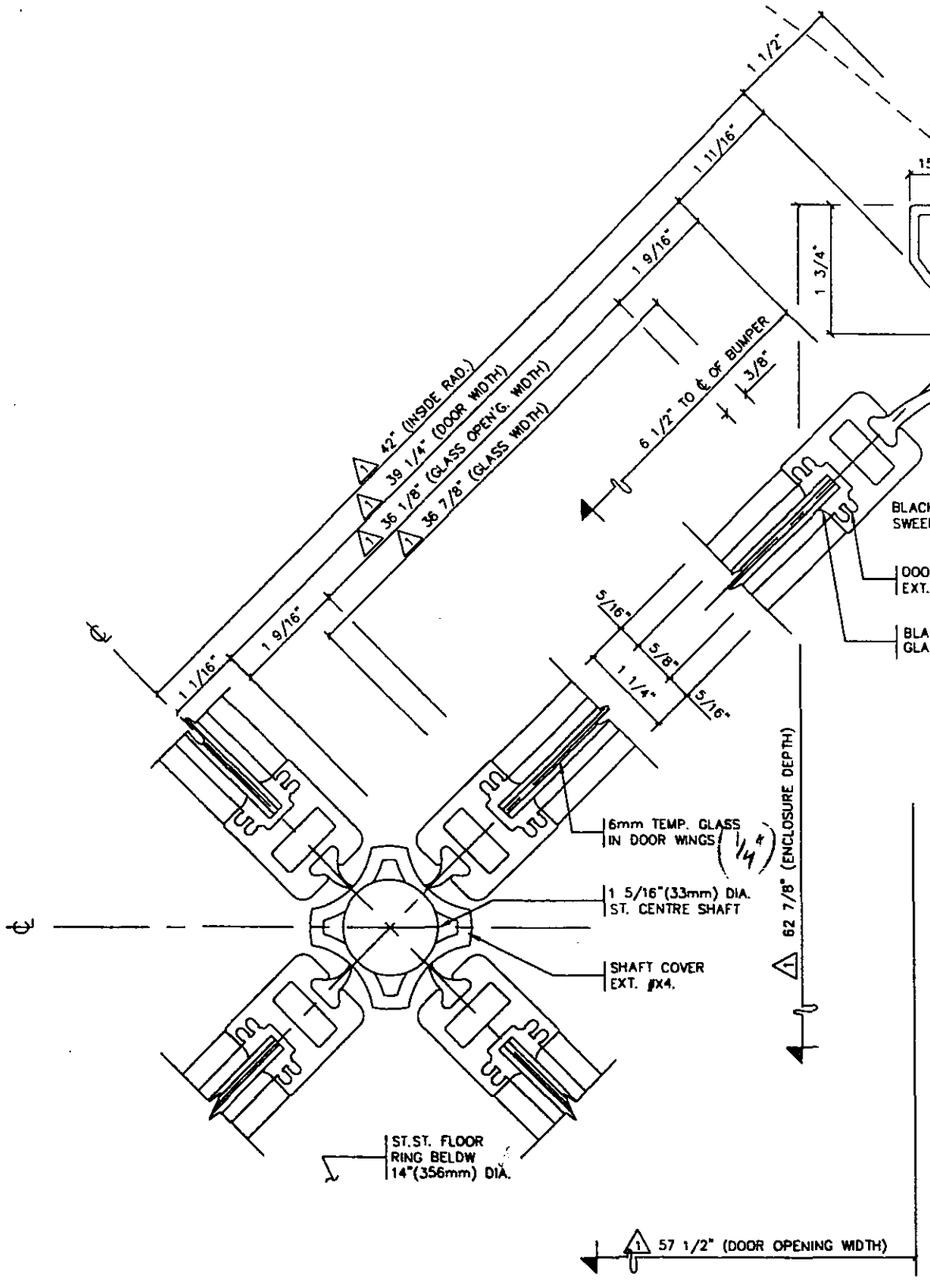
SCALE: NTS

STANLEY
Security Solutions

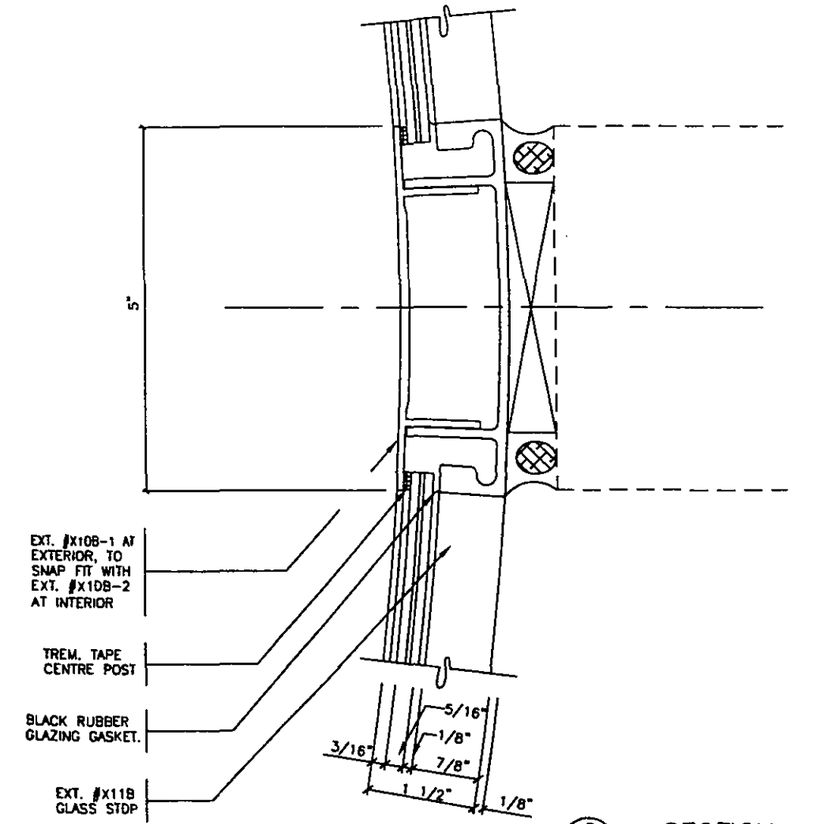
c.j. rush industries
65 RIVIERA DRIVE, MARKHAM, ONT. CANADA, L3R 5J6
Tel. 888-301-5407
905-944-8005
Fax 905-944-8006

1500 SERIES REVOLVING DOOR PLAN/ELEV/DETAILS

BUILDING UNIVERSITY OF KENTUCKY	
LOCATION KENTUCKY	
ARCH–ENG.	
CONTRACTOR Stanley Access Technologies	
Drawn by KH	Job No. 9617
Checked by ET	
Scale 3/4"=1'-0"	Dwg. No. 001
Date MAY.15/06	
Finish	



1/1 SECTION
FULL SCALE.



2/1 SECTION
FULL SCALE.

Date	REVISIONS	By	Issue

No.	ISSUED	Date
1	REVISED AS NOTED	JUN.16/06

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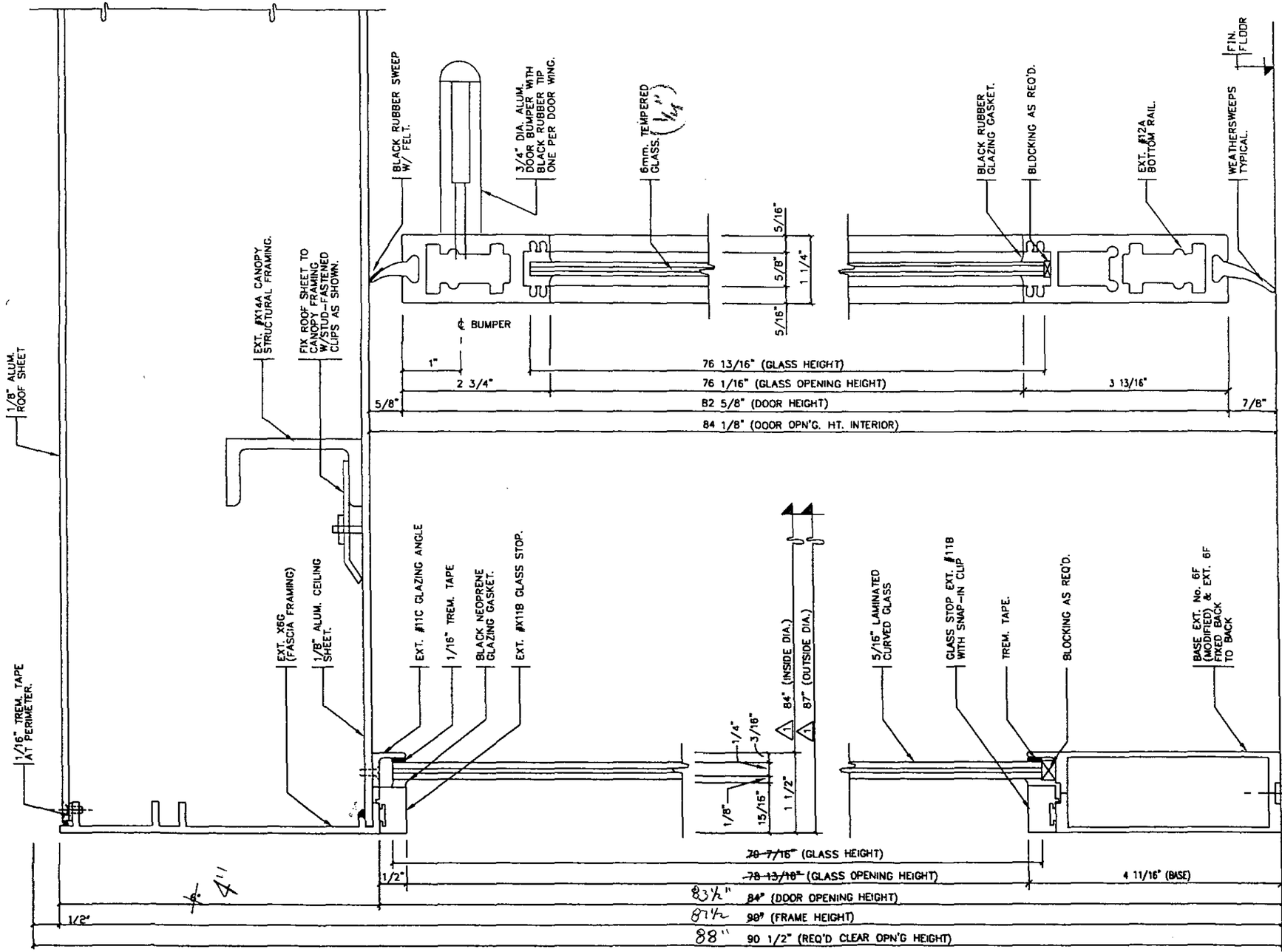
C.J.Rush Industries.

STANLEY
Security Solutions

c.j. rush industries
65 RIVIERA DRIVE
MARKHAM, ONT.
CANADA, L3R 5J6
Tel. 888-301-5407
905-944-8005
Fax 905-944-8006

1500 SERIES REVOLVING DOOR HORIZ-SECTION

BUILDING UNIVERSITY OF KENTUCKY	
LOCATION KENTUCKY	
ARCH-ENG.	
CONTRACTOR Stanley Access Technologies	
Drawn by KH	Job No. 9617
Checked by ET	
Scale FULL SIZE	Dwg. No. 002
Date MAY.15/06	
Finish	



Date	REVISIONS	By	Issue

No.	ISSUED	Date
1	REVISED AS NOTED	JUN.16/06

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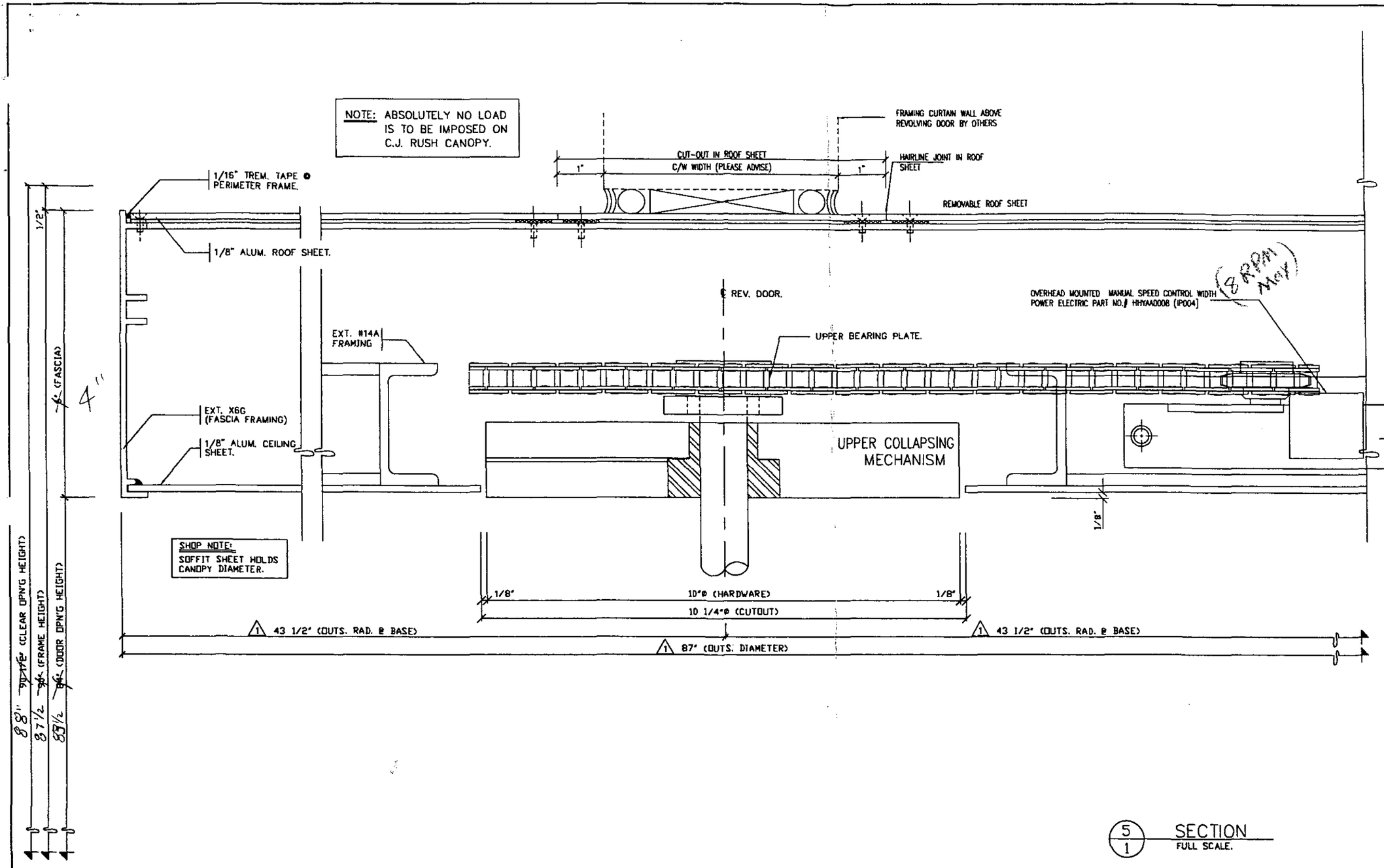
C.J.Rush Industries.

STANLEY
Security Solutions

c.j. rush industries
65 RIVIERA DRIVE
MARKHAM, ONT.
CANADA, L3R 5J6
Tel. 888-301-5407
905-944-8005
Fax 905-944-8006

1500 SERIES REVOLVING DOOR VERTICAL-SECTION

BUILDING	UNIVERSITY OF KENTUCKY
LOCATION	KENTUCKY
ARCH-ENG.	
CONTRACTOR	Stanley Access Technologies
Drawn by	KH
Checked by	ET
Scale	FULL SIZE
Date	MAY.15/06
Finish	
Job No.	9617
Dwg. No.	003



5/1 SECTION
FULL SCALE.

Date	REVISIONS	By	Issue

No.	ISSUED	Date
1	REVISED AS NOTED	JUN.16/06

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C.J.Rush Industries.

STANLEY
Security Solutions

c.j. rush industries
65 RIVIERA DRIVE
MARKHAM, ONT.
CANADA, L3R 5J6
Tel. 888-301-5407
905-944-8005
Fax 905-944-8006

1500 SERIES REVOLVING DOOR CANOPY-SECTION

BUILDING	UNIVERSITY OF KENTUCKY
LOCATION	KENTUCKY
ARCH-ENG.	
CONTRACTOR	Stanley Access Technologies
Drawn by	KH
Checked by	ET
Scale	FULL SIZE
Date	MAY.15/06
Finish	
Job No.	9617
Dwg. No.	004

UNIVERSITY OF KENTUCKY
PATIENT CARE FACILITY
PARKING GARAGE

UK Project #: 2239.2

940 Elizabeth Street
Lexington, KY 40506-0293

08700 – Automatic Door Operators
Submittal Date: November 22, 2006

Construction Manager
Central Kentucky Glass
1123 Versailles Road
Lexington, KY 40508
(859) 253-0710

Sub-Contractor
Stanley Access Technologies
3949 Zoneton Road
Sheperdsville, KY 40165

SUBMITTAL

Central Kentucky Glass Company

1123 Versailles Road Lexington. KY 40508
Phone: 859-253-0710 Fax: 859-255-7317

Re: University of Kentucky
Patient Care Facility-Parking Garage
Lexington, KY

The attached shop drawings and data are for spec section 08470 revolving entrance doors, 08700 door hardware-2.9 Automatic Door Operators.

1) Finish for revolving entrance door to be Kynar painted to match curtainwall-color "Bone White"
2) Finish for automatic door operators to be clear anodized finish.
3) Aluminum doors and frames are by Kawneer
4) All automatic door operators are for single leaf doors as shown on drawings.
5) Stanley is an approved supplier per 08470 (C.J. Rush Industries) and 08700.
6) Revolving door to have 5/16" curved clear laminated glass for outer walls and 1/4" clear tempered for wing doors.

THIS REVIEW BY GBBN ARCHITECTS, INC., IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND IS NDT AN APPRDVAL OF THIS DRAWING OR SET OF DRAWINGS. THE COMMENTS MADE DO NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH THE PROJECT DRAWINGS, SPECIFICATIONS AND OTHER CONTRACT DOCUMENTS. CONTRACTOR IS SOLELY RESPONSIBLE FOR: ALL DIMENSIONS AND QUANTITIES, ALL FABRICATION, DELIVERY AND ERECTION; ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES; ALL COORDINATION WITH ALL OTHER CONTRACTORS, SUPPLIERS AND OTHERS; PERFORMING ALL WORK IN A SAFE AND PROPER MANNER.

NO EXCEPTIONS TAKEN ☐
FURNISH AS CORRECTED ☒
REVISE AND RESUBMIT ☐
NO REVIEW - INCOMPLETE ☐
SUBMIT SPECIFIED ITEMS ☐
REJECTED ☐

DATE 12.07.06 BY JAP

GBBN ARCHITECTS, INC.
ARCHITECTURE, INTERIORS, PLANNING, ENGINEERING
☒ 332 EAST 8TH STREET, CINCINNATI, OHIO 45202-2217 (513) 241-8700
☐ 325 WEST MAIN STREET, LEXINGTON, KENTUCKY 40507 (859) 381-8787
☐ BEIJING XI CHENG DISTRICT, TONG LI GE ROAD NO 85, BEIJING, CHINA 100031 86 10 88386730

Company Certificate

American Association of Automatic Door Manufacturers

AAADM

The Board of Directors of the

American Association of Automatic Door Manufacturers certifies that

Dwight Reed

Stanley Access Technologies

has successfully completed the course of instruction as a

Certified Inspector of power-operated automatic pedestrian doors.

Certificate Number T-98C0018
Expires January 31, 2007

John Addington, Executive Director

AAADM American Association of Automatic Door Manufacturers
1300 Sumner Avenue, Cleveland, Ohio 44115

"Dedicated to promoting safety by establishing programs for training and certification of inspectors."

Intertek Systems Certification

Certificate of Registration

This is to certify that the Quality Management System of:

Stanley Access Technologies

65 Scott Swamp Road, Farmington, Connecticut, 06032, USA

has been assessed and registered by Intertek Testing Services NA, Inc.
as conforming to the requirements of the following standard(s):

ISO 9001:2000

The Quality Management System is applicable to:

Designer and manufacturer of automatic access control systems such as automatic pedestrian doors for worldwide commercial, industrial and transportation applications.

CERTIFICATION Intertek

Certificate No.

US-3218a

Intertek Testing Services NA, Inc.
Boxborough, MA, USA

The approval is subject to the organization maintaining their system in accordance with Intertek Testing Services NA, Inc.'s rules and regulations for certification. This certificate is valid as long as the company name appears on our website: www.intertek-sc.com.

RvA C 050

Initial Date:	July 27, 2005
Issue Date:	October 4, 2005
Renewal Date:	October 4, 2008

GILBANE
University of Kentucky
Patient Care Facility
Gilbane Project No. 18-3966

REVIEWED

☐ 010-Huguelet ☒ 020-Garage
☐ 030-Infrastructure ☐ 040-PCF Foundation
☐ 050-PCF Core/Shell ☐ 060-TowerUp Fit

Bid Package No. 020
Submittal No. 020-08700-001
Spec. Sect/Para. _____
Reviewed By BH
Date 11/22/06

This review does not constitute nor does it assume design responsibility nor does it relieve the trade contractor's supplier from complying with the contract requirements, coordinating their work with other trade contractors and verifying field dimensions.

Stanley
Access Technologies

Dean T. Negrelli
Manager, Evaluation and Analysis

65 Scott Swamp Road
Farmington, CT 06032

Tel 860-679-6453
1-800-7-ACCESS (ext. 56453)
Fax 860.679.6496
dnegrelli@stanleyworks.com

STANLEY

August 9, 2004

Re: STANLEY ACCESS TECHNOLOGIES' ANSI/BHMA SELF-CERTIFICATION

To Whom It May Concern:

This is to certify that the following Stanley Access Technologies' products comply with the standards specified:

ANSI/BHMA A156.10	Dura-Glide Sliding Door Systems – Series DG 2000, DG 3000, DG 5000, IS 10000, Double Diamond, Dura-Storm, Dura-Guard
	Swing Door Systems – Magic-Force, Magic-Access, Magic-Swing
	Bifold Door Systems – Magic-Force Bifold Door System (SB600)
ANSI/BHMA A156.19	Swing Door Systems – Magic-Force, Magic-Access

Certified by:

Dean Negrelli August 9, 2004
Manager, Evaluation & Analysis

STANLEY®

Security Solutions

STANLEY

Access Technologies

Dean Negrelli
Manager, Evaluation & Analysis
Stanley Security Solutions
Stanley Access Technologies
65 Scott Swamp Road
Farmington, CT 06032
Phone 860 679 6453
Fax 860 679 6409
dnegrelli@stanleyworks.com
www.stanleyaccesstechnologies.com

October 28, 2004

Re: Reliability Certification - Magic-Force Operator

To Whom It May Concern:

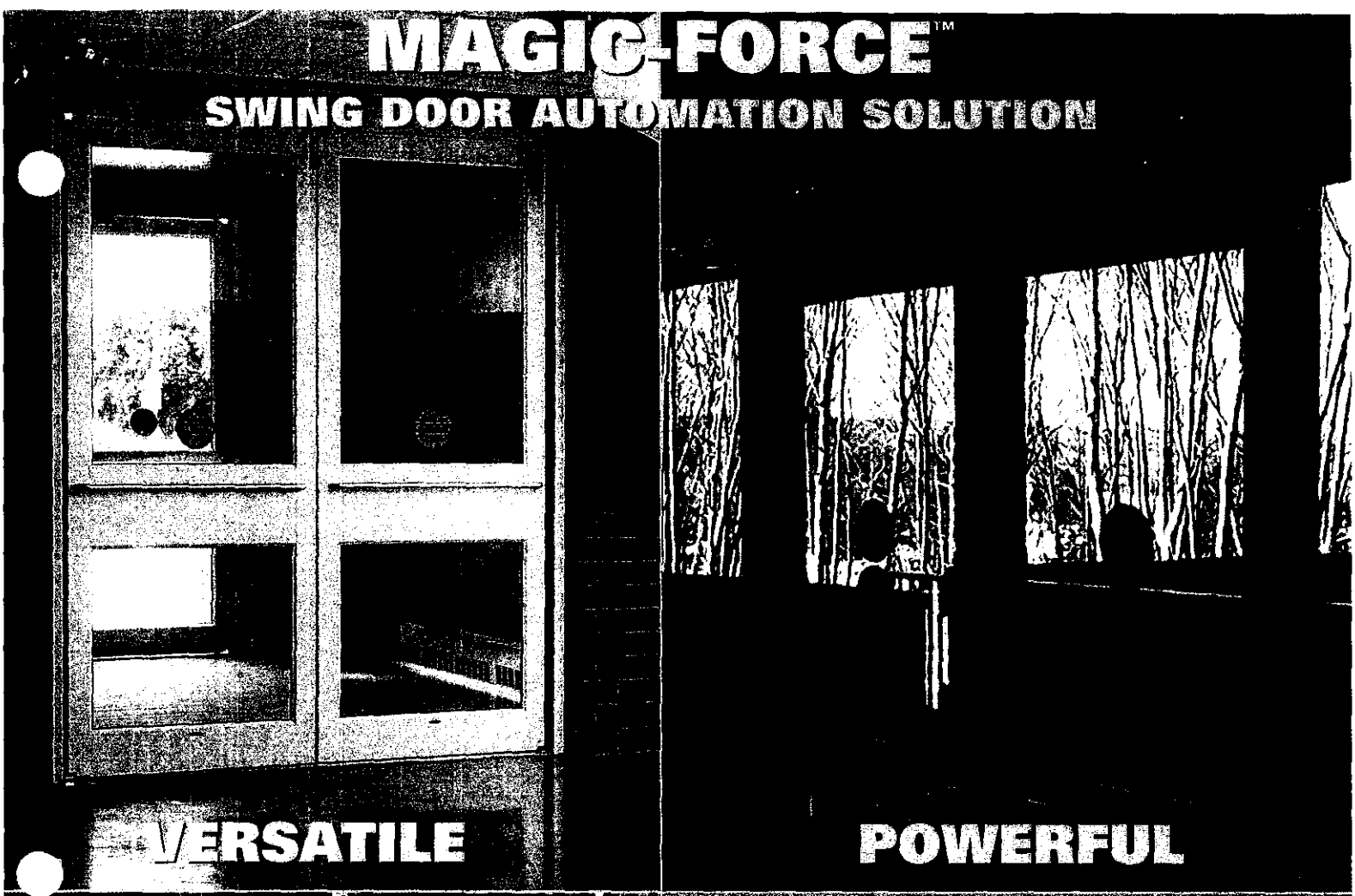
This letter is to certify that Stanley Access Technologies has tested the Magic-Force operator under maximum rated load conditions in excess of one million cycles of operation without failure.

Regards,

Dean Negrelli
Manager, Evaluation & Analysis

MAGIC-FORCE™

SWING DOOR AUTOMATION SOLUTION

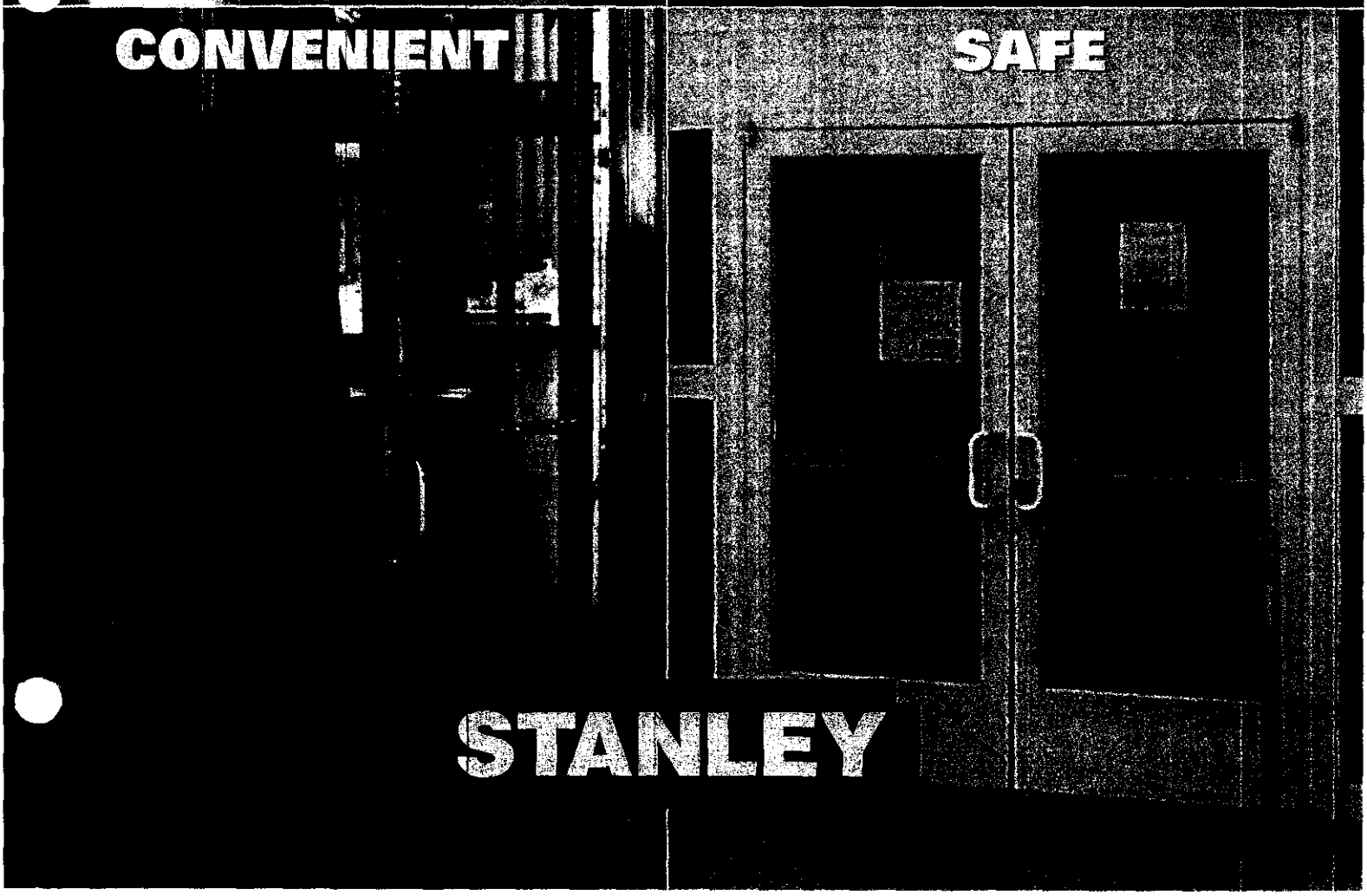


VERSATILE

POWERFUL

CONVENIENT

SAFE



STANLEY

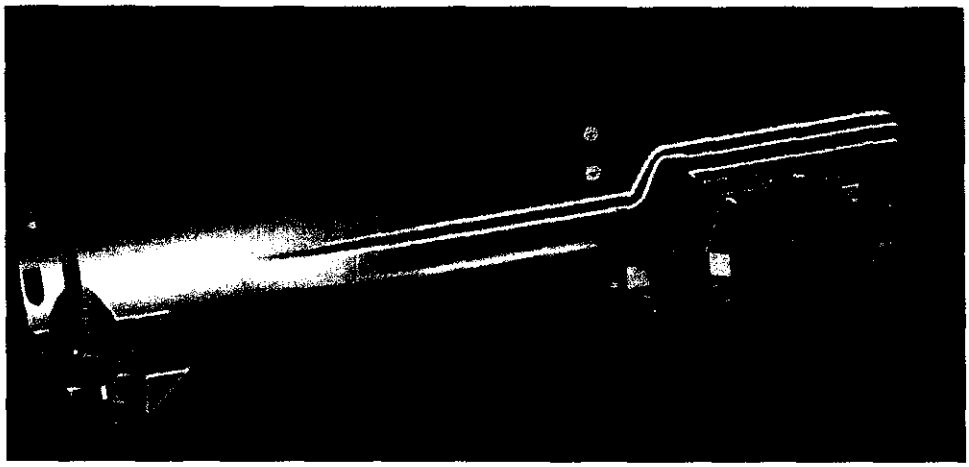
FACTORY TESTED & PROVEN PERFORMANCE

To make sure we could deliver the Magic-Force™ Operator with all the features to meet the demands of a continually changing market, we conducted the most extensive testing yet. In addition to testing the Magic-Force™ Operator to the industry standard number of cycles, we tested it to break it, then re-engineered it, and re-tested to break it again. Extensive field testing confirmed Stanley's lab test results to prove the Magic-Force™ performance.

The Magic-Force™ Operator

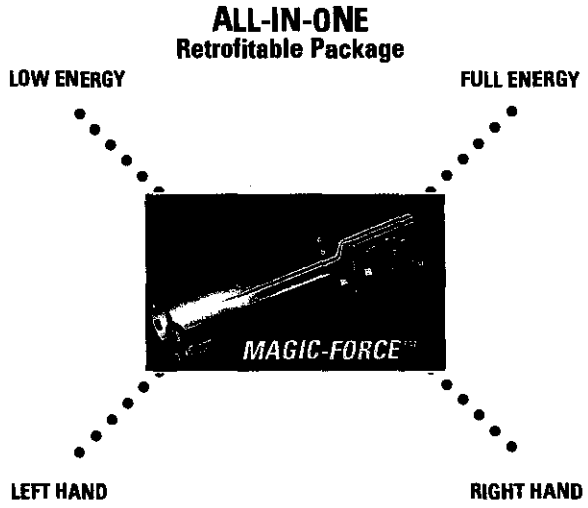
- Listing - UL 325
- cUL Listing - CSA 22.2 No. 247
- UL Listed Fire Door Operator
- BOCA Listing - 1017.4.3
- ICBO Report - UBC 10-1
- NFPA101 Life Safety Code - Section 5-2.1.9
- ANSI 156.10-1998, Full Energy
- ANSI 156.19-1997, Low Energy
- CSFM - CA State Fire Marshal

As the market demands change, the Magic-Force™ Operator is designed to change right along with them. This operator is setting a new standard in the industry and taking our customers into the 21st century.



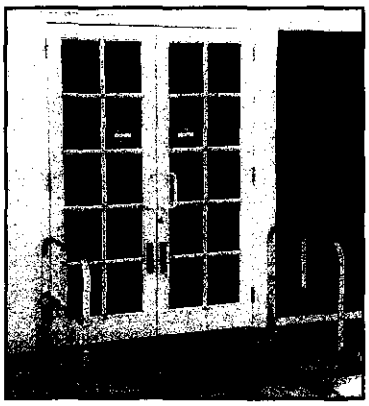
The Versatile Magic-Force™ Operator

- Unique innovative design offers an all-in-one system.
- Non-handed, In-Swing or Out-Swing, Visible or Concealed mounting.
- Configurable for Full Energy & Low Energy applications.
- Simplified Installation & Service.
- Smooth operation, low audible noise.
- Will interface with existing installed products.
- Heavy duty compression spring for unparalleled door control & durability.
- Field adjustable to overcome environmental or facility changes.

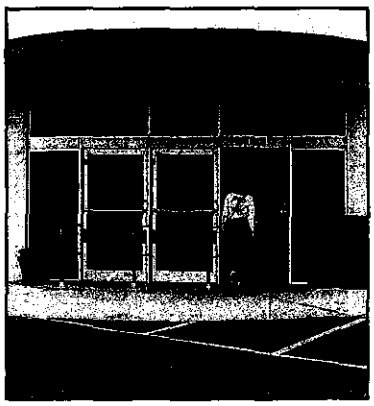


Stanley's Magic-Force™ Operator works in both Full Energy and Low Energy applications. Meets the demands for use in Supermarkets, Department Stores, Hospitals, Airports, Office Buildings, Public Buildings, Schools, Universities and more!

ADA



HEALTHCARE



GROCERY

State-of-the-art computerized factory test equipment ensures each operator works-first time, every time for a long time.

THE FIRST ALL-IN-ONE SYSTEM

The Magic-Force™ System is designed to be retrofittable and backwards compatible—the Magic-Force™ Operator and controller can replace existing Magic-Swing® Operators and/or controllers. Magic-Force™ Door Operators:

- *Work with every type of sensor we make for maximum design flexibility and convenience.*
- *Require only simple tune-in adjustments for fast, trouble-free installation.*
- *Resist wind and stack pressure conditions to maintain smooth, controlled operation.*

Additional Features:

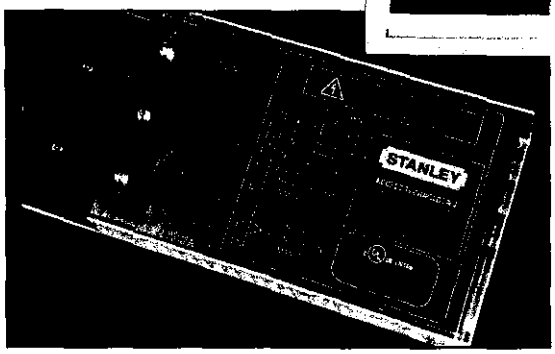
- *Available with Sentrex-3™ active infrared safety system.*

Alternative Sensors/Operators include mats, push plates, radio controls and motion sensors.

- *Surface Mount Header models afford fast and easy retrofits.*
- *Choice of complete factory engineered door systems.*
- *Fire Door Package with UL listed equipment.*
- *Provide safe pedestrian movement at all times with activation and safety sensors.*
- *Variable Spring Operator.*

The Magic-Force™ delivers easy, consistent feel across the entire transition from closed to fully opened. Fully field adjustable to meet specific site conditions. Easy opening with a powerful close. Patent pending.

Every Magic-Force includes the new Life Cycle Data feature, or LCD allowing Stanley to be a market leader in service and installation by adapting to site specific needs. The LCD allows future service based on cycles and customer tailored maintenance programs.

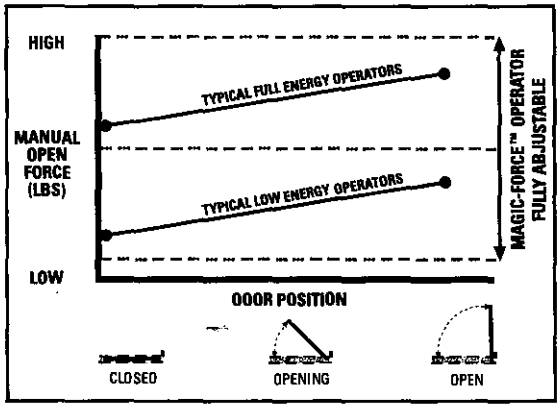


Advanced microprocesser controller and proven enceder technology work together for comprehensive and precise control of the door's motion.

Ensure trouble free operation with advanced controller features that provide:

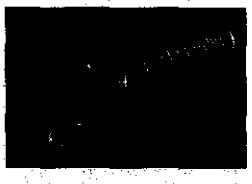
- *Automatic reset upon power up*
- *Fuse protection*
- *Electronic surge protection*
- *Internal power supply protection*

Range switch allows controller to limit the output of the system for heavy duty low energy applications.



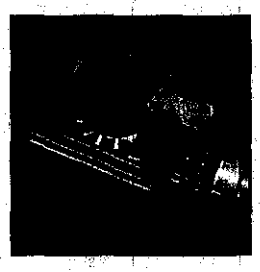
VERSATILE

- Non-handed
- In or Out Swing
- Concealed or Visible
- Full or Low Energy



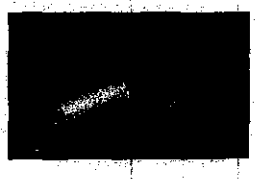
ADJUSTABLE

- Variable Spring Force
- Adjustable Closing Speed
- Adjustable Open Stop



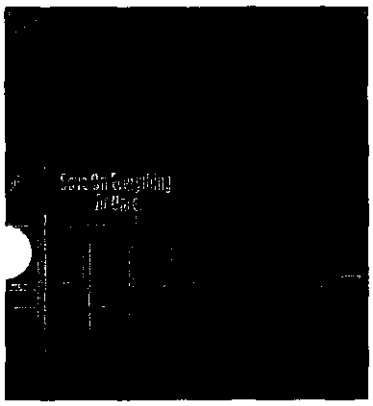
CONTROL

- Microprocessor Controlled
- Consistent Cycle
- Controlled Motion

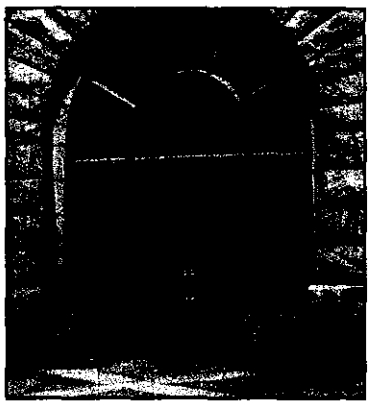


COMPACT POWER

- Precision Gear System
- Heavy Duty Spring
- Durable



DEPARTMENT STORES



OFFICE & PUBLIC BUILDINGS

SCHOOLS & UNIVERSITIES

HARDWARE

FASTENING SYSTEMS

MECHANICS TOOLS

HAND TOOLS

DOORS

AIR TOOLS

HYDRAULIC TOOLS

AUTOMATIC DOORS

Magic-Force™ Operator

FEATURES & BENEFITS:

- ***Full Energy/Low Energy Capable*** — The Magic-Force™ Operator design accommodates both full energy and low energy code requirements.
- ***Non-Handed Operator*** — This versatile operator can be used for right hand or left hand doors with minimal field adjustments. Allows for easy installation. In addition fewer parts are needod for a broad range of applications.
- ***Quiet Running Operation*** — Low noise level is a must! The Magic-Force™ operator is designed for impressively quiet performance.
- ***Consistent Cycle*** — Stanley's innovative design provides easy opening and positive closing under diverse canditions.
- ***Return From Breakout With Controlled Speed*** — Door automatically resots after breakout. Manual reset not required. In addition, the door will nat slam to the closed position after breakout.
- ***Manual Operation*** — Door will act as a manual closer without power applied. Important when used in ADA applications.
- ***Microprocessor Controlled*** — The advanced control box is highly versatile.
- ***Cycle Counter*** — Counter is ideal for preventative maintenance program scheduling and can be used for warranty calculations.
- ***Controls and Adjustments***

Power Opening Force:
Tarque adjustment eble to accommedate the Full Energy/Low Energy ANSI code requirements.

Closing Force:
Field Adjustable Spring

Open Speed, Close Speed, Open Check Speed:
Petentiameter Adjustable

Manual Opening Force:
Field Adjustable Spring allews this eperator te accammedete the Full Energy/Low Energy ANSI code requirements.

SPECIFICATIONS:

- ***Size*** — 4 5/8" (117.48mm) x 3 3/4" (95.25mm) x 18" (457.2mm)
- ***Door Weight*** — Up ta 350 lbs (158.7kg)
- ***Code Compliance*** — UL, cUL, ANSI A156.19, ANSI A156.10, NFPA 101, BOCA

Service & Installation

Stanley Access Tachnelegias designs, manufactures and markets autemetic dear systems werldwide. For mare than 65 years, we have set the global standard for smaoth, quiet aperatien, user safety, design flexibility, quality, reliability and ease of installatian. Our servica farce is Nerth America's largest and most comprehensive network davoted to the installatien and maintanance of autamatic dae; systems. This network cambines the global resources of Stanley with the unmatched customer respansiveness of lecal organizations to ensure every deer we sell and install prevides aur customars with worry-free eperatien.

For Servico, Call Stanley Toll Free: 1-888-DOOR-444.

STANLEY
MAKE SOMETHING GREAT™

Access Technologies: 65 Scott Swamp Road, Farmington, CT 06032
Toll Free: 1-800-7-ACCESS, In CT: 860-677-2861 Fax: 860-679-6436
Service: 1-888-DOOR-444 http://www.stanleyworks.com

STANLEY

JOB NAME _____

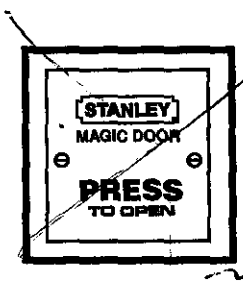
LOCATION _____

_____

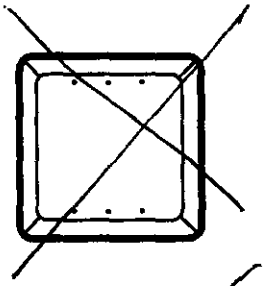
DOOR NUMBER _____

MANUAL ACTIVATORS

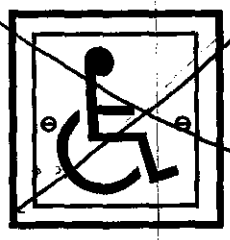
SQUARE PRESS SWITCH



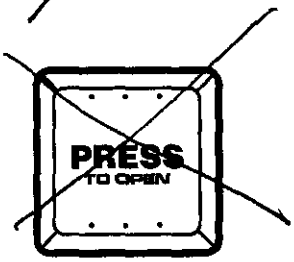
C-8
PRESS TO OPEN
ALUMINUM WALL PLATE
4" X 4"
5" X 5" BACK PLATE
(PTO)



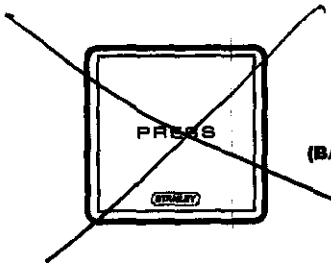
PLAIN
STAINLESS STEEL
4 1/2" X 4 1/2"



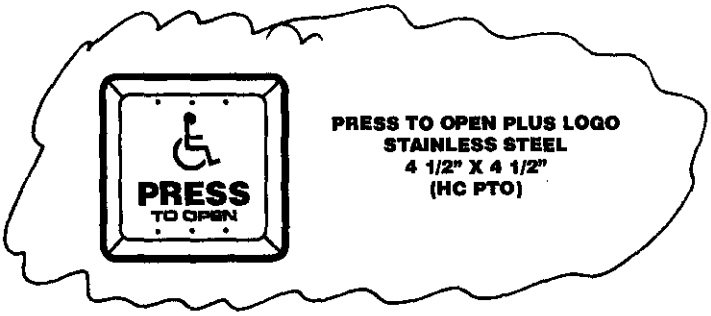
C-8
PRESS TO OPEN
ALUMINUM WALL PLATE
4" X 4"
5" X 5" BACK PLATE
(HC)



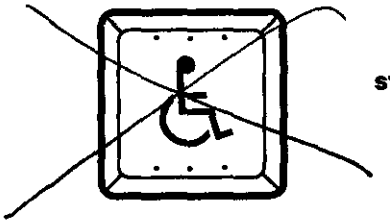
PRESS TO OPEN
STAINLESS STEEL
4 1/2" X 4 1/2"
(PTO)



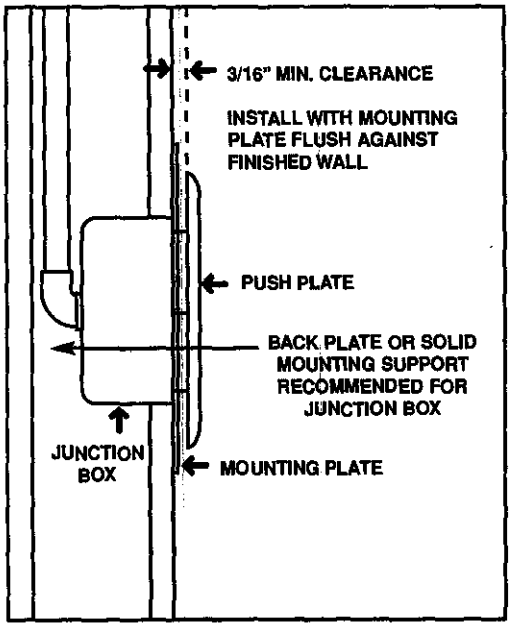
VINYL PUSH PAD
4" X 4"
(BACKING PLATE AVAILABLE
IN CLEAR OR BRONZE)



PRESS TO OPEN PLUS LOGO
STAINLESS STEEL
4 1/2" X 4 1/2"
(HC PTO)



LOGO
STAINLESS STEEL
4 1/2" X 4 1/2"
(HC)



HARDWIRE

1. (2) #18 LOW VOLTAGE WIRES (OR PER LOCAL CODE) REQUIRED FROM OPERATOR TO EACH PUSH PLATE BY ELEC. CONTR.
2. JUNCTION BOX BY ELEC. CONTR.

STANLEY

JOB NAME _____

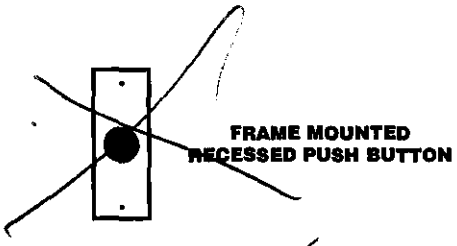
LOCATION _____

_____

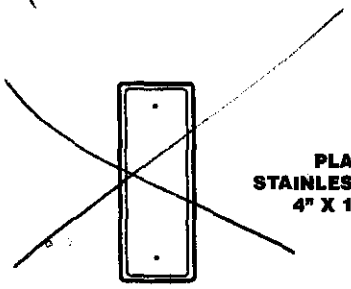
DOOR NUMBER _____

MANUAL ACTIVATORS

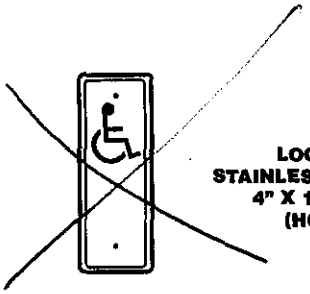
FRAME MOUNTED PRESS SWITCH



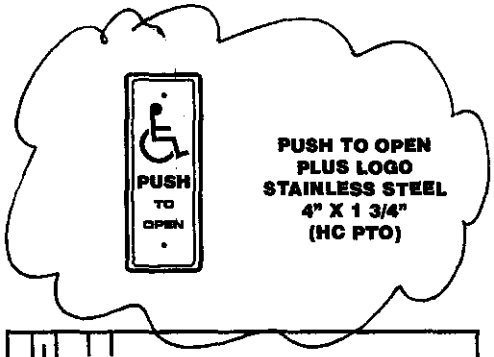
FRAME MOUNTED
RECESSED PUSH BUTTON



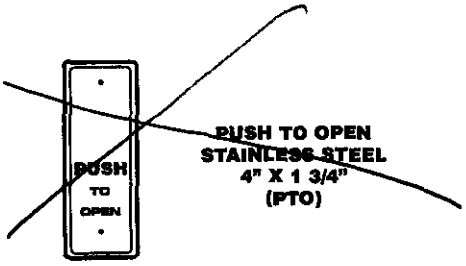
PLAIN
STAINLESS STEEL
4" X 1 3/4"



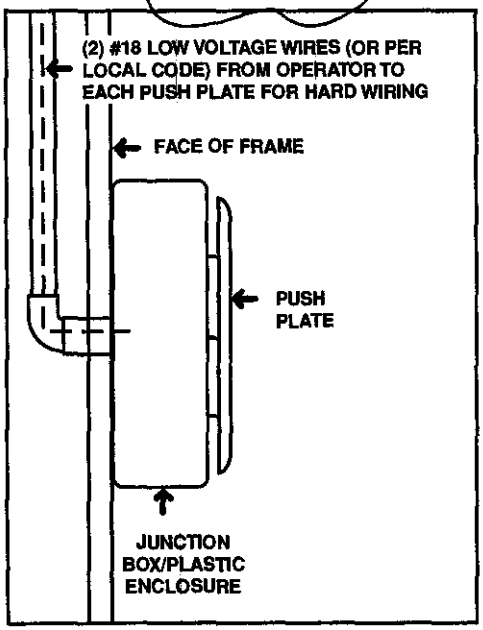
LOGO
STAINLESS STEEL
4" X 1 3/4"
(HC)



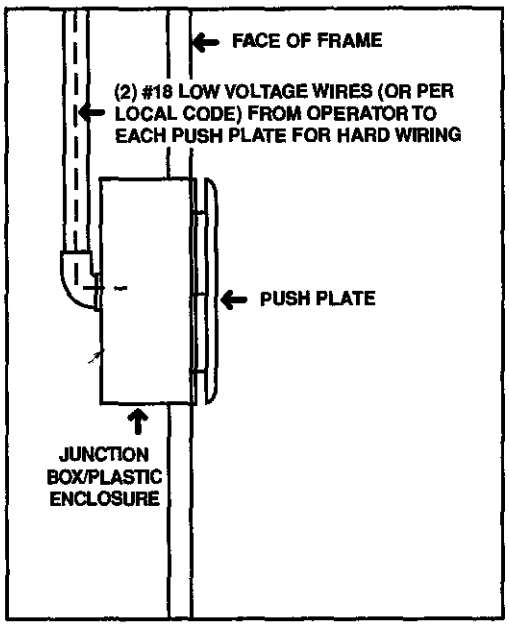
PUSH TO OPEN
PLUS LOGO
STAINLESS STEEL
4" X 1 3/4"
(HC PTO)



PUSH TO OPEN
STAINLESS STEEL
4" X 1 3/4"
(PTO)



SURFACE MOUNTED
HARDWIRE OR BATTERY



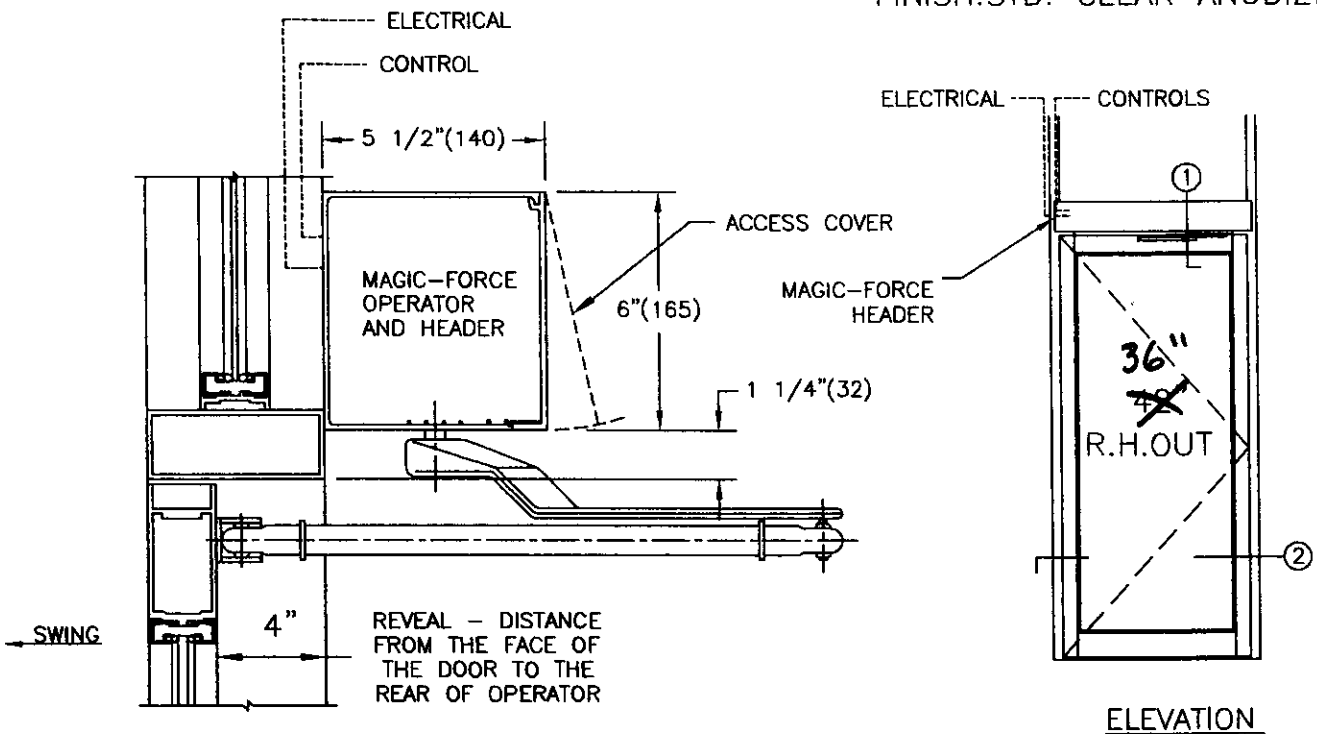
FLUSH MOUNTED
HARDWIRE OR BATTERY

STANLEY

JOB NAME U of K PATIENT PARKING GARAGE
LOCATION LEXINGTON,KY 07/11/06
DOOR NUMBER LOWER LEVEL #010

MAGIC-FORCE
SINGLE DOOR
VISIBLE R.H. "OUT"

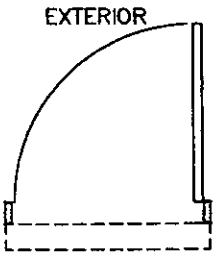
FINISH:STD. CLEAR ANODIZE



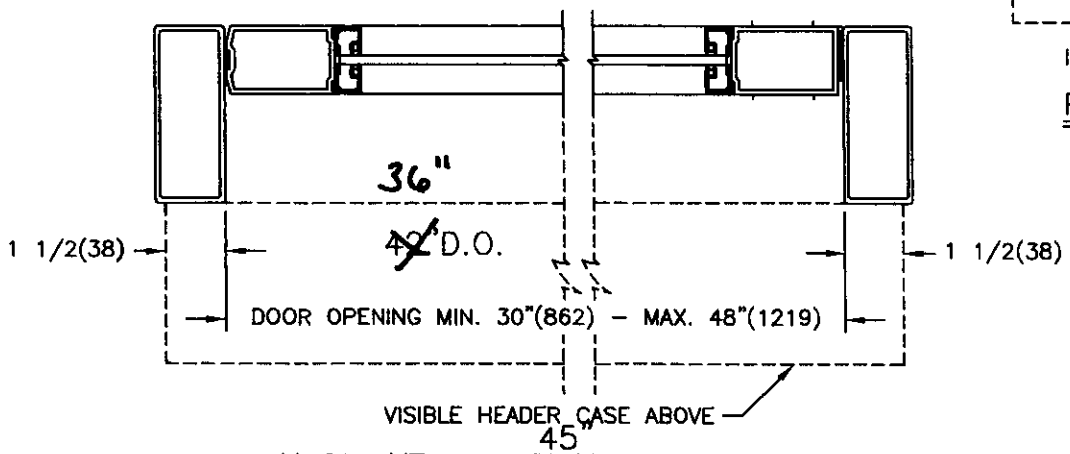
1 VERTICAL SECTION

ELEVATION

INCLUDES (2) WIRELESS PUSH PLATES.



PLAN



2 HORIZONTAL SECTION

NOTES:
1. DETAILS NOT TO SCALE.
2. ELECTRICAL REQUIREMENTS:
   12DVAC, 5AMPS MIN. TO OPERATOR BY ELECTRICAL CONTRACTOR.
3. DOORS, FRAMES AND HARDWARE BY OTHERS.
4. 32" CLEAR DOOR OPENING REQUIRED TO MEET A.D.A. REQUIREMENTS.
5. DOORS MUST BE NON-LATCHED FOR PROPER OPERATION.

STANLEY

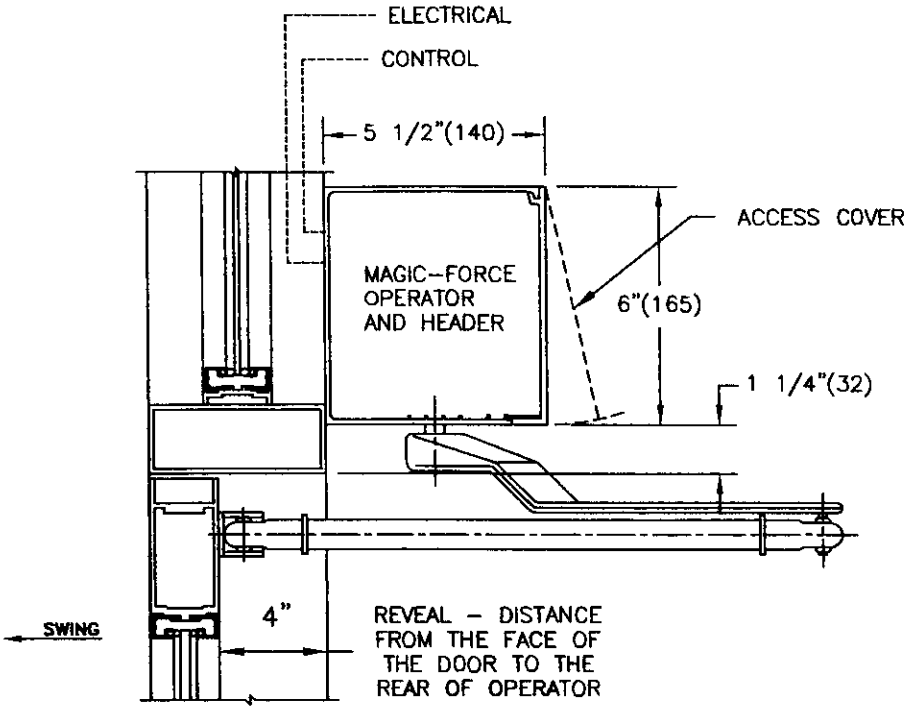
JOB NAME U of K PATIENT PARKING GARAGE
LOCATION LEXINGTON,KY 07/11/06

DOOR NUMBER LOWER LEVEL #010A

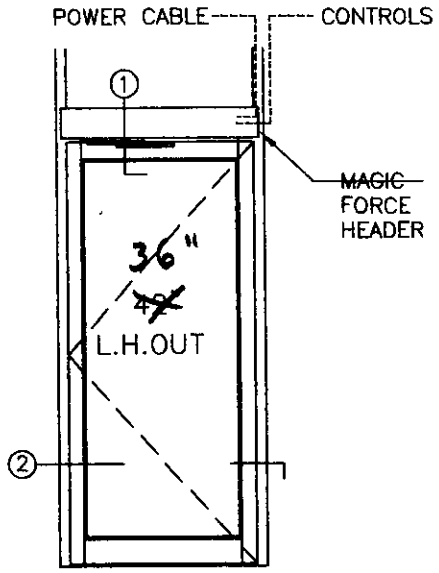
MAGIC-FORCE
SINGLE DOOR

VISIBLE L.H. "OUT"

FINISH:STD.CLEAR ANODIZE

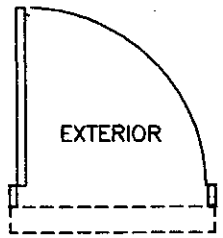


1 VERTICAL SECTION

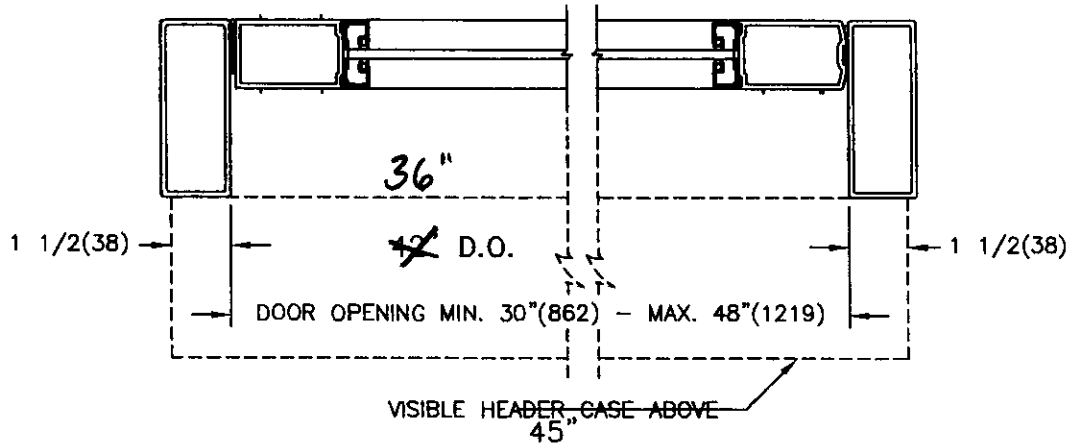


ELEVATION

INCLUDES (2) WIRELESS PUSH PLATES.



PLAN



2 HORIZONTAL SECTION

NOTES:
1. DETAILS NOT TO SCALE.
2. ELECTRICAL REQUIREMENTS:
   120VAC, 5AMPS MIN. TO OPERATOR BY ELECTRICAL CONTRACTOR.
3. DOORS, FRAMES AND HARDWARE BY OTHERS.
4. 32" CLEAR DOOR OPENING REQUIRED TO MEET A.D.A. REQUIREMENTS.
5. DOORS MUST BE NON-LATCHED FOR PROPER OPERATION.

STANLEY

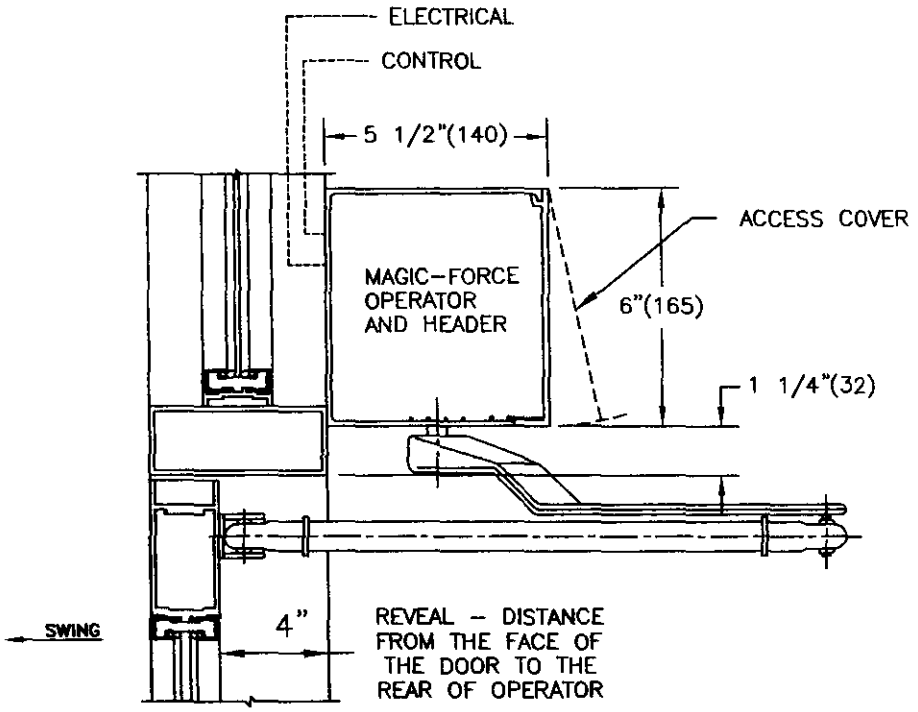
JOB NAME U of K PATIENT PARKING GARAGE
LOCATION LEXINGTON,KY 07/11/06

DOOR NUMBER GRADE LEVEL #110A

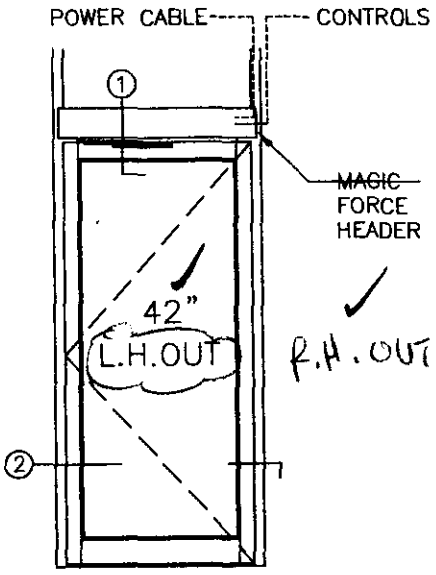
MAGIC-FORCE
SINGLE DOOR

VISIBLE L.H. "OUT"

FINISH:STD. CLEAR ANODIZE

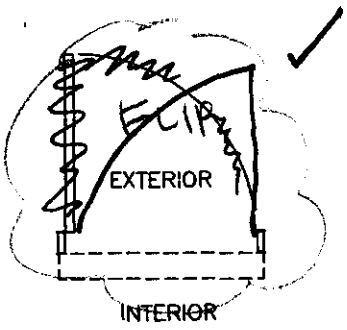


1 VERTICAL SECTION

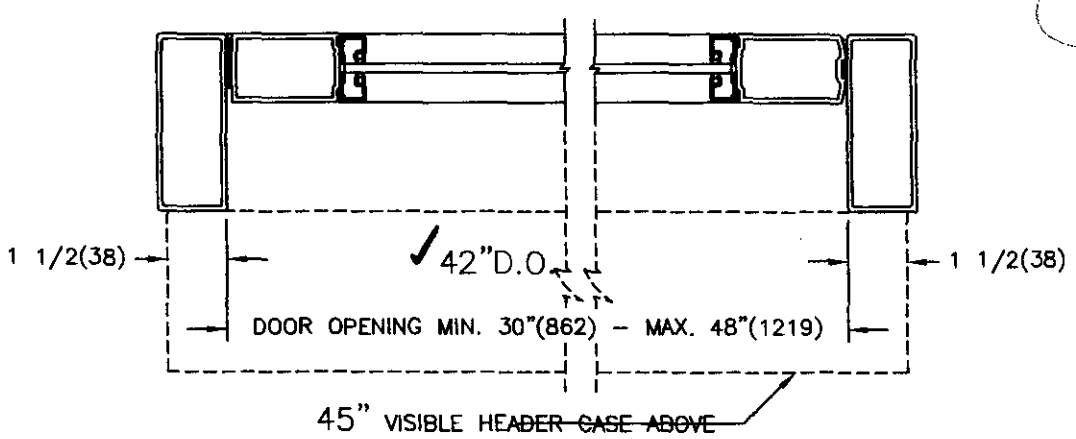


ELEVATION

INCLUDES (2) WIRELESS PUSH PLATES.



PLAN



2 HORIZONTAL SECTION

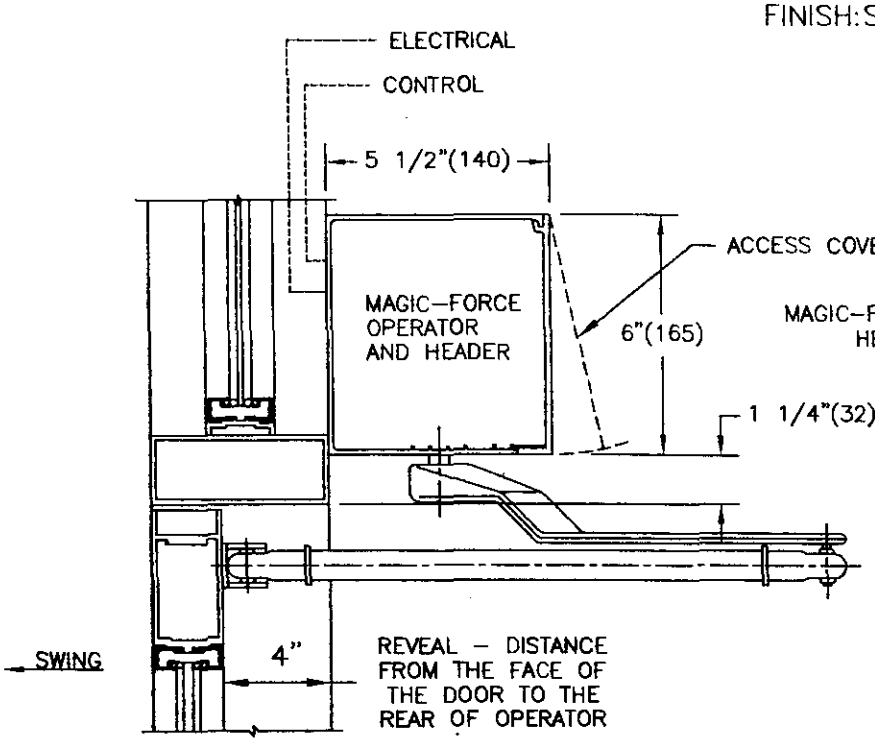
NOTES:
1. DETAILS NOT TO SCALE.
2. ELECTRICAL REQUIREMENTS:
   120VAC, 5AMPS MIN. TO OPERATOR BY ELECTRICAL CONTRACTOR.
3. DOORS, FRAMES AND HARDWARE BY OTHERS.
4. 32" CLEAR DOOR OPENING REQUIRED TO MEET A.D.A. REQUIREMENTS.
5. DOORS MUST BE NON-LATCHED FOR PROPER OPERATION.

STANLEY

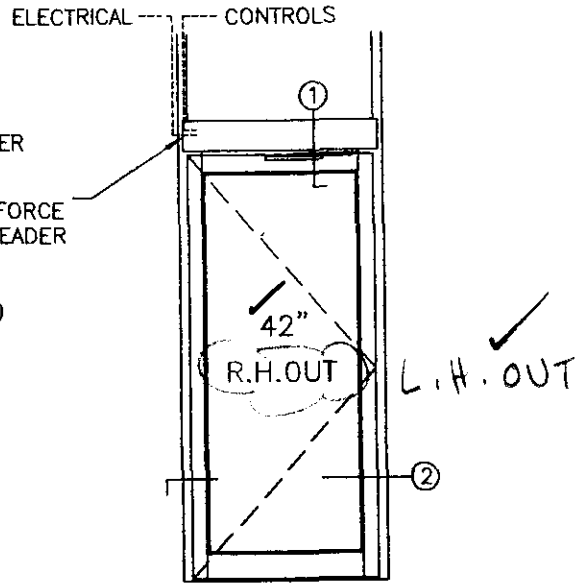
JOB NAME U OF K PATIENT PARKING GARAGE
LOCATION LEXINGTON,KY 07/11/06
DOOR NUMBER GRADE LEVEL #110

MAGIC-FORCE
SINGLE DOOR
VISIBLE R.H. "OUT"

FINISH:STD. CLEAR ANODIZE

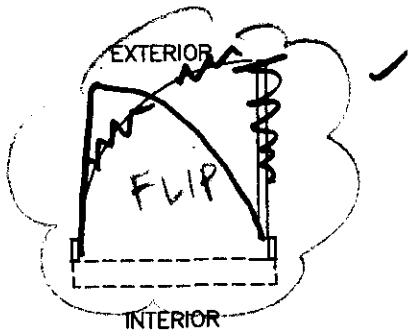


1 VERTICAL SECTION

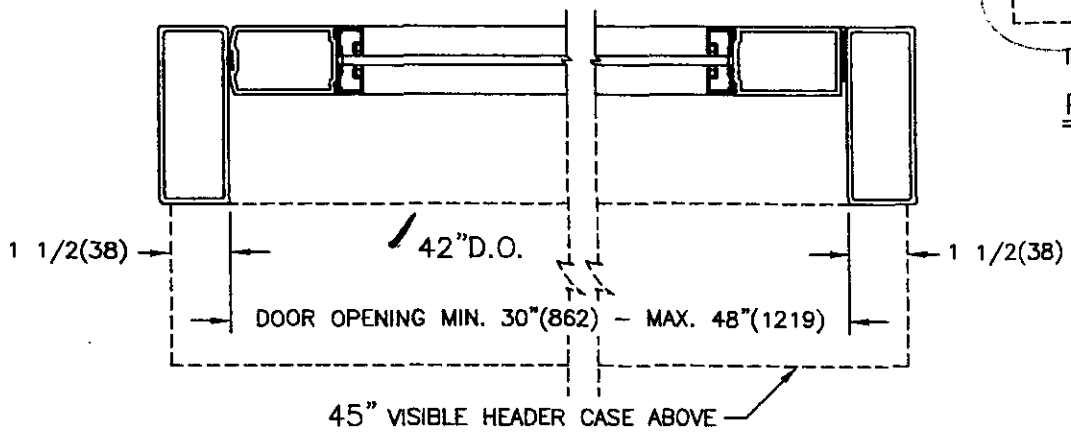


ELEVATION

INCLUDES (2) WIRELESS PUSH PLATES.



PLAN



2 HORIZONTAL SECTION

NOTES:
1. DETAILS NOT TO SCALE.
2. ELECTRICAL REQUIREMENTS:
   120VAC, 5AMPS MIN. TO OPERATOR BY ELECTRICAL CONTRACTOR.
3. DOORS, FRAMES AND HARDWARE BY OTHERS.
4. 32" CLEAR DOOR OPENING REQUIRED TO MEET A.D.A. REQUIREMENTS.
5. DOORS MUST BE NON–LATCHED FOR PROPER OPERATION.

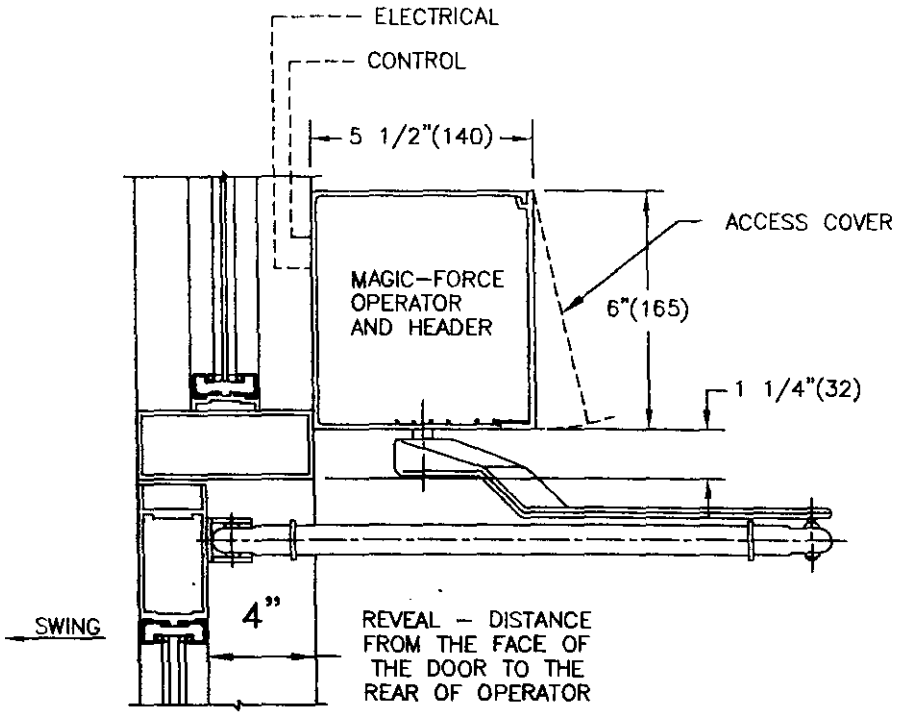
STANLEY

LOCATION LEXINGTON,KY 07/11/06

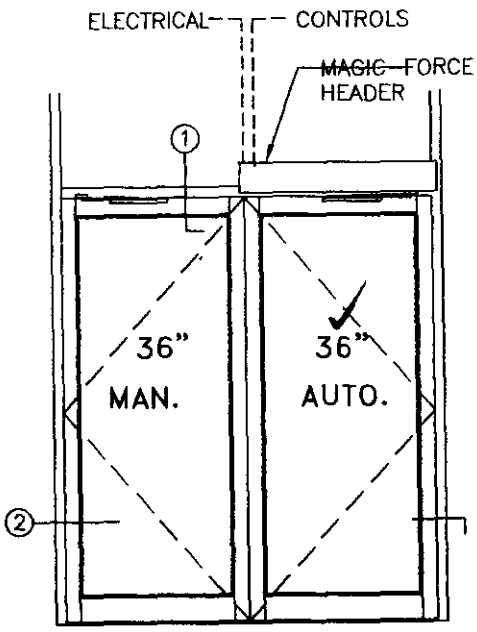
DOOR NUMBER GRADE LEVEL #107 R.H.OUT

MAGIC-FORCE
PAIR DOORS
R.H.
VISIBLE "OUT"

FINISH:STD.CLEAR ANODIZE



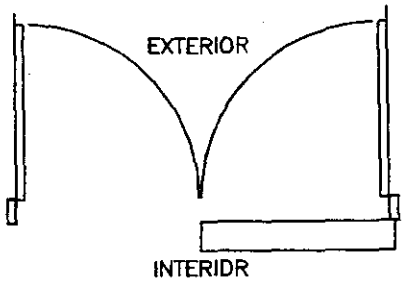
① VERTICAL SECTION



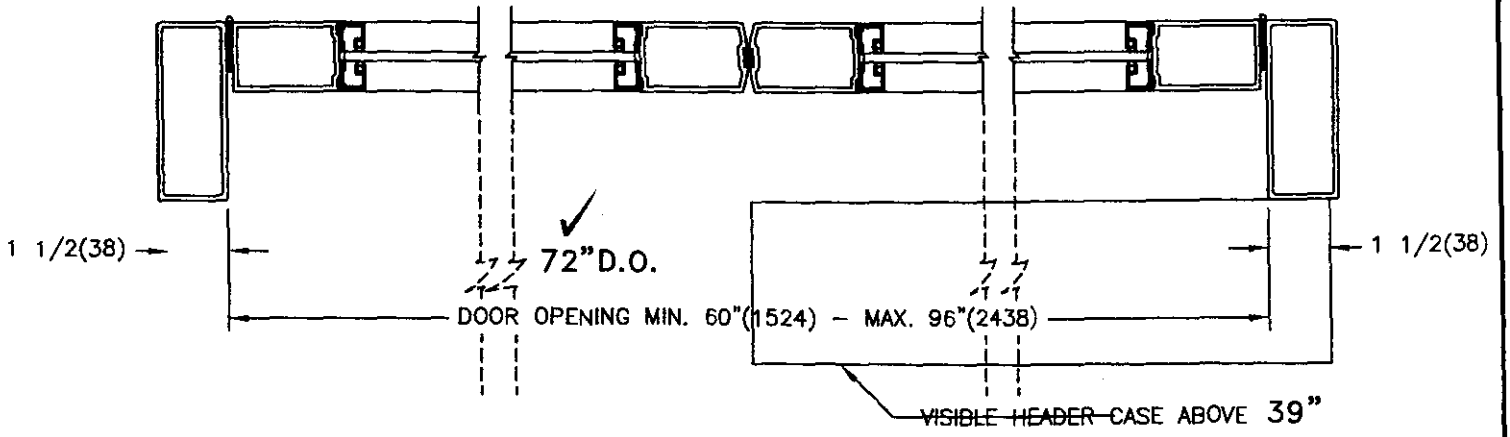
ELEVATION

INCLUDES (2) WIRELESS PUSH PLATES

ARCHITECT TO VERIFY AUTO HAND.



PLAN



② HORIZONTAL SECTION

NOTES:
1. DETAILS NOT TO SCALE.
2. ELECTRICAL REQUIREMENTS:
   120VAC, 10AMPS MIN. TO OPERATOR
   BY ELECTRICAL CONTRACTDR.
3. DOORS, FRAMES AND HARDWARE BY OTHERS.
4. DOORS MUST BE NON-LATCHED FOR PROPER OPERATION.

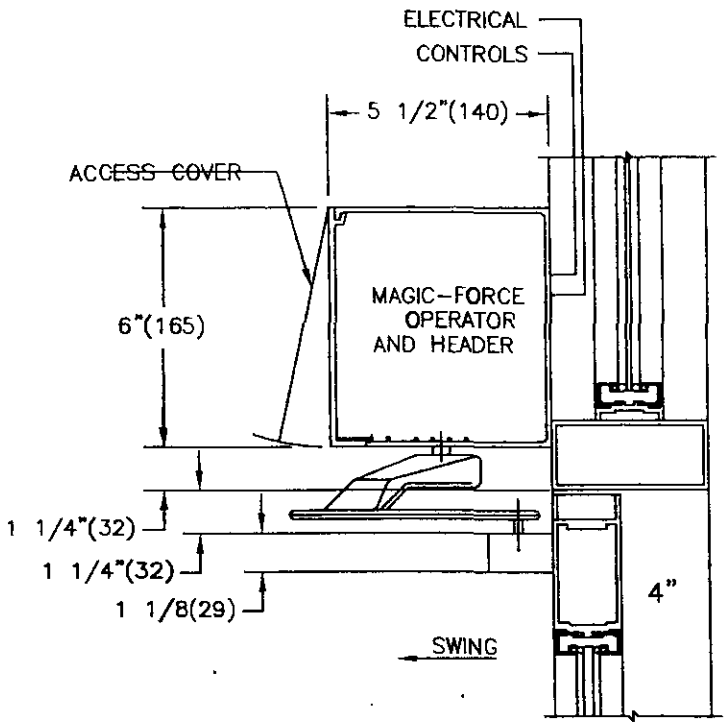
STANLEY

LOCATION LEXINGTON,KY 07/11/06

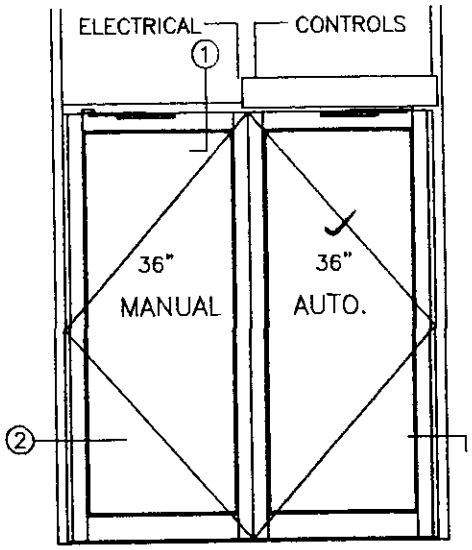
DOOR NUMBER GRADE LEVEL #107A L.H IN

MAGIC FORCE
PAIR DOORS
L.H.
VISIBLE "IN"

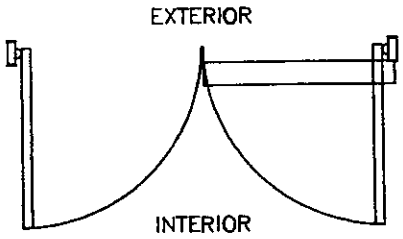
FINISH:STD. CLEAR ANODIZE



① VERTICAL SECTION



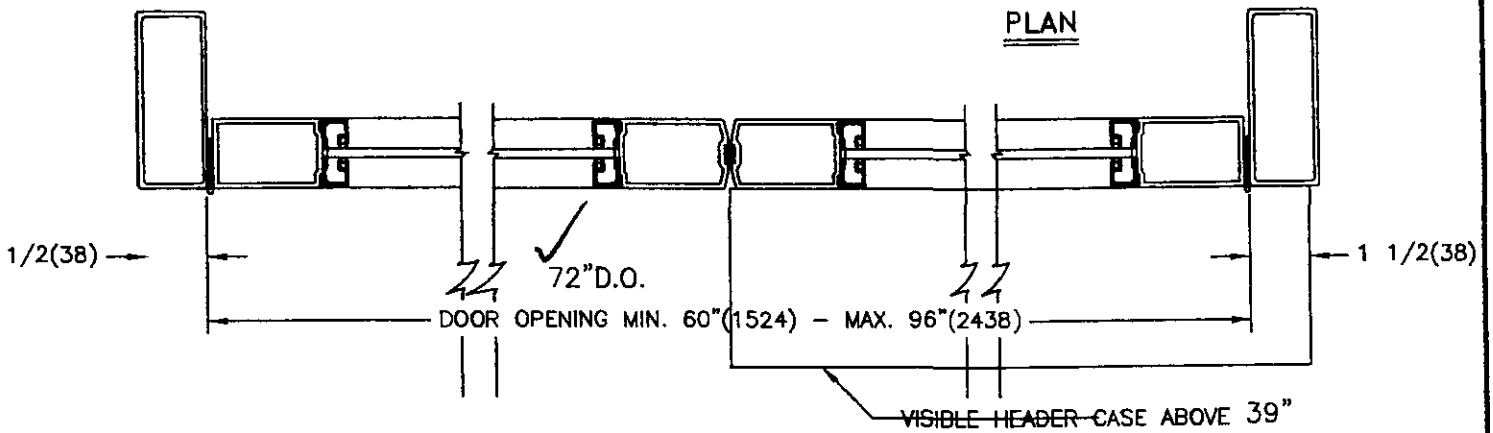
ELEVATION



INCLUDES (2) WIRELESS PUSH PLATES.

ARCHITECT TO VERIFY AUTO HAND.

PLAN



② HORIZONTAL SECTION

NOTES:
1. DETAILS NOT TO SCALE.
2. ELECTRICAL REQUIREMENTS:
   120VAC, 10AMPS MIN. TO OPERATOR
   BY ELECTRICAL CONTRACTOR.
3. DOORS, FRAMES AND HARDWARE BY OTHERS.
4. DOORS MUST BE NON-LATCHED FOR PROPER OPERATION.

STANLEY

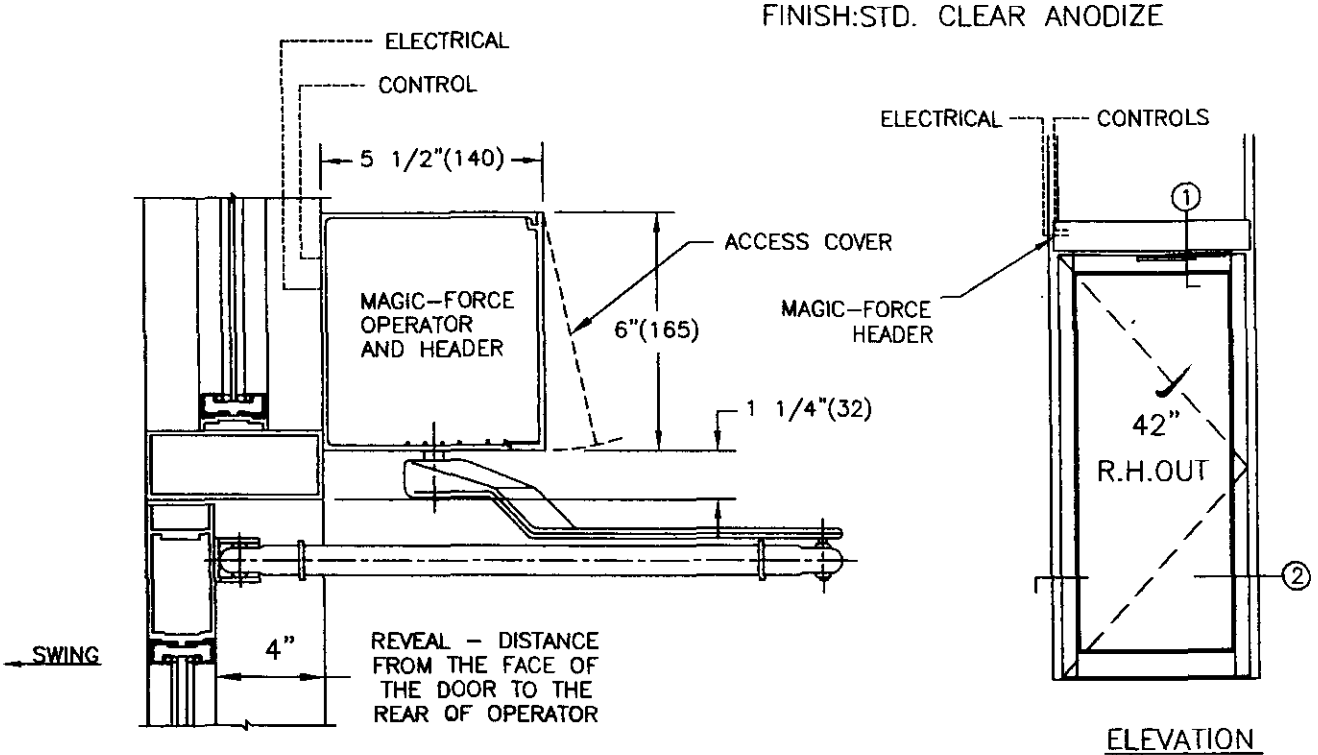
JOB NAME U of K PATIENT PARKING GARAGE
LOCATION LEXINGTON,KY 07/11/06

DOOR NUMBER 2ND LEVEL #210

MAGIC-FORCE
SINGLE DOOR

VISIBLE R.H. "OUT"

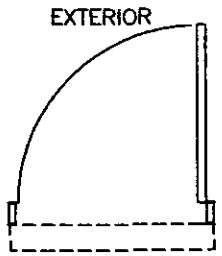
FINISH:STD. CLEAR ANODIZE



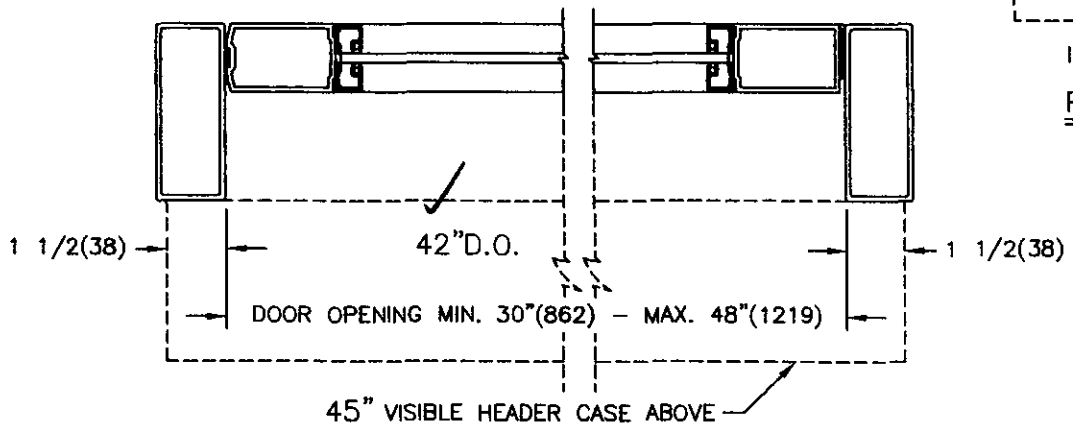
ELEVATION

1 VERTICAL SECTION

INCLUDES (2) WIRELESS PUSH PLATES.



PLAN



2 HORIZONTAL SECTION

NOTES:
1. DETAILS NOT TO SCALE.
2. ELECTRICAL REQUIREMENTS:
   120VAC, 5AMPS MIN. TO OPERATOR BY ELECTRICAL CONTRACTOR.
3. DOORS, FRAMES AND HARDWARE BY OTHERS.
4. 32" CLEAR DOOR OPENING REQUIRED TO MEET A.D.A. REQUIREMENTS.
5. DOORS MUST BE NON-LATCHED FOR PROPER OPERATION.

STANLEY

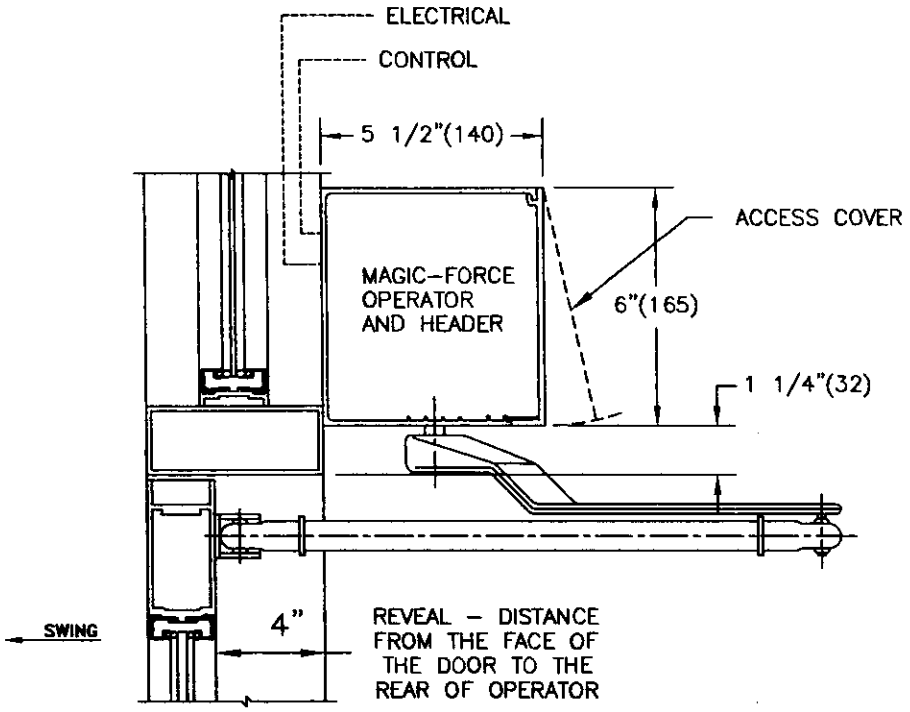
LOCATION LEXINGTON,KY 07/11/06

DOOR NUMBER 3RD LEVEL 310C

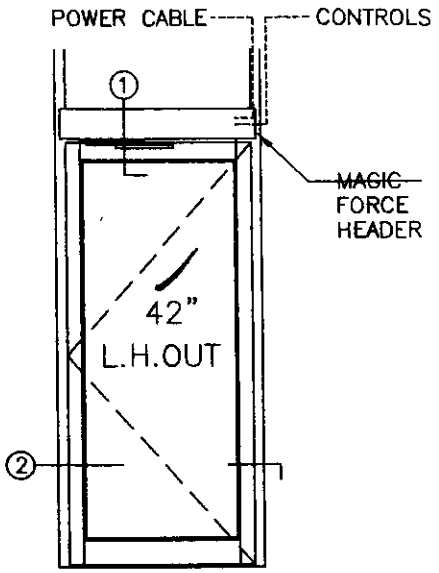
MAGIC FORCE
SINGLE DOOR

VISIBLE L.H. "OUT"

FINISH:STD. CLEAR ANODIZE

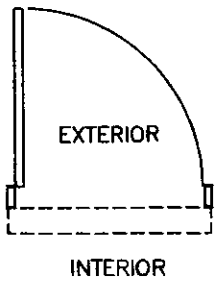


1 VERTICAL SECTION

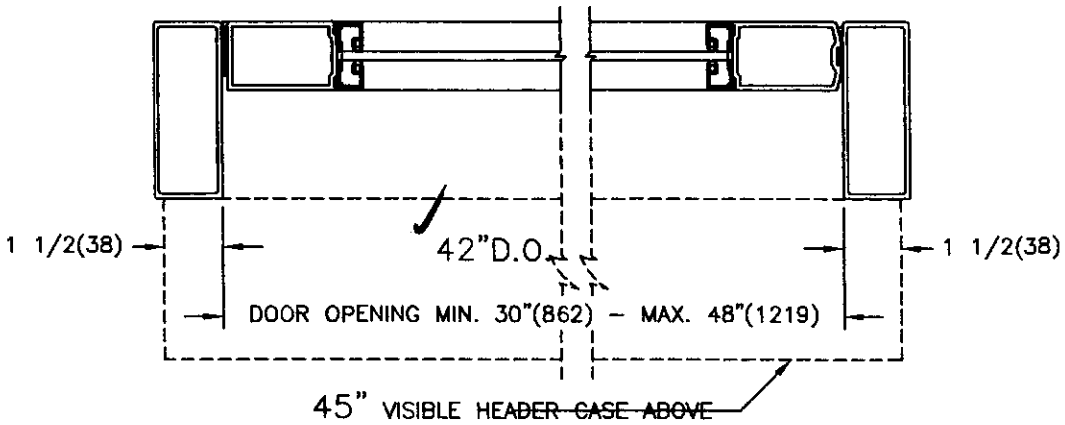


ELEVATION

INCLUDES (2) WIRELESS PUSH PLATES.



PLAN



2 HORIZONTAL SECTION

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STANLEY

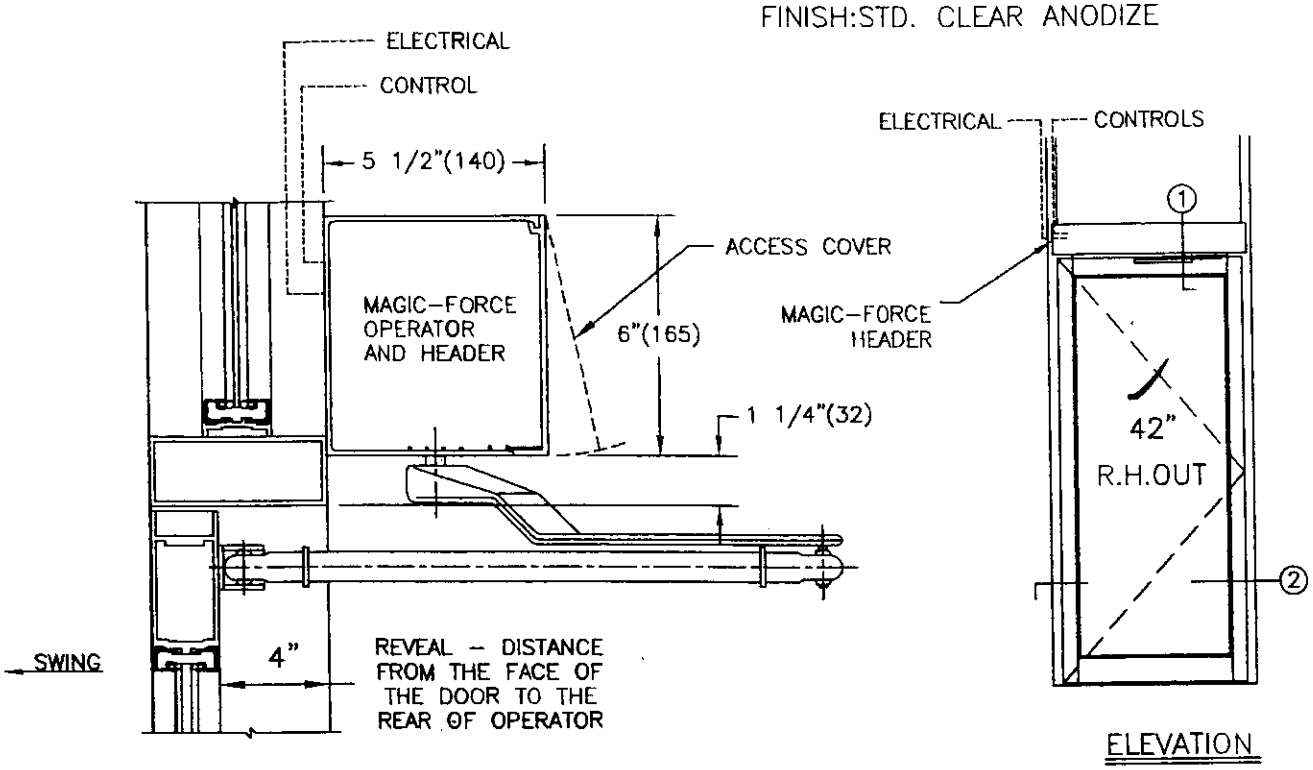
LOCATION LEXINGTON,KY 07/11/06

DOOR NUMBER 4TH LEVEL #410

SINGLE DOOR

VISIBLE R.H. "OUT"

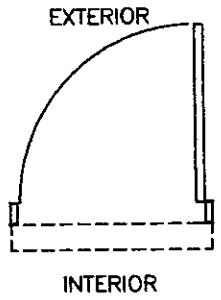
FINISH:STD. CLEAR ANODIZE



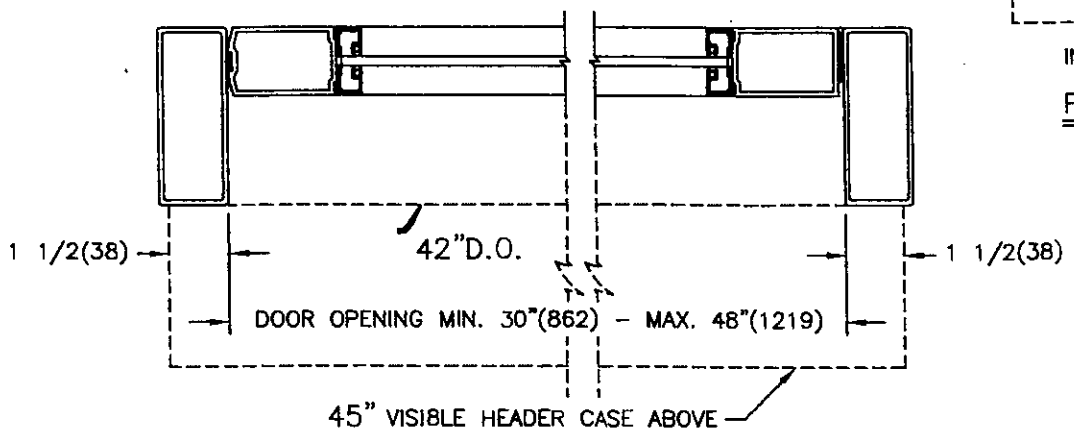
ELEVATION

1 VERTICAL SECTION

INCLUDES (2) WIRELESS PUSH PLATES.



PLAN



2 HORIZONTAL SECTION

NOTES:
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STANLEY

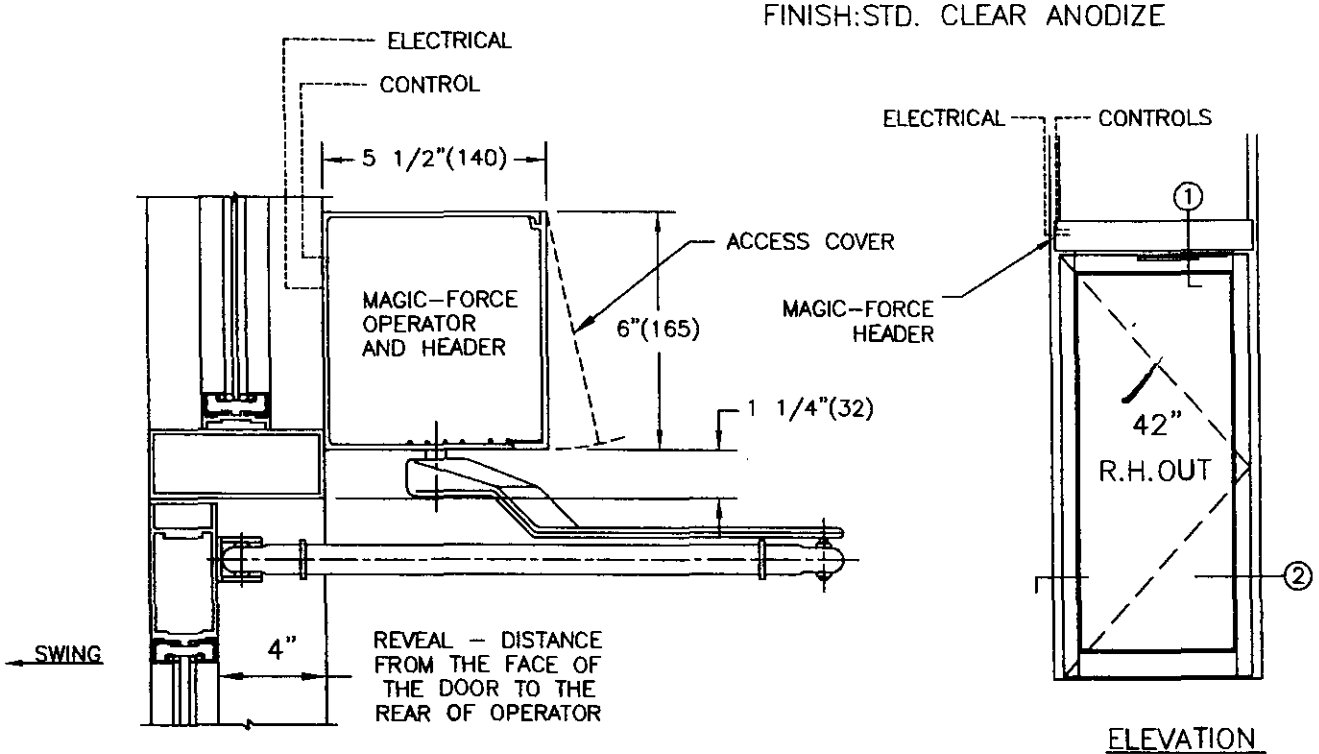
LOCATION LEXINGTON,KY 07/11/06

DOOR NUMBER 5TH LEVEL #510

MAGIC FORCE
SINGLE DOOR

VISIBLE R.H. "OUT"

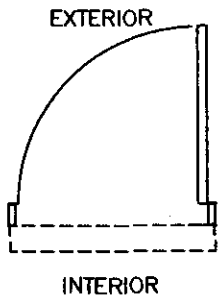
FINISH:STD. CLEAR ANODIZE



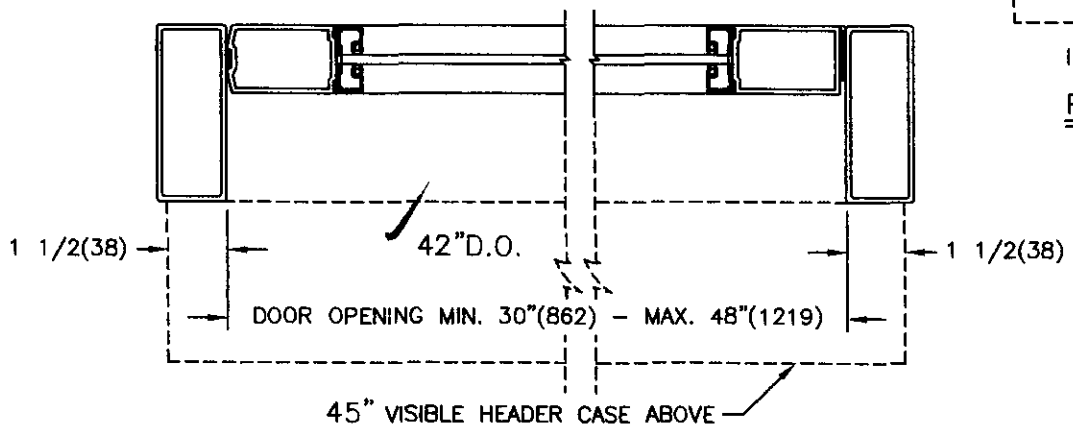
ELEVATION

1 VERTICAL SECTION

INCLUDES (2) WIRELESS PUSH PLATES.



PLAN



2 HORIZONTAL SECTION

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STANLEY

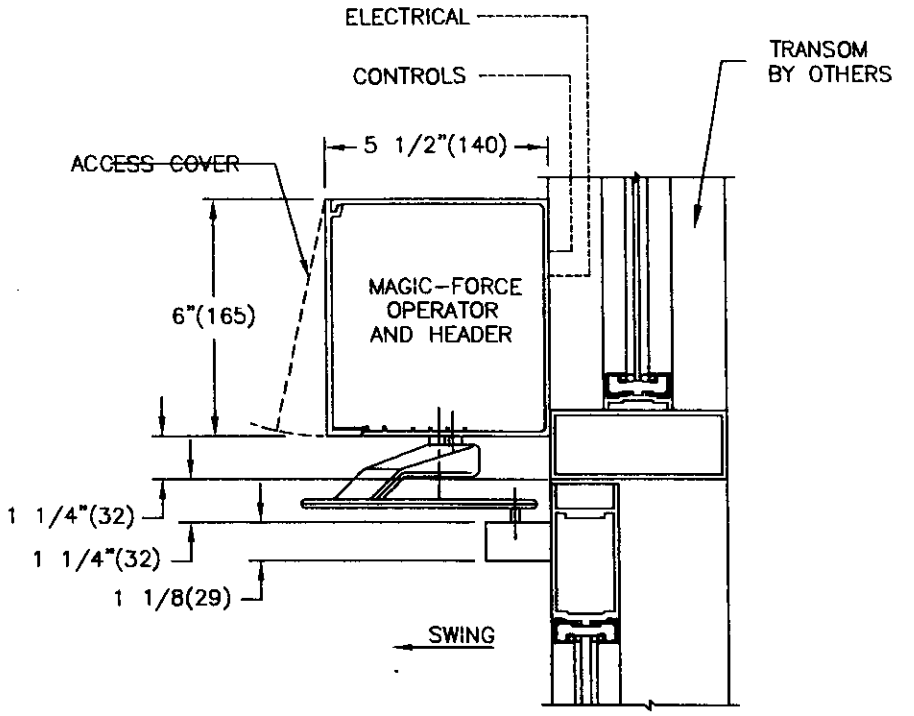
LOCATION LEXINGTON,KY 07/11/07

DOOR NUMBER 5TH FLOOR 510B

MAGIC FORCE
SINGLE DOOR

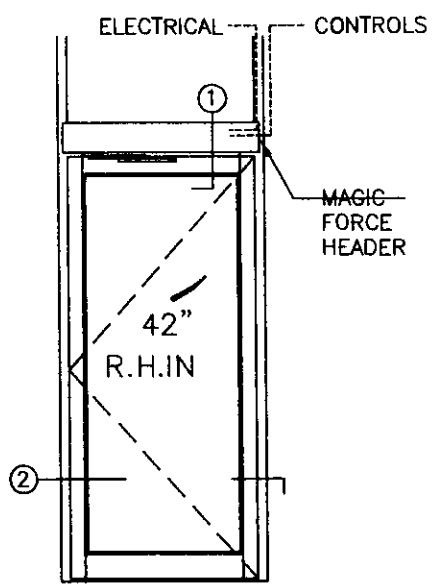
VISIBLE R.H. "IN"

FINISH:STD.CLEAR ANODIZE

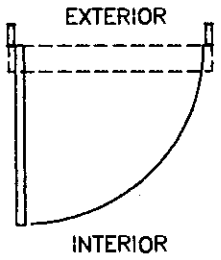


① VERTICAL SECTION

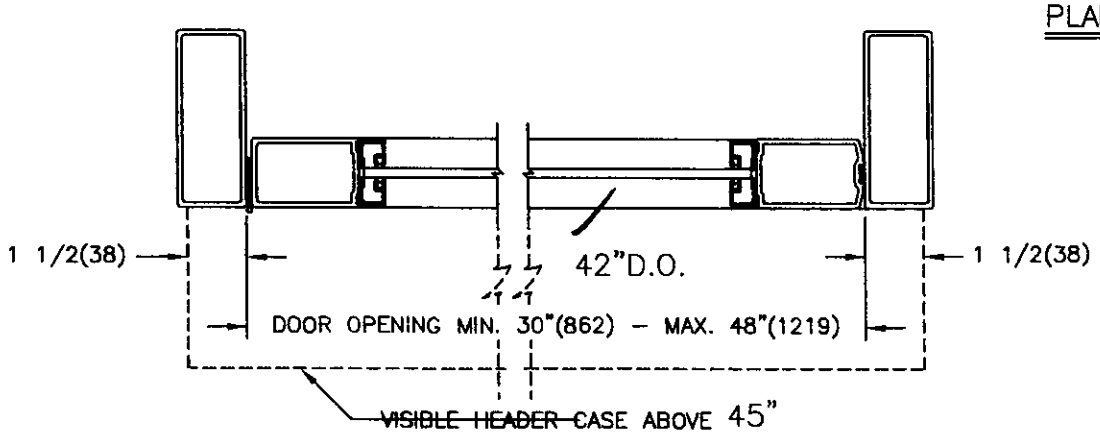
INCLUDES (2) WIRELESS PUSH PLATES.



ELEVATION



PLAN



② HORIZONTAL SECTION

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STANLEY

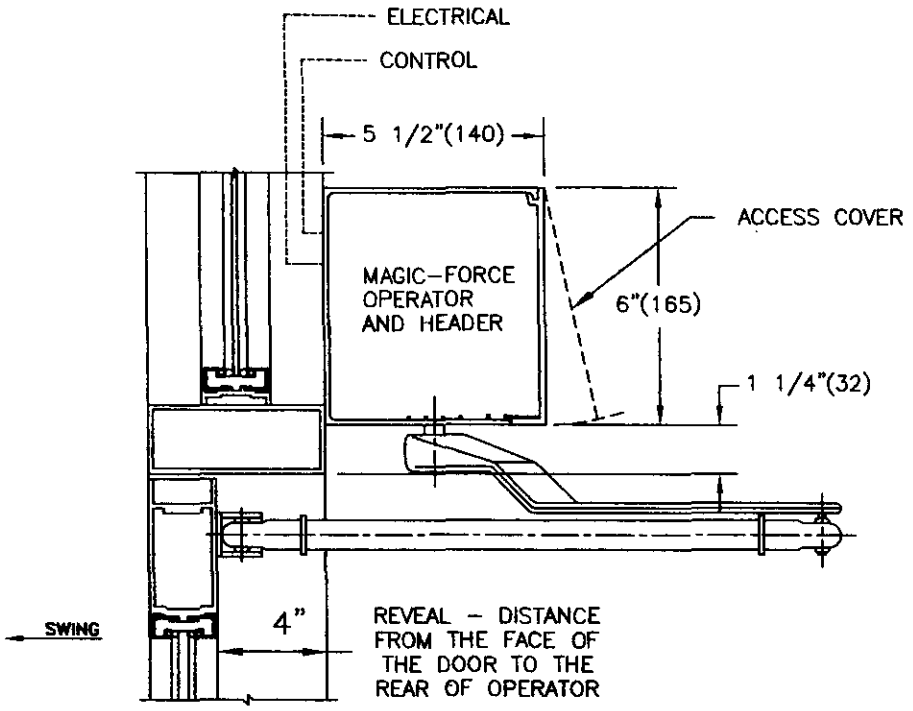
LOCATION LEXINGTON,KY 07/11/06

DOOR NUMBER 5TH FLOOR 510C

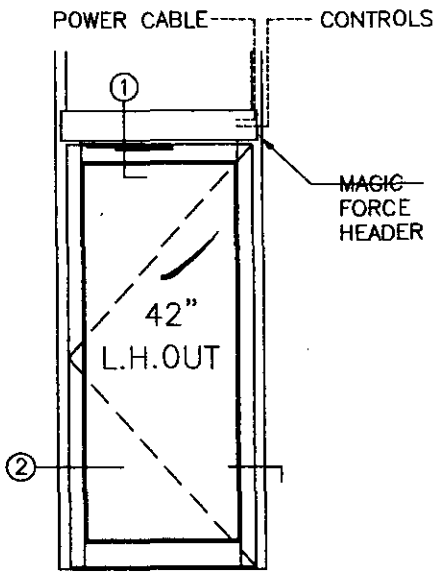
MAGIC-FORCE
SINGLE DOOR

VISIBLE L.H. "OUT"

FINISH:STD. CLEAR ANODIZE

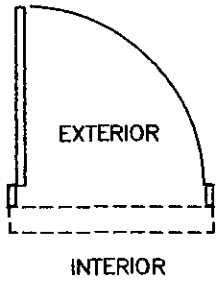


1 VERTICAL SECTION

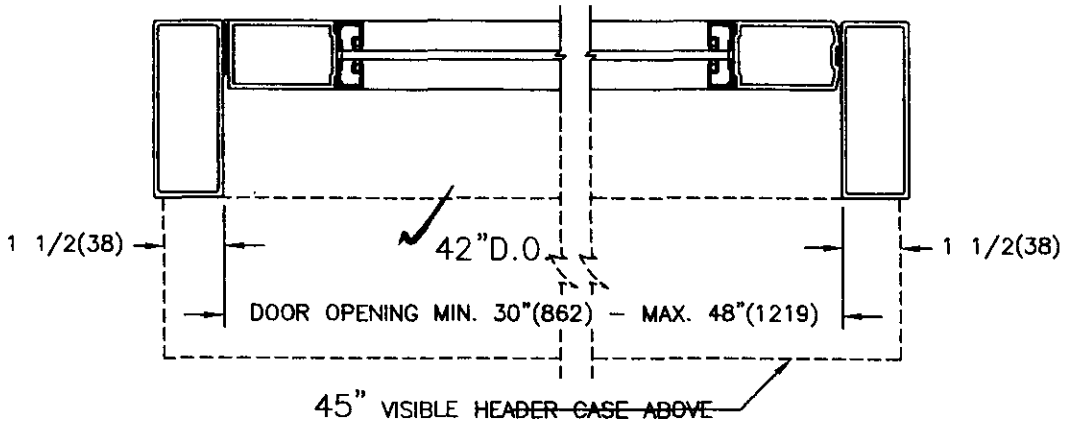


ELEVATION

INCLUDES (2) WIRELESS PUSH PLATES.



PLAN



2 HORIZONTAL SECTION

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STANLEY

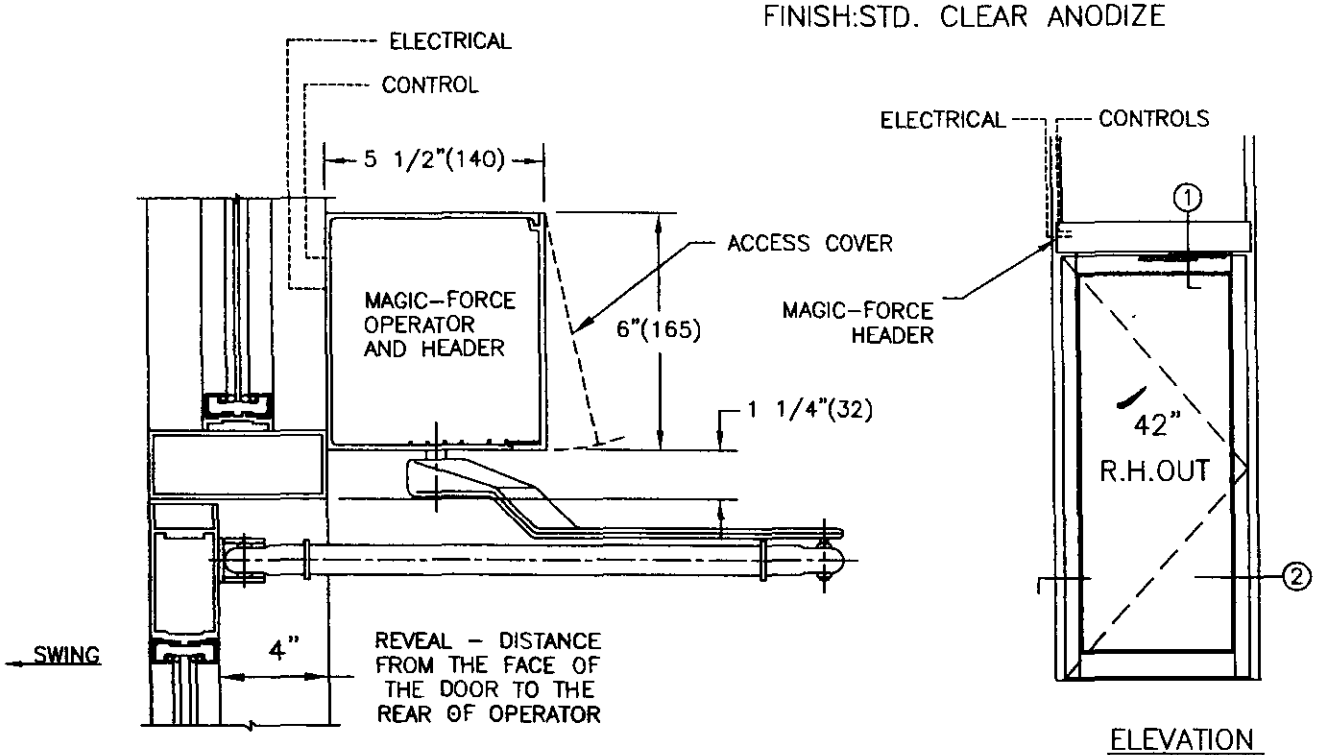
LOCATION LEXINGTON,KY 07/11/06

DOOR NUMBER 6TH LEVEL #610

MAGIC-FORCE
SINGLE DOOR

VISIBLE R.H. "OUT"

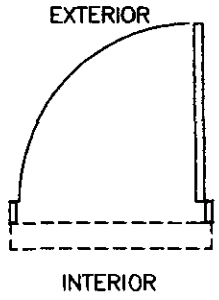
FINISH:STD. CLEAR ANODIZE



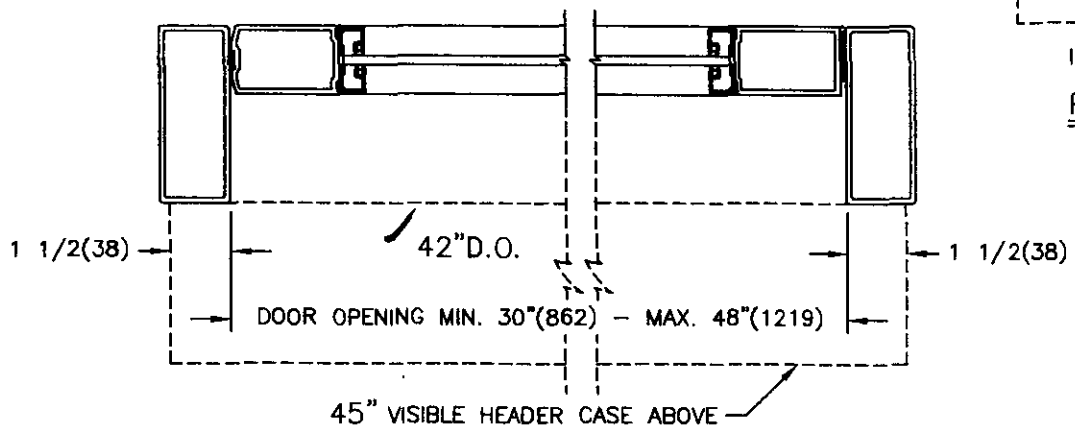
ELEVATION

1 VERTICAL SECTION

INCLUDES (2) WIRELESS PUSH PLATES.



PLAN



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STANLEY

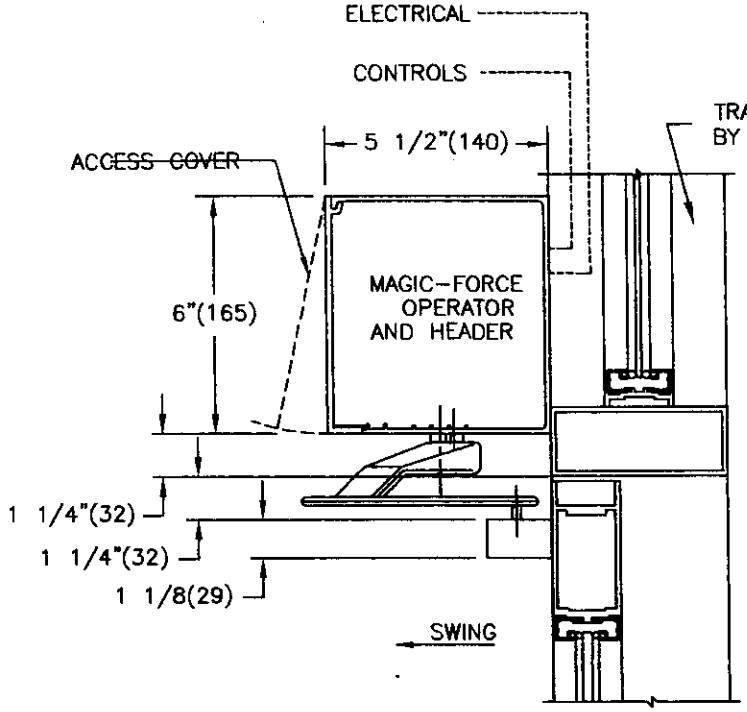
LOCATION LEXINGTON,KY. 07/11/06

DOOR NUMBER 6TH FLOOR #610A

SINGLE DOOR

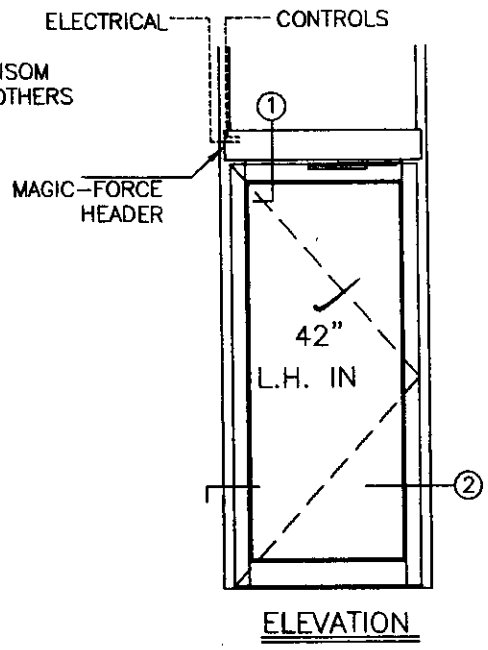
VISIBLE L.H. "IN"

FINISH:STD. CLEAR ANODIZE

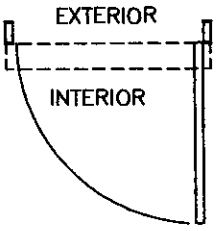


① VERTICAL SECTION

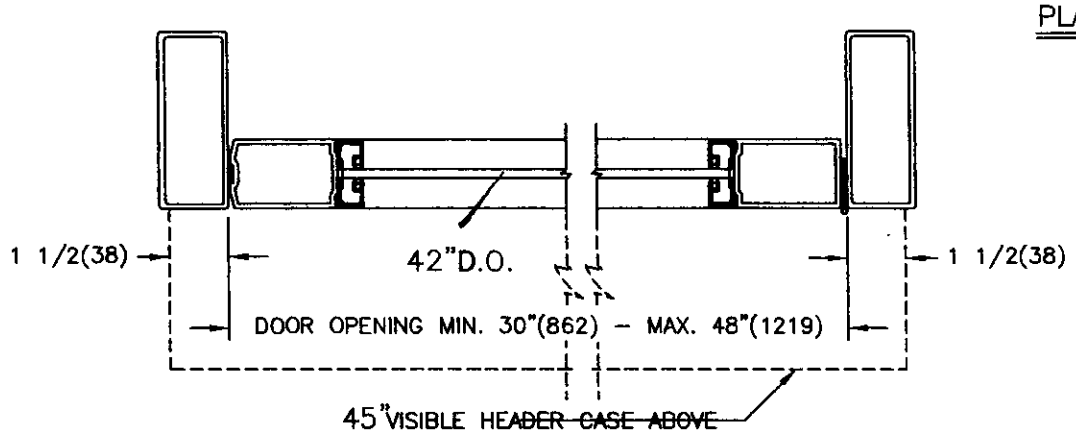
INCLUDES (2) WIRELESS PUSH PLATES.



ELEVATION



PLAN



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STANLEY

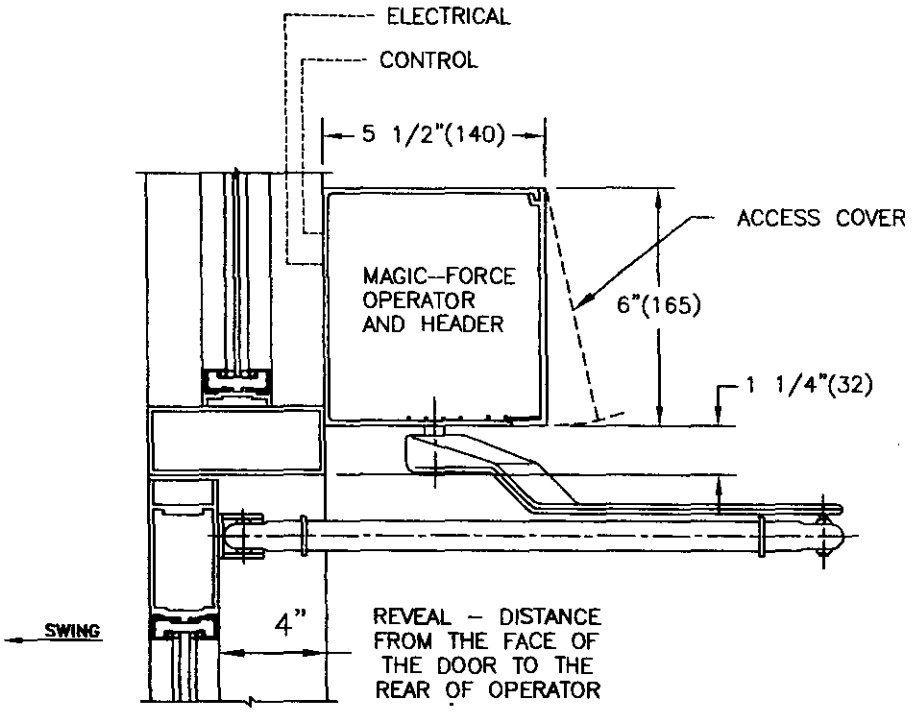
LOCATION LEXINGTON,KY 07/11/06

DOOR NUMBER 6TH LEVEL #610B

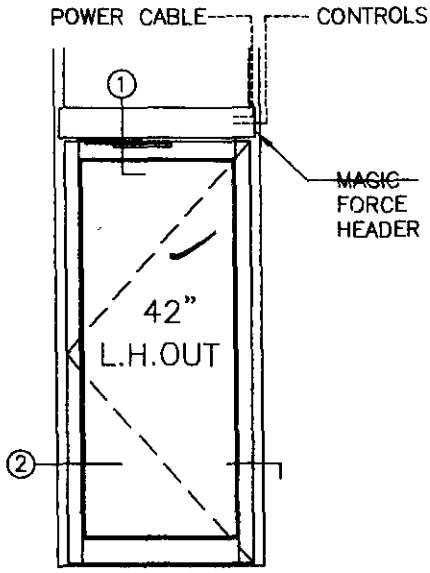
SINGLE DOOR

VISIBLE L.H. "OUT"

FINISH:STD. CLEAR ANODIZE

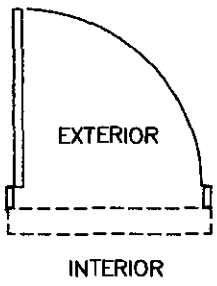


1 VERTICAL SECTION

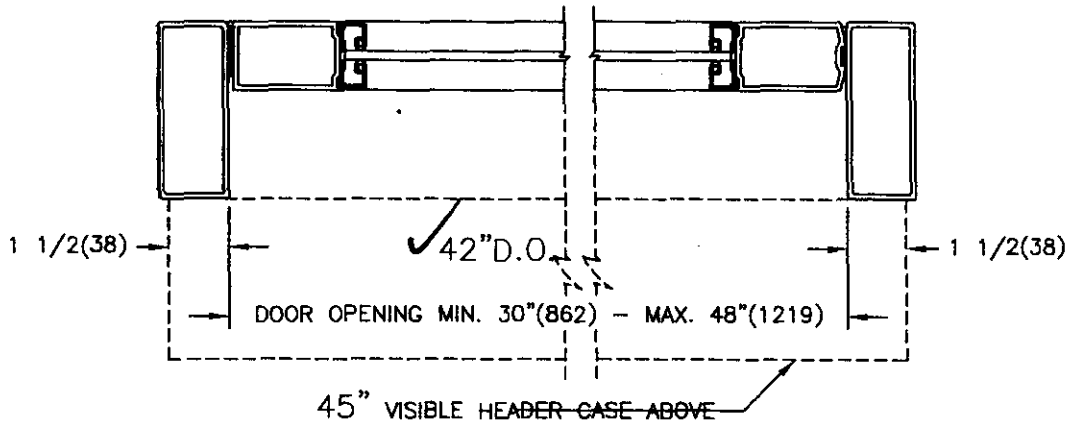


ELEVATION

INCLUDES (2) WIRELESS PUSH PLATES.



PLAN



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UNIVERSITY OF KENTUCKY
PATIENT CARE FACILITY
PARKING GARAGE

UK Project #: 2239.2

940 Elizabeth Street
Lexington, KY 40506-0293

08700 – Door Hardware
Submittal Date: September 19, 2007

Construction Manager
Central Kentucky Glass
1123 Versailles Road
Lexington, KY 40508
(859) 253-0710

SUBMITTAL

GILBANE
University of Kentucky
Patient Care Facility
Gilbane Project No. 18-3966

REVIEWED

☐ 010-Hugueley ☒ 020-Garage
☐ 030-Infrastructure ☐ 040-PCF Foundation
☐ 050-PCF Core/Shell ☐ 060-TowerUp Fit

Bid Package No. 080
Submittal No. 080-08900-003
Spec. Sect/Para. _____
Reviewed By BH
Date 9/19/07

This review does not constitute nor does it assume design responsibility nor does it relieve the trade contractor's supplier from complying with the contract requirements, coordinating their work with other trade contractors and verifying field dimensions.

PACKAGE # 003

ITEM # 010

RECEIVED

OCT 02 2007

GILBANE #3966

Rec'd for
DAVID P.
GBBN

THIS REVIEW BY GBBN ARCHITECTS, INC., IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND IS NOT AN APPROVAL OF THIS DRAWING OR SET OF DRAWINGS. THE COMMENTS MADE DO NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH THE PROJECT DRAWINGS, SPECIFICATIONS AND OTHER CONTRACT DOCUMENTS. CONTRACTOR IS SOLELY RESPONSIBLE FOR: ALL DIMENSIONS AND QUANTITIES, ALL FABRICATION, DELIVERY AND ERECTION; ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES; ALL COORDINATION WITH ALL OTHER CONTRACTORS, SUPPLIERS AND OTHERS; PERFORMING ALL WORK IN A SAFE AND PROPER MANNER.

NO EXCEPTIONS TAKEN ☐
FURNISH AS CORRECTED ☒
REVISE AND RESUBMIT ☐
NO REVIEW - INCOMPLETE ☐
SUBMIT SPECIFIED ITEMS ☐
REJECTED ☐

DATE 10/1/07 BY DRP

GBBN ARCHITECTS, INC.
ARCHITECTURE, INTERIORS, PLANNING, ENGINEERING
☐ 332 EAST 8TH STREET, CINCINNATI, OHIO 45202-2217 (513) 241-8700
☐ 325 WEST MAIN STREET, LEXINGTON, KENTUCKY 40507 (859) 381-8787

FINISH HARDWARE

UNIVERSITY OF KENTUCKY
PATIENT CARE FACILITY
PARKING GARAGE

CENTRAL KENTUCKY GLASS COMPANY
1123 VERSAILLES ROAD
LEXINGTON KENTUCKY 40508
PH (859)253-0710 FX (859)255-7317

SCHEDULED : DENNIS MARTIN 9/12/07

PHS CONTROL NUMBER : 4034

Door Index

Door No	Hand	Hdg
010	LHR	02
010A	RHR	02
107	LHRA	01
107A	RHA	03
110	RHR	02
110A	LHR	02
210	LHR	02
210B	RH	02
210C	RHR	02
310	LHR	02
310B	RH	02
310C	RHR	02
410	LHR	02
410B	RH	02
410C	RHR	02
510	LHR	02
510B	RH	02
510C	RHR	02
610	LHR	02
610A	LH	02
610B	RHR	02

Door No	Hand	Hdg

Finishes

ANSI	US	Description	Base Metal
613	US10B	DARK OXIDIZED SATIN BRONZE, OIL RUBBED	BRONZE
695		DARK BRONZE PAINTED	ANY
710	US10B	DARK OXIDIZED SATIN BRONZE ANODIZED	ALUMINUM

Manufacturers

Abbr	Name
IVE	H.B. IVES
LCN	LCN COMMERCIAL DIVISION
ROC	ROCKWOOD MANUFACTURING CO.
STA	STANLEY HARDWARE

Heading 02 (HwSet 03B)

KeyGroup				Hand	Degree Act	Degree InAct
	1	SGL	DOOR(S) 010 PARKING FROM LOBBY 010	LHR	110	
	1	SGL	DOOR(S) 010A PARKING FROM LOBBY 010	RHR	110	
	1	SGL	DOOR(S) 110 PARKING FROM LOBBY 110	RHR	110	
	1	SGL	DOOR(S) 110A PARKING FROM LOBBY 110	LHR	110	
	1	SGL	DOOR(S) 210 PARKING FROM LOBBY 210	LHR	110	
	1	SGL	DOOR(S) 210B LOBBY 210 TO PARKING	RH	110	
	1	SGL	DOOR(S) 210C PARKING FROM LOBBY 210	RHR	110	
	1	SGL	DOOR(S) 310 PARKING FROM LOBBY 310	LHR	110	
	1	SGL	DOOR(S) 310B LOBBY 310 TO PARKING	RH	110	
	1	SGL	DOOR(S) 310C PARKING FROM LOBBY 310	RHR	110	
	1	SGL	DOOR(S) 410 PARKING FROM LOBBY 410	LHR	110	
	1	SGL	DOOR(S) 410B LOBBY 410 TO PARKING	RH	110	
	1	SGL	DOOR(S) 410C PARKING FROM LOBBY 410	RHR	110	
	1	SGL	DOOR(S) 510 PARKING FROM LOBBY 510	LHR	110	
	1	SGL	DOOR(S) 510B LOBBY 510 TO PARKING	RH	110	
	1	SGL	DOOR(S) 510C PARKING FROM LOBBY 510	RHR	110	
	1	SGL	DOOR(S) 610 PARKING FROM LOBBY 610	LHR	110	
	1	SGL	DOOR(S) 610A LOBBY 610 TO PARKING	LH	110	
	1	SGL	DOOR(S) 610B PARKING FROM LOBBY 610	RHR	110	

3'6" x 7'4" x 1-3/4" x A/G x ALF x NON-RTD

Totals Each Assembly to have:

(19)	1	EA	TOP-BTM PVT SET	7215	613	IVE
(19)	1	EA	INTERMED PIVOT	7215-INT	613	IVE
(19)	1	EA	PUSH-PULL SET	BF157A47 37"	710	ROC
(19)	1	EA	AUTO OPERATOR	SEPARATE	695	STA

HARDWARE FINISHES SPECIFIED DO NOT MATCH DOOR/FRAME FINISH

Heading 03 (HwSet 03A-1)

KeyGroup					Hand	Degree Act	Degree InAct
	1	PR	DOOR(S) 107A LOBBY 110 TO PARKING 6'0" x 7'4" x 1-3/4" x A/G x ALF x NON-RTD		RHA	110	110

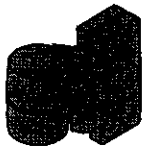
Totals	Each Assembly to have:					
(2)	2	EA	TOP-BTM PVT SET	7215	613	IVE
(2)	2	EA	INTERMED PIVOT	7215-INT	613	IVE
(2)	2	EA	PUSH-PULL SET	BF157A47 31"	710	ROC
(1)	1	EA	SURFACE CLOSER	4041	695	LCN
(1)	1	EA	MOUNTING PLATE	4040-18	695	LCN
(1)	1	EA	AUTO OPERATOR	SEPARATE	695	STA

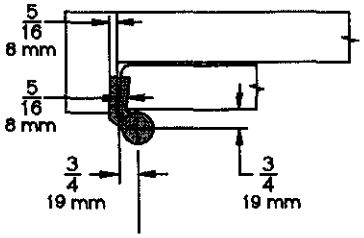
HARDWARE FINISHES SPECIFIED DO NOT MATCH DOOR/FRAME FINISH

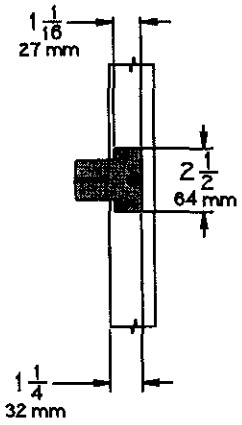
7200 Series Intermediate Pivots

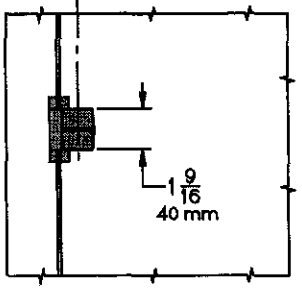
General Information:

- Door Height NFPA 80, Section 3-8.3, requires additional intermediate pivot for some fire-rated doors. We recommend one for every 2'6" (762mm), or fraction thereof, door height over 5'0" (1524mm).
- Door Weight exceeding pivot set limit, add one intermediate pivot for each 100 lbs. (45.5 kg) additional.
- Door Thickness minimum 1-3/4" (44mm), bevel 1/8" (3mm) in 2" (51mm).







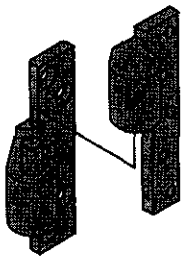


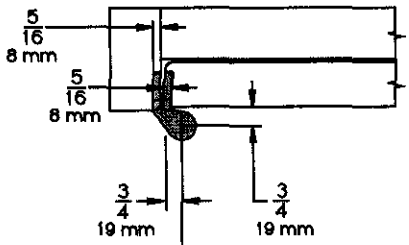
7212-7212V-7222 INT

- Handed 3/4" offset pivots compatible with the following pivot sets: 7212, 7212V and 7222.
- Maximum Load 100 pounds (45.5 kg).
- Vertical Adjustment Range of 3/16" (5mm), which includes a positive locking feature.
- Finishes: US3, US4, US10, US10B, US26, US26D, SP4, SP10, SP28, SP313 and SPBLK.

7215-7226-7227 INT

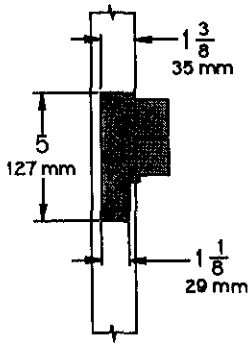
- Handed 3/4" offset pivots compatible with the following pivot sets: 7215, 7226 and 7227.
- Maximum Load 100 pounds (45.5 kg).
- UL Listed for 20 minute rated door.
- Meets ANSI/BHMA Grade 1.
- Vertical Adjustment Range of 3/16" (5mm), which includes a positive locking feature.
- Finishes: US3, US4, US10, US10B, US26, US26D, SP4, SP10, SP28, SP313 and SPBLK.

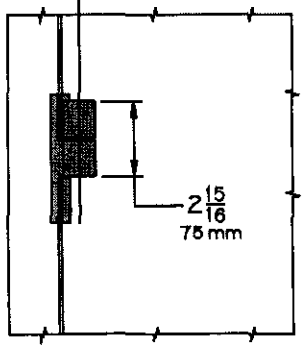




7215F-7226F-7227F INT

- Handed 3/4" offset pivots compatible with the following pivot sets: 7215F, 7226F and 7227F.
- Maximum Load 100 pounds (45.5 kg).
- UL Listed for 3 hour rated door.
- Meets ANSI/BHMA Grade 1.
- Vertical Adjustment Range of 3/16" (5mm), which includes a positive locking feature.
- Finishes: US3, US10, US32, US32D, SP4, SP10, SP2B, SP313 and SPBLK.

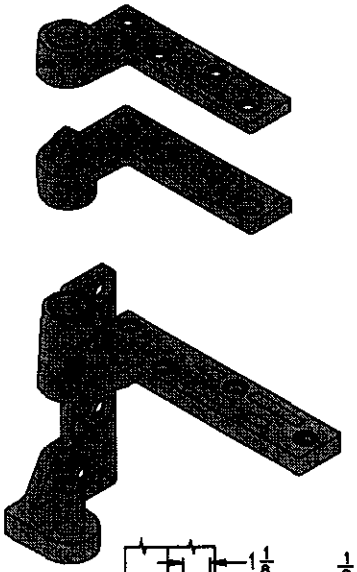


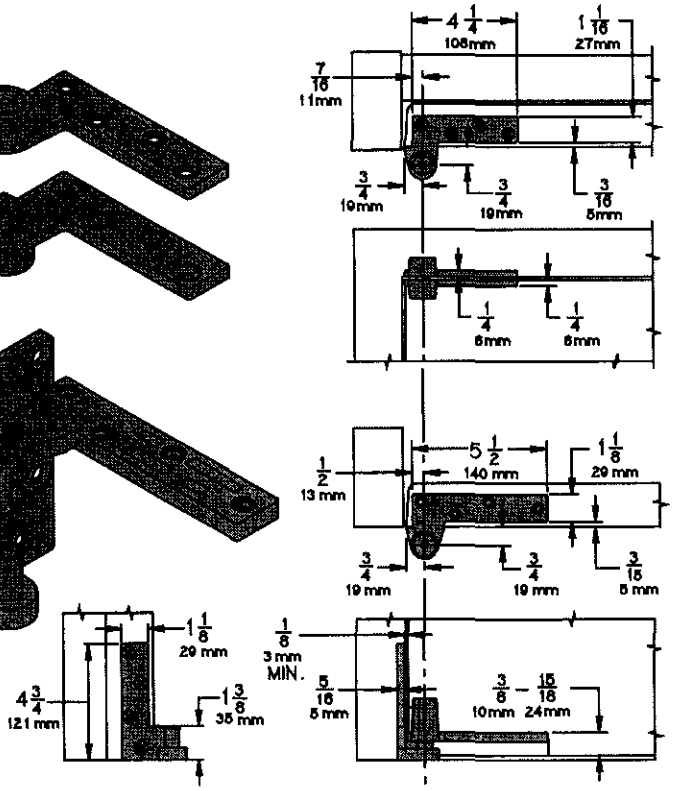


7215 & 7215F 3/4" Offset

7215 or **7215F** Pivot Sets

- Handed 3/4" offset pivot set consisting of a jamb mounted 7215 or 7215F Bottom Pivot (handed) and a head frame mounted 7215 or 7215F Top Pivot, (non-handed).
- Door Thickness minimum 1-3/4" (44mm), bevel 1/8" (3mm) in 2" (51mm).
- Center Line Offset 3/4" (19mm) from face of door and 3/4" from edge of door.
- Maximum Load 500 pounds (227 kg).
- UL Listed
  7215 for 20 minute rated door.
  7215F for 3 hour rated door.
- 7215F meets ANSI/BHMA Grade 1.
- Vertical Adjustment Range of 3/16" (5mm), which includes a positive locking feature.
- Optional Intermediate Pivot
  For 7215 set use 7215 Intermediate Pivot (handed).
  For 7215F set use 7215 Intermediate Pivot (handed).
  Each Intermediate Pivot carries up to an additional 100 pounds (45.5 kg) load or needed for doors over 7'. See page B14.
- Optional 7215 PT Power Transfer Intermediate Pivot (handed). Provides 4 wire transfer with no weight bearing capabilities. See page B20.





How to Order:

7215 ___ - ___ - ___ - ___

Rating:

Blank	Non-fire-rated
F	Fire-rated

Pivot Style:

Blank	Top and bottom set
TOP	Top pivot only
BTM	Bottom pivot only
INT	Intermediate pivot only
PT INT	Power transfer intermediate pivot only

Handing:

LH	Left-hand door
RH	Right-hand door

Finishes:

Non-Fire-Rated	US3, US4, US10, US10B, US26, US26D, SP4, SP10, SP28, SP313, SPBLK
Fire-Rated	US3, US10, US32, US32D, SP4, SP10, SP28, SP313, SPBLK

LCN 4040 SERIES

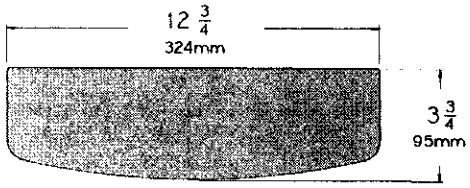
HINGE (PULL) SIDE MOUNTING

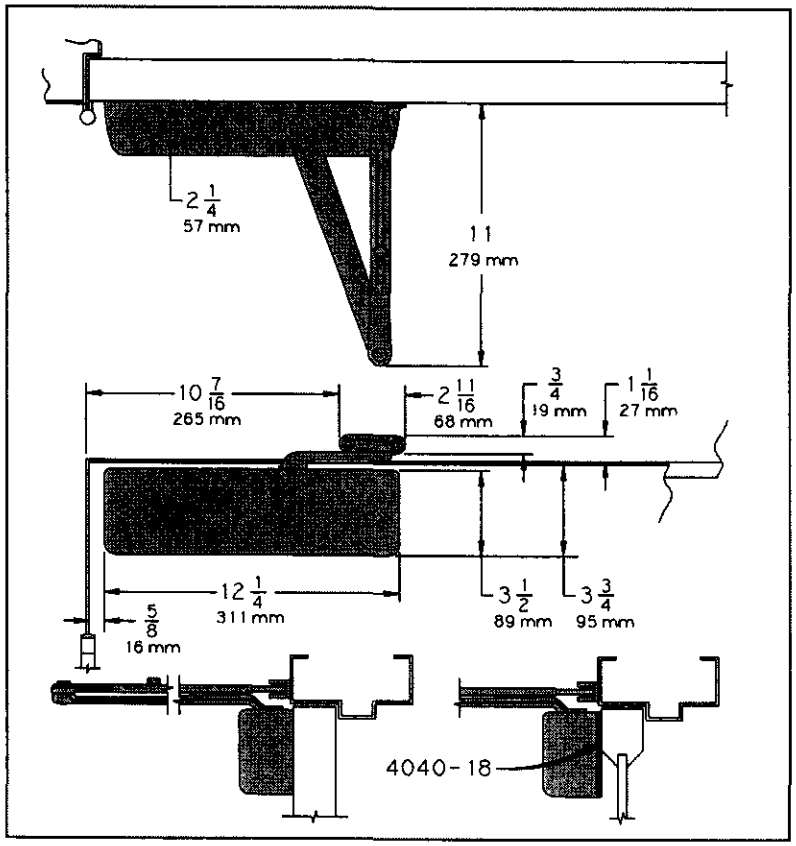
MAXIMUM OPENING

Templating allows up to 120°.

Hold-open points 90° up to 120° with hold-open arm.

Optional, Non-handed Designer Series Metal Cover





Options

- 4040XP cylinder
- 4041 Delayed action cylinder.
- Hold-open arm.
- Metal or lead lined cover.
- Corner bracket.
- Designer Series metal cover.

Special Templates

Customized installation templates or products may be available to solve unusual applications. Contact LCN for assistance.

- **Butt Hinges** should not exceed 5" (127 mm) in width.
- **Auxiliary Stop** is recommended at hold-open point or where a door cannot swing beyond 120°.
- **Reveal** should not exceed 3/4" (19 mm) for regular arm or hold-open arm.
- **Top Rail** less than 3 3/4" (95 mm) requires PLATE, 4040-18. Plate requires 2" (51 mm) minimum. With Designer Series metal cover, use PLATE, 4040-18DS1
- **Clearance** of 2 3/8" (60 mm) behind door required for 90° installation. 2 7/8" (73 mm) for Designer Series metal covers
- **Delayed Action** (not available on 4040XP) Add suffix "DEL" to selected cylinder (eg. 4041 DEL). Delays closing from 120° to 70°. Delay time adjustable up to approximately 1 minute.
- **Bull Nose Trim** requires SOFFIT SHOE, 4040-65.
- **Corner Bracket** available for doors where top jamb or parallel arm mounting can not be used.
  4040-16 allows 110° opening. Projects 5" (127 mm) from stop, 12 13/16" (325 mm) from frame.
  4040-17 allows 100° opening with certain auxiliary door holders (consult factory). Projects 6 3/8" (162 mm) from stop, 13 11/16" (348 mm) from frame.

LCN CLOSERS
121 W. RAILROAD AVE.
P.O. BOX 100
PRINCETON, IL, USA 61356-0100

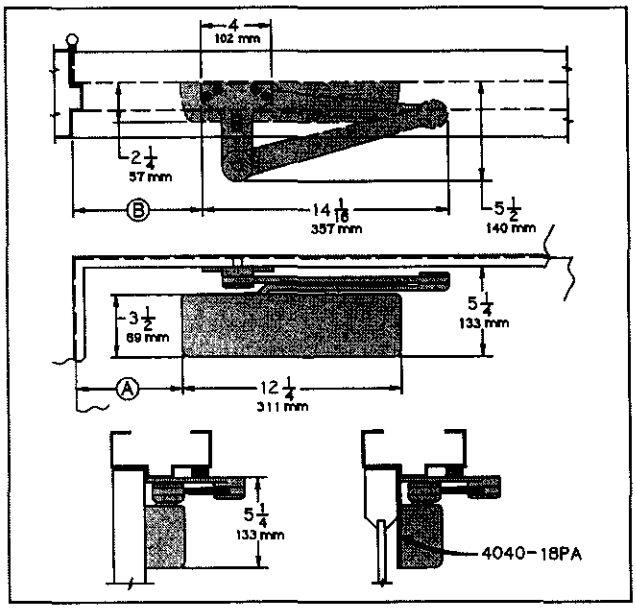
PHONE 800-526-2400
FAX 800-248-1460
www.lcn.ingersollrand.com

3/07

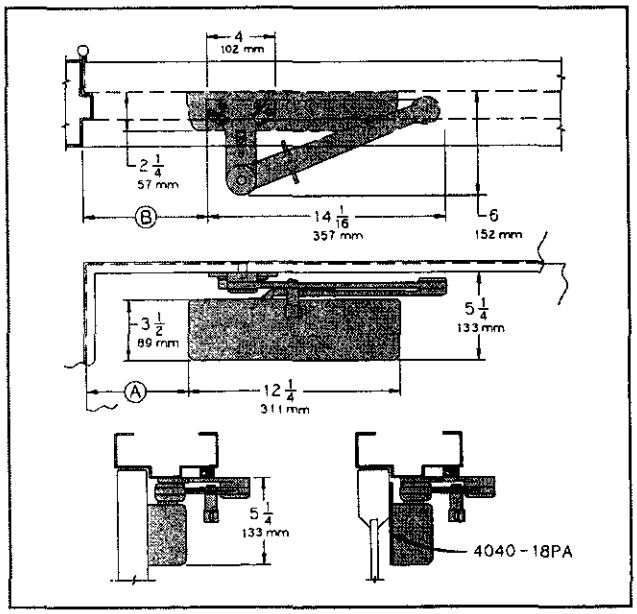
LCN 4040 SERIES

Mounting details are the same as 4040 Series REGULAR or HOLD-OPEN except as listed below. 4040 Series closers ordered with EDA or CUSH arms include 4040-201 FIFTH HOLE SPACER to support the shoe.

4040 SERIES EDA MOUNT



4040 SERIES CUSH MDUNT



- **Clearance** for 4040-62EDA is 5 1/2" (140 mm) from door face. 6" (152 mm) for CUSH.
- **Head Frame** flush or rabetted requires CUSH FLUSH PANEL ADAPTER, 4040-419.
- **CUSH ARM** requires SHDE SUPPDRT, 4040-30 for fifth screw anchorage for narrow frames.
- **Delayed Action** (not available on 4040XP) Add suffix "DEL" to selected cylinder (eg. 4041 DEL). Delays closing from maximum opening to; 115° with 180° template. 95° with 110° template. 85° with 100° template. 75° with 90° template.
  Delay time adjustable up to approximately 1 minute.

MAXIMUM OPENING

EDA arm can be templated for points at: 110°,
Ⓐ = 6 3/8" (162 mm)
Ⓑ = 7 3/4" (197 mm)
or 180°.
Ⓐ = 2 7/8" (73 mm)
Ⓑ = 4 1/4" (108 mm)
Hold-open points up to maximum opening with HEDA arm.

CUSH arms can be templated for opening/hold-open point at:
85°,
Ⓐ = 7 15/16" (202 mm)
Ⓑ = 9 1/8" (232 mm)
90°,
Ⓐ = 7 3/16" (183 mm)
Ⓑ = 8 1/2" (216 mm)
100°,
Ⓐ = 6 1/16" (154 mm)
Ⓑ = 7 1/4" (184 mm)
or 110°.
Ⓐ = 5 1/16" (129 mm)
Ⓑ = 6 3/8" (162 mm)

Spring Cush dead stop points are approximately 5° more than templated stop point. Hold open at templated stop points.

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P.O. BDX 100
PRINCETON, IL, USA 61356-0100

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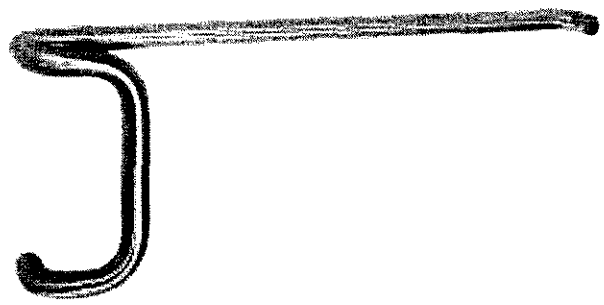
3/07

Heading 01 (HwSet 03A)

eyGroup					Hand	Degree Act	Degree InAct
	1	PR	DOOR(S) 107 PARKING FROM LOBBY 110 6'0" x 7'4" x 1-3/4" x A/G x ALF x NON-RTD		LHRA	110	110

Totals	Each Assembly to have:					
(2)	2	EA	TOP-BTM PVT SET	7215	613	IVE
(2)	2	EA	INTERMED PIVOT	7215-INT	613	IVE
(2)	2	EA	PUSH-PULL SET	BF157A47 31"	710	ROC
(1)	1	EA	SURFACE CLOSER	4041-CNS 4040-30 4040-61	695	LCN
(1)	1	EA	MOUNTING PLATE	4040-18PA	695	LCN
(1)	1	EA	AUTO OPERATOR	SEPARATE	695	STA

HARDWARE FINISHES SPECIFIED DO NOT MATCH DOOR/FRAME FINISH



Series 47 Offset Single Bar Sets

Material: Aluminum, Brass, Bronze, or Stainless Steel

Finishes: Available in standard architectural finishes, US32D**BIO**, US32D**316**, US32**316**, white (WPC), red (RPC), and black (BPC) powder coat finishes (see page 7). *US3**LIFETIME** available on select product below.

Mounting:

Door	Pull Free End	Push Free End	Common End	Description	Mounting Spec. No.
Metal & Wood	1	1	5	Back to Back & Thru Bolt	T3**
Metal	17	6	16	Back to Back & Concealed	T4
Wood	B	8	5	Back to Back & Concealed	T5
Metal & Wood	12	12	5	Back to Back & Decorative Bolt	T1
Glass	15	15	13	Back to Back & Thru Bolt	T2

** T3 is the standard mounting method for Metal and Wood Doors.
NOTE: See page A10 for detailed mounting drawings.

Ordering: Specify product number, mounting, door type, push bar CTC, and finish (i.e., BF15747 T3, wood door, 33" CTC, US32D**316**).

Other: See page A1 on "How To" size push bars.

Options:
- Engraving "PUSH" or "PULL" (specify handing).
- Base plates available similar to those shown on page A12 — use BP prefix (BPBF15747) when ordering.
- Heavy duty versions of most fastening types available — use suffix HD to fastening type number (BF15647 T3HD).

No.	Material Size	Pull CTC	Pull Projection	Pull Clearance	Push Projection	Push Clearance	Weight	ANSI 156.6
BF15647	1" dia.	8"	3½"	2½"	2½"	1½"	12.4 lbs.	J504
BF157A47	1" dia.	9"	3½"	2½"	2½"	1½"	12.6 lbs.	J504
BF15747*	1" dia.	10"	3½"	2½"	2½"	1½"	12.8 lbs.	J504
BF15847	1" dia.	12"	3½"	2½"	2½"	1½"	13.3 lbs.	J504
BF15947	1" dia.	18"	3½"	2½"	2½"	1½"	15.0 lbs.	J504

Gilbane

Transmittal

Project [2239.2] - PCF - Hospital - Garage **View Date** 12/19/2007

Gilbane
940 Elizabeth St
Lexington, KY 40506-0293
Phone: (859) 257-4536
Fax: (859) 323-1331

Transmittal No. 2239.2-01124

To	Mr. Doug Sherwood E. C. Matthews Co., Inc. 2265 Harrodsburg Road Lexington, KY 40504 USA Phone: (859) 278-3131 Fax: (859) 277-7903	**Date**	12/19/2007
		Items listed are being sent	
		☑ Enclosed	
		☐ Under Separate Cover	
		Via	Hand Delivered
		CSI Code	08700 - Door Hardware
From	Mr. Brian Hoerr (Gilbane)		
Subject	Submittal Package 100-08700-002.0		

We are transmitting the following to you:

☐ Product Data ☐ Samples ☐ Shop Drawings ☐ O&M Manuals ☐ Plans
☐ Architectural Drawings ☐ Letters ☐ Specifications ☐ Prints ☐ Addenda
☐ Engineering Drawings ☐ Change Orders ☑ Submittal

Submittals

Pkg. No./Rev.	Item No./Rev.	Description	Copies	Reason	Action
100-08700-002.0	100-08700-011.0	Drywall Access Panel	2	Approved as Noted	

Linked Documents	Document Type	Document	Open	Description	Date
	Doc	2239.2-01847		Drywall Access Panel REVIEWED 100-08700-011	12/18/2007

Remarks See GBBN comments.

From	Printed Name	Date
	Mr. Brian Hoerr	12/19/2007

Received By	Printed Name	Date

Linked Documents

Document Type	Document	Open	Description	Date
Sub. Pkg.	100-08700-002.0			

Distribution

Recipient	Company	Method	Date
Doug Sherwood	E. C. Matthews Co., Inc.	Message	12/19/2007

Transmittal

Project [2239.2] - PCF - Hospital - Garage **View Date** 12/18/2007

GBBN Architects, Inc.
325 West Main St
Lexington, KY 40507-1632
Phone: (859) 381-8787
Fax: (859) 381-8873

Transmittal No. 2239.2-01123

RECEIVED
DEC 18 2007
GILBANE #3966

To	Mr. Brian Hoerr Gilbane 940 Elizabeth St Lexington, KY 40506-0293 USA Phone: (859) 257-4536 Fax: (859) 323-1331
From	Ms. Donna Bradshaw (GBBN Architects, Inc.)
Subject	Submittal Package 100-08700-002.0

Date 12/18/2007
Items listed are being sent
☐ Enclosed
☐ Under Separate Cover
CSI Code 08700 - Door Hardware

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Submittals

Pkg. No./Rev.	Item No./Rev.	Description	Copies	Reason	Action
100-08700-002.0	100-08700-011.0	Drywall Access Panel	3	Furnish as Corrected	

Linked Documents	Document Type	Document	Open	Description	Date
	Doc	2239.2-01847		Drywall Access Panel REVIEWED 100-08700-011	12/18/2007

Remarks

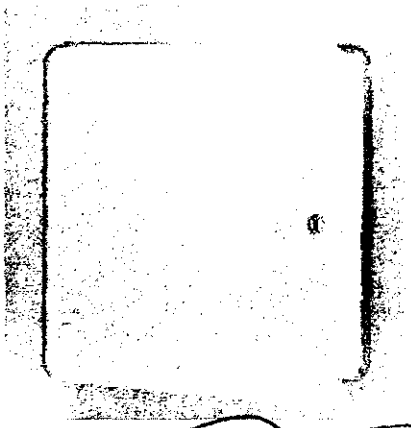
Received By Printed Name Date

Linked Documents

Document Type	Document	Open	Description	Date
Sub. Pkg.	100-08700-002.0			

Four Generations Dedicated to Quality

WB-GP Premium General Purpose Access Door



REPRESENTED BY

DETAIL & SUBMITTAL SHEET

Project:

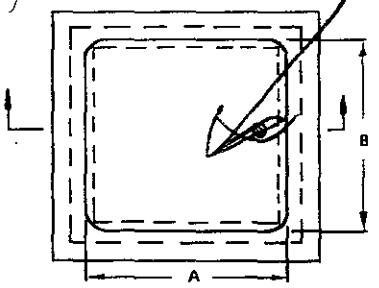
Specification Reference:

Contractor:

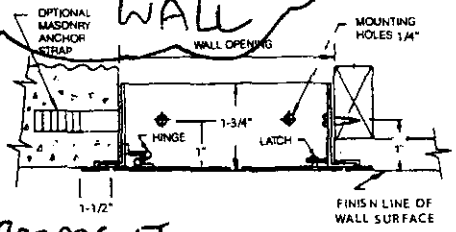
Architect: Date:

11-12-02

PAINT ACCESS DOOR TO MATCH WALL



ELEVATION



GBBN COMMENT

SECTION DETAIL

CONSTRUCTION FEATURES:

Door and Trim: 14 ga. steel. Trim being 1-1/2" wide.
Return Frame: 18 ga. steel having a depth of 1-3/4".
Hinges: Fully-concealed piano-type hinge. Allows opening to 170° Number of hinges varies with size of door and will be placed on long side of door unless otherwise requested.
Latches: Flush, stainless steel cam operated with screwdriver. Latches are positioned opposite hinge as well as top and bottom on larger sizes.
Finish: Electrostatically applied baked grey enamel, over rust-inhibiting phosphate treated steel. This coating can be used as a finish or as a prime coating.

GBBN COMMENT

Options Available: (AT EXTRA COST)

- Key Cylinder Lock with 2 keys
- Air-tight Neoprene Gasketing
- Stainless Steel Finish #304 or #316
- White Baked Enamel Finish
- Galvanized/Zinc Coating Finish
- Additional Accessories refer to back cover
- Masonry Anchor Straps
- Special Sizes (AT EXTRA COST): Available upon request

VERIFY TYPE W/ UK

GBBN COMMENT

ACCESS PANEL SHALL BE 2HR RATED

A Door Size	B Wall Opening	Hinges	Cam Latch	Shipping Wt. Lbs. Steel/Stainless
6"x6"	6 1/4"x6 1/4"	1	1	4*
8"x8"	8 1/4"x8 1/4"	1	1	5*
8"x12"	8 1/4"x12 1/4"	1	1	6*
8"x16"	8 1/4"x16 1/4"	2	1	8*
10"x10"	10 1/4"x10 1/4"	1	1	6*
12"x12"	12 1/4"x12 1/4"	1	3	8*
12"x16"	12 1/4"x16 1/4"	2	3	10
12"x18"	12 1/4"x18 1/4"	2	3	11
12"x24"	12 1/4"x24 1/4"	3	4	14
14"x14"	14 1/4"x14 1/4"	2	3	10*
16"x16"	16 1/4"x16 1/4"	2	3	13*
16"x20"	16 1/4"x20 1/4"	3	3	16
16"x24"	16 1/4"x24 1/4"	3	4	17
18"x18"	18 1/4"x18 1/4"	3	3	14*
18"x24"	18 1/4"x24 1/4"	3	4	18
18"x36"	18 1/4"x36 1/4"	+	5	29
20"x20"	20 1/4"x20 1/4"	3	3	17
20"x24"	20 1/4"x24 1/4"	3	4	21
20"x30"	20 1/4"x30 1/4"	+	4	23
22"x22"	22 1/4"x22 1/4"	3	4	22
22"x24"	22 1/4"x24 1/4"	3	4	23
22"x30"	22 1/4"x30 1/4"	+	4	25
22"x36"	22 1/4"x36 1/4"	+	5	32
24"x24"	24 1/4"x24 1/4"	3	4	24*
24"x30"	24 1/4"x30 1/4"	+	4	27
24"x36"	24 1/4"x36 1/4"	+	5	35
24"x48"	24 1/4"x48 1/4"	+	6	43
30"x30"	30 1/4"x30 1/4"	+	6	32
30"x36"	30 1/4"x36 1/4"	+	6	39
36"x36"	36 1/4"x36 1/4"	+	7	44
36"x48"	36 1/4"x48 1/4"	+	8	57
48"x48"	48 1/4"x48 1/4"	+	12	70

+Full Length Piano Hinge

*Standard in Stainless Steel

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Accessing the 21st Century

GILBANE
University of Kentucky
Patient Care Facility
Gilbane Project No. 18-3966

REVIEWED

☐ 010-Huguelet ☒ 020-Garage
☐ 030-Infrastructure ☐ 040-PCF Foundation
☐ 050-PCF Core/Shell ☐ 060-TowerUp Fit

Bid Package No. 100
Submittal No. 100-08700-002
Spec. Sect/Para. _____
Reviewed By BH
Date 12/7/07

This review does not constitute nor does it assume design responsibility nor does it relieve the trade contractor's supplier from complying with the contract requirements, coordinating their work with other trade contractors and verifying field dimensions.

002 - PACK.

011 - ITEM.

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NO EXCEPTIONS TAKEN ☐
FURNISH AS CORRECTED ☒
REVISE AND RESUBMIT ☐
NO REVIEW - INCOMPLETE ☐
SUBMIT SPECIFIED ITEMS ☐
REJECTED ☐
DATE 12/18/07 BY BH

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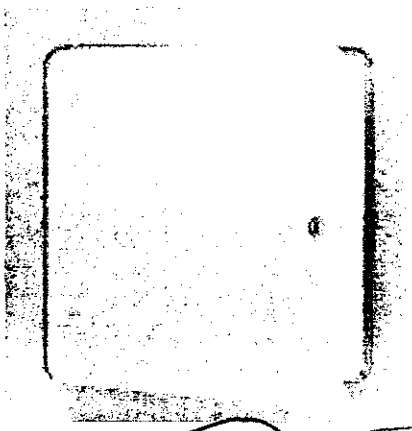
□ 325 WEST MAIN STREET, LEXINGTON, KENTUCKY 40507 (859) 381-8787

Four Generations Dedicated to Quality

WB-GP Premium General Purpose Access Door



REPRESENTED BY

DETAIL & SUBMITTAL SHEET

Project:

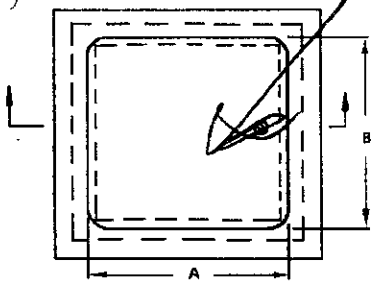
Specification Reference:

Contractor:

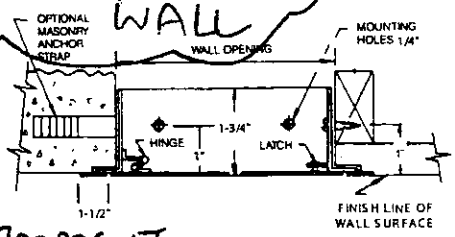
Architect: Date:

11-12-02

PAINT ACCESS DOOR TO MATCH WALL



ELEVATION



GBBN COMMENT

SECTION DETAIL

CONSTRUCTION FEATURES:

Door and Trim: 14 ga. steel. Trim being 1-1/2" wide.
Return Frame: 18 ga. steel having a depth of 1-3/4".
Hinges: Fully-concealed piano-type hinge. Allows opening to 170° Number of hinges varies with size of door and will be placed on long side of door unless otherwise requested.
Latches: Flush, stainless steel cam operated with screwdriver. Latches are positioned opposite hinge as well as top and bottom on larger sizes.
Finish: Electrostatically applied baked grey enamel, over rust-inhibiting phosphate treated steel. This coating can be used as a finish or as a prime coating.

GBBN COMMENT

Options Available: (AT EXTRA COST)

- Key Cylinder Lock with 2 keys
- ~~Air-tight Neoprene Gasketing~~
- Stainless Steel Finish #304 or #316
- White Baked Enamel Finish
- Galvanized/Zinc Coating Finish
- Additional Accessories refer to back cover
- Masonry Anchor Straps
- Special Sizes (AT EXTRA COST): Available upon request

VERIFY TYPE W/ UK

GBBN COMMENT

ACCESS PANEL SHALL BE 2HR RATED

A Door Size	B Wall Opening	Hinges	Cam Latch	Shipping Wt. Lbs. Steel/Stainless
6"x6"	6 1/4"x6 1/4"	1	1	4*
8"x8"	8 1/4"x8 1/4"	1	1	5*
8"x12"	8 1/4"x12 1/4"	1	1	6*
8"x16"	8 1/4"x16 1/4"	2	1	8*
10"x10"	10 1/4"x10 1/4"	1	1	6*
12"x12"	12 1/4"x12 1/4"	1	3	8*
12"x16"	12 1/4"x16 1/4"	2	3	10
12"x18"	12 1/4"x18 1/4"	2	3	11
12"x24"	12 1/4"x24 1/4"	3	4	14
14"x14"	14 1/4"x14 1/4"	2	3	10*
16"x16"	16 1/4"x16 1/4"	2	3	13*
16"x20"	16 1/4"x20 1/4"	3	3	16
16"x24"	16 1/4"x24 1/4"	3	4	17
18"x18"	18 1/4"x18 1/4"	3	3	14*
18"x24"	18 1/4"x24 1/4"	3	4	18
18"x36"	18 1/4"x36 1/4"	+	5	29
20"x20"	20 1/4"x20 1/4"	3	3	17
20"x24"	20 1/4"x24 1/4"	3	4	21
20"x30"	20 1/4"x30 1/4"	+	4	23
22"x22"	22 1/4"x22 1/4"	3	4	22
22"x24"	22 1/4"x24 1/4"	3	4	23
22"x30"	22 1/4"x30 1/4"	+	4	25
22"x36"	22 1/4"x36 1/4"	+	5	32
24"x24"	24 1/4"x24 1/4"	3	4	24*
24"x30"	24 1/4"x30 1/4"	+	4	27
24"x36"	24 1/4"x36 1/4"	+	5	35
24"x48"	24 1/4"x48 1/4"	+	6	43
30"x30"	30 1/4"x30 1/4"	+	6	32
30"x36"	30 1/4"x36 1/4"	+	6	39
36"x36"	36 1/4"x36 1/4"	+	7	44
36"x48"	36 1/4"x48 1/4"	+	8	57
48"x48"	48 1/4"x48 1/4"	+	12	70

+Full Length Piano Hinge

*Standard in Stainless Steel

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GILBANE
University of Kentucky
Patient Care Facility
Gilbane Project No. 18-3966

REVIEWED

☐ 010-Huguelet ☒ 020-Garage
☐ 030-Infrastructure ☐ 040-PCF Foundation
☐ 050-PCF Core/Shell ☐ 060-TowerUp Fit

Bid Package No. 100
Submittal No. 100-08700-002
Spec. Sect/Para. _____
Reviewed By BH
Date 12/7/07

This review does not constitute nor does it assume design responsibility nor does it relieve the trade contractor's supplier from complying with the contract requirements, coordinating their work with other trade contractors and verifying field dimensions.

002 - PACK.

011 - ITEM.

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SUBMIT SPECIFIED ITEMS ☐
REJECTED ☐
DATE 12/18/07 BY BH

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ARCHITECTURE, INTERIORS, PLANNING, ENGINEERING
□ 332 EAST 8TH STREET, CINCINNATI, OHIO 45202-2217 (513) 241-8700
□ 325 WEST MAIN STREET, LEXINGTON, KENTUCKY 40507 (859) 381-8787

UNIVERSITY OF KENTUCKY
PATIENT CARE FACILITY
PARKING GARAGE

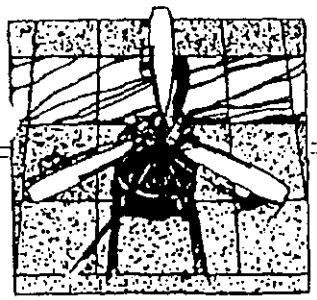
UK Project #: 2239.2

940 Elizabeth Street
Lexington, KY 40506-0293

08900 – Aluminum Curtainwall
Submittal Date: January 15, 2007

Construction Manager
Central Kentucky Glass
1123 Versailles Road
Lexington, KY 40508
(859) 253-0710

SUBMITTAL



MID AMERICA TESTING LABORATORY, INC.

10525 SIGNAL HILL DRIVE · CATAWISSA, MISSOURI 63015
(314) 257-4722 · FAX (314) 257-5425

DATE OF REPORT:	August 31, 2000
LOCATION OF TEST:	Kawneer Company Inc.
DATES OF TESTING:	August 9 and August 18, 2000
SYSTEM NAME:	Series 1600 System 1 and 2 Curtain Wall
PROJECT NUMBER:	20111F
CLIENT:	Kawneer Company, Inc.

The following were present for all or portions of the erection and testing.

Mr. Richard Blaschke	Kawneer Company, Inc.
Mr. Richard Pahmiyer	Kawneer Company, Inc.
Mr. Bill Roden	Kawneer Company, Inc.
Mr. Wayne Whitmyer	Kawneer Company, Inc.
Mr. Greg McKenna	Kawneer Company, Inc.
Mr. Richard Braunstein	Kawneer Company, Inc.
Mr. Gene Keeton	Mid America Testing Laboratory

UNIT DESCRIPTION

The Kawneer Series 1600 System 1 / System 2, 2 1/2" X 7 1/2" curtain wall system measured a nominal 21'-9" wide X 27'-4" high. The system structure is comprised of captured and structurally glazed tubular vertical mullions and captured exterior glazed horizontal mullions.

The horizontal mullions were attached to the vertical mullions with a shear block connection. The shear blocks were attached to the verticals with two (2) #12 sheet metal screws. The horizontals were attached to the shear blocks with two (2) #12 sheet metal screws. The vertical to horizontal joinery was sealed with silicone sealant.

The mock-up was glazed with eight (8) lites of 1" insulated 1/4"-1/4" clear tempered units and twelve (12) lites of 1/4" clear tempered spandrel glass. All of the glass lites were outside glazed, of which one (1) intermediate vertical was structurally glazed.

All glazing was set on 85 durometer setting blocks located at quarter points. Each glass lite had a 65 durometer side block installed at the mid height. A 60 durometer EPDM preset gasket was used at the interior and exterior. Each gasket corner intersection was sealed with silicone sealant.

A pressure plate was applied with a 1/4" EPDM separator and fastened at 9" on center vertically and horizontally with 1/4" sheet metal screws.

Each daylight opening was compartmentalized to control water infiltration. At each horizontal to vertical intersection, a joint plug was sealed into place, with silicone sealant, to divert water to the horizontal weep locations. Each horizontal was weeped 4" from each end with 5/16" diameter holes. Each horizontal cover was also weeped at 2" from each end with a 5/16" diameter hole.

The system anchorage consisted of steel plate anchors welded to the chamber structure and through bolted to the curtain wall system with two (2) 1/2" bolts and lock nuts.

Any item not specifically mentioned in this unit description can be referenced in the mock-up drawings T162-930 sheets 1 through 17, dated 8-9-00.

FORMAL TESTING

1. **PRELOAD** +20.0 PSF static pressure (50% of the positive design load for 10 seconds).

   ALLOWED: No failure of the system

   RESULTS: No failure of the system

   The above result constitutes an acceptable performance.

2. **STATIC AIR INFILTRATION** (ASTM E 283) at 1.57 PSF (25 MPH wind and .3" H_20).

   ALLOWED: .06 CFM per square foot of fixed specimen or 35.7 CFM gross leakage.

RESULTS: Less than .06 CFM per square foot of fixed specimen.

The above results constitute an acceptable performance.

3. **STATIC AIR INFILTRATION** (ASTM E 283) at 6.24 PSF (50 MPH wind and 1.2" H_20).

ALLOWED: .06 CFM per square foot of fixed specimen or 35.7 CFM gross leakage.

RESULTS: Less than .06 CFM per square foot of fixed specimen.

The above results constitute an acceptable performance.

4. **STATIC WATER INFILTRATION** (ASTM E 331) at 15 PSF (77.5 MPH wind and 2.88" H_20) with a water spray rate of five (5) gallons per hour per square foot minimum for fifteen (15) minutes.

ALLOWED: No uncontrolled water leakage shall be allowed.

RESULTS: No uncontrolled water leakage was noted to the room side.

The above result constitutes an acceptable performance.

5. **DYNAMIC WATER INFILTRATION** (AAMA 501) 100 MPH slip stream velocity at the prop creating an equivalent pressure at the wall of 15 PSF. Water was applied at a rate of five (5) gallons per hour per square foot for fifteen (15) minutes.

ALLOWED: No uncontrolled water leakage shall be allowed.

RESULTS: No uncontrolled water leakage was noted to the room side.

The above result constitutes an acceptable performance.

6. **STRUCTURAL DESIGN LOAD** (ASTM E 330) Held for ten (10) seconds duration for both 50% and 100% loads.

+20.0 PSF (50% Positive Design Load)
+40.0 PSF (100% Positive Design Load)
-20.0 PSF (50% Negative Design Load)
-40.0 PSF (100% Negative Design Load)

ALLOWED:	Deflection of framing members shall not exceed L/175 or .75" of the clear span or shall there be any failure of the system.
RESULTS:	No member exceeded the allowable deflection or was there any failure of the system.

The above results constitute an acceptable performance.

7. **SEISMIC RACKING LATERAL** (AAMA 501.4) Three (3) complete cycles at design displacement with each cycle consisting of 1.32" horizontal movement to the left, return to zero (0), 1.32" horizontal movement to the right, return to zero (0).

ALLOWED:	There shall be no failure of the system including anchors, frames, glass, and panels. Gaskets or seals may not fail.
RESULTS:	There was no failure of the system including anchors, frames, glass, and panels. Gaskets and seals did not fail.

The above results constitute an acceptable performance.

8. **STATIC AIR INFILTRATION** (ASTM E 283) at 1.57 PSF (25 MPH wind and .3" H_2O).

ALLOWED:	.06 CFM per square foot of fixed specimen or 35.7 CFM gross leakage.

RESULTS: Less than .06 CFM per square foot of fixed specimen.

The above results constitute an acceptable performance.

9. **STATIC AIR INFILTRATION** (ASTM E 283) at 6.24 PSF (50 MPH wind and 1.2" H_20).

ALLOWED: .06 CFM per square foot of fixed specimen or 35.7 CFM gross leakage.

RESULTS: Less than .06 CFM per square foot of fixed specimen.

The above results constitute an acceptable performance.

10. **STATIC WATER INFILTRATION** (ASTM E 331) at 15 PSF (77.5 MPH wind and 2.88" H_20) with a water spray rate of five (5) gallons per hour per square foot minimum for fifteen (15) minutes.

ALLOWED: No uncontrolled water leakage shall be allowed.

RESULTS: No uncontrolled water leakage was noted to the room side.

The above result constitutes an acceptable performance.

11. **DYNAMIC WATER INFILTRATION** (AAMA 501) 100 MPH slip stream velocity at the prop creating an equivalent pressure at the wall of 15 PSF. Water was applied at a rate of five (5) gallons per hour per square foot for fifteen (15) minutes.

ALLOWED: No uncontrolled water leakage shall be allowed.

RESULTS: No uncontrolled water leakage was noted to the room side.

The above result constitutes an acceptable performance.

12. **STRUCTURAL PROOF LOAD** (ASTM E 330) Held for ten (10) seconds duration for both 75% and 150% loads. Readings were recorded at 150% loads only.

+30.0 PSF (75% Positive Design Load)
+60.0 PSF (150% Positive Design Load)
-30.0 PSF (75% Negative Design Load)
-60.0 PSF (150% Negative Design Load)

ALLOWED: Permanent set of framing members shall not exceed .2% of the clear span or shall there be any failure of the system.

RESULTS: No member exceeded the allowable permanent set criteria or was there any failure of the system.

The above results constitute an acceptable performance.

13. **SEISMIC RACKING LATERAL** (AAMA 501.4) Three (3) complete cycles at 150% of the design displacement with each cycle consisting of 1.98" horizontal movement to the left, return to zero (0), 1.98" horizontal movement to the right, return to zero (0).

ALLOWED: Sealant may tear, metal may yield, and glass may crack, but no components may fall from the test specimen.

RESULTS: Three (3) lites of glass cracked however no glass or any other components fell from the test specimen.

The above results constitute an acceptable performance.

SUMMARY:

The Kawneer 1600 System 1 / System 2 curtain wall mock-up as installed at Kawneer Company, Inc. has met or exceeded the test parameters to which it was subjected.

This report or any portions thereof may not be reproduced by anyone or forwarded to anyone without the written consent of Mid America Testing Laboratory. Participants referenced in this test report are welcome to a copy of this report if so desired by the laboratory's client.

Should you have any question regarding the results of the mock-up in general please feel free to contact the laboratory.

Respectfully Submitted,

Mid America Testing Laboratory

Manager Technical Services

GK: ljk
20111F

GILBANE
University of Kentucky
Patient Care Facility
Gilbane Project No. 18-3956
REVIEWED

Bid Package No. _____
Submittal No. _____
Spec Sect/Para. _____
Reviewed By _____
Date _____

This review does not constitute nor does it assume design responsibility nor does it relieve the trade contractor's supplier from complying with the contract requirements coordinating their work with other trades and verifying field dimensions.

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NO EXCEPTIONS TAKEN — [X]
FURNISH AS CORRECTED — [ ]
REVISE AND RESUBMIT — [ ]
NO REVIEW - INCOMPLETE — [ ]
SUBMIT SPECIFIED ITEMS — [ ]
REJECTED — [ ]

DATE 3-15-07 BY BK

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□ 335 WEST MAIN STREET, LEXINGTON, KENTUCKY 40507 (859) 381-8787

APPROVED FOR
BONE WHITE COLOR

Gilbane

Transmittal

Project [2239.2] - PCF - Hospital - Garage

View Date 2/18/2008

Gilbane
940 Elizabeth St
Lexington, KY 40506-0293
Phone: (859) 257-4536
Fax: (859) 323-1331

Transmittal No. 2239.2-00451

To	Mr. Doug Sherwood E. C. Matthews Co., Inc. 2265 Harrodsburg Road Lexington, KY 40504 USA Phone: (859) 278-3131 Fax: (859) 277-7903
From	Mr. Ryan Maguire (Gilbane)
Subject	Submittal

Date 10/23/2006

Items listed are being sent

☑ Enclosed

☐ Under Separate Cover

CSI Code 09100 - Light Gauge Metal Framing

We are transmitting the following to you:

☑ Product Data ☐ Samples ☐ Shop Drawings ☐ O&M Manuals ☐ Plans
☐ Architectural Drawings ☐ Letters ☐ Specifications ☐ Prints ☐ Addenda
☐ Engineering Drawings ☐ Change Orders ☐ Submittal

Items

No.	Description	Copies	Reason	Action
100-09100-001	Light Gueage Metal Framing	2	Approved as Submitted	

Remarks

	Mr. Ryan Maguire	10/23/2006
From	Printed Name	Date
Received By	Printed Name	Date

Product Specification

UK PCF PARKING GARAGE
SECTION 05400 – COLD-FORMED METAL FRAMING
DATE: 10/04/2006

DIETRICH
METAL FRAMING
A Worthington Industries Company

Project Information:
Project Name: UK PCF Parking Garage
Project Number:
Address: 110 Transcript Avenue
City: Lexington
State: Kentucky

Contractor Information:
Company Name: Grayhawk, LLC
Contact Name: Kurt Stenzel
Address:
City: Lexington **State:** KY **Zip:** 40511
Phone: **Fax:**

Structural Stud

Product Code: CSJ
Depth: 3-5/8"
Flange: 1-5/8"
Lip: 1/2"
Yield Strength: 33
Gauge: 18
Design Thickness: 0.0451"

SSMA Code: 362S162-43
Weight/Foot: 1.111
Punched/Unpunched: P
Product Complies With:
A.I.S.I. Specification for the design of Cold-Formed Steel Structural Members
ASTM C-955
ASTM C-1007
ICBO 4784P*
See report for specific information.

Gross Section Properties

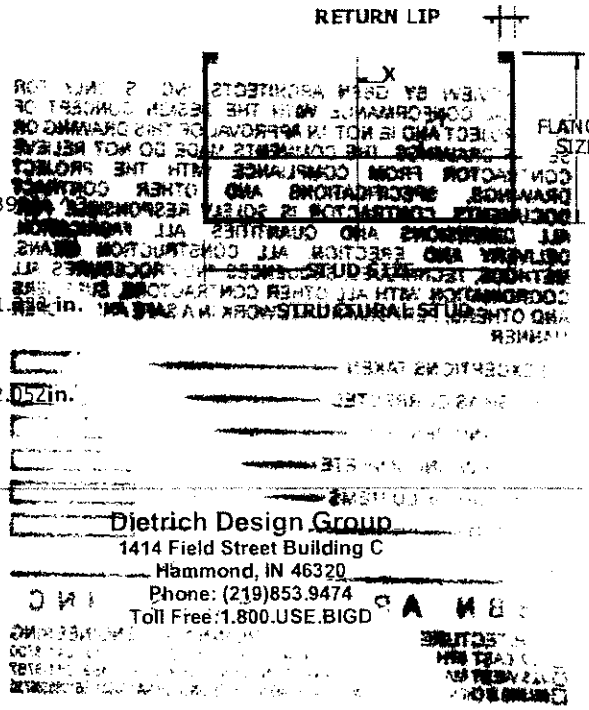
Area: 0.34 in.^2
Moment of inertia about x-x axis (Ix): 0.71 in.^4
Radius of gyration about x-x axis (Rx): 1.446 in.
Moment of inertia about y-y axis (Iy): 0.127in.^4
Radius of gyration about y-y axis (Ry): 0.611in.

Effective Section Properties

Fully Braced Allowable Moment (Mall): 8505in/lbs.
Moment of Inertia about x-x axis (IxEff): 0.71in.^4
Effective Section Modulus about x-x Axis (SxEff): 0.39

Torsional Section Properties

Distance between shear center and centroid (Xo): -1.
St. Venant torsional constant (Jx1000): 0.23
Warping torsional constant (Cw): 0.371
Polar radius of gyration about principal axis (Ro): 2.052in.
Beta Equals 1-(Xo/Ro)^2: 0.585



Dietrich Metal Framing, Inc.
Corporate Headquarters 500 Grant Street/Suite 2226
Pittsburgh, PA 15219
Phone: (412)281.2805

Dietrich Design Group
1414 Field Street Building C
Hammond, IN 46320
Phone: (219)853.9474
Toll Free:1.800.USE.BIGD

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J.C. MATTHEWS CO., INC.

BY: [signature] 10.9.06
SIGNATURE DATE

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NO EXCEPTIONS TAKEN ——— ☐

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[illegible]CTED ——— ☐

DATE 10/27/06 BY BK

GBBN ARCHITECTS, INC.

ARCHITECTURE [illegible] PLANNING, ENGINEERING

☐ 532 EAST 8[illegible] [illegible]INNATI, OHIO 45202-2217 (513) 241-8700

☐ 325 WEST MA[illegible] [illegible]EET, LEXINGTON, KENTUCKY 40507 (859) 381-8787

☐ [illegible] CHENG DISTRICT TONG LI GE ROAD NO 85, BEIJING, CHINA 100031 8610[illegible]

Product Specification

DIETRICH
METAL FRAMING
A Worthington Industries Company

Project Information:
Project Name: UK PCF Parking Garage
Project Number:
Address: 110 Transcript Avenue
City: Lexington
State: Kentucky

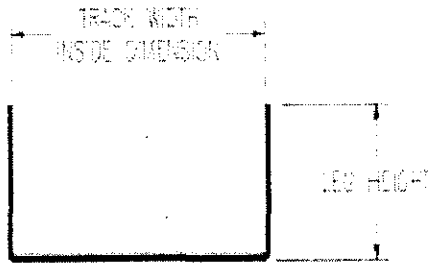
Contractor Information:
Company Name: Grayhawk, LLC
Contact Name: Kurt Stenzel
Address:
City: Lexington **State:** KY **Zip:** 40511
Phone: **Fax:**

Structural Track 2" Leg

Product Code: TSC
Depth: 3-5/8"
Leg Height: 2" Leg
Yield Strength: 33
Gauge: 18
Design Thickness: 0.0451"

SSMA Code: 362T200-43
Weight/Foot: 1.113
Product Complies With:
ASTM C-955
ASTM C-1007
ICBO 4782P*
See report for specific information.

Gross Section Properties
Area: 0.34 in.^2
Moment of inertia about x-x axis (Ix): 0.774 in.^4
Radius of gyration about x-x axis (Rx): 1.508 in.
Moment of inertia about y-y axis (Iy): 0.141 in.^4
Radius of gyration about y-y axis (Ry): 0.644 in.



STRUCTURAL TRACK

Effective Section Properties
Fully Braced Allowable Moment (Mall): 5184 in/lbs.
Moment of Inertia about x-x axis (IxEff): 0.611 in.^4
Effective Section Modulus about x-x Axis (SxEff): 0.262 in.^3

Torsional Section Properties
Distance between shear center and centroid (Xo): -1.285 in.
St. Venant torsional constant (Jx1000): 0.23
Warping torsional constant (Cw): 0.333
Polar radius of gyration about principal axis (Ro): 2.084 in.
Beta Equals 1-(Xo/Ro)^2: 0.62

Dietrich Metal Framing, Inc.
Corporate Headquarters 500 Grant Street/Suite 2226
Pittsburgh, PA 15219
Phone: (412)281.2805

Dietrich Design Group
1414 Field Street Building C
Hammond, IN 46320
Phone: (219)853.9474
Toll Free:1.800.USE.BIGD

FINISH MUST BE GALVANIZE FOR ALL COLD-FORMED METAL FRAMING PER SPEC SECTION 05400

Product Specification

DIETRICH
METAL FRAMING
A Worthington Industries Company

Project Information:
Project Name: UK PCF Parking Garage
Project Number:
Address: 110 Transcript Avenue
City: Lexington
State: Kentucky

Contractor Information:
Company Name: Grayhawk, LLC
Contact Name: Kurt Stenzel
Address:
City: Lexington **State:** KY **Zip:** 40511
Phone: **Fax:**

Structural Track 1-1/4" Leg

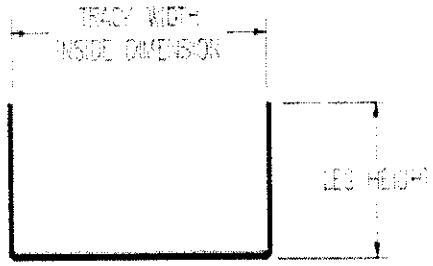
Product Code: TSB
Depth: 3-5/8"
Leg Height: 1-1/4" Leg
Yield Strength: 33
Gauge: 18
Design Thickness: 0.0451"

SSMA Code: 362T125-43
Weight/Foot: 0.891
Product Complies With:
ASTM C-955
ASTM C-1007
ICBO 4782P*
See report for specific information.

Gross Section Properties
Area: 0.272 **in.^2**
Moment of inertia about x-x axis (Ix): 0.546 **in.^4**
Radius of gyration about x-x axis (Rx): 1.416 **in.**
Moment of inertia about y-y axis (Iy): 0.039 **in.^4**
Radius of gyration about y-y axis (Ry): 0.376 **in.**

Effective Section Properties
Fully Braced Allowable Moment (Mall): 4696 **in/lbs.**
Moment of Inertia about x-x axis (IxEff): 0.502 **in.^4**
Effective Section Modulus about x-x Axis (SxEff): 0.238 **in.^3**

Torsional Section Properties
Distance between shear center and centroid (Xo): -0.668 **in.**
St. Venant torsional constant (Jx1000): 0.184
Warping torsional constant (Cw): 0.093
Polar radius of gyration about principal axis (Ro): 1.61 **in.**
Beta Equals 1-(Xo/Ro)^2: 0.828



STRUCTURAL TRACK

Dietrich Metal Framing, Inc.
Corporate Headquarters 500 Grant Street/Suite 2226
Pittsburgh, PA 15219
Phone: (412)281.2805

Dietrich Design Group
1414 Field Street Building C
Hammond, IN 46320
Phone: (219)853.9474
Toll Free:1.800.USE.BIGD

Product Specification

DIETRICH
METAL FRAMING
A Worthington Industries Company

Project Information:
Project Name: UK PCF Parking Garage
Project Number:
Address: 110 Transcript Avenue
City: Lexington
State: Kentucky

Contractor Information:
Company Name: Grayhawk, LLC
Contact Name: Kurt Stenzel
Address:
City: Lexington **State:** KY **Zip:** 40511
Phone: **Fax:**

Structural Stud

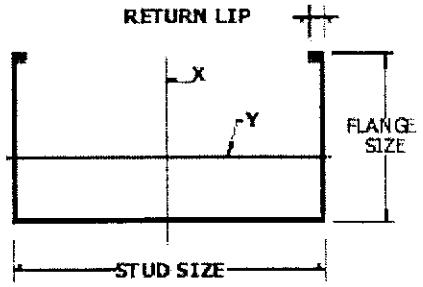
Product Code: CSJ
Depth: 6"
Flange: 1-5/8"
Lip: 1/2"
Yield Strength: 50
Gauge: 14
Design Thickness: 0.0713"

SSMA Code: 600S162-68
Weight/Foot: 2.266
Punched/Unpunched: P
Product Complies With:
A.I.S.I. Specification for the design of Cold-Formed Steel Structural Members
ASTM C-955
ASTM C-1007
ICBO 4784P*
See report for specific information.

Gross Section Properties
Area: 0.693 in.^2
Moment of inertia about x-x axis (Ix): 3.524 in.^4
Radius of gyration about x-x axis (Rx): 2.255 in.
Moment of inertia about y-y axis (Iy): 0.218in.^4
Radius of gyration about y-y axis (Ry): 0.561in.

Effective Section Properties
Fully Braced Allowable Moment (Mall): 39811in/lbs.
Moment of Inertia about x-x axis (IxEff): 4in.^4
Effective Section Modulus about x-x Axis (SxEff): 1in.^3

Torsional Section Properties
Distance between shear center and centroid (Xo): -1.061 in.
St. Venant torsional constant (Jx1000): 1.173
Warping torsional constant (Cw): 1.595
Polar radius of gyration about principal axis (Ro): 2.555in.
Beta Equals 1-(Xo/Ro)^2: 0.828



STRUCTURAL STUD

Dietrich Metal Framing, Inc.
Corporate Headquarters 500 Grant Street/Suite 2226
Pittsburgh, PA 15219
Phone: (412)281.2805

Dietrich Design Group
1414 Field Street Building C
Hammond, IN 46320
Phone: (219)853.9474
Toll Free:1.800.USE.BIGD

Product Specification

DIETRICH
METAL FRAMING
A Worthington Industries Company

Project Information:
Project Name: UK PCF Parking Garage
Project Number:
Address: 110 Transcript Avenue
City: Lexington
State: Kentucky

Contractor Information:
Company Name: Grayhawk, LLC
Contact Name: Kurt Stenzel
Address:
City: Lexington **State:** KY **Zip:** 40511
Phone: **Fax:**

Structural Track 1-1/4" Leg

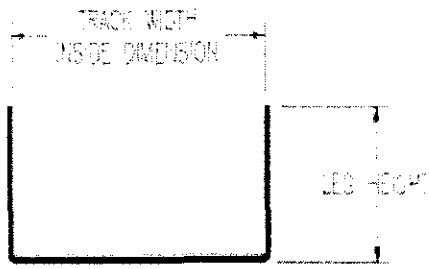
Product Code: TSB
Depth: 6"
Leg Height: 1-1/4" Leg
Yield Strength: 33/50
Gauge: 14
Design Thickness: 0.0713"

SSMA Code: 600T125-68
Weight/Foot: 1.837
Product Complies With:
ASTM C-955
ASTM C-1007
ICBO 4782P*
See report for specific information.

Gross Section Properties
Area: 0.597 in.^2
Moment of inertia about x-x axis (Ix): 2.843 in.^4
Radius of gyration about x-x axis (Rx): 2.182 in.
Moment of inertia about y-y axis (Iy): 0.067 in.^4
Radius of gyration about y-y axis (Ry): 0.334 in.

Effective Section Properties
Fully Braced Allowable Moment (Mall): 18213 in/lbs.
Moment of Inertia about x-x axis (IxEff): 2.843 in.^4
Effective Section Modulus about x-x Axis (SxEff): 0.891 in.^3

Torsional Section Properties
Distance between shear center and centroid (Xo): -0.517 in.
St. Venant torsional constant (Jx1000): 1.011
Warping torsional constant (Cw): 0.461
Polar radius of gyration about principal axis (Ro): 2.267 in.
Beta Equals 1-(Xo/Ro)^2: 0.948



STRUCTURAL TRACK

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Corporate Headquarters 500 Grant Street/Suite 2226
Pittsburgh, PA 15219
Phone: (412)281.2805

Dietrich Design Group
1414 Field Street Building C
Hammond, IN 46320
Phone: (219)853.9474
Toll Free:1.800.USE.BIGD

Product Specification

DIETRICH
METAL FRAMING
A Worthington Industries Company

Project Information:
Project Name: UK PCF Parking Garage
Project Number:
Address: 110 Transcript Avenue
City: Lexington
State: Kentucky

Contractor Information:
Company Name: Grayhawk, LLC
Contact Name: Kurt Stenzel
Address:
City: Lexington **State:** KY **Zip:** 40511
Phone: **Fax:**

U-Channel

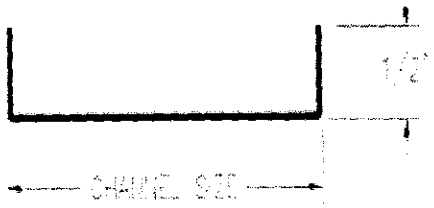
Product Code: CHN2
Width: 1-1/2"
Flange: 1/2"
Yield Strength: 33
Gauge: 16
Design Thickness: 0.056

SSMA Code: 150U50-54
Weight/Foot: 0.424
Product Complies With:
A.I.S.I. Specification for the design of Cold-Formed Steel Structural Members
ASTM C-645
ASTM C-754
ASTM C-955

Gross Section Properties
Area: 0.13 in.^2
Moment of inertia about x-x axis (Ix): 0.039 in.^4
Radius of gyration about x-x axis (Rx): 0.549 in.
Moment of inertia about y-y axis (Iy): 0.003in.^4
Radius of gyration about y-y axis (Ry): 0.145in.

Effective Section Properties
Fully Braced Allowable Moment (Mall): 1027in/lbs.
Moment of Inertia about x-x axis (IxEff): 0.039in.^4
Effective Section Modulus about x-x Axis (SxEff): 0.052in.^3

Torsional Section Properties
Distance between shear center and centroid (Xo): -0.2662 in.
St. Venant torsional constant (Jx1000): 0.1386
Warping torsional constant (Cw): 0.00102
Polar radius of gyration about principal axis (Ro): 0.62667in.
Beta Equals 1-(Xo/Ro)^2: 0.81956



U-CHANNEL

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Hammond, IN 46320
Phone: (219)853.9474
Toll Free:1.800.USE.BIGO

GILBANE
University of Kentucky
Patient Care Facility
Gilbane Project No. 18-3966

REVIEWED

☐ 010-Huguelet ☒ 020-Garage
☐ 030-Infrastructure ☐ 040-PCF Foundation
☐ 050-PCF Core/Shell ☐ 060-TowerUp Fit

Bid Package No. 100
Submittal No. 100-05400-0001
Spec. Sect/Para. —
Reviewed By RET
Date 10/13/2006

This review does not constitute nor does it assume design responsibility nor does it relieve the trade contractor's supplier from complying with the contract requirements, coordinating their work with other trade contractors and verifying field dimensions.

Gilbane

Transmittal

Project [2239.2] - PCF - Hospital - Garage

View Date 2/18/2008

Gilbane
940 Elizabeth St
Lexington, KY 40506-0293
Phone: (859) 257-4536
Fax: (859) 323-1331

Transmittal No. 2239.2-00451

To	Mr. Doug Sherwood E. C. Matthews Co., Inc. 2265 Harrodsburg Road Lexington, KY 40504 USA Phone: (859) 278-3131 Fax: (859) 277-7903
From	Mr. Ryan Maguire (Gilbane)
Subject	Submittal

Date 10/23/2006

Items listed are being sent

☑ Enclosed

☐ Under Separate Cover

CSI Code 09100 - Light Gauge Metal Framing

We are transmitting the following to you:

☑ Product Data ☐ Samples ☐ Shop Drawings ☐ O&M Manuals ☐ Plans
☐ Architectural Drawings ☐ Letters ☐ Specifications ☐ Prints ☐ Addenda
☐ Engineering Drawings ☐ Change Orders ☐ Submittal

Items

No.	Description	Copies	Reason	Action
100-09100-001	Light Gueage Metal Framing	2	Approved as Submitted	

Remarks

	Mr. Ryan Maguire	10/23/2006
From	Printed Name	Date
Received By	Printed Name	Date

UK PCF PARKING GARAGE
SECTION ~~09260~~ – LIGHT GAUGE
METAL FRAMING 09100
DATE: 10/04/2006

Product Specification

Project Information:

Project Name:	UK PCF Parking Garag
Project Number:	
Address:	110 Transcript Avenu
City:	Lexington
State:	Kentucky

Contractor Information:

Company Name:	Grayhawk, LLC
Contact Name:	Kurt Stenzel
Address:	
City: Lexington	**State:** KY **Zip:** 40511
Phone:	
Fax:	

DIETRICH METAL FRAMING
A Worthington Industries Company

Drywall Stud

DMF Product Code: STE
SSMA Product Code: 362S125-30
Size (inches): 3-5/8"
Size (mm): 92.1
Flange: 1-1/4"
Lip: 3/16"

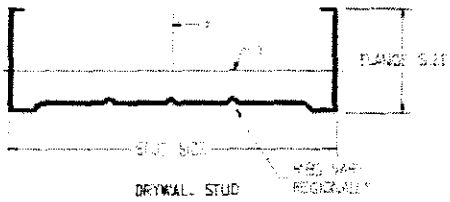
Gauge: 20 DW
Mils: 30
Design Thickness: 0.0312"
Yield Strength: 33 KSI

Weight (lbs/ft): 0.6335
Weight (kg/ft): 0.2873

Product Complies With:
ASTM C-645
ICBO 4782

Gross Section Properties

Area: 0.1936 in.^2
Moment of inertia about x-x axis (Ix): 0.3807 in.^4
Radius of gyration about x-x axis (Rx): 1.4022 in.
Moment of inertia about y-y axis (Iy): 0.0333 in.^4
Radius of gyration about y-y axis (Ry): 0.4150 in.

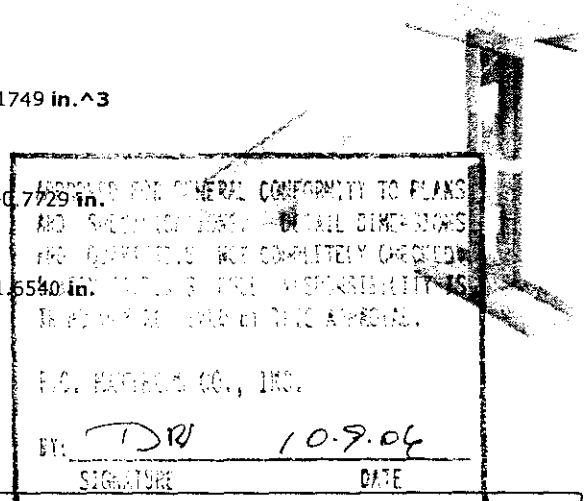


Effective Section Properties

Fully Braced Allowable Moment (Mall): 3,455.7 in/lbs.
Moment of Inertia about x-x axis (IxEff): 0.3748 in.^4
Effective Section Modulus about x-x Axis (SxEff): 0.1749 in.^3

Torsional Section Properties

Distance between shear center and centroid (Xo): -0.7729 in.
St. Venant torsional constant (Jx1000): 0.0627
Warping torsional constant (Cw): 0.0856
Polar radius of gyration about principal axis (Ro): 1.6540 in.
Beta Equals 1-(Xo/Ro)^2: 0.7816



Composite Limiting Heights

Member						Lateral Load								
						5 psf			7.5 psf			10 psf		
						Deflection Limit			Deflection Limit			Deflection Limit		
Depth	Designation	Gauge	Mils	Design Thickness (in.)	Spacing (in.)	L/120	L/240	L/360	L/120	L/240	L/360	L/120	L/240	L/360
3-5/8"	STE	20 DW	30	0.0312	12	21' 8"	17' 1"	14' 10"	18' 11"	14' 10"	12' 10"	17' 1"	13' 5"	11' 8"
					16	19' 11"	15' 8"	13' 7"	17' 5"	13' 7"	11' 9"	15' 8"	12' 3"	10' 7"
					24	17' 9"	14' 0"	12' 0"	15' 6"	12' 0"	10' 5"	14' 0"	10' 10"	9' 4"

f: Flexural Stress controls allowable wall height
s: Shear/web crippling controls allowable wall height

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Phone: (219)853.9474

THIS REVIEW BY GBBN ARCHITECTS, INC., IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND IS NOT AN APPROVAL OF THIS DRAWING OR SET OF DRAWINGS. THE COMMENTS MADE DO NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH THE PROJECT DRAWINGS, SPECIFICATIONS AND OTHER CONTRACT DOCUMENTS. CONTRACTOR IS SOLELY RESPONSIBLE FOR: ALL DIMENSIONS AND QUANTITIES, ALL FABRICATION, DELIVERY AND ERECTION; ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES; ALL COORDINATION WITH ALL OTHER CONTRACTORS, SUPPLIERS AND OTHERS; PERFORMING ALL WORK IN A SAFE AND PROPER MANNER.

NO EXCEPTIONS TAKEN — [X]
FURNISH AS CORRECTED — [ ]
REVISE AND RESUBMIT — [ ]
NO REVIEW - INCOMPLETE — [ ]
SUBMIT SPECIFIED ITEMS — [ ]
REJECTED — [ ]

DATE 10.18.06 BY JAP

GBBN ARCHITECTS, INC.
ARCHITECTURE, INTERIORS, PLANNING, ENGINEERING
□ 332 EAST 8TH STREET, CINCINNATI, OHIO 45202-2217 (513) 241-8700
□ 325 WEST MAIN STREET, LEXINGTON, KENTUCKY 40507 (859) 381-8787
□ BEIJING XI CHENG DISTRICT, TONG LI GE ROAD NO 85, BEIJING, CHINA 100031 86 10 88386730

Product Specification

Project Information:

Project Name: UK PCF Parking Garag
Project Number: 110
Address: Transcript Avenu
City: Lexington
State: Kentucky

Contractor Information:

Company Name: Grayhawk, LLC
Contact Name: Kurt Stenzel
Address:
City: Lexington **State:** KY **Zip:** 40511
Phone:
Fax:

DIETRICH METAL FRAMING
A Worthington Industries Company

Drywall Track

DMF Product Code: TRED
SSMA Product Code: 362T200-30
Size (inches): 3-5/8"
Size (mm): 92.1
Leg Height (inches): 2"
Leg Height (mm): 50.8

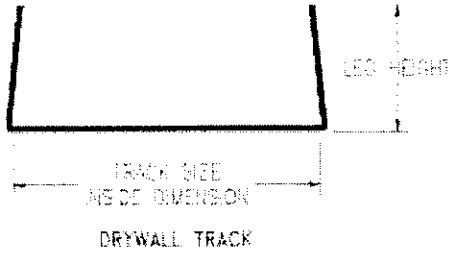
Gauge: 20 DW
Mils: 30
Design Thickness: 0.0312"
Yield Strength: 33 KSI

Weight (lbs/ft): 0.7771
Weight (kg/ft): 0.3525

Product Complies With:
ASTM C-645
ICBO 4782

Gross Section Properties

Area: 0.2375 in.^2
Moment of inertia about x-x axis (Ix): 0.5574 in.^4
Radius of gyration about x-x axis (Rx): 1.5320 in.
Moment of inertia about y-y axis (Iy): 0.0989 in.^4
Radius of gyration about y-y axis (Ry): 0.6453 in.



DRYWALL TRACK

Effective Section Properties

Fully Braced Allowable Moment (Mall): 3,281.7 in/lbs.
Moment of Inertia about x-x axis (LxEff): 0.4060 in.^4
Effective Section Modulus about x-x Axis (SxEff): 0.1661 in.^3

Torsional Section Properties

Distance between shear center and centroid (Xo): -1.2721 in.
St. Venant torsional constant (Jx1000): 0.0769
Warping torsional constant (Cw): 0.2428
Polar radius of gyration about principal axis (Ro): 2.0932 in.
Beta Equals 1-(Xo/Ro)^2: 0.6307

Dietrich Metal Framing, Inc.
Corporate Headquarters 500 Grant Street/Suite 2226
Pittsburgh, PA 15219
Phone: (412)281.2805

Dietrich Design Group
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Hammond, IN 46320
Phone: (219)853.9474
Toll Free:1.800.USE.BIGD

Product Specification

Project Information:

Project Name: UK PCF Parking Garag
Project Number:
Address: 110 Transcript Avenu
City: Lexington
State: Kentucky

Contractor Information:

Company Name: Grayhawk, LLC
Contact Name: Kurt Stenzel
Address:
City: Lexington **State:** KY **Zip:** 40511
Phone:
Fax:

DIETRICH
METAL FRAMING
A Worthington Industries Company

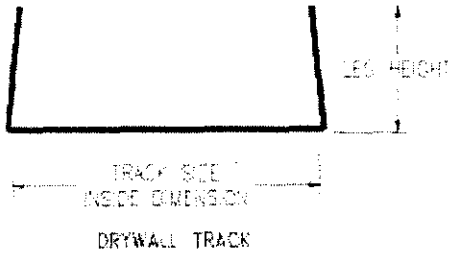
Drywall Track

DMF Product Code: TREB
SSMA Product Code: 362T125-30
Size (inches): 3-5/8"
Size (mm): 92.1
Leg Height (inches): 1-1/4"
Leg Height (mm): 31.75

Gauge: 20 DW
Mils: 30
Design Thickness: 0.0312"
Yield Strength: 33 KSI

Weight (lbs/ft): 0.6241
Weight (kg/ft): 0.2831

Product Complies With:
ASTM C-645
ICBO 4782



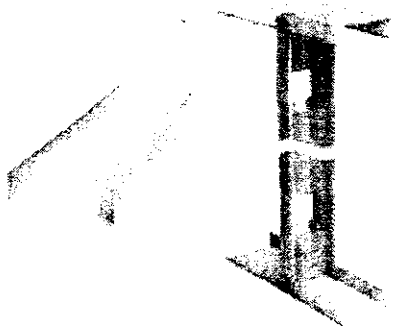
DRYWALL TRACK

Gross Section Properties

Area: 0.1908 in.^2
Moment of inertia about x-x axis (Ix): 0.3945 in.^4
Radius of gyration about x-x axis (Rx): 1.4380 in.
Moment of inertia about y-y axis (Iy): 0.0272 in.^4
Radius of gyration about y-y axis (Ry): 0.3778 in.

Effective Section Properties

Fully Braced Allowable Moment (Mall): 3,007.9 in/lbs.
Moment of Inertia about x-x axis (LxEff): 0.3382 in.^4
Effective Section Modulus about x-x Axis (SxEff): 0.1522 in.^3



Torsional Section Properties

Distance between shear center and centroid (Xo): -0.6594 in.
St. Venant torsional constant (Jx1000): 0.0617
Warping torsional constant (Cw): 0.0683
Polar radius of gyration about principal axis (Ro): 1.6265 in.
Beta Equals 1-(Xo/Ro)^2: 0.8356

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Toll Free:1.800.USE.BIGD

Product Specification

DIETRICH
METAL FRAMING
A Worthington Industries Company

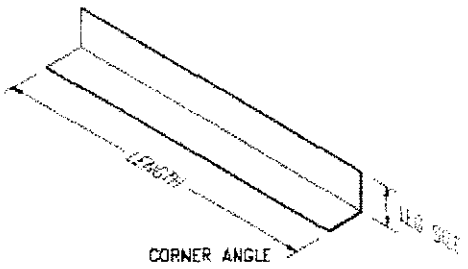
Project Information:
Project Name: UK PCF Parking Garage
Project Number:
Address: 110 Transcript Avenue
City: Lexington
State: Kentucky

Contractor Information:
Company Name: Grayhawk, LLC
Contact Name: Kurt Stenzel
Address:
City: Lexington **State:** KY **Zip:** 40511
Phone: **Fax:**

Corner Angle

Product Code: CAE
Leg: 1-1/2" x 1-1/2"
Yield Strength: 33
Gauge: 20
Design Thickness: 0.034"

SSMA Code: N/A
Weight/Foot: 0.33
Product Complies With:
ASTM C-645
ICBO 4782*
See report for specific information



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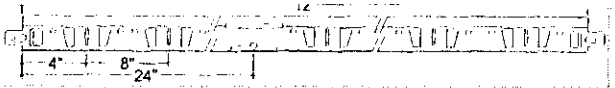
Phone: (219)853.9474
Toll Free:1.800.USE.BIGD

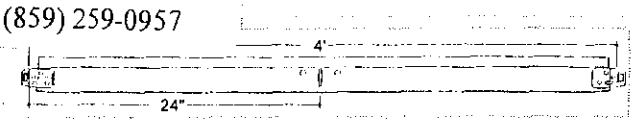
UK PCF PARKING GARAGE
SECTION ~~09250~~ – LIGHT GAUGE METAL FRAMING 09100
DATE: 10/04/2006

GRAYHAWK, LLC
2424 MERCHANT STREET
P.O. BOX 12111 (40580)
LEXINGTON, KY 40511
(859) 255-2754 FAX (859) 259-0957

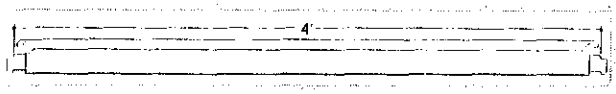
NT



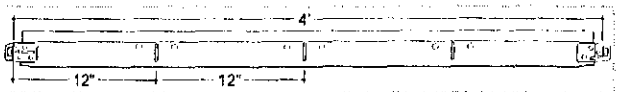
650-00C Furring Runner: 18 furring tee slots 8" O.C.



674-00C (Staked-On Clip) Furring Tee: 1 furring tee slot at midpoint.



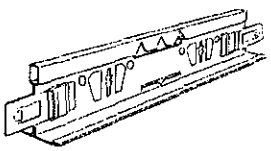
654-00C (Hook-Over) Furring Tee: No slots.



1274-01H Cross Tee: 3 cross tee slots, 1 at midpoint and 2 spaced 12" each side of midpoint.

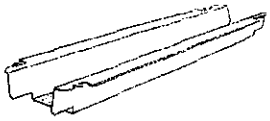
FIRE FRONT® 650-C DRYWALL FURRING SYSTEM

Product Number	Nominal Dimensions: Length	Height	Face	Slots	Per Carton: Feet	Pieces	Weight
Furring Runner – 1⅜" Wide Grid Face							
650-00C	12'	1½"	1⅜"	18	240	20	86
ASTM CLASSIFICATION: 650 – Heavy Duty.							
Furring Cross Channel – Stepped End▼							
634-00C	4'	⅞"	1⅜"	0	200	50	57
▼ Also compatible with 670 System components below.							
Furring Tee – Hook-Over End Tab							
654-00C	4'	1½"	1⅜"	0	160	40	57
Cross Tee – Staked-On Clip End Tab▼							
*1274-01H	4'	1½"	15/16"	3	200	50	61
▼ Also compatible with 670 System components below. * Used to support NEMA Type-G light fixture.							

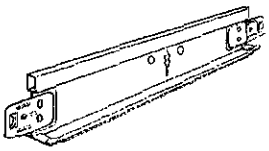


650-00C

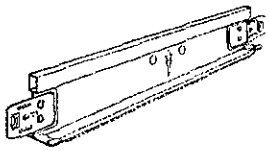
654-00C



634-00C



1274-01H



674-00C

U.L.® FIRE RESISTANT DESIGNS

Floor and Ceiling Designs – Type 650
D501, D502, G523, G524, G525, G526, G527, G528, G529, J502, L211*, L502, L508, L513, L515, L525, L526, L529

Roof and Ceiling Designs – Type 650
P237*, P239*, P240*, P241*, P501, P506, P507, P508, P509, P510, P513, P514,

* System used in upper plenum - Consult U.L. Fire Resistance Directory for details.

FIRE FRONT® 670-C DRYWALL FURRING SYSTEM▼

Product Number	Nominal Dimensions: Length	Height	Face	Slots	Per Carton: Feet	Pieces	Weight
Furring Runner – 1⅜" Wide Grid Face							
650-00C	12'	1½"	1⅜"	18	240	20	86
ASTM CLASSIFICATION: 650 – Heavy Duty.							
Furring Tee – Staked-On Clip End Tab							
674-00C	4'	1½"	1⅜"	1	160	40	57

▼ 634-00C Furring Cross Channel and 1274-01H Cross Tee components are also available for use with the 670 System. See 650-C System above for component details.

U.L.® FIRE RESISTANT DESIGNS

Floor and Ceiling Designs – Type 670
D501, D502, G523, G524, G525, G526, G527, G528, G529, J502, L211*, L502, L508, L513, L515, L525, L526, L529

Roof and Ceiling Designs – Type 670
P237*, P239*, P240*, P241*, P501, P506, P507, P508, P509, P510, P513, P514

* System used in upper plenum - Consult U.L. Fire Resistance Directory for details.

APPROVED FOR GENERAL CONFORMITY TO PLANS AND SPECIFICATIONS. DETAIL DIMENSIONS AND QUANTITIES NOT COMPLETELY CHECKED. CONTRACTOR'S FULL RESPONSIBILITY IS NOT RELIEVED BY THIS APPROVAL.

E.C. MATTINGLY CO., INC.

BY: DMJ 10.9.06
SIGNATURE DATE

SPECIFICATION GUIDELINES

(SECTION 09100 - Metal Support Systems)

PART 1 - GENERAL

1.01 Section Includes

Metal systems for supporting gypsum drywall in typical ceiling and soffit areas.

1.02 Related Sections

A. Section 09120 - Ceiling Suspension Systems

B. Section 09545 - Special Ceiling Surfaces

C. Section 13020 - Integrated Ceilings

D. Section 13080 - Sound, Vibration, and Seismic Control

E. Section 15500 - Heating, Ventilating, and Air Conditioning

F. Section 16500 - Lighting

1.03 Reference

A. American Society for Testing and Materials (ASTM)

1. C635 - Standard specification for the manufacture, performance, and testing of metal suspension systems for acoustical tile and lay-in panel ceilings.
2. C636 - Standard practice for installation of metal ceiling suspension systems for acoustical tile and lay-in panels.
3. C645 - Standard specifications for nonload (AXIAL) bearing steel studs, runners (TRACK), and furring channels for screw application of Gypsum Board.
4. C841 - Standard specification for installation of interior lathing and furring.
5. E119 - Standard methods of fire tests of building construction and materials.

B. Underwriters Laboratories (U.L.) Fire Resistance Directory (latest edition).

1.04 Submittals

A. Product data sheets: listing dimensions, load carrying capacity and standard compliance.

B. Samples: 12 inch long samples of main runner and furring cross tee with couplings.

1.05 Project Conditions

A. Environmental Requirements:

1. Verify weather tightness of area to receive suspension system prior to installation.
2. Wet trades work to be thoroughly dry and complete prior to installation.
3. Installation to begin only when temperature and humidity conditions closely approximate interior conditions which will exist when area is complete and occupied.
4. Heating and air conditioning systems to be operating prior to, during, and after installation.

1.06 Maintenance

Furnish additional material equal to _____ percent of ceiling area.

PART 2 - PRODUCTS

2.01 Manufacturers

Chicago Metallic (640-C) (660-C) (heavy duty) (intermediate duty), (650-C heavy duty) (670-C heavy duty) double web suspension system.

2.02 Suspension System Components

A. Furring Runners: Manufactured from (0.020) (0.015) inch thick steel (1-3/8) (15/16) inch wide with (knurled) (smooth) face by 1-1/2 inches high by 144 inches long with factory punched cross tee slots, hanger holes, and non-directional bayonet end tab couplings.

B. Furring Tees: Manufactured from (0.020) (0.012) inch thick 1-3/8 inch wide with knurled face by 1-1/2 inches high by 48 inches long with (staked-on clip) (hook-over end tab) couplings, factory punched cross tee slots, and hanger holes.

C. Furring Cross Channel:

1. Manufactured from 0.020 inch thick steel 1-3/8 inch wide with knurled face by 7/8 inches high by 48 inches long with straight locking end tabs.

D. Cross Tees:

1. Manufactured from 0.020 inch thick steel 15/16 inch wide by 1-1/2 inches high by 48 inches long with staked-on clip end tab couplings, factory punched cross tee slots, and hanger holes.
2. Coated with factory applied white baked-on enamel paint finish.

E. Wall Track:

1. Manufactured from 0.020 inch thick steel (1-1/2) (1-9/16) inches high by 120 inches long with a 1 inch top and bottom flange.

PART 3 - EXECUTION

3.01 Examination

Examine area receiving suspension system to identify conditions which will adversely affect installation. Do not begin installation until adverse conditions have been remedied.

3.02 Installation - Non Fire Rated System

A. Main Runners: Installed 48 inches on center, by direct suspension from existing structure, with not less than 12 gage hanger wires spaced 48 inches on center along main runner length. Wrap hanger wires tightly 3 full turns at each end.

B. Furring Tees: Installed perpendicular to main runners (16)(24) inches on center to form _____ by _____ modules.

C. Cross Tees: Installed adjacent to each unsupported side of recessed fixtures.

D. Wall Track: Installed on vertical surfaces, intersecting suspension components, by appropriate method in accordance with industry accepted practice.

E. Additional Hanger Wires: Wrapped tightly 3 full turns to structure and component at locations where imposed loads could cause deflection exceeding 1/360 span.

3.03 Installation - **Fire Rated System**

A. Installed in accordance with U.L. design number _____ guidelines.

3.03 REPAIR

Remove damaged components, replace with undamaged components.

Chicago Metallic's Standard, Drywall Furring and Designer Ceiling Systems are available in metric lengths with corresponding metric slotting. Contact your nearest Chicago Metallic representative or office for further information or assistance.

The suspension components of this ceiling system are manufactured from Hot Dipped Galvanized Steel.

Chicago Metallic®
CEILING SYSTEMS & SPECIALTY PRODUCTS

U.S. Toll Free: 800-323-7164 • Fax: 800-222-3744 • WWW.chicago-metallic.com

CHICAGO • BALTIMORE • LOS ANGELES
ANTWERP • HONG KONG • SINGAPORE • PARIS • LONDON • MILAN • FRANKFURT • SEOUL

PI-640/50/60/70-C-12985M
Printed in USA

GILBANE
University of Kentucky
Patient Care Facility
Gilbane Project No. 18-3986

REVIEWED

☐ 010-Huguelet ☒ 020-Garage
☐ 030-Infrastructure ☐ 040-PCF Foundation
☐ 050-PCF Core/Shell ☐ 060-TowerUp Fit

Bid Package No. 100
Submittal No. 100-09100-001
Spec. Sect/Para. —
Reviewed By EU
Date 10/13/2006

This review does not constitute nor does it assume design responsibility nor does it relieve the trade contractor's supplier from complying with the contract requirements, coordinating their work with other trade contractors and verifying field dimensions.

Gilbane

Transmittal

Project [2239.2] - PCF - Hospital - Garage

View Date 2/18/2008

Gilbane
940 Elizabeth St
Lexington, KY 40506-0293
Phone: (859) 257-4536
Fax: (859) 323-1331

Transmittal No. 2239.2-00904

To	Mr. Doug Sherwood E. C. Matthews Co., Inc. 2265 Harrodsburg Road Lexington, KY 40504 USA Phone: (859) 278-3131 Fax: (859) 277-7903
From	Mr. Brian Hoerr (Gilbane)
Subject	Submittal Package 100-09250-001.1.0

Date 5/31/2007

Items listed are being sent

☐ Enclosed

☐ Under Separate Cover

CSI Code 09250 - Gypsum Board

We are transmitting the following to you:

☐ Product Data ☐ Samples ☐ Shop Drawings ☐ O&M Manuals ☐ Plans
☐ Architectural Drawings ☐ Letters ☐ Specifications ☐ Prints ☐ Addenda
☐ Engineering Drawings ☐ Change Orders ☑ Submittal

Submittals

Pkg. No./Rev.	Item No./Rev.	Description	Copies	Reason	Action
100-09250-001.1.0	100-09250-002.0	Drywall Accessories- Product Data	5	Approved as Noted	

Linked Documents	Document Type	Document	Open	Description	Date
	Doc	2239.2-01111		100-09250-002	5/25/2007

Pkg. No./Rev.	Item No./Rev.	Description	Copies	Reason	Action
100-09250-001.1.0	100-09250-003.0	Joint Tape and Compound- Product Data	5	Approved as Noted	

Linked Documents	Document Type	Document	Open	Description	Date
	Doc	2239.2-01113		100-09250-002	5/25/2007

Remarks

	Mr. Brian Hoerr	5/31/2007
From	Printed Name	Date
Received By	Printed Name	Date

Linked Documents

Document Type	Document	Open	Description	Date
Sub. Pkg.	100-09250-001.1.0			

Distribution

Recipient	Company	Method	Date
Doug Sherwood	E. C. Matthews Co., Inc.	Message	5/31/2007

Gilbane

Transmittal

Project [2239.2] - PCF - Hospital - Garage

View Date 2/18/2008

Gilbane
940 Elizabeth St
Lexington, KY 40506-0293
Phone: (859) 257-4536
Fax: (B59) 323-1331

Transmittal No. 2239.2-00450

To	Mr. Doug Sherwood E. C. Matthews Co., Inc. 2265 Harrodsburg Road Lexington, KY 40504 USA Phone: (859) 278-3131 Fax: (859) 277-7903	**Date**	10/23/2006
From	Mr. Ryan Maguire (Gilbane)	**Items listed are being sent**	
Subject	Submittal	☑ Enclosed ☐ Under Separate Cover	
		CSI Code	09250 - Gypsum Board

We are transmitting the following to you:

☑ Product Data	☐ Samples	☐ Shop Drawings	☐ O&M Manuals	☐ Plans
☐ Architectural Drawings	☐ Letters	☐ Specifications	☐ Prints	☐ Addenda
☐ Engineering Drawings	☐ Change Orders	☐ Submittal		

Items

No.	Description	Copies	Reason	Action
100-09250-001	Gypsum Board Systems	2	Approved as Noted	

Remarks Revise and resubmit only those item noted.

	Mr. Ryan Maguire	10/23/2006
From	Printed Name	Date
Received By	Printed Name	Date

Grayhawk, LLC
2424 Merchant St.
P.O. Box 12111 (40580)
Lexington, KY 40511
859/255-2754 FAX 859/259-0957

Project: UK PCF Parking Garage
110 Transcript Avenue
Lexington, Kentucky
Section: 09250 Gypsum Board
Date: October 4, 2006

09250

GOLD BOND® BRAND XP® WALLBOARD

MANUFACTURER

National Gypsum Company
2001 Rexford Road
Charlotte, NC 28211
(704) 365-7300

Technical Information:
1-800-NATIONAL
(1-800-628-4662)

Fax: 1-800-FAX NGCC
(1-800-329-6421)

Internet Home Page:
www.nationalgypsum.com

09250/NGC BuyLine: 1100

DESCRIPTION

Gold Bond® BRAND XP® Wallboard panels consist of a fire-resistant, moisture-resistant gypsum core encased in heavy moisture/mold/mildew-resistant, 100% recycled purple paper on the face and back sides. XP Wallboard was designed to provide extra protection against mold and mildew compared to standard wallboard products. The face paper is folded around the long edges to reinforce and protect the core, and the ends are square-cut and finished smooth. Long edges of the panels are tapered. Tapered edges allow joints to be reinforced and concealed with ProForm® BRAND joint tape and Sta-Smooth® BRAND or Sta-Smooth Lite BRAND joint treatment compounds. For optimum mold performance, ProForm® BRAND XP™ Ready Mix is recommended for use.

Gold Bond BRAND XP Fire-Shield® Wallboard features a Type X core to provide additional fire resistance ratings when used in tested systems.

Gold Bond BRAND XP Fire-Shield C Wallboard Panels have a specially formulated type X core to achieve superior performance when used in specific fire-rated assemblies where the weight and number of wallboard layers are a concern.

BASIC USES

1/2" Regular - For single-layer application in residential construction.

1/2" Fire-Shield C - For single- or multi-layer construction in fire-tested assemblies.

5/8" Fire-Shield - For single- or multi-layer drywall construction. The greater thickness provides increased resistance to fire and reduced sound transmission.

ADVANTAGES

- Lightweight, cost-efficient material that readily accepts a wide range of decorative finishes.
- XP Wallboard is moisture-resistant and can be used as a tile-backer panel in dry areas or areas with limited water exposure such as toilet/sink areas and areas above tile in tubs and showers.
- Gypsum Wallboard is easily cut for quick installation, permitting painting or other decoration and the installation of metal or wood trim almost immediately.
- The gypsum core will not support combustion or transmit temperatures greatly in excess of 212°F (100°C) until completely calcined, a slow process.
- Expansion and contraction under normal atmospheric changes is negligible.

MOLD AND MILDEW RESISTANCE

XP Wallboard was designed to provide extra protection against mold and mildew compared to standard wallboard products. When tested by an independent lab per ASTM D3273 ("Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber"), XP Wallboard achieved a score of 10, the best possible score for this test.

The use of XP Wallboard in actual installations may not produce the same results as were achieved in controlled, laboratory conditions. No material can be considered "mold-proof", nor is it certain that any material will resist mold or mildew indefinitely. When used in conjunction with good design, handling and construction practices, XP Wallboard can provide increased mold resistance versus standard wallboard products. As with any building material, avoiding water exposure during handling, storage and installation, and after installation is complete, is the best way to avoid the formation of mold or mildew.

LIMITATIONS

- Exposure to excessive or continuous moisture and extreme temperatures should be avoided. Gypsum Wallboard is not recommended where it will be exposed to temperatures exceeding 125°F (52°C) for extended periods of time.
- XP Wallboard should not be used as a backer board directly behind tile in tub and shower areas.
- XP Wallboard should not be used in areas subject to constant and/or excessive moisture and high humidity such as gang showers, saunas and steam room and swimming pool enclosures. PermaBase® BRAND Cement Board is recommended for these applications.
- Installing Gypsum Wallboard panels over an insulating blanket, installed continuously across the face of the framing members, is not recommended. Blankets should be recessed and flanges attached to the sides of the studs or joists.
- Gypsum Wallboard must be stored off the ground and under cover. Sufficient risers must be used to assure support for the entire length of the wallboard to prevent sagging.
- Gypsum Wallboard must be kept dry to minimize the potential for mold growth. Adequate care should be taken while transporting, storing, applying and maintaining gypsum wallboard.

(Continued next page)

Job Name _____

Contractor _____ Date _____

APPROVED FOR GENERAL CONFORMITY TO PLANS AND SPECIFICATIONS. DETAIL DIMENSIONS AND QUANTITIES NOT COMPLETELY CHECKED. SUBCONTRACTOR'S FULL RESPONSIBILITY IS NOT RELIEVED BY THIS APPROVAL.

E.C. MATTHEWS CO., INC.

BY: DRS 10.9.06
SIGNATURE DATE

GILBANE
University of Kentucky
Patient Care Facility
Gilbane Project No. 18-3966
REVIEWED

☐ 010-Huguelet ☒ 020-Garage
☐ 030-Infrastructure ☐ 040-PCF Foundation
☐ 050-PCF Core/Shell ☐ 060-TowerUp Fit

Bid Package No. 10C
Submittal No. 10C-09250-001
Spec. Sect/Para. —
Reviewed By RL
Date 10/13/2006

This review does not constitute nor does it assume design responsibility nor does it relieve the trade contractor's supplier from complying with the contract requirements, coordinating their work with other trade contractors and verifying field dimensions.

THIS REVIEW BY GBBN ARCHITECTS, INC., IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND IS NOT AN APPROVAL OF THIS DRAWING OR SET OF DRAWINGS. THE COMMENTS MADE DO NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH THE PROJECT DRAWINGS, SPECIFICATIONS AND OTHER CONTRACT DOCUMENTS. CONTRACTOR IS SOLELY RESPONSIBLE FOR: ALL DIMENSIONS AND QUANTITIES; ALL FABRICATION, DELIVERY AND ERECTION; ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES; ALL COORDINATION WITH ALL OTHER CONTRACTORS, SUPPLIERS AND OTHERS; PERFORMING ALL WORK IN A SAFE AND PROPER MANNER.

NO EXCEPTIONS TAKEN — [X]

FURNISH AS CORRECTED — [ ]

REVISE AND RESUBMIT — [ ]

NO REVIEW - INCOMPLETE — [ ]

SUBMIT SPECIFIED ITEMS — [ ]

REJECTED — [ ]

DATE 10.18.06 BY JAP

GBBN ARCHITECTS, INC.
ARCHITECTURE, INTERIORS, PLANNING, ENGINEERING
☐ 332 EAST 8TH STREET, CINCINNATI, OHIO 45202-2217 (513) 241-8700
☒ 325 WEST MAIN STREET, LEXINGTON, KENTUCKY 40507 (859) 381-8787
☐ BEIJING XI CHENG DISTRICT, TONG LI GE ROAD NO 85, BEIJING, CHINA 100031 86 10 88386738

For additional information, refer to the Gypsum Association publication, *"Guidelines for the Prevention of Mold Growth on Gypsum Wallboard"* (GA-238-03), which is available at www.gypsum.org under the "Download Free Gypsum Association Publications" section.

COMPOSITION & MATERIALS

Gypsum Wallboard is a manufactured panel with a gypsum core encased with paper. Gypsum Wallboard contains no asbestos. Fire-Shield core gypsum wallboard also contains various aggregates such as fiberglass to enhance the fire-resistive qualities.

ACCESSORIES

Fasteners: drywall screws, nails or adhesives
Joint tape
Joint compound
Cornerbeads
Trims
Casing beads
Furring channels
E-Z Strip control joints
.093 zinc control joint

SIZES

Regular Gypsum Wallboard
Width: 4' (1219 mm)
Lengths: 8's, 10's and 12's (2438 – 3657 mm)
Thickness: 1/2" (12.7 mm)

Fire-Shield Wallboard (includes "C")
Width: 4' (1219 mm)
Lengths: 8's, 10's and 12's (2438 – 3657 mm)
Thickness: 1/2" (12.7 mm) 5/8" (15.9 mm)

Edges:
Regular Gypsum Wallboard: Square or tapered
Fire-Shield Wallboard: Square or tapered

APPLICABLE STANDARDS

ASTM C 1396/C 630

ASTM C473

Federal specification SS-L-30D Type III (Regular)

Federal specification SS-L-30D Type III Grade X (Fire-Shield)

► FIRE PERFORMANCE

SURFACE BURNING CHARACTERISTICS

ASTM E 84
Flame spread: 15
Smoke developed: 0

FIRE RESISTANCE RATINGS

Fire resistance ratings represent the results of tests on assemblies made up of specific materials in a specific configuration. When selecting construction designs to meet certain fire resistance requirements, caution must be used to insure that each component of the assembly is the one specified in the test. Further, precaution should be taken that assembly procedures are in accordance with those of the tested assembly. (For copies of specific tests, call 1-800-NATIONAL. For fire safety information, see www.nationalgypsum.com)

► INSTALLATION

APPLICABLE STANDARDS AND REFERENCES

ASTM C 840

Gypsum Association GA-216

Gypsum Association GA-214

National Gypsum Co. *Gypsum Construction Guide*

RECOMMENDATIONS

Installation of Gypsum Wallboard should be consistent with methods described in the standards and references noted.

GRIDMARX®

Gold Bond® BRAND Wallboard comes standard with GridMarX® guide marks, printed on the paper surface. These guide marks align with standard building dimensions and help to quickly identify fastener lines for stud and joist framing. Using GridMarX, accurate cuts can be made without having to draw lines. The use of GridMarX also provides quick identification and uniform nail/screw patterns.

GridMarX guide marks run the machine direction of the board at five points in 4" increments. Marks run along the edge in both tapers and at 16", 24" and 32" in the field of the board. The marks cover easily with no bleed-through using standard paint products.

Vertical Application - In a vertical application, GridMarX serve as a guide mark to help identify the exact location of framing members behind the gypsum board eliminating the need for field-applied vertical lines.

Horizontal Application - In a horizontal application, GridMarX serve as a reference mark to help identify the location of framing members behind the gypsum board. (If framing member is located 2" to the right of the GridMarX at the top edge of the board, it will be located 2" to the right down the face of the board.)

DECORATION

For best painting results, all surfaces, including joint compound, should be clean, dust-free and not glossy. To improve fastener and joint concealment, a coat of a quality drywall primer is recommended to equalize the porosities between surface paper and joint compound.

The selection of a paint to give the specified or desired finished characteristics is the responsibility of the architect or contractor.

Gypsum Wallboard that is to have a wallcovering applied to it should be prepared and primed as described for painting.

Gypsum Association GA-214, Recommended Specification for Levels of Gypsum Board Finish, should be referred to in order to determine the level of finishing needed to assure a surface properly prepared to accept the desired decoration.

National Gypsum.

Excellence Across The Board

Grayhawk, LLC
2424 Merchant St.
P.O. Box 12111 (40580)
Lexington, KY 40511
859/255-2754 FAX 859/259-0957

Project: UK PCF Parking Garage
110 Transcript Avenue
Lexington, KY
Section: 09250 Gypsum Board
Date: October 4, 2006

GlasRoc® BRAND Gypsum Sheathing Type X

Product Data and Submittal

GlasRoc® Enhanced Glass Reinforced Gypsum Sheathing Type X

PRODUCT DESCRIPTION

GlasRoc® Sheathing Type X is a high-performance, weather-resistant gypsum sheathing produced with BPB's proprietary Enhanced Glass Reinforced Gypsum Technology.

GlasRoc® Sheathing Type X has a specially formulated core for use in fire resistance-rated designs.

Basic Uses

GlasRoc® Sheathing Type X is an approved substrate by the major EIFS manufacturers, one-coat and conventional stucco systems, traditional cladding systems, exterior ceilings, soffit systems and exterior curved applications.

GlasRoc® Sheathing Type X can be used in fire-rated exterior wall assemblies.

Advantages

- Will withstand up to six months of exposure to typical weather conditions such as UV, rain, wind, ice and snow.
- Superior water resistance while allowing the building's vapor drive to be unimpeded.
- Improved physical performance compared to paper-faced and glass-faced gypsum sheathing products.
- Dimensionally stable under changes in temperature and relative humidity.
- Will not contribute to mold and mildew growth.
- Noncombustible
- Is lighter weight than comparable gypsum products.
- No special tools or fasteners required for installation.
- Resists delamination, deterioration, warping and job site damage because the glass mats are fully embedded into the panel.
- Fully-embedded glass mat reduces irritating glass fiber exposure for friendlier installation.

Limitations

- Framing spacing should not exceed 24" o.c. for 5/8" **GlasRoc®** Type X Sheathing.
- **GlasRoc®** Sheathing Type X must not be installed below grade.
- **GlasRoc®** Sheathing Type X should not be used as a nailing base.
- **GlasRoc®** Sheathing Type X application to framing by adhesive only is not recommended.
- Boards should be stacked flat with care taken to prevent sagging or damage to edges, ends and surfaces.

Composition and Materials

GlasRoc® Sheathing Type X is a paperless gypsum panel with a water-resistant core and fully-embedded glass mats which lie beneath a layer of gypsum, covered with an innovative acrylic coating. This product incorporates additives to enhance the fire resistive qualities.

Sizes and Types

Thicknesses: 5/8" (15.9 mm)

Widths: 4' (1219 mm) standard

Lengths: 8' standard. Custom lengths available.

Edges: Square

Packaging: Per piece

Applicable Standards and Code Compliance

GlasRoc® Sheathing Type X meets ASTM C 1177 and applicable ASTM C 931 and C 79 requirements.

ICC ES Legacy Report NER-674
NYC MEA 312-03-M
CCMC Evaluation Report #13095-R

TECHNICAL DATA

Surface Burning Characteristics

GlasRoc® Sheathing Type X has a Flame Spread rating of 0 and Smoke Developed rating of 0, in accordance with ASTM E 84 (UL723 and CAN/ULC-S102M).

Noncombustible

Fire testing in accordance with ASTM E 136 determined that **GlasRoc®** Sheathing Type X is noncombustible.

Fire Resistance

GlasRoc® Sheathing Type X is UL Classified for Fire Resistance in accordance with ASTM E 119 (ANSI/UL263, CAN/ULC-S101M).

UL Designs For Steel Stud Systems: U017, U411, U418, U420, U421, U422, U425, U434, U442, U450, U460, U465, U466, U467, U473, U475, U487, U494, U501, U502, U504, U505, U506, U510, U512, U603, U615, U617, U622, U623, U626, U640, V417, V419.

GA-600 Listings for Steel Stud Systems: WP 7210, WP 9020, WP 9200 and WP 9205.

UL Designs For Wood Stud Systems: U301, U302, U305, U309, U322, U323, U324, U325, U326, U329, U330, U332, U337, U338, U339, U341, U342, U354, U355, U357, U358, U360.

GA-600 Listings for Wood Stud Systems: WP 8105, WP 8410, WP 8415 and WP 8420.

UL Designs for Steel Joist Floor-Ceiling Systems: G501, G520 and G531.

Continued on back

Job Name _____

Contractor _____ Date _____

Product(s) Specified _____

APPROVED FOR GENERAL CONFORMANCE TO PLANS AND SPECIFICATIONS. APPROVAL OF SPECIFIC DETAILS AND CONSTRUCTION METHODS ARE THE RESPONSIBILITY OF THE CONTRACTOR. SUBMITTAL OF THIS DRAWING FOR APPROVAL IS TAKEN AS EVIDENCE THAT THE CONTRACTOR HAS REVIEWED AND APPROVED.

E.C. MATTHEWS CO., INC.

BY: DN 10-9-06
SIGNATURE DATE

GA-600 Listings for Steel Joist Floor-Ceiling Systems: FC 1130, FC 2116, FC 2120, FC 4490 and FC 4750.

UL Designs for Wood Joist Floor-Ceiling Systems: L501 and L508.

GA-600 Listings for Wood Joist Floor/Roof-Ceiling Systems: FC 5310, FC 5406, FC 5407, FC 5408, FC 5420, FC 5600, FC 5725, FC 5750, FC 5751, RC 2601, RC 2602, RC 2750 and RC 2751.

UL Designs for Beam Protection: N501, N502 and N505.

UL Designs for Column Protection: X508, X516, X517, X525, X526 and X528.
GA-600 Listings for Beam & Column Systems.

Beam Protection: BM 2120 and BM 2130.

Column Protection: CM 1850, CM 1851, CM 2017, CM 2020, CM 2120, CM 3115, CM 3116, CM 3120, CM 3450, CM 3451, CM 4110 and CM 4600.

STORAGE

Store materials protected against damage from weather, direct sunlight, surface contamination, construction traffic, or other causes. Stack sheathing flat on level supports off the ground, under cover and fully protected from weather. Store and support board in flat stacks to prevent sagging. Protect materials to keep them dry. Protect boards to prevent damage to edge and and surfaces.

INSTALLATION

Applicable Standards and Code Compliance

Gypsum Association GA-253, ASTM C 1280, ICC International Building Code, ICC ES

Recommendations

Comply with GA-253, ASTM C 1280, manufacturer's written instructions and local building codes.

Cut boards at penetrations, edges and other obstructions of work; fit tightly against abutting constructions, unless otherwise indicated.

Install boards with a 3/8" (9 mm) setback where nonload-bearing constructions abuts structural elements. Install boards with a 1/4" (6 mm) setback where they abut masonry or similar materials that might retain moisture, to prevent wicking. Allow no board joints greater than 1/8" (3 mm).

Coordinate sheathing installation with flashing and joint sealant installation so these materials are installed in sequence and manner that prevent exterior moisture from passing through completed exterior wall assembly.

Apply fasteners so screw heads bear tightly against face of sheathing boards but do not cut into facing. Do not bridge building expansion joints with sheathing; cut and space edges to match spacing of structural support elements.

Horizontal Installation

Install sheathing with long edges in contact with edges of adjacent boards without forcing. Abut ends of boards over centers of stud flanges, and stagger end joints of adjacent boards not less than one stud spacing. Attach boards at perimeter and within field of board to each stud.

Space fasteners a maximum of 8" (200 mm) o.c. (tighter spacing if recommended by manufacturer for specific application) and a minimum of 3/8" (9 mm) from edges and ends of boards.

Treat board joints, when required by local building code or exterior finish system, per manufacturer's written instructions.

TYPICAL PHYSICAL PROPERTIES	5/8"(15.9mm) GlasRoc® Sheathing Type X	Test Method
Physical Characteristics:		
Nominal Width	48" (1219 mm)	-
Standard Lengths	8'**	-
Face Surface	Acrylic/Gypsum	-
Pliability:		
Bending Radius - Dry, Lengthwise	8' (2400 mm)	-
Strength:		
Racking Strength - Lbs/Lin.Ft. - (kN/m) Design Value	120 (1.75)	ASTM E 72
Parallel Flexural Strength - Lbs. (N)	135 (600)	ASTM C 473
Water Resistance:		
Humidified Deflection (Sag)	1/64" (0.4 mm)	ASTM C 473
Water Vapor Transmission:		
Permeance- perms (ng/pa•s•m²)	21 (1200)	ASTM E 96
Thermal Resistance:		
"R" Value - sq.ft.•h•°F/Btu (K•m²/W)	0.51 (0.090)	ASTM C 518
Fire Performance:		
Flame Spread/Smoke Developed	0/0	ASTM E 84
Combustibility:	Noncombustible	ASTM E 136
Dimensional Stability:		
Thermal Coefficient of Linear Expansion - In./in./°F (mm/mm/°C)	6.4 X10⁻⁶ (11.5 X10⁻⁶)	ASTM E 228
Mold Resistance:		
Mold Resistance Rating*	10	ASTM D 3273/D3274

*No mold growth detected. Note that 10 is the highest rating possible
**Other lengths available upon request.

USA

BPB America Inc.
5301 West Cypress St., Suite 300
Tampa, FL 33607

Toll Free: +1-866-4 BPB USA (1-866-427-2872)
Fax: +1-813 286 3991
E-mail: crc@bpb-na.com
Web: www.bpb-na.com

Distributed by:

Grayhawk, LLC
2424 Merchant St.
P.O. Box 12111 (40580)
Lexington, KY 40511
859/255-2754 FAX 859/259-0957

Project: UK PCF Parking Garage
110 Transcript Avenue
Lexington, Kentucky
Section: 09250 Gypsum Board
Date: October 4, 2006

DUPONT Tyvek CommercialWrap® DUPONT Tyvek CommercialWrap® DUPONT Tyvek CommercialWrap®

Product Specifications for Tyvek® CommercialWrap®

PROPERTIES	METHOD	TYVEK® COMMERCIALWRAP®
Air Penetration	Air-Ins (cfm/ft²@75 Pa)	.001
	Gurley Hill (TAPPI T-460) (sec/100cc)	>1500
	ASTM E-1677	Type 1
Water Vapor Transmission	ASTM E-96 Method B (g/m²-24 hrs)	200
	(perms)	28
Water Penetration Resistance	AATCC-127 (cm)	280
Basis Weight	TAPPI T-41D (oz/yd²)	2.7
Breaking Strength	ASTM D-882 Method A (lbs/in)	38/35
Tear Resistance (trapezoid)	ASTM D-1117 (lbs)	12/10
Surface Burning Characteristics	ASTM E-84-97a Flame Spread	Class A
	Indexed Smoke Developed Value	Class A

APPROVED AS GENERAL CONFORMITY TO PLANS AND SPECIFICATIONS. SPECIAL DIMENSIONS AND CONDITIONS NOT COMPLETELY CHECKED. SUBCONTRACTOR'S FULL RESPONSIBILITY IS NOT RELIEVED BY THIS APPROVAL.

E.C. MATTHEWS CO., INC.

BY: DR 10.9.06
DATE

WARNING: Tyvek® is combustible and should be protected from a flame and other high heat sources. If the temperature of Tyvek® reaches 750 F (400 C), it will burn and the fire may spread and fall away from the point of ignition.

For more information:
1-800-44-TYVEK®
www.tyvekconstruction.com

DUPONT **Tyvek® CommercialWrap®**
Build it once, build it right.

Grayhawk, LLC
2424 Merchant St.
P.O. Box 12111 (40580)
Lexington, KY 40511
859/255-2754 FAX 859/259-0957

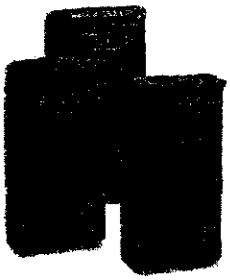
Project: UK PCF Parking Garage
110 Transcript Avenue Lexington, KY
Section: 09250 – Gypsum Board

Date: March 2, 2007

Submittal Sheet
09250

SHEETROCK® Brand Setting-Type Joint Compounds

Durabond



For one-day drywall finishing
- For interior gypsum panels and exterior gypsum ceiling boards.
- Unique humidity resistance.
- Exceptional bond, low shrinkage.
- Unusual check-crack resistance in heavy fills.
- Choice of setting times.

Description

These asbestos-free, chemically setting powder compounds for drywall interiors and exteriors permit same-day joint finishing, and, usually, next-day decoration. SHEETROCK® Brand Setting-Type Joint Compounds (DURABOND®) are also ideal for heavy fills and are virtually unaffected by humidity. They provide low shrinkage and superior bond, which make them excellent for laminating gypsum panels to gypsum panels, to sound-deadening boards, and to above-grade concrete surfaces. In addition, SHEETROCK Brand Setting-Type Joint Compounds can be used for filling, smoothing, and finishing interior concrete ceilings and above-grade concrete, and for taping and finishing SHEETROCK® Brand Gypsum Panels, Water-Resistant, under tile in bathroom wall areas. Other uses include finishing joints in exterior gypsum ceiling boards and presetting joints of veneer plaster finish systems.

To meet varying job requirements, a full line of SHEETROCK Brand Setting-Type Joint Compounds has been developed to provide a choice in setting times. The suffix number identifying each SHEETROCK Brand Joint Compound indicates an approximate setting time. DURABOND 20 sets in about 20-30 minutes; DURABOND 45 in 30-80 minutes; DURABOND 90 in 85-130 minutes; DURABOND 210 in 180-240 minutes; and DURABOND 300 in 240-360 minutes.

Advantages

Saves time and money. These compounds provide important labor and material cost reductions. One-day finishing with next-day decoration ensures rapid job completion and earlier occupancy. Choice of setting times aids work flow.

Quickly mixed for immediate use. Easy to mix—simply combine with water and stir. Compounds are applied after short soaking period and remixing.

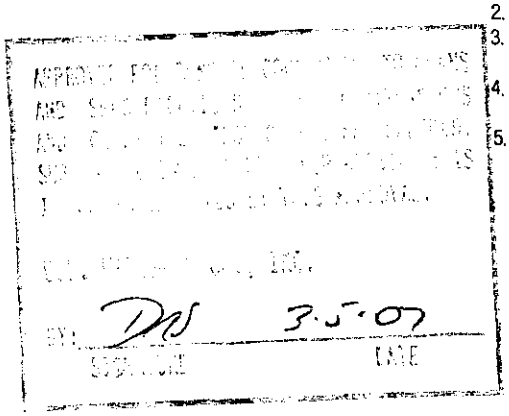
Resists shrinkage and edge-cracking. Compounds tolerate small amounts of excess water that would otherwise cause delayed shrinkage. Fill and finish coats can be applied when compound is hard—but still damp—with minimum danger of delayed shrinkage and cracking.

Resists humidity changes. Setting rates are virtually unaffected by high humidity or changes in humidity. Application can be made in damp weather when drying-type compounds would delay job completion.

Multiple use. Compounds are also excellent for patching and smoothing interior drywall and concrete surfaces because they provide superior bond, low shrinkage, and fast setting-action.

Limitations

1. SHEETROCK Brand Setting-Type Compounds are more difficult to smooth after drying than conventional drying-type compounds and should be smoothed before set or while they are in a damp but set state.
2. Setting action cannot be delayed or prevented by dilution with water.
3. Not to be applied over moist surfaces or surfaces likely to become moist, or on below-grade surfaces or surfaces projecting outside building structure unless protected from direct exposure to moisture.
4. Before using SHEETROCK Brand Setting-Type Compounds over new interior concrete surfaces, concrete should age 60 days or more. Remove protrusions, ridges, form or parting oils, grease, and efflorescence.
5. Prior to using any epoxy coating over any surface treated with joint compound, consult the epoxy coating manufacturer and follow manufacturer's specific recommendations regarding the preparation or suitability of substrates for the epoxy coating. Many epoxy coatings exert significant shear stress on the substrate as the strong epoxy film shrinks while curing/drying. This stress can cause the bond of the joint compound to fail, resulting in delamination problems.



USG

Directions

Preparation	In cold weather during gypsum panel joint finishing, minimum surface, water, mix, and air temperature of 45 °F must be ensured until joints are completely dry. Adequate ventilation shall be provided to carry off excess moisture.
Gypsum Panel Joint Treatment	Position and apply SHEETROCK® Brand Gypsum Panels in accordance with manufacturer's recommendations. Mix SHEETROCK Brand Setting-Type Joint Compound according to directions on bag. If using SHEETROCK Brand Gypsum Panels, SW Edge, prefill the "V" grooves formed by abutting tapered eased edges of the panels with DURABOND 45 or 90. Apply compound directly over "V" groove with a flexible 5" or 6" joint finishing knife. Wipe off excess compound that is applied beyond the groove. Allow the prefill compound to harden prior to the next application. Cover joint with a thin layer of compound and embed tape, leaving about 1/32" of compound under feathered edge and a thin layer over the tape. After compound has set, apply second coat, feathering out approximately 2" beyond first coat. After setting, apply third coat, feathering out 2" beyond second coat. After each coat is applied, smooth away any tool lap marks or other imperfections prior to setting action. Finish fastener heads with three coats of joint compound; finish corner bead and inside corners as required with at least two coats, feathered and smoothed out onto panel faces. For priming and decorating with paint, texture, or wallcovering, follow manufacturer's directions for materials used. All surfaces must be dry, dust-free, and not glossy. A prime coat of SHEETROCK® Brand First Coat or a good-quality interior latex flat wall paint with high solids content should be applied undiluted and allowed to dry before decorating. Walls to be covered with wallpaper or vinyl wallcovering should be sealed per manufacturer's recommendations. To improve fastener concealment where gypsum panel walls and ceilings will be subjected to severe artificial or natural side lighting and be decorated with a gloss paint (eggshell, semigloss, or gloss), the gypsum panel surface should be skim-coated with joint compound to equalize suction before painting (see publication J510).
Use with Veneer Plaster	Apply according to normal procedure. However, when building temperature/humidity conditions may result in rapid drying (see publication PM5), or when steel-framed systems at 24" o.c. with single-layer gypsum base and single-coat veneer plaster finish are specified in either rapid or normal drying conditions, use SHEETROCK® Brand Joint Tape embedded with SHEETROCK Brand Setting-Type Joint Compound (DURABOND 90). A fill or cover coat that completely hides the tape is required. This cover coat must be allowed to set before plastering. Plaster prefill is not required over SHEETROCK Brand Setting-Type Joint Compound.
Filling and Finishing over Interior Poured Concrete Ceilings	Grind high plane differences in concrete level with adjacent area; also remove any form oil, efflorescence, and greasy deposits. Prime exposed metal with a good rust-inhibitive primer. Fill offsets or voids with a SHEETROCK Brand Setting-Type Joint Compound. Apply additional coats of SHEETROCK Brand Setting-Type Joint Compound as necessary, after each coat has set, but not necessarily dried. After final coat of joint compound has dried, apply undiluted coat of SHEETROCK Brand First Coat or a good quality latex flat wall paint with high solids content over entire surface and allow to dry. For textured ceiling, apply SHEETROCK® Brand Ceiling Spray Texture–QT in a uniform coat at a rate not exceeding 10 ft.²/lb.
Exterior Joint Treatment	Mix SHEETROCK Brand Setting-Type Joint Compound according to directions on the bag. Do not overmix or use in temperatures below 45 °F (7 °C). Prefill joints of SHEETROCK® Brand Exterior Gypsum Board with SHEETROCK Brand Setting-Type Joint Compound. After prefill has set, embed SHEETROCK Brand Joint Tape centered over joint. When compound has set, immediately apply fill coat. Apply SHEETROCK Brand Setting-Type Joint Compound over flanges of zinc control joints, corner beads, and metal trim. Spot fastener heads. After fill coat has set, apply finishing coat of SHEETROCK Brand Setting-Type Joint Compound. Completely cover all joints, angles, beads, control joints, and fasteners. After the SHEETROCK Brand Setting-Type Joint Compound joint has dried, apply one coat of a good-quality oil or latex exterior primer. Then follow with at least one coat of a good-quality latex exterior paint.
Use with SHEETROCK Brand Gypsum Panels, Water-Resistant	In areas to be tiled, for tapered edge joints, embed SHEETROCK Brand Joint Tape with SHEETROCK Brand Setting-Type Joint Compound (DURABOND 45 or 90). When set, apply a fill coat of DURABOND 45 or 90. Take care not to crown the joint. Wipe excess joint compound from the panel surface before it sets. For butt joints and interior angles, embed SHEETROCK Brand Joint Tape with DURABOND 45 or 90. A fill coat is not necessary. Again, take care not to crown the joint. For fasteners, spot fastener heads at least once with DURABOND 45 or 90.

Fill and seal all openings around pipes, fittings, and fixtures with a thinned-down coat of tile adhesive. For best results, use Type I Ceramic Tile Adhesive that meets ANSI A136.1 both as a sealer and to set the tile. With a 1" brush, apply the thinned compound onto the raw gypsum panel core at cutouts, and allow area to dry thoroughly prior to application of tile. Before compound dries, wipe excess material from the surface of gypsum panels. For areas not to be tiled, embed tape with DURABOND 45 or 90 in the conventional manner. Finish with at least two coats of a SHEETROCK Brand Joint Compound to provide joint finishing for painting and wallpapering.

Laminating

Apply SHEETROCK Brand Setting-Type Joint Compound in the prescribed manner to back of face panels to be laminated. Laminate face panels to (base layer panels) (coreboard) using moderate pressure and temporary nailing or shoring to ensure adequate bond.

Repairing Handball and Racquetball Court Walls

Repair surface-damaged areas (gouges, scratches, surface imperfections) in handball and racquetball court walls and other interior wall and ceiling surfaces finished with U.S. Gypsum STRUCTO-BASE® and STRUCTO-GAUGE® Gypsum Plasters as follows. Clean surface of dust, residue, and other contaminants. Prepare DURABOND 45 or 90 by mixing into a solution of 1 part water and 1 part USG ACRI-ADD™ 100% Acrylic Add-Mix Fortifier. Use prepared mixture to refinish surface damage. Initial application over deep areas should be set and partially dry prior to application of subsequent coats. Finish to a smooth surface. This same procedure may be used in repair of surface-damaged areas of STRUCTOCORE® Security Wall Systems constructed using STRUCTO-BASE Gypsum Plaster and IMPERIAL® Finish Plaster per publication SA1119.

Finishing

For painting and decorating, follow manufacturer's directions for materials used.

Use With USG Gypsum Accelerator

USG Gypsum Accelerator (High Strength) when added to SHEETROCK Brand Setting Type Joint Compound (DURABOND) will shorten the setting time. USG Gypsum Accelerator should be sprinkled in dry form into the mixed compound. For hand mixing, dry accelerator can be added either to the dry mix or mixed compound. Never add USG Gypsum Accelerator directly to water or mix it with water to form a solution before adding it to the compound. Doing so will significantly reduce its ability to accelerate the set.

Accelerator Amount		Approximate Set Time (minutes)		
Tablespoon Per Bag	Tablespoon Per Bread Pan	DURABOND 90	DURABOND 45	DURABOND 20
1.0	0.22	40	20	10
2.0	0.44	30	10	
6.0	1.33	20		

- "Bread Pan" volume estimated at 10 cups (80 oz.)
- Wet Mixed Volume of Setting Type Joint Compounds approx. 2.8 gallons (45 cups) per bag.

Product Data

Color: Natural.
Binder: Vinyl.
Filler: Calcium Sulfate.
Dilution (water): Approximately 24 to 32 qt./100 lb. (50 to 67 L/100 kg). Refer to bag for specific water dilution directions.
Density (dry bulk): 40 lb./ft.^{3} (641 kg/m^3).
Freezing Sensitivity: None after set, but not necessarily dry.
Coverage: Average 72 lb./1000 ft.^{2} (35.2 kg/100 m^2) of gypsum panels.
Compliance with Standards: Meet ASTM Standard C475.
Storage: Close open bags as tightly as possible and store in a dry place.
Shelf Life: Up to 6 months under protected storage conditions.
Packaging: 25 lb. (11.3 kg) tan bags.

Grayhawk, LLC
2424 Merchant St.
P.O. Box 12111 (40580)
Lexington, KY 40511
859/255-2754 FAX 859/259-0957

Project: UK PCF Parking Garage
110 Transcript Avenue Lexington, KY
Section: 09250 – Gypsum Board

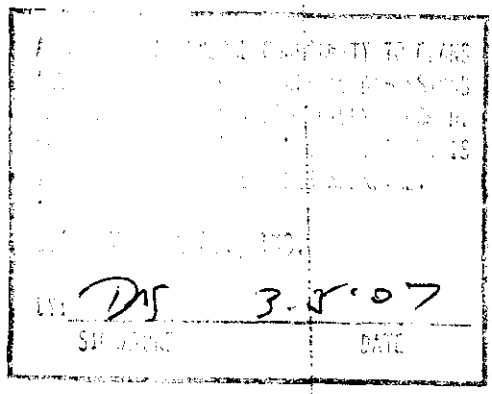
Date: March 2, 2007

CUSTOM TAPES INC.
CONSUMER PRODUCT DIVISION
7125 West Gunnison Street
Harwood Heights, IL 60706
Phone 800/621-7994 FAX 708/867-0522

GENERAL DESCRIPTION

A self adhering fiberglass mesh tape designed as a reinforcement to seal wallboard joints and repair of damaged plasterboard.

PHYSICAL CHARACTERISTICS	NOMINAL VALUES
Color	White to Off White
Thread Count per inch	10 x 20
Application Temperature Range	40°F to 100°F
Roll, length/width	2" x 36 ft.
	2" x 300 ft.
	2½" x 300 ft.
Roll Core Diameter	3"
Packaging	12 rolls per case
Shelf Life: storage	1 year minimum
72°F, 50% RH	



DO-IT-YOURSELF HOME IMPROVEMENT

Grayhawk, LLC
2424 Merchant St.
P.O. Box 12111 (40580)
Lexington, KY 40511
859/255-2754 FAX 859/259-0957

Project: UK PCF Parking Garage
110 Transcript Avenue Lexington, KY
Section: 09250 – Gypsum Board

Date: March 2, 2007

Submittal Sheet 2005

STRAIT-FLEX®

New Concept Drywall Products

DP 3.5.07
SIGNATURE DATE

L-BEAD

DESCRIPTION (Speed, Perfection and Longevity)	Patented PVC tight fibered cotton composite corner tape that is 2 14" wide, .020 thick and comes in 100' rolls. Strait-Flex L-Bead has recess running the length of tape, which makes folding easy, quick and is adjustable to any angle. Material is very stable with temperature changes and is flexible while maintaining it's rigidity when wet. Fold on crease, 3/8"-1/2"(std) -5/8"-3/4" fold down available upon request.
ADVANTAGES	• Strait-Flex L-Bead creates a fast, perfect inside off angle that can be installed by an apprentice taper. • 10 times stronger than paper tape • Forms easily to create straight, fast inside corners • Will not sag or soften • Will not shrink, blister, tear or wrinkle • Waterproof and rustproof • Saves 25-50% on installation time • Material can be second coated immediately • Solid rolls ensure no waste or damage in transit or in rough site conditions • Doe not require fasteners, stapling, or any special tools • Resists common cracking problems as encountered when using paper tapes • Requires very light fill coat to finish product.
LIMITATIONS	Not recommended for
WARRANTY	Strait-Flex products are backed by a lifetime warranty. When applied to a sound structure, built on a permanent foundation using recommended application techniques, we warrant that these products will not edge-crack for the lifetime of the structure. Inside offset corners applied horizontally cannot be guaranteed against cracking. Contact Strait-Flex International Inc for complete details.
DIRECTIONS	• Cut L-Bead to desired length and trim ends at 45-degree angles to eliminate slight curl at ends of cut lengths. • Apply using liberal coat of all-purpose compound to edge or angle with joint knife. • Press L-Bead into wet compound, adjust if necessary to create straight line and remove excess compound. • Apply second coat of compound "immediately", lightly skim coat surface of L-Bead. • Apply final coat if required, same as second coat and let dry. Sand lightly to smooth surface. • L-Bead will not fuzz up during sanding. Painted surface of L-Bead must be thoroughly dry before applying second paint coat.
STORAGE	Store in dry place protected from moisture

Grayhawk, LLC
2424 Merchant St.
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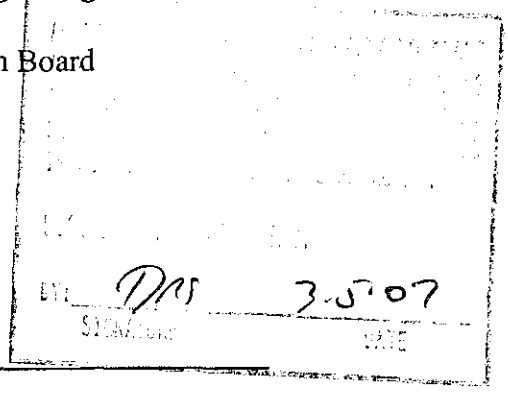
Lexington, KY 40511
859/255-2754 FAX 859/259-0957

Project: UK PCF Parking Garage

Section: 09250 – Gypsum Board

Date: March 2, 2007



Submittal Sheet 2005

STRAIT-FLEX®

New Concept Drywall Products

BIG-STICK OUTSIDE

DESCRIPTION (Speed, Perfection and Longevity)	Patented PVC tight fibered cotton composite corner tape that is 3.33" wide nominal, .026" thick and is available in 8', 9', 10'; lengths and custom lengths are also available. Strait-Flex Big-Stick Outside is very stable with temperature changes and is flexible while maintaining it's rigidity when wet.
ADVANTAGES	• No callbacks on outside 90-degree corners due to cracking or denting • Big Stick creates a fast, perfect, outside corner that can be installed by an apprentice • Damage proof design • Withstands settling, lumber shrinkage and temperature variation • Faster hanging and finishing time (guarantee) • Will not shrink, blister, tear or wrinkle • Installation does not require fasteners, stapling, or any special tools • Can run through hopper to mud both sides • Material can be second coated immediately • Material will not fuzz-up during sanding • Water resistant, rustproof • Saves 25-50% on installation time
WARRANTY	Strait-Flex products are backed by a lifetime warranty. When applied to a sound structure, built on a permanent foundation using recommended application techniques, we warrant that these products will not edge-crack for the lifetime of the structure. Contact Strait-Flex International Inc for complete details.
DIRECTIONS	• Apply using liberal coat of all-purpose compound to corner or angle with joint knife. Big Stick can also be put through a hopper to mud both sides. • Press Big Stick into wet compound, adjust if necessary to create straight line and remove excess compound. • Apply second coat of compound "immediately", lightly skim coat surface of Big Stick. • Apply final coat if required, same as second coat and let dry. Sand lightly to smooth surface. • Big Stick will not fuzz up during sanding. Painted surface of Big Stick must be thoroughly dry before applying second paint coat.
STORAGE	Store in dry place protected from moisture

Submittal Approvals:

Job Name:	
Contractor:	Date:

Transmittal

Project [2239.2] - PCF - Hospital - Garage **View Date** 4/13/2007

GBBN Architects, Inc.
332 East Eighth St
Cincinnati, OH 45202-2217
Phone: (513) 241-8700
Fax: (513) 241-8873

Transmittal No. 2239.2-00835

To	Mr. Brian Hoerr Gilbane 940 Elizabeth St Lexington, KY 40506-0293 USA Phone: (859) 257-4536 Fax: (859) 323-1331	**Date**	4/13/2007
		Items listed are being sent	
		☐ Enclosed	
		☐ Under Separate Cover	
		Via	Hand Delivered
		CSI Code	09440 - Resinous Matrix Terrazzo
From	Mr. Bryan Korb (GBBN Architects, Inc.)		
Subject	Submittal Package 100-09440-001.0		

We are transmitting the following to you:

☑ Product Data ☐ Samples ☐ Shop Drawings ☐ O&M Manuals ☐ Plans
☐ Architectural Drawings ☐ Letters ☐ Specifications ☐ Prints ☐ Addenda
☐ Engineering Drawings ☐ Change Orders ☑ Submittal

Submittals

Pkg. No./Rev.	Item No./Rev.	Description	Copies	Reason	Action
100-09440-001.0	100-09440-001.0	Terrazzo Color Chart	3	Revise and Resubmit	
100-09440-001.0	100-09440-002.0	Terrazzo Shop Drawings	3	Approved as Noted	
100-09440-001.0	100-09440-003.0	Terrazzo Manufacturer's Literature	3	Approved as Submitted	

Remarks Brian

Please see the following review comments.

1) Submit two 8" square samples of each terrazzo type circled in the terrazzo color selection chart. The design intent is to match the stone that is going to be used outside the elevator lobby on the third level. Please see the stone type and manufacturer below.

STN-12A: Limestone:

Color - Ruoms

Finish - Honed

Size - 3/8" thick tile for thin set application

Vendor - Stone Selection: 512.477.8700

Received By | Printed Name | Date

Linked Documents

Document Type	Document	Open	Description	Date
Sub. Pkg.	100-09440-001.0			

Distribution

Recipient	Company	Method	Date
Brian Hoerr	Gilbane	Message	4/13/2007

Gilbane

Transmittal

Project [2239.2] - PCF - Hospital - Garage

View Date 2/18/2008

Gilbane
940 Elizabeth St
Lexington, KY 40506-0293
Phone: (859) 257-4536
Fax: (859) 323-1331

Transmittal No. 2239.2-00967

To	Mr. Doug Sherwood E. C. Matthews Co., Inc. 2265 Harrodsburg Road Lexington, KY 40504 USA Phone: (859) 278-3131 Fax: (859) 277-7903
From	Mr. Brian Hoerr (Gilbane)
Subject	Submittal Package 100-09440-001-1.0: Terrazzo Samples

Date 7/6/2007

Items listed are being sent

☑ Enclosed

☐ Under Separate Cover

Via Hand Delivered

CSI Code 09440 - Resinous Matrix Terrazzo

We are transmitting the following to you:

☐ Product Data ☐ Samples ☐ Shop Drawings ☐ O&M Manuals ☐ Plans
☐ Architectural Drawings ☐ Letters ☐ Specifications ☐ Prints ☐ Addenda
☐ Engineering Drawings ☐ Change Orders ☑ Submittal

Submittals

Pkg. No./Rev.	Item No./Rev.	Description	Copies	Reason	Action
100-09440-001-1.0	100-09440-001-1.0	Terrazzo Samples	1 Sample	Approved as Noted	

Remarks See GBBN transmittal. Sample #2 is approved.

	Mr. Brian Hoerr	7/6/2007
From	Printed Name	Date
Received By	Printed Name	Date

Linked Documents

Document Type	Document	Open	Description	Date
Sub. Pkg.	100-09440-001-1.0		Terrazzo Samples	

Distribution

Recipient	Company	Method	Date
Doug Sherwood	E. C. Matthews Co., Inc.	Message	7/6/2007

SUBMITTAL TRANSMITTAL

E. C. Matthews Company, Inc.
2265 Harrodsburg Road
Lexington, KY 40504
Phone: 859/278-3131
FAX: 859/277-7903
E-Mail: dsherwood@ecmatthews.com

Spec Section	09440
Resinous Matrix Terrazzo	
Initial (I) or Resub (R#)	I

DATE: ~~08/30/2006~~ 2-26-07 JOB NO. 9212

TO: Gilbane Building Company
940 Elizabeth Street
Lexington, KY 40508

Brian Hoerr

University of Kentucky
PCF Parking Garage

We Are Sending You X Data Sheets ___ Shop Drawings

Subcontractor or Supplier: Mike Carnevale Tile & Terrazzo
2365 Reading Road
Cincinnati, OH 45202

COPIES	DATE	DESCRIPTION
8 9		Data Sheets, Shop Drawing and Color chart

Contractors Review:

APPROVED FOR GENERAL CONFORMITY TO PLANS AND SPECIFICATIONS. DETAIL DIMENSIONS AND QUANTITIES NOT COMPLETELY CHECKED. SUBCONTRACTOR'S FULL RESPONSIBILITY IS IN NO WAY RELIEVED BY THIS APPROVAL.

E.C. MATTHEWS CO., INC. BY: [signature] DATE 8-30-06

Construction Manager / Architects Review:

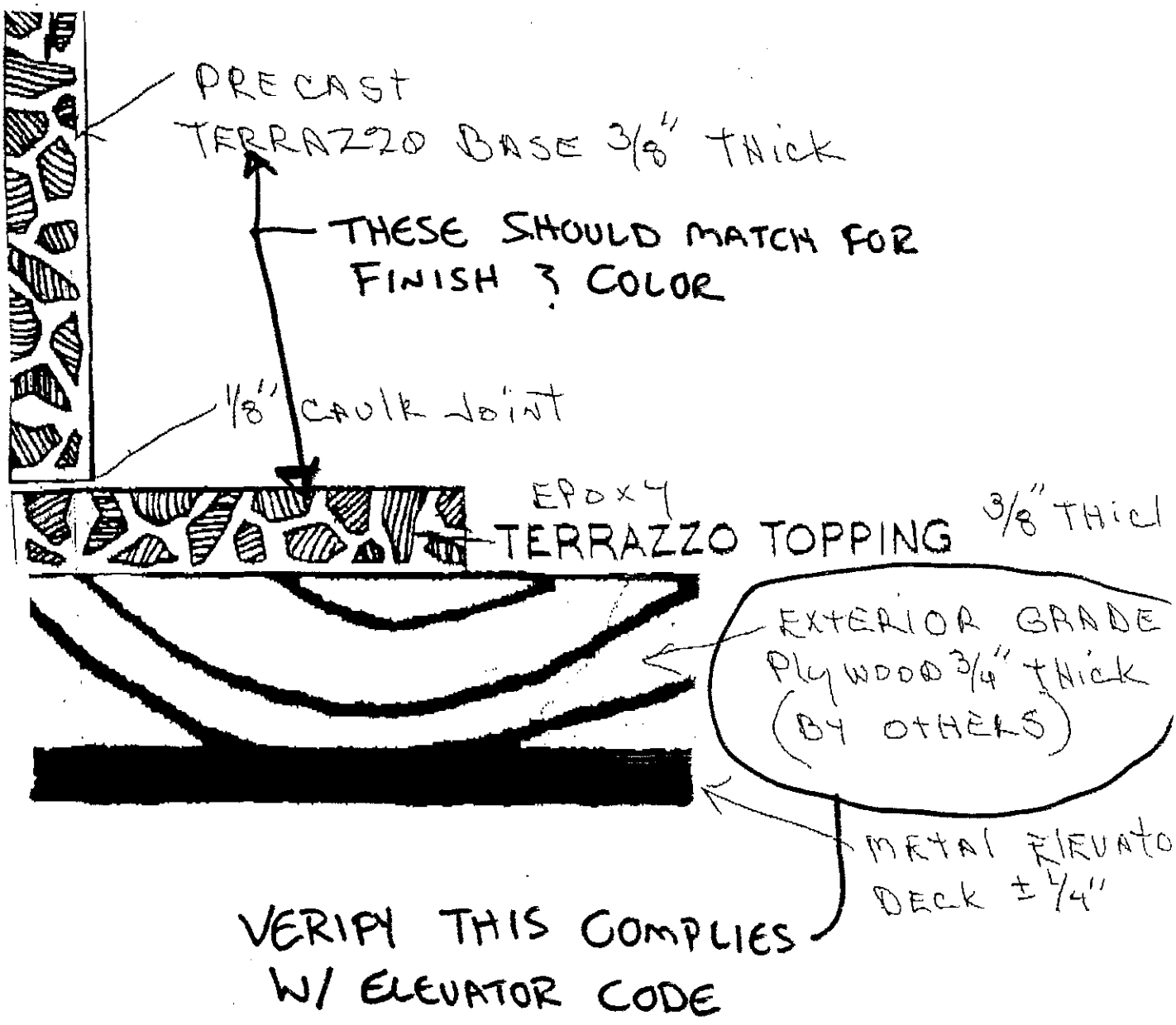
THIS REVIEW BY GBBN ARCHITECTS, INC., IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND IS NOT AN APPROVAL OF THIS DRAWING OR SET OF DRAWINGS. THE COMMENTS MADE DO NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH THE PRDJECT DRAWINGS, SPECIFICATIONS AND OTHER CONTRACT DOCUMENTS. CONTRACTOR IS SOLELY RESPONSIBLE FOR: ALL DIMENSIONS AND QUANTITIES, ALL FABRICATION, DELIVERY AND ERECTION; ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES; ALL COORDINATION WITH ALL OTHER CONTRACTORS, SUPPLIERS AND OTHERS; PERFORMING ALL WORK IN A SAFE AND PROPER MANNER.

NO EXCEPTIONS TAKEN ___
FURNISH AS CORRECTED X
REVISE AND RESUBMIT ___
NO REVIEW - INCOMPLETE ___
SUBMIT SPECIFIED ITEMS ___
REJECTED ___

DATE 4-13-07 BY BK

GBBN ARCHITECTS, INC.
ARCHITECTURE, INTERIORS, PLANNING, ENGINEERING
332 EAST 8TH STREET, CINCINNATI, OHIO 45202-2217 (513) 241-8700
325 WEST MAIN STREET, LEXINGTON, KENTUCKY 40507 (859) 381-8787

COPY TO: File Sherwood


PRECAST
TERRAZZO BASE 3/8" THICK
THESE SHOULD MATCH FOR FINISH & COLOR
1/8" CAULK JOINT
EPOXY
TERRAZZO TOPPING
3/8" THICK
EXTERIOR GRADE PLYWOOD 3/4" THICK (BY OTHERS)
METAL ELEVATOR DECK ± 1/4"
VERIFY THIS COMPLIES W/ ELEVATOR CODE

"SHOP TALK"

The National Terrazzo & Mosaic Association, Inc.
201 North Maple Avenue, Suite 208
Purcellville, Virginia 20132
(800) 323-9736, (540) 751-0930, Fax (540) 751-0935
www.NTMA.com

TECHNICAL BULLETIN #97 **9/98**

RE: TERRAZZO CONSIDERATION FOR ELEVATOR CABS

This bulletin deals with the use of an Epoxy Terrazzo for elevator cabs:

This industry offers one system that is feasible for this purpose; cement systems may not take the abuse of the movement anticipated. Consider the following when using Epoxy Terrazzo.

1. The Epoxy Terrazzo must be 3/8 inch in thickness.

2. We do not recommend using a coved vertical Epoxy Terrazzo base in such cabs. If straight base without a cove is desired, it should be separated from the floor by a flexible caulked joint.

3. Exterior grade plywood 3/4 inch thick shall be firmly attached to the metal steel deck of the cage. This would require not only a screw attachment, but also an adhesive glue between the metal and the plywood.

4. The placement of the plywood suggested by their Association: The longer joints on the 8 foot sides that butt adjacent sheets, should be spaced 1/8 to 1/4 inch apart. On the four foot side the space should be 1/16 to 1/8 inch.

5. Once the plywood is anchored, the surface must be sanded to remove all foreign matter from the board opening up the pores of the wood.

6. All joints must be filled with an Epoxy/Filler and a 4 inch wide fiberglass mesh placed over each joint.

7. Depending on the size of the cab, angle divider strips can be positioned and anchored to the plywood with the Epoxy material. The use of dividing strips is optional, as these strips are not necessary in this system.

8. The Epoxy Terrazzo is placed in the color of your choice and finished in the normal way.

KEY RESIN COMPANY

KEY PRIMER/LOW MODULUS BINDER #502

DESCRIPTION

KEY RESIN #502 is a 100% solids, moisture tolerant epoxy primer for concrete, wood, and masonry surfaces. Combining water insensitivity with good wetting properties, **KEY RESIN #502** is the ideal primer for almost every **Key Flooring System**.

KEY RESIN #502 provides excellent filling and sealing properties needed under high performance epoxy wall coatings on concrete and cinder block walls.

The moisture tolerance of **KEY RESIN #502** allows it to be applied to damp concrete after surface preparation. This includes bonding "old to old" or "new to old" concrete.

KEY RESIN #502 provides an excellent high strength, weather resistant bond for use under **Key Lastic SWS** parking and pedestrian deck systems.

In addition, the low modulus of elasticity and stress relieving properties of **KEY RESIN #502** makes it ideal for use as a binder for epoxy mortar systems and for patching and grouting applications.

KEY ADVANTAGES

- Low modulus; stress relieving
- Fast cure formulation available for priming under coatings
- Moisture insensitive cure
- Conforms to ASTM C-881 properties
- Low viscosity-good wetting properties
- Good trowelling properties when used with **Key Mortar Systems**

KEY CONSIDERATIONS

- Bonding surfaces must be sound, clean, and free from standing water
- Substrate temperature must be a minimum of 50°F
- Substrate must be free of dirt, waxes, curing agents, and other foreign materials
- Should not be installed on new concrete until maximum shrinkage has occurred (at least thirty (30) days after pour)

APPLICATION

SURFACE PREPARATION

Surface Preparation is the most critical portion of any successful resinous flooring system application. All substrates must be properly prepared as outlined in **KEY RESIN COMPANY'S TECHNICAL BULLETIN #1**. Work must be performed by trained or experienced contractors or maintenance personnel. The **KEY RESIN COMPANY** service department is pleased to answer any questions.

INSTALLATION

When priming, spread **KEY RESIN #502** at a rate of 250-275 ft² per gallon. Care should be taken to avoid puddles. Application can be made with brush, roller, or squeegee. For mortar applications, allow **KEY RESIN #502** to set for 30 minutes before topping. After seven (7) hours, it will be too hard. Coating applications should not be recoated until **KEY RESIN #502** has cured. To speed production, use fast cure formulation. For complete installation instructions, contact your **Key Representative** or **Key Resin Company's Technical Service**.

CLEAN UP

Clean skin with soap and water. Tools and equipment should be cleaned with xylene or lacquer thinner. Consult Material Safety Data for safety and health precautions.

COVERAGE

KEY RESIN #502 when applied at 275 ft² yields 5-6 mils

COMPOSITION

Polyamide-Modified Epoxy Resin and Wetting Agents

COLOR SELECTION

KEY RESIN #502 is available in Clear or **Key Standard Colors**. Custom colors are available subject to laboratory approval, minimum quantity, lead time for production, and increased cost.

KEY RESIN COMPANY

KEY EPOXY TERRAZZO #108

DESCRIPTION

KEY EPOXY TERRAZZO is a highly decorative, pigmented, 100% solids, two-component epoxy resin system. Mixed with a wide selection of decorative aggregates and trowel applied to a 1/4" or 3/8" nominal thickness, **KEY EPOXY TERRAZZO** provides outstanding durability and wear resulting in the lowest life cycle costing of any flooring system available.

KEY EPOXY TERRAZZO does not support bacterial growth and is also available in conductive and novolac formulations. Crack-free installations of **KEY EPOXY TERRAZZO** can be achieved when installed in conjunction with a **Key Waterproofing and Crack Isolation Membrane**.

KEY ADVANTAGES

- Quick curing and finishing time
- Weighs less than conventional terrazzo: More suitable for multi-story buildings
- Lowest life-cycle costing floor available
- Extensive color capabilities allow for unlimited design variations

KEY CONSIDERATIONS

- Substrate temperature must be a minimum of 55°F
- Substrate must be free of dirt, waxes, curing agents, and other foreign materials
- All control joints and expansion joints in the substrate must be revealed with the appropriate divider strips in the terrazzo topping

TYPICAL USES

KEY EPOXY TERRAZZO is ideal for almost any area where a monolithic, heavy duty floor surface is needed. In addition, **KEY EPOXY TERRAZZO** provides the ultimate in beauty and design. It is ideal for commercial, industrial, and institutional applications. **KEY EPOXY TERRAZZO**, when combined with marble or granite aggregate, withstands heavy industrial wear and chemical attack making it ideal for pharmaceutical and chemical plants.

KEY EPOXY TERRAZZO is the best choice for arenas, coliseums, schools, hospitals, institutions, and health care facilities due to its sanitary, joint free surface that is easily cleaned.

SELECTION GUIDE

⇧	Activity Centers	
	Aircraft Hangars	
⇧	Airports	Baggage/Service
⇧		Terminals
⇔	Animal Areas	Housing
		Cage Washing
⇔	Beverage	Processing
		Packaging/Warehousing
		Bottling
⇧	Cafeterias	
⇔	Chemical Processing	
⇧	Clean Rooms	
	Coolers	
⇔	Computer Assembly	
⇔	Commercial Kitchens	
	Containment Areas	
⇧	Convention Centers	
⇔	Correctional Facilities	
⇧	Corridors	
	Docks/Ramps	
	Dairies	
	Distilleries	Packaging
		Bottling
⇔	Food	Processing
⇔		Preparation Service
	Garages	
⇧	Hospitals	Corridors & Lobbies
		Patient Rooms
⇧		Operating Rooms
		Services
⇧	Laboratories	
	Laundries	
⇧	Locker Rooms	
	Machine Shops	
	Manufacturing	Light Duty
		Heavy Duty
	Meat, Fish, Poultry Processing	
	Mechanical Equipment Rooms	
	Munitions Facilities	
	Parking Garages	Interior Decks
		Exterior Decks
⇧	Pharmaceutical Plants	
	Pulp and Paper Processing Facilities	
⇧	Schools	
⇧	Shopping Malls	
⇧	Showers	
	Utilities	
	Warehouses	
⇔	Waste Water Treatment Facilities	

⇧-Excellent Choice ⇔-Alternate Choice

KEY RESIN COMPANY

KEY ACRYLIC SEALER

DESCRIPTION

KEY ACRYLIC SEALER is a clear acrylic solution formulated to create a clear, non-yellowing protective coating. **KEY ACRYLIC SEALER** provides a tough, UV and abrasion resistant film that effectively protects surfaces from moisture penetration, staining, dirt, dust, and wear. Providing a surface that is easy to clean and maintain, **KEY ACRYLIC SEALER** is an excellent choice for both interior and exterior applications.

KEY ACRYLIC SEALER is most commonly used as a sealer for **Key Epoxy Terrazzo** and **Key Polymeric Terrazzo** flooring systems. It is also used for sealing old and new concrete floors, exterior ramps, decks, sidewalks, slate, and exposed aggregate surfaces.

KEY ADVANTAGES

- UV resistant
- Excellent clarity and color retention
- Low maintenance finish
- Excellent abrasion and mar resistance
- Seals substrate from moisture penetration

KEY CONSIDERATIONS

- Do not apply below 50°F
- Contains solvent. Keep from ignition sources
- Must be applied with proper ventilation

APPLICATION

SURFACE PREPARATION

Prepare surface in accordance with **KEY RESIN COMPANY Technical Bulletin #1**. New concrete must be cured at least 30 days. All concrete curing compound must be mechanically removed, along with any foreign material. Old concrete must be structurally sound and prepped according to guidelines.

MIXING INSTRUCTIONS

KEY ACRYLIC SEALER is a single component acrylic solution. Stir material in container prior to application. Do not reduce.

INSTALLATION

Apply by roller, brush, or applicator pad. Spread at an even rate between 300 and 500 square feet per gallon. Two coats are recommended for sealing applications.

CURE

Re-coat in 2 to 4 hours at 70°F with 50% RH. Low temperatures or high humidity may significantly increase cure time. Do not open to light traffic for at least 24 hours after application.

CLEAN-UP

Clean tools with xylene or lacquer thinner.

KEY RESIN COMPANY

September 30, 2004

Ms. Diane Gabe
Mike Carnevale Tile & Terrazzo Co., Inc.
2365 Reading Road
Cincinnati, OH 45202

Fax: 721-6612

Dear Ms. Gabe:

This letter will confirm that Mike Carnevale Tile & Terrazzo Co., Inc. is a certified contractor to install **Key Epoxy Terrazzo** on the above listed project.

Should you need any additional information, please do not hesitate to contact our office.

Regards,

Robert R. Cain, President

cc: E. Borglum

4061 Clough Woods Drive • Batavia, Ohio 45103 • Phone (513)943-4225 • FAX (513)943-4255

KEY RESIN COMPANY

September 30, 2004

Ms. Diane Gabe
Mike Carnevale Tile & Terrazzo Co., Inc.
2365 Reading Road
Cincinnati, OH 45202

Fax: 721-6612

Dear Ms. Gabe:

This letter will confirm that **Key Epoxy Terrazzo** meets or exceeds the National Terrazzo and Mosaic Association's (N.T.M.A.) guide specification for epoxy terrazzo.

Should you need any additional information, please do not hesitate to contact our office.

Regards,

Robert R. Cain, President

cc: E. Borglum

4061 Clough Woods Drive • Batavia, Ohio 45103 • Phone (513)943-4225 • FAX (513)943-4255

KEY RESIN COMPANY

September 30, 2004

Ms. Diane Gabe
Mike Carnevale Tile & Terrazzo Co., Inc.
2365 Reading Road
Cincinnati, OH 45202

Fax: 721-6612

Dear Ms. Gabe:

This letter will certify that Key Resin materials are 100% non-volatile, non-odor epoxy systems, and are in compliance with EPA standards of indoor air quality.

Should you need any additional information, please do not hesitate to contact our office.

Regards,

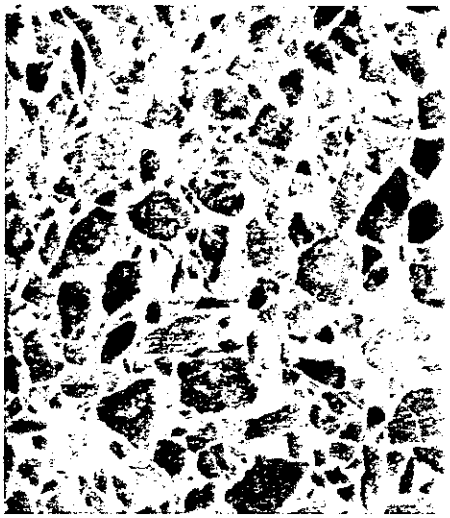
Robert R. Cain, President

cc: E. Borglum

4061 Clough Woods Drive • Batavia, Ohio 45103 • Phone (513)943-4225 • FAX (513)943-4255

Z O
T T E

S-04-10



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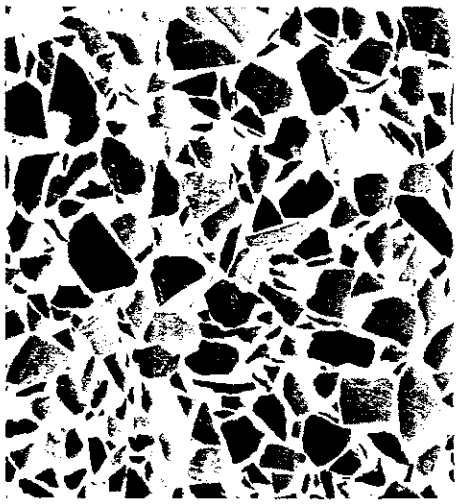

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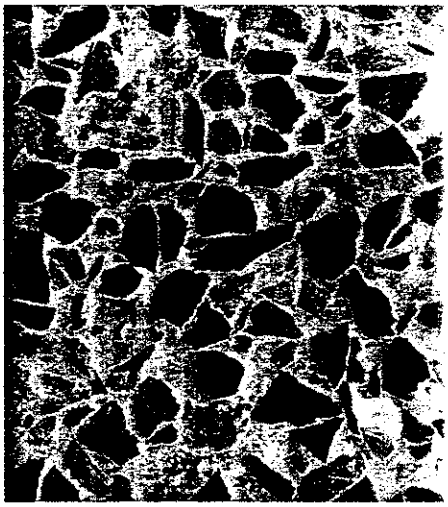

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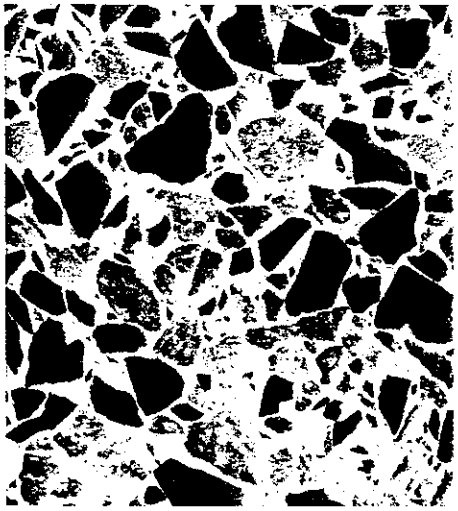
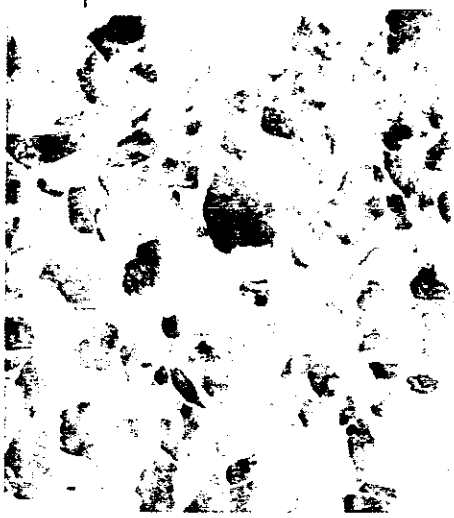


S-04-12

S-04-15

S-04-18

STANDARD
COLLECTION



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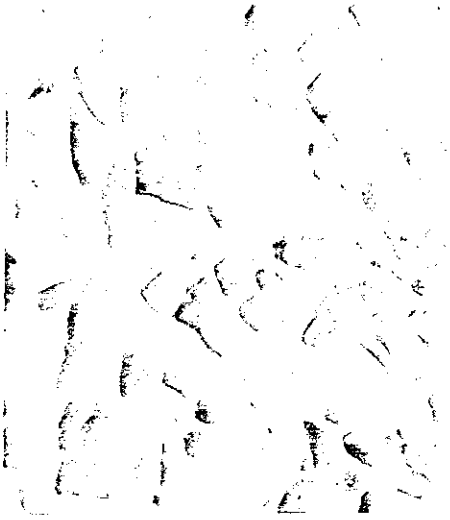

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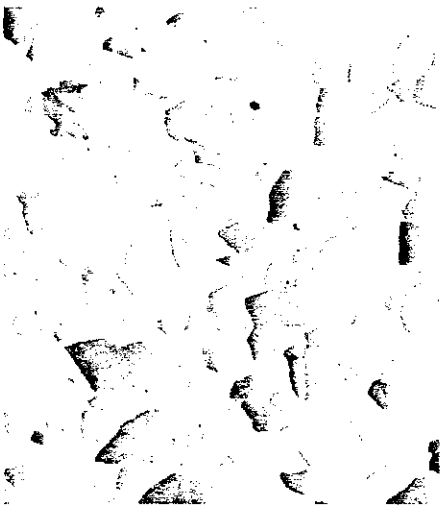

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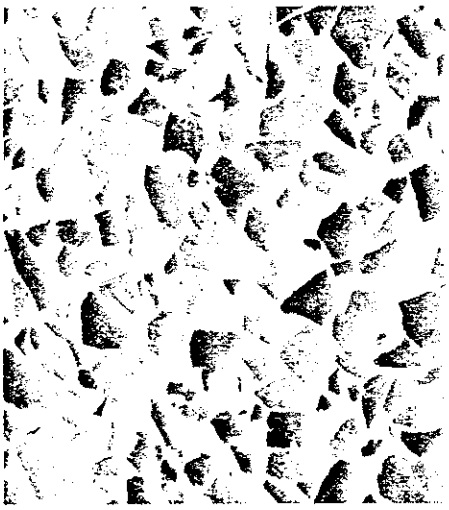

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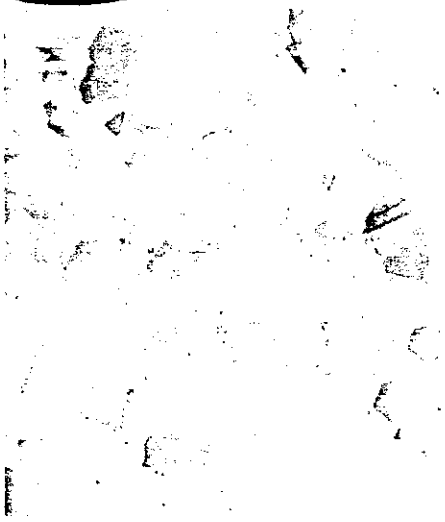

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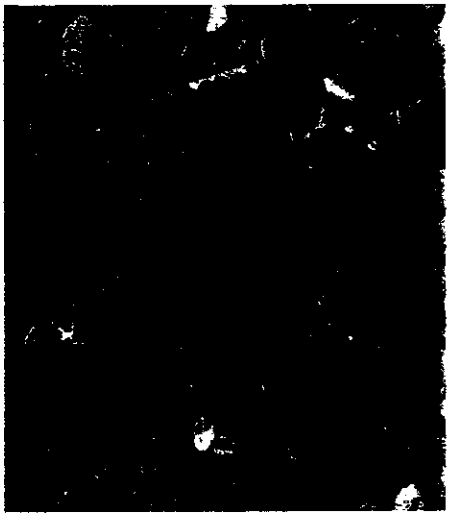

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DESIGNER
COLLECTION

S-04-27(SF)

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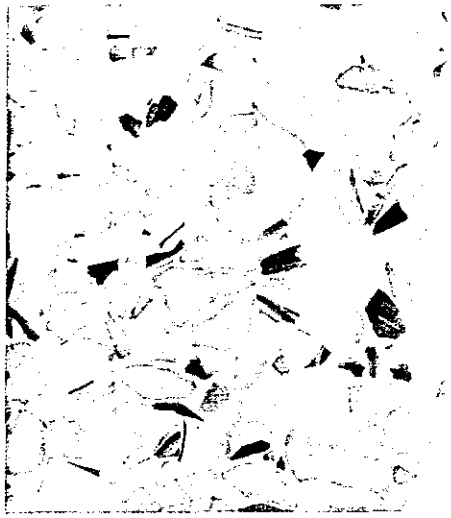
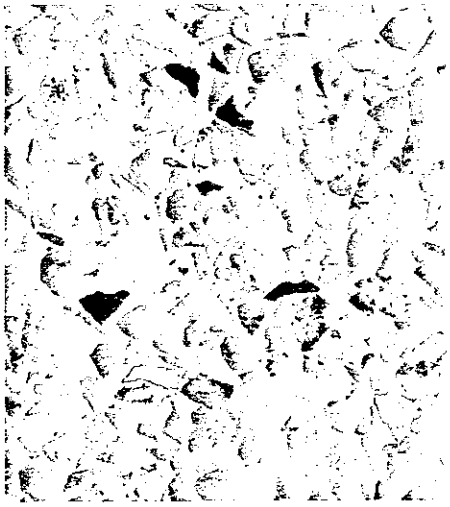


D-04-32

WITH COLORED RESIN

D-04-30



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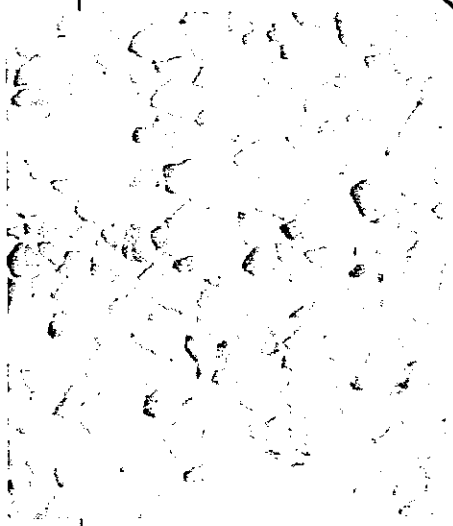

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D-04-34

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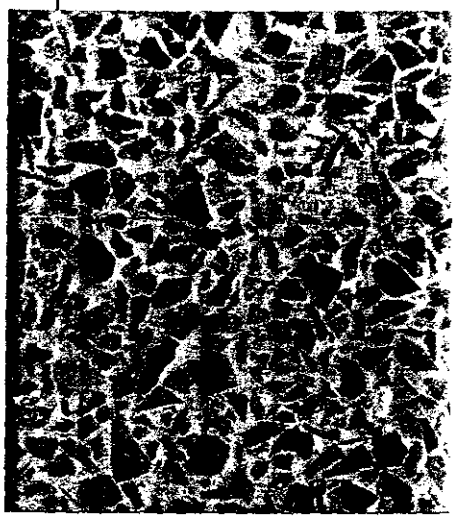

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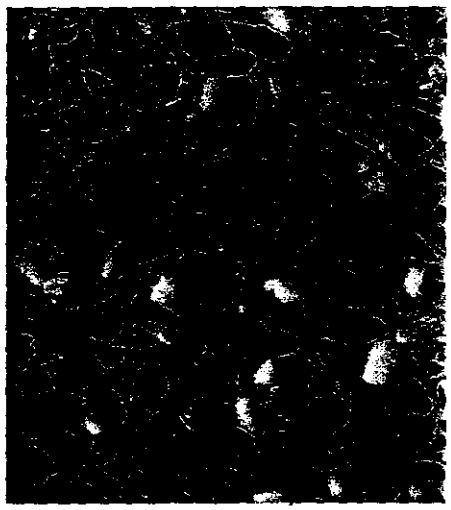

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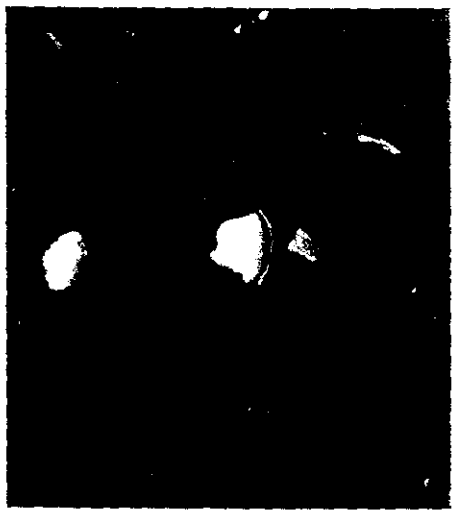

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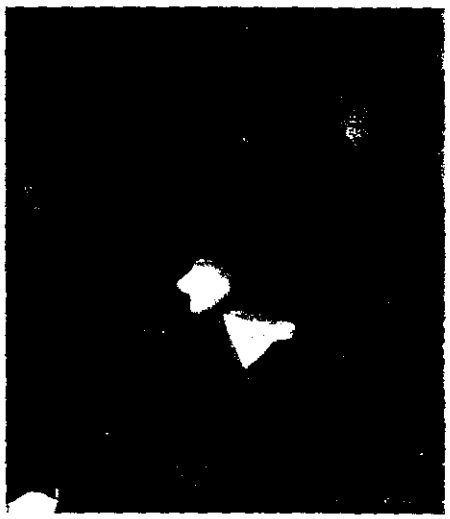

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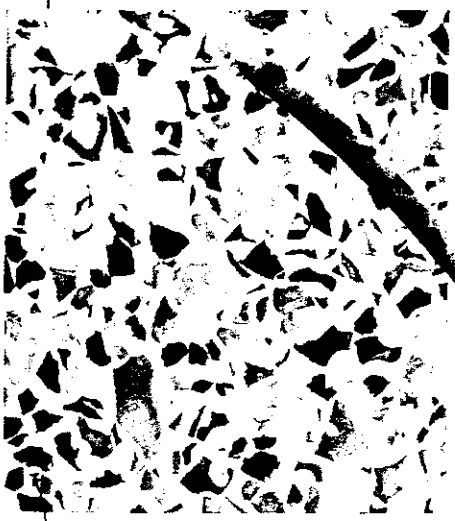

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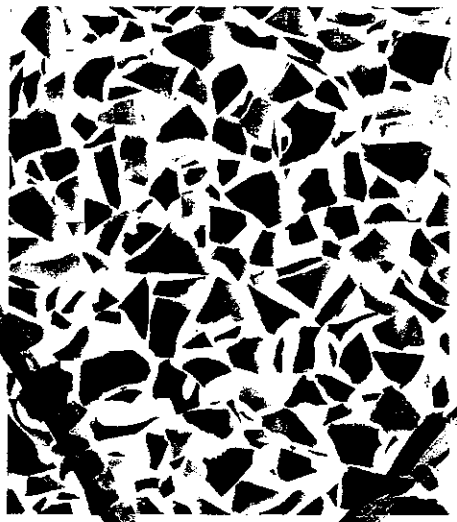

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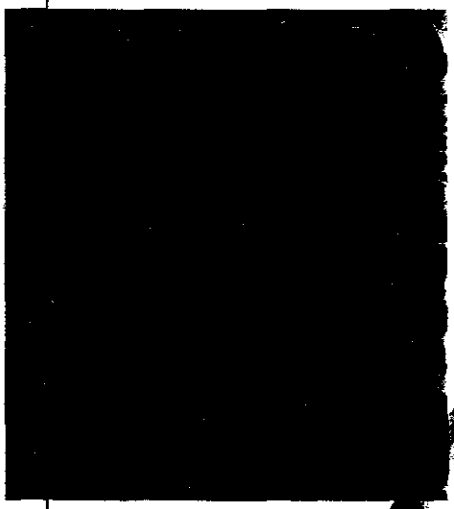

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Ex-04-48

Ex-04-51

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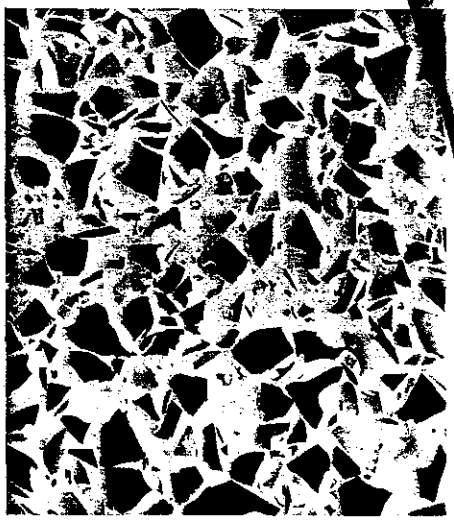

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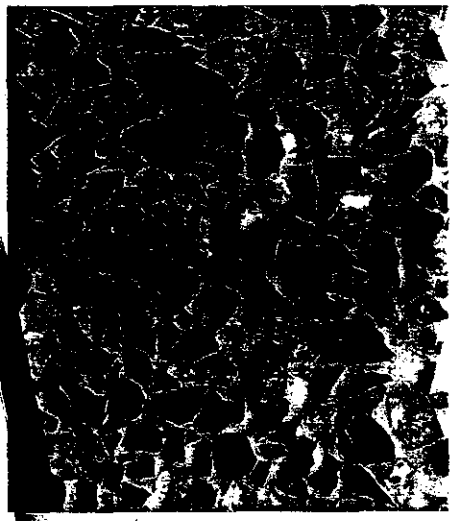


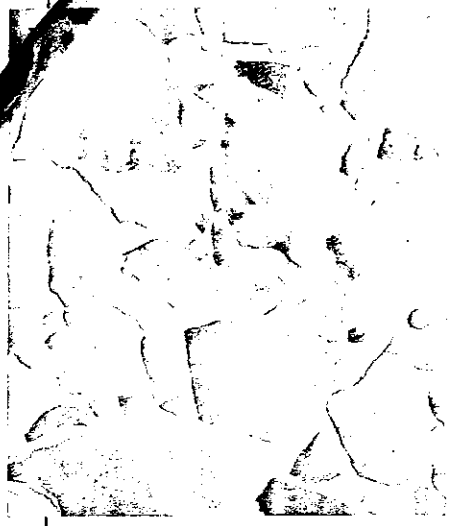
Ex-04-52

RUSTIC COLLECTION

VENETIAN COLLECTION

R-04-55

R-04-57



V-04-53

R-04-5

R-04-58

V-04-54

TERRAZZO PALETTE INFORMATION

Meticulous care has been exercised in the produc of these color illustrations to ensure that the palette represents the actual finished product as ly as the printers ink will permit. Nevertheless, some discrepancies may exist and it is therefore mmended that this palette be used for guiding initial color selections only, and that phys amples be obtained from the contractor prior to actual installation. Since marble chips product of nature, variations of color and shape can be anticipated.

Please note: The selection of Designe nd Exotic (EX) formulations are available only with the use of a resinous (Epoxy) binde ndard (S) formulations are available in either resinous or cementitious binders. Venetian (V) a tic (R) examples primarily use a cementitious binder. Being that Designer and Exotic formulati rporate the use of specialty aggregates, an increase in cost should be expected when compa the Standard formulations. Use of "Special Finish" techniques, designated by "SF," will also res an increased cost.

Terrazzo smoothness an loss will vary depending upon the degree of finishing and polishing specified. Price adjustments uld be expected for higher degrees of finishing.

The cost of installation is depe nt upon the materials selected (Standard, Designer, Exotic, Rustic, or Venetian), the total size of the in lation, intricacy of design, and prevailing labor rates in the area of the project. Designer, Exotic, Ven an and Rustic terrazzo formulations incorporate materials and/or techniques that will in ase the cost when compared to Standard terrazzo formulations.

The National Terrazzo & Mosaic Associa Inc. (NTMA) maintains strict quality standards for its members and strongly recommends the se on of an NTMA member for terrazzo installations.

THE NATIONAL TERRAZZO & MOSAIC ASSOCIATION, INC.

201 NORTH MAPLE AVENUE, SUITE 208

PURCELLVILLE, VIRGINIA 20132

800/323-9736

IN VIRGINIA — 540/751-0930 FAX 540/751-0935

www.ntma.com officentma@aol.com

Grayhawk, LLC
2424 Merchant St.
P.O. Box 12111 (40580)
Lexington, KY 40511
859/255-2754 FAX 859/259-0957

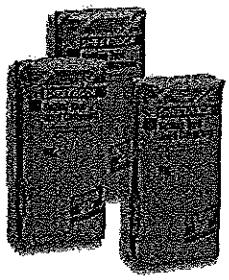
Project: UK PCF Parking Garage
110 Transcript Avenue Lexington, KY
Section: 09250 – Gypsum Board

Date: March 2, 2007

Submittal Sheet
09250

SHEETROCK® Brand Setting-Type Joint Compounds

Durabond



For one-day drywall finishing
- For interior gypsum panels and exterior gypsum ceiling boards.
- Unique humidity resistance.
- Exceptional bond, low shrinkage.
- Unusual check-crack resistance in heavy fills.
- Choice of setting times.

Description

These asbestos-free, chemically setting powder compounds for drywall interiors and exteriors permit same-day joint finishing, and, usually, next-day decoration. SHEETROCK® Brand Setting-Type Joint Compounds (DURABOND®) are also ideal for heavy fills and are virtually unaffected by humidity. They provide low shrinkage and superior bond, which make them excellent for laminating gypsum panels to gypsum panels, to sound-deadening boards, and to above-grade concrete surfaces. In addition, SHEETROCK Brand Setting-Type Joint Compounds can be used for filling, smoothing, and finishing interior concrete ceilings and above-grade concrete, and for taping and finishing SHEETROCK® Brand Gypsum Panels, Water-Resistant, under tile in bathroom wall areas. Other uses include finishing joints in exterior gypsum ceiling boards and presetting joints of veneer plaster finish systems.

To meet varying job requirements, a full line of SHEETROCK Brand Setting-Type Joint Compounds has been developed to provide a choice in setting times. The suffix number identifying each SHEETROCK Brand Joint Compound indicates an approximate setting time. DURABOND 20 sets in about 20-30 minutes; DURABOND 45 in 30-80 minutes; DURABOND 90 in 85-130 minutes; DURABOND 210 in 180-240 minutes; and DURABOND 300 in 240-360 minutes.

Advantages

Saves time and money. These compounds provide important labor and material cost reductions. One-day finishing with next-day decoration ensures rapid job completion and earlier occupancy. Choice of setting times aids work flow.

Quickly mixed for immediate use. Easy to mix—simply combine with water and stir. Compounds are applied after short soaking period and remixing.

Resists shrinkage and edge-cracking. Compounds tolerate small amounts of excess water that would otherwise cause delayed shrinkage. Fill and finish coats can be applied when compound is hard—but still damp—with minimum danger of delayed shrinkage and cracking.

Resists humidity changes. Setting rates are virtually unaffected by high humidity or changes in humidity. Application can be made in damp weather when drying-type compounds would delay job completion.

Multiple use. Compounds are also excellent for patching and smoothing interior drywall and concrete surfaces because they provide superior bond, low shrinkage, and fast setting-action.

Limitations

1. SHEETROCK Brand Setting-Type Compounds are more difficult to smooth after drying than conventional drying-type compounds and should be smoothed before set or while they are in a damp but set state.
2. Setting action cannot be delayed or prevented by dilution with water.
3. Not to be applied over moist surfaces or surfaces likely to become moist, or on below-grade surfaces or surfaces projecting outside building structure unless protected from direct exposure to moisture.
4. Before using SHEETROCK Brand Setting-Type Compounds over new interior concrete surfaces, concrete should age 60 days or more. Remove protrusions, ridges, form or parting oils, grease, and efflorescence.
5. Prior to using any epoxy coating over any surface treated with joint compound, consult the epoxy coating manufacturer and follow manufacturer's specific recommendations regarding the preparation or suitability of substrates for the epoxy coating. Many epoxy coatings exert significant shear stress on the substrate as the strong epoxy film shrinks while curing/drying. This stress can cause the bond of the joint compound to fail, resulting in delamination problems.

APPROVED FOR GENERAL CONFORMITY TO PLANS AND SPECIFICATIONS. ANY DEVIATIONS AND CORRECTIONS NOT CORRECTLY CHECKED, SUBMITTED WORKS THAT ARE NOT CORRECTLY IS TO BE MADE AT THIS APPROVAL.

E.C. MATTHEWS CO., INC.

BY: DW 3.5.07
SIGNATURE DATE

USG

Directions

Preparation	In cold weather during gypsum panel joint finishing, minimum surface, water, mix, and air temperature of 45 °F must be ensured until joints are completely dry. Adequate ventilation shall be provided to carry off excess moisture.
Gypsum Panel Joint Treatment	Position and apply SHEETROCK® Brand Gypsum Panels in accordance with manufacturer's recommendations. Mix SHEETROCK Brand Setting-Type Joint Compound according to directions on bag. If using SHEETROCK Brand Gypsum Panels, SW Edge, prefill the "V" grooves formed by abutting tapered eased edges of the panels with DURABOND 45 or 90. Apply compound directly over "V" groove with a flexible 5" or 6" joint finishing knife. Wipe off excess compound that is applied beyond the groove. Allow the prefill compound to harden prior to the next application. Cover joint with a thin layer of compound and embed tape, leaving about 1/32" of compound under feathered edge and a thin layer over the tape. After compound has set, apply second coat, feathering out approximately 2" beyond first coat. After setting, apply third coat, feathering out 2" beyond second coat. After each coat is applied, smooth away any tool lap marks or other imperfections prior to setting action. Finish fastener heads with three coats of joint compound; finish corner bead and inside corners as required with at least two coats, feathered and smoothed out onto panel faces. For priming and decorating with paint, texture, or wallcovering, follow manufacturer's directions for materials used. All surfaces must be dry, dust-free, and not glossy. A prime coat of SHEETROCK® Brand First Coat or a good-quality interior latex flat wall paint with high solids content should be applied undiluted and allowed to dry before decorating. Walls to be covered with wallpaper or vinyl wallcovering should be sealed per manufacturer's recommendations. To improve fastener concealment where gypsum panel walls and ceilings will be subjected to severe artificial or natural side lighting and be decorated with a gloss paint (eggshell, semigloss, or gloss), the gypsum panel surface should be skim-coated with joint compound to equalize suction before painting (see publication J510).
Use with Veneer Plaster	Apply according to normal procedure. However, when building temperature/humidity conditions may result in rapid drying (see publication PM5), or when steel-framed systems at 24" o.c. with single-layer gypsum base and single-coat veneer plaster finish are specified in either rapid or normal drying conditions, use SHEETROCK® Brand Joint Tape embedded with SHEETROCK Brand Setting-Type Joint Compound (DURABOND 90). A fill or cover coat that completely hides the tape is required. This cover coat must be allowed to set before plastering. Plaster prefill is not required over SHEETROCK Brand Setting-Type Joint Compound.
Filling and Finishing over Interior Poured Concrete Ceilings	Grind high plane differences in concrete level with adjacent area; also remove any form oil, efflorescence, and greasy deposits. Prime exposed metal with a good rust-inhibitive primer. Fill offsets or voids with a SHEETROCK Brand Setting-Type Joint Compound. Apply additional coats of SHEETROCK Brand Setting-Type Joint Compound as necessary, after each coat has set, but not necessarily dried. After final coat of joint compound has dried, apply undiluted coat of SHEETROCK Brand First Coat or a good quality latex flat wall paint with high solids content over entire surface and allow to dry. For textured ceiling, apply SHEETROCK® Brand Ceiling Spray Texture–QT in a uniform coat at a rate not exceeding 10 ft.²/lb.
Exterior Joint Treatment	Mix SHEETROCK Brand Setting-Type Joint Compound according to directions on the bag. Do not overmix or use in temperatures below 45 °F (7 °C). Prefill joints of SHEETROCK® Brand Exterior Gypsum Board with SHEETROCK Brand Setting-Type Joint Compound. After prefill has set, embed SHEETROCK Brand Joint Tape centered over joint. When compound has set, immediately apply fill coat. Apply SHEETROCK Brand Setting-Type Joint Compound over flanges of zinc control joints, corner beads, and metal trim. Spot fastener heads. After fill coat has set, apply finishing coat of SHEETROCK Brand Setting-Type Joint Compound. Completely cover all joints, angles, beads, control joints, and fasteners. After the SHEETROCK Brand Setting-Type Joint Compound joint has dried, apply one coat of a good-quality oil or latex exterior primer. Then follow with at least one coat of a good-quality latex exterior paint.
Use with SHEETROCK Brand Gypsum Panels, Water-Resistant	In areas to be tiled, for tapered edge joints, embed SHEETROCK Brand Joint Tape with SHEETROCK Brand Setting-Type Joint Compound (DURABOND 45 or 90). When set, apply a fill coat of DURABOND 45 or 90. Take care not to crown the joint. Wipe excess joint compound from the panel surface before it sets. For butt joints and interior angles, embed SHEETROCK Brand Joint Tape with DURABOND 45 or 90. A fill coat is not necessary. Again, take care not to crown the joint. For fasteners, spot fastener heads at least once with DURABOND 45 or 90.

Fill and seal all openings around pipes, fittings, and fixtures with a thinned-down coat of tile adhesive. For best results, use Type I Ceramic Tile Adhesive that meets ANSI A136.1 both as a sealer and to set the tile. With a 1" brush, apply the thinned compound onto the raw gypsum panel core at cutouts, and allow area to dry thoroughly prior to application of tile. Before compound dries, wipe excess material from the surface of gypsum panels. For areas not to be tiled, embed tape with DURABOND 45 or 90 in the conventional manner. Finish with at least two coats of a SHEETROCK Brand Joint Compound to provide joint finishing for painting and wallpapering.

Laminating

Apply SHEETROCK Brand Setting-Type Joint Compound in the prescribed manner to back of face panels to be laminated. Laminate face panels to (base layer panels) (coreboard) using moderate pressure and temporary nailing or shoring to ensure adequate bond.

Repairing Handball and Racquetball Court Walls

Repair surface-damaged areas (gouges, scratches, surface imperfections) in handball and racquetball court walls and other interior wall and ceiling surfaces finished with U.S. Gypsum STRUCTO-BASE® and STRUCTO-GAUGE® Gypsum Plasters as follows. Clean surface of dust, residue, and other contaminants. Prepare DURABOND 45 or 90 by mixing into a solution of 1 part water and 1 part USG ACRI-ADD™ 100% Acrylic Add-Mix Fortifier. Use prepared mixture to refinish surface damage. Initial application over deep areas should be set and partially dry prior to application of subsequent coats. Finish to a smooth surface. This same procedure may be used in repair of surface-damaged areas of STRUCTOCORE® Security Wall Systems constructed using STRUCTO-BASE Gypsum Plaster and IMPERIAL® Finish Plaster per publication SA1119.

Finishing

For painting and decorating, follow manufacturer's directions for materials used.

Use With USG Gypsum Accelerator

USG Gypsum Accelerator (High Strength) when added to SHEETROCK Brand Setting Type Joint Compound (DURABOND) will shorten the setting time. USG Gypsum Accelerator should be sprinkled in dry form into the mixed compound. For hand mixing, dry accelerator can be added either to the dry mix or mixed compound. Never add USG Gypsum Accelerator directly to water or mix it with water to form a solution before adding it to the compound. Doing so will significantly reduce its ability to accelerate the set.

Accelerator Amount		Approximate Set Time (minutes)		
Tablespoon Per Bag	Tablespoon Per Bread Pan	DURABOND 90	DURABOND 45	DURABOND 20
1.0	0.22	40	20	10
2.0	0.44	30	10	
6.0	1.33	20		

- "Bread Pan" volume estimated at 10 cups (80 oz.)
- Wet Mixed Volume of Setting Type Joint Compounds approx. 2.8 gallons (45 cups) per bag.

Product Data

Color: Natural.
Binder: Vinyl.
Filler: Calcium Sulfate.
Dilution (water): Approximately 24 to 32 qt./100 lb. (50 to 67 L/100 kg). Refer to bag for specific water dilution directions.
Density (dry bulk): 40 lb./ft.^{3} (641 kg/m^3).
Freezing Sensitivity: None after set, but not necessarily dry.
Coverage: Average 72 lb./1000 ft.^{2} (35.2 kg/100 m^2) of gypsum panels.
Compliance with Standards: Meet ASTM Standard C475.
Storage: Close open bags as tightly as possible and store in a dry place.
Shelf Life: Up to 6 months under protected storage conditions.
Packaging: 25 lb. (11.3 kg) tan bags.

Grayhawk, LLC
2424 Merchant St.
P.O. Box 12111 (40580)
Lexington, KY 40511
859/255-2754 FAX 859/259-0957

Project: UK PCF Parking Garage
110 Transcript Avenue Lexington, KY
Section: 09250 – Gypsum Board

Date: March 2, 2007

CUSTOM TAPES INC.
CONSUMER PRODUCT DIVISION
7125 West Gunnison Street
Harwood Heights, IL 60706
Phone 800/621-7994 FAX 708/867-0522

GENERAL DESCRIPTION

A self adhering fiberglass mesh tape designed as a reinforcement to seal wallboard joints and repair of damaged plasterboard.

PHYSICAL CHARACTERISTICS	NOMINAL VALUES
Color	White to Off White
Thread Count per inch	10 x 20
Application Temperature Range	40°F to 100°F
Roll, length/width	2" x 36 ft.
	2" x 300 ft.
	2½" x 300 ft.
Roll Core Diameter	3"
Packaging	12 rolls per case
Shelf Life: storage 72°F, 50% RH	1 year minimum

[illegible] CONFORMITY TO PLANS AND SPECIFICATIONS. OTHER DIMENSIONS AND QUANTITIES NOT CORRECTLY CHECKED. [illegible] IS [illegible] OF S.J. PRAY.

L.C. [illegible] CO., INC.

BY: DJS 3.8.07
SIGNATURE DATE

DO-IT-YOURSELF HOME IMPROVEMENT

Grayhawk, LLC
2424 Merchant St.
P.O. Box 12111 (40580)
Lexington, KY 40511
859/255-2754 FAX 859/259-0957

Project: UK PCF Parking Garage
110 Transcript Avenue Lexington, KY
Section: 09250 – Gypsum Board

Date: March 2, 2007

Submittal Sheet 2005

STRAIT-FLEX®

New Concept Drywall Products

E.C. ERNST CO., INC.
BY: DM 3.5.07
SIGNATURE DATE

L-BEAD

DESCRIPTION (Speed, Perfection and Longevity)	Patented PVC tight fibered cotton composite corner tape that is 2 14" wide, .020 thick and comes in 100' rolls. Strait-Flex L-Bead has recess running the length of tape, which makes folding easy, quick and is adjustable to any angle. Material is very stable with temperature changes and is flexible while maintaining it's rigidity when wet. Fold on crease, 3/8"-1/2"(std) -5/8"-3/4" fold down available upon request.
ADVANTAGES	• Strait-Flex L-Bead creates a fast, perfect inside off angle that can be installed by an apprentice taper. • 10 times stronger than paper tape • Forms easily to create straight, fast inside corners • Will not sag or soften • Will not shrink, blister, tear or wrinkle • Waterproof and rustproof • Saves 25-50% on installation time • Material can be second coated immediately • Solid rolls ensure no waste or damage in transit or in rough site conditions • Doe not require fasteners, stapling, or any special tools • Resists common cracking problems as encountered when using paper tapes • Requires very light fill coat to finish product.
LIMITATIONS	Not recommended for
WARRANTY	Strait-Flex products are backed by a lifetime warranty. When applied to a sound structure, built on a permanent foundation using recommended application techniques, we warrant that these products will not edge-crack for the lifetime of the structure. Inside offset corners applied horizontally cannot be guaranteed against cracking. Contact Strait-Flex International Inc for complete details.
DIRECTIONS	• Cut L-Bead to desired length and trim ends at 45-degree angles to eliminate slight curl at ends of cut lengths. • Apply using liberal coat of all-purpose compound to edge or angle with joint knife. • Press L-Bead into wet compound, adjust if necessary to create straight line and remove excess compound. • Apply second coat of compound "immediately", lightly skim coat surface of L-Bead. • Apply final coat if required, same as second coat and let dry. Sand lightly to smooth surface. • L-Bead will not fuzz up during sanding. Painted surface of L-Bead must be thoroughly dry before applying second paint coat.
STORAGE	Store in dry place protected from moisture

Grayhawk, LLC
2424 Merchant St.
P.O. Box 12111 (40580)
Lexington, KY 40511
859/255-2754 FAX 859/259-0957

Project: UK PCF Parking Garage

Section: 09250 – Gypsum Board

Date: March 2, 2007

Submittal Sheet 2005

STRAIT-FLEX®

New Concept Drywall Products

BIG-STICK OUTSIDE

DESCRIPTION (Speed, Perfection and Longevity)	Patented PVC tight fibered cotton composite corner tape that is 3.33" wide nominal, .026" thick and is available in 8', 9', 10'; lengths and custom lengths are also available. Strait-Flex Big-Stick Outside is very stable with temperature changes and is flexible while maintaining it's rigidity when wet.
ADVANTAGES	• No callbacks on outside 90-degree corners due to cracking or denting • Big Stick creates a fast, perfect, outside corner that can be installed by an apprentice • Damage proof design • Withstands settling, lumber shrinkage and temperature variation • Faster hanging and finishing time (guarantee) • Will not shrink, blister, tear or wrinkle • Installation does not require fasteners, stapling, or any special tools • Can run through hopper to mud both sides • Material can be second coated immediately • Material will not fuzz-up during sanding • Water resistant, rustproof • Saves 25-50% on installation time
WARRANTY	Strait-Flex products are backed by a lifetime warranty. When applied to a sound structure, built on a permanent foundation using recommended application techniques, we warrant that these products will not edge-crack for the lifetime of the structure. Contact Strait-Flex International Inc for complete details.
DIRECTIONS	• Apply using liberal coat of all-purpose compound to corner or angle with joint knife. Big Stick can also be put through a hopper to mud both sides. • Press Big Stick into wet compound, adjust if necessary to create straight line and remove excess compound. • Apply second coat of compound "immediately", lightly skim coat surface of Big Stick. • Apply final coat if required, same as second coat and let dry. Sand lightly to smooth surface. • Big Stick will not fuzz up during sanding. Painted surface of Big Stick must be thoroughly dry before applying second paint coat.
STORAGE	Store in dry place protected from moisture

Submittal Approvals:

Job Name:	
Contractor:	Date:

Gilbane

Transmittal

Project [2239.2] - PCF - Hospital - Garage

View Date 2/18/2008

Gilbane
940 Elizabeth St
Lexington, KY 40506-0293
Phone: (859) 257-4536
Fax: (859) 323-1331

Transmittal No. 2239.2-00456

To	Mr. Doug Sherwood E. C. Matthews Co., Inc. 2265 Harrodsburg Road Lexington, KY 40504 USA Phone: (859) 278-3131 Fax: (859) 277-7903	**Date**	10/23/2006
		Items listed are being sent	
		☑ Enclosed	
		☐ Under Separate Cover	
		CSI Code	09500 - Acoustic Ceilings
From	Mr. Ryan Maguire (Gilbane)		
Subject	Submittal		

We are transmitting the following to you:

☑ Product Data	☑ Samples	☐ Shop Drawings	☐ O&M Manuals	☐ Plans
☐ Architectural Drawings	☐ Letters	☐ Specifications	☐ Prints	☐ Addenda
☐ Engineering Drawings	☐ Change Orders	☑ Submittal		

Items

No.	Description	Copies	Reason	Action
100-09500-001	Accoustic Celing Tiles	2	Approved as Noted	

Remarks

	Mr. Ryan Maguire	10/23/2006
From	Printed Name	Date
Received By	Printed Name	Date

UK PCF PARKING GARAGE
SECTION 09500 – ACOUSTICAL CEILINGS
DATE: 10/04/2006

GRAYHAWK, LLC
2424 MERCHANT STREET
P.O. BOX 12111 (40580)
LEXINGTON, KY 40511
(859) 255-2754 FAX (859) 259-0957

Celotex® BRAND

Classic Mineral Ceiling Systems

Architectural Abstract

Fine Fissured

WET-FELTED ACOUSTICAL CEILING TILES & PANELS

- 100% non-directional fissure pattern.
- Variety of edge detail options and panel sizes.
- Available in 12" X 12" tiles for glue up and concealed grid applications.
- PlastiGard™ finish available for a scrubbable/washable surface.*

See reverse side for additional product specifications.

APPROVED AS PER CONTRACT DOCUMENTS TO PLANS AND SPECIFICATIONS. DIMENSIONS AND QUANTITIES ARE TO BE FIELD VERIFIED. CONTRACTOR'S RESPONSIBILITY IS NOT RELIEVED BY THIS APPROVAL.

E.C. MATTHEWS CO., INC.

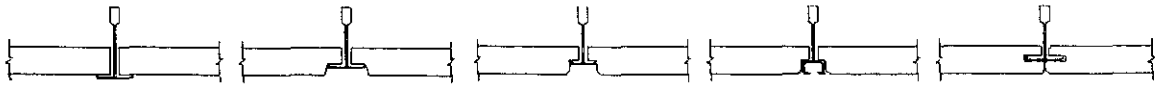
BY: DSJ 10.9.06
SIGNATURE DATE

Item Number	Nominal Size (Inches)	Edge Detail	UL Classified NRC	CAC	LR	Sq. Ft. Per Carton
		Safetone® Class A				
HHF-1S0	24 x 24 x 5/8	Narrow Reveal	.55	33	.83	64
HHF-154	24 x 24 x 5/8	Reveal	.55	33	.83	64
HHF-157	24 x 24 x 5/8	Trim	.55	33	.83	64
HHF-177	24 x 60 x 5/8	Trim	.55	35	.83	80
HHF-194	24 x 48 x 5/8	Reveal	.55	35	.83	64
HHF-197*	24 x 48 x 5/8	Trim	.55	35	.83	64
HHF-462	12 x 12 x 3/4	Bevel, Kerfed	.55	35	.83	32
		Protectone® (For specific UL fire resistance time-rated assemblies)				
PFF-1S4	24 x 24 x 5/8	Reveal	.55	35	.83	64
PFF-157	24 x 24 x 5/8	Trim	.55	35	.83	64
PFF-197	24 x 48 x 5/8	Trim	.55	40	.83	64
PFF-454	24 x 24 x 3/4	Reveal	.55	35	.83	56

PROVIDE BOTH

ASTM E 1264 Classification: Type III, Form 2, Pattern C D
Type IX, Form 2, Pattern C D (PlastiGard™ finish)
*Specify "PG" after item number for PlastiGard™ finish option. Example: HHF-197-PG

Edge Detail Options



Trim Edge (Square) 15/16" Grid

Reveal Edge (Beveled) 15/16" Grid

Narrow Reveal Edge (Corner Bevel) 9/16" Grid

Narrow Reveal Edge (Corner Bevel) 9/16" Grid (Bolt Slot)

Bevel Edge, Kerfed

Colortone Options (HHF-154, HHF-157, HHF-197)

In addition to standard white for all products, make an impact with one of the following Colortones for selected products.

Blondewood Beige Breeze Silver Lining Wet Clay White Wash

ADD

BioShield™
BioShield™ treatment included for added mold and mildew resistance.

U.S. Green Building Council Member

10YR Limited Warranty 104/90 Against Visible Sag

Safetone® Class A 52-62% Recycled Content

Protectone® 53-63% Recycled Content

Popular Applications:
- Hospitality • Retail • Office • Education
- Healthcare • Restaurants

BPB

E.C.M.®

PRODUCT SPECIFICATION DETAILS
ACOUSTICAL CEILINGS
09 51 00

PART 2: PRODUCTS

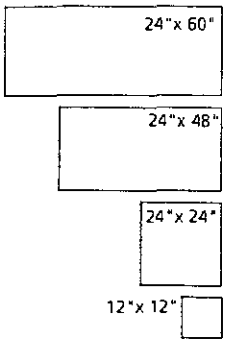
2.01 GENERAL

Provide Acoustical Ceiling Material manufactured to meet requirements of this specification in accordance with ASTM E 1264.

2.02 MATERIALS

Acoustical Ceiling Units:

Size Options



1. Type [III] [IX (PlastiGard™)]
2. Form 2
3. Pattern C D
4. Discreet non-directional fissured lay-in panels and tile.
5. Size [3/4"] [5/8"] thick x [12"x12"] [24"x 24"] [24"x 48"] [24" x 60"]
6. Edge Detail, Tile: Bevel, Kerfed
   Lay-In Panels: [Trim] [Reveal] [Narrow Reveal]
7. Noise Reduction Coefficient (NRC) .55
8. Ceiling Attenuation Class (CAC) [33] [35] [40]
9. Light Reflectance Coefficient (LR) .83
   Light Reflectance Designation LR-1
10. Color [White] [Blondewood] [Beige Breeze] [Silver Lining] [Wet Clay] [White Wash]
11. Flame Spread Classification (ASTM E 84, CAN/ULC-S102M) Class A
12. Underwriters Laboratories Inc. Fire-Resistance (ASTM E 119, CAN/ULC-S101M) Time-Rated Assembly* [D203] [D205] [G208] [G218] [G248] [G255] [L201] [P204] [P259] [P260] [P261] [P262] [P264]
13. Manufacturer, subject to compliance with requirements of this specification, BPB
14. Product Name Celotex® Brand [Fine Fissured] [Protectone® Fine Fissured]

*Relevant to Protectone® Only. Refer to UL Fire Resistance Directory for specific design information.

Distributed by:

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Chicago Metallic®

UK PCF PARKING GARAGE
SECTION 09500 – ACOUSTICAL CEILINGS
DATE: 10/04/2006

GRAYHAWK, LLC
2424 MERCHANT STREET
P.O. BOX 12111 (40580)
LEXINGTON, KY 40511
(859) 255-2754 FAX (859) 259-0957

Seismic 1200 15/16" Exposed

Product

Applications

Sustainable, accessible, economical commercial ceiling suspension.

Features

- The industry standard of compatibility: acoustical tile, light fixtures and air diffusers.
- Override and butt-cut tees available.
- All cross tees are 1½" tall.
- Complete seismic designs.

Benefits

- Cost control.
- Global compatibility and availability.
- Standard cross tee height ensures compatibility with straight and curved trim systems.
- Minimum 23% recycled content, 100% recyclable.

Material:

A. General
ASTM C 635 Heavy Duty (HD) and Intermediate Duty (ID) main tee classifications; commercial quality HDG-30 steel, galvanized body and cap, 15/16" width, 1-1/2" height. Meets all seismic code requirements.

Components:

1. **Main Tees:** Double web construction, 15/16" width, 1-1/2" height with hot-dip galvanized body.

(24 x 24, 24 x 48)
☐ 216.01H (120", slots 6" OC, ID)
☐ 200.01H (144", slots 6" OC, HD)
☐ 211.01H (144", slots 6" OC, ID)

(2D x 30, 20 x 60, 3D x 30, 6D x 6D)
☐ 299.01H (120", slots 10" OC, ID)

2. **Cross Tees:** Double web construction, 15/16" width, 1-1/2" height with hot-dip galvanized body 15/16" wide flange. Stab-in end detail.

Note: Cross tees are override design unless noted otherwise. Butt-cut tees are used for true, flat panel installation, i.e., metal panels.

(24 x 24, 24 x 48)
☐ 1251.01H (12", no slots)
☐ 1202.D1H (24", no slots)
☐ 1229.01H (24", no slots, butt-cut)
☐ 1253.01H (36", slots 12" OC)
☐ 121D.01H (48", slots 12" OC)
☐ 1213.01H (48", slots 12" OC)
☐ 1214.01H (48", slots 12" OC)
☐ 1215.01H (48", slots 12" OC, butt-cut)
☐ 1204.01H (48", slots 12" OC)
☐ 1278.01H (96", slots 12" OC)

(20 x 30, 20 x 60, 30 x 30, 30 x 60, 60 x 60)
☐ 1257.01H (20", no slots)
☐ 1258.01H (30", no slots)
☐ 1206.01H (60", 5 slots: midpoint, 10" each side of midpoint, 6" from each end)
☐ 1207.01H (60", slots 6" OC)

3. **Wall Angles & Moldings:**

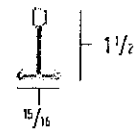
Wall Angles (A x B):
(hemmed edge)
☐ 1430.01 (144", 7/8" x 7/8")
☐ 1420.01 (144", 15/16" x 15/16")
☐ 1428.01* (144", 1" x 2")
☐ 1425.01 (144", 2" x 2")

* Compatible with 1496 SP (Seismic Perimeter) Clip.

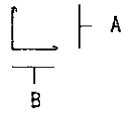
Moldings (A x B x C x D):
(Shadow Molding with hemmed edge)
☐ 1460.01 (120", 3/4" x 3/8" x 3/8" x 3/4")
☐ 1461.01 (120", 3/4" x 3/4" x 3/4" x 3/4")

Molding:
(Shadow Molding with two hemmed edges)
☐ 1466.01 (120", 1-11/16" x 1-1/4" x 5/16" x 3/4")

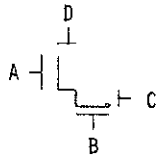
Tees



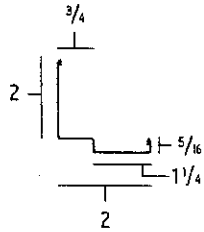
Wall Angle



Shadow Moldings

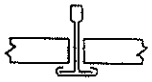


hemmed edge

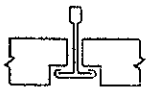


two hemmed edges

Details



square edge



reveal edge

APPROVED FOR GENERAL CONFORMITY TO PLANS AND SPECIFICATIONS. DETAIL DIMENSIONS AND CONDITIONS NOT COMPLETELY CHECKED. SHOP DWGS. FULL RESPONSIBILITY REMAINS WITH CONTRACTOR BY THIS APPROVAL.

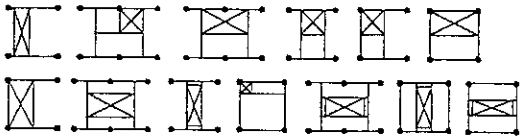
L.C. ENGINEERING CO., INC.

DV 10.9.06
SIGNATURE DATE

Seismic 1200 15/16" Exposed

Non-Fire Rated Assemblies

Hanger Positions for Non-Fire Rated Situations



This illustrates hanger positions for single fixtures in a field. Provide extra hangers for tandem fixtures.

Component Load Test Data (based on 1/360 span deflection)

ALLOWABLE LOAD per ASTM C635 *

Main Tee	Length	Hanger Spacing 4'	5'	6'
238	8'	Intermediate Duty	6.0	4.0
216	10'	Intermediate Duty	6.0	4.0
299	10'	Intermediate Duty	6.0	4.0
211	12'	Intermediate Duty	6.0	4.0
200	12'	Heavy Duty	8.9	5.6

Cross Tee	Length	1'	2'	3'	4'	5'	6'	8'
1251	12"	–						
1202	2'		33.0▲					
1229	2'		33.0▲					
1253	3'			29.3				
1209	4'				9.3			
1210	4'				9.3			
1213	4'				10.7			
1214	4'				14.0			
1215	4'				10.7			
1204	4'				17.0			
1244	4'				9.3			
12D6	5'					7.0		
1207	5'					8.5		
1236	6'						–	
1278	8'							1.8

* To convert data into lb/ft², divide on center spacing of component into lb/ft.

▲ Limited by safety factor of 2.

Light Fixture Load Test Data (based on 1/360 span deflection)

LIGHT FIXTURES	MAIN & CROSS TEES - ALLOWABLE FIXTURE WT. – LBS.			
Dimensions	200 1204	211 1210	211 1213	211 1228
1' x 4'	70.8	56.4	56.4	55.6
2' x 2'	60.4	34.8	34.8	31.2
2' x 4'	88.8	47.2	47.2	52.0

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GILBANE
University of Kentucky
Patient Care Facility
Gilbane Project No. 18-3966

REVIEWED

☐ 010-Huguelet ☒ 020-Garage
☐ 030-Infrastructure ☐ 040-PCF Foundation
☐ 050-PCF Core/Shell ☐ 060-TowerUp Fit

Bid Package No. 100
Submittal No. 100-09500-001
Spec. Sect/Para. —
Reviewed By RJ
Date 10/13/06

This review does not constitute nor does it assume design responsibility nor does it relieve the trade contractor's supplier from complying with the contract requirements, coordinating their work with other trade contractors and verifying field dimensions.

THIS REVIEW BY GBBN ARCHITECTS, INC., IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND IS NOT AN APPROVAL OF THIS DRAWING OR SET OF DRAWINGS. THE COMMENTS MADE DO NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH THE PROJECT DRAWINGS, SPECIFICATIONS AND OTHER CONTRACT DOCUMENTS. CONTRACTOR IS SOLELY RESPONSIBLE FOR: ALL DIMENSIONS AND QUANTITIES, ALL FABRICATION, DELIVERY AND ERECTION; ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES; ALL COORDINATION WITH ALL OTHER CONTRACTORS, SUPPLIERS AND OTHERS; PERFORMING ALL WORK IN A SAFE AND PROPER MANNER.

NO EXCEPTIONS TAKEN ☐
FURNISH AS CORRECTED ☒
REVISE AND RESUBMIT ☐
NO REVIEW - INCOMPLETE ☐
SUBMIT SPECIFIED ITEMS ☐
REJECTED ☐

DATE 10.18.06 BY JAP

GBBN ARCHITECTS, INC.
ARCHITECTURE, INTERIORS, PLANNING, ENGINEERING
☐ 332 EAST 8TH STREET, CINCINNATI, OHIO 45202-2217 (513) 241-8700
☒ 325 WEST MAIN STREET, LEXINGTON, KENTUCKY 40507 (859) 381-8787
☐ BEIJING XI CHENG DISTRICT, TONG LI GE ROAD NO 85, BEIJING, CHINA 100031 86 10 88386730

Gilbane

Transmittal

Project [2239.2] - PCF - Hospital - Garage

View Date 2/18/2008

Gilbane
940 Elizabeth St
Lexington, KY 40506-0293
Phone: (859) 257-4536
Fax: (859) 323-1331

Transmittal No. 2239.2-00752

To	Mr. Doug Sherwood E. C. Matthews Co., Inc. 2265 Harrodsburg Road Lexington, KY 40504 USA Phone: (859) 278-3131 Fax: (859) 277-7903	**Date**	3/5/2007
		Items listed are being sent	
		☑ Enclosed	
		☐ Under Separate Cover	
		Via	Hand Delivered
		CSI Code	09900 - Painting
From	Mr. Ryan Maguire (Gilbane)		
Subject	Submittal Package 100-09900-001.0		

We are transmitting the following to you:

☐ Product Data ☐ Samples ☐ Shop Drawings ☐ O&M Manuals ☐ Plans
☐ Architectural Drawings ☐ Letters ☐ Specifications ☐ Prints ☐ Addenda
☐ Engineering Drawings ☐ Change Orders ☑ Submittal

Submittals

Pkg. No./Rev.	Item No./Rev.	Description	Copies	Reason	Action
100-09900-001.0	100-09900-001.0	Paint Product Data	2	Approved as Noted	

Linked Documents	Document Type	Document	Open	Description	Date
	Doc	2239.2-00899		100-09900-001.0	4/13/2007

Pkg. No./Rev.	Item No./Rev.	Description	Copies	Reason	Action
100-09900-001.0	100-09900-002.0	Paint Samples for Verification		Revise and Resubmit	Action Needed

Linked Documents	Document Type	Document	Open	Description	Date
	Doc	2239.2-00900		100-09900-001.0	4/13/2007

Remarks See GBBN comments on transmittal sheet.

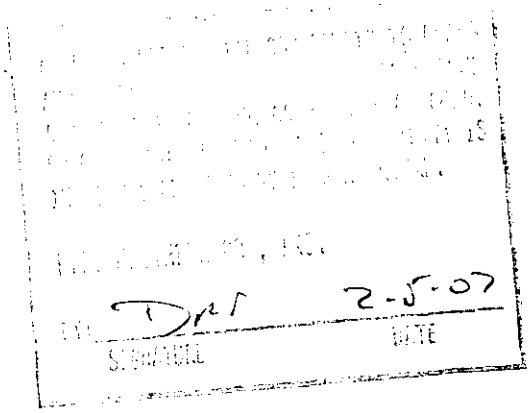
	Mr. Ryan Maguire	3/5/2007
From	Printed Name	Date
Received By	Printed Name	Date

Linked Documents

Document Type	Document	Open	Description	Date
Sub. Pkg.	100-09900-001.0			

Distribution

Recipient	Company	Method	Date
Doug Sherwood	E. C. Matthews Co., Inc.	Message	3/5/2007



U.K.

PCF Parking Garage

Mark's Painting
103 Pleasantview Street
Wilmore, KY 40390

THIS REVIEW BY GBBN ARCHITECTS, INC., IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT DF THE PRDJECT AND IS NOT AN APPROVAL OF THIS DRAWING OR SET OF DRAWINGS. THE COMMENTS MADE DO NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH THE PROJECT DRAWINGS, SPECIFICATIONS AND OTHER CONTRACT DOCUMENTS. CONTRACTOR IS SOLELY RESPDNSIBLE FDR: ALL DIMENSIONS AND QUANTITIES, ALL FABRICATIDN, DELIVERY AND ERECTION; ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES; ALL COORDINATION WITH ALL OTHER CONTRACTORS, SUPPLIERS AND OTHERS; PERFORMING ALL WORK IN A SAFE AND PROPER MANNER.

NO EXCEPTIONS TAKEN ☐
FURNISH AS CORRECTED ☒
REVISE AND RESUBMIT ☐
NO REVIEW - INCDMPLETE ☐
SUBMIT SPECIFIED ITEMS ☒
REJECTED ☐

DATE 02.26.07 BY JAP

GBBN ARCHITECTS, INC.
ARCHITECTURE, INTERIORS, PLANNING, ENGINEERING
332 EAST 8TH STREET, CINCINNATI, OHIO 45202-2217 (513) 241-8700
325 WEST MAIN STREET, LEXINGTON, KENTUCKY 40507 (859) 381-8787
BEIJING XI CHENG DISTRICT, TONG LI GE ROAD NO 85, BEIJING, CHINA 100031 86 10 88386730

SUBMIT SAMPLES PER SECTION
09900 - 1.3 - E.
EDISON COLOR = 1-1306P
PT4 = T&R # 8820W CASSIS ICE
PT3 = T&R # 8790N LOGGIA

GILBANE
University of Kentucky
Patient Care Facility
Gilbane Project No. 18-3966

REVIEWED

☐ 010-Huguelet ☒ 020-Garage
☐ 030-Infrastructure ☐ 040-PCF Foundation
☐ 050-PCF Core/Shell ☐ 060-TowerUp Fit

Bid Package No. 100
Submittal No. 100-09900-001
Spec. Sect/Para. _____
Reviewed By BH
Date 2/12/07

This review does not constitute nor does it assume design responsibility nor does it relieve the trade contractor's supplier from complying with the contract requirements, coordinating their work with other trade contractors and verifying field dimensions.

2.15 PAINTING SCHEDULE

A. For colors and locations, see Finish Schedule on Drawings
B. Galvanized and ungalvanized ferrous metals: Exposed steel items, doors and frame, flashings, and other exposed ferrous metal items, except mechanical and electrical work scheduled below:
   1. Pretreat surfaces as specified herein.
   a. 1 coat galvanized metal primer on galvanized surfaces #2042 Rust-Nox II
   b. 1 coat rust inhibiting primer on ungalvanized surfaces #42 Rust-Nox
   c. 2 coats finish #180 Enamelex

C. Mechanical and electrical work

   1. 1 coat primer as recommended by paint manufacturer
   2. 1 or 2 finish coats same as other exterior metal specified above.

D. Exterior Concrete Vertical Substrate at Parking Deck

   1. Mineral Silicate System EVERCOAT 300
      a. Prime Coat: N/A
      b. Intermediate and Top Coat: Flat

E. Ceiling Concrete Substrate at Garage Interior

   1. Exterior Alkyd Enamel
      a. Prime coat: Alkyd-resistant primer: Aqua-Bond
      b. Intermediate Coat: Exterior Alkyd #78 Trim-n-Tint
      c. Topcoat: Exterior Alkyd #78 Trim-n-Tint

F. CMU and Interior Vertical Concrete Substrates:

   1. Acrylic Latex over Alkali-Resistant Primer System:
      a. Prime Coat: Alkyd - resistant primer ~~#42 Rust-Nox~~ 955 BLOC FILL
      b. Intermediate Coat: Exterior Latex #690 Dura-Lex
      c. Topcoat: Exterior Latex Satin #690 Dura-Lex

G. ~~CMU~~ at Elevator Lobby: → (SEE RFI #156)

   1. ~~Acrylic Latex over Alkali-Resistant Primer System:~~
      a. ~~Prime Coat: Alkyd-resistant primer #42 Rust-Nox~~ 955 BLOC FIL
      b. ~~Intermediate Coat: Textured finish coat~~
      c. ~~Topcoat: Textured High-Build Satin Sto Powerwall Stucco System~~

H. Gypsum Board at Lobby:

   1. Acrylic Latex over Acrylic Primer System:
      a. Prime Coat: Water Borne Latex Primer #100 Lex-Bond
      b. Intermediate and Finish Coats: Acrylic Latex Semi-Gloss #890 Dura-Lex

I. Gypsum Board at Soffit:

   1. Acrylic Exterior Latex over primer:
      a. Prime Coat: Factory-formulated alkyd or alkyd resistant acrylic latex primer- Aqua-Bond
      b. Interimediate and Topcoat: Exterior Latex Semi-Gloss #890 Dura-Lex

Decorative Metals → (SEE 05700)
Primer: by others
Top coat: Tnemec Endura-Shield 73

E.06
RUSTNOX II DTM
Int./Ext Acrylic DTM Satin Primer/ Topcoat

PRODUCT DESCRIPTION

A modern, high quality, durable acrylic waterborne coating developed for use as a corrosion resistant direct-to-metal primer and/or topcoat for ferrous and non-ferrous metal surfaces including galvanized metal and aluminum. Also recommended for use on non-metal surfaces including primed wood, masonry, drywall, concrete block and repaint where a hard, durable, chemical resistant and washable surface is required. Can be topcoated with latex or oil based paints. Environmentally friendly. Low VOC. Low odor. Safe for use around home and farm.

Colors:

- 2042 Whites and Pastels (2oz/gal)
- 2049 Deeptones (8oz/gal)
- 2044 Accents (12oz/gal)
- 2043 Black
- 2045 Green
- 2046 Gray
- 2047 Red
- 2048 Tan

TECHNICAL DATA (2042)

Coverage: 340 sq. ft. per gallon on metal surfaces to yield a minimum DFT of 1.75 mils per coat on smooth low profile surfaces. 350-400 sq. ft./gal. on non-metal surfaces to yield a minimum DFT of 1.5 mils per coat. Coverage may vary depending on method of application and texture of surface.

Drying Time: temperature & humidity dependent @70 F & 50% R.H.:
Touch: 30 minutes
Recoat: 2 hours

Flash Point: None

Sheen: Satin

Vehicle Type: Acrylic

VOC:(calculated) 200 grams/liter (1.7 lbs/gal)

Volume Solids: 37.2%

Weight Solids: 49.0%

Weight Per Gallon: 10.2 lbs

Clean-up: Warm Soapy Water

Composition:

- Acrylic resin
- Titanium Dioxide and extender pigments
- Not formulated with lead or mercury containing materials.

SURFACE PREPARATION

Remove all dirt, grease, chalk, and other surface contamination with mild cleaning solution - rinse with clean water. Scrape or sand to remove all rust and loose and flaking or peeling paint. Glossy surface should be sanded dull and cleaned dust free. Repair damaged areas. Caulk as needed. Sand rough areas smooth. Spot prime bare areas. This product may be applied directly to sound prepared repaint surfaces.

For maximum protection and long term durability, apply two coats Rustnox II over properly prepared surface.

Mildew and algae must be removed before painting by washing with a solution of 1 quart liquid bleach and 3 quarts warm water or by using a consumer brand of mildew remover. Rinse all surfaces with clean water then wait until dry before painting. Caution - Do not add detergent or ammonia to the cleaning solution. Wear protective clothing.

WARNING! If you scrape, sand, or remove old paint, you may release lead dust. LEAD IS TOXIC. EXPOSURE TO LEAD DUST CAN CAUSE SERIDUS ILLNESS, SUCH AS BRAIN DAMAGE, ESPECIALLY IN CHILDREN. PREGNANT WOMEN SHOULD ALSO AVOID EXPOSURE. Wear an NIOSH-approved respirator to control lead exposure. Clean up carefully with a HEPA vacuum and a wet mop. Before you start, find out how to protect yourself by contacting the National Lead Information Hotline at 1-800-424-LEAD or log on to www.epa.gov/lead.

Ferrous Metal
Remove loose rust and mill scale by rigorous sanding, wire brushing, or power tool cleaning. Remove loose dust. A commercial grade blast cleaning is recommended for more severe corrosive environments.

E.06
RUSTNOX II DTM
Int./Ext Acrylic DTM Satin Primer/ Topcoat

Galvanized Metal/Aluminum
Wash oily deposits with detergent and water or allow to weather several months. Remove white rust or oxidation by sanding or wire brushing. Rinse with clean water.

Concrete, Masonry and Plaster
All surfaces must be cured, clean and free of any loose aggregate. Fresh concrete must be free of any form release compounds. Porous concrete and block should first be coated with 955 Bloc-Fil. Porous powdery plaster should be treated to become hard with a proper surface conditioner.

APPLICATION

Stir thoroughly before each use. Surface must be dry. Apply by synthetic bristle brush, appropriate nap roller, or airless spray. For airless spray application, use a .015-.021 size tip. Thinning is not normally required. If necessary, use up to 1/2 pint of clean water per gallon. Apply one coat for general use in mild environments. Two coats are recommended for improved corrosion protection in more aggressive applications. Three coats are required for best protection over abrasive-blasted steel.

Note: Double coating over ferrous metal is highly recommended to reduce or eliminate pin hole rusting and to assure adequate dry film thickness over high profile surfaces.

CAUTIONS

Avoid painting in direct sun or on hot surfaces. Do not paint in the later afternoon or any time when dew or rain can damage freshly applied paint. Apply only when substrate and air temperature is above 50 degrees F and at least 5 degrees above the dew point and will remain above those temperatures for at least four hours. Do not apply at lower temperatures if snow, frost or plunging temperatures may occur within hours of painting. Protect from freezing. Adequate health and safety precautions should be observed during all storage, handling, use and drying periods. For best results and safest usage, user should consult the current MSDS.

F.04
RUSTNOX
Exterior Alkyd Rust Inhibitive Primer/ Topcoat

PRODUCT DESCRIPTION

Rust-Nox is a modern self-priming rust inhibitive coating for interior and exterior metal. Provides a durable, low-lustre weather resistant primer or finish coat that is ideal for tanks, flashings, structural steel, fences, pipes or any atmospherically exposed metal surface. Makes an excellent rust fighting primer for architectural type oil based and acrylic latex topcoats. Also suitable for use as a finish coat for properly primed wood, concrete, and masonry surfaces. Tintable up to 2 oz. per gallon.

Colors:

- 42 Whites and Pastels (2oz/gal)
- 43 Black
- 45 Green
- 46 Gray
- 47 Red

TECHNICAL DATA (42)

Coverage: Approx. 400 sq. ft./gal.
Coverage may vary depending on method of application and texture of surface.

Drying Time: temperature & humidity dependent @70 F & 50% R.H.:
Touch: 4 hours
Recoat: 24 hours

Flash Point: 105 F

Sheen: Satin

Vehicle Type: Alkyd

VOC:(calculated) 367 grams/liter (3.1 lbs/gal)

Volume Solids: 52.8%

Weight Solids: 72.6%

Weight Per Gallon: 11.2 lbs

Clean-up: Mineral Spirits

Composition:

- Alkyd Resin
- Titanium Dioxide and extender pigments
- Not formulated with lead or mercury containing materials.

SURFACE PREPARATION

Remove all dirt, grease, chalk, and other surface contamination with mild cleaning solution - rinse with clean water and allow to dry. Scrape or sand to remove all rust and loose and flaking or peeling paint. Glossy surface should be sanded dull and cleaned dust free. Repair damaged areas. Caulk as needed. Sand rough areas smooth. Spot prime bare areas. This product may be applied directly to sound prepared repaint surfaces.

For maximum protection and long term durability, apply two coats Rustnox over properly prepared surface.

Mildew and algae must be removed before painting by washing with a solution of 1 quart liquid bleach and 3 quarts warm water or by using a consumer brand of mildew remover. Rinse all surfaces with clean water then wait until dry before painting. Caution - Do not add detergent or ammonia to the cleaning solution. Wear protective clothing.

WARNING! If you scrape, sand, or remove old paint, you may release lead dust. LEAD IS TOXIC. EXPOSURE TO LEAD DUST CAN CAUSE SERIOUS ILLNESS, SUCH AS BRAIN DAMAGE, ESPECIALLY IN CHILDREN. PREGNANT WOMEN SHOULD ALSO AVOID EXPOSURE. Wear an NIOSH-approved respirator to control lead exposure. Clean up carefully with a HEPA vacuum and a wet mop. Before you start, find out how to protect yourself by contacting the National Lead Information Hotline at 1-800-424-LEAD or log on to www.epa.gov/lead.

Ferrous Metal
Remove loose rust and mill scale by rigorous sanding, wire brushing, or power tool cleaning. Remove loose dust. A commercial grade blast cleaning is recommended for more severe corrosive environments.

Galvanized Metal/Aluminum
Not recommended for use directly on galvanized metal. However, with proper surface preparation, Rust-Nox may be used to help protect galvanized metal that is rusty due to loss of galvanized treatment.

F.04
RUSTNOX
Exterior Alkyd Rust Inhibitive Primer/ Topcoat

APPLICATION

Stir thoroughly before each use. Surface must be dry. Apply by synthetic bristle brush, appropriate nap roller, or airless spray. For airless spray application, use a .015-.021 size tip. Thinning is not normally required. If necessary, use up to 1/2 pint of clean mineral spirits per gallon. Apply one coat for general use in mild environments. Two coats are recommended for improved corrosion protection in more aggressive applications.

Note: Double coating over ferrous metal is highly recommended to reduce or eliminate pin hole rusting and to assure adequate dry film thickness over high profile surfaces.

CAUTIONS

Avoid painting in direct sun or on hot surfaces. Do not paint in the later afternoon or any time when dew or rain can damage freshly applied paint. Apply only when substrate and air temperature is above 40 degrees F. Do not apply at lower temperatures if snow, frost or plunging temperatures may occur within hours of painting. Adequate health and safety precautions should be observes during all storage, handling, use and drying periods. For best results and safest usage, user should consult the current MSDS.

D.03
ENAMELEX
Int./Ext. Alkyd Gloss Enamel

PRODUCT DESCRIPTION

Enamelex is a durable high gloss alkyd enamel for use on interior and exterior surfaces of wood, metal or concrete. Easy to apply with excellent flow and leveling. Low odor and sag resistant. Dries to a smooth, bright, high gloss finish. Safe for use on toys, woodwork and patio furniture. Tough enough for machinery and equipment.

Colors:

- 180 Whites & Pastels (2oz/gal)
- 193 Midtones (4oz/gal)
- 192 Deeptones (8oz/gal)
- 196 Accents (12oz/gal)
- 181 Black
- 183N Yellow
- 184 Calumet Red
- 185N Blue
- 186 Fern Green
- 188 Bright Red
- 190 International Orange
- 191 Bronzetone

TECHNICAL DATA (180)

Coverage: Approx. 400 sq. ft./gal.
Coverage may vary depending on method of application and texture of surface.

Drying Time: temperature & humidity dependent @70 F & 50% R.H.:
Touch: 4 hours
Recoat: 24 hours

Flash Point: 105 F

Sheen: Gloss

Vehicle Type: Alkyd

VOC:(calculated) 362 grams/liter (3.0 lbs/gal)

Volume Solids: 54.9%

Weight Solids: 70.6%

Weight Per Gallon: 10.3 lbs

Clean-up: Mineral Spirits

Composition:

- Alkyd Resin
- Titanium Dioxide and extender pigments.
- Not formulated with lead or mercury containing materials.

SURFACE PREPARATION

Remove all dirt, grease, chalk, and other surface contamination with mild cleaning solution - rinse with clean water and allow to dry. Scrape or sand to remove all rust and loose and flaking or peeling paint. Glossy surface should be sanded dull and cleaned dust free. Scrub protected areas such as under eaves, porch ceilings, and overhangs to remove invisible deposits that may prevent good adhesion.

For maximum protection and long term durability, apply two coats Enamelex over properly prepared surface.

Mildew and algae must be removed before painting by washing with a solution of 1 quart liquid bleach and 3 quarts warm water or by using a consumer brand of mildew remover. Rinse all surfaces with clean water then wait until dry before painting. Caution - Do not add detergent or ammonia to the cleaning solution. Wear protective clothing.

WARNING! If you scrape, sand, or remove old paint, you may release lead dust. LEAD IS TOXIC. EXPOSURE TO LEAD DUST CAN CAUSE SERIOUS ILLNESS, SUCH AS BRAIN DAMAGE, ESPECIALLY IN CHILDREN. PREGNANT WOMEN SHOULD ALSO AVOID EXPOSURE. Wear an NIOSH-approved respirator to control lead exposure. Clean up carefully with a HEPA vacuum and a wet mop. Before you start, find out how to protect yourself by contacting the National Lead Information Hotline at 1-800-424-LEAD or log on to www.epa.gov/lead.

Wood & Composition Board
Remove gummy sap with paint thinner. Sand lightly to fresh surface. Fill nail holes and imperfections with a wood filler and sand smooth. Spot prime nailheads, joints, knots, and around framing before applying latex caulk, then prime entire exterior surface with 100 Lex-Bond or 76 Ext. Oil Primer. Prime interior woodwork with 130 Enamel Undercoater.

Aluminum & Galvanized
Wash aluminum and galvanized metal with paint thinner to remove oily deposits or allow to weather for several months. Prime with Lex-Bond or Rustnox II DTM. Scrub aluminum siding with detergent solution to remove chalk and dirt. Rinse with clean water and allow to dry. Prime with Lex-Bond.

D.03
ENAMELEX
Int./Ext. Alkyd Gloss Enamel

Ferrous Metal
Remove rust and mill scale using sandpaper, steel wool, or wire brush. Bare steel must be primed same day as cleaning with Rust-Nox Primer.

Concrete, Masonry and Plaster
All surfaces must be cured, clean and free of any loose aggregate. Fresh concrete must be free of any form release compounds. Prime with Lex-Bond Primer. Porous concrete should be coated with 955 Bloc-Fil.

Previously Painted Surfaces
Repair damaged areas. Caulk as needed. Sand rough areas smooth. Feather edges of peeled paint. Spot prime bare areas. This product may be applied directly to sound prepared repaint surfaces. Weathered masonry, stucco, cement-asbestos shingles which are still chalky and porous after washing should be treated with #149 Sealz-It.

APPLICATION

Mix thoroughly before use. Apply using a high quality nylon/polyester brush, appropriate nap roller, or airless spray equipment. For airless spray, use a .013-.021" size tip. Thinning is not required. If necessary, thin sparingly with clean mineral spirits up to 1/2 pint per gallon.

CAUTIONS

Avoid painting in direct sun or on hot surfaces. Do not paint in the later afternoon or any time when dew or rain can damage freshly applied paint. Use only with adequate ventilation. Apply only when air, surface and material temperatures are above 40 degrees F prior to painting and for at least four hours thereafter. Do not apply at lower temperatures if snow, frost or plunging temperatures may occur within hours of painting. Apply only to thoroughly dry surfaces. Adequate health and safety precautions should be observed during all storage, handling, use and drying periods. For best results and safest usage, user should consult the current MSDS.

Edison Coatings, Inc.

EVERKOTE 300

REACTIVE INORGANIC MINERAL PAINTS & STAINS

DESCRIPTION:

EverKote 300 mineral coatings are waterborne inorganic paints and stains based on reactive potassium silicate binders. Potassium silicate masonry paints have been in use for over a century to provide extremely durable, breathable color coatings on all types of mineral-based substrates, including stone, masonry, concrete and cement plaster (stucco).

Two standard grades of are available:

GRADE	DESCRIPTION
PENETRAL	Low-Viscosity, Semi-Transparent Stains
PATINAR	Medium Viscosity, Opaque Coatings

PHOTO: EverKote 300 was applied to this Historic Courthouse as part of the building's restoration program.

EverKote 300 coatings are stabilized, reactive formulations which form chemical bonds within the substrate to provide long term color retention and durability.

HOW DO *EverKote 300* POTASSIUM SILICATE COATINGS WORK?

EverKote 300's potassium silicate binder is produced by fusing potassium carbonate with silica at high temperature. The result is a soluble silicate, which can be dissolved in water to produce a liquid "waterglass".

Although soluble silicates can be air dried to form a film, maximum water resistance, bond strength and long-term durability depend on chemical reactions with the substrate or added catalysts. Substrates with which silicates can react include:

☑Calcium salts, typically found in Portland cement, lime and calcareous natural stones such as limestone and marble

☑Silica, typically present in siliceous sandstones, silica sand, mortars, concrete and glass

☑Ceramics, including brick and terra cotta

☑Iron and other metals

When ***EverKote 300*** is applied to suitable substrates, it penetrates and reacts to form a hard, insoluble silicate. It can also increase substrate hardness, particularly in cementitious materials. When applied to materials containing Portland cement, the silicate reacts with incompletely hydrated cement particles, converting unreacted calcium hydroxide [$Ca(OH)_2$ or hydrated lime] to harder calcium silicate hydrates.

APPEARANCE:

EverKote 300 is available in nearly 900 standard colors. Custom color-matching is also available. Product dries to a flat (matte) finish.

PROPERTIES

☑Exceptionally Breathable

☑Moisture and Immersion Resistant

☑Does not contribute to growth of mold, algae or mildew

☑Improves resistance to certain chemicals

☑Durable and UV-Resistant; Does not yellow, fade or peel

☑Heat Resistant

PROPERTY	RESULTS	COMMENTS
Direct Tensile Bond Strength	>410 psi @ 48 hrs. cure	No adhesive failure; 100% cohesive failure in substrate
Flexural Bond Strength	>1440 psi @13 days cure	No adhesive failure; 100% cohesive failure in substrate
Water Vapor Transmission, ASTM E96	>99%	Results expressed as percentage versus uncoated control
Accelerated Weathering, ASTM G53	1000 hrs., no cracking, peeling, yellowing, swelling or checking	Stable

APPLICATION
Always pre-test a small, inconspicuous area for color, adhesion and compatibility prior to large scale application. Allow up to 7 days cure before judging final color. Previous treatments, water repellents, chemical cleaning agents, and substrate composition can affect mineral coating reaction rates and appearance. Mineral coatings are natural materials and some color variation or shading is normal. Colors may lighten somewhat with aging.

EverKote 300 may be applied in one, two or three coats. The first coat may be thinned with up to 10% demineralized water, followed by one or more undiluted *EverKote 300* top coats.

Surface Preparation
Surfaces to be treated must be clean, dry and free of dirt, dust, form oil, efflorescence, previous coatings (other than existing cement or silicate mineral coatings) and other materials which may hinder penetration and/or reaction with the substrate. Previous cementitious and silicate mineral coatings must be spot tested for compatibility in an inconspicuous area prior to large scale application.

CAUTION: Protect glass and other surfaces not intended to be coated by covering completely with polyethylene, sealing the edges continuously with heavy moisture resistant tape. Unprotected glass and other surfaces may be etched or "frosted" by contact with silicate coatings. This is a chemical reaction, which cannot be reversed by cleaning.

New Concrete, Stucco and Mortar must be allowed to cure for a minimum of 7 days prior to mineral coating application. For maximum effectiveness, surfaces must be sufficiently dry to allow the mineral coating to penetrate porous substrates. Allow extended drying time as required under cool, damp conditions.

Factors Affecting Penetration Depth
While penetration depth may not be critical for many architectural applications, greater penetration has a significant effect on strength and durability of applications on cement-based substrates, porous stone and traffic surfaces. Penetration is influenced by substrate pore structure and permeability, moisture content and surface preparation.

Application:
Mix product thoroughly before use as contents may settle upon standing. Re-mix periodically during use to maintain consistent color and saturation.

Apply *EverKote 300* by brush, roller or airless spray. Apply as a continuous film and do not attempt to overbuild the wet film to fill surface imperfections.

Allow first coat to dry for a minimum of 6 hours before top coat application of ***EverKote 300***. An additional minimum 6 hour period is required before application of a second top coat (optional).

Protection & Curing: Protect coated surfaces from rain or other water exposure for at least 24 hours after application. Full cure requires at least 7 days, and colors may change in hue or intensity during this period. Do not expose treated surfaces to acid cleaners, hot water or steam cleaning.

COVERAGE:
Coverage rates vary based on surface texture and porosity. Nominal coverage rate is 200 sq.ft./gal. per coat.

Rev. 6/2004

Edison Coatings, Inc.

3 Northwest Drive, Plainville, CT 06062

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E-mail: edison@edisoncoatings.com **Internet: www.edisoncoatings.com**

E.04
AQUA-BOND
Int./Ext. 100% Acrylic Stain Kill Primer/Sealer

PRODUCT DESCRIPTION

Aqua-Bond is a high quality 100% Acrylic Stain-Bloc Primer ideal for use under oil-based or latex top coats. Suitable for wood, metal, masonry, and clean sound repaint surfaces. For interior and exterior use combining outstanding adhesion and high hide. Provides a mildew resistant coating. Glossy surfaces such as formica, masonite and ceramic tile can be primed without sanding. Can be used as a barrier coat to block tannins in woods such as redwood and cedar. Great hiding power helps to seal many stains like crayon, graffiti, greasy spots, water stains, and rust or smoke. Also provides an excellent base for wallcoverings over any surface. No sizing is required. Hides patterns and colors of existing wallcovering when used as a primer. Aqua-Bond is also suitable as a finish coat. Tintable. Low VOC.

Colors:

- White (4oz/gal)
- Can be tinted toward finish color.

TECHNICAL DATA

Coverage: Approx. 400 sq. ft./gal.
Coverage may vary depending on method of application and texture of surface.

Drying Time: temperature & humidity dependent @70 F & 50% R.H.:
Touch: 30-45 minutes
Recoat: 1 hour

Flash Point: None

Sheen: Satin

Vehicle Type: 100% Acrylic

VOC:(calculated) 104 grams/liter (0.9 lbs/gal)

Volume Solids: 35.8%

Weight Solids: 46.6%

Weight Per Gallon: 10.2 lbs

Clean-up: Warm soapy water

Composition:

- Acrylic resin
- Titanium Dioxide and extender pigments.
- Not formulated with lead or mercury containing materials.

SURFACE PREPARATION

Remove all dirt, grease, chalk, and other surface contamination with mild cleaning solution - rinse with clean water. Scrape or sand to remove all rust and loose and flaking or peeling paint. Scrub protected areas such as under eaves, porch ceilings, and overhangs to remove invisible deposits that may prevent good adhesion. When priming over stained areas, first attempt to remove as much of the stains as possible by washing, sanding, scraping, etc.

Mildew and algae must be removed before painting by washing with a solution of 1 quart liquid bleach and 3 quarts warm water or by using a consumer brand of mildew remover. Rinse all surfaces with clean water then wait until dry before painting. Caution - Do not add detergent or ammonia to the cleaning solution. Wear protective clothing.

WARNING! If you scrape, sand, or remove old paint, you may release lead dust. LEAD IS TOXIC. EXPOSURE TO LEAD DUST CAN CAUSE SERIOUS ILLNESS, SUCH AS BRAIN DAMAGE, ESPECIALLY IN CHILDREN. PREGNANT WOMEN SHOULD ALSO AVOID EXPOSURE. Wear an NIOSH-approved respirator to control lead exposure. Clean up carefully with a HEPA vacuum and a wet mop. Before you start, find out how to protect yourself by contacting the National Lead Information Hotline at 1-800-424-LEAD or log on to www.epa.gov/lead.

Wood & Composition Board
Remove gummy sap with paint thinner. Sand lightly to fresh surface. Fill nail holes and imperfections with a wood filler and sand smooth. Spot prime nailheads, joints, knots, and around framing before applying latex caulk. Bleeding woods such as redwood and cedar may require two coats of primer to block discoloration of the finish coat.

Aluminum & Galvanized
Wash aluminum and galvanized metal with paint thinner to remove oily deposits or allow to weather for several months. Scrub aluminum siding with detergent solution to remove chalk and dirt. Rinse with clean water.

Ferrous Metal
Rust and mill scale must be removed using sandpaper, steel wool or wire brush. Bare steel must be primed the same day as cleaned. Apply one heavy

E.04
AQUA-BOND
Int./Ext. 100% Acrylic Stain Kill Primer/Sealer

coat or, preferably, two coats for greater corrosion resistance.

Concrete, Masonry and Plaster
All surfaces must be cured, clean and free of any loose aggregate. Fresh concrete must be free of any form release compounds. Porous concrete should be coated with 955 Bloc-Fil.

Hardboard Siding
Spot prime nailheads and around joints prior to caulking.

Vinyl Siding
Wash clean with detergent solution. Rinse thoroughly with clean water and allow to dry. Do not paint with a color darker than the original siding to prevent warping.

Previously Painted Surfaces
Repair damaged areas. Caulk as needed. Sand rough areas smooth. Feather edges of peeled paint. Spot prime bare areas. This product may be applied directly to sound prepared repaint surfaces. Weathered masonry, stucco, cement-asbestos shingles which are still chalky and porous after washing should be treated with 149 Sealz-It surface conditioner.

APPLICATION

Mix thoroughly before use. Apply using a high quality nylon/polyester brush, appropriate nap roller, or airless spray equipment. For airless spray, use a .015-.021" size tip. Thinning is not required. If necessary, thin sparingly with water up to 1/2 pint per gallon. Paint additives are not recommended.

CAUTIONS

Avoid painting in direct sun or on hot surfaces. Do not paint in the later afternoon or any time when dew or rain can damage freshly applied paint. May be applied to damp but not dripping surfaces. Apply only when air, surface and material temperatures are above 40 degrees F prior to painting and for at least four hours thereafter. Do not apply at lower temperatures if snow, frost, or plunging temperatures may occur within hours of painting. Protect from freezing. Adequate health and safety precautions should be observed during all storage, handling, use and drying periods. For best results and safest usage, user should consult the current MSDS.

D.01
TRIM & TINT
Ext. Alkyd Semi-Gloss House Paint

PRODUCT DESCRIPTION

Trim & Tint is a modern blend of alkyd resins and linseed oils formulated for use on exterior wood, metal, brick and masonry surfaces. A full bodied house paint that resists sags and runs, is easy to apply and dries to a uniform high sheen finish. Resists chalking for better appearance and durability. Provides a mildew resistant coating.

Colors:

- 78 Whites & Pastels (2oz/gal)
- 88 Midtones (4oz/gal)
- 89 Deeptones (8oz/gal)
- 79 Accents (12oz/gal)

TECHNICAL DATA (78)

Coverage: Approx. 350 sq. ft./gal.
Coverage may vary depending on method of application and texture of surface.

Drying Time: temperature & humidity dependent @70 F & 50% R.H.:
Touch: 4-6 hours
Recoat: 24 hours

Flash Point: 105 F

Sheen: Semi-Gloss

Vehicle Type: Alkyd/Linseed Oil

VOC:(calculated) 368 grams/liter (3.1 lbs/gal)

Volume Solids: 52.9%

Weight Solids: 31.0%

Weight Per Gallon: 10.7 lbs

Clean-up: Mineral Spirits

Composition:

- Alkyd Resin & Linseed Oil
- Titanium Dioxide and extender pigments.
- Not formulated with lead or mercury containing materials.

SURFACE PREPARATION

Remove all dirt, grease, chalk, and other surface contamination with mild cleaning solution - rinse with clean water and allow to dry. Scrape or sand to remove all rust and loose and flaking or peeling paint. Glossy surface should be sanded dull and cleaned dust free. Scrub protected areas such as under eaves, porch ceilings, and overhangs to remove invisible deposits that may prevent good adhesion.

For maximum protection and long term durability, apply two coats Trim & Tint over properly prepared surface.

Mildew and algae must be removed before painting by washing with a solution of 1 quart liquid bleach and 3 quarts warm water or by using a consumer brand of mildew remover. Rinse all surfaces with clean water then wait until dry before painting. Caution - Do not add detergent or ammonia to the cleaning solution. Wear protective clothing.

WARNING! If you scrape, sand, or remove old paint, you may release lead dust. LEAD IS TOXIC. EXPOSURE TO LEAD DUST CAN CAUSE SERIOUS ILLNESS, SUCH AS BRAIN DAMAGE, ESPECIALLY IN CHILDREN. PREGNANT WOMEN SHOULD ALSO AVOID EXPOSURE. Wear an NIOSH-approved respirator to control lead exposure. Clean up carefully with a HEPA vacuum and a wet mop. Before you start, find out how to protect yourself by contacting the National Lead Information Hotline at 1-800-424-LEAD or log on to www.epa.gov/lead.

Wood & Composition Board
Remove gummy sap with paint thinner. Sand lightly to fresh surface. Fill nail holes and imperfections with a wood filler and sand smooth. Spot prime nailheads, joints, knots, and around framing before applying latex caulk, then prime entire surface with 100 Lex-Bond or 76 Ext. Oil Primer. Bleeding woods such as redwood and cedar may require two coats of primer to block discoloration of the finish coat.

Aluminum & Galvanized
Wash aluminum and galvanized metal with paint thinner to remove oily deposits or allow to weather for several months. Prime with Lex-Bond or Rustnox II DTM. Scrub aluminum siding with detergent solution to remove chalk and dirt. Rinse with clean water and allow to dry. Prime with Lex-Bond.

D.01
TRIM & TINT
Ext. Alkyd Semi-Gloss House Paint

Ferrous Metal
Remove rust and mill scale using sandpaper, steel wool, or wire brush. Bare steel must be primed same day as cleaning with Rust-Nox Primer.

Concrete, Masonry and Plaster
All surfaces must be cured, clean and free of any loose aggregate. Fresh concrete must be free of any form release compounds. Prime with Lex-Bond Primer. Porous concrete should be coated with 955 Bloc-Fil.

Previously Painted Surfaces
Repair damaged areas. Caulk as needed. Sand rough areas smooth. Feather edges of peeled paint. Spot prime bare areas. This product may be applied directly to sound prepared repaint surfaces. Weathered masonry, stucco, cement-asbestos shingles which are still chalky and porous after washing should be treated with #149 Sealz-It.

APPLICATION

Mix thoroughly before use. Apply using a high quality nylon/polyester brush, appropriate nap roller, or airless spray equipment. For airless spray, use a .015-.021" size tip. Thinning is not required. If necessary, thin sparingly with clean mineral spirits up to 1/2 pint per gallon.

CAUTIONS

Avoid painting in direct sun or on hot surfaces. Do not paint in the later afternoon or any time when dew or rain can damage freshly applied paint. Use only with adequate ventilation. Apply only when air, surface and material temperatures are above 40 degrees F prior to painting and for at least four hours thereafter. Do not apply at lower temperatures if snow, frost or plunging temperatures may occur within hours of painting. Apply only to thoroughly dry surfaces. Adequate health and safety precautions should be observed during all storage, handling, use and drying periods. For best results and safest usage, user should consult the current MSDS.

E.07
955 BLOC-FIL
Int./Ext. Latex Concrete Block Filler

PRODUCT DESCRIPTION

955 Bloc-Fil is a specially formulated high quality vinyl-acrylic latex filler for use over both interior and exterior unpainted porous concrete and cinder block. Provides excellent filling properties and good hide when properly applied. Applies easily and dries quickly. Suitable for use as a base coat for most architectural topcoats as well as epoxy coatings.

Colors:

- 955 White
- Can be tinted toward finish color. (4oz/gal)

TECHNICAL DATA

Coverage: Approx. Up to 100 sq. ft./gal. Coverage may vary depending on method of application and texture and porosity of surface.

Drying Time: temperature & humidity dependent @70 F & 50% R.H.:
Touch: 2 hours
Recoat: 12 hours

Flash Point: None

Sheen: Flat

Vehicle Type: Vinyl Acrylic

VOC:(calculated) 30 grams/liter (0.3 lbs/gal)

Volume Solids: 45.0%

Weight Solids: 65.7%

Weight Per Gallon: 13.4 lbs

Clean-up: Warm soapy water

Composition:

- Vinyl Acrylic resin
- Titanium Dioxide and extender pigments.
- Not formulated with lead or mercury containing materials.

SURFACE PREPARATION

All masonry surfaces must be totally cured. Level any surface projections and mortar spatters. Remove all oil, dust, dirt, grease, efflorescence, and other surface contamination with mild cleaning solution - rinse with clean water. Any crayon, graffiti, smoke, greasy spots or water soluble stains should be sealed with Aqua Bond.

Mildew & algae must be removed before painting by washing with a solution of 1 quart liquid bleach and 3 quarts warm water or by using a consumer brand of mildew remover. Rinse all surfaces with clean water then wait until dry before painting. Caution - Do not add detergent or ammonia to the cleaning solution. Wear protective clothing.

WARNING! If you scrape, sand, or remove old paint, you may release lead dust. LEAD IS TOXIC. EXPOSURE TO LEAD DUST CAN CAUSE SERIOUS ILLNESS, SUCH AS BRAIN DAMAGE, ESPECIALLY IN CHILDREN. PREGNANT WOMEN SHOULD ALSO AVOID EXPOSURE. Wear an NIOSH-approved respirator to control lead exposure. Clean up carefully with a HEPA vacuum and a wet mop. Before you start, find out how to protect yourself by contacting the National Lead Information Hotline at 1-800-424-LEAD or log on to www.epa.gov/lead.

APPLICATION

Mix thoroughly before use. Apply generously by brush, roller, or airless spray. For airless spray, use a .027 size tip and remove all in-line and gun filters. Thinning is not normally required. If necessary, use only a small amount of clean water. Excessive thinning reduces the ability to fill voids and pores. It is recommended that the surface be back-rolled or squeegeed after application and before the filler sets. Extremely rough textures may require two coats of Bloc-Fil. After applying, two finish coats are recommended for maximum protection and long term durability.

E.07
955 BLOC-FIL
Int./Ext. Latex Concrete Block Filler

CAUTIONS

Do not apply at temperatures below 50 degrees F. Protect from freezing. Use only with adequate ventilation. Adequate health and safety precautions should be observed during all storage, handling, use and drying periods. For best results and safest usage, user should consult the current MSDS.

B.02
DURA-LEX
Ext. 100% Acrylic Satin House Paint

PRODUCT DESCRIPTION

Dura-Lex is our highest quality 100% acrylic latex house and trim paint. Formulated for rugged protection of exterior surfaces such as wood and metal, aluminum and vinyl siding, masonry and brick, composition board, galvanized metal or any previously painted or stained surface. Provides a mildew resistant coating. Resists fading, chalking, blistering, and flaking and peeling. Easy to apply. Suitable for use above 35 degrees F. See CAUTIONS section. Soap and water cleanup. Twenty year limited warranty.

Colors:

- 50-690 Whites & Pastels (2oz/gal)
- 50-691 Midtones (4oz/gal)
- 50-692 Deeptones (8oz/gal)
- 50-694 Accents (12oz/gal)

TECHNICAL DATA (690)

Coverage: Approx. 400 sq. ft./gal.
Coverage may vary depending on method of application and texture of surface.

Drying Time: temperature & humidity dependent @70 F & 50% R.H.:
Touch: 1 hour
Recoat: 24 hours

Flash Point: None

Sheen: Satin

Vehicle Type: 100% Acrylic

VOC:(calculated) 84 grams/liter (0.7 lbs/gal)

Volume Solids: 39.1%

Weight Solids: 50.0%

Weight Per Gallon: 10.5 lbs

Clean-up: Warm soapy water

Composition:

- Acrylic resin
- Titanium Dioxide and extender pigments.
- Not formulated with lead or mercury containing materials.

SURFACE PREPARATION

Remove all dirt, grease, chalk, and other surface contamination with mild cleaning solution - rinse with clean water. Scrape or sand to remove all rust and loose and flaking or peeling paint. Glossy surface should be sanded dull and cleaned dust free. Scrub protected areas such as under eaves, porch ceilings, and overhangs to remove invisible deposits that may prevent good adhesion.

For maximum protection and long term durability, apply two coats Dura-Lex over properly prepared surface.

Mildew and algae must be removed before painting by washing with a solution of 1 quart liquid bleach and 3 quarts warm water or by using a consumer brand of mildew remover. Rinse all surfaces with clean water then wait until dry before painting. Caution - Do not add detergent or ammonia to the cleaning solution. Wear protective clothing.

WARNING! If you scrape, sand, or remove old paint, you may release lead dust. LEAD IS TOXIC. EXPOSURE TO LEAD DUST CAN CAUSE SERIOUS ILLNESS, SUCH AS BRAIN DAMAGE, ESPECIALLY IN CHILDREN. PREGNANT WOMEN SHOULD ALSO AVOID EXPOSURE. Wear an NIOSH-approved respirator to control lead exposure. Clean up carefully with a HEPA vacuum and a wet mop. Before you start, find out how to protect yourself by contacting the National Lead Information Hotline at 1-800-424-LEAD or log on to www.epa.gov/lead.

Wood & Composition Board
Remove gummy sap with paint thinner. Sand lightly to fresh surface. Fill nail holes and imperfections with a wood filler and sand smooth. Spot prime nailheads, joints, knots, and around framing before applying latex caulk, then prime entire surface with 100 Lex-Bond or 76 Ext. Oil Primer. Bleeding woods such as redwood and cedar may require two coats of primer to block discoloration of the finish coat.

Aluminum & Galvanized
Wash aluminum and galvanized metal with paint thinner to remove oily deposits or allow to weather for several months. Prime with Lex-Bond or Rustnox II DTM. Scrub aluminum siding with detergent solution to remove chalk and dirt. Rinse with clean water. Prime with Lex-Bond.

B.02
DURA-LEX
Ext. 100% Acrylic Satin House Paint

Ferrous Metal
Remove rust and mill scale using sandpaper, steel wool, or wire brush. Bare steel must be primed same day as cleaning with Rust-Nox Primer.

Concrete, Masonry and Plaster
All surfaces must be cured, clean and free of any loose aggregate. Fresh concrete must be free of any form release compounds. Prime with Lex-Bond Primer. Porous concrete should be coated with 955 Bloc-Fil.

Vinyl Siding
Wash clean with detergent solution. Rinse thoroughly with clean water and allow to dry. Do not paint with a color darker than the original siding to prevent warping.

Previously Painted Surfaces
Repair damaged areas. Caulk as needed. Sand rough areas smooth. Feather edges of peeled paint. Spot prime bare areas. This product may be applied directly to sound prepared repaint surfaces. Weathered masonry, stucco, cement-asbestos shingles which are still chalky and porous after washing should be treated with 149 Sealz-It surface conditioner.

APPLICATION

Mix thoroughly before use. Apply using a high quality nylon/polyester brush, appropriate nap roller, or airless spray equipment. For airless spray, use a .015-.021" size tip. Thinning is not required. If necessary, thin sparingly with water up to 1/2 pint per gallon.

CAUTIONS

Avoid painting in direct sun or on hot surfaces. Do not paint in the later afternoon or any time when dew or rain can damage freshly applied paint. May be applied to damp but not dripping surfaces. Apply only when air, surface and material temperatures are above 35 degrees F prior to painting and for at least four hours thereafter. Do not apply at lower temperatures if snow, frost or plunging temperatures may occur within hours of painting. Protect from freezing. Adequate health and safety precautions should be observes during all storage, handling, use and drying periods. For best results and safest usage, user should consult the current MSDS.

E.07
955 BLOC-FIL
Int./Ext. Latex Concrete Block Filler

PRODUCT DESCRIPTION

955 Bloc-Fil is a specially formulated high quality vinyl-acrylic latex filler for use over both interior and exterior unpainted porous concrete and cinder block. Provides excellent filling properties and good hide when properly applied. Applies easily and dries quickly. Suitable for use as a base coat for most architectural topcoats as well as epoxy coatings.

Colors:

- 955 White
- Can be tinted toward finish color. (4oz/gal)

TECHNICAL DATA

Coverage: Approx. Up to 100 sq. ft./gal. Coverage may vary depending on method of application and texture and porosity of surface.

Drying Time: temperature & humidity dependent @70 F & 50% R.H.:
Touch: 2 hours
Recoat: 12 hours

Flash Point: None

Sheen: Flat

Vehicle Type: Vinyl Acrylic

VOC:(calculated) 30 grams/liter (0.3 lbs/gal)

Volume Solids: 45.0%

Weight Solids: 65.7%

Weight Per Gallon: 13.4 lbs

Clean-up: Warm soapy water

Composition:

- Vinyl Acrylic resin
- Titanium Dioxide and extender pigments.
- Not formulated with lead or mercury containing materials.

SURFACE PREPARATION

All masonry surfaces must be totally cured. Level any surface projections and mortar spatters. Remove all oil, dust, dirt, grease, efflorescence, and other surface contamination with mild cleaning solution - rinse with clean water. Any crayon, graffiti, smoke, greasy spots or water soluble stains should be sealed with Aqua Bond.

Mildew & algae must be removed before painting by washing with a solution of 1 quart liquid bleach and 3 quarts warm water or by using a consumer brand of mildew remover. Rinse all surfaces with clean water then wait until dry before painting. Caution - Do not add detergent or ammonia to the cleaning solution. Wear protective clothing.

WARNING! If you scrape, sand, or remove old paint, you may release lead dust. LEAD IS TOXIC. EXPOSURE TO LEAD DUST CAN CAUSE SERIOUS ILLNESS, SUCH AS BRAIN DAMAGE, ESPECIALLY IN CHILDREN. PREGNANT WOMEN SHOULD ALSO AVOID EXPOSURE. Wear an NIOSH-approved respirator to control lead exposure. Clean up carefully with a HEPA vacuum and a wet mop. Before you start, find out how to protect yourself by contacting the National Lead Information Hotline at 1-800-424-LEAD or log on to www.epa.gov/lead.

APPLICATION

Mix thoroughly before use. Apply generously by brush, roller, or airless spray. For airless spray, use a .027 size tip and remove all in-line and gun filters. Thinning is not normally required. If necessary, use only a small amount of clean water. Excessive thinning reduces the ability to fill voids and pores. It is recommended that the surface be back-rolled or squeegeed after application and before the filler sets. Extremely rough textures may require two coats of Bloc-Fil. After applying, two finish coats are recommended for maximum protection and long term durability.

Town & Ranch PAINTS

E.07
955 BLOC-FIL
Int./Ext. Latex Concrete Block Filler

CAUTIONS

Do not apply at temperatures below 50 degrees F. Protect from freezing. Use only with adequate ventilation. Adequate health and safety precautions should be observed during all storage, handling, use and drying periods. For best results and safest usage, user should consult the current MSDS.

E.05
LEX-B OND
Exterior Acrylic Latex Primer

UCT DESCRIPTION

modern 100% acrylic alkyd modified primer and barrier coat for use on asonry, composition board as well as aint and stain surfaces. Effective on edar as a sealer and barrier coat for er soluble tannin staining through la- educes nailhead rusting and corro- surfaces. Dries quickly and remains s grain cracking, blistering, and flak- g. Provides a mildew resistant coat- s a finish coat or may be topcoated paint.

ite (4oz/gal)
t Base (8oz/gal)

HNICAL DATA (100)

prox. 400 sq. ft./gal.
verage may vary depending on thod of application and texture of face.

temperature & humidity dependent
R.H.:
1 hour
24 hours

Jone

100% Acrylic Alkyd Modified

ed) 76 grams/liter (0.6 lbs/gal)

s: 39.7%

: 53.5%

allon: 10.8 lbs

arm soapy water

resin alkyd modified.
n Dioxide and extender pigments.
nulated with lead or mercury contain- erials.

SURFACE PREPARATION

Remove all dirt, grease, chalk, and other surface contamination with mild cleaning solution - rinse with clean water. Scrape or sand to remove all rust and loose and flaking or peeling paint. Glossy surface should be sanded dull and cleaned dust free. Scrub protected areas such as under eaves, porch ceilings, and overhangs to remove invisible deposits that may prevent good adhesion.

Mildew and algae must be removed before painting by washing with a solution of 1 quart liquid bleach and 3 quarts warm water or by using a consumer brand of mildew remover. Rinse all surfaces with clean water then wait until dry before painting. Caution - Do not add detergent or ammonia to the cleaning solution. Wear protective clothing.

WARNING! If you scrape, sand, or remove old paint, you may release lead dust. LEAD IS TOXIC. EXPOSURE TO LEAD DUST CAN CAUSE SERIOUS ILLNESS, SUCH AS BRAIN DAMAGE, ESPECIALLY IN CHILDREN. PREGNANT WOMEN SHOULD ALSO AVOID EXPOSURE. Wear an NIOSH-approved respirator to control lead exposure. Clean up carefully with a HEPA vacuum and a wet mop. Before you start, find out how to protect yourself by contacting the National Lead Information Hotline at 1-800-424-LEAD or log on to www.epa.gov/lead.

Wood & Composition Board
Remove gummy sap with paint thinner. Sand lightly to fresh surface. Fill nail holes and imperfections with a wood filler and sand smooth. Spot prime nailheads, joints, knots, and around framing before applying latex caulk. Bleeding woods such as redwood and cedar may require two coats of primer to block discoloration of the finish coat.

Aluminum & Galvanized
Wash aluminum and galvanized metal with paint thinner to remove oily deposits or allow to weather for several months. Scrub aluminum siding with detergent solution to remove chalk and dirt. Rinse with clean water.

Ferrous Metal
Rust and mill scale must be removed using sandpaper, steel wool or wire brush. Bare steel must be primed the same day as cleaned. Apply one heavy coat or, preferably, two coats for greater corrosion resistance.

E.05
LEX-BOND
Exterior Acrylic Latex Primer

Concrete, Masonry and Plaster
All surfaces must be cured, clean and free of any loose aggregate. Fresh concrete must be free of any form release compounds. Porous concrete should be coated with 955 Bloc-Fil.

Hardboard Siding
Spot prime nailheads and around joints prior to caulking.

Vinyl Siding
Wash clean with detergent solution. Rinse thoroughly with clean water and allow to dry. Do not paint with a color darker than the original siding to prevent warping.

Previously Painted Surfaces
Repair damaged areas. Caulk as needed. Sand rough areas smooth. Feather edges of peeled paint. Spot prime bare areas. This product may be applied directly to sound prepared repaint surfaces. Weathered masonry, stucco, cement-asbestos shingles which are still chalky and porous after washing should be treated with 149 Sealz-It surface conditioner.

APPLICATION

Mix thoroughly before use. Apply using a high quality nylon/polyester brush, appropriate nap roller, or airless spray equipment. For airless spray, use a .015-.021" size tip. Thinning is not required. If necessary, thin sparingly with water up to 1/2 pint per gallon. Paint additives are not recommended.

CAUTIONS

Avoid painting in direct sun or on hot surfaces. Do not paint in the later afternoon or any time when dew or rain can damage freshly applied paint. May be applied to damp but not dripping surfaces. Apply only when air, surface and material temperatures are above 40 degrees F prior to painting and for at least four hours thereafter. Do not apply at lower temperatures if snow, frost, or plunging temperatures may occur within hours of painting. Protect from freezing. Adequate health and safety precautions should be observed during all storage, handling, use and drying periods. For best results and safest usage, user should consult the current MSDS.

B.03
DURA-LEX
Ext. 100% Acrylic Semi-Gloss House Paint

DUCT DESCRIPTION

s our highest quality 100% acrylic latex rim paint. Formulated for rugged protec- rior surfaces such as wood and metal, nd vinyl siding, masonry and brick, com- rd, galvanized metal or any previously tained surface. Provides a mildew resis- . Resists fading, chalking, blistering, and peeling. Easy to apply. Soap and water venty year limited warranty.

90 Whites & Pastels (2oz/gal)
91 Midtones (4oz/gal)
92 Deeptones (8oz/gal)
94 Accents (12oz/gal)
52 Keeneland Green
61 Black
64 Autumn Brown
68 Bright Red

CHNICAL DATA (890)

Approx. 400 sq. ft./gal.
Coverage may vary depending on method of application and texture of surface.

e: temperature & humidity dependent
% R.H.:
ch: 1 hour
oat: 24 hours

t: None

ni-Gloss

oe: 100% Acrylic

lated) 213 grams/liter (1.8 lbs/gal)

lids: 35.4%

ids: 49.5%

Gallon: 10.7 lbs

Warm soapy water

on:
lic resin
ium Dioxide and extender pigments.
formulated with lead or mercury contain- naterials.

SURFACE PREPARATION

Remove all dirt, grease, chalk, and other surface contamination with mild cleaning solution - rinse with clean water. Scrape or sand to remove all rust and loose and flaking or peeling paint. Glossy surface should be sanded dull and cleaned dust free. Scrub protected areas such as under eaves, porch ceilings, and overhangs to remove invisible deposits that may prevent good adhesion.

For maximum protection and long term durability, apply two coats Dura-Lex over properly prepared surface.

Mildew and algae must be removed before painting by washing with a solution of 1 quart liquid bleach and 3 quarts warm water or by using a consumer brand of mildew remover. Rinse all surfaces with clean water then wait until dry before painting. Caution - Do not add detergent or ammonia to the cleaning solution. Wear protective clothing.

WARNING! If you scrape, sand, or remove old paint, you may release lead dust. LEAD IS TOXIC. EXPOSURE TO LEAD DUST CAN CAUSE SERIOUS ILLNESS, SUCH AS BRAIN DAMAGE, ESPECIALLY IN CHILDREN. PREGNANT WOMEN SHOULD ALSO AVOID EXPOSURE. Wear an NIOSH-approved respirator to control lead exposure. Clean up carefully with a HEPA vacuum and a wet mop. Before you start, find out how to protect yourself by contacting the National Lead Information Hotline at 1-800-424-LEAD or log on to www.epa.gov/lead.

Wood & Composition Board
Remove gummy sap with paint thinner. Sand lightly to fresh surface. Fill nail holes and imperfections with a wood filler and sand smooth. Spot prime nailheads, joints, knots, and around framing before applying latex caulk, then prime entire surface with 100 Lex-Bond or 76 Ext. Oil Primer. Bleeding woods such as redwood and cedar may require two coats of primer to block discoloration of the finish coat.

Aluminum & Galvanized
Wash aluminum and galvanized metal with paint thinner to remove oily deposits or allow to weather for several months. Prime with Lex-Bond or Rustnox II DTM. Scrub aluminum siding with detergent solution to remove chalk and dirt. Rinse with clean water. Prime with Lex-Bond.

B.03
DURA-LEX
Ext. 100% Acrylic Semi-Gloss House Paint

Ferrous Metal
Remove rust and mill scale using sandpaper, steel wool, or wire brush. Bare steel must be primed same day as cleaning with Rust-Nox Primer.

Concrete, Masonry and Plaster
All surfaces must be cured, clean and free of any loose aggregate. Fresh concrete must be free of any form release compounds. Prime with Lex-Bond Primer. Porous concrete should be coated with 955 Bloc-Fil.

Vinyl Siding
Wash clean with detergent solution. Rinse thoroughly with clean water and allow to dry. Do not paint with a color darker than the original siding to prevent warping.

Previously Painted Surfaces
Repair damaged areas. Caulk as needed. Sand rough areas smooth. Feather edges of peeled paint. Spot prime bare areas. This product may be applied directly to sound prepared repaint surfaces. Weathered masonry, stucco, cement-asbestos shingles which are still chalky and porous after washing should be treated with 149 Sealz-It surface conditioner.

APPLICATION

Mix thoroughly before use. Apply using a high quality nylon/polyester brush, appropriate nap roller, or airless spray equipment. For airless spray, use a .015-.021" size tip. Thinning is not required. If necessary, thin sparingly with water up to 1/2 pint per gallon.

CAUTIONS

Avoid painting in direct sun or on hot surfaces. Do not paint in the later afternoon or any time when dew or rain can damage freshly applied paint. May be applied to damp but not dripping surfaces. Apply only when air, surface and material temperatures are above 40 degrees F prior to painting and for at least four hours thereafter. Do not apply at lower temperatures if snow, frost or plunging temperatures may occur within hours of painting. Protect from freezing. Adequate health and safety precautions should be observed during all storage, handling, use and drying periods. For best results and safest usage, user should consult the current MSDS.

Town & Ranch PAINTS

E .04

AQUA-BOND

Int./Ext. 100% Acrylic Stain Kill Primer/Sealer

PRODUCT DESCRIPTION

Aqua-Bond is a high quality 100% Acrylic Stain-Bloc Primer ideal for use under oil-based or latex top coats. Suitable for wood, metal, masonry, and clean sound repaint surfaces. For interior and exterior use combining outstanding adhesion and high hide. Provides a mildew resistant coating. Glossy surfaces such as formica, masonite and ceramic tile can be primed without sanding. Can be used as a barrier coat to block tannins in woods such as redwood and cedar. Great hiding power helps to seal many stains like crayon, graffiti, greasy spots, water stains, and rust or smoke. Also provides an excellent base for wallcoverings over any surface. No sizing is required. Hides patterns and colors of existing wallcovering when used as a primer. Aqua-Bond is also suitable as a finish coat. Tintable. Low VOC.

Colors:

- White (4oz/gal)
- Can be tinted toward finish color.

TECHNICAL DATA

Coverage: Approx. 400 sq. ft./gal.
Coverage may vary depending on method of application and texture of surface.

Drying Time: temperature & humidity dependent @70 F & 50% R.H.:
Touch: 30-45 minutes
Recoat: 1 hour

Flash Point: None

Sheen: Satin

Vehicle Type: 100% Acrylic

VOC:(calculated) 104 grams/liter (0.9 lbs/gal)

Volume Solids: 35.8%

Weight Solids: 46.6%

Weight Per Gallon: 10.2 lbs

Clean-up: Warm soapy water

Composition:

- Acrylic resin
- Titanium Dioxide and extender pigments.
- Not formulated with lead or mercury containing materials.

SURFACE PREPARATION

Remove all dirt, grease, chalk, and other surface contamination with mild cleaning solution – rinse with clean water. Scrape or sand to remove all rust and loose and flaking or peeling paint. Scrub protected areas such as under eaves, porch ceilings, and overhangs to remove invisible deposits that may prevent good adhesion. When priming over stained areas, first attempt to remove as much of the stains as possible by washing, sanding, scraping, etc.

Mildew and algae must be removed before painting by washing with a solution of 1 quart liquid bleach and 3 quarts warm water or by using a consumer brand of mildew remover. Rinse all surfaces with clean water then wait until dry before painting. Caution - Do not add detergent or ammonia to the cleaning solution. Wear protective clothing.

WARNING! If you scrape, sand, or remove old paint, you may release lead dust. LEAD IS TOXIC. EXPOSURE TO LEAD DUST CAN CAUSE SERIOUS ILLNESS, SUCH AS BRAIN DAMAGE, ESPECIALLY IN CHILDREN. PREGNANT WOMEN SHOULD ALSO AVOID EXPOSURE. Wear an NIOSH-approved respirator to control lead exposure. Clean up carefully with a HEPA vacuum and a wet mop. Before you start, find out how to protect yourself by contacting the National Lead Information Hotline at 1-800-424-LEAD or log on to www.epa.gov/lead.

Wood & Composition Board
Remove gummy sap with paint thinner. Sand lightly to fresh surface. Fill nail holes and imperfections with a wood filler and sand smooth. Spot prime nailheads, joints, knots, and around framing before applying latex caulk. Bleeding woods such as redwood and cedar may require two coats of primer to block discoloration of the finish coat.

Aluminum & Galvanized
Wash aluminum and galvanized metal with paint thinner to remove oily deposits or allow to weather for several months. Scrub aluminum siding with detergent solution to remove chalk and dirt. Rinse with clean water.

Ferrous Metal
Rust and mill scale must be removed using sandpaper, steel wool or wire brush. Bare steel must be primed the same day as cleaned. Apply one heavy

E.04
AQUA-BOND
Int./Ext. 100% Acrylic Stain Kill Primer/Sealer

coat or, preferably, two coats for greater corrosion resistance.

Concrete, Masonry and Plaster
All surfaces must be cured, clean and free of any loose aggregate. Fresh concrete must be free of any form release compounds. Porous concrete should be coated with 955 Bloc-Fil.

Hardboard Siding
Spot prime nailheads and around joints prior to caulking.

Vinyl Siding
Wash clean with detergent solution. Rinse thoroughly with clean water and allow to dry. Do not paint with a color darker than the original siding to prevent warping.

Previously Painted Surfaces
Repair damaged areas. Caulk as needed. Sand rough areas smooth. Feather edges of peeled paint. Spot prime bare areas. This product may be applied directly to sound prepared repaint surfaces. Weathered masonry, stucco, cement-asbestos shingles which are still chalky and porous after washing should be treated with 149 Sealz-It surface conditioner.

APPLICATION

Mix thoroughly before use. Apply using a high quality nylon/polyester brush, appropriate nap roller, or airless spray equipment. For airless spray, use a .015-.021" size tip. Thinning is not required. If necessary, thin sparingly with water up to 1/2 pint per gallon. Paint additives are not recommended.

CAUTIONS

Avoid painting in direct sun or on hot surfaces. Do not paint in the later afternoon or any time when dew or rain can damage freshly applied paint. May be applied to damp but not dripping surfaces. Apply only when air, surface and material temperatures are above 40 degrees F prior to painting and for at least four hours thereafter. Do not apply at lower temperatures if snow, frost, or plunging temperatures may occur within hours of painting. Protect from freezing. Adequate health and safety precautions should be observed during all storage, handling, use and drying periods. For best results and safest usage, user should consult the current MSDS.

B. 03

DURA-L[redacted]EX

Ext. 100% Acrylic Semi-Gloss House P[redacted]aint

DESCRIPTION

[redacted]st quality 100% acrylic latex [redacted]Formulated for rugged protec-[redacted]es such as wood and metal, [redacted]ng, masonry and brick, com-[redacted]zed metal or any previously [redacted]ace. Provides a mildew resis-[redacted]ding, chalking, blistering, and [redacted]sy to apply. Soap and water [redacted]mited warranty.

[redacted] & Pastels (2oz/gal)
[redacted]s (4oz/gal)
[redacted]nes (8oz/gal)
[redacted]s (12oz/gal)
[redacted]nd Green

[redacted] Brown
[redacted]Red

[redacted]AL DATA (890)

[redacted]0 sq. ft./gal.
[redacted]may vary depending on application and texture of

[redacted]ture & humidity dependent

[redacted]rs

[redacted] Acrylic

[redacted] grams/liter (1.8 lbs/gal)

[redacted]

[redacted]).7 lbs

[redacted]y water

[redacted]e and extender pigments.
[redacted] with lead or mercury contain-

SURFACE PREPARATION

Remove all dirt, grease, chalk, and other su[redacted]rface contamination with mild cleaning solution - [redacted] rinse with clean water. Scrape or sand to remove a[redacted]l rust and loose and flaking or peeling paint. Gloss[redacted] sur-face should be sanded dull and cleaned dust [redacted] free. Scrub protected areas such as under eaves, [redacted]orch ceilings, and overhangs to remove invisible d[redacted]pos-its that may prevent good adhesion.

For maximum protection and long term dura[redacted] bility, apply two coats Dura-Lex over properly pre[redacted]ared surface.

Mildew and algae must be removed before pa[redacted]nting by washing with a solution of 1 quart liquid b[redacted]each and 3 quarts warm water or by using a cons[redacted] umer brand of mildew remover. Rinse all surfaces[redacted] with clean water then wait until dry before painting. Cau-tion - Do not add detergent or ammonia t[redacted] the cleaning solution. Wear protective clothing.

WARNING! If you scrape, sand, or remove old paint, yo[redacted]u may release lead dust. LEAD IS TOXIC. EXPOSURE TO [redacted] LEAD DUST CAN CAUSE SERIOUS ILLNESS, SUCH AS [redacted]RAIN DAMAGE, ESPECIALLY IN CHILDREN. PREG[redacted]NANT WOMEN SHOULD ALSO AVOID EXPOSURE. We[redacted]ar an NIOSH-approved respirator to control lead exposure. Cl[redacted]an up carefully with a HEPA vacuum and a wet mop. Befor[redacted]e you start, find out how to protect yourself by contacting th[redacted]e Na-tional Lead Information Hotline at 1-800-424-LEAD or lo[redacted] on to www.epa.gov/lead.

Wood & Composition Board

Remove gummy sap with paint thinner. Sand l[redacted]ghtly to fresh surface. Fill nail holes and imperfec[redacted]tions with a wood filler and sand smooth. Spot p[redacted]rime nailheads, joints, knots, and around framing b[redacted]efore applying latex caulk, then prime entire surface[redacted] with 100 Lex-Bond or 76 Ext. Oil Primer. Ble[redacted]ding woods such as redwood and cedar may re[redacted]quire two coats of primer to block discoloration of th[redacted]e fin-ish coat.

Aluminum & Galvanized

Wash aluminum and galvanized metal with paint thinner to remove oily deposits or allow to we[redacted]ather for several months. Prime with Lex-Bond or [redacted]Rust-nox II DTM. Scrub aluminum siding with dete[redacted]rgent solution to remove chalk and dirt. Rinse with [redacted]lean water. Prime with Lex-Bond.

B.03
DURA-LEX
Ext. 100% Acrylic Semi-Gloss House Paint

Ferrous Metal
Remove rust and mill scale using sandpaper, steel wool, or wire brush. Bare steel must be primed same day as cleaning with Rust-Nox Primer.

Concrete, Masonry and Plaster
All surfaces must be cured, clean and free of any loose aggregate. Fresh concrete must be free of any form release compounds. Prime with Lex-Bond Primer. Porous concrete should be coated with 955 Bloc-Fil.

Vinyl Siding
Wash clean with detergent solution. Rinse thoroughly with clean water and allow to dry. Do not paint with a color darker than the original siding to prevent warping.

Previously Painted Surfaces
Repair damaged areas. Caulk as needed. Sand rough areas smooth. Feather edges of peeled paint. Spot prime bare areas. This product may be applied directly to sound prepared repaint surfaces. Weathered masonry, stucco, cement-asbestos shingles which are still chalky and porous after washing should be treated with 149 Sealz-It surface conditioner.

APPLICATION

Mix thoroughly before use. Apply using a high quality nylon/polyester brush, appropriate nap roller, or airless spray equipment. For airless spray, use a .015-.021" size tip. Thinning is not required. If necessary, thin sparingly with water up to 1/2 pint per gallon.

CAUTIONS

Avoid painting in direct sun or on hot surfaces. Do not paint in the later afternoon or any time when dew or rain can damage freshly applied paint. May be applied to damp but not dripping surfaces. Apply only when air, surface and material temperatures are above 40 degrees F prior to painting and for at least four hours thereafter. Do not apply at lower temperatures if snow, frost or plunging temperatures may occur within hours of painting. Protect from freezing. Adequate health and safety precautions should be observed during all storage, handling, use and drying periods. For best results and safest usage, user should consult the current MSDS.

Endura-Shield® SERIES 73

PRODUCT PROFILE

GENERIC DESCRIPTION Aliphatic Acrylic Polyurethane

COMMON USAGE A coating highly resistant to abrasion, wet conditions, corrosive fumes, chemical contact and exterior weathering. High build quality combines with project specific primers for two-coat, labor saving systems. NOT FOR IMMERSION SERVICE.

COLORS Refer to Tnemec Color Guide. **Note:** Certain colors may require multiple coats depending on method of application and finish coat color. When feasible, the preceding coat should be in the same color family (blue, gray, etc.), but noticeably different.

FINISH Semi-gloss

SPECIAL QUALIFICATIONS Series 73 meets the accelerated weathering requirements of SSPC Paint Standard 36.

PERFORMANCE CRITERIA Extensive test data available. Contact your Tnemec representative for specific test results.

COATING SYSTEM

PRIMERS

Steel: Series 1, 20, 27, 37H, 66, L69, L69F, N69, N69F, 90-97, 91-H_2O, 94-H_2O, 135, L140, L140F, N140, N140F, 161, 394

Galvanized Steel & Non-Ferrous Metal: Series 27, 66, L69, L69F, N69, N69F, 161

Concrete: 54-660, 66, L69, L69F, N69, N69F, 161

CMU: 54-660

Note: Series 135 exterior exposed more than two months, or Series N69 or N140 exterior exposed more than three months must first be scarified or reprimed with themselves. Brush blasting with fine abrasive is the preferred method of scarification.

TOPCOATS Series 76, 700, 701, 1070, 1071, 1072, 1074, 1074U, 1075U, 1077, 1078, optional when extended weatherability is desired.

SURFACE PREPARATION

ALL SURFACES Must be clean, dry and free of oil, grease and other contaminants.

See primer product data sheet for surface preparation recommendation.

TECHNICAL DATA

VOLUME SOLIDS* 58.0 ± 2.0% (mixed)

RECOMMENDED DFT 2.0 to 5.0 mils (50 to 125 microns) per coat. **Note: Number of coats and thickness requirements will vary with substrate, application method and exposure. Contact your Tnemec representative.**

CURING TIME

Temperature	To Touch	To Handle	To Recoat
75°F (24°C)	1 hour	5-8 hours	12 hours

Curing time varies with surface temperature, air movement, humidity and film thickness.
Note: For faster curing and low-temperature applications, add No. 44-710 Urethane Accelerator; see separate product data sheet.

VOLATILE ORGANIC COMPOUNDS*

Unthinned	Thinned 10% (Max) (No. 39 Thinner)	Thinned 10% (Max) (No. 42 Thinner)	Thinned 10% (Max) (No. 56 Thinner)
2.70 lbs/gallon (325 grams/litre)	3.06 lbs/gallon (367 grams/litre)	3.11 lbs/gallon (372 grams/litre)	2.77 lbs/gallon (331 grams/litre)

HAPS 0.35 lbs/gal solids | 0.34 lbs/gal solids | 0.35 lbs/gal solids | 0.34 lbs/gal solids

THEORETICAL COVERAGE* 930 mil sq ft/gal (22.8 m^2/L at 25 microns).

NUMBER OF COMPONENTS Two: Part A and Part B

PACKAGING

	PART A (Partially filled)	PART B (Partially filled)	When Mixed
5 Gallon Kit	5 gallon pail	½ gallon can	5 gallons (18.9L)
1 Gallon Kit	1 gallon pail	1 quart can	1 gallon (3.79L)

NET WEIGHT PER GALLON* 12.13 ± 0.25 lbs (5.50 ± .11 kg)

STORAGE TEMPERATURE Minimum 20°F (-7°C) Maximum 110°F (43°C)

TEMPERATURE RESISTANCE (Dry) Continuous 250°F (121°C) Intermittent 275°F (135°C)

SHELF LIFE Part A: 24 months at recommended storage temperature.
Part B: 12 months at recommended storage temperature.

FLASH POINT - SETA Part A: 55°F (13°C) Part B: 112°F (43°C)

HEALTH & SAFETY Paint products contain chemical ingredients which are considered hazardous. Read container label warning and Material Safety Data Sheet for important health and safety information prior to the use of this product. **Keep out of the reach of children.**

SERIES 73 Endura-Shield®

APPLICATION

COVERAGE RATES*

	Conventional Build (Spray, Brush or Roller)			High-Build (Spray Only)		
	Dry Mils (Microns)	Wet Mils (Microns)	Sq Ft/Gal (m^2/Gal)	Dry Mils (Microns)	Wet Mils (Microns)	Sq Ft/Gal (m^2/Gal)
Suggested	2.5 (65)	4.5 (115)	372 (34.6)	4.0 (100)	7.0 (180)	235 (21.6)
Minimum	2.0 (50)	3.5 (90)	465 (43.2)	3.0 (75)	5.0 (125)	310 (28.8)
Maximum	3.0 (75)	5.0 (125)	310 (28.8)	5.0 (125)	8.5 (215)	186 (17.3)

(1) Can be spray applied at 3.0 to 5.0 mils (75 to 125 microns) DFT per coat when extra protection or the elimination of a coat is desired.
(2) Can be sprayed, brushed or rolled at 2.0 to 3.0 mils (50 to 75 microns) DFT per coat for use in systems requiring a conventional build topcoat.
Allow for overspray and surface irregularities. Wet film thickness is rounded to the nearest 0.5 mil or 5 microns. Application of coating below minimum or above maximum recommended dry film thicknesses may adversely affect coating performance.

MIXING — Stir contents of the container marked Part A, making sure no pigment remains on the bottom. Add the contents of the can marked Part B to Part A while under agitation. Continue agitation until the two components are thoroughly mixed. When used with 44-710 Urethane Accelerator, first blend 44-710 into Part A under agitation; continue as above. Do not use mixed material beyond pot life limits. **Caution:** Part B is moisture-sensitive and will react with atmospheric moisture. Keep unused material tightly closed at all times.

POT LIFE — 8 hours at 40°F (4°C) 4 hours at 77°F (25°C) 2 hours at 100°F (38°C)

THINNING — For air spray, thin up to 10% or ¾ pint (380 mL) per gallon by volume with No. 42 Thinner if temperatures are below 80°F (27°C), use No. 48 Thinner for temperatures above 80°F (27°C). Thin up to 5% or ¾ pint (190 mL) per gallon for airless spray. For brush or roller, thin 5% to 10% or ¼ to ¾ pint (190 to 380 mL) per gallon with No. 39 Thinner. Thinning is required for proper brush or roller application. **Caution:** Do not add thinner if more than thirty (30) minutes have elapsed after mixing. **Note:** A maximum of 10% of No. 56 Thinner may be used to comply with VOC regulations.

SURFACE TEMPERATURE — Minimum 35°F (2°C) Maximum 120°F (49°C)
The surface should be dry and at least 5°F (3°C) above the dew point.
Cure time necessary to resist direct contact with moisture at surface temperature:
40°F (4°C): 24 to 40 hours 50°F (10°C): 18 to 26 hours 60°F (16°C): 12 to 16 hours
70°F (21°C): 4 to 8 hours 90°F (32°C): 2 to 4 hours 100°F (38°C): 2 to 3 hours
If the coating is exposed to moisture before the preceding cure parameters are met, dull, flat or spotty-appearing areas may develop. Actual times will vary with air movement, film thickness and humidity.

APPLICATION EQUIPMENT

Air Spray

Gun	Fluid Tip	Air Cap	Air Hose ID	Mat'l Hose ID	Atomizing Pressure	Pot Pressure
DeVilbiss JGA	E	765 or 704	5/16" or 3/8" (7.9 or 9.5 mm)	3/8" or 1/2" (9.5 or 12.7 mm)	75-90 psi (5.2-6.2 bar)	10-20 psi (0.7-1.4 bar)

Low temperatures or longer hoses require higher pot pressure.

Airless Spray

Tip Orifice	Atomizing Pressure	Mat'l Hose ID	Manifold Filter
0.013"-0.017" (330-430 microns)	2700-3300 psi (186-228 bar)	1/4" or 3/8" (6.4 or 9.5 mm)	60 mesh (250 microns)

Use appropriate tip/atomizing pressure for equipment, applicator technique and weather conditions.
Roller: Use 1/4" to 3/8" (6.4 mm to 9.5 mm) synthetic woven nap roller cover. Do not use long nap roller covers. **Note:** Two coats are required to obtain dry film thickness above 3.0 mils (75 microns).
Brush: Recommended for small areas only. Use high quality natural or synthetic bristle brushes.
Note: Two or more coats may be required to obtain recommended film thicknesses.

CLEANUP — Flush and clean all equipment immediately after use with the recommended thinner or MEK.

*Values may vary with color.

INEMEC COMPANY INCORPORATED
PRINTED IN USA

Gilbane

Transmittal

Project [2239.2] - PCF - Hospital - Garage

View Date 2/18/2008

Gilbane
940 Elizabeth St
Lexington, KY 40506-0293
Phone: (859) 257-4536
Fax: (859) 323-1331

Transmittal No. 2239.2-00752

To	Mr. Doug Sherwood E. C. Matthews Co., Inc. 2265 Harrodsburg Road Lexington, KY 40504 USA Phone: (859) 278-3131 Fax: (859) 277-7903	**Date**	3/5/2007
		Items listed are being sent	
		☑ Enclosed	
		☐ Under Separate Cover	
		Via	Hand Delivered
		CSI Code	09900 - Painting
From	Mr. Ryan Maguire (Gilbane)		
Subject	Submittal Package 100-09900-001.0		

We are transmitting the following to you:

☐ Product Data ☐ Samples ☐ Shop Drawings ☐ O&M Manuals ☐ Plans
☐ Architectural Drawings ☐ Letters ☐ Specifications ☐ Prints ☐ Addenda
☐ Engineering Drawings ☐ Change Orders ☑ Submittal

Submittals

Pkg. No./Rev.	Item No./Rev.	Description	Copies	Reason	Action
100-09900-001.0	100-09900-001.0	Paint Product Data	2	Approved as Noted	

Linked Documents	Document Type	Document	Open	Description	Date
	Doc	2239.2-00899		100-09900-001.0	4/13/2007

Pkg. No./Rev.	Item No./Rev.	Description	Copies	Reason	Action
100-09900-001.0	100-09900-002.0	Paint Samples for Verification		Revise and Resubmit	Action Needed

Linked Documents	Document Type	Document	Open	Description	Date
	Doc	2239.2-00900		100-09900-001.0	4/13/2007

Remarks See GBBN comments on transmittal sheet.

	Mr. Ryan Maguire	3/5/2007
From	Printed Name	Date
Received By	Printed Name	Date

Linked Documents

Document Type	Document	Open	Description	Date
Sub. Pkg.	100-09900-001.0			

Distribution

Recipient	Company	Method	Date
Doug Sherwood	E. C. Matthews Co., Inc.	Message	3/5/2007

Gilbane

Transmittal

Project [2239.2] - PCF - Hospital - Garage

View Date 2/18/2008

Gilbane
940 Elizabeth St
Lexington, KY 40506-0293
Phone: (859) 257-4536
Fax: (859) 323-1331

Transmittal No. 2239.2-00752

To	Mr. Doug Sherwood E. C. Matthews Co., Inc. 2265 Harrodsburg Road Lexington, KY 40504 USA Phone: (859) 278-3131 Fax: (859) 277-7903	**Date**	3/5/2007
		Items listed are being sent	
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		Via	Hand Delivered
		CSI Code	09900 - Painting
From	Mr. Ryan Maguire (Gilbane)		
Subject	Submittal Package 100-09900-001.0		

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☐ Engineering Drawings ☐ Change Orders ☑ Submittal

Submittals

Pkg. No./Rev.	Item No./Rev.	Description	Copies	Reason	Action
100-09900-001.0	100-09900-001.0	Paint Product Data	2	Approved as Noted	

Linked Documents	Document Type	Document	Open	Description	Date
	Doc	2239.2-00899		100-09900-001.0	4/13/2007

Pkg. No./Rev.	Item No./Rev.	Description	Copies	Reason	Action
100-09900-001.0	100-09900-002.0	Paint Samples for Verification		Revise and Resubmit	Action Needed

Linked Documents	Document Type	Document	Open	Description	Date
	Doc	2239.2-00900		100-09900-001.0	4/13/2007

Remarks See GBBN comments on transmittal sheet.

	Mr. Ryan Maguire	3/5/2007
From	Printed Name	Date
Received By	Printed Name	Date

Linked Documents

Document Type	Document	Open	Description	Date
Sub. Pkg.	100-09900-001.0			

Distribution

Recipient	Company	Method	Date
Doug Sherwood	E. C. Matthews Co., Inc.	Message	3/5/2007

Gilbane

Transmittal

Project [2239.2] - PCF - Hospital - Garage

View Date 2/18/2008

Gilbane
940 Elizabeth St
Lexington, KY 40506-0293
Phone: (859) 257-4536
Fax: (859) 323-1331

Transmittal No. 2239.2-00752

To	Mr. Doug Sherwood E. C. Matthews Co., Inc. 2265 Harrodsburg Road Lexington, KY 40504 USA Phone: (859) 278-3131 Fax: (859) 277-7903	**Date**	3/5/2007
		Items listed are being sent	
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		Via	Hand Delivered
		CSI Code	09900 - Painting
From	Mr. Ryan Maguire (Gilbane)		
Subject	Submittal Package 100-09900-001.0		

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☐ Engineering Drawings ☐ Change Orders ☑ Submittal

Submittals

Pkg. No./Rev.	Item No./Rev.	Description	Copies	Reason	Action
100-09900-001.0	100-09900-001.0	Paint Product Data	2	Approved as Noted	

Linked Documents	Document Type	Document	Open	Description	Date
	Doc	2239.2-00899		100-09900-001.0	4/13/2007

Pkg. No./Rev.	Item No./Rev.	Description	Copies	Reason	Action
100-09900-001.0	100-09900-002.0	Paint Samples for Verification		Revise and Resubmit	Action Needed

Linked Documents	Document Type	Document	Open	Description	Date
	Doc	2239.2-00900		100-09900-001.0	4/13/2007

Remarks See GBBN comments on transmittal sheet.

	Mr. Ryan Maguire	3/5/2007
From	Printed Name	Date
Received By	Printed Name	Date

Linked Documents

Document Type	Document	Open	Description	Date
Sub. Pkg.	100-09900-001.0			

Distribution

Recipient	Company	Method	Date
Doug Sherwood	E. C. Matthews Co., Inc.	Message	3/5/2007

Gilbane

Transmittal

Project [2239.2] - PCF - Hospital - Garage

View Date 2/18/2008

Gilbane
940 Elizabeth St
Lexington, KY 40506-0293
Phone: (859) 257-4536
Fax: (859) 323-1331

Transmittal No. 2239.2-00752

To	Mr. Doug Sherwood E. C. Matthews Co., Inc. 2265 Harrodsburg Road Lexington, KY 40504 USA Phone: (859) 278-3131 Fax: (859) 277-7903	**Date**	3/5/2007
		Items listed are being sent	
		☑ Enclosed	
		☐ Under Separate Cover	
		Via	Hand Delivered
		CSI Code	09900 - Painting
From	Mr. Ryan Maguire (Gilbane)		
Subject	Submittal Package 100-09900-001.0		

We are transmitting the following to you:

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☐ Engineering Drawings ☐ Change Orders ☑ Submittal

Submittals

Pkg. No./Rev.	Item No./Rev.	Description	Copies	Reason	Action
100-09900-001.0	100-09900-001.0	Paint Product Data	2	Approved as Noted	

Linked Documents	Document Type	Document	Open	Description	Date
	Doc	2239.2-00899		100-09900-001.0	4/13/2007

Pkg. No./Rev.	Item No./Rev.	Description	Copies	Reason	Action
100-09900-001.0	100-09900-002.0	Paint Samples for Verification		Revise and Resubmit	Action Needed

Linked Documents	Document Type	Document	Open	Description	Date
	Doc	2239.2-00900		100-09900-001.0	4/13/2007

Remarks See GBBN comments on transmittal sheet.

From	Mr. Ryan Maguire Printed Name	3/5/2007 Date
Received By	Printed Name	Date

Linked Documents

Document Type	Document	Open	Description	Date
Sub. Pkg.	100-09900-001.0			

Distribution

Recipient	Company	Method	Date
Doug Sherwood	E. C. Matthews Co., Inc.	Message	3/5/2007

Gilbane

Transmittal

Project [2239.2] - PCF - Hospital - Garage **View Date** 2/18/2008

Gilbane
940 Elizabeth St
Lexington, KY 40506-0293
Phone: (859) 257-4536
Fax: (859) 323-1331

Transmittal No. 2239.2-00857

To	Mr. Doug Sherwood E. C. Matthews Co., Inc. 2265 Harrodsburg Road Lexington, KY 40504 USA Phone: (859) 278-3131 Fax: (859) 277-7903	**Date**	4/25/2007
		Items listed are being sent	
		☑ Enclosed	
		☐ Under Separate Cover	
		Via	Hand Delivered
		CSI Code	09900 - Painting
From	Mr. Ryan Maguire (Gilbane)		
Subject	Submittal Package 100-09900-002.0		

We are transmitting the following to you:

☐ Product Data ☐ Samples ☐ Shop Drawings ☐ O&M Manuals ☐ Plans
☐ Architectural Drawings ☐ Letters ☐ Specifications ☐ Prints ☐ Addenda
☐ Engineering Drawings ☐ Change Orders ☑ Submittal

Submittals

Pkg. No./Rev.	Item No./Rev.	Description	Copies	Reason	Action
100-09900-002.0	100-09900-007.0	Paint Color Samples	1	Approved as Noted	

Remarks See GBBN comments on transmittal sheet.

	Mr. Ryan Maguire	4/25/2007
From	Printed Name	Date
Received By	Printed Name	Date

Linked Documents

Document Type	Document	Open	Description	Date
Sub. Pkg.	100-09900-002.0			

Distribution

Recipient	Company	Method	Date
Doug Sherwood	E. C. Matthews Co., Inc.	Message	4/25/2007

Gilbane

Transmittal

Project [2239.2] - PCF - Hospital - Garage

View Date 2/18/2008

Gilbane
940 Elizabeth St
Lexington, KY 40506-0293
Phone: (859) 257-4536
Fax: (859) 323-1331

Transmittal No. 2239.2-00933

To	Mr. Doug Sherwood E. C. Matthews Co., Inc. 2265 Harrodsburg Road Lexington, KY 40504 USA Phone: (859) 278-3131 Fax: (859) 277-7903
From	Mr. Brian Hoerr (Gilbane)
Subject	Submittal Package 100-09900-002.1.0

Date 6/13/2007

Items listed are being sent

☑ Enclosed

☐ Under Separate Cover

Via Hand Delivered

CSI Code 09900 - Painting

We are transmitting the following to you:

☐ Product Data ☐ Samples ☐ Shop Drawings ☐ O&M Manuals ☐ Plans
☐ Architectural Drawings ☐ Letters ☐ Specifications ☐ Prints ☐ Addenda
☐ Engineering Drawings ☐ Change Orders ☑ Submittal

Submittals

Pkg. No./Rev.	Item No./Rev.	Description	Copies	Reason	Action
100-09900-002.1.0	100-09900-007.1.0	Paint Color Samples, (PT 1,4 , Mineral Silicate)	1	Approved as Submitted	

Remarks

	Mr. Brian Hoerr	6/13/2007
From	Printed Name	Date
Received By	Printed Name	Date

Linked Documents

Document Type	Document	Open	Description	Date
Sub. Pkg.	100-09900-002.1.0			

Distribution

Recipient	Company	Method	Date
Doug Sherwood	E. C. Matthews Co., Inc.	Message	6/13/2007

Gilbane

Transmittal

Project [2239.2] - PCF - Hospital - Garage **View Date** 2/18/2008

Gilbane
940 Elizabeth St
Lexington, KY 40506-0293
Phone: (859) 257-4536
Fax: (859) 323-1331

Transmittal No. 2239.2-01160

To	Mr. Doug Sherwood E. C. Matthews Co., Inc. 2265 Harrodsburg Road Lexington, KY 40504 USA Phone: (859) 278-3131 Fax: (859) 277-7903	**Date**	1/28/2008
		Items listed are being sent	
		☑ Enclosed	
		☐ Under Separate Cover	
		CSI Code	09900 - Painting
From	Mr. Brian Hoerr (Gilbane)		
Subject	Submittal Package 100-09900-003.0		

We are transmitting the following to you:

☐ Product Data ☐ Samples ☐ Shop Drawings ☐ O&M Manuals ☐ Plans
☐ Architectural Drawings ☐ Letters ☐ Specifications ☐ Prints ☐ Addenda
☐ Engineering Drawings ☐ Change Orders ☑ Submittal

Submittals

Pkg. No./Rev.	Item No./Rev.	Description	Copies	Reason	Action	Due
100-09900-003.0	100-09900-008.0	Bone White Color Sample (Mesh/Channels)	1	Approved as Noted		

Linked Documents	Document Type	Document	Open	Description	Date
	Doc	2239.2-01946		100-09900-008 Garage submittal Paint sample	1/17/2008

Remarks GBBN has retained the sample.

Please paint a sample on the mesh mock up.

From	Printed Name	Date
	Mr. Brian Hoerr	1/28/2008
Received By	Printed Name	Date

Linked Documents

Document Type	Document	Open	Description	Date
Sub. Pkg.	100-09900-003.0			

Distribution

Recipient	Company	Method	Date
Doug Sherwood	E. C. Matthews Co., Inc.	Message	1/28/2008

GILBANE
University of Kentucky
Patient Care Facility
Gilbane Project No. 18-3966

REVIEWED

☐ 010-Huguelet ☒ 020-Garage
☐ 030-Infrastructure ☐ 040-PCF Foundation
☐ 050-PCF Core/Shell ☐ 060-TowerUp Fit

Bid Package No. 100
Submittal No. 100-09900-002.1
Spec. Sect/Para. _____
Reviewed By BH
Date 5/29/07

This review does not constitute nor does it assume design responsibility nor does it relieve the trade contractor's supplier from complying with the contract requirements, coordinating their work with other trade contractors and verifying field dimensions.

ITEM # 100-09900-007.1

COLOR
PAINT SAMPLES

THIS REVIEW BY GBBN ARCHITECTS, INC., IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND IS NOT AN APPROVAL OF THIS DRAWING OR SET OF DRAWINGS. THE COMMENTS MADE DO NDT RELIEVE CONTRACTOR FRDM COMPLIANCE WITH THE PROJECT DRAWINGS, SPECIFICATIONS AND OTHER CONTRACT DOCUMENTS. CONTRACTOR IS SOLELY RESPONSIBLE FOR: ALL DIMENSIONS AND QUANTITIES, ALL FABRICATION, DELIVERY AND ERECTION; ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES; ALL COORDINATION WITH ALL OTHER CONTRACTORS, SUPPLIERS AND OTHERS; PERFORMING ALL WORK IN A SAFE AND PROPER MANNER.

NO EXCEPTIONS TAKEN ☒
FURNISH AS CORRECTED ☐
REVISE AND RESUBMIT ☐
NO REVIEW - INCOMPLETE ☐
SUBMIT SPECIFIED ITEMS ☐
REJECTED ☐

DATE 6/13/07 BY BK

GBBN ARCHITECTS, INC.
ARCHITECTURE, INTERIORS, PLANNING, ENGINEERING
332 EAST 8TH STREET, CINCINNATI, OHIO 45202-2217 (513) 241-8700
325 WEST MAIN STREET, LEXINGTON, KENTUCKY 40507 (859) 381-8787

GBBN KEPT THE SAMPLE

EVERKOTE 300 # 1-1306P
5.14, 158

50-690 PT 4 8751W

THIS REVIEW BY GBBN ARCHITECTS, INC. IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND IS NOT AN APPROVAL OF THIS DRAWING OR SET OF DRAWINGS. THE COMMENTS MADE DO NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH THE PROJECT DRAWINGS, SPECIFICATIONS AND OTHER CONTRACT DOCUMENTS. CONTRACTOR IS SOLELY RESPONSIBLE FOR: ALL DIMENSIONS AND QUANTITIES; ALL FABRICATION, DELIVERY AND ERECTION; ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES; ALL COORDINATION WITH ALL OTHER CONTRACTORS, SUPPLIERS AND OTHERS; PERFORMING ALL WORK IN A SAFE AND PROPER MANNER.

NO EXCEPTIONS TAKEN ☒ X

FURNISH AS CORRECTED ☐

REVISE AND RESUBMIT ☐

NO REVIEW - INCOMPLETE ☐

SUBMIT SPECIFIED ITEMS ☐

REJECTED ☐

DATE 6-8-07 BY JR

GBBN ARCHITECTS, INC.

ARCHITECTURE, INTERIORS, PLANNING, ENGINEERING

☐ 332 EAST 6TH STREET, CINCINNATI, OHIO 45202-2217 (513) 241-6700

☐ 325 WEST MAIN STREET, LEXINGTON, KENTUCKY 40507 (859) 381-6787

☐ BEIJING XI CHENG DISTRICT TONG LI GE ROAD NO 65, BEIJING, CHINA 100031 8610866366730

50-691 PT 1 8753M

THIS REVIEW BY GBBN ARCHITECTS, INC. IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND IS NOT AN APPROVAL OF THIS DRAWING OR SET OF DRAWINGS. THE COMMENTS MADE DO NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH THE PROJECT DRAWINGS, SPECIFICATIONS AND OTHER CONTRACT DOCUMENTS. CONTRACTOR IS SOLELY RESPONSIBLE FOR: ALL DIMENSIONS AND QUANTITIES; ALL FABRICATION, DELIVERY AND ERECTION; ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES; ALL COORDINATION WITH ALL OTHER CONTRACTORS, SUPPLIERS AND OTHERS; PERFORMING ALL WORK IN A SAFE AND PROPER MANNER.

NO EXCEPTIONS TAKEN ☐ X

FURNISH AS CORRECTED ☐

REVISE AND RESUBMIT ☐

NO REVIEW - INCOMPLETE ☐

SUBMIT SPECIFIED ITEMS ☐

REJECTED ☐

DATE 6-8-07 BY BK

GBBN ARCHITECTS, INC.

ARCHITECTURE, INTERIORS, PLANNING, ENGINEERING

☐ 332 EAST 8TH STREET, CINCINNATI, OHIO 45202-2217 (513) 241-8700

☐ 325 WEST MAIN STREET, LEXINGTON, KENTUCKY 40507 (859) 381-8787

☐ BEIJING XI CHENG DISTRICT TONG LI GE ROAD NO 85, BEIJING, CHINA 100031 86108336730

Gilbane

Transmittal

Project [2239.2] - PCF - Hospital - Garage **View Date** 10/22/2007

Gilbane
940 Elizabeth St
Lexington, KY 40506-0293
Phone: (859) 257-4536
Fax: (859) 323-1331

Transmittal No. 2239.2-01104

To	Mr. Doug Sherwood E. C. Matthews Co., Inc. 2265 Harrodsburg Road Lexington, KY 40504 USA Phone: (859) 278-3131 Fax: (859) 277-7903	**Date**	10/22/2007
		Items listed are being sent	
		☑ Enclosed	
		☐ Under Separate Cover	
		Via	E-Mail
		CSI Code	10400 - Signage
From	Mr. Brian Hoerr (Gilbane)		
Subject	Submittal Package 100-10400-003.0		

We are transmitting the following to you:

☐ Product Data ☐ Samples ☐ Shop Drawings ☐ O&M Manuals ☐ Plans
☐ Architectural Drawings ☐ Letters ☐ Specifications ☐ Prints ☐ Addenda
☐ Engineering Drawings ☐ Change Orders ☑ Submittal

Submittals

Pkg. No./Rev.	Item No./Rev.	Description	Copies	Reason	Action
100-10400-003.0	100-10400-005.0	Signage Engineering Data, Revised Shop Drawings	2	Approved as Noted	

Remarks Advanced copy was sent to ECM on 10/19/07.

	Mr. Brian Hoerr	10/22/2007
From	Printed Name	Date
Received By	Printed Name	Date

Linked Documents

Document Type	Document	Open	Description	Date
Sub. Pkg.	100-10400-003.0			

Distribution

Recipient	Company	Method	Date
Doug Sherwood	E. C. Matthews Co., Inc.	Message	10/22/2007

GBBN architects

Transmittal

Project [2239.2] - PCF - Hospital - Garage **View Date** 10/18/2007

GBBN Architects, Inc.
332 East Eighth St
Cincinnati, OH 45202-2217
Phone: (513) 241-8700
Fax: (513) 241-8873

Transmittal No. 2239.2-01092

To	Mr. Brian Hoerr Gilbane 940 Elizabeth St Lexington, KY 40506-0293 USA Phone: (859) 257-4536 Fax: (859) 323-1331
From	Mr. Bryan Korb (GBBN Architects, Inc.)
Subject	Submittal Package 100-10400-003.0

Date 10/18/2007
Items listed are being sent
☐ Enclosed
☐ Under Separate Cover
CSI Code 10400 - Signage

RECEIVED
OCT 18 2007
GILBANE #3966

We are transmitting the following to you:

☐ Product Data ☐ Samples ☐ Shop Drawings ☐ O&M Manuals ☐ Plans
☐ Architectural Drawings ☐ Letters ☐ Specifications ☐ Prints ☐ Addenda
☐ Engineering Drawings ☐ Change Orders ☑ Submittal

Submittals

Pkg. No./Rev.	Item No./Rev.	Description	Copies	Reason	Action
100-10400-003.0	100-10400-005.0	Signage Engineering Data, Revised Shop Drawings	3	Approved as Noted	

Remarks

Received By Printed Name Date

Linked Documents

Document Type	Document	Open	Description	Date
Sub. Pkg.	100-10400-003.0			

Distribution

Recipient	Company	Method	Date
Brian Hoerr	Gilbane	Message	10/18/2007

Memorandum

THP Limited, Inc. 100 E. Eighth St. Cincinnati, OH 45202 ph 513-241-3222 fx 241-2981 thpltd.com

To: Bryan Korb and David Proffitt - GBBN

From: Julie Cromwell

Subject: 100-10400-003.0

Date: October 5, 2007

THP has received for record the following signage shop drawings and calculations prepared by Sign Solutions, Inc.:

- ECP 19'-0" x 4'-0 5/8" double face "Park" sign flag mounted from parking garage column
  - Comment: THP has reviewed the attachment location to the garage column A-9 at elevations 991'-0" and 1000'-4". Recommend field verifying location of column reinforcement. Do not drill through or damage existing column reinforcement, both column vertical bars and horizontal ties.
- PYL 10'-3" x 4'-0 5/8" direct bury twin pole directional sign
- VD1 5'-3" X 3'-0 5/8" direct bury twin pole directional sign
- VD2 4'-3" x 3'-0 5/8" direct bury twin pole directional sign
- Level Identification Signage
- Mini elevator directory signage
- Rate description signage

If you have any questions, do not hesitate to call.

Thanks,
Julie

GILBANE
University of Kentucky
Patient Care Facility
Gilbane Project No. 18-3966

REVIEWED

☐ 010-Huguelet ☒ 020-Garage
☐ 030-Infrastructure ☐ 040-PCF Foundation
☐ 050-PCF Core/Shell ☐ 060-TowerUp Fit

Bld Package No. 100
Submittal No. 100-10400-003
Spec. Sect/Para. _____
Reviewed By BF
Date 10/11/07

This review does not constitute nor does it assume design responsibility nor does it relieve the trade contractor's supplier from complying with the contract requirements, coordinating their work with other trade contractors and verifying field dimensions.

REVIEW COMMENTS MADE SENT TO GILBANE ON 10/10/07

GBBN

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NO EXCEPTIONS TAKEN ☐
FURNISH AS CORRECTED ☐
REVISE AND RESUBMIT ☐
NO REVIEW - INCOMPLETE ☐
SUBMIT SPECIFIED ITEMS ☐
REJECTED ☐

DATE 10/10/07 BY _____

GBBN ARCHITECTS, INC.
ARCHITECTURE, INTERIORS, PLANNING, ENGINEERING
332 EAST 8TH STREET, CINCINNATI, OHIO 45202-2217 (513) 241-8700
325 WEST MAIN STREET, LEXINGTON, KENTUCKY 40507 (859) 381-8787

File : SgnSolutions004d.mcd

Site : University of Kentucky
PCF Parking Garage
110 Transcript Avenue
Lexington, KY 40508

Sign Type : ECP 19'-0" x 4'-0 5/8" double face 'PARK' sign flag mounted 2'-6" from parking garage wall above entrance/exit at 9/A414.
Drawing No. 070962 rev. A

Design wind load based on the Kentucky Building Code (2006 IBC) using Exposure C and 90 mph winds.

Design Wind Speed : (mph.) $V := 90.0$

Importance Factor : $I := 1.00$ Based on Category II, Non-Hurricane Prone Regions with V = 85-100 mph

Velocity Pressure Coefficient at a Height of less than 30', Exposure C : $Kz := 0.85$

Topographic Factor : $Kzt := 1.00$ Based on Exposure C, Cases 1 or 2

Wind Directionality Factor : $Kd := 0.95$ Based on Solid Signs in Table 6-6

Velocity Pressure : (PSF) $qz := 0.00256 \cdot Kz \cdot Kzt \cdot Kd \cdot V^2 \cdot I$ $qz = 16.744$

Force Coefficient : $Cf := 1.5$ Based on Square (Wind Normal to Face) in Table 6-10

Gust Effect Factor : $G := 0.85$ Taken from 6.5.8.1 for Rigid Structures

Design Pressure : (PSF) $F := qz \cdot Cf \cdot G$ $F = 21.349$ Use : $WL := 21.5$

Design Snow Load : (PSF) $SL := 15.0$ Based on Ground Snow Loads.

Reference : Manual of Steel Construction, AISC 9th Edition.

Tube : ASTM A-500 Gr. B $Fy = 46.0$ ksi. ; $Fb = 30.36$ ksi. ; $Fv = 18.40$ ksi.

Plate : ASTM A-36 $Fy = 36.0$ ksi. ; $Fb = 23.76$ ksi.

Mounting Bolts : ASTM A-307 $Fu = 60.0$ ksi. ; $Ft = 20.00$ ksi. ; $Fv := 10.0$ ksi.
(Threads included in shear plane.)

All Thread Rod : ASTM A-36 $Fu = 58.0$ ksi. ; $Ft = 19.14$ ksi. ; $Fv := 9.90$ ksi.
(Threads included in shear plane.)

Reference : 2005 Hilti North American Product Technical Guide

HIT RE 500 Injection Adhesive Anchor : 4.2.4.3 Technical Data

Design Loads for Internal Sign Poles :

Wind Load :

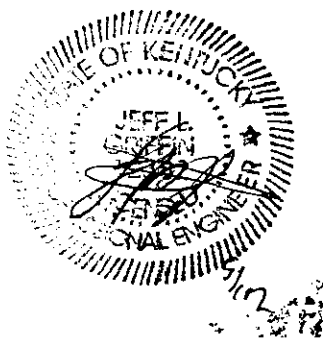
Sign : $Sgn := (4.05 \cdot 19.0 \cdot WL) \cdot \left(\frac{4.05}{2}\right)$ $Sgn = 3350.211$ ft.lbs.

Summation : (ft.lbs.) $MtWL := Sgn$ $MtWL = 3350.211$

Dead Load :

Sign : $Sgn := (4.05 \cdot 19.0 \cdot 8.5) \cdot \left(\frac{4.05}{2}\right)$ $Sgn = 1324.502$ ft.lbs.

Summation : (ft.lbs.) $MtDL := Sgn$ $MtDL = 1324.502$



Snow Load :

Sign : $Sgn := \left[4.05 \cdot \left(\frac{12.125}{12}\right) \cdot SL\right] \cdot \left(\frac{4.05}{2}\right)$ $Sgn = 124.3$ ft.lbs.

Summation : (ft.lbs.) $MtSL := Sgn$ $MtSL = 124.3$

Combined Moment :

Summation : (ft.lbs.) $Mt_{Comb} := \sqrt{(MtDL + MtWL)^2 + (MtSL + MtWL)^2}$

$Mt_{Comb} = 5824.531$

Combined Shear :

Summation : (ft.lbs.) $Shr_{Comb} := (4.05 \cdot 19.0 \cdot WL) + (4.05 \cdot 19.0 \cdot 8.5) + \left[4.05 \cdot \left(\frac{12.125}{12}\right) \cdot SL\right]$

$Shr_{Comb} = 2369.883$

Design of Internal Sign Poles :

Moment per Support : (ft.lbs.) $MtSprt := \frac{Mt_{Comb}}{2}$ $MtSprt = 2912.266$

Section Modulus of Tube : ($in.^3$) TS 4" x 4" x 3/16" wall - $TubeSM := 3.30$

Bending Stress : (psi.) $f_b := \frac{MtSprt \cdot 12}{TubeSM}$ $f_b = 10590.057$

Unity Check - Bending : $UCBnd := \frac{f_b}{30360}$ $UCBnd = 0.349$ < 1.00 OK

Shear per Support : (ft.lbs.) $ShrSprt := \frac{Shr_{Comb}}{2}$ $ShrSprt = 1184.941$

Area of Tube : ($in.^2$) TS 4" x 4" x 3/16" wall - $TubeArea := 2.77$

Shear Stress : (psi.) $f_v := \frac{ShrSprt}{TubeArea}$ $f_v = 427.777$

Unity Check - Shear : $UCShr := \frac{f_v}{18400}$ $UCShr = 0.023$ < 1.00 OK

Unity Check - Combined : $UC_{Comb} := UCShr + UCBnd$ $UC_{Comb} = 0.372$ < 1.00 OK

Design of Sign Mounting Bolts :

Mounting Bolt Diameter : (in.) $MntBltDia := 0.625$

Number of Mounting Bolts in Tension per Sign : $NoTen := 4$

Front to Back Distance Between Mounting Bolts : (in.) $LvrArm := 7.0$

Tension Load per Mounting Bolt : (lbs.) $TenMntBlt := \frac{Mt_{Comb} \cdot 12}{NoTen \cdot LvrArm}$ $TenMntBlt = 2496.23$

Stress Area : (in.^{2}) $MntBltArea := \frac{\pi \cdot MntBltDia^2}{4}$ MntBltArea = 0.307
(Based on nominal diameter per AISC 4-3)

Allowable Tension : (lbs.) AllwTen := 20000·MntBltArea AllwTen = 6136
(Based on ASTM A-307)

Unity Check - Mounting Bolt Tension : $UCMntTen := \frac{TenMntBlt}{AllwTen}$ UCMntTen = 0.407 < 1.00 OK

Number of Mounting Bolts in Shear per Sign : NoShr := 8

Shear Load per Mounting Bolt : (lbs.) $ShrMntBlt := \frac{Shr_{Comb}}{NoShr}$ ShrMntBlt = 296.24

Allowable Shear : (lbs.) AllwShr := 9900·MntBltArea AllwShr = 3037
(Based on ASTM A-307)

Unity Check - Mounting Bolt Shear : $UCMntShr := \frac{ShrMntBlt}{AllwShr}$ UCMntShr = 0.098 < 1.00 OK

Unity Check - Combined : $UC_{Comb} := UCMntTen + UCMntShr$ $UC_{Comb} = 0.504$ < 1.00 OK

Design of Sign Mounting Plates :

Plate Thickness : (in.) PltThk := 0.50 Plate Width : (in.) PLWdth := 10.0

Side to Side Distance Between Outer Mounting Bolts : (in.) BltSprd := 7.0

Plate Specimen : (in.) $PLS := \frac{\sqrt{(LvrArm^2 + BltSprd^2)} - \sqrt{(4.0^2 + 4.0^2)}}{2}$ PLS = 2.121

Minimum Thickness Required : (in.) $ReqdThk := \sqrt{\left[\frac{TenMntBlt \cdot PLS \cdot 6}{(PLWdth \cdot 23760)}\right]}$ ReqdThk = 0.366

Unity Check : Sign Mounting Plate Thickness $UCSgnPltThk := \frac{ReqdThk}{PltThk}$ UCSgnPltThk = 0.731 < 1.00 OK

Design Loads at Building for Cantilever Sign :

Wind Load :

Sign : $Sgn := (4.05 \cdot 19.0 \cdot WL) \cdot \left[\left(\frac{4.05}{2}\right) + 2.5\right]$ Sgn = 7486.273 ft.lbs.

Supports : $Sprts := \left[2 \cdot 2.5 \cdot \left(\frac{4}{12}\right) \cdot WL\right] \cdot \left(\frac{2.5}{2}\right)$ Sprts = 44.792 ft.lbs.

Summation : (ft.lbs.) MtWL := Sgn + Sprts MtWL = 7531.065

Dead Load :

Sign : $Sgn := (4.05 \cdot 19.0 \cdot 8.5) \cdot \left[\left(\frac{4.05}{2}\right) + 2.5\right]$ Sgn = 2959.689 ft.lbs.

Supports : $Sprts := (2 \cdot 2.5 \cdot 12.21) \cdot \left(\frac{2.5}{2}\right)$ Sprts = 76.313 ft.lbs.

Summation : (ft.lbs.) MtDL := Sgn + Sprts MtDL = 3036.002

Snow Load :

Sign : $Sgn := \left[4.05 \cdot \left(\frac{12.125}{12}\right) \cdot SL\right] \cdot \left[\left(\frac{4.05}{2}\right) + 2.5\right]$ Sgn = 277.757 ft.lbs.

Supports : $Sprts := \left[2 \cdot 2.5 \cdot \left(\frac{4}{12}\right) \cdot SL\right] \cdot \left(\frac{2.5}{2}\right)$ Sprts = 31.25 ft.lbs.

Summation : (ft.lbs.) MtSL := Sgn + Sprts MtSL = 309.007

Combined Moment :

Summation : (ft.lbs.) $Mt_{Comb} := \sqrt{(MtDL + MtWL)^2 + (MtSL + MtWL)^2}$

$Mt_{Comb} = 13157.873$

Combined Shear :

Summation : (ft.lbs.)

$Shr_{Comb} := (4.05 \cdot 19.0 \cdot WL) + \left[2 \cdot 2.5 \cdot \left(\frac{4}{12}\right) \cdot WL\right] + (4.05 \cdot 19.0 \cdot 8.5) + (2 \cdot 2.5 \cdot 12.21) + \left[4.05 \cdot \left(\frac{12.125}{12}\right) \cdot SL\right]$

$Shr_{Comb} = 2466.766$

Design of Sign Pole Stupports at Buiding :

Moment per Support : (ft.lbs.) $MtSprt := \frac{Mt_{Comb}}{2}$ MtSprt = 6578.937

Section Modulus of Tube : ($in.^3$) TS 4" x 4" x 1/4" wall - TubeSM := 4.11

Bending Stress : (psi.) $f_b := \frac{MtSprt \cdot 12}{TubeSM}$ $f_b = 19208.574$

Unity Check - Bending : $UCBnd := \frac{f_b}{30360}$ UCBnd = 0.633 < 1.00 OK

Shear per Support : (ft.lbs.) $ShrSprt := \frac{Shr_{Comb}}{2}$ ShrSprt = 1233.383

Area of Tube : ($in.^2$) TS 4" x 4" x 1/4" wall - TubeArea := 3.59

Shear Stress : (psi.) $f_v := \frac{ShrSprt}{TubeArea}$ $f_v = 343.561$

Unity Check - Shear : $UCShr := \frac{f_v}{18400}$ UCShr = 0.019 < 1.00 OK

Unity Check - Combined : $UC_{Comb} := UCShr + UCBnd$ $UC_{Comb} = 0.651$ < 1.00 OK

Design of All Thread Rods :

Threaded Rod Diameter : (in.) ThrdRodDia := 0.75

Number of Threaded Rods in Tension per Sign : NoTen := 4

Front to Back Distance Between Threaded Rods : (in.) LvrArm := 7.0

Tension Load per Threaded Rod : (lbs.) $TenThrdRod := \frac{Mt_{Comb} \cdot 12}{NoTen \cdot LvrArm}$ TenThrdRod = 5639.09

Stress Area : (in.^{2}) $ThrdRodArea := \frac{\pi \cdot ThrdRodDia^2}{4}$ ThrdRodArea = 0.442
(Based on nominal diameter per AISC 4-3)

Allowable Tension : (lbs.) AllwTen := 19140·ThrdRodArea AllwTen = 8456
(Based on ASTM A-36)

Unity Check : $UCTRodTen := \frac{TenThrdRod}{AllwTen}$ UCTRodTen = 0.667 < 1.00 OK
Threaded Rod Tension

Number of Threaded Rods in Shear per Sign : NoShr := 8

Shear Area : (in.^{2}) $ShrArea := \frac{\pi \cdot 0.6850^2}{4}$ ShrArea = 0.369
(Based on basic pitch diameter.)

Shear Stress per Threaded Rod : (psi.) $ShrThrdRod := \frac{Shr_{Comb}}{NoShr \cdot ShrArea}$ ShrThrdRod = 836.69

Unity Check : $UCTRodShr := \frac{ShrThrdRod}{9900}$ UCTRodShr = 0.085 < 1.00 OK
Threaded Rod Shear

Unity Check : $UC_{Comb} := UCTRodTen + UCTRodShr$ $UC_{Comb} = 0.751$ < 1.00 OK
Combined

Check of Hilti Adhesive for Mounting Bolts :

Based on technical data from 4.2.4.1 for the Hilti HIT RE 500 Injection Adhesive Anchor

Diameter of Threaded Rod : 3/4"

Embedment Depth : 6-3/4"

Compressive Strength of Concrete : 4,000 psi.

Allowable Tension Load of Adhesive : (lbs.) AllwTenAdhsv := 9985

Allowable Shear Load of Adhesive : (lbs.) AllwShrAdhsv := 17840

Load Adjustment Factor : LoadAdjstmntFactor := 0.84

Based on 3/4" Dia. Rods on 7" Centers with 6-3/4" Embedment Depth :

Unity Check - Hilti Adhesive Anchor Tension :

$$UCHiltiTen := \frac{TenThrdRod}{AllwTenAdhsv \cdot LoadAdjstmntFactor}$$ UCHiltiTen = 0.672 < 1.00 OK

Unity Check - Hilti Adhesive Anchor Shear

$$UCHiltiShr := \frac{ShrThrdRod}{AllwShrAdhsv \cdot LoadAdjstmntFactor}$$ UCHiltiShr = 0.056 < 1.00 OK

Design of Support Mounting Plates :

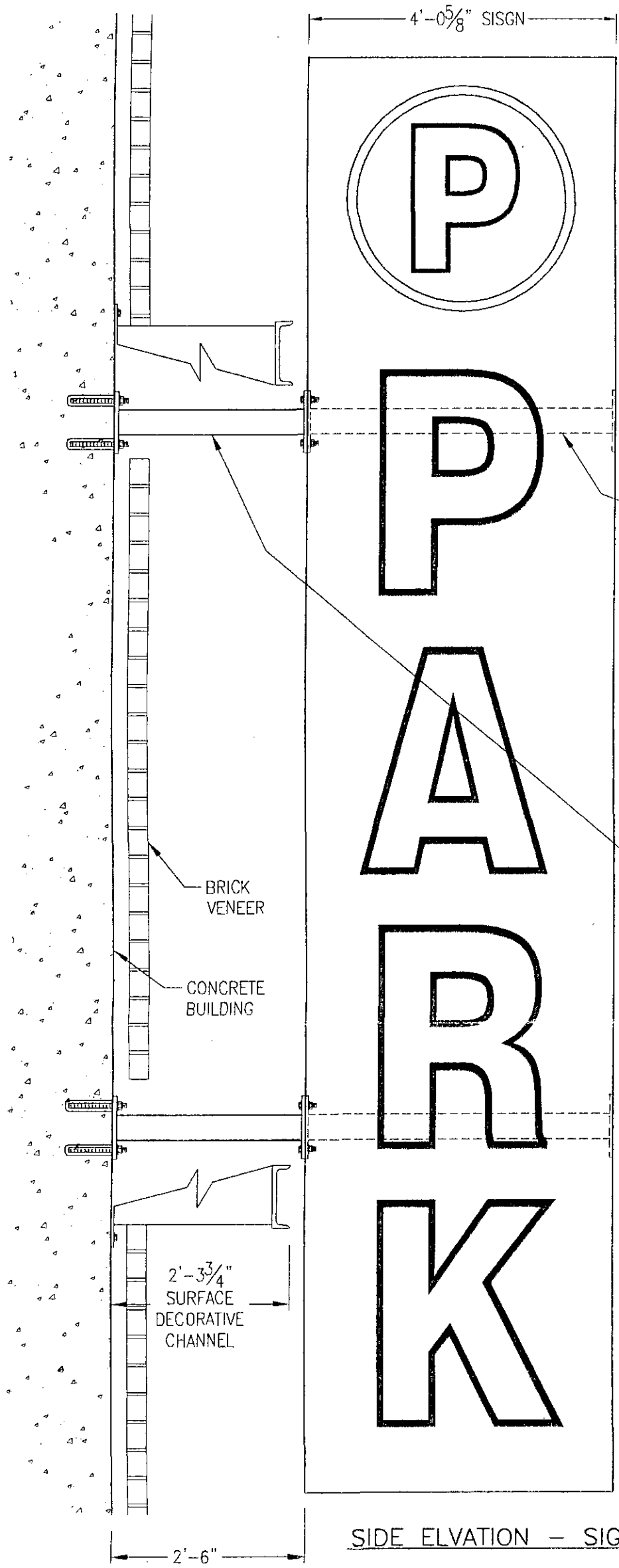
Plate Thickness : (in.) PltThk := 0.75 Plate Width : (in.) PLWdth := 10.0

Side to Side Distance Between Outer Mounting Bolts : (in.) BltSprd := 7.0

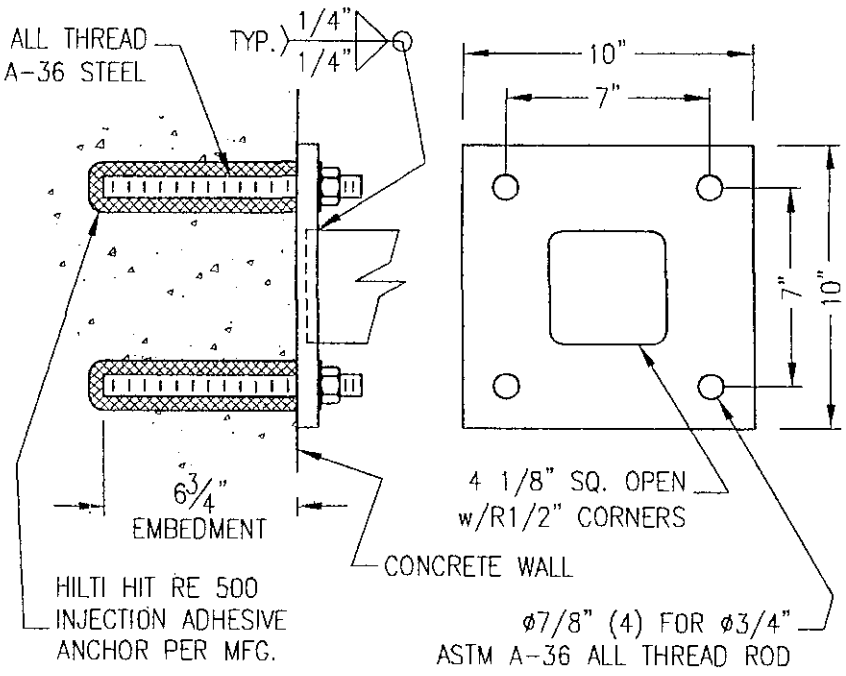
Plate Specimen : (in.) $PLS := \frac{\sqrt{(LvrArm^2 + BltSprd^2)} - \sqrt{(4.0^2 + 4.0^2)}}{2}$ PLS = 2.121

Minimum Thickness Required : (in.) $ReqdThk := \sqrt{\left[\frac{TenThrdRod \cdot PLS \cdot 6}{(PLWdth \cdot 23760)}\right]}$ ReqdThk = 0.55

Unity Check : Support Mounting Plate Thickness $UCSprtPltThk := \frac{ReqdThk}{PltThk}$ UCSprtPltThk = 0.733 < 1.00 O

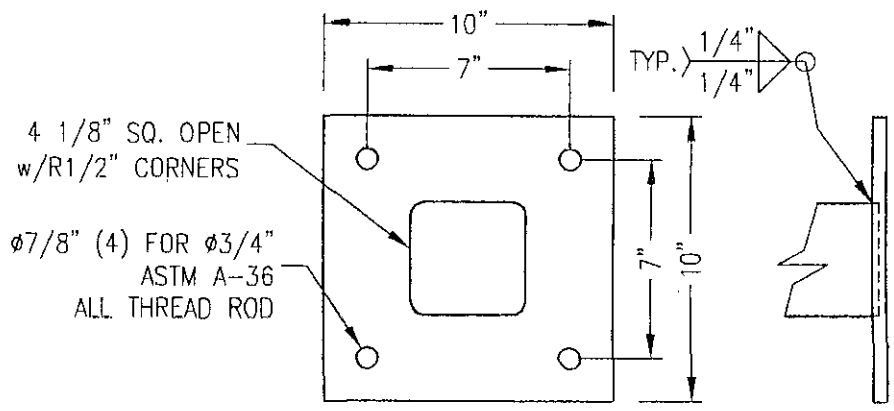


SIDE ELVATION – SIGN



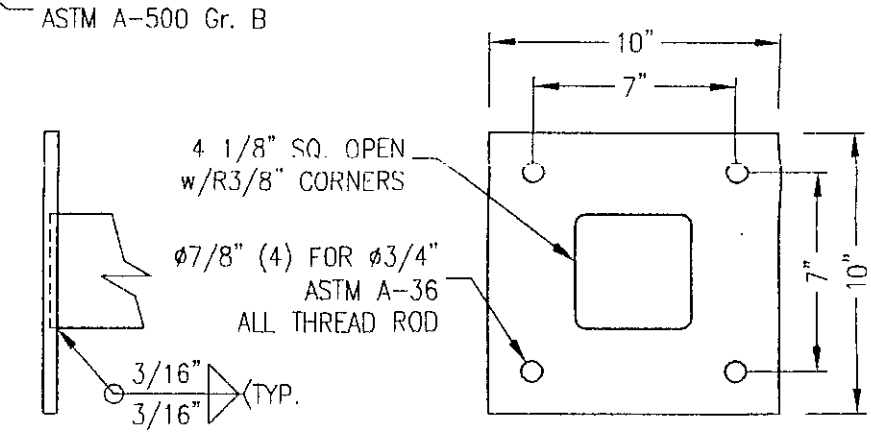
POLE MOUNTING PLATE DETAIL

3/4" ASTM A-36 STEEL



SIGN MOUNTING PLATE DETAIL

1/2" ASTM A-36 STEEL

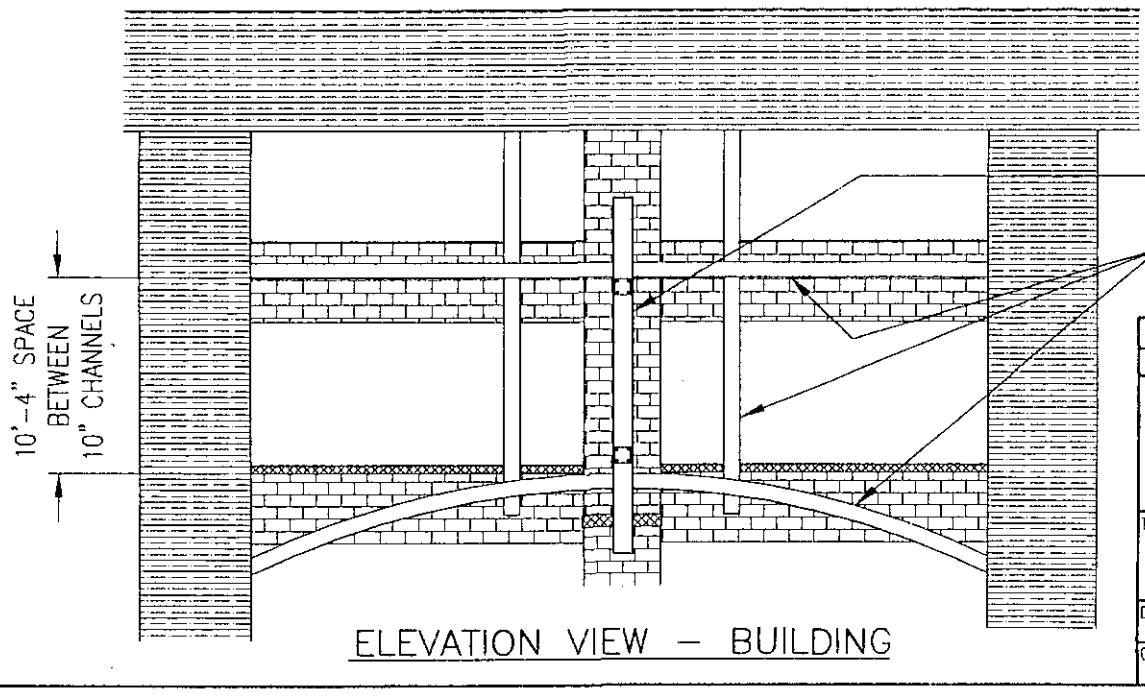


SIGN MATCH PLATE DETAIL

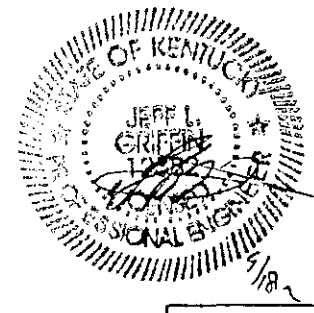
1/2" ASTM A-36 STEEL

DESIGN WIND LOAD:
Based on the Kentucky Building Code (2006 IBC) using Exposure C and 90 mph winds.

DESIGN SNOW LOAD:
Based on Ground Snow Loods.



ELEVATION VIEW – BUILDING



SITE: University of Kentucky
PCF Parking Garage
110 Transcript Avenue
Lexington, KY 40508

REV	DATE	DESCRIPTION	APPROVED
A	17 Sep 07	RELEASED FOR PERMITTING	J. HOGAN

Robert-James & Associates, Inc.
12255 West 187th Street, Makena Illinois 60448-9737
phone: 708-479-8385 fax: 708-479-8395 email: rja37@comcast.net

TITLE 19'-0" x 4'-0 5/8" PARKING SIGN
FLAG MOUNTED FROM BUILDING

DRAWN BY	DATE	SCALE	DRAWING NUMBER	SHEET	REV.
D. MUNNS	15 Sep 07	NONE	070962	1 OF 1	A
CHECKED BY J. HOGAN	DATE 17 Sep 07				

File : SgnSolutions004c.mcd

Site : University of Kentucky
PCF Parking Garage
110 Transcript Avenue
Lexington, KY 40508

Sign Type : VD2 4'-3" x 3'-0 5/8" direct bury twin pole directional sign (including revel) on 3" exposed concrete pedestal for an overall height of 4'-6".
Drawing No. 070961 rev. A

Design wind load based on the Kentucky Building Code (2006 IBC) using Exposure C and 90 mph winds.

Design Wind Speed : (mph.) $V := 90.0$

Importance Factor : $I := 1.00$ Based on Category II, Non-Hurricane Prone Regions with V = 85-100 mph

Velocity Pressure Coefficient at a Height of less than 15', Exposure C : $Kz := 0.85$

Topographic Factor : $Kzt := 1.00$ Based on Exposure C, Cases 1 or 2

Wind Directionality Factor : $Kd := 0.95$ Based on Solid Signs in Table 6-6

Velocity Pressure : (PSF) $qz := 0.00256 \cdot Kz \cdot Kzt \cdot Kd \cdot V^2 \cdot I$ $qz = 16.744$

Force Coefficient : $Cf := 1.5$ Based on Square (Wind Normal to Face) in Table 6-10

Gust Effect Factor : $G := 0.85$ Taken from 6.5.8.1 for Rigid Structures

Design Pressure : (PSF) $F := qz \cdot Cf \cdot G$ $F = 21.349$ Use : $WL := 21.5$

Reference : 2003 Aluminum Design Manual, The Aluminum Association

Tube : 6063-T5 Temper and Alloy $Fy = 27.0$ ksi. ; $Fb = 14.50$ ksi.

Reference : American Concrete Institute, Code 318.02.

Rebar : ASTM A-615 Grade 60 $Fy = 60.0$ ksi.

Concrete : 3,000 psi. compressive strength at 28 days.

Summation of Stresses at EL. 0.25' : (Top of footing)

Shear : (lbs.) $ShrEL0_{25} := (4.25 \cdot 3.05) \cdot WL$ $ShrEL0_{25} = 278.694$

Moment : (ft.lbs.) $MtEL0_{25} := ShrEL0_{25} \cdot \left(\frac{4.25}{2}\right)$ $MtEL0_{25} = 592.224$

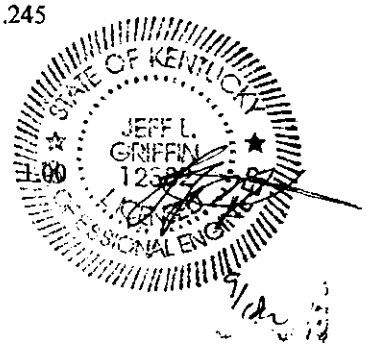
Design of Sign Pole Structures at EL. 0.25' :

Moment per Pole : (ft.lbs.) $MtPoleEL0_{25} := \frac{MtEL0_{25}}{2}$ $MtPoleEL0_{25} = 296.112$

Required Section Modulus : (in.^{3}) (Compact Tube Section) $ReqdSx := \frac{MtPoleEL0_{25} \cdot 12}{14500}$ $ReqdSx = 0.245$

Section Modulus of Tube : (in.^{3}) 3" x 3" x 1/8" wall - $TubeSx := 1.26$

Unity Check - Poles : $UCP := \frac{ReqdSx}{TubeSx}$ $UCP = 0.194$ < 1.00 OK



Summation of Stresses at Grade :

Directional Sign : $DirSgn := (4.25 \cdot 3.05 \cdot WL) \cdot \left[\left(\frac{4.25}{2}\right) + 0.25\right]$ DirSgn = 661.898 ft.lbs.

Exposed Footing : $ExpFtg := (0.25 \cdot 3.0 \cdot WL) \cdot \left(\frac{0.25}{2}\right)$ ExpFtg = 2.016 ft.lbs.

Moment : (ft.lbs.) $MtGrd := DirSgn + ExpFtg$ MtGrd = 663.913

Shear : (lbs.) $ShrGrd := (4.25 \cdot 3.05 \cdot WL) + (0.25 \cdot 3.0 \cdot WL)$ ShrGrd = 294.819

Design of Footing :

Loads :

Moment : (ft.lbs.)	Ma := MtGrd	Ma = 663.913
Shear : (lbs.)	Va := ShrGrd	Va = 294.819

Allowables :

Lateral passive pressure against foundation : (lbs./sq.ft. per foot)	PP := 250
Static soil pressure : (lbs./sq.ft.)	SSP := 2000
Dynamic soil pressure : (lbs./sq.ft.)	DSP := 2660

Foundation parameters :

Depth of footing below grade : (ft.)	D := 3.0
Height of footing : (ft.)	HF := 3.25
Width of footing : (ft.)	WF := 3.0
Length of footing : (ft.) (Wind direction)	LF := 0.83
Depth of water table below grade : (ft.) $Z(D,DWT) := if(D - DWT \le 0, 0, D - DWT)$	DWT := 7.5

Height of footing above grade : (ft.) $Hgt := HF - D$ Hgt = 0.25

Total passive pressure on footing : (lbs./sq.ft.) $Tpp := PP \cdot D^2 \cdot \frac{WF}{2}$ Tpp = 3375

Weight of structure and foundation :

Design weight of concrete : (lbs./cu.ft.)		CWT := 150
Sign weight : (lbs.)		SWT := 250
Footing weight : (lbs.)	FTWT := HF·WF·LF·CWT	FTWT = 1213.875
Buoyancy effect of water : (lbs.)	BOUY := Z(D,DWT)·LF·WF·62.4	BOUY = 0
Net weight of foundation : (lbs.)	NETWT := (SWT + FTWT) – BOUY	NETWT = 1463.875

Check Factor of Safety :

Overturning moment about heel point of foundation : (ft.lbs.)

Mo := Va·HF + Ma Mo = 1622.074

Resisting moment about the heel point : (ft.lbs.)

$$Mr := (NETWT)\cdot\left(\frac{LF}{2}\right) + Tpp\cdot\frac{HF}{3} \qquad Mr = 4263.758$$

Factor of Safety : $FS := \frac{Mr}{Mo}$ $FS = 2.629 > 1.5$ OK

Check soil bearing pressures :

Static soil pressure : (lbs./sq.ft.) $SBP := \frac{NETWT}{LF\cdot WF}$ $SBP = 587.902 < SSP = 2000$ OK

Dynamic soil pressure : (lbs./sq.ft.)

$$e := \left|\frac{\left[Mo - Tpp\cdot\left(\frac{HF}{3}\right)\right]}{NETWT}\right| \qquad e = 1.39$$

$$\left(\frac{D}{2}\right) = 1.5 > e = 1.39 > \left(\frac{D}{6}\right) = 0.5$$

$$qa := \left|\frac{NETWT}{3\cdot WF\cdot\left[\left(\frac{LF}{2}\right) - e\right]}\right| \qquad qa = 166.895 < DSP = 2660$$ OK

Check tensile stress of concrete at poles :

Compressive Strength of Existing Concrete : (psi.) $fc := 3000$

Overturning moment at pole : (ft.lbs./ft.) $Mp := \left(\frac{LF}{2}\right)^2\cdot\frac{qa}{2}$ $Mp = 14.372$

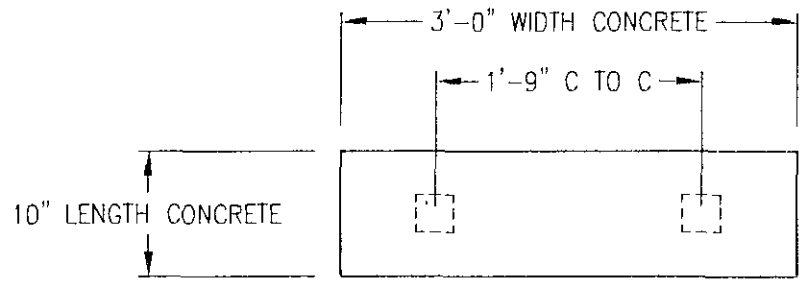
Section modulus of footing - Per foot of width : (in.^{3}) $Sw := 12\cdot\frac{(LF\cdot 12)^2}{6}$ $Sw = 198.403$

Allowable stress in concrete : (psi.) $\phi Ft := 0.65\cdot\left(5\cdot\sqrt{fc}\right)$ $\phi Ft = 178.01$

Tensile stress in concrete : (psi.) $ft := \left[\frac{(Mp\cdot 12)}{Sw}\right]\cdot 1.33$ $\phi Ft = 178.01 > ft = 1.156$

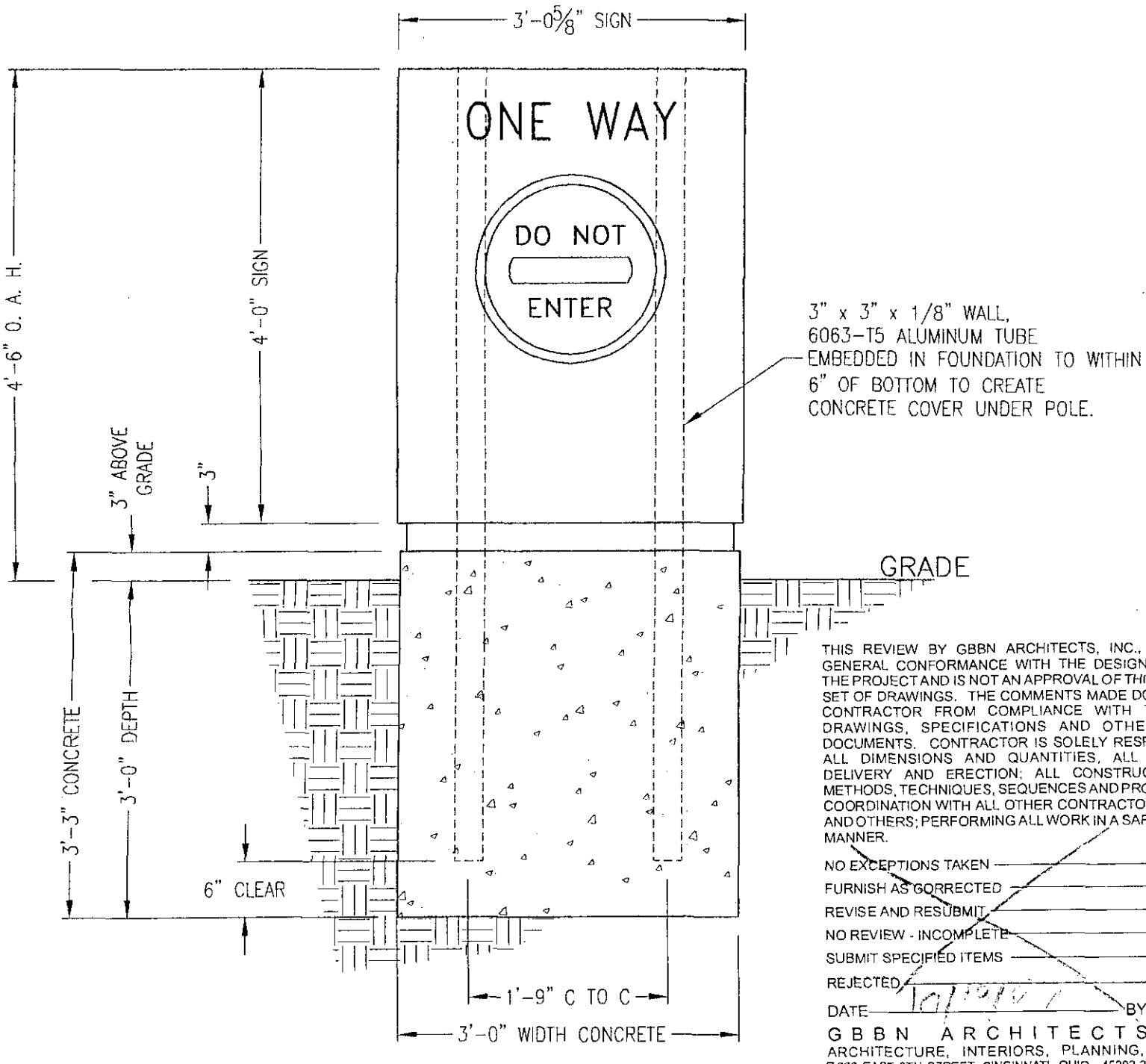
REBAR NOT REQUIRED FOR STRESS

Quantity of Concrete : (yds.^{3}) $Cy := \left[\frac{(LF\cdot WF\cdot HF)}{27}\right]$ $Cy = 0.3$



PLAN VIEW

QTY. CONCRETE: 0.3 CU. YDS.



ELEVATION VIEW

FOUNDATION DESIGN NOTES:

1. Concrete shall have a minimum compressive strength of 3000 PSI at 28 days.
2. Spade footing designed using soil bearing forces of 2000 PSF Static, 2660 PSF Dynamic, and 250 PSF per foot Lateral. If these soil conditions do not exist, it is the Erector's responsibility to have a new base designed for the existing soil conditions by a Licensed Structural Engineer.

DESIGN WINDLOAD:

Based on the Kentucky Building Code (2006 IBC) using Exposure C and 90 mph winds.

THIS REVIEW BY GBBN ARCHITECTS, INC., IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND IS NOT AN APPROVAL OF THIS DRAWING OR SET OF DRAWINGS. THE COMMENTS MADE DO NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH THE PROJECT DRAWINGS, SPECIFICATIONS AND OTHER CONTRACT DOCUMENTS. CONTRACTOR IS SOLELY RESPONSIBLE FOR: ALL DIMENSIONS AND QUANTITIES, ALL FABRICATION, DELIVERY AND ERECTION; ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES; ALL COORDINATION WITH ALL OTHER CONTRACTORS, SUPPLIERS AND OTHERS; PERFORMING ALL WORK IN A SAFE AND PROPER MANNER.

NO EXCEPTIONS TAKEN ☐
FURNISH AS CORRECTED ☐
REVISE AND RESUBMIT ☐
NO REVIEW - INCOMPLETE ☐
SUBMIT SPECIFIED ITEMS ☐
REJECTED ☐

DATE 10/19/07 BY

GBBN ARCHITECTS, INC.
ARCHITECTURE, INTERIORS, PLANNING, ENGINEERING
□ 332 EAST 8TH STREET, CINCINNATI, OHIO 45202-2217 (513) 241-8700
□ 325 WEST MAIN STREET, LEXINGTON, KENTUCKY 40507 (859) 381-8787

Revised

COMMONWEALTH OF KENTUCKY
JEFFREY GRIFFIN
12382
LICENSED PROFESSIONAL ENGINEER

SITE: University of Kentucky
PCF Parking Garage
110 Transcript Avenue
Lexington, KY 40508

REV	DATE	DESCRIPTION	APPROVED
A	17 Sep 07	RELEASED FOR PERMITTING	J. HOGAN

Robert-James & Associates, Inc.
12255 West 187th Street, Mokena Illinois 60448-9737
phone: 708-479-8385 fax: 708-479-8395 email: rja37@comcast.net

TITLE 4'-6" OAH DIRECT BURY TWIN POLE FOR PARKING DIRECTIONAL MONUMENT

DRAWN BY	DATE	SCALE	DRAWING NUMBER	SHEET	REV.
D. MUNNS	15 Sep 07	NONE	070961	1 OF 1	A
CHECKED BY J. HOGAN	DATE 17 Sep 07				

uding revel) on 2'-0"

ire C and 90 mph winds.

gions with V = 85-100 mph

.85

ible 6-10

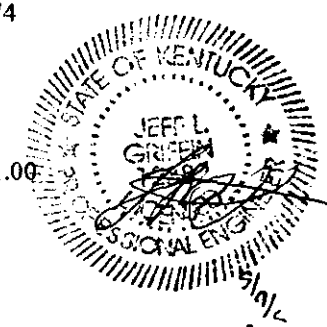
.1.5

.853

< = 0.374

1.26

< 1.00 OK



Summation of Stresses at Grade :

Directional Sign : $DirSgn := (5.25 \cdot 3.05 \cdot WL) \cdot \left[\left(\frac{5.25}{2}\right) + 2.0\right]$ DirSgn = 1592.243 ft.lbs.

Exposed Footing : $ExpFtg := (2.0 \cdot 3.0 \cdot WL) \cdot \left(\frac{2.0}{2}\right)$ ExpFtg = 129 ft.lbs.

Moment : (ft.lbs.) MtGrd := DirSgn + ExpFtg MtGrd = 1721.243

Shear : (lbs.) ShrGrd := (5.25·3.05·WL) + (2.0·3.0·WL) ShrGrd = 473.269

Design of Footing :

Loads :

Moment : (ft.lbs.)	Ma := MtGrd	Ma = 1721.243
Shear : (lbs.)	Va := ShrGrd	Va = 473.269

Allowables :

Lateral passive pressure against foundation : (lbs./sq.ft. per foot)	PP := 250
Static soil pressure : (lbs./sq.ft.)	SSP := 2000
Dynamic soil pressure : (lbs./sq.ft.)	DSP := 2660

Foundation parameters :

Depth of footing below grade : (ft.)	D := 3.0
Height of footing : (ft.)	HF := 5.0
Width of footing : (ft.)	WF := 3.0
Length of footing : (ft.) (Wind direction)	LF := 0.83
Depth of water table below grade : (ft.) $Z(D, DWT) := \text{if}(D - DWT \le 0, 0, D - DWT)$	DWT := 7.5

Height of footing above grade : (ft.) Hgt := HF - D Hgt = 2

Total passive pressure on footing : (lbs./sq.ft.) $Tpp := PP \cdot D^2 \cdot \frac{WF}{2}$ Tpp = 3375

Weight of structure and foundation :

Design weight of concrete : (lbs./cu.ft.)		CWT := 150
Sign weight : (lbs.)		SWT := 250
Footing weight : (lbs.)	FTWT := HF·WF·LF·CWT	FTWT = 1867.5
Buoyancy effect of water : (lbs.)	BOUY := Z(D,DWT)·LF·WF·62.4	BOUY = 0
Net weight of foundation : (lbs.)	NETWT := (SWT + FTWT) - BOUY	NETWT = 2117.5

Check Factor of Safety :

Overturning moment about heel point of foundation : (ft.lbs.)

Mo := Va·HF + Ma Mo = 4087.587

Resisting moment about the heel point : (ft.lbs.)

$$Mr := (NETWT)\cdot\left(\frac{LF}{2}\right) + Tpp\cdot\frac{HF}{3} \qquad Mr = 6503.762$$

Factor of Safety : $FS := \frac{Mr}{Mo}$ $FS = 1.591 > 1.5$ OK

Check soil bearing pressures :

Static soil pressure : (lbs./sq.ft.) $SBP := \frac{NETWT}{LF\cdot WF}$ $SBP = 850.402 < SSP = 2000$ OK

Dynamic soil pressure : (lbs./sq.ft.)

$$e := \left|\frac{\left[(Mo - Tpp)\cdot\left(\frac{HF}{3}\right)\right]}{NETWT}\right| \qquad e = 0.561$$

$$\left(\frac{D}{2}\right) = 1.5 > e = 0.561 > \left(\frac{D}{6}\right) = 0.5$$

$$qa := \left|\frac{NETWT}{3\cdot WF\cdot\left[\left(\frac{LF}{2}\right) - e\right]}\right| \qquad qa = 1612.916 < DSP = 2660$$ OK

Check tensile stress of concrete at poles :

Compressive Strength of Existing Concrete : (psi.) $fc := 3000$

Overturning moment at pole : (ft.lbs./ft.) $Mp := \left(\frac{LF}{2}\right)^2\cdot\frac{qa}{2}$ $Mp = 138.892$

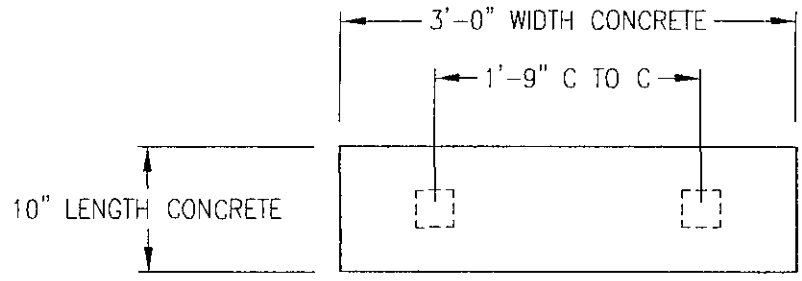
Section modulus of footing - Per foot of width : (in.^{3}) $Sw := 12\cdot\frac{(LF\cdot 12)^2}{6}$ $Sw = 198.403$

Allowable stress in concrete : (psi.) $\phi Ft := 0.65\cdot\left(5\cdot\sqrt{fc}\right)$ $\phi Ft = 178.01$

Tensile stress in concrete : (psi.) $ft := \left[\frac{(Mp\cdot 12)}{Sw}\right]\cdot 1.33$ $\phi Ft = 178.01 > ft = 11.173$

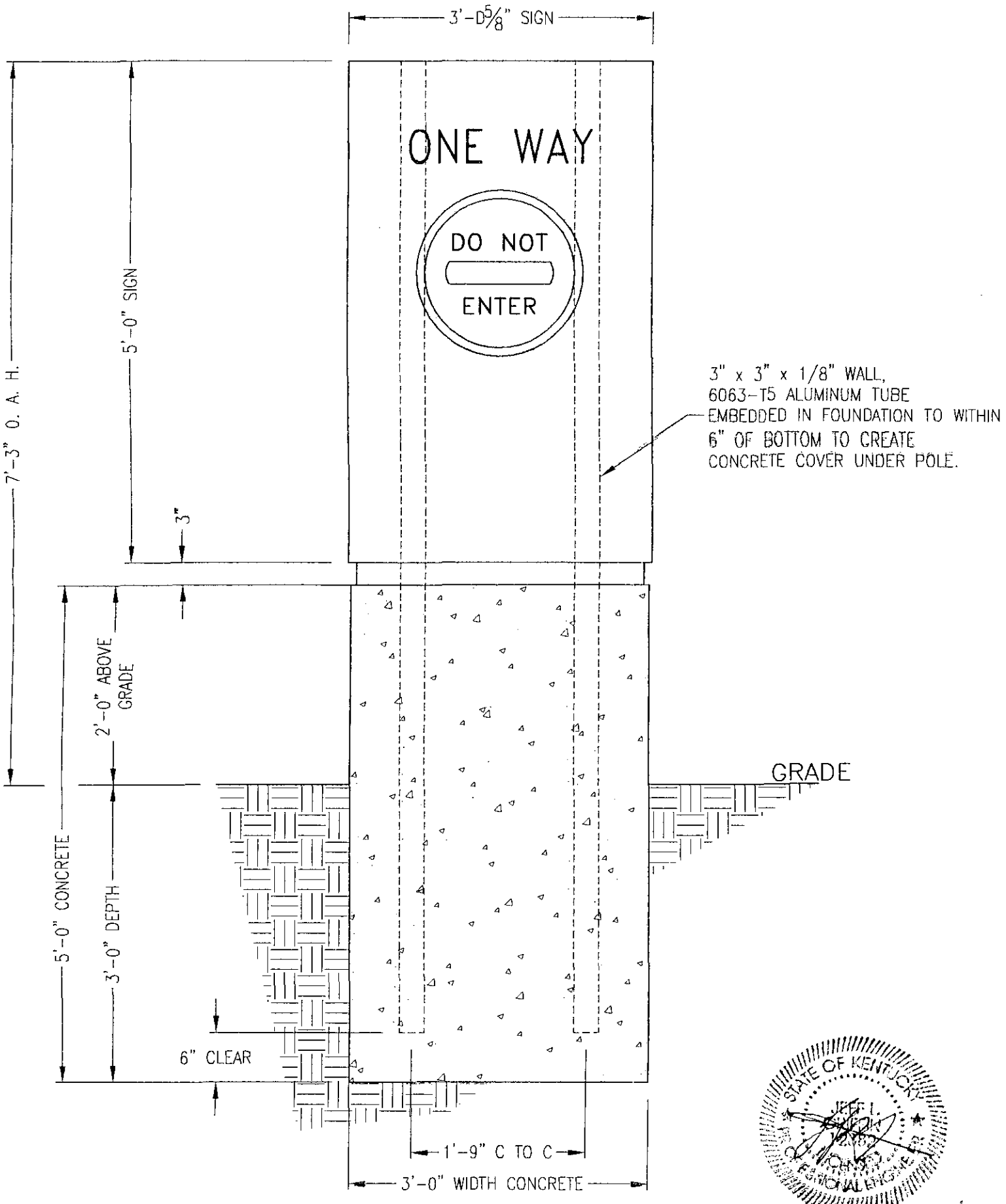
REBAR NOT REQUIRED FOR STRESS

Quantity of Concrete : (yds.^{3}) $Cy := \left[\frac{(LF\cdot WF\cdot HF)}{27}\right]$ $Cy = 0.461$



PLAN VIEW

QTY. CONCRETE: 0.5 CU. YDS.



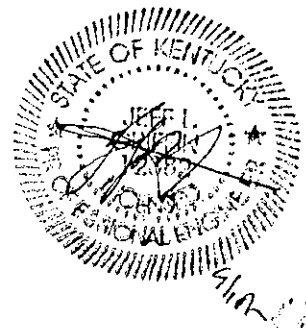
ELEVATION VIEW

FOUNDATION DESIGN NOTES:

1. Concrete shall have a minimum compressive strength of 3000 PSI at 28 days.
2. Spade footing designed using soil bearing forces of 2000 PSF Static, 2660 PSF Dynamic, and 250 PSF per foot Lateral. If these soil conditions do not exist, it is the Erector's responsibility to have a new base designed for the existing soil conditions by a Licensed Structural Engineer.

DESIGN WINDLOAD:

Based on the Kentucky Building Code (2006 IBC) using Exposure C and 90 mph winds.



SITE: University of Kentucky
PCF Parking Garage
110 Transcript Avenue
Lexington, KY 40508

REV	DATE	DESCRIPTION	APPROVED
A	17 Sep 07	RELEASED FOR PERMITTING	J. HOGAN

Robert-James & Associates, Inc.
12255 West 187th Street, Mokena Illinois 60448-9737
phone: 708-479-8385 fax: 708-479-8395 email: rja37@comcast.net

TITLE: 7'-3" OAH DIRECT BURY TWIN POLE FOR PARKING DIRECTIONAL MONUMENT

DRAWN BY	DATE	SCALE	DRAWING NUMBER	SHEET	REV.
D. MUNNS	15 Sep 07	NONE	070960	1 OF 1	A
CHECKED BY J. HOGAN	DATE 17 Sep 07				

File : SgnSolutions004a.mcd

Site : University of Kentucky
PCF Parking Garage
110 Transcript Avenue
Lexington, KY 40508

Sign Type : PYL 10'-3" x 4'-0 5/8" direct bury twin pole directional sign (including revel) on 2'-0" exposed concrete pedestal for an overall height of 12'-3".
Drawing No. 070959 rev. A

Design wind load based on the Kentucky Building Code (2006 IBC) using Exposure C and 90 mph winds.

Design Wind Speed : (mph.) $V := 90.0$

Importance Factor : $I := 1.00$ Based on Category II, Non-Hurricane Prone Regions with V = 85-100 mph

Velocity Pressure Coefficient at a Height of less than 15', Exposure C : $Kz := 0.85$

Topographic Factor : $Kzt := 1.00$ Based on Exposure C, Cases 1 or 2

Wind Directionality Factor : $Kd := 0.95$ Based on Solid Signs in Table 6-6

Velocity Pressure : (PSF) $qz := 0.00256 Kz \cdot Kzt \cdot Kd \cdot V^2 \cdot I$ $qz = 16.744$

Force Coefficient : $Cf := 1.5$ Based on Square (Wind Normal to Face) in Table 6-10

Gust Effect Factor : $G := 0.85$ Taken from 6.5.8.1 for Rigid Structures

Design Pressure : (PSF) $F := qz \cdot Cf \cdot G$ $F = 21.349$ Use : $WL := 21.5$

Reference : 2003 Aluminum Design Manual, The Aluminum Association

Tube : 6063-T5 Temper and Alloy $Fy = 27.0$ ksi. ; $Fb = 14.50$ ksi.

Reference : American Concrete Institute, Code 318.02.

Rebar : ASTM A-615 Grade 60 $Fy = 60.0$ ksi.

Concrete : 3,000 psi. compressive strength at 28 days.

Summation of Stresses at EL. 2.0' : (Top of footing)

Shear : (lbs.) $ShrEL2_0 := (10.25 \cdot 4.05) \cdot WL$ $ShrEL2_0 = 892.519$

Moment : (ft.lbs.) $MtEL2_0 := ShrEL2_0 \cdot \left(\frac{10.25}{2}\right)$ $MtEL2_0 = 4574.159$

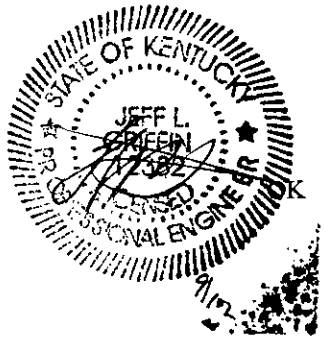
Design of Sign Pole Structures at EL. 2.0' :

Moment per Pole : (ft.lbs.) $MtPoleEL2_0 := \frac{MtEL2_0}{2}$ $MtPoleEL2_0 = 2287.079$

Required Section Modulus : ($in.^3$) (Compact Tube Section) $ReqdSx := \frac{MtPoleEL2_0 \cdot 12}{14500}$ $ReqdSx = 1.893$

Section Modulus of Tube : ($in.^3$) 7" x 3" x 1/8" wall (y-y axis) - $TubeSx := 2.64$

Unity Check - Poles : $UCP := \frac{ReqdSx}{TubeSx}$ $UCP = 0.717$ < 1.00



Summation of Stresses at Grade :

Directional Sign : $DirSgn := (10.25 \cdot 4.05 \cdot WL) \cdot \left[\left(\frac{10.25}{2}\right) + 2.0\right]$ DirSgn = 6359.196 ft.lbs.

Exposed Footing : $ExpFtg := (2.0 \cdot 4.0 \cdot WL) \cdot \left(\frac{2.0}{2}\right)$ ExpFtg = 172 ft.lbs.

Moment : (ft.lbs.) $MtGrd := DirSgn + ExpFtg$ MtGrd = 6531.196

Shear : (lbs.) $ShrGrd := (10.25 \cdot 4.05 \cdot WL) + (2.0 \cdot 4.0 \cdot WL)$ ShrGrd = 1064.519

Design of Footing :

Loads :

Moment : (ft.lbs.)	Ma := MtGrd	Ma = 6531.196
Shear : (lbs.)	Va := ShrGrd	Va = 1064.519

Allowables :

Lateral passive pressure against foundation : (lbs./sq.ft. per foot)	PP := 250
Static soil pressure : (lbs./sq.ft.)	SSP := 2000
Dynamic soil pressure : (lbs./sq.ft.)	DSP := 2660

Foundation parameters :

Depth of footing below grade : (ft.)	D := 3.0
Height of footing : (ft.)	HF := 5.0
Width of footing : (ft.)	WF := 4.0
Length of footing : (ft.) (Wind direction)	LF := 1.0

Depth of water table below grade : (ft.)

$Z(D, DWT) := if(D - DWT \le 0, 0, D - DWT)$ DWT := 7.5

Height of footing above grade : (ft.)	Hgt := HF - D	Hgt = 2
Total passive pressure on footing : (lbs./sq.ft.)	$Tpp := PP \cdot HF^2 \cdot \frac{WF}{2}$	Tpp = 12500

Weight of structure and foundation :

Design weight of concrete : (lbs./cu.ft.)		CWT := 150
Sign weight : (lbs.)		SWT := 375
Footing weight : (lbs.)	FTWT := HF·WF·LF·CWT	FTWT = 3000
Buoyancy effect of water : (lbs.)	BOUY := Z(D,DWT)·LF·WF·62.4	BOUY = 0
Net weight of foundation : (lbs.)	NETWT := (SWT + FTWT) - BOUY	NETWT = 3375

Check Factor of Safety :

Overturning moment about heel point of foundation : (ft.lbs.)

Mo := Va·HF + Ma Mo = 11853.79

Resisting moment about the heel point : (ft.lbs.)

$$Mr := (NETWT)\cdot\left(\frac{LF}{2}\right) + Tpp\cdot\frac{HF}{3} \qquad Mr = 22520.833$$

Factor of Safety : $FS := \frac{Mr}{Mo}$ $FS = 1.9 > 1.5$ OK

Check soil bearing pressures :

Static soil pressure : (lbs./sq.ft.) $SBP := \frac{NETWT}{LF\cdot WF}$ $SBP = 843.75 < SSP = 2000$ OK

Dynamic soil pressure : (lbs./sq.ft.)

$$e := \left|\frac{(Mo - Tpp)\cdot\left(\frac{HF}{3}\right)}{NETWT}\right| \qquad e = 0.319$$

$$\left(\frac{D}{6}\right) = 0.5 > e = 0.319$$

$$qa := \left(\frac{NETWT}{WF\cdot LF}\right)\cdot\left[\left[1 + \left(6\cdot\frac{e}{LF}\right)\right]\right] \qquad qa = 2459.275 < DSP = 2660$$ OK

Check tensile stress of concrete at poles :

Compressive Strength of Existing Concrete : (psi.) $fc := 3000$

Overturning moment at pole : (ft.lbs./ft.) $Mp := \left(\frac{LF}{2}\right)^2\cdot\frac{qa}{2}$ $Mp = 307.409$

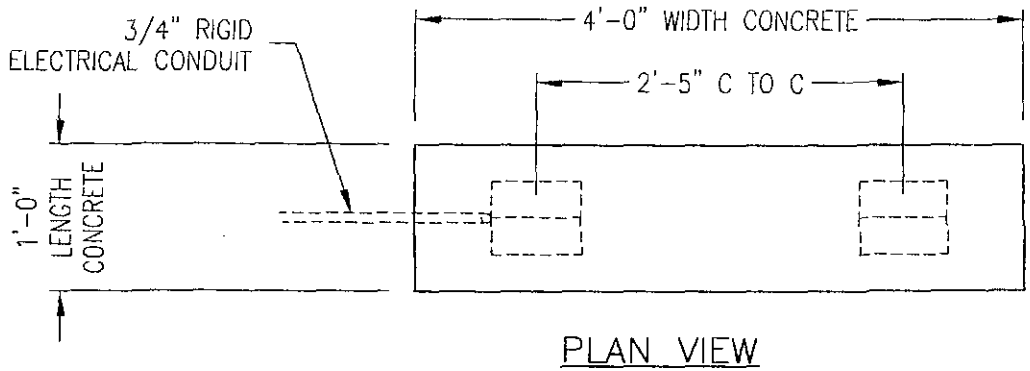
Section modulus of footing - Per foot of width : ($in.^3$) $Sw := 12\cdot\frac{(LF\cdot 12)^2}{6}$ $Sw = 288$

Allowable stress in concrete : (psi.) $\phi Ft := 0.65\cdot\left(5\cdot\sqrt{fc}\right)$ $\phi Ft = 178.01$

Tensile stress in concrete : (psi.) $ft := \left[\frac{(Mp\cdot 12)}{Sw}\right]\cdot 1.33$ $\phi Ft = 178.01 > ft = 17.036$

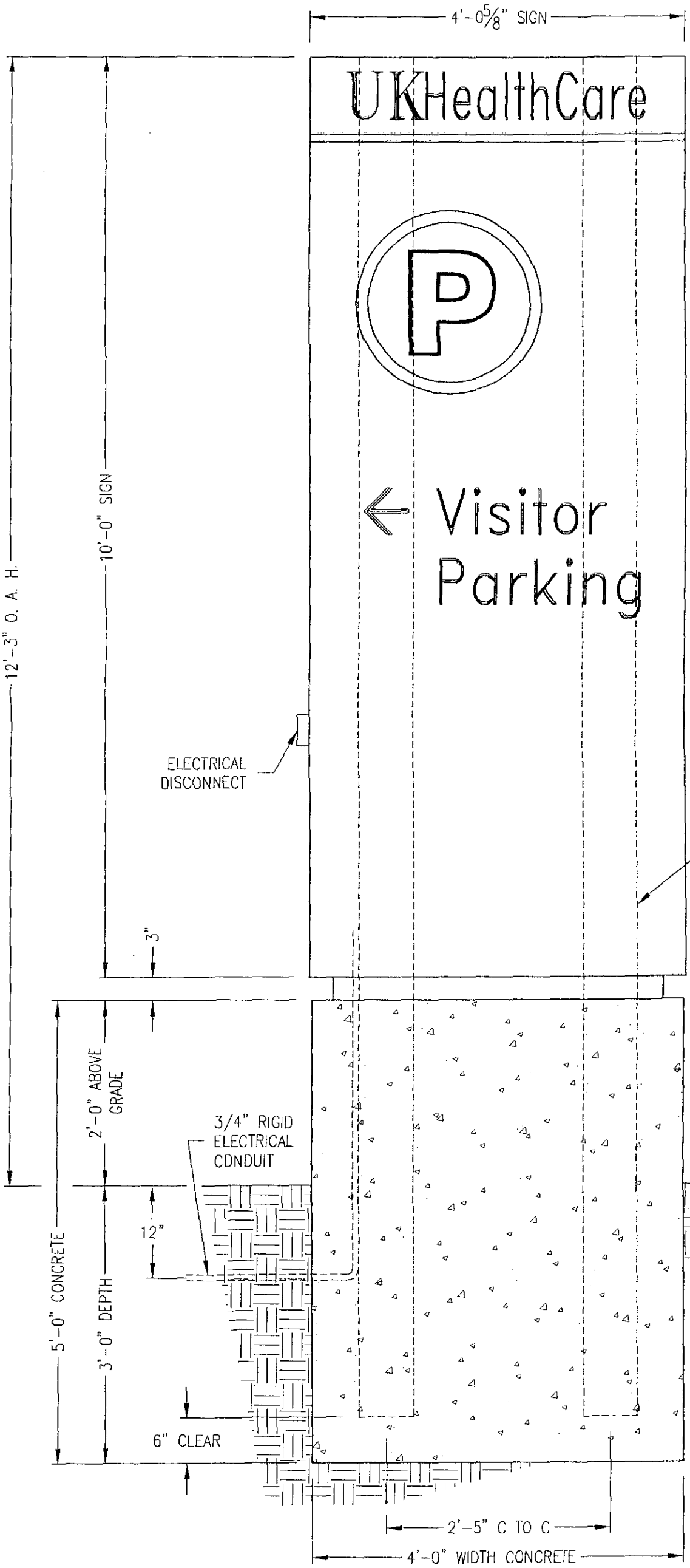
REBAR NOT REQUIRED FOR STRESS

Quantity of Concrete : ($yds.^3$) $Cy := \left[\frac{(LF\cdot WF\cdot HF)}{27}\right]$ $Cy = 0.741$



PLAN VIEW

QTY. CONCRETE: 0.8 CU. YDS.



ELEVATION VIEW

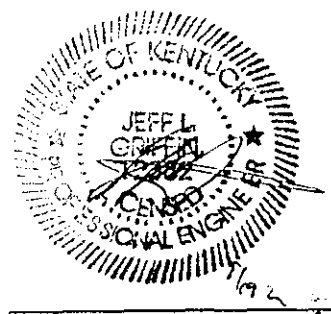
FOUNDATION DESIGN NOTES:

1. Concrete shall have a minimum compressive strength of 3000 PSI at 28 days.
2. Spade footing designed using soil bearing forces of 2000 PSF Static, 2660 PSF Dynamic, and 250 PSF per foot Lateral. If these soil conditions do not exist, it is the Erector's responsibility to have a new base designed for the existing soil conditions by a Licensed Structural Engineer.

DESIGN WINDLOAD:

Based on the Kentucky Building Code (2006 IBC) using Exposure C and 90 mph winds.

TWO (2) 7" x 3" x 1/8" WALL, 6063-T5 ALUMINUM TUBES PER SIDE. FOUR (4) TOTAL REQUIRED. EMBEDDED IN FOUNDATION TO WITHIN 6" OF BOTTOM TO CREATE CONCRETE COVER UNDER POLE.



SITE: University of Kentucky
PCF Parking Garage
110 Transcript Avenue
Lexington, KY 40508

REV	DATE	DESCRIPTION	
A	17 Sep 07	RELEASED FOR PERMITTING	J. HOGAN
			APPROVED

Robert-James & Associates, Inc.
12255 West 187th Street, Mokena Illinois 60448-9737
phone: 708-479-8385 fax: 708-479-8395 email: rja37@comcast.net

TITLE 12'-3" OAH DIRECT BURY TWIN POLE FOR PARKING DIRECTIONAL MONUMENT

DRAWN BY	DATE	SCALE	DRAWING NUMBER	SHEET	REV.
D. MUNNS	15 Sep 07	NONE	070959	1 OF 1	A
CHECKED BY J. HOGAN	DATE 17 Sep 07				

Transmittal

Project [2239.2] - PCF - Hospital - Garage **View Date** 9/14/2007

Gilbane
940 Elizabeth St
Lexington, KY 40506-0293
Phone: (859) 257-4536
Fax: (859) 323-1331

Transmittal No. 2239.2-01063

To	Mr. Doug Sherwood E. C. Matthews Co., Inc. 2265 Harrodsburg Road Lexington, KY 40504 USA Phone: (859) 278-3131 Fax: (859) 277-7903	**Date**	9/14/2007
		Items listed are being sent	
		☑ Enclosed	
		☐ Under Separate Cover	
		Via	Hand Delivered
		CSI Code	10400 - Signage
From	Mr. Brian Hoerr (Gilbane)		
Subject	Submittal Package 100-10400-002.0		

We are transmitting the following to you:

☐ Product Data ☐ Samples ☐ Shop Drawings ☐ O&M Manuals ☐ Plans
☐ Architectural Drawings ☐ Letters ☐ Specifications ☐ Prints ☐ Addenda
☐ Engineering Drawings ☐ Change Orders ☑ Submittal

Submittals

Pkg. No./Rev.	Item No./Rev.	Description	Copies	Reason	Action
100-10400-002.0	100-10400-004.0	Signage Fastener Data Sheets	2	Approved as Noted	

Remarks Please see GBBN notes on the submittal.

From	Mr. Brian Hoerr	9/14/2007
	Printed Name	Date
Received By	Printed Name	Date

Linked Documents

Document Type	Document	Open	Description	Date
Sub. Pkg.	100-10400-002.0			

Distribution

Recipient	Company	Method	Date

Doug Sherwood	E. C. Matthews Co., Inc.	Message	9/14/2007

Transmittal

Project [2239.2] - PCF - Hospital - Garage **View Date** 9/12/2007

GBBN Architects, Inc.
332 East Eighth St
Cincinnati, OH 45202-2217
Phone: (513) 241-8700
Fax: (513) 241-8873

Transmittal No. 2239.2-01056

To	Mr. Brian Hoerr Gilbane 940 Elizabeth St Lexington, KY 40506-0293 USA Phone: (859) 257-4536 Fax: (859) 323-1331
From	Mr. Bryan Korb (GBBN Architects, Inc.)
Subject	Submittal Package 100-10400-002.0

Date 9/12/2007

Items listed are being sent

☐ Enclosed

☐ Under Separate Cover

CSI Code 10400 - Signage

RECEIVED
SEP 12 2007
GILBANE #3966

We are transmitting the following to you:

☐ Product Data ☐ Samples ☐ Shop Drawings ☐ O&M Manuals ☐ Plans
☐ Architectural Drawings ☐ Letters ☐ Specifications ☐ Prints ☐ Addenda
☐ Engineering Drawings ☐ Change Orders ☑ Submittal

Submittals

Pkg. No./Rev.	Item No./Rev.	Description	Copies	Reason	Action
100-10400-002.0	100-10400-004.0	Signage Fastener Data Sheets		Approved as Noted	

Remarks

Received By Printed Name Date

Linked Documents

Document Type	Document	Open	Description	Date
Sub. Pkg.	100-10400-002.0			

GILBANE
University of Kentucky
Patient Care Facility
Gilbane Project No. 18-3966

REVIEWED

☐ 010-Huguelet ☒ 020-Garage
☐ 030-Infrastructure ☐ 040-PCF Foundation
☐ 050-PCF Core/Shell ☐ 060-TowerUp Fit

Bid Package No. 150
Submittal No. 150-10400-002
Spec. Sect/Para. _____
Reviewed By BH
Date 8/30/07

This review does not constitute nor does it assume design responsibility nor does it relieve the trade contractor's supplier from complying with the contract requirements, coordinating their work with other trade contractors and verifying field dimensions.

THIS REVIEW BY GBBN ARCHITECTS, INC., IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT DF THE PROJECT AND IS NOT AN APPROVAL OF THIS DRAWING OR SET OF DRAWINGS. THE COMMENTS MADE DO NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH THE PROJECT DRAWINGS, SPECIFICATIONS AND OTHER CONTRACT DOCUMENTS. CONTRACTOR IS SOLELY RESPONSIBLE FOR: ALL DIMENSIONS AND QUANTITIES, ALL FABRICATION, DELIVERY AND ERECTION; ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES; ALL COORDINATION WITH ALL OTHER CONTRACTORS, SUPPLIERS AND OTHERS; PERFORMING ALL WORK IN A SAFE AND PROPER MANNER.

NO EXCEPTIONS TAKEN	☐
FURNISH AS CORRECTED	☒
REVISE AND RESUBMIT	☐
NO REVIEW - INCOMPLETE	☐
SUBMIT SPECIFIED ITEMS	☐
REJECTED	☐

DATE 9/12/07 BY BK

GBBN ARCHITECTS, INC.
ARCHITECTURE, INTERIORS, PLANNING, ENGINEERING
☐ 332 EAST 8TH STREET, CINCINNATI, OHIO 45202-2217 (513) 241-8700
☐ 325 WEST MAIN STREET, LEXINGTON, KENTUCKY 40507 (859) 381-8787

From: "bob massinon" <bmassinon@insightbb.com>
To: "EC MATTHEWS CO" <dsherwood@ecmatthews.com>
CC:
Subject: UNIVERSITY OF KENTUCKY PCF PARKING GARAGE (SIGNAGE) FASTENING ANCHORS
ate: Thursday, August 16, 2007 03:09:07 PM

SIGNSOLUTIONS
THE BRIDGE BETWEEN CHALLENGE AND SOLUTION

505 Commerce Parkway West Drive
Greenwood, In 46143

317-881-1818
317-881-1919 Fax

SENT TO: **E.C. MATTHEWS COMPANY, INC,** ATTN:**DOUG SHERWOOD**

FROM: ***BOB MASSINON*** *DATE:* ***08-16-07***

SUBJECT: **UNIVERSITY OF KENTUCKY PCF PARKING GARAGE** ***(SIGNAGE)***

Doug,

Reference: ***FASTENING ANCHORS***

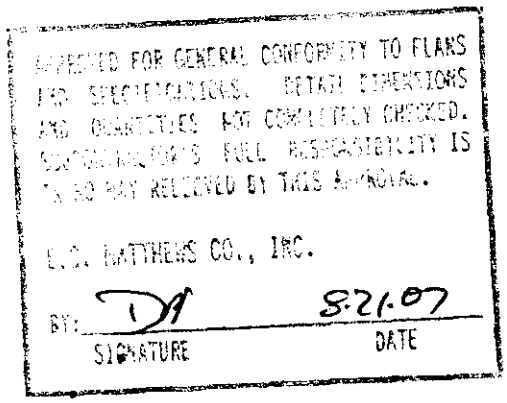
Hope your having a good day !

Per our phone conversation this afternoon:

Listed below is the fastening part # we propose to use per sign type utilized for this project.

These part numbers are identified in the cut sheets I sent yesterday.

Sign Type	Part #	Manufacturer
ECS	50504	Fastenal
ECP	50504	Fastenal
SPD	50504	Fastenal
RTS	50504	Fastenal
PAY	50504	Fastenal
OVD	50504	Fastenal
DR1	50504	Fastenal
PD	52001	Red Head
HCP-(alt)	52001	Red Head
OPD	52001	Red Head
HCP-(base)	52007	Red Head

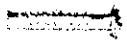


Thank You !

Nail-In Anchors

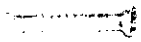
FASTENAL®

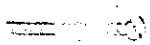
Nylon



All styles of Nail-in-Anchors have a steel nail.

For use in concrete, block, brick, wallboard, etc. No other fasteners needed.





3/16"

Length	Mushroom Head Part No.	Mushroom Head Price /100	Flat Head Part No.	Flat Head Price /100	Round Head Part No.	Round Head Price /100	Case Qty.
3/4"	50802	$8.25					1000
1"	50803	8.80	50823	$8.80	50833	$8.80	1000
1-1/2"	50812	13.20	50824	13.20			1000

1/4"

Length	Mushroom Head Part No.	Mushroom Head Price /100	Round Head Part No.	Round Head Price /100	Case Qty.
3/4"	50804	$8.25			1000
1"	50805	9.02			1000
1-1/2"	50806	11.00	50837	$11.00	1000
2"	50807	14.85			1000
3"	50808	23.38			1000
4"	50809	38.50			1000
6"	50810	138.00			1000

Mushroom Head All Nylon

1/4"

Length	Part No.	Pkg. Qty.	Case Qty.	Price /100
3/4"	50840	100	1000	$8.80
1"	50841	100	1000	13.20
1-1/2"	50842	100	1000	16.50

Fastenal Nail-ins

Pin Bolt Drive Zinc Plated Pin Zinc Alloy Body

GSA Spec. FF-S-325 Group V, Type 2, Class 3

Nail Drive anchor can be used in concrete, block or brick for applications such as sheet skirting and flashing, gutter and downspouts, electrical accessories, drywall track, HVAC straps (horizontally), frame brackets, and barrier plates.

Installation is easy. Insert anchor into hole until the head of the anchor body is flush with material to be fastened. Tap the nail until flush with head of anchor, installation is complete.

3/16"

Length	Part No.	Drill Size	Pkg. Qty.	Price /100
7/8"	50502	3/16"	100	$19.09

1/4"

Length	Part No.	Drill Size	Pkg. Qty.	Price /100
3/4"	50503	1/4"	100	$22.08
1"	50504	1/4"	100	23.20
1-1/4"	50505	1/4"	100	23.72
1-1/2"	50506	1/4"	100	26.71
2"	50507	1/4"	100	34.50
2-1/2"	50508	1/4"	100	35.76
3"	50509	1/4"	100	36.99

Fastenal Nail-ins

Pin Bolt Drive Stainless Steel Pin Zinc Alloy Body

GSA Spec. FF-S-325 Group V, Type 2, Class 3

Installation is easy. Insert anchor into hole until the head of the anchor body is flush with material to be fastened. Tap the nail until flush with head of anchor, installation is complete.

3/16"

Length	Part No.	Drill Size	Pkg. Qty.	Case Qty.	Price /100
7/8"	50794	3/16"	100	1000	$17.80

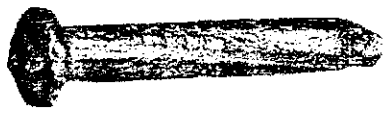
1/4"

Length	Part No.	Drill Size	Pkg. Qty.	Case Qty.	Price /100
3/4"	50795	1/4"	100	1000	$31.05
1"	50798	1/4"	100	500	56.78
1-1/4"	50799	1/4"	100	500	61.19
1-1/2"	50800	1/4"	100	500	64.98
2"	50801	1/4"	100	500	72.30
2-1/2	50796	1/4	100	500	75.38
3"	50797	1/4"	100	500	78.02

Pingrips

FASTENAL®

Perma-Grip Masonry Fasteners



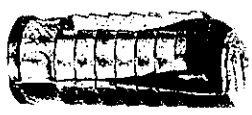
For use in concrete brick or block. These Hot Dipped Galvanized anchors require no special driving tool. Simply drill the appropriate size hole 1/4" deeper than the anchor, then tap the Perma-grip until securely seated. Anchor is compatible with steel and plastic stress plates.

1/4

Size	Part No.	Pkg. Qty.	Case Qty.	Price /100
1-1/8"	51620	100	500	$24.86
1-1/2"	51621	100	500	29.57
2"	51622	100	500	33.62
2-1/2"	51623	100	500	39.20
3"	51624	100	500	45.99
3-1/2"	51625	100	500	52.56
4"	51626	100	500	61.32

Fastenal

Four-Way Anchors



Also called four way bolts, these anchors have four legs that expand to hold medium to heavy loads. Made of corrosion-resistant zinc alloy, they can be used with cap screws and threaded rod. To install, drill a hole as deep as the anchor length, place anchor in hole, position fixture, insert cap screw or threaded rod and tighten.

Size	Drill Size	Part No.	Pkg. Qty.	Case Qty.	Price /100
1/4"	1/2"	51151	100	1000	$181.00
3/8"	11/16"	51153	50	500	241.00
1/2"	7/8"	51154	50	200	361.00

The : symbol after a price denotes that it is a Direct Ship Product (DSP) and shipping, availability & lead times may vary.

Mechanical Anchors

RED HEAD
CONCRETE ANCHORING SYSTEMS

Trubolt® Concrete Anchors

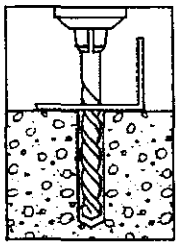
Advantages

- Versatile fully threaded design is standard on sizes up to 3/4" diameter and 10" length
- Anchor diameter equals hole diameter
- One piece stainless steel expander clip resists corrosion
- Available in zinc plated, hot-dipped galvanized, 304 s/s and 316 s/s
- 360° contact with concrete assures full expansion for reliable working loads
- Non bottom-bearing, may be used in hole depth exceeding anchor length
- Can be installed through the work fixture, eliminating hole spotting
- Inspectable torque values, indicating proper installation

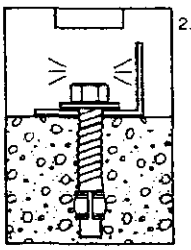
Approvals & Listings

- Meets or exceeds U.S. Government G.S.A Specification A-A1923A Type 4 (Formerly GSA: FF-S-325 Group 2, Class 1, Type 4)
- Underwriters Laboratories
- Factory Mutual
- ICC Evaluation Service, Inc.- #ESR-2251, according to ACI318-05 Appendix D
- Metro-Dade County – #01-0504.12
- City of Los Angeles – #RR2748
- California State Fire Marshal
- Cal Trans
- Florida Building Code

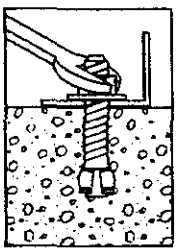
Installation Steps:



1. Using a bit whose diameter equals the anchor diameter, drill hole to any depth exceeding the minimum embedment. Clean hole.



2. Assemble anchor with nut and washer so that the top of the nut is flush with the top of the anchor. Drive anchor through material to be fastened so that nut and washer are flush with surface of material.



3. Expand anchor by tightening nut 3 to 5 turns, or to the specific torque requirement.

Product Info:

1/4" - Pkg. Qty. 100

Anchor Lgth.	Thread Lgth.	Min. Embed.	Carbon Steel* Part No.	Carbon Steel* PRICE /Pkg.	Galv. Steel Part No.	Galv. Steel PRICE /Pkg.	304 SS Part No.	304 SS PRICE /100	316 SS Part No.	316 SS PRICE /Pkg.
1-3/4	3/4	1-1/8	52001	$50.27			52051	$118.00		
2-1/4	1-1/4	1-1/8	52002	56.86			52052	145.00	0152200	$109.00
3-1/4	2-1/4	1-1/8	52003	61.79			52053	164.00	0152201	137.00

3/8" - Pkg. Qty. 50

Anchor Lgth.	Thread Lgth.	Min. Embed.	Carbon Steel* Part No.	Carbon Steel* PRICE /Pkg.	Galv. Steel Part No.	Galv. Steel PRICE /Pkg.	304 SS Part No.	304 SS PRICE /Pkg.	316 SS Part No.	316 SS PRICE /Pkg.
2-1/4	1-1/8	1-1/2	52004	$29.97			52054	$98.50	0152202	$117.50
2-3/4	1-5/8	1-1/2	52005	32.22			52055	111.50	0152203	139.50
3	1-3/4	1-1/2	52006	32.86			52056	119.50	0152204	142.50
3-3/4	2-1/2	1-1/2	52007	32.95			52057	135.50	0152205	145.00
5	3-3/4	1-1/2	52008	41.08			52058	184.00	0152206	218.50

1/2" - Pkg. Qty. 25

Anchor Lgth.	Thread Lgth.	Min. Embed.	Carbon Steel* Part No.	Carbon Steel* PRICE /Pkg.	Galv. Steel Part No.	Galv. Steel PRICE /Pkg.	304 SS Part No.	304 SS PRICE /Pkg.	316 SS Part No.	316 SS PRICE /Pkg.
2-3/4	1-1/4	2-1/4	52009	$25.50	52038	$58.00	52059	$104.00	0152207	$113.50
3-3/4	2-1/4	2-1/4	52010	26.25			52060	115.00	0152208	142.00
4-1/4	2-3/4	2-1/4	52011	28.00	52039	74.25	52061	121.50	0152209	192.25
5-1/2	4	2-1/4	52012	33.00	52040	92.00	52062	151.00	0152210	194.75
7	5-1/2	2-1/4	52013	40.00	52041	97.00	52063	195.25		

5/8" - Pkg. Qty. 10

Anchor Lgth.	Thread Lgth.	Min. Embed.	Carbon Steel Part No.	Carbon Steel PRICE /Pkg.	Galv. Steel Part No.	Galv. Steel PRICE /Pkg.	304 SS Part No.	304 SS PRICE /Pkg.	316 SS Part No.	316 SS PRICE /Pkg.
3-1/2	1-3/4	2-3/4	52014	$20.40	52042	$45.90	52064	$84.40		
4-1/4	2-1/2	2-3/4	52015	21.10					0152211	$109.20
5	3-1/4	2-3/4	52016	22.60			52065	95.90	0152212	115.30
6	4-1/4	2-3/4	52017	24.70	52043	54.90	52066	108.40		
7	5-1/4	2-3/4	52018	28.30			52067	124.80	0152213	124.50
8-1/2	5-3/4	2-3/4	52019	47.10			52068	197.10		
10	5-3/4	2-3/4	52020	65.20						

3/4" - Pkg. Qty. 10

Anchor Lgth.	Thread Lgth.	Min. Embed.	Carbon Steel Part No.	Carbon Steel PRICE /Pkg.	Galv. Steel Part No.	Galv. Steel PRICE /Pkg.	304 SS Part No.	304 SS PRICE /Pkg.	316 SS Part No.	316 SS PRICE /Pkg.
4-1/4	2-3/8	3-1/4	52021	$27.80						
4-3/4	2-7/8	3-1/4	52022	28.40	52044	$67.80	52069	$124.80	0152214	$144.20
5-1/2	3-5/8	3-1/4	52023	31.00	52045	74.20	52070	144.50	0152215	158.30
6-1/4	4-3/8	3-1/4	52024	34.80						
7	5-1/8	3-1/4	52025	37.40			52071	165.60		
8-1/2	5-3/4	3-1/4	52026	54.90	52046	112.90	52072	214.20		
10	5-3/4	3-1/4	52027	74.30			52073	282.50		
12	1-3/4	3-1/4	52028	119.90						

7/8" - Pkg. Qty. 5

Anchor Lgth.	Thread Lgth.	Min. Embed.	Carbon Steel Part No.	Carbon Steel PRICE /Pkg.	Galv. Steel Part No.	Galv. Steel PRICE /Pkg.	304 SS Part No.	304 SS PRICE /Pkg.	316 SS Part No.	316 SS PRICE /Pkg.
6	2-1/2	3-3/4	52029	$48.45						
8	2-1/2	3-3/4	52030	56.40			52074	$235.85		
10	2-1/2	3-3/4	52031	66.75						

1" - Pkg. Qty. 5

Anchor Lgth.	Thread Lgth.	Min. Embed.	Carbon Steel Part No.	Carbon Steel PRICE /Pkg.	Galv. Steel Part No.	Galv. Steel PRICE /Pkg.	304 SS Part No.	304 SS PRICE /Pkg.	316 SS Part No.	316 SS PRICE /Pkg.
6	2-1/2	4-1/2	52032	$54.15			52075	$211.55		
9	2-1/2	4-1/2	52033	68.70	52047	$108.40	52076	262.15		
12	2-1/2	4-1/2	52034	83.15	52098	354.75				

Other sizes available upon request.

Gilbane

Transmittal

Project [2239.2] - PCF - Hospital - Garage

View Date 2/18/2008

Gilbane
940 Elizabeth St
Lexington, KY 40506-0293
Phone: (859) 257-4536
Fax: (859) 323-1331

Transmittal No. 2239.2-00753

To	Mr. Doug Sherwood E. C. Matthews Co., Inc. 2265 Harrodsburg Road Lexington, KY 40504 USA Phone: (859) 278-3131 Fax: (859) 277-7903
From	Mr. Ryan Maguire (Gilbane)
Subject	Submittal Package 100-10800-001.0

Date 3/5/2007

Items listed are being sent

☑ Enclosed

☐ Under Separate Cover

Via Hand Delivered

CSI Code 10800 - Toilet Accessories

We are transmitting the following to you:

☐ Product Data ☐ Samples ☐ Shop Drawings ☐ O&M Manuals ☐ Plans
☐ Architectural Drawings ☐ Letters ☐ Specifications ☐ Prints ☐ Addenda
☐ Engineering Drawings ☐ Change Orders ☑ Submittal

Submittals

Pkg. No./Rev.	Item No./Rev.	Description	Copies	Reason	Action
100-10800-001.0	100-10800-002.0	Toilet Accessories	2	Approved as Noted	

Linked Documents

Document Type	Document	Open	Description	Date
Doc	2239.2-00936		100-10800-002.0	4/16/2007

Remarks

	Mr. Ryan Maguire	3/5/2007
From	Printed Name	Date
Received By	Printed Name	Date

Linked Documents

Document Type	Document	Open	Description	Date
Sub. Pkg.	100-10800-001.0			

Distribution

Recipient	Company	Method	Date
Doug Sherwood	E. C. Matthews Co., Inc.	Message	3/5/2007

Transmittal

Project [2239.2] - PCF - Hospital - Garage **View Date** 3/1/2007

GBBN Architects, Inc.
332 East Eighth St
Cincinnati, OH 45202-2217
Phone: (513) 241-8700
Fax: (513) 241-8873

Transmittal No. 2239.2-00740

To Mr. Brian Hoerr Gilbane 940 Elizabeth St Lexington, KY 40506-0293 USA Phone: (859) 257-4536 Fax: (859) 323-1331	**Date** 3/1/2007 **Items listed are being sent** ☐ Enclosed ☐ Under Separate Cover **CSI Code** 10800 - Toilet Accessories
From Mr. Bryan Korb (GBBN Architects, Inc.)	
Subject Submittal Package 100-10800-001.0	

We are transmitting the following to you:

☐ Product Data ☐ Samples ☐ Shop Drawings ☐ O&M Manuals ☐ Plans
☐ Architectural Drawings ☐ Letters ☐ Specifications ☐ Prints ☐ Addenda
☐ Engineering Drawings ☐ Change Orders ☑ Submittal

Submittals

Pkg. No./Rev.	Item No./Rev.	Description	Copies	Reason	Action
100-10800-001.0	100-10800-002.0	Toilet Accessories	3	Approved as Noted	

Remarks Submittal comments:

See typical mounting heights and dimensions for toilet accessories on "AS" sheet.
Contractor is to coordinate location of owner supplied toilet accessories with UK.

Received By Printed Name Date

Linked Documents

Document Type	Document	Open	Description	Date
Sub. Pkg.	100-10800-001.0			

Distribution

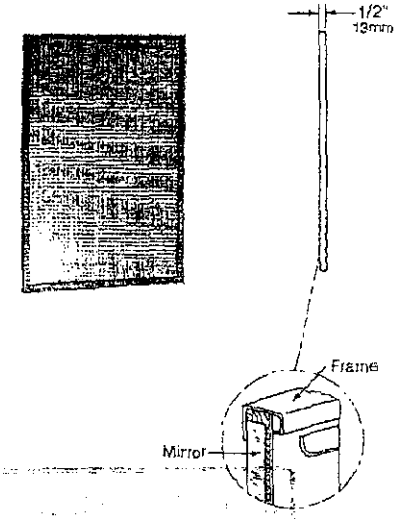
Recipient	Company	Method	Date
Brian Hoerr	Gilbane	Message	3/1/2007

Bobrick

Technical Data

MIRROR WITH STAINLESS STEEL CHANNEL FRAME

B-165 SERIES



SNAP LOCKING DESIGN
(Rear View)

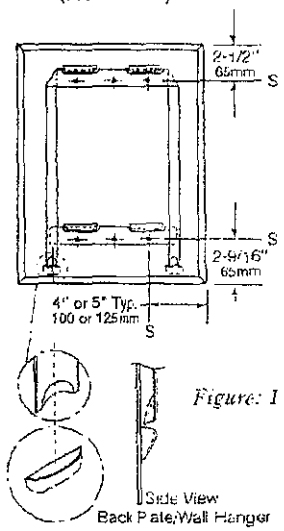


Figure: 1

SCREW LOCKING DESIGN
(Rear View)

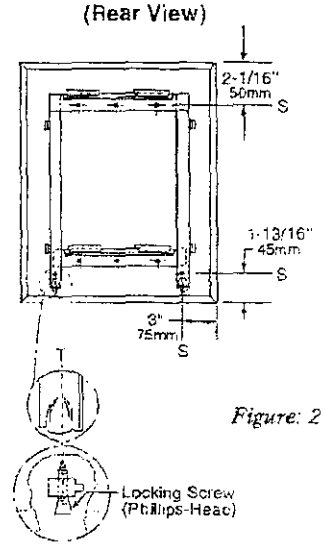


Figure: 2

STANDARD B-165 SERIES MIRRORS

MODEL NO.	OVERALL SIZE W	H
B-165 1624	16" (41cm)	24" (61cm)
B-165 1824	18" (46cm)	24" (61cm)
B-165 1830	18" (46cm)	30" (76cm)
B-165 1836	18" (46cm)	36" (91cm)
B-165 2430	24" (61cm)	30" (76cm)
B-165 2436	24" (61cm)	36" (91cm)
B-165 2448	24" (61cm)	48" (122cm)
B-165 2460	24" (61cm)	60" (152cm)

STANDARD B-165 SERIES MIRRORS

MODEL NO.	OVERALL SIZE W	H
B-165 3636	36" (91cm)	36" (91cm)
B-165 4836	48" (122cm)	36" (91cm)
B-165 6036	60" (152cm)	36" (91cm)

All Other Size Mirrors

Designer's Notes:

1. Special-order sizes available on request.
2. Maximum size mirror available, 72" x 60" (183 x 152cm); minimum size, 12" x 12" (30 x 30cm).
3. All Bobrick framed mirrors are manufactured to overall width and height dimensions. EXAMPLE: A 24" x 36" (61 x 91cm) mirror will be furnished 24" x 36" (61 x 91cm) outside-of-frame to outside-of-frame.
4. To specify special sizes use Series Number followed by width then height in inches. EXAMPLE: B-165 2024
5. Bobrick framed mirrors are manufactured to a tolerance 1/8" (3.2mm).
6. For sufficient space to lift mirror onto wall hanger(s), provide 3-1/4" (85mm) minimum clearance above center line of mounting screw holes.
7. Provide 1" (25mm) minimum clearance at bottom of mirror for engaging locking screws and 1" (25mm) clearance on each side.

MATERIALS:

Frame — Type-430 stainless steel, 1/2" x 1/2" x 3/8" (13 x 13 x 9.5mm) channel with 1/4" (6mm) return at rear with bright polished finish. One piece frame with 90 degree mitered corners. Galvanized steel back has integral horizontal hanging brackets near the top for hanging the mirror and near the bottom to prevent the bottom of the mirror from pulling away from the wall. Locking devices secure mirror to concealed wall hanger. In Screw Locking Design (see figure 2), concealed Philips-head locking screws securely fasten mirror to wall hanger.

Mirror — No. 1 quality, 1/4" (6mm) select float glass; selected for silvering, electrolytically copper-plated by the galvanic process, and guaranteed for 10 years against silver spoilage. Corners are protected by friction-absorbing filler strips; back is protected by full-size, shock-absorbing, water-resistant, nonabrasive, 3/16" (5mm) thick polyethylene padding.

Concealed Wall Hanger — 20-gauge (0.9mm) galvanized steel. Incorporates lower support member, forming rigid rectangle, which engages lower backplate louvers to keep bottom of mirror against wall.

continued . . .

Rev. 5/06 R/B Printed in U.S.A.

INSTALLATION:

Mount wall hanger on wall with screws (furnished by manufacturer) at points indicated by an *S*. For plaster or dry wall construction, provide backing to comply with local building codes, then secure wall hanger with screws furnished. When providing a concealed backing, allow backing to cover minimum range of mounting hole locations shown on drawing. For other wall surfaces, provide fiber plugs or expansion shields for use with screws furnished, or provide 1/8" (3mm) toggle bolts or expansion bolts. Hang mirror on wall hanger with all four backplate louvers engaged behind horizontal wall hanger members. Hang mirror on wall hanger with all four backplate louvers engaged behind horizontal wall hanger members. To do this, mirror must be centered in front of the wall hanger horizontally, pressed flat against the wall approximately 1" (25mm) above final position and then lowered into final position.

Snap Locking Design — Locking devices automatically secure mirror to concealed wall hanger when it is lowered into final position. Locking devices may be unlocked by inserting two flat blade screwdrivers behind each side of mirror near the bottom or under the bottom of the mirror and pulling mirror bottom forward and then up (see figure 3).

Screw Locking Design — Lock mirror to wall hanger by tightening Phillips-head locking screws that are concealed in the bottom of frame at points indicated by a *T*. Mirror may be unlocked from wall hanger by loosening locking screws and lifting mirror off of concealed wall hanger (see figure 4).

SNAP LOCKING DESIGN
(Front View)

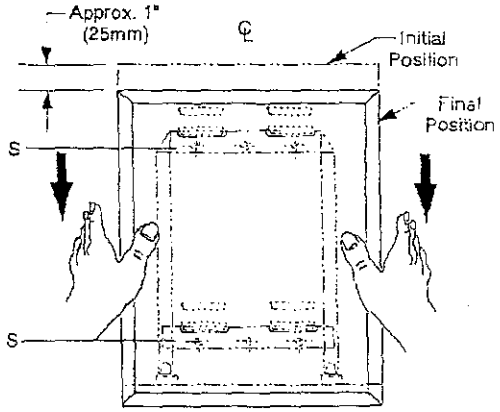


Figure: 3

SCREW LOCKING DESIGN
(Front View)

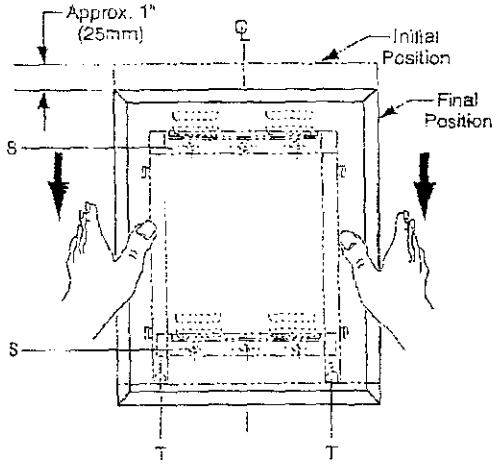


Figure: 4

SPECIFICATION:

Mirror shall have a one-piece type-430 stainless steel channel frame, 1/2" x 1/2" x 3/8" (13 x 13 x 9.5mm), with 90° mitered corners; all exposed surfaces shall have bright polished finish. Select float glass mirror shall be guaranteed for 10 years against silver spoilage. Corners shall be protected by friction-absorbing filler strips and the back shall be protected by full-size, shock-absorbing, water-resistant, nonabrasive, 3/16" (5mm) thick polyethylene padding. Galvanized steel back shall have integral horizontal hanging brackets located at top and bottom for mounting on concealed rectangular wall hanger to prevent the mirror from pulling away from the wall. Locking devices secure mirror to concealed wall hanger. Mirror shall be removable from the wall.

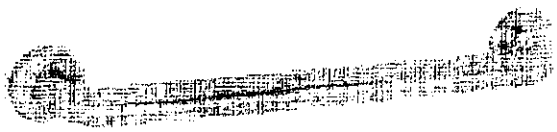
Framed Mirror shall be Model B-165 _____ (insert width and height) of Bobrick Washroom Equipment, Inc., Clifton Park, New York; Jackson, Tennessee; Los Angeles, California; Bobrick Washroom Equipment Company, Scarborough, Ontario; Bobrick Washroom Equipment Pty. Ltd., Australia; and Bobrick Washroom Equipment Limited, United Kingdom.

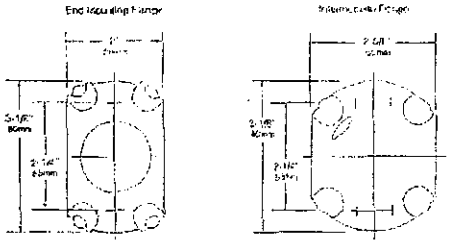
Technical Data

1½" (38mm) DIAMETER STAINLESS STEEL GRAB BARS WITH SNAP FLANGE

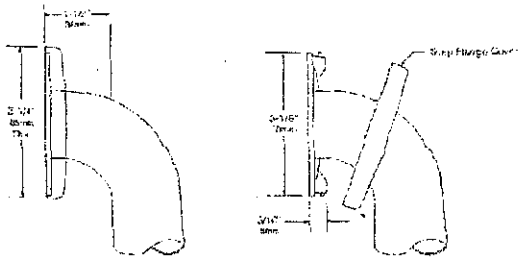
B-6806 SERIES

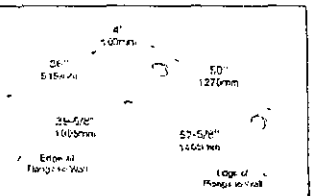
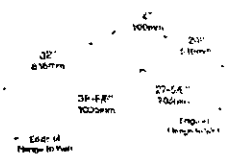
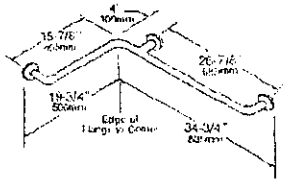
Specify Finish Required: ☐ Satin finish
☐ Satin finish with peened gripping surface; add suffix .99 to model number





1 @ 36"
1 @ 42"



		
HORIZONTAL	VERTICAL	TWO WALL WHEELCHAIR TOILET COMPARTMENT
B-6806 x 12, 18, 24, 30, 36, 42, 48		B-6818 /
		
HORIZONTAL TUB BATH 24 x 36	HORIZONTAL TWO-WALL BAR for 36 x 36 Shower Stall	
B-68616	B-6861	

continued . . .

MATERIALS:

Grab Bar — 18-8 S, type-304, 18-gauge (1.2mm) stainless steel tubing with satin finish. 1-1/2" (38mm) outside diameter. Ends are heliarc welded to flanges. Clearance between the grab bar and wall is 1-1/2" (38mm).

Concealed Mounting Flanges — 18-8 S, type-304, 1/8" (3mm) thick, stainless steel plate: end flanges 2" x 3-1/8" (50 x 80mm) with two holes for attachment to wall. Intermediate flanges 2-5/8" x 3-1/8" (65 x 80mm) wide x 3-1/8" (80mm) diameter.

Snap Flange Covers — 18-8 S, type-304, 22-gauge (0.8mm) drawn stainless steel with satin finish. 3-1/4" (85mm) diameter x 1/2" (13mm) deep. Each cover snaps over mounting flange to conceal mounting screws.

STRENGTH:

Bobrick grab bars that provide 1-1/2" (38mm) clearance from wall can support loads in excess of 900 pounds (408kg) if properly installed. Other grab bar configurations can support loads in excess of 250 pounds (113kg) if properly installed, complying with barrier-free accessibility guidelines (including ADAAG in the U.S.A.) for structural strength.

Warning: *Grab bars are no stronger than the anchors or walls to which they are attached and, therefore, must be firmly secured in order to support the loads for which they are intended.*

INSTALLATION:

Provide concealed anchor device or backing as specified or required in accordance with local building codes before wall is finished. Fasten concealed mounting flanges to anchor device or backing with two screws in each flange. Snap flange covers over each mounting flange to conceal mounting screws. Concealed anchor devices and mounting screws are not included with Bobrick grab bars and must be specified as an accessory.

For Grab Bars with an Intermediate Flange(s), Pull Snap-Flange Covers away from mounting flanges. Place grab bar in desired mounting location. Use intermediate flange as a template to mark location of mounting screws at intermediate flange only. Mark screw locations at the center of the slot in the middle of the double-keyhole shaped mounting holes (2) in the intermediate flange. Remove grab bar from wall. Drive the intermediate flange mounting screws into wall at marked locations. **Note:** Make sure to leave a space of just over 1/8" (3.17mm) between the underside of the screw head and the wall. Install grab bar on the wall by placing the round ends of the intermediate flange double-keyhole shaped mounting holes over the mounting screws. (2) are located in the middle of the flange slots. Install the mounting screws into the wall at the end flanges and secure tightly. Tighten the mounting screws at the intermediate flange. Press all snap-flange covers into place to conceal mounting flanges.

Note: Recommend use of 1/4" or #14 (M6.3) sheet metal or wood screws to install Intermediate Flange. #12 (M5.5) screws may also be used.

Important Notes:

1. **Mounting Kits** — Bobrick has a selection of mounting screws and fasteners available for different types of installations; one Bobrick mounting kit is required for each flange.

Mounting Kit No.	Description
252-30	Consists of (3) #14 x 2½" (M6.3 x 64mm) type-304 stainless steel, Phillips round-head, sheet-metal screws
2521-30	Consists of (3) 1/4"–20 x 3½" (M6.3–1 x 89mm) type-304 stainless steel, Phillips round-head, machine screws with plated-steel toggle nuts.
2522-30	Consists of (3) 1/4"–20 x 2" (M6.3–1 x 51mm) type-304 stainless steel, Phillips round-head, machine screws with metal expansion shields.

2. **Concealed Anchor Devices** — Bobrick has a complete selection of grab bar anchor devices available for all types of installations. All Bobrick concealed anchor devices include stainless steel machine screws to be used for attaching grab bars to anchors.

Concealed Anchor No.	Type of Installation
2562 Series	Anchor plate for stud wall construction.
2573	Anchor for solid wall construction; 1 anchor required for each flange.
2583	Anchor for installation of grab bar through ceramic tile; 1 anchor required for each flange

3. **Grab Bar Fastener** — Bobrick has a grab bar fastening system that secures all Bobrick grab bar series; one Bobrick fastener is required for each flange. Install grab bar without backing in wall requires minimum 5/8" (16mm) thick painted or tiled drywall.

WingIt™ Fastener No.	Description
251-4	Consists of (3) 10–32 x 5/16" round-head, Phillips 18/8 stainless steel screws. (1) WingIt grab bar fastener.

SPECIFICATION:

Grab bar shall be type-304 stainless steel with satin finish. Grab bar shall have 18-gauge (1.2mm) wall thickness and 1 1/2" (38mm) outside diameter. Clearance between the grab bar and wall shall be 1-1/2" (38mm). Concealed mounting flanges shall be 1/8" (3mm) thick stainless steel plate, 2" x 3-1/8" (50 x 80mm), and equipped with two screw holes for attachment to wall. Flange covers shall be 22 gauge (0.8mm), 3-1/4" (85mm) diameter x 1/2" (13mm) deep, and shall snap over mounting flange to conceal mounting screws and/or WingIt fasteners. Ends of grab bar shall pass through concealed mounting flanges and be heliarc welded to form one structural unit. Grab bar shall comply with barrier-free accessibility guidelines (including ADAAG in the U.S.A.) for structural strength. Manufacturer's service and parts manual shall be provided to the building owner/manager upon completion of project.

Grab Bar shall be Model _____ (insert model number) of Bobrick Washroom Equipment, Inc., Clifton Park, New York; Jackson, Tennessee; Los Angeles, California; Bobrick Washroom Equipment Company, Scarborough, Ontario; Bobrick Washroom Equipment Pty. Ltd., Australia; and Bobrick Washroom Equipment Limited, United Kingdom.

GILBANE
University of Kentucky
Patient Care Facility
Gilbane Project No. 18-3966

REVIEWED

- ☐ 010-Huguelet
- ☒ 020-Garage
- ☐ 030-Infrastructure
- ☐ 040-PCF Foundation
- ☐ 050-PCF Core/Shell
- ☐ 060-TowerUp Fit

Bid Package No. 100
Submittal No. 100-10800-001
Spec. Sect/Para. —
Reviewed By RH
Date 7/12/2007

This review does not constitute nor does it assume design responsibility nor does it relieve the trade contractor's supplier from complying with the contract requirements, coordinating their work with other trade contractors and verifying field dimensions.

THIS REVIEW BY GBBN ARCHITECTS, INC., IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND IS NOT AN APPROVAL OF THIS DRAWING OR SET OF DRAWINGS. THE COMMENTS MADE DO NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH THE PROJECT DRAWINGS, SPECIFICATIONS AND OTHER CONTRACT DOCUMENTS. CONTRACTOR IS SOLELY RESPONSIBLE FOR: ALL DIMENSIONS AND QUANTITIES, ALL FABRICATION, DELIVERY AND ERECTION; ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES; ALL COORDINATION WITH ALL OTHER CONTRACTORS, SUPPLIERS AND OTHERS; PERFORMING ALL WORK IN A SAFE AND PROPER MANNER.

NO EXCEPTIONS TAKEN ☐
FURNISH AS CORRECTED ☒
REVISE AND RESUBMIT ☐
NO REVIEW - INCOMPLETE ☐
SUBMIT SPECIFIED ITEMS ☐
REJECTED ☐

DATE 07.12.07 BY SAP

GBBN ARCHITECTS, INC.
ARCHITECTURE, INTERIORS, PLANNING, ENGINEERING
332 EAST 8TH STREET, CINCINNATI, OHIO 45202-2217 (513) 241-8700
325 WEST MAIN STREET, LEXINGTON, KENTUCKY 40507 (859) 381-8787
BEIJING XI CHENG DISTRICT, TONG LI GE ROAD NO 85, BEIJING, CHINA 100031 86 18 88386730

Gilbane

Transmittal

Project [2239.2] - PCF - Hospital - Garage

View Date 2/18/2008

Gilbane
940 Elizabeth St
Lexington, KY 40506-0293
Phone: (859) 257-4536
Fax: (859) 323-1331

Transmittal No. 2239.2-00825

To	Mr. Doug Sherwood E. C. Matthews Co., Inc. 2265 Harrodsburg Road Lexington, KY 40504 USA Phone: (859) 278-3131 Fax: (859) 277-7903
From	Mr. Ryan Maguire (Gilbane)
Subject	Submittal Package 100-10900-001.0

Date 4/6/2007

Items listed are being sent

☑ Enclosed

☐ Under Separate Cover

Via U.S. Mail

CSI Code 10990 - Miscellaneous Specialties

We are transmitting the following to you:

☐ Product Data ☐ Samples ☐ Shop Drawings ☐ O&M Manuals ☐ Plans
☐ Architectural Drawings ☐ Letters ☐ Specifications ☐ Prints ☐ Addenda
☐ Engineering Drawings ☐ Change Orders ☑ Submittal

Submittals

Pkg. No./Rev.	Item No./Rev.	Description	Copies	Reason	Action
100-10900-001.0	100-10900-005.0	Fire Extinguishers and Cabinets	2	Approved as Noted	

Linked Documents	Document Type	Document	Open	Description	Date
	Doc	2239.2-01109		100-10900-005.0	5/25/2007

Remarks

From	Mr. Ryan Maguire	4/6/2007
	Printed Name	Date
Received By	Printed Name	Date

Linked Documents

Document Type	Document	Open	Description	Date
Sub. Pkg.	100-10900-001.0			

Distribution

Recipient	Company	Method	Date
Doug Sherwood	E. C. Matthews Co., Inc.	Message	4/6/2007

1) WHICH [illegible] MANUFACTURER?

2) CONTRACTOR TO VERIFY [illegible] FIRE EXTINGUISHERS W/ [illegible] LS01A & LS02

SCHILLER
Architectural Hardware And Door Systems

FIRE EXTINGUISHERS AND CABINETS

FOR

U.K. PARKING GARAC

CONTRACTOR: **E.C. MATTHEWS CO.**
2265 HARRODSBURG ROAD
LEXINGTON, KY 40504

SUPPLIER: **SCHILLER ARCHITECTURAL**
1032 MAJAUN DRIVE
LEXINGTON, KY 40511

MANUFACTURER: **LARSENS**

PREPARED BY: **CHRISTY CROSS †**
02-14-07

THIS REVIEW BY GBBN ARCHITECTS, INC., IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND IS NOT AN APPROVAL OF THIS DRAWING OR SET OF DRAWINGS. THE COMMENTS MADE DO NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH THE PROJECT DRAWINGS, SPECIFICATIONS AND OTHER CONTRACT DOCUMENTS. CONTRACTOR IS SOLELY RESPONSIBLE FOR: ALL DIMENSIONS AND QUANTITIES, ALL FABRICATION, DELIVERY AND ERECTION; ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES; ALL COORDINATION WITH ALL OTHER CONTRACTORS, SUPPLIERS AND OTHERS; PERFORMING ALL WORK IN A SAFE AND PROPER MANNER.

NO EXCEPTIONS TAKEN ☐
FURNISH AS CORRECTED ☒
REVISE AND RESUBMIT ☐
NO REVIEW - INCOMPLETE ☐
SUBMIT SPECIFIED ITEMS ☐
REJECTED ☐
DATE 4/4/07 BY EK

GBBN ARCHITECTS, INC.
ARCHITECTURE, INTERIORS, PLANNING, ENGINEERING
□ 332 EAST 8TH STREET, CINCINNATI, OHIO 45202-2217 (513) 241-8700
□ 325 WEST MAIN STREET, LEXINGTON, KENTUCKY 40507 (859) 381-8787

GILBANE
University of Kentucky
Patient Care Facility
Gilbane Project No. 18-3966
REVIEWED
☐ 010-Huguelet ☒ 020-Garage
☐ 030-Infrastructure ☐ 040-PCF Foundation
☐ 050-PCF Core/Shell ☐ 060-TowerUp Fit

Bid Package No. 100
Submittal No. 100-10500-001
Spec. Sect/Para. _____
Reviewed By KH
Date 2/21/07

This review does not constitute nor does it assume design responsibility nor does it relieve the trade contractor's supplier from complying with the contract requirements, coordinating their work with other trade contractors and verifying field dimensions.

2-21-07

Larsen's® Fire Extinguishers — MP,DC & HT Series

Submittal and Detail Sheet

PROJECT: U.K. Parking Garage LOCATION: Lexington Ky

MODEL NUMBER: MP6 QUANTITY: 98

ARCHITECT: CONTRACTOR: EC Mathews

DATE: 2-14-07 DISTRIBUTOR: Schiller Hardware

MP SERIES-Multi-Purpose Dry Chemical

These units contain specially fluidized and siliconized mono ammonium phosphate powder which smothers and breaks the chain reaction on Class B fires, fuses and insulates Class A fires, and, as a non-conductor of electricity, is effective on Class C fires.

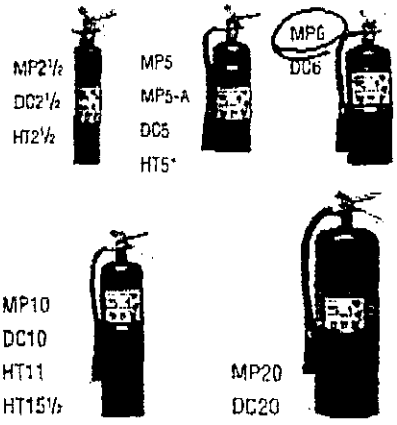
DC SERIES-Regular Dry Chemical

These units contain specially siliconized sodium bicarbonate powder with free flowing and non-caking additives, suitable for fires in flammable liquids, and energized electrical equipment.

All multi-purpose and regular dry chemical units feature: Heavy DOT steel cylinders * Rugged metal valves and siphon tubes * Replaceable molded valve stem seals * Corrosion and impact resistant polyester/epoxy paint finish Pull pin-upright squeeze grip operation * Approved to -65 degrees F. * Non-toxic * Pressure gauges * Contact factory if non-ferrous cylinders are required.

HT SERIES-Halotron I

Halotron I is an EPA approved clean agent which discharges as a rapidly evaporating liquid, leaving no residue. It effectively extinguishes Class A, B and C fires and is intended for use in areas formerly protected by Halon 1211.

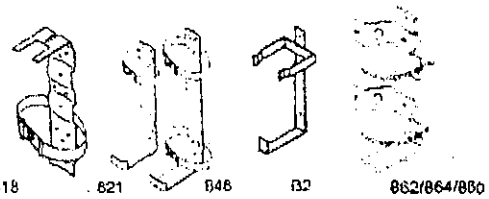


*Note: HT5 is equipped with nozzle in lieu of hose and horn.

MODEL NUMBER	NOMINAL CAPACITY	SHIPPING WEIGHT	CYLINDER DIAMETER	OVERALL HEIGHT	OVERALL WIDTH	UL RATING	STANDARD BRACKET*	OPTIONAL BRACKET**
MP2½	2½ lbs.	5½ lbs.	3 in.	15½ in.	5¾ in.	1A-10B:C	817	860
MP5	5 lbs.	9¼ lbs.	4¼ in.	15¼ in.	7¼ in.	2A-10B:C	1521	B-2,818,821,860
MP5-A	5 lbs.	9¼ lbs.	4¼ in.	15¼ in.	7¼ in.	3A-10B:C	1521	821,860
MP6	6 lbs.	12¾ lbs.	5 in.	16 in.	7¾ in.	3A-40B:C	5525	808,862
MP10	10 lbs.	18 lbs.	5 in.	20 in.	7¾ in.	4A-80B:C	5525	B-2, 846, 862
MP20	20 lbs.	38 lbs.	7 in.	23¼ in.	10¼ in.	20A-120B:C	1007	864
DC2½	2½ lbs.	5½ lbs.	3 in.	15½ in.	5-3/4 in.	10B:C	817	860
DC5	5½ lbs.	9½ lbs.	4¼ in.	15¼ in.	7¼ in.	40B:C	1521	B-2, 818, 821, 860
DC6	6 lbs.	13 lbs.	5 in.	16¼ in.	8½ in.	40B:C	1007	808, 862
DC10	10 lbs.	18 lbs.	5 in.	20 in.	7-3/4 in.	60B:C	5525	B-2, 846, 862
DC20	20 lbs.	38 lbs.	7 in.	23¼ in.	10¼ in.	120B:C	1007	864
HT2½	2½ lbs.	5¼ lbs.	3 in.	15½ in.	5½ in.	2B:C	817	860
HT5	5 lbs.	9½ lbs.	4¼ in.	15¼ in.	5-3/4 in	5B:C	818	860
HT11	11 lbs.	22½ lbs.	6 in.	21½ in.	9¼ in.	1A:10B:C	833	862
HT15½	15½ lbs.	27½ lbs.	6 in.	21½ in.	9¼ in.	2A:10B:C	833	862

STANDARD BRACKETS*

OPTIONAL BRACKETS*



*NOTE: *Standard brackets are included with all extinguishers at no additional cost. If specified, optional brackets are only available at additional cost. All of the above brackets are designed to accommodate Larsen's extinguishers. While most comparably sized extinguishers usually will function with the above brackets, Larsen's cannot assume responsibility for variations in cylinder dimensions among various extinguisher suppliers.*

LARSEN'S MANUFACTURING COMPANY
7421 Commerce Lane N.E., Mpls, MN 55432
Phone: (763) 571-1181 FAX: (763) 571-6900
www.larsensmfg.com

FLORIDA DIVISION:
3130 N.W. 17th Street, Ft. Laudordale, FL 33311
Phone: (954) 486-3325 FAX: (954) 486-3352

Larsen's®

Architectural Series Fire Extinguisher Cabinets
Submittal and Detail Sheet

PROJECT: UK Parking Garage
LOCATION: Lexington, KY
MODEL NUMBER: 2409-1eR
QUANTITY: 13
ARCHITECT:
CONTRACTOR: EC Matthews
DATE: 02-14-07
DISTRIBUTOR: Schiller Hardware

SPECIFICATIONS:

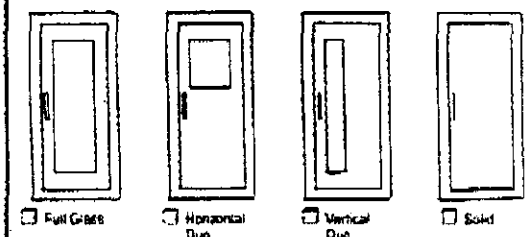
All recessed and semi-recessed cabinets and surface-mounted steel cabinets have a heavy gauge, white baked enamel box. Surface-mounted cabinets with aluminum door and trim have a box constructed entirely of clear or color anodized aluminum. Surface-mounted cabinets with stainless steel door and trim have a box constructed entirely of 304 stainless steel with a #4 finish.

Steel and stainless steel cabinets have a full ½" thick hollow metal heavy gauge door. Trims and doors feature one piece construction with satin finish pull handle, continuous matching hinge, and self-adjusting roller catch. Baked white enamel finish is standard for steel units. Stainless steel cabinets have a #4 finish, 304 stainless steel.

Aluminum cabinet doors and trims are extruded or fabricated aluminum with clear satin anodized finish. Aluminum door is ½" thick with satin finish matching pull handle and hinge. Color anodized finishes are available as options.

STEP 1: Select cabinet model number from the dimensions on page 2 and indicate on the top of this sheet. To specify aluminum trim and door, use the prefix, "AL" before the model number. To specify stainless steel trim and door, use the prefix, "SS" before the model number. **Note: Rough opening dimensions are larger for fire-rated cabinets. Please refer to separate Fire-Rated Cabinet Submittal and Detail Sheet.**

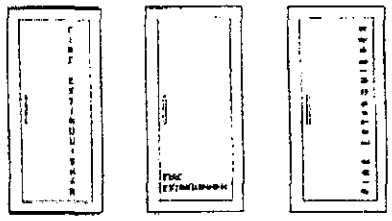
STEP 2: Select Door Style and Door Glazing (if applicable) below:



DOOR GLAZING:
- ☑ Clear Acrylic (Standard)
- ☐ Clear Tempered Safety Glass
- ☐ Clear Wire Glass
- ☐ Laminated Safety Glass
- ☐ Bronze Acrylic
- ☐ Gray Acrylic
- ☐ (Other) _____

* Note, Solid Door with Larsen-Loc® can be specified as Institutional Door (access only with key) by deleting the pull handle and decal.

STEP 5: Select Optional* Die Cut Lettering Style and Color:

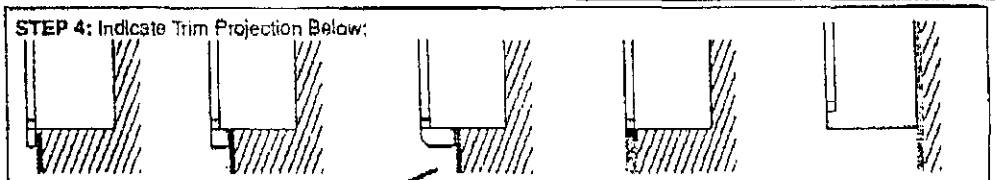


- ☐ Black
- ☐ White
- ☑ Red
- ☐ Other _____

* Factory applied die cut lettering is available at additional cost. Standard application of lettering is on the metal section of the door – not on the glazing. Decals also are available and are shipped loose for jobsite application.

STEP 3: Indicate Trim and Door Material:
- ☑ Steel
- ☐ Aluminum (AL)
- ☐ Stainless (SS)
- ☐ Other (specify) _____

STEP 4: Indicate Trim Projection Below:



† Trimless cabinets must be installed before the drywall because their plaster stops must be behind the drywall. Trimless cabinets are not recommended for block wall installation.

* See back of this sheet or attached sheet for Recessed Handle (required only for 4" return trims when ADA wall projection compliance is necessary)

LARSEN'S MANUFACTURING COMPANY - www.larsensmfg.com
7421 Commerce Lane N.E., Minneapolis, MN 55432 Phone: (763) 571-1161 FAX: (763) 571-6900
FLORIDA DIVISION: 3130 N.W. 17th Street, Ft. Lauderdale, FL 33311 Phone: (954) 486-3325 FAX: (954) 486-3352

1) PROVIDE LOCK PER 10900-2.1 C

2) CABINET INTERIOR TO BE ELECTROSTATICALLY APPLIED EPOXY.

CABINET DIMENSIONS - ARCHITECTURAL SERIES

Model Number	Trim Style and Projection	Inside Box Dimensions			Outside Trim Dimensions**		Rough Opening***			Recommended Extinguisher Capacity
		Height	Width	Depth	Height	Width	Height	Width	Depth	
☐ __ 2409-R1	Rec. 5/16"	24"	9⅛"	5"*	27⅛"	13"	25"	10⅛"	5¼"	MP 2½, MP5,MP5-A, DC2½,DC5, HT2½"HT5
☐ __ 2409-5R	Semi-Rec. 1½"	24"	9⅛"	5"*	27⅛"	13"	25"	10⅛"	4"	
☐ __ 2409-R3	Semi-Rec. 2½"	24"	9⅛"	5"*	27⅛"	13"	25"	10⅛"	3"	
☐ __ 2409-R2	Rec. 5/16"	24"	9⅛"	6"	27⅛"	13"	25"	10⅛"	6¼"	MP 2½,MP5, MP5-A, DC2½,DC5 MP8,MP10 DC6,DC10,CD5 HT2½", HT5
☐ __ 2409-R7	Semi-Rec. 3½"	24"	9⅛"	6"	27⅛"	13"	25"	10⅛"	5"	
☐ __ 2409-5R	Semi-Rec. 2½"	24"	9⅛"	6"	27⅛"	13"	25"	10⅛"	4"	
☐ __ 2409-R4	Semi-Rec. 3½"	24"	9⅛"	6"	27⅛"	13"	25"	10⅛"	3"	
☐ __ 2409-RM	Semi-Rec. 4½"	24"	9⅛"	6"	27⅛"	13"	25"	10⅛"	2"	
☐ __ 2409-RT	Trimless	24"	9⅛"	6"	-	-	†	†	6½"	
☐ __ 2409-SM	Surface Mounted	27½"	13"	6"	27½"	13"	-	-	-	
☐ __ 2409-RA	Semi-Rec. 4"	24"	9⅛"	6"	27⅛"	13"	25"	10⅛"	2½"	
* Depth is 4¾" when supplied with aluminum door and trim. The AL2409-5R has a 1¼" square trim.										
☐ __ 2712-R	Rec. 5/16"	27"	12"	8"	30⅛"	15⅛"	28"	13"	8¼"	All of Above, PW 2½",MP20, DC20,CD10 WC-GL HT11, HT15½"
☐ __ 2712-RK	Semi-Rec. 1¼"	27"	12"	8"	30⅛"	15⅛"	28"	13"	7¼"	
☐ __ 2712-RL	Semi-Rec. 2½"	27"	12"	8"	30⅛"	15⅛"	28"	13"	6"	
☐ __ 2712-RM	Semi-Rec. 4½"	27"	12"	8"	30⅛"	15⅛"	28"	13"	4"	
☐ __ 2712-RT	Trimless	27"	12"	8"	-	†	†	†	8½"	
☐ __ 2712-SM	Surface Mounted	30½"	15⅛"	8½"	30⅛"	15⅛"	-	-	-	
☐ __ 2712-RA	Semi-Rec. 4"	27"	12"	8"	30⅛"	15⅛"	28"	13"	4½"	
☐ __ 2720-R	Rec. 5/16"	27"	20"	8"	30⅛"	23⅛"	28"	21"	8¼"	Two Each of The listed: PW2½",MP10, DC10,MP20, DC20,CD5, D10 WC-GL,HT11, HT15½"
☐ __ 2720-RK	Semi-Rec. 1¼"	27"	20"	8"	30⅛"	23⅛"	28"	21"	7¼"	
☐ __ 2720-RL	Semi-Rec. 2½"	27"	20"	8"	30⅛"	23⅛"	28"	21"	6"	
☐ __ 2720-RM	Semi-Rec. 4½"	27"	20"	8"	30⅛"	23⅛"	28"	21"	4"	
☐ __ 2720-RT	Trimless	27"	20"	8"	-	-	†	†	8½"	
☐ __ 2720-SM	Surface Mounted	30½"	23⅛"	8½"	30⅛"	23⅛"	-	-	-	
☐ __ 2720-RA	Semi-Rec. 4"	27"	20"	8"	30⅛"	23⅛"	28"	21"	4½"	
☐ __ 3012-R	Rec. 5/16"	30"	12"	8"	33⅛"	15⅛"	31"	13"	8⅛"	Same as 2712
☐ __ 3012-RK	Semi-Rec. 1¼"	30"	12"	8"	33⅛"	15⅛"	31"	13"	7¼"	
☐ __ 3012-RL	Semi-Rec. 2½"	30"	12"	8"	33⅛"	15⅛"	31"	13"	6"	
☐ __ 3012-RM	Semi-Rec. 4½"	30"	12"	8"	33⅛"	15⅛"	31"	13"	4"	
☐ __ 3012-RT	Trimless	30"	12"	8"	-	-	T	†	8½"	
☐ __ 3012-SM	Surface Mounted	33⅛"	15⅛"	8½"	33⅛"	15⅛"	-	-	-	
☐ __ 3012-RA	Semi-Rec. 4"	30"	12"	8"	33⅛"	15⅛"	31"	13"	4½"	
☐ __ 3612-R	Rec. 5/16"	36"	12"	8"	39⅛"	15⅛"	37"	13"	8¼"	Same as 2712
☐ __ 3612-RK	Semi-Rec. 1¼"	36"	12"	8"	39⅛"	15⅛"	37"	13"	7¼"	
☐ __ 3612-RL	Semi-Rec. 2½"	36"	12"	8"	39⅛"	15⅛"	37"	13"	6"	FB 3612 OPTION: ☐ w/Shelf & Fire Blanket
☐ __ 3612-RM	Semi-Rec. 4½"	36"	12"	8"	39⅛"	15⅛"	37"	13"	4"	
☐ __ 3612-RT	Trimless	36"	12"	8"	-	-	1	†	8⅛"	
☐ __ 3612-SM	Surface Mounted	39⅛"	15⅛"	8½"	39⅛"	15⅛"	-	-	-	
☐ __ 3612-RA	Semi-Rec. 4"	36"	12"	8"	39⅛"	15⅛"	37"	13"	4½"	
☐ __ M3216-R	Rec. 5/16"	32"	16"	8"	35⅛"	19⅛"	33"	17"	8¼"	PW2½",MP20, DC20,CD10, CD15, WM2½"
☐ __ M3216-RK	Semi-Rec. 1¼"	32"	16"	8"	35⅛"	19⅛"	33"	17"	7¼"	
☐ __ M3216-RL	Semi-Rec. 2½"	32"	16"	8"	35⅛"	19⅛"	33"	17"	6"	
☐ __ M3216-RM	Semi-Rec. 4½"	32"	16"	8"	35⅛"	19⅛"	33"	17"	4"	
☐ __ M3216-RT	Trimless	32"	16"	8"	-	-	†	†	8⅛"	
☐ __ M3216-SM	Surface Mounted	35⅛"	19⅛"	8½"	35⅛"	19⅛"	-	-	-	
☐ __ M3216-RA	Semi-Rec. 4"	32"	16"	8"	35⅛"	19⅛"	33"	17"	4½"	

† Trimless cabinets must be installed before the drywall because their plaster stops must be behind the drywall. Trimless cabinets are not recommended for block wall installation

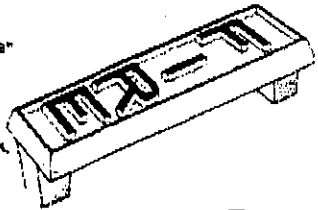
** Deduct ¾" from HxW dimensions for cabinets with aluminum trim.

*** **Rough openings are larger for fire-rated cabinets. Please refer to Fire-rated Extinguisher Cabinet Submittal and Detail Sheet.**

NOTE: Semi-recessed and surface-mounted cabinet compliance with ADA wall projection guidelines depends on several location and installation issues. Please refer to page 2 of Larsen's 10520/LAR Catalog.

☐ OPTIONAL "FIRE" HANDLE

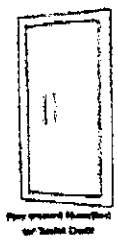
Optional die cast "Fire" Handle is available at additional cost. Natural finish is standard. Optional finishes are red, black, and white.

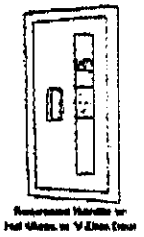


☐ Standard ☐ Red ☐ Black ☐ White

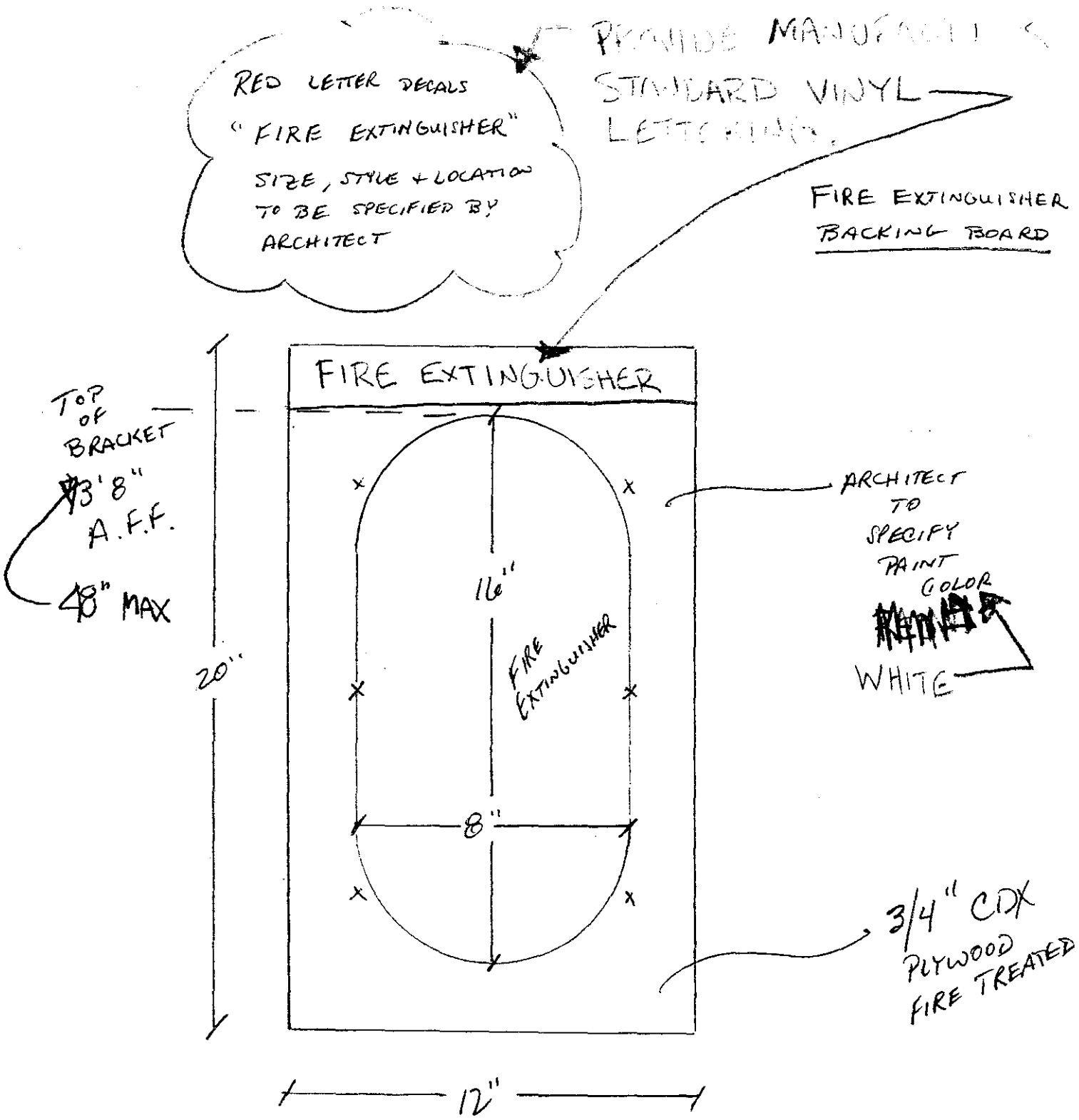
☐ OPTIONAL RECESSED HANDLE

Optional recessed handle is available at additional cost for Solid, H-Duo, V-Duo, or Full Glass Doors. Larsen-Loc® is also available with recessed handle. The recessed handle must be specified with 4" projecting trims in order for the cabinet to comply with ADA wall projection guidelines.

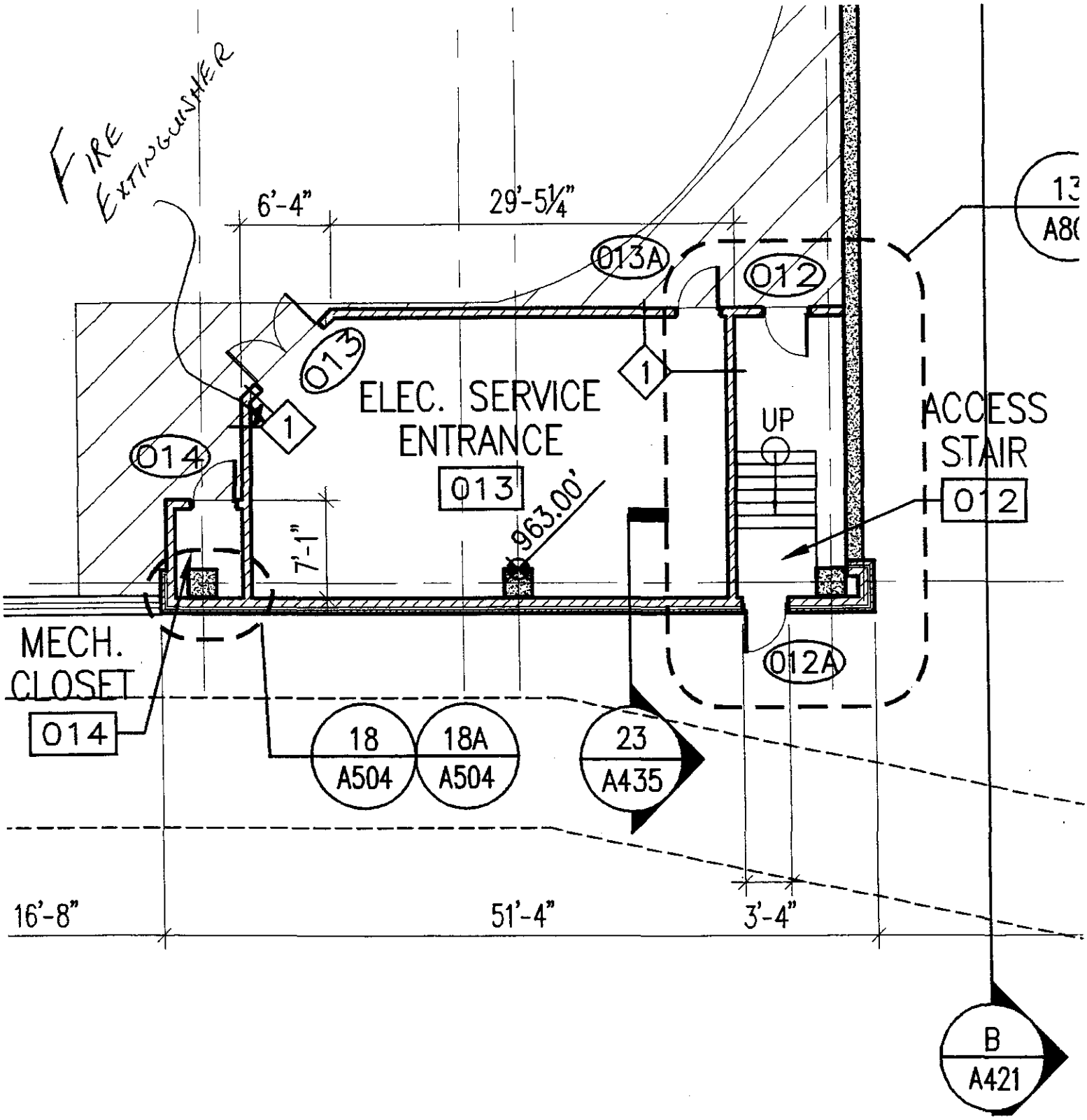


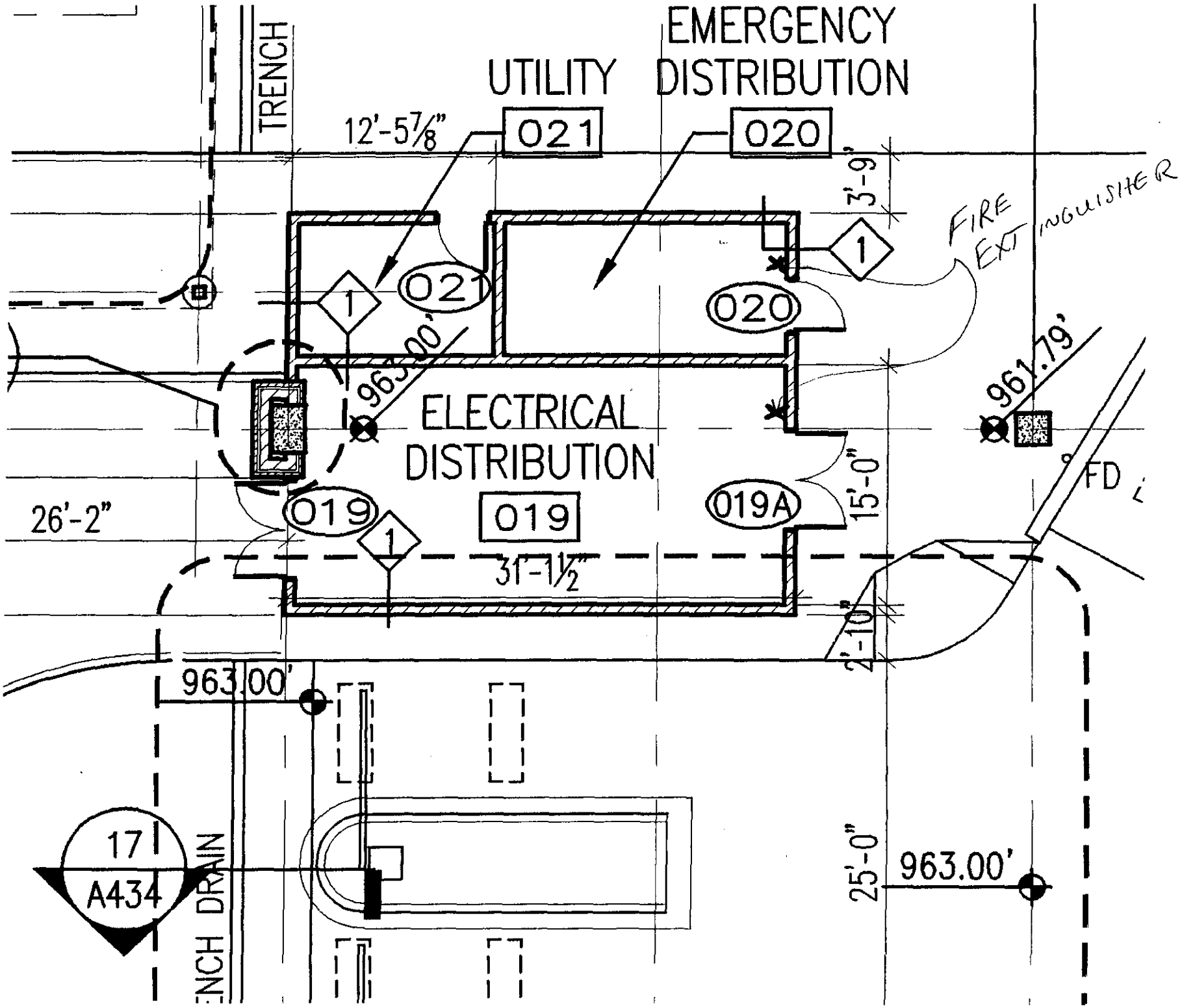


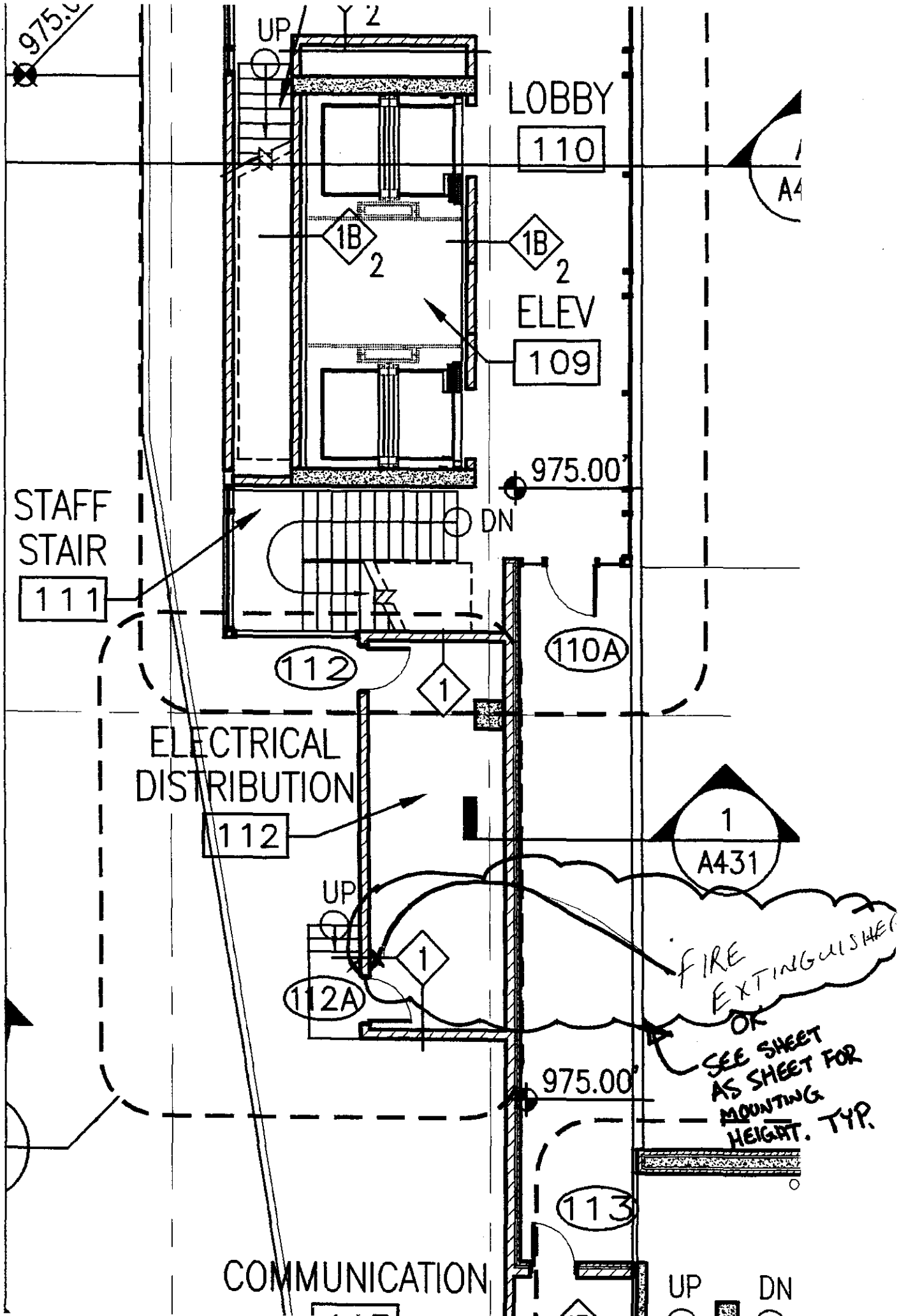
LARSEN'S MANUFACTURING COMPANY - www.larsensmfg.com
7421 Commerce Lane N.E., Mpls. MN 55432 Phone: (763) 571-1181 FAX: (763) 571-6900
FLORIDA DIVISION: 3130 N.W. 17th Street, Ft. Lauderdale, FL 33311 Phone: (954) 486-3325 FAX: (954) 486-3352



X = MOUNTING SCREW LOCATION
1/4" x 2 3/4" TAPCON


FIRE EXTINGUISHER
6'-4"
29'-5¼"
013A
012
013
ELEC. SERVICE ENTRANCE
013
1
1
014
UP
ACCESS STAIR
012
963.00'
7'-1"
MECH. CLOSET
014
012A
18
A504
18A
A504
23
A435
16'-8"
51'-4"
3'-4"
B
A421


TRENCH
UTILITY
EMERGENCY
DISTRIBUTION
12'-5⅞"
021
020
3'-9"
FIRE EXT INGUISHER
1
021
020
963.00'
961.79'
ELECTRICAL
DISTRIBUTION
019
019A
019
15'-0"
26'-2"
31'-1½"
FD
2'-10"
963.00'
17
A434
25'-0"
963.00'


975.0
UP
LOBBY
110
1B 2
1B 2
ELEV
109
975.00'
STAFF
STAIR
111
DN
110A
112
1
ELECTRICAL
DISTRIBUTION
112
1
A431
UP
1
112A
FIRE EXTINGUISHER
OK
SEE SHEET
AS SHEET FOR
MOUNTING
HEIGHT. TYP.
975.00'
113
COMMUNICATION
UP
DN

GILBANE
University of Kentucky
Patient Care Facility
Gilbane Project No. 18-3966

REVIEWED

☐ 010-Huguelet ☒ 020-Garage
☐ 030-Infrastructure ☐ 040-PCF Foundation
☐ 050-PCF Core/Shell ☐ 060-TowerUp Fit

Bid Package No. 100
Submittal No. 100-05500-013
Spec. Sect/Para. _____
Reviewed By BH
Date 1/24/08

This review does not constitute nor does it assume design responsibility nor does it relieve the trade contractor's supplier from complying with the contract requirements, coordinating their work with other trade contractors and verifying field dimensions.

PC-013
Htm-014

THIS REVIEW BY GBBN ARCHITECTS, INC., IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND IS NOT AN APPROVAL OF THIS DRAWING OR SET OF DRAWINGS. THE COMMENTS MADE DO NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH THE PROJECT DRAWINGS, SPECIFICATIONS AND OTHER CONTRACT DOCUMENTS. CONTRACTOR IS SOLELY RESPONSIBLE FOR: ALL DIMENSIONS AND QUANTITIES, ALL FABRICATION, DELIVERY AND ERECTION; ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES; ALL COORDINATION WITH ALL OTHER CONTRACTORS, SUPPLIERS AND OTHERS; PERFORMING ALL WORK IN A SAFE AND PROPER MANNER.

NO EXCEPTIONS TAKEN ☐
FURNISH AS CORRECTED ☒
REVISE AND RESUBMIT ☐
NO REVIEW - INCOMPLETE ☐
SUBMIT SPECIFIED ITEMS ☒
REJECTED ☐

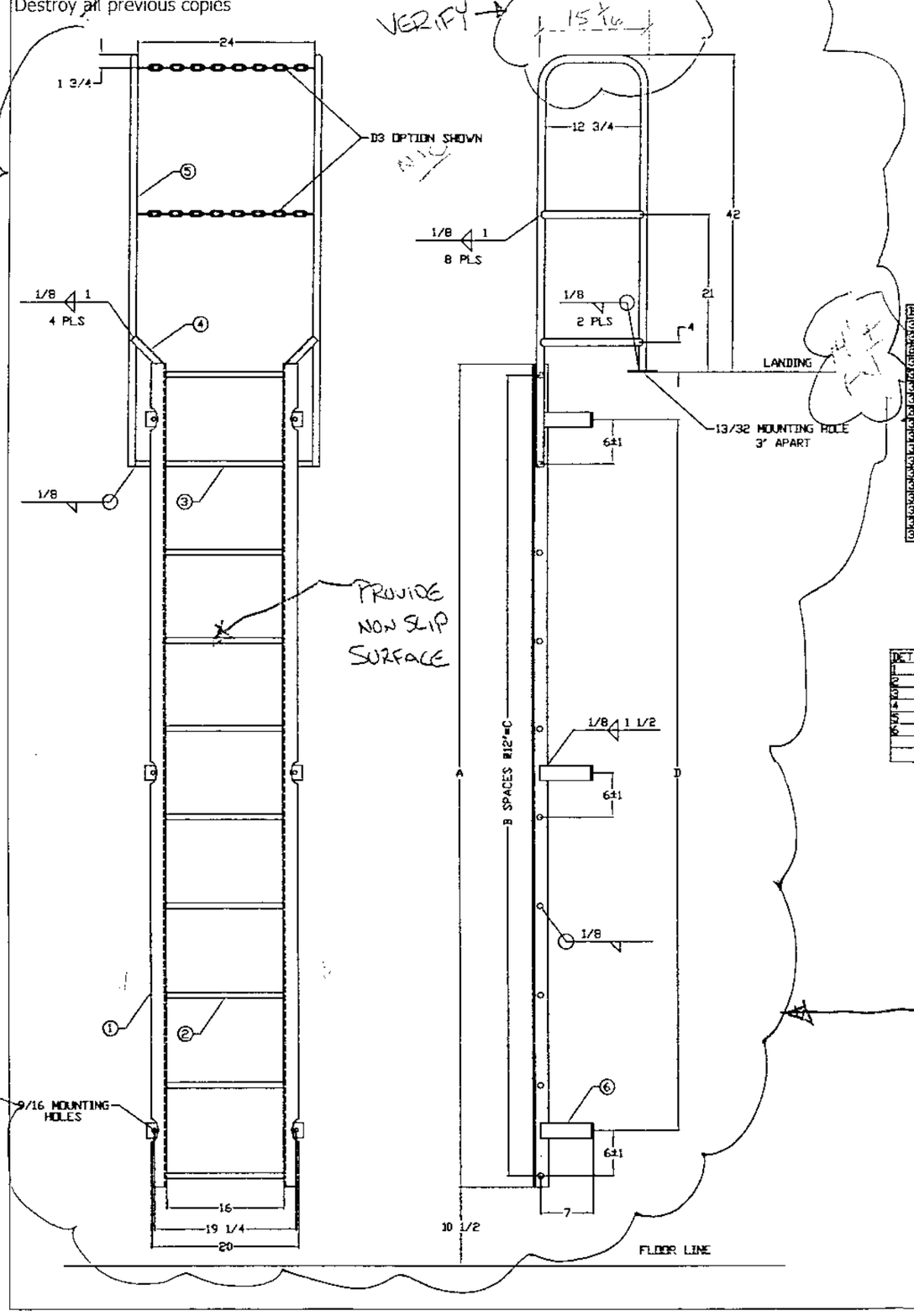
DATE 1-29-08 BY BK

GBBN ARCHITECTS, INC.
ARCHITECTURE, INTERIORS, PLANNING, ENGINEERING
☐ 332 EAST 8TH STREET, CINCINNATI, OHIO 45202-2217 (513) 241-8700
☐ 325 WEST MAIN STREET, LEXINGTON, KENTUCKY 40507 (859) 381-8787

G:\3057\C0570003revE.dwg, 1/14/2008 4:19:46 PM, KS; This copy may contain changes,,,

Destroy all previous copies

VERIFY



REVISIONS					
REV	E.C.O. NO.	DESCRIPTION	BY	APP'D	DATE
D	0678	REDRAWN TO COMPUTER	EL	JK	6-11-92
E	1045	CHANGED STANDOFF PLACEMENT	TB	JK	1-20-95

BOM No.	LADDER	A*	B	C	D*	E	SA (1)	SA (2)	SF (3)	MT. ABOVE THE FOLLOWING RUNGS			
3570222	F4V	39	3	36	24	4	SA6100	–	–	1	3		
3570223	F5V	51	4	48	36	4	SA6101	–	–	1	4		
3570224	F6V	63	5	60	48	4	SA6102	–	–	1	5		
3570225	F7V	75	6	72	60	4	SA6103	–	–	1	6		
3570226	F8V	87	7	84	72	4	SA6104	–	–	1	7		
3570227	F9V	99	8	96	84	4	SA6105	–	–	1	8		
3570228	F10V	111	9	108	96	6	SA6106	–	–	1	5	9	
3570229	F11V	123	10	120	108	6	SA6107	–	–	1	6	10	
3570230	F12V	135	11	132	120	6	SA6108	–	–	1	6	11	
3570231	F13V	147	12	144	132	6	SA6109	–	–	1	7	12	
3570232	F14V	159	13	156	144	6	SA6110	–	–	1	7	13	
3570233	F15V	171	14	168	156	6	SA6111	–	–	1	8	14	
3570234	F16V	183	15	180	168	6	SA6112	–	–	1	8	15	
3570235	F17V	195	16	192	180	8	SA6113	–	–	1	6	11	16
3570236	F18V	207	17	204	192	8	SA6114	–	–	1	7	12	17
3570237	F19V	219	18	216	204	8	SA6115	–	–	1	7	13	18
3570238	F20V	231	19	228	216	8	SA6116	–	–	1	7	13	19
3570239	F21V	243	20	240	228	8	SA6116	SA6139	SF9126	1	8	14	20

DET	DWG. NO.	PT. NO.	DESCRIPTION	QTY.
1	B-57-1	SA (1)	SIDE RAIL ANGLE	2
2	A-57-80	RB3103	RUNGS	8
3	A-57-81	RB3102	MOUNTING RUNG	1
4	A-57-18	SA4121	SUPPORT ANGLE	2
5	B-57-24	SU2119	HANDRAIL	2
6	A-57-12	SF3103	MOUNTING BRACKETS	2
	B-57-1	SA (2)	SIDE RAIL EXT. ANGLE	2
	A-57-30	SF (3)	SPLICE PLATE	4

NOTE:
ALL DIMENSIONS ARE IN INCHES

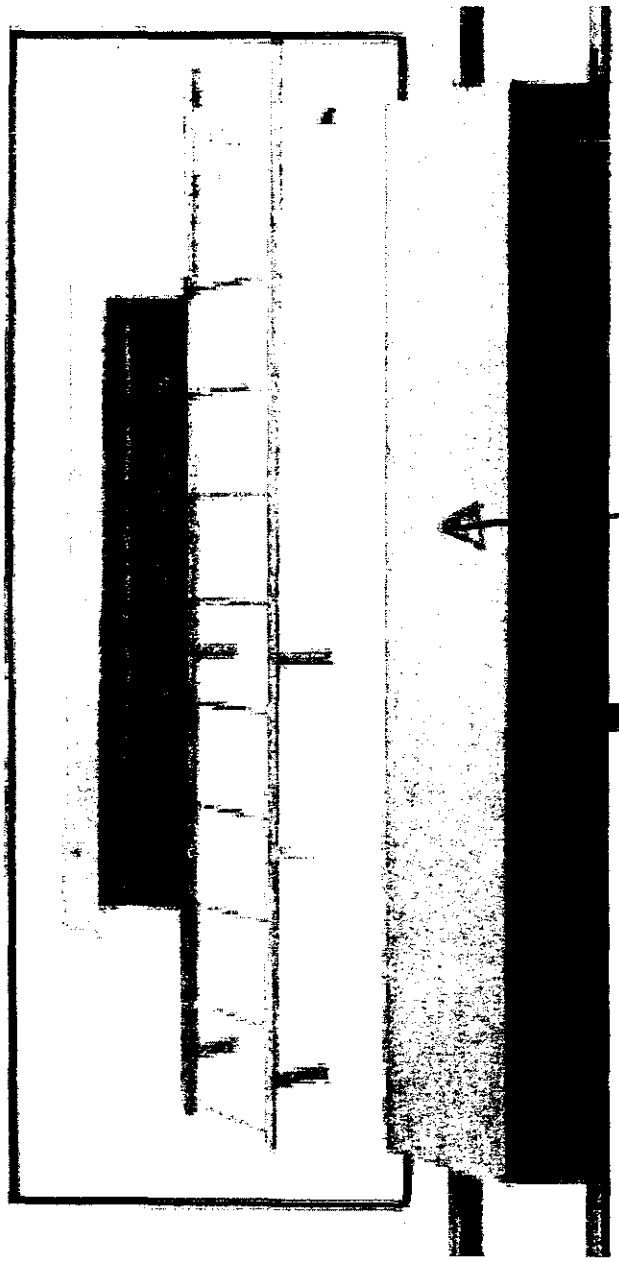
LADDER DIMS DO NOT MATCH DIMS ON SKETCH ISSUED IN RFQ-1S4R.1 TC TO VERIFY LADDER IS OSHA COMPLIANT

DWG. NO. C-057-0003 SHT. REV. E

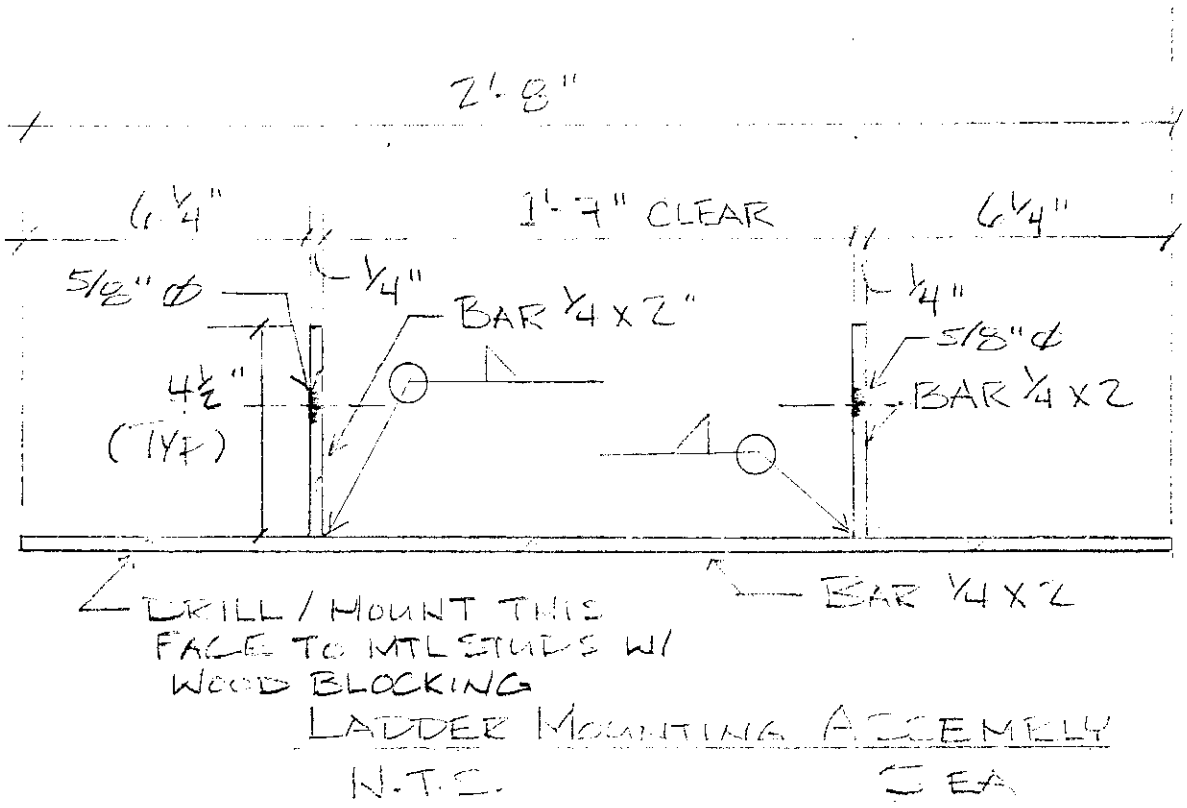
DRN CEG	DATE 2-26-82	COTTERMAN COMPANY	
CKD	DATE	130 SELTZER ROAD CROSWELL, MI 48422	
APD JK	DATE 5-22-91	WALK THRU FIXED LADDER ASSEMBLY	
THIS PRINT IS THE PROPERTY OF COTTERMAN CO. AND MUST NOT BE USED IN WHOLE, OR PART WITHOUT WRITTEN PERMISSION PLEASE RETURN ON DEMAND.		PART NO.	DWG.NO. C-057-0003 REV E
		SCALE	SHT.

TO PLANS
ENGINEERING
APPROVED.
RESPONSIBILITY IS
ORIGINAL.

ENG.
BY: DJ 1-22-08
SIGNATURE DATE



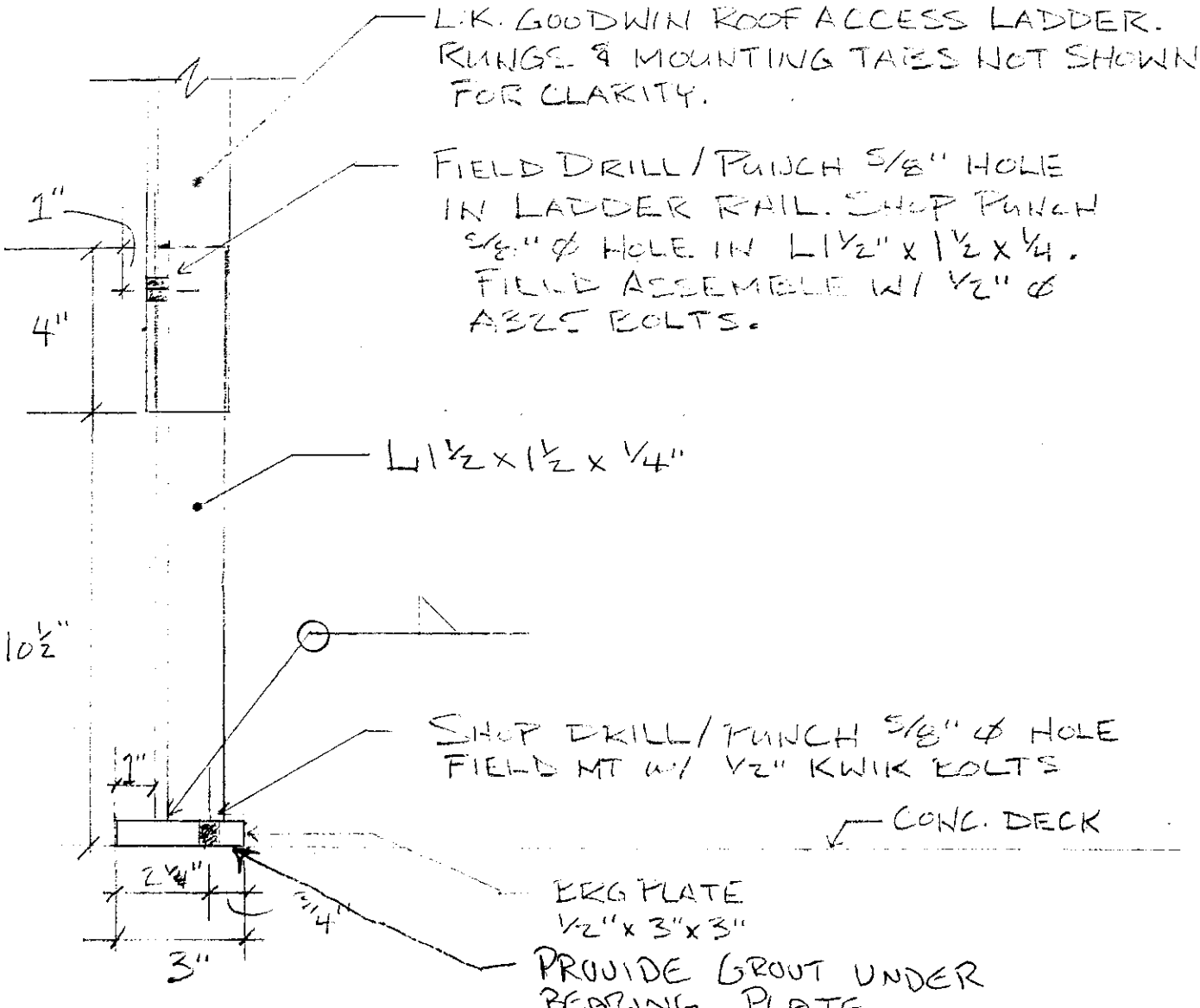
LADDER GUARD



LADDER MOUNTING ASSEMBLY

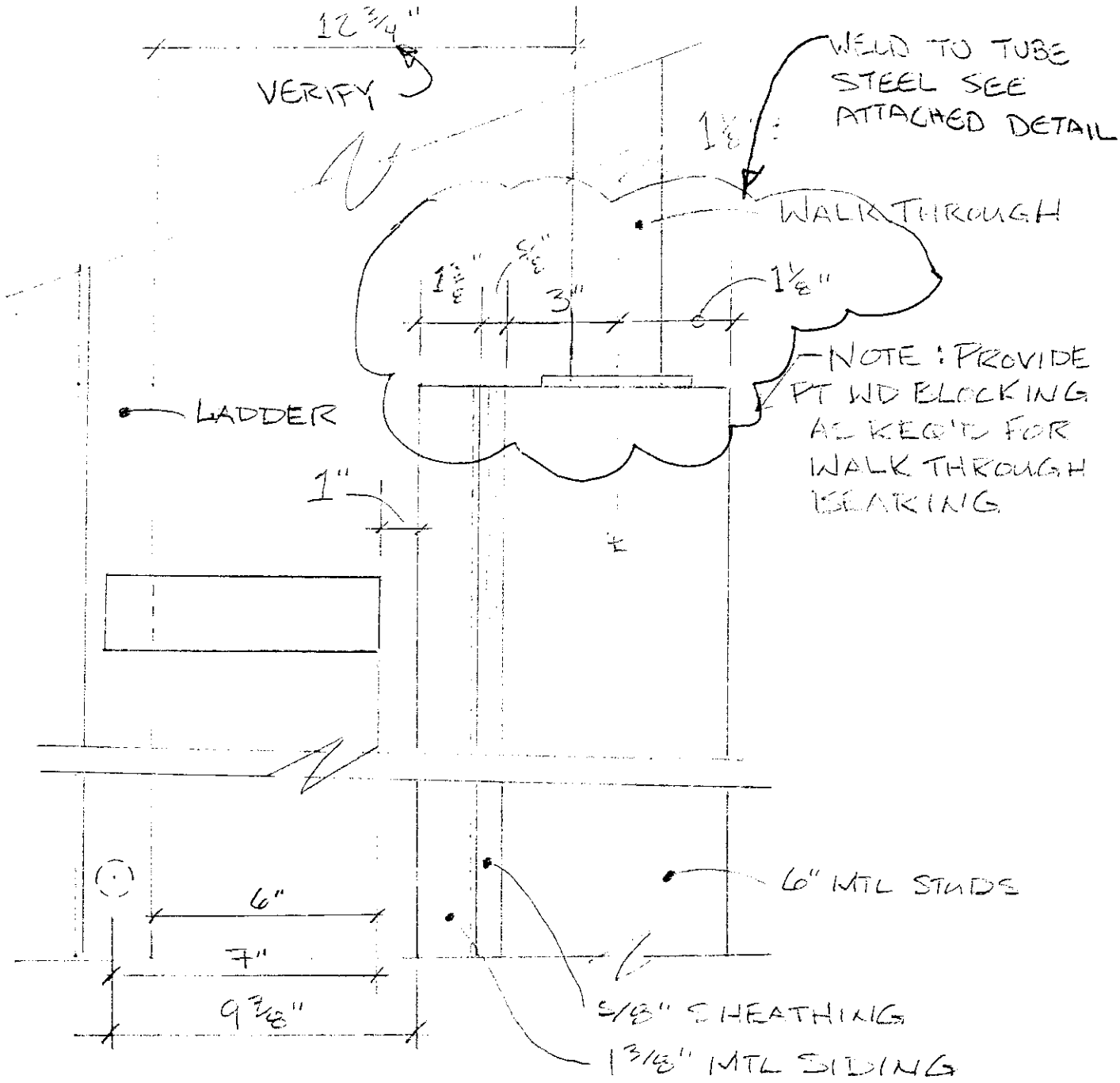
N.T.S.

2 EA

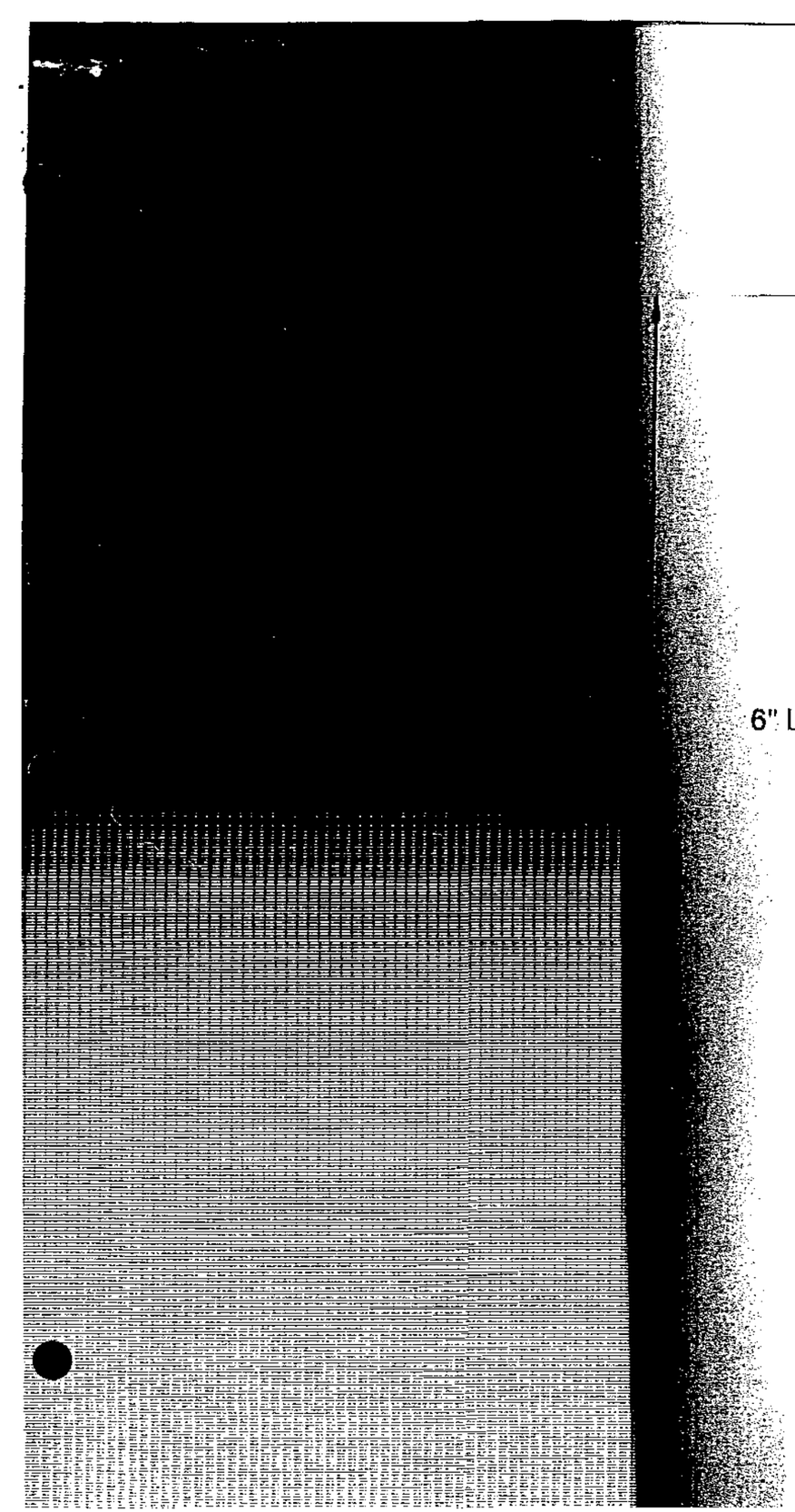


LADDER BEARING ASSEMBLY

N.T.S.



LADDER MOUNTING
N.T.S.



LADDER

EXTEND WATER BARRIER
TO BACK SIDE OF COPING

COPING TRIM

CLEAT TRIM

3/4" AB SCREW @ 12" O.C.
w/ 1/8" SHIM

RIVET @ 12" O.C.

OFFSET TRIM

3/4" AB SCREW @ 16" O.C.
& NON-CURING BUTYL

6" LONG 1/2" SUBGIRT @ 16" O.C.

PANEL CLIP

WATER BARRIER (NOT by DT)

WOOD BLOCKING (NOT by DT)

6" 16GA STUD

BULB-TITE RIVETS @ 12" O.C.
& NON-CURING BUTYL

FIELD VERIFY DIMS

WELD BASE PLATE TO TUBE STEEL ALL FOUR SIDES

1"

1/2" AB SCREW @ 12" O.C.
& NON-CURING BUTYL

STEEL TUBE

CLOSURE TRIM

3/4" CDX PLYWOOD

METAL STUDS @ 16" O.C. (NOT by DT)

5/8" EXT. GYP BOARD (NOT by DT)

$1\frac{3}{8}$"

$7\frac{1}{4}$"

$8\frac{5}{8}$"

PROVIDE SEALANT AROUND LADDER WHERE IT PENETRATES THROUGH COPING

1/D1 DETAIL
COPING

METAL

Gilbane

Transmittal

Project [2239.2] - PCF - Hospital - Garage **View Date** 10/22/2007

Gilbane
940 Elizabeth St
Lexington, KY 40506-0293
Phone: (859) 257-4536
Fax: (859) 323-1331

Transmittal No. 2239.2-01102

To	Mr. Doug Sherwood E. C. Matthews Co., Inc. 2265 Harrodsburg Road Lexington, KY 40504 USA Phone: (859) 278-3131 Fax: (859) 277-7903	**Date**	10/22/2007
		Items listed are being sent	
		☑ Enclosed	
		☐ Under Separate Cover	
		Via	Hand Delivered
		CSI Code	10990 - Miscellaneous Specialties
From	Mr. Brian Hoerr (Gilbane)		
Subject	Submittal Package 100-10990-003.0		

We are transmitting the following to you:

☐ Product Data ☐ Samples ☐ Shop Drawings ☐ O&M Manuals ☐ Plans
☐ Architectural Drawings ☐ Letters ☐ Specifications ☐ Prints ☐ Addenda
☐ Engineering Drawings ☐ Change Orders ☑ Submittal

Submittals

Pkg. No./Rev.	Item No./Rev.	Description	Copies	Reason	Action
100-10990-003.0	100-10990-003.0	Voice Port Data Sheet, Revised	2	Approved as Submitted	

Remarks Attached is a record copy of submittal.

	Mr. Brian Hoerr	10/22/2007
From	Printed Name	Date
Received By	Printed Name	Date

Linked Documents

Document Type	Document	Open	Description	Date
Sub. Pkg.	100-10990-003.0			

Distribution

Recipient	Company	Method	Date
Doug Sherwood	E. C. Matthews Co., Inc.	Message	10/22/2007

GBBN architects

Transmittal

Project [2239.2] - PCF - Hospital - Garage **View Date** 10/19/2007

GBBN Architects, Inc.
332 East Eighth St
Cincinnati, OH 45202-2217
Phone: (513) 241-8700
Fax: (513) 241-8873

Transmittal No. 2239.2-01097

To Mr. Brian Hoerr Gilbane 940 Elizabeth St Lexington, KY 40506-0293 USA Phone: (859) 257-4536 Fax: (859) 323-1331	**Date** 10/19/2007 **Items listed are being sent** ☐ Enclosed ☐ Under Separate Cover **CSI Code** 10990 - Miscellaneous Specialties
From Mr. Bryan Korb (GBBN Architects, Inc.)	
Subject Submittal Package 100-10990-003.0	

RECEIVED
OCT 19 2007
GILBANE #3966

We are transmitting the following to you:

☐ Product Data ☐ Samples ☐ Shop Drawings ☐ O&M Manuals ☐ Plans
☐ Architectural Drawings ☐ Letters ☐ Specifications ☐ Prints ☐ Addenda
☐ Engineering Drawings ☐ Change Orders ☑ Submittal

Submittals

Pkg. No./Rev.	Item No./Rev.	Description	Copies	Reason	Action
100-10990-003.0	100-10990-003.0	Voice Port Data Sheet, Revised	3	Approved as Submitted	

Remarks

Received By Printed Name Date

Linked Documents

Document Type	Document	Open	Description	Date
Sub. Pkg.	100-10990-003.0			

GILBANE
University of Kentucky
Patient Care Facility
Gilbane Project No. 18-3966

REVIEWED

☐ 010-Huguelet ☒ 020-Garage
☐ 030-Infrastructure ☐ 040-PCF Foundation
☐ 050-PCF Core/Shell ☐ 060-TowerUp Fit

Bid Package No. 100
Submittal No. 100-10990-003
Spec. Sect/Para. _____
Reviewed By BH
Date 10/16/07

This review does not constitute nor does it assume design responsibility nor does it relieve the trade contractor's supplier from complying with the contract requirements, coordinating their work with other trade contractors and verifying field dimensions.

ITEM - 003

PACKAGE - 003

RFQ 88.1 - VOICE PORT DATA SHEET

THIS REVIEW BY GBBN ARCHITECTS, INC., IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND IS NOT AN APPROVAL OF THIS DRAWING OR SET OF DRAWINGS. THE COMMENTS MADE DO NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH THE PROJECT DRAWINGS, SPECIFICATIONS AND OTHER CONTRACT DOCUMENTS. CONTRACTOR IS SOLELY RESPONSIBLE FOR: ALL DIMENSIONS AND QUANTITIES, ALL FABRICATION, DELIVERY AND ERECTION; ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES; ALL COORDINATION WITH ALL OTHER CONTRACTORS, SUPPLIERS AND OTHERS; PERFORMING ALL WORK IN A SAFE AND PROPER MANNER.

NO EXCEPTIONS TAKEN ☐
FURNISH AS CORRECTED ☐
REVISE AND RESUBMIT ☐
NO REVIEW - INCOMPLETE ☐
SUBMIT SPECIFIED ITEMS ☐
REJECTED ☐

DATE _____ BY _____

GBBN ARCHITECTS, INC.
ARCHITECTURE, INTERIORS, PLANNING, ENGINEERING
☐ 332 EAST 8TH STREET, CINCINNATI, OHIO 45202-2217 (513) 241-8700
☐ 325 WEST MAIN STREET, LEXINGTON, KENTUCKY 40507 (859) 381-8787

Hoerr, Brian C.

From: bkorb@gbbn.com
Sent: Monday, September 24, 2007 4:31 PM
To: Hoerr, Brian C.
Subject: Re: FW: FW: Voice Port Data Sheet, RFQ 88R.1

Attachments: vioce port.pdf

vioce port.pdf (159 KB)

Brian

The proposed voice data port is acceptable to the design team. Please use the 5" DIA. voice port in SS to match package pass through.

BK

"Hoerr, Brian C." <BHoerr@GilbaneCo.com>
09/24/2007 01:36 PM

To <bkorb@gbbn.com>
cc
Subject FW: FW: Voice Port Data Sheet, RFQ 88R.1

Bryan,

Have you had a chance to review this email?

Thanks,

Brian

-----Original Message-----
From: Hoerr, Brian C.
Sent: Tuesday, September 18, 2007 2:39 PM
To: 'bkorb@gbbn.com'
Cc: 'ckgmartin@windstream.net'
Subject: FW: FW: Voice Port Data Sheet, RFQ 88R.1

Bryan,

Please review the email below from Doug concerning the voice port.

Thank you,

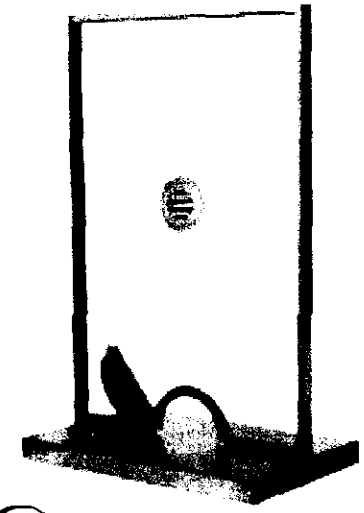
No-Draft Speak Thrus

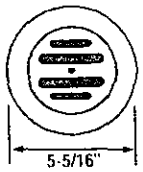
834 Series
Aluminum Construction

549 Series
Chrome Plated Brass

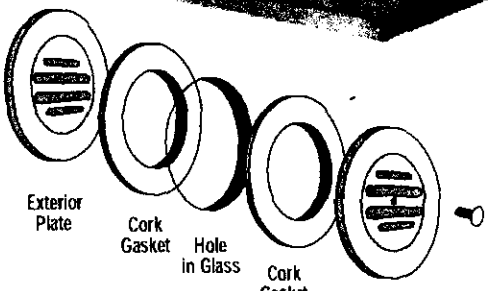
- Easy to Install
- Eliminates Drafts
- Theft-Proof Locking Device

Our No-Draft Speak-Thrus are designed to allow audible transmission of voice requests at ticket windows, box offices and more. They prevent tampering from the outside, and stop drafts to the interior. The 549 Series is made of brass, the 834 Series is made of aluminum. Each unit is individually boxed with gaskets and mounting screws for installation on glass up to 1/4" thick. For glass up to 3-3/4" thick you can use the optional Cat. No. 8324 4" screws. No-Draft Speak-Thrus require a minimum hole diameter of 2-1/4", and will cover holes up to 4-1/4". Recommended hole diameter is 3-1/2".





Front View



CAT. NO.	DESCRIPTION
549	Chrome Plated Brass
834A	Satin Anodized Aluminum
834BA	Bright Anodized Aluminum
834BGA	Bright Gold Anodized Aluminum
834DU	Duranodic Bronze Aluminum
8324	8-32 x 4" Screws (10 Pack)

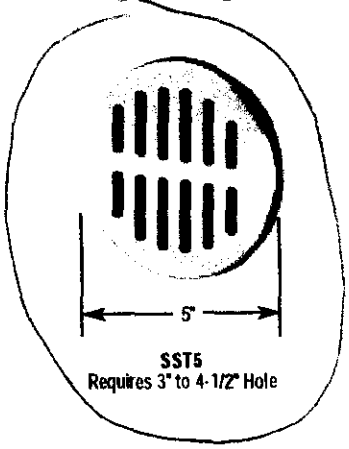
SPECIFICATIONS:

Materials: 834-Aluminum; 549-Brass
Finishes: 834 - Brite Anodized, Brite Gold Anodized, Duranodic Bronze, Satin Anodized; 549 - Chrome Plating
Instructions Included
Glass Fabrication Required

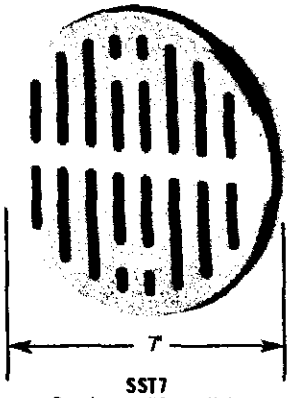
Stainless Steel Speak-Thrus

- Provides Natural Voice Transmission
- Designed to Eliminate Drafts

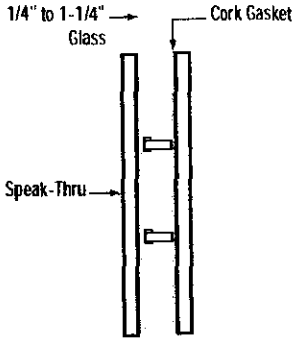
The Stainless Steel Speak-Thru provides natural voice transmission. Offset slots in front and rear prevent tampering from the outside, and stops drafts to the interior. Speak-Thru has a brushed stainless finish, and comes in two sizes. Accommodates glazing from 1/4" to 1-1/4" thick.

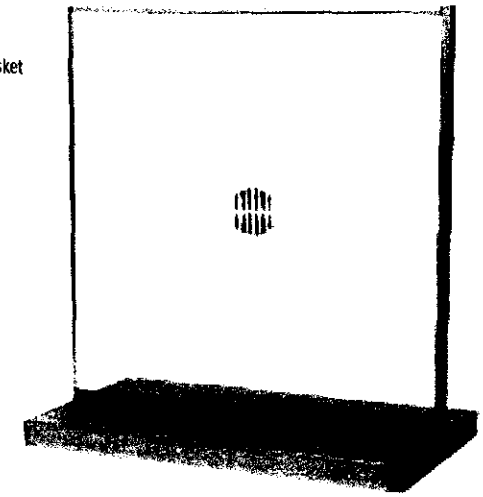


SST5
Requires 3" to 4-1/2" Hole

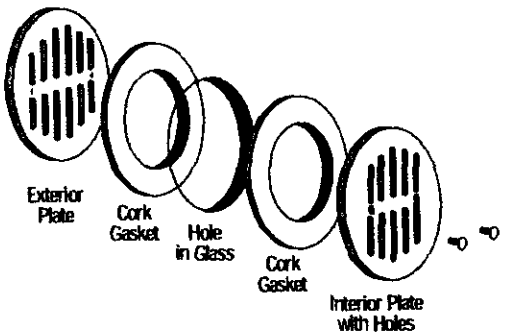


SST7
Requires 4-1/2" to 6" Hole





Designed, Engineered and Manufactured in the USA by C.R. Laurence



CAT. NO.	DESCRIPTION
SST7	5" Round Speak-Thru
SST5	7" Round Speak-Thru

SPECIFICATIONS:

Material: Stainless Steel
Finish: Brushed Stainless Steel
Instructions Included
Glass Fabrication Required

Gilbane

Transmittal

Project [2239.2] - PCF - Hospital - Garage **View Date** 9/13/2007

Gilbane
940 Elizabeth St
Lexington, KY 40506-0293
Phone: (859) 257-4536
Fax: (859) 323-1331

Transmittal No. 2239.2-01060

To	Mr. Doug Sherwood E. C. Matthews Co., Inc. 2265 Harrodsburg Road Lexington, KY 40504 USA Phone: (859) 278-3131 Fax: (859) 277-7903
From	Mr. Brian Hoerr (Gilbane)
Subject	Submittal Package 100-10990-001.0

Date 9/13/2007

Items listed are being sent

☑ Enclosed

☐ Under Separate Cover

Via Hand Delivered

CSI Code 10990 - Miscellaneous Specialties

We are transmitting the following to you:

☐ Product Data ☐ Samples ☐ Shop Drawings ☐ O&M Manuals ☐ Plans
☐ Architectural Drawings ☐ Letters ☐ Specifications ☐ Prints ☐ Addenda
☐ Engineering Drawings ☐ Change Orders ☑ Submittal

Submittals

Pkg. No./Rev.	Item No./Rev.	Description	Copies	Reason	Action
100-10990-001.0	100-10990-001.0	package Pass, Voice Port Data Sheet (RFQ 88R.1)	5	Approved as Noted	

Remarks

	Mr. Brian Hoerr	9/13/2007
From	Printed Name	Date
Received By	Printed Name	Date

Linked Documents

Document Type	Document	Open	Description	Date
Sub. Pkg.	100-10990-001.0			

Distribution

Recipient	Company	Method	Date
Doug Sherwood	E. C. Matthews Co., Inc.	Message	9/13/2007

Transmittal

Project [2239.2] - PCF - Hospital - Garage **View Date** 9/12/2007

GBBN Architects, Inc.
332 East Eighth St
Cincinnati, OH 45202-2217
Phone: (513) 241-8700
Fax: (513) 241-8873

Transmittal No. 2239.2-01058

RECEIVED
SEP 12 2007
GILBANE #3966

To Mr. Brian Hoerr Gilbane 940 Elizabeth St Lexington, KY 40506-0293 USA Phone: (859) 257-4536 Fax: (859) 323-1331	**Date** 9/12/2007 **Items listed are being sent** ☐ Enclosed ☐ Under Separate Cover **CSI Code** 10990 - Miscellaneous Specialties
From Mr. Bryan Korb (GBBN Architects, Inc.)	
Subject Submittal Package 100-10990-001.0	

We are transmitting the following to you:

☐ Product Data ☐ Samples ☐ Shop Drawings ☐ O&M Manuals ☐ Plans
☐ Architectural Drawings ☐ Letters ☐ Specifications ☐ Prints ☐ Addenda
☐ Engineering Drawings ☐ Change Orders ☑ Submittal

Submittals

Pkg. No./Rev.	Item No./Rev.	Description	Copies	Reason	Action
100-10990-001.0	100-10990-001.0	package Pass, Voice Port Data Sheet (RFQ 88R.1)		Approved as Noted	

Remarks

Received By Printed Name Date

Linked Documents

Document Type	Document	Open	Description	Date
Sub. Pkg.	100-10990-001.0			

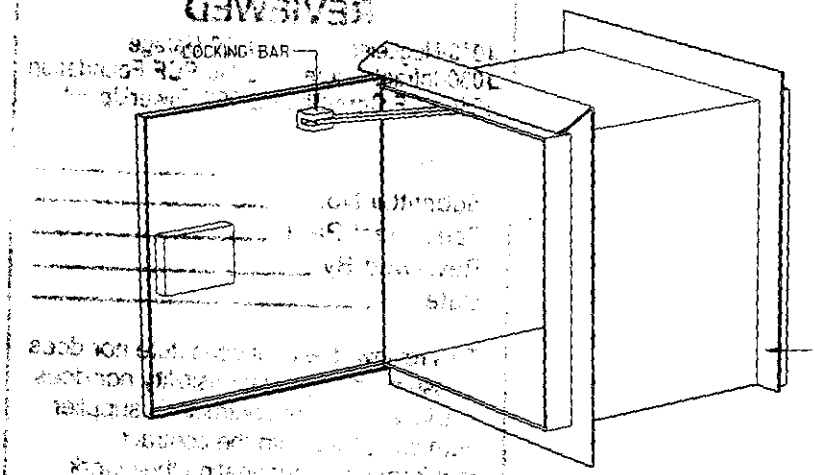
Distribution

Recipient	Company	Method	Date
Brian Hoerr	Gilbane	Message	9/12/2007

DLD®

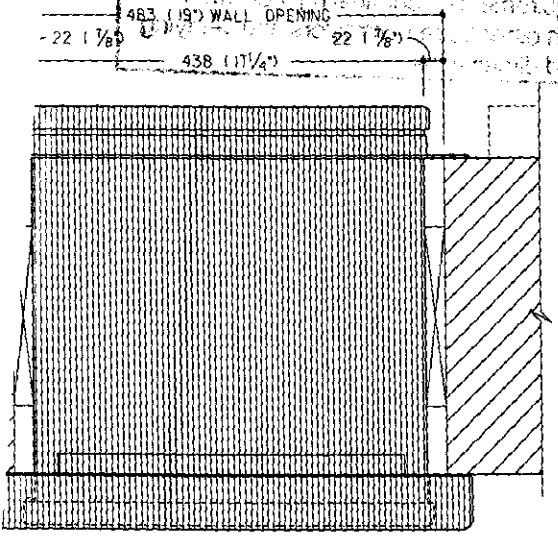
114-59 PACKAGE RECEIVER

999-3600



PERSPECTIVE

LEFT SWING (SHOWN)
RIGHT SWING (OPTIONAL)



PLAN VIEW

SPECIFICATIONS

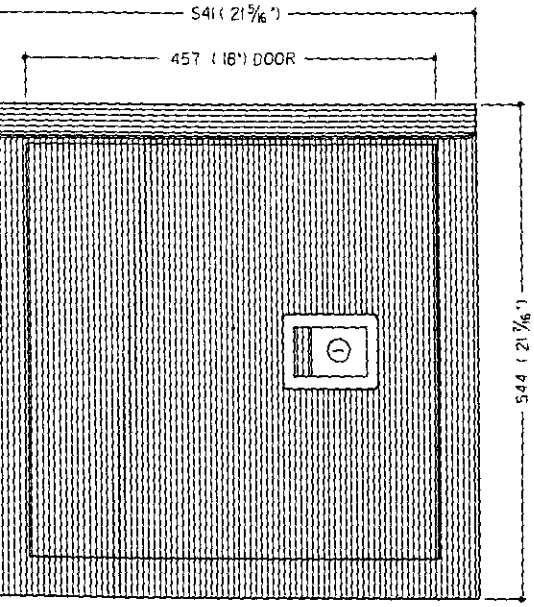
BODY: —— 03mm (1/8") B.R. STEEL. 03mm (1/8") STAINLESS STEEL. ALL WELDED CONSTRUCTION.

LOCKING: —— OUTER AND INNER DOORS HAVE CONNECTING BARS THAT PERMIT ONLY ONE DOOR TO BE IN THE OPEN POSITION. PADDLE LATCH ON BOTH DOORS.

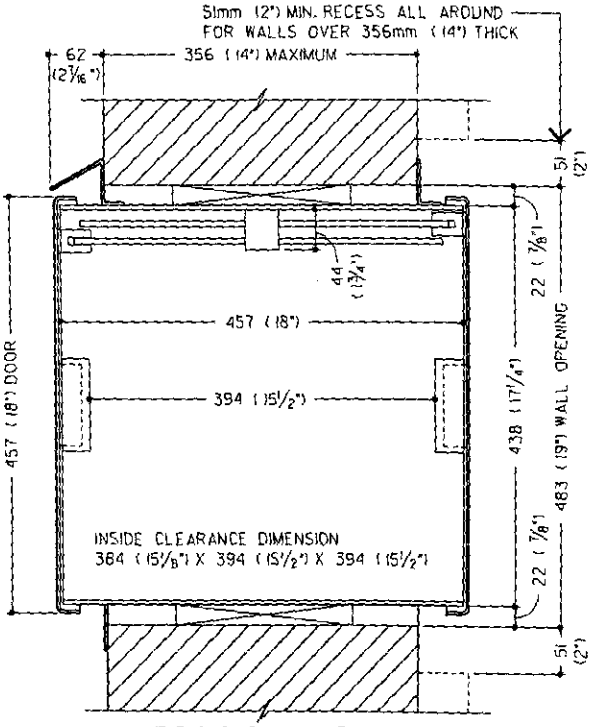
LOCK: —— PADDLE LATCH WITH KEY LOCK (EXTERIOR DOOR). BRUSHED AND BRIGHT CHROME FINISH.

FINISH: —— "A" ☐ PRIME PAINTED THROUGHOUT
"B" ☑ STAINLESS STEEL EXTERIOR

WEIGHT: —— APPROXIMATE 54.4 kg. (120 LBS.)



FRONT VIEW



SECTION VIEW

VOICE PORT

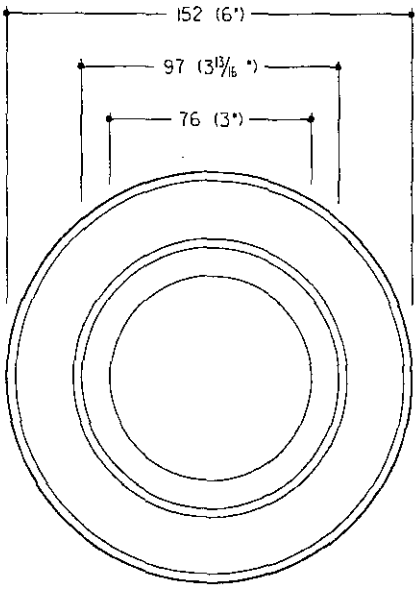
DIEBOLD®

CALL 1-800-999-3600

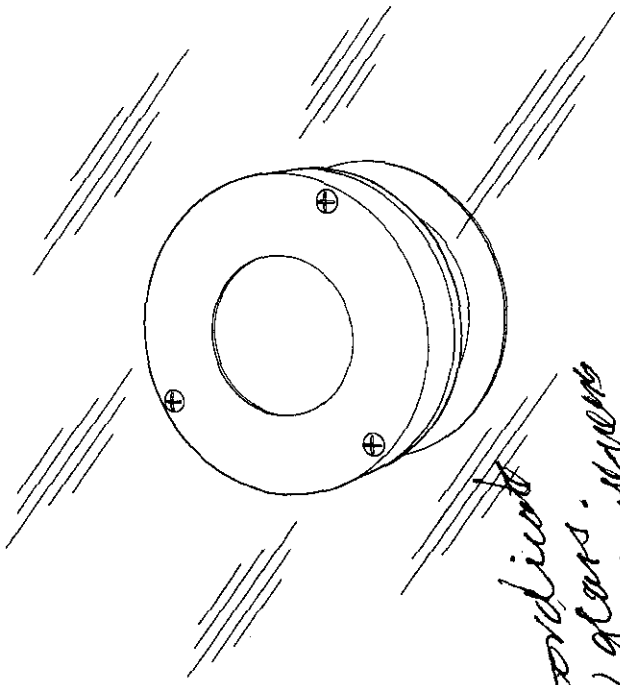
14933

DIMENSIONS IN MILLIMETRES
(DIMENSIONS IN INCHES)

THIRD ANGLE PROJECTION

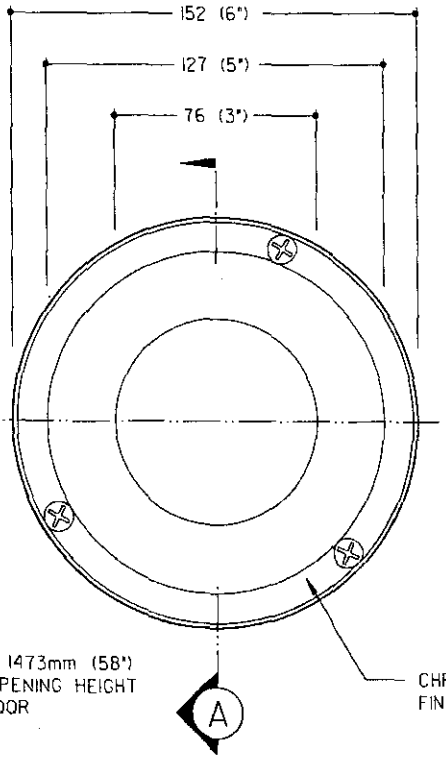


ATTACK SIDE

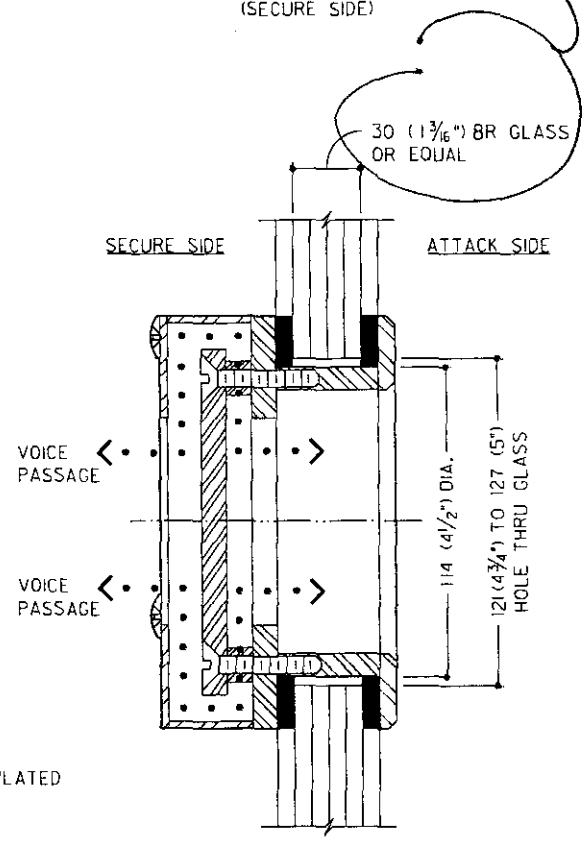


PERSPECTIVE
(SECURE SIDE)

coordinate w/ glass dimensions



SECURE SIDE



SECTION "A"

PAGE 1 OF 1

*ALL DIMENSIONS AND DESIGN CRITERIA SUBJECT TO CHANGE WITHOUT NOTICE.

FILE NO. 174-23 REV. 1

Gilbane

Transmittal

Project [2239.2] - PCF - Hospital - Garage **View Date** 11/7/2007

Gilbane
940 Elizabeth St
Lexington, KY 40506-0293
Phone: (859) 257-4536
Fax: (859) 323-1331

Transmittal No. 2239.2-01113

To	Mr. Doug Sherwood E. C. Matthews Co., Inc. 2265 Harrodsburg Road Lexington, KY 40504 USA Phone: (859) 278-3131 Fax: (859) 277-7903	**Date**	11/7/2007
		Items listed are being sent	
		☑ Enclosed	
		☐ Under Separate Cover	
		Via	Hand Delivered
From	Mr. Brian Hoerr (Gilbane)	**CSI Code**	10990 - Miscellaneous Specialties
Subject	Submittal Package 100-10990-004.0		

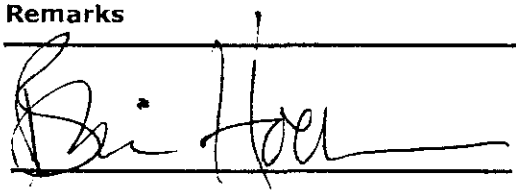
We are transmitting the following to you:

☐ Product Data ☐ Samples ☐ Shop Drawings ☐ O&M Manuals ☐ Plans
☐ Architectural Drawings ☐ Letters ☐ Specifications ☐ Prints ☐ Addenda
☐ Engineering Drawings ☐ Change Orders ☑ Submittal

Submittals

Pkg. No./Rev.	Item No./Rev.	Description	Copies	Reason	Action
100-10990-004.0	100-10990-004.0	Window Washing Tie Backs, RFQ 137	2	Approved as Submitted	

Remarks



From	Mr. Brian Hoerr	11/7/2007
	Printed Name	Date

Received By	Printed Name	Date

Linked Documents

Document Type	Document	Open	Description	Date
Sub. Pkg.	100-10990-004.0			

Distribution

Recipient	Company	Method	Date
Doug Sherwood	E. C. Matthews Co., Inc.	Message	11/7/2007

Transmittal

Project [2239.2] - PCF - Hospital - Garage **View Date** 11/6/2007

GBBN Architects, Inc.
332 East Eighth St
Cincinnati, OH 45202-2217
Phone: (513) 241-8700
Fax: (513) 241-8873

Transmittal No. 2239.2-01112

RECEIVED
NOV 06 2007
GILBANE #3966

To	Mr. Brian Hoerr Gilbane 940 Elizabeth St Lexington, KY 40506-0293 USA Phone: (859) 257-4536 Fax: (859) 323-1331
From	Mr. Bryan Korb (GBBN Architects, Inc.)
Subject	Submittal Package 100-10990-004.0

Date 11/6/2007

Items listed are being sent

☐ Enclosed

☐ Under Separate Cover

CSI Code 10990 - Miscellaneous Specialties

We are transmitting the following to you:

☐ Product Data ☐ Samples ☐ Shop Drawings ☐ O&M Manuals ☐ Plans
☐ Architectural Drawings ☐ Letters ☐ Specifications ☐ Prints ☐ Addenda
☐ Engineering Drawings ☐ Change Orders. ☑ Submittal

Submittals

Pkg. No./Rev.	Item No./Rev.	Description	Copies	Reason	Action
100-10990-004.0	100-10990-004.0	Window Washing Tie Backs, RFQ 137	3	Furnish as Corrected	

Remarks

Received By Printed Name Date

Linked Documents

Document Type	Document	Open	Description	Date
Sub. Pkg.	100-10990-004.0			

GILBANE
University of Kentucky
Patient Care Facility
Gilbane Project No. 18-3966

REVIEWED

☐ 010-Huguelet ☒ 020-Garage
☐ 030-Infrastructure ☐ 040-PCF Foundation
☐ 050-PCF Core/Shell ☐ 060-Tower Up Fit

Bid Package No. 100
Submittal No. 100-10990-004
Spec. Sect/Para. _____
Reviewed By BK
Date 11/2/07

This review does not constitute nor does it assume design responsibility nor does it relieve the trade contractor's supplier from complying with the contract requirements, coordinating their work with other trade contractors and verifying field dimensions.

THIS REVIEW BY GBBN ARCHITECTS, INC., IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND IS NOT AN APPROVAL OF THIS DRAWING OR SET OF DRAWINGS. THE COMMENTS MADE DO NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH THE PROJECT DRAWINGS, SPECIFICATIONS AND OTHER CONTRACT DOCUMENTS. CONTRACTOR IS SOLELY RESPONSIBLE FOR: ALL DIMENSIONS AND QUANTITIES, ALL FABRICATION, DELIVERY AND ERECTION; ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES; ALL COORDINATION WITH ALL OTHER CONTRACTORS, SUPPLIERS AND OTHERS; PERFORMING ALL WORK IN A SAFE AND PROPER MANNER.

NO EXCEPTIONS TAKEN	
FURNISH AS CORRECTED	X
REVISE AND RESUBMIT	
NO REVIEW - INCOMPLETE	
SUBMIT SPECIFIED ITEMS	
REJECTED	

DATE 11-6-07 BY BK

GBBN ARCHITECTS, INC.
ARCHITECTURE, INTERIORS, PLANNING, ENGINEERING
☐ 332 EAST 8TH STREET, CINCINNATI, OHIO 45202-2217 (513) 241-8700
☐ 325 WEST MAIN STREET, LEXINGTON, KENTUCKY 40507 (859) 381-8787

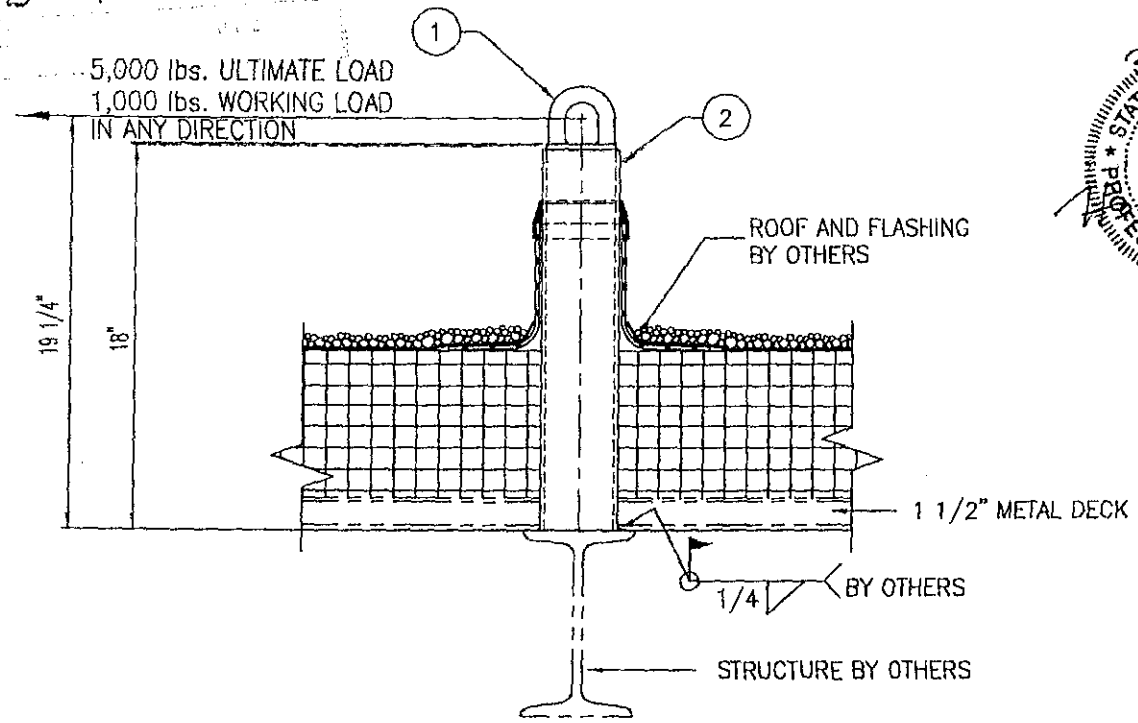
SEE RFQ-137 FOR ROOF TIE BACK LOCATIONS

PRO-BEL MODEL #PBE75-0000-18000

1. 3/4"ø STAINLESS STEEL U-BAR.
2. 3 1/2" O.D. GALVANIZED STEEL PIER.

DW 10.30.07

SYSTEM CERTIFICATION
VALID UNTIL OCT 24 2012



IMPORTANT NOTE:

PLATE OR STRUCTURE BY OTHERS TO ACCOMMODATE 3 1/2"ø O.D. ANCHOR AND 1/4" FILLET WELD. SUPPORTING STRUCTURE MUST FULLY DEVELOP THE WELDED CONNECTION FOR THE MOMENT, SHEAR AND AXIAL FORCES, WHICH WILL BE PLACED ON THE ANCHOR.

WELDED TO STRUCTURE ROOF ANCHOR DETAIL [QTY: 18]

(REF.: BELOW) SCALE: 1 1/2"=1'-0"
(A106, AA107, A401, A802A, A803A, A804A
S106, S501A, S502A,S503A.)

Approved for Construction
SEE SHEET 1.01 FOR GENERAL NOTE

STATE OF KENTUCKY * SIK HOI HO 23352 * LICENSED PROFESSIONAL ENGINEER

THE ENGINEER'S SEAL INDICATES ONLY THAT THE STRUCTURAL COMPONENTS SUPPLIED BY PRO-BEL:

a) WILL RESIST THE LOADS INDICATED ON THIS DRAWING WHEN ANALYZED BY CONVENTIONAL STRUCTURAL TECHNIQUES OR

b) HAVE BEEN LAB TESTED FOR THE LOADS INDICATED.

THIS DRAWING IS ON LOAN ONLY AND THE SYSTEM IS CONSIDERED CERTIFIED PROVIDING ANNUAL INSPECTIONS ARE PERFORMED IN ACCORDANCE WITH PRO-BEL LOG BOOK REQUIREMENTS.

THE CONTRACTOR MUST VERIFY ALL DIMENSIONS ON SITE.

ANY DEVIATION FROM THIS DRAWING MUST BE REPORTED TO PRO-BEL ENTERPRISES LIMITED.

THIS DRAWING MUST NOT BE USED FOR CONSTRUCTION UNTIL IT IS APPROVED.

PRO-BEL ENTERPRISES, LTD.
765 WESTNEY ROAD SOUTH
AJAX, ONTARIO, CANADA L1S 6W1
Tel:(905) 427-0616, Fax:(905) 427-2545
Toll Free: 1 (800) 461-0575
Web: www.pro-bel.ca, E-Mail: info@pro-bel.ca

CLIENT: AVENUE FABRICATING

PROJECT:
U OF KENTUCKY-PAT. CARE FAC. GARAGE
110 TRANSCRIPT AVE
LEXINGTON, KENTUCKY.

SUPPLY ONLY

mm/dd/yyyy: 09/17/2007		TECH. REVIEW:	SQ		
SCALE: AS INDICATED		SALES	PM	ENG/SUP	
DRAWN BY: DM		KM	GK		

TITLE: WINDOW CLEANING SAFETY SYSTEM DETAIL

No.	REVISION	BY	CHKD	mm/dd/yy
1	REVISED AS PER CLIENT COMMENTS.	DM	GK	10/12/07

JOB NO.	DRAWING NO.		REV. NO.
1N1-2007-11959	2.01	A	1

GENERAL NOTES

DESIGN

1. DESIGN OF THE SAFETY SYSTEM LAYOUT IS BY OTHERS. REFERENCE THE ARCHITECT/CLIENT IS RESPONSIBLE FOR THE LOCATION AND INTENDED USE OF THE SAFETY SYSTEM.

2. PRO-BEL ENTERPRISES LIMITED IS TO BE NOTIFIED OF ALL CHANGES TO AND/OR DEVIATIONS FROM THIS DRAWING.

3. GENERAL CONTRACTOR/ARCHITECT/CLIENT IS TO VERIFY THAT THE LOCATION OF THE EQUIPMENT SUPPLIED BY PRO-BEL DOES NOT CONFLICT WITH DOORWAYS, ROOF DRAINS, MECHANICAL UNITS ETC...

4. THE PORTIONS OF BUILDING STRUCTURE THAT SUPPORT PRO-BEL EQUIPMENT SHALL BE VERIFIED BY THE PROJECT STRUCTURAL ENGINEER/ ARCHITECT FOR THE RESULTING FORCES AND MOMENTS DUE TO THE LOADS SHOWN ON PRO-BEL SHOP DRAWING(S). THE LOADS SHOWN ARE UNFACTORED WORKING LOADS UNLESS NOTED OTHERWISE.

5. REINFORCING OF BUILDING STRUCTURE BY OTHERS AS REQUIRED BY THE PROJECT STRUCTURAL ENGINEER TO RESIST THE LOADS IMPOSED BY PRO-BEL EQUIPMENT.

6. EVERY MAIN OR WORKING ROOF LEVEL MUST HAVE DIRECT ACCESS TO THE INTERIOR OF THE BUILDING.

7. THE SAFETY ANCHOR HAS BEEN TESTED TO ENSURE THAT FRACTURE OR DETACHMENT DOES NOT OCCUR WITH A 22.2 kN (5,000 lb.) LOAD.

8. THE WORKING LOAD OF THE SAFETY ANCHORS IS 4.45 kN (1,000 lb.).

9. INSTALLATION OF HORIZONTAL LIFELINES, STATIC LINES AND/OR DOG LINES BETWEEN ANCHORS/DAVITS WITHOUT PRIOR WRITTEN APPROVAL FROM PRO-BEL ENTERPRISES LTD. IS STRICTLY PROHIBITED, AND MAY RESULT IN LEGAL ACTION AGAINST ALL PARTIES INITIATING SUCH ACTION(S).

MATERIAL

1. ALL STRUCTURAL STEEL IS DESIGNED AS PER AISC SPECIFICATIONS.

2. ALL HOLLOW STRUCTURAL SECTIONS ARE TO BE ASTM A500 GRADE C WITH Fy= 50 ksi AND Fu= 65 ksi.

3. ALL STEEL PLATE AND OTHER SECTIONS ARE TO BE 44W / ASTM A36 WITH Fy= 44 ksi AND Fu= 65 ksi.

4. STAINLESS STEEL IS TO BE TYPE 304.

INSTALLATION

1. EQUIPMENT IS TO BE SUPPLIED BY PRO-BEL AND INSTALLED BY OTHERS.

2. ROOFING IN OF PRO-BEL EQUIPMENT IS TO BE BY OTHERS.

3. ALL ON-SITE WELDING OF PRO-BEL EQUIPMENT SHALL BE PERFORMED BY CERTIFIED WELDERS REGISTERED IN THE STATE WHERE EQUIPMENT IS INSTALLED. WELDING SHALL COMPLY WITH AWS D1.1 "STRUCTURAL WELDING CODE - STEEL". ON-SITE WELDING COMPANY MUST SUPPLY PROOF OF CERTIFICATION TO PRO-BEL ENTERPRISES LIMITED.

INSPECTION AND TESTING

1. PRO-BEL EQUIPMENT IS NOT TO BE LOAD TESTED WITHOUT PRIOR CONSULTATION WITH PRO-BEL ENTERPRISES LIMITED.

2. ALL PRO-BEL EQUIPMENT IS TO BE INSPECTED BY A COMPETENT PERSON BEFORE EACH SCHEDULED SERVICE CYCLE AND NOT LESS THAN ONCE A YEAR TO ENSURE THAT IT IS IN GOOD WORKING ORDER. ANY DAMAGED OR DETERIORATED COMPONENT MUST BE REPAIRED OR REPLACED UNDER THE DIRECTION OF A PROFESSIONAL ENGINEER.

3. YIELDING OF THE EQUIPMENT AND/OR SUPPORTING STRUCTURE MAY OCCUR IN THE EVENT OF A FALL ARREST INCIDENT. WHEN THE EQUIPMENT HAS BEEN IMPACTED BY FALL ARREST LOADING, A THOROUGH INSPECTION OF PRO-BEL EQUIPMENT AND THE SUPPORTING STRUCTURE IS TO BE CONDUCTED, AND ANY DAMAGED COMPONENT MUST BE REPAIRED OR REPLACED, UNDER THE DIRECTION OF A PROFESSIONAL ENGINEER.

USAGE

1. WORKER MUST BE TIED OFF FOR FALL ARREST PRIOR TO APPROACHING, AND REMAIN CONTINUOUSLY TIED OFF WHEN WORKING, WITHIN 6'-0" OF ROOF EDGE WHERE PARAPET HEIGHT IS LESS THAN SAFETY RAILING HEIGHT.

2. WORKERS MUST PROTECT LINES FROM CHAFING AT ALL TIMES.

3. WHEN USING TRANSPORTABLE SUSPENSION EQUIPMENT, i.e. PARAPET SUPPORT HOOKS, OUTRIGGER BEAMS ETC., THEY MUST BE INSTALLED AND TIED BACK TO AN ANCHOR IN A SECURE MANNER (OSHA 1926.451(d)(5)(iii)).

4. BEFORE USING TRANSPORTABLE SUSPENSION EQUIPMENT, INSPECT ALL LOCKS & PINS. ENSURE THEY ARE IN PLACE, IN GOOD WORKING ORDER, AND PROPERLY ENGAGED.

5. WORKERS SHALL ARRANGE THEIR LIFE LINES IN SUCH A WAY TO ENSURE THAT THEY CANNOT FALL MORE THAN 6'-0" VERTICAL FREE FALL, OR STRIKE LOWER ROOF LEVELS OR BUILDING WHEN PERFORMING NON-ROUTINE ROOF MAINTENANCE WORK.

6. WORKERS MUST AT ALL TIMES BE TIED OFF TO INDEPENDENT SAFETY ANCHORS WHEN USING A BOSUN'S CHAIR, CAGE, OR ANY OTHER MEANS OF SUSPENSION.

7. PRO-BEL EQUIPMENT SHALL BE RE-CERTIFIED AT PERIODS NOT TO EXCEED 10 YEARS. THE RE-CERTIFICATION RECORD SHALL BE INCLUDED IN THE BUILDING LOGBOOK. IF AN AREA OF SUSPICION IS IDENTIFIED, A TEST PROCEDURE, IF NECESSARY, SHALL BE PERFORMED UNDER THE DIRECTION OF A PROFESSIONAL ENGINEER.

8. ALL USERS OF PRO-BEL EQUIPMENT MUST BE PROPERLY TRAINED IN ORDER TO USE THE EQUIPMENT SAFELY. USERS MUST COMPLY WITH ALL APPLICABLE SAFETY CODES AND REGULATIONS WHEN USING THIS SYSTEM.

9. THIS DRAWING MUST BE READ AND USED IN CONJUNCTION WITH THE OPERATING INSTRUCTIONS DESCRIBED IN THE LOG BOOK SUPPLIED BY PRO-BEL.

10. GENERAL CONTRACTOR/ARCHITECT/CLIENT TO PROVIDE THE REQUIRED ELECTRICAL POWER ON GROUND & ROOF WHERE ELECTRICAL EQUIPMENT FOR WINDOW CLEANING IS USED.

11. WINDOW CLEANERS (CONTRACTORS) MUST HAVE MECHANICAL MEANS TO RAISE AND LOWER THE LINES (SUSPENSION LINES).

12. WINDOW CLEANERS (CONTRACTORS) MUST TAKE ADDITIONAL SAFETY MEASURE AND PRECAUTIONS WHILE RIGGING FROM THE BUILDING TO PROTECT THE PUBLIC.

13. WORKERS MUST HAVE A WORK PLAN PRIOR TO START OF WORK ON THE TOP ROOF AREA AND OTHER AREAS WHERE WINDOW WASHING EQUIPMENT IS TO BE USED AND ALSO DEMONSTRATE HOW TO RIG SAFELY AS PER THE SAFETY REGULATIONS.

NOTE:
WORKERS MUST USE A SHOCK ABSORBING LANYARD RATED FOR 900 lbs. MAXIMUM ARREST FORCE.

IMPORTANT NOTE:
STRUCTURAL ENGINEER FOR THE OVERALL PROJECT IS RESPONSIBLE FOR DESIGN OF THE BUILDING STRUCTURE, AND LOCAL REINFORCEMENT WHERE REQUIRED, TO WITHSTAND THE APPLIED LOADS OF THE SAFETY EQUIPMENT SUPPLIED BY PRO-BEL.

SYSTEM CERTIFICATION
VALID UNTIL OCT 24, 2007

2007 OCT 24
STATE OF KENTUCKY
SIK HOI HO 23352 LICENSED PROFESSIONAL ENGINEER

THE ENGINEER'S SEAL INDICATES ONLY THAT THE STRUCTURAL COMPONENTS SUPPLIED BY PRO-BEL:

a) WILL RESIST THE LOADS INDICATED ON THIS DRAWING WHEN ANALYZED BY CONVENTIONAL STRUCTURAL TECHNIQUES OR

b) HAVE BEEN LAB TESTED FOR THE LOADS INDICATED.

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THE CONTRACTOR MUST VERIFY ALL DIMENSIONS ON SITE.

ANY DEVIATION FROM THIS DRAWING MUST BE REPORTED TO PRO-BEL ENTERPRISES LIMITED.

THIS DRAWING MUST NOT BE USED FOR CONSTRUCTION UNTIL IT IS APPROVED.

PRO-BEL ENTERPRISES, LTD.
765 WESTNEY ROAD SOUTH
AJAX, ONTARIO, CANADA L1S 6W1
Tel:(905) 427-0616, Fax:(905) 427-2545
Toll Free: 1 (800) 461-0575
Web: www.pro-bel.ca, E-Mail: info@pro-bel.ca

CLIENT:
AVENUE FABRICATING

PROJECT:
U OF KENTUCKY-PAT. CARE FAC. GARAGE
110 TRANSCRIPT AVE
LEXINGTON, KENTUCKY.

SUPPLY ONLY

mm/dd/yyyy: 08/17/2007		TECH. REVIEW:	SQ				
SCALE: AS INDICATED		SALES	PM		ENG/SUP		
DRAWN BY: DM		KM		GK			

TITLE:
WINDOW CLEANING SAFETY SYSTEM
GENERAL NOTES

No.	REVISION	BY	CHKD	mm/dd/yy
1	REVISED AS PER CLIENT COMMENTS.	DM	GK	10/12/07

JOB NO.	DRAWING NO.		REV. NO.
1N1-2007-11959	1.01	A	1

GILBANE
University of Kentucky
Patient Care Facility
Gilbane Project No. 18-3966
REVIEWED
☐010-Huguelet ☒020-Garage
☐030-Infrastructure ☐040-PCF Foundation
☐050-PCF Core/Shell ☐060-TowerUp Fit

Bid Package No. 100
Submittal No. 100-10990-004
Spec. Sect/Para.
Reviewed By BH
Date 11/2/07

This review does not constitute nor does it assume design responsibility nor does it relieve the trade contractor's supplier from complying with the contract requirements, coordinating their work with other trade contractors and verifying field dimensions.

THIS REVIEW BY GBBN ARCHITECTS, INC., IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND IS NOT AN APPROVAL OF THIS DRAWING OR SET OF DRAWINGS. THE COMMENTS MADE DO NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH THE PROJECT DRAWINGS, SPECIFICATIONS AND OTHER CONTRACT DOCUMENTS. CONTRACTOR IS SOLELY RESPONSIBLE FOR: ALL DIMENSIONS AND QUANTITIES, ALL FABRICATION, DELIVERY AND ERECTION; ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES; ALL COORDINATION WITH ALL OTHER CONTRACTORS, SUPPLIERS AND OTHERS; PERFORMING ALL WORK IN A SAFE AND PROPER MANNER.

NO EXCEPTIONS TAKEN	
FURNISH AS CORRECTED	X
REVISE AND RESUBMIT	
NO REVIEW - INCOMPLETE	
SUBMIT SPECIFIED ITEMS	
REJECTED	

DATE 11-6-07 BY BK

GBBN ARCHITECTS, INC.
ARCHITECTURE, INTERIORS, PLANNING, ENGINEERING
332 EAST 8TH STREET, CINCINNATI, OHIO 45202-2217 (513) 241-8700
325 WEST MAIN STREET, LEXINGTON, KENTUCKY 40507 (859) 381-8787

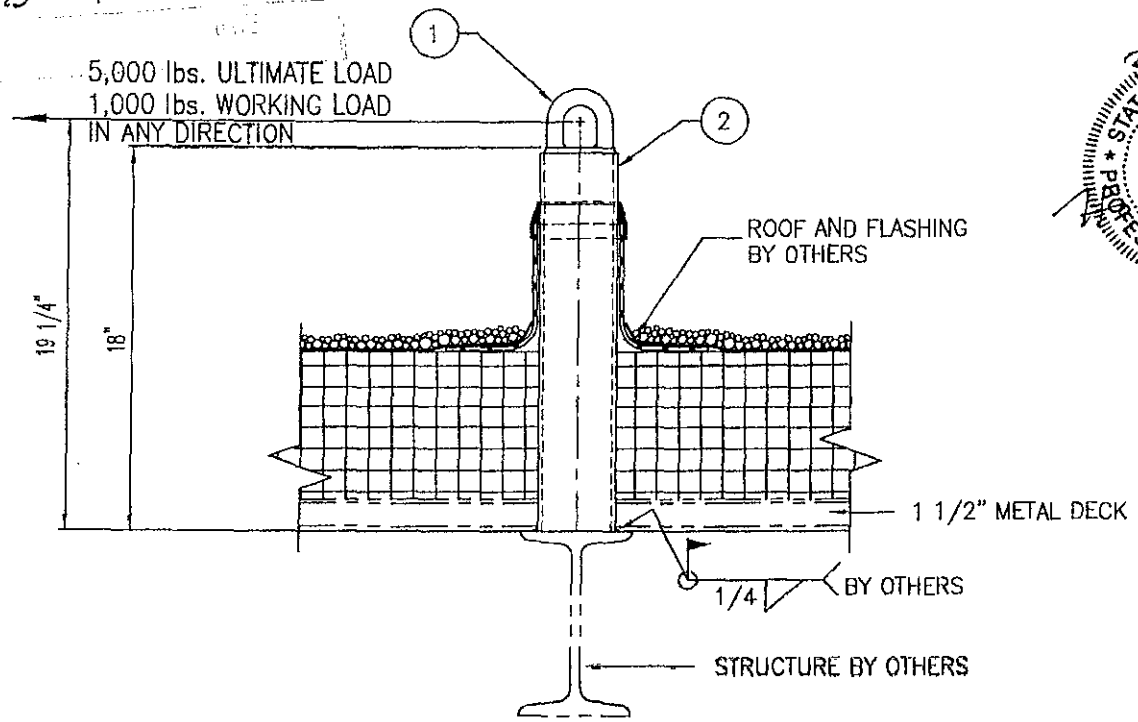
SEE RFQ-137 FOR ROOF TIE BACK LOCATIONS

PRO-BEL MODEL #PBE75-0000-18000

1. 3/4"ø STAINLESS STEEL U-BAR.
2. 3 1/2" O.D. GALVANIZED STEEL PIER.

DW 10.30.07

SYSTEM CERTIFICATION
VALID UNTIL OCT 24 2017



IMPORTANT NOTE:
PLATE OR STRUCTURE BY OTHERS TO ACCOMMODATE 3 1/2"ø O.D. ANCHOR AND 1/4" FILLET WELD. SUPPORTING STRUCTURE MUST FULLY DEVELOP THE WELDED CONNECTION FOR THE MOMENT, SHEAR AND AXIAL FORCES, WHICH WILL BE PLACED ON THE ANCHOR.

WELDED TO STRUCTURE ROOF ANCHOR DETAIL [QTY: 18]

(REF.: BELOW) SCALE: 1 1/2"=1'-0"
(A106, AA107, A401, A802A, A803A, A804A
S106, S501A, S502A, S503A.)

2007 OCT 24
STATE OF KENTUCKY
SIK HOI HO
23352
LICENSED ENGINEER
PROFESSIONAL
Construction

SEE SHEET 1.01 FOR GENERAL NOTE

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CLIENT: AVENUE FABRICATING

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SUPPLY ONLY

mm/dd/yyyy: 09/17/2007		TECH. REVIEW:		SQ		
SCALE: AS INDICATED		SALES	PM		ENG/SUP	
DRAWN BY: DM		KM		GK		

TITLE: WINDOW CLEANING SAFETY SYSTEM DETAIL

No.	REVISION	BY	CHKD	mm/dd/yy
1	REVISED AS PER CLIENT COMMENTS.	DM	GK	10/12/07

JOB NO.	DRAWING NO.		REV. NO.
1N1-2007-11959	2.01	A	1

GENERAL NOTES

DESIGN

1. DESIGN OF THE SAFETY SYSTEM LAYOUT IS BY OTHERS. REFERENCE THE ARCHITECT/CLIENT IS RESPONSIBLE FOR THE LOCATION AND INTENDED USE OF THE SAFETY SYSTEM.
2. PRO-BEL ENTERPRISES LIMITED IS TO BE NOTIFIED OF ALL CHANGES TO AND/OR DEVIATIONS FROM THIS DRAWING.
3. GENERAL CONTRACTOR/ARCHITECT/CLIENT IS TO VERIFY THAT THE LOCATION OF THE EQUIPMENT SUPPLIED BY PRO-BEL DOES NOT CONFLICT WITH DOORWAYS, ROOF DRAINS, MECHANICAL UNITS ETC...
4. THE PORTIONS OF BUILDING STRUCTURE THAT SUPPORT PRO-BEL EQUIPMENT SHALL BE VERIFIED BY THE PROJECT STRUCTURAL ENGINEER/ ARCHITECT FOR THE RESULTING FORCES AND MOMENTS DUE TO THE LOADS SHOWN ON PRO-BEL SHOP DRAWING(S). THE LOADS SHOWN ARE UNFACTORED WORKING LOADS UNLESS NOTED OTHERWISE.
5. REINFORCING OF BUILDING STRUCTURE BY OTHERS AS REQUIRED BY THE PROJECT STRUCTURAL ENGINEER TO RESIST THE LOADS IMPOSED BY PRO-BEL EQUIPMENT.
6. EVERY MAIN OR WORKING ROOF LEVEL MUST HAVE DIRECT ACCESS TO THE INTERIOR OF THE BUILDING.
7. THE SAFETY ANCHOR HAS BEEN TESTED TO ENSURE THAT FRACTURE OR DETACHMENT DOES NOT OCCUR WITH A 22.2 kN (5,000 lb.) LOAD.
8. THE WORKING LOAD OF THE SAFETY ANCHORS IS 4.45 kN (1,000 lb.).
9. INSTALLATION OF HORIZONTAL LIFELINES, STATIC LINES AND/OR DOG LINES BETWEEN ANCHORS/DAVITS WITHOUT PRIOR WRITTEN APPROVAL FROM PRO-BEL ENTERPRISES LTD. IS STRICTLY PROHIBITED, AND MAY RESULT IN LEGAL ACTION AGAINST ALL PARTIES INITIATING SUCH ACTION(S).

MATERIAL

1. ALL STRUCTURAL STEEL IS DESIGNED AS PER AISC SPECIFICATIONS.
2. ALL HOLLOW STRUCTURAL SECTIONS ARE TO BE ASTM A500 GRADE C WITH Fy= 50 ksi AND Fu= 65 ksi.
3. ALL STEEL PLATE AND OTHER SECTIONS ARE TO BE 44W / ASTM A36 WITH Fy= 44 ksi AND Fu= 65 ksi.
4. STAINLESS STEEL IS TO BE TYPE 304.

INSTALLATION

1. EQUIPMENT IS TO BE SUPPLIED BY PRO-BEL AND INSTALLED BY OTHERS.
2. ROOFING IN OF PRO-BEL EQUIPMENT IS TO BE BY OTHERS.
3. ALL ON-SITE WELDING OF PRO-BEL EQUIPMENT SHALL BE PERFORMED BY CERTIFIED WELDERS REGISTERED IN THE STATE WHERE EQUIPMENT IS INSTALLED. WELDING SHALL COMPLY WITH AWS D1.1 "STRUCTURAL WELDING CODE – STEEL". ON-SITE WELDING COMPANY MUST SUPPLY PROOF OF CERTIFICATION TO PRO-BEL ENTERPRISES LIMITED.

INSPECTION AND TESTING

1. PRO-BEL EQUIPMENT IS NOT TO BE LOAD TESTED WITHOUT PRIOR CONSULTATION WITH PRO-BEL ENTERPRISES LIMITED.
2. ALL PRO-BEL EQUIPMENT IS TO BE INSPECTED BY A COMPETENT PERSON BEFORE EACH SCHEDULED SERVICE CYCLE AND NOT LESS THAN ONCE A YEAR TO ENSURE THAT IT IS IN GOOD WORKING ORDER. ANY DAMAGED OR DETERIORATED COMPONENT MUST BE REPAIRED OR REPLACED UNDER THE DIRECTION OF A PROFESSIONAL ENGINEER.
3. YIELDING OF THE EQUIPMENT AND/OR SUPPORTING STRUCTURE MAY OCCUR IN THE EVENT OF A FALL ARREST INCIDENT. WHEN THE EQUIPMENT HAS BEEN IMPACTED BY FALL ARREST LOADING, A THOROUGH INSPECTION OF PRO-BEL EQUIPMENT AND THE SUPPORTING STRUCTURE IS TO BE CONDUCTED, AND ANY DAMAGED COMPONENT MUST BE REPAIRED OR REPLACED, UNDER THE DIRECTION OF A PROFESSIONAL ENGINEER.

USAGE

1. WORKER MUST BE TIED OFF FOR FALL ARREST PRIOR TO APPROACHING, AND REMAIN CONTINUOUSLY TIED OFF WHEN WORKING, WITHIN 6'-0" OF ROOF EDGE WHERE PARAPET HEIGHT IS LESS THAN SAFETY RAILING HEIGHT.
2. WORKERS MUST PROTECT LINES FROM CHAFING AT ALL TIMES.
3. WHEN USING TRANSPORTABLE SUSPENSION EQUIPMENT, i.e. PARAPET SUPPORT HOOKS, OUTRIGGER BEAMS ETC., THEY MUST BE INSTALLED AND TIED BACK TO AN ANCHOR IN A SECURE MANNER (OSHA 1926.451(d)(5)(iii)).
4. BEFORE USING TRANSPORTABLE SUSPENSION EQUIPMENT, INSPECT ALL LOCKS & PINS. ENSURE THEY ARE IN PLACE, IN GOOD WORKING ORDER, AND PROPERLY ENGAGED.
5. WORKERS SHALL ARRANGE THEIR LIFE LINES IN SUCH A WAY TO ENSURE THAT THEY CANNOT FALL MORE THAN 6'-0" VERTICAL FREE FALL, OR STRIKE LOWER ROOF LEVELS OR BUILDING WHEN PERFORMING NON-ROUTINE ROOF MAINTENANCE WORK.
6. WORKERS MUST AT ALL TIMES BE TIED OFF TO INDEPENDENT SAFETY ANCHORS WHEN USING A BOSUN'S CHAIR, CAGE, OR ANY OTHER MEANS OF SUSPENSION.
7. PRO-BEL EQUIPMENT SHALL BE RE-CERTIFIED AT PERIODS NOT TO EXCEED 10 YEARS. THE RE-CERTIFICATION RECORD SHALL BE INCLUDED IN THE BUILDING LOGBOOK. IF AN AREA OF SUSPICION IS IDENTIFIED, A TEST PROCEDURE, IF NECESSARY, SHALL BE PERFORMED UNDER THE DIRECTION OF A PROFESSIONAL ENGINEER.
8. ALL USERS OF PRO-BEL EQUIPMENT MUST BE PROPERLY TRAINED IN ORDER TO USE THE EQUIPMENT SAFELY. USERS MUST COMPLY WITH ALL APPLICABLE SAFETY CODES AND REGULATIONS WHEN USING THIS SYSTEM.
9. THIS DRAWING MUST BE READ AND USED IN CONJUNCTION WITH THE OPERATING INSTRUCTIONS DESCRIBED IN THE LOG BOOK SUPPLIED BY PRO-BEL.
10. GENERAL CONTRACTOR/ARCHITECT/CLIENT TO PROVIDE THE REQUIRED ELECTRICAL POWER ON GROUND & ROOF WHERE ELECTRICAL EQUIPMENT FOR WINDOW CLEANING IS USED.
11. WINDOW CLEANERS (CONTRACTORS) MUST HAVE MECHANICAL MEANS TO RAISE AND LOWER THE LINES (SUSPENSION LINES).
12. WINDOW CLEANERS (CONTRACTORS) MUST TAKE ADDITIONAL SAFETY MEASURE AND PRECAUTIONS WHILE RIGGING FROM THE BUILDING TO PROTECT THE PUBLIC.
13. WORKERS MUST HAVE A WORK PLAN PRIOR TO START OF WORK ON THE TOP ROOF AREA AND OTHER AREAS WHERE WINDOW WASHING EQUIPMENT IS TO BE USED AND ALSO DEMONSTRATE HOW TO RIG SAFELY AS PER THE SAFETY REGULATIONS.

NOTE:
WORKERS MUST USE A SHOCK ABSORBING LANYARD RATED FOR 900 lbs. MAXIMUM ARREST FORCE.

IMPORTANT NOTE:
STRUCTURAL ENGINEER FOR THE OVERALL PROJECT IS RESPONSIBLE FOR DESIGN OF THE BUILDING STRUCTURE, AND LOCAL REINFORCEMENT WHERE REQUIRED, TO WITHSTAND THE APPLIED LOADS OF THE SAFETY EQUIPMENT SUPPLIED BY PRO-BEL.

SYSTEM CERTIFICATION
VALID UNTIL OCT 24, 2017

2007 OCT 24
STATE OF KENTUCKY
SIK HOI
HO
23352
LICENSED PROFESSIONAL ENGINEER

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WINDOW CLEANING SAFETY SYSTEM
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JOB NO.	DRAWING NO.		REV. NO.
1N1-2007-11959	1.01	A	1

Gilbane

Transmittal

Project [2239.2] - PCF - Hospital - Garage

View Date 2/18/2008

Gilbane
940 Elizabeth St
Lexington, KY 40506-0293
Phone: (859) 257-4536
Fax: (859) 323-1331

Transmittal No. 2239.2-00930

To	Mr. Doug Sherwood E. C. Matthews Co., Inc. 2265 Harrodsburg Road Lexington, KY 40504 USA Phone: (859) 278-3131 Fax: (859) 277-7903	**Date**	6/13/2007
		Items listed are being sent	
		☑ Enclosed	
		☐ Under Separate Cover	
		Via	Hand Delivered
		CSI Code	13121 - Fabricated Structures
From	Mr. Brian Hoerr (Gilbane)		
Subject	Submittal Package 100-13121-003.0		

We are transmitting the following to you:

☐ Product Data ☐ Samples ☐ Shop Drawings ☐ O&M Manuals ☐ Plans
☐ Architectural Drawings ☐ Letters ☐ Specifications ☐ Prints ☐ Addenda
☐ Engineering Drawings ☐ Change Orders ☑ Submittal

Submittals

Pkg. No./Rev.	Item No./Rev.	Description	Copies	Reason	Action
100-13121-003.0	100-13121-003.0	Prefabricated Structures-Verification Samples	1	Approved as Submitted	

Remarks 1 approved sample returned to ECM.

	Mr. Brian Hoerr	6/13/2007
From	Printed Name	Date
Received By	Printed Name	Date

Linked Documents

Document Type	Document	Open	Description	Date
Sub. Pkg.	100-13121-003.0			

Distribution

Recipient	Company	Method	Date
Doug Sherwood	E. C. Matthews Co., Inc.	Message	6/13/2007

Gilbane

Transmittal

Project [2239.2] - PCF - Hospital - Garage

View Date 2/18/2008

Gilbane
940 Elizabeth St
Lexington, KY 40506-0293
Phone: (859) 257-4536
Fax: (859) 323-1331

Transmittal No. 2239.2-00427

To	Mr. Doug Sherwood E. C. Matthews Co., Inc. 2265 Harrodsburg Road Lexington, KY 40504 USA Phone: (859) 278-3131 Fax: (859) 277-7903
From	Mr. Ryan Maguire (Gilbane)
Subject	Submittal

Date 10/18/2006

Items listed are being sent

☑ Enclosed

☐ Under Separate Cover

CSI Code 13121 - Fabricated Structures

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Items

No.	Description	Copies	Reason	Action
100-13121-001	Prefabricated Structures	2	Approved as Noted	Action Needed

Remarks See notes on GBBN transmittal sheet.

	Mr. Ryan Maguire	10/18/2006
From	Printed Name	Date
Received By	Printed Name	Date

THE PORTA-KING ADVANTAGE

Porta-King Durasteel™ and PC Series Buildings	Competition*	The Porta-King Advantage

FRAME AND BASE

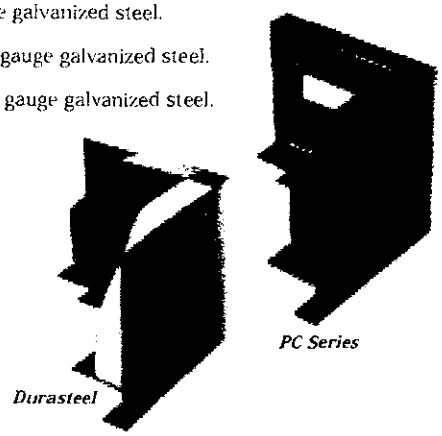
Frame: 2" x 2" x 11 gauge structural steel tubing.

Base: 12 gauge galvanized steel.

Walls, Int.: 16 gauge galvanized steel.

Walls, Ext.: 14 gauge galvanized steel.

Insulation:
Durasteel -
R-10 walls and
R-19 ceiling.
Durasteel-PC -
R-9 walls and
R-17 ceiling.



FRAMEWORK AND WALLS
Frame:
- 2" x 2" x 11 gauge.
- 2" x 2" x 14 gauge.
- 1" x 1" x 16 gauge.
- No frame provided.

Base:
- 14 and 13 ga. galvanized steel.

Walls, Interior:
- 16 and 18 gauge steel.

Walls, Exterior:
- 14 and 16 gauge steel.

Insulation (Walls and Ceiling):
- R-0 walls and R-0 ceiling.
- R-4.3 walls and R-17 ceiling.
- R-10 walls and R-0 ceiling.

FRAMEWORK AND WALLS
Frame:
Porta-King framing material ranges from **45% to 85% THICKER** than the competition. One competitor uses NO vertical frames at all, relying solely on welded panels for strength.

Base:
Porta-King base frame ranges from **16% to 38% THICKER** than the competition.

Walls, Interior:
Porta-King wall material ranges up to **23% THICKER** than the competition.

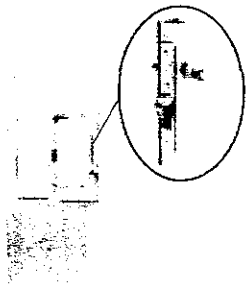
Walls, Exterior:
Porta-King wall material ranges up to **23% THICKER** than the competition.

Insulation (Walls and Ceiling):
If you don't ask the competition for insulation, in many cases you won't get it. With Porta-King, insulation is always standard.

DDORS AND LOCKS

Doors:
Sturdy, 1-3/4" thick anodized aluminum **top-suspended** door recessed into the floor structure to prevent the door from being kicked in.

Locks:
Tough, rust-resistant, laminated steel hook-bolt lock-set with removable cylinder for master keying capability.



DOORS AND LOCKS
Doors:
- Thin, 5/8" thick, "storm door" constructed from mill finished aluminum.
- 16 gauge galvanized steel.

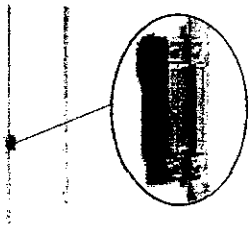
Locks:
- Flip-up latch lock.

DOORS AND LOCKS
Doors:
Thin, mill finished aluminum doors can be easily kicked in and will oxidize. Heavy steel doors are difficult to operate and will rust. Porta-King top-suspended doors operate smoothly, resist vandalism, and "will not oxidize" - we'll guarantee that for 5 years!

Locks:
Only Porta-King provides a laminated hook-bolt lockset with removable cylinder as a standard feature.

WINDOWS

Corrosion-resistant, industrial quality, all anodized aluminum frames and insert frames. Active window panels slide HORIZONTALLY on stainless steel rollers.



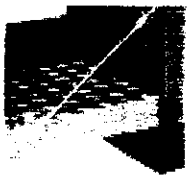
WINDOWS
Frames:
- Vertical rising, mill finished aluminum.
- 16 gauge galvanized steel.

Rollers:
- Nylon and steel rollers.
- No rollers.

WINDOWS
Vertical rising windows can become very dangerous (guillotine effect). Mill finished aluminum frames and steel frames will oxidize rapidly. Nylon and steel rollers will crack and/or corrode once exposed to extreme climates. Porta-King uses only the finest, rust-resistant components and backs them with a 5 year warranty! Our standard horizontal sliding window prevents the "guillotine" effect from ever occurring.

SUB AND FINISHED FLOORING

Sub-floor is 1-1/2" solid waterproof core with maintenance-free aluminum treadplate finished flooring.



SUB AND FINISHED FLOORING
- Concrete pad, by others.
- 12 gauge steel treadplate.

SUB AND FINISHED FLOORING
Once again, with some competitors, "if you don't ask for it, you won't get it." As for steel floors, they will rust. Porta-King aluminum treadplate flooring is waterproof and will never rust.

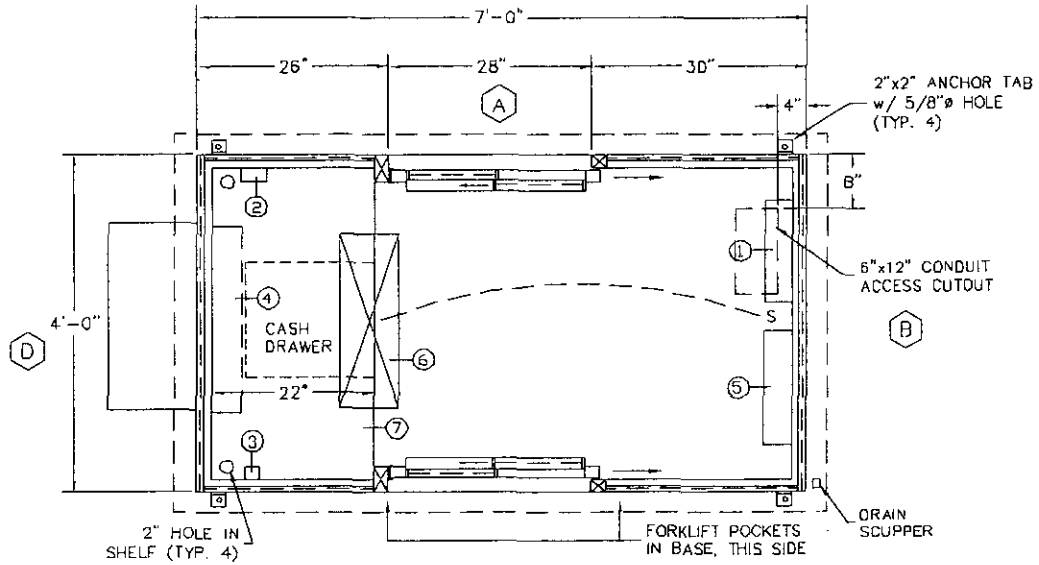
SERVICE

Located in St. Louis, Missouri, Porta-King utilizes outside sales representatives to provide **LOCAL** service to its customers.

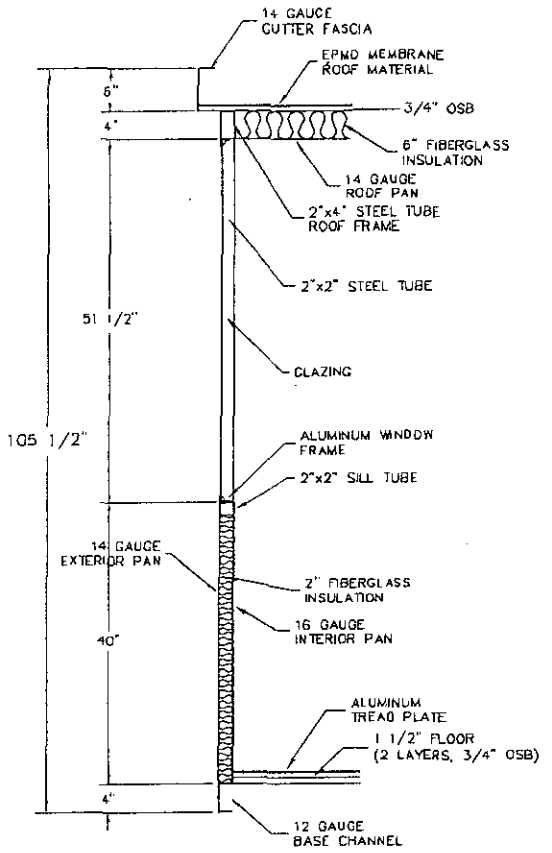
SERVICE
- No field representation.

SERVICE
Porta-King gives you the opportunity to work face to face with a factory representative who can assist you with the specification writing, negotiating and problem solving before and after the sale.

* Competitor information based on manufacturers' printed material.



PLAN VIEW



WALL SECTION DETAIL

DURASTEEL MODEL S74DSLDD BUILDING NOTES :

1. 125 AMP, SINGLE PHASE, 24 CIRCUIT MAIN LOAD CENTER
2. 115V DUPLEX, 230V OUTLET
3. 115V DUPLEX GFI OUTLET
4. 230V 9900 C/1160D H BTU THRU WALL HVAC
5. 230V, 400D WATT WALL MTD HEATER (WIRED DIRECT)
6. 34 WATT SURFACE MTD. FLUORESCENT LIGHT W/ SWITCH
7. 22" DEEP 14GA STEEL, PAINTED SHELF W/S-1 CASH DRAWER

* 3" OVERHANG EXTERIOR MEMBRANE ROOF
* 90" INTERIOR HEIGHT
* 1- HEAVY DUTY ALUMINUM DOOR 2472 W/20"H TRANSACTION WDW, HOOKBOLT DEADLOCK, AND ADA HANDLES
* GLAZING- CLEAR TEMPERED GLASS W/SATELLITE BUTT-GLAZED CORNERS
* INSULATION - WALLS R-10, CEILING R-19
* ALUMINUM TREADPLATE FLOOR
* 1 SET- FORKLIFT POCKETS IN BASE
* BUILDING PAINTED- ADVISE COLOR
* KY INSIGNIA /TRA LABEL /UL LABEL

ORDER IS ON HOLD UNTIL RECEIPT OF INFORMATION LISTED BELOW, AND SIGNED DRAWING.

* ADVISE PAINT COLOR
* VERIFY DOOR CONSTRUCTION TO BE ALUMINUM DUE TO ALUMINUM TRANSACTION WINDOW

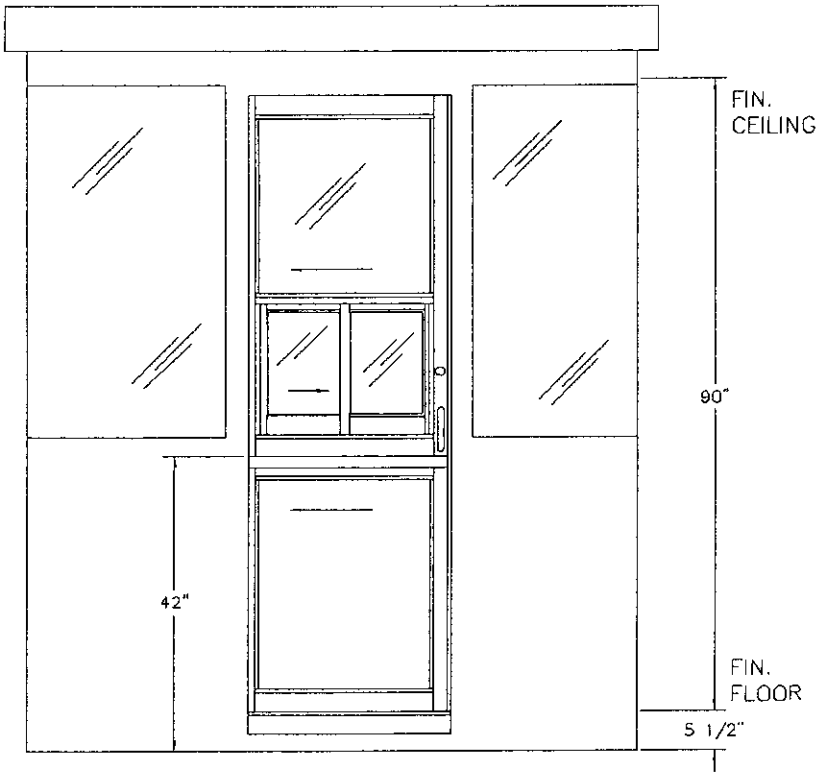
THESE DRAWINGS AND SPECIFICATIONS HAVE BEEN PRODUCED IN ACCORDANCE WITH PORTA-KING'S PROPOSAL AND THE PROJECT DESIGN. THE PROJECT WILL BE MANUFACTURED IN ACCORDANCE TO THIS INFORMATION AS SUBMITTED. THE SECURING OF BUILDING PERMITS AND COMPLIANCE WITH APPROPRIATE BUILDING CODES IS NOT THE RESPONSIBILITY OF PORTA-KING, BUT IS THE RESPONSIBILITY OF THE PURCHASER OF THE BUILDING.

☐ APPROVED AS SUBMITTED, RELEASE FOR MANUFACTURING
☐ APPROVED AS NOTED, RELEASE FOR MANUFACTURING
☐ REVISE AND RESUBMIT

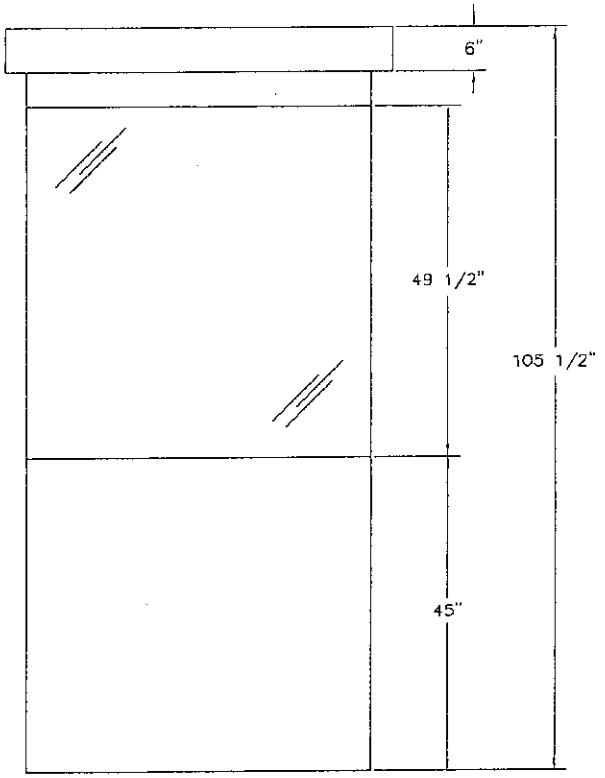
SIGN : _____ DATE : _____

PORTA-KING BUILDING SYSTEMS
4133 SHORELINE DRIVE EARTH CITY, MISSOURI 63045
1-800-BUILDING 314-291-4200 FAX 314-291-2857

TITLE: UK PATIENT CARE FAC. LEXINGTON, KY	E.C. MATTHEWS CO. INC. MODEL S74DSLDD
JOB NO. PK09957	DRAWN BY KCD
SCALE	DATE 9-27-06
	SHEET 1 OF 2



ELEVATION A AND (C MIRRORED)



ELEVATION B AND D

APPROVAL - CAPE CONSISTENCY TO PLANS AND [illegible] DETAIL DIMENSIONS [illegible] NOT COMPLETELY CHECKED. [illegible] RESPONSIBILITY IS [illegible] BY THIS APPROVAL.

E.C. MATTHEWS CO., INC.

BY: [signature] 9.28.06

SIGNATURE DATE

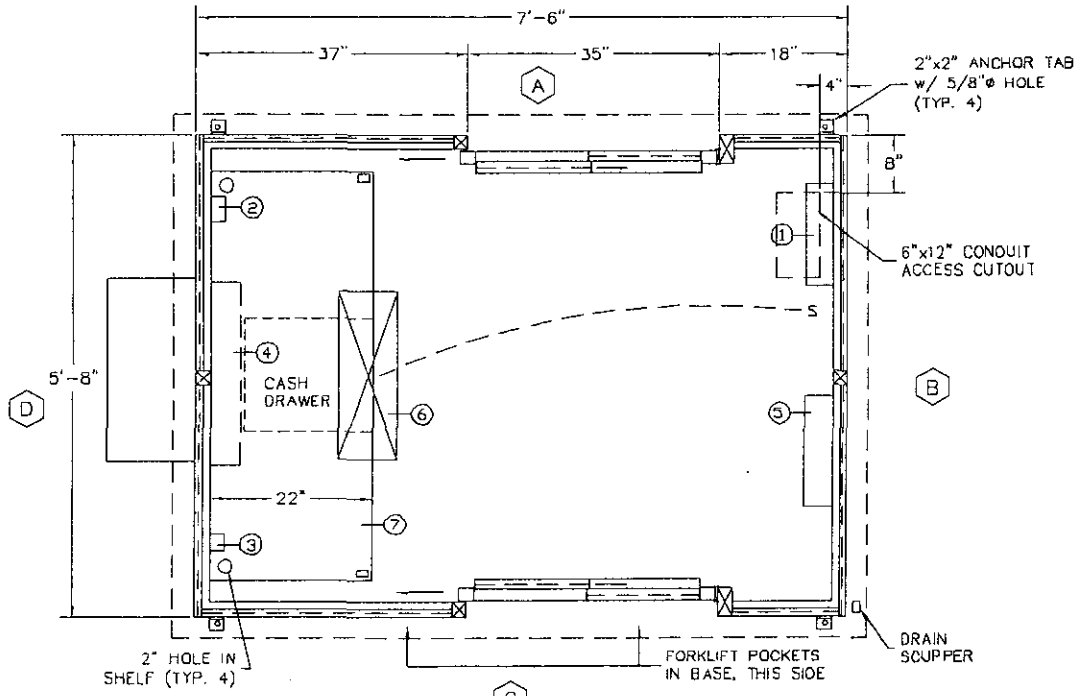
THESE DRAWINGS AND SPECIFICATIONS HAVE BEEN PRODUCED IN ACCORDANCE WITH PORTA-KING'S PROPOSAL AND THE PROJECT DESIGN. THE PROJECT WILL BE MANUFACTURED IN ACCORDANCE TO THIS INFORMATION AS SUBMITTED. THE SECURING OF BUILDING PERMITS AND COMPLIANCE WITH APPROPRIATE BUILDING CODES IS NOT THE RESPONSIBILITY OF PORTA-KING, BUT IS THE RESPONSIBILITY OF THE PURCHASER OF THE BUILDING.

☐ APPROVED AS SUBMITTED, RELEASE FOR MANUFACTURING
☐ APPROVED AS NOTED, RELEASE FOR MANUFACTURING
☐ REVISE AND RESUBMIT

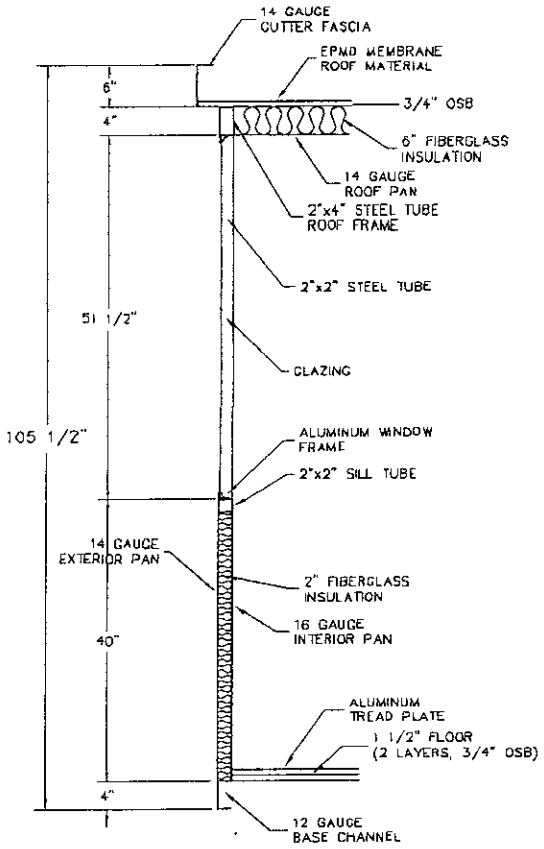
SIGN : _____ DATE : _____

PORTA-KING BUILDING SYSTEMS
4133 SHORELINE DRIVE EARTH CITY, MISSOURI 63045
1-800-BUILDING 314-291-4200 FAX 314-291-2857

TITLE		
UK PATIENT CARE FAC. LEXINGTON, KY	E.C. MATTHEWS CO. INC. MODEL S74DSLDD	
JOB NO. PK09957	DRAWN BY KCD	SHEET 2 OF 2
SCALE	DATE 9-27-06	



PLAN VIEW



WALL SECTION DETAIL

DURASTEEL MODEL DA-S75DSLDD BUILDING NOTES :

1. 125 AMP, SINGLE PHASE, 24 CIRCUIT MAIN LOAD CENTER
2. 115V DUPLEX, 230V OUTLET
3. 115V DUPLEX GFI OUTLET
4. 230V 9900 C/11600 H BTU THRU WALL HVAC
5. 230V, 4000 WATT WALL MTD HEATER (WIRED DIRECT)
6. 34 WATT SURFACE MTD. FLUORESCENT LIGHT W/ SWITCH
7. 22" DEEP 14GA STEEL, PAINTED SHELF W/S-1 CASH DRAWER

- 3" OVERHANG EXTERIOR MEMBRANE ROOF
- 90" INTERIOR HEIGHT
- 1- HEAVY DUTY ALUMINUM DOOR 3072 W/20"H TRANSACTION WDW, HOOKBOLT DEADLOCK, AND ADA HANDLES
- GLAZING- CLEAR TEMPERED GLASS W/SATELLITE BUTT-GLAZED CORNERS
- INSULATION - WALLS R-10, CEILING R-19
- ALUMINUM TREADPLATE FLOOR
- 1 SET- FORKLIFT POCKETS IN BASE
- BUILDING PAINTED- ADVISE COLOR
- KY INSIGNIA /TRA LABEL /UL LABEL

ORDER IS ON HOLD UNTIL RECEIPT OF INFORMATION LISTED BELOW, AND SIGNED DRAWING.

- ADVISE PAINT COLOR
- VERIFY DDDR CONSTRUCTION TO BE ALUMINUM DUE TO ALUMINUM TRANSACTION WINDOW

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4133 SHORELINE DRIVE EARTH CITY, MISSOURI 63045
1-800-BUILDING 314-291-4200 FAX 314-291-2857

TITLE	
UK PATIENT CARE FAC. LEXINGTON, KY	E.C. MATTHEWS CO. INC. MODEL DA-S75DSLDD
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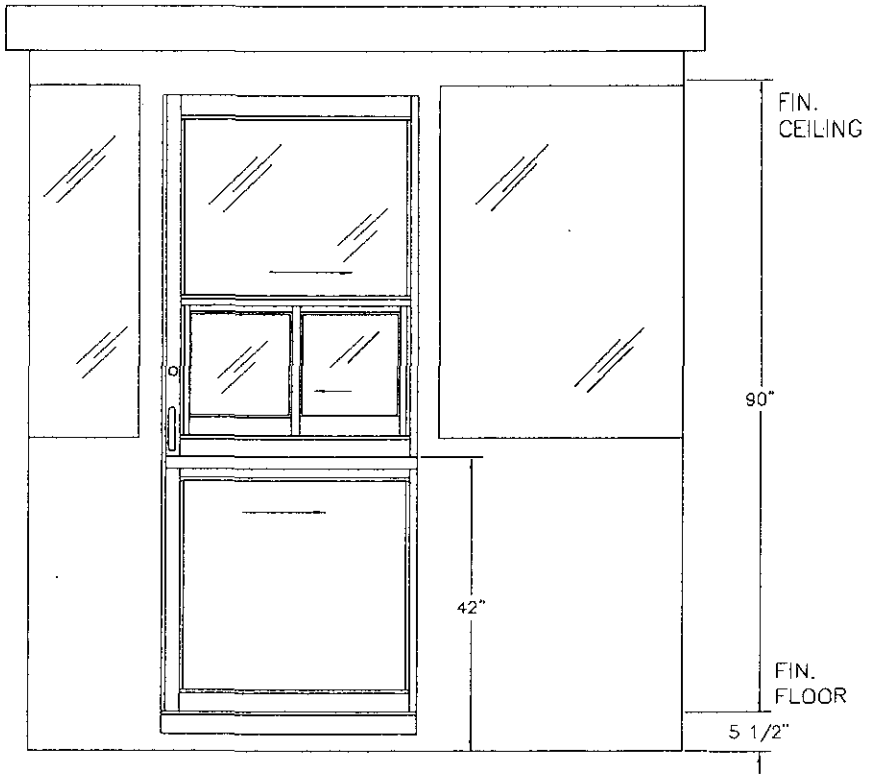
SHEET 1 OF 2



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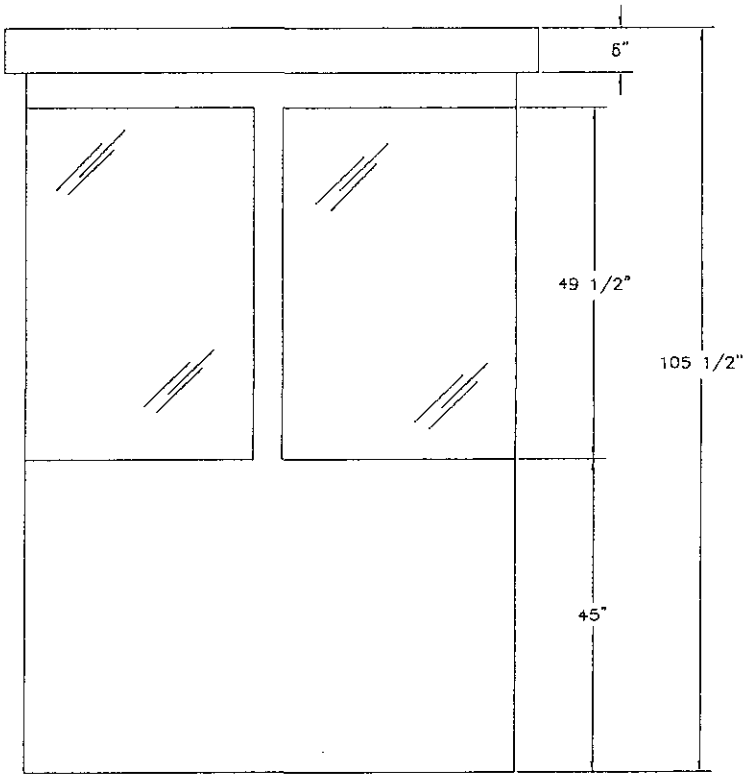

ELEVATION B AND D

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	SHEET 2 OF 2

13046/PCQ

BuyLine 6183

APPROVED FOR GENERAL CONFORMITY TO PLANS AND SPECIFICATIONS. CERTAIN DIMENSIONS AND QUANTITIES NOT COMPLETELY CHECKED. SUBCONTRACTOR'S FULL RESPONSIBILITY IS TO NOT BE RELIEVED BY THIS APPROVAL.

E.C. MATTHEWS CO., INC.

BY: DRL 9.28.06

SIGNATURE DATE

PORTA-KING

ADA Booths
Security/Surveillance Booths
Access Control Booths
Guardhouses
Cashier/Toll Booths
Convenience Products Booths
Parking Booths
Attendant Booths
Information Booths
Gas Island Booths
Valet Parking Booths
Bus Shelters
Service Writer Booths
Smoking Shelters
Control Booths
Ticket Booths
Gate Houses

Steel Or Aluminum ... Your Single-Source For Modular, Pre-Assembled Buildings

Durasteel modular buildings combine the strength of steel for long lasting durability and security with the beauty of seamless construction for terrific eye appeal. Blend those qualities to a variety of tough acrylic finishes, custom designs and a wide range of options, and you've got a modular building perfect for any application, and that can meet ADA guidelines.

SECURITY

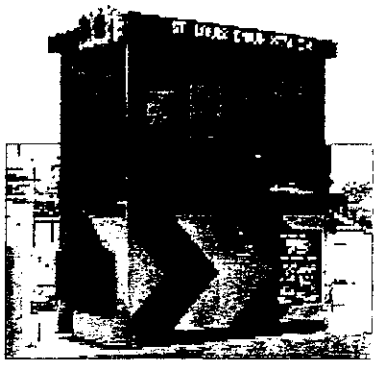
- 1-3/4" thick anodized aluminum door, recessed into the floor
- High security, laminated hookbolt deadlock offers a master key option
- High security camlocks on operating windows
- Optional bullet resistant construction, security screens, through-wall transaction drawers, speaker systems, and more

DURABILITY

- Structural, tubular steel framework, floor to ceiling
- Galvanized steel construction on all exposed surfaces
- Top suspended anodized aluminum doors guarantee smooth operation and never rust
- Industrial grade anodized aluminum window frames
- Aluminum treadplate floor never rusts

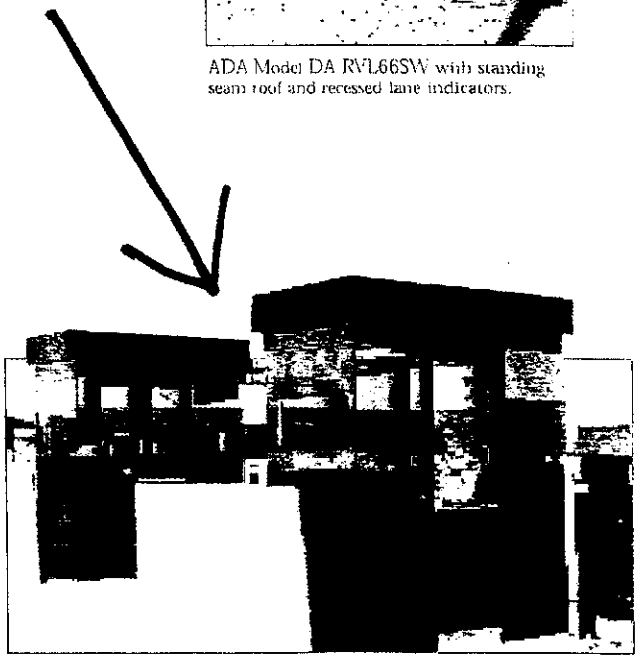
SPEED

- 38" window sill height makes transactions fast and convenient
- Doors and windows can be installed on both sides for two lane operation



Model 64SL with custom paint.

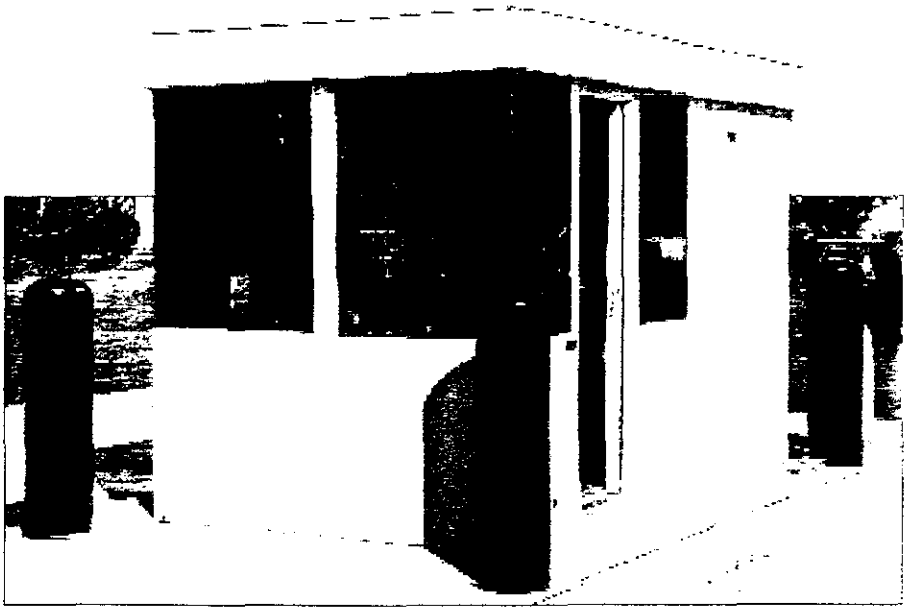
ADA Model DA RVL66SW with standing seam roof and recessed lane indicators.



Custom toll booth Model S74DSLDD featuring satellite glazing and sliding Dutch door.

PORTA KING

Model RND63CSL with tinted bronze polycarbonate glazing.



Model RR-S107DSL featuring satellite glazing and custom revealed radius corner fascia.

Bullet resistaot Model BR64SW with thru wall transaction drawer and inter com system.

Model TRL64CSL with two-tone paint and custom stenciling.

Model 74CDSL with transaction window.

PC SERIES ... The Strength Of Steel, The Economy Of Aluminum

The PC Series is a line of pan constructed steel structures that combine the durability and strength of Durasteel, yet incorporate a more economical method of construction. And we pass the savings along to you.

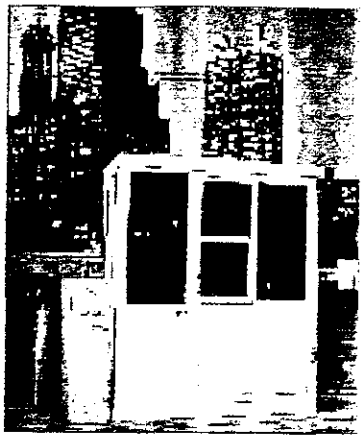
Every structure meets or exceeds the specifications of the competition. Plus, we offer you a variety of acrylic finishes, custom designs and other options to meet your exact requirements. For additional flexibility, wall panels can be replaced on-site in case of damage.

ADA Model PC DA 75CSW featuring horizontal sliding cashier window.

Model PC64CSL with horizontal sliding transaction window on side opposite door.

Porta-King stands apart from every other modular building manufacturer because Porta-King is the only company that uses all maintenance-free anodized aluminum components — standard. Eliminates painting, rusting and surface deterioration. Compare that to the industry standard of using mill finished aluminum.

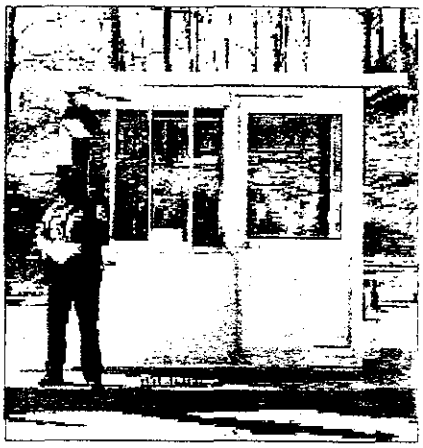
And, our non-weld construction means it's simple and fast to replace damaged building components. Buildings are shipped pre-assembled. Simply bring electric to the pre-wired system and go to work.



Model 7648CSL with tinted tempered safety glass.

SECURITY

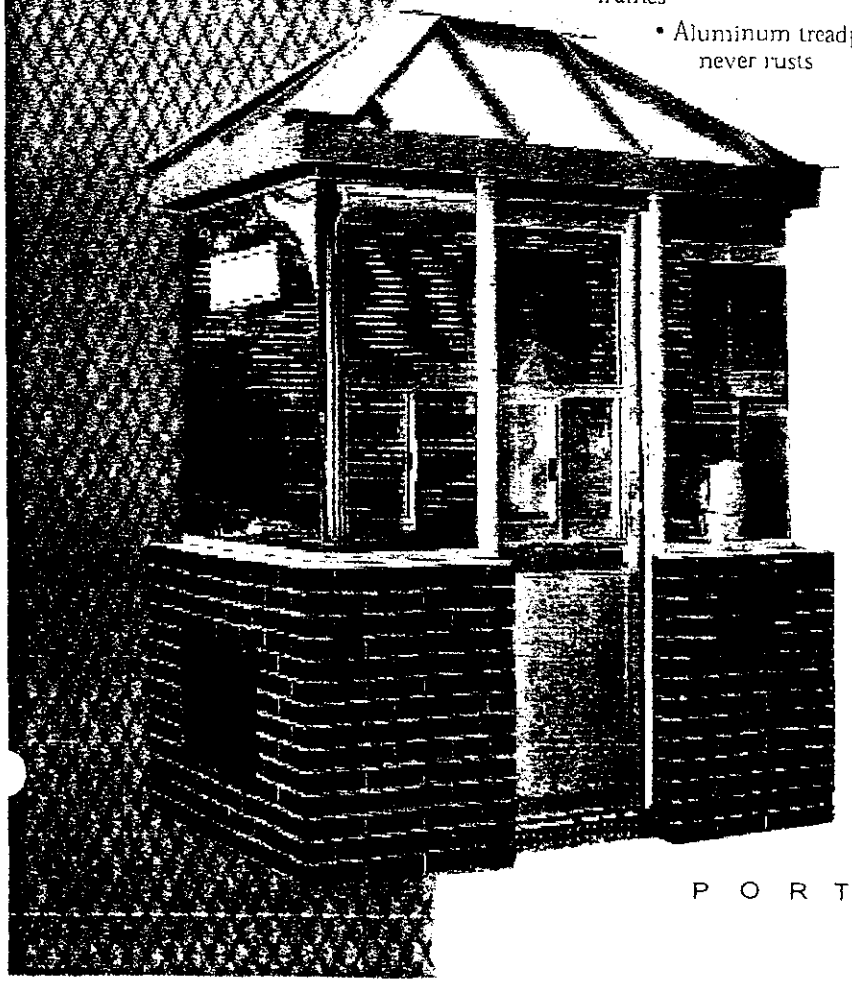
- 1-3/4" thick anodized aluminum door, recessed into floor
- High security, laminated hookbolt deadlock offers a master key option
- High security camlocks on operating windows
- Optional bullet resistant construction, security screens, through-wall transaction drawers, speaker systems, and more



Bullet resistant Model BR-9696SW with exterior spotlight.

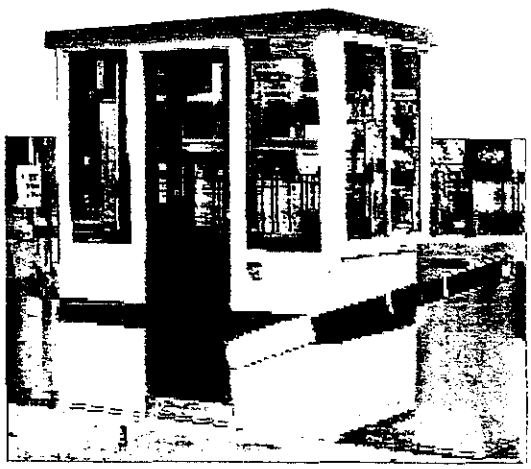
DURABILITY

- Anodized aluminum finish means no painting, rusting or surface deterioration
- 5-year warranty on wall panel construction and finish
- Structural aluminum framework, floor to ceiling
- Top suspended anodized aluminum doors guarantee smooth operation and never rust
- Industrial grade anodized aluminum window frames
- Aluminum treadplate floor never rusts



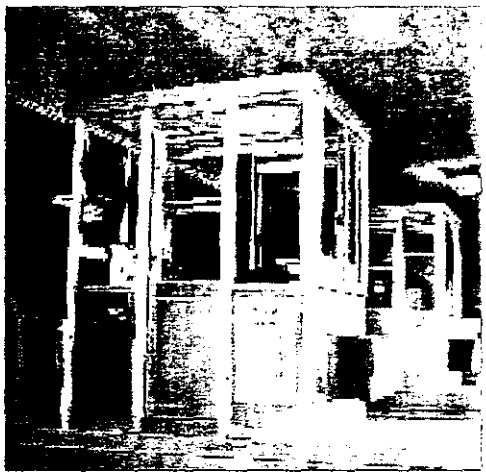
SPEED

- 38" window sill height makes transactions fast and convenient
- Doors and windows can be installed on both sides for two lane operation

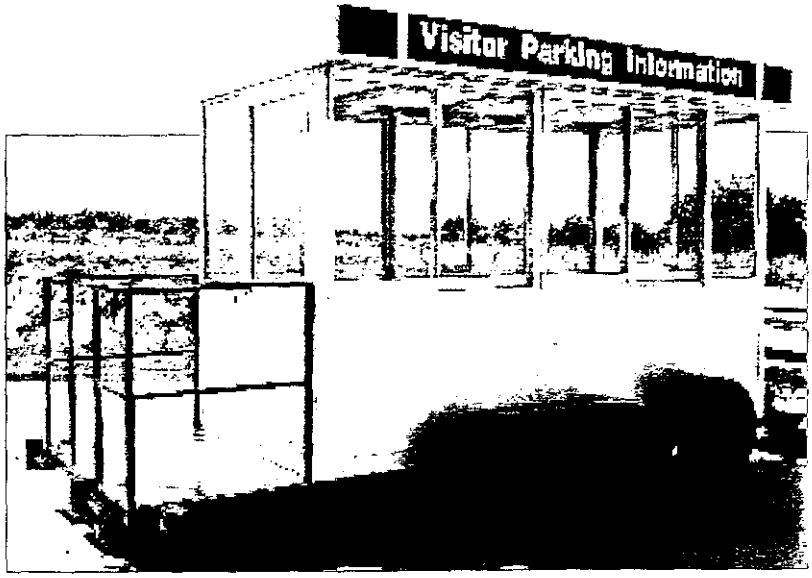


Model 7648CSL with horizontal sliding transaction window and custom two tone paint.

PORTA KING

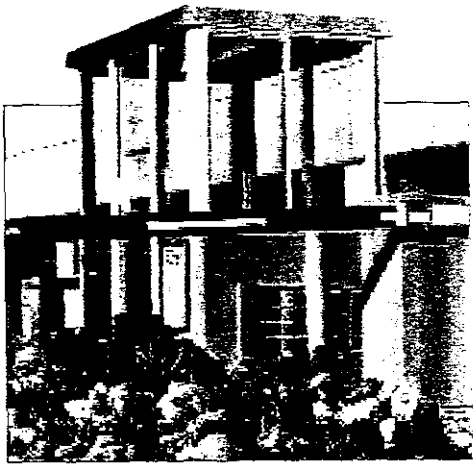


Model 7648CSL with vertical rising transaction window and HVAC.



Model TRL14476SW with custom backlit signage.

Bullet resistant Model BR7648SL.



Model 7648CSL cashier booth.

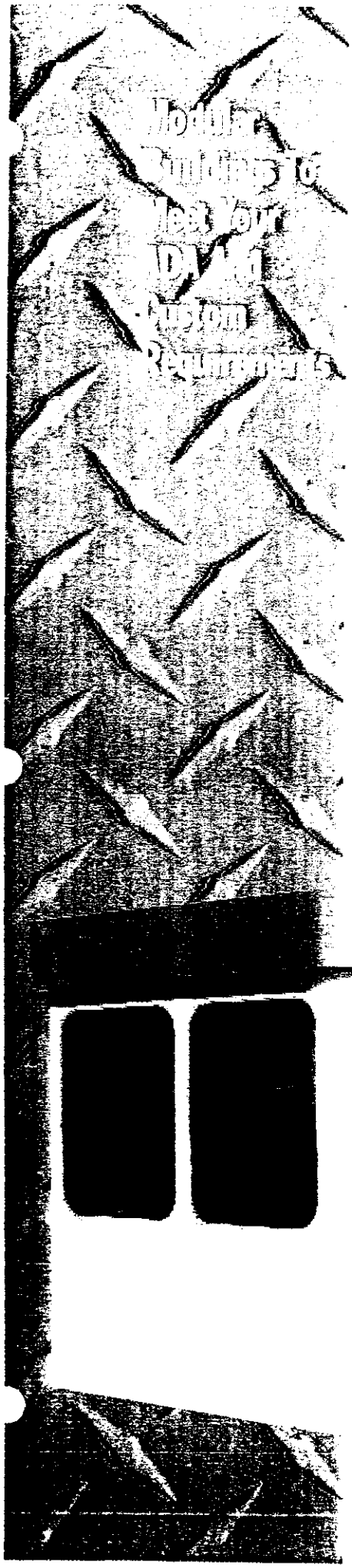
Model PL64CSL with exterior rim fit roof.

PIVOT-LOCK™ ... The Ultimate In Ease Of Assembly

Pivot-Lock pre-fabricated, modular panels simply pivot and lock together, which eliminates the mess and extensive costs and time required by conventional construction.

The system allows you to construct in low ceiling height or confined areas, where a typical pre-assembled building may not fit or be extremely hard to place. Panels are completely framed in anodized aluminum extrusions, windows are pre-glazed and doors pre-hung. And for added flexibility and cost savings, you can easily dis-assemble and relocate the structure in just a matter of a few hours. Ideal for both interior and exterior applications.

Custom bullet resistant Model BR-PL258 central cashier and security office.



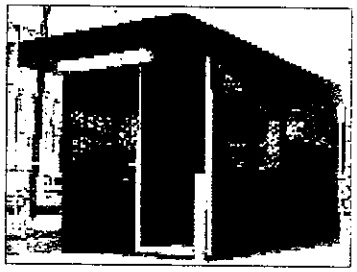
Porta-King modular buildings comply with ADA guidelines and can be built to meet your specific requirements.

Standard features that meet ADA guidelines include:

1) Maneuverability within booth — 60" diameter
2) Door clearances — 32" clear opening, 1/2" high threshold
3) Counters — 32" A.F.F.
4) Cashier window — 32" A.F.F.
5) Ceiling height — 80"

All structures can be designed to allow for an accessible route to meet on-site conditions, such as door location and threshold height. Consult Porta-King for more information.

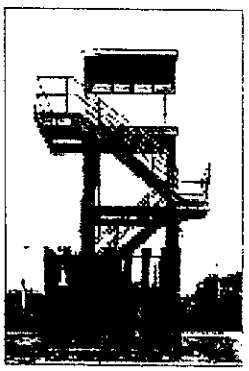
ADA Duraluminum Model DA-8866SW.



Custom Durasteel Model 106SW featuring security screens, steel roll-down shutters and extended illuminated overhang.

Durasteel Model RAD64CSL featuring radius corners and rounded windows.

Custom Durasteel Model PEN44SW with standing seam roof, extended overhang and backlit fascia.



Durasteel Model RVL99SW featuring vertical reveals in fascia and wall panels.

PORTA KING

STANDARD FEATURES AND OPTIONS

KEY

DS Durasteel — DSPC Durasteel PC Series
DA Duraluminum — PL Pivot Lock
● Standard Features — ○ Optional Features — – Not Available

LEGEND

♦ 5-year limited warranty against swelling due to moisture.
▼ 5-year limited warranty against oxidation, surface deterioration.
: Standard in Duraluminum models 76" in one dimension or less.
▲ 10-year limited warranty against leakage.

SHIPPING	DS	DSPC	DA	PL
Pre-assembled	●	●	●	○
Knocked-down	–	–	–	●
Pre-wired	●	●	●	○
STRUCTURAL FRAMEWORK, BASE, FLOOR				
Structural Framework				
Anodized aluminum, 6063T6 ▼	–	–	●	●
Steel tubing, 2"x2"x .120	●	●	–	–
Replaceable components	–	–	●	●
Base				
Anodized aluminum angle ▼	–	–	●	○
Galvanized steel angle, 12 gauge	●	●	–	–
Floor				
1-1/2" waterproof insulating core	●	●	●	○
Aluminum safety treadplate finish models 48" or less	●	●	●	○
Vinyl compositional floor tile	●	●	●	○
WALL PANELS, EXTERIOR FINISH, DOORS				
Wall Panels				
3" thick, R-13, polystyrene/hardboard	–	–	–	●
5/8" thick, R-2, REDEX board ♦	–	–	●	–
2" thick, R-10, galvanized steel	●	–	–	–
2" thick, R-9, galvanized steel	–	●	–	–
2" thick, R-10, polyisocyanurate/REDEX ♦	–	–	○	–
Replaceable panels	–	●	●	●
Exterior Finish				
Anodized aluminum ▼	–	–	●	○
Fiberglass reinforced plastic (FRP)	–	–	○	○
Custom acrylic enamel paint, choice of one color	●	●	○	○
Doors				
Anodized aluminum, 1-3/4" thick ▼				
Swing, or	●	●	●	●
Sliding, top suspended, or	●	●	●	–
Sliding, bottom track	○	○	○	●
Recessed into floor	●	●	●	–
Adams Rite laminated hookbolt deadlock	●	●	●	–
Steel, 1-3/4" thick				
Swing	○	○	○	○
Sliding	○	○	○	–
WINDOWS, GLAZING, COUNTERS				
Windows				
Industrial grade, anodized aluminum ▼	●	●	●	○
Heavy-duty camlock	●	●	●	○
Horizontally sliding on stainless steel rollers	●	●	●	○
Glazing				
Tempered/safety glass	●	●	●	○
Tinted tempered	○	○	○	○
Clear insulated	○	○	○	○
Tinted insulated	○	○	○	○
Clear acrylic	○	○	○	○
Tinted acrylic	○	○	○	○
Bullet resistant, Class I III	○	○	○	○
Counters				
22" deep t.				
Plastic laminate	●	●	●	○
Galvanized steel	○	○	○	○
Stainless steel	○	○	○	○

CEILING, EXTERIOR, ROOF	DS	DSPC	DA	PL
Ceiling				
Corrugated deck, acoustical tile & grid	–	–	–	●
3", R-13 polystyrene/hardboard	–	–	–	○
5/8", R-2, REDEX board ♦	–	–	●	○
4", R-19, galvanized steel	●	–	–	–
4", R-17, galvanized steel	–	●	–	–
2", R-10, polyisocyanurate/REDEX ♦	–	–	○	○
Exterior Roof				
Anodized aluminum gutter with 4" fascia ▼	–	–	○	○
Galvanized steel gutter with 6" fascia	○	○	–	–
Rubber roof membrane ▲	○	○	–	–
ELECTRICAL				
100 AMP load center	●	●	●	○
1-115v duplex, 1-230v single outlet	●	●	●	○
Light fixture (20w, 40w, 80w)	●	●	●	○
Electrical wiring to conform to NEC	●	●	●	○
Electrical components to bear UL label	●	●	●	●
MISCELLANEOUS				
Climate Control				
Heating units	○	○	○	○
Air conditioning units	○	○	○	○
Heat, vent, air combo units	○	○	○	○
Roof mount units	○	○	○	–
Thru-wall units	○	○	○	○
Accessories				
Storage drawers	○	○	○	○
Cash drawers	○	○	○	○
Thru-wall transaction drawers	○	○	○	○
Intercom systems	○	○	○	○
Traffic control lights	○	○	○	○
Speak holes	○	○	○	○
Back lit signs	○	○	○	○
Painted/stencil signage	○	○	○	○
Models (styles)				
Satellite				
wrap around (acrylic)	○	○	○	–
butt-glazing	○	○	–	–
Radius corner	○	○	–	–
Round end	○	○	–	–
Trailer	○	○	○	○
Pedestal	○	○	○	–
Brick finish	○	○	○	○
Bullet-resistant, Class I III	○	○	○	○
Restroom (pre-plumbed)	○	○	○	–
Standing seam roof	○	○	○	○
Multi-sided	○	○	○	○
Custom designed to order	○	○	○	○
WARRANTY				
1 year limited warranty on workmanship of product.	●	●	●	●
5-year limited warranty on anodized aluminum surfaces from oxidizing.	●	●	●	●
5 year limited warranty on wall panels from swelling due to moisture.	–	–	●	–
10 year limited warranty on roof membrane from leaking.	●	●	–	–
Manufacturers' warranty on accessory items.	●	●	●	●

CUSTOM DESIGN INFORMATION

If you need special components or have custom requirements and/or specifications other than those described on this page, please consult your Porta-King representative or contact Porta-King direct. In most cases, we can meet your exact requirements.

DETAILS AND SPECIFICATIONS

DURASTEEL

1. Scope
1.1 Product
Furnish Duraxteel Model _____, as manufactured by Porta King Building Systems, or pre-approved equal
2. Materials
2.1 Product Construction
Building to be of welded steel construction, with all intersecting welded connections ground smooth. Overall height to be 89" for interior use, or 95" with exterior roof
2.2 Structural Framework
Structural corners and uprights to be 2" X 2" X 120 structural ASTM A500 Grade B welded tubing
2.3 Wall Panels
Walls to be 14 gauge galvanized steel on exterior and 16 gauge galvanized steel on interior. Wall thickness to be 2" and insulated to R 10.
2.4 Finish
Exterior surfaces to be full flush, smooth surface with no visible seams or caulked joints. Interior wall surfaces to be flush, smooth, modern construction with no exposed fasteners. All surfaces to be electrostatically painted with a rust inhibitive epoxy primer and shall have a painted enamel finish.
2.5 Floor Structure
Floor to be 1-1/2" solid waterproof insulating core fit tight against wall panels and fastened to bottom 12 gauge galvanized structural base frame. The finished floor to be maintenance-free 3003 TREADBRITE aluminum safety treadplate.
2.6 Ceiling
Ceiling to be 14 gauge galvanized steel. Roof to have R-19 insulation and protective membrane on top side.
2.7 Doors
Doors to be of anodized aluminum, 1-3/4" thick, and half-glazed with tempered safety glass. Bottom portion to include insulated panel with smooth anodized aluminum.
2.7.1 Sliding door to be top-suspended in overhead track assembly and to be fully weatherstripped. Sliding doors to incorporate a maximum security laminated hookbolt deadlock with removable cylinders. Door to be recessed into the floor structure.
2.7.1 Swing door to be fully weatherstripped with key-in-knob locksets
2.7.2 Transaction booths to have a horizontal sliding cashier window in the door
2.8 Windows
Windows to have anodized aluminum frames and insect frames and to be of industrial quality with screw window panel to slide horizontally on stainless steel, ball-bearing rollers (plastic rollers are not acceptable). Windows to include inside positive camlocking device. Exterior window sill height to be 38" (inside 34" from finished floor)
2.9 Glass Glazing
All glazing to be tempered/safety glass
2.10 Counter
Furnish 22" deep, full width counter, 32" from finished floor and with walnut grain plastic laminate
2.11 Electrical Service
All components to bear UL label. Electric service to include single phase, 100 AMP capacity load center, pre-wired in conduit, with one (1) 230v and four (4) 115v circuit capability. Furnish one (1) 115v duplex and one (1) 230v single outlets. Electric work to be in conformation with the N.E.C. Provide one (1) 6" X 12" conduit access cutout, with removable cover, in the floor.
2.11.1 Lights to be fluorescent type fixtures with acrylic lens
2.12 Exterior Roof
Exterior weatherproof roof to be of 14 gauge galvanized steel and to include a 3" overhang with a 6" fascia. Roof to be shipped installed

PC-SERIES

1. Scope
1.1 Product
Furnish Duraxteel Model PC _____, as manufactured by Porta King Building Systems, or pre-approved equal
2. Materials
2.1 Product Construction
Building to be of welded steel construction, with all intersecting welded corners ground smooth. Overall height to be 89 1/2" for interior use, or 95-1/2" with exterior roof
2.2 Structural Framework
Structural corners and uprights to be 2" X 2" x 120 structural ASTM A500 Grade B welded tubing;
2.3 Wall Panels
Wall panels to be pan type construction made from 14 gauge galvanized steel on exterior and flat 16 gauge galvanized steel on interior. Panels to be mechanically fastened to frame work to allow field replacement of damaged panels. Overall wall thickness to be 2" and shall be insulated to R-9.
2.4 Finish
All surfaces to be electrostatically painted with rust inhibitive epoxy primer and to have a finish coat of air dry industrial acrylic paint. Building to be painted one color, as selected from standard acrylic finishes
2.5 Floor Structure
Floor to be 1-1/2" solid waterproof insulating core fit tight against wall panels and fastened to bottom 12 gauge galvanized structural base frame. The finished floor to be maintenance-free 3003 TREADBRITE aluminum safety treadplate.
2.6 Ceiling
Ceiling to be a composite panel. Roof to be insulated to R-17 and to include a protective membrane on top side
2.7 Doors
Doors to be of anodized aluminum, 1-3/4" thick, half-glazed with clear tempered safety glass. Bottom portion to include insulated panel with smooth anodized aluminum on both sides.
2.7.1 Sliding door to be top-suspended in overhead track assembly and to be fully weatherstripped. Sliding doors to incorporate a maximum security laminated hookbolt deadlock with removable cylinders. Door to be recessed into the floor structure.
2.7.1 Swing door to be fully weatherstripped with key-in-knob locksets
2.7.2 Transaction booths to have a horizontal sliding cashier window in the door
2.8 Windows
Windows to have aluminum frames. Sliding windows to include an inside positive locking device. Exterior window sill height to be 38" (inside 34" from finished floor)
2.9 Glass Glazing
All glazing to be tempered/safety glass.
2.10 Counter
Furnish 22" deep, full width counter, 32" from finished floor and with walnut grain plastic laminate
2.11 Electrical Service
All components to bear UL label. Electric service to include single phase, 100 AMP capacity load center, pre-wired in conduit, with one (1) 230v and four (4) 115v circuit capability. Furnish one (1) 115v duplex and one (1) 230v single outlets. Electric work to be in conformation with the N.E.C. Provide one (1) 6" X 12" conduit access cutout, with removable cover, in the floor.
2.11.1 Lights to be fluorescent type fixtures with acrylic lens.
2.12 Exterior Roof
Exterior weatherproof roof to be of 14 gauge galvanized steel and to include a 3" overhang;

DURALUMINUM

with a 6" fascia. Roof to be shipped installed
1. Scope
1.1 Product
Furnish Duraluminum Model _____, as manufactured by Porta King Building Systems, or pre-approved equal
2. Materials
2.1 Product Construction
Building to have satin anodized aluminum exterior. All anodized aluminum surfaces to carry a five (5) year warranty from surface deterioration caused by oxidation. Overall height to be 87" for interior use, or 95" with exterior roof
2.1.1 Fasteners to be corrosion-proof type and to permit on-site replacement of damaged components. Welded fabrication is not acceptable.
2.2 Structural Framework
Structural members to be alloy 6063 T6, anodized 204R1, with ribbed pattern.
2.3 Wall Panels
Wall panels to be 5/8" fire-impact resistant moisture-resistant and expansion-resistant insulating REDEX board. Wall panels to carry a five (5) year warranty from swelling due to moisture absorption
2.4 Finish
Anodized diamond embossed sheet laminated to the exterior side. Interior to have vinyl walnut wood grain surface
2.5 Floor Structure
Floor to be 1-1/2" solid waterproof insulating core fit tight against wall panels and fastened to bottom structural base frame. Finished floor to be 3003 TREADBRITE aluminum safety treadplate
2.6 Ceiling
Ceiling panel to be 3/4" REDEX board with white vinyl prepainted laminated to the interior side. Ceiling panel to carry a five (5) year warranty from swelling due to moisture absorption
2.7 Doors
Doors to be of anodized aluminum, 1-3/4" thick, half-glazed with clear tempered safety glass. Bottom portion to include insulated panel with smooth anodized aluminum on both sides.
2.7.1. Sliding door to be top-suspended in overhead track assembly and shall be fully weatherstripped. Sliding doors to incorporate a maximum security laminated hookbolt deadlock with removable cylinders. Door to be recessed into the floor structure
2.7.1 Swing door to be fully weatherstripped with key-in-knob locksets
2.7.2 Transaction booths to have a horizontal sliding cashier window in the door.
2.8 Windows
Windows to have anodized aluminum frames and to be of industrial quality with screw window panel to slide horizontally on stainless steel, ball-bearing rollers (plastic rollers are not acceptable). Windows to include inside positive camlocking device. Exterior window sill height to be 38" (inside 34" from finished floor).
2.9 Glass Glazing
All glazing to be tempered/safety glass
2.10 Counter
Furnish 22" deep, full width counter, per plans, 32" from finished floor and with walnut grain plastic laminate to match interior walls.
2.11 Electrical Service
All components to bear UL label. Electric service to include single phase, 100 AMP capacity load center, pre-wired in conduit, with one (1) 230v and four (4) 115v circuit capability. Furnish one (1) 115v duplex and one (1) 230v single outlets. Electric work to be in conformation with the N.E.C. Provide one (1) 6" X 12" conduit access cutout, with removable cover, in the floor
2.11.1 Lights to be fluorescent type fixtures with acrylic lens.
2.12 Exterior Roof
Exterior weatherproof roof to include a ribbed anodized fascia trim, with integral

PIVOT-LOCK

self-contained purlins and to include a 3" overhang with a 6" fascia. Roof to be shipped installed.
1. Scope
1.1 Product
Furnish a _____ X _____ size, Pivot-Lock building for information only as manufactured by Porta King Building Systems, or pre-approved equal. Building is shipped from plainly knocked down
2. Materials
2.1 Wall Panels
Panels to be 3" thick with expanded poly-styrene foamplate (Grade II, Class II). Interior to be vinyl covered hardboard, exterior to be painted embossed, anodized aluminum sheet. Panels to utilize the Pivot-Lock method of connection
2.1.1 Optional wall finishes include: Paneled steel, FRP board, anodized brick, stone-embossed aluminum, high pressure laminate, aggregate stone.
2.2 Floor Structure
Concrete pad (by others) recommended
2.2 Optional: Pressure-treated floor structure available with maintenance-free 3003 TREADBRITE aluminum safety treadplate, or vinyl tile.
2.3 Ceiling
Acoustical grid-type ceiling system with hanger rods, and 2' X 4' lay-in acoustical boards, and corrugated decking.
2.3 Optional: Ceiling to be 3/4" REDEX board with white vinyl laminated to interior side. Panel to carry a five (5) year warranty from swelling due to moisture absorption.
2.3 Optional: Pivot-Lock panel-type ceiling system with 3" thick panels, R-23.
2.4 Doors
Anodized aluminum doors shipped pre-hung, installed in the wall sections with butt hinges, key-in-knob locksets (shipped separately), and door threshold
2.4 Optional: Doors to be sliding type.
2.5 Windows
Windows and doors to be factory glazed with clear tempered safety glass. All glass to be shipped installed, on-site glazing is not required.
2.6 Electrical Service
Anodized aluminum extrusions to form raised lay-in wireway, with removable cover, for run sealed electrics. Provide _____ 115v duplex outlets, _____ 230v single outlets, _____ light fixtures, and 100 AMP circuit breaker box. All electrical devices to bear UL label. Wiring to be furnished and installed by others
2.7 Exterior Roof
Exterior weatherproof roof to include a

STANDARD COLOR OPTIONS

ribbed fascia trim with integral self-contained purlins and to include a _____" overhang

A variety of standard colors are available. Custom [illegible]

DESIGN ASSISTANCE

Give us your specifications, standard or custom. We'll provide you with FREE CAD drawings of project designs.

PORTA-KING
A Jay Henges Enterprise.
4133 Shoreline Drive • Earth City, Missouri 63045 • Phone: 800 284 5346 • 314 291 4200 • Fax: 314 291 2857
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INSTALLATION INSTRUCTIONS

and

MAINTENANCE MANUAL

APPROVED FOR GENERAL CONFORMITY TO PLANS AND SPECIFICATIONS. DETAIL DIMENSIONS AND QUANTITIES NOT COMPLETELY CHECKED. SUBCONTRACTOR'S FULL RESPONSIBILITY IS IN NO WAY RELIEVED BY THIS APPROVAL.

F.C. MATTHEWS CO., INC.

BY: DJS 9.28.06

SIGNATURE DATE

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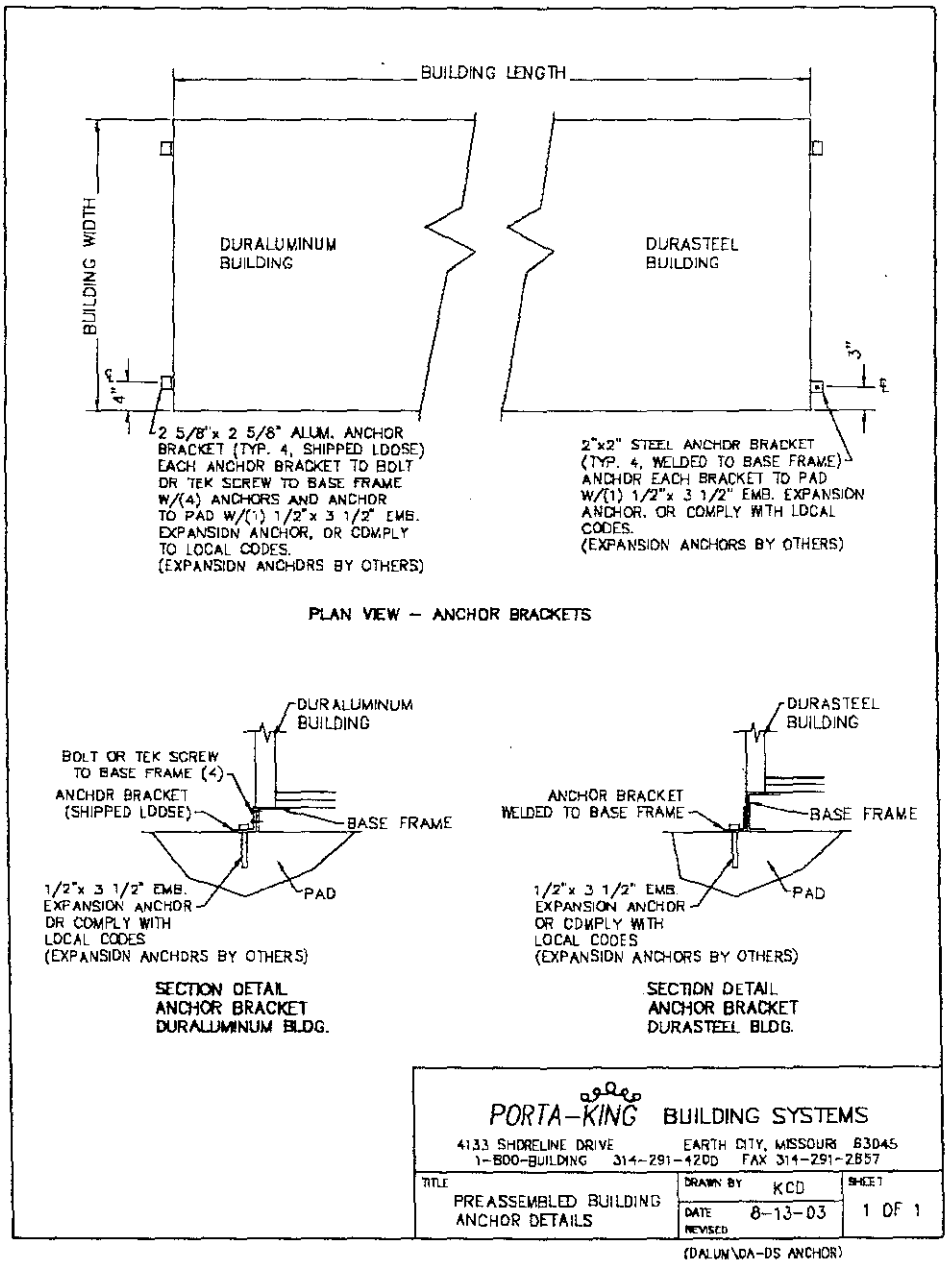
ANCHOR DETAILS
PREASSEMBLED BUILDINGS



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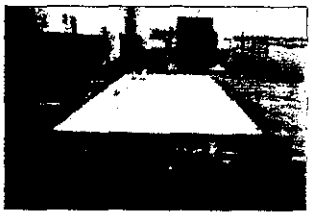
PREPARATORY WORK and INSTALLATION



PREPARATORY WORK

It is the responsibility of the buyer to perform all preparatory work (unless otherwise specified in a Porta-King Building Systems contract).

IMPORTANT: The securing of building permits and compliance with appropriate building codes is not the responsibility of Porta-King, but is the responsibility of the purchaser of the building.

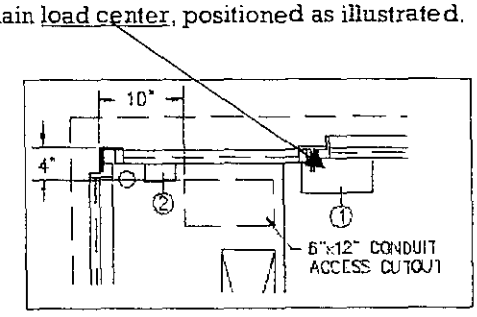
It is NOT the responsibility of Porta-King to verify that these "suggestions" comply with local and state codes, rather, it is the responsibility of the purchaser of the building.

SUGGESTIONS

1. Pour concrete island (pad) minimum 4" deep. The island should be a minimum of 12" wider than the roofline dimensions to allow a 6" concrete border on each side of the building roofline.
2. Level the concrete island and install ballards at each corner of the building to further protect the building from damage caused by passing vehicles.
3. Provide three-wire 240v/110v single-phase, 100 amperage, service (standard) to the concrete island. Refer to your Porta-King approval drawing, which illustrate the proper "stub up" location for your electrical source.
4. If your installation requires plumbing, provide a fresh water supply line and gray-matter waste line to the concrete island. Refer to your Porta-King approval drawing, which illustrate the proper "stub up" location for your plumbing lines.
5. Receive and offload the building using either a forklift truck or overhead crane. Position the building square on the concrete island and anchor. Remove wooden skids.
6. Recommended concrete anchor is ½" x 4" galvanized or stainless steel, or comply with local codes – which ever is MORE stringent.
7. Make the final electrical / plumbing / communication connections and clean the work area.

TYPICAL CONDUIT ACCESS CUTOUT LOCATION AND BREAKER BOX SPECIFICATION

1. The "typical" conduit access floor cutout measures 6" x 12". It is located 10" and 4" from the corner of the building, as illustrated.
2. The "standard" breaker box is a single-phase, 12-circuit, 100-amp main load center, positioned as illustrated.



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RECEIVING and OFFLOADING INSTRUCTIONS

RECEIVING

Each Porta-King preassembled building will arrive to the job site via flatbed truck. Each building will be individually wrapped by Porta-King; additionally, the trucker will have tamped each building to further protect it during transit.

Once the building arrives, **INSPECT** each building **PRIOR TO SIGNING** the **CLEAR BILL**. If the building arrives damaged note the damage on the clear bill. If you are unable to inspect each building thoroughly prior to signing the clear bill, note on the clear bill the phrase **"SUBJECT TO INSPECTION."** This will reduce your liability should the building have incurred any "hidden" damage not yet identified.

Offload the building using either a forklift truck or overhead crane. Set the building on a concrete pad. Refer to "Installation Instructions" for additional information.

IMPORTANT: Buildings with exterior roofs can be exposed to the outdoor elements. If your building does not feature an exterior roof design then the building must be protected from the elements. Any wall / roof penetration (climate control units, etc...) must be sealed PRIOR to exposure to the outside elements

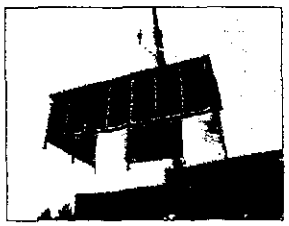
OFFLOADING (FORKLIFT TRUCK)

1. Prior to shipping, each building is positioned onto a flat bed truck utilizing a forklift truck; therefore, the use of a forklift truck is recommended for offloading the building at the job site. The building ships on skids to allow easy access t beneath the building.
2. Simply drive the forks of the forklift truck beneath the elevated base of the building. Be sure not to puncture the sub-floor with the forks as the building is lifted; forklift extensions may be needed on buildings with wider spans.
3. Gently lift the building from beneath its base. Be sure to protect the building during the offloading process to keep from damaging the building walls, glazing, and/or gutter / fascia.

OFFLOADING (OVERHEAD CRANE)

1. The building ships on skids to allow easy access to beneath the building.
2. Cradle the building by positioning slings (...appropriately designed to carry the weight of the building...) beneath the building base. Be sure to use spreader bars to prevent damage to the building top-frame and/or roof fascia during the offloading process.
3. Gently lift the building and set onto a concrete pad.

OFFLOADING (LIFTING RINGS)



1. Utilizing the "adder optional" lifting rings, attach the lifting straps (...appropriately designed to carry the weight of the building...) to the lifting rings, which are attached through the roof material.
2. Gently lift the building and set onto a concrete pad.

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GENERAL BUILDING CARE and MAINTENANCE

GENERAL BUILDING CARE and MAINTENANCE

Periodic cleaning and maintenance using proper procedures and compatible cleaners is recommended to prolong service life.

For general cleaning and maintenance, it is recommended that the following instructions be used.

FOUNDATION

1. Inspect the concrete island (pad) on which the building sits. The island should be kept clean and free of debris. Sweep the concrete island on a regular basis.
2. Inspect the grout and / or caulk around the base of the booth and foundation. Replace as needed.

BUILDING INTERIOR

1. Periodically, sweep the interior of the booth with a broom.
2. Clean the interior walls, doors, and glazing (refer to instructions found herein) when dirty. Be sure not to use abrasive objects and cleaners, which may damage the interior finish.
3. Inspect sliding windows and door tracks for dirt and debris. Keep dirt and debris from these areas.
4. Inspect electrical and communication connects periodically to be sure that the connections are tight and not frayed. Replace damaged / questionable components / materials. Replace light fixtures as needed.
5. **Refer to your manufacturers warranty on climate control components for periodic general care and maintenance instructions.**

BUILDING EXTERIOR

1. Periodically, clean the building exterior surfaces, as needed (refer to instructions found herein).
2. Inspect window framing and doors for broken seals. Replace damaged components and repair broken seals, as needed.
3. Inspect roof, especially during the autumn months, for fallen debris (such as, leaves, sticks, paper, etc...) and remove such items from the roof. Keep the water drainage holes / scuppers free from debris to insure proper water drainage.

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CLEAR ANODIZED ALUMINUM SURFACES

GENERAL CARE AND MAINTENANCE INSTRUCTIONS

Periodic cleaning and maintenance using proper procedures and compatible cleaners is recommended to prolong service life.

For general cleaning and maintenance, it is recommended that the following instructions and materials be used.

Disclaimer: Although any information, recommendations, or advice contained herein is given in good faith, Porta-King makes no warranty or guarantee, express or implied, as to the effectiveness or safety of any procedure or materials and it shall in no event be responsible for any loss resulting from any use of these materials on its product described herein. **IMPORTANT:** If a material is found to be incompatible in a short-term test, it will usually be found to be incompatible in the field. The converse, however, is not always true. Favorable performance is no guarantee that actual end-use conditions have been duplicated. Therefore, these results should be used as a guide only and it is recommended that the user test the products under actual end-use conditions.

CLEANING PROCEDURES

1. Wash with a mild solution of soap or detergent and lukewarm water.
2. Using a soft cloth or sponge, gently wash the clear anodized aluminum surface to loosen dirt and grime and rinse well with clean water.
3. To prevent water spotting, thoroughly dry with chamois or cellulose sponge.
4. Avoid the use of abrasive cleaners, squeegees and/or other cleaning implements that may mar or gouge the glazing material. Avoid cleaning in direct sunlight to prevent streaking. **Avoid use of cleaners containing acid (...citrus or otherwise).**

CLEANING AGENTS WHICH HAVE BEEN FOUND TO BE COMPATIBLE WITH CLEAR ANODIZED ALUMINUM MATERIALS UNDER LABORATORY CONDITIONS

- **Aqueous Solutions of Soaps and Detergents**

Windex	Top Job
Joy	Mr. Clean
Fantastik	Formula 409

- **Organic Solvents**
  Naphtha (VM&P) grade (graffiti removal)
- **Alcohol's**
  Isopropyl Alcohol (graffiti removal)

All residual solvents should be removed with a secondary rinse.

COMPONENT LISTING OF CLEAR ANODIZED ALUMINUM MATERIALS

- **Duraluminum**: Building frame and exterior wall panels, standard-design window frames and door, gutter and fascia.
- **Durasteel, Durasteel-PC, Durasteel-Shelters**: Building standard-design window frames and doors.

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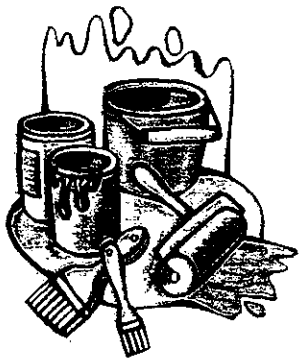
PAINTED SURFACES

CLEANING AND MAINTENANCE INSTRUCTIONS

Your Porta-King preassembled building is fabricated from either galvanized steel or clear anodized aluminum material. The building has been properly protected with a base primer and commercial quality paint. Periodic cleaning using proper procedures and compatible cleaners is recommended to prolong service life.

In the event that the building paint surface has been removed it is imperative that the damaged area be properly touched up to prevent premature oxidation.

For general cleaning and maintenance, it is recommended that the following instructions and materials be used.



CLEANING PROCEDURES

1. Painted surfaces should be cleaned only with cool to warm water and mild detergent, such as Meguiars #M-62 car wash shampoo.
2. Using a soft cloth or sponge, gently wash the painted surface to loosen dirt and grime and rinse well with clean water. Always hand-apply cleaners.
3. To prevent water spotting, thoroughly dry with chamois or cellulose sponge.
4. For blemishes not removed by normal cleaning such as scuffs, light stains and excessively dirty areas, clean with a mild compound cleaner, such as Meguiars #M-9716 paint cleaner.
5. Avoid the use: (a) of abrasive cleaners, squeegees and/or other cleaning implements that may mar or gouge the coating; (b) aggressive compound containing grit; (c) harsh acidic type or abrasive cleaners or solvents; (d) high-speed buffers or polishes; (e) high temperature water such as a steam cleaning pressure washer designed for degreasing or industrial cleaning; (f) pressure washing is recommended ONLY with unheated water and a lower pressure – between 800 and 1200 pounds.

DAMAGE REPAIR & TOUCH-UP

Scratches and gouges where painted surfaces have been scored or removed will require paint touch-up.

For light scratches where no metal is exposed, clean the area of any contaminates – such as dirt or grease. Allow to dry – brush or dab touch-up paint into area.

For deeper scratches where bare metal is exposed, filler may be required to level the surface before painting. Sand the exposed metal with 320-grit sandpaper. To level the area, apply filler putty, such as 3M-#5966, with a razor blade or small spreader into damaged area. Allow to dry – sand smooth with the 320-grit sandpaper. After area is level, putty must be coated with any primer sealer type product either by brush or aerosol spray. After area is sealed, apply paint to repaint area. Brush edges lightly into undamaged area surrounding repair to help blend.

To repaint the entire area of a building, repair any exposed metal damage as previously instructed. Scuff all surfaces to be painted with 3M-#7447 Scotch Brite pad until sheen is removed. Roll or spray one to two coats of exterior grade enamel paint over entire area, as required.

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SLIDING DOOR and SLIDING WINDOW ADJUSTMENTS

MAINTENANCE INSTRUCTIONS

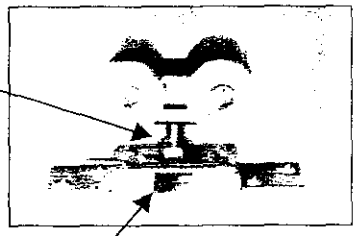
Periodic door and window adjustments may be required through normal use. Using proper procedures is recommended to prolong service life.

For general door and window maintenance, it is recommended that the following instructions be used.

DOOR LEVELING & REMOVAL INSTRUCTIONS

Leveling

1. Using a thin (flat) wrench turn the Post to adjust vertically for height and plumb.
2. **Do not unscrew Post from the Hanger.**



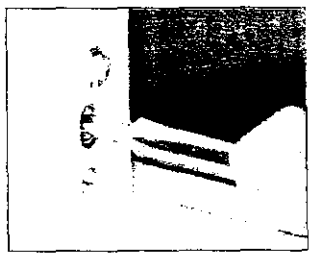
Removal

1. To remove door, activate Tab (gray) forward with a Flat back Screw Driver.

WINDOW LEVELING / ADJUSTMENT INSTRUCTIONS

Leveling

1. Using a Phillips screw-driver turn the adjustment screw either clockwise or counter clockwise to raise or lower the active window.



Removal

1. To remove window, position the window panel to the middle of the entire window-frame opening (the window will appear half-open / half-closed).
2. With your hands, grab each side of the window panel frame and gently lift upward then pull inward toward yourself.

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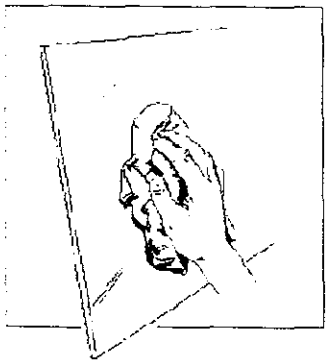
CLEANING AND MAINTENANCE INSTRUCTIONS

Periodic cleaning using proper procedures and compatible cleaners is recommended to prolong service life.

For general cleaning and maintenance, it is recommended that the following instructions and materials be used.



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IMPORTANT: If a material is found to be incompatible in a short-term test, it will usually be found to be incompatible in the field. The converse, however, is not always true. Favorable performance is no guarantee that actual end-use conditions have been duplicated. Therefore, these results should be used as a guide only and it is recommended that the user test the products under actual end-use conditions.

CLEANING PROCEDURES

1. Wash with a mild solution of soap or detergent and lukewarm water.
2. Using a soft cloth or sponge, gently wash the glazing to loosen dirt and grime and rinse well with clean water.
3. To prevent water spotting, thoroughly dry with chamois or cellulose sponge.
4. Avoid the use of abrasive cleaners, squeegees and/or other cleaning implements that may mar or gouge the glazing material. Avoid cleaning in direct sunlight to prevent streaking.

CLEANING AGENTS WHICH HAVE BEEN FOUND TO BE COMPATIBLE WITH TEMPERED GLASS, LAMINATED GLASS, POLYCARBONATE AND ACRYLIC GLAZING MATERIALS UNDER LABORATORY CONDITIONS

- **Aqueous Solutions of Soaps and Detergents**

Windex	Top Job
Joy	Mr. Clean
Fantastik	Formula 409

- **Organic Solvents**
  Naphtha (VM&P) grade

- **Alcohol's**
  Isopropyl Alcohol

All residual solvents should be removed with a secondary rinse.

GRAFFITI REMOVAL

1. Be sure that the solvent will not attack the glazing.
2. Isopropyl alcohol, VM&P naphtha or similar solvents have been successfully used.
3. Be sure to rinse with clear water after solvent application.

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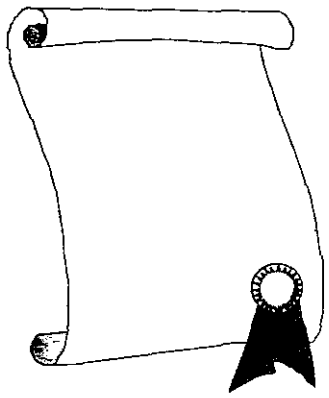
WARRANTY
DURALUMINUM and DURASTEEL PRODUCTS



WARRANTY INFORMATION

This warranty shall not cover items damaged due to acts of vandalism, misuse, abuse, damage caused by a third party, or natural phenomena.

Warranty shall not cover damage caused during maintenance actions by untrained or unapproved personnel.

DURALUMINUM PRODUCTS

General

The workmanship and material on all Porta-King Duraluminum products are guaranteed to be free from manufacturing defect for a period of one- (1) year from the date of shipment. All **accessory** items (i.e. storage drawers, climate control units, and/or other special "buy-out" items) shall be covered separately under the specific warranty of that manufacturer.

Extended

1. A five- (5) year warranty applies to all clear anodized aluminum surfaces to be free from oxidation.
2. A five- (5) year warranty applies to all wall panels to be free from swelling and delamination due to moisture absorption.
3. A ten- (10) year limited warranty applies to the exterior roof from leaks, in applications where the roof is lined with a rubber roofing membrane.

DURASTEEL PRODUCTS

General

The workmanship and material on all Porta-King Durasteel products are guaranteed to be free from manufacturing defect for a period of one- (1) year from the date of shipment. All **accessory** items (i.e. storage drawers, climate control units, and/or other special "buy-out" items) shall be covered separately under the specific warranty of that manufacturer.

Extended

1. A five- (5) year warranty applies to all clear anodized aluminum surfaces to be free from oxidation.
2. A ten- (10) year limited warranty applies to the exterior roof from leaks, in applications where the roof is lined with a rubber roofing membrane.

Porta-King Building Systems
4133 Shoreline Drive
Earth City, MO 63045
800-456-5464 **www.portaking.com**

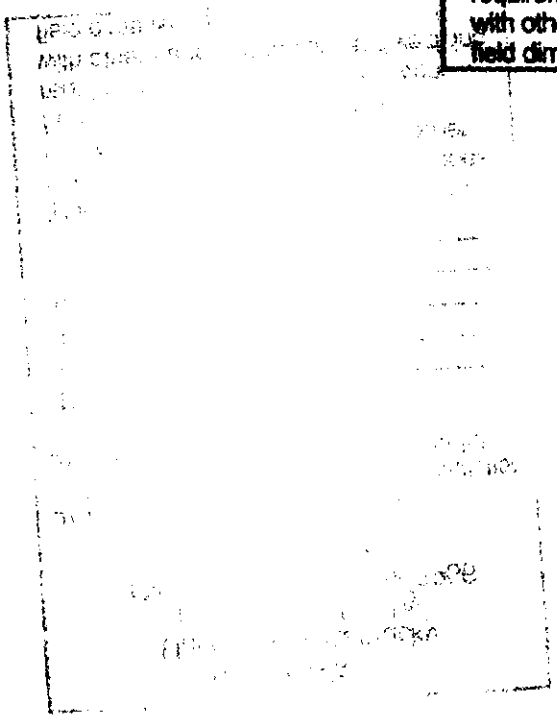
GILBANE
University of Kentucky
Patient Care Facility
Gilbane Project No. 18-3966

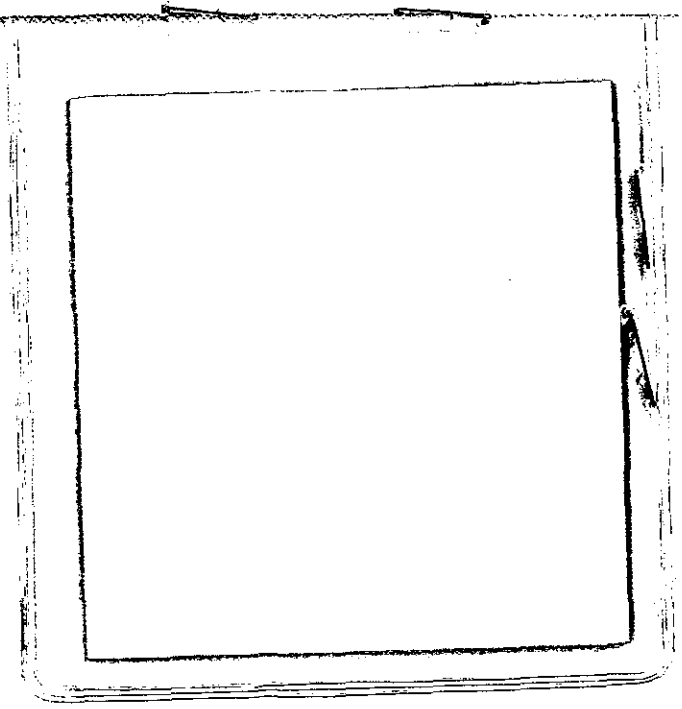
REVIEWED

☐ 010-Hugueiet ☒ 020-Garage
☐ 030-Infrastructure ☐ 040-PCF Foundation
☐ 050-PCF Core/Shell ☐ 060-TowerUp Fit

Bid Package No. 100
Submittal No. 100-13121-001
Spec. Sect/Para. —
Reviewed By EU
Date 10/2/2006

This review does not constitute nor does it assume design responsibility nor does it relieve the trade contractor's supplier from complying with the contract requirements, coordinating their work with other trade contractors and verifying field dimensions.





Kawneer
An Alcoa Company

High performance coating sample meets AAMA 2605

391X035 Fluropon®
351X035 Flurospar®
BONE WHITE

This is a lab prepared color display panel. A reasonable degree of color variation can be expected on production line application. Fluropon® and Flurospar® finishes are formulated by The Valspar Corporation.

APPROVED

THIS REVIEW BY GBBN ARCHITECTS, INC., IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND IS NOT AN APPROVAL OF THIS DRAWING OR SET OF DRAWINGS. THE COMMENTS MADE DO NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH THE PROJECT DRAWINGS, SPECIFICATIONS AND OTHER CONTRACT DOCUMENTS. CONTRACTOR IS SOLELY RESPONSIBLE FOR: ALL DIMENSIONS AND QUANTITIES, ALL FABRICATION, DELIVERY AND ERECTION; ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES; ALL COORDINATION WITH ALL OTHER CONTRACTORS, SUPPLIERS AND OTHERS; PERFORMING ALL WORK IN A SAFE AND PROPER MANNER.

NO EXCEPTIONS TAKEN	
FURNISH AS CORRECTED	X
REVISE AND RESUBMIT	
NO REVIEW - INCOMPLETE	
SUBMIT SPECIFIED ITEMS	X
REJECTED	

DATE 3-15-07 BY BK

GBBN ARCHITECTS, INC.
ARCHITECTURE, INTERIORS, PLANNING, ENGINEERING
□332 EAST 8TH STREET, CINCINNATI, OHIO 45202-2217 (513) 241-8700
□325 WEST MAIN STREET, LEXINGTON, KENTUCKY 40507 (859) 381-8787

SUBMIT METAL SAMPLE WITH PPG T0315-W11 PAINT COLOR

RECEIVED
MAR 15 2007
GBBN ARCHITECTS, INC.

GILBANE
University of Kentucky
Patient Care Facility
Gilbane Project No. 18-3966
REVIEWED
□010-Huguelet ☑020-Garage
□030-Infrastructure □040-PCF Foundation
□050-PCF Core/Shell □060-TowerUp Fit

Bid Package No. 100
Submittal No. 100-1321-002
Spec. Sect/Para. —
Reviewed By BK
Date 3/15/07

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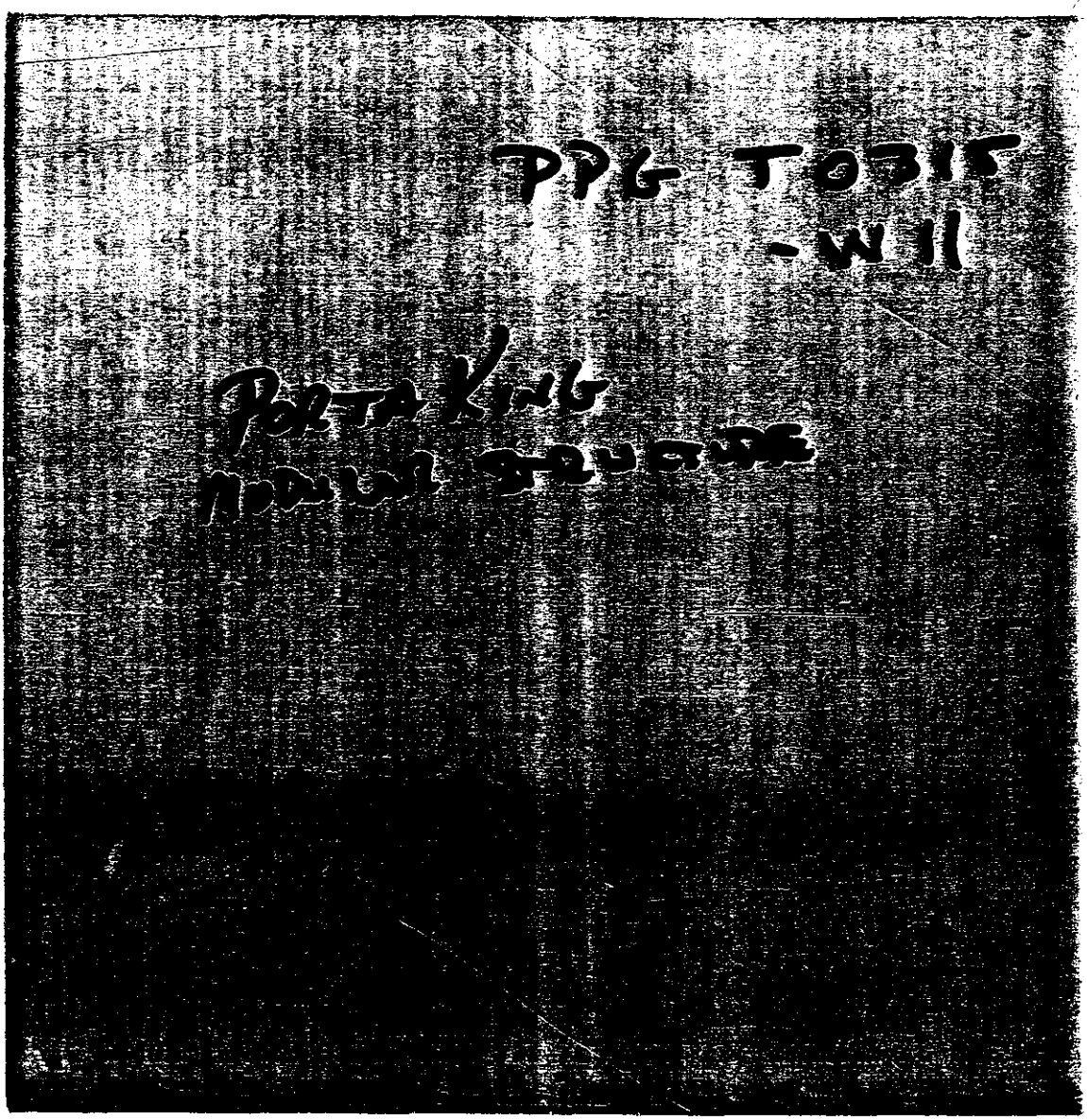
PPG TOBIE
-W11

GILBANE
University of Kentucky
Patient Care Facility
Gilbane Project No. 18-3966

REVIEWED

☐ 010-Huguelet ☒ 020-Garage
☐ 030-Infrastructure ☐ 040-PCF Foundation
☐ 050-PCF Core/Shell ☐ 060-TowerUp Fit

Bid Package No. 100
Submittal No. 100-13121-004
Spec. Sect/Para.
Reviewed By BH
Date 1/10/08

This review does not constitute nor does it assume design responsibility nor does it relieve the trade contractor's supplier from complying with the contract requirements, coordinating their work with other trade contractors and verifying field dimensions.

Item- 009
package - 004

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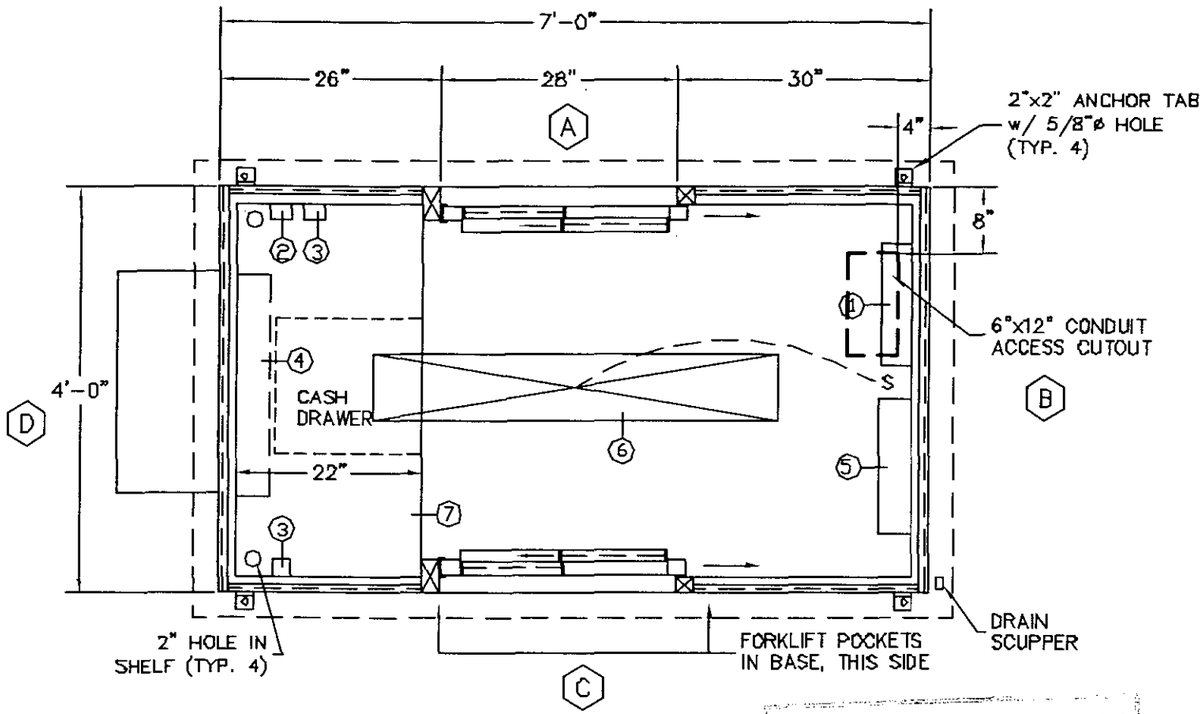
NO EXCEPTIONS TAKEN ☒
FURNISH AS CORRECTED ☐
REVISE AND RESUBMIT ☐
NO REVIEW - INCOMPLETE ☐
SUBMIT SPECIFIED ITEMS ☐
REJECTED ☐

DATE 1-11-08 BY RK

GBBN ARCHITECTS, INC.
ARCHITECTURE, INTERIORS, PLANNING, ENGINEERING
☐ 332 EAST 8TH STREET, CINCINNATI, OHIO 45202-2217 (513) 241-8700
☐ 325 WEST MAIN STREET, LEXINGTON, KENTUCKY 40507 (859) 381-8787

COPY SENT BACK VIA EMAIL 1-11-08



PLAN VIEW

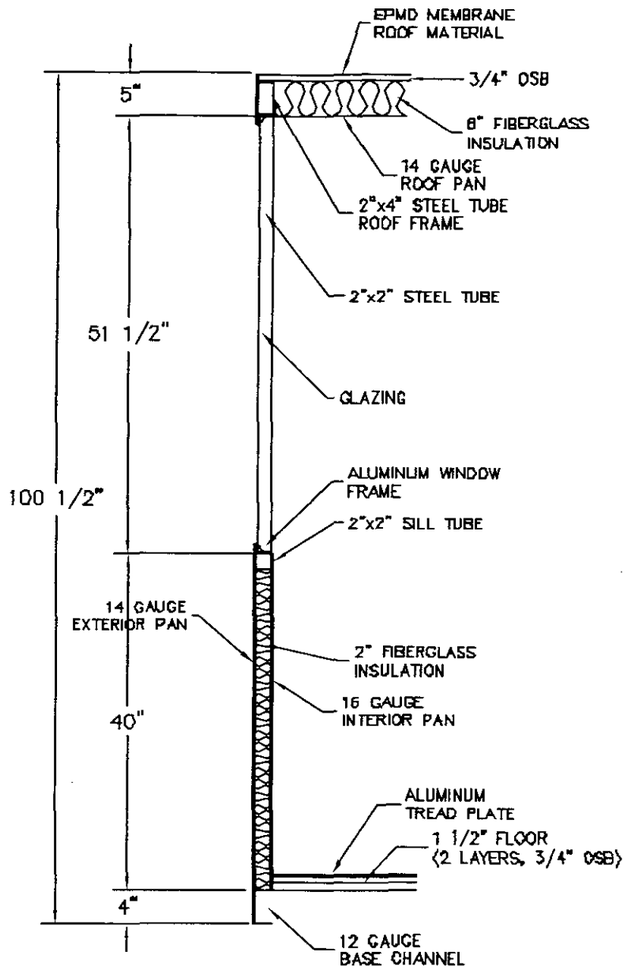
DURASTEEL MODEL S74DSLDD BUILDING NOTES :

1. 125 AMP, SINGLE PHASE, 24 CIRCUIT MAIN LOAD CENTER
2. 230V OUTLET
3. 115V DUPLEX GFI OUTLET
4. 230V 9900 C/11600 H BTU THRU WALL HVAC
5. 230V, 4000 WATT WALL MTD HEATER (WIRED DIRECT)
6. 64 WATT SURFACE MTD. FLUORESCENT LIGHT W/ SWITCH
7. 22" DEEP 14GA STEEL, PAINTED SHELF W/S-1 CASH DRAWER

* NO OVERHANG "INTERIOR USE" MEMBRANE ROOF
* 90" INTERIOR HEIGHT
* 2- HEAVY DUTY ALUMINUM DUTCH DOORS 2472 W/20"H TRANSACTION WDW, HOOKBOLT DEADLOCK, AND ADA HANDLES
* GLAZING- 5/8" CLEAR INSULATED TEMPERED GLASS W/SATELLITE BUTT-GLAZED CORNERS
* INSULATION - WALLS R-10, CEILING R-19
* ALUMINUM TREADPLATE FLOOR
* 1 SET- FORKLIFT POCKETS IN BASE
* BUILDING PAINTED- PPG T0315 W11
* KY INSIGNIA /TRA LABEL /UL LABEL

E.C. MATTHEWS CO., INC.

BY: DRS 1-9-08
SIGNATURE DATE



WALL SECTION DETAIL

THESE DRAWINGS AND SPECIFICATIONS HAVE BEEN PRODUCED IN ACCORDANCE WITH PORTA-KING'S PROPOSAL AND THE PROJECT DESIGN. THE PROJECT WILL BE MANUFACTURED IN ACCORDANCE TO THIS INFORMATION AS SUBMITTED. THE SECURING OF BUILDING PERMITS AND COMPLIANCE WITH APPROPRIATE BUILDING CODES IS NOT THE RESPONSIBILITY OF PORTA-KING, BUT IS THE RESPONSIBILITY OF THE PURCHASER OF THE BUILDING.

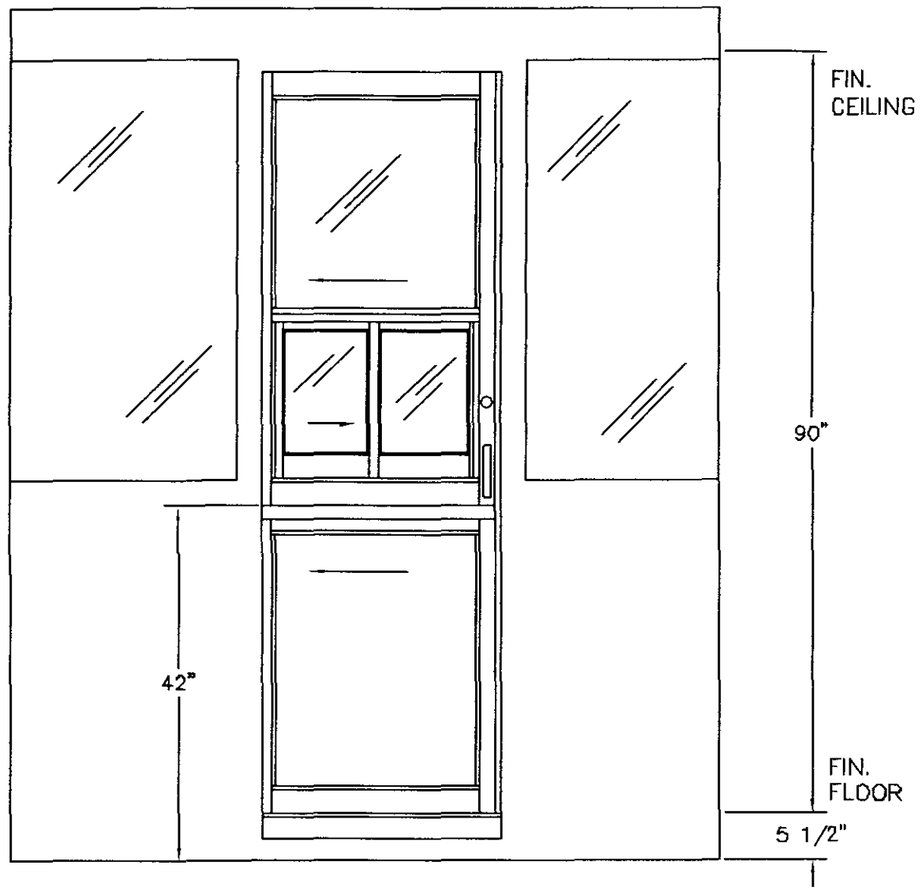
☐ APPROVED AS SUBMITTED, RELEASE FOR MANUFACTURING
☐ APPROVED AS NOTED, RELEASE FOR MANUFACTURING
☐ REVISE AND RESUBMIT

SIGN : _____ DATE : _____

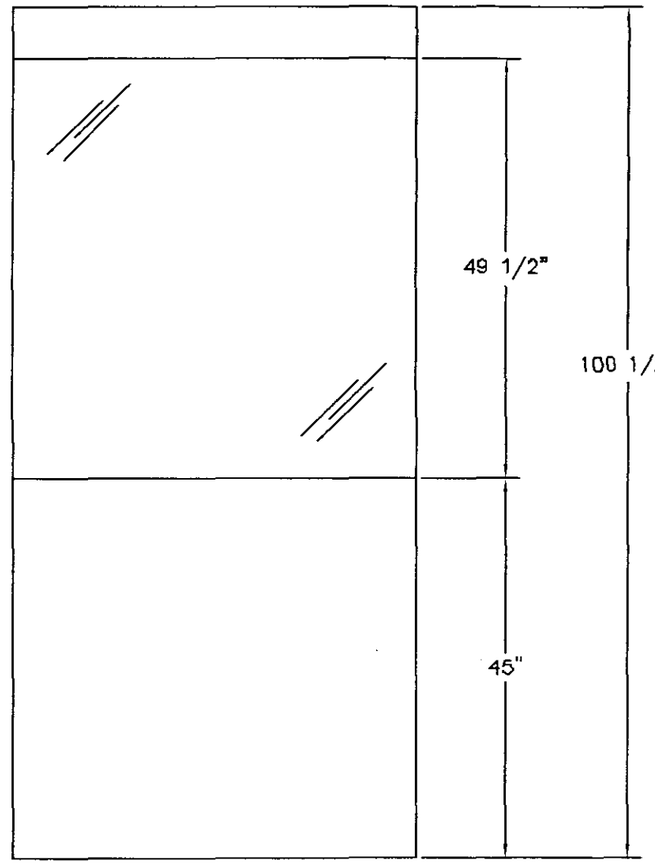
PORTA-KING BUILDING SYSTEMS

4133 SHORELINE DRIVE EARTH CITY, MISSOURI 63045
1-800-BUILDING 314-291-4200 FAX 314-291-2857

TITLE: UK PATIENT CARE FAC. LEXINGTON, KY	E.C. MATTHEWS CO. INC. MODEL S74DSLDD	
JOB NO. PK12219	DRAWN BY KCD	SHEET 1 OF 2
SCALE	DATE 1-8-08 REVISED	



ELEVATION A AND (C MIRRORED)



ELEVATION B AND D

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- ☐ REVISE AND RESUBMIT

SIGN : _____ DATE : _____

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4133 SHORELINE DRIVE EARTH CITY, MISSOURI 63045
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TITLE: UK PATIENT CARE FAC. LEXINGTON, KY	E.C. MATTHEWS CO. INC. MODEL S74DSLDD	
JOB NO. PK12219	DRAWN BY KCD	SHEET 2 OF 2
SCALE	DATE 1-8-08	

4133 Shoreline Drive
Earth City, MO 63045
1-800-284-5346

Durasteel Building Custom Manufactured for UK FacilityParking
Model S74DSLDD & DA-S75DSLDD
Serial #15450& 15451
Manufactured 1/08

Warranty – Durasteel Products

The workmanship and material on all Porta-King Building Systems Durasteel products are guaranteed to be free from manufacturing defect for a period of one (1) year from the date of shipment. All accessory items (such as: storage drawers, air conditioners, heaters, and all other "buy-out" items) shall be covered separately under the specific warranty of each manufacturer.

Extended warranties on the Durasteel product include:

1. A five (5) year warranty on all anodized aluminum surfaces (window frames, doors, etc…) from oxidizing;
2. Ten (10) year limited warranty on rubber roof membrane from leaking.

If you are in need of additional information or have any questions regarding Porta-King Building Systems' warranties, feel free to contact us:

1. …by phone, at **1-800-284-5346**
2. …via email, at **info@portaking.com**

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BUILDING SYSTEMS

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