



Biological Pharmaceutical Complex – Bid Package 04
Operation and Maintenance Manual

Project #2235

789 S. Limestone
Lexington, KY 40506

Submitted: 5/20/09

Volume II – 071326-086300

Architect

EOP

201 W. Short Street, Ste. 700
Lexington, KY 40507
(859) 231-7538

Structural Engineer

BFMJ

620 E. Euclid Avenue, Ste. 300
Lexington, KY 40502
(859) 278-5050

Utilities Engineer

Staggs & Fisher

3264 Lochness Drive
Lexington, KY 40517
(859) 271-3246

MEP Engineer

Vanderweil Engineers, LLP

274 Summer Street
Boston, MA 02210
(617) 956-4528

Construction Manager

Messer Construction

854 W. Main Street
Lexington, KY 40508
(859) 231-8199

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071326

**SELF-ADHESIVE SHEET
WATERPROOFING**



Limited Material Warranty

Date: 4/7/2009

Warranty #: 37613

Project Ref: Biological Pharm. Complex New College of Pharm. Univ. of KY
Contractor: Messer Construction Co.
Applicator: River City Development
Owner : Univ. of Kentucky
Product: Dynatrol II SG
Primer: none
Completion Date: 3/1/2010

Pecora Corporation warrants its product to be manufactured free from defects in material and workmanship.

Under this warranty, Pecora will be responsible for the cost of replacement material for any materials made necessary by a failure of the sealant for a period of 5 years of substantial completion. The holder of this warranty shall notify Pecora or the applicator in writing of any claims within 30 days from the discovery of any defect. Pecora will then have 30 days in which to schedule an inspection of the installation to determine if Pecora's product is not performing as intended. Pecora reserves the right to run performance tests on building material samples in its laboratory and/or field tests of actual surfaces sealed with the Dynatrol II SG sealant.

The owner agrees to provide the manufacturer/applicator field representatives with access to the affected areas of the project for purpose of testing and evaluating the performance of the sealant application.

This warranty becomes effective only upon full payment for all Pecora material used on the referenced project and becomes null and void if remedial repairs are performed without written authorization from either the manufacturer or the applicator.

This warranty specifically excludes failure of the sealant due to:

- a) Natural causes such as lightning, earthquake, hurricane, tornado, fire, etc.;
- b) Movement of the structure resulting in stresses on the sealant which exceed Pecora's published specification for elongation and/or compression for the sealant, whether due to structural settlement, design error or construction error;
- c) Disintegration of the underlying substrates;
- d) Mechanical damage to the sealant caused by individuals, tools or other outside agents, or
- e) Changes in the appearance of the sealant from the accumulation of dirt or other contaminants deposited on the sealant from the atmosphere.

This is Pecora's sole warranty with respect to its products. Pecora makes no other warranty of any kind, whatever, expressed or implied, and all implied warranties of merchantability and fitness for a specific purpose, which exceed this obligation, are hereby disclaimed by Pecora and excluded. In no case will Pecora be responsible for liquidated, incidental or consequential damages.

Any claim or controversy between or among the parties arising out of or relating to the application described herein shall be settled by arbitration in accordance with the rules of the American Arbitration Association, and judgment upon the award rendered by the arbitrator may be entered into a court having jurisdiction.

NOTE: Warranty not in effect unless signed by Pecora Corporation representative.

A handwritten signature in black ink, appearing to read 'Roy D. Cannon, Jr.'.

Roy D. Cannon, Jr.
Technical Service Director, PECORA CORPORATION

For questions on this or any other warranty you have with Pecora Corporation, please contact the Technical Service Group at (215) 799-7520 or fax (215) 721-0286.

"The signature appearing on this Warranty contract is from a Pecora Corporation Representative. Although it was applied electronically to the document, the signature is binding and enforceable against Pecora Corporation to the same degree as a signature delivered in writing. If you have elected to process this Warranty electronically, it will be deemed completed, executed and delivered at the time of processing, and you hereby consent to the delivery of this document in electronic format only."



Date: April 8, 2009

To: Messer Construction
146 Virginia Ave.
Lexington, KY 40508

Re: UK Pharmaceutical College

Dear Sir,

Please be advised that River City Development Corporation does hereby warrant all materials and workmanship at the above referenced project for a period of one (1) year, from Substantial Completion.

This warranty does not apply to conditions beyond River City Development's control, such as: Acts of God, abuse or neglect by the owner or by others.

Very truly yours,

RIVER CITY DEVELOPMENT CORP.

Wayne Spalding
Vice President

Subscribed and sworn to me this 8th of April, 2009

Notary Public

My Commission Expires: 9-2-2012.



CONTRACTOR GUARANTEE

The undersigned M M Cosmetic Sealants having heretofore entered into a contract with : ~~BARSKER CONSTRUCTION COMPANY~~ to perform work at:

UK BIOLOGICAL/PHARMACEUTICAL COMPLEX
COLLEGE OF PHARMACY
UNIVERSITY OF KENTUCKY, LEXINGTON KENTUCKY

And in accordance with the terms of said contract, do hereby guarantee that all the labor and material furnished, and work performed by us under said contract is in conformity with the plans and specifications and authorized alterations thereto, and we agree to repair at our own cost and expense, all of the work covered under said contract and change orders which may prove to be defective for a period of two (2) years from the date of completion. Furthermore, we agree to repair at our sole cost, any work that we may affect or disturb in making the repairs herein contemplated.

M M Cosmetic Sealants

By: John W McFarland III
JOHN W. MCFARLAND, III

Guarantee Period Begins: DECEMBER 31, 2009

JOHN W. MCFARLAND, III
1411 ORMSBY LANE LOUISVILLE, KENTUCY 40222-3827
OFFICE 502/445-8612 - FAX 502/749-7814 - EMAIL mcfarljw3@insightbb.com



CONTRACTOR GUARANTEE

The undersigned **M&M Cosmetic Sealants** having heretofore entered into a contract with : **MESSER CONSTRUCTION COMPANY** to perform work at:

**UK BIOLOGICAL/PHARMACEUTICAL COMPLEX
COLLEGE OF PHARMACY
UNIVERSITY OF KENTUCKY, LEXINGTON KENTUCKY**

And in accordance with the terms of said contract, do hereby guarantee that all the labor and material furnished, and work performed by us under said contract is in conformity with the plans and specifications and authorized alterations thereto, and we agree to repair at our own cost and expense, all of the work covered under said contract and change orders which may prove to be defective for a period of two (2) years from the date of completion. Furthermore, we agree to repair at our sole cost, any work that we may affect or disturb in making the repairs herein contemplated.

M&M Cosmetic Sealants

By: _____
JOHN W. MCFARLAND, III

Guarantee Period Begins: DECEMBER 31, 2009

JOHN W. MCFARLAND, III
1411 ORMSBY LANE LOUISVILLE, KENTUCY 40222-3827
OFFICE 502/445-8612 - FAX 502/749-7814 - EMAIL mcfarljw3@insightbb.com

THANK YOU FOR YOUR BUSINESS

071700

BENTONITE WATERPROOFING

CARLISLE COATINGS & WATERPROOFING INCORPORATED

900 Hensley Lane • Wylie, TX 75098 • (972) 442-6545

CCW MiraCLAY FIVE YEAR WATERMARK MATERIAL WARRANTY

NAME OF BUILDING: University of Kentucky Biological Pharmaceutical Complex
ADDRESS, CITY and STATE: 146 Virginia Ave Lexington, KY
WATERPROOFING CONTRACTOR: RAM Construction Services of Cincinnati LLC
WATERPROOFING CONTRACTOR ADDRESS: 1150 Century Cr North Cincinnati, OH
SQUARE FEET: 31,000 EFFECTIVE DATE November 24, 2008 THIS WARRANTY EXPIRES: November 23, 2013

Carlisle Coatings & Waterproofing Incorporated ("Carlisle"), warrants the Carlisle membrane product installed at the above project in accordance with the following terms and conditions:

Carlisle warrants to the Buyer of the membrane product that the membrane product will be free from manufacturing defects at the time of its delivery to the job site. Any claim by Buyer of a manufacturing defect in the membrane product must be given to Carlisle, in writing, within thirty (30) days of delivery of the membrane product to the job site. If, upon inspection by Carlisle, the membrane evidences manufacturing defects, Carlisle's liability and Buyer's exclusive remedy shall be limited to the replacement of the defective membrane product at the F.O.B. point in the original contract of sale.

Carlisle further warrants that subject to the terms and conditions of this warranty, water will not leak directly through the membrane for a period of five (5) years from the date of issuance of this warranty, if properly installed, maintained and used for the purpose intended by Carlisle. See above for the expiration date of this warranty.

This warranty does not apply to any part of the membrane product unless installed by an authorized applicator by Carlisle. Further, this warranty does not cover any cost or expenses associated with the removal, excavation or replacement of concrete or other materials covering the membrane product incurred to test, repair, inspect, remove or replace the membrane product.

If upon inspection by Carlisle, the membrane product shows water leaking directly through the membrane within the five (5) year period stated herein, Carlisle's sole liability and the Buyer's exclusive remedy are limited, at Carlisle's option, to the providing of repair material for the original membrane product or the granting of credit to be applied towards the purchase of a new membrane product, the value of these remedies being determined by Carlisle based upon the number of remaining months of the warranty period used to pro-rate the value allowed by Carlisle for the repair or credit. In no event shall the cost of the repair material or the credit exceed the original purchase price for the membrane product.

This warranty against leakage directly through the membrane applies only to the membrane product and does not cover flashings, adhesives and other accessories contained in a membrane system.

Any claim of leakage directly through the membrane must be made, in writing, to Carlisle within thirty (30) days of the date of discovery or by the expiration date of this warranty, whichever shall first occur.

Carlisle shall not be liable for any consequential or incidental damages related, directly or indirectly, to the presence of any irritants, contaminants, vapors, fumes, molds, fungi, bacteria, spores, mycotoxins or the like in the building or in the air, land or water serving or coming in contact with the building.

Carlisle's obligations under this warranty shall become effective only upon payment in full for the membrane product. This warranty shall become null and void, except for the disclaimers and limitations of liability herein, if any of the following shall occur:

- repairs or alterations are made to the membrane product after installation by anyone not expressly authorized by Carlisle;
- the membrane is damaged by intentional or negligent acts, accidents, misuse, abuse, vandalism, civil disobedience or the like;
- the membrane product is damaged by natural disasters including, but not limited to, fire, insect infestations, earthquake, tornado, hail or hurricane;
- deterioration or failure of building components damage the membrane product;
- acids or harmful chemicals come in contact with the membrane product; or
- gaps or cracks exist in the structural base which exceed 1/16 inch in width.

This warranty is not assignable by operation of law or otherwise.

CARLISLE DOES NOT WARRANT PRODUCTS UTILIZED IN THIS INSTALLATION WHICH IT HAS NOT FURNISHED; AND SPECIFICALLY DISCLAIMS LIABILITY, UNDER ANY THEORY OF LAW, ARISING OUT OF THE INSTALLATION AND PERFORMANCE OF, OR DAMAGES SUSTAINED BY OR CAUSED BY PRODUCTS NOT FURNISHED BY CARLISLE.

THE REMEDIES STATED HEREIN ARE THE SOLE AND EXCLUSIVE REMEDIES FOR FAILURE OF THE CARLISLE MEMBRANE PRODUCT. THERE ARE NO WARRANTIES EITHER EXPRESSED OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE OR MERCHANTABILITY WHICH EXTEND BEYOND THE FACE HEREOF. CARLISLE SHALL NOT BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL OR OTHER DAMAGES INCLUDING, BUT NOT LIMITED TO, LOSS OF PROFITS OR DAMAGE TO THE BUILDING OR ITS CONTENTS UNDER ANY THEORY OF LAW.

CARLISLE COATINGS & WATERPROOFING INCORPORATED



April 20, 2010

E.C. Matthews Co., Inc.
2265 Harrodsburg Road
Lexington, KY 40504

ATTN: Doug Sherwood

RE: University of KY Bio-Pharmacy –**Labor Warranty**
Lexington, KY
RAM Job No. 0057

Dear Doug:

RAM Construction Services of Cincinnati, LLC guarantee that the waterproofing installation on the above captioned project will remain free from defects due to defective material and labor on RAM Construction Services of Cincinnati, LLC's part of a period of (1) year starting from the substantial completion date.

Defects in the structure or other causes beyond our control are not covered by this guarantee.

This guarantee will not become effective until all bills for installation supplies, and services in connection with the restoration repairs covered by this guarantee have been paid in full. Either direct or indirect acceptance of and/or payment constitutes approval of and agreement with all terms and conditions of this guarantee by the owner. This guarantee shall be deemed a contract and shall be deemed to be entered into under and pursuant to the laws of the State of Kentucky and shall be governed as to all matters and questions whatsoever, whether of validity, construction, interpretation, enforcement or otherwise, by and in accordance with such laws.

Very Truly Yours,

RAM Construction Services of Cincinnati, LLC

Robert T. Mazur
President

074216

**INSULATED CORE METAL WALL
PANELS**

**Warranty/Guarantee for
UK Pharmacy Building
146 Virginia Avenue
Lexington, KY 40506**

It is hereby understood and agreed that **ProCLAD, Inc.** shall guarantee all Work performed under this contract, and said Work shall be completed in accordance with the Contract Documents and be free from defective materials, equipment and/or workmanship for a period of one (1) year from the date of the Certificate of Substantial Completion (December, 2009). Scope of work includes the following products:

Metl-Span CF 36A Horizontal Smooth Dove Gray wall panels and associated flashings
Metl-Span CF 36A Special Reveal wall panels and associated flashings

Except for abuse, neglect or normal wear **ProCLAD, Inc.** shall promptly correct defective materials, equipment and/or workmanship including any other work which may be displaced or damaged in so doing at no cost to the Owner. The Owner shall notify **ProCLAD, Inc.** within 48 hours of any deficiencies found or if any construction activities are to occur in the area within the scope of this warranty.

In the event that **ProCLAD, Inc.** fails to remedy such defects after reasonable time to make corrections, then the Construction Manager or Owner may correct the Work and **ProCLAD, Inc.** thereby shall fully and promptly reimburse the Owner.

Regards,



Brad L. Hitzfield
President

February 5, 2010

BJ47628

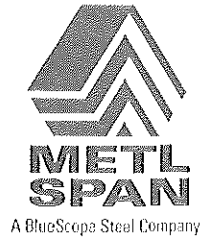
METL-SPAN LLC
LIMITED WARRANTY
FOR PRODUCTS MANUFACTURED AFTER
APRIL 15, 2009

THE WARRANTIES DESCRIBED AND LIMITED HEREIN SHALL BE IN LIEU OF, AND SELLER HEREBY DISCLAIMS, ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY AS TO THE MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE.

METL-SPAN LLC., HEREINAFTER DESCRIBED AS METL-SPAN, SHALL NOT BE LIABLE FOR CONSEQUENTIAL, INCIDENTAL, OR SPECIFIC DAMAGES OF ANY NATURE WHICH MAY ARISE IN CONNECTION WITH SUCH PANELS. THE TERM CONSEQUENTIAL IS EXPRESSLY INTENDED, BUT NOT LIMITED, TO MEAN THOSE DAMAGES THAT ARE NOT IMMEDIATELY FORESEEABLE TO METL-SPAN SUCH AS DAMAGE CLAIMS INVOLVING LABOR CHARGES FOR REMOVAL OR INSTALLATION OF SAID PRODUCT OR PART; LOSS OF STORED PRODUCT; LOST SALES; LOST ORDERS; LOST PROFITS; LOST INCOME, EITHER GROSS OR NET; ALL ALLEGEDLY CAUSED, WHETHER DIRECTLY OR INDIRECTLY, BY FAILURE OR NON-PERFORMANCE OF METL-SPAN PRODUCTS.

METL-SPAN WARRANTS THE INSULATED PANELS MANUFACTURED AND SOLD BY IT TO BE FREE FROM DEFECTS IN MATERIAL AND WORKMANSHIP FOR A PERIOD OF TWO (2) YEARS FROM THE DATE OF SHIPMENT, AND PROVIDES A SEPARATE WARRANTY FOR EXTERIOR COIL COATINGS (PAINT FINISHES) ONLY. NO WARRANTY IS OFFERED FOR PAINT FINISHES ON THE INTERIOR FACE(S) OF THE INSULATED PANELS. METL-SPAN WILL REPAIR OR REPLACE F.O.B. FACTORY, AT ITS OPTION, ANY PANEL, WHICH MAY PROVE TO METL-SPAN'S SATISFACTION TO BE DEFECTIVE. METL-SPAN SHALL NOT BE LIABLE FOR FAILURES DUE IN WHOLE OR IN PART TO ACTS OF GOD, FALLING OBJECTS, EXPLOSIONS, FIRE, OR OTHER SUCH SIMILAR OR DISSIMILAR OCCURENCES BEYOND METL-SPAN'S CONTROL; STANDING OR PONDING WATER; SETTLEMENT OR DISTORTION OF THE BUILDING ON WHICH THE PANELS ARE INSTALLED BEYOND NORMAL LEVELS, FAILURE OR CRACKING OF THE BUILDING OR ITS FOUNDATION; OTHER DEFECTS OF THE BUILDING; RUPTURE, PERFORATION, RUST OR CORROSION OF GALVANIZED STEEL, ALUMINUM, STAINLESS STEEL AND ALUMINUM-ZINC COATED STEEL PANEL FACES; OR IF SAID PRODUCTS HAVE BEEN SCRATCHED, ABRADED, OR IMPROPERLY HANDLED, STORED, INSTALLED, OR REPAIRED, OR ALTERED IN ANY WAY OUTSIDE OF METL-SPAN'S FACTORY. IT IS EXPRESSLY UNDERSTOOD THAT METL-SPAN'S LIABILITY HEREUNDER IS LIMITED TO REPAIR OR REPLACEMENT OF PANELS WITHIN THE TIME PERIOD SPECIFIED ABOVE. THE FOREGOING REMEDY SHALL BE METL-SPAN'S SOLE LIABILITY AND SHALL BE THE EXCLUSIVE REMEDY AVAILABLE TO THE BUILDING OWNER.

JOB NUMBER: 47628
CUSTOMER: PROCLAD, INC.
JOB NAME: UK BIOLOGICAL/PHARMACEUTICAL COMPLEX BDG
SHIP DATE: 12/1/2009
P. O. #: 5
WARRANTY No.: 101-814
DATE ISSUED: JANUARY 21, 2010



**Coil Coatings Warranty
For Metl-Span Insulated Panels**

The Valspar Coil Coating Systems warranty dated June 15, 2009 between The Valspar Corporation, their Fluropon Paint System and Metl-Span LLC, covers the paint finish on the exterior side of the panels facing to the exterior of the building. No warranty is offered for paint finishes on the panel surfaces facing to the interior of the building. **Metl-Span will warrant the Fluropon® paint finish on the exterior side of its wall panels facing to the exterior of the building, to the extent of its warranty from The Valspar Corporation.** The warranty will commence with the date of shipment of panels.

Color Name: Dove Gray

Job #: 47628

Project Name: UK Biological/Pharmaceutical Complex Bldg

Project Location: 146 Virginia Ave.
Lexington, KY 40508

Shipping Date: 12/1/2009

METL-SPAN LLC

Effective Date: January 21, 2010

Metl-Span's Customer: Proclad, Inc.



901 North Greenwood Avenue
Kankakee, Illinois 60901
Phone: 815.933.5561
Fax: 815.936.7811

June 15, 2009

Mr. Karl Hiescher
Metl Span LLC, a Bluescope Company
1497 N. Kealy
Lewisville, TX 75057

SUBJECT: FLUROPON® PREMIERE (CLEAR COAT REQUIRED) LIMITED WARRANTY

Dear Mr. Hiescher:

We are pleased to present you with THE FOLLOWING Limited Warranty on our Fluropon® Premiere coil coatings.

1. This Warranty applies if any of the following Warranty Conditions occurs:

- a. Within 20 years from the date of application of the paint, Fluropon Premiere exhibits flaking or peeling (loss of adhesion) to an extent that is apparent on ordinary outdoor visual observation. *Minute fracturing, which may occur in proper fabrication of the building parts, is not a covered Warranty Condition. Failure due to substrate corrosion is not a covered Warranty Condition.*
- b. Within 20 years from the date of installation of the panels, Fluropon Premiere:
 - i. Chalks in excess of ASTM D-4214-98 method A D659 number a number eight (8) rating on panels, when properly maintained as described herein, and
 - ii. Changes color more than (5.0) Hunter delta-E units on panels as determined by ASTM method D-2244-02. Color change shall be measured on an exposed painted surface that has been cleaned of surface soils and chalk, and the corresponding values measured on the original or unexposed painted surface. Color changes may not be uniform on surfaces that are not equally exposed to the sun and elements and Valspar does not warrant that color changes will be uniform.

2. If a Warranty condition occurs and the other requirements of this Warranty are met, Valspar will supply you with the following Warranty benefits:

Valspar will provide or pay for the material reasonably necessary to repaint, repair or replace, at our option, the metal panels showing the Warranty Conditions. The Warranty Benefits shall not exceed the original purchase price of the affected metal panels or the remedy provided in any other warranty provided to the building owner, whichever is less. This Warranty will continue to apply to any metal panels that were repainted, repaired or replaced due to a Warranty Condition, but only for the unexpired portion of the Warranty period applicable to the original part.

3. Valspar cannot control the circumstances of application. Therefore, this Limited Warranty applies only when a minimum of 0.7 mils of Fluropon Premiere coil coatings are properly applied (according to the application instructions in Valspar's then-current Detail Sheet) to a properly pre-treated and primed substrate (HDG Steel (G90), Galvalume, and Aluminum) that is fabricated into commercial or industrial building parts. Valspar does not warrant the use of Fluropon Premiere coil coatings with non-Valspar coatings. Warranty Benefits are available only for all-Valspar coating systems. Also, because some colors may not meet our standards, Valspar will inform you in writing at the time of color matching if the color you have selected is not an approved color.

4. To receive Warranty Benefits for a Warranty Condition, the building owner or you must:

- a. Send written notice of the Warranty Condition within thirty days to: Business Operations Director, the Valspar Corporation, 901 N. Greenwood Avenue, Kankakee, IL 60901.
- b. Provide access to the affected panels and site.
- c. Assist us as necessary in determining the exact cause of failure.
- d. Provide such documentation as we shall request to confirm the Warranty Condition, including records sufficient to identify the batch number and application date of the Fluropon Premiere coating involved; and production records and quality control records from your coater showing compliance with our application specifications and the results of tests required by those specifications.

If it matters, we're on it.™

5. We are not responsible and provide no Warranty Benefits, for any damage or condition resulting from circumstances beyond our control, including any of the following:
- a. Acts of God, falling objects, explosions, or fire;
 - b. Harmful fumes or foreign substances in the atmosphere, standing water or salt spray;
 - c. Failure to apply a minimum dry film thickness of 0.7 mils of the Fluoropon Premiere coil coatings to a properly pre-treated and primed substrate in accordance with our specifications and instructions as outlined on our then-current published product data sheets;
 - d. Improper treatment or defects in the substrate metal or in its fabrication;
 - e. When roof is not uniformly insulated;
 - f. Failure to store or install products coated with Fluoropon Premiere in a way that allows for adequate circulation. Condensation attributable to improper packaging, handling, shipping, processing and/or installation;
 - g. Failures or damage resulting from edge corrosion or failure of the metal substrate;
 - h. Development of any other condition between the coating and the substrate which causes the coating to degrade or delaminate, including any failure or deficiency in the cleaning process or pretreatment;
 - i. Contact with animals or animal waste;
 - j. Mishandling of Fluoropon Premiere or of any substrate coated with it, including abuse, alteration, modification, improper use, or storage contrary to our written instructions;
 - k. Where materials / items such as snow guards and solar panels are attached / adhered to the product;
 - l. Other circumstances or occurrences beyond Valspar's control
- 6 No Warranty is provided for Fluoropon Premiere on any substrate that is subjected to sea spray or installed on property located 1,500 or fewer feet from a salt-water environment.
- 7 If chrome free pretreatment is used, warranty for adhesion must be validated by sample testing of production material. Material must pass fifteen (15) minute boiling water/crosshatch adhesion with no tape off.
- 8 Coil material should be used within 180 days of coating. Aging varies with the substrate, pretreatment and coatings, but in all cases will affect the coatings flexibility and subsequent performance. Storage conditions should be controlled to avoid potential forming and performance problems. Extreme changes in temperature, humidity levels and exposure to moisture can all have an adverse affect on material performance. Long storage times before forming may affect your warranty. The slow changes in properties over time are not a concern once the material is formed.
- 9 This warranty applies only to building parts installed on buildings within the Continental United States, Alaska and Canada. This Warranty will automatically expire upon any change or transfer of ownership of the property on which the metal coated with Fluoropon Premiere is originally installed.
- 10 This is our only warranty concerning Fluoropon Premiere coil coatings. Except for this Warranty, WE MAKE NO WARRANTIES, EXPRESS OR IMPLIED AND DISCLAIM ALL IMPLIED WARRANTIES INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR FREEDOM FROM PATENT INFRINGEMENT. VALSPAR WILL NOT BE LIABLE FOR ANY SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES. We have no other liability with respect to Fluoropon Premiere coil coatings, whether based on warranty, negligence or any other legal theory.
- 11 This is our complete warranty. It lists all of Valspar's obligations regarding Fluoropon Premiere coil coatings purchased by you on or after the effective date shown below. It is only for your benefit and you may not assign it to any other person or entity. Valspar makes no warranty to your customers, and is not responsible for any warranty you choose to provide to your customers concerning the performance of Fluoropon Premiere coil coatings. Valspar may change or discontinue this Warranty by providing you with 30 days advance written notice. Any changes will apply only to Fluoropon Premiere coil coatings sold to you after the notice period expires.

IN WITNESS WHEREOF, Valspar and Customer have executed this Warranty effective as of this 15th day of June, 2009.

CUSTOMER

BY: [Signature]

Title President; CEO

THE VALSPAR CORPORATION

BY: [Signature]

Title Business Operations Director



901 North Greenwood Avenue
Kankakee, Illinois 60901
Phone: 815.933.5561
Fax: 815.936.7811

November 7, 2003

METL-SPAN I, LTD
1497 North Kealy
Lewisville, TX 75067

SUBJECT: FLUROPON® COIL COATING SYSTEMS THIRTY (30) YEAR LIMITED WARRANTY
For HDG Steel,(G90+), Zinc-Aluminum Alloy Steel, or Aluminum for Exterior Building Components

Dear Sir(s):

We are pleased to present you with our thirty (30) year Fluropon® limited Warranty.

1. Our Fluropon® family of coil coatings, properly applied to HDG steel, (G90+), Zinc-Aluminum Alloy steel, or Aluminum will meet the following standards:
 - a. For thirty (30) years from the date of installation WILL NOT crack, check or peel (lose adhesion). This does not include minute fracturing which may occur in proper fabrication of the building parts. Failure due to substrate corrosion is excluded.
 - b. For twenty-five (25) years from the date of installation WILL NOT chalk in excess of ASTM D-4214-89 method A (D659) number eight (8) rating.
 - c. For twenty-five (25) years from the date of installation WILL NOT change color more than five (5.0) Hunter ΔE units as determined by ASTM method D-2244-93. Color change shall be measured on an exposed painted surface that has been cleaned of surface soils and chalk, and the corresponding values measured on the original or unexposed surface. It is understood that fading or color changes may not be uniform, if the surfaces are not equally exposed to the sun and elements.
2. In case of a complaint, you will provide access to us and assist us as necessary in determining the exact cause of the failure. ASTM and NCCA testing procedures will be used.
3. If our Fluropon® family of coil coatings fail to comply with our limited Warranty, we will pay for labor and material reasonably necessary to repaint, repair or replace, at our option, the building part showing the failure. In order for the warranty to be in effect, however, you must notify us in writing of the failure within thirty days of the discovery such problem and provide documentation we may require. If we repaint, we will use normal painting practices using Fluropon® or other suitable alternatives. This Warranty also applies to the part we repainted, repaired, or replaced, but only for the unexpired portion of the Warranty period applicable to the original part.
4. Our LIMITED WARRANTY DOES NOT APPLY to circumstances which we do not control, including:
 - a. Fire or other casualty or physical damage;
 - b. Unusual harmful fumes, foreign substances in the atmosphere, standing water, or salt spray;
 - c. Misapplication of the Fluropon® family of coil coatings (that is, the coating was not applied in accordance with our specifications and instructions as outlined on our product data sheets);
 - d. Improper treatment of or defects in the metal or in the fabrication; and

- e. Mishandled Products, e.g., ANY PRODUCT WHICH HAS BEEN ABUSED, ALTERED, MODIFIED, USED IN A MANNER NOT ORIGINALLY INTENDED, OR STORED CONTRARY TO OUR INSTRUCTIONS. Including a) damage to the product occasioned by condensation attributable to improper packaging, handling, shipping, processing, and/or installation; b) damage due to failure of the substrate.
5. This warranty will apply only to metal which is coated with Fluropon® and used on property located within the Continental United States, Alaska, and Canada.
 6. Some colors may not meet our high standards. The Warranty applies only to colors that are on our approved color lists.
 7. The Fluropon® family of coil coatings have a limited shelf life. So this Warranty applies only to the Fluropon® coil coatings applied by you within six (6) months after it is shipped by Valspar.
 8. For our Warranty to apply, you must maintain certain records. You need to make them available to us for inspection and copying. These are:
 - a. Records necessary to identify the Fluropon® coating involved in a complaint. (Information that will allow us to obtain batch numbers and application date from your coater).
 - b. Normal production records and quality control records as well as tests required by our specifications.
 9. We need to make clear that this is our only Warranty concerning these Fluropon® coil coatings. And that we have no other obligations concerning them. So, please read and understand the following:

Except for this Warranty, we make NO WARRANTY OR GUARANTEE EXPRESS OR IMPLIED WITH RESPECT TO THE FLUROPON® FAMILY OF COIL COATINGS. IMPLIED WARRANTIES OR FITNESS AND MERCHANTABILITY ARE EXCLUDED. Further, we have no other liability with respect to the Fluropon® family of coil coatings, whether based on Warranty, negligence or any other legal theory. For example, we have no liability for consequential damages.
 10. That is our complete Warranty. It sets out all of our obligations regarding the Fluropon® family of coil coatings. It is only for your benefit and is not assignable. It cannot be changed by such things as your purchase order forms or our acceptance forms. But it can be changed if Valspar agrees in writing.

In the case of:
 METL-SPAN 1, LTD
 1497 North Kealy
 Lewisville, TX 75067
 Attention: Doug Pickens

In the case of:
 THE VALSPAR CORPORATION
 901 N. Greenwood Avenue
 Kankakee, IL 60901
 Attention: Al Dunlop
 Vice President, Coil & Extrusion

IN WITNESS WHEREOF, Valspar and Metl-Span 1, LTD have executed this agreement on this day and year shown below:

METL-SPAN 1, LTD
 By *Doug Pickens*
 Title *V.P. Sales & Marketing*
 Date *11/14/03*

THE VALSPAR CORPORATION
 By *Al Dunlop*
 Vice President, Coil & Extrusion
 November 7, 2003



Metal Wall Panels • Composite Wall Panels • Architectural Fabric

Metal Roofing Panels • Cold Storage • Custom Fabrication

**Warranty/Guarantee for
UK Pharmacy Building
146 Virginia Avenue
Lexington, KY 40506**

It is hereby understood and agreed that **ProCLAD, Inc.** shall guarantee all Work performed under this contract, and said Work shall be completed in accordance with the Contract Documents and be free from defective materials, equipment and/or workmanship for a period of one (1) year from the date of the Certificate of Substantial Completion (December, 2009). Scope of work includes the following products:

Metl-Span CF 36A Horizontal Smooth Dove Gray wall panels and associated flashings
Metl-Span CF 36A Special Reveal wall panels and associated flashings

Except for abuse, neglect or normal wear **ProCLAD, Inc.** shall promptly correct defective materials, equipment and/or workmanship including any other work which may be displaced or damaged in so doing at no cost to the Owner. The Owner shall notify **ProCLAD, Inc.** within 48 hours of any deficiencies found or if any construction activities are to occur in the area within the scope of this warranty.

In the event that **ProCLAD, Inc.** fails to remedy such defects after reasonable time to make corrections, then the Construction Manager or Owner may correct the Work and **ProCLAD, Inc.** thereby shall fully and promptly reimburse the Owner.

Regards,

A handwritten signature in black ink, appearing to read "Brad L. Hitzfield", written over a horizontal line.

Brad L. Hitzfield
President

September 29, 2008

CORPORATE OFFICE: 15255 Endeavor Drive, Suite 100 • Noblesville, IN 46060 • Phone: 317.845.5300 • Fax: 317.845.5353

EASTERN REGIONAL OFFICE • Phone: 765.825.8181 • Fax: 765.825.8383

-Specializing In Metal Exteriors-

METL-SPAN I, LTD.
LIMITED WARRANTY
FOR PRODUCTS MANUFACTURED AFTER
MAY 1, 2001

THE WARRANTIES DESCRIBED AND LIMITED HEREIN SHALL BE IN LIEU OF, AND SELLER HEREBY DISCLAIMS, ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY AS TO THE MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE.

METL-SPAN I, LTD., HEREINAFTER DESCRIBED AS METL-SPAN, SHALL NOT BE LIABLE FOR CONSEQUENTIAL, INCIDENTAL, OR SPECIFIC DAMAGES OF ANY NATURE WHICH MAY ARISE IN CONNECTION WITH SUCH PANELS. THE TERM CONSEQUENTIAL IS EXPRESSLY INTENDED, BUT NOT LIMITED, TO MEAN THOSE DAMAGES THAT ARE NOT IMMEDIATELY FORESEEABLE TO METL-SPAN SUCH AS DAMAGE CLAIMS INVOLVING LABOR CHARGES FOR REMOVAL OR INSTALLATION OF SAID PRODUCT OR PART; LOSS OF STORED PRODUCT; LOST SALES; LOST ORDERS; LOST PROFITS; LOST INCOME, EITHER GROSS OR NET; ALL ALLEGEDLY CAUSED, WHETHER DIRECTLY OR INDIRECTLY, BY FAILURE OR NON-PERFORMANCE OF METL-SPAN PRODUCTS.

METL-SPAN WARRANTS THE INSULATED PANELS MANUFACTURED AND SOLD BY IT TO BE FREE FROM DEFECTS IN MATERIAL AND WORKMANSHIP FOR A PERIOD OF TWO (2) YEARS FROM THE DATE OF SHIPMENT; AND PROVIDES A SEPARATE WARRANTY FOR EXTERIOR COIL COATINGS (PAINT FINISHES) ONLY. NO WARRANTY IS OFFERED FOR PAINT FINISHES ON THE INTERIOR FACE(S) OF THE INSULATED PANELS. METL-SPAN ALSO WARRANTS THE INSULATED PANELS MANUFACTURED AND SOLD BY IT TO BE FREE FROM GAS BLISTER FORMATION OF THE FOAM CORE TO THE EXTERIOR PANEL FACING FOR A PERIOD OF FIVE (5) YEARS FROM THE DATE OF SHIPMENT. METL-SPAN WILL REPAIR OR REPLACE F.O.B. FACTORY, AT ITS OPTION, ANY PANEL, WHICH MAY PROVE TO METL-SPAN'S SATISFACTION TO BE DEFECTIVE. METL-SPAN SHALL NOT BE LIABLE FOR FAILURES DUE IN WHOLE OR IN PART TO ACTS OF GOD, FALLING OBJECTS, EXPLOSIONS, FIRE, OR OTHER SUCH SIMILAR OR DISSIMILAR OCCURENCES BEYOND METL-SPAN'S CONTROL; STANDING OR PONDING WATER; SETTLEMENT OR DISTORTION OF THE BUILDING ON WHICH THE PANELS ARE INSTALLED BEYOND NORMAL LEVELS, FAILURE OR CRACKING OF THE BUILDING OR ITS FOUNDATION; OTHER DEFECTS OF THE BUILDING; RUPTURE, PERFORATION, RUST OR CORROSION OF GALVANIZED STEEL, ALUMINUM, STAINLESS STEEL AND ALUMINUM-ZINC COATED STEEL PANEL FACES; OR IF SAID PRODUCTS HAVE BEEN SCRATCHED, ABRADED, OR IMPROPERLY HANDLED, STORED, INSTALLED, OR REPAIRED, OR ALTERED IN ANY WAY OUTSIDE OF METL-SPAN'S FACTORY. IT IS EXPRESSLY UNDERSTOOD THAT METL-SPAN'S LIABILITY HEREUNDER IS LIMITED TO REPAIR OR REPLACEMENT OF PANELS WITHIN THE TIME PERIOD SPECIFIED ABOVE. THE FOREGOING REMEDY SHALL BE METL-SPAN'S SOLE LIABILITY AND SHALL BE THE EXCLUSIVE REMEDY AVAILABLE TO THE BUILDING OWNER.

JOB NUMBER:
CUSTOMER:
JOB NAME:
SHIP DATE:
P. O. #:
WARRANTY NO.:
DATE ISSUED:

substantial completion

substantial completion

EOP REVIEW:
NO
EXCEPTIONS
TAKEN
7.7.08 BB

MESSER CONSTRUCTION
APPROVED FOR SUBMITTAL

REVIEWED
By JFW at 2:54 pm, Jun 30, 2008

BY _____

Maintenance

Metl-Span III

Maintenance and Care of Metl-Span Pre-Painted Surfaces

Proper installation and maintenance are extremely important in obtaining the very best service and appearance from pre-painted metal surfaces. The following information should be read carefully before engaging in any of the operations below.

- I. Installation and Storage
- II. Cleaning of Painted Surfaces
- III. Touch-up Repair of Field Surface Scratches

I. Installation and Storage

Pre-Painted formed sheets must be protected from moisture until installation. When metal surfaces are tightly nested together and exposed to moisture and heat, oxidation (rusting) of the metal substrate can begin. In the case of galvanized steel, a white powder will be formed which is the normal sacrificial reaction of the zinc coating. Oxidation of this type can take place underneath the paint film. The following steps should be taken to control this type of storage damage.

1. *Keep exterior storage time at the job site to a minimum.*
2. *Cover and slant bundles of sheets to ensure drainage of rainwater. Make sure no sags exist. Cut outer wrapping to avoid condensation build-up inside package.*

Proper handling and stacking should be observed when moving panels to prevent abrasions. During installation, a frequent cause of damage is the dragging of whole panels or edges and corners across other panels. When damage occurs, sacrificial action of the zinc coating will retard red rusting, even if both the paint and galvanized coatings are cut through. If the appearance is damaged sufficiently, a touch-up operation may be necessary.

Improper cutting and drilling of pre-painted surfaces can cause bad rust spotting. Hot chips from drilling operations, saws or cutting discs, may embed in the paint finish.

Metl-Span III

Maintenance and Care of Metl-Span Pre-Painted Surfaces

Even though panels themselves are not cut, chips from adjacent steel work may embed in the paint surface. These chips will rust and form unsightly red spots on the painted surface that may become larger than the original chip. When saws, drill or cutting discs are used, the painted surface should be protected with a non-flammable cover. Also, prepainted panels installed next to a panel being cut or any panels nearby should be covered or removed if possible.

Brush off any chips of steel from the painted surface. If they are embedded they should be dislodged mechanically. Brushing with a stiff fiber brush may be adequate. Care should be taken by workmen to avoid stepping on or exerting pressure against any steel chips which tend to get embedded in the paint film.

II. Cleaning Paint Surfaces

Although the factory applied finishes are very durable and will last many years, eventually it may be desirable to thoroughly clean or repaint them.

Dirt build-up may cause apparent discoloration of the paint when it has been exposed to dirt laden atmospheres for long periods of time. Slight chalking may cause some change in appearance in areas of strong sunlight. A good cleaning will often restore the appearance of these buildings and render repainting unnecessary. An occasional light cleaning will help maintain a good appearance.

In many cases, simply washing the building with plain water using hoses or pressure sprays will be adequate. In areas where heavy dirt deposits dull the surface, a solution of water and detergent (1/3 cup Tide per gallon of water for example) may be used. A soft bristle brush with a long handle may be useful. A clear water rinse should follow. Mildew may occur in areas subject to high humidity, especially on dirt and spore deposits. This is not normally a problem on clean surfaces, however, due to the high inherent mildew resistance of baked-on finishes. To remove mildew the following solution is recommended:

1/3 cup detergent (e.g. Tide)

Maintenance

Metl-Span III

*Maintenance and Care
of Metl-Span
Pre-Painted Surfaces*

2/3 cup tri-sodium phosphate (e.g. Soilex)

1 quart sodium hypochlorite 5% solution (e.g. Clorox)

3 quarts water

Strong solvents and abrasive type cleaners should be avoided. Caulking compounds, oil, grease, tars, wax and similar substances can be removed by wiping with a cloth soaked with mineral spirits. Wipe only contaminated areas and follow with detergent cleaning and thorough rinsing.

III. Touch-up Repair of Installed Surface Scratches

1. Surface Preparation:

- A. Edges of deep scratches should be lightly sanded or feathered with #400 grit sand paper.
- B. Scratches and areas immediately adjacent should be wiped with lint free cloth dampened in mineral spirits.
- C. Allow area to dry thoroughly before applying touch-up.

2. Touch-up Application:

- A. Check touch-up paint for correct match before applying to damaged areas.
- B. Shake and stir paint before applying.
- C. Apply touch-up paint to damaged area in thin coatings at a time.

3. Precautions:

- A. Protect eyes, face and hands from direct contact with touch-up paint and /or solvents.
- B. Provide good ventilation in work area.
- C. Enforce NO SMOKING. Remove all sources of ignition. These coatings and solvents are FLAMMABLE.

074243

COMPOSITE WALL PANELS

University of Kentucky

College of Pharmacy

146 Virginia Avenue
Lexington, Kentucky 40508

Warranty Contacts

<u>Specification Section</u>	<u>Supplier</u>
074243 – Composite Wall Panels Contact: Matt Hale	Sobotec/Spohn Ph. (317) 921-0021
076200 – Sheet metal flashing and trim Contact: Pete Passon	Linell Signature Ph. (317) 831-5314 ex. 135
084113 – Aluminum-framed Entrances Contact: Mike Bettice	Kawneer Ph. (317) 883-4320
084126 – All Glass Entrances and Storefronts Contact: Holly Engel	Oldcastle Glass Ph. (800) 537-4064
084413 – Glazed Aluminum Curtainwalls Contact: Mike Bettice	Kawneer Ph. (317) 883-4320
086300 – Glass Canopies and Metal Framed Skylights Contact: Pete Passon	Linell Signature Ph. (317) 831-5314 ex. 135
088000 – Glazing Contact: Holly Engel	Oldcastle Glass Ph. (800) 537-4064
088300 – Mirrors Contact: Latrisha Finger	Arch Aluminum & Glass Ph. (317) 273-0646
107000 – Exterior Sun Control Contact: Aaron Johns	Doralco Ph. (888) 443-6725

University of Kentucky College of Pharmacy

FINISH SCHEDULE

074243 – Composite Wall Panels

Sobotec / Spohn
7150 Winton Drive, Suite 100
Indianapolis, IN 46268
(317) 921-0021

Finish: Alucobond – Silver Metallic
#A3001-OXLE

076200 – Sheet metal flashing and trim

Linel Signature
101 Linel Drive
Mooresville, IN 46158
(317) 831-5314

Finish: PPG – UC65890 XL
Bright Silver – 70% Kynar

084113 – Aluminum-framed Entrances

Kawneer
2031 Deyerle Ave.
Harrisonburg, VA 22801
(877) 505-3771

Finish: PPG – UC65890 XL
Bright Silver – 70% Kynar

084126 – All Glass Entrances and Storefronts

Oldcastle Glass
291 “M” Street
Perrysburg, OH 43551
(800) 537-4064

Makeup: 1/2” Clear Tempered Glass

Dorma Automatics
924 Sherwood Drive
Lake Bluff, Illinois 60044
(877) 367-6211

Finish: Monterey Grey LT144056 – 70% Kynar
ICU Doors / Automatic Sliding Doors

086300 – Glass Canopies and Metal Framed Skylights

Linell Signature (Framing)
101 Linell Drive
Mooresville, IN 46158
(317) 831-5314

Finish: PPG – UC65890 XL
Bright Silver – 70% Kynar

Oldcastle Glass (Skylight)
291 “M” Street
Perrysburg, OH 43551
(800) 537-4064

Makeup: 1 5/16” I.G. Clear Solarban 60 #2 surface
1/2” Airspace – 9/16” Clear Laminated
with 30% dots - #3 surface

Viracon (Glass Canopies)
800 Park Drive
Owatonna, MN 55060
(800) 533-2080

Makeup: 9/16” Clear Laminated with 30% dots
#2 surface

088000 – Glazing

Oldcastle Glass
291 “M” Street
Perrysburg, OH 43551
(800) 537-4064

Makeup: Exterior – 1” I.G. Clear Solarban 60 #2
surface – 1/2” airspace – 1/4” clear
Makeup: Interior – 1/4” Saten Tempered
1/4” Clear Tempered

088300 – Mirrors

Arch Aluminum & Glass
7701 West New York Street
Indianapolis, IN 46214
(317) 273-0646

Makeup: 1/4” Clear Mirror

107000 – Exterior Sun Control

Doralco
11901 S. Austin Ave., Suite 301
Alsip, Illinois 60803
(888) 443-6725

Finish: PPG – UC65890 XL
Bright Silver – 70% Kynar



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

STATE OF Kentucky

COUNTY OF Fayette

WARRANTY AND GUARANTEE


NAME OF PROJECT: University of Kentucky – College of Pharmacy
Lexington, Kentucky

NAME OF OWNER: University of Kentucky

SCOPE OF WORK:

- 084126 – All-glass Entrances and Storefronts
- 088000 – Glazing
- 107000 – Exterior Sun Control
- 086300 – Glass Canopies & Metal Framed Skylights
- 076200 – Sheet metal flashing and trim
- 088300 – Mirrors
- 074243 – Composite Wall Panels
- 084413 – Glazed Aluminum Curtainwalls
- 084113 – Aluminum-framed entrances

As a Subcontractor on the above referenced project, Central Kentucky Glass Company does hereby Guarantee that all material and workmanship is free from defects for a period of One (1) year from the date of Substantial Completion (December 17, 2009) and that all defects occurring within that period will be promptly corrected at no cost to the Owner. Nothing in the above shall be construed to imply that this Guarantee shall apply to any material which has been abused or neglected by the Owner.

BY:  President
Dennis Martin Title

DATE: 12/21/09



WARRANTY

SOBOTEK Ltd. ("Sobotec") warrants the building material furnished by Sobotec for the building described below to be free from defect in material or workmanship on the shipment date. Sobotec will correct by repair or by furnishing replacement materials any such defect reported to Sobotec within (2) year(s) from substantial completion. As used in this warranty, the term "reported" refers to the procedure set forth in paragraph 5 below.

PROJECT NAME:	<u>U. K. College of Pharmacy-Biological Complex</u>
BUILDING LOCATION:	<u>789 S. Limestone, Lexington, KY 40536</u>
OWNER:	<u>State of Kentucky</u>
SOBOTEK CONTRACT NO.:	<u>08-04-038</u>
DATE OF SUBSTANTIAL COMPLETION:	<u>December 17, 2009</u>

THE FOREGOING WARRANTY IS SUBJECT TO THE FOLLOWING LIMITATIONS, ADDITIONAL PROVISIONS AND CONDITIONS, INCLUDING THOSE WHICH ARE CONTAINED ON THE FOLLOWING PAGES.

1) The warranties expressed herein do not apply:

- a. to panels installed in areas subject at any time subsequent to installation to exposure to corrosive or aggressive conditions such as airborne abrasives, salt water, marine atmospheres, spray of salt or fresh water, fallout or exposure to fumes, vapors or solid emanations containing acids, alkalis, or compounds of mercury, or other corrosive chemicals, ash or fumes (for example, without limiting the foregoing, this Warranty does not apply to a building which is subject to salt or fresh water spray from an ocean or cooling tower or to corrosive agents emanating from a nearby manufacturing or processing plant.)



- b. to failures caused by Acts of God, falling objects, external forces, explosions, fire, riot, civil commotion, acts of war, radiation, defects in any part of the foundation of the building, or the attachment of components, such as vents,

flashing signs, fascia, skylights, or any other materials, accessories or machinery, the attachment of which is not made known to and approved by Sobotec in writing.
 - c. to products or materials which are not manufactured by Sobotec except to the extent of the guarantee given by the actual manufacturer.
 - d. to used materials or to materials repaired or replaced under this Warranty except to the extent of the remainder of the applicable warranty period (to repaired, repainted, replaced or used materials).
 - e. to slight hairline crazing in paint films which may result from normal fabrication and installation processes.
 - f. to any paints or coating applied after installation not furnished or specifically recommended in writing by Sobotec.
- 2) As used in this Warranty, the term "wall panel" excludes vents, gutters, skylights, trim flashing or other attachments to the wall.
 - 3) Title to any replaced material shall pass to Sobotec.
 - 4) Sobotec does not warrant any part, product or material to meet local, municipal, or state ordinances, codes, laws or regulations.
 - 5) The obligations of Sobotec under this warranty shall not arise unless Sobotec is notified and this warranty is presented, together with a written statement specifying the claim of failure within sixty (60) days after a failure is first called to the attention of the owner and not later than the expiration of the applicable warranty period. Sobotec shall determine whether correction of the defect or failure shall be by repair or by furnishing replacement materials. Sobotec's liability shall not arise unless the correction is made under the supervision of or with written approval of Sobotec.
 - 6) The obligations of Sobotec hereunder extend only to the original owner listed above to whom the materials are initially sold. This Warranty may not be made the subject of any assignment or transfer by such owner without written consent of Sobotec.
 - 7) Except where such disclaimers and exclusions are specifically prohibited by applicable law, THE FOREGOING SETS FORTH THE ONLY GUARANTEES THEREOF AND SAID WARRANTIES ARE GIVEN EXPRESSLY AND IN LIEU OF ALL OTHER

Alcan Composites USA, Inc.
Alucobond® Aluminum Composite Material
Finished with Polyvinylidene Fluoride (PVDF)

20-YEAR WARRANTY

This warranty is issued by Alcan Composites USA, Inc. (Composites) to the property owner (the "Owner") identified below and applies to the finish/Finish on Alucobond® aluminum composite material (the "Material") finished with a PVDF finish system (the "Finish") installed at the property (the "Property") identified below:

Property Name:	U.K. College of Pharmacy – Biological Complex		
Property Owner:	State of Kentucky		
Property Address:	789 S. Limestone		
City: Lexington	State: KY	Zip: 40536	
Fabricator Name:	Sobotec, Ltd.		
Alucobond Sales Order #	120156	Quantity in SF	4,361
Alucobond Material Color:	PVDF 3—Silver Metallic		
Date of Warranty:	June 2, 2009		

Warranty Coverage is subject to the following terms and conditions:

1. The duration of this Warranty (the "Warranty Period") shall be for twenty (20) years.
2. The Warranty Period shall begin from the date of installation or six (6) months after the date of initial shipment from the Composites facility, whichever occurs first, and is void unless payment for the materials indicated has been received by Composites.
3. Composites warrants that during the Warranty Period, the Finish will not peel, check or crack (except for slight crazing or cracking as may occur on normal roll-forming or brake bending and which is accepted as standard, or when cracking or crazing is the result of metal fracture).
4. Composites warrants that during the Warranty Period, the Finish will not chalk in excess of a numerical rating eight (8), as measured using the procedures of ASTM D-4214-89.
5. Composites warrants that during the Warranty Period, the Finish will not fade or change color in excess of five (5) E units (Hunter Color Difference) as measured using the procedure of ASTM D-2244-85, comparing an unexposed retain panel to the exposed panel after removal of dirt and chalk.
6. For Material that has been purchased from Composites as "finish good on both sides"; this Warranty is only valid for the visible side of the Material, provided that, the Alucobond Sales Order Number for the Material has been indicated by the Fabricator on the non-visible side.
7. It is acknowledged that fading or color changes may not be uniform if the surfaces are not equally exposed to the sun and elements. Composites recommends that there be a systematic fresh water rinse maintenance program in effect in areas of high salt concentration (such as adjacent to the seashore and/or in industrial atmospheres) so as to prevent the accumulation of concentrated salt deposits.

Spec Section 074243 - Composite Wall Panels

8. This Warranty will not apply to damage to and/or failure of the Finish caused by: moisture or other contamination detrimental to the Finish because of improper packaging, storage, or handling of the Material prior to installation; improper handling, shipping, processing (such as fabrication at temperatures below 60°F(15.5°C)), an d/or installation of the Material; scratching or abrading of the Finish during or after installation; standing or ponding water; improper cleaning of the Material; corrosion of the Material; or, acts of God, falling objects, explosions, fire or other such similar or dissimilar occurrences beyond Composites' control.
9. Composites' exclusive liability and the Customer's sole remedy under this Warranty, or otherwise, shall be limited to, at Composites' option, the refinishing, or replacing, or reimbursement of the cost of refinishing or replacing the Material exhibiting a defective Finish. Cost of such replacement or repair is not to exceed the unit price of such Product less a calendar year deductible in each calendar year of five (5%) of the original unit price so that the aggregate deducted over the twentieth calendar shall be one hundred percent (100%). All costs and cost of labor to remove and replace panels claimed to be coated with defective Product are to be borne by Customer. Customer agrees, as a condition of this warranty, to return non-conforming Product to Composites, FOB its plant, at the express written request of Composites. Refinishing shall be performed by a Composites' approved contractor, using standard finishing practices and materials as selected and/or approved by Composites. Composites reserves the right to approve any contract for such refinishing or replacing; such approval not to be unreasonably delayed or withheld.
10. Composites' reserves the right to discontinue or modify its product lines and Finish colors. If the original Finish is no longer available, Composites will, at its option, either substitute a Finish of comparable quality or refund the purchase price of the defective Finish only.
11. The Warranty Period on a refinished or replaced finished Material shall be only for the remainder of the Warranty Period applicable to the Material originally finished. ^(R)
12. In no event shall Composites be liable under any theory of recovery, whether based on negligence of any kind, strict liability or tort, for any direct, indirect, special, punitive, incidental or consequential damages in any way arising out of the purchase of a Finish or from any possession or use made of a Finish.
13. All claims relating to the quality, condition or performance of the Finish shall be denied unless the Customer acknowledges the claim in writing to Composites within the applicable Warranty Period, and within thirty (30) days after the Customer is informed or becomes aware of a defect in or of the Finish; and Composites must be given a reasonable and prompt opportunity to inspect said defect.
14. COMPOSITES MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE, WITH RESPECT TO ANY OF THE FINISHS.
15. This Warranty is extended solely to the Customer. It is nontransferable and nonassignable.
16. All claims and notices must be submitted in writing to: Alcan Composites USA, Inc., P.O.Box 507, ATTN: Claims Department, Benton, KY, 42025.
17. Acceptance of this Warranty grants Composites the right to secure photography of the Property for advertising, public relations, and related industry promotional collateral. Rights to said photography are unrestricted and may be transferable.

18. No terms or conditions other than those stated herein, and no agreement or understanding, oral or written, in any way purporting to modify this Warranty shall be binding upon a party unless made in writing, expressly refers to this Warranty and is signed by that party's authorized representative. This Warranty supersedes and cancels any prior representations, warranties and agreements relating to the subject matters of this warranty.

ALUCOBOND®



CLEANING OF ALUCOBOND PANELS

Regular cleaning of Alucobond panels is recommended with frequency dependent on the location and atmospheric conditions, but not less than once per year.

Instructions

- A. Recommended cleaning includes the use of diluted solution of ivory liquid and water, or a similar mild cleaner, to be applied with a sponge in a linear motion.

The entire panel should be sponged and rinsed thoroughly with clean water.

A squeegee should be used to remove excess water to dry.

- B. To remove caulking from panel, acetone is recommended.

Acetone should be used with caution, since it is a combustible material.

SOBOTEC LTD.
Hamilton, Ontario

075216

**SBS MODIFIED BITUMINOUS
MEMBRANE ROOFING**

J.W. Jones

Construction Corporation

Certified General Contractor / Certified Roofing Contractor

CGC1508575 / CGC1514749 / CCC1326327 / CCC1328377

Indian River County 772-299-0344 / Fax 772-567-1093

WARRANTY

Warranty Start Date: Tuesday April 7, 2009

Warranty Period Year(2): Two (2)

COVERED UNDER WARRANTY


We the undersigned guarantee the workmanship against defect in the installation and further guarantee the installation to be in accordance with the manufacturer's instructions at the: **UK Biological/Pharmaceutical Complex, 789 Limestone Street, Lexington, KY 40508 (Project # 2235.0)** for a period of two (2) years. During which, in the event of a leak caused by reasons of workmanship, we will make the necessary repairs.

EXCLUDED FROM WARRANTY

1. Act's of God, unusual climatic events (hurricanes, tornados, lightening, etc.)
2. Structural movement
3. Work to roofing system and/or penetrations through system by anyone other than the grantor of the warranty.
4. Damage caused by other individuals and contractors not associated with the grantor of the warranty.


We make no guarantees expressed and/or implied except as stated herein and contract document. (Any Guarantee from J.W. Jones Construction Corporation is only in force when monies due have been paid in full).

SIGNED:


J.W. Jones Construction Corporation

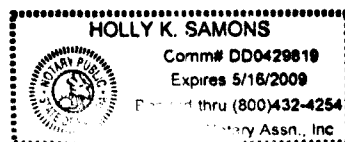
Scribed and sworn before me this 4/7/2009

NOTARY:


Holly K. Samons

My Commission Expires:

5/16/2009





*"Quality You Can Trust Since 1886...
From North America's Largest Roofing Manufacturer"*

*Guarantee Services
1361 Alps Road
Building 11-2
Wayne, NJ 07470
(800) 766-3411, Option #2*

February 3, 2010

UNIVERSITY OF KENTUCKY
PETERSON SERVICE BUILDING - ROOM 32
LEXINGTON, KY 40506

**Re: UK BIOLOGICAL/PHARMACEUTICAL COMPLEX
789 LIMESTONE STREET
LEXINGTON, KY 40508
Guarantee #: G2008-00004693**

Dear MIKE MUDD:

Thank you for choosing a GAF Materials Corporation RUBEROID DIAMOND PLEDGE 20 Year Guarantee for your roofing system. We believe that you've made the best and safest choice to protect your property for years to come.

We've enclosed the following items in this package:

- Your Guarantee - please keep this in your files. You'll need it in the unlikely event that there is a problem with your roof, or if you should sell the property.
- Well Roof™ Advantage Information Sheet - we can help you extend your Diamond Pledge Guarantee coverage length for an additional 25% at no charge! This sheet gives you a quick explanation of the Well Roof program, requirements, and benefits. Contact us for more details!
- Roofing Solutions Reference Manual - explains the importance of regular roof maintenance, and can help you get started on setting up a roof maintenance program. Remember, regular inspections and maintenance are a requirement of any roofing system guarantee. After you've had a chance to read the manual, we suggest that you set up a time to discuss a maintenance program with J.W. Jones Construction Corporation, the GAF Master Commercial Roofing Contractor that installed your new roofing system.
- Scheduled Maintenance Checklists Booklet - provides you with suggested inspection checklists that you and your contractor can use for the life of your guarantee - and beyond.
- Stop Sign - attach this sign to the main point of entry to your roof system. It helps remind other trades that may need to access the roof about the importance of being careful with your investment. Your contractor can provide you with more if needed.

Remember, if you ever have any questions or concerns regarding your roofing system, we're here to help you at (800) 766-3411, Option #2 - or contact us at the e-mail address below. And thanks for choosing GAF!

Cordially,

Guarantee Services

E-mail: cguarantee@gaf.com

cc: Project File



GAF Materials Corporation

1361 Alps Road Wayne, NJ

(800) 766-3411, Option 2

February 3, 2010

UNIVERSITY OF KENTUCKY
PETERSON SERVICE BUILDING - ROOM 32
LEXINGTON, KY 40506

**RE: UK BIOLOGICAL/PHARMACEUTICAL COMPLEX
789 LIMESTONE STREET
LEXINGTON, KY 40508
Guarantee #: G2008-00004693**

SUBJECT: WE WOULD APPRECIATE YOUR FEEDBACK!

Dear: UNIVERSITY OF KENTUCKY

Congratulations...

And thank you for choosing J.W. Jones Construction Corporation to install one of GAF's Integrated Commercial Roofing Systems on your property. Your RUBEROID DIAMOND PLEDGE 20 YEAR GUARANTEE provides you with comprehensive system protection, so that if your roof leaks from either installation or material defects, the costs of repair are covered (see RUBEROID DIAMOND PLEDGE 20 YEAR GUARANTEE for details). You can be certain that you've made the best and safest choice to protect your valuable property for years to come.

Your Feedback Is Important . . .

J.W. Jones Construction Corporation is committed to providing the best and safest choice for their customers and they know to be successful they must continuously improve. Your participation in a brief online quality survey will provide J.W. Jones Construction Corporation with a better understanding of their strengths and weaknesses, and as a result they will provide even better service for future customers.

Simply go to www.GAF.com/survey and enter your personal survey code (all letters): **knjliinkudnlfKdj**. When you complete the survey, you will automatically be entered in the GAF Market Pulse™ Survey monthly sweepstakes. See the details on the website and below.

Questions?

Please feel free to call us if you have any questions about your new roof. And again, thanks for choosing GAF, your best and safest choice in roofing!

Very truly yours,

GAF Guarantee Services Team

***GAF MarketPulse™ Survey Monthly Sweepstakes
-Rules Summary-***

NO PURCHASE NECESSARY. Void where prohibited by law. Subject to all federal, state, local laws, regulations and ordinances. Open to recent purchasers of either a GAF Diamond Pledge™ Limited Guarantee or System Pledge™ Ltd. Guarantee from a GAF Certified Contractor, who are legal residents of the 50 United States and the District of Columbia 18 years of age or older as of the date of entry. Employees and Directors of GAF Materials Corporation, or any of its parents, subsidiaries, affiliates, consultants, contractors, legal, advertising, public relations, promotional, fulfillment/marketing agencies and web providers and their immediate family/household members are not eligible to participate. Monthly contests begin 12:00 AM ET at the first of every month and ends 11:59 PM ET at the last day of every month. To enter, go to www.gaf.com/survey, enter the personal survey code you received with notification of registration of either your GAF Diamond Pledge™ Limited Guarantee or System Pledge™ Ltd. Guarantee, and then complete the on-line quality survey.

Monthly sweepstakes winners will each receive a \$100 American Express Gift Cheque. Odds of winning based on the number of eligible entries received.

To enter and to see the complete rules and eligibility requirements, visit www.gaf.com/survey. Sponsored by GAF Materials Corporation, 1361 Alps Road, Wayne, NJ 07470



Supersedes All Previous Guarantees
Ruberoid®/GAFGLAS®
DIAMOND PLEDGE™
NDL ROOF GUARANTEE

No. **G2008-00004693**



OWNER **UNIVERSITY OF KENTUCKY** PERIOD OF COVERAGE **20** YEARS

NAME AND TYPE OF BUILDING: **UK BIOLOGICAL/PHARMACEUTICAL COMPLEX**

ADDRESS OF BUILDING: **789 LIMESTONE STREET, LEXINGTON, KY 40508**

SPECIFICATION: **I0220/30FR(CA)** AREA OF ROOF: **450.00** SQUARES

APPLIED BY: **J.W. JONES CONSTRUCTION CORPORATION / VERO BEACH, FL**

DATE OF COMPLETION: **12/01/2009** GUARANTEE EXPIRATION DATE: **12/01/2029**

THE GUARANTEE/SOLE AND EXCLUSIVE REMEDY

GAF MATERIALS CORPORATION ("GAF") guarantees to you, the original owner of the building described above, that GAF will provide "Edge To Edge" protection by repairing leaks through the GAF roofing membrane, liquid applied membrane or coating, base flashing insulation, expansion joint covers, preflashed accessories and metal flashings used by the contractor of record that meet SMACNA standards (the "GAF Roofing Materials") resulting from manufacturing defects, ordinary wear and tear or workmanship in applying the GAF Roofing Materials. There is no dollar limit on covered repairs. Leaks caused by any materials other than those listed above, such as the roof deck, non-GAF insulation, or any other materials used in the construction of the roof system, are not covered.

GUARANTEE PERIOD

This guarantee ends on the expiration date listed above. **NOTE:** Lexsuro® and uncoated M-CURB flashings are covered by this guarantee only for the first ten years.

OWNER'S RESPONSIBILITIES

Notification of Leaks

In the event of a leak through the GAF Roofing Materials, you must make sure that GAF is notified directly about the leak, in writing, within 30 days by email (preferred) at guaranteeservices@gaf.com, or in writing to Guarantee Services Department, 1361 Alps Road, Bldg. 11-1, Wayne, New Jersey 07470, or GAF will have no responsibility for making repairs. **NOTE:** The roofing contractor is NOT an agent of GAF; notice to the roofing contractor is NOT notice to GAF.

By notifying GAF, you authorize GAF to investigate the cause of the leak. If the investigation reveals that the leak is not covered by this guarantee, you agree to pay an investigation cost of \$500. This guarantee will be canceled if you fail to pay this cost within 30 days of receipt of an invoice for it.

Preventative Maintenance and Repairs

A. In order to maximize the trouble-free performance of your roof, you must perform regular inspections and maintenance and keep records of this work.

B. To keep this guarantee in effect, you must repair any conditions in the building structure or roofing system that are not covered by this guarantee but that GAF concludes may be threatening the integrity of the GAF Roofing Materials (e.g., porous walls allowing water entry into the roofing system).

C. You may make temporary repairs to minimize damage to the building or its contents in an emergency, at your sole expense. These repairs will not result in cancellation of the guarantee as long as they are reasonable and customary and do not result in permanent damage to the GAF Roofing Materials.

D. Any equipment or material that impedes any inspection or repair must be removed at your expense so that GAF can perform inspections or repairs.

EXCLUSIONS FROM COVERAGE

(e.g., items that are not "ordinary wear and tear" or are beyond GAF's control)

This guarantee does NOT cover conditions other than leaks. This guarantee also does not cover leaks caused by the following:

- Inadequate roof maintenance, that is, the failure to follow the Scheduled Maintenance Checklists provided with this guarantee (extra copies available by calling Guarantee Services at 1-800-ROOF-4111).
- Unusual weather conditions or natural disasters including, but not limited to, windstorms, hail, floods, hurricanes, lightning, tornadoes, and earthquakes, unless specifically covered under this guarantee.
- Damage to the roof constructed of the GAF Roofing Materials due to (a) movement or cracking of the roof deck or building, (b) improper installation or failure of any non-GAF insulation or materials, (c) infiltration or condensation of moisture through or around the walls, ceilings, building structure or surrounding materials except where high wall GAF waterproofing flashings are installed, (d) chemical attack on the membrane, including, but not limited to, exposure to grease or oil, or (e) the failure of wood nailers to remain attached to the structure.
- Traffic of any nature on the roof unless using GAF walkways applied in accordance with GAF's Application and Specifications Manual.
- Blisters in the GAF Roofing Materials that have not resulted in leaks unless (a) the blister is between the base sheet and insulation and a Stratavent® Eliminator® perforated venting base sheet is installed directly over isocyanurate insulation, or (b) the blister is in a seam and may affect the watertight integrity of the GAF Roofing Materials.
- Changes in the use of the building or any repairs, modifications or additions to the GAF Roofing Materials after the roof is completed, unless approved in writing by GAF.
- Conditions that prevent positive drainage or result from ponding water.
- Any condition (e.g., base flashing height or lack of counterflashing) that is not in accordance with GAF's Application and Specifications Manual or any deviation or modification from any specification published in the Manual, unless specifically authorized by a GAF Contractor Services Manager or Director in writing.

No representative, employee or agent of GAF has the authority to assume any additional liability or responsibility for GAF, except in writing signed by an authorized GAF Contractor Services Manager or Director. **NOTE:** Any inspections made by GAF are limited to a surface inspection only, are for GAF's sole benefit, and do not constitute a waiver of any of the terms and conditions of this guarantee.

TRANSFERABILITY

You may transfer or assign this guarantee to a subsequent owner of this building for the remaining term only if: 1) the request is in writing to GAF at the address listed below within 60 days after ownership transfer, 2) you make any repairs to the GAF Roofing Materials or other roofing or building components that are identified by GAF after an inspection as necessary to preserve the integrity of the GAF Roofing Materials, and 3) you pay an assignment fee of \$500. This guarantee is NOT otherwise transferable or assignable by contract or operation of law, either directly or indirectly.

LIMITATION OF DAMAGES; MEDIATION; JURISDICTION; CHOICE OF LAW

THIS GUARANTEE IS EXPRESSLY IN LIEU OF ANY OTHER GUARANTEES OR WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, and of any other obligations or liability of GAF, whether any claim against it is based upon negligence, breach of warranty or any other theory. In NO event shall GAF be liable for any CONSEQUENTIAL OR INCIDENTAL DAMAGES of any kind, including, but not limited to, interior or exterior damages and/or mold growth.

The parties agree that, as a condition precedent to litigation, any controversy or claim relating to this Guarantee shall be first submitted to mediation before a mutually acceptable mediator. In the event that mediation is unsuccessful, the parties agree that neither one will commence or prosecute any lawsuit or proceed in other than before the appropriate state or federal court in the State of New Jersey. This Guarantee shall be governed by the laws of the State of New Jersey, without regard to principles of conflicts of laws. Each party irrevocably consents to the jurisdiction and venue of the identified courts above.

NOTE: This Guarantee becomes effective only when all bills for installation and supplies have been paid in full to the roofing contractor and material suppliers, and the Guarantee charge has been paid to GAF Materials Corporation.

GAF MATERIALS CORPORATION
 1361 ALPS ROAD, EISENHART 11-1
 WAYNE, NEW JERSEY

This guarantee must have a raised seal to be valid.

Printed on Recycled Paper
 02.03.2010

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J.W. Jones

Construction Corporation

Certified General Contractor / Certified Roofing Contractor

CGC1508575 / CGC1514749 / CCC1326327 / CCC1328377

Indian River County 772-299-0344 / Fax 772-567-1093

WARRANTY

Warranty Start Date: Tuesday April 7, 2009

Warranty Period Year(2): Two (2)

COVERED UNDER WARRANTY

We the undersigned guarantee the workmanship against defect in the installation and further guarantee the installation to be in accordance with the manufacturer's instructions at the: **UK Biological/Pharmaceutical Complex, 789 Limestone Street, Lexington, KY 40508 (Project # 2235.0)** for a period of two (2) years. During which, in the event of a leak caused by reasons of workmanship, we will make the necessary repairs.

EXCLUDED FROM WARRANTY

1. Act's of God, unusual climatic events (hurricanes, tornados, lightening, etc.)
2. Structural movement
3. Work to roofing system and/or penetrations through system by anyone other than the grantor of the warranty.
4. Damage caused by other individuals and contractors not associated with the grantor of the warranty.

We make no guarantees expressed and/or implied except as stated herein and contract document. (Any Guarantee from J.W. Jones Construction Corporation is only in force when monies due have been paid in full).


SIGNED:



J.W. Jones Construction Corporation

Scribed and sworn before me this 4/7/2009

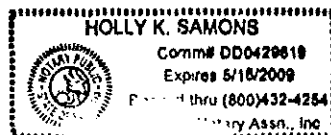
NOTARY:



Holly K. Samons

My Commission Expires:

5/16/2009





No. _____

DIAMOND PLEDGE™ ROOF GUARANTEE



20 years

OWNER: _____ PERIOD OF COVERAGE: _____ YEARS

NAME AND TYPE OF BUILDING: _____

ADDRESS OF BUILDING: _____

SPECIFICATION: _____ AREA OF ROOF: _____ SQUARES

TYPE OF FLASHING: _____ LENGTH OF FLASHING: _____ LINEAL FEET

APPLIED BY: _____

DATE OF COMPLETION: _____ EXPIRATION DATE: _____

THE GUARANTEE

GAF MATERIALS CORPORATION ("GAFMC") guarantees to you, the original owner of the building described above, that GAFMC will repair leaks through the GAFMC roofing membrane, liquid applied TOPCOAT™ membrane or coating, base flashing, high wall waterproofing flashing, insulation, expansion joint covers and prefashed accessories (the "GAFMC Roofing Materials") resulting from the causes listed below while this guarantee is in effect.

Scope Of Coverage - Leaks Caused by:

1. Natural deterioration of the GAFMC Roofing Materials
2. Blisters
3. Bare Spots
4. Fish-mouths
5. Ridges

6. Splits not caused by structural failure or movement of or cracks in substrate roof base or non-GAFMC insulation over which the GAFMC Roofing Materials are applied
7. Buckles and wrinkles
8. Workmanship in applying the GAFMC Roofing Materials
9. Slippage of membrane or base flashing

There is no dollar limit on covered repairs. Leaks caused by any materials other than those listed above, such as the roof deck, non-GAFMC insulation, or any other materials used in the construction of the roof system, are not covered.

GUARANTEE PERIOD

This guarantee ends as of the date listed above. Note: Some systems require the use of specialized accessories in the roofing system. Where Lexsuco or uncoated Mcurb flashings are used, they are covered by this guarantee **only** for the first ten years.

ELIMINATOR™ ADVANTAGE

In addition to the repair of leaks as detailed above, if a Stratavent™ Eliminator™ perforated venting base sheet is installed directly over isocyanurate insulation, GAFMC will also make repairs to eliminate blisters that occur between the Stratavent™ Eliminator™ perforated venting base sheet and the isocyanurate insulation even if these blisters do not result in leaks.

OWNER'S RESPONSIBILITIES

In the event of a leak through the GAFMC Roofing Materials, you must notify the GAFMC Guarantee Services, 1381 Alps Road, Bldg. 11-1, Wayne, New Jersey 07470 in writing about the leak within 30 days after its discovery or GAFMC will have no responsibility for any repairs. NOTE: the roofing contractor is NOT an agent of GAFMC; notice to the roofing contractor is NOT notice to GAFMC.

By notifying GAFMC, you authorize GAFMC to investigate the cause of the leak. If the investigation reveals that the leak is not covered by this guarantee, you agree to pay an investigation cost of \$500. This Guarantee will be cancelled if you fail to pay this cost within 30 days of receipt of an invoice for it.

You must perform regular inspections and maintenance and keep records of this work. Any equipment or material that impedes any inspection must be removed at your expense so that GAFMC can perform inspections. You must make repairs to the building or roof components not covered under the guarantee that are identified by GAFMC during an inspection as necessary to preserve the integrity of the GAFMC Roofing Materials. This guarantee will be cancelled or suspended if you fail to do so in a timely manner.

You may make temporary repairs to minimize damage to the building or its contents in an emergency, at your sole expense. These repairs will not result in cancellation of the guarantee as long as they are reasonable and customary and do not result in permanent damage to the GAFMC Roofing Materials.

EXCLUSIONS FROM COVERAGE

This Guarantee does NOT cover leaks caused by the following or conditions other than leaks:

1. Lack of roof maintenance.
2. Unusual weather conditions or natural disasters including, but not limited to, windstorms, hail, floods, hurricanes, lightning, tornadoes, and earthquakes.
3. Damage to the roof constructed of the GAFMC Roofing Materials due to: (a) movement or cracking of the roof deck or building; (b) improper installation or failure of any non-GAFMC insulation or materials; (c) infiltration or condensation of moisture through or around the walls, copings, building structure or surrounding materials except where wall waterproofing coatings are installed, leaks are covered (d) chemical attack on the membrane, including, but not limited to, exposure to grease or oil; or (e) the failure of wood nailers to remain attached to the structure.
4. Traffic of any nature on the roof.
5. Changes in the use of the building unless approved in writing in advance by GAFMC.
6. Conditions that prevent positive drainage or result from ponding water.
7. Any repairs, modifications or additions to the GAFMC Roofing Materials after the roof is completed, unless approved by GAFMC in writing in advance.
8. Any condition (e.g., base flashing height or lack of counterflashing) that is not in accordance with GAFMC's Application and Specifications Manual unless specifically accepted by GAFMC in writing.

No representative, employee or agent of GAFMC has the authority to assume any additional liability or responsibility for GAFMC unless approved in writing by an authorized Contractor Services Manager. GAFMC shall not be responsible for or liable for any change or amendment to the GAFMC roof specifications in regard to the construction of the roof described above unless the change and/or amendment to the specifications is approved in writing by an authorized GAFMC Contractor Services Manager. NOTE: Any inspections made by GAFMC are limited to a surface inspection only, are for GAFMC's sole benefit, and do not constitute a waiver of any of the terms and conditions of this guarantee.

ASSIGNABILITY

You may assign this guarantee to a subsequent owner of this building for the remaining term only if: 1) the request is in writing within 60 days after ownership transfer; 2) you make any repairs to the GAFMC Roofing Materials or other roofing or building components that are identified by GAFMC after an inspection as necessary to preserve the integrity of the GAFMC Roofing Materials; and 3) you pay an assignment fee of \$500. This Guarantee is NOT otherwise assignable by contract or operation of law, either directly or indirectly.

LIMITATION OF DAMAGES; MEDIATION; JURISDICTION; CHOICE OF LAW

THIS GUARANTEE IS EXPRESSLY IN LIEU OF ANY OTHER GUARANTEES OR WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED GUARANTEE OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, and of any other obligations or liability of GAFMC, whether any claim against it is based upon negligence, breach of guarantee or any other theory. In NO event shall GAFMC be liable for any CONSEQUENTIAL OR INCIDENTAL DAMAGES of any kind, including, but not limited to interior or exterior damages and/or mold growth.

The parties agree that, as a condition precedent to litigation, any controversy or claim relating to this Guarantee shall be first submitted to mediation before a mutually acceptable mediator. In the event that mediation is unsuccessful, the parties agree that neither one will commence or prosecute any lawsuit or proceeding other than before the appropriate state or federal court in the State of New Jersey. This Guarantee shall be governed by the laws of the State of New Jersey, without regard to principles of conflicts of laws. Each party irrevocably consents to the jurisdiction and venue of the above identified courts.

Scheduled
Maintenance
Checklists

"Help Prevent Roofing Problems Before They Happen"

CONTENTS:

**Welcome
to the
GAF Family!**

**What Types
Of Things
Can Cause
Premature
Roof Failure?**

**Protecting
Your Roof
Investment**

**What's
Not Covered
By Roof
Warranties**

**Quality Care—
Inspection
&
Maintenance
Logs**

**Maintenance
Checklists**

**Quality
You Can Trust
Since 1886
...from
North America's
Largest Roofing
Manufacturer**



Welcome to the GAF Family!

You've made a wise investment—
and you're not alone! More North American
property owners have chosen GAF Materials
Corporation than any other roofing system.

Choosing the right roofing system not only
helps to protect your property, but may also
reduce the chances of construction-related
litigation. Did you know that roofing
represents just 4% of the construction
cost of a building—but as much as
75% of the litigation cost! Much of this
litigation might have been avoided
with a properly-selected and maintained
roofing system installed by a professional
roofing contractor.

GAF's promise to property owners is to be your
"best and safest choice" in roofing. We deliver
on that promise by providing you not only with

- quality products
- installed by certified roofing contractors,

but with **the information you need to help
maintain your new roof (and guarantee
your coverage) for many years to come.**

Please read through this booklet carefully. If
you have any questions about how to best
maintain your new roof, please contact us at:

1-800-ROOF-411

(1-800-766-3411)

What Can Cause Premature Roof Failure?

Before you can learn how to maintain a new roof, you should begin with a quick review of the types of things that can shorten the life of your roofing investment (and can spell trouble for your facility and its occupants).

What "wears out" roofs?

- **Exposure...** Either long-term exposure to the elements (sun, water, freeze-thaw) or shorter-term exposure to damaging air pollutants and chemicals
- **Structural Movement...** Such as building settlement or expansion/contraction not accommodated by the roofing system
- **Biological Growth...** Such as vegetation in areas of standing water or algae
- **Not Fixing Problems Promptly...** These can add up to a much shorter roof life – e.g., if a small problem is not repaired, then a large amount of insulation can be damaged
- **Forgetting About Maintenance...** This is perhaps the single biggest cause of premature roof failure
- **Change In The Use Of The Building...**
e.g., an increase in the interior relative humidity of a building can cause severe condensation problems within the roofing system

What can cause immediate problems?

- **Extreme Weather...**
Lightning, high winds, hail, drenching rains that overflow the flashing heights
- **Equipment Additions...**
Improperly added equipment or other items improperly added on the roof (items added by tenants are a very common source of roofing problems)
- **Trade Damage...**
Punctures, holes, etc. caused by trades other than your roofing contractor
- **Unintended Abuse...**
Vandalism or accidental damage...even a small hole can let a large amount of water into the roofing system

What Can You Do To Protect Your Roofing System?

An analogy... if a roof were like a new car, in order to keep it running smoothly, you would have it periodically inspected! Keep the oil changed! Rotate the tires!

Here is a comprehensive list of steps that should be performed periodically to protect your roofing system.

What	How	Why
1. Maintain Records	<ul style="list-style-type: none">✓ Keep a file of all records relating to this roof including...<ul style="list-style-type: none">• GAF guarantee• inspection reports• repair and maintenance bills• original construction drawings, specifications and invoices	<ul style="list-style-type: none">• <i>These records can be very helpful if you need to have repairs made or have additional equipment added to the roof.</i>• <i>Also helpful when it's time to re-roof – since you know what's up on the roof and what's been done</i>
2. Conduct Routine Inspections	<ul style="list-style-type: none">✓ At least once per year (twice per year is optimal, typically in the spring and fall)✓ Inspection maintenance checklists are provided in this Guide	<ul style="list-style-type: none">• <i>It's simple really...in the spring, you want to check for any maintenance items that can be scheduled for the roofing system – and in the fall, you're checking to make sure the roof is ready to go through the winter months</i>
3. Inspect After Severe Weather	<ul style="list-style-type: none">✓ Always inspect the roof for damage after severe weather such as hail-storms, heavy rains, high winds, etc.	<ul style="list-style-type: none">• <i>Just because water is not coming in doesn't mean the roof has been damaged</i>• <i>The sooner you repair any damage, the smaller the repair cost</i>

What	How	Why
4. Repair Correctly	<ul style="list-style-type: none"> ✓ All roofing repairs must be performed by a GAF Authorized, Master, or Master Select Roofing Contractor, including repairs for non-guaranteed conditions ✓ Make repairs with GAF materials, following our current repair guidelines for the type and quality of roof installed 	<ul style="list-style-type: none"> • <i>Remember, improper repairs are a common cause of roof problems... and are easy to avoid!</i>
5. Keep Roof Clean & Free Of Debris	<ul style="list-style-type: none"> ✓ Always remove debris from roof... such as: <ul style="list-style-type: none"> • Leaves, branches, dirt, rocks, bottles, • Debris and trash from other trades, etc. ✓ Keep gutters, downspouts, drains, scuppers, and the surrounding roof areas clean to ensure proper drainage 	<ul style="list-style-type: none"> • <i>Trash and debris can cause not only harm (such as punctures) to the roofing system, but can also be a safety hazard; this can range from simple "trip" hazards to potentially overloading the structure with extensive ponding water from clogged drains</i>
6. Keep Metal In Good Condition	<ul style="list-style-type: none"> ✓ Examine all metal flashings, counter flashings, expansion joints, and pitch pockets for... <ul style="list-style-type: none"> • Rust • Detachment or damage • Deteriorated sealant ✓ Reattach loose metalwork, replace sealant as necessary; repair metal as necessary; and prepare and paint any rusted metal 	<ul style="list-style-type: none"> • <i>Metal components on a roof are a common point of water entry</i> • <i>It doesn't matter how good your roofing system is if the adjacent metal is letting water into the building</i>

What	How	Why (cont'd)
7. Keep Masonry In Good Condition	<ul style="list-style-type: none"> ✓ Examine masonry walls and copings for... <ul style="list-style-type: none"> • Cracks and bad mortar joints • Deteriorated sealant • Loose masonry/coping stones • Indications of water absorption ✓ Repair all such conditions to prevent water infiltration 	<ul style="list-style-type: none"> • <i>Water leaks from masonry is often incorrectly attributed to the roofing system... so keeping any walls, copings, etc. watertight also goes a long way to keeping the building leak-free</i>
8. Maintain Rooftop Equipment	<ul style="list-style-type: none"> ✓ Examine rooftop equipment for any problems that may allow water infiltration – including: <ul style="list-style-type: none"> • Air conditioners, vents, and duct work • Equipment stands or screens • Skylights • Satellite dishes, antennas 	<ul style="list-style-type: none"> • <i>Just as the roof needs maintenance, so does the equipment that's on the roof</i> • <i>Be sure to follow the manufacturer's maintenance recommendations provided and always check the roof after any service calls to make sure the roof hasn't been accidentally damaged!</i>
9. Maintain Roof Coating If Present	<ul style="list-style-type: none"> ✓ Eliminate any spillage of coolant, oils, grease, etc. and repair roof membrane if affected. ✓ Examine protective coatings and recoat any cracked, flaked, blistered or worn areas with a compatible GAF roof coating 	<ul style="list-style-type: none"> • <i>Roof coatings protect the membrane from long term exposure to the elements... and, if reflective, also provide great cooling benefits for the building. Recoating of these materials protects the membrane and allows it to keep doing its job</i>
10. Minimize Rooftop Traffic	<ul style="list-style-type: none"> ✓ Minimize rooftop traffic by limiting access to necessary personnel only ✓ Maintain a roof access log so that you can ascertain who has been on the roof in the event of damage to the roof from other trades 	<ul style="list-style-type: none"> • <i>Roofs are meant to keep water out...and, if properly designed, can even act as another work area. But most roofs are not designed for this, and repeated, long-term traffic can tear out a roof</i> • <i>The easiest way to prevent this type of damage is to keep people off the roof who don't belong there!</i>

What's Typically Not Covered by Roof Guarantees?

Why are certain things not covered by the manufacturer's guarantee?

ITEMS TYPICALLY NOT COVERED BY THE MANUFACTURER'S GUARANTEE

Generally, because they are out of the manufacturer's control. Certainly there are things that you can do to protect against damage from these causes. If you would like to know more about a specific issue, just call us!

- Lack of routine maintenance or improper repairs by non-authorized contractors
- Structural problems...building movement
- Mother Nature... hail, wind storms, heavy snow loads, etc.
- Contamination of the membrane by harmful chemicals, such as oil or grease.
- Damage caused by other trades... e.g., improperly installed new equipment
- Excessive traffic on the roof
- Vandalism, impact from falling objects

Providing Quality Care For Your Roof

We've taken the guesswork out of how to keep up-to-date on the inspection and maintenance work for your roof!

The following pages provide a structured guide for maintaining your roof. But before you jump in, let's consider WHO should do this work—and WHY.

WHO...

GAF recommends that all inspections and maintenance be performed by properly trained roofing professionals (such as the GAF certified contractor who installed your roofing system)

WHY...

It's simple – they are properly trained and can be a critical part of your team to protect your investment instead of inadvertently causing harm. They know from experience how to perform these duties and may have a much better understanding of how to “cause no harm” to the roofing membrane!

After 6 months, inspect the following...

<i>What To Inspect</i>	<i>Maintenance/Check Required</i>	<i>Notes And Comments</i>
Exterior Walls	for leaks, staining, missing mortar	
Interior Roof Deck	for signs of leaks or deterioration	
Ceiling	for signs of leaks	
Interior Walls	for signs of leaks	
Roof Edge	for deterioration	
Fascia/Coping	for deterioration	
Expansion Joints	for signs of excessive movement, leaks, deterioration	
HVAC	• check duct work, housings, condensate lines, pipes	
	• inspect sheet metal cabinets and gaskets	
	• inspect equipment base/tie-in	
Penetrations	• fill all pitch pans, inspect pipe boots	
Drainage System	• clear all gutters, downspouts, scuppers	
	• clean out drains	
	• make sure drains are working properly	
	• check strainers and clamping rings	
Field Of Roof	• redistribute any ballast across bare spots	
	• note any deficiencies or damage and contact GAF	
	• inspect coating if present and recoat as necessary	
Base Flashings	• check attachment and repair as necessary	
	• check counter flashings	
	• inspect for signs of movement	
Metal	• check attachment and repair as necessary	
	• paint any rusted metal	
	• re-caulk as necessary	
Other	check for oil deposits/surface contamination, soft areas, vandalism, ponding water, etc.	

NOTES: _____

Signature: _____ Date: _____

Name: _____ Company: _____

After 12 months, inspect the following...

<i>What To Inspect</i>	<i>Maintenance/Check Required</i>	<i>Notes And Comments</i>
Exterior Walls	for leaks, staining, missing mortar	
Interior Roof Deck	for signs of leaks or deterioration	
Ceiling	for signs of leaks	
Interior Walls	for signs of leaks	
Roof Edge	for deterioration	
Fascia/Coping	for deterioration	
Expansion Joints	for signs of excessive movement, leaks, deterioration	
HVAC	• check duct work, housings, condensate lines, pipes	
	• inspect sheet metal cabinets and gaskets	
	• inspect equipment base/tie-in	
Penetrations	• fill all pitch pans, inspect pipe boots	
Drainage System	• clear all gutters, downspouts, scuppers	
	• clean out drains	
	• make sure drains are working properly	
	• remove any debris	
Field Of Roof	• redistribute any ballast across bare spots	
	• note any deficiencies or damage and contact GAF	
	• inspect coating if present and recoat as necessary	
Base Flashings	• check attachment and repair as necessary	
	• check counter flashings	
Metal	• inspect for signs of movement	
	• check attachment and repair as necessary	
	• paint any rusted metal	
	• re-caulk as necessary	
Other	check for oil deposits/surface contamination, soft areas, vandalism, ponding water, etc.	

SPECIAL CONSIDERATIONS: The roof has been through its first full year. Pay close attention to anything that should have been fastened but may have been missed. Also check for any movement of ballast or surfacing that may be caused by wind so that you can reposition if necessary or consider additional steps to prevent wind scour.

Signature: _____ Date: _____

Name: _____ Company: _____

After 2 years, inspect the following...

<i>What To Inspect</i>	<i>Maintenance/Check Required</i>	<i>Notes And Comments</i>
Exterior Walls	for leaks, staining, missing mortar	
Interior Roof Deck	for signs of leaks or deterioration	
Ceiling	for signs of leaks	
Interior Walls	for signs of leaks	
Roof Edge	for deterioration	
Fascia/Coping	for deterioration	
Expansion Joints	for signs of excessive movement, leaks, deterioration	
HVAC	• check duct work, housings, condensate lines, pipes	
	• inspect sheet metal cabinets and gaskets	
	• inspect equipment base/tie-in	
Penetrations	• fill all pitch pans, inspect pipe boots	
Drainage System	• clear all gutters, downspouts, scuppers	
	• clean out drains	
	• make sure drains are working properly	
	• check strainers and clamping rings	
Field Of Roof	• redistribute any ballast across bare spots	
	• note any deficiencies or damage and contact GAF	
	• inspect coating if present and recoat as necessary	
Base Flashings	• check attachment and repair as necessary	
	• check counter flashings	
	• inspect for signs of movement	
Metal	• check attachment and repair as necessary	
	• paint any rusted metal	
	• re-caulk as necessary	
Other	check for oil deposits/surface contamination, soft areas, vandalism, ponding water, etc.	

SPECIAL CONSIDERATIONS: If this is a white roof, is it still white or does it need cleaning? Do you need to clean on a regular basis to keep the benefits of a white roof?

Signature: _____ Date: _____

Name: _____ Company: _____

After 3 years, inspect the following...

<i>What To Inspect</i>	<i>Maintenance/Check Required</i>	<i>Notes And Comments</i>
Exterior Walls	for leaks, staining, missing mortar	
Interior Roof Deck	for signs of leaks or deterioration	
Ceiling	for signs of leaks	
Interior Walls	for signs of leaks	
Roof Edge	for deterioration	
Fascia/Coping	for deterioration	
Expansion Joints	for signs of excessive movement, leaks, deterioration	
HVAC	<ul style="list-style-type: none"> • check duct work, housings, condensate lines, pipes • inspect sheet metal cabinets and gaskets • inspect equipment base/tie-in 	
Penetrations	• fill all pitch pans, inspect pipe boots	
Drainage System	<ul style="list-style-type: none"> • clear all gutters, downspouts, scuppers • clean out drains • make sure drains are working properly • check strainers and clamping rings 	
Field Of Roof	<ul style="list-style-type: none"> • redistribute any ballast across bare spots • note any deficiencies or damage and contact GAF • inspect coating if present and recoat as necessary 	
Base Flashings	<ul style="list-style-type: none"> • check attachment and repair as necessary • check counter flashings • inspect for signs of movement 	
Metal	<ul style="list-style-type: none"> • check attachment and repair as necessary • paint any rusted metal • re-caulk as necessary 	
Other	check for oil deposits/surface contamination, soft areas, vandalism, ponding water, etc.	

SPECIAL CONSIDERATIONS: Check pitch pans carefully; after three years or even before, they may need maintenance and filling.

Signature: _____ Date: _____

Name: _____ Company: _____

After 4 years, inspect the following...

<i>What To Inspect</i>	<i>Maintenance/Check Required</i>	<i>Notes And Comments</i>
Exterior Walls	for leaks, staining, missing mortar	
Interior Roof Deck	for signs of leaks or deterioration	
Ceiling	for signs of leaks	
Interior Walls	for signs of leaks	
Roof Edge	for deterioration	
Fascia/Coping	for deterioration	
Expansion Joints	for signs of excessive movement, leaks, deterioration	
HVAC	• check duct work, housings, condensate lines, pipes	
	• inspect sheet metal cabinets and gaskets	
	• inspect equipment base/tie-in	
Penetrations	• fill all pitch pans, inspect pipe boots	
Drainage System	• clear all gutters, downspouts, scuppers	
	• clean out drains	
	• make sure drains are working properly	
	• check strainers and clamping rings	
Field Of Roof	• redistribute any ballast across bare spots	
	• note any deficiencies or damage and contact GAF	
	• inspect coating if present and recoat as necessary	
Base Flashings	• check attachment and repair as necessary	
	• check counter flashings	
	• inspect for signs of movement	
Metal	• check attachment and repair as necessary	
	• paint any rusted metal	
	• re-caulk as necessary	
Other	check for oil deposits/surface contamination, soft areas, vandalism, ponding water, etc.	

SPECIAL CONSIDERATIONS: If this is a white roof, is it still white or does it need cleaning? Do you need to clean on a regular basis to keep the benefits of a white roof?

Signature: _____ Date: _____

Name: _____ Company: _____

After 5 years, inspect the following...

<i>What To Inspect</i>	<i>Maintenance/Check Required</i>	<i>Notes And Comments</i>
Exterior Walls	for leaks, staining, missing mortar	
Interior Roof Deck	for signs of leaks or deterioration	
Ceiling	for signs of leaks	
Interior Walls	for signs of leaks	
Roof Edge	for deterioration	
Fascia/Coping	for deterioration	
Expansion Joints	for signs of excessive movement, leaks, deterioration	
HVAC	<ul style="list-style-type: none"> • check duct work, housings, condensate lines, pipes • inspect sheet metal cabinets and gaskets • inspect equipment base/tie-in 	
Penetrations	• fill all pitch pans, inspect pipe boots	
Drainage System	<ul style="list-style-type: none"> • clear all gutters, downspouts, scuppers • clean out drains • make sure drains are working properly • check strainers and clamping rings 	
Field Of Roof	<ul style="list-style-type: none"> • redistribute any ballast across bare spots • note any deficiencies or damage and contact GAF • inspect coating if present and recoat as necessary 	
Base Flashings	<ul style="list-style-type: none"> • check attachment and repair as necessary • check counter flashings • inspect for signs of movement 	
Metal	<ul style="list-style-type: none"> • check attachment and repair as necessary • paint any rusted metal • re-caulk as necessary 	
Other	check for oil deposits/surface contamination, soft areas, vandalism, ponding water, etc.	

SPECIAL CONSIDERATIONS: Are there any signs of traffic patterns on the roof? Do you need walkways or other protection-wearing surfaces installed to protect the membrane?

Signature: _____ Date: _____

Name: _____ Company: _____

After 6 years, inspect the following...

<i>What To Inspect</i>	<i>Maintenance/Check Required</i>	<i>Notes And Comments</i>
Exterior Walls	for leaks, staining, missing mortar	
Interior Roof Deck	for signs of leaks or deterioration	
Ceiling	for signs of leaks	
Interior Walls	for signs of leaks	
Roof Edge	for deterioration	
Fascia/Coping	for deterioration	
Expansion Joints	for signs of excessive movement, leaks, deterioration	
HVAC	• check duct work, housings, condensate lines, pipes	
	• inspect sheet metal cabinets and gaskets	
	• inspect equipment base/tie-in	
Penetrations	• fill all pitch pans, inspect pipe boots	
Drainage System	• clear all gutters, downspouts, scuppers	
	• clean out drains	
	• make sure drains are working properly	
	• check strainers and clamping rings	
Field Of Roof	• redistribute any ballast across bare spots	
	• note any deficiencies or damage and contact GAF	
	• inspect coating if present and recoat as necessary	
Base Flashings	• check attachment and repair as necessary	
	• check counter flashings	
	• inspect for signs of movement	
Metal	• check attachment and repair as necessary	
	• paint any rusted metal	
	• re-caulk as necessary	
Other	check for oil deposits/surface contamination, soft areas, vandalism, ponding water, etc.	

SPECIAL CONSIDERATIONS: If you haven't replaced any caulks or sealants, be sure to check and make sure they are still providing a seal against the weather.

Signature: _____ Date: _____

Name: _____ Company: _____

After 7 years, inspect the following...

What To Inspect	Maintenance/Check Required	Notes And Comments
Exterior Walls	for leaks, staining, missing mortar	
Interior Roof Deck	for signs of leaks or deterioration	
Ceiling	for signs of leaks	
Interior Walls	for signs of leaks	
Roof Edge	for deterioration	
Fascia/Coping	for deterioration	
Expansion Joints	for signs of excessive movement, leaks, deterioration	
HVAC	<ul style="list-style-type: none"> • check duct work, housings, condensate lines, pipes • inspect sheet metal cabinets and gaskets • inspect equipment base/tie-in 	
Penetrations	• fill all pitch pans, inspect pipe boots	
Drainage System	<ul style="list-style-type: none"> • clear all gutters, downspouts, scuppers • clean out drains • make sure drains are working properly • check strainers and clamping rings - 	
Field Of Roof	<ul style="list-style-type: none"> • redistribute any ballast across bare spots • note any deficiencies or damage and contact GAF • inspect coating if present and recoat as necessary 	
Base Flashings	<ul style="list-style-type: none"> • check attachment and repair as necessary • check counter flashings 	
Metal	<ul style="list-style-type: none"> • inspect for signs of movement • check attachment and repair as necessary • paint any rusted metal • re-caulk as necessary 	
Other	check for oil deposits/surface contamination, soft areas, vandalism, ponding water, etc.	

SPECIAL CONSIDERATIONS: If this is a smooth surfaced roof with a coating, consider re-coating with an ENERGYSTAR™ rated coating both to protect the membrane and get the benefits of an energy efficient coating..

Signature: _____ Date: _____

Name: _____ Company: _____

After 8 years, inspect the following...

<i>What To Inspect</i>	<i>Maintenance/Check Required</i>	<i>Notes And Comments</i>
Exterior Walls	for leaks, staining, missing mortar	
Interior Roof Deck	for signs of leaks or deterioration	
Ceiling	for signs of leaks	
Interior Walls	for signs of leaks	
Roof Edge	for deterioration	
Fascia/Coping	for deterioration	
Expansion Joints	for signs of excessive movement, leaks, deterioration	
HVAC	• check duct work, housings, condensate lines, pipes	
	• inspect sheet metal cabinets and gaskets	
	• inspect equipment base/tie-in	
Penetrations	• fill all pitch pans, inspect pipe boots	
Drainage System	• clear all gutters, downspouts, scuppers	
	• clean out drains	
	• make sure drains are working properly	
	• check strainers and clamping rings	
Field Of Roof	• redistribute any ballast across bare spots	
	• note any deficiencies or damage and contact GAF	
	• inspect coating if present and recoat as necessary	
Base Flashings	• check attachment and repair as necessary	
	• check counter flashings	
	• inspect for signs of movement	
Metal	• check attachment and repair as necessary	
	• paint any rusted metal	
	• re-caulk as necessary	
Other	check for oil deposits/surface contamination, soft areas, vandalism, ponding water, etc.	

SPECIAL CONSIDERATIONS: Be sure to check for any deterioration of metal; better to clean, prime and protect now than have to replace later.

Signature: _____ Date: _____

Name: _____ Company: _____

After 9 years, inspect the following...

<i>What To Inspect</i>	<i>Maintenance/Check Required</i>	<i>Notes And Comments</i>
Exterior Walls	for leaks, staining, missing mortar	
Interior Roof Deck	for signs of leaks or deterioration	
Ceiling	for signs of leaks	
Interior Walls	for signs of leaks	
Roof Edge	for deterioration	
Fascia/Coping	for deterioration	
Expansion Joints	for signs of excessive movement, leaks, deterioration	
HVAC	• check duct work, housings, condensate lines, pipes	
	• inspect sheet metal cabinets and gaskets	
	• inspect equipment base/tie-in	
Penetrations	• fill all pitch pans, inspect pipe boots	
Drainage System	• clear all gutters, downspouts, scuppers	
	• clean out drains	
	• make sure drains are working properly	
	• check strainers and clamping rings	
Field Of Roof	• redistribute any ballast across bare spots	
	• note any deficiencies or damage and contact GAF	
	• inspect coating if present and recoat as necessary	
Base Flashings	• check attachment and repair as necessary	
	• check counter flashings	
	• inspect for signs of movement	
Metal	• check attachment and repair as necessary	
	• paint any rusted metal	
	• re-caulk as necessary	
Other	check for oil deposits/surface contamination, soft areas, vandalism, ponding water, etc.	

NOTES: _____

Signature: _____ Date: _____

Name: _____ Company: _____

After 10 years, inspect the following...

<i>What To Inspect</i>	<i>Maintenance/Check Required</i>	<i>Notes And Comments</i>
Exterior Walls	for leaks, staining, missing mortar	
Interior Roof Deck	for signs of leaks or deterioration	
Ceiling	for signs of leaks	
Interior Walls	for signs of leaks	
Roof Edge	for deterioration	
Fascia/Coping	for deterioration	
Expansion Joints	for signs of excessive movement, leaks, deterioration	
HVAC	• check duct work, housings, condensate lines, pipes	
	• inspect sheet metal cabinets and gaskets	
	• inspect equipment base/tie-in	
Penetrations	• fill all pitch pans, inspect pipe boots	
Drainage System	• clear all gutters, downspouts, scuppers	
	• clean out drains	
	• make sure drains are working properly	
	• check strainers and clamping rings	
Field Of Roof	• redistribute any ballast across bare spots	
	• note any deficiencies or damage and contact GAF	
	• inspect coating if present and recoat as necessary	
Base Flashings	• check attachment and repair as necessary	
	• check counter flashings	
	• inspect for signs of movement	
Metal	• check attachment and repair as necessary	
	• paint any rusted metal	
	• re-caulk as necessary	
Other	check for oil deposits/surface contamination, soft areas, vandalism, ponding water, etc.	

SPECIAL CONSIDERATIONS: 10 years is a long time; consider restoring your roof with an elastomeric coating to protect your investment and extend the life of the roof.

Signature: _____ Date: _____

Name: _____ Company: _____

After 11 years, inspect the following...

<i>What To Inspect</i>	<i>Maintenance/Check Required</i>	<i>Notes And Comments</i>
Exterior Walls	for leaks, staining, missing mortar	
Interior Roof Deck	for signs of leaks or deterioration	
Ceiling	for signs of leaks	
Interior Walls	for signs of leaks	
Roof Edge	for deterioration	
Fascia/Coping	for deterioration	
Expansion Joints	for signs of excessive movement, leaks, deterioration	
HVAC	<ul style="list-style-type: none"> • check duct work, housings, condensate lines, pipes • inspect sheet metal cabinets and gaskets • inspect equipment base/tie-in 	
Penetrations	• fill all pitch pans; inspect pipe boots	
Drainage System	<ul style="list-style-type: none"> • clear all gutters, downspouts, scuppers • clean out drains • make sure drains are working properly • check strainers and clamping rings 	
Field Of Roof	<ul style="list-style-type: none"> • redistribute any ballast across bare spots • note any deficiencies or damage and contact GAF • inspect coating if present and recoat as necessary 	
Base Flashings	<ul style="list-style-type: none"> • check attachment and repair as necessary • check counter flashings • inspect for signs of movement 	
Metal	<ul style="list-style-type: none"> • check attachment and repair as necessary • paint any rusted metal • re-caulk as necessary 	
Other	check for oil deposits/surface contamination, soft areas, vandalism, ponding water, etc.	

SPECIAL CONSIDERATIONS: If you haven't replaced any caulks or sealants, be sure to check and make sure they are still providing a seal against the weather.

Signature: _____ Date: _____

Name: _____ Company: _____

After 12 years, inspect the following...

<i>What To Inspect</i>	<i>Maintenance/Check Required</i>	<i>Notes And Comments</i>
Exterior Walls	for leaks, staining, missing mortar	
Interior Roof Deck	for signs of leaks or deterioration	
Ceiling	for signs of leaks	
Interior Walls	for signs of leaks	
Roof Edge	for deterioration	
Fascia/Coping	for deterioration	
Expansion Joints	for signs of excessive movement, leaks, deterioration	
HVAC	• check duct work, housings, condensate lines, pipes	
	• inspect sheet metal cabinets and gaskets	
	• inspect equipment base/tie-in	
Penetrations	• fill all pitch pans, inspect pipe boots	
Drainage System	• clear all gutters, downspouts, scuppers	
	• clean out drains	
	• make sure drains are working properly	
	• check strainers and clamping rings	
Field Of Roof	• redistribute any ballast across bare spots	
	• note any deficiencies or damage and contact GAF	
	• inspect coating if present and recoat as necessary	
Base Flashings	• check attachment and repair as necessary	
	• check counter flashings	
	• inspect for signs of movement	
Metal	• check attachment and repair as necessary	
	• paint any rusted metal	
	• re-caulk as necessary	
Other	check for oil deposits/surface contamination, soft areas, vandalism, ponding water, etc.	

SPECIAL CONSIDERATIONS: If this is a white roof, is it still white or does it need cleaning? Do you need to clean on a regular basis to keep the benefits of a white roof?

Signature: _____ Date: _____

Name: _____ Company: _____

After 13 years, inspect the following...

<i>What To Inspect</i>	<i>Maintenance/Check Required</i>	<i>Notes And Comments</i>
Exterior Walls	for leaks, staining, missing mortar	
Interior Roof Deck	for signs of leaks or deterioration	
Ceiling	for signs of leaks	
Interior Walls	for signs of leaks	
Roof Edge	for deterioration	
Fascia/Coping	for deterioration	
Expansion Joints	for signs of excessive movement, leaks, deterioration	
HVAC	• check duct work, housings, condensate lines, pipes	
	• inspect sheet metal cabinets and gaskets	
	• inspect equipment base/tie-in	
Penetrations	• fill all pitch pans, inspect pipe boots	
Drainage System	• clear all gutters, downspouts, scuppers	
	• clean out drains	
	• make sure drains are working properly	
	• check strainers and clamping rings	
Field Of Roof	• redistribute any ballast across bare spots	
	• note any deficiencies or damage and contact GAF	
	• inspect coating if present and recoat as necessary	
Base Flashings	• check attachment and repair as necessary	
	• check counter flashings	
	• inspect for signs of movement	
Metal	• check attachment and repair as necessary	
	• paint any rusted metal	
	• re-caulk as necessary	
Other	check for oil deposits/surface contamination, soft areas, vandalism, ponding water, etc.	

NOTES:

Signature: _____ Date: _____

Name: _____ Company: _____

After 14 years, inspect the following...

What To Inspect	Maintenance/Check Required	Notes And Comments
Exterior Walls	for leaks, staining, missing mortar	
Interior Roof Deck	for signs of leaks or deterioration	
Ceiling	for signs of leaks	
Interior Walls	for signs of leaks	
Roof Edge	for deterioration	
Fascia/Coping	for deterioration	
Expansion Joints	for signs of excessive movement, leaks, deterioration	
HVAC	• check duct work, housings, condensate lines, pipes	
	• inspect sheet metal cabinets and gaskets	
	• inspect equipment base/tie-in	
Penetrations	• fill all pitch pans, inspect pipe boots	
Drainage System	• clear all gutters, downspouts, scuppers	
	• clean out drains	
	• make sure drains are working properly	
	• check strainers and clamping rings	
Field Of Roof	• redistribute any ballast across bare spots	
	• note any deficiencies or damage and contact GAF	
	• inspect coating if present and recoat as necessary	
Base Flashings	• check attachment and repair as necessary	
	• check counter flashings	
	• inspect for signs of movement	
Metal	• check attachment and repair as necessary	
	• paint any rusted metal	
	• re-caulk as necessary	
Other	check for oil deposits/surface contamination, soft areas, vandalism, ponding water, etc.	

SPECIAL CONSIDERATIONS: Are there any signs of traffic patterns on the roof? Do you need walkways or other protection-wearing surfaces installed to protect the membrane?

Signature: _____ Date: _____

Name: _____ Company: _____

After 15 years, inspect the following...

What To Inspect	Maintenance/Check Required	Notes And Comments
Exterior Walls	for leaks, staining, missing mortar	
Interior Roof Deck	for signs of leaks or deterioration	
Ceiling	for signs of leaks	
Interior Walls	for signs of leaks	
Roof Edge	for deterioration	
Fascia/Coping	for deterioration	
Expansion Joints	for signs of excessive movement, leaks, deterioration	
HVAC	<ul style="list-style-type: none"> • check duct work, housings, condensate lines, pipes • inspect sheet metal cabinets and gaskets • inspect equipment base/tie-in 	
Penetrations	• fill all pitch pans, inspect pipe boots	
Drainage System	<ul style="list-style-type: none"> • clear all gutters, downspouts, scuppers • clean out drains • make sure drains are working properly • check strainers and clamping rings - 	
Field Of Roof	<ul style="list-style-type: none"> • redistribute any ballast across bare spots • note any deficiencies or damage and contact GAF • inspect coating if present and recoat as necessary 	
Base Flashings	<ul style="list-style-type: none"> • check attachment and repair as necessary • check counter flashings • inspect for signs of movement 	
Metal	<ul style="list-style-type: none"> • check attachment and repair as necessary • paint any rusted metal • re-caulk as necessary 	
Other	check for oil deposits/surface contamination, soft areas, vandalism, ponding water, etc.	

SPECIAL CONSIDERATIONS: Fifteen years of service! Be sure to pay attention to any area that may be seeing the most abuse -from other trades, Mother Nature, etc. and check all flashings and pipe boots to make sure they are performing.

Signature: _____ Date: _____

Name: _____ Company: _____

After 16 years, inspect the following...

<i>What To Inspect</i>	<i>Maintenance/Check Required</i>	<i>Notes And Comments</i>
Exterior Walls	for leaks, staining, missing mortar	
Interior Roof Deck	for signs of leaks or deterioration	
Ceiling	for signs of leaks	
Interior Walls	for signs of leaks	
Roof Edge	for deterioration	
Fascia/Coping	for deterioration	
Expansion Joints	for signs of excessive movement, leaks, deterioration	
HVAC	• check duct work, housings, condensate lines, pipes	
	• inspect sheet metal cabinets and gaskets	
	• inspect equipment base/tie-in	
Penetrations	• fill all pitch pans, inspect pipe boots	
Drainage System	• clear all gutters, downspouts, scuppers	
	• clean out drains	
	• make sure drains are working properly	
	• check strainers and clamping rings	
Field Of Roof	• redistribute any ballast across bare spots	
	• note any deficiencies or damage and contact GAF	
	• inspect coating if present and recoat as necessary	
Base Flashings	• check attachment and repair as necessary	
	• check counter flashings	
	• inspect for signs of movement	
Metal	• check attachment and repair as necessary	
	• paint any rusted metal	
	• re-caulk as necessary	
Other	check for oil deposits/surface contamination, soft areas, vandalism, ponding water, etc.	

SPECIAL CONSIDERATIONS: If you haven't replaced any caulks or sealants, be sure to check and make sure they are still providing a seal against the weather.

Signature: _____ Date: _____

Name: _____ Company: _____

After 17 years, inspect the following...

What To Inspect	Maintenance/Check Required	Notes And Comments
Exterior Walls	for leaks, staining, missing mortar	
Interior Roof Deck	for signs of leaks or deterioration	
Ceiling	for signs of leaks	
Interior Walls	for signs of leaks	
Roof Edge	for deterioration	
Fascia/Coping	for deterioration	
Expansion Joints	for signs of excessive movement, leaks, deterioration	
HVAC	<ul style="list-style-type: none"> • check duct work, housings, condensate lines, pipes • inspect sheet metal cabinets and gaskets • inspect equipment base/tie-in 	
Penetrations	• fill all pitch pans, inspect pipe boots	
Drainage System	<ul style="list-style-type: none"> • clear all gutters, downspouts, scuppers • clean out drains • make sure drains are working properly • check strainers and clamping rings 	
Field Of Roof	<ul style="list-style-type: none"> • redistribute any ballast: across bare spots • note any deficiencies or damage and contact GAF • inspect coating if present and recoat as necessary 	
Base Flashings	<ul style="list-style-type: none"> • check attachment and repair as necessary • check counter flashings • inspect for signs of movement 	
Metal	<ul style="list-style-type: none"> • check attachment and repair as necessary • paint any rusted metal • re-caulk as necessary 	
Other	check for oil deposits/surface contamination, soft areas, vandalism, ponding water, etc.	

SPECIAL CONSIDERATIONS: If this is a white roof, is it still white or does it need cleaning? Do you need to clean on a regular basis to keep the benefits of a white roof?

Signature: _____ Date: _____

Name: _____ Company: _____

After 18 years, inspect the following...

What To Inspect	Maintenance/Check Required	Notes And Comments
Exterior Walls	for leaks, staining, missing mortar	
Interior Roof Deck	for signs of leaks or deterioration	
Ceiling	for signs of leaks	
Interior Walls	for signs of leaks	
Roof Edge	for deterioration	
Fascia/Coping	for deterioration	
Expansion Joints	for signs of excessive movement, leaks, deterioration	
HVAC	• check duct work, housings, condensate lines, pipes	
	• inspect sheet metal cabinets and gaskets	
	• inspect equipment base/tie-in	
Penetrations	• fill all pitch pans, inspect pipe boots	
Drainage System	• clear all gutters, downspouts, scuppers	
	• clean out drains	
	• make sure drains are working properly	
	• check strainers and clamping rings	
Field Of Roof	• redistribute any ballast across bare spots	
	• note any deficiencies or damage and contact GAF	
	• inspect coating if present and recoat as necessary	
Base Flashings	• check attachment and repair as necessary	
	• check counter flashings	
Metal	• inspect for signs of movement	
	• check attachment and repair as necessary	
	• paint any rusted metal	
	• re-caulk as necessary	
Other	check for oil deposits/surface contamination, soft areas, vandalism, ponding water, etc.	

SPECIAL CONSIDERATIONS: Be sure to check for any deterioration of metal; better to clean, prime and protect now than have to replace later.

Signature: _____ Date: _____

Name: _____ Company: _____

After 19 years, inspect the following...

<i>What To Inspect</i>	<i>Maintenance/Check Required</i>	<i>Notes And Comments</i>
Exterior Walls	for leaks, staining, missing mortar	
Interior Roof Deck	for signs of leaks or deterioration	
Ceiling	for signs of leaks	
Interior Walls	for signs of leaks	
Roof Edge	for deterioration	
Fascia/Coping	for deterioration	
Expansion Joints	for signs of excessive movement, leaks, deterioration	
HVAC	• check duct work, housings, condensate lines, pipes	
	• inspect sheet metal cabinets and gaskets	
	• inspect equipment base/tie-in	
Penetrations	• fill all pitch pans, inspect pipe boots	
Drainage System	• clear all gutters, downspouts, scuppers	
	• clean out drains	
	• make sure drains are working properly	
	• check strainers and clamping rings	
Field Of Roof	• redistribute any ballast across bare spots	
	• note any deficiencies or damage and contact GAF	
	• inspect coating if present and recoat as necessary	
Base Flashings	• check attachment and repair as necessary	
	• check counter flashings	
	• inspect for signs of movement	
Metal	• check attachment and repair as necessary	
	• paint any rusted metal	
	• re-caulk as necessary	
Other	check for oil deposits/surface contamination, soft areas, vandalism, ponding water, etc.	

NOTES:

Signature: _____ Date: _____

Name: _____ Company: _____

After 20 years, inspect the following...

<i>What To Inspect</i>	<i>Maintenance/Check Required</i>	<i>Notes And Comments</i>
Exterior Walls	for leaks, staining, missing mortar	
Interior Roof Deck	for signs of leaks or deterioration	
Ceiling	for signs of leaks	
Interior Walls	for signs of leaks	
Roof Edge	for deterioration	
Fascia/Coping	for deterioration	
Expansion Joints	for signs of excessive movement, leaks, deterioration	
HVAC	• check duct work, housings, condensate lines, pipes	
	• inspect sheet metal cabinets and gaskets	
	• inspect equipment base/tie-in	
Penetrations	• fill all pitch pans, inspect pipe boots	
Drainage System	• clear all gutters, downspouts, scuppers	
	• clean out drains	
	• make sure drains are working properly	
	• check strainers and clamping rings	
Field Of Roof	• redistribute any ballast across bare spots	
	• note any deficiencies or damage and contact GAF	
	• inspect coating if present and recoat as necessary	
Base Flashings	• check attachment and repair as necessary	
	• check counter flashings	
	• inspect for signs of movement	
Metal	• check attachment and repair as necessary	
	• paint any rusted metal	
	• re-caulk as necessary	
Other	check for oil deposits/surface contamination, soft areas, vandalism, ponding water, etc.	

SPECIAL CONSIDERATIONS: 20 years is a long time; consider restoring your roof with an elastomeric coating to protect your investment and extend the life of the roof.

Signature: _____ Date: _____

Name: _____ Company: _____

After 21 years, inspect the following...

<i>What To Inspect</i>	<i>Maintenance/Check Required</i>	<i>Notes And Comments</i>
Exterior Walls	for leaks, staining, missing mortar	
Interior Roof Deck	for signs of leaks or deterioration	
Ceiling	for signs of leaks	
Interior Walls	for signs of leaks	
Roof Edge	for deterioration	
Fascia/Coping	for deterioration	
Expansion Joints	for signs of excessive movement, leaks, deterioration	
HVAC	<ul style="list-style-type: none"> • check duct work, housings, condensate lines, pipes • inspect sheet metal cabinets and gaskets • inspect equipment base/tie-in 	
Penetrations	• fill all pitch pans, inspect pipe boots	
Drainage System	<ul style="list-style-type: none"> • clear all gutters, downspouts, scuppers • clean out drains • make sure drains are working properly • check strainers and clamping rings 	
Field Of Roof	<ul style="list-style-type: none"> • redistribute any ballast across bare spots • note any deficiencies or damage and contact GAF • inspect coating if present and recoat as necessary 	
Base Flashings	<ul style="list-style-type: none"> • check attachment and repair as necessary • check counter flashings • inspect for signs of movement 	
Metal	<ul style="list-style-type: none"> • check attachment and repair as necessary • paint any rusted metal • re-caulk as necessary 	
Other	check for oil deposits/surface contamination, soft areas, vandalism, ponding water, etc.	

NOTES: _____

Signature: _____ Date: _____

Name: _____ Company: _____

After 22 years, inspect the following...

What To Inspect	Maintenance/Check Required	Notes And Comments
Exterior Walls	for leaks, staining, missing mortar	
Interior Roof Deck	for signs of leaks or deterioration	
Ceiling	for signs of leaks	
Interior Walls	for signs of leaks	
Roof Edge	for deterioration	
Fascia/Coping	for deterioration	
Expansion Joints	for signs of excessive movement, leaks, deterioration	
HVAC	<ul style="list-style-type: none"> • check duct work, housings, condensate lines, pipes • inspect sheet metal cabinets and gaskets • inspect equipment base/tie-in 	
Penetrations	• fill all pitch pans, inspect pipe boots	
Drainage System	<ul style="list-style-type: none"> • clear all gutters, downspouts, scuppers • clean out drains • make sure drains are working properly • check strainers and clamping rings 	
Field Of Roof	<ul style="list-style-type: none"> • redistribute any ballast across bare spots • note any deficiencies or damage and contact GAF • inspect coating if present and recoat as necessary 	
Base Flashings	<ul style="list-style-type: none"> • check attachment and repair as necessary • check counter flashings • inspect for signs of movement 	
Metal	<ul style="list-style-type: none"> • check attachment and repair as necessary • paint any rusted metal • re-caulk as necessary 	
Other	check for oil deposits/surface contamination, soft areas, vandalism, ponding water, etc.	

SPECIAL CONSIDERATIONS: Are there any signs of traffic patterns on the roof? Do you need walkways or other protection-wearing surfaces installed to protect the membrane?

Signature: _____ Date: _____

Name: _____ Company: _____

After 23 years, inspect the following...

What To Inspect	Maintenance/Check Required	Notes And Comments
Exterior Walls	for leaks, staining, missing mortar	
Interior Roof Deck	for signs of leaks or deterioration	
Ceiling	for signs of leaks	
Interior Walls	for signs of leaks	
Roof Edge	for deterioration	
Fascia/Coping	for deterioration	
Expansion Joints	for signs of excessive movement, leaks, deterioration	
HVAC	<ul style="list-style-type: none"> • check duct work, housings, condensate lines, pipes • inspect sheet metal cabinets and gaskets • inspect equipment base/tie-in 	
Penetrations	• fill all pitch pans, inspect pipe boots	
Drainage System	<ul style="list-style-type: none"> • clear all gutters, downspouts, scuppers • clean out drains • make sure drains are working properly • check strainers and clamping rings 	
Field Of Roof	<ul style="list-style-type: none"> • redistribute any ballast across bare spots • note any deficiencies or damage and contact GAF • inspect coating if present and recoat as necessary 	
Base Flashings	<ul style="list-style-type: none"> • check attachment and repair as necessary • check counter flashings • inspect for signs of movement 	
Metal	<ul style="list-style-type: none"> • check attachment and repair as necessary • paint any rusted metal • re-caulk as necessary 	
Other	check for oil deposits/surface contamination, soft areas, vandalism, ponding water, etc.	

SPECIAL CONSIDERATIONS: If this is a white roof, is it still white or does it need cleaning? Do you need to clean on a regular basis to keep the benefits of a white roof?

Signature: _____ Date: _____

Name: _____ Company: _____

After 24 years, inspect the following...

<i>What To Inspect</i>	<i>Maintenance/Check Required</i>	<i>Notes And Comments</i>
Exterior Walls	for leaks, staining, missing mortar	
Interior Roof Deck	for signs of leaks or deterioration	
Ceiling	for signs of leaks	
Interior Walls	for signs of leaks	
Roof Edge	for deterioration	
Fascia/Coping	for deterioration	
Expansion Joints	for signs of excessive movement, leaks, deterioration	
HVAC	• check duct work, housings, condensate lines, pipes	
	• inspect sheet metal cabinets and gaskets	
	• inspect equipment base/tie-in	
Penetrations	• fill all pitch pans, inspect pipe boots	
Drainage System	• clear all gutters, downspouts, scuppers	
	• clean out drains	
	• make sure drains are working properly	
Field Of Roof	• check strainers and clamping rings	
	• redistribute any ballast across bare spots	
	• note any deficiencies or damage and contact GAF	
Base Flashings	• inspect coating if present and recoat as necessary	
	• check attachment and repair as necessary	
	• check counter flashings	
Metal	• inspect for signs of movement	
	• check attachment and repair as necessary	
	• paint any rusted metal	
Other	• re-caulk as necessary	
	check for oil deposits/surface contamination, soft areas, vandalism, ponding water, etc.	

SPECIAL CONSIDERATIONS: If you haven't replaced any caulks or sealants, be sure to check and make sure they are still providing a seal against the weather.

Signature: _____ Date: _____

Name: _____ Company: _____

After 25 years, inspect the following...

<i>What To Inspect</i>	<i>Maintenance/Check Required</i>	<i>Notes And Comments</i>
Exterior Walls	for leaks, staining, missing mortar	
Interior Roof Deck	for signs of leaks or deterioration	
Ceiling	for signs of leaks	
Interior Walls	for signs of leaks	
Roof Edge	for deterioration	
Fascia/Coping	for deterioration	
Expansion Joints	for signs of excessive movement, leaks, deterioration	
HVAC	<ul style="list-style-type: none"> • check duct work, housings, condensate lines, pipes • inspect sheet metal cabinets and gaskets • inspect equipment base/tie-in 	
Penetrations	• fill all pitch pans, inspect pipe boots	
Drainage System	<ul style="list-style-type: none"> • clear all gutters, downspouts, scuppers • clean out drains • make sure drains are working properly • check strainers and clamping rings 	
Field Of Roof	<ul style="list-style-type: none"> • redistribute any ballast across bare spots • note any deficiencies or damage and contact GAF • inspect coating if present and recoat as necessary 	
Base Flashings	<ul style="list-style-type: none"> • check attachment and repair as necessary • check counter flashings • inspect for signs of movement 	
Metal	<ul style="list-style-type: none"> • check attachment and repair as necessary • paint any rusted metal • re-caulk as necessary 	
Other	check for oil deposits/surface contamination, soft areas, vandalism, ponding water, etc.	

SPECIAL CONSIDERATIONS: Twenty-five years of service! Be sure to pay attention to any areas that may be seeing the most abuse -from other trades, mother nature, etc. and check all flashings and pipe boots to make sure they are performing. If you would like additional maintenance checklists, please contact us!

Signature: _____ Date: _____

Name: _____ Company: _____

076200

**SHEET METAL FLASHING &
TRIM**

Central Kentucky Glass Company

1123 Versailles Road
Phone: 859-253-0710

Lexington, KY 40508
Fax: 859-255-73173

December 20, 2010

Messer Construction
146 Virginia Ave.
Lexington, KY 40508

Re: UK Pharmacy
Lexington, KY

Attn: Susan Cox

Dear Susan,

Listed below is Central Kentucky Glass' extended warranties as requested.

- 1) Oldcastle Glass – Central Kentucky Glass will add six (6) months of extended warranty. This includes: specification section 084126 - glass doors and specification section 088000 - coated glass, insulating glass and silkscreen/spandrel.
- 2) Doralco – Central Kentucky Glass will add six (6) months of extended warranty. This includes specification section 107000 – sunshade paint.
- 3) Linel Signature – Central Kentucky Glass will add six (6) months of extended warranty for specification sections 076200 and 086300 for spray coating warranties.

Please insert this in your warranty book.

Thank you,



Dennis Martin
President

College of Pharmacy

Lexington, KY

UC65890XL- Silver

Sub. Comp. Date: December 17, 2009



DURANAR® SPRAY COATINGS MASTER WARRANTY AGREEMENT

THIS MASTER WARRANTY AGREEMENT is made between PPG Industries, Inc. ("PPG"), a Pennsylvania corporation, and the following building products producer (the "Customer"):

**LinEl Signature
101 Linel Drive
 Mooresville, IN 46158**

This Agreement applies to any purchase from PPG by the Customer, or for it by a PPG "Warranty Approved" aluminum extrusion spray applicator (the "Applicator"), of a Duranar® coating listed below (the "Product") which the Customer applies, or has applied for it by the Applicator, to the exterior of an approved quality metal substrate listed for the Product which is used for an exterior aluminum extrusion or other building product (the "Metal Substrate").

Metal Substrate	Atmospheric Environment	Recommended Product
Aluminum (Spray Applied)	Normal	Duranar®
"	Normal, Industrial, Seacoast	Duranar® XL, XLBC

PPG warrants, subject to the conditions of this Agreement, that a Product, when properly factory machine applied to and cured on a properly cleaned, treated and primed Metal Substrate, will not:

- A. Peel, check or crack. Fabrication of spray applied product is not recommended or warranted; or,
- B. Chalk in excess of a numerical rating 8, as measured using the procedures of ASTM D4214-89 (Method D-659); or,
- C. Fade or change color in excess of 5 ΔE units (Hunter Color Difference), as measured using the procedure of ASTM D-2244-85, comparing an unexposed retain panel to the exposed panel after removal of dirt and chalk.

The above warranties (the "Performance Warranties") shall be 20 YEARS from the installation of the Metal Substrate coated with the Product or 21 YEARS from application of the Product to the Metal Substrate, whichever first occurs; provided, unless specifically agreed to in writing by PPG for a particular project of the Customer, where the Metal Substrate coated with the Product is not installed within continental North America the Performance Warranties shall be one-half (½) of the before stated periods.

THIS WARRANTY IS SUBJECT TO THE FOLLOWING CONDITIONS

1. The Performance Warranties apply to all Product colors unless PPG designates in writing to the Customer that a color is not covered.
2. It is acknowledged that fading or color changes may not be uniform if the surfaces are not equally exposed to the sun and elements. PPG recommends that there be a systematic fresh water rinse maintenance program in effect in areas of high salt concentration (such as adjacent to the seashore and/or in industrial atmospheres) so as to prevent the accumulation of concentrated salt deposits.
3. The Performance Warranties only will apply to Product which is applied to the Metal Substrate within six (6) months from the date PPG ships the Product. Further, the Performance Warranties only will apply to Product which is: properly factory applied to and properly cured on a properly cleaned, treated (a minimum of 40 milligrams per square foot of an approved chrome treatment per Section 6, AAMA 2605 is required for aluminum extrusion spray applicators) and primed Metal Substrate in accordance with PPG's then published Product Data Sheet and procedures and specifications (as such may be revised by PPG from time to time); and, applied in the case of a spray applicator, by an Applicator approved in advance by PPG and who has agreed in writing to comply with and be governed by the terms of this Agreement. Also, all companion products used in conjunction with the Product, such as primers, must be PPG approved products. Further, the Performance Warranties only will apply to Product applied within continental North America, unless specifically agreed to in writing by PPG for a particular project of the Customer.
4. The Performance Warranties will not apply to damage to and/or failure of the Product caused by: moisture or other contamination detrimental to the Product because of improper packaging, storage or handling of the coated Metal Substrate prior to installation; improper handling, shipping, processing, and/or installation of the coated Metal Substrate; scratching or abrading of the Product during or after installation; improper cleaning and/or pretreatment of the Metal Substrate or improper application of the Product; or, acts of God, falling objects, explosions, fire, or other such similar or dissimilar occurrences beyond PPG's control.
5. The Customer shall maintain, and as applicable, shall cause the Applicator to maintain, for the applicable warranty period, adequate records to establish identification of any Product and/or for any Metal Substrate involved in a warranty claim of: the Product batch number; the dates of application of the Product to the Metal Substrate, the quality control records, and the dates of the installation of the coated Metal Substrate; and, such other information as PPG may reasonably require from time to time. In the event of any Performance Warranties claim, these records shall be made available for inspection by PPG. Further, the Customer shall send, or cause the Applicator to send, within thirty (30) days from the date of each run of a Product purchased from PPG, to PPG four (4) 12" long production pieces from each run of a Product purchased from PPG; each being identified by extrusion production run or lot number, appropriate PPG batch numbers and date of coating, and accompanied by a legible copy of the quality control records covering these extrusions and the project name, number, location and any other information pertinent to the project.
6. PPG shall, at reasonable times and in such manner as will not unreasonably interfere with the Customer's or the Applicator's operations, be permitted to inspect and approve the production line,

coating equipment, Metal Substrate, cleaning and treatment, curing conditions, application methods and procedures and quality control of the Customer or of the Applicator.

7. PPG's exclusive liability and the Customer and the Applicator's sole remedy under this Agreement, or otherwise, shall be limited to, at PPG's option, the refinishing, or replacing, or reimbursement of the cost of refinishing or replacing the Metal Substrate exhibiting a defective Product. Such refinishing shall be performed by a PPG approved contractor, using standard finishing practices and materials as selected and/or approved by PPG (not necessarily a Product). PPG reserves the right to approve any contract for such refinishing or replacing; such approval not to be unreasonably delayed or withheld. The Performance Warranties on any refinished or replaced coated Metal Substrate shall be only for the remainder of the warranty period applicable to the Metal Substrate originally coated. Except as expressly provided above in this Section 7., in no event shall PPG be liable under any theory of recovery, whether based on negligence of any kind, strict liability or tort, for any direct, indirect, special, punitive, incidental or consequential damages in any way arising out of the purchase of a Product or from any possession or use made of a Product.

8. All claims relating to quality, condition or performance of the Product shall be waived unless made by the Customer or the Applicator in writing to PPG within the applicable warranty period, and within thirty (30) days after the Customer or Applicator is informed or becomes aware of a defect in or of the Product; and PPG must be given a reasonable and prompt opportunity to inspect said defect.

9. Except for the Performance Warranties, PPG MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE, WITH RESPECT TO ANY OF THE PRODUCTS.

10. The Performance Warranties are extended solely to the Customer and the Applicator. They are nontransferable and nonassignable, and neither the Customer nor the Applicator shall permit or authorize their employees, agents, representatives or customers to claim, represent or imply that the Performance Warranties extend to or are available to anyone other than the Customer or the Applicator.

11. In the event of a material breach by the Customer or the Applicator of any of the conditions of this Agreement, PPG shall have no liability for any Product failure claims.

12. PPG reserves the right to terminate this Agreement at any time upon sixty (60) days' prior notice, except with respect to any Product which already has been shipped to the Customer or Applicator prior to the giving of such notice.

13. All notices and claims given under or pursuant to this Agreement shall be in writing and sent by certified or registered mail, postage prepaid, return receipt requested. Unless otherwise instructed by a party by notice hereunder, all such notices to be given to: the Customer shall be sent to the address specified at the beginning of this agreement; and PPG shall be sent to the attention of : Manager, Color Services, Industrial Finishes Group, PPG Industries, Inc., 151 Colfax Street, Springdale, PA 15144. All such notices when deposited in the U.S. mail as set forth above shall be considered delivered three (3) days following such deposit.

14. PPG and the Customer agree that this Agreement does not constitute an obligation of any kind whatsoever on the part of the Customer to purchase any of the Product from PPG or an obligation on PPG's part to sell any of the Product to the Customer; but rather, it provides the governing terms and conditions as to the parties' respective liabilities and rights if, and when, any such purchases/sales of any of the Product occur.

15. No terms or conditions other than those stated herein, and no agreement or understanding, oral or written, in any way purporting to modify this Agreement shall be binding upon a party unless made in writing, expressly refers to this Agreement and is signed by that party's authorized representative. This Agreement supersedes and cancels any prior representations, warranties and agreements relating to the subject matters of this Agreement.

16. This Agreement is made under Pennsylvania law (without giving effect to the conflict of law principles thereof) and the local law of Pennsylvania shall apply to the construction, enforcement and interpretation of this Agreement.

PPG and the Customer have signed this Agreement as of the date(s) set forth below.

PPG Industries, Inc.

Customer *CINEL SIGNATURE*

By: S.D. Sturdevant (agg)
Name (Print): Shelley D. Sturdevant
Title: Manager, Color Services
Date: March 5, 2004

By: *[Signature]*
Name (Print): ROBERT B. SLOAN
Title: MANAGING MEMBER
Date: 3/15/04



**LINEL SIGNATURE LIMITED WARRANTY
(Formed Metal Material Order)**

CONTRACTOR: Central Kentucky Glass
1123 Versailles Road
Lexington, KY 40507

PROJECT: UK Biological Pharmaceutical Complex- College of Pharmacy

OWNER: University of Kentucky

LOCATION: Limestone Street
Lexington, KY 40508

LINEL JOB #: 30604 (Spec Section 076200 - Sheet metal flashing and trim)

CONTRACT/ PO #: 08/227/LEX **CONTRACT/PO DATE:** 04/08/08

Signature Skylights, LLC d/b/a LinEl Signature located at 101 Linel Drive, Mooresville, IN 46158 warrants that the materials provided on this project in accordance with the plans and specifications provided by Contractor will be free from *** defective materials*** which may appear within a period of 5 years after the Commencement Date as defined below (the "Warranty Period"), subject to the disclaimer, conditions, exceptions and exclusions stated below. This warranty is the exclusive warranty. The Warranty Period shall commence on completion of delivery of materials (the "Commencement Date"). The Commencement Date for this warranty is: December 17, 2010.

This warranty is non-assignable and shall terminate if the above Owner ceases to own the building during the Warranty Period.

DISCLAIMER OF WARRANTY

EXCEPT AS SPECIFIED ABOVE, ALL EXPRESS OR IMPLIED CONDITIONS, REPRESENTATIONS, AND WARRANTIES INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, NON-INFRINGEMENT, SATISFACTORY QUALITY, NON-INTERFERENCE, ACCURACY OF INFORMATIONAL CONTENT, OR ARISING FROM A COURSE OF DEALING, LAW, USAGE, OR TRADE PRACTICE, ARE HEREBY EXCLUDED BY LINEL SIGNATURE TO THE FULL EXTENT ALLOWED BY APPLICABLE LAW AND ARE EXPRESSLY DISCLAIMED BY LINEL SIGNATURE, ITS SUPPLIERS AND LICENSORS. TO THE EXTENT AN IMPLIED WARRANTY CANNOT BE EXCLUDED UNDER APPLICABLE LAW, SUCH WARRANTY IS LIMITED IN DURATION TO THE WARRANTY PERIOD STATED ABOVE. BECAUSE SOME STATES OR JURISDICTIONS DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, THE ABOVE LIMITATION MAY NOT APPLY. THESE WARRANTIES GIVE THE CUSTOMER SPECIFIC LEGAL RIGHTS AND CUSTOMER MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM JURISDICTION TO JURISDICTION. THIS DISCLAIMER AND EXCLUSION SHALL APPLY EVEN IF THE EXPRESS WARRANTY SET FORTH ABOVE FAILS OF ITS ESSENTIAL PURPOSE.

Additional CONDITIONS:

1. The Owner listed above shall notify LinEl Signature in writing that the materials supplied have become defective and state the nature of the defect within fifteen (15) business days of discovery. No repairs or replacement shall be commenced except in the case of emergency or risk of imminent danger until LinEl Signature has had the opportunity to inspect as provided below.
2. The Owner shall allow LinEl Signature its agents or employees a reasonable time period after receipt of the notice, but not less than fifteen (15) business days, to examine the materials supplied to determine what repairs or replacements are necessary. If replacement items need to be ordered from suppliers, their standard lead times will govern the replacement lead time.
3. If repairs are performed by anyone other than LinEl Signature or their approved agents during the Warranty Period, the warranty shall be null and void.
4. LinEl Signature's warranty will be void in the event that full payment is not received for goods and services within the agreed upon terms of sale. No employee, representative, or distributor of LinEl Signature is authorized to modify this warranty.

Additional EXCEPTIONS:

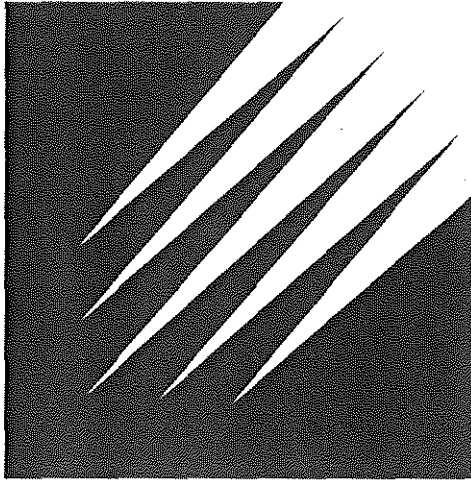
1. This warranty excludes remedy for damage or defect caused by abuse, misuse, improper installation, any damage occurring during installation, modifications not approved and/or not executed by LinEl Signature or an authorized subcontractor or representative, improper or insufficient maintenance, improper operation, or normal wear and tear under normal usage.
2. LinEl Signature does not warrant and will not be liable for defects or damage caused by unusual, extraordinary or unforeseen conditions, such as but not limited to:
 - a. Tomadoes, hurricanes, fires, earthquakes, lightning, or any other acts of God.
 - b. Settlement, distortions, or failures of supporting structure, walls, or foundations of the building.
 - c. Objects striking the materials supplied, such as but not limited to vandalism or carelessness, or unauthorized personnel walking or climbing on the system or materials.
3. . Painted surfaces shall be warranted to the extent that the specified paint manufacturer warrants the painted surfaces to LinEl Signature. If the manufacturer of the paint fails for any reason to provide a warrant to LinEl Signature, then no warranty is made by LinEl Signature. To the extent that the manufacture of the paint extends or provides a warranty, then LinEl Signature's warranty shall be limited to what is provided by the manufacturer.
4. If applicable, all movable parts, such as blinds, door closers, electric and manual vent mechanisms shall have a thirty (30) day warranty from the installation date, and such warranty shall be subject to the Disclaimer, Additional Conditions, Additional Exceptions and Additional Exclusions shall apply.

Additional EXCLUSIONS:

LinEl Signature shall, in no event, be responsible for special, incidental, punitive, exemplar, consequential, or any other type of damages with respect to the material or labor provided herein. The sole remedy shall be replacement or repair of any defective materials or workmanship.

Executed this July 13, 2010 in Mooresville, Indiana.

Signed: 
Rebecca Morris, Controller



LINEAL

Signature

Operations and Maintenance Manual
FOR FINISHED ARCHITECTURAL ALUMINUM

**Project Name: UK Biological Pharmaceutical Complex-
College of Pharmacy**

Project Number: 30604

Project City: Lexington, KY

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LINEL SIGNATURE CLEANING AND MAINTENANCE MANUAL FOR FINISHED ARCHITECTURAL ALUMINUM

1. SCOPE

1.1 This guide outlines LinEl Signature's methods, equipment and materials applicable for cleaning architecturally finished aluminum after construction and for subsequent periodic maintenance.

1.2 The methods outlined herein are intended for use on anodized or painted (reference specific sections) architectural products whether rolled or extruded shapes.

1.3 Deviation from the information contained within this document may void LinEl's finish warranty.

2. PURPOSE

This information is intended as a guide for architects, owners, building managers, contractors and others in the building industry who are interested in the proper care and maintenance of finished architectural aluminum. Herein, describes safe and practical methods for cleaning, maintaining and protecting finished architectural aluminum.

3. GENERAL

3.1 **Anodized Aluminum:** As with any finished building material, anodized aluminum requires reasonable care prior to and during installation and periodic cleaning and maintenance after installation. Although anodized aluminum possesses exceptional resistance to corrosion, discoloration and wear, its natural beauty can be marred by harsh chemicals, rough conditions or neglect. Such conditions usually affect only the surface finish and do not reduce the service life of the aluminum. However, the marks resulting from such mistreatment may be permanent.

3.2 **Painted Aluminum:** Organic coatings on aluminum do not normally show an appreciable amount of dirt collection, but cleaning and surface care may be desirable for the sake of appearance.

3.3 Both painted and anodized surfaces, exposed to the atmosphere, collect soil and dirt, the amount of which may vary depending on geographic area, environmental conditions, finish and location on the building. More frequent cleaning will be required in heavy industrialized areas compared to rural areas. Seasonal rainfall can affect washing frequency by removing water soluble deposits and less adherent soil. In foggy coastal regions, frequent cycles of condensation and drying can create a heavy build-up of atmospheric salts and dirt which may adhere tenaciously. In climates where rainfall is low, the opportunity for atmospheric washing of the surface is minimal. This situation requires that cleaning be done more frequently than in other metropolitan areas where rainfall is more frequent. Recessed and sheltered areas usually become more heavily soiled because of the lack of rain washing. Frequent and longer periods of condensation also occur in protected areas increasing the adhesion of the soil. Periodic maintenance inhibits long-term accumulation of soil which, under certain conditions, can accelerate weathering of the finish. The more frequently aluminum is cleaned, the easier and less costly succeeding maintenance is. It is recommended the finish supplier be consulted for proper cleaning schedule.

****CLEANING SHOULD OCCUR TWICE ANNUALLY AT MINIMUM****

3.4 In any case, the aluminum cleaning schedule is integrated with other cleaning schedules for efficiency and economy.

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CLEANING AND MAINTENANCE MANUAL FOR FINISHED ARCHITECTURAL ALUMINUM

4. CLEANING PROCEDURES AND CARE AFTER INSTALLATION

Construction soils, including concrete or mortar, etc., should be removed as soon as possible. The exact procedure for cleaning will vary depending on the nature and degree of soil. When selecting a method of cleaning and type of cleaner, consideration should be given to all other materials that may be adversely affected by the wash of the cleaning process. Try to restrict cleaning to mild weather. Cleaning should be done on the shaded side of the building or ideally on a mild, cloudy day.

4.1 REMOVAL OF LIGHT SURFACE SOIL ON ANODIC COATINGS

Removal of light surface soil may be accomplished by alternative methods as described in 4.1.1, 4.1.2, 4.1.3 and 4.1.4. Only trial and error testing employing progressively stronger cleaning procedures can determine which will be most effective. Begin the cleaning process at the top by rinsing an area to the ground level in continuous drop with water spray. This should be done at the beginning and the end of each drop regardless of the final cleaning materials employed.

4.1.1 The simplest procedure is to flush the surface with water to dislodge the soil. If soil is still adhering after drying, then a mild detergent will be necessary.

4.1.2 When mild detergent or mild soap is necessary for removal of soil, it should be used while lightly brushing with a soft bristle brush or sponging. The washing should be done with uniform pressure, cleaning first with a horizontal motion and then with a vertical motion. Apply cleaners only to an area that can be conveniently cleaned without changing position. The surface must be thoroughly rinsed with clean water. It may be necessary to sponge the surface while rinsing, particularly if cleaner is permitted to dry on the surface. The rinsed surface is permitted to air dry or is wiped dry with a chamois, squeegee or lint-free cloth.

4.1.3 Run-down of cleaner (from any operation) to the lower portions of the building should be minimized and these areas should be rinsed as soon as and as long as necessary to lessen streaking, etc., from unavoidable rundown, lower areas should be kept wet or flooded with water. Do not allow cleaning chemicals to collect on surfaces or to "puddle" on horizontal surfaces, crevices, etc. These should be flushed with water and dried. Always clean coated surfaces down from top to bottom and follow with a thorough rinsing with clean water. (With one-story or low elevation buildings, it is recommended to clean from bottom up and rinse from top down.)

4.1.4 Mild soaps or detergents ruled safe for bare hands should be safe for coated aluminum. Stronger detergents should be carefully spot tested and may necessitate rubber gloves, long handled, soft bristle brushes, etc. With any soap or detergent the finish should be thoroughly rinsed with clean water and dried.

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CLEANING AND MAINTENANCE MANUAL FOR FINISHED ARCHITECTURAL ALUMINUM

4.2 REMOVAL OF MEDIUM TO HEAVY SURFACE SOIL ON ANODIC COATINGS

4.2.1 If surface soil still adheres after using procedures under 4.1, cleaning with the assistance of a cleaning pad can be employed. Hand scrub the metal surface using a palm-sized nylon cleaning pad. Thoroughly wet pad with clean water or a mild detergent cleaner or pumice powder. Start across the top and work down, rubbing the metal surface in the direction of the metal grain with uniform pressure. After scrubbing, the metal surface should be rinsed thoroughly with clean water to remove all residues. It may be necessary to sponge the surface while rinsing, particularly if the cleaner is permitted to dry on the surface. Solvents may be used to remove non-water soluble deposits. Extreme care must be exercised when solvents are used since they may damage organic sealants, gaskets and painted finishes. If solvents are used, rinse the surface completely with clean water and allow the surface to air dry or wipe dry with a chamois, squeegee or lint-free cloth.

CAUTION: These procedures must not be used on surfaces with a factory applied clear organic protective coating. Many organic solvents are flammable and/or toxic refer to MSDS for proper handling.

4.3 REMOVAL OF LIGHT SURFACE SOIL ON ORGANIC COATINGS

Removal of light surface soil may be accomplished by alternative methods as described in 4.3.1, 4.3.2, 4.3.3 and 4.3.4. Only trial and error testing employing progressively stronger cleaning procedures can determine which will be most effective. Begin the cleaning process at the top by rinsing an area to the ground level in continuous drop with water spray. This should be done at the beginning and the end of each drop regardless of the final cleaning materials employed.

4.3.1 The simplest procedure is to flush the surface with water to dislodge the soil. If soil is still adhering after drying, then a mild detergent will be necessary.

4.3.2 When mild detergent or mild soap is necessary for removal of soil, it should be used while lightly brushing with a soft bristle brush or sponging. The washing should be done with uniform pressure, cleaning first with a horizontal motion and then with a vertical motion. Apply cleaners only to an area that can be conveniently cleaned without changing position. The surface must be thoroughly rinsed with clean water. It may be necessary to sponge the surface while rinsing, particularly if cleaner is permitted to dry on the surface. The rinsed surface is permitted to air dry or is wiped dry with a chamois, squeegee or lint-free cloth.

4.3.3 Run-down of cleaner (from any operation) to the lower portions of the building should be minimized and these areas should be rinsed as soon as and as long as necessary to lessen streaking, etc., from unavoidable rundown, lower areas should be kept wet or flooded with water. Do not allow cleaning chemicals to collect on surfaces or to "puddle" on horizontal surfaces, crevices, etc. These should be flushed with water and dried. Always clean coated surfaces down from top to bottom and follow with a thorough rinsing with clean water. (With one-story or low elevation buildings, it is recommended to clean from bottom up and rinse from top down.)

4.3.4 Mild soaps or detergents ruled safe for bare hands should be safe for coated aluminum. Stronger detergents should be carefully spot tested and may necessitate rubber gloves, long handled, soft bristled brushes, etc. With any soap or detergent the finish should be thoroughly rinsed with clean water and dried.

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CLEANING AND MAINTENANCE MANUAL FOR FINISHED ARCHITECTURAL ALUMINUM

4.4 REMOVAL OF MEDIUM TO HEAVY SURFACE SOIL ON ORGANIC COATINGS

4.4.1 Always first try a water and mild detergent solution. A mild solvent such as mineral spirits may be used to remove grease, sealant or caulking compounds. Stronger solvent or solvent containing cleaners may have a deleterious or softening effect on paints. To prevent harm to the finish, these types of solvent or emulsion cleaners should be spot tested and preferably the coating manufacturer should be consulted. Care should be taken to assure that no marring of the surface is taking place in this manner since this could give an undesirable appearance at certain viewing angles. Cleaners of this type are usually applied with a clean cloth and removed with a cloth. Remaining residue should be washed with mild soap and rinsed with water. Use solvent cleaners sparingly.

4.4.1.1 It may be possible for solvents to extract materials from sealants which could stain the painted surface or could prove harmful to sealants; therefore, these possible effects must be considered. Test a small area first.

4.4.2 If cleaning of heavy surface soil has been postponed or in the cases of an especially tenacious soil, stubborn stains, etc., a more aggressive cleaner and technique may be required. Cleaner and technique should be matched to the soil and the painted finish. Some local manual cleaning may be needed at this point. Always follow the recommendations of the cleaner manufacturer as to proper cleaner and concentration. Test clean a small area first. Cleaners should not be used indiscriminately. Do not use excessive, abrasive rubbing as such may alter surface texture or may impart a "shine" to the surface.

4.4.2.1 Concrete spillage that has dried on the painted surface may become quite stubborn to remove. Special cleaners may be necessary. Diluted solutions of Muriatic Acid (under 10%) may be effective in removing dried concrete stains; however, a test area should be tried first. Proper handling precautions must be exercised for safety reasons. Also, effective proprietary cleaners for concrete and mortar staining are available.

4.4.3 Never mix cleaners together. The mixing of cleaners may not only be ineffective, but also very dangerous. For example, mixing of chlorine containing materials such as bleaches, with other cleaning compounds containing ammonia, can result in poison gas emission.

4.4.4 Always rinse after removal of any surface soil.

4.5 INSPECTION

It is suggested that the building owner provide an engineer or representative to inspect the cleaning work to ensure satisfactory clean appearance of the building.

4.5.1 Metal seams, crevices, sills and any other area that may trap water, cleaner or dirt must be cleaned and thoroughly dried. These "trap" areas must be hand-wiped with absorbent towels or cloths to prevent rundown streaks or "puddling" which will later cause discoloration.

4.5.2 Inspect metal surfaces for any discoloration or stains not removed during cleaning operations. Soil or discoloration's still remaining should be manually cleaned in accordance with sections 4.1, 4.2, 4.3 and 4.4 until a satisfactory appearance is achieved.

5. CLEANING PRECAUTIONS

Follow LinEl Signature's cleaning recommendations for architectural aluminum finishes.

LINE SIGNATURE

CLEANING AND MAINTENANCE MANUAL FOR FINISHED ARCHITECTURAL ALUMINUM

5.1 Correctly identify the aluminum finish to be cleaned when selecting an appropriate cleaning method.

5.2 Never use aggressive alkaline or acid cleaners on aluminum finishes. Do not use cleaners containing trisodium phosphate, phosphoric acid, hydrochloric acid, hydrofluoric acid, fluorides, or similar compounds on anodized aluminum surfaces. Strong solvents or abrasive cleaners can cause damage to painted surfaces. Always follow the cleaner manufacturer's recommendations as to the proper cleaner and concentration. Test-clean a small area first. Different cleaners should not be mixed.

5.3 It is preferable to clean the metal when shaded. Do not attempt to clean hot, sun-heated surfaces since possible chemical reactions on hot metal surfaces will be highly accelerated and non-uniform. Also, avoid cleaning in freezing temperatures or when metal temperatures are sufficiently cold to cause condensation. Surfaces cleaned under these adverse conditions can become so streaked or tainted that they cannot be restored to their original appearance.

5.4 Apply the cleaning solution only to an area that can be conveniently cleaned without changing position. Thoroughly rinse the surface with clean water before applying cleaner. Minimize cleaner rundown over the lower portions of the building and rinse such areas as soon as practical.

5.5 Solutions of water and mild detergents should be tried first. If an aggressive cleaner is required for some other component of the building, care must be taken to prevent the cleaner from contacting the aluminum finish.

Note: Care should be taken to avoid over spray or run off of cleaner onto other buildings components such as glazing materials, weather-stripping sealants, etc.

5.6 Do not use excessive abrasive rubbing to remove stubborn stains. Such procedures can produce an undesirable appearance or adversely affect the finish.

5.7 The type and frequency of cleaning and coating will vary with the amount of atmospheric soil and dirt accumulated on the surfaces and the owners desires regarding appearance. Periodic re-application and wipe on surface protectants will assist in maintaining the appearance and reduce the cleaning required.

J.W. Jones

Construction Corporation

Certified General Contractor / Certified Roofing Contractor

CGC1508575 / CGC1514749 / CCC1326327 / CCC1328377

Indian River County 772-299-0344 / Fax 772-567-1093

MAINTENANCE DATA FOR SHEET METAL FLASHING, TRIM & ACCESSORIES

Job Name and Project Number: UK Biological/Pharmaceutical Complex (Project # 2235.0)

DESCRIPTION OF FLASHINGS INSTALLED: Stainless steel metal flashings installed as submitted.

RECOMMENDED MAINTENANCE: Once every two to three years, sealants should be inspected and re-sealed if necessary.

077200

ROOF ACCESSORIES



February 22, 2010

Attn: Anthony Samons
J W JONES CONSTRUCTION CORP
882 41ST COURT
VERO BEACH, FL 32960

Re: PO # 1667389-00
BILCO Sales Order # 475162
BILCO Invoice # 769690
Item(s): (1) SS-50
Invoice Date: 11/18/08
Project: UK BIOLOGICAL/PHARMACEUTICAL COMPLEX
789 LIMESTONE STREET
LEXINGTON, KY 40508
Owner: UNIVERSITY OF KENTUCKY

Dear Sir or Madam:

BILCO Products are guaranteed to be free from defects in material and workmanship for a period of five years from date of purchase. Should any part fail to function or break in normal use during this period, a new part will be furnished at no charge. Electrical operating mechanisms, smoke detectors, and other special equipment are separately warranted.

Very truly yours,

THE BILCO COMPANY

Molly Seely
Customer Service
Architectural Products

077200

CB: pl1



February 22, 2010

Attn: Anthony Samons
J W JONES CONSTRUCTION CORP
882 41ST COURT
VERO BEACH, FL 32960

Re: PO # 1620980
BILCO Sales Order # 471935
BILCO Invoice # 763591
Item(s): (1) L-20
(1) D-20
Invoice Date: 08/15/08
Project: UK BIOLOGICAL/PHARMACEUTICAL COMPLEX
789 LIMESTONE STREET
LEXINGTON, KY 40508
Owner: UNIVERSITY OF KENTUCKY

Dear Sir or Madam:

BILCO Products are guaranteed to be free from defects in material and workmanship for a period of five years from date of purchase. Should any part fail to function or break in normal use during this period, a new part will be furnished at no charge. Electrical operating mechanisms, smoke detectors, and other special equipment are separately warranted.

Very truly yours,

THE BILCO COMPANY

A handwritten signature in cursive script that reads "Molly Seely".

Molly Seely
Customer Service
Architectural Products

CB: p11

078100

APPLIED FIREPROOFING

*INSULATION

*SOUND CONTROL

omni
fireproofing co., llc.

9305 Le Saint Drive, Fairfield, Ohio 45014
(513) 870-9115 FAX 870-9312

*SPRAY ON

FIREPROOFING

March 31, 2010

EC Matthews
Attention: Doug Sherwood
2265 Harrodsburg Road
Lexington KY 40504-


RE: BIOLOGICAL PHARMACY
Job No 08086 /WARRANTY

Ladies and Gentlemen:

Omni Fireproofing Company agrees (as applicator) to repair/replace Fireproofing work for this section of the project FOR A PERIOD OF 2 YEARS (FROM 11/30/2009), which has cracked, flaked, dusted excessively, peeled or fallen from substrate, or otherwise deteriorated to a condition where it would not perform effectively as intended for fireproofing purposes; due substantially to defective materials or workmanship and not to abuse by occupants, maintenance, non-foreseeable ambient exposures, roof replacement, or other causes beyond anticipated conditions and Contractor's/Installer's control.

Please advise if you require any additional information.

Sincerely,
Omni Fireproofing Co., LLC.


Gregory S. Shields
Treasurer

cc: Field File-Warranty, AR FILE

RECEIVED
APR 02 2010
E. C. Matthews Co., Inc

TERMS AND CONDITIONS OF SALE

All prices, terms and conditions stated are current, subject to change without notice by Seller. Buyer agrees to pay in accordance with prices, terms and conditions in effect at time of shipment.

Cash discount, if any is indicated, will apply only on the net amount of invoice after deducting transportation charges and taxes thereon, unless otherwise specified, and will be allowed only if payment is made within the time stated, and provided there are no past due items. A service charge on past due items will be the maximum allowed by state usury laws. No anticipation deductions are allowed. In the event legal or collection action becomes necessary in Seller's opinion, Buyer shall be liable for legal and collection fees.

All taxes and excises of any nature whatever now or hereafter levied by governmental authority, whether federal, state or local, either directly or indirectly, upon the sale or use of any material covered hereby, or upon the subject matter hereof or upon transportation charges, shall be paid and borne by the Buyer, unless prohibited by law.

Any increase in transportation rates, or any changes in routing requested by the Buyer which result in increased transportation costs, will be at the Buyer's expense.

Title to the material shall pass to Buyer upon delivery thereof to the carrier (F.O.B. shipping point), unless otherwise specifically indicated on the face hereof. Following delivery to the carrier, materials shall be at Buyer's risk. Any claim by Buyer against Seller for shortage or damage occurring prior to such delivery must be made within five (5) days after receipt of shipment and be accompanied by original transportation bill signed by carrier noting that carrier received said materials from Seller in the condition claimed. In the event there is a claim against carrier for shortage or damage occurring after delivery to the carrier, Buyer shall process such claim directly. Only if Seller so requests, Buyer shall forward such claim to Seller for processing with carrier, together with original paid transportation bill signed by carrier and noting shortage or damage if claimed; provided that Seller's responsibility shall be limited to crediting to Buyer only such adjustments as are allowed by carrier, and to which Buyer under the terms hereof is entitled.

Seller shall not be liable for failure to ship or delays in delivery by reason of the following: (a) Fires, floods or other casualties; (b) Wars, riots, civil commotion, embargoes, governmental regulations, or Seller's inability to obtain necessary materials (finished or otherwise) from its usual source of supply, (c) Shortage of cars or trucks or delays in transit (d) Strikes or other labor troubles affecting production or shipment, whether involving employees of Seller or employees of others; (e) Shortages of products, labor or raw materials, or any other cause beyond Seller's control, whether or not of a class or kind mentioned herein.

THE PRODUCTS DESCRIBED ON THE REVERSE SIDE HEREOF, SOLD BY SELLER, ARE WARRANTED TO BE FREE FROM DEFECTS IN MATERIAL AND WORKMANSHIP AT TIME OF SHIPMENT. THIS WARRANTY IS IN LIEU OF AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE. CONSULT SELLER'S WRITTEN APPLICATION AND INSTALLATION INSTRUCTIONS BEFORE USE.

SELLER SHALL NOT BE LIABLE FOR CONSEQUENTIAL LOSS, DAMAGE OR EXPENSE, DIRECTLY OR INDIRECTLY ARISING FROM THE SALE, DELIVERY, HANDLING OR USE OF THE PRODUCTS, OR FROM ANY OTHER CAUSE RELATING THERETO. SELLER'S LIABILITY HEREUNDER IN ANY CASE IS EXPRESSLY LIMITED TO PRODUCT REPLACEMENT IN THE FORM ORIGINALLY SHIPPED, OR, AT SELLER'S ELECTION, TO THE REPAYMENT OF, OR CREDITING BUYER WITH AN AMOUNT EQUAL TO THE PURCHASE PRICE OF SUCH PRODUCTS, WHETHER SUCH CLAIMS ARE FOR BREACH OF WARRANTY OR NEGLIGENCE. NO PRODUCTS SHALL BE RETURNED BY BUYER WITHOUT THE PRIOR WRITTEN APPROVAL OF SELLER; ANY CLAIM BY BUYER FOR DEFECTIVE PRODUCTS SHALL BE MADE IMMEDIATELY ON OR BEFORE FIRST USE OF SUCH PRODUCTS, AND NO PRODUCTS BELIEVED TO BE DEFECTIVE SHALL BE USED BY BUYER WITHOUT INSPECTION BY AND PRIOR WRITTEN APPROVAL OF SELLER.

Should the financial responsibility of the Buyer at any time appear unsatisfactory to the Seller, the Seller reserves the right to require payment for any shipment hereunder in advance, or require satisfactory security. If the Buyer fails to make payment in accordance with the terms hereof, or fails to comply with any provision hereof, the Seller may, at its option (and in addition to other remedies) cancel any unshipped portion of Buyer's orders. Buyer shall remain liable for all unpaid accounts and entire account shall immediately come due and payable.

Should litigation become necessary, the Buyer agrees to a change of venue at the discretion of the Seller.

Where Buyer desires to cancel any order for special materials or products not normally carried in stock by Seller, Buyer shall be required to make payment as follows:

- (a) In full for finished items
- (b) On other unfinished items, that percentage of the full price as the percentage of completion bears to full completion; and
- (c) Where only unprocessed materials are involved, the cost of the materials plus 15%.

No terms or conditions in any way modifying or changing the provisions stated herein shall be binding upon the Seller unless in writing and signed and approved in advance by an officer of the Seller at the home office in Stanhope, New Jersey. No modification of any of these terms shall be affected by Seller's shipment of products following receipt of Buyer's purchase order, shipping request or similar forms containing printed terms and conditions conflicting or inconsistent with the terms herein.

At Seller's option, disputes of any kind may be brought to arbitration according to rules of the American Arbitration Association and judgment upon the award rendered may be entered in the highest court, state or federal, having jurisdiction.

The sale of the products shall be subject to these Terms and Conditions of Sale, INCLUDING those LIMITING WARRANTIES, as set forth in the Seller's invoices. No agent, employee or representative of the Seller, its subsidiary or affiliated companies is authorized to modify this statement.

079200

JOINT SEALANTS



CONTRACTOR GUARANTEE

The undersigned M M Cosmetic Sealants having heretofore entered into a contract with : ~~MESSER CONSTRUCTION COMPANY~~ to perform work at:

UK BIOLOGICAL/PHARMACEUTICAL COMPLEX
COLLEGE OF PHARMACY
UNIVERSITY OF KENTUCKY, LEXINGTON KENTUCKY

And in accordance with the terms of said contract, do hereby guarantee that all the labor and material furnished, and work performed by us under said contract is in conformity with the plans and specifications and authorized alterations thereto, and we agree to repair at our own cost and expense, all of the work covered under said contract and change orders which may prove to be defective for a period of two (2) years from the date of completion. Furthermore, we agree to repair at our sole cost, any work that we may affect or disturb in making the repairs herein contemplated.

M M Cosmetic Sealants

By: _____

John W McFarland III
JOHN W. MCFARLAND, III

Guarantee Period Begins: DECEMBER 31, 2009

JOHN W. MCFARLAND, III
1411 ORMSBY LANE LOUISVILLE, KENTUCY 40222-3827
OFFICE 502/445-8612 - FAX 502/749-7814 - EMAIL mcfarljw3@insightbb.com



CONTRACTOR GUARANTEE

The undersigned **M&M** Cosmetic Sealants having heretofore entered into a contract with : **MESSER CONSTRUCTION COMPANY** to perform work at:

**UK BIOLOGICAL/PHARMACEUTICAL COMPLEX
COLLEGE OF PHARMACY
UNIVERSITY OF KENTUCKY, LEXINGTON KENTUCKY**

And in accordance with the terms of said contract, do hereby guarantee that all the labor and material furnished, and work performed by us under said contract is in conformity with the plans and specifications and authorized alterations thereto, and we agree to repair at our own cost and expense, all of the work covered under said contract and change orders which may prove to be defective for a period of two (2) years from the date of completion. Furthermore, we agree to repair at our sole cost, any work that we may affect or disturb in making the repairs herein contemplated.

M&M Cosmetic Sealants

By: _____
JOHN W. MCFARLAND, III

Guarantee Period Begins: DECEMBER 31, 2009

JOHN W. MCFARLAND, III
1411 ORMSBY LANE LOUISVILLE, KENTUCY 40222-3827
OFFICE 502/445-8612 - FAX 502/749-7814 - EMAIL mcfarljw3@insightbb.com

THANK YOU FOR YOUR BUSINESS



CONTRACTOR GUARANTEE

The undersigned M M Cosmetic Sealants having heretofore entered into a contract with : ~~MESSER CONSTRUCTION COMPANY~~ to perform work at:

UK BIOLOGICAL/PHARMACEUTICAL COMPLEX
COLLEGE OF PHARMACY
UNIVERSITY OF KENTUCKY, LEXINGTON KENTUCKY

And in accordance with the terms of said contract, do hereby guarantee that all the labor and material furnished, and work performed by us under said contract is in conformity with the plans and specifications and authorized alterations thereto, and we agree to repair at our own cost and expense, all of the work covered under said contract and change orders which may prove to be defective for a period of two (2) years from the date of completion. Furthermore, we agree to repair at our sole cost, any work that we may affect or disturb in making the repairs herein contemplated.

M M Cosmetic Sealants

By: _____

John W McFarland III
JOHN W. MCFARLAND, III

Guarantee Period Begins: DECEMBER 31, 2009

JOHN W. MCFARLAND, III
1411 ORMSBY LANE LOUISVILLE, KENTUCY 40222-3827
OFFICE 502/445-8612 - FAX 502/749-7814 - EMAIL mcfarljw3@insightbb.com



PECORA
CORPORATION

Limited Material Warranty

Date: 4/7/2009

Warranty #: 37612

Project Ref: Biological Pharm. Complex New College of Pharm. Univ. of KY
 Contractor: Messer Construction Co.
 Applicator: M&M Sealants
 Owner : Univ. of Kentucky
 Product: Pecora 890 FTS
 Primer: none
 Completion Date: 11/1/2009

Pecora Corporation warrants its product to be manufactured free from defects in material and workmanship. We further warrant that sealant will maintain a watertight weatherseal for a period of 20 years from the date of installation and *if the application exceeds 5000 Lineal Feet*, the following criteria are to be met:

- 1) The sealant is applied to compatible substrates in accordance with Pecora Corporation published application procedures.
- 2) The sealant is applied within its stated shelf life.
- 3) Field adhesion tests are made and documented to confirm adhesion under site conditions.
- 4) Field adhesion test results are submitted within thirty days of completion of field testing.
- 5) All requirements outlined in Pecora project test results are strictly adhered to.
- 6) All samples submitted for internal testing by Pecora are representative of materials used for job site construction.

Under this warranty, Pecora will be responsible for the cost of replacement material for any materials made necessary by a failure of the sealant for a period of 20 years of substantial completion.

The holder of this warranty shall notify Pecora or the applicator in writing of any claims within 30 days from the discovery of any defect. Pecora will then have 30 days in which to schedule an inspection of the installation to determine if Pecora's product is not performing as intended. Pecora reserves the right to run performance tests on building material samples in its laboratory and/or field tests of actual surfaces sealed with the Pecora 890 FTS sealant.

The owner agrees to provide the manufacturer/applicator field representatives with access to the affected areas of the project for purpose of testing and evaluating the performance of the sealant application.

This warranty becomes effective only upon full payment for all Pecora material used on the referenced project and becomes null and void if remedial repairs are performed without written authorization from either the manufacturer or the applicator.

This warranty specifically excludes failure of the sealant due to:

- a) Natural causes such as lightning, earthquake, hurricane, tornado, fire, etc.;
- b) Movement of the structure resulting in stresses on the sealant which exceed Pecora's published specification for elongation and/or compression for the sealant, whether due to structural settlement, design error or construction error;
- c) Disintegration of the underlying substrates;
- d) Mechanical damage to the sealant caused by individuals, tools or other outside agents, or
- e) Changes in the appearance of the sealant from the accumulation of dirt or other contaminants deposited on the sealant from the atmosphere.

This is Pecora's sole warranty with respect to its products. Pecora makes no other warranty of any kind, whatever, expressed or implied, and all implied warranties of merchantability and fitness for a specific purpose, which exceed this obligation, are hereby disclaimed by Pecora and excluded. In no case will Pecora be responsible for liquidated, incidental or consequential damages.

Any claim or controversy between or among the parties arising out of or relating to the application described herein shall be settled by arbitration in accordance with the rules of the American Arbitration Association, and judgment upon the award rendered by the arbitrator may be entered into a court having jurisdiction.

NOTE: Warranty not in effect unless signed by Pecora Corporation representative.

Roy D. Cannon, Jr.
 Technical Service Director, PECORA CORPORATION

For questions on this or any other warranty you have with Pecora Corporation, please contact the Technical Service Group at (215) 799-7520 or fax (215) 721-0286.

"The signature appearing on this Warranty contract is from a Pecora Corporation Representative. Although it was applied electronically to the document, the signature is binding and enforceable against Pecora Corporation to the same degree as a signature delivered in writing. If you have elected to process this Warranty electronically, it will be deemed completed, executed and delivered at the time of processing, and you hereby consent to the delivery of this document in electronic format only."



Limited Material Warranty

Date: 4/7/2009

Warranty #: 37613

Project Ref: Biological Pharm. Complex New College of Pharm. Univ. of KY
Contractor: Messer Construction Co.
Applicator: M&M Sealants
Owner : Univ. of Kentucky
Product: Dynatrol II SG
Primer: none
Completion Date: 3/1/2010

Pecora Corporation warrants its product to be manufactured free from defects in material and workmanship.

Under this warranty, Pecora will be responsible for the cost of replacement material for any materials made necessary by a failure of the sealant for a period of 5 years of substantial completion. The holder of this warranty shall notify Pecora or the applicator in writing of any claims within 30 days from the discovery of any defect. Pecora will then have 30 days in which to schedule an inspection of the installation to determine if Pecora's product is not performing as intended. Pecora reserves the right to run performance tests on building material samples in its laboratory and/or field tests of actual surfaces sealed with the Dynatrol II SG sealant.

The owner agrees to provide the manufacturer/applicator field representatives with access to the affected areas of the project for purpose of testing and evaluating the performance of the sealant application.

This warranty becomes effective only upon full payment for all Pecora material used on the referenced project and becomes null and void if remedial repairs are performed without written authorization from either the manufacturer or the applicator.

This warranty specifically excludes failure of the sealant due to:

- a) Natural causes such as lightning, earthquake, hurricane, tornado, fire, etc.;
- b) Movement of the structure resulting in stresses on the sealant which exceed Pecora's published specification for elongation and/or compression for the sealant, whether due to structural settlement, design error or construction error;
- c) Disintegration of the underlying substrates;
- d) Mechanical damage to the sealant caused by individuals, tools or other outside agents, or
- e) Changes in the appearance of the sealant from the accumulation of dirt or other contaminants deposited on the sealant from the atmosphere.

This is Pecora's sole warranty with respect to its products. Pecora makes no other warranty of any kind, whatever, expressed or implied, and all implied warranties of merchantability and fitness for a specific purpose, which exceed this obligation, are hereby disclaimed by Pecora and excluded. In no case will Pecora be responsible for liquidated, incidental or consequential damages.

Any claim or controversy between or among the parties arising out of or relating to the application described herein shall be settled by arbitration in accordance with the rules of the American Arbitration Association, and judgment upon the award rendered by the arbitrator may be entered into a court having jurisdiction.

NOTE: Warranty not in effect unless signed by Pecora Corporation representative.

A handwritten signature in black ink, appearing to read 'Roy D. Cannon, Jr.'.

Roy D. Cannon, Jr.
Technical Service Director, PECORA CORPORATION

For questions on this or any other warranty you have with Pecora Corporation, please contact the Technical Service Group at (215) 799-7520 or fax (215) 721-0286.

"The signature appearing on this Warranty contract is from a Pecora Corporation Representative. Although it was applied electronically to the document, the signature is binding and enforceable against Pecora Corporation to the same degree as a signature delivered in writing. If you have elected to process this Warranty electronically, it will be deemed completed, executed and delivered at the time of processing, and you hereby consent to the delivery of this document in electronic format only."



PECORA
CORPORATION

Limited Material Warranty Date: 4/7/2009

Warranty #: 37614

Project Ref: Biological Pharm. Complex New College of Pharm. Univ. of KY
 Contractor: Messer Construction Co.
 Applicator: M&M Sealants
 Owner : Univ. of Kentucky
 Product: Pecora 898
 Primer: none
 Completion Date: 11/1/2009

Pecora Corporation warrants its product to be manufactured free from defects in material and workmanship. We further warrant that sealant will maintain a watertight weatherseal for a period of 5 years from the date of installation and *if the application exceeds 5000 Lineal Feet*, the following criteria are to be met:

- 1) The sealant is applied to compatible substrates in accordance with Pecora Corporation published application procedures.
- 2) The sealant is applied within its stated shelf life.
- 3) Field adhesion tests are made and documented to confirm adhesion under site conditions.
- 4) Field adhesion test results are submitted within thirty days of completion of field testing.
- 5) All requirements outlined in Pecora project test results are strictly adhered to.
- 6) All samples submitted for internal testing by Pecora are representative of materials used for job site construction.

Under this warranty, Pecora will be responsible for the cost of replacement material for any materials made necessary by a failure of the sealant for a period of 5 years of substantial completion.

The holder of this warranty shall notify Pecora or the applicator in writing of any claims within 30 days from the discovery of any defect. Pecora will then have 30 days in which to schedule an inspection of the installation to determine if Pecora's product is not performing as intended. Pecora reserves the right to run performance tests on building material samples in its laboratory and/or field tests of actual surfaces sealed with the Pecora 898 sealant.

The owner agrees to provide the manufacturer/applicator field representatives with access to the affected areas of the project for purpose of testing and evaluating the performance of the sealant application.

This warranty becomes effective only upon full payment for all Pecora material used on the referenced project and becomes null and void if remedial repairs are performed without written authorization from either the manufacturer or the applicator.

This warranty specifically excludes failure of the sealant due to:

- a) Natural causes such as lightning, earthquake, hurricane, tornado, fire, etc.;
- b) Movement of the structure resulting in stresses on the sealant which exceed Pecora's published specification for elongation and/or compression for the sealant, whether due to structural settlement, design error or construction error;
- c) Disintegration of the underlying substrates;
- d) Mechanical damage to the sealant caused by individuals, tools or other outside agents, or
- e) Changes in the appearance of the sealant from the accumulation of dirt or other contaminants deposited on the sealant from the atmosphere.

This is Pecora's sole warranty with respect to its products. Pecora makes no other warranty of any kind, whatever, expressed or implied, and all implied warranties of merchantability and fitness for a specific purpose, which exceed this obligation, are hereby disclaimed by Pecora and excluded. In no case will Pecora be responsible for liquidated, incidental or consequential damages.

Any claim or controversy between or among the parties arising out of or relating to the application described herein shall be settled by arbitration in accordance with the rules of the American Arbitration Association, and judgment upon the award rendered by the arbitrator may be entered into a court having jurisdiction.

NOTE: Warranty not in effect unless signed by Pecora Corporation representative.

Roy D. Cannon, Jr.
 Technical Service Director, PECORA CORPORATION

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Pecora Corporation Silicone Building Sealants Limited Weatherseal Warranty

Warranty # 37612

Date: 4/7/2009
Project Reference: Biological Pharm. Complex New College of Pharm. Univ. of KY
General Contractor: Messer Construction Co.
Applicator: M&M Sealants
Owner: Univ. of Kentucky
Primer (if used): TBA
Date of Completion: TBA

Pecora Corporation manufactures and sells a full line of waterproofing materials. These products display a wide range of physical and performance characteristics. Pecora Corporation warrants that its products are manufactured free from defects in material and workmanship. We further warrant that 890FTS Silicone Sealant will maintain a watertight weatherseal for a period of (20) twenty years from the date of installation and *if the application exceeds 5000 Lineal Feet*, the following criteria are to be met:

- 1) 890FTS is applied to compatible substrates in accordance with Pecora Corporation published application procedures.
- 2) 890FTS is applied within its stated shelf life.
- 3) Field adhesion tests are made and documented to confirm adhesion under site conditions.
- 4) Field adhesion test results are submitted within thirty days of completion of field testing.
- 5) All requirements outlined in Pecora project test results are strictly adhered to.
- 6) All samples submitted for internal testing by Pecora are representative of materials used for job site construction.

The holder of this warranty shall notify Pecora in writing of any claims within thirty (30) days from the discovery of any defect. Pecora will then have thirty (30) days in which to schedule an inspection of the installation to determine if Pecora's product is not performing as intended. Pecora reserves the right to conduct performance testing on actual building material samples in its laboratory and/or in the field. The owner agrees to provide access to any affected areas on the project for the purpose of evaluation and/or testing procedures to be performed by Pecora personnel.

Limitations

- 1) Natural causes such as lightning, earthquake, hurricanes, tornado, fire, etc.
- 2) Movement of the structure resulting in stresses on the sealant which exceed Pecora's published specifications for extension/compression of the sealant, whether due to structural settlement, design error, or construction error;
- 3) Disintegration of the underlying substrates;
- 4) Mechanical damage to the sealant caused by individuals, tools, or other outside agents;
- 5) Changes in the appearance of the sealant from the accumulation of dirt or other contaminants deposited on the sealant from the atmosphere or changes in appearance of the sealant due to contact with materials not compatible with the sealant and not submitted during initial project adhesion and compatibility testing.
- 6) Failure of allied project contractors to follow specific manufacturer installation instructions and guidelines for related material and systems contributing to overall waterproofing of subject structure.



Pecora Corporation Silicone Building Sealants Limited Weatherseal Warranty

Warranty # 37612

This warranty becomes effective only upon full payment for all Pecora material used on the referenced project and becomes null and void if remedial repairs are performed without written authorization from Pecora.

Remedies

In the event of a claim on this warranty, you must notify *Pecora Corporation* within thirty (30) days of the discovery of the claimed defect and provide *Pecora Corporation* with the opportunity to inspect. *Pecora Corporation* shall, for a period of twenty (20) years from the date of substantial completion of installation of the sealant, be responsible for the cost of replacement material.

This limited warranty for the specific project is in lieu of all other warranties issued by Pecora Corporation regarding the performance of the above specified product. In no case will Pecora Corporation be responsible for liquidate, incidental or consequential damages.

Any claim or controversy between or among parties arising out of or relating to the application described herein shall be settled by arbitration in accordance with the rules of the American Arbitration Association, and judgement upon the award rendered by the arbitrator may be entered into a court having jurisdiction.

Note: Warranty not in effect unless signed by Pecora Corporation representative.

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Roy D. Cannon, Jr.
Technical Service Director
PECORA CORPORATION

RDC/gm

Pc: Lauren DeFrain, Welling Co.

For questions on this or any other warranty you have with Pecora Corporation, please contact the Technical Service Group at (215) 799-7520 or fax (215) 721-0286.

Pecora 890 FTS

Specification Data Sheet

Field Tintable, Non-Staining, Ultra Low-Modulus Silicone Sealant



1. BASIC USES

• Pecora 890FTS (Field Tintable Silicone) is designed primarily for sealing expansion and control joints in precast concrete panels, architectural and natural stone, metal curtain walls, sealing of door and window perimeters, Exterior Insulation Finish Systems (EIFS) and numerous other applications requiring a high-performance sealant. It adheres tenaciously to concrete, natural stone, masonry, steel, fluoropolymer and powder coated aluminum, wood, vinyl and many plastics, generally without need for a primer, and performs equally well in new or remedial construction. Compared to Pecora 890, the 890FTS offers the added versatility of field tinting through the use of our universal color packs.

effect on the ultimate performance of 890FTS even after years of such exposure.

Pecora 890FTS is particularly well suited for use in Exterior Insulation Finish (EIFS) because of its proven strong adhesion to all EIFS base coats and because its ultra-low modulus formulation places minimal stress on the bond line.

Advantages: Pecora 890FTS offers the following features:

- Ability to produce virtually any color in the field through the use of Pecora's universal color pack system and color matching services.
- Will not stain natural stone or other porous surfaces.
- Superior adhesion: Will bond tenaciously to most substrates without the need for priming.

- Excellent weatherability: Because of its 100% silicone composition, it is virtually unaffected by UV, precipitation, ozone, and temperature extremes.
- Resilient: Will remain flexible under extreme temperature swings (-60°F to 300°F).

PACKAGING

- 1.5 gallon (5.68 L) units

COLOR

- 50 Standard colors (see color strip for details).
- Unlimited range of custom colors (certain restrictions may apply).

2. MANUFACTURER

Pecora Corporation

165 Wambold Road

Harleysville, PA 19438

Phone: 215-723-6051

800-523-6688

Fax: 215-721-0286

Website: www.pecora.com

3. PRODUCT DESCRIPTION

Pecora 890FTS is a field tintable, neutral-curing, ultra low-modulus silicone sealant that will not stain natural stone such as marble and granite. It reacts with atmospheric moisture to form a durable, flexible building sealant. Pecora 890FTS performs exceptionally well under dynamic conditions due to its ultra-low modulus, high extension/compression, recovery properties and strong adhesion to most building materials and as a result, accommodates long-term movement of +100/-50% in properly designed joints.

Harsh weather conditions, rain, sleet, snow, sunlight and extreme temperatures, high ozone concentrations and/or exposure to intense ultraviolet rays have very little

TABLE 1: TYPICAL UNCURED PROPERTIES
at 77°F (25°C), 50% R.H.

Test Property	Value	Test Procedure
Flow, Sag, Slump	Nil	ASTM C-639
Tool/Work Time (minutes)	15-20	Pecora Corp.
Tack free time (hrs)	1-2	ASTM C-679
Cure time (days)	7-14	Pecora Corp.
Full adhesion (days)	7-14	Pecora Corp.
VOC g/L	98	ASTM D-3960

TABLE 2: TYPICAL CURED PROPERTIES
After 7 days cure at 77°F (25°C), 50% R.H.

Test Property	Value	Test Procedure
Hardness (Shore A)	15-18	ASTM C-661
Extension (%)	1000	ASTM D-412
Modulus @ 100% ext. (psi)	30	ASTM D-412
Tensile strength (psi)	120	ASTM D-412
Tear strength (ppi)	30	ASTM D-624
Peel strength (pli)	25	ASTM D-794
Dynamic movement (%)	+100/-50	ASTM C-719
Ozone/UV resistance	excellent	ASTM C-793
Staining of porous substrates		ASTM C-1248
Marble	no stain	
Granite	no stain	
Limestone	no stain	
Service temp. range (°F)	-60 to +300	Pecora Corp.

Limitations: Pecora 890FTS should not be used in the following applications:

- Sealing horizontal decks, patios, driveway or terrace joints where abrasion or physical abuse is encountered.
- Below grade, submerged joints or below the waterline in marine uses.
- In totally confined or air-free spaces since moisture is necessary for cure.
- In designs that will be painted after the sealant is applied. Apply sealant after painting is completed.
- In structural glazing applications.
- On surfaces with special protective or decorative coatings without prior consultation with Technical Services.
- With building materials that bleed oils, plasticizers or solvents, i.e., impregnated wood, caulks, some vulcanized rubber gaskets or tapes, etc.
- In interior penetration firestop systems.
- On surfaces in direct contact with food, use of Pecora 860 silicone with FDA approval is recommended.
- Where the ultra-smooth appearance of standard Pecora 890 is required.

Packaging: Pecora 890FTS is packaged in 1.5 gallon units. Pecora universal color packs are supplied separately.

Color: Since Pecora 890FTS is a neutral color base, any of our standard, special or custom colors are immediately obtainable after mixing in the Pecora color pack. Where a more precise match to standard Pecora 890 is required, custom color packs can be ordered.

4. TECHNICAL DATA

Applicable Standards: Pecora 890FTS meets or exceeds the requirements of the following industry specifications: TT-S-230C, Class A; ASTM C920, Class 100, Type S, Grade NS, Use G, A, M, O, and CGSB-19GP-9

Joint Design: Pecora 890FTS Silicone sealant should be no deeper than 3/8" (9 mm) and no less than 1/8" (3 mm). Ideally, ratio of joint width to the sealant depth is 2:1. Joint width should not exceed 1". For joints greater than 1", consult Technical Services. If Pecora 890FTS cannot

be installed when the design width is approximately halfway between the dimensional extremes, the designed joint must be at least twice the total anticipated joint movement. Good architectural practice calls for joint design of four times the anticipated movement due to construction tolerances and material variations.

5. INSTALLATION

Surface Preparation: Clean all joints and glazing areas by removing foreign matter and contaminants such as oil, dust, grease, frost, water, surface dirt, old sealants or glazing compounds and any protective coating. Porous substrates and precast concrete panels using form release agents should be cleaned by grinding, saw cutting, blast cleaning (water or sand), mechanical abrading or a combination of these methods which will provide a sound, clean and dry surface for sealant application. Dust, loose particles, etc. should be blown out of joints with oil-free compressed air or vacuum cleaned. Metal, glass and plastic surfaces should be cleaned with solvent procedure or by mechanical means. Soap or detergent and water cleaning treatments are not recommended. Cleaning of all surfaces should be done on the same day the sealant is applied.

Mixing:

- Remove plastic film. In the event skinning developed during storage, remove and discard prior to mixing.
- Pour contents of Pecora universal color pack into pail using a spatula to scrape as much color tint from container as possible.
- For best overall appearance, use the Albion® 381-G01 4 inch mixing paddle or Pecora #2 mixing paddle (or other comparable mixing paddle). Do not over mix.
- Mix for about 1 minute, moving drill throughout material while avoiding contact with pail.
- Scrape any unmixed material from sides and bottom of can with flat-edge spatula or margin trowel.
- Continue mixing for 1-2 minutes or until a uniform color is achieved. Do not exceed 4 minutes total mixing time.

- Use clean bulk caulking gun for sealant application.
- Dry tooling is recommended. If a slicking agent is required, use mineral spirits.

Cleaning: Excess sealant should be removed from all surfaces while still uncured. Cured sealant is very difficult, if not impossible, to remove without altering or damaging the surface it is adhered to.

CAUTION: Solvents may be toxic and/or flammable. Refer to solvent manufacturer's instructions or Material Safety Data Sheets.

Priming: Pecora 890FTS does not require priming on most common substrates. However, Pecora strongly suggests adhesion pre-testing, either in the field or in Pecora's laboratory, on all porous substrates, particularly brick, as well as unusual building materials and other substrates where special coatings or surface treatments may impair optimum adhesion. Where primer is indicated, P-150 should be used on porous substrates and P-120 on special metal and plastic surfaces. All EIFS substrates require priming with P-150 primer. Contact Technical Services for primer use on other substrates.

Pecora routinely conducts project specific adhesion, compatibility, and staining tests in its laboratory on representative substrate samples. Consult Technical Services for details.

Joint Backing: Backer rod controls the depth of the sealant and allows it to be applied under pressure. Use a size that will compress 25%. Denver Foam® open-cell polyurethane or reticulated (soft) polyethylene rod is recommended. Closed-cell polyethylene may be used but care must be taken not to puncture the rod which can cause outgassing or bubbling/blistering in the sealant. Open-cell polyurethane is required with non-porous substrates to allow proper curing from both sides of the sealant. In joints too shallow for backer rod, use a polyethylene bond-breaker tape to prevent three-sided adhesion. For detailed information on the use of sealant backing materials, consult Pecora Technical Bulletin #105.

Application: All joints should be masked to ensure a neat appearance and prevent sealant applied outside the joint confines from discoloring the substrate.

Storage: 12 months from date of manufacture when stored in original, airtight containers at temperatures below 90°F (32°C).

Precautions: Use in well-ventilated areas. Contact with uncured sealant may irritate eyes or skin. Flush eyes with water for fifteen minutes and seek medical attention if irritation persists. May be harmful if swallowed.

Consult Material Safety Data Sheet for additional information.

**FOR PROFESSIONAL USE ONLY.
KEEP OUT OF THE REACH
OF CHILDREN.**

6. AVAILABILITY AND COST

Pecora products are available from stocking distributors nationwide. For the name and telephone number of your nearest representative, call the number below or visit our website at www.pecora.com.

7. WARRANTY

Pecora Corporation warrants its products to be free of defects. Under this warranty, we will provide, at no charge, replacement materials for, or refund the purchase price of, any product proven to be defective when used in strict accordance with our published recommendations and in applications considered by us as suitable for this product. The determination of eligibility for this warranty, or the choice of remedy available under this warranty, shall be made in our sole discretion and any decisions made by Pecora Corporation shall be final. This warranty is in lieu of any and all other warranties, expressed or implied, including but not limited to a warranty of merchantability or fitness for a particular purpose and in no case will Pecora be liable for damages other than those expressly stated in this warranty, including but not limited to incidental or consequential damages.

8. MAINTENANCE

If the sealant is damaged and the bond is intact, cut out the damaged area and re-caulk. No primer is necessary. If the bond has been affected, remove the sealant, clean and repair joint in accordance with instructions under "installation".

9. TECHNICAL SERVICES

Local Pecora representatives are available to assist you in selecting an appropriate product and to provide on-site application instructions, or to conduct job-site inspections. For further information and assistance, please call our Technical Service department at 215-723-6051 or 800-523-6688.

10. FILING SYSTEMS

- General Building
 - 07100 Waterproofing
 - 07920 Sealants
- Civil Engineering
 - 07100 Waterproofing



079201

**SPECIAL SEALING FOR VERMIN
CONTROL**



Warranty # 37613

Limited Material Warranty

Date: 4/7/2009
Project Reference: Biological Pharm. Complex New College of Pharm. Univ. of KY
General Contractor: Messer Construction Co.
Applicator: M&M Sealants
Owner: Univ. of Kentucky
Date of Completion: TBA

Pecora Corporation warrants its product to be manufactured free from defects in material and workmanship.

Under this warranty, Pecora will be responsible for the cost of replacement material for any materials made necessary by a failure of the sealant under this for a period of five (5) years of substantial completion.

Product: Dynatrol II-SG Urethane
Primer (if used): TBA

The holder of this warranty shall notify Pecora or the applicator in writing of any claims within 30 days from the discovery of any defect. Pecora will then have 30 days in which to schedule an inspection of the installation to determine if Pecora's product is not performing as intended. Pecora reserves the right to run performance tests on building material samples in its laboratory and/or field tests of actual surfaces sealed with the Dynatrol II-SG Urethane sealant. The owner agrees to provide the manufacturer/applicator field representatives with access to the affected areas of the project for purpose of testing and evaluating the performance of the sealant application.

This warranty becomes effective only upon full payment for all Pecora material used on the referenced project and becomes null and void if remedial repairs are performed without written authorization from either the manufacturer or the applicator.

This warranty specifically excludes failure of the sealant due to:

- a) Natural causes such as lightning, earthquake, hurricane, tornado, fire, etc.;
- b) Movement of the structure resulting in stresses on the sealant which exceed Pecora's published specification for elongation and/or compression for the sealant, whether due to structural settlement, design error or construction error;
- c) Disintegration of the underlying substrates;
- d) Mechanical damage to the sealant caused by individuals, tools or other outside agents, or
- e) Changes in the appearance of the sealant from the accumulation of dirt or other contaminants deposited on the sealant from the atmosphere.



Warranty # 37613

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Any claim or controversy between or among the parties arising out of or relating to the application described herein shall be settled by arbitration in accordance with the rules of the American Arbitration Association, and judgment upon the award rendered by the arbitrator may be entered into a court having jurisdiction.

Note: Warranty not in effect unless signed by Pecora Corporation representative.

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Roy D. Cannon, Jr.
Technical Service Director
PECORA CORPORATION

RDC/gm

Pc: Lauren DeFrain, Welling Co.

For questions on this or any other warranty you have with Pecora Corporation, please contact the Technical Service Group at (215) 799-7520 or fax (215) 721-0286.



Pecora Corporation Silicone Building Sealants Limited Weatherseal Warranty

Warranty # 37614

Date: 4/7/2009
Project Reference: Biological Pharm. Complex New College of Pharm. Univ. of KY
General Contractor: Messer Construction Co.
Applicator: M&M Sealants
Owner: Univ. of Kentucky
Primer (if used): TBA
Date of Completion: TBA

Pecora Corporation manufactures and sells a full line of waterproofing materials. These products display a wide range of physical and performance characteristics. Pecora Corporation warrants that its products are manufactured free from defects in material and workmanship. We further warrant that 898 Silicone Sealant will maintain a watertight weatherseal for a period of (5) five years from the date of installation and *if the application exceeds 5000 Lineal Feet*, the following criteria are to be met:

- 1) 898 is applied to compatible substrates in accordance with Pecora Corporation published application procedures.
- 2) 898 is applied within its stated shelf life.
- 3) Field adhesion tests are made and documented to confirm adhesion under site conditions.
- 4) Field adhesion test results are submitted within thirty days of completion of field testing.
- 5) All requirements outlined in Pecora project test results are strictly adhered to.
- 6) All samples submitted for internal testing by Pecora are representative of materials used for job site construction.

The holder of this warranty shall notify Pecora in writing of any claims within thirty (30) days from the discovery of any defect. Pecora will then have thirty (30) days in which to schedule an inspection of the installation to determine if Pecora's product is not performing as intended. Pecora reserves the right to conduct performance testing on actual building material samples in its laboratory and/or in the field. The owner agrees to provide access to any affected areas on the project for the purpose of evaluation and/or testing procedures to be performed by Pecora personnel.

Limitations

- 1) Natural causes such as lightning, earthquake, hurricanes, tornado, fire, etc.
- 2) Movement of the structure resulting in stresses on the sealant which exceed Pecora's published specifications for extension/compression of the sealant, whether due to structural settlement, design error, or construction error;
- 3) Disintegration of the underlying substrates;
- 4) Mechanical damage to the sealant caused by individuals, tools, or other outside agents;
- 5) Changes in the appearance of the sealant from the accumulation of dirt or other contaminants deposited on the sealant from the atmosphere or changes in appearance of the sealant due to contact with materials not compatible with the sealant and not submitted during initial project adhesion and compatibility testing.
- 6) Failure of allied project contractors to follow specific manufacturer installation instructions and guidelines for related material and systems contributing to overall waterproofing of subject structure.



Pecora Corporation Silicone Building Sealants Limited Weatherseal Warranty

Warranty # 37614

This warranty becomes effective only upon full payment for all Pecora material used on the referenced project and becomes null and void if remedial repairs are performed without written authorization from Pecora.

Remedies

In the event of a claim on this warranty, you must notify *Pecora Corporation* within thirty (30) days of the discovery of the claimed defect and provide *Pecora Corporation* with the opportunity to inspect. *Pecora Corporation* shall, for a period of five (5) years from the date of substantial completion of installation of the sealant, be responsible for the cost of replacement material.

This limited warranty for the specific project is in lieu of all other warranties issued by Pecora Corporation regarding the performance of the above specified product. In no case will Pecora Corporation be responsible for liquidate, incidental or consequential damages.

Any claim or controversy between or among parties arising out of or relating to the application described herein shall be settled by arbitration in accordance with the rules of the American Arbitration Association, and judgement upon the award rendered by the arbitrator may be entered into a court having jurisdiction.

Note: Warranty not in effect unless signed by Pecora Corporation representative.

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Roy D. Cannon, Jr.
Technical Service Director
PECORA CORPORATION

RDC/gm

Pc: Lauren DeFrain, Welling Co.

For questions on this or any other warranty you have with Pecora Corporation, please contact the Technical Service Group at (215) 799-7520 or fax (215) 721-0286.

081416

FLUSH WOOD DOORS

SPEC SECTION 081416_1.7
 WARRANTY_2 STATES: WARRANTY
 SHALL ALSO INCLUDE
 INSTALLATION AND FINISHING THAT
 MAY BE REQUIRED DUE TO REPAIR
 OR REPLACEMENT OF DEFECTIVE
 DOOR

GRAHAM GMD LIMITED WARRANTY

Graham WARRANTS ALL GMD DOORS SOLD UNDER THIS WARRANTY (except those expressly excluded from this warranty), to be of good material and workmanship at the time of shipment, and to be free of defects which would render said doors unserviceable or unfit for their ordinary recommended use for the time periods listed below.

This warranty extends only to the first purchaser of said door(s) and may not be enforced by any person to whom the said door(s) are transferred. Claims made under this manufacturer's warranty must be made by the first purchaser on behalf of those to whom he transferred ownership.

The period of warranty coverage extends from the date of shipment by Graham through the periods listed below. Graham will at its option either 1) refund the price received by the manufacturer for, or 2) repair or, 3) replace. **THIS WARRANTY DOES NOT PROVIDE REMOVAL, REHANGING, OR RE-FINISHING COSTS.** However, written notice of any claim under this warranty must be given to the manufacturer promptly when discovered.

In the case of a defect reasonably discoverable by visual inspection of each door upon receipt of the shipment from Graham, notice must be given within thirty days thereafter and prior to treatment or hanging in any manner.

Graham shall not be liable for doors repaired or replaced without its prior consent. Estimates of the repair or replacement costs must be submitted and approved by Graham prior to the work commencing.

TELEGRAPH AND WARP

"Warp is any distortion in the door itself and does not refer to the relationship of the door to the frame or jamb in which it is hung." The term "warp" shall include bow, cup, or twist. The following method will be used to measure the amount of warp present in a door.

Warp shall be measured by placing a straight-edge, taut wire or string on the suspected concave face of the door at any angle (horizontally, vertically, or diagonally), with the door in its installed position. The measurement of the warp shall be made at the point of maximum distance between the bottom of the straight-edge, taut wire, or string and the face of the door.

1. Action on any claim for warp or telegraph after installation may be deferred, at the option of the manufacturer, for a period of 12 months from the date of complaint. During this period doors must remain hung in the original installation to permit conditioning to temperature and humidity.
2. Warp shall not be considered a defect unless it exceeds 1/4 inch in any 3'6" x 7'0" section of the door.
3. Stile, rail and core show-through (telegraphing) on flush doors shall not be considered a defect unless it exceeds 1/100 inch in any 3-inch span.
4. Warp and telegraph shall not be considered defects in any event if the door/doors are not properly finished according to the "Storage, Handling, Finishing, Installation and Maintenance" instructions appearing on the reverse side of this warranty.

ALLOWABLE TOLERANCES

1. Sizing—Length \pm 1/16 inch; Thickness \pm 1/16 inch; Standard width \pm 1/16 inch; Prefit width \pm 1/32 inch.
2. Squareness—Diagonal measurement difference not to exceed 1/8 inch.
3. Hardware Preparation—Hinge mortise \pm 1/32 inch; Lock preparation + 1/32 -0 inch; Window & Louver \pm 1/16 inch of spec; Hinge depth + 15/1000 inch.

MATTERS EXCLUDED FROM THIS WARRANTY

1. Unsatisfactory service or appearance caused by failure to follow recommended Storage, Handling, Finishing, Installation and Maintenance Instructions appearing on the reverse side of this warranty.
2. The performance of doors which are improperly field finished is not warranted in any event.
3. The appearance of field finished doors is not warranted in any event.
4. Natural variations in the color or texture of wood as specified by species and grade are not considered defects.
5. The warranty against warp does not apply to the following:
 - a) All 1 3/8 inch thick doors which are wider than 3'0" or higher than 7'0".
 - b) All doors with face veneers of differing species, or finishes/paints which differ from face to face.
 - c) Doors which are installed improperly.
 - d) Doors which are implemented in improper applications, i.e. interior door in exterior application.
6. This warranty does not cover:
 - a) Flush doors with cutouts for lights and/or louvers any edge of which is nearer than 5 inches* to any edge of the door.
 - b) Flush doors with cutout areas exceeding 40% of the area of the face of the door.
 - c) Flush doors with cutouts exceeding one-half of the height of the door.
 - d) All doors having less than 5 inches* between cutouts for lights, unit locks, louvers, and other hardware cutouts.

***Machining specifications for labeled fire doors must be followed and may vary from these minimum dimensions.**
7. Exterior applications—all hardboard faced doors, mineral core fire rated doors, veneered edge banded doors, or doors not manufactured using Type 1 adhesive bonds between all plies of construction.

Graham sole responsibility under this warranty is as stated herein, and it shall not be liable for consequential, indirect or incidental damages, or for any amount in excess of its price for the shipment involved whether the claim is for breach of warranty or negligence. There are no warranties expressed, written, or implied as to merchantability or fitness for a particular purpose except those stated herein.

DURATION OF GMD LIMITED WARRANTY

GMC SYMBOL	DOOR TYPE	INTERIOR DURATION	EXTERIOR DURATION*
GMD-PC	Particleboard Core	Lifetime	1 Year
GMD-HC	Standard Hollow Core	5 Year	1 Year

* Exterior duration warranty is valid only if doors ordered, utilize skins with exterior glue, type 1 exterior glue bonding face to core, and are properly installed utilizing appropriate flashing and finished per A.W.I. quality standards sec. 1300-G-19.

Lifetime warranty applies to the original installation only.

STORAGE, HANDLING, FINISHING, INSTALLATION AND MAINTENANCE INSTRUCTIONS

STORAGE AND HANDLING **DOORS ARE TO BE PACKAGED IN EITHER CLEAR PLASTIC OR CARDBOARD CARTON**

1. Store doors in a flat, level, horizontal position supported by at least 3 full width 2 X 4's.
2. Handle doors with clean hands or while wearing clean gloves.
3. Do not drag doors across one another, lift and carry them.
4. Store doors in clean surroundings protected from dirt, abuse, excess moisture or dryness, extremes of temperature, or direct sunlight.
5. If doors are covered to protect them be sure to allow circulation.
6. Do not deliver doors to the jobsite until construction materials i.e., plaster, concrete, paint, etc. are dry and temperature and humidity are controlled and normal.
7. Doors should be conditioned to the average prevailing humidity of the locality and jobsite prior to hanging.
8. Certain species of wood, particularly oak, contain chemicals which react unfavorably with ferrous metals causing dark blue/black stains. Avoid contact with steel, steel products, filings, etc.

PREPARATION FOR FINISHING

1. Prior to finishing insure that the building atmosphere is dried to a normal, interior relative humidity of 25% to 55%, 50-90 degrees F per WDMA I.S.1A
2. Sanding and Finishing must be done with the door in a horizontal position.
3. Prior to finishing remove all handling marks, raised grain, and other undesirable blemishes by completely hand block sanding all surfaces with a 100 to 150 fine grit abrasive. Do not use steel wool. Do not spot sand. Failure to properly prepare the surface will result in blotchy appearance.
4. When possible, the species finish combination should be tested prior to finishing the doors. Notify the finish supplier and door supplier immediately if any undesirable reaction is noticed. Do not continue with finishing until the problem is resolved.
5. In order not to induce warpage, avoid dark stains or dark colored paints on door surfaces exposed to direct sunlight.
6. To prevent blemish magnification, avoid extremely dark stains on light colored wood species.
7. Water based sealers or prime coats should not be used. Water based top coats should be used only over surfaces which have been completely sealed with a non-water based sealer or primer.
8. A first coat of thinned sanding sealer, followed by light block sanding, will minimize subsequent handling marks, and promote uniformity of subsequent stain coats.
9. High gloss finishes are not recommended.
10. Be sure the door surface is satisfactory before applying sealers, stains or topcoats.

INSTALLATION

1. The utility or structural strength of the doors must not be impaired in fitting the door to the opening, preparation and application of hardware, preparation and application of lights, louvers, plant-ons or other detailing.
2. On all exterior and interior solid core doors, use a minimum of one hinge for each 30 inches of door height. When using 3 or more hinges they are to be equally spaced. Interior hollow core doors weighing less than 50 pounds and not over 6' 8" in height may be hung on two hinges.
3. Pilot holes must be drilled for the screws attaching hinges, lock hardware, and other devices to the faces of door stiles. Pilot holes should be 70% of the root diameter for wood screws used in application to softwood stiles and 90% of the root diameter for wood screws used in application to hardwood stiles.
4. All hardware locations, preparations, and methods of attachment must be appropriate for the specific door construction.
5. Clearances between door edges and door frame shall be a minimum of 1/16 inch on the hinge edge, 1/8 inch on the latch edge and top rail.
6. Doors shall be completely finished for seal, stain, topcoat and hardware preparation prior to installation.
7. Properly protect top and bottom edges of exterior doors and the bottom of light or louver cutouts with proper finishes and metal flashing to prevent moisture from leaking into the core. Exterior lip mouldings must be used in light/louver openings.
8. Exterior doors, in geographical areas having climatic conditions that cause substantial temperature and/or humidity differences on opposite sides of the door, should be installed in a storm door unit to help prevent warpage.
9. Fire doors bearing Graham Manufacturing Corporation certification labels have been prepared for installation per the conformance authorities granted by Warnock Hersey International and under label service. The door is to be installed so that the certification label will be on the hinge stile at approximately eye level. Removal or tampering with this label will void the rating of the door. Fire Doors must be installed per label instructions.
10. Job site modification of certified, labeled fire doors is restricted to the following:
 - a) Function holes for mortise locks, holes for labeled viewers, a maximum 3/4" undercutting of book height doors, protection plates and preparations for surface and applied hardware not to exceed 1" in diameter.
 - b) Unless otherwise identified, certified labeled fire doors installed in pairs must have metal meeting edges or metal meeting edges with an astragal.
 - c) Pilot holes must be drilled for all screw applications. Drill 5/32" diameter pilot holes for No. 12 screws.

MAINTENANCE

1. Insure that doors have been finished and installed properly.
2. Insure the doors continue to swing freely, do not bind in the frame and that all hardware is well maintained and remains functional.
3. Protect the doors and hardware from abuse by the users.
4. Most finishes on both interior and exterior doors will deteriorate with time and use. In order for these doors to continue receiving the protection required, periodic inspection and repair or refinishing is necessary. Frequency of inspection and repair or refinish should be at least once a year for exterior doors and at least once every two years for interior doors.
5. Periodic care and cleaning of the door finish is recommended. Care should be taken not to use chemical cleaners or polishes which will react unfavorably with the finish materials.
6. Care should be taken to insure that any repair or replacement of the finish is done with materials which are compatible with the original materials used. Follow the instructions under "Preparation for Finishing."

MATERIAL SAFETY DATA INFORMATION

In accordance with the 1989 O.S.H.A. "Z" List of Hazardous materials and the reporting of those materials, Graham of Mason City, Iowa issues the following statement:

NO materials used in the production or manufacture of any Graham products are hazardous to the handler or user of those products when they are finished and installed according to accepted industry standards.

Wood and wood products are exempt and **are not** defined as hazardous by the O.S.H.A. standard.

Customer:

Job Name:

GMC#:

PO#:

INV#:

DATE:

GRAHAM • 1502 12th Street NW • P.O. Box 1647 • Mason City, IA 50402-1647
Phone: 641-423-2444 • FAX: 800-672-8110

Graham[™]
wood doors

ASSA ABLOY

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in door opening solutions

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Products - Stile and Rail Door Warranty

Stile and Rail Doors

Panel Doors

French Doors

Combination Doors

Louver Doors

8212 Specification

Thermal Fused Flush Doors

Flush Door Facas

8210 Specification

Specialty Doors

Acoustical Doors

Lead-Lined Doors

Bullet-Resistant Doors

Historic Replications

Frames

TERMS AND CONDITIONS OF SALE Section #8200 Wood Doors

1. Applicability: Seller's sale of products and services is expressly conditioned upon these terms and conditions. All quotations, offers to sell, proposals, acknowledgments and acceptances of orders by Seller are subject to these Terms and Conditions of Sale, and acceptance by Purchaser is expressly limited to them. Any conflicting terms and conditions set forth in any purchase order or similar communication submitted to Seller by Purchaser are objected to, and are deemed proposals for addition to the contract of sale, and do not become part of the contract of sale between Seller and Purchaser unless expressly and separately agreed to in writing by Seller. Authorization by Purchaser, whether written or oral, for Seller to supply the products and services will constitute acceptance of these Terms and Conditions of Sale.

2. Prices: Prices quoted by Seller are valid for the stated period. If no period is stated, then any proposal shall expire without notice 30 calendar days after issuance, unless terminated earlier by prior written notice. Prices quoted do not include any federal, state, local or other taxes, including but not limited to sales and use taxes, turnover taxes, duties, fees, or other specific assessments which may be levied against the products, and Purchaser agrees to pay any and all such taxes which Seller may be required by law to pay or collect on account of the manufacture or sale of goods and performance of any services for Purchaser.

3. Specifications: Specifications are as stated in Seller's written quotation. No other specifications may be deemed part of the contract between Seller and Purchaser unless specifically identified as such in a writing made part of the contract and signed by the Seller. After the contract of sale becomes effective, specification changes requested by Purchaser and agreed to by Seller may become part of the contract only by separate written agreement signed by Seller, in which event the prices quoted in connection with the original specifications will be subject to change.

4. Shipment: Shipments are F.O.B. plant of manufacture. Any shipment dates quoted by Seller are approximate. Seller shall select the mode of shipment and carrier. All shipping costs shall be borne by Purchaser. Seller shall exercise reasonable care in preparing items for shipment. Purchaser agrees to advise Seller and pay for any additional packaging and crating requirements. Purchaser shall be liable to Seller for any storage, warehouse or demurrage charges and any extra cartage and handling charges caused by Purchaser's failure or refusal to accept delivery of the products when tendered. If shipment is delayed at Purchaser's request, then any payments otherwise due from Purchaser to Seller upon delivery shall immediately become due and payable, and Purchaser shall pay, prior to shipment, any costs of handling, storage and insurance of the products incurred prior to delivery of the products.

5. Force Majeure; Purchaser's Rights In The Event Of Delays : Seller shall not be held responsible for any delay or failure in performance of any part of its obligations to Purchaser, to the extent that such delay or failure is caused by fire, flood, explosion, war, strike, embargo, government requirement, civil or military authority, act of God, or other similar causes beyond the parties' control. Seller shall not be liable to Purchaser for any damages purported to be due to delays in shipment, regardless of the causes of the delays. Purchaser may cancel the contract due to delays only if (a) shipment is delayed for more than 120 days by delays caused by Seller, (b) after any such 120 day delay period, Purchaser gives Seller notice in writing of Purchaser's intent to cancel the contract unless shipment is made within 30 days of Purchaser's written notice, (c) Seller fails to ship within 30 days after Purchaser's written notice, and (d) Purchaser provides Seller with written notice canceling the contract after the expiration of the 30 days without shipment. If Purchaser cancels the contract in accordance with the foregoing, then Seller shall refund to Purchaser all funds paid by Purchaser for the products, and shall have no further liability of any kind to Purchaser.

6. Installation: Installation is by Purchaser. Seller is not responsible for installation.

7. Cancellation: Purchaser may only cancel the contract by giving notice in writing to Seller of the cancellation. Purchaser may cancel the contract for delay only in accordance with the provisions stated above. If Purchaser cancels the contract for any reason other than delay in shipment, then Seller may retain all payments made by Purchaser prior to the cancellation, regardless of Seller's costs prior to the cancellation. If Seller's costs at the time of cancellation, plus 15

NEWS AND UPDATES

****New Certifications****
NAUF and FSC



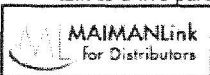
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Sam-5pm (Central Time) M-F

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Have more questions? Need to
talk to a live person?



percent of the costs, collectively exceed the amount of any payments made by Purchaser prior to the cancellation, then Purchaser shall be liable to Seller for such increment in excess of the amount of Purchaser's payments.

8. Warranty: Seller warrants that all doors manufactured and provided by Seller are warranted to be free from defects in material and workmanship which would render them unserviceable or unfit for ordinary, recommended use. Seller's entire liability and exclusive remedy to Purchaser, any Third Party Purchaser, or Consumer of any doors is expressly limited to the repair and replacement, at Seller's sole discretion, of any doors that are determined by Seller to be defective under the terms of this warranty. Action by Seller on any claim may be deferred at the option of Seller for a period not to exceed 1 year from the date of installation to permit conditioning of the doors to temperature and humidity conditions.

THE WARRANTY SET FORTH HEREIN IS IN LIEU OF ALL OTHER WARRANTIES, WHETHER EXPRESSED, IMPLIED OR STATUTORY, INCLUDING BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

9. Instructions For Storage, Handling, Finishing, Use and Installation: Since methods and conditions of installation and use are beyond Seller's control, Seller's warranty is not effective unless the doors are stored, handled, finished, used and installed in strict accordance with the following provisions:

STORAGE AND HANDLING

- Store doors flat on a level surface in a dry, well-ventilated building. Doors must not come in contact with water. Doors should be kept at least 4 in. (102mm) off the floor and must have protective coverings under the bottom door and over the top. Covering must protect doors from dirt, water and abuse but allow for air circulation under and around the stack.
- Doors must not be subjected to direct sunlight. Certain species (e.g., cherry, mahogany, walnut, and teak) in an unfinished state are more susceptible to discoloration if exposed to sunlight or some forms of artificial light. To protect doors from light damage after delivery, opaque wrapping of individual doors may be specified.
- Do not subject interior doors to extremes of heat and/or humidity. Do not allow doors to come in contact with water. Prolonged exposure may cause damage. Buildings where humidity and temperature are controlled provide the best storage facilities (conditions must be maintained between 25%-55% RH and 50°F-90°F (10°C to 32°C)).
- Do not install doors in buildings that have wet plaster or cement. Do not store doors in buildings with excessive moisture content – HVAC systems must be operating and balanced.
- Doors must always be handled with clean dry hands or while wearing clean dry gloves.
- Doors must be lifted and carried when being moved, not dragged across one another.

FINISHING

- Wood is hygroscopic and dimensionally influenced by changes in moisture content caused by changes within its surrounding environment. To assure uniform moisture exposure and dimensional control, all surfaces must be finished equally.
- Doors must not be considered ready for finishing when initially received. Before finishing, remove all handling marks, raised grain, scuffs, burnishes and other undesirable blemishes by block sanding all surfaces in a horizontal position with 120, 150 or 180 grit sandpaper. All architectural flush and stile & rail doors, due to their weight, naturally compress the face veneer grain while in the stack. Therefore, sanding of the overall surface will be required to open the veneer grain to receive a field applied finish evenly. To avoid cross grain scratches, sand with the grain.
- Certain species of wood, particularly oak, may contain extractives which react unfavorably with foreign materials in the finishing system. Do not use steel wool on bare wood, rusty containers or any other contaminate in the finishing system.
- A thinned coat of sanding sealer should be applied prior to staining to promote a uniform appearance and avoid sharp contrasts in color or a blotchy appearance. Door manufacturers are not responsible for the final appearance of field-finished doors. It is expected that the painting contractor will make adjustments as needed to achieve desired results.
- All exposed, unfinished wood surfaces must be finished and the top and bottom rails sealed. Cutouts for hardware must be sealed prior to installation of hardware.
- Dark colored finishes should be avoided on all surfaces if the door is exposed to direct sunlight, in order to reduce

Specifications
require a lifetime
warranty of the
wood doors.

SPEC SECTION 081433_1.7
WARRANTY_A_1 STATES:
WARRANTY SHALL
INCLUDE INSTALLATION
AND FINISHING THAT MAY
BE REQUIRED DUE TO THE
REPAIR OR REPLACEMENT
OF DEFECTIVE DOORS

the chance of warping or veneer checking.

- Water-based coatings on unfinished wood will cause delamination, veneer splits, highlight joints and raise wood grain. If used on exterior doors, the coating must be an exterior grade product. When installed in exterior applications, doors must be properly sealed and adequately protected from the elements. Please follow the finish and door manufacturer's recommendations regarding the correct application and use of these products. The Maiman Company does not guarantee doors installed in an exterior application.
- Be sure the door surface being finished is satisfactory in both smoothness and color after each coat. Allow adequate drying time between coats. Desired results are best achieved by following the finish manufacturer's recommendations. Do not finish doors until a sample of the finish has been approved
- Certain wood fire doors have fire retardant salts impregnated into various wood components that make the components more hygroscopic than normal wood. When exposed to high moisture conditions, these salts will concentrate on exposed surfaces and interfere with the finish. Before finishing the treated wood, reduce moisture content below 11% and remove the salt crystals with a damp cloth followed by drying and light sanding.

INSTALLATION

- The utility or structural strength of the doors must not be impaired when fitting to the opening, in applying hardware, in preparing for lites, louvers, plant-ons or other detailing.
- Use two hinges for solid core doors up to 60 in. (1524 mm) in height, three hinges up to 90 in. (2286 mm) in height or portion thereof. Use heavy weight hinges on doors over 175 lbs. (79 kg). Pivot hardware may be used in lieu of hinges. Consult hinge or pivot hardware manufacturer with regard to weight and size of hinges or pivots required.
- The maximum clearance between the top, hinge edge and lock edge to the frame and meeting edge of pairs of doors, is 1/8 in. (3.2 mm).
- All hardware locations, preparations and methods of attachment must be appropriate for the specific door construction. Templates for specific hardware preparation are available from hardware manufacturers or their distributors.
- When lite or louver cutouts are made for exterior doors, they must be protected in order to prevent water from entering the door core.
- Pilot holes must be drilled for all screws that act as hardware attachments. Full threaded screws are preferable for fastening hardware to non-rated doors and are required on fire-rated doors. **Self-tapping or combination wood/metal screws are not to be used on wood doors.**
- If a full threaded screw is installed, then subsequently removed from a non-combustible fire door core, a new fastener with a larger root diameter and 1/2" longer than the original **MUST BE SUBSTITUTED**. This non-combustible material has considerably less "memory" than wood products do, and, therefore, must follow different guidelines for fasteners than wood-based cores.
- In fitting non-rated doors for height, do not trim top or bottom edge by more than 3/4 in. (20 mm) unless accommodated by additional blocking. Trimming of fire-rated doors must be in accordance with NFPA 80.
- Doors and door frames must be installed plumb, square and level.

CLEANING AND TOUCHUP

- Inspect all wood doors prior to hanging them on the job. Repair noticeable marks or defects that may have occurred from improper storage and handling.
- **Field repairs and touchups are the responsibility of the installing contractor upon completion of initial installation.** Field touchup shall include the filling of exposed nail or screw holes, re-finishing of raw surfaces resulting from job fitting, repair of job inflicted scratches and mars and final cleaning of finished surfaces.
- When cleaning door surfaces, use a non-abrasive commercial cleaner designed for cleaning wood door or paneling surfaces, that does not leave a film residue that would build up or affect the surface gloss of the door finish.

ADJUSTMENT AND MAINTENANCE

- Insure that all doors swing freely and do not bind in their frame. Adjust the finish hardware for proper alignment, smooth operation and proper latching without unnecessary force or excessive clearance.

- Review with the owner/owner's representative how to periodically inspect all doors for wear, damage and natural deterioration.
- Review with the owner/owner's representative how to periodically inspect and adjust all hardware to insure that it continues to function as it was originally intended.
- Finishes on exterior doors may deteriorate due to exposure to the environment. In order to protect the door it is recommended that the condition of the exterior finish be inspected at least once a year and re-finished as needed. Both exterior and interior finishes will change color over time. The Maiman Company does not guarantee doors installed in an exterior application.

10. Warranty Exclusions: Seller's warranty does not cover the following.

- The appearance of field finished doors.
- Natural variations in the color, texture, character, or cut of the wood.
- Doors with cutouts nearer than five inches to the door edge, or doors with less than five inches between adjacent cutouts such as hardware, lights, and louvers, etc.
- Doors which are improperly hung or do not swing freely.
- Warpage of doors less than 1-3/4 inches thick which are wider than 3/0 or higher than 7/0.
- Normal wear and tear including wear-through of finish.
- The appearance of high gloss wood faced doors.
- Incompatibility of hardware with a particular door construction. This includes concealed closures deeper than 2 inches and concealed vertical rod devices.
- Exterior doors are not warranted under any circumstances.
- Construction involving different species or face materials on opposite sides of the door. This may create an unbalanced condition not warranted against warpage.
- Construction involving appliques to one face of the door, which creates, unbalanced conditions.
- Doors that are not treated as outlined in the Handling, Finishing and Installation Instructions.
- Doors that are stored longer than 15 days.
- Doors that have any form of facing grooving penetrating the veneer.
- Doors altered by others for size by re-railing or re-stiling.
- Applied lumber mouldings in excess of 3-1/2 inches in width or which cover over 25% of a door face.
- Doors exceeding 3'-6" in width, or 9'-0" in height are not warranted.
- Doors that are constructed of solid lumber, or other deviations from The Maiman Company's standard construction practices are not warranted.

INSTALLER TO ADHERE TO THESE TERMS OR PROVIDE WRITTEN AUTHORIZATION FROM MANUFACTURER

11. Special Provision As To Warping: Seller's warranty is subject to the following special provision with respect to warping: Warp shall not be considered a defect unless it exceeds 1/4 inch in the plane of the door itself. For doors 1-3/4 inch or thicker, warp shall not exceed 1/4 inch in doors 3/6 x 7/0 or smaller, nor shall it exceed 1/4 inch in doors 3/6 x 7/0 section of larger doors. For doors less than 1-3/4 inch thick, warp shall not exceed 1/4 inch in doors 3/0 x 7/0 or smaller. Warp is any distortion in the door itself and does not refer to the relationship of the door to the frame, jamb, or adjacent doors. Warp is measured by placing a straight edge on the concave face and determining the maximum distance from straight edge to the door face.

12. Notice Provision: Purchaser shall notify Seller in writing promptly upon discovery of facts giving rise to any claim under this warranty, stating specifically the nature of the claim, the date of discovery of same, identifying the product involved, and providing photographic evidence of the condition of the doors. Failure to so notify Seller within ninety days after discovery of facts giving rise to the claim shall fully and completely relieve Seller from any obligation under this warranty.

13. Partial Invalidity: If any provision or portion of a provision of these Terms and Conditions of Sale is determined to be invalid under any applicable law, it shall be deemed omitted, and the remaining provisions and partial provisions hereof shall continue in full force and effect.

14. Governing Law And Dispute Resolution: The contract between Seller and Purchaser, including these Terms and Conditions of Sale, shall be interpreted and construed in accordance with the laws of the state of Missouri. All disputes in any way involving the contract between Seller and Purchaser, including these Terms and Conditions of Sale, shall be decided by mediation/arbitration in the following manner. Disputes shall be initially submitted to mediation before the American Arbitration Association ("AAA"), in accordance with the AAA's construction industry rules for mediation, with the mediation to take place in Greene County, Missouri. If after twelve hours of actual mediation time, the parties have not reached a settlement, then the mediator shall declare the mediation proceedings closed, at which time the mediator shall assume the role of an arbitrator, and each of the parties shall simultaneously provide the mediator with a final offer and demand. Within 24 hours of such submission, the arbitrator shall select either the final offer or the final demand, with the Arbitrator's selection to be entered as the Final Award in the Arbitration, binding on the parties. The Arbitrator's Award may be confirmed and enforced as a judgment in any court competent to do so.

15. Changes: No changes of the contract between the parties or to these Terms and Conditions of Sale shall be binding without the written consent of both parties.

16. LIMITATION ON DAMAGES: SELLER SHALL NOT BE LIABLE FOR ANY CONSEQUENTIAL OR INCIDENTAL DAMAGES OF ANY KIND. THIS LIMITATION ON DAMAGES IS INTENDED TO HAVE THE BROADEST POSSIBLE APPLICATION AND IS INTENDED TO APPLY TO ALL DISPUTES THAT ARE DIRECTLY OR INDIRECTLY RELATED TO THE CONTRACT BETWEEN THE PARTIES AND/OR THE PRODUCTS TO BE SUPPLIED BY SELLER, REGARDLESS OF WHETHER OR NOT THE PRODUCTS ARE ACTUALLY MANUFACTURED AND/OR SHIPPED TO THE PURCHASER. EXCEPT AS OTHERWISE PROVIDED HEREIN, PURCHASER'S EXCLUSIVE REMEDY FOR ALL CLAIMS ARISING OUT OF THE CONTRACT OF SALE SHALL BE THE RIGHT TO REPAIR OR REPLACEMENT OF NONCONFORMING PRODUCTS, OR AT SELLER'S OPTION, REPAYMENT OF THE PURCHASE PRICE. SELLER'S LIABILITY TO PURCHASER FOR DAMAGES, REGARDLESS OF WHETHER SUCH DAMAGES ARE DISCLAIMED HEREIN, SHALL IN NO EVENT EXCEED THE CONTRACT PRICE.

17. Assignment: This agreement benefits Seller, its successors and assigns. Seller may assign its rights under the contract, and the assignee and any subsequent assignee shall have all the rights and remedies of Seller under the contract of sale. Neither the contract of sale nor the obligations thereunder may be assigned or transferred by Purchaser unless separately agreed to by Seller, in writing. Any purported assignment by Purchaser in violation of this provision shall be void as against Seller.

18. Security Interest: Seller reserves a purchase money security interest in all products delivered until Seller receives the full purchase price. Purchaser agrees to execute any documents at Seller's request with respect to creation and perfection of a security interest in the products sold.

The Maiman Company, Ince. (The Maiman Company) warrants Stile and Rail doors to be of good material and workmanship and will provide satisfactory performance for a period of one year from the date of invoice.



THE MAIMAN COMPANY

Fine Architectural Doors

Warranty Information from The Maiman Company's Stile and Rail Doors Terms & Conditions

How to Store, Handle, Finish, Install and Maintain Wood Doors

Care and Installation at the Job Site

To preserve the fine qualities of wood doors and a lifetime of superior service, proper storage, handling, finishing and installation is very important. The following procedures are required to maintain the high quality products supplied by The Maiman Company. Failure to comply with these procedures will nullify any warranty extended by The Maiman Company.

Storage and Handling DOORS ARE TO BE PACKAGED IN CLEAR PLASTIC OR CARDBOARD CARTONS

1. Store doors flat on a level surface in a dry, well-ventilated building. Doors must not come in contact with water. Doors should be kept at least 4 in. (102mm) off the floor and must have protective coverings under the bottom door and over the top. Covering must protect doors from dirt, water and abuse but allow for air circulation under and around the stack. Do not store doors longer than 15 days.
2. Doors must not be subjected to direct sunlight. Certain species (e.g., cherry, mahogany, walnut, and teak) in an unfinished state are more susceptible to discoloration if exposed to sunlight or some forms of artificial light. To protect doors from light damage after delivery, opaque wrapping of individual doors may be specified.
3. Do not subject interior doors to extremes of heat and/or humidity. Do not allow doors to come in contact with water. Prolonged exposure may cause damage. Buildings where humidity and temperature are controlled provide the best storage facilities. Conditions for storage, installation and use must be maintained between 25%-55% RH and 50°F-90°F (10°C to 32°C).
4. Do not install doors in buildings that have wet plaster or cement. Do not store doors in buildings with excessive moisture content – HVAC systems must be operating and balanced.

Please contact us with any questions (417) 862-0681
www.maiman.com sales@maiman.com

5. Doors must always be handled with clean dry hands or while wearing clean dry gloves.
6. Doors must be lifted and carried when being moved, not dragged across one another or any other surface.

Finishing

1. Wood is hygroscopic and dimensionally influenced by changes in moisture content caused by changes within its surrounding environment. To assure uniform moisture exposure and dimensional control, all surfaces must be finished equally. Doors must be finished within 5 days of delivery from manufacturer.
2. Wood doors must not be considered ready for finishing when initially received. Before finishing, remove all handling marks, raised grain, scuffs, burnishes and other undesirable blemishes by block sanding all surfaces in a horizontal position with 120, 150 or 180 grit sandpaper. All architectural wood veneered flush and stile & rail doors, due to their weight, naturally compress the face veneer grain while in the stack. Therefore, sanding of the overall surface will be required to open the veneer grain to receive a field applied finish evenly. To avoid cross grain scratches, sand with the grain.
3. Certain species of wood, particularly oak, may contain extractives which react unfavorably with foreign materials in the finishing system. Do not use steel wool on bare wood. Do not use rusty containers or any other contaminate in the finishing system.
4. A thinned coat of sanding sealer should be applied prior to staining to promote a uniform appearance and avoid sharp contrasts in color or a blotchy appearance. The Maiman Company is not responsible for the final appearance of field-finished doors. The painting contractor must make adjustments as needed to achieve desired results.
5. All exposed, unfinished wood surfaces must be finished and the top and bottom rails sealed within 5 days of delivery from the manufacturer. Cutouts for lites and hardware must be sealed prior to installation of hardware.
6. Do not use dark colored finishes on door surfaces that will be exposed to direct sunlight to minimize the chance of warping or veneer checking.
7. Do not use water-based sealers, primers, or other finishes on Stile & Rail doors or frames. Water-based coatings applied to unfinished wood will cause delamination, veneer splits, highlight joints and raise wood grain. If used on exterior doors, the coating must be an exterior grade product. When installed in

exterior applications, doors must be properly sealed and adequately protected from the elements. Please follow the finish and door manufacturer's recommendations regarding the correct application and use of these products. The Maiman Company does not guarantee doors installed in an exterior application.

8. The door surface must be thoroughly finished in both smoothness and color after each coat. Allow adequate drying time between coats. Desired results are best achieved by following the finish manufacturer's recommendations. Do not finish doors until a sample of the finish has been approved.
9. Certain wood fire doors have fire retardant salts impregnated into various wood components that make the components more hygroscopic than normal wood. When exposed to high moisture conditions, these salts will concentrate on exposed surfaces and interfere with the finish. Before finishing the treated wood, reduce moisture content below 11% and remove the salt crystals with a damp cloth followed by drying and light sanding.

Installation

1. The utility or structural strength of the doors must not be impaired when fitting to the opening, in applying hardware, in preparing for lites, louvers, plant-ons or other detailing.
2. Use two hinges for solid-core doors up to 60 in. (1524 mm) in height, three hinges up to 90 in. (2286 mm) in height or portion thereof. Use heavy weight hinges on doors over 175 lbs. (79 kg). Pivot hardware may be used in lieu of hinges. Consult hinge or pivot hardware manufacturer with regard to weight and size of hinges or pivots required.
3. The maximum clearance between the top, hinge edge and lock edge to the frame and meeting edge of pairs of doors, is 1/8 in. (3.2 mm).
4. All hardware locations, preparations and methods of attachment must be appropriate for the specific door construction. Templates for specific hardware preparation are available from hardware manufacturers or their distributors.
5. When lite or louver cutouts are made for exterior doors, they must be protected in order to prevent water from entering the door core.
6. Pilot holes must be drilled for all screws that act as hardware attachments. Full threaded screws are preferable for fastening hardware to non-rated doors and are required on fire-rated doors. **Self-tapping or combination wood/metal screws are not to be used on wood doors.**

7. If a full threaded screw is installed, then subsequently removed from a non-combustible fire door core, a new fastener with a larger root diameter and 1/2" longer than the original **MUST BE SUBSTITUTED**. This non-combustible material has considerably less "memory" than wood products do, and, therefore, must follow different guidelines for fasteners than wood-based cores.
8. In fitting non-rated doors for height, do not trim top or bottom edge by more than 3/4 in. (20 mm) unless accommodated by additional blocking. Trimming of fire-rated doors must be in accordance with NFPA 80.
9. Doors and door frames must be installed plumb, square and level.

Cleaning and Touchup

1. Inspect all wood doors prior to hanging them on the job. Repair noticeable marks or defects that may have occurred due to improper storage or handling.
2. **Field repairs and touchups are the responsibility of the installing contractor upon completion of initial installation.** Field touchup shall include the filling of exposed nail or screw holes, re-finishing of raw surfaces resulting from job fitting, repair of job inflicted scratches and mars and final cleaning of finished surfaces.
3. When cleaning door surfaces, use a non-abrasive commercial cleaner designed for cleaning wood door or paneling surfaces, that does not leave a film residue that would build up or affect the surface gloss of the door finish.

Adjustment and Maintenance

1. Insure that all doors swing freely and do not bind in their frames. Adjust the finish hardware for proper alignment, smooth operation and proper latching without unnecessary force or excessive clearance.
2. Review with the owner/owner's representative how to periodically inspect all doors for wear, damage and natural deterioration.
3. Review with the owner/owner's representative how to periodically inspect and adjust all hardware to insure that it continues to function as it was originally intended.
4. Finishes on exterior doors may deteriorate due to exposure to the environment. In order to protect the door it is recommended that the condition of the exterior finish be inspected at least once a year and re-finished as needed. Both exterior and interior finishes will change color over time. The Maiman Company does not guarantee doors installed in an exterior application.

081433

STILE & RAIL WOOD DOORS



THE MAIMAN COMPANY

Fine Architectural Doors

Atlas Metal Products
Attn: Pam Barr
125 F Trade Street
Lexington, Ky. 40511

April 13, 2009

Ph: 859-254-9244
Fax: 859-254-9057

Re: Univ. of Kentucky – Bio-Pharmacy
Maiman Order # 32670

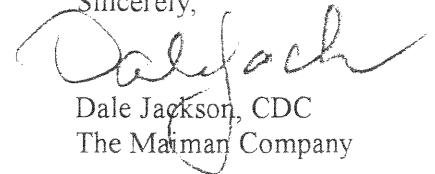
Dear Pam,

This letter is to verify that our warranty on this project will include the cost to refinish and rehang any doors that have a manufacturing defect. The warranty period is for the life of the original installation.

We do not send out warranties until the project is shipped and paid for. Our standard warranty is on our website if you need to look at it. (www.maiman.com)

If you have any other questions or I can be of assistance in this matter please let me know.

Sincerely,



Dale Jackson, CDC
The Maiman Company

Cc: Job Folder

082200

FRP DOORS & FRAMES



Tiger Door, LLC., 1802 Izard Street Omaha, Nebraska USA 68102
Phone (402) 346-4344, Fax (402) 346-0561

**Statement of Warranty
(Limited Door and Frame Warranty)**

Warranty:

Tiger Door™ Warranty for Medium Duty doors

Tiger Door Medium Duty doors shall be guaranteed for the life of the product against **delamination** and failure due to corrosion from the specific chemical environment named at the time of purchase. Furthermore, all products are inspected prior to shipment and guaranteed against defective workmanship for a period of ten (10) calendar years after the date of purchase. *Subs. completion*

Tiger Door™ Warranty for Heavy Duty doors

Tiger Door Heavy Duty fiberglass doors are guaranteed for the life of the product against **delamination** and failure due to corrosion from the specific chemical environment named at the time of purchase. Tiger Doors are also guaranteed for the life of the product to meet the door industry standards for flatness. Furthermore, all products are inspected prior to shipment and guaranteed against defective workmanship for a period of ten (10) calendar years after the date of purchase.

Tiger Door™ Warranty for Extreme Duty doors

Tiger Door Extreme Duty fiberglass doors are guaranteed for the life of the product against **delamination** and failure due to corrosion from the specific chemical environment named at the time of purchase. Tiger Doors are also guaranteed for the life of the product to meet the door industry standards for flatness. Furthermore, all products are inspected prior to shipment and guaranteed against defective workmanship for a period of ten (10) calendar years after the date of purchase.

Tiger Door™ Warranty for Extreme Duty Fire rated doors

Tiger Door fiberglass Fire Doors are guaranteed for 10 years against **delamination** due to corrosion from the specific chemical environment named at the time of purchase. Furthermore, all products are inspected prior to shipment and guaranteed against defective workmanship for a period of ten (10) calendar years after the date of purchase.

Tiger Door™ Warranty for Medium, Heavy, and Extreme Duty door frame and windows

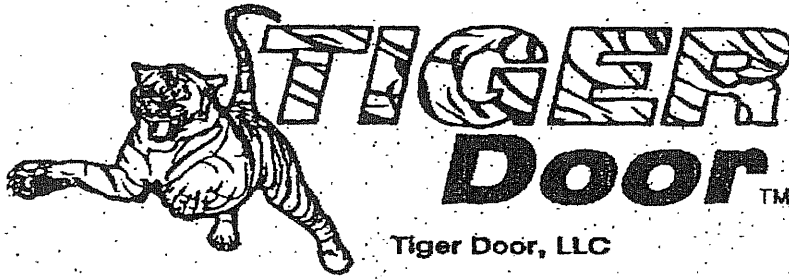
Tiger Door fiberglass frames and windows, welded corners and chemically bonded hinge reinforcements are guaranteed for the life of the product against failure due to corrosion from the specific chemical environment named at the time of purchase. Furthermore, all products are inspected prior to shipment and guaranteed against defective workmanship for a period of ten (10) calendar years after the date of purchase.

Tiger Door™ Warranty for Engineered Duty door, frame and windows

Due to the classified or protective nature of Tiger Door's Engineered Duty series of products, statement of warranty will be conveyed in writing to the owner at time of purchase. No other Tiger Door LLC warranty written or implied shall be applicable.

Conditions, Exceptions, and Remediations:

1. A new door will be offered in replacement of the original door or the factory price refunded at the option of the door manufacturer.
2. This guarantee does not extend to failure caused by excessive wear and tear, physical abuse, improper installation, unauthorized cuts or bores, improper maintenance, thermal bow (as recognized by industry standards) or bond separations that exhibit substrate fiber tear.
3. Factory applied gelcoat or color topcoat is excluded from this warranty.
4. **Delamination** is limited to separation of the door face laminate from the fiberglass tube, honeycomb, or mineral door core, and/or separation of the layers of fiberglass and resin that make up the door skin. Pinholes, edge cracking of any length, and/or edge splitting that does not exceed ¼" in depth is considered cosmetic, and is not covered as part of the delamination warranty due to the sacrificial nature of the fiberglass edge strip.
5. Should a problem with any Tiger Door product arise, the customer should inform Tiger Door, LLC. Customer Service Department *in writing* immediately and call (888-891-4416). Tiger Door must be notified and provided with sufficient time to remedy any product deficiencies that require factory attention. This time period may include but is not limited to production lead times, travel time and raw material lead times.
6. Tiger Door will not be responsible for any charges or back charges related to unapproved repair, product installation, removal, and/or re-installation. Defective product shall not be installed prior to correction.
7. Tiger Door, LLC. reserves the right to approve all repairs or remediation to any Tiger Door product. Any repairs, remediation, or modifications undertaken without expressed written approval from Tiger Door, LLC. shall be the responsibility of the customer and may void any warranty. If required as a part any factory approved repair, all service time and labor rates shall be determined by Tiger Door, LLC.
8. Tiger Door LLC's Liabilities are limited to repair, replacement, or refund of the factory quoted price (Tiger Door's option). Under no conditions shall Tiger Door LLC be liable or have any obligation for losses, expenses, litigation fees, damages including loss of use, loss of profits, damage to persons or property, or any actual, incidental, liquidated, or consequential damages.
9. All returned orders to Tiger Door, LLC. must have a Tiger Door, LLC. issued RMA number prior to shipment. Only Tiger Door, LLC. customer service or management shall have authority to issue RMA numbers.
10. Items damaged in shipment are considered freight damage thus freight claims shall not be considered part of the Tiger Door Warranty.
11. Any products not manufactured by Tiger Door supplied with and/or installed on Tiger Door products are covered by the original manufacturers' warranty and are excluded from any Tiger Door warranty. Any damage to a Tiger Door product caused by products not manufactured by Tiger Door shall be excluded from the Tiger Door warranty.
12. Tiger Door LLC shall have no obligations under this warranty unless and until full payment for the entire order has been received by Tiger Door LLC within standard payment terms as set fourth by Tiger Door LLC.
13. Tiger Door reserves the right to improve products, make changes in specifications, designs and standard equipment without prior notice and without incurring obligation.



1802 IZARD STREET
OMAHA, NEBRASKA
68102 USA

TOLL FREE SALES (888) 891-4416
FAX (402) 346-0561

www.tigerdoor.com

Tiger Door Care and Cleaning Recommendations

All Tiger Door door and frame products are made of fiberglass reinforced polyester components either with a polyurethane or a polyester gelcoat color coat finish. The finish is stain and abrasion resistant. However, the finish requires reasonable care. Wash periodically with warm water, use a soft cloth with a mild detergent approved for fiberglass or urethane finishes. Wax protectants can be used on the surfaces of Tiger Door products and oxidation removers can be used to remove slight surface oxidation.

Typically, products designed for the marine market are best suited for these cleaning and protectant purposes. Several excellent products are available from 3-M, and Meguiars, as well as other reputable manufactures.

For removal of graffiti from permanent markers and most spray paints, a specially formulated cleaner is available from Tiger Door.

Never use any abrasive scouring powders, cleaners, steel pads, or cleaners that contain sodium hydroxide or other chemicals known to harm fiberglass or polyurethane finishes.

For cleaner compatibility questions or concerns, consult the cleaner manufacturer or call the Tiger Door factory for assistance.

The
ATLAS
Companies
Doors and Frames

Distributed By:

Atlas Metal Products - LOU
5101 Commerce Crossings Drive
Louisville, Kentucky 40229
Phone: 502-968-5445 Fax: 502-969-2486

RECORD OF SUBMITTALS 300293		
	SUBMITTED	RETURNED
1 ST	4-24-2008	
2 ND	5-21-2008	
3 RD		
4 TH		
		DATE
APPROVED DRAWINGS		
APPROVED HARDWARE		
Engineered By: Clint Burden		

ATLAS PROJECT MANAGER	
Pam Barr	
Atlas Work Order Numbers	
HM Doors & Frames - 55308	
SCW/S&R Wood Doors -- 55309 -- Wood Frames - 55310	
FRP Doors & Frames - 55311	
HDWR - 55315	
PROJECT:	UK Biological Pharmaceutical Complex
LOCATION:	Lexington, Kentucky
ARCHITECT:	Ekhoff, Ochenkoski & Polk Architects
CONTRACTOR:	Messer Construction Company



UK Biological Pharmaceutical Complex
Lexington, Kentucky



Atlas General Notes

1. These submittals have been prepared by the Atlas Companies for the exclusive use for this project. They are The Atlas Companies guide to manufacture/acquire products that meet the architect's design and intent per the contract documents provided.
2. Approval of these submittals by the architect, contractor, or owner shall constitute acceptance for The Atlas Companies to manufacture/procure material.
3. Fabrication/purchase of required material for this project will proceed only after receipt of final approval of these submittals.
4. Atlas will provide detailed delivery information to the contractor after receipt of the final signed submittals.
5. Any changes or additions after final approval of these submittals will require a change order and could result in an up-charge.

The Atlas Companies strive to provide premium quality products in a timely manner. Thank you for allowing us to work with you on this project.

"We Set the Standard".

May 21, 2008

door handing guide



Face the door from the keyed side.

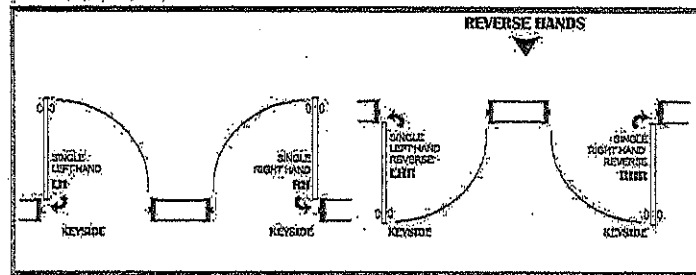
If the hinges are on the right, it is a right hand door, on left, a left hand door.

If the door opens toward you, it is a reverse swing.

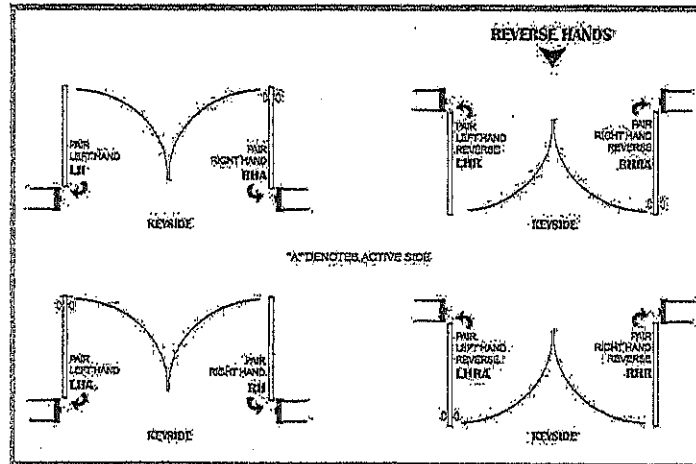
If it is a paired opening, the active side is the side with the lock.

See the charts below for typical examples of single and paired openings.

SINGLES



PAIRS



UK Biological Pharmaceutical Complex
Lexington, Kentucky



PROJECT PREAMBLE

UK Biological Pharmaceutical Complex

HOLLOW METAL DOORS AND FRAMES (ATHM)

Manufacturer: Metal Products Inc.

- All labeled corridor doors to get "S" Labels
- Products to meet positive pressure CAT B specs.

SC WOOD DOORS (ATWD)

Manufacturer: Graham Door

- SC Wood doors to be pre-machined at factory
- Products to meet positive pressure CAT A specs.
 - NO Urea Formyldehyde
- AWI Letter of Compliance Required

S&R WOOD DOORS (ATWD)

Manufacturer: Maiman Company

- SC Wood doors to be pre-machined at factory
- Products to meet positive pressure CAT A specs.
 - Maiman "Green" Core
- AWI Letter of Compliance Required

FRP DOORS & FRAMES (TIGR)

Manufacturer: Tiger Door

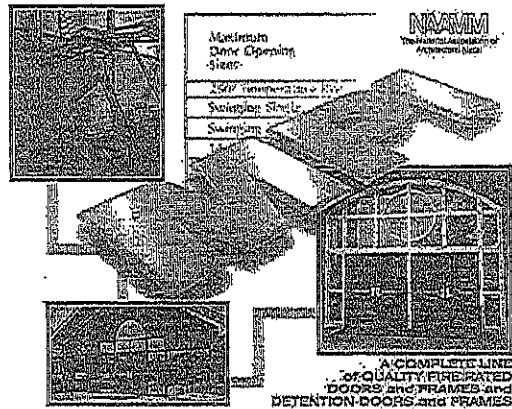
- FRP doors to be pre-machined at factory

Hardwa4re and glazing to be factory
installed per specifications.

NOTES GENERAL

- Verify all frame depths and anchors.
 - Verify all glass thicknesses.

UK Biological Pharmaceutical Complex
Lexington, Kentucky



GENERAL NOTES

QUANTITY 218 Hollow Metal Frames @ 236 Hollow Metal Openings

16 Wood Frames, 74 FRP Frames

QUANTITY 161 Hollow Metal Doors, 158 Flush Wood Doors, 196 S&R Wood Doors, 82 FRP Doors
6 Transoms

May 21, 2008

DOOR AND FRAME CONSTRUCTION DETAILS

FRAMES

Frame Gauge: Interior - Cold Rolled Steel 16 Gauge

Exterior - A60 Galvanized 14 Gauge

Jamb Anchor : 16 Gauge 3 per Jamb

Head Reinforcement - Not Applicable

Assembly: Interior - Continuous Weld

Exterior - Continuous Weld

Finish: Manufacture Standard Primer for Doors & Frames

Product Test Reports & Samples to Follow

Closer Reinforcement - 12 Gauge Closer Reinf.*

Provide Head Reinforcement for frames over 48" Long.

*No terminated stops were shown or noted on the prints,
None included.

Hinge Reinforcement - 7 Gauge*

Strike Reinforcement - 11 Gauge*

Hospital Stops Not Applicable

GLAZING

1/4" Thick*

Glass/Glazing Supplied By Others

DOORS

Door Gauge: Interior - Cold Rolled Steel 18 Gauge

Exterior - A60 Galvanized 16 Gauge

Door Edge - Filled, Finished Smooth*

Top & Bottom Edges 16 Gauge Channel*

Interior - Inverted Top Bottom*

Exterior - Closed Top, Inverted Bottom*

Hinge Reinforcement - 7 Gauge*

Lock Reinforcement - 11 Gauge*

Surface Hardware Reinforcement - 14 Gauge*

Glass Trim - Welded Flush Trim*

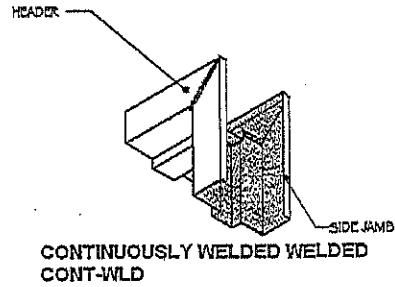
Louver - NA

Hollow metal and wood. Glazing at FRP is by Atlas.

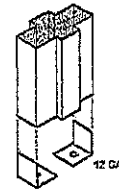
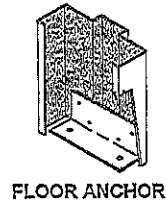
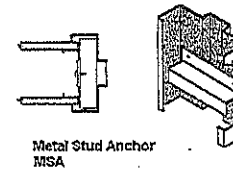
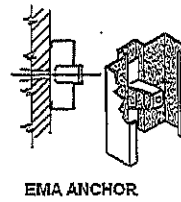
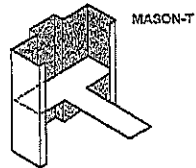
NOTE: Bituminous Coating on FM Frames is specified required. Bituminous Coating to be finished and field applied by Atlas.
A60 GALV IS 6.02 per square foot.

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Lexington, Kentucky

HM FRAME CORNER WELDS "SERIES"



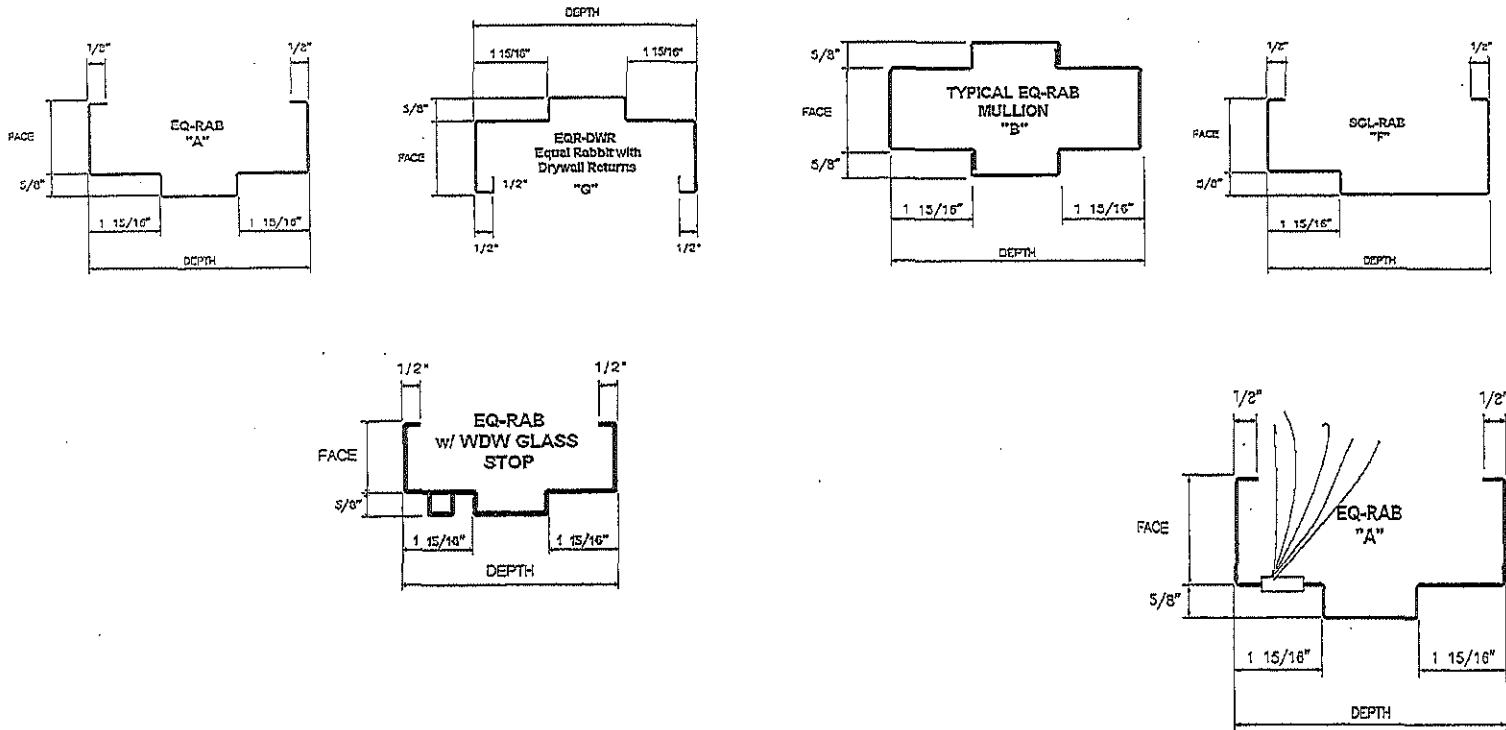
FRAME ANCHORS



EMA's are generally used at EXISTING OPENINGS – Please field verify the opening size on the schedule and make size changes as necessary.

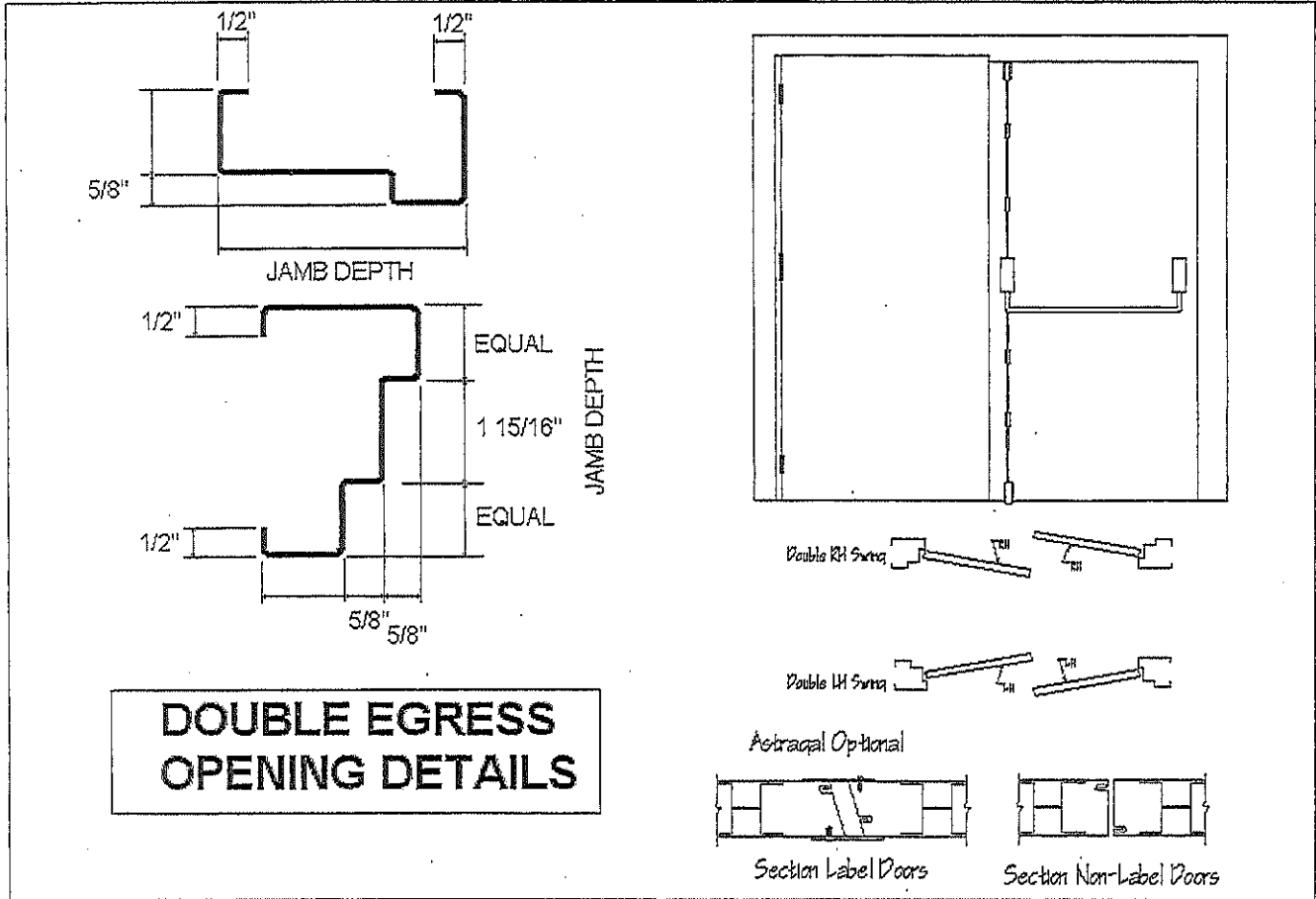
STANDARD JAMB TYPES

ALL FRAMES GET 1/2" BACKBEND (Standard)



Electrified Hardware will be prepped at factory

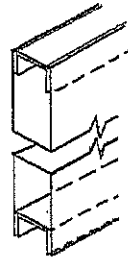
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Lexington, Kentucky



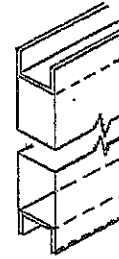
May 21, 2008

UK Biological Pharmaceutical Complex
Lexington, Kentucky

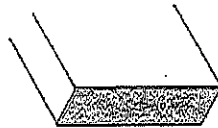
HOLLOW METAL DOOR SERIES AND EDGES



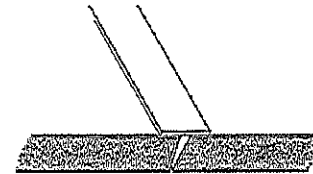
FLUSH TOP, INVERTED BOTTOM
FT-INV-B



INVERTED TOP & BOTTOM
INV-TB

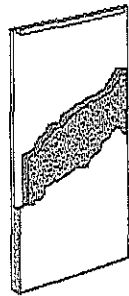


FILL-EDG
FILLED EDGE
POLYSTYRENE CORE



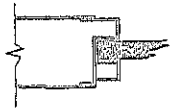
MEETING STILES
Optional Flat-Bar Astragal
Shipped Loose

HOLLOW METAL DOOR CORE MATERIAL



POLYSTYRENE CORE DOOR

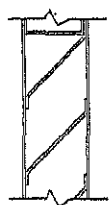
HOLLOW METAL DOOR GLASS TRIM & LOUVERS



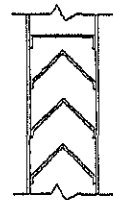
Glass
Moulding



Muntin
Bar

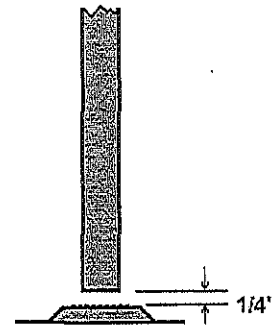


Louver
Exterior

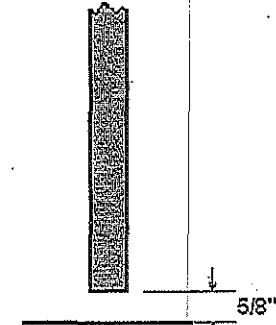


Louver
Interior

HOLLOW METAL DOOR UNDERCUTS



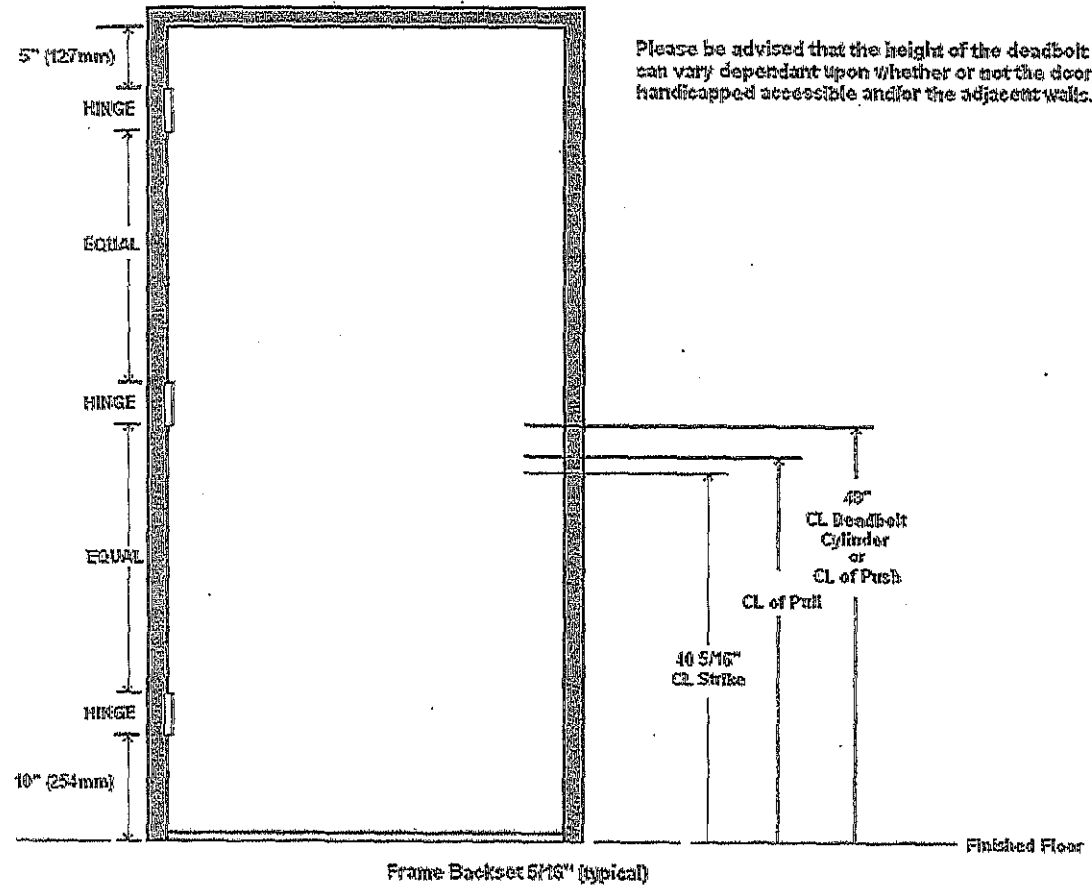
UNDERCUT ABOVE THRESHOLD



UNDERCUT NO THRESHOLD

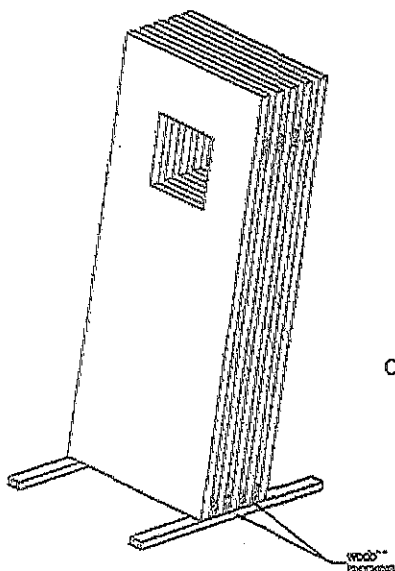
UK Biological Pharmaceutical Complex
Lexington, Kentucky

Hardware Location Chart

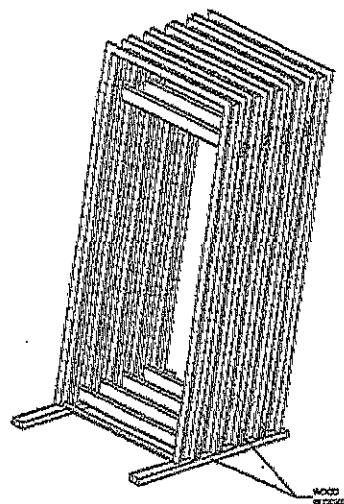


May 21, 2008

DELIVERY & STORAGE



CONTRACTOR RESPONSIBILITIES



The contractor responsible for the installation shall remove any wraps or covers from doors and frames upon delivery to the job site. The contractor responsible for the installation shall inspect the items for scratches or disfigurements caused by shipping or handling. The contractor responsible for the installation will promptly clean and touch-up the door or frame with rust inhibitive primer.

The contractor responsible for the installation shall store the doors and frames on wood runners off the ground. Doors and frames are to be separated enough to allow proper ventilation. The doors and frames should be covered with a tarpoulin or plastic if stored outdoors but must allow for proper ventilation to eliminate moisture condensation.

UK Biological Pharmaceutical Complex
Lexington, Kentucky



MANUFACTURER

SCW DOORS - Graham Door S&R DOORS - Maiman Company



Door Core: Interior - SCLC-5, Fire Rated - Mineral Core

Subcontractor to verify / confirm product meets requirements of NFPA-80 per specifications.

POSITIVE PRESSURE - UL10C, UBC7-2-1997
CATAGORY A

Blocking Requirements: FIRE RATED DOORS - Top, Bot, Lock/Mid Rail
NOTE HARDWARE SCHEDULE FOR PREPS - ALL PREPS DONE BY WOOD DOOR MANUFACTURER

Face Veneer: RC-WASH=Rotary Cut White Ash

AWI Letter of Compliance required indicated on submittal cover and per Quality Assurance specifications.

- AWI Premium Grade AA Face
- Veneer Match - Book
- Assembled Face Match - Center Balance
- Door Pairs - Matched
- Vertical Edges - Same Species

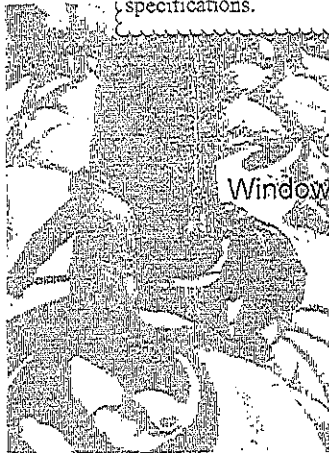
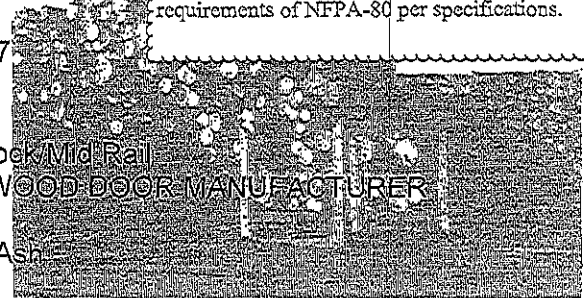
Glazing: 1/4" Thick* Supplied By Others*

Window Beads: NON-Rated Standard Wood Bead RATED: Wood Veneered Metal Vision Panel

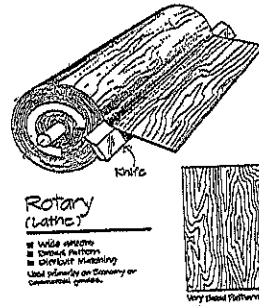
S&R/SCW Door Finish: Inivar (Sys TR6) - Stain - Finish all 4 door edges and cut-outs.

Packaging: POLYBAG WRAP

DOOR CONSTRUCTION INFORMATION

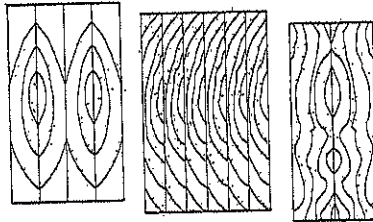


VENEER CUTTING



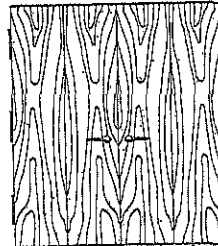
VENEER ASSEMBLY

Center Balance Match



Balance and Center Match

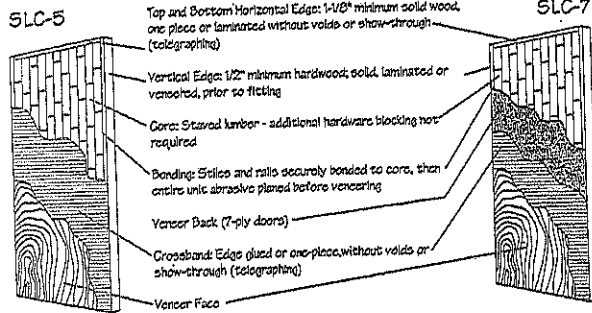
Pair Match



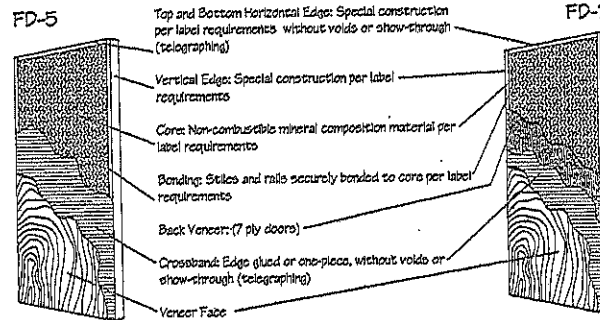
DOOR CONSTRUCTION INFORMATION

CORE MATERIAL

Veneer, Bonded Staved Lumber Core



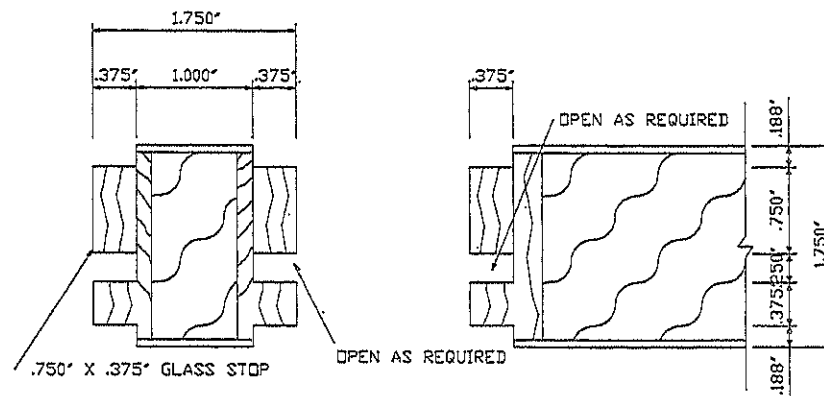
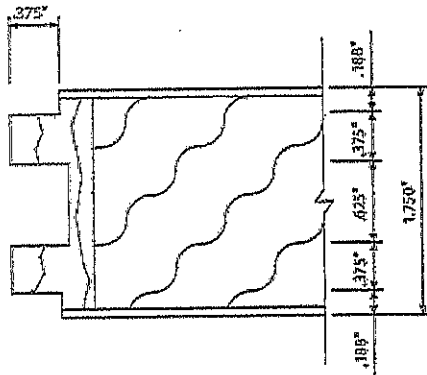
Veneer, Mineral Core



UK Biological Pharmaceutical Complex
Lexington, Kentucky

Stile & Rail Door Construction

.375" Square Sticking



SECTION " " THRU SQUARE STICKING
BARS AND MUNTS

May 21, 2008

UK Biological Pharmaceutical Complex
Lexington, Kentucky



MACHINE FOR HARDWARE (Factory Preps)

PACKAGING

**

CARTON

**

**

BLOCKING REQUIREMENTS: NA

GLAZING: 1/4" Thick* By Door/Frame Manufacturer

FIRE RATED DOORS

POSITIVE PRESSURE - UL10C, UBC7-2-1997

CATAGORY A

FRP Door & Frame Construction By the Tiger Door Company under separate cover

UK Biological Pharmaceutical Complex
Lexington, Kentucky

DIVISION 8
DOCUMENTATION

Door Frame Submittal Legend

		Manufacturer
*NIC		Not In Contract
ALUM		LEAVE ALONE - DO NOT ERASE
ATHM		Atlas Metals Generic HM
ATWD		Atlas Generic Wood Doors/Frames
TIGR		Tiger Door, LLC
		Door Description
*NIC	NIC	Door Furnished & Installed By Others
ALUM	AL-DR	Aluminum Door
ATHM	HMD	Hollow Metal Door
ATWD	SR-DR	Stile & Rail Door
	WD-DR	Wood Door
	WD-DR-TR	Wood Door and Transom
TIGR	FRP-DR	FRP Door Unit
	FULL-GRILL	Full Grill
		Door Series
ATHM	FL-TB	Flush Top and Bottom
	FLT-INVB	Flush Top, Inverted Bottom (EXT)
	INV-TB	Inverted Top and Bottom (INT)
		Door Gauge
ATHM	16	16 Gauge
	18	18 Gauge
		Door Thickness
ATHM	1 3/4	1 3/4" Thick
ATWD	1 3/4	1 3/4" Thick
TIGR	1 3/4	1 3/4" Thick
		Door Material
ATHM	A60	A60 Galvanized
	CRS	Cold Rolled Steel
ATWD	PG-BIR	Paint Grade Birch
	RC-WASH	Rotary Cut White Ash
TIGR	FRP-COP	FRP Copolymer Resin
		Door Edge
ATHM	FILL-EDG	Filled Edge Seam, Finish Smooth (Std)
ATWD	SAME-SP	Same Species
		Door Core
ATHM	POLYS	Polystyrene (Not for Labeled PAIRS)
ATWD	MINERAL	Mineral Core
	SGLC-5	Structural Lumber Composite Core 5 Ply (Timberstrand)
		Door Finish
ATHM	CALV	Galvanized
	STD-PRIM	Manufacturer Standard Primer
ATWD	TR6-STN	TR6 Finish Stain
		Frame Description
*NIC	NIC	Frame Furnished & Installed By Others
	PREV-USED	Previously Used, Opening Accounted For
ALUM	AL-FR	Aluminum Frame
ATHM	HMF	Hollow Metal Frame
ATWD	WD-FR	Wood Frame
TIGR	FRP-FR	FRP Frame

		Frame Series
ATHM	CONT-WLD	Continuous Weld
ATWD	101	101 Slick Frame
	102	102 Slick Frame
	602	Six Opening Frame ID 2

		Frame Gauge
ATHM	14	14 Gauge
	16	16 Gauge
ATWD	3/4	3/4" Thick

		Frame Construction
ATHM	101	Single Opening Frame
	101-4	Single Opening Frame w/4" Head
	102	Double Opening Frame
	102-4	Double Opening Frame w/4" Head
	102-4DEQR	102 Double Egress Frame w/4" Head
	102-UEP	Double Opening Frame Unequal Pair Doors
	401	4 Opening Frame ID 1
	601	6 Opening Frame ID 1
	603	6 Opening Frame ID 3
ATWD	2X5/8-S4S	2" x 5/8" S4S Casing
TIGR	101-4	Single Opening Frame 4" Head
	102-4	Double Opening Frame 4" Head

		Frame Material
ATHM	A60-GALV	A60 Galvanized
	CRS	Cold Rolled Steel
ATWD	WASH	White Ash

		Frame Profile
ATHM	EQ-RAB	Equal Rabbit
	EQR-DWR	Equal Rabbit with Drywall Returns
ATWD	SGLR-DWR	Single Rabbit with Drywall Returns
	AP-STOP	Applied Stop
TIGR	EQ-RAB	Equal Rabbit

		Frame Anchors
ATHM	EMA	Existing Masonry Anchor
	MASON-T	Masonry T Anchor
	MTL-STUD	Metal Stud Anchor

May 21, 2008

UK Biological Pharmaceutical Complex
Lexington, Kentucky

CORRIDOR T002 FROM TUNNEL T001

TUNNEL T001 FROM EXISTING

DIVISION 8
DOCUMENTATION

Door Frame Submittal

OPEN NO.	LOCATION	QTY	OPENING SIZE	SGL / PR	HAND	LABEL	HEADING	HW SET	MFG	ARCH	THICK	SERIES	MATERIAL	CORE	GAUGE	ELEV		NOTES	MFC	ARCH	MATERIAL	SERIES	PROF	GAUGE	DEPTH	ELEV		ANCHOR	NOTES		
																C	PAGE									C	PAGE				
T001	Cylinder 016 from M24+D Shop-022C	1	6070	P	RHRA		099	099	AT	HM	C2	1 3/4	FLT-INV-B	A60	POLY S	16	FLUS H	1		AT	HM	2B	A60-GALV	CONT-WLD	EQ-RAB	14	8 5/8	102-4	4	MAS ON-T	
T001A	MCPFB Shop 022D from Existing	1	6070	P	RHRA		100	100	AT	HM	C2	1 3/4	FLT-INV-B	A60	POLY S	16	FLUS H	1		AT	HM	2C	A60-GALV	CONT-WLD	EQ-RAB	14	7 5/8	102	4	EMA	
T002	Exterior from Corridor T002	1	6080	P	RHRA		052	052	AT	HM	C2	1 3/4	FLT-INV-B	A60	POLY S	16	FLUS H	1		AT	HM	2C	A60-GALV	CONT-WLD	EQ-RAB	14	7 5/8	102	4	EMA	
T003	Corridor T002 from Tunnel T003	1	6070	P	RHRA		099	099	AT	HM	C2	1 3/4	FLT-INV-B	A60	POLY S	16	FLUS H	1		AT	HM	2B	A60-GALV	CONT-WLD	EQ-RAB	14	8 5/8	102-4	4	MAS ON-T	
T003A	Tunnel T003 from Arceway-3 T003A	1	6090	P	RHRA		101	101	AT	HM	C2	1 3/4	FLT-INV-B	A60	POLY S	16	FLUS H	1		AT	HM	2C	A60-GALV	CONT-WLD	EQ-RAB	14	7 5/8	102	4	EMA	
000A	Corridor 000 from Corridor 000A	1	7078	P	RHRA		001	001	AT	WD	J	1 3/4	RC-WASH	SCLC -5	HG26 X36	2				AT	HM	2A	CRS	CONT-WLD	EQ-RAB	16	8 5/8	102-4	4	MAS ON-T	
002	Corridor 000 from Security Closet 002	1	3070	S	RHR		002	002	AT	HM	A1	1 3/4	INV-TB	CRS	SCLC S	18	FLUS H	1		AT	HM	1	CRS	CONT-WLD	EQR-DWR	16	8 1/4	101	4	MTL-STUD	
003	Corridor 000 from NMR Facility 003	1	3070	S	LHR		013	013	AT	WD	J1	1 3/4	RC-WASH	SCLC -5	HG20 X47	2				AT	HM	1	CRS	CONT-WLD	EQR-DWR	16	8 1/4	101	4	MTL-STUD	
003A	NMR Facility 003 to HE Comp 003A	1	3070	S	RH	45MIN	014	014	AT	HM	A1	1 3/4	INV-TB	CRS	POLY S	18	FLUS H	1		AT	HM	1	CRS	CONT-WLD	EQR-DWR	16	8 1/4	101	4	MTL-STUD	
003B	Corridor 003B from NMR Facility 003	1	7078	P	RHRA		015	015	AT	WD	J	1 3/4	RC-WASH	SCLC -5	HG26 X36	2				AT	HM	2	CRS	CONT-WLD	EQR-DWR	16	8 1/4	102	4	MTL-STUD	
004	Corridor 000 from Electrical 004	1	3070	S	RHR		016	016	AT	HM	A1	1 3/4	INV-TB	CRS	POLY S	18	FLUS H	1		AT	HM	1	CRS	CONT-WLD	EQR-DWR	16	8 1/4	101	4	MTL-STUD	
006	Corridor 000 from BDF 006	1	3070	S	RHR		058	058	AT	HM	A1	1 3/4	INV-TB	CRS	POLY S	18	FLUS H	1		AT	HM	1	CRS	CONT-WLD	EQR-DWR	16	8 1/4	101	4	MTL-STUD	
008	Corridor 000 to Interior Corridor 008	1	6070	P	RHA		051	051	AT	WD	J	1 3/4	RC-WASH	SCLC -5	HG20 X47	2				AT	HM	2	CRS	CONT-WLD	EQR-DWR	16	8 1/4	102	4	MTL-STUD	
008A	Interior Corridor 008 to COP Flies 008A	1	3070	S	RH		059	059	AT	HM	A1	1 3/4	INV-TB	CRS	POLY S	18	FLUS H	1		AT	HM	1	CRS	CONT-WLD	EQR-DWR	16	8 1/4	101	4	MTL-STUD	
008B	Corridor 008A2 to Interior Corridor 008	1	3070	S	RH		060	060	AT	HM	G1	1 3/4	INV-TB	CRS	POLY S	18	HG24 X36	1		AT	HM	1	CRS	CONT-WLD	EQR-DWR	16	8 1/4	101	4	MTL-STUD	
010	Corridor 000 to Water Closet 010	1	3070	S	LH		024	024	AT	HM	A1	1 3/4	INV-TB	CRS	POLY S	18	FLUS H	1		AT	HM	1	CRS	CONT-WLD	EQR-DWR	16	8 1/4	101	4	MTL-STUD	
012	Corridor 000 to Low Vibration Lab 012	1	3070	S	LH		082 A	024	AT	HM	K1	1 3/4	INV-TB	CRS	POLY S	18	FG20 X36	1		AT	HM	1B	CRS	CONT-WLD	EQR-DWR	16	8 1/4	601	5	MTL-STUD	
014	Corridor 000A from Bed Storage 014	1	7078	P	RHRA	45MIN	036	036	TIG	R	L3	1 3/4	FRP-COP		FLUS H	1				TI	GR	3A		EQ-RAB				102-4FRP	7		
014A	Cage Wash 031 to Bed Storage 014	1	3078	S	RH		033	033	TIG	R	L2	1 3/4	FRP-COP		FLUS H	1				TI	GR	3		EQ-RAB				101-4FRP	7		
016	Corridor 000A to Cylinder 016	1	3078	S	RH	45MIN	038	038	TIG	R	L2	1 3/4	FRP-COP		FLUS H	1				TI	GR	3		EQ-RAB				101-4FRP	7		
018	Corridor 000A from Vacuum System 018	1	7078	P	RHRA	45MIN	040	040	TIG	R	L3	1 3/4	FRP-COP		FLUS H	1				TI	GR	3A		EQ-RAB				102-4FRP	7		
020	Corridor 000A to Waste Staging 020	1	3078	S	RH	45MIN	034	034	TIG	R	L2	1 3/4	FRP-COP		FLUS H	1				TI	GR	3		EQ-RAB				101-4FRP	7		
020A	Cage Wash 031 to Waste Staging 020	1	3078	S	LH		035	035	TIG	R	L2	1 3/4	FRP-COP		FLUS H	1				TI	GR	3		EQ-RAB				101-4FRP	7		
022A	Corridor 000A1 to Mail/Copy Room 022A	1	3070	S	LH		003	003	AT	HM	G1	1 3/4	INV-TB	CRS	POLY S	18	HG24 X36	1		AT	HM	1	CRS	CONT-WLD	EQR-DWR	16	8 1/4	101	4	MTL-STUD	
022A1	Interior Corridor 008 to Mail/Copy Room 022A	1	3070	S	LH		004	004	AT	HM	G1	1 3/4	INV-TB	CRS	POLY S	18	HG24 X36	1		AT	HM	1	CRS	CONT-WLD	EQR-DWR	16	8 1/4	101	4	MTL-STUD	
022B	Corridor 000A1 to Holding/Staging 022B	1	3070	S	RH		050	050	AT	HM	G1	1 3/4	INV-TB	CRS	POLY S	18	HG24 X36	1		AT	HM	1	CRS	CONT-WLD	EQR-DWR	18	8 1/4	101	4	MTL-STUD	
022B1	Interior Corridor 008 to Holding/Staging 022B	1	3070	S	RH		050	050	AT	HM	G1	1 3/4	INV-TB	CRS	POLY S	18	HG24 X36	1		AT	HM	1	CRS	CONT-WLD	EQR-DWR	18	8 1/4	101	4	MTL-STUD	

HM - Type 03 -
Reference A9.8

UK Biological Pharmaceutical Complex
Lexington, Kentucky

DIVISION 8
DOCUMENTATION

OPEN NO.	LOCATION	QTY	Opening					Door										Frame										NOTES		
			OPENING SIZE	SGL / PR	HAND	LABEL	H.D.W. SET	H.D.W. MFG	TRYCPHE	THICK	SERIES	M.A.T.L.	CORE	GAUGE	ELEV		MFG	TRYCPHE	M.A.T.L.	SERIES	PROF	GAUGE	DEPT H	CODE	PAGE	ANCHOR				
															FLUSH	PAGE											MFG		TRYCPHE	M.A.T.L.
022C	Corridor 000A2 from Central Building Storage 022C	1	3670	S	LHR		056	058	AT HM	A1	1 3/4	INV-TB	CRS	POLY S	18	FLUSH	1		AT HM	1	CRS	CONT-WILD	EQR-DWR	16	8 1/4	101	4	MTL-STUD		
022D	Corridor 000A3 from Surplus Storage 022D	1	3670	S	LHR		057	057	AT HM	A1	1 3/4	INV-TB	CRS	POLY S	18	FLUSH	1		AT HM	1	CRS	CONT-WILD	EQR-DWR	16	8 1/4	101	4	MTL-STUD		
022E	Corridor 000A3 to Low Vibration Lab 022E	1	3670	S	LH		081	081	AT HM	A1	1 3/4	INV-TB	CRS	POLY S	18	FLUSH	1		AT HM	1	CRS	CONT-WILD	EQR-DWR	16	8 1/4	101	4	MTL-STUD		
022F	Corridor 000A2 from COP Chem Waste 022F	1	3670	S	RHR		013	013	AT HM	A1	1 3/4	INV-TB	CRS	POLY S	18	FLUSH	1		AT HM	1	CRS	CONT-WILD	EQR-DWR	16	8 1/4	101	4	MTL-STUD		
022G	Corridor 000A2 to MCPD Shop 022G	1	3670	S	LH		055	055	AT HM	A1	1 3/4	INV-TB	CRS	POLY S	18	FLUSH	1		AT HM	1	CRS	CONT-WILD	EQR-DWR	16	8 1/4	101	4	MTL-STUD		
022H	Corridor 000A1 to Office 022H	1	3070	S	LH		054	054	AT HM	G1	1 3/4	FL-TB	CRS	POLY S	18	HG24 X26	1		AT HM	1	CRS	CONT-WILD	EQR-DWR	16	8 1/4	101	4	MTL-STUD		
024	Corridor 000C to RO 024	1	4070	S	LH	45MIN	053	053	AT HM	A1	1 3/4	INV-TB	CRS	POLY S	18	FLUSH	1		AT HM	1A	CRS	CONT-WILD	EQR-RAB	16	8 5/8	101-4	4	MAS ON-T		
030	Corridor 000C from Vestibule 030	1	3070	S	RHR	45MIN	041	041	AT HM	P1	1 3/4	INV-TB	CRS	POLY S	18	N6X26	1		AT HM	1A	CRS	CONT-WILD	EQR-RAB	16	8 5/8	101-4	4	MAS ON-T		
030A	Vestibule 030 from Interior Corridor 030A	1	3070	S	RHR		042	042	TIG R	L2	1 3/4	FRP-COP				FLUSH	1		TIG R	3		EQR-RAB					101-4FRP	7		
030A1	Interior Corridor 030A2 to Interior Corridor 030A1	1	3678	S	LH		030	030	TIG R	L4	1 3/4	FRP-COP				NL10 X26	1		TIG R	3		EQR-RAB						101-4FRP	7	
030A4	Vestibule 030A5 from Interior Corridor 030A4	1	7078	P	RHRA		043	043	TIG R	L3	1 3/4	FRP-COP				FLUSH	1		TIG R	3A		EQR-RAB						102-4FRP	7	
030A5	Recalling Area 022 from Vestibule 030A5	1	7078	P	RHRA	45MIN	044	044	TIG R	L3	1 3/4	FRP-COP				FLUSH	1		TIG R	3A		EQR-RAB						102-4FRP	7	
030B	Interior Corridor 030A to Laundry 030B	1	3670	S	LH		025	025	TIG R	L2	1 3/4	FRP-COP				FLUSH	1		TIG R	3		EQR-RAB						101-4FRP	7	
030C	Interior Corridor 030A to VET/Tech 030C	1	3070	S	RH		023	023	TIG R	L4	1 3/4	FRP-COP				NL10 X26	1		TIG R	3		EQR-RAB						101-4FRP	7	
030D	Interior Corridor 030A to Break Room 030D	1	3670	S	LH		025	025	TIG R	L4	1 3/4	FRP-COP				NL10 X26	1		TIG R	3		EQR-RAB						101-4FRP	7	
030E	Interior Corridor 030A to Men 030E	1	3670	S	RH		027	027	TIG R	L2	1 3/4	FRP-COP				FLUSH	1		TIG R	3		EQR-RAB						101-4FRP	7	
030E1	Interior Corridor 030A2 to Men 030E	1	3670	S	LH		027	027	TIG R	L2	1 3/4	FRP-COP				FLUSH	1		TIG R	3		EQR-RAB						101-4FRP	7	
030F	Interior Corridor 030A to Women 030F	1	3670	S	LH		027	027	TIG R	L2	1 3/4	FRP-COP				FLUSH	1		TIG R	3		EQR-RAB						101-4FRP	7	
030F1	Interior Corridor 030A2 to Women 030F	1	3670	S	RH		027	027	TIG R	L2	1 3/4	FRP-COP				FLUSH	1		TIG R	3		EQR-RAB						101-4FRP	7	
030G	Interior Corridor 030A1 to Gymnasium 030G	1	3070	S	LH		026	026	TIG R	L4	1 3/4	FRP-COP				NL10 X26	1		TIG R	3		EQR-RAB						101-4FRP	7	
030H	Interior Corridor 030A1 to Office 030H	1	3070	S	LH		023	023	AT HM	K1	1 3/4	INV-TB	CRS	POLY S	18	HG30 X68	1		AT HM	1B	CRS	CONT-WILD	EQR-RAB	16	8 5/8	401	5	MAS ON-T		
030J	Interior Corridor 030A1 to Storage 030J	1	3670	S	RH		028	028	TIG R	L2	1 3/4	FRP-COP				FLUSH	1		TIG R	3		EQR-RAB						101-4FRP	7	
031	Interior Corridor 030A2 from Cage Wash 031	1	7080	P	RHRA		029	029	AL UM	M								AL UM											Alum Door By Others	
031A	Interior Corridor 030A2 from Cage Wash 031	1	6078	P	RHRA		039	039	TIG R	L1	1 3/4	FRP-COP				NL10 X26	1		TIG R	3A		EQR-RAB						102-4FRP	7	
031A2	Interior Corridor 030A4 from Cage Wash 031	1	7080	P	LHRA		029	029	AL UM	M								AL UM											Alum Door By Others	
032	Interior Corridor 030A4 to General Storage 032	1	3678	S	LH		032	032	TIG R	L2	1 3/4	FRP-COP				FLUSH	1		TIG R	3		EQR-RAB						101-4FRP	7	
033	Interior Corridor 030A4 to Necropsy 033	1	3678	S	LH		012	012	TIG R	L	1 3/4	FRP-COP				NL10 X26	1		TIG R	3		EQR-RAB						101-4FRP	7	
034	Interior Corridor 030A4 to Interior Corridor 034	1	3678	S	RH		037	037	TIG R	L	1 3/4	FRP-COP				NL10 X26	1		TIG R	3		EQR-RAB						101-4FRP	7	
034A	Interior Corridor 034 to AHR 034A	1	3678	S	LH		011	011	TIG R	L	1 3/4	FRP-COP				NL10 X26	1		TIG R	3		EQR-RAB						101-4FRP	7	
034A1	AHR 034A to Procedure	1	3678	S	LH		012	012	TIG R	L	1 3/4	FRP-COP				NL10	1		TIG R	3		EQR-RAB						101-4FRP	7	

HM Type 05 -
Reference A9.8

UK Biological Pharmaceutical Complex
Lexington, Kentucky

DIVISION 8
DOCUMENTATION

Opening										Door										Frame												
OPEN NO.	LOCATION	QTY	OPENING SIZE	SGL / PR	HAND	LABEL	HEADING	HWS SET	MFG	TRYCPH	THICK	SERIES	MATL	CORE	GAUGE	ELEV		NOTES	MFG	TRYCPH	MATL	SERIES	PROF	GAUGE	DEPTH	ELEV		ANCHOR	NOTES			
																CODE	PAGE									CODE	PAGE					
034A1																X26	34															
034B	Interior Corridor 034 to Procedure 034B	1	3678	S	RH		012	012	TIG R	L	1 3/4"	FRP-COP				NL10 X26	1	34									101-4FRP	7				
034C	Interior Corridor 034 to AHR 034C	1	3678	S	RH		011	011	TIG R	L	1 3/4"	FRP-COP				NL10 X26	1	34									101-4FRP	7				
036	Interior Corridor 030A2 to Janitor Closet 036	1	3678	S	LH		032	032	TIG R	L2	1 3/4"	FRP-COP				FLUSH	1										101-4FRP	7				
038	Interior Corridor 030A2 to Shared Procedure 038	1	3678	S	RH		012	012	TIG R	L	1 3/4"	FRP-COP				NL10 X26	1	34									101-4FRP	7				
040	Interior Corridor 030A2 from AHR Corridor 040	1	6070	P	RHRA		031	031	TIG R	L1	1 3/4"	FRP-COP				NL10 X26	1	34									102-4FRP	7				
040A	AHR Corridor 040 to AHR 040A	1	3678	S	LH		010	010	TIG R	L	1 3/4"	FRP-COP				NL10 X26	1	34									101-4FRP	7				
040A1	AHR 040A to Procedure 034B	1	3678	S	LH		012	012	TIG R	L	1 3/4"	FRP-COP				NL10 X26	1	34									101-4FRP	7				
040B	AHR Corridor 040 to AHR 040B	1	3678	S	RH		010	010	TIG R	L	1 3/4"	FRP-COP				NL10 X26	1	34									101-4FRP	7				
040B1	AHR 040B to Procedure 034A1	1	3678	S	RH		012	012	TIG R	L	1 3/4"	FRP-COP				NL10 X26	1	34									101-4FRP	7				
040C	AHR Corridor 040 from Storage 040C	1	3678	S	RHR		019	019	TIG R	L2	1 3/4"	FRP-COP				FLUSH	1										101-4FRP	7				
040D	AHR Corridor 040 to AHR 040D	1	3678	S	LH		010	010	TIG R	L	1 3/4"	FRP-COP				NL10 X26	1	34									101-4FRP	7				
040D1	AHR 040D to Procedure 040D1	1	3678	S	LH		012	012	TIG R	L	1 3/4"	FRP-COP				NL10 X26	1	34									101-4FRP	7				
040E	AHR Corridor 040 to AHR 040E	1	3678	S	RH		010	010	TIG R	L	1 3/4"	FRP-COP				NL10 X26	1	34									101-4FRP	7				
040E1	AHR 040E to Procedure 040E1	1	3678	S	RH		012	012	TIG R	L	1 3/4"	FRP-COP				NL10 X26	1	34									101-4FRP	7				
041	Interior Corridor 030A2 to Behav 041	1	3678	S	RH		011	011	TIG R	L	1 3/4"	FRP-COP				NL10 X26	1	34									101-4FRP	7				
042	Interior Corridor 030A2 to Shared Procedure 042	1	3678	S	LH		012	012	TIG R	L	1 3/4"	FRP-COP				NL10 X26	1	34									101-4FRP	7				
043	Interior Corridor 030A2 to Behav 043	1	3678	S	LH		011	011	TIG R	L	1 3/4"	FRP-COP				NL10 X26	1	34									101-4FRP	7				
044	Interior Corridor 030A2 to Storage 044	1	3678	S	LH		020	020	TIG R	L2	1 3/4"	FRP-COP				FLUSH	1										101-4FRP	7				
046	Interior Corridor 030A2 to Shared Procedure 046	1	3678	S	RH		012	012	TIG R	L	1 3/4"	FRP-COP				NL10 X26	1	34									101-4FRP	7				
047	Interior Corridor 030A2 to Storage 047	1	3678	S	RH		020	020	TIG R	L2	1 3/4"	FRP-COP				FLUSH	1										101-4FRP	7				
050	Interior Corridor 030A2 from AHR Corridor 050	1	6078	P	RHRA		031	031	TIG R	L1	1 3/4"	FRP-COP				NL10 X26	1	34									102-4FRP	7				
050A	AHR Corridor 050 to AHR 050A	1	3678	S	LH		010	010	TIG R	L	1 3/4"	FRP-COP				NL10 X26	1	34									101-4FRP	7			VERIFY	
050A1	AHR 050A to Procedure 040E1	1	3678	S	LH		012	012	TIG R	L	1 3/4"	FRP-COP				NL10 X26	1	34									101-4FRP	7			VERIFY	
050B	AHR Corridor 050 to AHR 050B	1	3678	S	RH		010	010	TIG R	L	1 3/4"	FRP-COP				NL10 X26	1	34									101-4FRP	7			VERIFY	
050B1	AHR 050B to Procedure 040D1	1	3678	S	RH		012	012	TIG R	L	1 3/4"	FRP-COP				NL10 X26	1	34									101-4FRP	7			VERIFY	
050C	AHR 050B from Storage 050C	1	3678	S	RHR		019	019	TIG R	L2	1 3/4"	FRP-COP				FLUSH	1										101-4FRP	7			VERIFY	
050D	AHR Corridor 050 to AHR 050D	1	3678	S	RH		010	010	TIG R	L	1 3/4"	FRP-COP				NL10 X26	1	34									101-4FRP	7			VERIFY	
050D1	AHR 050D to Procedure 050D1	1	3678	S	LH		012	012	TIG R	L	1 3/4"	FRP-COP				NL10 X26	1	34									101-4FRP	7			VERIFY	
050E	AHR Corridor 050 to AHR 050E	1	3678	S	RH		010	010	TIG R	L	1 3/4"	FRP-COP				NL10 X26	1	34									101-4FRP	7			VERIFY	

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OPEN NO.	LOCATION	Opening					Door										Frame														
		QTY	OPENING SIZE	SGL / PR	HAND	LABEL	HEAD IN G	HDW SET	TIG R	MFG	TY CP HE	TH ICK	SERIES	M A T L	CORE	GAUGE	ELEV		NOTES	MFG	TY CP HE	M A T L	SERIES	PROF	GAU GE	J A M B	DEPT H	ELEV		ANCHOR	NOTES
																	CODE	PAGE										CODE	PAGE		
050E1	AHR 050E to Procedure 050E1	1	3678	S	RH		012	012	TIG R	L	1 3/4"		FRP-COP			NL10 X26	1	34		TI GR	3			EQ-RAB				101-4FRP	7		VERIFY
051A	Surgery Corridor 051 from Instrument Storage 051A	1	7080	P	RHRA		029	029	ALUM	M										ALUM										Alum Frame By Others	
051B	Surgery Corridor 051 to Prep 051B	1	7080	P	LHA		029	029	ALUM	M										ALUM										Alum Frame By Others	
051B1	Prep 051B to Rodent Surgery 051B1	1	7080	P	LHA		029	029	ALUM	M										ALUM										Alum Frame By Others	
051B2	Rodent Surgery 051B1 to Recovery 051B2	1	7080	P	LHA		029	029	ALUM	M										ALUM										Alum Frame By Others	
051B3	Interior Corridor 030A2 from Recovery 051B2	1	7080	P	RHRA		029	029	ALUM	M										ALUM										Alum Frame By Others	
051C	Surgery Corridor 051 from Storage 051C	1	3678	S	RHR		021	021	TIG R	L2	1 3/4"		FRP-COP			FLUS H	1			TI GR	3			EQ-RAB			101-4FRP	7			
051D	Surgery Corridor 051 to Prep 051D	1	7080	P	RHA		029	029	ALUM	M										ALUM										Alum Frame By Others	
051D1	Prep 051D to Rodent Surgery 051D1	1	7080	P	LHA		029	029	ALUM	M										ALUM										Alum Frame By Others	
051D2	Rodent Surgery 051D1 to Recovery 051D2	1	7080	P	LHA		029	029	ALUM	M										ALUM										Alum Frame By Others	
051D3	Interior Corridor 030A2 from Recovery 051D2	1	7080	P	RHRA		029	029	ALUM	M										ALUM										Alum Frame By Others	
052	Interior Corridor 030A2 to Shared Procedure 052	1	3678	S	LH		012	012	TIG R	L	1 3/4"		FRP-COP			NL10 X26	1	34		TI GR	3			EQ-RAB			101-4FRP	7			
054	Interior Corridor 030A2 to Janitor Closet 054	1	3678	S	LH		032	032	TIG R	L2	1 3/4"		FRP-COP			FLUS H	1			TI GR	3			EQ-RAB			101-4FRP	7			
059	Interior Corridor 030A2 from LG Behav Corridor 059	1	6078	P	RHRA		031	031	TIG R	L1	1 3/4"		FRP-COP			NL10 X26	1	34		TI GR	3A			EQ-RAB			102-4FRP	7			
059A	LG Behav Corridor 059 to LG Behav 059A	1	3678	S	RH		011	011	TIG R	L	1 3/4"		FRP-COP			NL10 X26	1	34		TI GR	3			EQ-RAB			101-4FRP	7			
059B	LG Behav Corridor 059 to LG Behav 059B	1	3678	S	LH		011	011	TIG R	L	1 3/4"		FRP-COP			NL10 X26	1	34		TI GR	3			EQ-RAB			101-4FRP	7			
059C	LG Behav Corridor 059 from Storage 059C	1	3678	S	RHR		019	019	TIG R	L2	1 3/4"		FRP-COP			FLUS H	1			TI GR	3			EQ-RAB			101-4FRP	7			
059D	LG Behav Corridor 059 to LG Behav 059D	1	3678	S	RH		011	011	TIG R	L	1 3/4"		FRP-COP			NL10 X26	1	34		TI GR	3			EQ-RAB			101-4FRP	7			
059E	LG Behav Corridor 059 to LG Behav 059E	1	3678	S	LH		011	011	TIG R	L	1 3/4"		FRP-COP			NL10 X26	1	34		TI GR	3			EQ-RAB			101-4FRP	7			
060	Interior Corridor 030A2 from AHR Corridor 060	1	6078	P	RHRA		031	031	TIG R	L1	1 3/4"		FRP-COP			NL10 X26	1	34		TI GR	3A			EQ-RAB			102-4FRP	7			
060A	AHR Corridor 060 to AHR 060A	1	3678	S	RH		010	010	TIG R	L	1 3/4"		FRP-COP			NL10 X26	1	34		TI GR	3			EQ-RAB			101-4FRP	7			
060A1	AHR 060A to Breeding 060A1	1	3678	S	RH		017	017	TIG R	L	1 3/4"		FRP-COP			NL10 X26	1	34		TI GR	3			EQ-RAB			101-4FRP	7			
060B	AHR Corridor 060 to AHR 060B	1	3678	S	RH		010	010	TIG R	L	1 3/4"		FRP-COP			NL10 X26	1	34		TI GR	3			EQ-RAB			101-4FRP	7			
060B1	AHR 060B to Procedure 060B1	1	3678	S	LH		012	012	TIG R	L	1 3/4"		FRP-COP			NL10 X26	1	34		TI GR	3			EQ-RAB			101-4FRP	7			
060C	AHR Corridor 060 to Storage 060C	1	3678	S	RH		020	020	TIG R	L2	1 3/4"		FRP-COP			FLUS H	1			TI GR	3			EQ-RAB			101-4FRP	7			
060D	AHR Corridor 060 to Large AHR 060D	1	3678	S	RH		010	010	TIG R	L	1 3/4"		FRP-COP			NL10 X26	1	34		TI GR	3			EQ-RAB			101-4FRP	7			
060E	AHR Corridor 060 to Shared Procedure 060E	1	3678	S	RH		012	012	TIG R	L	1 3/4"		FRP-COP			NL10 X26	1	34		TI GR	3			EQ-RAB			101-4FRP	7			
061	Interior Corridor 030A2 to Research Storage 061	1	3678	S	LH		020	020	TIG R	L2	1 3/4"		FRP-COP			FLUS H	1			TI GR	3			EQ-RAB			101-4FRP	7			
062	Interior Corridor 030A2 to Image 062	1	3678	S	LH		018	018	TIG R	L2	1 3/4"		FRP-COP			FLUS H	1			TI GR	3			EQ-RAB			101-4FRP	7			
064	Elevator Lobby 000 to Janitor	1	13070	S	LH	45MIN	014	014	AT	A1	1 3/4"	INV-	CRS	POLY 18	FLUS	1			AT	1A	CRS	CONT	EQ-	16	8 5/8	101-4	14	IMAS			

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Reference RFQ 055 - Doors 070A, 070C,
070C1 and 070A1 to be 45 Min. Rated **YES**

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OPEN NO.	LOCATION	QTY	Opening										ELEV	NOTES	Frame										ELEV	ANCHOR	NOTES		
			OPENING SIZE	SLIP	HAND	LABEL	HEADING	HDW SET	MFG	TRY	THICK	SEERIES			MATL	CORE	GALV	CODE	PAGE	MFG	TRY	MATL	SEERIES	PROF				GALV	JAMB
066	Closet 064 Corridor 000D to Sewer Elevator 066	1	3070	S	RH	45MIN	014	014	AT HM	A1	1 3/4	INV- TB	CRS	POLY S	18	FLUS H	1		AT HM	1A	CRS	WLD EQ- RAB	16	8 5/8	101-4	4	ON-T		
070	Corridor 000D from Mechanical 070	1	6070	P	RHRA	45MIN	068 A	68A	AT HM	C1	1 3/4	FLT- INVB	ABS	POLY S	18	FLUS H	1	NOT GALV.	AT HM	2A	ABS GALV	CONT WLD	EQ- RAB	16	8 5/8	102-4	4	MAS ON-T	NOT GALV.
070A	Mechanical Stair F from Electrical 070A	1	3070	S	LHR		071	071	AT HM	A1	1 3/4	INV- TB	CRS	POLY S	18	FLUS H	1		AT HM	1A	CRS	CONT WLD	EQ- RAB	16	8 5/8	101-4	4	MAS ON-T	
070A1	Mechanical 070 from Electrical 070A	1	6070	P	RHRA		060	069	AT HM	C1	1 3/4	INV- TB	CRS	POLY S	18	FLUS H	1		AT HM	2A	CRS	CONT WLD	EQ- RAB	16	8 5/8	102-4	4	MAS ON-T	
070A2	Tunnel T003 from Electrical 070A	1	6090	P	RHRA		068 B	68B	AT HM	C2	1 3/4	FLT- INVB	ABS	POLY S	16	FLUS H	1		AT HM	2C	ABS GALV	CONT WLD	EQ- RAB	14	8 5/8	102	4	EMA	
070B	Mechanical Stair G from UPS 070B	1	3070	S	LHR		063	063	AT HM	A1	1 3/4	INV- TB	CRS	POLY S	18	FLUS H	1		AT HM	1A	CRS	CONT WLD	EQ- RAB	16	8 5/8	101-4	4	MAS ON-T	
070C	Mechanical Stair G from Emergency Electrical 070C	1	3070	S	RHR		070	070	AT HM	A1	1 3/4	INV- TB	CRS	POLY S	18	FLUS H	1		AT HM	1A	CRS	CONT WLD	EQ- RAB	16	8 5/8	101-4	4	MAS ON-T	
070C1	Mechanical 070 from Emergency Electrical 070C	1	6070	P	RHRA		068	068	AT HM	C1	1 3/4	FLT- INVB	ABS	POLY S	18	FLUS H	1	NOT GALV.	AT HM	2A	ABS GALV	CONT WLD	EQ- RAB	16	8 5/8	102-4	4	MAS ON-T	NOT GALV.
070D	Tunnel T003 from Mechanical 070	1	6090	P	RHRA		068 B	68B	AT HM	C2	1 3/4	FLT- INVB	ABS	POLY S	16	FLUS H	1		AT HM	2C	ABS GALV	CONT WLD	EQ- RAB	14	8 5/8	102	4	EMA	
070E	Tunnel T003 from Mechanical 070	1	6090	P	RHRA		068 B	68B	AT HM	C2	1 3/4	FLT- INVB	ABS	POLY S	16	FLUS H	1		AT HM	2C	ABS GALV	CONT WLD	EQ- RAB	14	8 5/8	102	4	EMA	
080	Corridor 000D from Community Closet 080	1	3070	S	LHR	45MIN	005	005	AT HM	A1	1 3/4	INV- TB	CRS	POLY S	18	FLUS H	1		AT HM	1A	CRS	CONT WLD	EQ- RAB	16	8 5/8	101-4	4	MAS ON-T	
082	Corridor 000D from FP 082	1	3070	S	RHR	45MIN	006	006	AT HM	A1	1 3/4	INV- TB	CRS	POLY S	18	FLUS H	1		AT HM	1A	CRS	CONT WLD	EQ- RAB	16	8 5/8	101-4	4	MAS ON-T	
082A	Mechanical 070 from FP 082	1	3070	S	LHR	45MIN	022	022	AT HM	A1	1 3/4	INV- TB	CRS	POLY S	18	FLUS H	1		AT HM	1A	CRS	CONT WLD	EQ- RAB	16	8 5/8	101-4	4	MAS ON-T	
100	Corridor 100 from Display Case 100	1	7083	P	RHRA		102	102	AL UM	P								Alum Door By Others	AL UM										Alum Frame By Others
100.1	Corridor 100 from Display Case 100.1	1	7083	P	RHRA		102	102	AL UM	P								Alum Door By Others	AL UM										Alum Frame By Others
100A	Exterior from Vestibule 100A	1	61080	P	RHRA		090	090	AL UM	Q1								Alum Door By Others	AL UM	8									Alum Frame By Others
100A1	Vestibule 100A from Corridor 100	1	61080	P	RHRA		092	092	AL UM	Q1								Alum Door By Others	AL UM	8									Alum Frame By Others
100C	Exterior from Vestibule 100C	1	70810	P	RHRA		090	090	AL UM	Q1								Alum Door By Others	AL UM	8									Alum Frame By Others
100C1	Vestibule 100C from Common Area 100B	1	70810	P	RHRA		092	092	AL UM	Q1								Alum Door By Others	AL UM	8									Alum Frame By Others
100F	Exterior from Vestibule 100F	1	6080	P	RHRA		090	090	AL UM	Q1								Alum Door By Others	AL UM	8									Alum Frame By Others
100F1	Vestibule 100F from Corridor 100E	1	6080	P	RHRA		092	092	AL UM	Q1								Alum Door By Others	AL UM	8									Alum Frame By Others
100J	Exterior from Vestibule 100J	1	6870	P	RHRA		091	091	AL UM	Q1								Alum Door By Others	AL UM	8									Alum Frame By Others
100J1	Vestibule 100J from Lobby 100H	1	6870	P	RHRA		093	093	AL UM	Q1								Alum Door By Others	AL UM	8									Alum Frame By Others
100K	Corridor 100K from Display Case 100K	1	8083	P	RHRA		102	102	AL UM	P								Alum Door By Others	AL UM										Alum Frame By Others
100K1	Corridor 100K from Display Case 100K1	1	4083	S	LHR		103	103	AL UM	P1								Alum Door By Others	AL UM										Alum Frame By Others
100K2	Corridor 100K from Display Case 100K2	1	4083	S	LHR		103	103	AL UM	P1								Alum Door By Others	AL UM										Alum Frame By Others
100K3	Corridor 100K from Display Case 100K3	1	4083	S	LHR		103	103	AL UM	P1								Alum Door By Others	AL UM										Alum Frame By Others
100K4	Corridor 100K from Display Case 100K4	1	8083	P	RHRA		102	102	AL UM	P								Alum Door By Others	AL UM										Alum Frame By Others
100M	Exterior from Vestibule 100M	1	61080	P	RHRA		091	091	AL UM	Q1								Alum Door By Others	AL UM	8									Alum Frame By Others

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Opening										Door										Frame												
OPEN NO.	LOCATION	QTY	OPENING SIZE	TYPE	HAND	LABEL	HEIGHT	WIDTH	FINISH	ALUM	GLASS	TYPE	THICK	SHIMS	MATL	PROG	REG	ELEV	CODE	PAGE	NOTES	ALUM	TYPE	MATL	SHIMS	PROG	REG	ELEV	CODE	PAGE	ANCHOR	NOTES
100M1	Vestibule 100M from Corridor 100K	1	6880	P	RHRA	093	093			ALUM	Q1										Alum Door By Others	ALUM	8								Alum Frame By Others	
100S	Exterior from Vestibule 100S	1	6880	P	RHRA	090	090			ALUM	Q1										Alum Door By Others	ALUM	8								Alum Frame By Others	
100S1	Vestibule 100S from Lockers 184	1	61080	P	RHRA	092	092			ALUM	Q1										Alum Door By Others	ALUM	8								Alum Frame By Others	
102	Corridor 100 to Storage 102	1	3070	S	LH	080	080			ATWD	A	1 3/4		RC-WASH	SCLC-5		FLUSH			2		ALUM	8								Alum Frame By Others	
114	Corridor 100 to Admission/A&SA Wal/Recept 114	1	3070	S	LH	096	096			ATWD	K	1 3/4		RC-WASH	SCLC-5		FLUSH			3	FG20X68	ALUM	8								Alum Frame By Others	
114A	Corridor 100 from Interior Corridor 114A	1	3070	S	LHR	087	087			ATWD	K	1 3/4		RC-WASH	SCLC-5		FLUSH			3	FG20X68	ALUM	8								Alum Frame By Others	
114A2	Lecture Hall Gallery 124 from Interior Corridor 114A2	1	3070	S	RHR	087	087			ATWD	K	1 3/4		RC-WASH	SCLC-5		FLUSH			3	FG20X68	ALUM	8						8 1/4"		Alum Frame By Otherc	
114B	Interior Corridor 114A to Secure Storage 114B	1	3070	S	LH	080	080			ATWD	A	1 3/4		RC-WASH	SCLC-5		FLUSH			2		ATHM	1	CRS	CONT-WLD	EQR-DWR	16	8 1/4	101	4	MTL-STUD	
114C	Interior Corridor 114A from Electrical 114C	1	3070	S	LHR	005	005			ATWD	A	1 3/4		RC-WASH	SCLC-5		FLUSH			2		ATHM	1	CRS	CONT-WLD	EQR-DWR	16	8 1/4	101	4	MTL-STUD	
114D	Interior Corridor 114A to Conference Room 114D	1	3070	S	LH	084	084			ATWD	K	1 3/4		RC-WASH	SCLC-5		FLUSH			3	FG20X68	ALUM	8								Alum Frame By Others	
114E	Interior Corridor 114A from Tel/Data 114E	1	3070	S	LHR	005	005			ATWD	A	1 3/4		RC-WASH	SCLC-5		FLUSH			2		ATHM	1	CRS	CONT-WLD	EQR-DWR	16	8 1/4	101	4	MTL-STUD	
114F	Interior Corridor 114A to Office 114F	1	3070	S	RH	023	023			ATWD	K	1 3/4		RC-WASH	SCLC-5		FLUSH			3	FG20X68	ALUM	8								Alum Frame By Others	
114G	Interior Corridor 114A from Closet 114G	1	3070	S	RHR	121	121			ATWD	A	1 3/4		RC-WASH	SCLC-5		FLUSH			2		ATHM	1	CRS	CONT-WLD	EQR-DWR	16	8 1/4	101	4	MTL-STUD	Verify Depth
114H	Staff Admin 114A1 to Office 114H	1	3070	S	LH	054	054			ATWD	K	1 3/4		RC-WASH	SCLC-5		FLUSH			3		ALUM	8								Alum Frame By Others	
114J	Staff Admin 114A1 to Office 114J	1	3070	S	RH	054	054			ATWD	K	1 3/4		RC-WASH	SCLC-5		FLUSH			3		ALUM	8								Alum Frame By Others	
114K	Interior Corridor 114A2 to Office 114K	1	3070	S	LH	054	054			ATWD	K	1 3/4		RC-WASH	SCLC-5		FLUSH			3		ALUM	8								Alum Frame By Others	
114L	Interior Corridor 114A2 to Office 114L	1	3070	S	LH	023	023			ATWD	K	1 3/4		RC-WASH	SCLC-5		FLUSH			3		ALUM	8								Alum Frame By Others	
114M	Interior Corridor 114A2 to Office 114M	1	3070	S	LH	054	054			ATWD	K	1 3/4		RC-WASH	SCLC-5		FLUSH			3	FG20X68	ALUM	8								Alum Frame By Others	
114N	Interior Corridor 114A2 to Office 114N	1	3070	S	RH	054	054			ATWD	K	1 3/4		RC-WASH	SCLC-5		FLUSH			3		ALUM	8								Alum Frame By Others	
114P	Interior Corridor 114A2 to Office 114P	1	3070	S	LH	054	054			ATWD	K	1 3/4		RC-WASH	SCLC-5		FLUSH			3		ALUM	8								Alum Frame By Others	
114R	Interior Corridor 114A2 to Office 114R	1	3070	S	RH	054	054			ATWD	K	1 3/4		RC-WASH	SCLC-5		FLUSH			3		ALUM	8								Alum Frame By Others	

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OPEN NO.	LOCATION	QTY	Opening					Door										Frame												
			OPENING SIZE	SCL / PR	HAND	LABEL	HEADING	W D	H	MFG	TRY CP HE	THICK	INS	MAT L	CORE	GAUGE	CODE	PAGE	NOTES	MFG	TRY CP HE	MAT L	SEES	PROF	GAUGE	JAMB	DEPTH	CODE	PAGE	ANCHOR
114S	Interior Corridor 114A2 to Unisex Toilet 114S	1	3070	S	RH		024	024	ATWD	A	1 3/4		RC-WASH	SCLC	-5	FLUS	2		AT	HM	1	CRS	CONT-WLD	EQR-DWR	16	8 1/2	101	4	MTL-STUD	
114T	Interior Corridor 114A2 to Office 114T	1	3070	S	LH		054	054	ATWD	K	1 3/4		RC-WASH	SCLC	-5	FLUS	3		AL	UM	8									Alum Frame By Others
114U	Interior Corridor 114A2 to Office 114U	1	3070	S	RH		054	054	ATWD	K	1 3/4		RC-WASH	SCLC	-5	FLUS	3		AL	UM	8									Alum Frame By Others
114V	Interior Corridor 114A2 to Storage 114V	1	3070	S	RH		052	052	ATWD	A	1 3/4		RC-WASH	SCLC	-5	FLUS	2		AL	UM	8									Alum Frame By Others
114W	Interior Corridor 114A2 to Office 114W	1	3070	S	LH		054	054	ATWD	K	1 3/4		RC-WASH	SCLC	-5	FLUS	3		AL	UM	8									Alum Frame By Others
114X	Interior Corridor 114A2 to Copy/Workroom 114X	1	3070	S	LH		054	054	ATWD	A	1 3/4		RC-WASH	SCLC	-5	FLUS	2		AL	UM	8									Alum Frame By Others
114Y	Interior Corridor 114A2 to Office 114Y	1	3070	S	LH		054	054	ATWD	K	1 3/4		RC-WASH	SCLC	-5	FLUS	3		AL	UM	8									Alum Frame By Others
114Z	Interior Corridor 114A2 to Office 114Z	1	3070	S	RH		054	054	ATWD	K	1 3/4		RC-WASH	SCLC	-5	FLUS	3		AL	UM	8									Alum Frame By Others
116	Corridor 100 to Food Service 116	1	3070	S	RH		054	054	ATWD	K	1 3/4		RC-WASH	SCLC	-5	FLUS	3		AL	UM	8									Alum Frame By Others
116A	Corridor 100 to Food Service 116	1	3070	S	LH		054	054	ATWD	K	1 3/4		RC-WASH	SCLC	-5	FLUS	3		AL	UM	8									Alum Frame By Others
118	Corridor 100 from SAS 118	1	6070	P	RHRA		104	104	AT	HM	CI	1 3/4	INV-TB	CRS	POLY S	18	FLUS	1	AT	HM	2	CRS	CONT-WLD	EQR-DWR	16	8 1/4	102	4	MTL-STUD	
121	Common Area 100D to Prob.-Based Learning 121	1	3070	S	LH		088	088	ATWD	K	1 3/4		RC-WASH	SCLC	-5	FLUS	3		AL	UM	8									Alum Frame By Others
121A	Common Area 100D to Prob.-Based Learning 121	1	3070	S	RH		007	007	ATWD	K	1 3/4		RC-WASH	SCLC	-5	FLUS	3		AL	UM	8									Alum Frame By Others
124	Corridor 100 from Lecture Hall Gallery 124	1	3070	S	RHR		082	082	ATWD	N1	1 3/4		RC-WASH	SCLC	-5	3-PNL	3		AT	WD	FR-7	WAS	802	AP-STOP	3/4	8 1/2	802	6		
TR124		1	3025	S					AT	WD	A	1 3/4		RC-WASH	SCLC	-5	FLUS	2	TRANSOM PANEL, Actual Height 2'-0" Verif 19 1/2"	MTL	FR-7	WAS	802	AP-STOP	3/4	8 1/2	802	6	Wood Transom Panel	
124.0	Corridor 100 from Lecture Hall Gallery 124	1	3070	S	RHR		083	083	ATWD	N1	1 3/4		RC-WASH	SCLC	-5	3-PNL	3		Shared Frame. Transom and frame by Atlas.	MTL	FR-7	WAS	802	AP-STOP	3/4	8 1/2	802	6	Shared Frame 124	
TR124.0		1	3025	S					AT	WD	A	1 3/4		RC-WASH	SCLC	-5	FLUS	2	TRANSOM PANEL, Actual Height 2'-0" Verif 19 1/2"	MTL	FR-7	WAS	802	AP-STOP	3/4	8 1/2	802	6	Wood Transom Panel	
124.1	Corridor 100 from Lecture Hall Gallery 124	1	3070	S	RHR		083	083	ATWD	N1	1 3/4		RC-WASH	SCLC	-5	3-PNL	3		Shared Frame. Transom and frame by Atlas.	MTL	FR-7	WAS	802	AP-STOP	3/4	8 1/2	802	6	Shared Frame 124	
TR124.1		1	3025	S					AT	WD	A	1 3/4		RC-WASH	SCLC	-5	FLUS	2	TRANSOM PANEL, Actual Height 2'-0" Verif 19 1/2"	MTL	FR-7	WAS	802	AP-STOP	3/4	8 1/2	802	6	Wood Transom Panel	
124A	Lecture Hall Gallery 124 from Lecture Hall 124A	1	6070	P	RHRA		081	081	AT	WD	N1	1 3/4		RC-WASH	SCLC	-5	3-PNL	3	AT	WD	FR-7	WAS	802	AP-STOP	3/4	8 1/2	802	6		
124A1	Vestibule 124A1 from Lecture	1	3070	S	LHR		095	095	AT	N1	1 3/4		RC-	SCLC		3-PNL	3		AT	WD	FR-7	WAS	802	AP-STOP	3/4	8 1/2	802	6		

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REFER TO ATTACHED RFQ # 60 - DOUBLE ACTION DOORS & 8'-0" TALL.

REFER TO
ATTACHED
RFQ # 60 -
DOUBLE
ACTION
DOORS &
8'-0" TALL

Opening										Door										Frame										
OPEN NO.	LOCATION	QTY	OPENING SIZE	SGL / PR	HAND	LABEL	HEAD INCH	HDW SET	MFG	ATYP	THICK	SEALS	MATL	CORE	G AUG	CODE	PAGE	NOTES	MFG	ATYP	MATL	SEALS	PROP	G AUG	JAMB	DEPT	CODE	PAGE	ANCHOR	NOTES
152.0	Corridor 100 from Lecture Hall Gallery 152	1	3070 80	S	LHR		083	083	ATWD	N1	1 3/4		RC-WASH	SCLC-5		3-PNL	3		ATWD	FR-7						8 1/2"				Shared Frame 152
TR152.0		1	3070 18	S					ATWD	A	1 3/4		RC-WASH	SCLC-5		FLUSH	2	Transom Panel, Actual Height 19 1/2"								8 1/2"				Wood Transom Panel
152.1	Corridor 100 from Lecture Hall Gallery 152	1	3070 80	S	LHR		082	082	ATWD	N1	1 3/4		RC-WASH	SCLC-5		3-PNL	3									8 1/2"				Shared Frame 152
TR152.1		1	3070 18	S					ATWD	A	1 3/4		RC-WASH	SCLC-5		FLUSH	2	Transom Panel, Actual Height 19 1/2"								8 1/2"				Wood Transom Panel
152A	Lecture Hall Gallery 152 from Lecture Hall 152A	1	6070 80	P	RHRA		081	081	ATWD	N2	1 3/4		RC-WASH	SCLC-5		3-PNL	3		ATWD	6	WASH	102	AP-STOP	3/4	8 1/2	102	6			
152A1	Vestibule 152A1 from Lecture Hall 152A	1	3070	S	RHR		095	095	ATWD	N1	1 3/4		RC-WASH	SCLC-5		3-PNL	3		ATWD	5	WASH	101	AP-STOP	3/4	8 1/2	101	6			
152A1A	Corridor 100E from Vestibule 152A1	1	3070	S	LHR		094	094	ATWD	N1	1 3/4		RC-WASH	SCLC-5		3-PNL	3		ATWD	5	WASH	101	AP-STOP	3/4	8 1/2	101	6			
152A2	Vestibule 152A1 from Storage 152A2	1	2670	S	RHR		066	066	ATWD	A	1 3/4		RC-WASH	SCLC-5		FLUSH	2		ATHM	1	CRS	CONT-WLD	EQR-DWR	16	8 1/4	101	4		MTL-STUD	
152A3	Lecture Hall Gallery 152 from Lecture Hall 152A	1	6070 80	P	RHRA		081	081	ATWD	N2	1 3/4		RC-WASH	SCLC-5		3-PNL	3		ATWD	6	WASH	102	AP-STOP	3/4	8 1/2	102	6			
152B	Lecture Hall Gallery 152 to AV Storage 152B	1	3070	S	RH		003	003	ATWD	A	1 3/4		RC-WASH	SCLC-5		FLUSH	2	FG20X68	ATHM	1	CRS	CONT-WLD	EQR-DWR	16	8 1/4	101	4		MTL-STUD	
154	Corridor 100 to Student Org 154	1	6070	P	RHA		106	106	ATWD	N3	1 3/4		RC-WASH	SCLC-5		FG21X68	3	VERIFY ALUM (Addenda 3.34.1)	ALUM	8										Alum Frame By Others
155A	Womens 155 from Storage 155A	1	3070	S	RHR		108	108	ATHM	A1	1 3/4	INV-TB	CRS	POLY S	18	FLUSH	1		ATHM	1	CRS	CONT-WLD	EQR-DWR	16	8 1/4	101	4		MTL-STUD	
157	Corridor 100G to Prob.-Based Learning 157	1	3070	S	LH		088	088	ATWD	K	1 3/4		RC-WASH	SCLC-5		FG21X68	3		ALUM	8										Alum Frame By Others
157A	Corridor 100G to Prob.-Based Learning 157	1	3070	S	RH		007	007	ATWD	K	1 3/4		RC-WASH	SCLC-5		FG21X68	3	FG20X68	ALUM	8										Alum Frame By Others
158	Corridor 100 to Student Org 158	1	3070	S	RH		085	085	ATWD	K	1 3/4		RC-WASH	SCLC-5		FG21X68	3		ALUM	8										Alum Frame By Others
160	Corridor 100K to Student Org 160	1	3070	S	LH		085	085	ATWD	K	1 3/4		RC-WASH	SCLC-5		FG21X68	3		ALUM	8										Alum Frame By Others
162	Corridor 100L from BAS 162	1	6070	P	RHRA		104	104	ATHM	C1	1 3/4	INV-TB	CRS	POLY S	18	FLUSH	1		ATHM	2	CRS	CONT-WLD	EQR-DWR	16	8 1/4	102	4		MTL-STUD	
164	Corridor 100L to Student Org 164	1	3070	S	RH		085	085	ATWD	K	1 3/4		RC-WASH	SCLC-5		FG21X68	3		ALUM	8										Alum Frame By Others
166	Corridor 100L from BAS 166	1	6070	P	RHRA		104	104	ATHM	C1	1 3/4	INV-TB	CRS	POLY S	18	FLUSH	1		ATHM	2	CRS	CONT-WLD	EQR-DWR	16	8 1/4	102	4		MTL-STUD	
168	Corridor 100L to Student Org 168	1	3070	S	LH		085	085	ATWD	K	1 3/4		RC-WASH	SCLC-5		FG21X68	3	FG20X68	ALUM	8										Alum Frame By Others
170	Corridor 100L from Classroom 170	1	3070	S	LHR		006	006	ATWD	K	1 3/4		RC-WASH	SCLC-5		FG21X68	3		ALUM	8										Alum Frame By Others

Shared frame. Transom and frame by Atlas.

this addenda item references door number N3 not door type N3

May 21, 2008

NEW DOOR ADDED # 170B - SEE ATTACHED RFQ # 60. FLUSH TYPE A, FRAME TYPE ALUM # 8, 3070

UK Biological Pharmaceutical Complex
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OPEN NO.	LOCATION	QTY	Opening				Door										Frame										NOTES					
			OPENING SIZE	SSL / PPR	HAND	LABEL	HEAD IN G	HDW SET	MFG	ARCH	TYPC	THICK	FINISH	MATL	CORE	G AUGE	ELEV	CODE	PAGE	MFG	ARCH	TYPC	MATL	FINISH	PROF	G AUGE		JAMB	DEPT H	ELEV	CODE	PAGE
170A	Corridor 100L from Classroom 170	1	3070	S	RHR	006	008	ATWD	K	1 3/4		RC-WASH	SCLC	FG21 X69	3			ALUM	8													Alum Frame By Others
171	Corridor 100G to Prob.-Based Learning 171	1	3070	S	LH	088	088	ATWD	K	1 3/4		RC-WASH	SCLC	FG21 X69	3	FG20X68		ALUM	8													Alum Frame By Others
171A	Corridor 100G to Prob.-Based Learning 171	1	3070	S	RH	007	007	ATWD	K	1 3/4		RC-WASH	SCLC	FG21 X69	3			ALUM	8												Alum Frame By Others	
172	Corridor 100 to Student Org 172	1	6670	P	RHA	106	106	ATWD	K	1 3/4		RC-WASH	SCLC	FG21 X69	3	VERIFY ALUM (Addenda 3-244)		ALUM	8													Alum Frame By Others
175	Corridor 100G to Prob.-Based Learning 175	1	3070	S	LH	088	088	ATWD	K	1 3/4		RC-WASH	SCLC	FG21 X69	3	FG20X68		ALUM	8													Alum Frame By Others
175A	Corridor 100G to Prob.-Based Learning 175	1	3070	S	RH	007	007	ATWD	K	1 3/4		RC-WASH	SCLC	FG21 X69	3			ALUM	8												Alum Frame By Others	
176	Lockers 184 to Janitor Closet 176	1	3070	S	RH	100	100	ATHM	A1	1 3/4	INV-TB	CRS	POLY S	18	FLUS H	1		ATHM	1	CRS	CONT JWLD	EQR-DWR	16	8 1/4	101	4	MTL-STUD					
178	Lockers 184 to Prob.-Based Learning 178	1	3070	S	RH	004	004	ATWD	K	1 3/4		RC-WASH	SCLC	FG21 X69	3			ALUM	8												Alum Frame By Others	
180	Lockers 184 to Prob.-Based Learning 180	1	3070	S	LH	004	004	ATWD	K	1 3/4		RC-WASH	SCLC	FG21 X69	3			ALUM	8												Alum Frame By Others	
181	Corridor 100G to Prob.-Based Learning 181	1	3070	S	LH	088	088	ATWD	K	1 3/4		RC-WASH	SCLC	FG21 X69	3	FG20X68		ALUM	8													Alum Frame By Others
181A	Corridor 100G to Prob.-Based Learning 181	1	3070	S	RH	007	007	ATWD	K	1 3/4		RC-WASH	SCLC	FG21 X69	3			ALUM	8												Alum Frame By Others	
182	Lockers 184 to Prob.-Based Learning 182	1	3070	S	RH	004	004	ATWD	K	1 3/4		RC-WASH	SCLC	FG21 X69	3			ALUM	8												Alum Frame By Others	
185	Corridor 100G to Quiet Study Area 185	1	3070	S	RH	084	084	ATWD	K	1 3/4		RC-WASH	SCLC	FG21 X69	3			ALUM	8												Alum Frame By Others	
186	Lockers 184 from Electrical 186	1	3070	S	LHR	005	005	ATHM	A1	1 3/4	INV-TB	CRS	POLY S	18	FLUS H	1		ATHM	1	CRS	CONT JWLD	EQR-DWR	16	8 1/4	101	4	MTL-STUD					
187	Corridor 100G to Building Storage 187	1	3070	S	RH	014	014	ATHM	A1	1 3/4	INV-TB	CRS	POLY S	18	FLUS H	1		ATHM	1	CRS	CONT JWLD	EQR-DWR	16	8 1/4	101	4	MTL-STUD					
188	Lockers 184 from Tel/Data 188	1	3070	S	LHR	005	005	ATHM	A1	1 3/4	INV-TB	CRS	POLY S	18	FLUS H	1		ATHM	1	CRS	CONT JWLD	EQR-DWR	16	8 1/4	101	4	MTL-STUD					
189	Corridor 100G from Sec 189	1	4470	P	RHRA	105	105	ATHM	C1	1 3/4	INV-TB	CRS	POLY S	18	FLUS H	1		ATHM	2	CRS	CONT JWLD	EQR-DWR	16	8 1/4	102	4	MTL-STUD					
190	Lockers 184 from Building Storage 190	1	3070	S	LHR	083	083	ATHM	A1	1 3/4	INV-TB	CRS	POLY S	18	FLUS H	1		ATHM	1	CRS	CONT JWLD	EQR-DWR	16	8 1/4	101	4	MTL-STUD					
192	Lockers 184 to Prob.-Based Learning 192	1	3070	S	LH	004	004	ATWD	K	1 3/4		RC-WASH	SCLC	FG21 X69	3			ALUM	8												Alum Frame By Others	
194	Lockers 184 to Prob.-Based Learning 194	1	3070	S	RH	004	004	ATWD	K	1 3/4		RC-WASH	SCLC	FG21 X69	3	FG20X68		ALUM	8												Alum Frame By Others	
196	Lockers 184 to Student Camp Support Cubicle 196	1	3070	S	RH	004	004	ATWD	K	1 3/4		RC-WASH	SCLC	FG21 X69	3			ALUM	8												Alum Frame By Others	
198	Lockers 184 from Interior Corridor 198	1	3070	S	RHR	004	004	ATWD	K	1 3/4		RC-WASH	SCLC	FG21 X69	3			ALUM	8												Alum Frame By Others	

this addenda item references door number N3 not door type N3

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OPEN NO.	LOCATION	QTY	Opening					Door										Frame										NOTES			
			OPENING SIZE	SGL / PPR	HAND	LABEL	HEADING	HDW SET	MFG	ATYP	CHK	SERIES	MATL	CORE	GAUGE	CODE	ELEV	PAGE	NOTES	MFG	ATYP	MATL	SERIES	FORP	GAUGE	JAMB	DEPTH		CODE	PAGE	ANCHOR
198A	Interior Corridor 198 to Work Area College 198A	1	3070	S	LH		054	054	ATWD	K	1 3/4		RC-WAS H	SCLC -5	FG21 X68	3		ALUM	8												Alum Frame By Others
198A1	Student Comp Support Cubicle 198 to Support Staff 198A1	1	3070	S	RH		054	054	ATWD	K	1 3/4		RC-WAS H	SCLC -5	FG21 X68	3	FG20X68	ALUM	8											Alum Frame By Others	
198B	Interior Corridor 198 to Web Prog Office 198B	1	3070	S	RH		054	054	ATWD	K	1 3/4		RC-WAS H	SCLC -5	FG21 X68	3		ALUM	8											Alum Frame By Others	
198C	Interior Corridor 198 to Server Room 198C	1	3070	S	RH		050	060	ATWD	A	1 3/4		RC-WAS H	SCLC -5	FLUS H	2		ALUM	8											Alum Frame By Others	
200A	Bridge 200A1 from Corridor 200A	1	6070	P	RHRA	45MIN	097	097	ATWD	J	1 3/4		RC-WAS H	MINE RAL	HG20 X47	2		ATHM	2	CRS	CONT-WLD	EQR-DWR	16	8 1/2"	102	4	MTL-STUD	HM per Add 3, Verify Type & Depth	CORRECT		
200A1	Existing from Bridge 200A1	1	6070	P	RHRA		126	120	ALUM	Q1							Alum per Add 3	ALUM	8										Alum Frame By Others		
200C	Corridor 200B to/from Corridor 200E	1	6070	P	DE		079	079	ATWD	E	1 3/4		RC-WAS H	SCLC -5	N4X2 5	2		ATHM	9	CRS	CONT-WLD	SGLR-DWR	16	8 1/4"	102-4DEGR	5	MTL-STUD				
210	Corridor 200 from Comm Closet 210	1	3070	S	RHR		005	005	ATHM	A1	1 3/4	INV-TB	CRS	POLY S	18	FLUS H	1	ATHM	1	CRS	CONT-WLD	EQR-DWR	16	8 1/4"	101	4	MTL-STUD				
212	Corridor 200 from Electrical 212	1	3070	S	RHR		005	005	ATHM	A1	1 3/4	INV-TB	CRS	POLY S	18	FLUS H	1	ATHM	1	CRS	CONT-WLD	EQR-DWR	18	8 1/4"	101	4	MTL-STUD				
214	Corridor 200 from Deans Suite Receipt 214	1	3070	S	LHR		008	008	ATWD	K	1 3/4		RC-WAS H	SCLC -5	FG21 X68	3	FG20X68	ALUM	8										Alum Frame By Others		
214A1	Interior Corridor 214A1 from Closet 214A	1	6972	P	RHRA		102	102	ALUM	P							Alum Door By Others	ALUM											Alum Frame By Others		
214A6	Corridor 200A to Interior Corridor 214A6	1	3070	S	LH		009	009	ATWD	K	1 3/4		RC-WAS H	SCLC -5	FG21 X68	3	FG20X68	ALUM	8											Alum Frame By Others	
214B	Interior Corridor 214A1 from Closet 214B	1	4470	P	RHRA		098	098	ATWD	K	1 3/4		RC-WAS H	SCLC -5	FLUS H	2		ALUM	8											Alum Frame By Others	
214B1	Interior Corridor 214A1 from Closet 214B	1	4470	P	RHRA		098	098	ATWD	K	1 3/4		RC-WAS H	SCLC -5	FLUS H	2		ALUM	8											Alum Frame By Others	
214C	Interior Corridor 214A1 to Office 214C	1	3070	S	RH		023	023	ATWD	K	1 3/4		RC-WAS H	SCLC -5	FG21 X68	3		ALUM	8											Alum Frame By Others	
214D	Interior Corridor 214A1 to Office 214D	1	3070	S	LH		023	023	ATWD	K	1 3/4		RC-WAS H	SCLC -5	FG21 X68	3	FG20X68	ALUM	8											Alum Frame By Others	
214E	Interior Corridor 214A3 to Conference Room 214E	1	3070	S	RH		084	084	ATWD	K	1 3/4		RC-WAS H	SCLC -5	FG21 X68	3		ALUM	8											Alum Frame By Others	
214F	Interior Corridor 214A3 to Conference Room 214F	1	3070	S	RH		084	084	ATWD	K	1 3/4		RC-WAS H	SCLC -5	FG21 X68	3		ALUM	8											Alum Frame By Others	
214F1	Conference Room 214F to Interior Corridor 214H3	1	3070	S	RH		088	088	ATWD	A	1 3/4		RC-WAS H	SCLC -5	FLUS H	2		ALUM	8											Alum Frame By Others	
214G	Interior Corridor 214A3 to Kitchenette 214G	1	3070	S	RH		110	110	ATWD	A	1 3/4		RC-WAS H	SCLC -5	FLUS H	2		ALUM	8											Alum Frame By Others	
214G1	Interior Corridor 214A3 to Kitchenette 214G	1	3070	S	LH		110	110	ATWD	A	1 3/4		RC-WAS H	SCLC -5	FLUS H	2		ALUM	8											Alum Frame By Others	
214H	Interior Corridor 214A6 to	1	3070	S	LH		054	054	ATWD	K	1 3/4		RC-	SCLC	FG21 X68	3	FG20X68	ALUM	8											Alum Frame By	

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Opening											Door								Frame															
OPEN NO.	LOCATION	QTY	OPENING SIZE	SG/L/P/R	HAND	LABEL	HEADING	HDW SET	MFG	ATYP	THICK	SERIES	MATL	CORSE	G AUGEE	C O D E	P A G E	ELEV	NOTES	MFG	ATYP	MATL	SERIES	PROF	G AUGEE	J A M B	DEPT H	C O D E	P A G E	ELEV	A N C H O R	NOTES		
	Office 214H																																	Others
214H1	Office 214H to Dean 214H1	1	3070	S	RH		111	111	ATWD	A	1 3/4		RC-WASH	SCLC	-5	FLUSH	2		FG20X68	ALUM	8												Alum Frame By Others	
214H2	Dean 214H1 to Closet 214H2	1	3070	S	RH		110	110	ATWD	A	1 3/4		RC-WASH	SCLC	-5	FLUSH	2			ALUM	8												Alum Frame By Others	
214H3	Interior Corridor 214H3 to Dean 214H1	1	3070	S	RH		054	054	ATWD	A	1 3/4		RC-WASH	SCLC	-5	FLUSH	2			ALUM	8												Alum Frame By Others	
214H4	Interior Corridor 214H3 to Restroom 214H4	1	3070	S	RH		067	067	ATWD	A	1 3/4		RC-WASH	SCLC	-5	FLUSH	2			ALUM	8												Alum Frame By Others	
214J	Interior Corridor 214A6 to Office 214J	1	3070	S	LH		054	054	ATWD	K	1 3/4		RC-WASH	SCLC	-5	FLUSH	3			ALUM	8												Alum Frame By Others	
214K	Interior Corridor 214A6 to Office 214K	1	3070	S	RH		054	054	ATWD	K	1 3/4		RC-WASH	SCLC	-5	FLUSH	3			ALUM	8												Alum Frame By Others	
214L	Interior Corridor 214A6 to Office 214L	1	3070	S	LH		054	054	ATWD	K	1 3/4		RC-WASH	SCLC	-5	FLUSH	3		FG20X68	ALUM	8												Alum Frame By Others	
214M	Interior Corridor 214A6 to Office 214M	1	3070	S	RH		054	054	ATWD	K	1 3/4		RC-WASH	SCLC	-5	FLUSH	3			ALUM	8												Alum Frame By Others	
214N	Interior Corridor 214A6 to Office 214N	1	3070	S	RH		054	054	ATWD	K	1 3/4		RC-WASH	SCLC	-5	FLUSH	3			ALUM	8												Alum Frame By Others	
214P	Admin Assist 214A7 to Office 214P	1	3070	S	RH		054	054	ATWD	A	1 3/4		RC-WASH	SCLC	-5	FLUSH	2			ALUM	8												Alum Frame By Others	
214R	Interior Corridor 214A6 to Office 214R	1	3070	S	LH		054	054	ATWD	K	1 3/4		RC-WASH	SCLC	-5	FLUSH	3		FG20X68	ALUM	8												Alum Frame By Others	
214S	Interior Corridor 214A8 to Restroom 214S	1	3070	S	LH		087	087	ATWD	A	1 3/4		RC-WASH	SCLC	-5	FLUSH	2			ATHM	1	CRS	CONT-WLD	EQR-DWR	16	8 1/4	101	4				MTL-STUD		
214T	Interior Corridor 214A8 to Restroom 214T	1	3070	S	RH		067	067	ATWD	A	1 3/4		RC-WASH	SCLC	-5	FLUSH	2			ATHM	1	CRS	CONT-WLD	EQR-DWR	18	8 1/4	101	4				MTL-STUD		
214U	Interior Corridor 214A8 to Staff Room 214U	1	3070	S	LH		084	084	ATWD	K	1 3/4		RC-WASH	SCLC	-5	FLUSH	3		FG20X68	ALUM	8												Alum Frame By Others	
214V	Interior Corridor 214A8 to Workroom 214V	1	3070	S	RH		084	084	ATWD	A	1 3/4		RC-WASH	SCLC	-5	FLUSH	2			ALUM	8												Alum Frame By Others	
216	Corridor 200 to Conference 216	1	3070	S	LH		084	084	ATWD	K	1 3/4		RC-WASH	SCLC	-5	FLUSH	3		FG20X68	ALUM	8												Alum Frame By Others	
216A	Deans Suite Reception 214 to Conference 216	1	3070	S	LH		084	084	ATWD	A	1 3/4		RC-WASH	SCLC	-5	FLUSH	2			ALUM	8												Alum Frame By Others	
218	Corridor 200A to Mail Room 218	1	3070	S	RH		007	007	ATWD	K	1 3/4		RC-WASH	SCLC	-5	FLUSH	3		FG20X68	ALUM	8												Alum Frame By Others	
220	Corridor 200 from BAS 220	1	3070	P	RHRA		104	104	ATHM	C	1 3/4	INV-TB	CRS	POLYS	18	FLUSH	1			ATHM	2	CRS	CONT-WLD	EQR-DWR	16	8 1/4	102	4				MTL-STUD		
221	Corridor 200B to Office 221	1	3070	S	LH		054	054	ATWD	K	1 3/4		RC-WASH	SCLC	-5	FLUSH	3		FG20X68	ALUM	8												Alum Frame By Others	

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OPEN NO.	LOCATION	Opening										Door										Frame											
		QTY	OPENING SIZE	SGL / PR	HAND	LABEL	HEADING	HWS	MFG	ATYP	THICK	SERIES	MTRL	CORE	GAUGE	ELEV		NOTES	MFG	ATYP	MTRL	SERIES	PROF	GAUGE	JAMB	DEPT	ELEV		ANCHOR	NOTES			
																CODE	PAGE										CODE	PAGE					
222	Corridor 200A to AV Closet 222	1	3070	S	LH		062	062	AT	WD	A	1 3/4	RC-WAS	SCLC	-5	FLUS	H	2		AT	HM	1	CRS	CONT-WLD	EQR-DWR	16	8 1/4	101	4			MTL-STUD	
222A	Classroom 234B to AV Closet 222	1	3070	S	RH		062	062	AT	WD	A	1 3/4	RC-WAS	SCLC	-5	FLUS	H	2		AT	HM	1	CRS	CONT-WLD	EQR-DWR	16	8 1/2	101	4			MTL-STUD	
223	Corridor 200B to Office 223	1	3070	S	RH		064	064	AT	WD	K	1 3/4	RC-WAS	SCLC	-5	FG20X68				AL	UM	8										Alum Frame By Others	
224	Corridor 200A to Study Alcove 224	1	3070	S	RH		084	084	AT	WD	K	1 3/4	RC-WAS	SCLC	-5	FG20X68				AL	UM	8										Alum Frame By Others	
225	Corridor 200B to Office 225	1	3070	S	LH		054	054	AT	WD	K	1 3/4	RC-WAS	SCLC	-5	FG20X68				AL	UM	8										Alum Frame By Others	
226	Corridor 200A to Study Alcove 226	1	3070	S	RH		084	084	AT	WD	K	1 3/4	RC-WAS	SCLC	-5	FG20X68				AL	UM	8										Alum Frame By Others	
227	Corridor 200B to Office 227	1	3070	S	RH		064	064	AT	WD	K	1 3/4	RC-WAS	SCLC	-5	FG20X68			FG20X68	AL	UM	8										Alum Frame By Others	
228	Corridor 200A to Study Alcove 228	1	3070	S	RH		084	084	AT	WD	K	1 3/4	RC-WAS	SCLC	-5	FG20X68				AL	UM	8										Alum Frame By Others	
230	Corridor 200A to Study Alcove 230	1	3070	S	RH		084	084	AT	WD	K	1 3/4	RC-WAS	SCLC	-5	FG20X68				AL	UM	8										Alum Frame By Others	
231	Corridor 200B to Office 231	1	3070	S	LH		054	054	AT	WD	K	1 3/4	RC-WAS	SCLC	-5	FG20X68				AL	UM	8										Alum Frame By Others	
232	Corridor 200A to Study Alcove 232	1	3070	S	RH		084	084	AT	WD	K	1 3/4	RC-WAS	SCLC	-5	FG20X68				AL	UM	8										Alum Frame By Others	
233	Corridor 200B to Office 233	1	3070	S	RH		054	054	AT	WD	K	1 3/4	RC-WAS	SCLC	-5	FG20X68				AL	UM	8										Alum Frame By Others	
234	Corridor 200 from Vestibule 234	1	3070	S	RHR		112	112	AT	WD	A	1 3/4	RC-WAS	SCLC	-5	FLUS	H	2		AT	WD	5	WAS	H	101	AP-STOP	3/4	8 1/2	101	6			
234A	Vestibule 234 from Classroom 234B	1	3070	S	RHR		114	114	AT	WD	A	1 3/4	RC-WAS	SCLC	-5	FLUS	H	2		AT	WD	5	WAS	H	101	AP-STOP	3/4	8 1/2	101	6			
234B	Corridor 200 from Vestibule 234A	1	3070	S	LHR	A? YES Verify.	113	113	AT	WD	A	1 3/4	RC-WAS	SCLC	-5	FLUS	H	2		AT	WD	5	WAS	H	101	AP-STOP	3/4	8 1/2	101	6			
234B1	Vestibule 234A from Classroom 234B	1	3070	S	LHR	A? YES Verify.	114	114	AT	WD	A	1 3/4	RC-WAS	SCLC	-5	FLUS	H	2		AT	WD	5	WAS	H	101	AP-STOP	3/4	8 1/2	101	6			
234C	Vestibule 234C from Classroom 234B	1	3070	S	LHR		114	114	AT	WD	A	1 3/4	RC-WAS	SCLC	-5	FLUS	H	2		AT	WD	5	WAS	H	101	AP-STOP	3/4	8 1/2	101	6			
234C1	Corridor 200A from Vestibule 234C	1	3070	S	LHR		115	115	AT	WD	A	1 3/4	RC-WAS	SCLC	-5	FG20X68				AT	WD	5	WAS	H	101	AP-STOP	3/4	8 1/2	101	6			
235	Corridor 200B to Office 235	1	3070	S	LH		054	054	AT	WD	K	1 3/4	RC-WAS	SCLC	-5	FG20X68			FG20X68	AL	UM	8										Alum Frame By Others	
235B	Corridor 200 to Prob.-Based Learning 236	1	3070	S	RH		116	116	AT	WD	K	1 3/4	RC-WAS	SCLC	-5	FG20X68			FG20X68	AL	UM	8										Alum Frame By Others	

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RFQ # 56

OPEN NO.	LOCATION	QTY	Opening					Door										Frame										NOTES																
			OPENING SIZE	SGL / PR	HAND	LABEL	HEADING	HDW SET	MFG	ARY CP HE	THICK	SERIES	MATL	CORE	G AUG E	ELEV CODE	PAGE	MFG	ARY CP HE	MATL	SERIES	PORT	G AUG E	J AM B	D R E P T	ELEV CODE	PAGE		A N C H O R															
236A	Corridor 200 to Preb.-Based Learning 236	1	3070	S	LH		118	118	AT	WD	K	1 3/4		RC-WASH	SCLC	-5	FG21 X69	3														ALUM	8					Alum Frame By Others						
237	Corridor 200B to Office 237	1	3070	S	RH		054	054	AT	WD	K	1 3/4		RC-WASH	SCLC	-5	FG21 X69	3																		Alum Frame By Others								
239	Corridor 200B to Pharm Policy 239	1	3070	S	RH		054	054	AT	WD	K	1 3/4		RC-WASH	SCLC	-5	FG21 X69	3																		Alum Frame By Others	RFQ # 60 - SEE ATTACHED							
239A	Corridor 200B to Pharm Policy 239	1	3070	S	LH		054	054	AT	WD	K	1 3/4		RC-WASH	SCLC	-5	FG21 X69	3																		Alum Frame By Others	RFQ TO FOLLOW							
240	Corridor 200 from Sterile Compound Lab 240	1	3070	S	RHR		118	118	AT	WD	K	1 3/4		RC-WASH	SCLC	-5	FG21 X69	3																		Alum Frame By Others								
240A	Sterile Compound Lab 240 to Interior Corridor 240A	1	3070	S	RH		119	119	AT	WD	K	1 3/4		RC-WASH	SCLC	-5	FG21 X69	3																		Alum Frame By Others								
240A1	Sterile Compound Lab 240 to Interior Corridor 240A	1	3070	S	RH		110	110	AT	WD	K	1 3/4		RC-WASH	SCLC	-6	FG21 X69	3																		Alum Frame By Others								
240A2	Sterile Compound Lab 240 from Pat Inter Discussion Room 250	1	3070	S	LHR		119	119	AT	WD	K	1 3/4		RC-WASH	SCLC	-5	FG21 X69	3																		Alum Frame By Others								
240B	Interior Corridor 240A to Tech Office 240B	1	3070	S	RH		054	054	AT	WD	K	1 3/4		RC-WASH	SCLC	-5	FG21 X69	3																		Alum Frame By Others								
240C	Interior Corridor 240A to Tech Office 240C	1	3070	S	LH		054	054	AT	WD	K	1 3/4		RC-WASH	SCLC	-5	FG21 X69	3																		Alum Frame By Others								
240D	Interior Corridor 240A to Workroom 240D	1	3070	S	RH		085	085	AT	WD	K	1 3/4		RC-WASH	SCLC	-5	FG21 X69	3																		Alum Frame By Others								
241	Corridor 200B to Office 241	1	3070	S	LH		054	054	AT	WD	K	1 3/4		RC-WASH	SCLC	-5	FG21 X69	3																		Alum Frame By Others								
243	Corridor 200B to Office 243	1	3070	S	RH		054	054	AT	WD	K	1 3/4		RC-WASH	SCLC	-5	FG21 X69	3																		Alum Frame By Others								
245	Corridor 200E to Office 245	1	3070	S	LH		054	054	AT	WD	K	1 3/4		RC-WASH	SCLC	-5	FG21 X69	3																		Alum Frame By Others								
247	Corridor 200E to Office 247	1	3070	S	RH		054	054	AT	WD	K	1 3/4		RC-WASH	SCLC	-5	FG21 X69	3																		Alum Frame By Others								
249	Corridor 200E from Sec 249	1	4470	P	RHRA		105	105	AT	HM	CT	1 3/4	INV-TB	CRS	POLY S	18	FLUSH	1																	AT HM	2	CRS	CONT-JULD	EQR-DWR	18	8 1/4	102	4	MTL-STUD
250	Corridor 200 from Pat Inter Discussion Room 250	1	3070	S	RHR		118	118	AT	WD	K	1 3/4		RC-WASH	SCLC	-5	FG21 X69	3																		ALUM	8					Alum Frame By Others		
250A	Corridor 200 from Pat Inter Discussion Room 250	1	3070	S	LHR		123	123	AT	WD	K	1 3/4		RC-WASH	SCLC	-5	FG21 X69	3																			ALUM	8					Alum Frame By Others	
250A1	Pat Inter Discussion Room 250 from Interior Corridor 240A	1	3070	S	LHR		119	119	AT	WD	K	1 3/4		RC-WASH	SCLC	-5	FG21 X69	3																				ALUM	8					Alum Frame By Others
250B	Pat Inter Discussion Room 250 to Storage 250B	1	3070	S	LH		014	014	AT	WD	K	1 3/4		RC-WASH	SCLC	-5	FG21 X69	3																			ALUM	8					Alum Frame By Others	

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OPEN NO.	LOCATION	Opening					Door										Frame										NOTES			
		QTY	OPENING SIZE	SGL / FR	HAND	LABEL	HEAD IN G	HDW SET	MFG	ATRY CPHE	THICK	SEERIES	MATL	CORE	GAUGE	ELEV CODE	ELEV PAGE	MFG	ATRY CPHE	MATL	SEERIES	PROP	GAUGE	JAMB	DEPTH	ELEV CODE		ELEV PAGE	ANCHOR	
250B1	Pat Inter Discussion Room 250 to Storage 250B	1	3070	S	RH		014	014	ATWD	K	1 3/4		RC-WASH	SCLC-5	FG20X68	3		ALUM	8											Alum Frame By Others
251	Corridor 200E to Office 251	1	3070	S	LH		054	054	ATWD	K	1 3/4		RC-WASH	SCLC-5	FG20X68	3		ALUM	8											Alum Frame By Others
252	Corridor 200 from Electrical 252	1	3070	S	LHR	45MIN	005	005	ATHM	A1	1 3/4	INV-TB	CRS	POLY S	FLUSH	1		ALUM	1	CRS	CONT-WILD	EQR-DWR	16	8 1/4	101	4	MTL-STUD			
253	Corridor 200E to Office 253	1	3070	S	RH		054	054	ATWD	K	1 3/4		RC-WASH	SCLC-5	FG20X68	3		ALUM	8											Alum Frame By Others
255	Corridor 200E to Office 255	1	3070	S	LH		054	054	ATWD	K	1 3/4		RC-WASH	SCLC-5	FG20X68	3		ALUM	8											Alum Frame By Others
257	Corridor 200E to Office 257	1	3070	S	RH		054	054	ATWD	K	1 3/4		RC-WASH	SCLC-5	FG20X68	3		ALUM	8											Alum Frame By Others
258	Lounge/Break-out 200F to Womens 258	1	3070	S	RH		089	089	ATHM	A1	1 3/4	INV-TB	CRS	POLY S	FLUSH	1		ALUM	1	CRS	CONT-WILD	EQR-DWR	15	9 1/2	101	4	MTL-STUD			
258A	Womens 258 from Storage 258A	1	2870	S	LHR		108	108	ATHM	A1	1 3/4	INV-TB	CRS	POLY S	FLUSH	1		ALUM	1	CRS	CONT-WILD	EQR-DWR	15	8 1/4	101	4	MTL-STUD			
259	Corridor 200E to Janitor Closet 259	1	3070	S	RH		080	080	ATHM	A1	1 3/4	INV-TB	CRS	POLY S	FLUSH	1		ALUM	1	CRS	CONT-WILD	EQR-DWR	15	9 1/2	101	4	MTL-STUD			
260	Corridor 200 from Non-Sterile Ext Compound Area 260	1	3070	S	LHR		118	118	ATWD	K	1 3/4		RC-WASH	SCLC-5	FG20X68	3		ALUM	8											Alum Frame By Others
260A	Non-Sterile Ext Compound Area 260 from Pat Inter Discussion Room 260	1	3070	S	RHR		119	119	ATWD	K	1 3/4		RC-WASH	SCLC-5	FG20X68	3		ALUM	8											Alum Frame By Others
260A1	Non-Sterile Ext Compound Area 260 from Pat Inter Discussion Room 260	1	3070	S	LHR		119	119	ATWD	K	1 3/4		RC-WASH	SCLC-5	FG20X68	3		ALUM	8											Alum Frame By Others
260A2	Non-Sterile Ext Compound Area 260 from Interior Corridor 270A1	1	3070	S	RHR		084	084	ATWD	K	1 3/4		RC-WASH	SCLC-5	FG20X68	3		ALUM	8											Alum Frame By Others
269	Corridor 200G to Recy 269	1	3070	S	LH		107	107	ATHM	A1	1 3/4	INV-TB	CRS	POLY S	FLUSH	1		ALUM	1	CRS	CONT-WILD	EQR-DWR	15	9 1/2	101	4	MTL-STUD	Verify Depth	CORRECT	
270	Corridor 200 from Student Write-Up 270	1	3070	S	RHR		120	120	ATWD	K	1 3/4		RC-WASH	SCLC-5	FG20X68	3		ALUM	8											Alum Frame By Others
270A	Student Write-Up 270 from Non-Sterile Ext Compound Area 260	1	3070	S	LHR		119	119	ATWD	K	1 3/4		RC-WASH	SCLC-5	FG20X68	3		ALUM	8											Alum Frame By Others
270A2	Interior Corridor 270A to Student Write-Up 270	1	3070	S	LH		116	116	ATWD	A	1 3/4		RC-WASH	SCLC-5	FLUSH	2		ALUM	1	CRS	CONT-WILD	EQR-DWR	15	8 1/4	101	4	MTL-STUD			
270B	Interior Corridor 270A1 from Storage 270B	1	3070	S	RHR		121	121	ATWD	A	1 3/4		RC-WASH	SCLC-5	FLUSH	2		ALUM	1	CRS	CONT-WILD	EQR-DWR	15	9 1/2	101	4	MTL-STUD			
270C	Interior Corridor 270A1 to Standardized Patient Room 270C1	1	3070	S	RH		023	023	ATWD	A	1 3/4		RC-WASH	SCLC-5	FLUSH	2		ALUM	1	CRS	CONT-WILD	EQR-DWR	15	9 1/2	101	4	MTL-STUD			
270C2	Standardized Patient Room 270C1 from Storage 270C2	1	3070	S	LHR		121	121	ATWD	A	1 3/4		RC-WASH	SCLC-5	FLUSH	2		ALUM	1	CRS	CONT-WILD	EQR-DWR	15	8 1/4	101	4	MTL-STUD			
270C3	Standardized Patient Room 270C1 from Toilet 270C3	1	3070	S	RHR		122	122	ATWD	A	1 3/4		RC-WASH	SCLC-5	FLUSH	2		ALUM	1	CRS	CONT-WILD	EQR-DWR	15	8 1/4	101	4	MTL-STUD			
270C4	Standardized Patient Room 270C1 from Storage 270C4	1	3070	S	RHR		121	121	ATWD	A	1 3/4		RC-WASH	SCLC-5	FLUSH	2		ALUM	1	CRS	CONT-WILD	EQR-DWR	15	8 1/4	101	4	MTL-STUD			

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OPEN NO.	LOCATION	QTY	Opening						Door										Frame										
			OPENING SIZE	SGL / PR	HAND	LABEL	H E A D I N G	H D W	M F G	A T Y C P E	T H I C K	L E I T R I M S	M A T L	C O R E	G A U G E	ELEV		M F G	A T Y C P E	M A T L	S E E I S	P R O F	G A U G E	J A M B	D E P T H	ELEV		A N C H O R	N O T E S
																CODE	PAGE									CODE	PAGE		
270D	Interior Corridor 270A2 to Patient Assessment 270D	1	3070	S	LH	084	084	AT	A	1 3/4	RC-WAS H	SCLC -5	FLUS H	2		AT	HM	1	CRS	CONT -WLD	EQR-DWR	18	9 1/2	101	4	MTL-STUD			
270D1	Standardized Patient Room 270C1 to Patient Assessment 270D	1	3070	S	LH	084	084	AT	A	1 3/4	RC-WAS H	SCLC -5	FLUS H	2		AT	HM	1	CRS	CONT -WLD	EQR-DWR	18	9 1/2	101	4	MTL-STUD			
270E	Interior Corridor 270A2 to Patient Assessment 270E	1	3070	S	LH	084	084	AT	A	1 3/4	RC-WAS H	SCLC -5	FLUS H	2		AT	HM	1	CRS	CONT -WLD	EQR-DWR	18	9 1/2	101	4	MTL-STUD			
270E1	Standardized Patient Room 270C1 to Patient Assessment 270E	1	3070	S	LH	084	084	AT	A	1 3/4	RC-WAS H	SCLC -5	FLUS H	2		AT	HM	1	CRS	CONT -WLD	EQR-DWR	18	9 1/2	101	4	MTL-STUD			
270F	Interior Corridor 270A2 to Patient Assessment 270F	1	3070	S	RH	084	084	AT	A	1 3/4	RC-WAS H	SCLC -5	FLUS H	2		AT	HM	1	CRS	CONT -WLD	EQR-DWR	18	9 1/2	101	4	MTL-STUD			
270F1	Standardized Patient Room 270C1 to Patient Assessment 270F	1	3070	S	RH	084	084	AT	A	1 3/4	RC-WAS H	SCLC -5	FLUS H	2		AT	HM	1	CRS	CONT -WLD	EQR-DWR	18	9 1/2	101	4	MTL-STUD			
270G	Interior Corridor 270A2 to Patient Assessment 270G	1	3070	S	LH	084	084	AT	A	1 3/4	RC-WAS H	SCLC -5	FLUS H	2		AT	HM	1	CRS	CONT -WLD	EQR-DWR	18	9 1/2	101	4	MTL-STUD			
270G1	Standardized Patient Room 270C1 to Patient Assessment 270G	1	3070	S	LH	084	084	AT	A	1 3/4	RC-WAS H	SCLC -5	FLUS H	2		AT	HM	1	CRS	CONT -WLD	EQR-DWR	18	9 1/2	101	4	MTL-STUD			
270H	Interior Corridor 270A2 to Patient Assessment 270H	1	3070	S	RH	084	084	AT	A	1 3/4	RC-WAS H	SCLC -5	FLUS H	2		AT	HM	1	CRS	CONT -WLD	EQR-DWR	18	9 1/2	101	4	MTL-STUD			
270H1	Standardized Patient Room 270C1 to Patient Assessment 270H	1	3070	S	RH	084	084	AT	A	1 3/4	RC-WAS H	SCLC -5	FLUS H	2		AT	HM	1	CRS	CONT -WLD	EQR-DWR	18	9 1/2	101	4	MTL-STUD			
270J	Interior Corridor 270A to Patient Assessment 270J	1	3070	S	LH	084	084	AT	A	1 3/4	RC-WAS H	SCLC -5	FLUS H	2		AT	HM	1	CRS	CONT -WLD	EQR-DWR	18	9 1/2	101	4	MTL-STUD			
270J1	Standardized Patient Room 270C1 to Patient Assessment 270J	1	3070	S	LH	084	084	AT	A	1 3/4	RC-WAS H	SCLC -5	FLUS H	2		AT	HM	1	CRS	CONT -WLD	EQR-DWR	18	9 1/2	101	4	MTL-STUD			
270K	Interior Corridor 270A to Patient Assessment 270K	1	3070	S	RH	085	085	AT	A	1 3/4	RC-WAS H	SCLC -5	FLUS H	2		AT	HM	1	CRS	CONT -WLD	EQR-DWR	18	9 1/2	101	4	MTL-STUD			
270K1	Standardized Patient Room 270C1 to Patient Assessment 270K	1	3070	S	RH	084	084	AT	A	1 3/4	RC-WAS H	SCLC -5	FLUS H	2		AT	HM	1	CRS	CONT -WLD	EQR-DWR	18	9 1/2	101	4	MTL-STUD			
270L	Interior Corridor 270A to Patient Assessment 270L	1	3070	S	LH	085	085	AT	A	1 3/4	RC-WAS H	SCLC -5	FLUS H	2		AT	HM	1	CRS	CONT -WLD	EQR-DWR	18	9 1/2	101	4	MTL-STUD			
270L1	Standardized Patient Room 270C1 to Patient Assessment 270L	1	3070	S	LH	084	084	AT	A	1 3/4	RC-WAS H	SCLC -5	FLUS H	2		AT	HM	1	CRS	CONT -WLD	EQR-DWR	18	9 1/2	101	4	MTL-STUD			
270M	Interior Corridor 270A to Patient Assessment 270M	1	3070	S	RH	084	084	AT	A	1 3/4	RC-WAS H	SCLC -5	FLUS H	2		AT	HM	1	CRS	CONT -WLD	EQR-DWR	18	9 1/2	101	4	MTL-STUD			
270M1	Standardized Patient Room 270C1 to Patient Assessment 270M	1	3070	S	RH	084	084	AT	A	1 3/4	RC-WAS H	SCLC -5	FLUS H	2		AT	HM	1	CRS	CONT -WLD	EQR-DWR	18	9 1/2	101	4	MTL-STUD			
270N	Interior Corridor 270A to Patient Assessment 270N	1	3070	S	RH	084	084	AT	A	1 3/4	RC-WAS H	SCLC -5	FLUS H	2		AT	HM	1	CRS	CONT -WLD	EQR-DWR	18	9 1/2	101	4	MTL-STUD			
270N1	Standardized Patient Room 270C1 to Patient Assessment	1	3070	S	RH	084	084	AT	A	1 3/4	RC-WAS H	SCLC -5	FLUS H	2		AT	HM	1	CRS	CONT -WLD	EQR-DWR	18	9 1/2	101	4	MTL-STUD			

May 21, 2008

Opening										Door										Frame														
OPEN NO.	LOCATION	QTY	OPENING SIZE	SGL / PPR	HAND	LABEL	HEADING	HDW SET	MFG	ATRY	CPHE	THICK	SERIES	MATL	CORE	GAUGE	CODE	ELEV	PAGE	NOTES	MFG	ATRY	CPHE	MATL	SERIES	FORM	GAUGE	JAMB	DEPTH	CODE	PAGE	ANCHOR	NOTES	
2670?	Verify. CORRECT																																	
271	Corridor 200G to Office 271	1	3070	S	LH		054	054	AT	WD	K	1 3/4	RC-WASH	SCLC	-5	FG21 X68	3			FG20x68	AL	UM	8										Alum Frame By Others	
273	Corridor 200G to Office 273	1	3070	S	RH		054	054	AT	WD	K	1 3/4	RC-WASH	SCLC	-5	FG21 X68	3			FG20x68	AL	UM	8										Alum Frame By Others	
274	Elevator Lobby 200D to Mens 274	1	3070	S	LH		089	089	AT	HM	A1	1 3/4	INV-TB	CRS	POLY S	18	FLUS H	1			AT	HM	1	CRS	CONT-WLD	EQR-DWR	16	9 1/2	101	4	MTL-STUD			
274A	Mens 274 from Storage 274A	1	3070	S	LHR		121	121	AT	HM	A1	1 3/4	INV-TB	CRS	POLY S	18	FLUS H	1			AT	HM	1	CRS	CONT-WLD	EQR-DWR	16	8 1/4	101	4	MTL-STUD			
275	Corridor 200G to Office 275	1	3070	S	LH		054	054	AT	WD	K	1 3/4	RC-WASH	SCLC	-5	FG21 X68	3			FG20x68	AL	UM	8										Alum Frame By Others	
276	Corridor 200 from Control Room 276	1	3070	S	LHR		120	120	AT	WD	K	1 3/4	RC-WASH	SCLC	-5	FG21 X68	3			FG20x68	AL	UM	8										Alum Frame By Others	
276A	Interior Corridor 270A to Control Room 276	1	3070	S	RH		064	064	AT	WD	A	1 3/4	RC-WASH	SCLC	-5	FLUS H	2				AT	HM	1	CRS	CONT-WLD	EQR-DWR	16	8 1/4	101	4	MTL-STUD			
277	Corridor 200G from BAS 277	1	6070	P	RHRA		104	104	AT	HM	C1	1 3/4	INV-TB	CRS	POLY S	18	FLUS H	1			AT	HM	2	CRS	CONT-WLD	EQR-DWR	16	8 1/4	102	4	MTL-STUD			
270	Corridor 200G from BAS 279	1	6070	P	RHRA		104	104	AT	HM	C1	1 3/4	INV-TB	CRS	POLY S	18	FLUS H	1			AT	HM	2	CRS	CONT-WLD	EQR-DWR	16	8 1/4	102	4	MTL-STUD			
280	Corridor 200 from Student Prop 280	1	3070	S	LHR		120	120	AT	WD	K	1 3/4	RC-WASH	SCLC	-5	FG21 X68	3			FG20x68	AL	UM	8										Alum Frame By Others	
280A	Interior Corridor 270A to Student Prop 280	1	3070	S	RH		116	116	AT	WD	A	1 3/4	RC-WASH	SCLC	-5	FLUS H	2				AT	HM	1	CRS	CONT-WLD	EQR-DWR	16	8 1/4	101	4	MTL-STUD			
281	Corridor 200G to Office 281	1	3070	S	RH		054	054	AT	WD	K	1 3/4	RC-WASH	SCLC	-5	FG21 X68	3				AL	UM	8											Alum Frame By Others
283	Corridor 200G to Office 283	1	3070	S	LH		054	054	AT	WD	K	1 3/4	RC-WASH	SCLC	-5	FG21 X68	3			FG20x68	AL	UM	8											Alum Frame By Others
285	Corridor 200C to Office 285	1	3070	S	RH		054	054	AT	WD	K	1 3/4	RC-WASH	SCLC	-5	FG21 X68	3				AL	UM	8											Alum Frame By Others
286	Corridor 200 from Electrical 286	1	3070	S	LHR		005	005	AT	HM	A1	1 3/4	INV-TB	CRS	POLY S	18	FLUS H	1			AT	HM	1	CRS	CONT-WLD	EQR-DWR	16	8 1/4	101	4	MTL-STUD			
287	Corridor 200H to Conference 287	1	3070	S	RH		084	084	AT	WD	K	1 3/4	RC-WASH	SCLC	-5	FG21 X68	3			FG20x68	AL	UM	8											Alum Frame By Others
288	Corridor 200 from Comm Closet 288	1	3070	S	LHR		005	005	AT	HM	A1	1 3/4	INV-TB	CRS	POLY S	18	FLUS H	1			AT	HM	1	CRS	CONT-WLD	EQR-DWR	16	8 1/4	101	4	MTL-STUD			
289	Corridor 200H from Sec 289	1	4470	P	RHRA		105	105	AT	HM	C1	1 3/4	INV-TB	CRS	POLY S	18	FLUS H	1			AT	HM	2	CRS	CONT-WLD	EQR-DWR	16	8 1/4	102	4	MTL-STUD			
290	Corridor 200 from Building Storage 290	1	3070	S	LHR		093	093	AT	HM	A1	1 3/4	INV-TB	CRS	POLY S	18	FLUS H	1			AT	HM	1	CRS	CONT-WLD	EQR-DWR	16	8 1/4	101	4	MTL-STUD			
292	Corridor 200 from Support Staff 292	1	3070	S	LHR		096	096	AT	WD	K	1 3/4	RC-WASH	SCLC	-5	FG21 X68	3			FG20x68	AL	UM	8											Alum Frame By Others
292C1	Interior Corridor 270A3 from Interior Corridor 292C1	1	3070	S	RHR		124	124	AT	WD	A	1 3/4	RC-WASH	SCLC	-5	FLUS H	2				AT	HM	1	CRS	CONT-WLD	EQR-DWR	16	8 1/4	101	4	MTL-STUD			
292D	Interior Corridor 292C to Office 292D	1	3070	S	LH		054	054	AT	WD	K	1 3/4	RC-WASH	SCLC	-5	FG21 X68	3			FG20x68	AL	UM	8											Alum Frame By Others

UK Biological Pharmaceutical Complex
Lexington, Kentucky

DIVISION 8
DOCUMENTATION

OPEN NO.	LOCATION	QTY	Opening										Door										Frame										NOTES
			OPENING SIZE	SGL / PR	HAND	LABEL	HEAD IN G	HDW SET	MFG	TRY CP HE	THICK	SERIES	MATL	CORE	GAUGE	CODE	PAGE	ELEV	MFG	TRY CP HE	MATL	SERIES	PROF	GAUGE	JAMB	DEPT H	CODE	PAGE	ANCHOR				
																														NOTES	NOTES	NOTES	
292E	Interior Corridor 292C to Office 292E	1	3070	S	RH		054	054	AT	K	1 3/4	RC-WASH	SCLC-5	FG21 X68	3		ALUM	8												Alum Frame By Others			
292G	Interior Corridor 292C1 to Office 292G	1	3070	S	LH		054	054	AT	K	1 3/4	RC-WASH	SCLC-5	FG21 X68	3		ALUM	8											Alum Frame By Others				
292H	Interior Corridor 292C1 to Office 292H	1	3070	S	LH		023	023	AT	K	1 3/4	RC-WASH	SCLC-5	FG21 X68	3		ALUM	8											Alum Frame By Others				
292J	Interior Corridor 292C1 to Office 292J	1	3070	S	RH		054	054	AT	K	1 3/4	RC-WASH	SCLC-5	FG21 X68	3		ALUM	8											Alum Frame By Others				
292K	Interior Corridor 292C to Office 292K	1	3070	S	LH		054	054	AT	K	1 3/4	RC-WASH	SCLC-5	FG21 X68	3	FG20x68	ALUM	8											Alum Frame By Others				
292L	Interior Corridor 292C to Office 292L	1	3070	S	LH		054	054	AT	K	1 3/4	RC-WASH	SCLC-5	FG21 X68	3		ALUM	8											Alum Frame By Others				
292M	Interior Corridor 292C to Office 292M	1	3070	S	RH		054	084	AT	K	1 3/4	RC-WASH	SCLC-5	FG21 X68	3		ALUM	8											Alum Frame By Others				
292N	Support Staff 292 to Office 292N	1	3070	S	LH		054	054	AT	K	1 3/4	RC-WASH	SCLC-5	FG21 X68	3		ALUM	8											Alum Frame By Others				
292P	Support Staff 292 to Office 292P	1	3070	S	RH		054	054	AT	K	1 3/4	RC-WASH	SCLC-5	FG21 X68	3		ALUM	8											Alum Frame By Others				
300C	Corridor 300 to/from Corridor 300C	1	8070	P	DE	45MIN	077	077	AT	E	1 3/4	RC-WASH	MINE RAL	N4X2 5	2		AT	9	CRS	CONT -WLD	SGLR -DWR	10	8 1/4	102-4DEGR	5			MTL-STUD					
300E	Corridor 300B to/from Corridor 300B	1	8070	P	DE	45MIN	078	078	AT	E	1 3/4	RC-WASH	MINE RAL	N4X2 5	2		AT	9	CRS	CONT -WLD	SGLR -DWR	10	8 1/4	102-4DEGR	5			MTL-STUD					
300F	Corridor 300B from Support Staff 300F1	1	3070	S	LHR		086	086	AT	K	1 3/4	RC-WASH	SCLC-5	FG21 X68	3	FG20x68	ALUM	8											Alum Frame By Others				
300G	Support Staff 300F1 to Corridor 300G	1	3070	S	RH		086	086	AT	K	1 3/4	RC-WASH	SCLC-5	FG21 X68	3		ALUM	8											Alum Frame By Others				
302	Corridor 300 from Interior Corridor 302	1	3070	S	LHR	60MIN	002	002	AT	K	1 3/4	RC-WASH	MINE RAL	N5X2 0	2	Add 3 - Verify	AT	10	CRS	CONT -WLD	EQR-DWR	16	8 1/4	603	5			MTL-STUD	Add 3 - Verify				
304	Interior Corridor 302 from Chem Support Room 304	1	4670	P	RHRA		073	073	AT	H	1 3/4	RC-WASH	SCLC-5	HG20 X47	2	& HG 6x47	AT	2	CRS	CONT -WLD	EQR-DWR	16	8 1/4	102-UEP	4			MTL-STUD					
304A	Chem Support Room 304 from Special Purpose Support 304A	1	3670	S	RHR		125	125	AT	D	1 3/4	RC-WASH	SCLC-5	N4X2 5	2		AT	1	CRS	CONT -WLD	EQR-DWR	10	8 1/4	101	4			MTL-STUD					
306	Interior Corridor 302 from Chem 306	1	4670	P	RHRA		073	073	AT	H	1 3/4	RC-WASH	SCLC-5	HG20 X47	2	& HG 6x47	AT	2	CRS	CONT -WLD	EQR-DWR	16	8 1/4	102-UEP	4			MTL-STUD					
306A	Chem 306 to Chem Support Room 304	1	3070	S	RH		076	076	AT	G	1 3/4	RC-WASH	SCLC-5	HG30 X36	2		ALUM	8											Alum Frame By Others				
308	Interior Corridor 302 from Shared Desk Area 308	1	3070	S	RHR		075	075	AT	K	1 3/4	RC-WASH	SCLC-5	FG21 X68	3	FG20x68	AT	1	CRS	CONT -WLD	EQR-DWR	16	8 1/4	101	4			MTL-STUD					
308A	Shared Desk Area 308 from Chem 308	1	3070	S	RHR		075	075	AT	R	1 3/4	RC-WASH	SCLC-5	FG24 X66	2		ALUM	8											Alum Frame By Others				

May 21, 2008

SEE ATTACHED
REVISED DOOR
ELEVATION 'U'
FOR THIS DOOR

CORRECT

UK Biological Pharmaceutical Complex
Lexington, Kentucky

DIVISION 8
DOCUMENTATION

OPEN NO.	LOCATION	QTY	Opening					Door										Frame										NOTES			
			OPENING SIZE	SOL/P	HAND	LABEL	HEADING	HDW SET	MFG	ATYP	THICK	SERIES	MATL	CORE	GAUGE	CODE	ELEV	PG	MFG	ATYP	MATL	SERIES	PROF	GAUGE	JAMB	DEPTH	CODE		ELEV	PG	ANCHOR
308A1	Shared Desk Area 308 from Chem 308	1	3070	S	RHR		075	075	ATWD	R	1 3/4		RC-WASH	SCLC	FG24 X36	2		ALUM	8												Alum Frame By Others
310	Corridor 300 from Tel/Data 310	1	3070	S	RHR	45MIN	005	005	ATHM	A1	1 3/4	INVTB	CRS	POLY S	18	FLUS H	1	ATHM	1	CRS	CONT-WLD	EQR-DWR	16	8 1/4	101	4			MTL-STUD		
312	Corridor 300 from Electrical 312	1	3070	S	RHR	45MIN	005	005	ATHM	A1	1 3/4	INVTB	CRS	POLY S	18	FLUS H	1	ATHM	1	CRS	CONT-WLD	EQR-DWR	16	8 1/4	101	4			MTL-STUD		
314	Interior Corridor 322 from Shared Equipment Room 314	1	4670	P	LHRA	45MIN	127	127	ATWD	H	1 3/4		RC-WASH	MINE RAL	HG20 X47	2		ATHM	2	CRS	CONT-WLD	EQR-DWR	16	8 1/4	102-UEP	4			MTL-STUD		
314A	Shared Equipment Room 314 Dark Room 314A	1	4670	S			129	129	NI C	S																			Dark Room Frame By Others		
314B	Shared Equipment Room 314 to Special Purpose Support 314B	1	3670	S	LH		117	117	ATWD	D	1 3/4		RC-WASH	SCLC	N402 5	2		ATHM	1	CRS	CONT-WLD	EQR-DWR	16	8 1/4	101	4			MTL-STUD		
316	Interior Corridor 322 from Pharmaceutics 316	1	4670	P	LHRA	45MIN	127	127	ATWD	H	1 3/4		RC-WASH	MINE RAL	HG20 X47	2		ATHM	2	CRS	CONT-WLD	EQR-DWR	16	8 1/4	102-UEP	4			MTL-STUD		
316A	Pharmaceutics 316 to Shared Equipment Room 314	1	3070	S	RH		130	130	ATWD	G	1 3/4		RC-WASH	SCLC	HG30 X36	2		ATHM	1	CRS	CONT-WLD	EQR-DWR	16	8 1/4	101	4			MTL-STUD		
316B	Pharmaceutics 316 from Chem 308	1	4670	P	LHRA		074	074	ATWD	H	1 3/4		RC-WASH	SCLC	HG20 X47	2		ATHM	2	CRS	CONT-WLD	EQR-DWR	16	8 1/4	102-UEP	4			MTL-STUD		
318	Interior Corridor 322 from Shared Desk Area 318	1	3070	S	LHR	45MIN	131	131	ATWD	K	1 3/4		RC-WASH	MINE RAL	FG20 X68	3		ATHM	3	CRS	CONT-WLD	EQR-DWR	16	8 1/4	101	4			MTL-STUD		
318A	Shared Desk Area 318 from Pharmaceutics 316	1	3070	S	LHR		075	075	ATWD	R	1 3/4		RC-WASH	SCLC	FG24 X36	2		ALUM	8											Alum Frame By Others	
318A1	Shared Desk Area 318 from Pharmaceutics 316	1	3070	S	LHR		075	075	ATWD	R	1 3/4		RC-WASH	SCLC	FG24 X36	2		ALUM	8											Alum Frame By Others	
321	Corridor 300B to Office 321	1	3070	S	LH		054	054	ATWD	K	1 3/4		RC-WASH	SCLC	FG20 X68	3		ALUM	8											Alum Frame By Others	
322	Corridor 300 from Interior Corridor 322	1	4670	P	LHRA	45MIN	072	072	ATWD	H	1 3/4		RC-WASH	MINE RAL	HG20 X47	2		ATHM	2	CRS	CONT-WLD	EQR-DWR	16	8 1/4	102-UEP	4			MTL-STUD		
323	Corridor 300B to Office 323	1	3070	S	RH		054	054	ATWD	K	1 3/4		RC-WASH	SCLC	FG20 X68	3		ALUM	8											Alum Frame By Others	
324	Interior Corridor 322 from Shared Equipment Room 324	1	4670	P	LHRA		128	128	ATWD	H	1 3/4		RC-WASH	SCLC	HG20 X47	2		ATHM	2	CRS	CONT-WLD	EQR-DWR	16	8 1/4	102-UEP	4			MTL-STUD		
324B	Shared Equipment Room 324 from BAS 324B	1	6070	P	RHRA		104	104	ATHM	C1	1 3/4	INVTB	CRS	POLY S	18	FLUS H	1	ATHM	2	CRS	CONT-WLD	EQR-DWR	16	8 1/4	102	4			MTL-STUD		
324C	Shared Equipment Room 324 from Culture (SCCR) 324C	1	3670	S	RHR		125	125	ATWD	A	1 3/4		RC-WASH	SCLC	FLUS H	2		ATHM	1	CRS	CONT-WLD	EQR-DWR	16	8 1/4	101	4			MTL-STUD		
324D	Shared Equipment Room 324 to Autoclave 324D	1	4670	P	RHA		132	132	ATWD	H	1 3/4		RC-WASH	SCLC	HG20 X47	2		ATHM	2	CRS	CONT-WLD	EQR-DWR	16	8 1/4	102-UEP	4			MTL-STUD		
324F	Shared Equipment Room 324 to Imaging & Microscopy 324F	1	3670	S	LH		117	117	ATWD	D	1 3/4		RC-WASH	SCLC	N402 5	2		ATHM	1	CRS	CONT-WLD	EQR-DWR	16	8 1/4	101	4			MTL-STUD		
324G	Shared Equipment Room 324A to Special Purpose Support 324G	1	3670	S	RH		117	117	ATWD	D	1 3/4		RC-WASH	SCLC	N402 5	2		ATHM	1	CRS	CONT-WLD	EQR-DWR	16	8 1/4	101	4			MTL-STUD		
324H	Shared Equipment Room	1	3670	S	LH		117	117	ATWD	A	1 3/4		RC-WASH	SCLC	FLUS	2		ATHM	1	CRS	CONT	EQR	16	8 1/4	101	4			MTL		

Darkroom door by Atlas. Separate submittal.

DOUBLE ACTING HOLLOW METAL FRAME - RFQ TO FOLLOW

UK Biological Pharmaceutical Complex
Lexington, Kentucky

DIVISION 8
DOCUMENTATION

OPEN NO.	Opening						Door										Frame															
	LOCATION	QTY	OPENING SIZE	SCL / PR	HAND	LABEL	HEADING	HDW SET	MFG	TRY CP HE	THICK	SERIES	MATL	CORE	GAUGE	ELEV	CODE	PAGE	NOTES	MFG	TRY CP HE	MATL	SERIES	PROF	GAUGE	JAMB	DEPTH	CODE	PAGE	ANCHOR	NOTES	
	324A to Cell Culture (LCCR) 324H																															
325	Corridor 300B to Office 325	1	3070	S	LH		054	054	AT WD	K	1 3/4		RC- WAS H	SCLC -5	H	FG24 X68	3	FG20X68	AL UM	8											STUD	Alum Frame By Others
320	Interior Corridor 322 from Pharmaceutics 325	1	4670	P	LHRA		127 A	127 A	AT WD	H	1 3/4		RC- WAS H	SCLC -5	H	HG20 X47	2	& HG 6x47	AT HM	2	CRS	CONT- WLD	EQR- DWR	16	8 1/4	102- UEP	4	MTL- STUD				
326A	Pharmaceutics 326 to Shared Equipment Room 324	1	3670	S	LH		130	130	AT WD	G	1 3/4		RC- WAS H	SCLC -5	H	HG30 X36	2		AT HM	1	CRS	CONT- WLD	EQR- DWR	16	8 1/4	101	4	MTL- STUD	Verify Depth/Type	CORRECT		
326A1	Biology 326A to Shared Equipment Room 324A	1	3670	S	LH		076	076	AT WD	G	1 3/4		RC- WAS H	SCLC -5	H	HG30 X36	2		AL UM	8											Alum Frame By Others	
327	Corridor 300B to Office 327	1	3070	S	RH		054	054	AT WD	K	1 3/4		RC- WAS H	SCLC -5	H	FG24 X68	3	FG20X68	AL UM	8												Alum Frame By Others
328	Lounge 322A from Shared Desk Area 328	1	3070	S	RHR		075	075	AT WD	K	1 3/4		RC- WAS H	SCLC -5	H	FG24 X68	3		AL UM	8												DOUBLE ACTING HOLLOW METAL FRAME - RFQ TO FOLLOW
328A	Shared Desk Area 328 from Pharmaceutics 326	1	3070	S	RHR		076	076	AT WD	R	1 3/4		RC- WAS H	SCLC -5	H	FG24 X68	2	58	AL UM	8												Alum Frame By Others
328A1	Shared Desk Area 328 from Pharmaceutics 326	1	3070	S	RHR		075	075	AT WD	R	1 3/4		RC- WAS H	SCLC -5	H	FG24 X68	2	58	AL UM	8												Alum Frame By Others
328A2	Shared Desk Area 328A from Biology 326A	1	3070	S	RHR		075	075	AT WD	R	1 3/4		RC- WAS H	SCLC -5	H	FG24 X68	2	58	AL UM	8												Alum Frame By Others
328A3	Shared Desk Area 328A from Biology 326A	1	3070	S	RHR		075	075	AT WD	R	1 3/4		RC- WAS H	SCLC -5	H	FG24 X68	2	58	AL UM	8												Alum Frame By Others
331	Corridor 300B to Office 331	1	3070	S	LH		054	054	AT WD	K	1 3/4		RC- WAS H	SCLC -5	H	FG24 X68	3	FG20X68	AL UM	8												Alum Frame By Others
N3	Interior Stair N from Corridor 300	1	3070	S	LHR	90MIN	080	080	AL UM	T									Alum Door By Others	AL UM	12											Alum Frame By Others
333	Corridor 300B to Office 333	1	3070	S	RH		054	054	AT WD	K	1 3/4		RC- WAS H	SCLC -5	H	FG24 X68	3		AL UM	8												Alum Frame By Others
335	Corridor 300B to Office 335	1	3070	S	LH		054	054	AT WD	K	1 3/4		RC- WAS H	SCLC -5	H	FG24 X68	3		AL UM	8												Alum Frame By Others
337	Corridor 300B to Office 337	1	3070	S	RH		054	054	AT WD	K	1 3/4		RC- WAS H	SCLC -5	H	FG24 X68	3		AL UM	8												Alum Frame By Others
339	Corridor 300B to Dry Res Lab 339	1	3070	S	RH		064	064	AT WD	K	1 3/4		RC- WAS H	SCLC -5	H	FG24 X68	3		AL UM	8												Alum Frame By Others
339A	Corridor 300B to Dry Res Lab 339	1	3070	S	LH		116	116	AT WD	K	1 3/4		RC- WAS H	SCLC -5	H	FG24 X68	3	FG20X68	AL UM	8												Alum Frame By Others
341	Corridor 300B to Office 341	1	3070	S	LH		054	054	AT WD	K	1 3/4		RC- WAS H	SCLC -5	H	FG24 X68	3		AL UM	8												Alum Frame By Others
343	Corridor 300B to Office 343	1	3070	S	RH		054	054	AT WD	K	1 3/4		RC- WAS H	SCLC -5	H	FG24 X68	3		AL UM	8												Alum Frame By Others
345	Corridor 300B to Office 345	1	3070	S	LH		054	054	AT WD	K	1 3/4		RC- WAS H	SCLC -5	H	FG24 X68	3		AL UM	8												Alum Frame By Others

May 21, 2008

UK Biological Pharmaceutical Complex
Lexington, Kentucky

DIVISION 8
DOCUMENTATION

OPEN NO.	LOCATION	Opening										Door										Frame									
		QTY	OPENING SIZE	GL/P/R	HAND	LABEL	HEADING	HDW SET	MFG	ATYP	THICK	SERIES	MATL	CORE	G AUGE	C O D E	P A G E	NOTES	MFG	ATYP	MATL	SERIES	PROF	G AUGE	J A M B	D E P T H	C O D E	P A G E	A N C H O R	NOTES	
347	Corridor 300B to Office 347	1	3070	S	RH		054	054	ATWD	K	1 3/4		RC-WASH	SCLC-5	FG2 X89	3	FG20X68	ALUM	8												Alum Frame By Others
349	Corridor 300B from Sec 340	1	4470	P	RHRA		105	105	ATHM	C1	1 3/4	INV-TB	CRS	POLY S	FLUS H	1		ATHM	2	CRS	CONT-WLD	EQR-DWR	16	8 1/4	102	4		MTL-STUD			
351	Corridor 300B to Office 351	1	3070	S	LH		054	054	ATWD	K	1 3/4		RC-WASH	SCLC-5	FG2 X89	3	FG20X68	ALUM	8											Alum Frame By Others	
352	Corridor 300C from Electrical 352	1	3070	S	LHR	45MIN	005	005	ATHM	A1	1 3/4	INV-TB	CRS	POLY S	FLUS H	1		ATHM	1	CRS	CONT-WLD	EQR-DWR	16	8 1/4	101	4		MTL-STUD			
353	Corridor 300B to Office 353	1	3070	S	RH		054	054	ATWD	K	1 3/4		RC-WASH	SCLC-5	FG2 X89	3	FG20X68	ALUM	8					8 1/4"							
354	Corridor 300C to Women 354	1	3070	S	LH		089	089	ATWD	K	1 3/4		RC-WASH	SCLC-5	FG2 X89	3	A1? YES	ATHM	1	CRS	CONT-WLD	EQR-DWR	16	9 X	101	4		MTL-STUD			
354A	Women 354 from Storage 354A	1	2070	S	RHR		108	108	ATHM	A1	1 3/4	INV-TB	CRS	POLY S	FLUS H	1		ATHM	1	CRS	CONT-WLD	EQR-DWR	16	8 1/4	101	4		MTL-STUD			
355	Corridor 300B to Office 355	1	3070	S	LH		054	054	ATWD	K	1 3/4		RC-WASH	SCLC-5	FG2 X89	3	FG20X68	ALUM	8					8 1/4"					Alum Frame By Others		
358	Corridor 300C from Janitor Closet 358	1	3070	S	RHR		053	053	ATHM	A1	1 3/4	INV-TB	CRS	POLY S	FLUS H	1		ATHM	1	CRS	CONT-WLD	EQR-DWR	16	9 X	101	4		MTL-STUD			
357	Support Staff 300F1 to Office 357	1	3070	S	RH		054	054	ATWD	K	1 3/4		RC-WASH	SCLC-5	FG2 X89	3	FG20X68	ALUM	8					8 1/4"					Alum Frame By Others		
358	Corridor 300C to Men 358	1	3070	S	RH		089	089	ATHM	A1	1 3/4	INV-TB	CRS	POLY S	FLUS H	1		ATHM	1	CRS	CONT-WLD	EQR-DWR	16	9 X	101	4		MTL-STUD			
358A	Men 358 from Storage 358A	1	2070	S	LHR		108	108	ATHM	A1	1 3/4	INV-TB	CRS	POLY S	FLUS H	1		ATHM	1	CRS	CONT-WLD	EQR-DWR	16	8 1/4	101	4		MTL-STUD			
360	Corridor 300C Support Staff 360	1	3070	S	RH		116	116	ATWD	K	1 3/4		RC-WASH	SCLC-5	FG2 X89	3	FG20X68	ALUM	8										Alum Frame By Others		
360A	Support Staff 360 to Small Copy/Workroom 360A	1	3070	S	RH		084	084	ATHM	A1	1 3/4	INV-TB	CRS	POLY S	FLUS H	1		ATHM	1	CRS	CONT-WLD	EQR-DWR	16	8 1/4	101	4		MTL-STUD			
360B	Support Staff 360 to Storage 360B	1	3070	S	RH		060	060	ATHM	A1	1 3/4	INV-TB	CRS	POLY S	FLUS H	1		ATHM	1	CRS	CONT-WLD	EQR-DWR	16	8 1/4	101	4		MTL-STUD			
361	Support Staff 300F1 to Office 361	1	3070	S	LH		054	054	ATWD	K	1 3/4		RC-WASH	SCLC-5	FG2 X89	3	FG20X68	ALUM	8										Alum Frame By Others		
363	Support Staff 300F1 to Office 363	1	3070	S	RH		054	054	ATWD	K	1 3/4		RC-WASH	SCLC-5	FG2 X89	3	FG20X68	ALUM	8										Alum Frame By Others		
364	Interior Corridor 372 from Shared Equipment Room 364	1	4670	P	RHRA		127	127	ATWD	H	1 3/4		RC-WASH	SCLC-5	HG20 X47	2	& HG 6X47	ATHM	2	CRS	CONT-WLD	EQR-DWR	16	8 1/4	102-UEP	4		MTL-STUD			
364B	Shared Equipment Room 364 from BAS 364B	1	6070	P	RHRA		104	104	ATHM	C1	1 3/4	INV-TB	CRS	POLY S	FLUS H	1		ATHM	2	CRS	CONT-WLD	EQR-DWR	16	8 1/4	102	4		MTL-STUD			
364C	Shared Equipment Room 364 to Cell Culture (LCCR) 364C	1	3070	S	LH		117	117	ATWD	A	1 3/4		RC-WASH	SCLC-5	FLUS H	2		ATHM	1	CRS	CONT-WLD	EQR-DWR	16	8 1/4	101	4		MTL-STUD			
364D	Shared Equipment Room 364 to Special Purpose Support 364D	1	3070	S	RH		117	117	ATWD	D	1 3/4		RC-WASH	SCLC-5	N4X2 5	2		ATHM	1	CRS	CONT-WLD	EQR-DWR	16	8 1/4	101	4		MTL-STUD			
364E	Shared Equipment Room 364 to Imaging & Microscopy 364E	1	3070	S	LH		117	117	ATWD	D	1 3/4		RC-WASH	SCLC-5	N4X2 6	2		ATHM	1	CRS	CONT-WLD	EQR-DWR	16	8 1/4	101	4		MTL-STUD			
364G	Shared Equipment Room	1	3070	S	RH		117	117	ATWD	D	1 3/4		RC-WASH	SCLC-5	N4X2 2	2		ATHM	1	CRS	CONT	EQR	16	8 1/4	101	4		MTL			

May 21, 2008

OPEN NO.	LOCATION	Opening				Door										Frame										NOTES									
		QTY	OPENING SIZE	SGL / PR	HAND	LABEL	HEADING	HDW SET	MFG	TYPE	THICK	SERIES	MATL	CORE	Gauge	CODD	PAGE	ELEV	NOTES	MFG	TYPE	MATL	SERIES	PROF	Gauge		JAMB	DEPT	CODD	PAGE	ELEV	ANCHOR	NOTES		
																																	Others		
378	Interior Corridor 372 from Biology 378	1	4870	P	RHRA		127	127	AT	H	1 3/4		RC-WAS H	SCLC	-5	HG20 X47	2																& HG 6X47		
378A	Biology 378 to Shared Equipment Room 374	1	3570	S	LH		076	076	AT	G	1 3/4		RC-WAS H	SCLC	-5	HG30 X36	2																	K? Verify.	
378	Interior Corridor 372 from Shared Desk Area 378	1	3070	S	RHR		075	075	AT	G	1 3/4		RC-WAS H	SCLC	-5	HG24 X25	2																	Alum Frame By Others	
378A	Shared Desk Area 378 from Biology 378	1	3070	S	RHR		075	075	AT	R	1 3/4		RC-WAS H	SCLC	-5	FG24 X26	2																	Alum Frame By Others	
378A1	Shared Desk Area 378 from Biology 378	1	3070	S	RHR		075	075	AT	R	1 3/4		RC-WAS H	SCLC	-5	FG24 X26	2																	Alum Frame By Others	
381	Corridor 300G to Office 381	1	3070	S	RH		054	054	AT	K	1 3/4		RC-WAS H	SCLC	-5	FG24 X26	3																	Alum Frame By Others	
383	Corridor 300G to Office 383	1	3070	S	LH		054	054	AT	K	1 3/4		RC-WAS H	SCLC	-5	FG24 X26	3																		Alum Frame By Others
385	Corridor 300C to Office 385	1	3070	G	RH		054	054	AT	K	1 3/4		RC-WAS H	SCLC	-5	FG24 X26	3																	Alum Frame By Others	
385	Corridor 300C from Electrical 385	1	3070	S	LHR		005	005	AT	A1	1 3/4	INV-TB	CRS	POLY S	18	FLUS H	1																	Alum Frame By Others	
387	Corridor 300H to Conference 387	1	3070	S	RH		084	084	AT	K	1 3/4		RC-WAS H	SCLC	-5	FG24 X26	3																	Alum Frame By Others	
388	Corridor 300C from Tel/Data 388	1	3070	S	LHR		005	005	AT	A1	1 3/4	INV-TB	CRS	POLY S	18	FLUS H	1																	Alum Frame By Others	
389	Corridor 300H from Sec 389	1	4470	P	RHRA		105	105	AT	C1	1 3/4	INV-TB	CRS	POLY S	18	FLUS H	1																	Alum Frame By Others	
390	Corridor 300C from MC PPD 390	1	3070	S	LHR		083	083	AT	A1	1 3/4	INV-TB	CRS	POLY S	18	FLUS H	1																	Alum Frame By Others	
392	Corridor 300C from Interior Corridor 392	1	3070	S	RHR	60MIN	002	002	AT	K	1 3/4		RC-WAS H	SCLC	-5	FLUS H	2																	Add 3 - Verify	
394	Interior Corridor 392 from Shared Equipment Room 394	1	4870	P	LHRA		073	073	AT	H	1 3/4		RC-WAS H	SCLC	-5	HG20 X47	2																		& HG 6X47
394A	Shared Equipment Room 394 to Cell Culture (LCCR) 394A	1	3570	S	LH		117	117	AT	A	1 3/4		RC-WAS H	SCLC	-5	FLUS H	2																		Alum Frame By Others
394B	Shared Equipment Room 394 to Special Purpose Report 394B	1	3570	S	RH		117	117	AT	D	1 3/4		RC-WAS H	SCLC	-5	N4X2 5	2																		Alum Frame By Others
394C	Shared Equipment Room 394 to Imaging & Microscopy 394C	1	3570	S	LH		117	117	AT	D	1 3/4		RC-WAS H	SCLC	-5	N4X2 5	2																		Alum Frame By Others
396	Interior Corridor 392 from Biology 396	1	4870	P	LHRA		073	073	AT	H	1 3/4		RC-WAS H	SCLC	-5	HG20 X47	2																		& HG 6X47
396A	Biology 396 to Shared Equipment Room 394	1	3070	S	RH		078	078	AT	G	1 3/4		RC-WAS H	SCLC	-5	HG30 X36	2																		Alum Frame By Others
398	Interior Corridor 392 from Shared Desk Area 398	1	3070	S	LHR		075	075	AT	K	1 3/4		RC-WAS H	SCLC	-5	FG24 X26	3																		Verify Depth/Type

DOUBLE ACTING
HOLLOW METAL
FRAME - RFQ TO
FOLLOW

ADD 3 - VERIFY
CORRECT

REFER TO
ATTACHED
REVISED
ELEVATION 'U'
FOR THIS DOOR

UK Biological Pharmaceutical Complex
Lexington, Kentucky

DIVISION 8
DOCUMENTATION

OPEN NO.	LOCATION	QTY	Opening				Door										Frame										NOTES						
			OPENING SIZE	SGL / PPR	HAND	LABEL	H E A D I N G	H D W	S E E T	M F C	A R Y C P E	T H I C K	S E R I E S	M A T L	C O R E	G A U G E	ELEV		M F C	A R Y C P E	M A T L	S E R I E S	P R O F	G A U G E	J A M B	D E P T H		ELEV		A N C H O R			
																	CODE	PAGE										CODE	PAGE				
398A	Shared Desk Area 398 from Biology 306	1	3070	S	LHR		075	075	AT	R	1 3/4	RC-WASH	SCLC-5		FG24 XDR	2		ALUM	8														Alum Frame By Others
398A1	Shared Desk Area 398 from Biology 306	1	3070	S	LHR		075	075	AT	R	1 3/4	RC-WASH	SCLC-5		FG24 XDR	2		ALUM	8													Alum Frame By Others	
400SH	Corridor 400A from 4th Floor Shell 401	1	3070	S	RHR	45MIN	110	116	AT	A1	1 3/4	INV-TB	CRS	POLY S	18	FLUSH	AT	HM	1	CRS	CONT-WILD	EQR-DWR	16	8 1/4	101	4					MTL-STUD		
401SH	Corridor 400 from 4th Floor Shell 401	1	3070	S	RHR	90MIN	118	116	AT	A1	1 3/4	INV-TB	CRS	POLY S	18	FLUSH	AT	HM	1	CRS	CONT-WILD	EQR-DWR	16	9 1/2	101	4					MTL-STUD	Verify Depth CORRECT	
410	Corridor 400 from Tel/Data 410	1	3070	S	RHR	90MIN	005	005	AT	A1	1 3/4	INV-TB	CRS	POLY S	18	FLUSH	AT	HM	1	CRS	CONT-WILD	EQR-DWR	16	9 1/2	101	4					MTL-STUD		
412	Corridor 400 from Electrical 412	1	3070	S	RHR	90MIN	005	005	AT	A1	1 3/4	INV-TB	CRS	POLY S	18	FLUSH	AT	HM	1	CRS	CONT-WILD	EQR-DWR	16	9 1/2	101	4					MTL-STUD		
424B	4th Floor Shell 401 from BAS 424B	1	6070	P	RHRA		104	104	AT	C1	1 3/4	INV-TB	CRS	POLY S	18	FLUSH	AT	HM	2	CRS	CONT-WILD	EQR-DWR	16	8 1/4	102	4					MTL-STUD		
440	4th Floor Shell 401 from BAS 449	1	4470	P	RHRA		105	105	AT	C1	1 3/4	INV-TB	CRS	POLY S	18	FLUSH	AT	HM	2	CRS	CONT-WILD	EQR-DWR	16	8 1/4	102	4					MTL-STUD		
452	4th Floor Shell 401 from Electrical 452	1	3070	S	LHR	45MIN	005	005	AT	A1	1 3/4	INV-TB	CRS	POLY S	18	FLUSH	AT	HM	1	CRS	CONT-WILD	EQR-DWR	16	8 1/4	101	4					MTL-STUD		
464D	4th Floor Shell 401 from BAS 464B	1	6070	P	RHRA		104	104	AT	C1	1 3/4	INV-TB	CRS	POLY S	18	FLUSH	AT	HM	2	CRS	CONT-WILD	EQR-DWR	16	8 1/4	102	4					MTL-STUD		
480	4th Floor Shell 401 from Electrical 480	1	3070	S	LHR		005	005	AT	A1	1 3/4	INV-TB	CRS	POLY S	18	FLUSH	AT	HM	1	CRS	CONT-WILD	EQR-DWR	16	8 1/4	101	4					MTL-STUD		
488	4th Floor Shell 401 from Tel/Data 488	1	3070	S	LHR		005	005	AT	A1	1 3/4	INV-TB	CRS	POLY S	18	FLUSH	AT	HM	1	CRS	CONT-WILD	EQR-DWR	16	8 1/4	101	4					MTL-STUD		
600SH	Corridor E500 from 5th Floor Shell 501	1	3070	S	RHR	45MIN	118	116	AT	A1	1 3/4	INV-TB	CRS	POLY S	18	FLUSH	AT	HM	1	CRS	CONT-WILD	EQR-DWR	16	8 1/4	101	4					MTL-STUD		
501SH	Corridor 500 from 5th Floor Shell 501	1	3070	S	RHR	90MIN	118	116	AT	A1	1 3/4	INV-TB	CRS	POLY S	18	FLUSH	AT	HM	1	CRS	CONT-WILD	EQR-DWR	16	9 1/2	101	4					MTL-STUD	Verify Depth CORRECT	
510	Corridor 500 from Tel/Data 510	1	3070	S	RHR	90MIN	005	005	AT	A1	1 3/4	INV-TB	CRS	POLY S	18	FLUSH	AT	HM	1	CRS	CONT-WILD	EQR-DWR	16	9 1/2	101	4					MTL-STUD		
512	Corridor 600 from Electrical 512	1	3070	S	RHR	90MIN	005	005	AT	A1	1 3/4	INV-TB	CRS	POLY S	18	FLUSH	AT	HM	1	CRS	CONT-WILD	EQR-DWR	16	9 1/2	101	4					MTL-STUD		
524B	5th Floor Shell 501 from BAS 524B	1	6070	P	RHRA		104	104	AT	C1	1 3/4	INV-TB	CRS	POLY S	18	FLUSH	AT	HM	2	CRS	CONT-WILD	EQR-DWR	16	8 1/4	102	4					MTL-STUD	Verify Depth CORRECT	
540	5th Floor Shell 501 from Sec 549	1	4470	P	RHRA		105	105	AT	C1	1 3/4	INV-TB	CRS	POLY S	18	FLUSH	AT	HM	2	CRS	CONT-WILD	EQR-DWR	16	8 1/4	102	4					MTL-STUD		
552	5th Floor Shell 501 from Electrical 552	1	3070	S	LHR	45MIN	005	005	AT	A1	1 3/4	INV-TB	CRS	POLY S	18	FLUSH	AT	HM	1	CRS	CONT-WILD	EQR-DWR	16	8 1/4	101	4					MTL-STUD		
564B	5th Floor Shell 501 from BAS 564B	1	6070	P	RHRA		104	104	AT	C1	1 3/4	INV-TB	CRS	POLY S	18	FLUSH	AT	HM	2	CRS	CONT-WILD	EQR-DWR	16	8 1/4	102	4					MTL-STUD		
586	5th Floor Shell 501 from Electrical 586	1	3070	S	LHR		005	005	AT	A1	1 3/4	INV-TB	CRS	POLY S	18	FLUSH	AT	HM	1	CRS	CONT-WILD	EQR-DWR	16	8 1/4	101	4					MTL-STUD		
588	5th Floor Shell 501 from Tel/Data 588	1	3070	S	LHR		005	005	AT	A1	1 3/4	INV-TB	CRS	POLY S	18	FLUSH	AT	HM	1	CRS	CONT-WILD	EQR-DWR	16	8 1/4	101	4					MTL-STUD		
600	Exterior to Penthouse Floor 600	1	3070	S	LH		134	134	AT	A2	1 3/4	FLT-INV	A60	POLY S	18	FLUSH	AT	HM	1	A60-GALV	CONT-WILD	EQR-DWR	14	1 1/4	101	4					MTL-STUD		
WON		1	1980	S			Won	Won	AT	WD	1 3/4		PG-BIR	SCLC-5		FLUSH															Door for Window Assembly - Exact Measurements to be 1-9 7/16" x 8-0"		
600A	Exterior to Penthouse Floor 600	1	3070	S	LH		134	134	AT	A2	1 3/4	FLT-INV	A60	POLY S	18	FLUSH	AT	HM	1	A60-GALV	CONT-WILD	EQR-DWR	14	1 1/4	101	4					MTL-STUD		
600B	Existing to Penthouse Floor 600	1	3070	S	RH		134	134	AT	A2	1 3/4	FLT-INV	A60	POLY S	18	FLUSH	AT	HM	1	A60-GALV	CONT-WILD	EQR-DWR	14	1 1/4	101	4					MTL-STUD		
601	Penthouse Floor 600 from Elevator Control 601	1	3070	S	LHR	45MIN	063	063	AT	A1	1 3/4	INV-TB	CRS	POLY S	18	FLUSH	AT	HM	1	CRS	CONT-WILD	EQR-DWR	16	8 1/4	101	4					MTL-STUD	Add 3	

NOT WRAP AROUND FRAMES - USE 8 1/4" DEEP FRAME - REFER TO PENTHOUSE METAL WALL PANEL SHOPS FOR HEAD/JAMB DETAIL

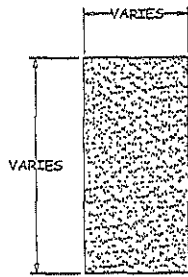
UK Biological Pharmaceutical Complex
Lexington, Kentucky

DIVISION 8
DOCUMENTATION

OPEN NO.	LOCATION	Opening										Door										Frame									
		QTY	OPENING SIZE	SCL/PPR	HAND	LABEL	HEADING	HDS	MFG	ARCH	THICK	SERIES	MATERIAL	CORE	GAUGE	ELEV		NOTES	MFG	ARCH	MATERIAL	SERIES	PROF	GAUGE	DEPTH	ELEV		ANCHOR	NOTES		
																CODE	PAGE									CODE	PAGE				
602	Penthouse Floor 600 from Elevator Control 602	1	3070	S	RHR	45MIN	083	083	AT HM	A1	1 3/4	INV-TB	CRS	POLY S	18	FLUSH	1		AT HM	1	CRS	CONT-JWLD	EQR-DWR	16	8 1/4	101	4	MTL-STUD	Add 3		
A	Egress Stair A from Corridor 600	1	3070	S	LHR	90MIN	045	045	AT HM	F1	1 3/4	INV-TB	CRS	POLY S	18	N5X2 0	1		AT HM	1	CRS	CONT-JWLD	EQR-DWR	16	9 1/2	101	4	MTL-STUD			
A1	Corridor 100 from Egress Stair A	1	3070	S	RHR	90MIN	048	048	AT HM	F1	1 3/4	INV-TB	CRS	POLY S	18	N5X2 0	1		AT HM	1	CRS	CONT-JWLD	EQR-DWR	16	9 1/2	101	4	MTL-STUD			
A2	Egress Stair A from Corridor 200	1	3070	S	RHR	90MIN	048	048	AT HM	F1	1 3/4	INV-TB	CRS	POLY S	18	N5X2 0	1		AT HM	1	CRS	CONT-JWLD	EQR-DWR	16	9 1/2	101	4	MTL-STUD			
A3	Egress Stair A from Corridor 300	1	3070	S	LHR	90MIN	049	049	AT HM	F1	1 3/4	INV-TB	CRS	POLY S	18	N5X2 0	1		AT HM	1	CRS	CONT-JWLD	EQR-DWR	16	9 1/2	101	4	MTL-STUD			
A4	Egress Stair A from Corridor 400	1	3070	S	RHR	90MIN	049	049	AT HM	F1	1 3/4	INV-TB	CRS	POLY S	18	N5X2 0	1		AT HM	1	CRS	CONT-JWLD	EQR-DWR	16	9 1/2	101	4	MTL-STUD			
A6	Egress Stair A from Corridor 600	1	3070	S	LHR	90MIN	049	049	AT HM	F1	1 3/4	INV-TB	CRS	POLY S	18	N5X2 0	1		AT HM	1	CRS	CONT-JWLD	EQR-DWR	16	9 1/2	101	4	MTL-STUD			
A6A	Egress Stair A from Stair Vestibule 600	1	3070	S	LHR	90MIN	045	045	AT HM	F1	1 3/4	INV-TB	CRS	POLY S	18	N5X2 0	1		AT HM	1	CRS	CONT-JWLD	EQR-DWR	16	9 1/2	101	4	MTL-STUD			
A6A	Stair Vestibule 600 from Penthouse Floor 600	1	3070	S	RHR	90MIN	049	049	AT HM	F1	1 3/4	INV-TB	CRS	POLY S	18	N5X2 0	1		AT HM	1	CRS	CONT-JWLD	EQR-DWR	16	9 1/2	101	4	MTL-STUD			
B	Receiving Area 022 from Interstitial Stair B	1	3870	S	RHR	45MIN	045	045	AT HM	F1	1 3/4	INV-TB	CRS	POLY S	18	N5X2 0	1		AT HM	1A	CRS	CONT-JWLD	EQR-RAB	18	8 5/8	101-4	4	MAS-ON-T			
D	Mechanical 070 from Interstitial Stair D	1	3070	S	RHR	45MIN	047	047	AT HM	F1	1 3/4	INV-TB	CRS	POLY S	18	N5X2 0	1		AT HM	1A	CRS	CONT-JWLD	EQR-RAB	18	8 5/8	101-4	4	MAS-ON-T			
E	Egress Stair E from Mechanical 070	1	3070	S	RHR	90MIN	045	045	AT HM	F1	1 3/4	INV-TB	CRS	POLY S	18	N5X2 0	1		AT HM	1A	CRS	CONT-JWLD	EQR-RAB	16	10 1/8	101-4	4	MAS-ON-T			
EO	Egress Stair E from Corridor 900D	1	3070	S	LHR	90MIN	045	045	AT HM	F1	1 3/4	INV-TB	CRS	POLY S	18	N5X2 0	1		AT HM	1A	CRS	CONT-JWLD	EQR-RAB	16	10 1/8	101-4	4	MAS-ON-T			
E1	Egress Stair E from Lockers 184	1	3070	S	RHR	90MIN	049	049	AT HM	F1	1 3/4	INV-TB	CRS	POLY S	18	N5X2 0	1		AT HM	1	CRS	CONT-JWLD	EQR-DWR	16	9 1/2	101	4	MTL-STUD			
E1A	Exterior from Egress Stair E	1	3070	S	RHR	LHR	050	050	AL UM	Q2								Alum Door By Others	AL UM									Alum Frame By Others			
E2	Egress Stair E from Corridor 200	1	3070	S	LHR	90MIN	048	048	AT HM	F1	1 3/4	INV-TB	CRS	POLY S	18	N5X2 0	1		AT HM	1	CRS	CONT-JWLD	EQR-DWR	16	9 1/2	101	4	MTL-STUD			
E3	Egress Stair E from Corridor 300C	1	3070	S	RHR	90MIN	049	049	AT HM	F1	1 3/4	INV-TB	CRS	POLY S	18	N5X2 0	1		AT HM	1	CRS	CONT-JWLD	EQR-DWR	16	9 1/2	101	4	MTL-STUD			
E4	Egress Stair E from 4th Floor Shell 401	1	3070	S	LHR	90MIN	049	049	AT HM	F1	1 3/4	INV-TB	CRS	POLY S	18	N5X2 0	1		AT HM	1	CRS	CONT-JWLD	EQR-DWR	16	9 1/2	101	4	MTL-STUD			
E6	Egress Stair E from 5th Floor Shell 501	1	3070	S	RHR	90MIN	049	049	AT HM	F1	1 3/4	INV-TB	CRS	POLY S	18	N5X2 0	1		AT HM	1	CRS	CONT-JWLD	EQR-DWR	16	9 1/2	101	4	MTL-STUD			
E6	Egress Stair E from Stair Vestibule 600	1	3070	S	RHR	90MIN	045	045	AT HM	F1	1 3/4	INV-TB	CRS	POLY S	18	N5X2 0	1		AT HM	1	CRS	CONT-JWLD	EQR-DWR	16	9 1/2	101	4	MTL-STUD			
E6A	Stair Vestibule 600 from Penthouse Floor 600	1	3070	S	LHR	90MIN	049	049	AT HM	F1	1 3/4	INV-TB	CRS	POLY S	18	N5X2 0	1		AT HM	1	CRS	CONT-JWLD	EQR-DWR	16	9 1/2	101	4	MTL-STUD			
MISC		1		S					AT HM																						

Supplier notes that "less than 0-6" rails and stiles will void manufacturer's warranty. The supplier has previously advised that 0-6" rails and stiles are required "Due to Hardware Minimum on SC Wood Doors. Both comments are believed to apply to SC Wood Doors (see following pages), but supplier has noted change to 0-6" on HM to be "consistent." A/E please advise. **ACCEPTED**

HOLLOW METAL DOORS

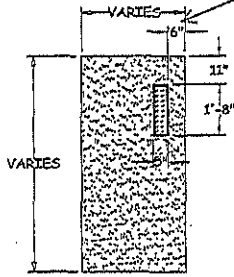


FLUSH
ATHM

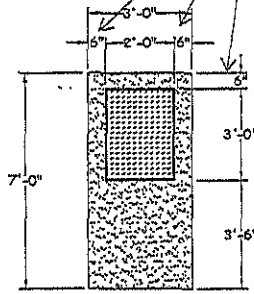
A1, C1 = HM
A2, C2 = GALV

Type X, A1,
A2/E, C1,
C2

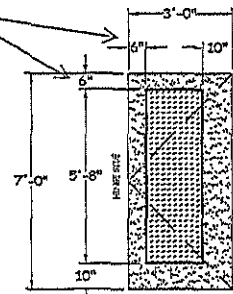
Types A and C
are Wood Doors



N5X20
ATHM
Type F1



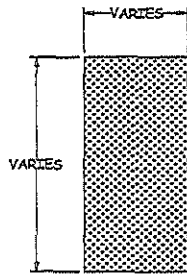
HG24X36
ATHM
TYPE G1



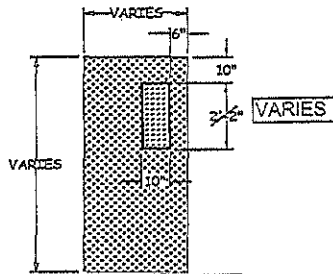
FG20X68
ATHM
TYPE K1

ALL INTERIOR GLASS (BO) TO BE 3/4" THICK - VERIFY
LESS THAN 6" RAILS AND STILES WILL VOID
MANUFACTURER'S WARRANTY

FIBERGLASS DOORS



FLUSH
TIGR
Type L2, L3



NL10X34 = L, L1
NL10X26 = L4
TIGR
Type L, L1,
L4

No.	Revisions/Issues	Date



Project Name and Address
UK Biological
Pharmaceutical Complex
Lexington, KY

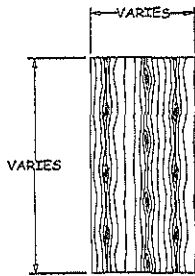
UK Biological
21 May 03
1
NDS

DOOR FRAME LIBRARY MASTER.dwg

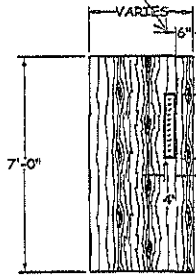
5/21/2008

See review note on prior page regarding stile and rail width (Typical this page. **ACCEPTED**)

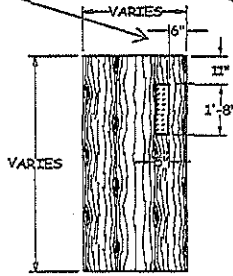
SOLID CORE FLUSH WOOD DOORS



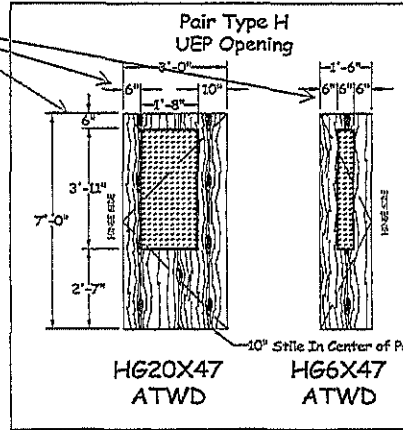
FLUSH ATWD Type A **SINGLE** TYPE C = DOUBLE



N4X25 ATWD Type D **SINGLE** TYPE E = DOUBLE



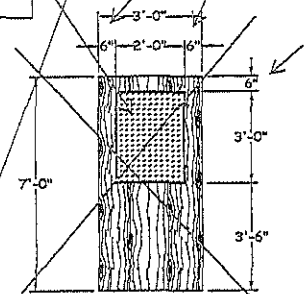
N5X20 ATWD Type F



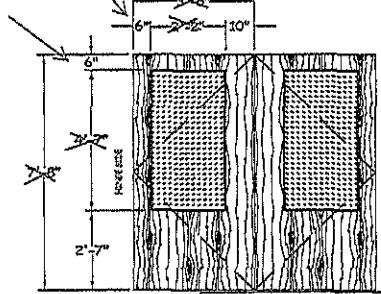
Pair Type H UEP Opening HG20X47 ATWD HG6X47 ATWD

ALL INTERIOR GLASS (BO) TO BE 3/4" THICK - VERIFY LESS THAN 6" RAILS AND STILES WILL VOID MANUFACTURER'S WARRANTY **ACCEPTED**

THIS DOOR DOES NOT EXIST

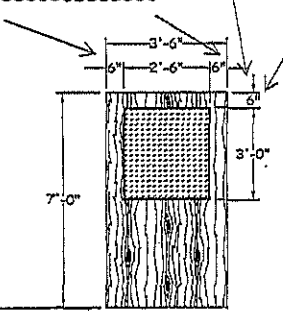


HG24X36 ATWD Type G

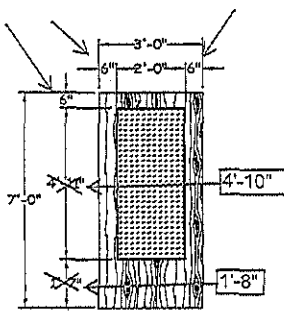


HG20X47 FOR 7'-0" TALL DOOR HG26X55 FOR 7'-8" TALL DOOR (Pair Shown) TYPE J1 = DOUBLE TYPE J = SINGLE ATWD Type H

Verify. Believed to be Type J.



HG30X36 ATWD Type G



FG24X59 ATWD Type R

Type C noted to be required. Subcontractor to provide elevation.

General Notes

No.	Revision/Issue	Date

For more and details

the ATLAS Companies

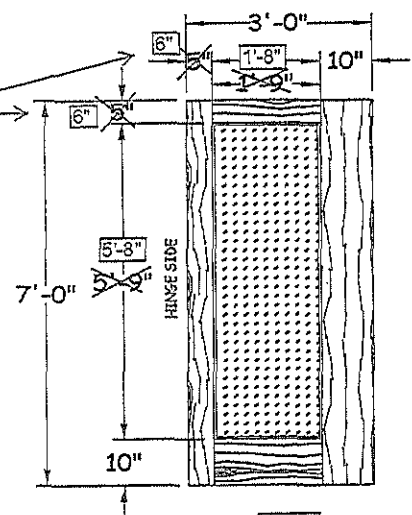
Circle 10 on card

UK Biological Pharmaceutical Complex
Ludington, NY

Project	UK Biological
Date	21 May 08
	NTD

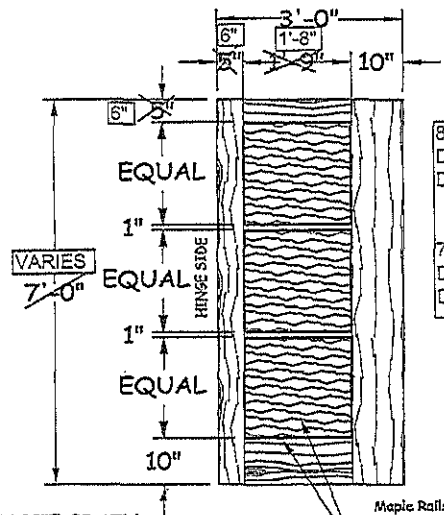
2

0.5" per Drawings. Reference deviations and review notes on HM and SC Wood Door submittal pages.



20x68
FG21X69
 Arch Type K = SINGLE
 TYPE N3 = DOUBLE
 *5" Stiles and Rails
 Waranteed

NOTE GRAIN DIRECTION DRAWN



3-PNL
 Arch Type N1, N2
S&R ATWD
 *5" Stiles and Rails
 Waranteed

Maple Rails and Stiles
 Birdseye Maple Panels
 3/4" Accent - Dark Stained Maple

8'-0" TALL DOORS FOR:
 DOORS # 124, 124.0, 124.1
 DOORS # 152, 152.0, 152.1

7'-0" TALL DOORS FOR:
 DOORS # 124A1, 124A1a
 DOORS # 152A1, 152A1a

True Stile and Rail Door by a custom door manufacturer. Note Grain Direction.

ALL INTERIOR GLASS (BO) TO BE 1/4" THICK - VERIFY

DOOR FRAME LIBRARY MASTER.dwg

5/21/2003

General Notes

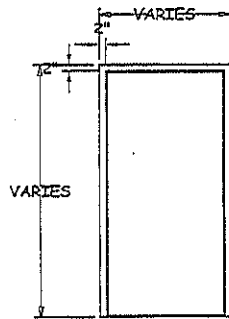
Rev.	Description/Change	Date

Project Name and Address

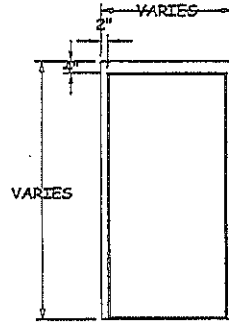
UK Biological Pharmaceutical Complex
 Lexington, KY

Project: UK Biological
 Date: 21 May 03
 Scale: NTS

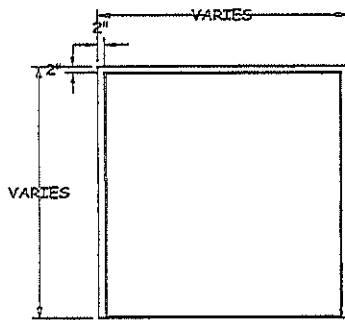
Sheet: 3



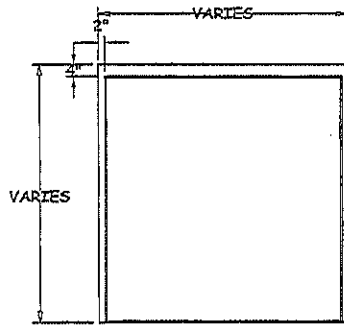
101
ATHM
Type 1, 1C



101-4
ATHM
Type 1A



102
ATHM
Type 2, 2C



102-4
&
102-UEP
(Unequal Door Pair)
ATHM
Type 2a, 2B

General Notes

No.	Revising/Issue	Date

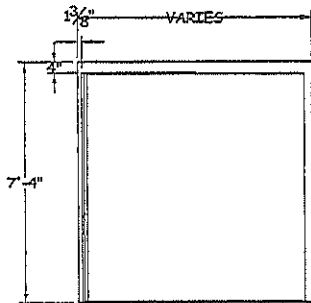
Site Name and Address

The ATLAS Companies

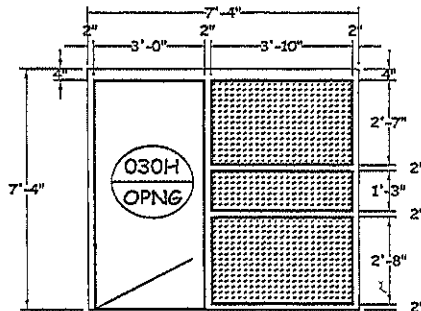
Project Name and Address

UK Biological Pharmaceutical Complex
Ludington, KY

Project	UK Biologool	Sheet	4
Date	21 May 03		
Drawn	NTS		



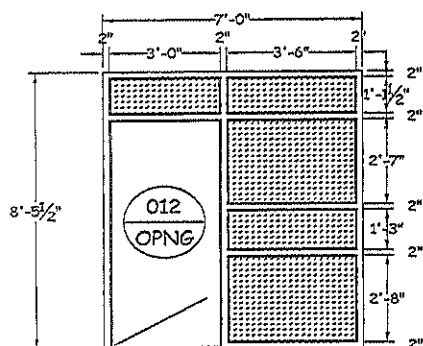
102-4DEGR
ATHM
Type 9



401
ATHM
Type 5

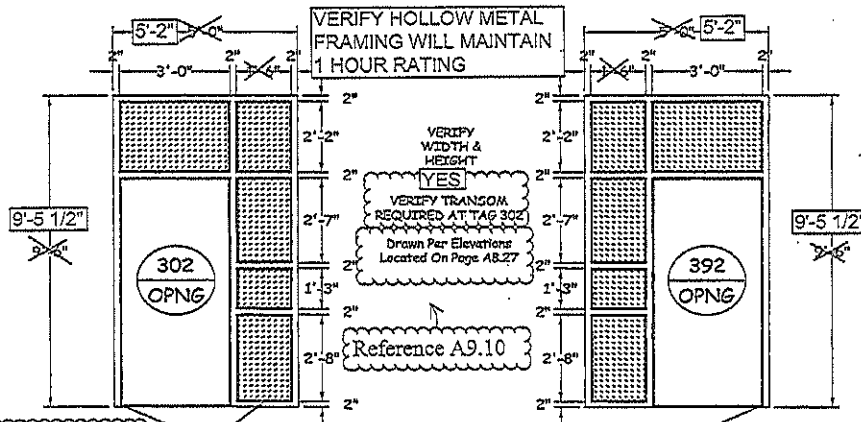
FRAME TYPE 1B (FOR DOOR SCHEDULE)
HM TYPE 05 (FRAME ELEVATION -
REFERENCE DETAIL A5/A9.8

INTERIOR GLASS THICKNESS 1/4" (VERIFY).
GLASS BEAD ON OPPOSITE SIDE SHOWN.



601
ATHM
Type 3

FRAME TYPE 1B (FOR
DOOR SCHEDULE)
HM TYPE 03 (FRAME
ELEVATION - REFERENCE
DETAIL A3/A9.8

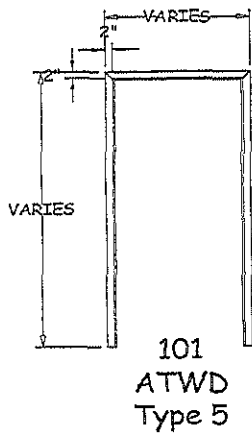


603
ATHM
Type 3

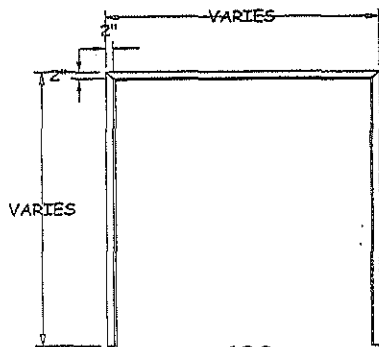
DOOR 302
FRAME TYPE 10 (FOR
DOOR SCHEDULE)
HM TYPE 73 (FRAME
ELEVATION - REFERENCE
DETAIL A6/A9.10

DOOR 392
FRAME TYPE 10 (FOR
DOOR SCHEDULE)
HM TYPE 83 (FRAME
ELEVATION - REFERENCE
DETAIL C3/A9.10

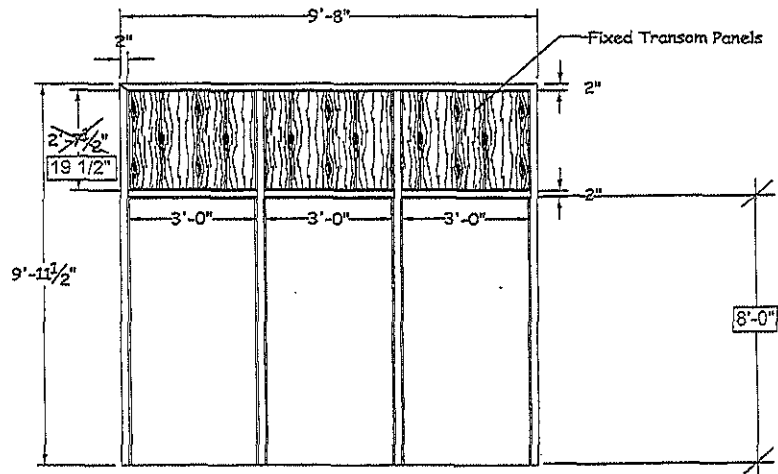
General Notes		
No.	Revision/Notes	Date
Project Name and Address UK Biological Pharmaceutical Complex Lexington, KY		
Project	UK Biological	Sheet
Date	21 May 08	5
	NTS	



101
ATWD
Type 5

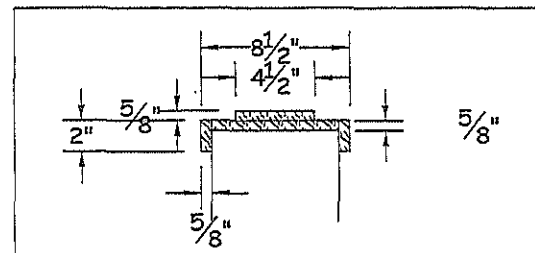


102
ATWD
Type 6



602
ATWD
Type 7

RFI submitted questioning support for hardware, wood frame and transom. Additional information and detailing to be provided following response to RFI.



TYPICAL WOOD
FRAME SECTION

Frame to be field
assembled.

General Notes

No.	Revision/Issue	Date

Drawn, Checked and Approved:

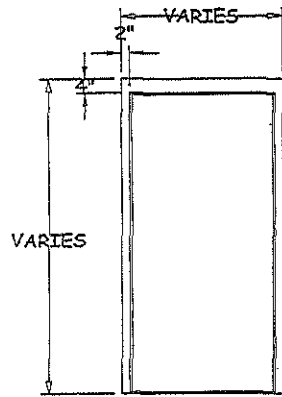
Atlas Companies

Project Name and Address:

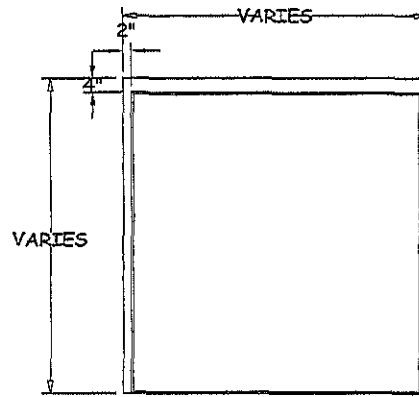
UK Biological
Pharmaceutical Complex
Ludington, KY

Page: UK Biological
Date: 21 May 08
Sheet: NTC

6



TYPE 3
101-4FRP
TIGR



TYPE 3A
102-4FRP
TIGR

Detail drawings
and Data for FRP
included with
FRP product data
under separate
cover.

Manufacturer
Detailed
Drawing To
Follow

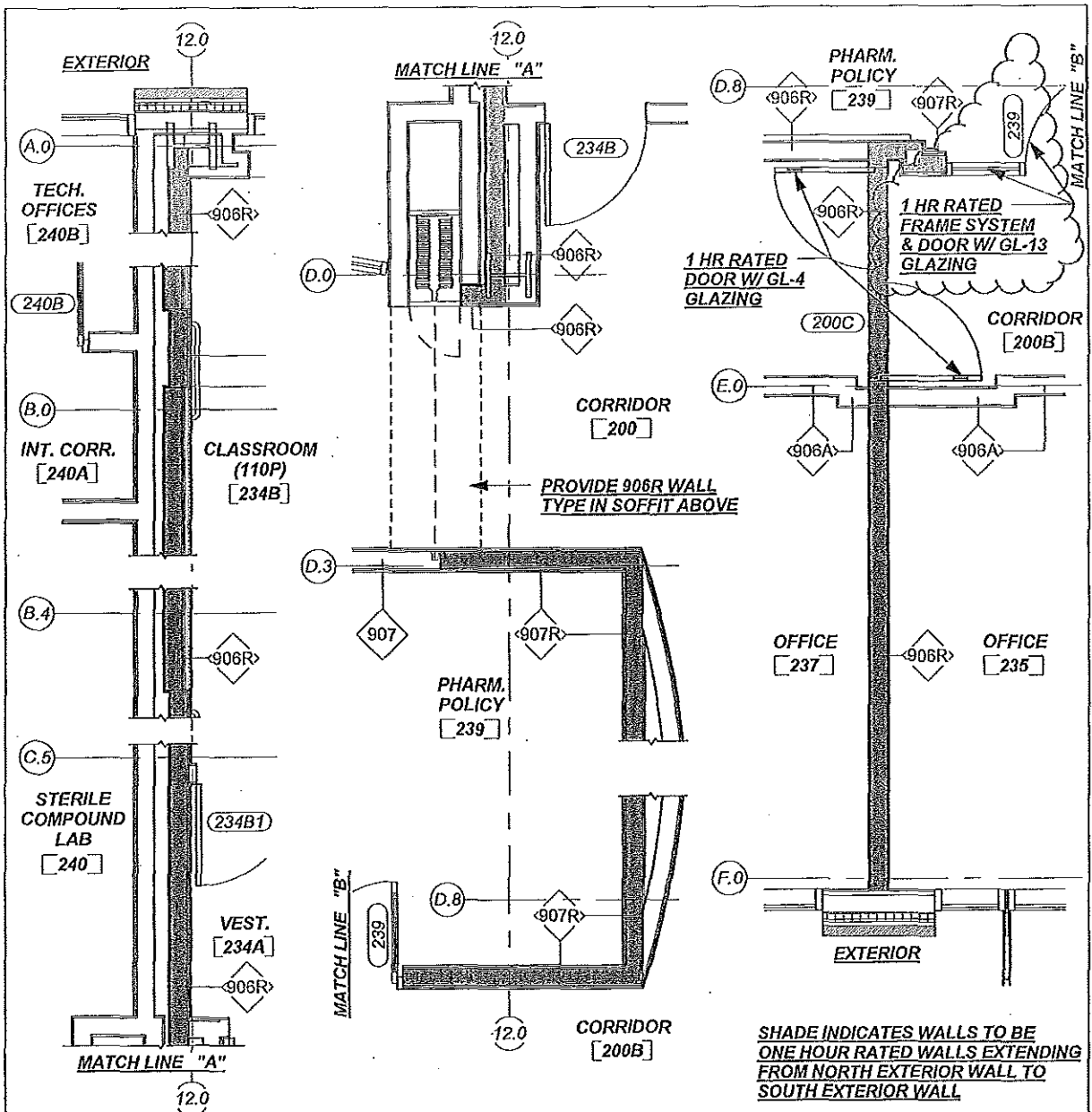
Control Name

No.	Revision/Date	Date

THE ATLAS Companies

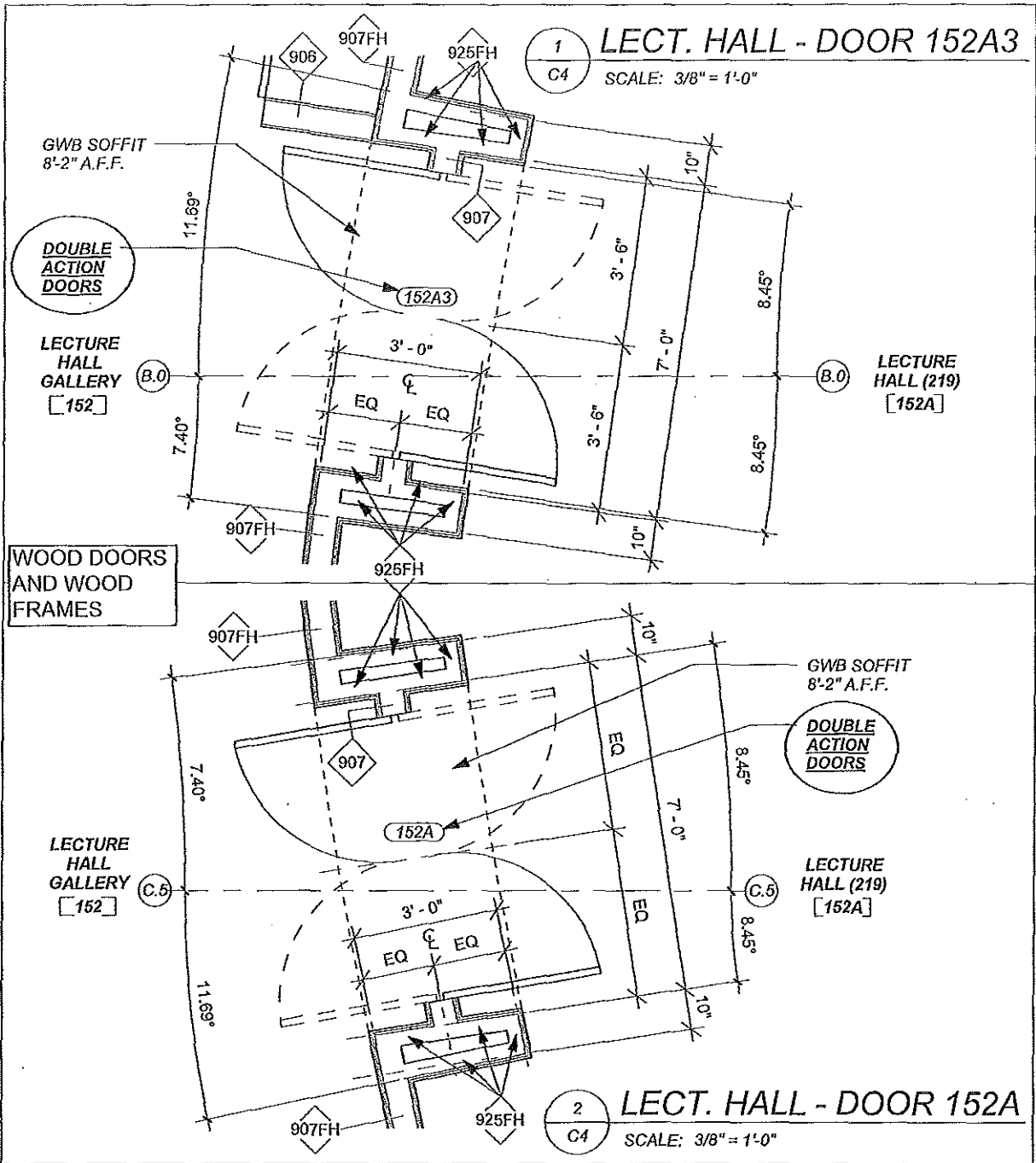
Project Name and Address
UK Biological
Pharmaceutical Complex
Lexington, KY

Project UK Biological	Sheet 7
Date 21 May 03	
Drawn NTS	

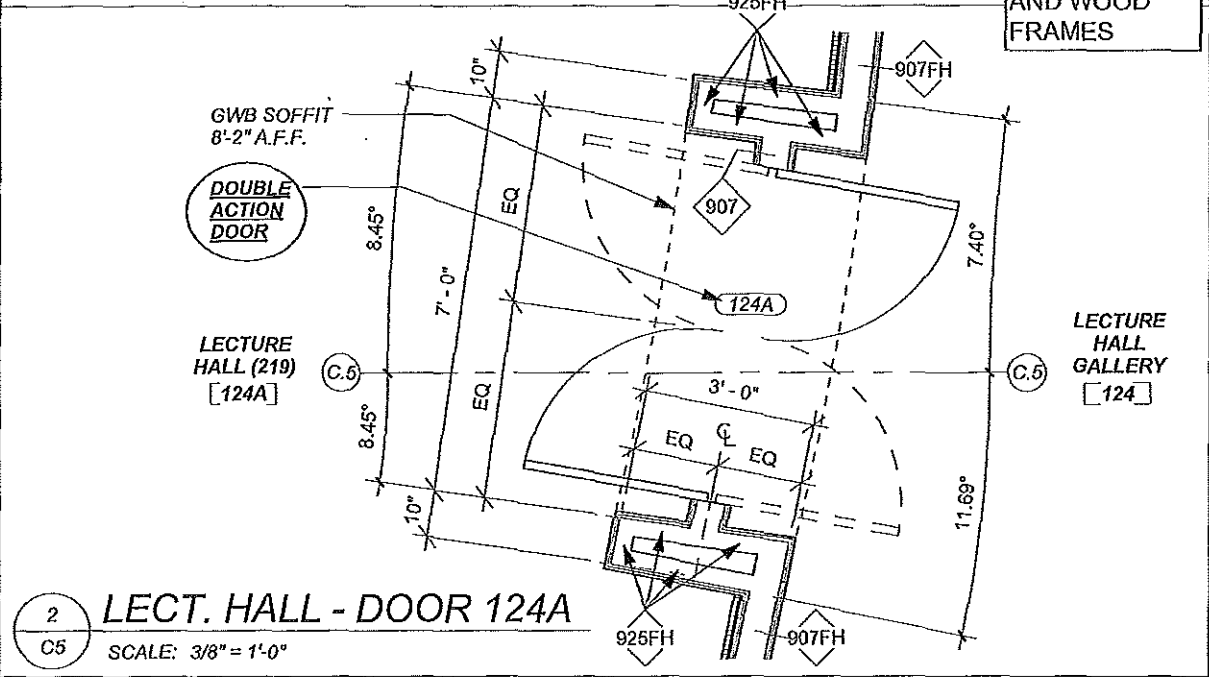
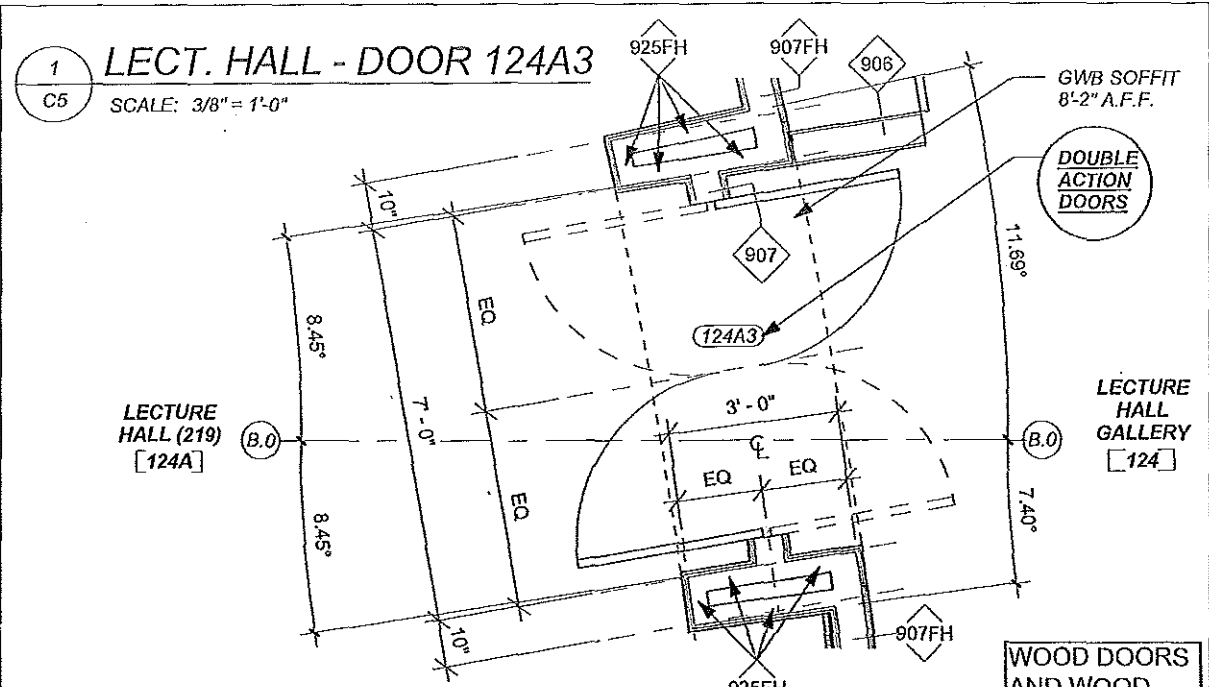


1 2nd FLOOR ONE HOUR RATED WALL
 C3 SCALE: 1/4" = 1'-0"

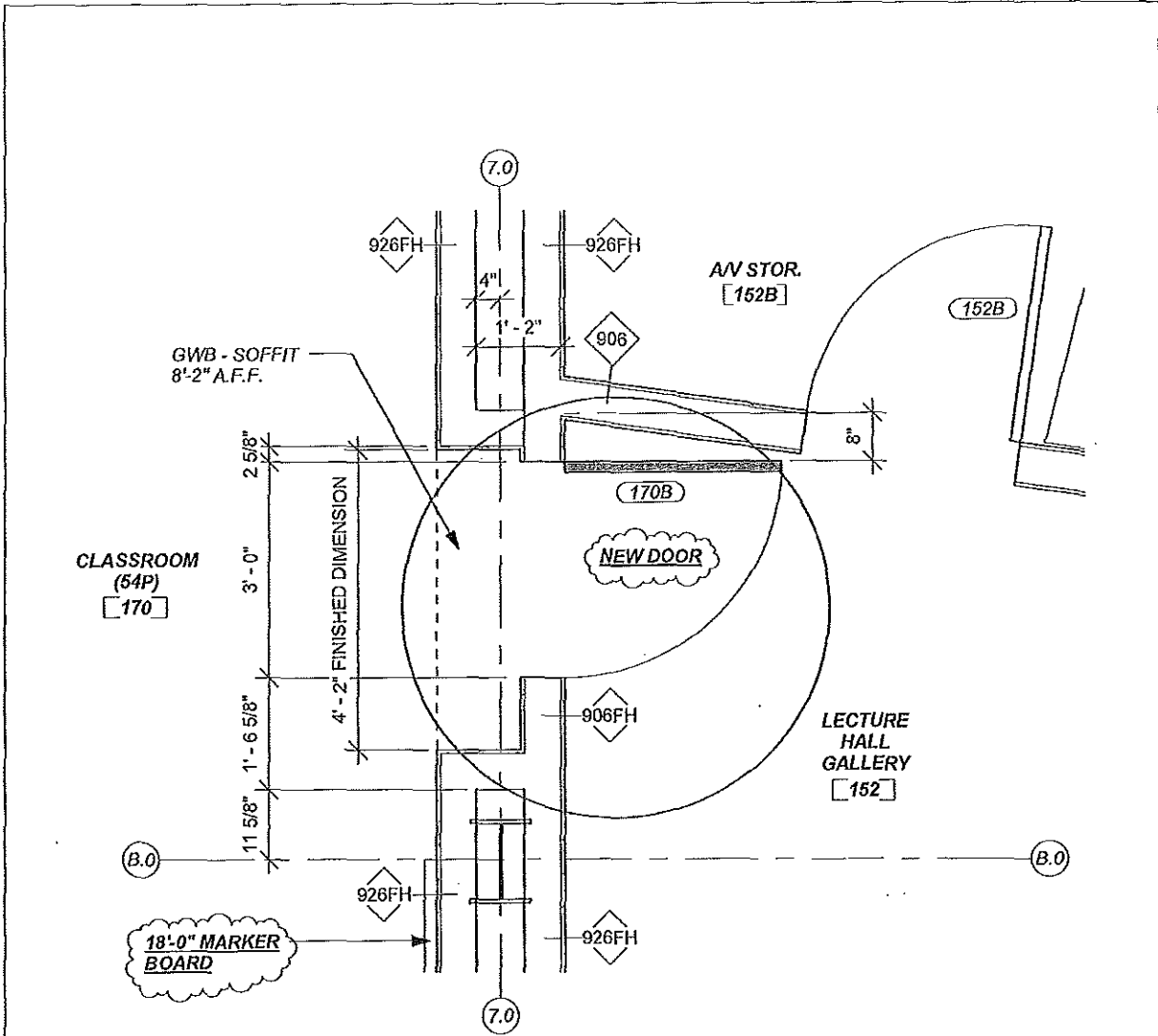
ERKHOFF, OCHENKOSKI & POLK EOP ARCHITECTS	UK Biological Pharmaceutical Complex	SECOND FLOOR - ONE HOUR RATED WALLS RFQ # 60	
		Project-number 0544 Date 05/20/08 Drawn by STAFF Checked by BB/AM	C3 Scale 1/4" = 1'-0"



	UK Biological Pharmaceutical Complex	LECTURE HALL DOORS # 152A3 & # 152A RFQ # 60	
		Project number 0544 Date 05/20/08 Drawn by STAFF Checked by BB/AM	C4 Scale 3/8" = 1'-0"

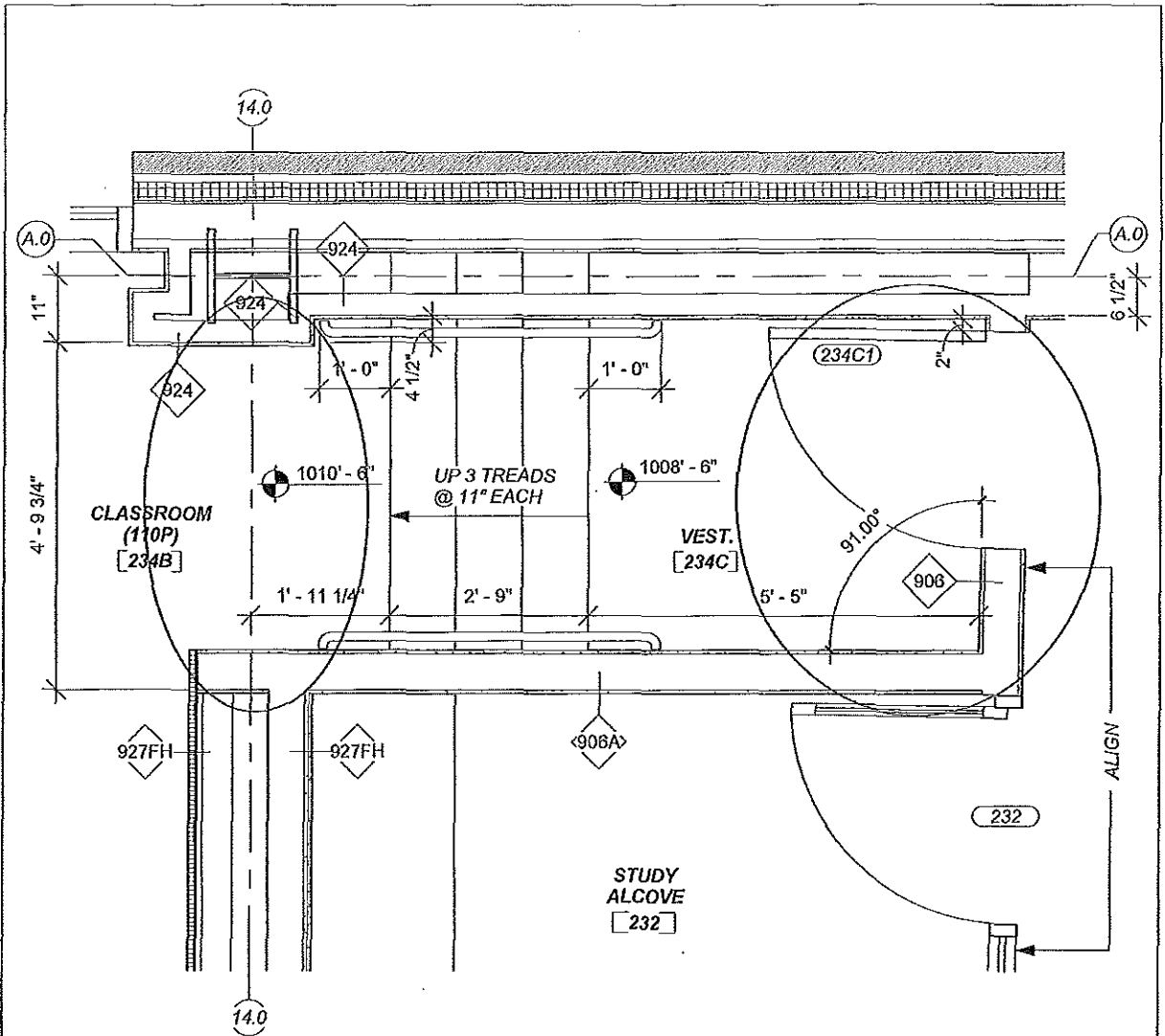


	UK Biological Pharmaceutical Complex	LECTURE HALL DOORS # 124A3 & # 124A RFQ # 60	
		Project number 0544 Date 05/20/08 Drawn by STAFF Checked by BB/AM	C5 Scale 3/8" = 1'-0"



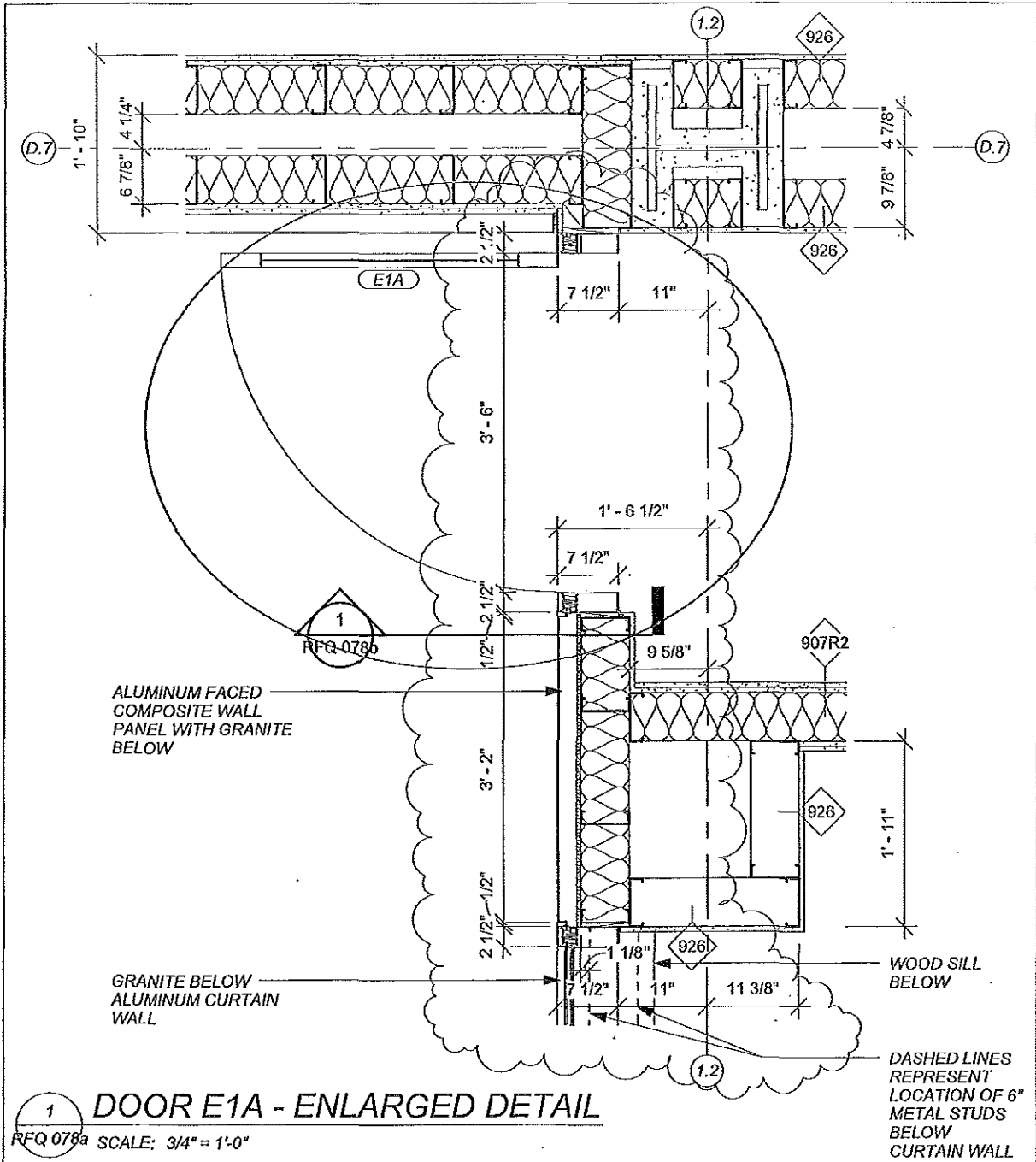
1 CLASSROOM 170 - NEW DOOR 170B
 D1 SCALE: 1/2" = 1'-0"

EKNOFF, OCHENROSKI & POLK E O P ARCHITECTS	UK Biological Pharmaceutical Complex	CLASSROOM 170 - NEW DOOR 170B - RFQ # 56	
		Project number 0544 Date 05/12/08 Drawn by STAFF Checked by BB/AM	D1 Scale 1/2" = 1'-0"

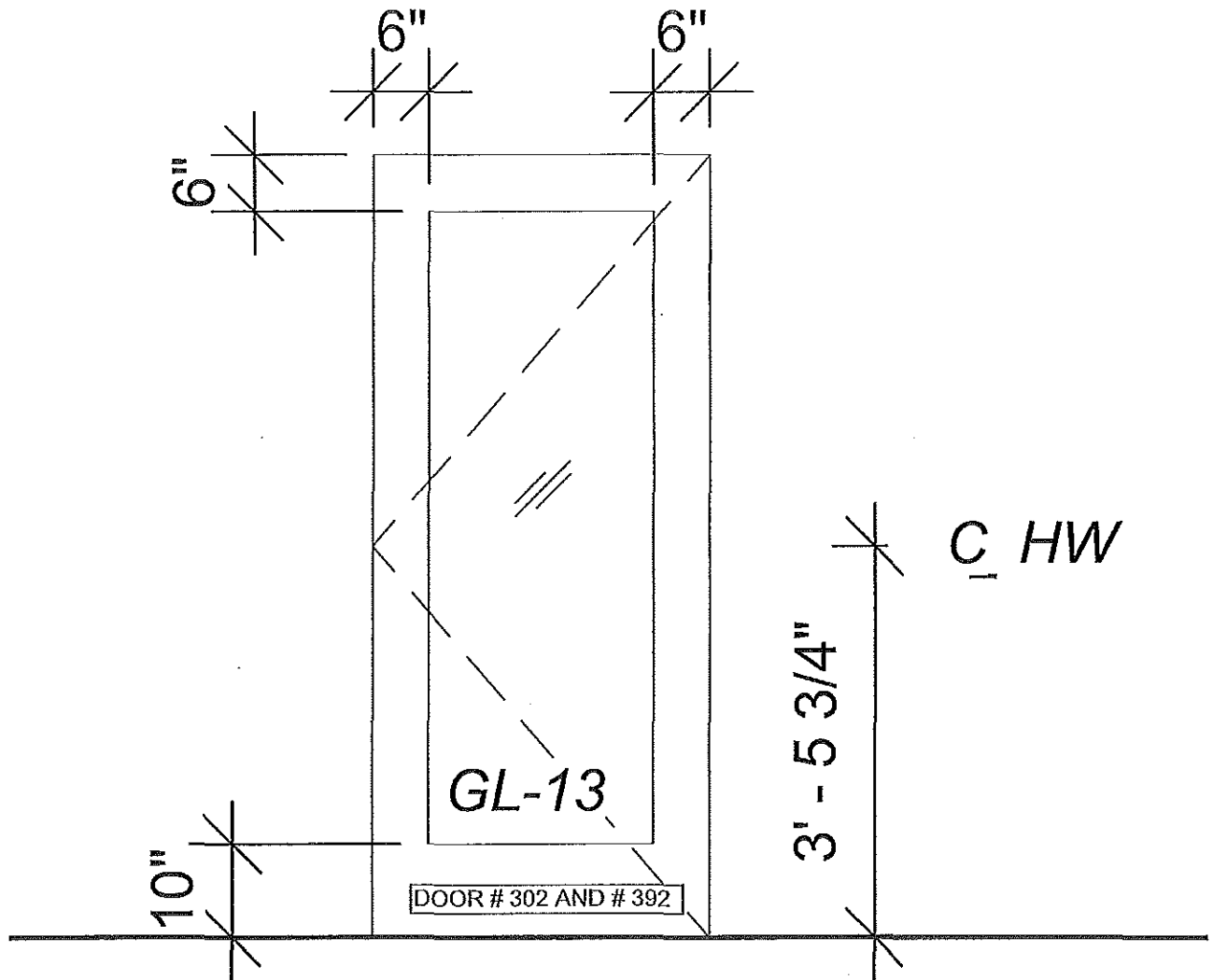


1 VESTIBULE 234C
 D2 SCALE: 1/2" = 1'-0"

ERHOFF, OCHENROSKI & POLK E O P ARCHITECTS	UK Biological Pharmaceutical Complex	VEST. 234C - STAIR & DOOR MODIFICATIONS - RFQ # 56	
		Project number 0544 Date 05/12/08 Drawn by STAFF Checked by BB/AM	D2 Scale 1/2" = 1'-0"

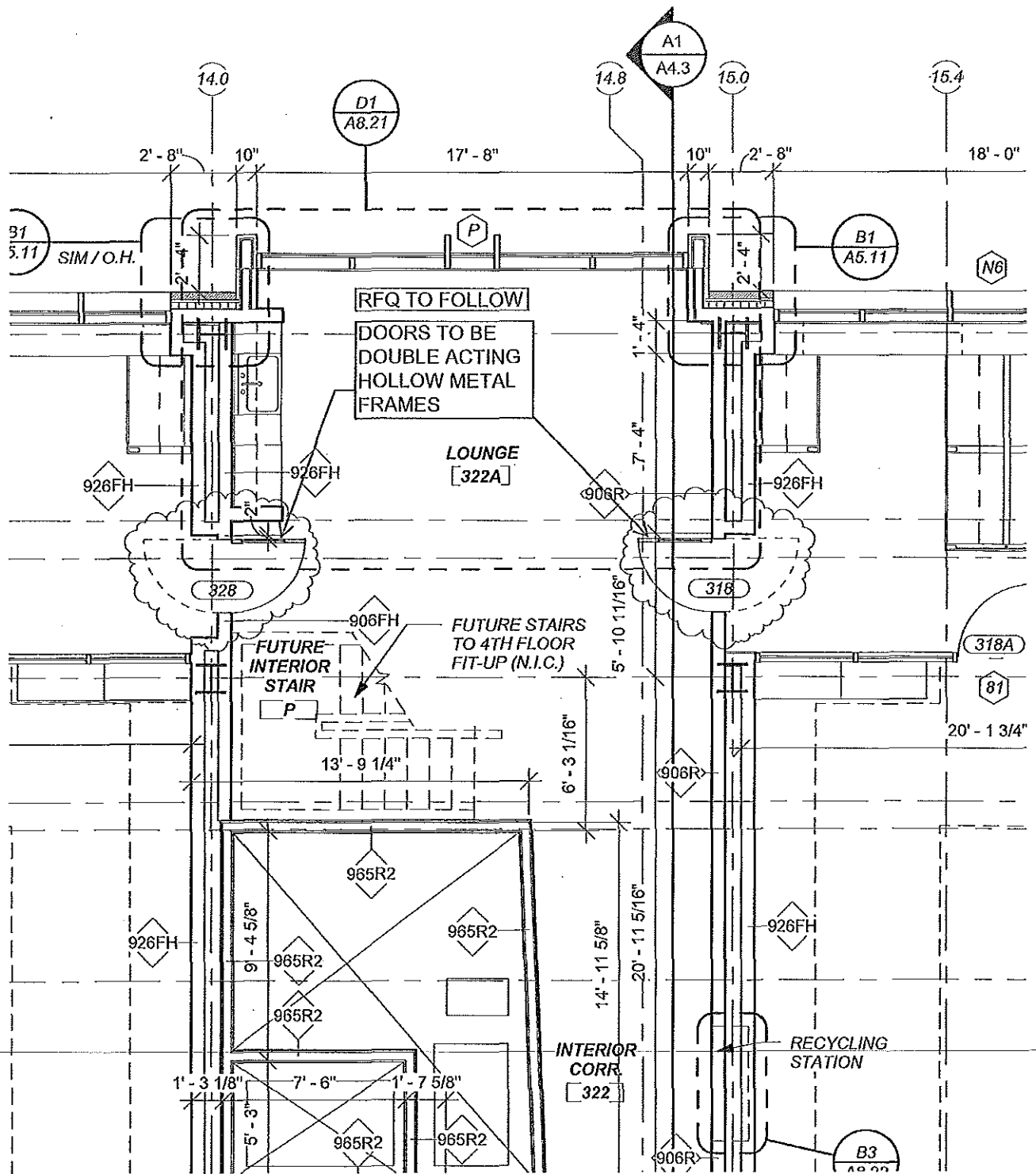


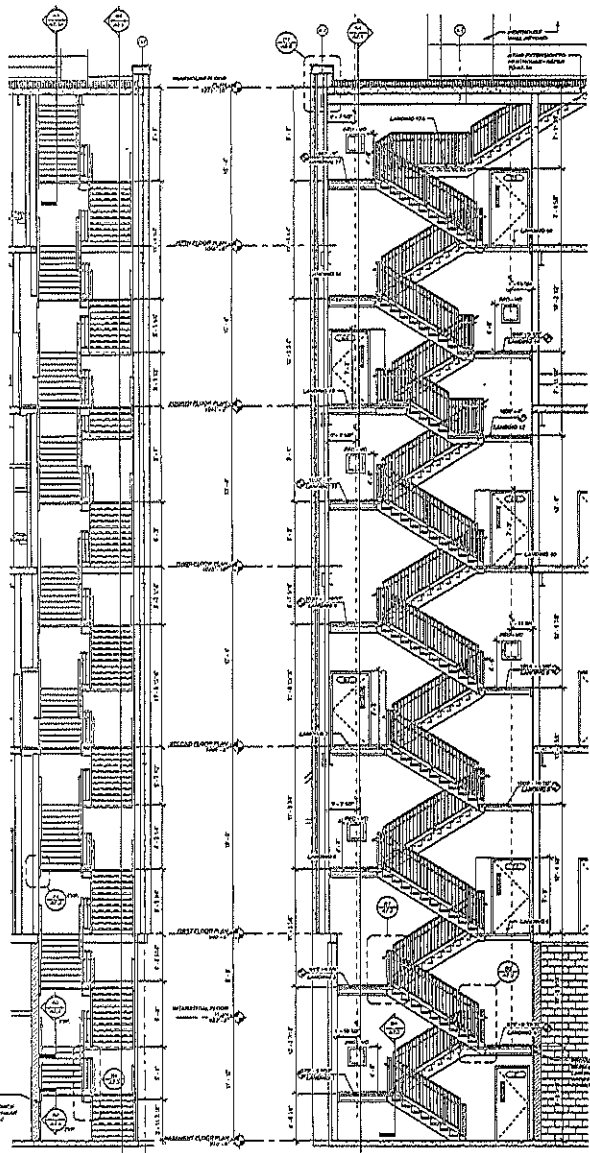
EXHOFF, OCHENROSKI & POLK E O P ARCHITECTS	UK Biological Pharmaceutical Complex	PLAN DETAIL FOR CLARIFICATION	
		Project number 0544 Date 07/14/08 Drawn by Author Checked by Checker	RFQ 078a Scale 3/4" = 1'-0"



REVISED
DOOR
ELEVATION

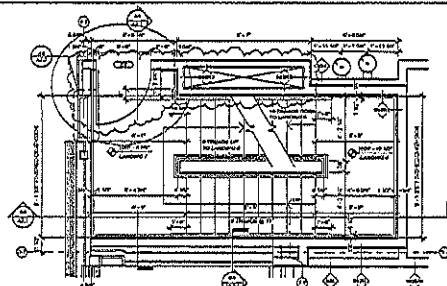
**1 HR RATED WOOD
DOOR WITH
FIRELITE GLAZING**



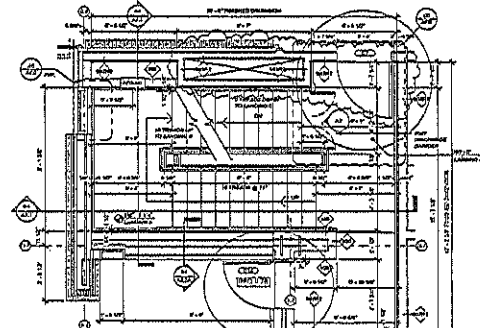


EGRESS STAIR E (WEST) - SECTION
SCALE: 1/8" = 1'-0"

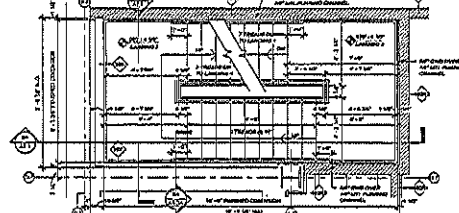
EGRESS STAIR E (WEST) - SECTION
SCALE: 1/8" = 1'-0"



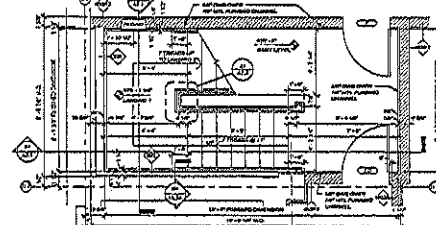
EGRESS STAIR E (WEST) - 2ND FLR PLAN & LANDING 6
SCALE: 1/8" = 1'-0"



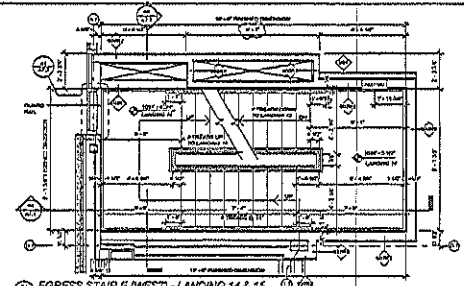
EGRESS STAIR E (WEST) - 3RD FLR PLAN & LANDING 7
SCALE: 1/8" = 1'-0"



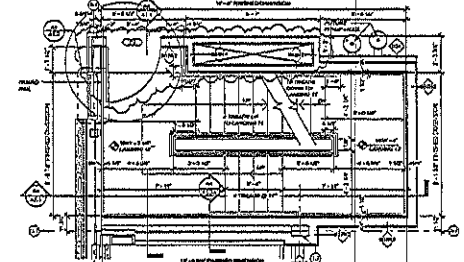
EGRESS STAIR E (WEST) - 4TH FLR PLAN & LANDING 8
SCALE: 1/8" = 1'-0"



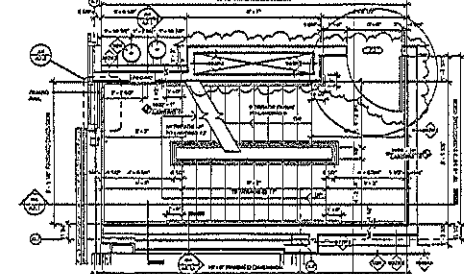
EGRESS STAIR E (WEST) - 5TH FLR PLAN & LANDING 9
SCALE: 1/8" = 1'-0"



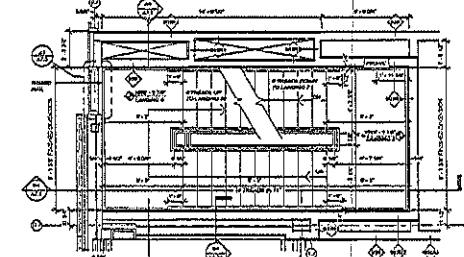
EGRESS STAIR E (WEST) - 6TH FLR PLAN & LANDING 10
SCALE: 1/8" = 1'-0"



EGRESS STAIR E (WEST) - 7TH FLR PLAN & LANDING 11
SCALE: 1/8" = 1'-0"



EGRESS STAIR E (WEST) - 8TH FLR PLAN & LANDING 12
SCALE: 1/8" = 1'-0"



EGRESS STAIR E (WEST) - 9TH FLR PLAN & LANDING 13
SCALE: 1/8" = 1'-0"

University of Kentucky
College of Pharmacy
Lexington, Kentucky



Biological
Pharmaceutical
Complex
UK Project Number: 22256

**BID
PACKAGE 04**

NO.	DATE	DESCRIPTION
1	10/17/12	PROPOSAL
2	11/07/12	WORK
3	12/07/12	WORK
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		



KEYPLAN

EGP Architects
P.O. Box 1000
Lexington, KY 40502

Shanklin & Associates/Planning
Design/Laboratory/Healthcare
www.shanklin.com

Architect - Associates
Landscape Architect
www.associates.com

GFPAI Inc.
Structural Engineer
www.gfpa.com

R.O. Woodruff
Engineer, LEED
MEP Engineer
www.rowoodruff.com

Reagan and Fisher
Utility Engineer
www.reaganfisher.com

David Engineers
Civil Engineer
www.davidengineers.com

Michael J. Smith
Construction Manager
www.mjsm.com



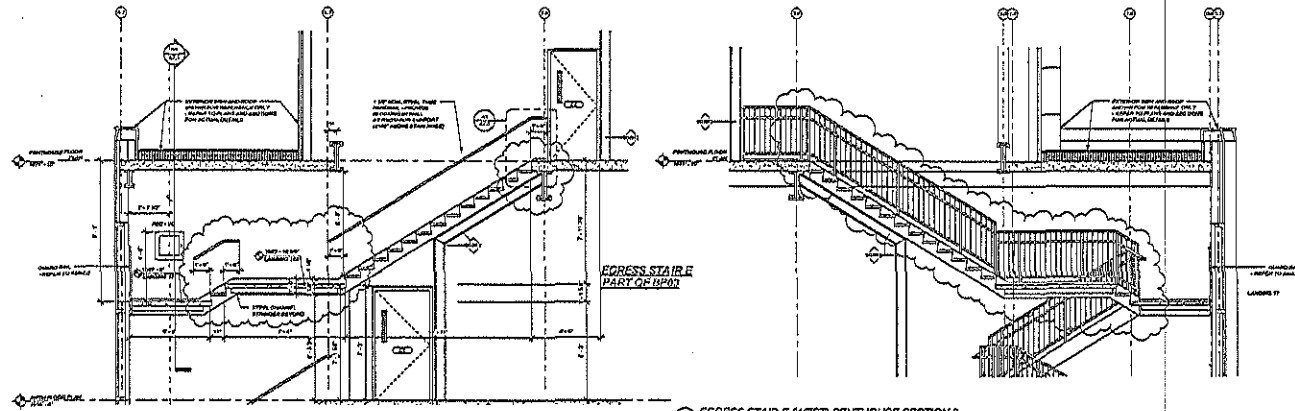
www.eoparchitects.com
1000 University Blvd., Lexington, KY 40502
502.255.1234

Job Number: 2244-00
Drawn By: STAFF
Checked By: PKJ/SP
File: 04-EGRESS STAIR E
Date: 08 JANUARY 2008



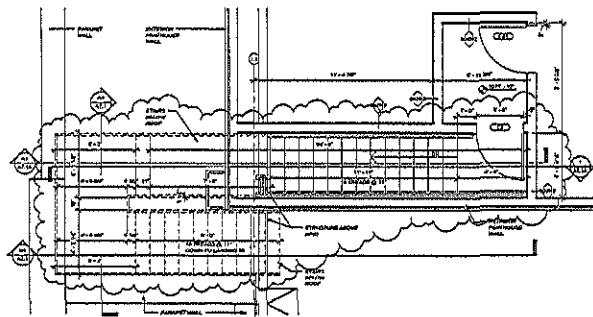
**EGRESS STAIR E
(WEST) PLANS &
SECTIONS**

A7.1
RFQ # 071



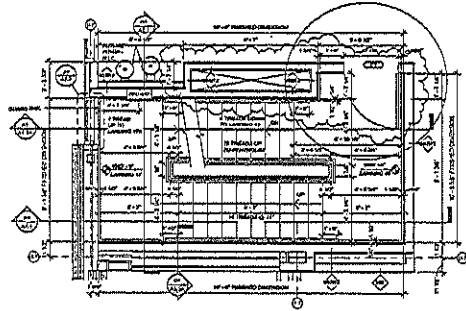
EGRESS STAIR E (WEST) - PENTHOUSE SECTION
SCALE: 3/8" = 1'-0"

EGRESS STAIR E (WEST) PENTHOUSE SECTION 2
SCALE: 3/8" = 1'-0"



NOTE: EGRESS STAIR E STRUCTURAL STEEL ONLY INCLUDED IN BID PACKAGE 03

EGRESS STAIR E (WEST) - PENTHOUSE FLOOR PLAN
SCALE: 3/8" = 1'-0"



EGRESS STAIR E (WEST) - 6TH FLR PLAN & LANDING 17
SCALE: 3/8" = 1'-0"

University of Kentucky
College of Pharmacy
Lexington, Kentucky



Biological
Pharmaceutical
Complex
UK Project Number 223510

BID
PACKAGE 04

NO.	DATE	DESCRIPTION
1	1/10/06	ISSUED
2	1/10/06	REVISED
3	1/10/06	REVISED
4	1/10/06	REVISED
5	1/10/06	REVISED
6	1/10/06	REVISED
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16	1/10/06	REVISED
17	1/10/06	REVISED
18	1/10/06	REVISED
19	1/10/06	REVISED
20	1/10/06	REVISED



KEYPLAN

CDP Architects
Plexus Architects
www.cdp.com

Cleaveland Architecture/Planning
Design/Construction Services
www.cleaveland.com

Mohrle + Associates
Landscape Architects
www.mohrle.com

BP&I Inc.
Structural Engineer
www.bpand.com

P.O. Vandenbrouck
Engineers, LLP
MEP Engineers
www.vandenbrouck.com

Steggs and Fisher
Utility Engineers
www.steggsandfisher.com

Quinn Engineers
Civil Engineer
www.quinneng.com

Hansen / Jacobs
Construction Manager
www.hansen.com



Information and product specifications are provided for informational purposes only. The user is responsible for verifying the accuracy and completeness of information and for determining the applicability of the information to their project.

Job Number: 064402
Drawn By: RFP/02
Checked By: RFP/05
File: 04 JANUARY 2006

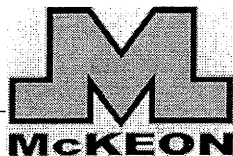


EGRESS STAIR E
(WEST) PLAN &
SECTIONS

A7.1A
REQ # 071

083326

OVERHEAD COILING GRILLES



McKEON DOOR COMPANY

Manufacturer of Fire, Smoke, Security & Emergency Egress Door Systems

April 13, 2009

Overhead Door Company of Lexington, Inc.
181 Trade Street
Lexington, KY 40511

Re: University of Kentucky – Biological Science Pharmacy Building (H 62906)

LIMITED ONE YEAR WARRANTY

McKeon Door Company, Bellport, New York warrants that every door will be free of defects in workmanship and material. Should any defect in workmanship or material appear within **ONE YEAR** of the original date of shipment, McKeon Door Company shall, upon written notification, correct such non-conformity at its option, by repairing or replacing any defective part or parts. This warranty gives you specific rights which may vary from state to state.

This warranty does not include normal wear, damage beyond the manufacturer's control, damage due to negligence or any replacement labor.

Any repair work performed by another company other than a McKeon Door Company Authorized & Certified Representative or that utilizes parts not manufactured by McKeon Door Company, alters the construction of the product or deviates from the original product specifications will render this warranty null and void.

No warranties expressed or implied (including, but not limited to a warranty of merchantability or fitness for particular purpose) shall extend beyond the applicable time period stated in bold face type above.

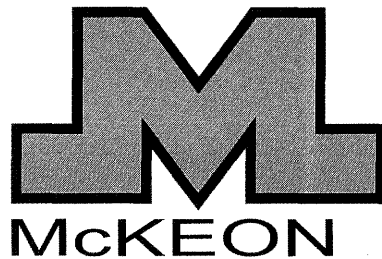
Claims for any defective parts or components must be made in writing to McKeon Door Company within the governing warranty period.

The foregoing warranty is exclusive and in lieu of other warranties. In no event shall seller be liable for special, incidental or consequential damages. However, some states do not allow limitation of incidental or consequential damages, therefore the above exclusion or limitation may not apply to you.

Authorized By



Vadim Litman
SENIOR PRODUCT ENGINEER



***OPERATION & MAINTENANCE
MANUAL***

**UNIVERSITY OF KENTUCKY
BIOLOGICAL SCIENCE
PHARMACY BUILDING**

PREPARED FOR:

***OVERHEAD DOOR COMPANY
OF LEXINGTON***

181 TRADE STREET
LEXINGTON, KY 40511

DESCRIPTION:

- (6) FSFD - AUTO-SET FIRE DOORS
- (1) H200 - HORIZONTAL FIRE SHUTTER
- (2) Sg3000 - COILING SECURITY GRILLES



McKEON

Coiling Security Grilles

SG3000 Series

Description: Coiling Security Grilles SG3000 Series are vertical coiling units comprised of vertical links and horizontal rods. They are available in motor, hand crank, hand chain and push up operated designs. These units can be manufactured in stainless steel, steel and aluminum and are available in a variety of finishes and patterns.

Advantages: McKeon Door offers eight different standard grille patterns. By combining our grille designs with customized drives, we are able to reduce head room and side room requirements between thirty and forty percent when compared to conventional coiling security grilles. When head room is a severe problem, the motor drives can be remotely mounted thus reducing the head room requirements by several inches. Consult factory for solutions to your space problems.

Design Alternatives: Coiling Security Grilles provide a more aesthetically pleasing solution to securing openings than conventional accordion folding or sliding gates.

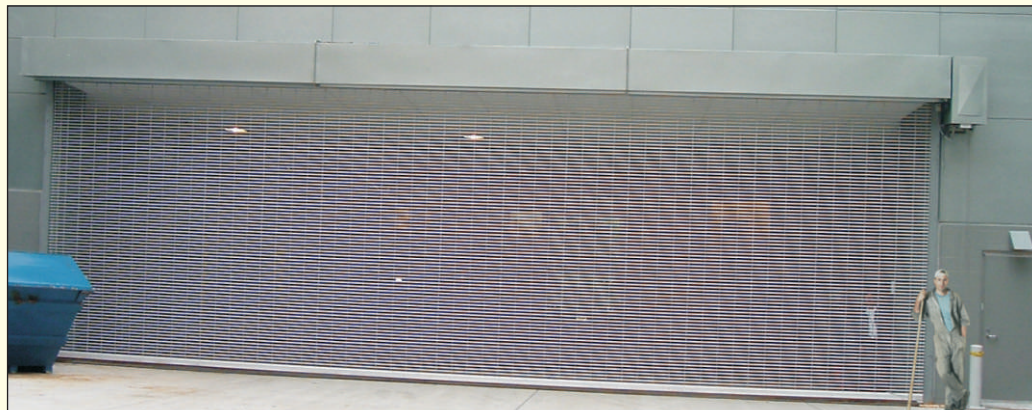
They require much less head room than side room than with alternative designs and therefore, provide design professionals a great deal of flexibility.

Applications: Coiling Security Grilles are utilized in parking facilities, schools, correctional facilities, industrial facilities, as well as shopping malls and store fronts.

McKeon security grilles can be designed for openings up to 60 feet in width



McKeon custom perforated doors are available with up to 1½" diameter perforations



SG3000 can be designed to accommodate almost any style and variation of openings

Toll-Free 1-800-266-9392 / (718) 965-0700 • Fax: (718) 768-3406
95 29th Street • Brooklyn, NY 11232 USA • email: info@McKeonDoor.com



www.McKeonDoor.com

CALIFORNIA

NEW YORK

WASHINGTON, DC



SAFETY SUMMARY



SAFETY SUMMARY SHEET

WARNING!

THESE WARNING PARAGRAPHS MUST BE OBSERVED IN ORDER TO PREVENT SERIOUS INJURY OR DEATH TO AN INSTALLER OR OPERATOR.

CAUTION!

THESE CAUTION PARAGRAPHS MUST BE OBSERVED IN ORDER TO PREVENT DAMAGE, DESTRUCTION, OR LOSS OF OPERATING PERFORMANCE AND EFFECTIVENESS OF THE PRODUCT.

IT IS THE RESPONSIBILITY AND DUTY OF ALL PERSONNEL INVOLVED IN THE OPERATING AND MAINTENANCE OF THIS EQUIPMENT TO FULLY UNDERSTAND THE WARNING AND CAUTION PROCEDURES BY WHICH HAZARDS ARE TO BE REDUCED OR ELIMINATED. PERSONNEL MUST BECOME THOROUGHLY FAMILIAR WITH ALL ASPECTS OF SAFETY AND EQUIPMENT PRIOR TO ANY OPERATION OR MAINTENANCE OF THIS EQUIPMENT.

WARNING! SOME DOORS INCLUDE A SPRING CHARGE-RETAINING PIN NEAR THE END OF THE SHAFT FOR THE COUNTER BALANCE SPRING. THIS PIN SHOULD REMAIN IN THE SHAFT UNTIL THE CURTAIN HAS BEEN ATTACHED, THE MOTOR OPERATOR DRIVE CHAIN HAS BEEN INSTALLED AND POWER HAS BEEN CONNECTED TO THE MOTOR OPERATOR.

WARNING! BE AWARE OF THE INHERENT DANGERS OF WORKING ON ELECTRICAL EQUIPMENT, AS WELL AS WORKING ABOVE THE FINISH FLOOR.

WARNING! THE MOTOR IS OPERATED AND CONTROLLED BY A MINIMUM OF 110 VOLT POWER. SECURE POWER SOURCE TO THE MOTOR OPERATOR WHEN CONDUCTING MAINTENANCE ON THE DOOR.

WARNING! INSTALL THE SPRING CHARGE-RETAINING PIN WHENEVER THE CURTAIN WEIGHT IS REMOVED FROM THE SHAFT, BECAUSE WITHOUT THE CURTAIN'S WEIGHT, THERE IS A POTENTIAL FOR AN UNCONTROLLED DISCHARGE OF THE COUNTERBALANCE SPRING ASSEMBLY.

CAUTION! DO NOT, UNDER ANY CIRCUMSTANCES, ATTEMPT TO SHIFT TO MANUAL OPERATION WHILE THE MOTOR OPERATOR IS RUNNING BECAUSE OF POTENTIAL DAMAGE TO THE CLUTCH.

CAUTION! CARE SHOULD BE TAKEN TO PREVENT THE CURTAIN FROM DOUBLING BACK ON ITSELF IN HANDLING BEFORE INSTALLATION. IN SOME CASES THE SLATS OR PANELS MAY BE FORCED APART WHEN AN EFFORT IS MADE TO READJUST THE SLATS OR PANELS BACK TO THEIR PROPER ENGAGEMENT.

CAUTION! IF THE DOOR WILL NOT OPERATE PROPERLY OR FREELY IN THE MANUAL MODE, DAMAGE MAY OCCUR IF ELECTRICAL OPERATION IS ATTEMPTED.

CAUTION! BE PREPARED TO IMMEDIATELY STOP THE DOOR IF IT APPEARS THAT THE DOOR WILL COME IN CONTACT WITH THE MECHANICAL STOPS OR GO BEYOND THE FULLY OPEN POSITION WHEN OPENING AS WELL AS PILE ON THE FLOOR OR INTO THE RECEIVER WHEN CLOSING. DURING THE INITIAL ELECTRICAL CHECKS, PERSONNEL SHOULD BE IN A POSITION TO TURN OFF THE POWER SOURCE IN CASE THE "STOP" PUSH-BUTTON FAILS TO WORK.

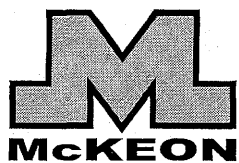
CAUTION! DO NOT ATTEMPT TO OPERATE THE DOOR ELECTRICALLY PRIOR TO THESE CHECKS.

CAUTION! IF LIMIT SWITCHES ARE NOT SET, ALLOW DOOR TO TRAVEL ONLY A SHORT DISTANCE TO VERIFY OPERATION, AND THEN STOP.

CAUTION! IF DOOR OPERATION IS REVERSED FROM THE DIRECTION SELECTED BY THE PUSH-BUTTON OR KEY SWITCH CONTROL STATION, THEN MOTOR ROTATION SHOULD BE REVERSED BY CHANGING THE PHASE OF THE MOTOR'S POWER SOURCE AT THE STARTER.

CAUTION! THE "OPEN" AND "CLOSE" CONTROL POINTS MUST BE WIRED TO THE TERMINALS SHOWN ON THE WIRING DIAGRAM. DO NOT CHANGE PUSH-BUTTON OR KEY SWITCH CONTROL STATION WIRING IF THE DOOR TRAVELS IN THE WRONG DIRECTION.

CAUTION! BE PREPARED TO STOP THE DOOR WITH THE "STOP" BUTTON WHEN ADJUSTING THE LIMIT SWITCHES.



INSTALLATION INSTRUCTIONS
FOR
GRILLES



INSTALLATION INSTRUCTIONS

Upon receipt of shipment – immediately check that you have received the correct number of pieces, and that the entire shipment is intact and complete. Any damage or shortages should be noted on the freight carrier's bill of lading before signing for the shipment.

Should damage or shortages be found after the shipment has been accepted notify the delivering carrier at once and confirm such notification in writing to them.

Call McKeon Door's Service Department for pricing to replace/repair the items in question and submit this information to the carrier – in writing. This forms the basis for the freight claim.

All shipments are made F.O.B. factory, freight allowed, and it is the purchaser's responsibility to file all freight claims. McKeon will provide any necessary backup paperwork to substantiate your claim, but we cannot file these claims for you, as ownership for the shipment determines who must file the claim.

Before beginning installation – read the installation instructions on the following pages thoroughly.



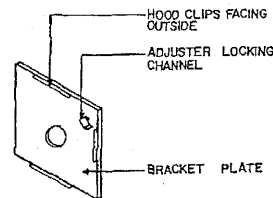
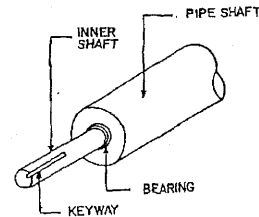
INSTALLATION PROCEDURE

STEP 1

- A typical door will have the following components:
 - A curtain made up of interlocking slats with double angle bottom bar.
 - Two guide assemblies (one left and one right hand) each having three angles; two forming guide and one wall angle; completely assembled with bolts.
 - One counterbalancing pipe.
 - Two steel bracket plates with bolts in place, an adjusting wheel, with drive gear or sprocket and chain operator or crank operator if called for.
 - One sheet metal hood. When the door is to be installed under a lintel, a sheet metal fascia is included in the shipment.
 - Motor operator and accessories called for.
 - Bag with hardware items, such as self-tapping screws for hood, mounting bolts, and inner shaft keys.

STEP 2

- Separate the material into groups forming complete doors and determine the “hand” of each door. “Hand” is determined by the location of the operating side (chain, crank, or motor) taken when looking at the opening from the side on which the coil will be mounted. A right hand door will therefore have the operator on the right with the adjusting wheel at the left side.
- Inspect the shaft assembly. The adjusting end of the shaft assembly is the one with the bearing in it. The bearing that is visible can identify the spring side where the inner shaft enters the outer pipe.
- The adjusting bracket plate can be identified as the one with the adjuster-locking channel shown at right.

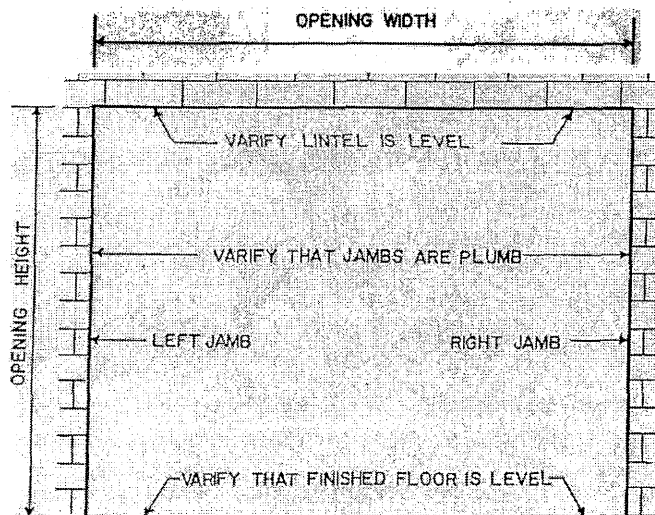


Note: It is imperative that you verify “hand” of doors correctly. Failure to do so can result in incorrect installation, causing possible damage to the springs within the pipe shaft by winding them backwards. This may also lead to damage to other parts of the door, or to serious injury to installation personnel and passerby.



STEP 3

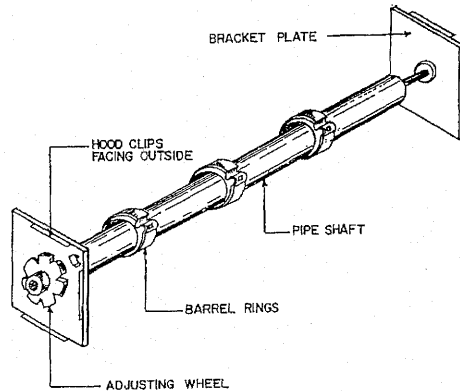
- Measure the opening and verify dimensions and clearances. Check that the lintel is level and that the jambs are plumb.
- Remove door guides from wall angles. Place a level mark about 4'-0" from floor on both sides of "inset" mark. Mark mounting irons about 4"-0" from bottom of iron.
- Place wall angle against the proper face of the building, at the proper side for hand operation as given above. Wall angles should be vertical and plumb, with level marks matching, making sure that "guide inset" is maintained between the wall angles. Guide inset in curtain overall width plus 1½" (endlock to endlock or windlock to windlock).
- Place marks on the wall through the holes in the wall angle to indicate where to place the anchoring bolts.
- Remove wall angle -- drill and set shields or drill and tap into steel or drill, or burn holes for through bolts, nuts and washers.
- Holes in wall angles are ½", use 7/16" carboloy drill for holes. 3/8" rawl plugs and 3/8"x 3" lab bolts are in box, see packing slip.
- Fasten wall angle to wall. Use same procedure on opposite side of opening. Make sure wall angles are square at right to the opening.





STEP 4

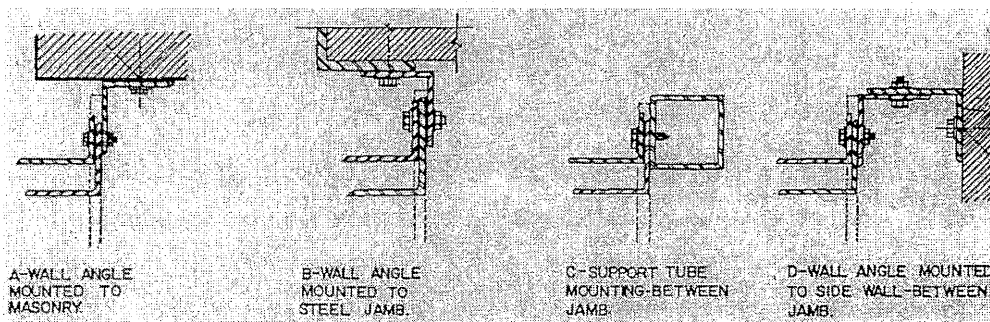
- Pre-assemble the pipe shaft unit and both bracket plates on the floor. Be sure to match the spring adjustment bracket plate to the spring end of the shaft. Attach adjusting wheel and rive gear or sprocket.



Note: On all doors with 1½" diameter or larger inner shafts, installer must tighten set screw on bearing in bracket plate at drive side (plug end) of shaft.

STEP 5

- Hoist the shaft assembly and bolt the bracket plates to the wall angles. Note that the bracket plates are mounted to inside faces of the wall angles.
- Tighten all bracket bolts to the wall angle while revolving pipe by hand to be certain it is free turning in the bearings. The pip must be checked with a level and be in perfect alignment (perpendicular with the bracket plate).



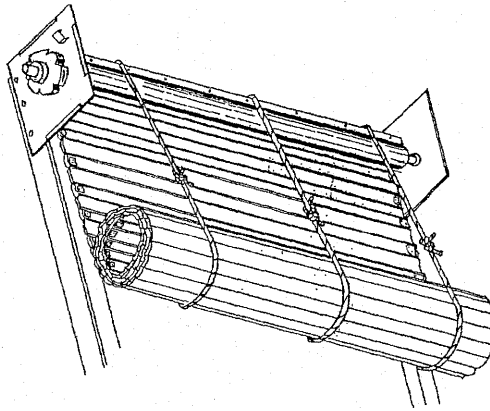
Note: Shaft must be perfectly level or curtain will not roll up evenly.



- Install the operator using mounting bracket or mounting platform supplied, and adjust location so that proper roller chain tension is obtained. Use half links for fine adjustment if necessary. Motor must be diagonally braced to adjacent wall construction by the installer. Bracing must be of sufficient strength to prevent sideways movement of bracket plate when door is operating.

STEP 7

- Raise the coiled curtain to about 18" below the pipe shaft. Best method is with a fork lift truck of suitable capacity. Install heavy-duty rope slings around the curtain and the pipe. Care must be used to prevent damage to door or injury to personnel. Erector must use a sufficient number of slings to prevent the curtain from being deformed while installing (one every 3 feet will suffice).



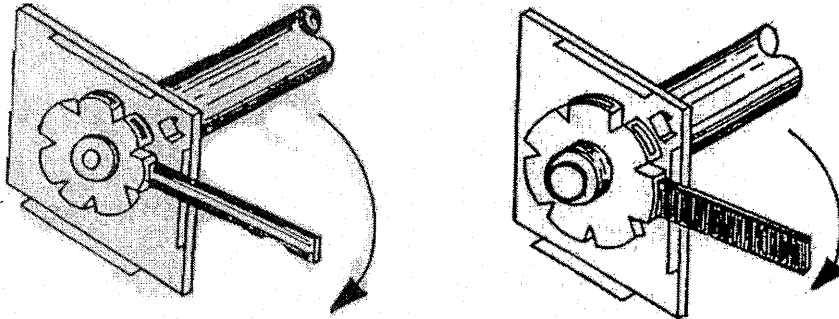
- Turn pipe shaft by hand or with drive mechanism so that slings carry top slat to the pipe shaft. Line up holes in top slat with holes in barrels and bolt tip slats to shaft using 3/8"x1" bolts. Be certain that the top slats on both ends of the curtain are butted against the endlocks of the slat just below, before they are bolted to the shaft. This will insure against curtain movement from side to side, while opening and closing the door. If the pre-punched holes in the top slat will not allow the top slat to butt against the endlocks of the slat below them, the installer must punch an additional hole in the top slat in order to meet this requirement. Note distance from endlocks to bracket plate must be checked to make sure it agrees with dimensions shown in guide details. Continue winding curtain onto shaft. Stop winding curtain when it is completely wound on shaft and bottom bar is about 3" below bottom of bracket plates. Do not remove slings.
- For door with chain hoist operators, secure hand chain to wall angle temporarily. For hand lift doors, secure c-clamp to one wall angle to prevent curtain from moving.



- Attach the guide angles to the wall angle furthest from the hand chain or c-clap with 3/8" diameter bolts, nuts, and washers. Refer to guide detail on shop drawings for location of guide angles.

STEP 9

- Examine the adjusting mechanism. It will correspond to one of the charging details shown below. Adjust the spring tension with the curtain in the full open position by turning the adjusting wheel in the direction show. Springs will exert a large force on the wheel, which must be held securely to avoid any accidents. Turn the adjusting wheel one recess at a time, holding tit by placing the locking plate through the channel holder and into a slot in the adjusting wheel, when taking a new grip. The number of turns will vary with each door. Between one and two turns are usually required. Apply 1½ turns and lock the adjusting wheel by placing the plate through the channel and into the wheel slot.



STEP 10

- Release the had chain or c-clap and install the guide angles and bell mouth stops to the wall angle nearest the chain or c-clap -- inserting the curtain bottom bar into the guides.

STEP 11

- Place the hood across the coil of the door and fasten to flanges on bracket plates. Install center hood support if supplied.

STEP 12

- Install fascia, soffit, special covers, and any special hardware furnished. Install hand chain lock on wall.



STEP 13

- Check for tightness of all bolts and hardware.

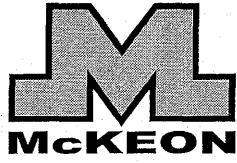
STEP 14

- On MG and H series motor operators the emergency hand chain or hand crank is engaged by pulling another separate lighter chain. This lighter chain is held by a lock-lever which must be mounted on the wall with the bracket provided.
- Lock the lever in the down position and attach it to the lighter chain. Pull the chain so that it engages the manual operator. Holding the chain taut, bolt the lever bracket to the wall at about four feet from the floor. Release the lever and check that the manual operator has disengaged.
- If the motor operator is not electrified, the limit switches must be adjusted to avoid override in case of accidental operation with power, prior to the final setting of the limit switches.
- Close door to within two feet of the floor. Push down on pressure plate and move. Close groove nut until it contacts its micro switch.
- Open door to within two feet of stops and move the open groove nut until it contacts its micro switch.
- Wiring diagram is located inside operator control box.

STEP 15

- Re-check operation of door. Door must be properly balanced, even if a motor operator is used. On manual units, the door should remain on floor in down position, be easily raised and lowered, and remain against stop in up position. On other units, the force required to raise or lower door with the chain, crank, or emergency hand chain must not exceed 35 pounds.

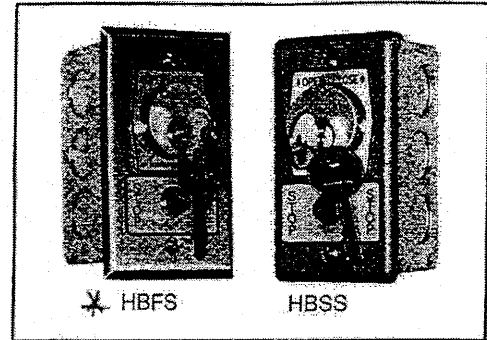
Note: On all motor operated doors, the operator and bracket plate must be field braced by the installer to prevent all movement. Bracing must not interfere with the proper operation of the door.



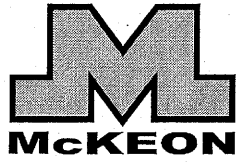
KEY SWITCH
CONTROL STATION

NEMA 1 Control Stations In Single Gang Box With Stop Buttons

- **HBSS**
Surface Mount Key Switch with
Stop Button,
OPEN-CLOSE, Center Return
H= 4", W= 2", D= 1-3/4"
- *■ **HBFS**
Flush Mount Key Switch with
Stop Button,
OPEN-CLOSE, Center Return
FACE PLATE: H= 4-1/2", W= 2-3/4"
BACK BOX: H= 4", W= 2", D= 2"

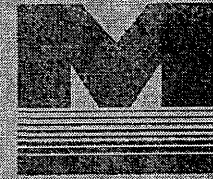


Specify Keyed Alike or Random
Available with Tamperproof Screws
Available with Best Cylinder
or Equivalent



ELECTRICAL
SAFETY EDGE

MillerEdge®



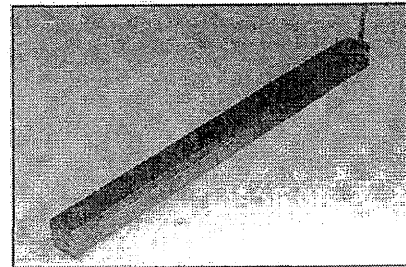
ME110 SwitchFlex®



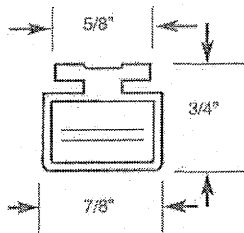
• Counter Shutters • Emergency Switches • Conveyor Systems • Rolling Grilles

About the ME110...

This pressure sensitive electric edge can be adapted to suit a wide variety of applications. It is manufactured to user specifications for length, sensitivity and outlet location. When touched lightly or at an angle, the ME110 sends an immediate signal to stop and/or reverse operations depending upon your particular application. Multiple mounting channel designs allow for easy installation on nearly any surface.



Specifications



Color: Black

Length: Per spec to nearest 1/4", max = 100ft.

Sensitivity: 8psi

Lead Wire: 2ft. 22 gauge - standard

Wire Outlet Location: specify right hand, left hand or end

Electrical Requirements: Maximum 24 volts AC/DC, 1/2 amp

Wiring Diagram: 2 wire, N. O.

Mounting Channel: High density PVC

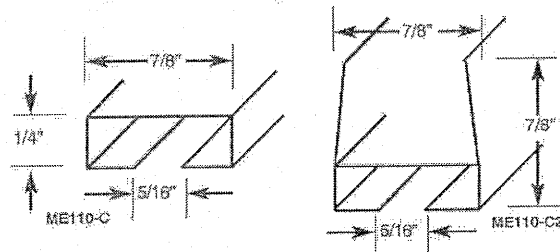
Sensing Edge: Extruded flexible PVC

Contact Element: Alumaglas®

Temperature Range: -30°F to +155°F

Options

- 4 wire self monitoring
- Soft ends
- Coil Cord attached
- 4-wire Control Panel (MFSC-100)
- 4-wire intrinsically safe control panel (FSIS-25-4)
- Pneumatic (MEP110) Air-Wave (MAW110)
- Mounting Channel Designs:



Installation

Place appropriate ME110 mounting channel in desired location. Drill 1/8" holes through channel and into mounting surface every 24". Attach channel to surface with screws. Slide ME110 SensingEdge into channel and wire to controls.

Note: Use a maximum 24 volt, 1/2 amp AC/DC power. Overload can cause damage. For detailed installation and wiring instructions, contact Miller Edge, Inc.

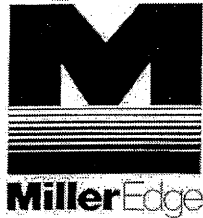
Care of the ME110...

Minimum care is required for the ME110 since it is manufactured with only the most durable materials and the highest quality control standards. However, SensingEdges should be examined regularly for cuts or punctures which could damage internal components. Check wiring to be sure connections are secure. When properly maintained, the ME110 offers years of trouble free operation.

U.S. patent #4,398,814 Canadian patent #1,048,066 other patents apply.

MILLER EDGE, INC. • P.O. Box 159 • West Grove, PA 19390 • (610)869-4422 • Fax: (610)869-4423 • 800-220-3343 • www.milleredge.com
MILLER EDGE, INC. • 6809 South Hari Avenue, Suite A, Tempe, AZ 85283 • (480)755-3565 • Fax (480)755-3558 • 800-887-3343

REV. 8-23-04



Miller Edge Receiver Installation Instructions (Model MWR02)

General Information About the Model MWR-02 Receiver

The Miller Edge Model MWR-02 universal receiver was designed to have several selectable options not found on other radio controls. By properly selecting these options with the convenient slide switches and wiring harness, the Model MWR-02 eliminates the requirement to stock several receivers.

1. The Model MWR-02 will operate on either 12 or 24 Volt AC or DC by selecting either 24V or 12V with the voltage selection switch.
2. The Model MWR-02 will generate either a 0.5 second pulsed, or a continuous relay output depending on the setting of the output slide switch. To energize the output relay as long as the transmitter is activated, select the CONT position. To energize the output relay for 0.5 seconds regardless of how long the transmitter is activated, select the PULSED position. Many gate operators and some garage door operators will not work properly when the switch is not in the CONT position.
3. The Model MWR-02 comes standard with 5 wires. Two of these wires (red and black) are for the power input and the other three are the relay contacts. The white wire is the relay common and is always used. Most control circuits require a normally open switch contact. For these applications use the NO (yellow wire) and the white wire. It is recommended that the unused orange wire be cut off. For controls requiring a normally closed switch contact use the NC (orange wire) and the white wire. It is recommended that the yellow wire be cut off, if it isn't used.
4. The Model MWR-02 comes standard with an "F" connector and a 1/2 wave wire antenna. If signal conditions require the use of an external coax antenna to eliminate signal blockage due to obstructions, dead spots etc., use RG59 coax to extend the antenna to the remote location. The 1/2 wave wire antenna may be left on the receiver.

Model MWR-02 Installation Instructions

1. Disconnect the power to the operator.
2. Remove access cover of receiver to gain access to the coding switch and the programming switches.
3. Place the voltage selector slide switch in either the 24V or 12V position depending upon the control voltage of the operator.
4. Place the output selector slide switch in either the CONT or PULSED position depending upon the operator being used. In most cases either position will work properly.
5. Set the 9 pole, 3 position coding switch under the access cover to match the transmitter coding switch. Any switch position will work as long as the transmitter coding switch and the receiver coding switch are exactly matched.
6. Mount receiver inside the operator control box so that the wires from the receiver will reach the terminal strip on the operator.
7. Connect the black wire (-V) and the white wire (COMMON) to negative power terminal.
8. If the operator requires a normally open contact to activate the operator, connect the yellow wire (NO) to the relay output of the operator. Cut off the orange wire. If the operator requires a normally closed contact, connect the orange wire (NC) and cut off the yellow wire.
9. Connect the red wire (+V) to the positive power terminal of the operator.
10. Reconnect the power to the operator and test the system. Position the green antenna wire so it is hanging down outside the operator box. If needed, to improve reception, cut the length of the green wire in half.

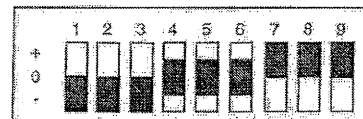
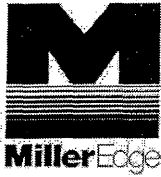


Figure A



Miller Edge Transmitter Receiver Installation Instructions

(Models MWT02, MWTA02, and MWR02)

Setting the Code for the Single Entry Transmitter (Models MWT02 and MWTA02)

You may set your transmitter to any code you desire, but be sure the code you set matches on both your transmitter and receiver. There are nine (9) dip switches, each of which can be placed in three different positions (+, 0, -). DO NOT set all switches in the same position, such as all +, all -, or all zero (**Figure A**). **WARNING:** No other adjustments should be made inside the transmitter. Now that you have selected your personal code, replace the transmitter cover.

* Mount transmitter box directly to gate post or door. **NOTE: DO NOT** drill any holes in the transmitter box. Use only mounting holes provided, any additional holes in transmitter box will cause water to enter and a loss of warranty.

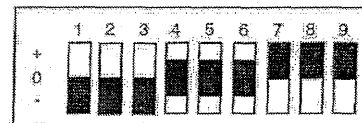
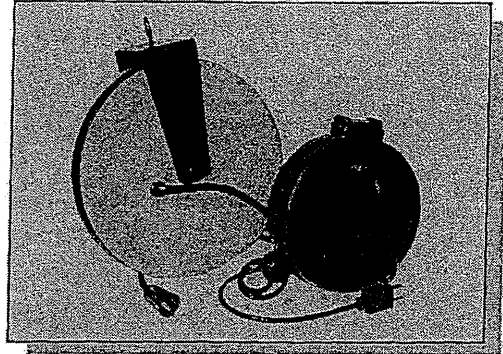


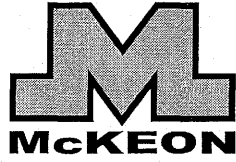
Figure A

Cord Reels

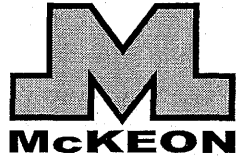
Industry Standard Cord Reels Provided without Stops for Door and Gate Industries. Supplied with Mounting Brackets.



Model	Type	Extended Length	AWG/ Conductors
CRP-2	SVT	20 ft.	18/2
CMM-2 (metal case)	SVT	20 ft.	18/2
CRP-3	SVT	20 ft.	18/3
CPM-3 (metal case)	SO	30 ft.	18/3
CRP-3P (metal case)	SJT	30 ft.	18/3
RC50	SJTO	50 ft.	16/3



MECHANICAL
TROUBLE SHOOTING



MAINTENANCE
INSTRUCTION
&
SCHEDULE



MAINTENANCE INSTRUCTION FOR ROLLING STEEL DOORS

LUBRICATION: The most important single maintenance item on doors of this type is lubrication. This is required only at certain points because all rotating members are equipped with high quality sealed bearings that are lubricated for life.

The curtain guides and the teeth of the gears contained in chain hoist or hand crank mechanism (if supplied) should be lubricated at least twice a year (more often if door is operated frequently) with one of the following greases:

Summer: Dixon's #2 Graphite Cup Grease
Alemite MP Lithium Grease (#1 for winter weather, #2 for normal weather)
Texaco #904 Graphite Grease, or their equivalents.

If the door is electrically operated check the oil level in the worm gear speed reducer every six months and replenish if necessary with S.A.E. 140 gear oil for normally heated buildings, or thinner grades for outside installations exposed to low temperatures.

PAINT: All non-lubricated steel surfaces should be painted annually (more often if required in corrosive atmospheres) with a good grade of rust-inhibiting metallic base paint.

SPRING ADJUSTMENT: In time, the counter balancing springs may lose some of their initial tension. This condition imposes an extra load on the operator and should be corrected as follows:

1. Manually operated doors should be opened fully by hand and held open by C-clamps or vise grip pliers on each guide.
2. Mechanically operated doors should be opened fully and the crank or had chain should be locked to hold the door open.
3. Electrically operated doors should be opened fully by pushing the "UP" or "OPEN" button. Motor brake will hold the door open.
4. With a suitable tool (18" or 24" pipe wrench or large spanner) turn the spring adjusting wheel (1/8 turn at a time) until door is balanced properly. Make sure locking pawl is properly engaged in spring adjusting wheel.

For door with adjusting wheel on left hand side, wind springs clockwise.
For door with adjusting wheel on right hand side, wind springs counter clockwise.



DOOR OPERATOR SCHEDULED MAINTENANCE

	MAINTENANCE PERFORMED	MONTHLY INTERVAL			
		1	3	6	12
DRIVE CHAIN	ADJUST TENSION AS REQUIRED LUBRICATE AS REQUIRED		○		
LIMIT ADJUSTMENTS	CHECK FOR FULL TRAVEL (NO OVERTRAVEL)		○		
DRIVE SPROCKETS	CHECK SET SCREWS CHECK FOR ABNORMAL WEAR		○		
DRIVE BELTS	CHECK FOR ABNORMAL WEAR CHECK TENSION & RETIGHTEN AS REQUIRED		○		
GEAR REDUCER	CHECK OIL LEVEL (CHECK FOR SIGNS OF LEAKAGE)			○	
CLUTCH	CHECK FOR PROPER OPERATION AND ADJUST AS REQUIRED (SEE CLUTCH ADJUSTMENT PROCEDURE IN OPERATION MANUAL) REPLACE PADS AND SPRING IF CLUTCH CAN NOT BE SET SATISFACTORILY		○		
MOUNTING BOLTS	CHECK AND TIGHTEN AS REQUIRED			○	
ELECTRICAL CONNECTIONS	INSPECT CONNECTIONS FOR LOOSE SCREWS, AND MECHANICAL DAMAGE SUCH AS WORN OR BROKEN INSULATION, BROKEN WIRE ENDS, OR FRAYED CONNECTIONS			○	
DOOR	INSPECT ALL MOVING PARTS FOR CORRECT OPERATION. (NO BINDING) INSPECT ROLLERS, HINGES FOR ABNORMAL WEAR, CHECK GUIDES FOR CORRECT CLEARANCE LUBRICATE AS REQUIRED	○			
OBSTRUCTION SENSING DEVICES	CHECK FOR PROPER OPERATION	○			

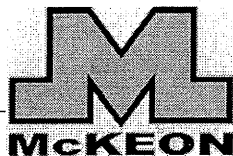
RECOMMENDED LUBRICATION:

ALL CHAINS - CHAIN LUBRICANT
 IDLER SPROCKETS AND SHAFTS - GENERAL PURPOSE SILICON BASE GREASE
 GATE ROLLERS OR HINGES - AS SPECIFIED BY MANUFACTURER
 DISCONNECTED LEVERS AND OTHER MOVING SHAFT PARTS - 30 WT. OIL
 GEAR BOX: 30°F TO 140°F - 80 QT. GEAR OIL (STD) AGMA - 7
 40°F TO 150°F - 80 QT. 140 SYNTHETIC

NOTE: DO NOT OVERFILL GEARBOX.

083400

**VERTICAL COILING FIRE &
SMOKE RATED DOORS**



McKEON DOOR COMPANY

Manufacturer of Fire, Smoke, Security & Emergency Egress Door Systems

April 13, 2009

Overhead Door Company of Lexington, Inc.
181 Trade Street
Lexington, KY 40511

Re: University of Kentucky – Biological Science Pharmacy Building (H 62906)

LIMITED ONE YEAR WARRANTY

McKeon Door Company, Bellport, New York warrants that every door will be free of defects in workmanship and material. Should any defect in workmanship or material appear within **ONE YEAR** of the original date of shipment, McKeon Door Company shall, upon written notification, correct such non-conformity at its option, by repairing or replacing any defective part or parts. This warranty gives you specific rights which may vary from state to state.

This warranty does not include normal wear, damage beyond the manufacturer's control, damage due to negligence or any replacement labor.

Any repair work performed by another company other than a McKeon Door Company Authorized & Certified Representative or that utilizes parts not manufactured by McKeon Door Company, alters the construction of the product or deviates from the original product specifications will render this warranty null and void.

No warranties expressed or implied (including, but not limited to a warranty of merchantability or fitness for particular purpose) shall extend beyond the applicable time period stated in bold face type above.

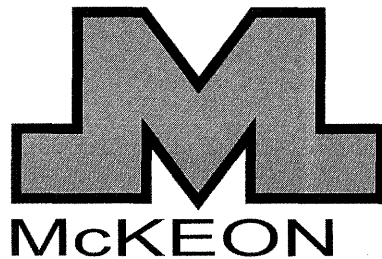
Claims for any defective parts or components must be made in writing to McKeon Door Company within the governing warranty period.

The foregoing warranty is exclusive and in lieu of other warranties. In no event shall seller be liable for special, incidental or consequential damages. However, some states do not allow limitation of incidental or consequential damages, therefore the above exclusion or limitation may not apply to you.

Authorized By



Vadim Litman
SENIOR PRODUCT ENGINEER



***OPERATION & MAINTENANCE
MANUAL***

**UNIVERSITY OF KENTUCKY
BIOLOGICAL SCIENCE
PHARMACY BUILDING**

PREPARED FOR:

***OVERHEAD DOOR COMPANY
OF LEXINGTON***

181 TRADE STREET
LEXINGTON, KY 40511

DESCRIPTION:

- (6) F5FD - AUTO-SET FIRE DOORS
- (1) H200 - HORIZONTAL FIRE SHUTTER
- (2) Sg3000 - COILING SECURITY GRILLES



McKEON

Coiling Fire and Smoke Rated Doors

Auto-Set™ Model FSFD

Description: The McKeon Auto-Set™ fire & smoke rated doors are recommended in situations where fire protection is required but emergency egress is not an issue. The Auto-Set™ fire door is a vertically acting fire door which is UL classified for up to four hours in both masonry and dry wall applications.

In the event of a fire alarm, power failure, the breakage of a fusible link, or activation of the True Test™ Panel, the hold open brake is released and the door self-closes without the aid of electricity or battery back-up. The rate of descent is controlled by a centrifugal governor which is engaged when the closing speed of the door reaches six inches per second. Any Auto-Set™ fire door may be equipped with the optional ten second time delay. The purpose of the ten second time delay is to prevent nuisance closure due to momentary power failure. Once the door is closed and the power is energized, or the alarm signal is cleared, the door and the time delay mechanism automatically reset without the need for tools or a technician.

Advantages: Unlike conventional fire door design any number of Auto-Set™ fire doors, in a given area, or throughout a building, can be connected in a series, such that the activation of a single fusible link on any door will activate every door in a designated area or in an entire building. As an added life safety feature, the safety edge is still active on the Auto-Set™ fire door after the activation of the fusible link. The True Test™ panel triggers an actual drop test in accordance with NFPA 80 by releasing the constant hold open brake and allowing the door to close under gravitational force. When the test panel is set back to standard mode, the door automatically resets. The True Test™ panel is designed to drop test and reset multiple doors simultaneously.

Design Alternatives: Conventional fire doors are difficult to test and are often improperly reset. Malfunctions typically occur when the spring tension is misapplied during installation or conventional resetting procedures. Auto-Set™ fire doors are always biased to the closed position. The spring tension is not adjusted and the door is automatically tested and reset.

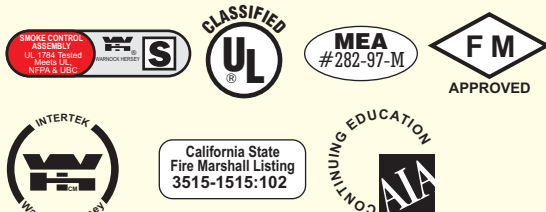
Applications: Auto-Set™ fire doors are ideal for use in schools, hospitals, convention centers, casinos, museums, airports, hotels and industrial facilities. They are frequently used in area separations, occupancy separations and corridor separations.

Approved Up To A 4 Hour Fire Rating

- | | |
|--|---|
| <ul style="list-style-type: none"> • Custom built to any height and width • Self-closes without electricity or battery back-up • Requires very little head room and side room • Easy to test and automatically reset | <p>Available with</p> <ul style="list-style-type: none"> • An acoustical rating • Climate control insulated curtains • Smoke & draft rating |
|--|---|



58 Ft High Auto-Set™ Model FSFD



This product is covered under US Patents:
5,203,392 - 5,245,879 - 5,386,891 - 5,605,185 - 5,673,514 - 5,893,234

www.McKeonDoor.com

Toll-Free 1-800-266-9392 / (718) 965-0700 • Fax: (718) 768-3406
95 29th Street • Brooklyn, NY 11232 USA • email: info@McKeonDoor.com

McKEON
McKeon Door Company



SAFETY SUMMARY



SAFETY SUMMARY SHEET

WARNING!

THESE WARNING PARAGRAPHS MUST BE OBSERVED IN ORDER TO PREVENT SERIOUS INJURY OR DEATH TO AN INSTALLER OR OPERATOR.

CAUTION!

THESE CAUTION PARAGRAPHS MUST BE OBSERVED IN ORDER TO PREVENT DAMAGE, DESTRUCTION, OR LOSS OF OPERATING PERFORMANCE AND EFFECTIVENESS OF THE PRODUCT.

IT IS THE RESPONSIBILITY AND DUTY OF ALL PERSONNEL INVOLVED IN THE OPERATING AND MAINTENANCE OF THIS EQUIPMENT TO FULLY UNDERSTAND THE WARNING AND CAUTION PROCEDURES BY WHICH HAZARDS ARE TO BE REDUCED OR ELIMINATED. PERSONNEL MUST BECOME THOROUGHLY FAMILIAR WITH ALL ASPECTS OF SAFETY AND EQUIPMENT PRIOR TO ANY OPERATION OR MAINTENANCE OF THIS EQUIPMENT.

WARNING! SOME DOORS INCLUDE A SPRING CHARGE-RETAINING PIN NEAR THE END OF THE SHAFT FOR THE COUNTER BALANCE SPRING. THIS PIN SHOULD REMAIN IN THE SHAFT UNTIL THE CURTAIN HAS BEEN ATTACHED, THE MOTOR OPERATOR DRIVE CHAIN HAS BEEN INSTALLED AND POWER HAS BEEN CONNECTED TO THE MOTOR OPERATOR.

WARNING! BE AWARE OF THE INHERENT DANGERS OF WORKING ON ELECTRICAL EQUIPMENT, AS WELL AS WORKING ABOVE THE FINISH FLOOR.

WARNING! THE MOTOR IS OPERATED AND CONTROLLED BY A MINIMUM OF 110 VOLT POWER. SECURE POWER SOURCE TO THE MOTOR OPERATOR WHEN CONDUCTING MAINTENANCE ON THE DOOR.

WARNING! INSTALL THE SPRING CHARGE-RETAINING PIN WHENEVER THE CURTAIN WEIGHT IS REMOVED FROM THE SHAFT, BECAUSE WITHOUT THE CURTAIN'S WEIGHT, THERE IS A POTENTIAL FOR AN UNCONTROLLED DISCHARGE OF THE COUNTERBALANCE SPRING ASSEMBLY.

CAUTION! DO NOT, UNDER ANY CIRCUMSTANCES, ATTEMPT TO SHIFT TO MANUAL OPERATION WHILE THE MOTOR OPERATOR IS RUNNING BECAUSE OF POTENTIAL DAMAGE TO THE CLUTCH.

CAUTION! CARE SHOULD BE TAKEN TO PREVENT THE CURTAIN FROM DOUBLING BACK ON ITSELF IN HANDLING BEFORE INSTALLATION. IN SOME CASES THE SLATS OR PANELS MAY BE FORCED APART WHEN AN EFFORT IS MADE TO READJUST THE SLATS OR PANELS BACK TO THEIR PROPER ENGAGEMENT.

CAUTION! IF THE DOOR WILL NOT OPERATE PROPERLY OR FREELY IN THE MANUAL MODE, DAMAGE MAY OCCUR IF ELECTRICAL OPERATION IS ATTEMPTED.

CAUTION! BE PREPARED TO IMMEDIATELY STOP THE DOOR IF IT APPEARS THAT THE DOOR WILL COME IN CONTACT WITH THE MECHANICAL STOPS OR GO BEYOND THE FULLY OPEN POSITION WHEN OPENING AS WELL AS PILE ON THE FLOOR OR INTO THE RECEIVER WHEN CLOSING. DURING THE INITIAL ELECTRICAL CHECKS, PERSONNEL SHOULD BE IN A POSITION TO TURN OFF THE POWER SOURCE IN CASE THE "STOP" PUSH-BUTTON FAILS TO WORK.

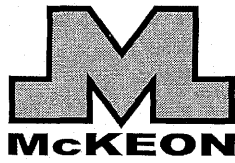
CAUTION! DO NOT ATTEMPT TO OPERATE THE DOOR ELECTRICALLY PRIOR TO THESE CHECKS.

CAUTION! IF LIMIT SWITCHES ARE NOT SET, ALLOW DOOR TO TRAVEL ONLY A SHORT DISTANCE TO VERIFY OPERATION, AND THEN STOP.

CAUTION! IF DOOR OPERATION IS REVERSED FROM THE DIRECTION SELECTED BY THE PUSH-BUTTON OR KEY SWITCH CONTROL STATION, THEN MOTOR ROTATION SHOULD BE REVERSED BY CHANGING THE PHASE OF THE MOTOR'S POWER SOURCE AT THE STARTER.

CAUTION! THE "OPEN" AND "CLOSE" CONTROL POINTS MUST BE WIRED TO THE TERMINALS SHOWN ON THE WIRING DIAGRAM. DO NOT CHANGE PUSH-BUTTON OR KEY SWITCH CONTROL STATION WIRING IF THE DOOR TRAVELS IN THE WRONG DIRECTION.

CAUTION! BE PREPARED TO STOP THE DOOR WITH THE "STOP" BUTTON WHEN ADJUSTING THE LIMIT SWITCHES.



INSTALLATION INSTRUCTIONS
FOR
AUTO-SET FIRE DOOR



INSTALLATION INSTRUCTIONS
OVERHEAD COILING FIRE & SMOKE RATED DOORS
MODELS FSFD-HC, FSFD-HK & FSFD-M

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INSPECTION OF MATERIALS

UPON RECEIPT OF SHIPMENT - IMMEDIATELY CHECK THAT YOU HAVE RECEIVED THE CORRECT NUMBER OF PIECES, AND THAT THE ENTIRE SHIPMENT IS INTACT AND COMPLETE. ANY DAMAGE OR SHORTAGES SHOULD BE NOTED ON THE FREIGHT CARRIER'S BILL OF LADING BEFORE SIGNING AND ACCEPTING THE SHIPMENT.

SHOULD DAMAGE OR SHORTAGES BE FOUND AFTER THE SHIPMENT HAS BEEN ACCEPTED NOTIFY THE DELIVERING CARRIER AT ONCE AND CONFIRM SUCH NOTIFICATION TO THEM IN WRITING.

CALL McKEON DOOR COMPANY'S CUSTOMER SERVICE DEPARTMENT FOR THE COST TO REPLACE/REPAIR THE ITEMS IN QUESTION AND SUBMIT THIS INFORMATION IN WRITING TO THE CARRIER. THIS FORMS THE BASIS FOR THE REQUIRED FREIGHT CLAIM.

ALL SHIPMENTS ARE MADE F.O.B. FACTORY, FREIGHT ALLOWED, AND IT IS THE PURCHASER'S RESPONSIBILITY TO FILE ALL FREIGHT CLAIMS. McKEON DOOR COMPANY WILL PROVIDE ANY NECESSARY BACKUP PAPERWORK TO SUBSTANTIATE YOUR FREIGHT CLAIM, BUT McKEON DOOR COMPANY CANNOT FILE THESE CLAIMS FOR YOU, AS OWNERSHIP FOR THE SHIPMENT DETERMINES WHO CAN AND MUST FILE THE FREIGHT CLAIM.

BEFORE BEGINNING INSTALLATION - READ THE SAFETY SUMMARY SHEET, AS-BUILT SHOP DRAWINGS AND THESE INSTALLATION INSTRUCTIONS THOROUGHLY. IF YOU HAVE ANY QUESTIONS OR CONCERNS PLEASE CONTACT OUR TECHNICAL SUPPORT DEPARTMENT AT 800-266-9392.

INSTALLATION PROCEDURE

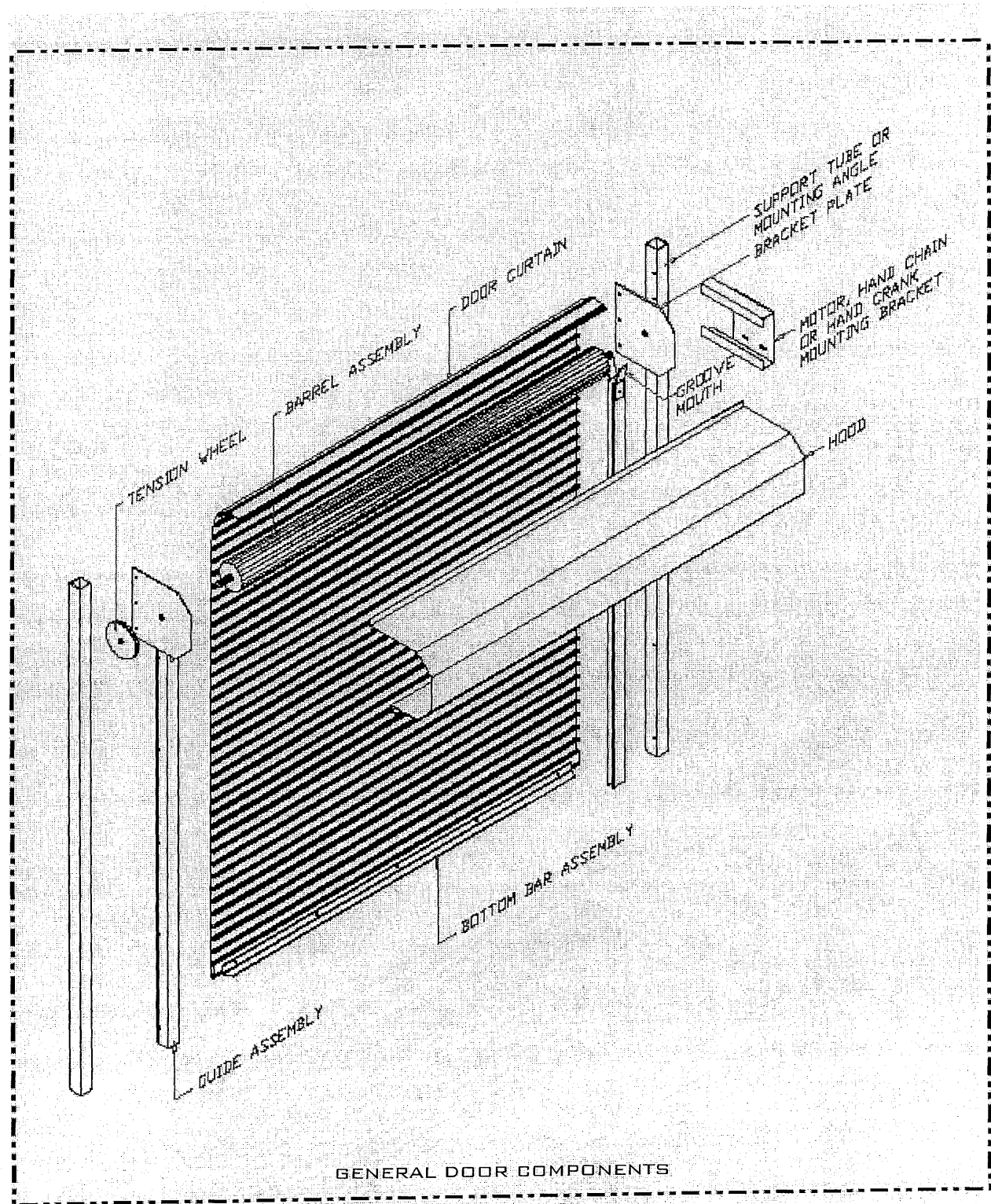
STEP 1 - A TYPICAL OVERHEAD COILING FIRE DOOR WILL INCLUDE THE FOLLOWING COMPONENTS

- A) DOOR CURTAIN, CONSISTING OF A SERIES OF SLATS ASSEMBLED AND HELD TOGETHER WITH ENDLOCKS, WINDLOCKS OR BOTH WITH A BOTTOM BAR ASSEMBLY TYPICALLY ALREADY INSTALLED.
- B) TWO (2) SETS OF GUIDE ASSEMBLIES OF LENGTH AND CONFIGURATION AS INDICATED ON THE AS-BUILT SHOP DRAWINGS.
- C) MOUNTING BRACKETS AND MOUNTING HARDWARE.
- D) COUNTERBALANCE SHAFT ASSEMBLY.
- E) HOOD AND IF REQUIRED FASCIA AND HOOD SUPPORTS.
- F) MODEL FSFD-HC WILL INCLUDE A HAND CHAIN ASSEMBLY AND MOUNTING HARDWARE.
- G) MODEL FSFD-HK WILL INCLUDE A HAND CRANK ASSEMBLY AND MOUNTING HARDWARE.
- H) MODEL FSFD-M WILL INCLUDE A MOTOR OPERATOR ASSEMBLY AND MOUNTING HARDWARE.
- I) STEEL SUPPORT TUBES COMPLETE WITH MOUNTING HARDWARE (IF APPLICABLE).



INSTALLATION INSTRUCTIONS
OVERHEAD COILING FIRE & SMOKE RATED DOORS
MODELS FSFD-HC, FSFD-HK & FSFD-M

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GENERAL DOOR COMPONENTS



INSTALLATION INSTRUCTIONS
OVERHEAD COILING FIRE & SMOKE RATED DOORS
MODELS FSFD-HG, FSFD-HK & FSFD-M

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GENERAL INSTALLATION NOTE: THE DOOR GUIDES MAY BE REVERSIBLE, THEREFORE, REFER TO THE CORRECT BACK OF GUIDE TO BACK OF GUIDE DIMENSION AS INDICATED ON THE PLAN DETAIL OF THE AS-BUILT SHOP DRAWINGS. YOUR DOOR MAY ALSO BE PROVIDED WITH 'ADDITIONAL' ANGLES FOR CONDITIONS THAT MAY REQUIRE BETWEEN JAMB MOUNTING. IF SO, REFER TO THE PLAN AND GUIDE DETAILS IN THE AS-BUILT SHOP DRAWINGS IN ORDER TO DETERMINE THE PROPER POSITIONING IN THE OPENING. IF YOU DO HAVE 'ADDITIONAL' ANGLES INSTALL THE GUIDES DIRECTLY TO THE MOUNTING ANGLES. ATTENTION SHOULD BE EXERCISED TO INSURE THAT THE MOUNTING ANGLES ARE PLUMB AND ADEQUATE SIDE ROOM CLEARANCES HAVE BEEN PROVIDED.

STEP 2 - LAYOUT AND MOUNTING ANGLE INSTALLATION
(REFER TO FIGURES 1A & 1B)

- A) LOCATE THE CENTER OF THE OPENING AT THE TOP OF THE OPENING. YOU CAN USE A "PLUMB BOB" TO LOCATE THE CENTER OF THE OPENING ON THE FLOOR.
- B) LOCATE THE BACK OF GUIDE TO BACK OF GUIDE DIMENSION AS NOTED ON THE PLAN DETAIL OF THE AS-BUILT SHOP DRAWINGS. THIS DIMENSION IS VERY CRITICAL. MARK THIS DIMENSION AT BOTH THE TOP AND BOTTOM OF THE OPENING.

NOTE - IN SOME CASES THE BACK OF GUIDE TO BACK OF GUIDE DIMENSION IS OFFSET FROM THE CENTER LINE. THIS WILL ALSO BE INDICATED ON THE PLAN DETAIL OF THE AS-BUILT SHOP DRAWINGS.

- C) REFER TO THE PLAN DETAIL ON THE AS-BUILT SHOP DRAWINGS IN ORDER TO IDENTIFY WHICH GUIDE IS FOR THE LEFT AND WHICH GUIDE IS FOR THE RIGHT. TAKE THE GUIDE ASSEMBLIES APART, STAND THE MOUNTING ANGLES AGAINST THE WALL AND ALIGN THE BACK OF THE MOUNTING ANGLES WITH THE BACK OF GUIDE TO BACK OF GUIDE MARKS THAT YOU PUT ON THE WALL. MAKE SURE THE ANGLES ARE PLUMB. CHECK THE BACK OF GUIDE TO BACK OF GUIDE MOUNTING ANGLE DIMENSION, BOTH AT THE TOP AND BOTTOM OF THE OPENING.
- D) CHECK THE FLOOR LEVEL. IF THE FLOOR IS NOT LEVEL, RAISE ONE MOUNTING ANGLE TO COMPENSATE FOR THE DIFFERENCE. THE TOP END OF EACH OF THE MOUNTING ANGLES SHOULD BE IN ALIGNMENT WITH EACH OTHER. USE A CHALK LINE FROM TOP AND BOTTOM HOLES TO CHECK THAT ALL HOLES ARE IN LINE. MARK EACH HOLE ON THE WALL FOR DRILLING.

NOTE - CHECK BACK OVER STEPS 1, 2, & 3. McKEON DOOR COMPANY CANNOT WARRANTY ANY DOOR THAT HAS MOUNTING ANGLES THAT ARE NOT PLUMB, LEVEL, OR ARE NOT SET AT THE PROPER DISTANCE APART.

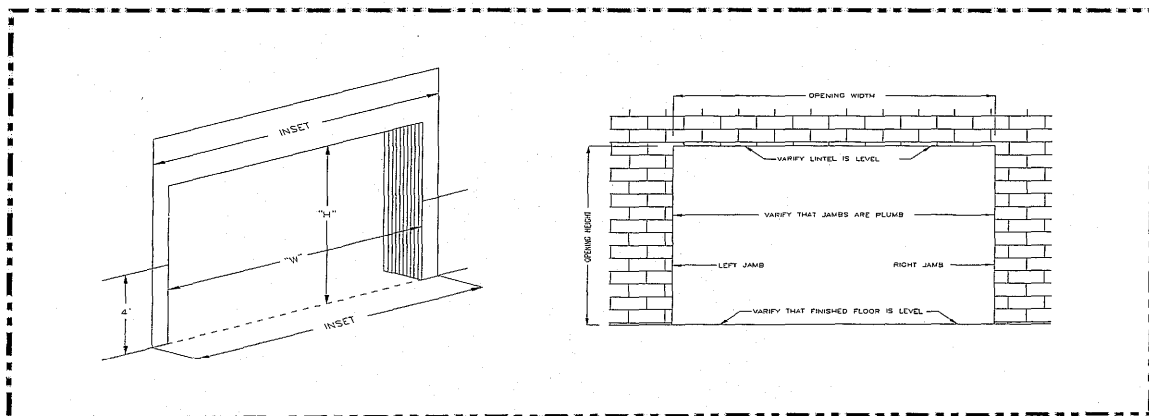


FIGURE 1A

FIGURE 1B



INSTALLATION INSTRUCTIONS
OVERHEAD COILING FIRE & SMOKE RATED DOORS
MODELS FSFD-HC, FSFD-HK & FSFD-M

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**STEP 3 - PLACEMENT AND INSTALLATION OF MOUNTING SUPPORT ANGLES OR
STEEL SUPPORT TUBES**

FACE MOUNT TO CONCRETE/MASONRY APPLICATIONS (REFER TO FIGURE 2)

- A) DRILL WALL BOLT HOLES.
- B) IF YOUR DOOR IS PROVIDED WITH A FASCIA AND YOU HAVE DETERMINED THAT THE FASCIA MUST BE INSTALLED PRIOR TO THE DOOR ITSELF, THEN INSTALL IT NOW (SOME INSTALLATIONS REQUIRE THAT THE FASCIA BE INSTALLED BETWEEN THE MOUNTING ANGLES AND THE WALL). BOLT BOTH OF THE MOUNTING ANGLES INTO PLACE.

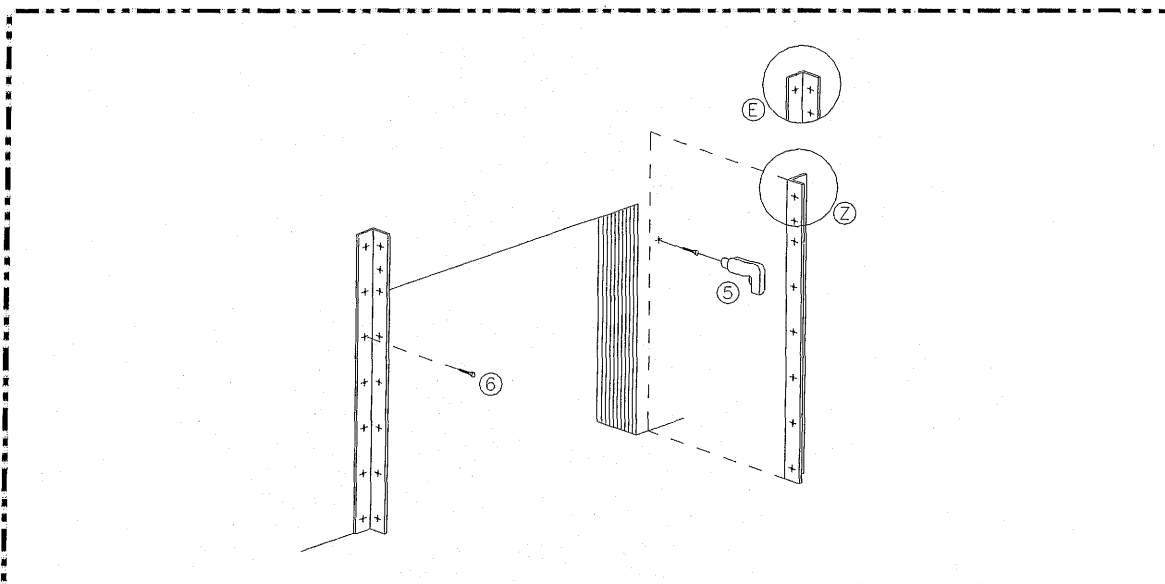


FIGURE 2

FACE MOUNT OR JAMB MOUNT TO STEEL SUPPORT TUBES (REFER TO FIGURE 3)

NOTE - WHEN MOUNTING FIRE DOORS TO STEEL SUPPORT TUBES IT IS IMPORTANT THAT YOU VERIFY WITH OWNER OR CONTRACTOR THAT THE STEEL SUPPORT TUBE LAYOUT WILL BE PROPERLY ENCASED IN FIRE RATED DRYWALL OR FIREWALL IN ACCORDANCE WITH THE APPROVED SHOP DRAWINGS AND THE AS-BUILT SHOP DRAWINGS.

- A) PLACE BASE SUPPORT SHOES AND DECK SUPPORT HAT INTO TUBE AND LEVEL AGAINST WALL TO MAKE A BLUE PRINT OF THE STEEL SUPPORT TUBES FOR THE PROPER HOLE LOCATIONS TO BE VERIFIED.
- B) VERIFY THAT THE TUBE HAS THE CORRECT CUT LENGTH.
- C) INSTALL BASE SUPPORT SHOE USING ANCHOR BOLTS.
- D) WITH DECK SUPPORT HAT STILL IN TOP OF STEEL SUPPORT TUBE, SLIDE THE STEEL SUPPORT TUBE INTO PLACE OVER SHOE.
- E) MOUNT THE DECK SUPPORT HAT TO DECK BUT FIRST MAKE CERTAIN THAT THE STEEL SUPPORT TUBES ARE PLUMB AND LEVEL IN BOTH DIRECTIONS BEFORE ANCHORING THE DECK SUPPORT HAT.



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- F) IF THE DOOR IS FACE MOUNTED TO STEEL SUPPORT TUBES, THEN INSTALL MOUNTING ANGLES TO THE STEEL SUPPORT TUBES, MAKE CERTAIN TO MAINTAIN THE BACK OF GUIDE TO BACK OF GUIDE DIMENSIONS THAT ARE INDICATED ON THE AS-BUILT SHOP DRAWINGS.

NOTE - IF YOUR DOOR IS PROVIDED WITH A FASCIA AND YOU HAVE DETERMINED THAT IT MUST BE INSTALLED PRIOR TO THE DOOR ITSELF, THEN IT SHOULD BE INSTALLED NOW.

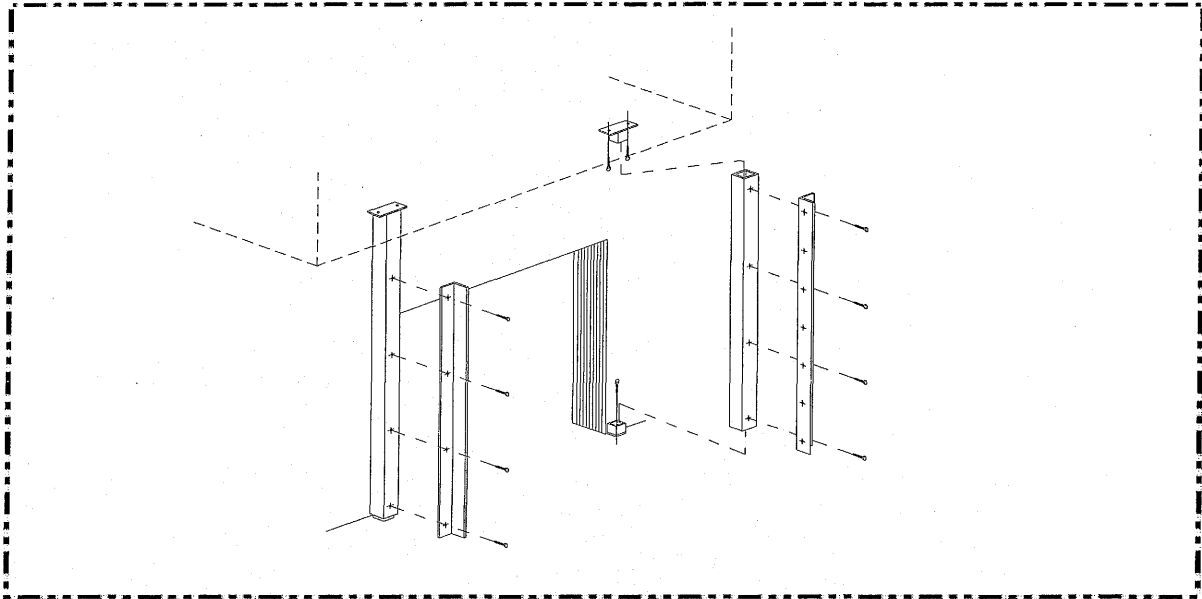


FIGURE 3

STEP 4 - ASSEMBLING BARREL ASSEMBLY & BRACKET PLATES

- A) WHEN ASSEMBLING BARREL TO THE BRACKET PLATES TAKE NOTE:
1. **CAUTION** - THE BARREL WEIGHT IS NOT SYMMETRICAL ABOUT THE CENTERLINE. THE BARREL IS HEAVIER ON THE TENSION SIDE.
 2. THE DRIVE SIDE BRACKET PLATE **HAS** A BEARING IN IT AND SHOULD BE INSTALLED ON THE BARREL DRIVE SIDE WHICH **DOES NOT** HAVE A BEARING IN IT.
 3. THE TENSION SIDE BRACKET PLATE **DOES NOT** HAVE A BEARING IN IT AND SHOULD BE INSTALLED ON THE BARREL SIDE WHICH **HAS** A BEARING IN IT.

- B) THE BARREL ASSEMBLY IS MARKED EITHER RIGHT HAND OR LEFT HAND. REFER TO THE AS-BUILT SHOP DRAWINGS TO DETERMINE THE CORRECT DRIVE SIDE.

NOTE - THESE INSTRUCTIONS ARE BASED ON THE INSTALLER FACING THE COIL SIDE OF THE DOOR.

- C) INSTALL THE DRIVE SIDE AND TENSION SIDE BRACKETS ONTO THE BARREL ASSEMBLY IN ACCORDANCE WITH THE NOTES INDICATED IN STEP 4A.

- D) THE TENSION SIDE BRACKET NEEDS TO BE INSTALLED SO THAT THE TENSION PIN RETAINING CHANNEL IS OPPOSITE THE SIDE OF THE BARREL ASSEMBLY.



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- e) THE DRIVE SIDE BRACKET NEEDS TO BE INSTALLED SO THE HUB OF THE BEARING IS FACING ON THE SAME SIDE AS THE BARREL ASSEMBLY.
- f) SECURE THE DOOR DRIVE SPROCKET ONTO THE DRIVE SIDE SHAFT OF THE BARREL ASSEMBLY BY INSERTING THE KEY INTO THE KEYWAY SLOT IN THE DRIVE SHAFT AND SECURING IT THERE WITH THE SET SCREW LOCATED IN THE DRIVE SPROCKET.
- g) THE BARREL SHOULD BE SNUG TOWARD THE DRIVE SIDE BRACKET SO IT IS APPROXIMATELY CENTERED BETWEEN THE BRACKET PLATES.
- h) THE TOP SLAT OF THE COILING CURTAIN IS PUNCHED TO MATCH THE CURTAIN FASTENING SCREWS WHICH ARE LOCATED ON THE BARREL ASSEMBLY. THESE ARE THE MACHINE SCREWS AND WASHERS THAT ARE IN-LINE ON THE BARREL ASSEMBLY. REMOVE THESE SCREWS AND WASHERS AND SAVE THEM FOR USE IN ATTACHING THE COILING CURTAIN LATER.

STEP 5 - INSTALLATION OF BARREL ASSEMBLY & BRACKET PLATES
(REFER TO FIGURES 4A & 4B)

- a) HOIST THE BARREL ASSEMBLY AND BRACKETS UP INTO POSITION AND BOLT THE BRACKETS TO THE INSIDE FACE OF THE MOUNTING ANGLES OR STEEL TUBE SUPPORTS (IF BETWEEN JAMB MOUNTED) USING THE BOLTS, WASHERS, AND NUTS AS SHOWN.

CAUTION - USE EITHER A 'C' CLAMP OR VICE GRIPS ON THE TENSION SHAFT TO MAKE SURE THE TENSION BRACKET DOESN'T FALL OFF THE SHAFT DURING THE HOISTING.

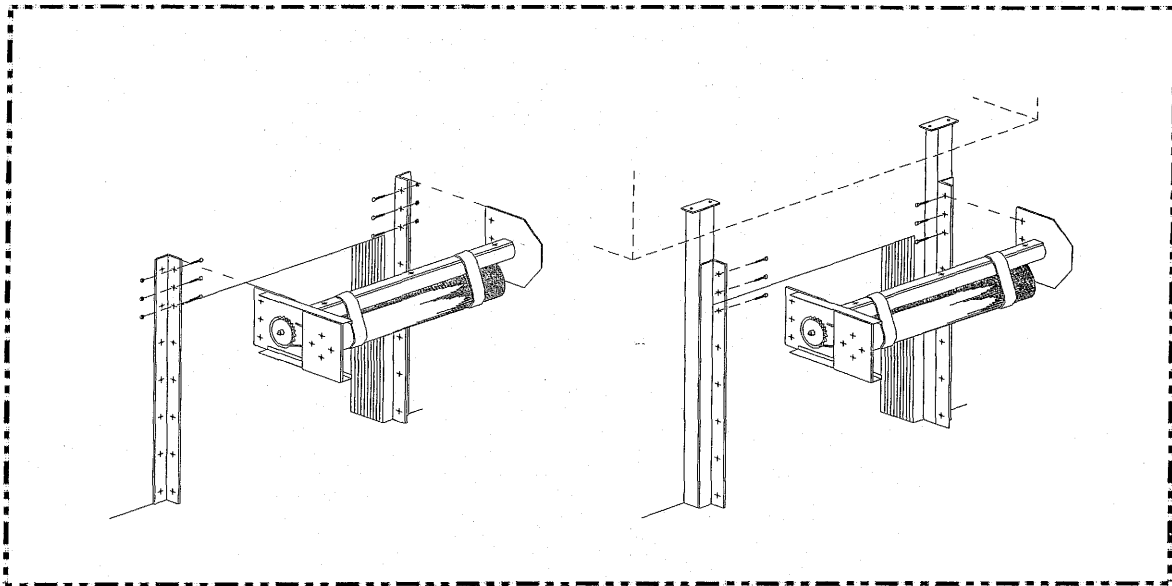


FIGURE 4A

FIGURE 4B

- b) AFTER BOLTING THE BRACKETS TO THE MOUNTING ANGLES OR STEEL SUPPORT TUBES, CHECK TO MAKE SURE THERE IS CLEARANCE BETWEEN THE TENSION SIDE BRACKET PLATE AND THE BARREL ASSEMBLY. IT IS EXTREMELY IMPORTANT TO HAVE THE BARREL ASSEMBLY LEVEL AND ROTATING FREELY.



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- C) LEVEL THE BARREL ASSEMBLY BY CAREFULLY RAISING OR LOWERING THE MOUNTING ANGLES.
- D) TIGHTEN THE WALL BOLTS AGAIN AND TRY TO ROTATE BARREL ASSEMBLY TO ASCERTAIN IF IT TURNS FREELY. IF BARREL ASSEMBLY DOES NOT TURN FREELY, CHECK THE INSTALLATION OF THE BRACKET PLATES AND THE MOUNTING ANGLES TO MAKE SURE THAT THEY ARE PLUMB AND SQUARE.

STEP 6 - INSTALLATION OF DRIVE MECHANISM AND ALIGNMENT OF GEARS & SPROCKETS
(REFER TO FIGURES 5A, 5B & 5C)

- A) INSTALL HAND CHAIN, HAND CRANK OR MOTOR OPERATOR BY BOLTING IT TO THE DRIVE SIDE BRACKET PLATE.
- B) INSTALL THE DRIVE CHAIN AROUND THE DOOR DRIVE SPROCKET AND THE DRIVE MECHANISM'S DRIVE SPROCKET, ADJUST THE DRIVE CHAIN TO THE PROPER LENGTH AND CONNECT THE TWO ENDS TOGETHER WITH THE MASTER-LINKS AND HALF-LINKS THAT WERE INCLUDED. DOUBLE CHECK ALL BOLTS TO MAKE SURE THEY ARE TIGHT.

NOTE - IF YOUR DOOR IS PROVIDED WITH HOOD SUPPORT(S), YOU MAY WANT TO LAY OUT THE SUPPORT(S) NOW AND PRE DRILL THE MOUNTING HOLES. AN EASY METHOD FOR DETERMINING THE LINE OF HOOD ACROSS THE OPENING IS TO USE A CHALK LINE FROM THE TOP OF EACH MOUNTING ANGLE. BE SURE TO MEASURE THE HOOD TO DETERMINE THE PROPER LOCATION OF THE HOOD SUPPORT(S).

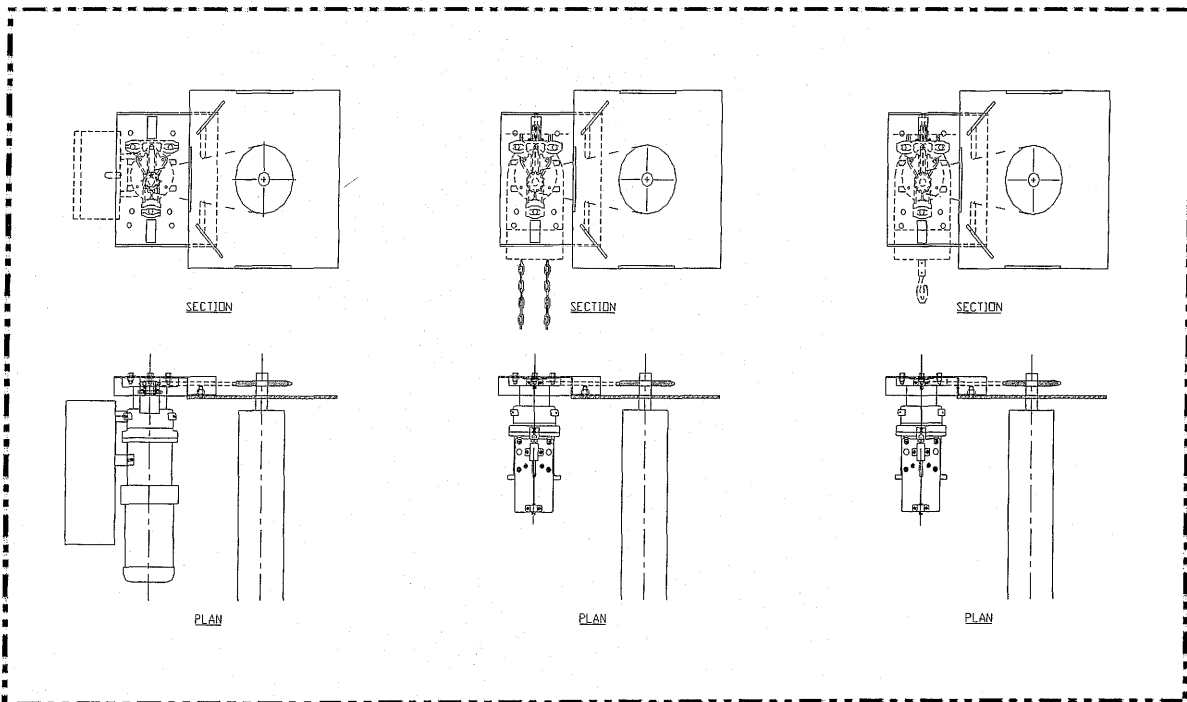


FIGURE 5A
(MOTORIZED)

FIGURE 5B
(HAND CHAIN)

FIGURE 5C
(HAND CRANK)



INSTALLATION INSTRUCTIONS
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STEP 7 - INSTALLATION OF THE CURTAIN ASSEMBLY
(REFER TO FIGURES 6A & 6B)

- A) USE TWO OR MORE NYLON SLINGS OF EQUAL LENGTH TO HANG OFF THE BARREL. THESE SLINGS WILL BE USED FOR INSTALLING THE COILING CURTAIN. YOU MUST USE SLINGS THAT WILL SAFELY HANDLE THE WEIGHT OF THE CURTAIN ASSEMBLY.
- B) PLACE THE COILING CURTAIN IN POSITION ON THE FLOOR BELOW THE BARREL,
- C) CAREFULLY LIFT THE CURTAIN ASSEMBLY UP MAKING SURE THAT THE TOP SLAT IS POINTING AWAY FROM THE OPENING AND SUSPEND IT IN THE NYLON SLINGS APPROXIMATELY TWO FEET BELOW THE BARREL ASSEMBLY.
- D) SLIDE THE TENSION WHEEL ONTO THE TENSION SIDE SHAFT OF THE BARREL ASSEMBLY. **DO NOT** PLACE THE TENSION PIN INTO TENSION PIN RETAINING CHANNEL TO LOCK THE TENSION WHEEL AT THIS TIME.
- E) **THE CURTAIN MUST BE CENTERED BETWEEN THE BRACKETS.** RAISE THE TOP SLAT UP BETWEEN THE BARREL ASSEMBLY AND THE FACE OF THE WALL AND MEASURE EACH SIDE OF THE COILING CURTAIN TOP SLAT TO MAKE SURE YOU HAVE THE SAME DISTANCE BETWEEN THE CURTAIN TOP SLAT AND THE INSIDE FACE OF EACH BRACKET PLATE.
- F) ATTACH THE TOP SLAT TO THE BARREL ASSEMBLY WITH THE MACHINE SCREWS AND WASHERS THAT YOU HAD REMOVED FROM THE BARREL ASSEMBLY EARLIER. USE ONLY THOSE SCREWS AND WASHERS THAT WERE PROVIDED. IF ANY OTHER TYPE OR LENGTH OF SCREW IS USED, THE SCREWS MAY IMPEDE THE OPERATION OF THE INTERNAL TORSION SPRING ASSEMBLY.
- G) CHECK THE CURTAIN AGAIN TO MAKE SURE IT IS CENTERED BETWEEN THE BRACKETS.
- H) WITH THE CURTAIN ATTACHED TO THE BARREL AND SUPPORTED BY THE NYLON SLINGS, BEGIN TO ROLL THE CURTAIN ASSEMBLY ONTO THE BARREL ASSEMBLY. USE THE HAND CHAIN, HAND CRANK OR MOTOR OPERATOR TO ROLL THE CURTAIN ASSEMBLY AROUND THE BARREL UNTIL THE BOTTOM BAR HANGS DOWN APPROXIMATELY 3 INCHES BELOW THE OPENING.
- I) TIE THE HAND CHAIN OFF OR SECURE THE CRANK HANDLE SO THAT TO PREVENT THE CURTAIN FROM UNCOILING.

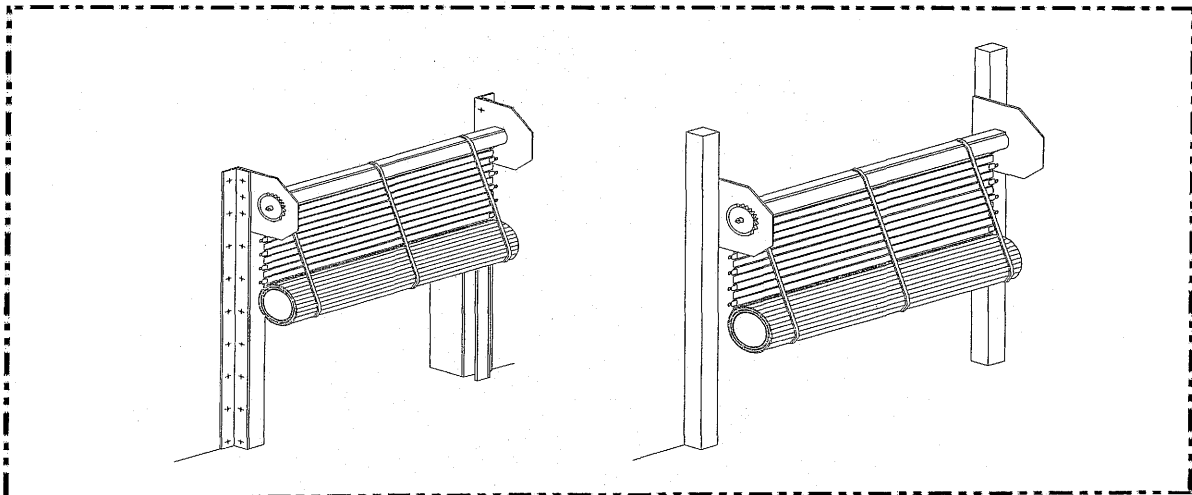


FIGURE 6A

FIGURE 6B



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STEP 8 - INSTALLATION OF THE GUIDE ASSEMBLIES
(REFER TO FIGURES 7A & 7B)

- A) ATTACH THE INSIDE AND OUTSIDE ANGLES TO THE INSIDE FACE OF THE MOUNTING ANGLES.
- B) ADJUST THE GUIDE GROOVE MOUTH TO ACCOMMODATE FOR THE TYPE OF SLAT THAT IS USED ON THE SPECIFIC CURTAIN ASSEMBLY.
- C) MAKE SURE THAT THE BOTTOM BAR IS IN THE GUIDE GROOVE MOUTH AND ABOUT 3 INCHES BELOW WHERE THE DOOR STOP HOLES ARE LOCATED.
- D) INSTALL THE DOOR STOPS USING THE HARDWARE THAT WAS PROVIDED (SOME DOORS ARE SHIPPED FROM THE FACTORY WITH THE DOOR STOPS ALREADY INSTALLED).

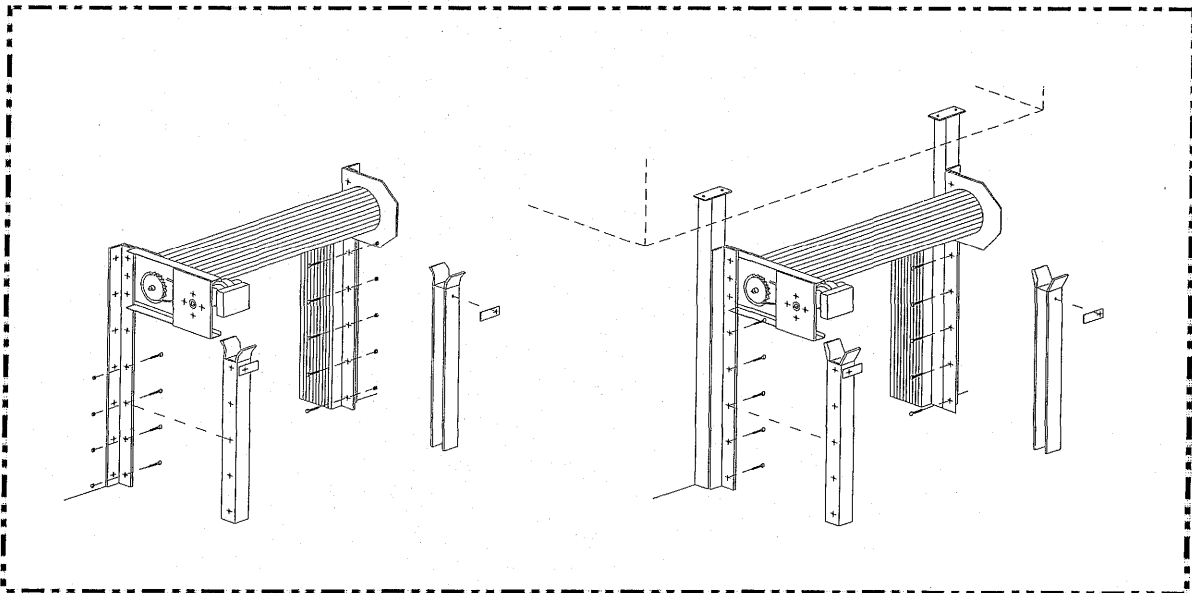


FIGURE 7A

FIGURE 7B

STEP 9 - APPLYING TENSION TO THE TORSION SPRING COUNTERBALANCE ASSEMBLY

NOTE - MAKE CERTAIN THAT THE LADDER, SCAFFOLDING OR MAN LIFT THAT YOU MAYBE USING IS SECURE AND YOU HAVE FIRM FOOTING.

FOR HAND CHAIN AND HAND CRANK OPERATED DOORS (MODELS FSFD-HC & FSFD-HK)

USING THE TENSION PIN AND A TENSION BAR OF AN APPROPRIATE SIZE, TURN THE TENSION WHEEL ONE TENSION WHEEL "NOTCH" AT A TIME. MAKE SURE TO KEEP COUNT OF THE TOTAL NUMBER OF TOTAL TURNS ADDED. ADD TENSION UNTIL THE BOTTOM BAR GOES UP TO THE CURTAIN STOPS

CLOCKWISE DIRECTION FOR DOORS THAT ARE RIGHT HAND DRIVE

- OR -

COUNTERCLOCKWISE DIRECTION FOR DOORS THAT ARE LEFT HAND DRIVE



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CAUTION - USE EXTREME CARE IN TAKING IN OR LETTING OUT TENSION. ONCE YOU HAVE THE RIGHT AMOUNT OF TENSION, INSERT THE TENSION PIN INTO THE TENSION PIN RETAINING CHANNEL AND MAKE SURE IT IS SECURED.

- A) REMOVE THE NYLON SLINGS FROM THE DOOR ASSEMBLY.
- B) OPERATE THE DOOR VIA USE OF THE HAND CHAIN, HAND CRANK TO FIND A SATISFACTORY POINT OF OPERATION.
- C) ADJUST THE DOOR OPERATION BY TAKING IN OR LETTING OUT TENSION, MAKE SURE TO ALLOW ONLY ONE HOLE OF ADJUSTMENT AT A TIME.

WARNING - DO NOT TAKE IN OR LET OUT TENSION UNLESS THE CURTAIN IS IN THE FULLY OPEN POSITION.

FOR MOTOR OPERATED DOORS (MODEL FSFD-M)

TYPICALLY MOTOR OPERATED DOORS DO NOT REQUIRE ANY TENSION. WITH THE DOOR IN THE FULLY OPEN POSITION SIMPLY INSERT THE TENSION PIN INTO THE TENSION PIN RETAINING CHANNEL AND MAKE SURE IT IS SECURED.

- A) REMOVE THE NYLON SLINGS FROM THE DOOR ASSEMBLY.
- B) IF ELECTRICITY IS NOT CURRENTLY AVAILABLE AT THE TIME OF INSTALLATION, ADJUST THE LIMIT SWITCHES SO THAT THE MICRO SWITCHES ENGAGE WHEN THE BOTTOM BAR IS 12" TO 18" FROM THE FLOOR AND 12" TO 18" BELOW THE DOOR STOPS. DOUBLE CHECK THE GEARING, DRIVE CHAINS AND BOLTS.
- C) IF ELECTRICITY IS CURRENTLY AVAILABLE PROCEED TO THE NEXT STEP.

STEP 10 - INSTALLATION OF HOOD & HOOD SUPPORTS

- A) IF THE DOOR IS PROVIDED WITH HOOD SUPPORT(S), MAKE SURE TO USE THEM. ATTACH EACH SUPPORT TO THE WALL WITH THE APPROPRIATE HARDWARE THAT WAS PROVIDED.
- B) PLACE THE HOOD OVER THE HOOD SUPPORT AND SECURE HOOD TO HOOD SUPPORT(S).
- C) IF THE DOOR HOOD DOES NOT INCLUDE HOOD SUPPORTS INSTALL THE HOOD BY PLACING EACH END OVER THE BRACKET PLATE BANDS AND SECURING IT IN PLACE WITH THE SHEET METAL SCREWS THAT ARE PROVIDED.

**STEP 11 - WIRING OF MOTOR OPERATOR
(REFER TO WIRING DIAGRAM INSIDE CONTROL PANEL)**

- A) CONNECT LINE VOLTAGE TO THE PROPER TERMINALS IN ACCORDANCE WITH THE INSTRUCTIONS NOTED ON THE WIRING DIAGRAM.

NOTE: LINE VOLTAGE AND PHASE MUST MATCH THAT WHICH IS INDICATED ON THE AS-BUILT SHOP DRAWINGS AND THAT WHICH IS INDICATED ON THE WIRING DIAGRAM.

- B) DETERMINE LOCATION OF THE CONTROL STATION AS DIRECTED BY THE OWNER, ARCHITECT OR AUTHORITY HAVING JURISDICTION AND MOUNT CONTROL STATION ACCORDINGLY.
- C) RUN WIRING FROM MOTOR OPERATOR TO THE CONTROL STATION AND CONNECT WIRING IN ACCORDANCE WITH THE INSTRUCTIONS NOTED ON THE WIRING DIAGRAM.



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MODELS FSFD-HC, FSFD-HK & FSFD-M

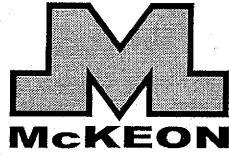
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- D) CONNECT FIRE ALARM TO THE PROPER TERMINALS AS NOTED ON THE WIRING DIAGRAM.

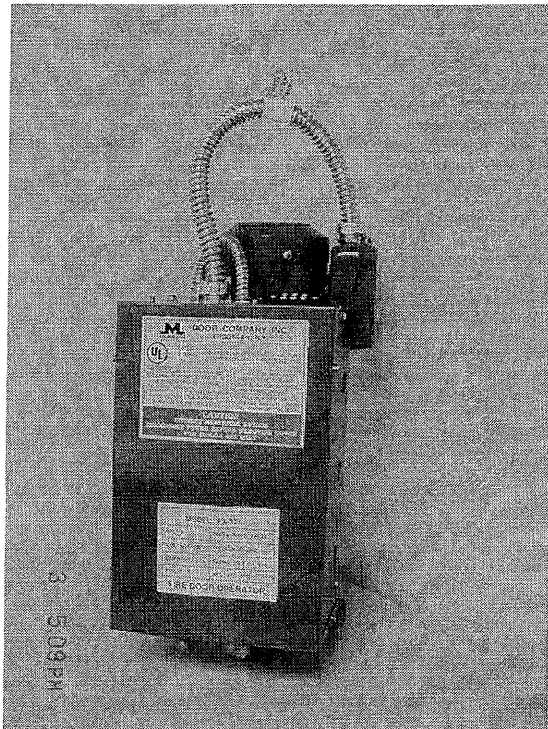
NOTE: FIRE ALARM VOLTAGE AND CURRENT MUST MATCH THAT WHICH IS INDICATED ON THE AS-BUILT SHOP DRAWINGS.

STEP 12 - TESTING & FINAL ADJUSTMENTS

- A) IF THE DOOR IS MOTOR OPERATED, CHECK AND MAKE SURE THAT THE CORRECT REQUIRED LINE VOLTAGE AND PHASE HAS BEEN CONNECTED TO DOOR'S MOTOR OPERATOR.
- B) IF THE DOOR IS CONNECTED TO A FIRE ALARM/SMOKE DETECTOR, CHECK AND MAKE SURE THAT THE CORRECT REQUIRED FIRE ALARM/SMOKE DETECTOR VOLTAGE AND CURRENT HAS BEEN CONNECTED TO DOOR'S ALARM TERMINAL STRIP.
- C) IF THE DOOR IS MOTOR OPERATED, CHECK AND MAKE SURE THAT THE CONTROL STATION HAS BEEN CORRECTLY WIRED TO DOOR'S MOTOR OPERATOR TERMINAL STRIP.
- D) IF THE DOOR IS MOTOR OPERATED, PRIOR TO ATTEMPTING TO OPERATE THE DOOR MAKE SURE SET AND ADJUST OPEN AND CLOSED LIMIT SWITCHES IN ACCORDANCE WITH THE LIMIT SWITCH SETTING INSTRUCTIONS LOCATED IN THE MOTOR OPERATOR'S OWNERS MANUAL.
- E) OPERATE THE DOOR TO THE FULLY OPEN AND CLOSE POSITION TO ASSURE SMOOTH NORMAL OPERATION.
- F) CHECK THE DOOR'S SELF CLOSING OPERATION BY ACTIVATING THE FUSIBLE LINK OR THE FIRE ALARM/SMOKE DETECTOR.
- G) RESET THE DOOR BACK TO THE FULLY OPEN FIRE READY POSITION.



AUTO-SET
FIRE DOOR OPERATORS
"FS" SERIES



INSTALLATION INSTRUCTIONS
&
MAINTENANCE MANUALS

GENERAL NOTES

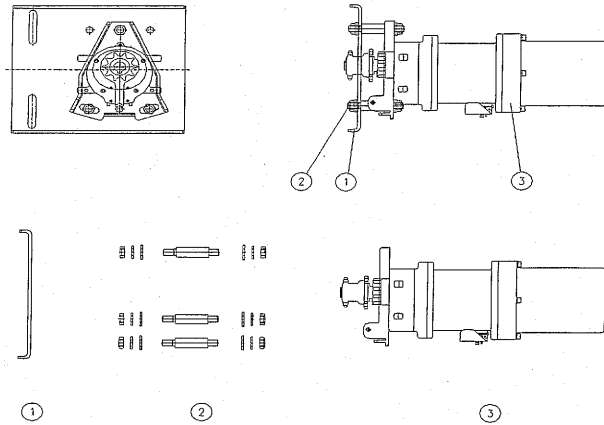


TO REDUCE THE RISK OF SEVERE INJURY OR DEATH, READ AND FOLLOW ALL INSTALLATION INSTRUCTIONS

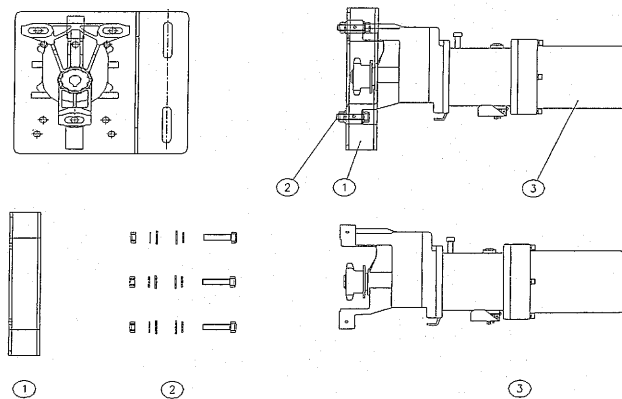
- ❖ Install the operator only on a properly operating and balanced door. A poorly operating or improperly balanced door can cause serious injury or death and severely reduce the life of the operator.
- ❖ The door is under extreme spring tension. Have qualified door mechanics make all necessary adjustments and repairs to the door.
- ❖ The operator must be installed by qualified door mechanics using proper tools and equipment.
- ❖ Make sure the available power supply to be connected to the operator is of the same voltage, frequency, phase and wattage as indicated on the nameplate of the operator.
- ❖ Read and understand this manual before installing the operator.
- ❖ Read and understand the wiring diagram of the operator and the control station (open-close-stop push button), and any other equipment to be connected to the operator.
- ❖ The operator is intended to be installed eight (8) feet or more above the floor. It must be covered or sprockets and roller chains must be guarded when installed less than eight (8) feet above the floor.
- ❖ To avoid damage to the door and operator, make all door locks inoperative. Secure locks in the unlocked position, or install external electrical interlocks to prevent operation with the locks engaged.
- ❖ Always disconnect power whenever installing or servicing the door operator or door.
- ❖ All wiring is to comply with National Electrical Code (NEC) and local code requirements.
- ❖ Any change in mounting position may result in change of operator rotation and consequently in change of control functions. Consult factory for any changes.

OPERATOR MOUNTING

1. Before the operator is installed, verify that the door is properly operating and balanced.
2. Make sure the dimensions of mounting holes on the bracket are correct.
3. Attached and tighten the three legs (2) to the mounting plate. (Not applicable for 3/4hp)
4. Bolt the operator mounting plate (1) to the door bracket plate.
5. Finally, mount the operator (3) to the three legs (2) and tighten (for 1/3 and 1/2hp only). For 3/4hp, mount the operator (3) to the mounting plate (1).

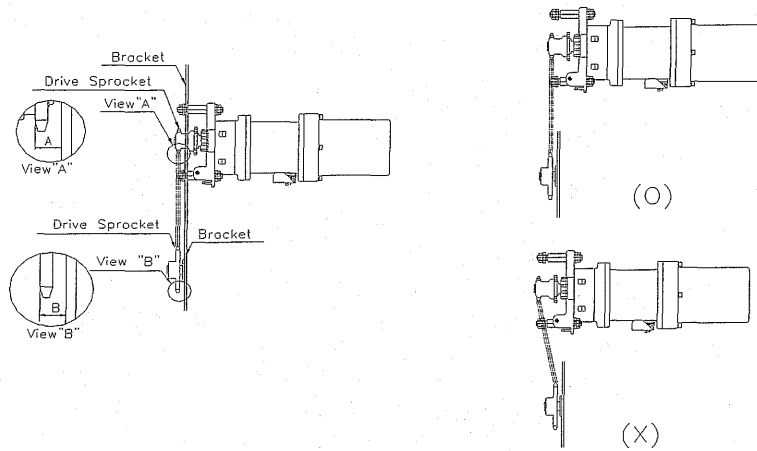


(Figure 1 for 1/3hp and 1/2hp)

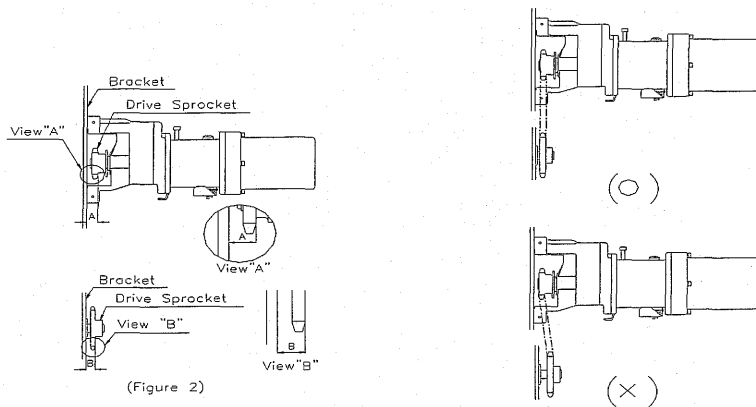


(Figure 2 for 3/4hp)

6. When the operator is mounted on the bracket, be sure the door driven sprocket is properly aligned with the operator drive sprocket before securing to the shaft. The clearance (B) must be the same as the height (A). (See Figure 1 for 1/3hp and 1/2hp; see Figure 2 for 3/4hp)
7. The shelf or bracket must provide adequate support for the operator. Prevent play between operator and door shaft. Permit operator to be fastened securely and with the drive shaft parallel to the door shaft. It may be necessary to field brace the operator/bracket.



(Figure 1 for 1/3hp and 1/2hp)



(Figure 2 for 3/4hp)

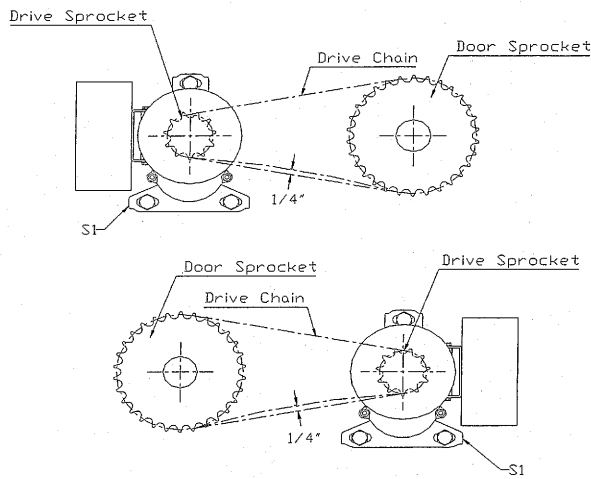
DRIVE CHAIN ADJUSTMENT

NOTE: Use correct type, size and proper length of roller chain.

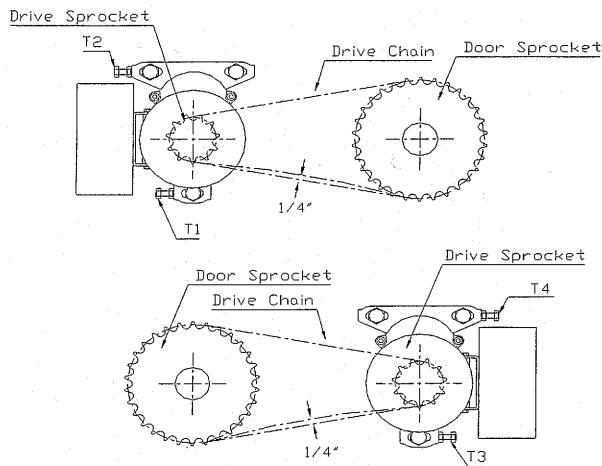
1. Adjust the drive chain by tilting or move the operator so that there is about 1/4" of slack when the chain is depressed.

Note: The set screw included in the operator may be used for adjustment. (See figure 1- S1 location for 1/3hp and 1/2hp), (See figure 2 - T1, T2, T3, T4 for 3/4hp).

2. Once the drive chain has been tightened and the base leg screws have been set, and then tighten the operator screws.



(Figure 1 for 1/3hp and 1/2hp)



(Figure 1 for 3/4hp)

LIMIT SWITCH ADJUSTMENT

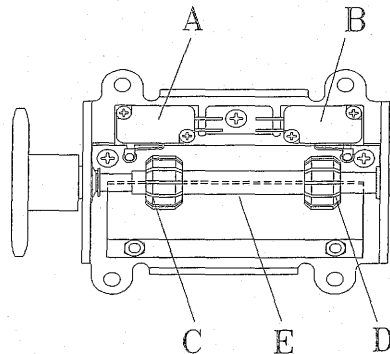
Make sure the limit cams are positioned between the limit switch actuators before proceeding with adjustments.

1. Remove the control panel cover.
2. Open or close door to determine the moving direction of the limit switch cams.
3. Open or close door to the desired position.



If the door is opened or closed electrically, to avoid serious injury or death, disconnect power before manually moving limit switch cams.

4. While pressing the spring-loaded lever (E), which holds the limit switch cams in place, adjust the limit switch cam (C or D) until the micro switch (A or B) clicking sound is heard.
5. If the limit switch cam cannot be rotated to its desired position, release the lever and move the door away from the desired position, then adjust the limit switch cam to its desired position. It may be necessary to repeat this step until the exact position has been reached.
6. Repeat step 3 and 4 for the opposite position. Adjust close limit cams so that actuator is engaged as door fully seats at the floor.



* Illustration only, not drawn to scale. See actual product for correct details.

NOTE: "A" is usually the opening side and "B" is usually the closing side.

WIRING INSTRUCTIONS



Disconnect power at the fuse box and the operator before proceeding with any wiring.

1. Do not install any wiring or attempt to run this operator without checking with the wiring diagram. The wiring diagram is located on the inside of the control box cover.
2. Do not turn on power until you have finished making all power and control wiring connections.
3. Do not run power and control wiring in the same conduit.
4. Any wire connecting to the control panel must be protected by conduit or other means to ensure the safety and permanency of the wiring.
5. Use copper wire inside the control panel.
6. A separate fuse line of adequate capacity is needed for the operator.
7. The operator must be properly grounded. The ground screw, painted green, is located inside the control panel.



Failure to properly ground the operator could result in electric shock and serious injury or death.



To avoid damage to door and operator, make all door locks inoperative. Secure lock(s) in the unlocked position, or install electrical interlocks to prevent operation with the lock engaged.

CONTROL WIRING



Disconnect power at the fuse box before proceeding with any wiring.

1. Locate the control station where the user can clearly see the operation of the door. Mount the enclosed placard adjacent to the 3-button control station.



If the door is not visible from the control station, or if any device other than the control station is used to activate the door, a sensing edge must be installed on the bottom of the door. Failure to install a sensing edge may result in serious injury or death to person(s) trapped beneath the door.

Complete limit switch adjustments before making any sensing edge wiring connections to the operator.

2. Do not run control wiring in the same conduit as power wiring.
3. Any wire connecting to the control panel must be protected by conduit or other means to ensure the safety and permanency of the wiring.



Do not use radio controls with your operator unless some type of entrapment protection device has been installed. Failure to do so may result in serious injury or death to person(s) trapped beneath the door.



Do not change closing control from constant pressure to momentary pressure without installing a sensing edge. This could result in serious injury or death to person(s) trapped beneath the door.



Changing from left hand to right hand or vice versa could result in change of control wiring. Please consult factory for details.

4. After installation, be sure that the operator, controls, and sensing edge or other entrapment protection devices have been tested and function properly.

FS 115V 1 Phase (DRY CONTACT ALARM) LH
(TRUE TEST PANEL & APU)
(For FS-31)

EB105-31 L

NOTES:

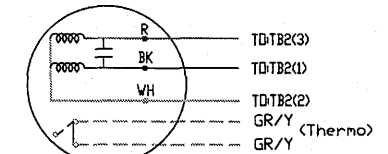
- RA-WIRELESS EDGE RELAY (COIL 24VAC)
- R5-SENSING-EDGE RELAY (COIL 24VAC)
- R6-ALARM RELAY (COIL 24VAC)
- R6A-ALARM RELAY (COIL 24VAC)
- R7-EXTERNAL POWER SOURCE RELAY (COIL 24VAC)
- CAPACITOR(C1&10)-FOR FS-31

- LS1-OPEN MICROSWITCH
- LS2-CLOSE MICROSWITCH
- LS3-RADIO CONTROL MICROSWITCH
- LS4-SENSING-EDGE MICROSWITCH
- LSA-FUSIBLE LINK MICRO (TOP)
- LSB-FUSIBLE LINK MICRO (BOTTOM)

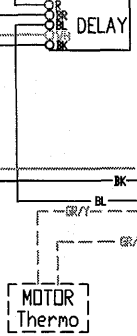
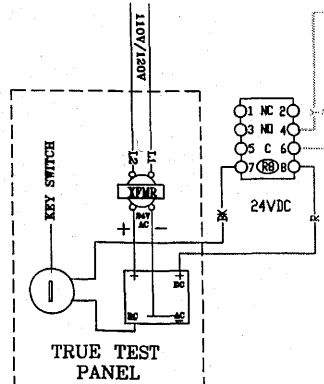
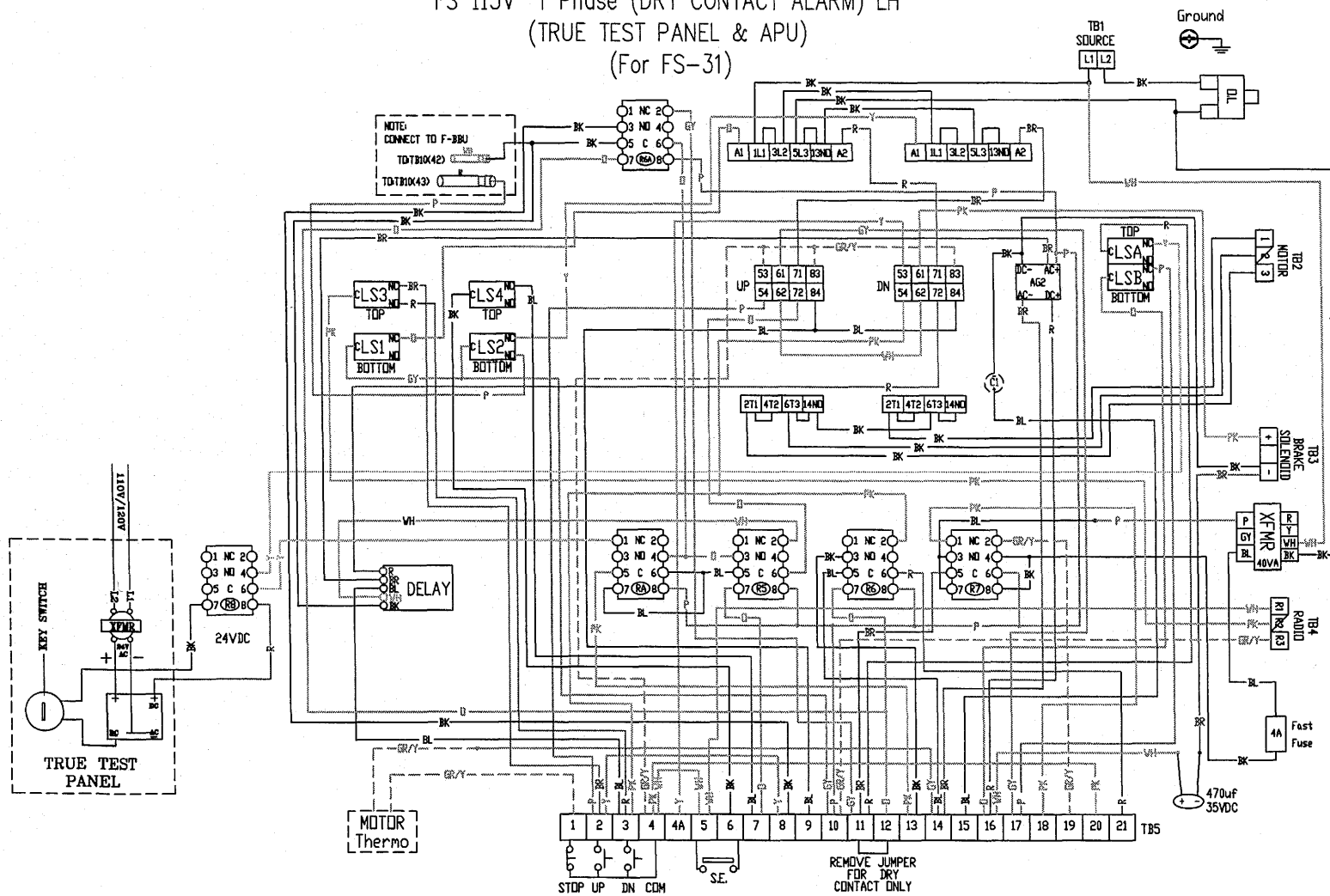
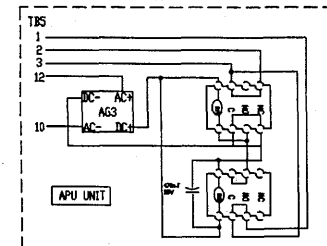
TERMINAL NUMBER:

- 1 CONTROL STATION-STOP
- 2 CONTROL STATION-UP
- 3 CONTROL STATION-DN
- 4 CONTROL STATION-COMMON
- 4&4A JUMP FOR MOMENTARY CONTACT DOWN
- 5&6 SENSING-EDGE (S.E.) CONNECTION
- 7&8 JUMP FOR S.E. TO REVERSE
- 9&10 DDDR MOVING WARNING SIGNAL AC 24V
- 15&16 JUMP FOR ALARM AND POWER FAILURE 10 SEC DELAY
- 16&17 JUMP FOR FUSIBLE LINK 10 SEC. DELAY
- 18&19 EXTERNAL POWER INPUT AC 24V

ALARM FUNCTION	11&12	13&14	20&21
ND ALARM	JUMP	OPEN	OPEN
ALARM (GAV.DN)	DRY CONTACT	OPEN	OPEN
ALARM (PW.DN)	DRY CONTACT	JUMP	JUMP



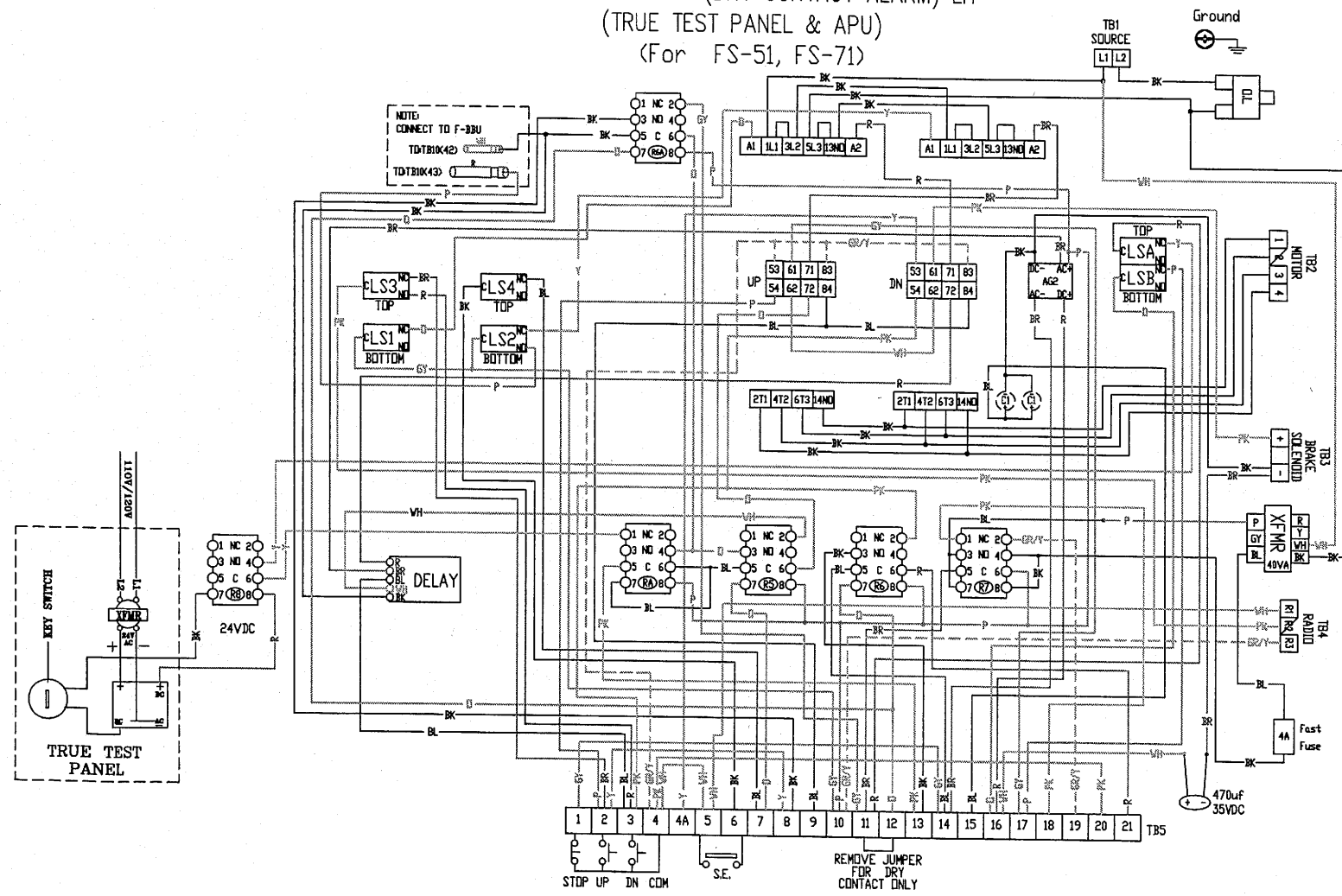
110V/115V 1 Phase
MOTOR CONNECTION



REMOVE JUMPER FOR DRY CONTACT ONLY

FS 115V 1 Phase (DRY CONTACT ALARM) LH
 (TRUE TEST PANEL & APU)
 (For FS-51, FS-71)

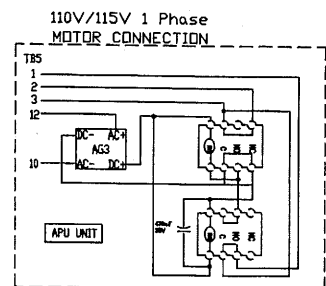
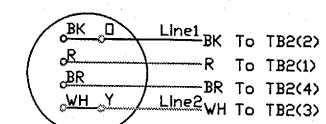
EB105-1 L



- NOTES:
 RA-WIRELESS EDGE RELAY (COIL 24VAC)
 R5-SENSING-EDGE RELAY (COIL 24VAC)
 R6-ALARM RELAY (COIL 24VAC)
 R6A-ALARM RELAY (COIL 24VAC)
 R7-EXTERNAL POWER SOURCE RELAY (COIL 24VAC)
 CAPACITOR(C#1)-FDR FS-51
 CAPACITOR(C#2)-FDR FS-71

- LS1-OPEN MICROSWITCH
 LS2-CLOSE MICROSWITCH
 LS3-RADIO CONTRL MICROSWITCH
 LS4-SENSING-EDGE MICROSWITCH
 LSA-FUSIBLE LINK MICRO (TOP)
 LSB-FUSIBLE LINK MICRO (BOTTOM)
- TERMINAL NUMBER:
 1 CONTROL STATION-STOP
 2 CONTROL STATION-UP
 3 CONTROL STATION-DN
 4 CONTROL STATION-COMM
 4&4A JUMP FOR MOMENTARY CONTACT DOWN
 5&6 SENSING-EDGE (S.E.) CONNECTION
 7&8 JUMP FOR S.E. TO REVERSE
 9&10 DOOR MOVING WARNING SIGNAL AC 24V
 15&16 JUMP FOR ALARM AND POWER FAILURE 10 SEC DELAY
 16&17 JUMP FOR FUSIBLE LINK 10 SEC. DELAY
 18&19 EXTERNAL POWER INPUT AC 24V

ALARM FUNCTION	11&12	13&14	20&21
NO ALARM	JUMP	OPEN	OPEN
ALARM (GAV.DN)	DRY CONTACT	OPEN	OPEN
ALARM (PW.DN)	DRY CONTACT	JUMP	JUMP



Reference

Fail-Safe Series Terminal Connections

1	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Control Station					Sensing Edge Connection		S.E. Open to Stop		Door moving warning signal 24VAC		Alarm Connection Dry Contact		Alarm Function Please review Alarm Table		10 Sec. Delay for central signal			External power source input 24VAC		Alarm Function Please review Alarm Table	
Stop	Up	Down	Com				S.E. Jump to Reverse									10 Sec delay for fusible link					
			Jump for momentary contact close												If and only if alarm has delay, then fusible link has delay.						

Alarm Table

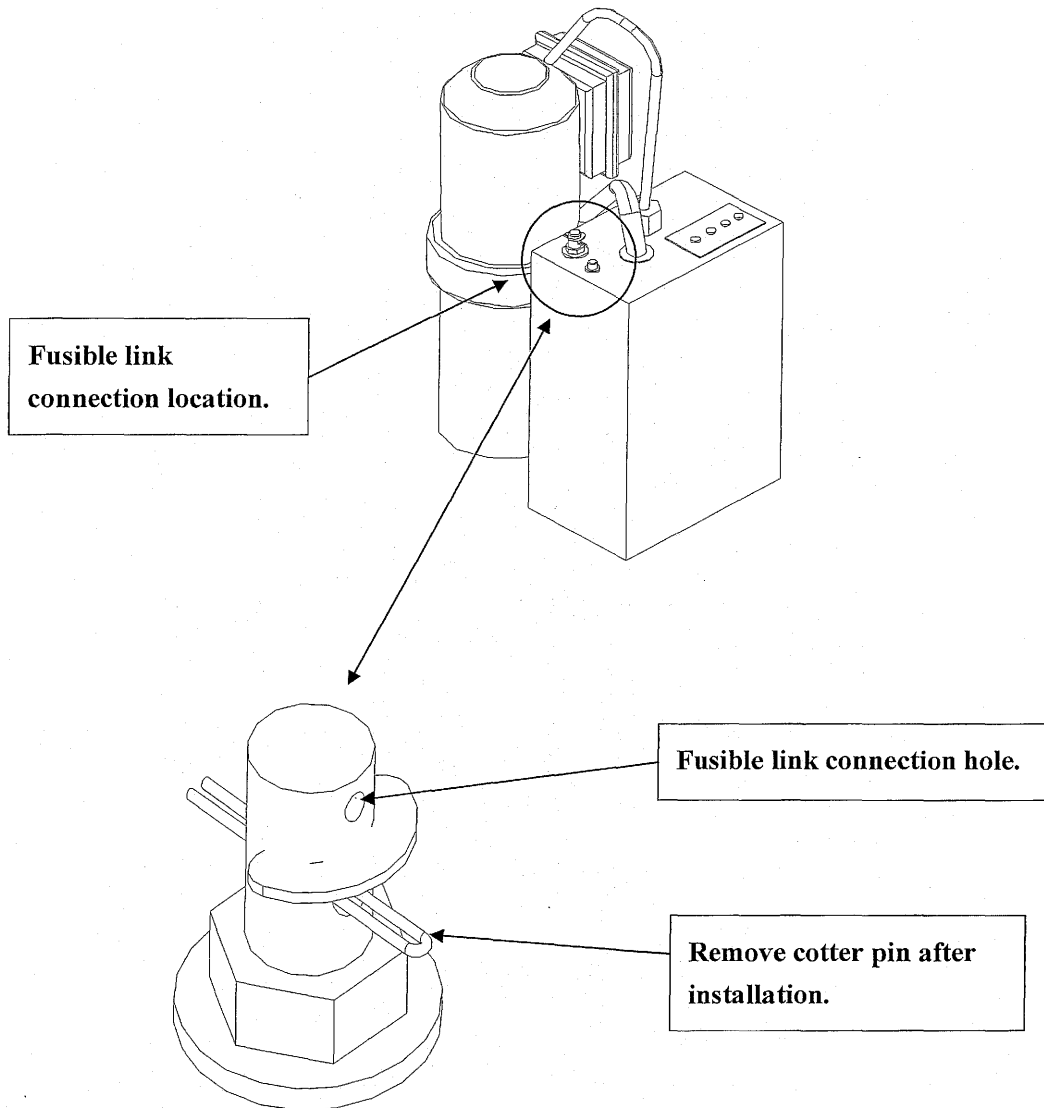
Alarm Function	Terminal		
	11&12	13&14	20&21
No Alarm	Jump	Open	Open
Alarm (Gravity Down)	Dry Contact	Open	Open
Alarm (Power Down)	Dry Contact	Jump	Jump

- ❖ It comes with 10-second delay standard during power failure. Other delay adjustments can be made on the terminal strip.
- ❖ Control box comes with one-second delay on reverse.
- ❖ When the door is moving downward, a push of “Up” or “Stop” button will stop the door from moving.
- ❖ When the door is moving downward, the radio control transmitter can stop and reverse the door at anytime.
- ❖ For gravity down during alarm function, no power to the control. The door will close under gravity.
- ❖ Under power down during alarm, can not choose 10-second delay for closing.

FUSIBLE LINK CONNECTIONS

- ❖ **REMOVE COTTER PIN FROM RELEASE ASSEMBLY AFTER INSTALLATION IS COMPLETE.**

Consult NFPA-80 and the authority having jurisdiction for fusible link location(s) and method.



* Illustration only, not drawn to scale. See actual product for correct details.

OPERATING INSTRUCTIONS

1. If a 3-button control station is used to operate the door, push the "OPEN" button to open the door, push the "CLOSE" button to close the door, push the "STOP" button to stop movement of the door while opening or closing. Removing pressure from the "CLOSE" button will cause the door to stop.

2. If a key switch control station is used to operate the door, turn the key to the "OPEN" position to open the door, turn the key to the "CLOSE" position to close the door, push the "STOP" button to stop movement of the door while opening or closing. Removing pressure from the "CLOSE" key position will cause the door to stop.



If a sensing edge is not installed on the bottom of the door, and removing pressure from the "CLOSE" button or key switch position does not cause the door to stop, this condition must be corrected immediately. Improper operation could result in serious injury or death to person(s) trapped beneath the door.

3. Door may also be operated by remote devices.

MAINTENANCE INSTRUCTIONS

The brake is a self-adjusting brake. It is maintenance free. The brake assembly requires no additional adjustments for its lifetime.

If an entrapment protection device is used, i.e. sensing edge or photoelectric sensors, please consult the manufacturer for maintenance instruction.



Disconnect power supply to the operator before servicing.

Check the following items at the intervals listed:

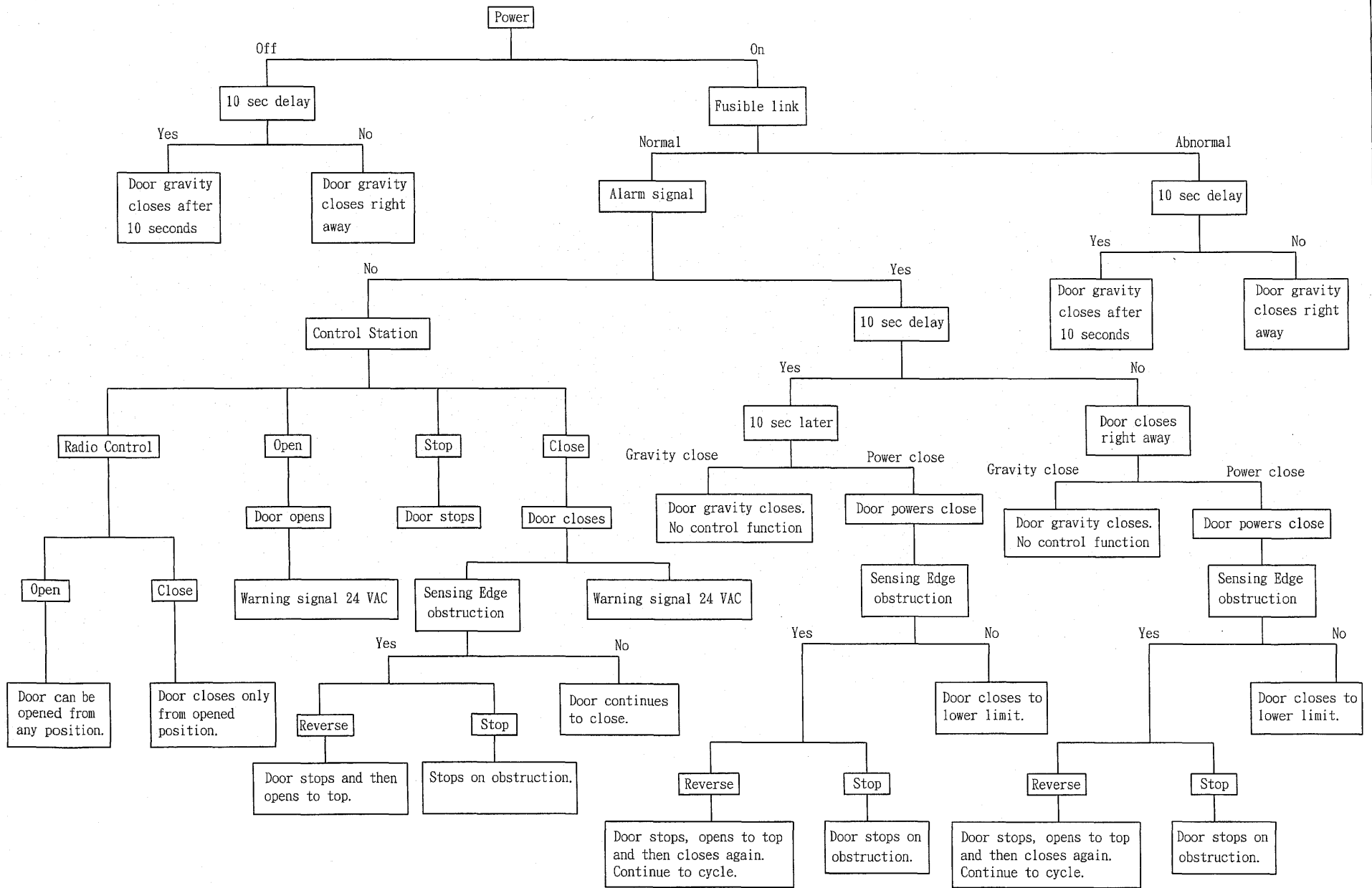
CHECK LIST	DESCRIPTION	EVERY 3 MONTHS	EVERY 6 MONTHS	EVERY 12 MONTHS
Drive Chain	Check for excessive slack. Check & adjust as required Lubricate.	●		
Sprockets	Check set screw tightness	●		
Fasteners	Check & tighten as required		●	
Bearings & Shafts	Check for wear & lubricate	●		
Drop-test	Inspect door, drop-test for proper operation and full closure per NFPA-80			●

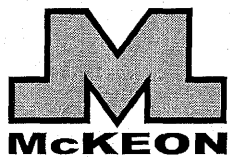
- ❖ Do not lubricate motor. Lubrication could cause damage.
- ❖ Inspect and service whenever a malfunction either door or operator is observed or suspected.
- ❖ Before servicing, always disconnect power supply to the operator.
- ❖ Replace fuses only with those of the same type and rating.
- ❖ All replacement parts must be obtained from the door manufacturer per NFPA-80.



Do not place hands or tools in or near the operator when the power is connected or when testing control or safety devices. Always disconnect power before servicing or adjusting the operator.

Fire Door Operator





DROP TEST AND RESET
INSTRUCTIONS



DROP TEST AND RESET INSTRUCTIONS FOR McKEON MODEL FSFD FIRE DOORS

NOTE: THIS FIRE DOOR IS EQUIPPED WITH THE AUTOMATIC DROP TEST AND RESET FEATURE. NO SPECIAL TOOLS ARE REQUIRED.

Option A To drop test the door, cut the fusible link or release the s-hook from the plunger located on the top of the operator. Once the plunger is released the door will begin to self close at a uniform rate of decent (6" to 9" per second).

To reset the door, pull plunger up and re-attach fusible link or sash chain, and push "OPEN" button on control station.

Option B To drop test the door, cut the power to the operator by cutting off the power at the disconnect switch. Once the power has been cut the door will begin to self-close at a uniform rate of decent (6" to 9" per second).

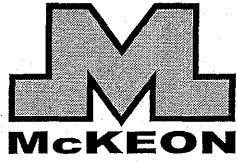
To reset the door, re-engage the power to the operator and push the "OPEN" button on the control station.

Option C To drop test the door, send signal from the fire alarm, the door will begin to close at a uniform rate of decent (6" to 9" per second).

To reset the door, clear signal from fire alarm and push "OPEN" button on control station.

ONCE FSFD AUTOMATICALLY RESETS ITSELF, IT IS AUTOMATICALLY BACK IN FIRE-MODE.

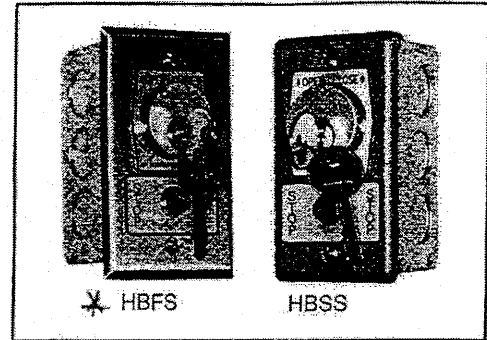
NOTE: ALL ABOVE OPTIONS MEET NFPA REQUIREMENTS CONSTITUTING ACTUAL DROP TEST.



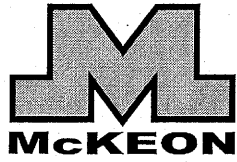
KEY SWITCH
CONTROL STATION

NEMA 1 Control Stations In Single Gang Box With Stop Buttons

- **HBSS**
Surface Mount Key Switch with
Stop Button,
OPEN-CLOSE, Center Return
H= 4", W= 2", D= 1-3/4"
- *■ **HBFS**
Flush Mount Key Switch with
Stop Button,
OPEN-CLOSE, Center Return
FACE PLATE: H= 4-1/2", W= 2-3/4"
BACK BOX: H= 4", W= 2", D= 2"

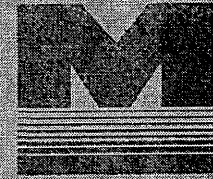


Specify Keyed Alike or Random
Available with Tamperproof Screws
Available with Best Cylinder
or Equivalent



ELECTRICAL
SAFETY EDGE

MillerEdge®



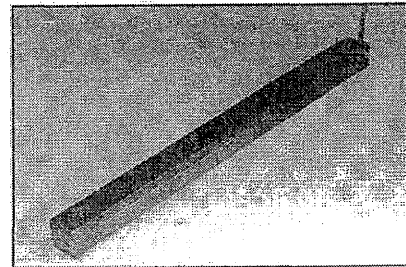
ME110 SwitchFlex®



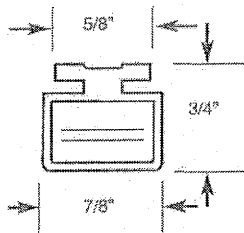
• Counter Shutters • Emergency Switches • Conveyor Systems • Rolling Grilles

About the ME110...

This pressure sensitive electric edge can be adapted to suit a wide variety of applications. It is manufactured to user specifications for length, sensitivity and outlet location. When touched lightly or at an angle, the ME110 sends an immediate signal to stop and/or reverse operations depending upon your particular application. Multiple mounting channel designs allow for easy installation on nearly any surface.



Specifications



Color: Black

Length: Per spec to nearest 1/4", max = 100ft.

Sensitivity: 8psi

Lead Wire: 2ft. 22 gauge - standard

Wire Outlet Location: specify right hand, left hand or end

Electrical Requirements: Maximum 24 volts AC/DC, 1/2 amp

Wiring Diagram: 2 wire, N. O.

Mounting Channel: High density PVC

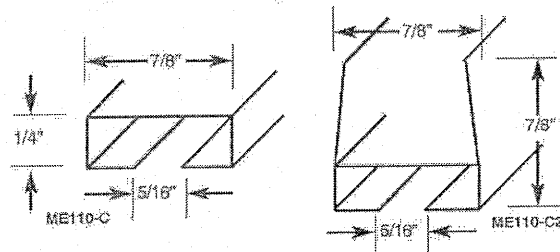
Sensing Edge: Extruded flexible PVC

Contact Element: Alumaglas®

Temperature Range: -30°F to +155°F

Options

- 4 wire self monitoring
- Soft ends
- Coil Cord attached
- 4-wire Control Panel (MFSC-100)
- 4-wire intrinsically safe control panel (FSIS-25-4)
- Pneumatic (MEP110) Air-Wave (MAW110)
- Mounting Channel Designs:



Installation

Place appropriate ME110 mounting channel in desired location. Drill 1/8" holes through channel and into mounting surface every 24". Attach channel to surface with screws. Slide ME110 SensingEdge into channel and wire to controls.

Note: Use a maximum 24 volt, 1/2 amp AC/DC power. Overload can cause damage. For detailed installation and wiring instructions, contact Miller Edge, Inc.

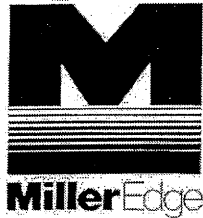
Care of the ME110...

Minimum care is required for the ME110 since it is manufactured with only the most durable materials and the highest quality control standards. However, SensingEdges should be examined regularly for cuts or punctures which could damage internal components. Check wiring to be sure connections are secure. When properly maintained, the ME110 offers years of trouble free operation.

U.S. patent #4,398,814 Canadian patent #1,048,066 other patents apply.

MILLER EDGE, INC. • P.O. Box 159 • West Grove, PA 19390 • (610)869-4422 • Fax: (610)869-4423 • 800-220-3343 • www.milleredge.com
MILLER EDGE, INC. • 6809 South Hari Avenue, Suite A, Tempe, AZ 85283 • (480)755-3565 • Fax (480)755-3558 • 800-887-3343

REV. 8-23-04



Miller Edge Receiver Installation Instructions (Model MWR02)

General Information About the Model MWR-02 Receiver

The Miller Edge Model MWR-02 universal receiver was designed to have several selectable options not found on other radio controls. By properly selecting these options with the convenient slide switches and wiring harness, the Model MWR-02 eliminates the requirement to stock several receivers.

1. The Model MWR-02 will operate on either 12 or 24 Volt AC or DC by selecting either 24V or 12V with the voltage selection switch.
2. The Model MWR-02 will generate either a 0.5 second pulsed, or a continuous relay output depending on the setting of the output slide switch. To energize the output relay as long as the transmitter is activated, select the CONT position. To energize the output relay for 0.5 seconds regardless of how long the transmitter is activated, select the PULSED position. Many gate operators and some garage door operators will not work properly when the switch is not in the CONT position.
3. The Model MWR-02 comes standard with 5 wires. Two of these wires (red and black) are for the power input and the other three are the relay contacts. The white wire is the relay common and is always used. Most control circuits require a normally open switch contact. For these applications use the NO (yellow wire) and the white wire. It is recommended that the unused orange wire be cut off. For controls requiring a normally closed switch contact use the NC (orange wire) and the white wire. It is recommended that the yellow wire be cut off, if it isn't used.
4. The Model MWR-02 comes standard with an "F" connector and a 1/2 wave wire antenna. If signal conditions require the use of an external coax antenna to eliminate signal blockage due to obstructions, dead spots etc., use RG59 coax to extend the antenna to the remote location. The 1/2 wave wire antenna may be left on the receiver.

Model MWR-02 Installation Instructions

1. Disconnect the power to the operator.
2. Remove access cover of receiver to gain access to the coding switch and the programming switches.
3. Place the voltage selector slide switch in either the 24V or 12V position depending upon the control voltage of the operator.
4. Place the output selector slide switch in either the CONT or PULSED position depending upon the operator being used. In most cases either position will work properly.
5. Set the 9 pole, 3 position coding switch under the access cover to match the transmitter coding switch. Any switch position will work as long as the transmitter coding switch and the receiver coding switch are exactly matched.
6. Mount receiver inside the operator control box so that the wires from the receiver will reach the terminal strip on the operator.
7. Connect the black wire (-V) and the white wire (COMMON) to negative power terminal.
8. If the operator requires a normally open contact to activate the operator, connect the yellow wire (NO) to the relay output of the operator. Cut off the orange wire. If the operator requires a normally closed contact, connect the orange wire (NC) and cut off the yellow wire.
9. Connect the red wire (+V) to the positive power terminal of the operator.
10. Reconnect the power to the operator and test the system. Position the green antenna wire so it is hanging down outside the operator box. If needed, to improve reception, cut the length of the green wire in half.

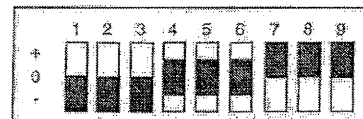


Figure A



Miller Edge Transmitter Receiver Installation Instructions (Models MWT02, MWTA02, and MWR02)

Setting the Code for the Single Entry Transmitter (Models MWT02 and MWTA02)

You may set your transmitter to any code you desire, but be sure the code you set matches on both your transmitter and receiver. There are nine (9) dip switches, each of which can be placed in three different positions (+, 0, -). DO NOT set all switches in the same position, such as all +, all -, or all zero (**Figure A**). **WARNING:** No other adjustments should be made inside the transmitter. Now that you have selected your personal code, replace the transmitter cover.

* Mount transmitter box directly to gate post or door. **NOTE: DO NOT** drill any holes in the transmitter box. Use only mounting holes provided, any additional holes in transmitter box will cause water to enter and a loss of warranty.

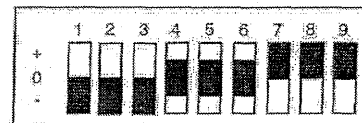
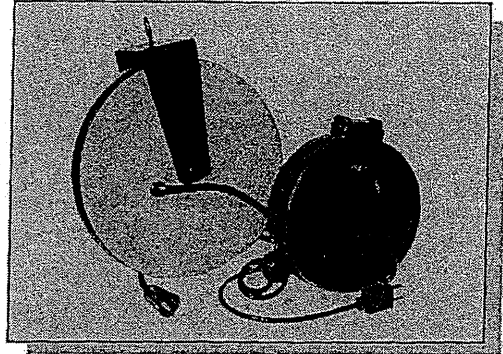


Figure A

Cord Reels

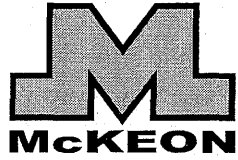
Industry Standard Cord Reels Provided without Stops for Door and Gate Industries. Supplied with Mounting Brackets.



Model	Type	Extended Length	AWG/ Conductors
CRP-2	SVT	20 ft.	18/2
CMM-2 (metal case)	SVT	20 ft.	18/2
CRP-3	SVT	20 ft.	18/3
CPM-3 (metal case)	SO	30 ft.	18/3
CRP-3P (metal case)	SJT	30 ft.	18/3
RC50	SJTO	50 ft.	16/3



MECHANICAL
TROUBLE SHOOTING



MAINTENANCE
INSTRUCTION
&
SCHEDULE



MAINTENANCE INSTRUCTION FOR ROLLING STEEL DOORS

LUBRICATION: The most important single maintenance item on doors of this type is lubrication. This is required only at certain points because all rotating members are equipped with high quality sealed bearings that are lubricated for life.

The curtain guides and the teeth of the gears contained in chain hoist or hand crank mechanism (if supplied) should be lubricated at least twice a year (more often if door is operated frequently) with one of the following greases:

Summer: Dixon's #2 Graphite Cup Grease
Alemite MP Lithium Grease (#1 for winter weather, #2 for normal weather)
Texaco #904 Graphite Grease, or their equivalents.

If the door is electrically operated check the oil level in the worm gear speed reducer every six months and replenish if necessary with S.A.E. 140 gear oil for normally heated buildings, or thinner grades for outside installations exposed to low temperatures.

PAINT: All non-lubricated steel surfaces should be painted annually (more often if required in corrosive atmospheres) with a good grade of rust-inhibiting metallic base paint.

SPRING ADJUSTMENT: In time, the counter balancing springs may lose some of their initial tension. This condition imposes an extra load on the operator and should be corrected as follows:

1. Manually operated doors should be opened fully by hand and held open by C-clamps or vise grip pliers on each guide.
2. Mechanically operated doors should be opened fully and the crank or had chain should be locked to hold the door open.
3. Electrically operated doors should be opened fully by pushing the "UP" or "OPEN" button. Motor brake will hold the door open.
4. With a suitable tool (18" or 24" pipe wrench or large spanner) turn the spring adjusting wheel (1/8 turn at a time) until door is balanced properly. Make sure locking pawl is properly engaged in spring adjusting wheel.

For door with adjusting wheel on left hand side, wind springs clockwise.
For door with adjusting wheel on right hand side, wind springs counter clockwise.



DOOR OPERATOR SCHEDULED MAINTENANCE

	MAINTENANCE PERFORMED	MONTHLY INTERVAL			
		1	3	6	12
DRIVE CHAIN	ADJUST TENSION AS REQUIRED LUBRICATE AS REQUIRED		○		
LIMIT ADJUSTMENTS	CHECK FOR FULL TRAVEL (NO OVERTRAVEL)		○		
DRIVE SPROCKETS	CHECK SET SCREWS CHECK FOR ABNORMAL WEAR		○		
DRIVE BELTS	CHECK FOR ABNORMAL WEAR CHECK TENSION & RETIGHTEN AS REQUIRED		○		
GEAR REDUCER	CHECK OIL LEVEL (CHECK FOR SIGNS OF LEAKAGE)			○	
CLUTCH	CHECK FOR PROPER OPERATION AND ADJUST AS REQUIRED (SEE CLUTCH ADJUSTMENT PROCEDURE IN OPERATION MANUAL) REPLACE PADS AND SPRING IF CLUTCH CAN NOT BE SET SATISFACTORILY		○		
MOUNTING BOLTS	CHECK AND TIGHTEN AS REQUIRED			○	
ELECTRICAL CONNECTIONS	INSPECT CONNECTIONS FOR LOOSE SCREWS, AND MECHANICAL DAMAGE SUCH AS WORN OR BROKEN INSULATION, BROKEN WIRE ENDS, OR FRAYED CONNECTIONS			○	
DOOR	INSPECT ALL MOVING PARTS FOR CORRECT OPERATION. (NO BINDING) INSPECT ROLLERS, HINGES FOR ABNORMAL WEAR, CHECK GUIDES FOR CORRECT CLEARANCE LUBRICATE AS REQUIRED	○			
OBSTRUCTION SENSING DEVICES	CHECK FOR PROPER OPERATION	○			

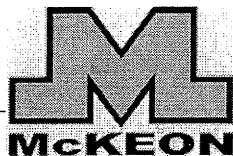
RECOMMENDED LUBRICATION:

ALL CHAINS - CHAIN LUBRICANT
 IDLER SPROCKETS AND SHAFTS - GENERAL PURPOSE SILICON BASE GREASE
 GATE ROLLERS OR HINGES - AS SPECIFIED BY MANUFACTURER
 DISCONNECT LEVERS AND OTHER MOVING SHAFT PARTS - 30 WT. OIL
 GEAR BOX: 30°F TO 140°F - 80 QT. GEAR OIL (STD) AGMA - 7
 40°F TO 150°F - 80 QT. 140 SYNTHETIC

NOTE: DO NOT OVERFILL GEARBOX.

083410

**HORIZONTAL COILING SMOKE
RATED SHUTTERS**



McKEON DOOR COMPANY

Manufacturer of Fire, Smoke, Security & Emergency Egress Door Systems

April 13, 2009

Overhead Door Company of Lexington, Inc.
181 Trade Street
Lexington, KY 40511

Re: University of Kentucky – Biological Science Pharmacy Building (H 62906)

LIMITED ONE YEAR WARRANTY

McKeon Door Company, Bellport, New York warrants that every door will be free of defects in workmanship and material. Should any defect in workmanship or material appear within **ONE YEAR** of the original date of shipment, McKeon Door Company shall, upon written notification, correct such non-conformity at its option, by repairing or replacing any defective part or parts. This warranty gives you specific rights which may vary from state to state.

This warranty does not include normal wear, damage beyond the manufacturer's control, damage due to negligence or any replacement labor.

Any repair work performed by another company other than a McKeon Door Company Authorized & Certified Representative or that utilizes parts not manufactured by McKeon Door Company, alters the construction of the product or deviates from the original product specifications will render this warranty null and void.

No warranties expressed or implied (including, but not limited to a warranty of merchantability or fitness for particular purpose) shall extend beyond the applicable time period stated in bold face type above.

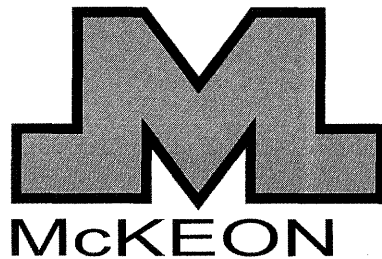
Claims for any defective parts or components must be made in writing to McKeon Door Company within the governing warranty period.

The foregoing warranty is exclusive and in lieu of other warranties. In no event shall seller be liable for special, incidental or consequential damages. However, some states do not allow limitation of incidental or consequential damages, therefore the above exclusion or limitation may not apply to you.

Authorized By



Vadim Litman
SENIOR PRODUCT ENGINEER



*OPERATION & MAINTENANCE
MANUAL*

**UNIVERSITY OF KENTUCKY
BIOLOGICAL SCIENCE
PHARMACY BUILDING**

PREPARED FOR:

***OVERHEAD DOOR COMPANY
OF LEXINGTON***

181 TRADE STREET
LEXINGTON, KY 40511

DESCRIPTION:

- (6) F5FD - AUTO-SET FIRE DOORS
- (1) H200 - HORIZONTAL FIRE SHUTTER
- (2) Sg3000 - COILING SECURITY GRILLES



McKEON

Horizontal Fire and Smoke Rated Shutters

Models H200 and HL250



Horizontals are custom designed to meet the most stringent demands and requirements

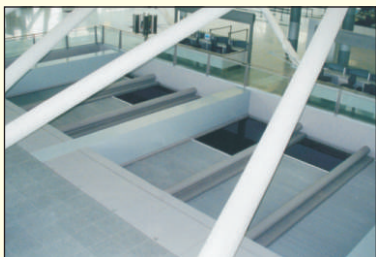
Description: The H200 is a horizontal coiling fire & smoke rated shutter. It is a motor operated system which is designed and manufactured as a fail-safe unit utilizing the Auto-Set™ operator. The unit is driven to the closed position by our patented self-closing mechanism, much like our S9000 and S4000 models. The H200 has been tested and approved by UL and ITS. The H200 is also available with a smoke and draft rating and has been tested under UL 1784.

Advantages: The H200 is of a compact design and offers design professionals the flexibility of using one horizontal fire and smoke rated shutter in lieu of several conventional roll down fire doors to protect horizontal fire penetrations in a facility.

Design Alternatives: The H200 is used to reduce smoke evacuation costs and costs related to deluge systems. It can also be used to eliminate multiple vertical acting fire doors which can be unsightly due to the position of vertical columns and mullions.

Applications: The H200 is ideal for closing off penetrations in ceilings for atrium conditions as well as convenience stairways, escalator enclosures and skylights.

Approved Up To A 2 Hour Fire Rating



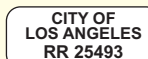
H200's used in atrium protection for fire and smoke



H200's used for fire protection in double height atrium



HL250 used for fire and smoke protection in penetrations created by escalators



This product is covered under US Patents:
5,203,392 - 5,245,879 - 5,355,927 - 5,386,891 - 5,542,460 - 5,605,185 - 5,673,514 - 5,893,234

www.McKeonDoor.com

Toll-Free 1-800-266-9392 / (718) 965-0700 • Fax: (718) 768-3406
95 29th Street • Brooklyn, NY 11232 USA • email: info@McKeonDoor.com

McKEON
McKeon Door Company



SAFETY SUMMARY



SAFETY SUMMARY SHEET

WARNING!

THESE WARNING PARAGRAPHS MUST BE OBSERVED IN ORDER TO PREVENT SERIOUS INJURY OR DEATH TO AN INSTALLER OR OPERATOR.

CAUTION!

THESE CAUTION PARAGRAPHS MUST BE OBSERVED IN ORDER TO PREVENT DAMAGE, DESTRUCTION, OR LOSS OF OPERATING PERFORMANCE AND EFFECTIVENESS OF THE PRODUCT.

IT IS THE RESPONSIBILITY AND DUTY OF ALL PERSONNEL INVOLVED IN THE OPERATING AND MAINTENANCE OF THIS EQUIPMENT TO FULLY UNDERSTAND THE WARNING AND CAUTION PROCEDURES BY WHICH HAZARDS ARE TO BE REDUCED OR ELIMINATED. PERSONNEL MUST BECOME THOROUGHLY FAMILIAR WITH ALL ASPECTS OF SAFETY AND EQUIPMENT PRIOR TO ANY OPERATION OR MAINTENANCE OF THIS EQUIPMENT.

WARNING! SOME DOORS INCLUDE A SPRING CHARGE-RETAINING PIN NEAR THE END OF THE SHAFT FOR THE COUNTER BALANCE SPRING. THIS PIN SHOULD REMAIN IN THE SHAFT UNTIL THE CURTAIN HAS BEEN ATTACHED, THE MOTOR OPERATOR DRIVE CHAIN HAS BEEN INSTALLED AND POWER HAS BEEN CONNECTED TO THE MOTOR OPERATOR.

WARNING! BE AWARE OF THE INHERENT DANGERS OF WORKING ON ELECTRICAL EQUIPMENT, AS WELL AS WORKING ABOVE THE FINISH FLOOR.

WARNING! THE MOTOR IS OPERATED AND CONTROLLED BY A MINIMUM OF 110 VOLT POWER. SECURE POWER SOURCE TO THE MOTOR OPERATOR WHEN CONDUCTING MAINTENANCE ON THE DOOR.

WARNING! INSTALL THE SPRING CHARGE-RETAINING PIN WHENEVER THE CURTAIN WEIGHT IS REMOVED FROM THE SHAFT, BECAUSE WITHOUT THE CURTAIN'S WEIGHT, THERE IS A POTENTIAL FOR AN UNCONTROLLED DISCHARGE OF THE COUNTERBALANCE SPRING ASSEMBLY.

CAUTION! DO NOT, UNDER ANY CIRCUMSTANCES, ATTEMPT TO SHIFT TO MANUAL OPERATION WHILE THE MOTOR OPERATOR IS RUNNING BECAUSE OF POTENTIAL DAMAGE TO THE CLUTCH.

CAUTION! CARE SHOULD BE TAKEN TO PREVENT THE CURTAIN FROM DOUBLING BACK ON ITSELF IN HANDLING BEFORE INSTALLATION. IN SOME CASES THE SLATS OR PANELS MAY BE FORCED APART WHEN AN EFFORT IS MADE TO READJUST THE SLATS OR PANELS BACK TO THEIR PROPER ENGAGEMENT.

CAUTION! IF THE DOOR WILL NOT OPERATE PROPERLY OR FREELY IN THE MANUAL MODE, DAMAGE MAY OCCUR IF ELECTRICAL OPERATION IS ATTEMPTED.

CAUTION! BE PREPARED TO IMMEDIATELY STOP THE DOOR IF IT APPEARS THAT THE DOOR WILL COME IN CONTACT WITH THE MECHANICAL STOPS OR GO BEYOND THE FULLY OPEN POSITION WHEN OPENING AS WELL AS PILE ON THE FLOOR OR INTO THE RECEIVER WHEN CLOSING. DURING THE INITIAL ELECTRICAL CHECKS, PERSONNEL SHOULD BE IN A POSITION TO TURN OFF THE POWER SOURCE IN CASE THE "STOP" PUSH-BUTTON FAILS TO WORK.

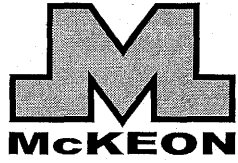
CAUTION! DO NOT ATTEMPT TO OPERATE THE DOOR ELECTRICALLY PRIOR TO THESE CHECKS.

CAUTION! IF LIMIT SWITCHES ARE NOT SET, ALLOW DOOR TO TRAVEL ONLY A SHORT DISTANCE TO VERIFY OPERATION, AND THEN STOP.

CAUTION! IF DOOR OPERATION IS REVERSED FROM THE DIRECTION SELECTED BY THE PUSH-BUTTON OR KEY SWITCH CONTROL STATION, THEN MOTOR ROTATION SHOULD BE REVERSED BY CHANGING THE PHASE OF THE MOTOR'S POWER SOURCE AT THE STARTER.

CAUTION! THE "OPEN" AND "CLOSE" CONTROL POINTS MUST BE WIRED TO THE TERMINALS SHOWN ON THE WIRING DIAGRAM. DO NOT CHANGE PUSH-BUTTON OR KEY SWITCH CONTROL STATION WIRING IF THE DOOR TRAVELS IN THE WRONG DIRECTION.

CAUTION! BE PREPARED TO STOP THE DOOR WITH THE "STOP" BUTTON WHEN ADJUSTING THE LIMIT SWITCHES.



INSTALLATION INSTRUCTIONS
FOR
HORIZONTAL FIRE DOORS



INSTALLATION INSTRUCTIONS
HORIZONTAL COILING FIRE & SMOKE RATED SHUTTERS
MODELS H200 & HL250

PAGE 1 OF 6

INSPECTION OF MATERIALS

UPON RECEIPT OF SHIPMENT - IMMEDIATELY CHECK THAT YOU HAVE RECEIVED THE CORRECT NUMBER OF PIECES, AND THAT THE ENTIRE SHIPMENT IS INTACT AND COMPLETE. ANY DAMAGE OR SHORTAGES SHOULD BE NOTED ON THE FREIGHT CARRIER'S BILL OF LADING BEFORE SIGNING AND ACCEPTING THE SHIPMENT.

SHOULD DAMAGE OR SHORTAGES BE FOUND AFTER THE SHIPMENT HAS BEEN ACCEPTED NOTIFY THE DELIVERING CARRIER AT ONCE AND CONFIRM SUCH NOTIFICATION TO THEM IN WRITING.

CALL McKEON DOOR COMPANY'S CUSTOMER SERVICE DEPARTMENT FOR THE COST TO REPLACE/REPAIR THE ITEMS IN QUESTION AND SUBMIT THIS INFORMATION IN WRITING TO THE CARRIER. THIS FORMS THE BASIS FOR THE REQUIRED FREIGHT CLAIM.

ALL SHIPMENTS ARE MADE F.O.B. FACTORY, FREIGHT ALLOWED, AND IT IS THE PURCHASER'S RESPONSIBILITY TO FILE ALL FREIGHT CLAIMS. McKEON DOOR COMPANY WILL PROVIDE ANY NECESSARY BACKUP PAPERWORK TO SUBSTANTIATE YOUR FREIGHT CLAIM, BUT McKEON DOOR COMPANY CANNOT FILE THESE CLAIMS FOR YOU, AS OWNERSHIP FOR THE SHIPMENT DETERMINES WHO CAN AND MUST FILE THE FREIGHT CLAIM.

BEFORE BEGINNING INSTALLATION - READ THE SAFETY SUMMARY SHEET, AS-BUILT SHOP DRAWINGS AND THESE INSTALLATION INSTRUCTIONS THOROUGHLY. IF YOU HAVE ANY QUESTIONS OR CONCERNS PLEASE CONTACT OUR TECHNICAL SUPPORT DEPARTMENT AT 800-266-9392.

INSTALLATION PROCEDURE

STEP 1 - A TYPICAL HORIZONTAL COILING FIRE SHUTTER WILL INCLUDE THE FOLLOWING COMPONENTS

- A) SHUTTER CURTAIN, CONSISTING OF A SERIES OF SLATS ASSEMBLED TOGETHER WITH TWO (2) COUNTERBALANCE ASSEMBLIES ALREADY INSTALLED IN A PREDETERMINED COIL BOX ASSEMBLY.
- B) TWO (2) SETS OF TRACK ASSEMBLIES OF LENGTH AND CONFIGURATION AS INDICATED ON THE AS-BUILT SHOP DRAWINGS.
- C) MOUNTING HARDWARE BOX.
- D) COIL BOX COVER PANELS (IF REQUIRED).
- E) MODEL H200 WILL INCLUDE A RECEIVING EDGE.
- F) MOTOR OPERATOR DRIVE ASSEMBLY ALREADY INSTALLED ONTO COIL BOX ASSEMBLY.



INSTALLATION INSTRUCTIONS
HORIZONTAL COILING FIRE & SMOKE RATED SHUTTERS
MODELS H200 & HL250

PAGE 2 OF 6

WARNING!

HORIZONTAL FIRE SHUTTERS CONTAIN TWO (2) COUNTERBALANCE ASSEMBLIES WHICH ARE BOTH PRE-CHARGED FROM THE FACTORY WITH VERY HIGH AMOUNTS OF CAPTURED SPRING FORCE.

1. TENSION RETAINING PIN #1 MUST NEVER BE REMOVED (REFER TO FIGURE 1).
2. TENSION RETAINING PIN #2 MUST NOT BE REMOVED PRIOR TO POWER AND CENTRAL ALARM SYSTEM CONNECTION TO FIRE SHUTTER MOTOR OPERATOR AND MUST BE REMOVED PRIOR TO ANY OPERATION OF THE SHUTTER (REFER TO FIGURE 1).

IMPORTANT NOTE: NOT FOLLOWING THIS PROCEDURE AS STATED ABOVE CAN RESULT IN SERIOUS INJURY AND / OR DAMAGE TO THE SHUTTER.

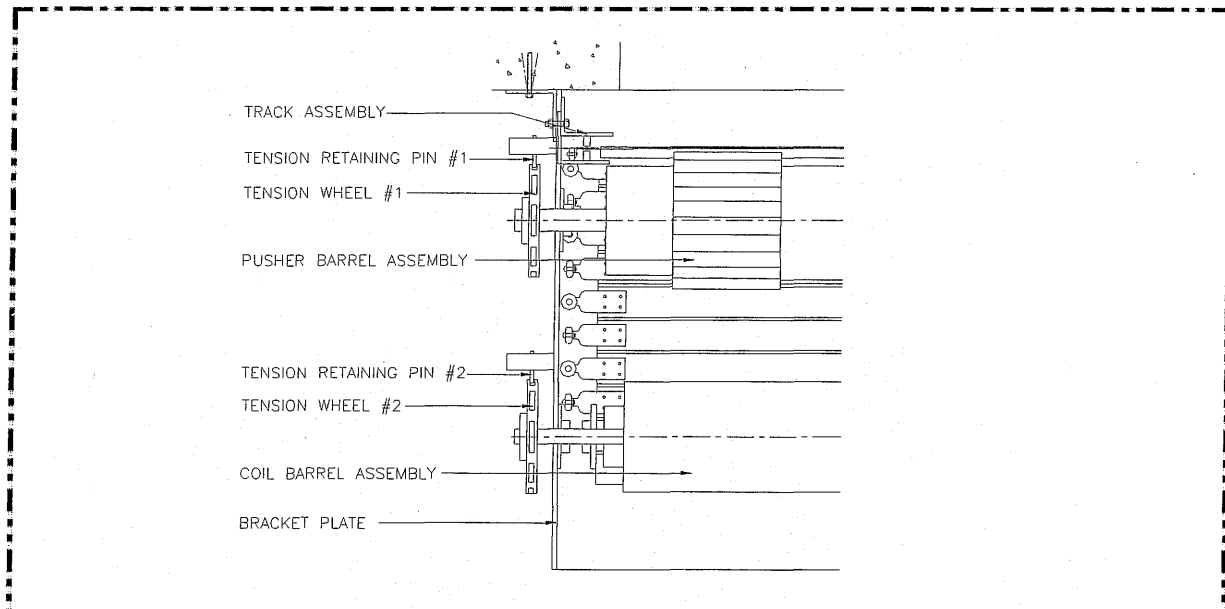


FIGURE 1

STEP 2 - INITIAL TRACK MOUNTING & INSTALLATION (REFER TO FIGURE 2)

- A) DETERMINE THE CORRECT LOCATION OF THE SUPPORT MOUNTING ANGLES WITH RESPECT TO THE OPENING AS NOTED ON THE AS-BUILT SHOP DRAWINGS.
- B) DETERMINE THE REQUIRED DISTANCE THAT IS REQUIRED BETWEEN THE SUPPORT MOUNTING ANGLES BY MEASURING THE OUTSIDE TO OUTSIDE OF BRACKET DIMENSION OF THE COIL BOX ASSEMBLY IN ACCORDANCE WITH THE DISTANCE NOTED ON THE AS-BUILT SHOP DRAWINGS.
- C) PLACE MOUNTING ANGLES ONTO MOUNTING SURFACE OF SUPPORTING STRUCTURE AND MARK OFF AND DRILL BOLT HOLE LOCATIONS AS REQUIRED.



INSTALLATION INSTRUCTIONS
HORIZONTAL COILING FIRE & SMOKE RATED SHUTTERS
MODELS H200 & HL250

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- D) CAREFULLY TEMPORARILY SECURE MOUNTING ANGLES AS REQUIRED TO THE EXISTING SUPPORTING STRUCTURE.
- E) MAKE SURE THAT THE MOUNTING ANGLES ARE STRAIGHT, PARALLEL AND SQUARE WITH EACH OTHER AND WITH THE OPENING.

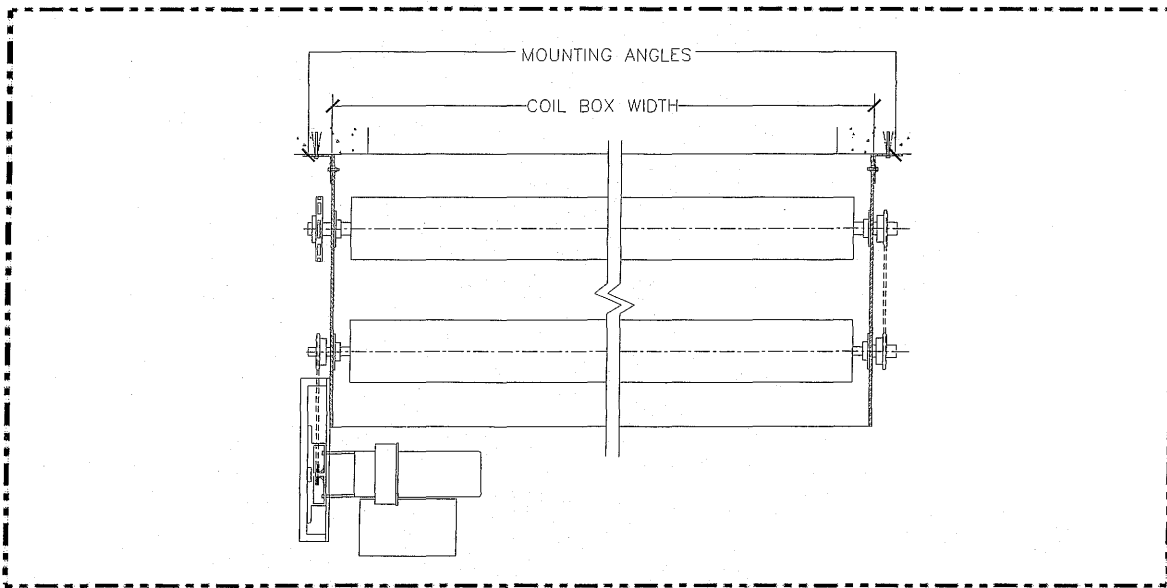


FIGURE 2

STEP 3 - PLACEMENT AND INSTALLATION OF COIL BOX ASSEMBLY

- A) CAREFULLY RAISE COIL BOX ASSEMBLY AND PLACE IN BETWEEN THE MOUNTING ANGLES.

NOTE: COIL BOX ASSEMBLIES ARE VERY HEAVY AND MAY NOT HAVE A SYMMETRICAL CENTER OF GRAVITY, COIL BOX ASSEMBLY MUST BE MOVED VERY CAREFULLY.

- B) ALIGN THE BOLT HOLES IN COIL BOX ASSEMBLY BRACKET PLATES WITH BOLT HOLES IN MOUNTING ANGLES. USE THE FASTENERS THAT WERE PROVIDED TO SECURE COIL BOX ASSEMBLY TIGHTLY TO MOUNTING ANGLES.
- C) IN SOME CASES DEPENDING ON YOU PROJECT REQUIREMENTS THE COIL BOX ASSEMBLY MAY BE EQUIPPED WITH SUPPORTING CLIP ANGLES FOR EXTRA SUPPORT TO THE ADJACENT CONSTRUCTION (REFER TO AS-BUILT SHOP DRAWING). IF YOUR COIL BOX ASSEMBLY WAS PROVIDED WITH SUPPORTING CLIP ANGLES INSTALL THEM NOW.
- D) MAKE SURE THAT COIL BOX IS COMPLETELY SUPPORTED AND SECURED BY THE SHUTTERS SUPPORT STRUCTURE BEFORE REMOVAL OF ANY HOISTING OR SUPPORTING EQUIPMENT THAT WAS USED.



INSTALLATION INSTRUCTIONS
HORIZONTAL COILING FIRE & SMOKE RATED SHUTTERS
MODELS H200 & HL250

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STEP 4 - INSTALLATION AND ADJUSTMENT OF TRACKS
(REFER TO FIGURE 3)

- A) AT THIS POINT YOU SHOULD HAVE SECURED TRACK ANGLES TO MOUNTING ANGLE, IF NOT BECAUSE THEY WERE REMOVED TO EASE INSTALLATION OF MOUNTING ANGLES, INSTALL THEM NOW.
- B) MAKE SURE THAT THE TRACK ANGLES ARE FULLY ALIGNED WITH INTERNAL TRACKS WHICH ARE LOCATED INSIDE COIL BOX.

NOTE: MISALIGNMENT OF THESE TRACKS WILL CAUSE THE SHUTTER JAM AT THE POINT WHERE THE SHUTTER INTERNAL TRACKS AND OPENING TRACKS MEET.

- C) CHECK AND VERIFY OVERALL DIMENSIONS IN ACCORDANCE WITH THE AS-BUILT SHOP DRAWINGS, PAY SPECIAL ATTENTION TO THE TIP TO TIP OF TRACK DIMENSION AS THEY MUST BE EXACTLY AS SHOWN IN THE AS-BUILT SHOP DRAWING AND THIS DIMENSION IS NOT ADJUSTABLE.

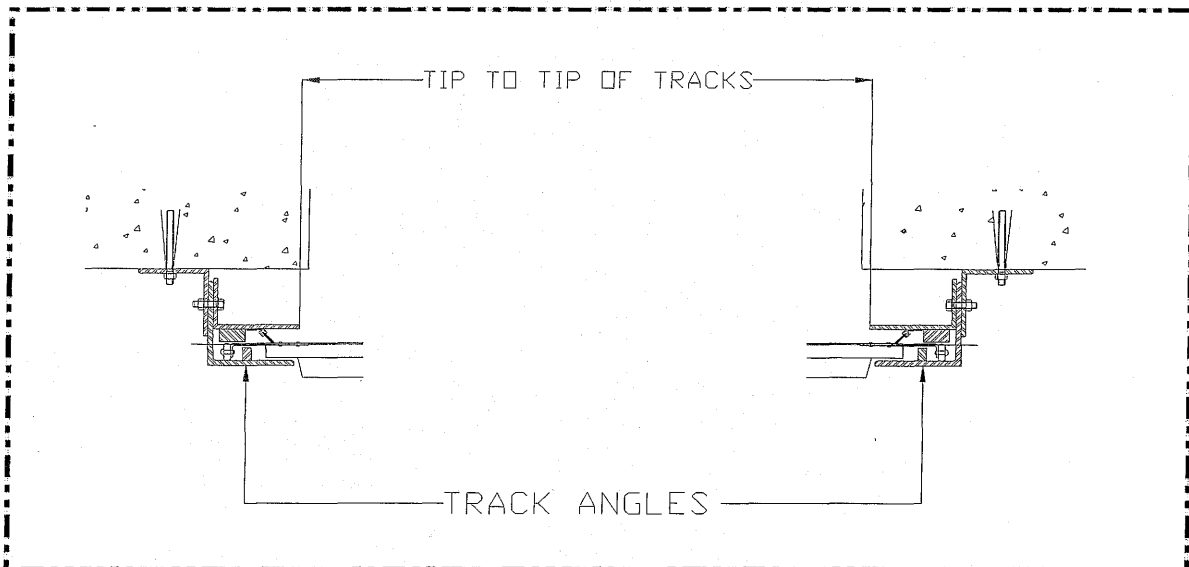


FIGURE 3

STEP 5 - INSTALLATION OF RECEIVING CHANNEL
(REFER TO FIGURE 4)

- A) POSITION RECEIVING CHANNEL STEEL ANGLE SUPPORT ACROSS THE OPENING'S END LOCATION AS NOTED ON THE AS-BUILT SHOP DRAWINGS.
- B) MAKE SURE THAT THE RECEIVING CHANNEL STEEL ANGLE SUPPORT IS LEVEL AND SQUARE WITH THE SIDE TRACK ASSEMBLIES PRIOR TO SECURING IT IN PLACE.
- C) ONCE THE RECEIVING CHANNEL STEEL ANGLE SUPPORT HAS BEEN SECURED THEN ATTACH THE RECEIVING CHANNEL TO THE STEEL ANGLE SUPPORT SO THAT IT IS IN POSITION TO RECEIVE THE LEADING EDGE WHEN THE SHUTTER IS IN THE COMPLETELY CLOSED POSITION.



INSTALLATION INSTRUCTIONS
HORIZONTAL COILING FIRE & SMOKE RATED SHUTTERS
MODELS H200 & HL250

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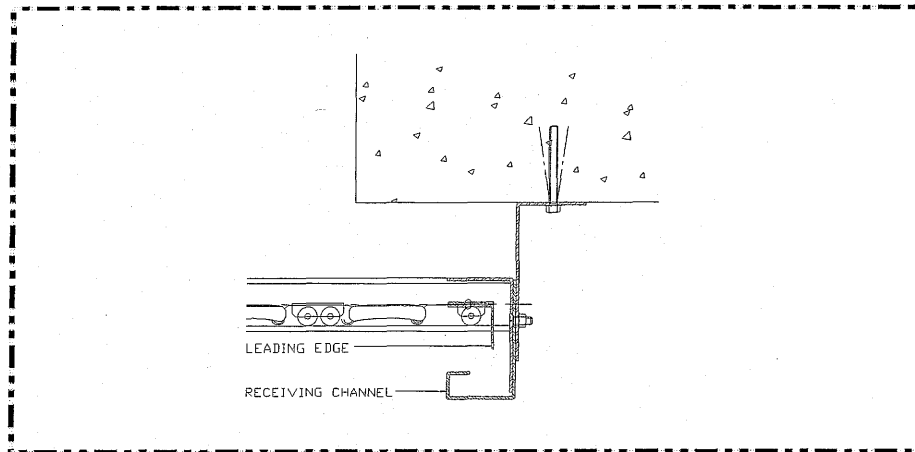


FIGURE 4

STEP 6 - INSTALLATION OF COIL BOX COVERS

- A) INSTALL COIL BOX END COVERS BY USING THE SCREWS THAT WERE PROVIDED IN THE HARDWARE PACKAGE.
- B) SECURE AND SCREW STRICTLY AROUND THE PERIMETER OF EACH FLAT COVER DIRECTLY TO THE PERIMETER OF THE COIL BOX FRAME.

**STEP 7 - WIRING OF MOTOR OPERATOR
(REFER TO WIRING DIAGRAM INSIDE CONTROL PANEL)**

- A) CONNECT LINE VOLTAGE TO THE PROPER TERMINALS IN ACCORDANCE WITH THE INSTRUCTIONS NOTED ON THE WIRING DIAGRAM.

NOTE: LINE VOLTAGE AND PHASE MUST MATCH THAT WHICH IS INDICATED ON THE AS-BUILT SHOP DRAWINGS AND THAT WHICH IS INDICATED ON THE WIRING DIAGRAM.

- B) DETERMINE LOCATION OF KEY SWITCH CONTROL STATION AS DIRECTED BY THE OWNER ARCHITECT OR AUTHORITY HAVING JURISDICTION AND MOUNT CONTROL STATION ACCORDINGLY.
- C) RUN WIRING FROM MOTOR OPERATOR TO THE CONTROL STATION AND CONNECT WIRING IN ACCORDANCE WITH THE INSTRUCTIONS NOTED ON THE WIRING DIAGRAM.
- D) CONNECT FIRE ALARM TO THE PROPER TERMINALS AS NOTED ON THE WIRING DIAGRAM.

NOTE: FIRE ALARM VOLTAGE AND CURRENT MUST MATCH THAT WHICH IS INDICATED ON THE AS-BUILT SHOP DRAWINGS.

IMPORTANT NOTE: AFTER CONNECTION AND ACTIVATION OF THE LINE VOLTAGE AND THE FIRE ALARM HAS BEEN MADE TO THE MOTOR OPERATOR MAKE SURE TO REMOVE TENSION PIN #2 PRIOR TO ATTEMPTING ANY OPERATION OF THE SHUTTER. TENSION PIN #2 MUST BE REMOVED PRIOR TO ANY OPERATION OF THE SHUTTER (REFER TO FIGURE 1). OPERATING THE SHUTTER PRIOR TO REMOVING TENSION PIN #2 WILL RESULT IN DAMAGE TO THE SHUTTER AND/OR POSSIBLE SERIOUS INJURY TO PERSONNEL.

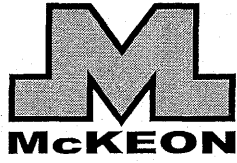


INSTALLATION INSTRUCTIONS
HORIZONTAL COILING FIRE & SMOKE RATED SHUTTERS
MODELS H200 & HL250

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STEP 8 - TESTING & FINAL ADJUSTMENTS

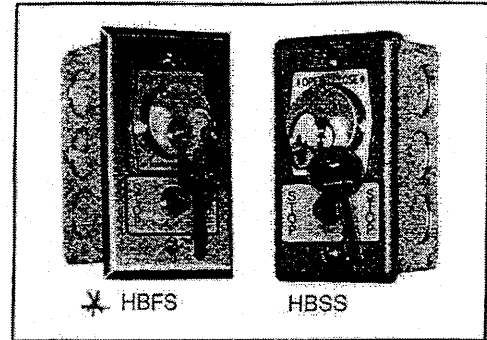
- A) CHECK AND MAKE SURE THAT THE CORRECT REQUIRED LINE VOLTAGE AND PHASE HAS BEEN CONNECTED TO SHUTTER'S MOTOR OPERATOR.
- B) CHECK AND MAKE SURE THAT THE CORRECT REQUIRED FIRE ALARM/SMOKE DETECTOR VOLTAGE AND CURRENT HAS BEEN CONNECTED TO SHUTTER'S MOTOR OPERATOR ALARM TERMINAL STRIP.
- C) CHECK AND MAKE SURE THAT THE CONTROL STATION HAS BEEN CORRECTLY WIRED TO SHUTTER'S MOTOR OPERATOR TERMINAL STRIP.
- D) PRIOR TO ATTEMPTING TO OPERATE THE SHUTTER MAKE SURE SET AND ADJUST OPEN AND CLOSED LIMIT SWITCHES IN ACCORDANCE WITH THE LIMIT SWITCH SETTING INSTRUCTIONS LOCATED IN THE MOTOR OPERATOR'S OWNERS MANUAL.
- E) PRIOR TO ATTEMPTING TO OPERATE THE SHUTTER MAKE SURE YOU TENSION PIN #2 HAS BEEN REMOVED.
- F) ACTIVATE THE CONTROL STATION TO CHECK THE CLOSING AND OPENING CYCLES TO ASSURE OF THE SHUTTER'S SMOOTH NORMAL OPERATION.
- G) CHECK THE SHUTTER'S SELF CLOSING OPERATION BY ACTIVATING THE FIRE ALARM/SMOKE DETECTOR.



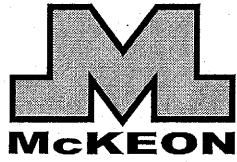
KEY SWITCH
CONTROL STATION

NEMA 1 Control Stations In Single Gang Box With Stop Buttons

- **HBSS**
Surface Mount Key Switch with
Stop Button,
OPEN-CLOSE, Center Return
H= 4", W= 2", D= 1-3/4"
- *■ **HBFS**
Flush Mount Key Switch with
Stop Button,
OPEN-CLOSE, Center Return
FACE PLATE: H= 4-1/2", W= 2-3/4"
BACK BOX: H= 4", W= 2", D= 2"

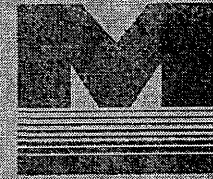


Specify Keyed Alike or Random
Available with Tamperproof Screws
Available with Best Cylinder
or Equivalent



ELECTRICAL
SAFETY EDGE

MillerEdge®



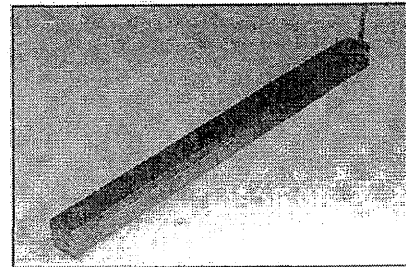
ME110 SwitchFlex®



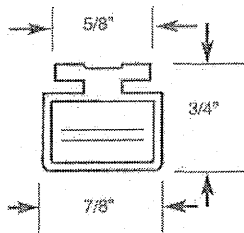
• Counter Shutters • Emergency Switches • Conveyor Systems • Rolling Grilles

About the ME110...

This pressure sensitive electric edge can be adapted to suit a wide variety of applications. It is manufactured to user specifications for length, sensitivity and outlet location. When touched lightly or at an angle, the ME110 sends an immediate signal to stop and/or reverse operations depending upon your particular application. Multiple mounting channel designs allow for easy installation on nearly any surface.



Specifications



Color: Black

Length: Per spec to nearest 1/4", max = 100ft.

Sensitivity: 8psi

Lead Wire: 2ft. 22 gauge - standard

Wire Outlet Location: specify right hand, left hand or end

Electrical Requirements: Maximum 24 volts AC/DC, 1/2 amp

Wiring Diagram: 2 wire, N. O.

Mounting Channel: High density PVC

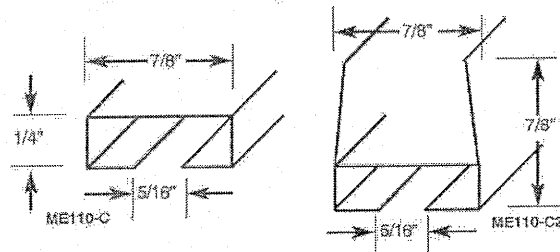
Sensing Edge: Extruded flexible PVC

Contact Element: Alumaglas®

Temperature Range: -30°F to +155°F

Options

- 4 wire self monitoring
- Soft ends
- Coil Cord attached
- 4-wire Control Panel (MFSC-100)
- 4-wire intrinsically safe control panel (FSIS-25-4)
- Pneumatic (MEP110) Air-Wave (MAW110)
- Mounting Channel Designs:



Installation

Place appropriate ME110 mounting channel in desired location. Drill 1/8" holes through channel and into mounting surface every 24". Attach channel to surface with screws. Slide ME110 SensingEdge into channel and wire to controls.

Note: Use a maximum 24 volt, 1/2 amp AC/DC power. Overload can cause damage. For detailed installation and wiring instructions, contact Miller Edge, Inc.

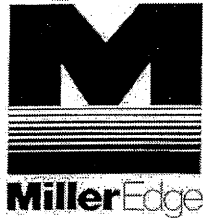
Care of the ME110...

Minimum care is required for the ME110 since it is manufactured with only the most durable materials and the highest quality control standards. However, SensingEdges should be examined regularly for cuts or punctures which could damage internal components. Check wiring to be sure connections are secure. When properly maintained, the ME110 offers years of trouble free operation.

U.S. patent #4,398,814 Canadian patent #1,048,066 other patents apply.

MILLER EDGE, INC. • P.O. Box 159 • West Grove, PA 19390 • (610)869-4422 • Fax: (610)869-4423 • 800-220-3343 • www.milleredge.com
MILLER EDGE, INC. • 6809 South Hari Avenue, Suite A, Tempe, AZ 85283 • (480)755-3565 • Fax (480)755-3558 • 800-887-3343

REV. 8-23-04



Miller Edge Receiver Installation Instructions (Model MWR02)

General Information About the Model MWR-02 Receiver

The Miller Edge Model MWR-02 universal receiver was designed to have several selectable options not found on other radio controls. By properly selecting these options with the convenient slide switches and wiring harness, the Model MWR-02 eliminates the requirement to stock several receivers.

1. The Model MWR-02 will operate on either 12 or 24 Volt AC or DC by selecting either 24V or 12V with the voltage selection switch.
2. The Model MWR-02 will generate either a 0.5 second pulsed, or a continuous relay output depending on the setting of the output slide switch. To energize the output relay as long as the transmitter is activated, select the CONT position. To energize the output relay for 0.5 seconds regardless of how long the transmitter is activated, select the PULSED position. Many gate operators and some garage door operators will not work properly when the switch is not in the CONT position.
3. The Model MWR-02 comes standard with 5 wires. Two of these wires (red and black) are for the power input and the other three are the relay contacts. The white wire is the relay common and is always used. Most control circuits require a normally open switch contact. For these applications use the NO (yellow wire) and the white wire. It is recommended that the unused orange wire be cut off. For controls requiring a normally closed switch contact use the NC (orange wire) and the white wire. It is recommended that the yellow wire be cut off, if it isn't used.
4. The Model MWR-02 comes standard with an "F" connector and a 1/2 wave wire antenna. If signal conditions require the use of an external coax antenna to eliminate signal blockage due to obstructions, dead spots etc., use RG59 coax to extend the antenna to the remote location. The 1/2 wave wire antenna may be left on the receiver.

Model MWR-02 Installation Instructions

1. Disconnect the power to the operator.
2. Remove access cover of receiver to gain access to the coding switch and the programming switches.
3. Place the voltage selector slide switch in either the 24V or 12V position depending upon the control voltage of the operator.
4. Place the output selector slide switch in either the CONT or PULSED position depending upon the operator being used. In most cases either position will work properly.
5. Set the 9 pole, 3 position coding switch under the access cover to match the transmitter coding switch. Any switch position will work as long as the transmitter coding switch and the receiver coding switch are exactly matched.
6. Mount receiver inside the operator control box so that the wires from the receiver will reach the terminal strip on the operator.
7. Connect the black wire (-V) and the white wire (COMMON) to negative power terminal.
8. If the operator requires a normally open contact to activate the operator, connect the yellow wire (NO) to the relay output of the operator. Cut off the orange wire. If the operator requires a normally closed contact, connect the orange wire (NC) and cut off the yellow wire.
9. Connect the red wire (+V) to the positive power terminal of the operator.
10. Reconnect the power to the operator and test the system. Position the green antenna wire so it is hanging down outside the operator box. If needed, to improve reception, cut the length of the green wire in half.

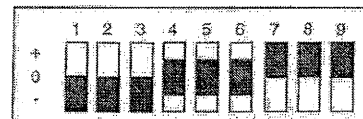


Figure A



Miller Edge Transmitter Receiver Installation Instructions (Models MWT02, MWTA02, and MWR02)

Setting the Code for the Single Entry Transmitter (Models MWT02 and MWTA02)

You may set your transmitter to any code you desire, but be sure the code you set matches on both your transmitter and receiver. There are nine (9) dip switches, each of which can be placed in three different positions (+, 0, -). DO NOT set all switches in the same position, such as all +, all -, or all zero (**Figure A**). **WARNING:** No other adjustments should be made inside the transmitter. Now that you have selected your personal code, replace the transmitter cover.

* Mount transmitter box directly to gate post or door. **NOTE: DO NOT** drill any holes in the transmitter box. Use only mounting holes provided, any additional holes in transmitter box will cause water to enter and a loss of warranty.

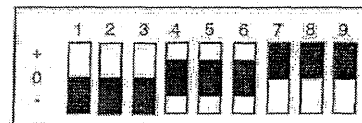
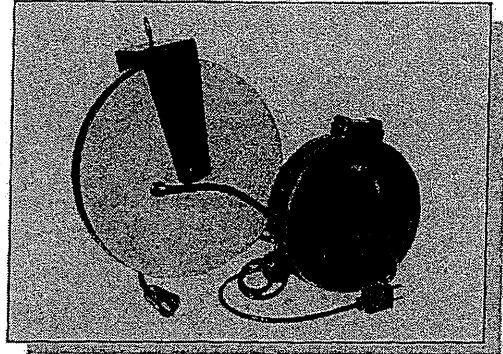


Figure A

Cord Reels

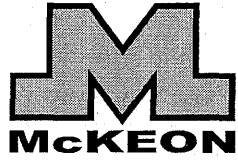
Industry Standard Cord Reels Provided without Stops for Door and Gate Industries. Supplied with Mounting Brackets.



Model	Type	Extended Length	AWG/ Conductors
CRP-2	SVT	20 ft.	18/2
CRP-2 (metal case)	SVT	20 ft.	18/2
CRP-3	SVT	20 ft.	18/3
CRP-3 (metal case)	SO	30 ft.	18/3
CRP-3P (metal case)	SJT	30 ft.	18/3
RC50	SJTO	50 ft.	16/3



MECHANICAL
TROUBLE SHOOTING



MAINTENANCE
INSTRUCTION
&
SCHEDULE



MAINTENANCE INSTRUCTION FOR ROLLING STEEL DOORS

LUBRICATION: The most important single maintenance item on doors of this type is lubrication. This is required only at certain points because all rotating members are equipped with high quality sealed bearings that are lubricated for life.

The curtain guides and the teeth of the gears contained in chain hoist or hand crank mechanism (if supplied) should be lubricated at least twice a year (more often if door is operated frequently) with one of the following greases:

Summer: Dixon's #2 Graphite Cup Grease
Alemite MP Lithium Grease (#1 for winter weather, #2 for normal weather)
Texaco #904 Graphite Grease, or their equivalents.

If the door is electrically operated check the oil level in the worm gear speed reducer every six months and replenish if necessary with S.A.E. 140 gear oil for normally heated buildings, or thinner grades for outside installations exposed to low temperatures.

PAINT: All non-lubricated steel surfaces should be painted annually (more often if required in corrosive atmospheres) with a good grade of rust-inhibiting metallic base paint.

SPRING ADJUSTMENT: In time, the counter balancing springs may lose some of their initial tension. This condition imposes an extra load on the operator and should be corrected as follows:

1. Manually operated doors should be opened fully by hand and held open by C-clamps or vise grip pliers on each guide.
2. Mechanically operated doors should be opened fully and the crank or had chain should be locked to hold the door open.
3. Electrically operated doors should be opened fully by pushing the "UP" or "OPEN" button. Motor brake will hold the door open.
4. With a suitable tool (18" or 24" pipe wrench or large spanner) turn the spring adjusting wheel (1/8 turn at a time) until door is balanced properly. Make sure locking pawl is properly engaged in spring adjusting wheel.

For door with adjusting wheel on left hand side, wind springs clockwise.
For door with adjusting wheel on right hand side, wind springs counter clockwise.



DOOR OPERATOR SCHEDULED MAINTENANCE

	MAINTENANCE PERFORMED	MONTHLY INTERVAL			
		1	3	6	12
DRIVE CHAIN	ADJUST TENSION AS REQUIRED LUBRICATE AS REQUIRED		○		
LIMIT ADJUSTMENTS	CHECK FOR FULL TRAVEL (NO OVERTRAVEL)		○		
DRIVE SPROCKETS	CHECK SET SCREWS CHECK FOR ABNORMAL WEAR		○		
DRIVE BELTS	CHECK FOR ABNORMAL WEAR CHECK TENSION & RETIGHTEN AS REQUIRED		○		
GEAR REDUCER	CHECK OIL LEVEL (CHECK FOR SIGNS OF LEAKAGE)			○	
CLUTCH	CHECK FOR PROPER OPERATION AND ADJUST AS REQUIRED (SEE CLUTCH ADJUSTMENT PROCEDURE IN OPERATION MANUAL) REPLACE PADS AND SPRING IF CLUTCH CAN NOT BE SET SATISFACTORILY		○		
MOUNTING BOLTS	CHECK AND TIGHTEN AS REQUIRED			○	
ELECTRICAL CONNECTIONS	INSPECT CONNECTIONS FOR LOOSE SCREWS, AND MECHANICAL DAMAGE SUCH AS WORN OR BROKEN INSULATION, BROKEN WIRE ENDS, OR FRAYED CONNECTIONS			○	
DOOR	INSPECT ALL MOVING PARTS FOR CORRECT OPERATION. (NO BINDING) INSPECT ROLLERS, HINGES FOR ABNORMAL WEAR, CHECK GUIDES FOR CORRECT CLEARANCE LUBRICATE AS REQUIRED	○			
OBSTRUCTION SENSING DEVICES	CHECK FOR PROPER OPERATION	○			

RECOMMENDED LUBRICATION:

ALL CHAINS - CHAIN LUBRICANT
 IDLER SPROCKETS AND SHAFTS - GENERAL PURPOSE SILICON BASE GREASE
 GATE ROLLERS OR HINGES - AS SPECIFIED BY MANUFACTURER
 DISCONNECT LEVERS AND OTHER MOVING SHAFT PARTS - 30 WT. OIL
 GEAR BOX: 30°F TO 140°F - 80 QT. GEAR OIL (STD) AGMA - 7
 40°F TO 150°F - 80 QT. 140 SYNTHETIC

NOTE: DO NOT OVERFILL GEARBOX.

083700

FIRE RATED FOLDING DOORS



Won-Door Corporation

1865 South 3480 West
Salt Lake City, UT 84104
(800) 890-2149
Fax (801) 977-2167

DATE: OCT 30, 2008
TO: PAM BARR
FROM: SHERYL LANE
RE: 40035 UNIV OF KY BIO

Dear GENTLEMEN

Please use this letter as a certification that The Won-Door Corporation (WD) will provide **one FireGuard-60** door that meets the design intent for specification section **083700**. This FireGuard product will have a fire rating of **SIXTY (60) minutes**.

Also, please use this letter as a certificate of installation compliance with the UL rating. A Won-Door field service technician, who has been extensively trained at Won-Door's factory and on the jobsite, will install the **FireGuard-60 door**.

Please feel free to call me if you have any questions.

Thank you,

SHERYL LANE
WON-DOOR CORPORATION
PROJECT MANAGER
1-800-890-2149



Salt Lake Office

Won-Door Corporation
1865 South 3480 West
Salt Lake City, Utah 84104

Telephone: (801) 973-7500
Sales Fax: (801) 977-9749
Customer Service Fax: (801) 977-2167
Web Site: www.wondoors.com

RE: 40035 UNIV OF KY BIOLOGICAL SCIENCE – PHARMACY BUILDING
146 VIRGINIA AVE
LEXINGTON KY 40508

LIMITED WARRANTY

I. ONE YEAR WARRANTY

Subject to conditions and limitations stated, **Won-Door Corporation** warrants to the owner that each **Won-Door Fireguard** accordion fire door will be free from defects in materials and workmanship for a period of one (1) year following the date of substantial completion. Should any defect in material and workmanship appear within this one (1) year period, **Won-Door Corporation** shall, upon notification, replace or repair, at its option, any defective part or parts.

II. CONDITIONS

1. This warranty is valid only if installation is performed by Won-Door factory trained technician.
2. This warranty is valid only within the United States and Canada unless expressly extended by an office of Won-Door Corporation.
3. This warranty shall terminate upon removal of the accordion fire door from its original installed position.
4. 12-volt batteries used in the Automatic Closing System will be replaced at no charge exclusive of freight and labor during the life of this warranty provided they do not become defective due to disruption of A/C electrical service for more than 72 hours.
5. **Won-Door** shall not be liable for damage to the accordion fire door from any of the following:
 - a. Accident, alteration, misuse, flood, riots, fire or acts of God;
 - b. Vandalism or acts of mischief;
 - c. Settling of the building or any occurrence causing unleveling of the structure to which the folding partitions is attached;
 - d. Obstruction in the operating path of the accordion fire door;
 - e. Storage pockets, pocket doors and hardware that do not conform to Won-Door specifications.

III. LIMITATIONS

This warranty is in lieu of all other warranties, either expressed or implied. In no event shall **Won-Door Corporation** be liable for any consequential damages.

RE: UK Pharmacy
Lexington KY

LIMITED WARRANTY

I. ONE YEAR WARRANTY

Subject to conditions and limitations stated, **Won-Door Corporation** warrants to the owner that each **Won-Door Fireguard** accordion fire door will be free from defects in materials and workmanship for a period of one (1) year following the date of substantial completion. Should any defect in material and workmanship appear within this one (1) year period, **Won-Door Corporation** shall, upon notification, replace or repair, at its option, any defective part or parts.

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III. LIMITATIONS

This warranty is in lieu of all other warranties, either expressed or implied. In no event shall **Won-Door Corporation** be liable for any consequential damages.

Contact for Warranty

Susan Pappas 800-890-2111
Service Department
Won-Door Corporation
1865 South 3480 West
Salt Lake City UT 84104
susp@wondoor.com

Terms & Conditions

Service Agreement

It is understood that this service agreement is for the purpose of performing periodic inspection, testing and routine maintenance to the covered equipment.

Term

Won-Door shall notify Purchaser, at least 30 days prior to the expiration of the original or any renewal term of this agreement, of any price increase proposed for the next annual contract period, otherwise the price shall remain the same as that charged for the prior contract term.

Parts & Labor

Parts and Labor for the repair of covered equipment, if required, shall be at the expense of the Customer (except parts covered by warranty). Prior to installation of new parts, Won-Door will advise the customer of what parts or materials Won-Door recommends be replaced or repaired. The Customer agrees to pay Won-Door for parts and Labor at the time of repair at Won-Door's current list price and labor rates. Parts and materials ordered by the Customer hereunder are subject to availability at the time of ordering.

Access to Equipment

Customer shall furnish Won-Door with reasonable access to the equipment covered by this agreement. Customer shall provide such working space and facilities on the premises as may be required by Won-Door to perform the services covered by this agreement.

Limitation of Liability

Won-Door's liability for failure of performance of this service agreement, shall be limited to the refunding of a portion or whole of the payment made by the Customer for the service. Won-Door will endeavor to render prompt service hereunder, but will not be responsible for loss or damage caused directly or indirectly as a result of unavoidable delay in the rendering of such service.

Delinquent Payments

If a collection matter occurs, Customer agrees to pay court costs and any reasonable attorney's fees. Interest will be charged at 1 1/2% per month after thirty (30) days on any unpaid balance. Won-Door reserves the right to withhold service or cancel this agreement if a customer's account is over sixty (60) days delinquent.

Entire Agreement

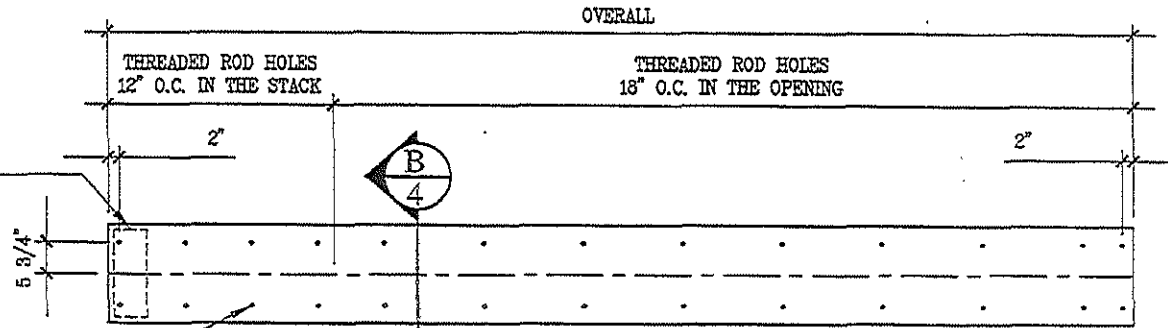
It is understood and agreed that this agreement constitutes the entire agreement for the services herein described, that all other prior representations or agreements, whether written or verbal, shall be suspended hereby and no changes in or additions to this agreement shall be recognized unless made in writing and signed by both parties.

PLAN VIEW-HEADER

SCALE: NO SCALE

MOTOR DRIVE UNIT MOUNTED AT THE BACK OF THE POCKET BY WON-DOOR

1/2" DIA. HOLES FOR THREADED RODS BY WON-DOOR STARTING 2" FROM THE ENDS & CONTINUING 12" O.C. IN THE STACK & 18" O.C. IN THE OPENING.



PLAN VIEW

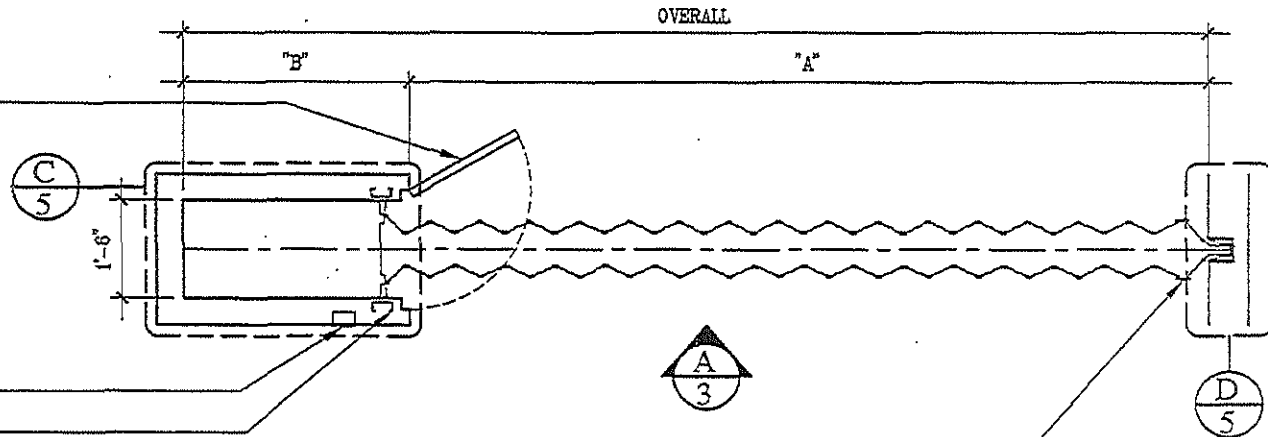
SCALE: NO SCALE

POCKET COVER DOOR BY OTHERS

KEY SWITCH BY WON-DOOR

STUD CENTERED 5" FROM THE FACE OF THE POCKET BY OTHERS. TYPICAL ON BOTH SIDES OF THE POCKET.

EXIT HARDWARES BY WON-DOOR (TYPICAL ON BOTH SIDES OF THE DOOR.)



DIMENSION TABLE

DOOR #	"A"	"B"	OVERALL	DOOR #	"A"	"B"	OVERALL	DOOR #	"A"	"B"	OVERALL
P-1	7'-1 1/8"	3'-3"	10'-4 1/8"								

FIREGUARD PLAN VIEW

40055

WON-DOOR CORPORATION
1855 SOUTH 3400 WEST
SALT LAKE CITY, UT 84104



FIREGUARD ELEVATION

40055

TOP OF TRACK / BOTTOM OF HEADER

BOTTOM OF SOFFIT

MOTOR DRIVE UNIT BY WON-DOOR

STORAGE POCKET

CONTROL BOX BY WON-DOOR

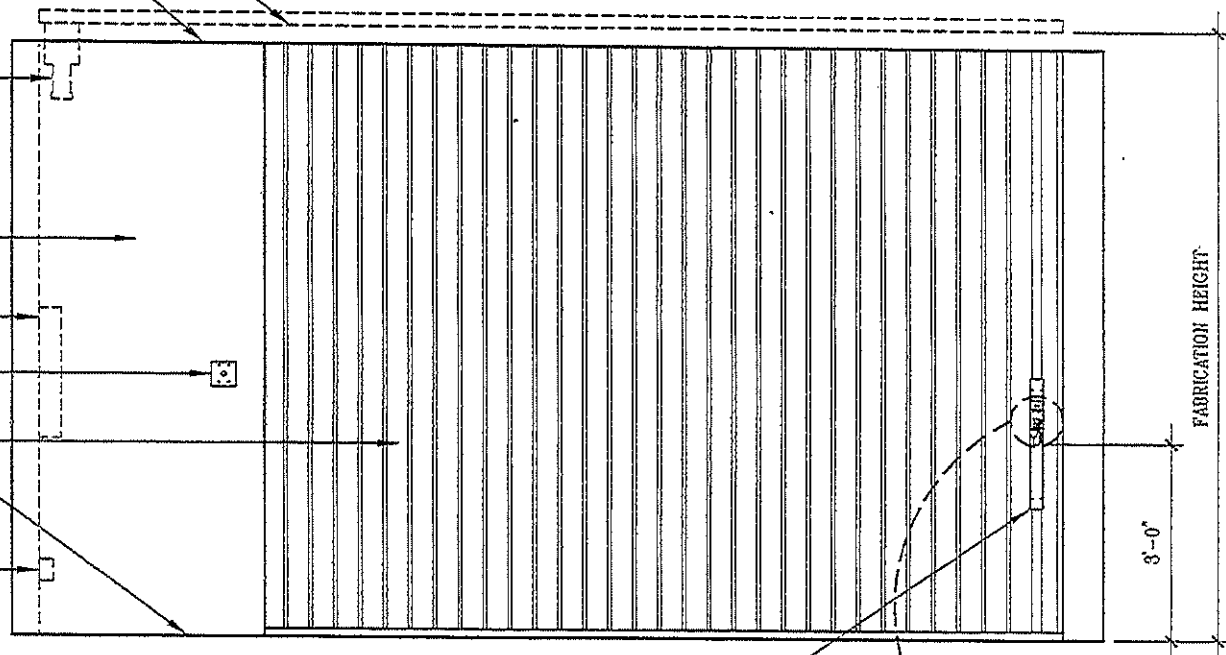
KEY SWITCH BY WON-DOOR (SEE PLAN VIEW
FOR ACTUAL LOCATION)

FIRE-RATED ACCORDIAN DOOR BY WON-DOOR

FINISHED FLOOR

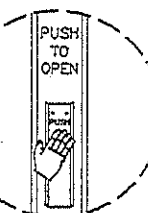
(2) 4" x 4" "J" BOXES BY OTHERS,
MOUNTED 12" FROM THE FINISHED FLOOR.
(SEE ELECTRICAL SHEET)

EXIT HARDWARE BY WON-DOOR (TYPICAL ON
BOTH SIDES OF THE DOOR)



FABRICATION HEIGHT

3'-0"



A
3

ELEVATION

SCALE:

NO SCALE

WON-DOOR
CORPORATION
1885 SOUTH 3180 WEST
SALT LAKE CITY, UT 84104



FIREGUARD HEAD DETAIL

40055

WON-DOOR CORPORATION
1865 SOUTH 3400 WEST
SALT LAKE CITY, UT 84104



STRUCTURAL SUPPORT ABOVE BY OTHERS.

1/2" DIA. THREADED RODS WITH NUTS & WASHERS BY WON-DOOR. 12" O.C. IN THE POCKET & 18" O.C. ACROSS THE OPENING!

ONE HOUR WALL CONSTRUCTION BY OTHERS. (REFER TO UL FIRE DIRECTORY FOR CONSTRUCTION GUIDELINES.)

(1) LAYER 3/4" x 17 1/4" + 3/4" / -1/4" x CONTINUOUS PLYWOOD AND (2) LAYERS 3/4" x 15" ± 1/2" x CONTINUOUS PLYWOOD BY WON-DOOR. STAGGER JOINTS, GLUE & SCREW TOGETHER @ 24" O.C. WITH (2) #7 x 1 5/8" SCREWS. HEADER MUST EXTEND TO BACK OF THE POCKET WITH MAX. GAP OF 1/2". HEADER MUST BE PARALLEL WITH THE FLOOR WITH A MAXIMUM TOLERANCE OF ± 1/8".

NOTE: SCREWS ONLY ACCEPTABLE AT LAP-JOINTS

(2) LAYERS 5/8" x 18" x CONTINUOUS TYP "X" GYP. BOARD BY OTHERS.

(3) LAYERS 1/2" x 3 5/8" x CONTINUOUS TYP "X" GYP. BOARD BY OTHERS. RUNNING THE WHOLE LENGTH OF THE OPENING & TERMINATING 12" FROM THE BACK OF THE POCKET. TOTAL THICKNESS OF GYP. MUST BE 1 1/2". DO NOT BEAD CORNER.

L-SHAPED TRIM PIECE BY WON-DOOR. PRE-FINISHED WHITE COLOR TO MATCH TRACK. PROVIDES A TRANSITION FROM GYP. TO TRACK.

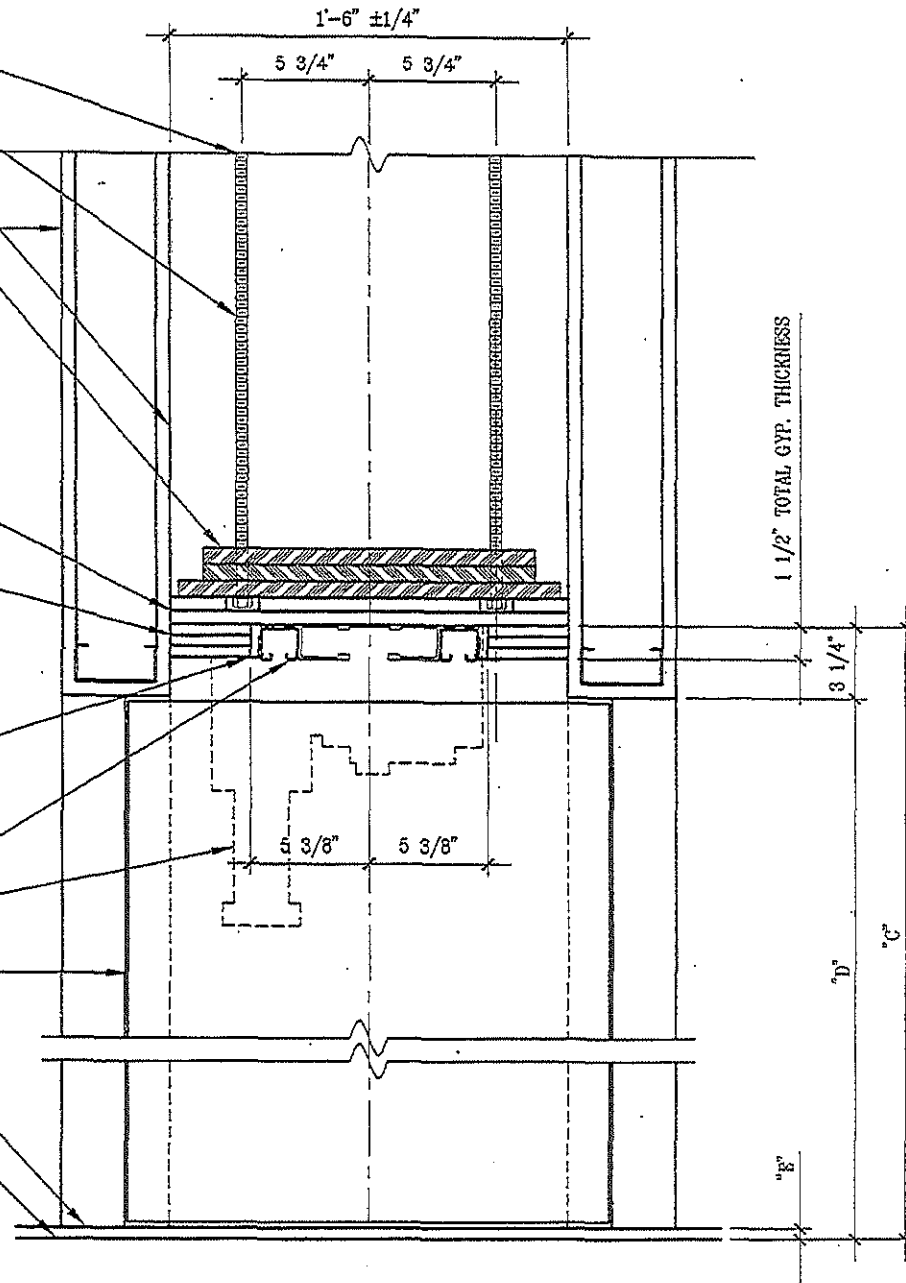
TRACK ASSEMBLY BY WON-DOOR.

MOTOR DRIVE UNIT MOUNTED @ THE BACK OF THE POCKET BY WON-DOOR.

POCKET COVER DOOR BY OTHERS. (SEE PLAN VIEW OR POCKET DETAIL FOR SWING ORIENTATION.)

FINISHED FLOOR

SUBFLOOR

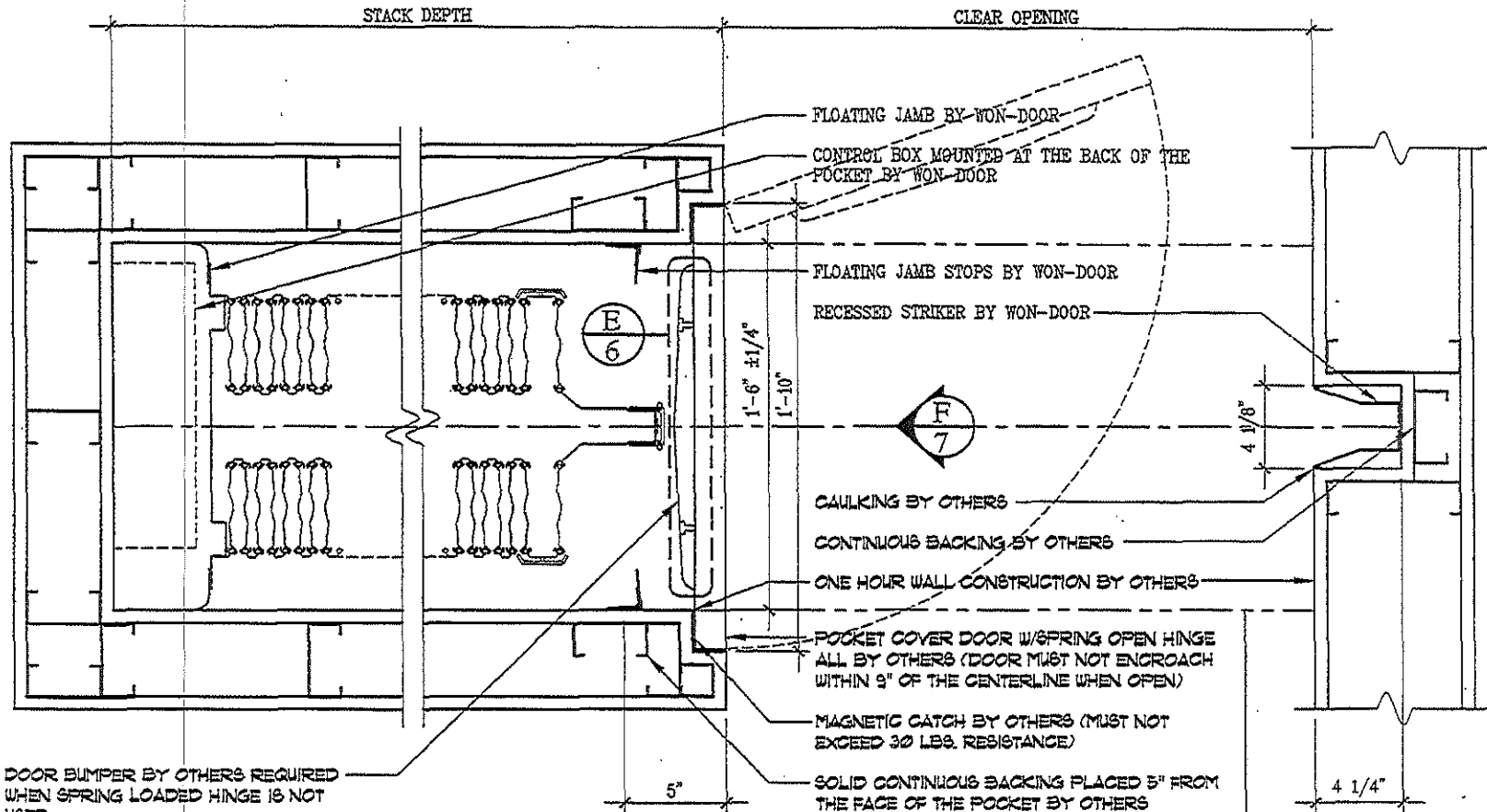


B HEADER DETAIL
4 SCALE: NO SCALE

FIREGUARD 20/60 DETAIL

40055

WON-DOOR
CORPORATION
1865 SOUTH 3480 WEST
SALT LAKE CITY, UT 84108



DOOR BUMPER BY OTHERS REQUIRED WHEN SPRING LOADED HINGE IS NOT USED.

NOTE: THIS DETAIL TYPICAL FOR ALL DOORS. SEE ARCHITECTURAL PLANS FOR SPECIFIC WALL CONFIGURATIONS.

NOTE: OBJECTS (WALLS, SOFFITS, DOORS, DOORJAMBS, ETC.) MUST NOT ENCR OACH WITHIN 9" OF THE CENTERLINE FOR THE ENTIRE LENGTH & HEIGHT OF PARTITION

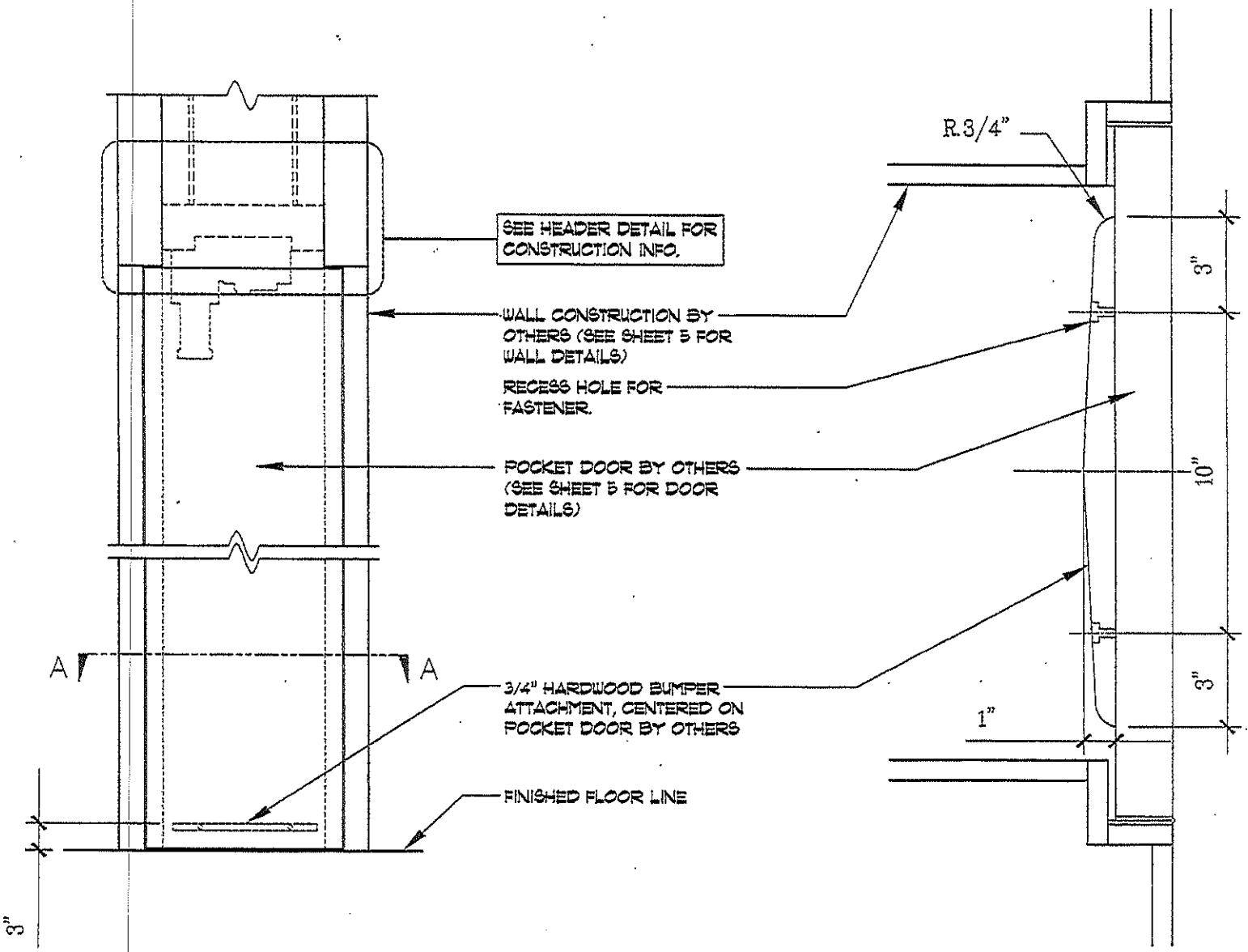
C POCKET DETAIL
5 SCALE: NO SCALE

D STRIKER DETAIL
5 SCALE: NO SCALE

BUMPER ATTACHMENT

40055

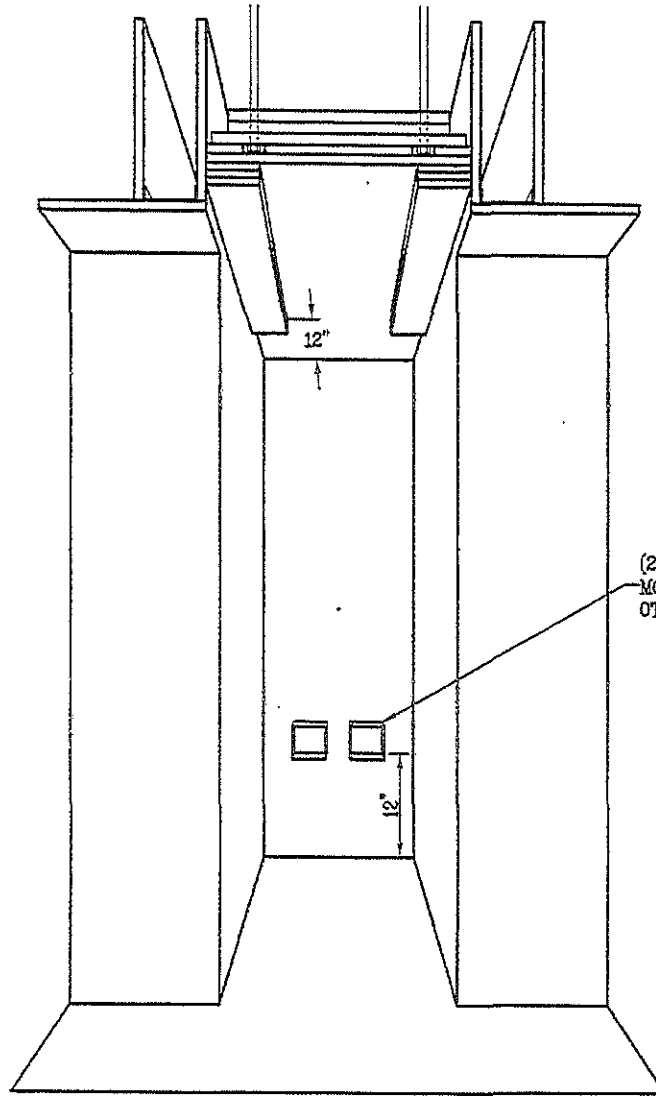
WON-DOOR
CORPORATION
1865 SOUTH 3460 WEST
SALT LAKE CITY, UT 84103



E
6 SECTION A-A

FIREGUARD PERSPECTIVE DETAIL

40055



(2) 4" x 4" SURFACE
MOUNTED "J" BOXES BY
OTHERS

F
7

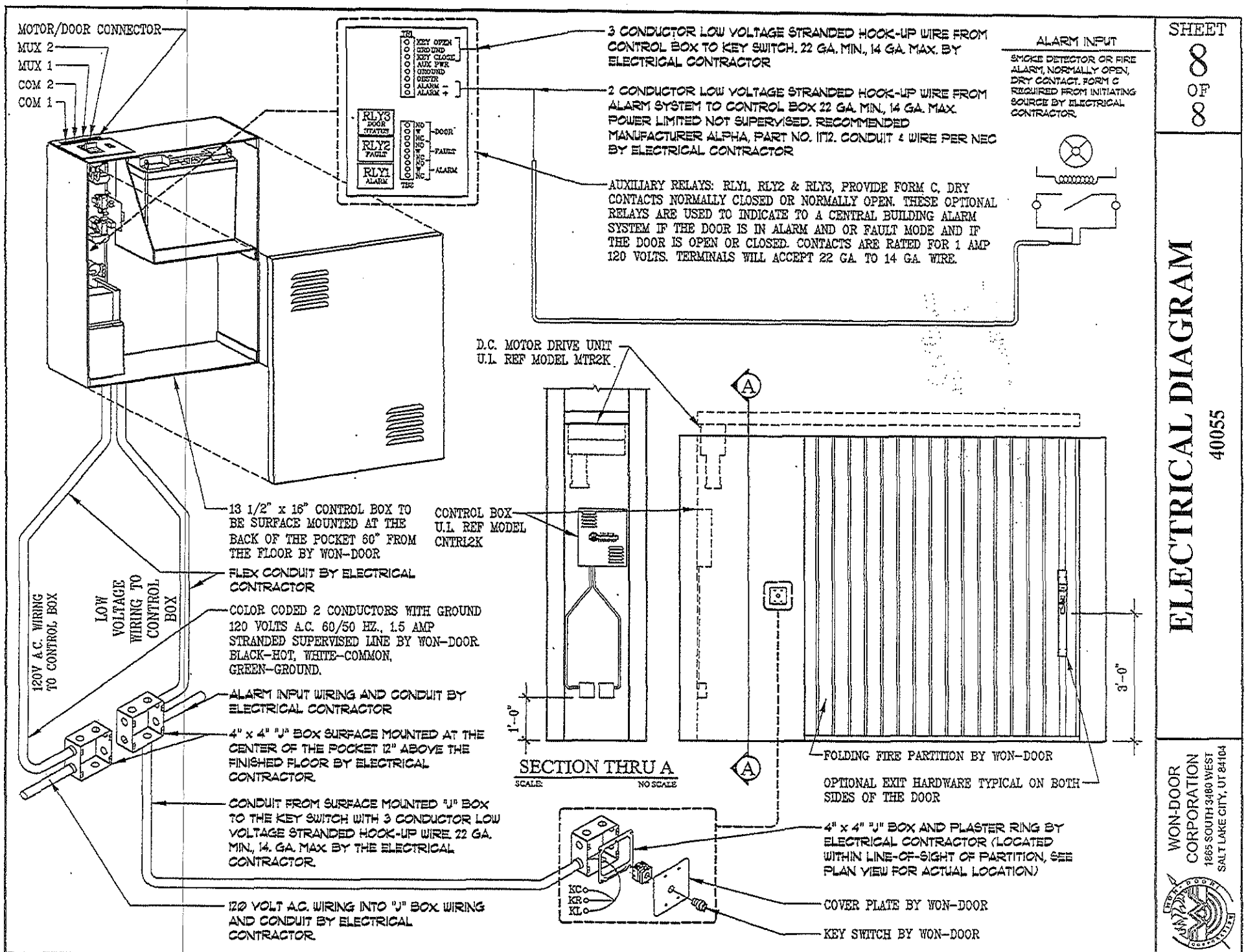
PERSPECTIVE

SCALE:

NO SCALE

WON-DOOR
CORPORATION
1855 SOUTH 3480 WEST
SALT LAKE CITY, UT 84104





ELECTRICAL DIAGRAM

40055

WON-DOOR CORPORATION
 1265 SOUTH 3480 WEST
 SALT LAKE CITY, UT 84104



Won-Door FireGuard

Owner's Manual

Operation &
Maintenance
Guide



Table of Contents

Standard Operation	2
Preventive Maintenance	4
Operator Troubleshooting	6

Won-Door Corporation
Main Office: (800) 453-8494
Service Department: (800) 890-2111

Frequently asked questions about the FireGuard system

■ **How do I operate the FireGuard door?**

see page 2

■ **How do I get the door to open?**

see page 2

■ **How do I reset the door?**

see page 3

■ **Why is my door beeping?**

see page 6

■ **Who do I call for service?**

see page 7

Standard Operation

Won-Door FireGuard folding partitions are a part of the fire and life safety equipment of your building and may only be installed and serviced by factory trained personnel. However, it is essential that building personnel have a basic understanding of their purpose and operation.

Reading this manual will acquaint you with the system and how it works. Suggestions on periodic preventive maintenance are outlined in the "Preventive Maintenance" section beginning on page 4. For information regarding various fault conditions or trouble signals, refer to "Operator Troubleshooting" on page 6.

The U.L. listed Won-Door FireGuard assembly is installed in the open position, typically in a storage pocket, closing upon a signal from either a smoke detector or fire alarm system. The door assembly operates on a 12 volt DC system which includes batteries, a transformer and a microprocessor. A 120 volt line connected to a junction box in the storage pocket near the "Control Box" is used to continually float charge the batteries at 13.8 volts. Upon activation of a building alarm, the door will close automatically. The speed at which the door closes can vary, but it is typically set to close at 10 inches per second. Concurrent with the building alarm will be the activation of the horn, an audible signal sounding a steady tone indicating that the system is in the "Fire Mode." It will remain in this condition until the system is physically reset (as described later in this manual).

The leading edge of the door is equipped with a special sensor. Upon encountering an obstruction the door will stop – only light pressure is needed to activate the sensor – pause momentarily, then continue closing. Once the door is in the fully closed position it can be reopened by:

- pressing the Close/Clear – Open/Mute rocker switch to the Open/Mute position which will engage the motor and open the partition. This switch is located on one side near the leading edge of the door assembly. Once the door is in operation, it can be

stopped at any point by pressing the same switch to the Close/Clear position.

- depressing the exit hardware. As little as four pounds of pressure applied anywhere on this plate will cause the door to retract a preset distance from its closed position. If the exit hardware is activated again after the door has stopped, it will open an additional distance equal to the established opening width. After retracting to the prescribed opening width, the door will pause, then recycle closed.

- operating it manually by physically pushing the door back to create an opening. This method can be used if there is a complete loss of power.

It is recommended that the Won-Door FireGuard assembly be routinely operated at least quarterly. This can be done without setting the building into an alarm condition by using the rocker switch. Activating the rocker switch will cause the door to close automatically. Pressing the rocker switch in the opposite direction will cause the door to automatically open.

The door is designed, and can be optionally installed, so that it will close upon power loss in the building. If this occurs, the door can be reset into the pocket by pressing the rocker switch to the *door open* position after the power has been restored.

Alarm activation will be the major reason that resetting the door will be necessary. Assuming that the condition which initiated the alarm has been cleared, resetting the system is accomplished by operating the rocker switch.

Preventive Maintenance

It is recommended that the door assemblies be operated at least quarterly (by use of the rocker switch) and that the following maintenance procedures be performed:

INSPECTIONS

1) The chain. The door assembly is chain driven. The chain is located in a guide track between the tracks in which the door travels. The drive sprocket is located immediately adjacent to the DC motor, and the return idler can be found at the opposite end. Proper chain tension must be maintained to insure reliable door operation. With the door in the fully open or retracted position, find the approximate midpoint of the opening. At the midpoint, the chain should be resting on the chain guide. If the chain has fallen out of the guide or if the door refuses to stay in the closed or open position, the tension of the chain may need to be adjusted. If so, contact the Won-Door Service Department for assistance.

2) The door track system. Locating the track system 3 1/4" above the ceiling line substantially reduces the possibility of damage. Nevertheless, periodic visual inspection of both tracks along the entire length of the opening will insure proper operation in an emergency condition.

3) The leading edge obstruction detector. This is the aluminum cap on the leading edge of the door assembly. Sensing switches, located behind this cap, are connected to the microprocessor. The edge cap should be firmly attached to the lead post assembly of the door and installed so that the only movement is for the activation of the sensors. Test for proper operation by placing the door in the open position. Close the door by operating the rocker switch in the close direction. While the door is closing, depress the leading edge. If the door does not stop quickly or if the edge cap is loose or improperly aligned, contact the Won-Door Service Department to schedule a service call.

4) Operation from open to closed position. Actuate each FireGuard door by pressing the rocker switch to close and then to open, checking for smooth operation across the entire opening. As the door closes, make sure that the leading edge fully seats into the striker. As the door opens, see that the door stops in the properly stacked position.

5) The exit hardware. With the door in the fully closed position, depress the exit hardware to ensure that the door opens the desired amount. (ie: the door will open to a minimum of 38" and stop.)

6) The trolleys and panel pins. Inspect the trolleys and panel pins for damage.

7) The sweeps. Check the top and bottom sweep for proper seal. If there are any tears, holes or light gaps, the sweep should be repaired. If the damage is extensive, it should be replaced.

LUBRICATION

1) The chain. There should always be a light film of lubrication coating the entire chain, indicating adequate lubrication. Use lithium chain oil.

2) The tracks and support trolleys. Apply a light film of lithium grease along the inside of the track as well as on the trolley rollers.

CLEANING

The Won-Door FireGuard doors are easy to clean. The panels, lead posts and bottom of the track are to be cleaned with a mild soap and water base cleaner. Cleaning should be done quarterly unless excessive dirt buildup occurs. In that case, the door should be cleaned more frequently.

Operator Troubleshooting

The Won-Door FireGuard system is the only fire door assembly which is entirely electronically supervised. The microprocessor, located in the "Control Box," receives input from the various integral door components. Monitoring is continuous, occurring approximately 3 times per second. If for any reason a fault condition occurs, an audible signal will be transmitted from a horn located on the Control Box.

If, upon arriving at the door location in your building, you find the door either in the open or closed position and you hear a fault signal, listen carefully to the horn pattern. This pattern will indicate what has caused the condition.

1) A single beep pattern means there is a battery fault. This condition will occur if the battery is overcharged or undercharged due to a failed component in the power supply or if there has been a loss of AC power for a sustained period of time. If the latter situation has occurred, the batteries will have discharged to such a point that, for fire protection, the door will have automatically closed while adequate power remained.

To correct the fault, operate the rocker switch. If the fault clears, make a note that the fault occurred. If it reoccurs within 24 hours, call Won-Door Service and schedule a service call to test the charging system or replace the batteries.

If the fault did not clear when you operated the rocker switch, it is a clear indication that the batteries are low because there was a loss of AC power going to the control box. Since low battery faults will have priority over loss of AC power faults, you may hear the low battery horn pattern even though the real problem is loss of AC power. Follow the procedure for restoring AC power described below. If the fault still cannot be corrected, contact Won-Door Service to schedule a service call.

2) A two beep pattern is communicating a loss of AC power. As soon as the AC power is restored, this fault will automatically clear. If you

are experiencing a general power outage, and it will be a long time before the 120 volt service can be restored, mute the door with the rocker switch to temporarily silence the horn.

If the power is not off:

- check the building circuit breaker to insure there is no interruption of the 120 volt power to the control box.
- If the breaker is okay, check the AC fuse in the control box (it is the one on the left marked 3 amp). Replace it if it is bad. For safety, before entering the pocket to check the fuse, unplug the wire connecting the floating jamb to the control box. The horn will sound a 5 beep pattern and the door will be prevented from opening while you service the fuse. Once the fuse is checked or replaced, be sure to plug the floating jamb wire back in. Reset the 5 beep pattern by operating the rocker switch.

3) A three beep pattern indicates that there is a switch malfunction.

- Check the leading edge detector at the front of the door by pulling out on the cap. If the fault clears it means the leading edge cap is sticking. Contact Won-Door Service to repair the damaged cap.
- Check the fire exit hardware on both sides of the door. If pulling gently on the plates causes the fault to clear, either the switches behind the plate are damaged or the plate is not functioning properly. Call Won-Door Service and arrange for a service call.
- If neither of these procedures enables you to identify the problem, contact Won-Door Service for repair.

4) A continuous tone means that the door is in fire mode and will seek the closed position. As soon as the initiating device (a smoke detector or building alarm system) has been cleared the door can be reset by operating the rocker switch. It can then be operated back into the pocket.

Other fault conditions routinely monitored by the microprocessor are identified by a detailed description of horn patterns found in the "Operation and Instruction Manual" available from the Won-Door Corporation. To schedule service or request additional information, contact the Won-Door Service Department at 1-800-890-2111.



**Underwriters
Laboratories Inc.®**

Northbrook Division

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Northbrook, IL 60062-2096 USA
www.ul.com
tel: 1 847 272 8800
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Customer service: 1 877 854 3577

File R12272

11/30/1987

REPORT

on

UNITS, PARTITION PANELS

Under The

CLASSIFICATION PROGRAM

WON-DOOR CORPORATION
Salt Lake City, UT

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D E S C R I P T I O N

MATERIALS:

The following is a description of the materials used in the test assembly. For clarity, they are separated into the wall opening assembly and the single sliding partition panel.

WALL OPENING ASSEMBLY

Studs - The studs used to support the gypsum wallboard were fabricated in two sizes, one having a 4 in. web with 1-1/8 in. flanges and 5/16 in. returns and a thickness of 0.032 in. No. 22 MSG, and the other having a 6 in. web with 1-5/16 in. flanges and 5/16 in. returns and a thickness of 0.020 in. (No. 26 MSG). Both types were fabricated from galvanized steel and supplied in 12 ft lengths.

Runners - The runners used at the ends of the studs were fabricated in two sizes, one having a 4 in. web and 1 in. flanges and a thickness of 0.025 in. and the other having a 6 in. web with 2 in. flanges and a thickness of 0.022 in. Both types were fabricated from galvanized steel and supplied in 10 ft lengths.

Wallboard, Gypsum - The wallboard was 1/2 in. thick, Type C, and supplied in 4 ft by 12 ft sheets. The wallboard is Classified in the Fire Resistance Directory and is under the Follow-Up Service of Underwriters Laboratories Inc.

Cornerbead - The cornerbead used at the outside corners of the gypsum wallboard had 1-1/4 in. legs and was fabricated from No. 26 MSG galvanized steel.

Joint System - The joint compound was a dry powder, field mixed. The tape was a perforated paper type.

Wallboard Screws - The screws used to fasten the wallboard to the studs were Type "S" double lead Phillips bugle head, fabricated from case hardened steel. The length was 1 in. for the first (base) layer and 1-5/8 in. for the second (exposed) layer.

Plywood - Plywood used to form the support for the wall header was 23/32 in. (nominal 3/4 in.) thick, rated APA Sturdi 1, floor type, supplied in 4 by 8 ft sheets.

Adhesive - Adhesive used to bond the layers of plywood together was a construction type identified as Formula 38 drywall construction adhesive.

Header Screws - Screws used in conjunction with the construction adhesive were Type "G", 1-1/2 in. long steel.

Hangers - Hangers used to support the plywood header were 1/2 in. diameter steel threaded rods 24 in. long used with steel washers and steel nuts.

SINGLE SLIDING PARTITION PANEL

The partition panel was produced and was eligible for Classification as a Fire Door described as a horizontal-single sliding accordian-type. The Fire Door was tested with the corresponding frame assembly and hardware.

The partition panel assembly consisted of a track and trolley system, floating jamb, striker jamb, folding panels, and an automated closing system.

The partition panel was designed to fit into an opening of 135 in. in width and 108 in. in height.

The folding curtains of the wall assembly consisted of painted steel sections having thermal insulation secured to the back by means of spring clips. The individual folding curtains were connected together by means of steel hinges inserted into grooves located along the vertical edges of the individual panels. The curtains (front and back) were then mechanically fastened together at their side locations by means of channels at the floating jamb and by means of the lead post to form the completed wall assembly.

CONSTRUCTION OF TEST ASSEMBLY:

Wall Component - The opening into which the partition panel was installed was constructed as follows:

To assure that proper support was attained, at the header, 1/2 in. thick by 30 in. wide steel plates were welded to the underside of the test frame by means of 2 in. by 2 in. steel angles which in turn had been welded to the test frame at the corresponding spacing to receive the plates. Steel threaded rods were welded to the plates with steel nuts as a temporary attachment. The rods were spaced 18 in. OC in the field and 12 in. OC at the stacking location (at the floating jamb) and were in two rows spaced 15 in. OC. A wood header was fabricated on the ground from three layers of 3/4 in. plywood with the layers bonded together using construction adhesive and Type "G" screws. Steel nuts were threaded onto the rods for leveling the header. After proper curing of the adhesive, approximately 24 h, the wood header was placed in the assembly and suspended from the threaded rods using steel nuts and steel washers as required. The header was leveled as necessary using the steel nuts and washers above and below the header.

The wallboard was attached to the plywood in two layers using 1 in. Type "S" screws for the first layer and 1-5/8 in. Type "S" screws for the second layer.

Steel runners, 6 in. wide, were fastened to the wood header and sill at the striker jamb using masonry anchors at the sill and Type "S" screws at the header. The 6 in. wide steel studs were fastened to the runners and the masonry wall using masonry anchors at the wall and Type "S" screws at the runners. The studs were spaced to allow a pocket to accept the striker jamb.

Steel runners, 4 in. wide, were fastened to the header and sill in the same manner as at the striker jamb at a width allowing insertion of the floating jamb assembly of the fire door. The wall area above the header was erected using 4 in. wide studs and runners. At the fire side of the wall the upper runner was welded to the 1/2 in. steel plates and the studs were fastened, with screw to the runner at a spacing of 24 in. OC. The lower runner was then attached to the studs with the same type screws. Wallboard was attached to the section in two layers with 1 in. long screws used for the first layer and 1-5/8 in. long screws used for the top layer. Wallboard extended below the plywood header. The lower runner was then fastened to the plywood header through its flange. The unexposed wall was fabricated on the ground using the runners and studs cut to the correct height and with a length allowing an opening for installation of the firewall motor. The two layers forming the interior of the wall were fastened to the studs on the ground and the assembly was lifted into place and held temporarily while the upper runner was welded to the steel plates and the lower runner was fastened to the plywood header using Type "S" screws. An opening to allow access to the fire door motor was constructed at the floating jamb side completing the unexposed wall above the firewall assembly.

The wallboard was fastened to the remaining areas in two layers installed on each side of the assembly. The taping system was applied to the exposed surfaces with corner beads used at all outside corners. A second coat of compound was applied approximately 24 h after the first coat was applied. An access door was fabricated from two layers of wallboard to enclose the opening for the motor.

The finish opening was 12 ft, 0 in. wide and 9 ft, 0 in. high to the bottom of the header. The depth from the bottom of the soffit to the bottom of the header was 3-1/4 in. The pocket at the striker jamb measured 4-1/16 in. wide and 4-3/16 in. deep while the pocket at the floating jamb was 18 in. wide and 8 in. deep. The wall opening under construction is shown in ILLS. 2 to 8.

INSTALLATION OF FIREWALL ASSEMBLY:

The test assembly was built into the gypsum wallboard wall constructed as described above. The track system was installed in the header in two parallel tracks using 1/4 in. diameter steel toggle bolts inserted into holes drilled through the track, wallboard, and plywood header. Steel washers were used with the toggle bolts. During installation of the track system, a hole for the motor drive unit was drilled into the header.

The stabilizing bar was placed in the track and the installation of the track was completed.

The motor drive unit was located in the chase area above the plywood and attached to the plywood using wood screws. The drive shaft engaged the drive gear located in the track.

The chain was installed in the assembly engaging the stabilizer bar, idler gear and motor.

The striker jamb was installed using No. 10 by 2-1/2 in. screws at the end away from the motor. The lead post was installed in the track and connected to the stabilizer bar followed by installation at the lower half of the stabilizer bar. The panel sections were placed in the track and the floating jamb was also placed in the track.

The various electrical wires were installed or adjusted as necessary.

The splice hinges, used to connect panel segments were installed creating a single folding panel on each track.

The floating jamb was connected to the frame using the 2-1/2 in. self-drilling screws spaced 18 in. OC driven through the studs. The north end of the panels was fastened to the floating jamb using the 2-1/2 in. self-drilling screws spaced 18 in. OC. The panels were fastened at the south end to the lead post using No. 8 by 3/4 in. self-tapping screws spaced 16 in. OC.

A soffit section was inserted on both sides of the track using No. 8 by 3-1/2 in. screws 36 in. OC, 4 in. from the butt ends. The control box was surface mounted approximately 5 ft from floor level at the floating jamb side. Electrical connections were made and the wall was tested for correct operation. The installation of the firewall assembly is shown in ILLS. 9 to 17. The exposed and unexposed surfaces of the assembly before test are shown in ILLS. 18 and 19, respectively.

T E S T R E C O R D N O. 1

FIRE ENDURANCE TEST:

SAMPLES

The test assembly measured 11 ft, 4 in. wide by 9 ft, 0 in. high and was erected in the test frame as previously described.

METHOD

The fire test was conducted in accordance with the Standard Fire Tests of Building Construction and Materials, ANSI/UL 263 (ASTM E119, NFPA No. 251).

The furnace temperatures were measured with 12 thermocouples symmetrically located in the furnace chamber positioned 6 in. from the exposed face of the assembly. The location of these thermocouples is shown in App. A, ILL. 1.

Temperatures of the unexposed surface were measured by twelve thermocouples, each covered with a 6 by 6 in. ceramic fiber pad. The location of these thermocouples is shown in Appendix A.

Temperatures of the inner wall of the assembly are shown, for general information purpose, in Appendix A, ILL. 2.

Temperatures of the header were measured by three thermocouples located as shown in App. A, ILL. 2.

Temperatures of the motor shaft were measured as shown in Appendix A for general information purposes.

Throughout the test observations were made to note the character of the fire and its control, the condition of the exposed and unexposed surfaces of the wall, and all developments pertinent to the performance of the assembly as a fire retardant with reference to stability, heat insulation, passage of flame, and generation of smoke.

RESULTS

Character and Distribution of Fire - The fire was luminous and well distributed, and the temperatures developed followed the Standard Time-Temperature curve, as shown in App. A, ILL. 1 and as specified in the Standard.

Observations of the Exposed and Unexposed Surface - The following observations were made during the fire test. All references to dimensions are approximate.

<u>Time:min</u>	<u>Observations</u>
1	The exposed surface was bowed inward at the edges and also at the fire side in the central area.
4	The exposed surface was flaming with the greatest amount of flaming observed at the lower area of the assembly.
5	No changes were observed in the unexposed surface of the assembly.
7	The corner beads at the exposed surface were buckling from the heat. Flaming appeared throughout the exposed surface of the assembly. The exposed surface was also bowed about the same as noted previously.
10	No changes were observed in the condition of the assembly from previous notations.
11	The exposed painted surface was charred and there was no flaming emanating from the assembly.
15	No changes were observed in either the unexposed or exposed surfaces.

<u>Time:min</u>	<u>Observations</u>
17	Smoke began to emanate from the upper surface of the exposed side of the assembly at the approximate center area at the header. The assembly felt cool to the touch at the upper one-third of the assembly.
20	Smoke was emitted from the top of the unexposed surface at the right hand side. There were no other changes on the unexposed surface. However, smoke was emitting from the top of the wallboard area at the edge of the framed portion of the assembly. This location was not part of the fire wall assembly area.
25	The smoke continued to emit from the upper area of the wallboard.
26	The exposed surface was about the same as noted previously.
26:30	There was flaming in the exposed surface of the assembly at the center. This flaming appeared to be caused by the lower sweep beginning to burn.
31	The flaming of the sweep had ceased.
33	Smoke was emitting once again at the header in the center and in the right hand portion. The smoke at this time was white. There was some cracking sounds heard coming from the furnace. There were no changes in the exposed surface. The upper area of the assembly was about the same as observed earlier but with more charred areas and a deeper char present in the assembly.

<u>Time:min</u>	<u>Observations</u>
37	Smoke continued to emanate from the header at the right corner. The surface of the unexposed surface was hot to a point where it was very uncomfortable to the touch. The lower 3 ft was still cool to the touch.
43	There were no flames either emanating outward from the assembly or through the assembly. The wallboard components were buckling slightly throughout the assembly.
47	There was flaming in the upper header as observed from the exposed surface. This flaming was at the right hand side of the assembly when facing the assembly from the unexposed surface. The upper sweep was burned away in some areas in the unexposed surface. The smoke continued to emanate from the assembly at the header. There were some areas where smoke discoloration had occurred. These areas were at the approximate center of the assembly.
50	Two thermocouples on the unexposed surface, Nos. 11 and 16, malfunctioned. This was corrected by switching to alternate channels.
51	The flaming on the exposed upper header had ceased. The unexposed upper header was about the same with the upper sweep continuing to soften. At intervals, parts of the upper sweep dropped from the assembly. The smoking in the header appeared to increase slightly at the right hand side of the assembly.
55	At intervals, cracking or popping sounds were heard emanating from the assembly.

<u>Time:min</u>	<u>Observations</u>
59	The assembly was in about the same condition as observed earlier. Smoke continued to emanate and the upper sweep continued to melt with the material dropping at intervals. There was smoke at the right corner.
90	The smoking coming from underneath the lintel continued. There was scorching of the gypsum board in the immediate corner in the upper south side of the wall.
91	The sweep at the top of the door had begun to drip and fall from the top. Some had collected on the wall itself and some had fallen to the bottom sill area.
130	Gas off.

Temperature of the Unexposed Surface - The limiting average temperature is reached when heat transmission through the assembly is sufficient to raise the average temperature 250°F above the ambient temperature or when the temperature at an individual point rises 325°F above the ambient temperature. In this test, the initial temperature was 79°F. Therefore, the average limiting temperature was 329°F and the individual limiting temperature was 404°F. Neither the average limiting temperature or the individual temperature were reached at 120 min. At that time, the average temperature was 307.6°F and the maximum individual temperature was 394°F.

HOSE STREAM TEST:

The hose stream was applied to the exposed surface of a test assembly identical in construction details and materials to that described in this Report but which had a lesser thickness of thermal blanket. The assembly had been subjected to a 2 h fire exposure.

METHOD

The hose stream test was conducted in accordance with the Standard ANSI/UL 263. The assembly was subjected to the action of a 30 psi hose stream applied for a duration of 2-1/2 min to the exposed area. The hose stream was applied with a 1-1/8 in. diameter nozzle at a perpendicular distance of 20 ft from the center of the test assembly. The area of the assembly measured 9 ft by 11 ft, 4 in.

RESULTS

Projection of water was not noted beyond the unexposed surface of the test assembly. During the test, the assembly bowed outward but the header and jambs did not tear away from the brick walls. The wall did not release from the jambs. The wall remained in the tracks on both the exposed and unexposed sides.

The appearance of the unexposed surface of the assembly after the hose stream test is shown in ILLS. 20 and 21.

The appearance of the exposed surface of the assembly after the hose stream test is shown in ILLS. 22 and 23.

OBSERVATIONS AFTER THE FIRE TEST:

The unexposed surface of the assembly was basically unchanged from the start of the test. The vinyl sweep at the top of the panels was melted away in most areas and had fallen to the floor. The lower sweep had little damage. The upper corner of the assembly at the strike jamb had a discolored area from smoke.

The gypsum wallboard was unaffected by the fire except for some smoke discoloration. The interior surface of the ceramic blanket protection was discolored in some areas, especially at the header and sill locations.

The exposed surface of the wall panels was blackened and brittle with the individual hinges having restricted movement because of charring and buckling. The vinyl sweeps at the top and bottom of the panels were burned away. The gypsum wallboard was in place with slight cracks. Both layers were brittle and crumbled when tested for strength. When the plywood header was examined charring was found but the header was still structurally sound. The jambs were in place and the header track of the wall unit was still in place fastened to the plywood header. The fire insulation material was discolored but remained in place fastened to the two walls. The roller assemblies were in place in the track and the lead post was locked into the lead post jamb.

STUDY FOR CLASSIFICATION:

As part of the evaluation of this assembly, temperatures were monitored on the unexposed side of the header lintel which consisted of plywood protected by two layers of 1/2 in. thick gypsum wallboard. At the locations monitored the maximum individual limiting temperature rise of 325°F above ambient was recorded at 88 min (401°F). The maximum temperature recorded at 120 min was 444°F. To compensate for this temperature rise a third layer of the 1/2 in. thick gypsum wallboard will be specified. Experience with multiple layer gypsum wallboard protection does indicate that within the applicable temperature limits experienced under this fire test that the third layer of 1/2 in. gypsum wallboard would adequately reduce the maximum recorded unexposed surface temperatures.

C O N C L U S I O N

The following conclusions represent the judgement of Underwriters Laboratories Inc. based upon the results of the examination and tests presented in this Report as they relate to established principles and previously recorded data.

FIRE RESISTANCE PROPERTIES:

It is judged that single sliding wall and partition assembly constructed as described herein will afford 2 h protection against the passage of flame and dangerous transmission of heat when exposed to the fire on liner side only.

No passage of flame, smoke, or hot gases through the wall assembly occurred during the fire exposure period. The transmission of heat through the assembly did not raise the average temperature of the unexposed surface over the allowable 250°F or over 325°F for any single temperature reading during the 2 h classification period as specified in the test standard.

The assembly in summarized form, as shown on the individual design and illustration included in this Report will be described in the building materials list as wall and partition Design No. U520.

PRACTICABILITY:

The assembly described herein is practical for its intended use and can be erected without undue difficulty.

CONFORMITY:

This construction was tested in accordance with the Standard of Underwriters Laboratories Inc. for Fire Tests of Building Construction and Materials, ANSI/UL 263 (ASTM E119, NFPA 251).

FOLLOW-UP PROGRAM:

The single sliding Partition Panel Unit as described herein, is judged to be eligible for Classification and Follow-Up Service of Underwriters Laboratories Inc. Under the Service, the manufacturer is authorized to use Underwriters Laboratories Inc. Classification Marking on those products which comply with the Follow-Up Service Procedure, and any other applicable requirements of Underwriters Laboratories Inc. Only those products which properly bear Underwriters Laboratories Classification Marking are considered as Classified by Underwriters Laboratories Inc.

The Classification Marking to be used on the Partition Panel Unit and Framing Assembly is illustrated below.

UNDERWRITERS LABORATORIES INC. R

CLASSIFIED
UNITS, PARTITION PANEL
FIRE RESISTANCE CLASSIFICATION
DESIGN NO. U520
SEE UL FIRE RESISTANCE DIRECTORY

Report by:
M. GINA SCHMIDT
Engineering Assistant
Fire Protection Department

Greg Rezek — J.M. 4/8/2005
GREG REZEK
Senior Engineering Associate
Fire Protection Department

Reviewed by:

Kenneth D. Rhodes — J.M.
KENNETH D. RHODES
Engineering Group Leader 4/8/2005
Fire Protection Department

083700

INSERT OWNER TRAINING HERE

084113

**ALUMINUM-FRAMED
ENTRANCES & STOREFRONTS**

**LIMITED WARRANTY AND REMEDY
MATERIAL & WORKMANSHIP**

This is to certify that Kawneer Company, Inc. warrants to its dealers, customers and all subsequent purchasers and users, subject to every term, condition and limitation stated herein, that the products supplied by it on the project identified as:

UK College of Pharmacy

Job # 08-350817

shall be free from material defects, in material and workmanship, for a period of **ten (10)** years from the date of substantial completion of the project, provided however, that the Limited Warranty shall begin in no event later than six (6) months from the date of shipment by Kawneer.

This warranty applies only if Kawneer's products are installed and maintained according to Kawneer's recommended practices and installation instructions, and only to defects appearing within **ten (10)** years from substantial completion of the project and only if Kawneer is notified in writing within sixty (60) days after such defects either (i) appear or (ii) should have been discovered after the exercise of reasonable diligence. Failure of the claiming party to notify Kawneer within such period shall automatically relieve Kawneer of any and all responsibility and/or liability under this Limited Warranty. **KAWNEER DOES NOT MAKE ANY OTHER REPRESENTATIONS OR WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.**

This warranty does not cover, and Kawneer hereby disclaims all liability for, the installation of Kawneer products, any particular application or selection of the product for any particular project or design, any parts, gaskets, glazing materials, components or sealants of other manufacturers used with Kawneer products, or any lack of performance of Kawneer products attributable to such items. This Warranty also does not cover, and Kawneer hereby disclaims all liability for, any products which have been subject to abuse, alteration, neglect, misuse, abnormal use, accident, fire, war, flood, earthquakes, acts of God, or to which parts, not supplied by Kawneer have been added, or to defects caused by depreciation or normal wear. All decisions regarding the existence of defects in material and workmanship and the occurrence of any of the matters described in the preceding paragraphs or affecting this Warranty shall be made by Kawneer and shall be final and binding upon the parties.

The sole and exclusive remedy with respect to this warranty or with respect to any other claim relating to defects or any other condition or use of the products supplied by Kawneer, however caused, and whether such claim is based upon warranty, contract, negligence, strict liability, or any other theory is limited to, at Kawneer's option, repair or replacement of such products or repayment by Kawneer of the purchase price paid for it.

The products repaired, replaced, or otherwise restored shall be warranted to the same extent and to the expiration date from the original date of shipment, and this warranty shall not be deemed to have been extended from the date of such warranty work. At no time does this warranty



confer upon the claiming party or any other party the right to proceed with repair, replacement, or restoration, without written notice and agreement by a duly authorized officer of Kawneer. Any such work undertaken by the claiming party or any other party shall be for the claiming party's own account and shall result in this warranty becoming null and void.

KAWNEER'S AGGREGATE TOTAL CUMULATIVE LIABILITY UNDER THIS LIMITED WARRANTY IS LIMITED TO THE DOLLAR AMOUNT OF THE PURCHASER'S ORIGINAL PAYMENT MADE TO KAWNEER FOR MATERIAL FURNISHED BY KAWNEER ONLY. IN CONSIDERATION OF THIS WARRANTY, KAWNEER SHALL NOT BE LIABLE FOR SPECIAL, DIRECT, INDIRECT, OR CONSEQUENTIAL DAMAGES OF ANY KIND, INCLUDING BUT NOT LIMITED TO LOSS OF USE, LOSS OF PROFITS OR GOODWILL, DAMAGES FOR NEGLIGENCE IN THE MANUFACTURE, DESIGN, OR INSTALLATION OF THE PRODUCTS, OR OTHER COMMERCIAL LOSS OR INJURY.

This is the only warranty made in the connection with the sale and distribution of the Products. No representative, dealer, or any other person is authorized to make or makes any warranty, representation, or promise with respect to the Products. No terms or conditions other than those stated herein, and no agreement or understanding, oral or written, in any way purporting to modify this warranty shall be binding on Kawneer unless made in writing and signed by Kawneer's authorized representative.

Laws and building and safety codes governing the design and use of glazed entrance, windows, and curtain wall products vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefore.

Customer's agreement to and acceptance of this warranty shall be indicated by signing and returning a copy of this document to Kawneer.

KAWNEER COMPANY, INC.

By: Don Delaughter

Signature: _____

Title: CWW Business Manager

Date Issued: 3/5/10

Accepted By:

Customer: **CENTRAL KENTUCKY GLASS CO.**

By Dennis Martin

Signature: _____

Title President

DATE SIGNED 7/14/10

**LIMITED WARRANTY AND REMEDY
70% FLUOROPOLYMER PAINT FINISH**

Kawneer Company, Inc. hereby warrants to its dealers, customers and all subsequent purchasers and users, subject to every term, condition and limitation stated herein, that the 70% fluoropolymer finish applied at its Springdale, AR plant, to the aluminum material on the project identified as:

UK College of Pharmacy

Job # 08-350817

and hereinafter referred to, as "Metal" shall, for a period of twenty (20) years from substantial completion of the project, provided however, that the limited warranty shall begin in no event later than six (6) months from the date of shipment by Kawneer.

1. Will not chalk more than that represented by a No. 8 rating for colors or No. 6 for whites, when measured in accordance with the standard procedures specified in ASTM D 4214, Test Method A ("Excessive Chalking");
2. Will not change color more than five (5) Hunter ΔE units as determined by ASTM D 2244 ("Excessive Color Change"); and
3. Will not crack, check or peel.

This warranty is subject to the following conditions:

1. The warranty will not apply to or cover, and Kawneer hereby disclaims all liability for,
 - (a) damage to the finish occasioned by moisture or other contamination detrimental to the finish because of improper storage of the finished Metal prior to installation;
 - (b) water damage due to condensation caused by improper repackaging of the finished Metal prior to installation;
 - (c) damage including but not limited to scratches and abrasions to the finished Metal caused by use, handling, shipping and/or installation, or by utilization of the Metal with any parts, gaskets, glazing materials, components or sealants of other manufacturers used with Kawneer products, or any lack of performance of Kawneer products attributable to such items;
 - (d) damage to finished Metal caused by exposure to caustic agents, acidic agents, or harmful fumes or other destructive foreign materials;
 - (e) damage due to improper maintenance i.e. the use of chemical cleaning agents;

- (f) corrosion of metal due to aggressive atmospheres including exposure to salt spray and/or salt mist; and
 - (g) any particular application or selection of the Metal for any particular project or design.
2. The warranty also does not cover, and Kawneer hereby disclaims all liability for, any product which has been subject to abuse, alterations, modification, neglect, misuse, abnormal use, accident, fire or other casualty or physical damage, war, flood, falling objects, external forces, earthquakes, acts of God, or to which parts not supplied by Kawneer have been added, or to defects caused by depreciation or normal wear or other occurrences beyond Kawneer's control.
3. In order for this warranty to remain valid, a systematic maintenance program must be instituted by the purchaser or user to prevent the build-up of dirt and salt deposits on the painted surface. The surface must be cleaned at least annually in accordance with AAMA 609 & 610-02 so as to prevent the accumulation of harmful deposits. More frequent cleaning is required in heavy industrialized environments or coastal environments. Coastal environments where salt spray or salt fog is present can be very detrimental to metal especially where the paint coating has been scratched or damaged. In coastal environments where metal is exposed to salt spray or salt fog or in heavy industrial environments, the metal surface must be cleaned at least once quarterly to prevent the accumulation of harmful deposits. **A FAILURE TO INSTITUTE A SYSTEMATIC MAINTENANCE PROGRAM AS DESCRIBED ABOVE WILL VOID THIS WARRANTY.**
4. Kawneer is not responsible for chalking or for fading or color changes that are less than the Excessive Chalking or Excessive Color Change referenced and warranted above. Normal weathering, such as the damaging effects of sunlight and exposure to the elements, such as extremes of weather and atmosphere, may cause any colored surface to fade, chalk, or become soiled or stained. These changes may not be uniform if the surfaces are not equally exposed to the sun and elements. The degree to which normal weathering occurs will vary depending on the air quality, the building's location and many other factors over which Kawneer has no control. Metallic/mica flake colors are not color measurable and are not applicable to the Excessive Color Change warranty set forth above.
5. All decisions regarding the existence of defects in material and workmanship and the occurrence of any of the matters described in the preceding paragraphs of affecting this warranty shall be made by Kawneer and shall be final and binding upon the parties.
6. The sole and exclusive remedy with respect to this warranty or with respect to any other claim relating to defects or any other condition or use of the products supplied by Kawneer, however caused, and whether such claim is based upon warranty, contract, negligence, strict liability or any other theory, is limited to, at Kawneer's sole discretion, replacement or refinishing of the defective Metal or repayment by Kawneer of the purchase price paid to it. Refinishing of the

defective Metal shall be performed by using standard finishing practices and materials as selected by Kawneer. Kawneer reserves the right to approve any contract for refinishing of defective Metal. The warranty on any refinished, coated and/or replacement Metal shall continue for the remainder of the original warranty period. At no time does this warranty confer upon the claiming party the right to proceed with repair, replacement or restoration, without written notice and agreement by a duly authorized officer of Kawneer. Any such work undertaken by the claiming party or any party other party shall be for the claiming party's own account and shall result in this warranty becoming null and void. IN NO EVENT SHALL KAWNEER BE LIABLE FOR ANY SPECIAL, DIRECT, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES OF ANY KIND, INCLUDING BUT NOT LIMITED TO LOSS OF PROFITS OR GOOD WILL, OR OTHER COMMERCIAL LOSS OR INJURY.

7. Claims under the warranty must be made to Kawneer in writing within sixty (60) days after discovery of the defective finished Metal and Kawneer must be given a reasonable opportunity to inspect the finished Metal claimed to be defective. In the event of a claim under the warranty, customer shall furnish proof of date of the shipment of the Metal finished with the product and shall demonstrate that the failure of the product was due to a breach of the warranty stated herein.
8. This warranty will apply only to Metal, which is finished in the Springdale, AR plant and used within the continental United States, unless Kawneer agrees otherwise in writing.
9. All notices given under or pursuant to this Agreement shall be in writing and sent by registered mail, postage paid, return receipt requested, to the party to whom such notices is to be given, as follows:

(a) Kawneer: Kawneer Company, Inc.
600 Kawneer Drive, PO Box 709
Springdale, AR 72765-0709
Attention: Engineering Manager

(b) Customer: Central Kentucky Glass Co
1123 Versailles Road
Lexington, KY 40508
Attention: Dennis Martin

All such notices when deposited in U.S. mail as set forth above shall be considered served when received.

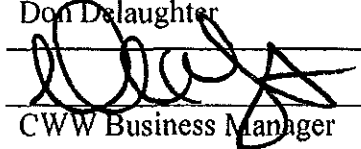
10. No terms or conditions other than those stated herein, and no agreement or understanding, oral or written, in any way purporting to modify this warranty



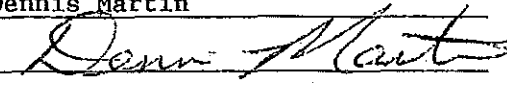
shall be binding on Kawneer unless made in writing and signed by its authorized representative.

Customer's agreement to and acceptance of this warranty shall be indicated by signing and returning a copy of this document to Kawneer.

KAWNEER COMPANY, INC.

By: Don DeLaughter
 Signature: 
 Title: CWW Business Manager
 Date Issued: 4/22/2008

Accepted By:

Customer: Central Kentucky Glass Co.
 By: Dennis Martin
 Signature: 
 Title: President
 Date Signed: 7/14/10



DORMA - CAROLINA DOOR CONTROLS, INC.
D/B/A CAROLINA DOOR CONTROLS

957 HILLSIDE DR., LOUISVILLE, TN 37777
1-800-348-3125 - TOLL FREE / 865-588-1472 - FACSIMILE

LETTER OF WARRANTY

July 21, 2010

Central Kentucky Glass
1123 Versailles Rd.
Lexington, KY 40508

Spec Section 084113 - Aluminum-framed Entrances
and Storefronts

RE: (8) ED400 Pair of swing door units, (9) ESA300 Manual sliding door units, (2) ESA300 Sliding door units

UK Biological Pharmacy
Lexington, KY

Dorma - Carolina Door Controls, Inc. hereby warrants that all components of the product sold herewith shall be free of defects in materials and workmanship for 12 MONTHS. All defects occurring within this warranty period shall be replaced or repaired by seller at no cost to buyer.

Any misuse, alteration, modification, abuse or neglect of the product by the buyer or others shall invalidate this warranty.

THE FOREGOING WARRANTY AND THE OBLIGATIONS AND LIABILITIES OF SELLER THEREUNDER ARE EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, WHETHER WRITTEN, ORAL OR IMPLIED (INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR PURPOSE OR PARTICULAR USE PURSUANT TO THE UNIFORM COMMERCIAL CODE). BUYER HEREBY WAIVES ALL OTHER REMEDIES, WARRANTIES, GUARANTEES OR LIABILITIES, EXPRESSED OR IMPLIED, ARISING BY LAW OR OTHERWISE, INCLUDING WITHOUT LIMITATION ANY OBLIGATIONS OF SELLER WITH RESPECT TO FITNESS, MERCHANTABILITY AND CONSEQUENTIAL DAMAGES, OR WHETHER OR NOT OCCASIONED BY SELLERS NEGLIGENCE. THIS WARRANTY SHALL NOT BE EXTENDED, ALTERED OR VARIED EXCEPT BY WRITTEN INSTRUMENT SIGNED BY SELLER.

The warranty period for the above mentioned project begins on substantial date of completion of December 17, 2009. Warranty service is to be performed during *normal* working hours of Monday through Friday from 8:00a.m. - 5:00p.m.

Sincerely,


Jamie Madgar

Cc: Job File/ L20551

Central location for:

Knoxville, TN / Nashville, TN / Memphis, TN / Louisville, KY (d/b/a Carolina Door Controls)
Charleston, WV (d.b.a. West Virginia Entrances)
Birmingham, AL (d.b.a. Alabama Door Systems, Inc.)
Slidell, LA (d.b.a. Automatic Access)
Norcross, GA (d.b.a. Georgia Entrance Systems)



DORMA - CAROLINA DOOR CONTROLS, INC.
D/B/A CAROLINA DOOR CONTROLS

957 HILLSIDE DR., LOUISVILLE, TN 37777
1-800-348-3125 - TOLL FREE / 865-588-1472 - FACSIMILE

LETTER OF WARRANTY

August 3, 2010

Central Kentucky Glass
1123 Versailles Rd.
Lexington, KY 40508

Spec Section 084113 - Aluminum-Framed Entrances & Storefronts

RE: (8) ED40 Pair of swing door units, (9) ESA300 Manual Sliding door units, and (2) ESA300 Automatic sliding door units.

UK Biological Pharmaceuticals
Lexington, KY

Dorma - Carolina Door Controls, Inc. hereby warrants that all components of the product sold herewith shall be free of defects in the finish for 60 MONTHS. All defects occurring within this warranty period shall be replaced or repaired by seller at no cost to buyer.

Any misuse, alteration, modification, abuse or neglect of the product by the buyer or others shall invalidate this warranty.

THE FOREGOING WARRANTY AND THE OBLIGATIONS AND LIABILITIES OF SELLER THEREUNDER ARE EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, WHETHER WRITTEN, ORAL OR IMPLIED (INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR PURPOSE OR PARTICULAR USE PURSUANT TO THE UNIFORM COMMERCIAL CODE). BUYER HEREBY WAIVES ALL OTHER REMEDIES, WARRANTIES, GUARANTEES OR LIABILITIES, EXPRESSED OR IMPLIED, ARISING BY LAW OR OTHERWISE, INCLUDING WITHOUT LIMITATION ANY OBLIGATIONS OF SELLER WITH RESPECT TO FITNESS, MERCHANTABILITY AND CONSEQUENTIAL DAMAGES, OR WHETHER OR NOT OCCASIONED BY SELLERS NEGLIGENCE. THIS WARRANTY SHALL NOT BE EXTENDED, ALTERED OR VARIED EXCEPT BY WRITTEN INSTRUMENT SIGNED BY SELLER.

The warranty period for the above mentioned project begins on substantial date of completion of December 1, 2010. Warranty service is to be performed during *normal* working hours of Monday through Friday from 8:00a.m. - 5:00p.m.

Sincerely,


Jamie Madgar

Cc: Job File / L20551

Central location for:

Knoxville, TN / Nashville, TN / Memphis, TN / Louisville, KY (d/b/a Carolina Door Controls)
Charleston, WV (d.b.a. West Virginia Entrances)
Birmingham, AL (d.b.a. Alabama Door Systems, Inc.)
Slidell, LA (d.b.a. Automatic Access)
Norcross, GA (d.b.a. Georgia Entrance Systems)



**LIMITED WARRANTY AND REMEDY
70% FLUOROPOLYMER PAINT FINISH**

Kawneer Company, Inc. hereby warrants to its dealers, customers and all subsequent purchasers and users, subject to every term, condition and limitation stated herein, that the 70% fluoropolymer finish applied at its Springdale, AR plant, to the aluminum material on the project identified as:

UK College of Pharmacy

Job # 08-350817

and hereinafter referred to, as "Metal" shall, for a period of twenty (20) years from substantial completion of the project, provided however, that the limited warranty shall begin in no event later than six (6) months from the date of shipment by Kawneer.

1. Will not chalk more than that represented by a No. 8 rating for colors or No. 6 for whites, when measured in accordance with the standard procedures specified in ASTM D 4214, Test Method A ("Excessive Chalking");
2. Will not change color more than five (5) Hunter ΔE units as determined by ASTM D 2244 ("Excessive Color Change"); and
3. Will not crack, check or peel.

This warranty is subject to the following conditions:

1. The warranty will not apply to or cover, and Kawneer hereby disclaims all liability for,
 - (a) damage to the finish occasioned by moisture or other contamination detrimental to the finish because of improper storage of the finished Metal prior to installation;
 - (b) water damage due to condensation caused by improper repackaging of the finished Metal prior to installation;
 - (c) damage including but not limited to scratches and abrasions to the finished Metal caused by use, handling, shipping and/or installation, or by utilization of the Metal with any parts, gaskets, glazing materials, components or sealants of other manufacturers used with Kawneer products, or any lack of performance of Kawneer products attributable to such items;
 - (d) damage to finished Metal caused by exposure to caustic agents, acidic agents, or harmful fumes or other destructive foreign materials;
 - (e) damage due to improper maintenance i.e. the use of chemical cleaning agents;

- (f) corrosion of metal due to aggressive atmospheres including exposure to salt spray and/or salt mist; and
 - (g) any particular application or selection of the Metal for any particular project or design.
2. The warranty also does not cover, and Kawneer hereby disclaims all liability for, any product which has been subject to abuse, alterations, modification, neglect, misuse, abnormal use, accident, fire or other casualty or physical damage, war, flood, falling objects, external forces, earthquakes, acts of God, or to which parts not supplied by Kawneer have been added, or to defects caused by depreciation or normal wear or other occurrences beyond Kawneer's control.
3. In order for this warranty to remain valid, a systematic maintenance program must be instituted by the purchaser or user to prevent the build-up of dirt and salt deposits on the painted surface. The surface must be cleaned at least annually in accordance with AAMA 609 & 610-02 so as to prevent the accumulation of harmful deposits. More frequent cleaning is required in heavy industrialized environments or coastal environments. Coastal environments where salt spray or salt fog is present can be very detrimental to metal especially where the paint coating has been scratched or damaged. In coastal environments where metal is exposed to salt spray or salt fog or in heavy industrial environments, the metal surface must be cleaned at least once quarterly to prevent the accumulation of harmful deposits. **A FAILURE TO INSTITUTE A SYSTEMATIC MAINTENANCE PROGRAM AS DESCRIBED ABOVE WILL VOID THIS WARRANTY.**
4. Kawneer is not responsible for chalking or for fading or color changes that are less than the Excessive Chalking or Excessive Color Change referenced and warranted above. Normal weathering, such as the damaging effects of sunlight and exposure to the elements, such as extremes of weather and atmosphere, may cause any colored surface to fade, chalk, or become soiled or stained. These changes may not be uniform if the surfaces are not equally exposed to the sun and elements. The degree to which normal weathering occurs will vary depending on the air quality, the building's location and many other factors over which Kawneer has no control. Metallic/mica flake colors are not color measurable and are not applicable to the Excessive Color Change warranty set forth above.
5. All decisions regarding the existence of defects in material and workmanship and the occurrence of any of the matters described in the preceding paragraphs of affecting this warranty shall be made by Kawneer and shall be final and binding upon the parties.
6. The sole and exclusive remedy with respect to this warranty or with respect to any other claim relating to defects or any other condition or use of the products supplied by Kawneer, however caused, and whether such claim is based upon warranty, contract, negligence, strict liability or any other theory, is limited to, at Kawneer's sole discretion, replacement or refinishing of the defective Metal or repayment by Kawneer of the purchase price paid to it. Refinishing of the

defective Metal shall be performed by using standard finishing practices and materials as selected by Kawneer. Kawneer reserves the right to approve any contract for refinishing of defective Metal. The warranty on any refinished, coated and/or replacement Metal shall continue for the remainder of the original warranty period. At no time does this warranty confer upon the claiming party the right to proceed with repair, replacement or restoration, without written notice and agreement by a duly authorized officer of Kawneer. Any such work undertaken by the claiming party or any party other party shall be for the claiming party's own account and shall result in this warranty becoming null and void. IN NO EVENT SHALL KAWNEER BE LIABLE FOR ANY SPECIAL, DIRECT, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES OF ANY KIND, INCLUDING BUT NOT LIMITED TO LOSS OF PROFITS OR GOOD WILL, OR OTHER COMMERCIAL LOSS OR INJURY.

7. Claims under the warranty must be made to Kawneer in writing within sixty (60) days after discovery of the defective finished Metal and Kawneer must be given a reasonable opportunity to inspect the finished Metal claimed to be defective. In the event of a claim under the warranty, customer shall furnish proof of date of the shipment of the Metal finished with the product and shall demonstrate that the failure of the product was due to a breach of the warranty stated herein.
8. This warranty will apply only to Metal, which is finished in the Springdale, AR plant and used within the continental United States, unless Kawneer agrees otherwise in writing.
9. All notices given under or pursuant to this Agreement shall be in writing and sent by registered mail, postage paid, return receipt requested, to the party to whom such notices is to be given, as follows:

- | | | |
|-----|-----------|---|
| (a) | Kawneer: | Kawneer Company, Inc.
600 Kawneer Drive, PO Box 709
Springdale, AR 72765-0709
Attention: Engineering Manager |
| (b) | Customer: | Central Kentucky Glass Co
1123 Versailles Road
Lexington, KY 40508
Attention: Dennis Martin |

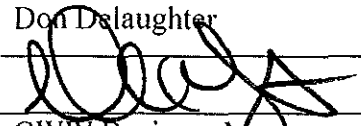
All such notices when deposited in U.S. mail as set forth above shall be considered served when received.

10. No terms or conditions other than those stated herein, and no agreement or understanding, oral or written, in any way purporting to modify this warranty

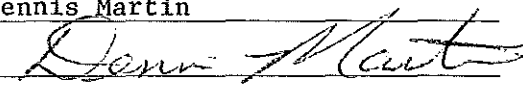
shall be binding on Kawneer unless made in writing and signed by its authorized representative.

Customer's agreement to and acceptance of this warranty shall be indicated by signing and returning a copy of this document to Kawneer.

KAWNEER COMPANY, INC.

By: Don DeLaughter
Signature: 
Title: CWW Business Manager
Date Issued: 4/22/2008

Accepted By:

Customer: Central Kentucky Glass Co.
By: Dennis Martin
Signature: 
Title: President
Date Signed: 7/14/10



**LIMITED WARRANTY AND REMEDY
MATERIAL & WORKMANSHIP**

This is to certify that Kawneer Company, Inc. warrants to its dealers, customers and all subsequent purchasers and users, subject to every term, condition and limitation stated herein, that the products supplied by it on the project identified as:

UK College of Pharmacy

Job # 08-350817

shall be free from material defects, in material and workmanship, for a period of **ten (10)** years from the date of substantial completion of the project, provided however, that the Limited Warranty shall begin in no event later than six (6) months from the date of shipment by Kawneer.

This warranty applies only if Kawneer's products are installed and maintained according to Kawneer's recommended practices and installation instructions, and only to defects appearing within **ten (10)** years from substantial completion of the project and only if Kawneer is notified in writing within sixty (60) days after such defects either (i) appear or (ii) should have been discovered after the exercise of reasonable diligence. Failure of the claiming party to notify Kawneer within such period shall automatically relieve Kawneer of any and all responsibility and/or liability under this Limited Warranty. **KAWNEER DOES NOT MAKE ANY OTHER REPRESENTATIONS OR WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.**

This warranty does not cover, and Kawneer hereby disclaims all liability for, the installation of Kawneer products, any particular application or selection of the product for any particular project or design, any parts, gaskets, glazing materials, components or sealants of other manufacturers used with Kawneer products, or any lack of performance of Kawneer products attributable to such items. This Warranty also does not cover, and Kawneer hereby disclaims all liability for, any products which have been subject to abuse, alteration, neglect, misuse, abnormal use, accident, fire, war, flood, earthquakes, acts of God, or to which parts, not supplied by Kawneer have been added, or to defects caused by depreciation or normal wear. All decisions regarding the existence of defects in material and workmanship and the occurrence of any of the matters described in the preceding paragraphs or affecting this Warranty shall be made by Kawneer and shall be final and binding upon the parties.

The sole and exclusive remedy with respect to this warranty or with respect to any other claim relating to defects or any other condition or use of the products supplied by Kawneer, however caused, and whether such claim is based upon warranty, contract, negligence, strict liability, or any other theory is limited to, at Kawneer's option, repair or replacement of such products or repayment by Kawneer of the purchase price paid for it.

The products repaired, replaced, or otherwise restored shall be warranted to the same extent and to the expiration date from the original date of shipment, and this warranty shall not be deemed to have been extended from the date of such warranty work. At no time does this warranty



confer upon the claiming party or any other party the right to proceed with repair, replacement, or restoration, without written notice and agreement by a duly authorized officer of Kawneer. Any such work undertaken by the claiming party or any other party shall be for the claiming party's own account and shall result in this warranty becoming null and void.

KAWNEER'S AGGREGATE TOTAL CUMULATIVE LIABILITY UNDER THIS LIMITED WARRANTY IS LIMITED TO THE DOLLAR AMOUNT OF THE PURCHASER'S ORIGINAL PAYMENT MADE TO KAWNEER FOR MATERIAL FURNISHED BY KAWNEER ONLY. IN CONSIDERATION OF THIS WARRANTY, KAWNEER SHALL NOT BE LIABLE FOR SPECIAL, DIRECT, INDIRECT, OR CONSEQUENTIAL DAMAGES OF ANY KIND, INCLUDING BUT NOT LIMITED TO LOSS OF USE, LOSS OF PROFITS OR GOODWILL, DAMAGES FOR NEGLIGENCE IN THE MANUFACTURE, DESIGN, OR INSTALLATION OF THE PRODUCTS, OR OTHER COMMERCIAL LOSS OR INJURY.

This is the only warranty made in the connection with the sale and distribution of the Products. No representative, dealer, or any other person is authorized to make or makes any warranty, representation, or promise with respect to the Products. No terms or conditions other than those stated herein, and no agreement or understanding, oral or written, in any way purporting to modify this warranty shall be binding on Kawneer unless made in writing and signed by Kawneer's authorized representative.

Laws and building and safety codes governing the design and use of glazed entrance, windows, and curtain wall products vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefore.

Customer's agreement to and acceptance of this warranty shall be indicated by signing and returning a copy of this document to Kawneer.

KAWNEER COMPANY, INC.

By: Don Delaughter

Signature: _____

Title: CWW Business Manager

Date Issued: 3/5/10

Accepted By:

Customer: **CENTRAL KENTUCKY GLASS CO.**

By Dennis Martin

Signature _____

Title President

DATE SIGNED 7/14/10



**LIMITED WARRANTY AND REMEDY
MATERIAL & WORKMANSHIP**

This is to certify that Kawneer Company, Inc. warrants to its dealers, customers and all subsequent purchasers and users, subject to every term, condition and limitation stated herein, that the products supplied by it on the project identified as:

UK College of Pharmacy

Job # 08-350817

shall be free from material defects, in material and workmanship, for a period of five (5) years from the date of substantial completion of the project, provided however, that the Limited Warranty shall begin in no event later than six (6) months from the date of shipment by Kawneer.

This warranty applies only if Kawneer's products are installed and maintained according to Kawneer's recommended practices and installation instructions, and only to defects appearing within five (5) years from substantial completion of the project and only if Kawneer is notified in writing within sixty (60) days after such defects either (i) appear or (ii) should have been discovered after the exercise of reasonable diligence. Failure of the claiming party to notify Kawneer within such period shall automatically relieve Kawneer of any and all responsibility and/or liability under this Limited Warranty. KAWNEER DOES NOT MAKE ANY OTHER REPRESENTATIONS OR WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

This warranty does not cover, and Kawneer hereby disclaims all liability for, the installation of Kawneer products, any particular application or selection of the product for any particular project or design, any parts, gaskets, glazing materials, components or sealants of other manufacturers used with Kawneer products, or any lack of performance of Kawneer products attributable to such items. This Warranty also does not cover, and Kawneer hereby disclaims all liability for, any products which have been subject to abuse, alteration, neglect, misuse, abnormal use, accident, fire, war, flood, earthquakes, acts of God, or to which parts, not supplied by Kawneer have been added, or to defects caused by depreciation or normal wear. All decisions regarding the existence of defects in material and workmanship and the occurrence of any of the matters described in the preceding paragraphs or affecting this Warranty shall be made by Kawneer and shall be final and binding upon the parties.

The sole and exclusive remedy with respect to this warranty or with respect to any other claim relating to defects or any other condition or use of the products supplied by Kawneer, however caused, and whether such claim is based upon warranty, contract, negligence, strict liability, or any other theory is limited to, at Kawneer's option, repair or replacement of such products or repayment by Kawneer of the purchase price paid for it.

The products repaired, replaced, or otherwise restored shall be warranted to the same extent and to the expiration date from the original date of shipment, and this warranty shall not be deemed to have been extended from the date of such warranty work. At no time does this warranty



confer upon the claiming party or any other party the right to proceed with repair, replacement, or restoration, without written notice and agreement by a duly authorized officer of Kawneer. Any such work undertaken by the claiming party or any other party shall be for the claiming party's own account and shall result in this warranty becoming null and void.


KAWNEER'S AGGREGATE TOTAL CUMULATIVE LIABILITY UNDER THIS LIMITED WARRANTY IS LIMITED TO THE DOLLAR AMOUNT OF THE PURCHASER'S ORIGINAL PAYMENT MADE TO KAWNEER FOR MATERIAL FURNISHED BY KAWNEER ONLY. IN CONSIDERATION OF THIS WARRANTY, KAWNEER SHALL NOT BE LIABLE FOR SPECIAL, DIRECT, INDIRECT, OR CONSEQUENTIAL DAMAGES OF ANY KIND, INCLUDING BUT NOT LIMITED TO LOSS OF USE, LOSS OF PROFITS OR GOODWILL, DAMAGES FOR NEGLIGENCE IN THE MANUFACTURE, DESIGN, OR INSTALLATION OF THE PRODUCTS, OR OTHER COMMERCIAL LOSS OR INJURY.

This is the only warranty made in the connection with the sale and distribution of the Products. No representative, dealer, or any other person is authorized to make or makes any warranty, representation, or promise with respect to the Products. No terms or conditions other than those stated herein, and no agreement or understanding, oral or written, in any way purporting to modify this warranty shall be binding on Kawneer unless made in writing and signed by Kawneer's authorized representative.

Laws and building and safety codes governing the design and use of glazed entrance, windows, and curtain wall products vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefore.

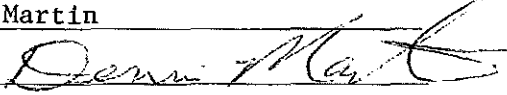
Customer's agreement to and acceptance of this warranty shall be indicated by signing and returning a copy of this document to Kawneer.

KAWNEER COMPANY, INC.

By: Don DeLaughter
Signature: 
Title: CWW Business Manager
Date Issued: 04/22/2008

Accepted By:

Customer: **CENTRAL KENTUCKY GLASS CO.**

By Dennis Martin
Signature 
Title President
DATE SIGNED 7/14/10



Carpet-Cleaning

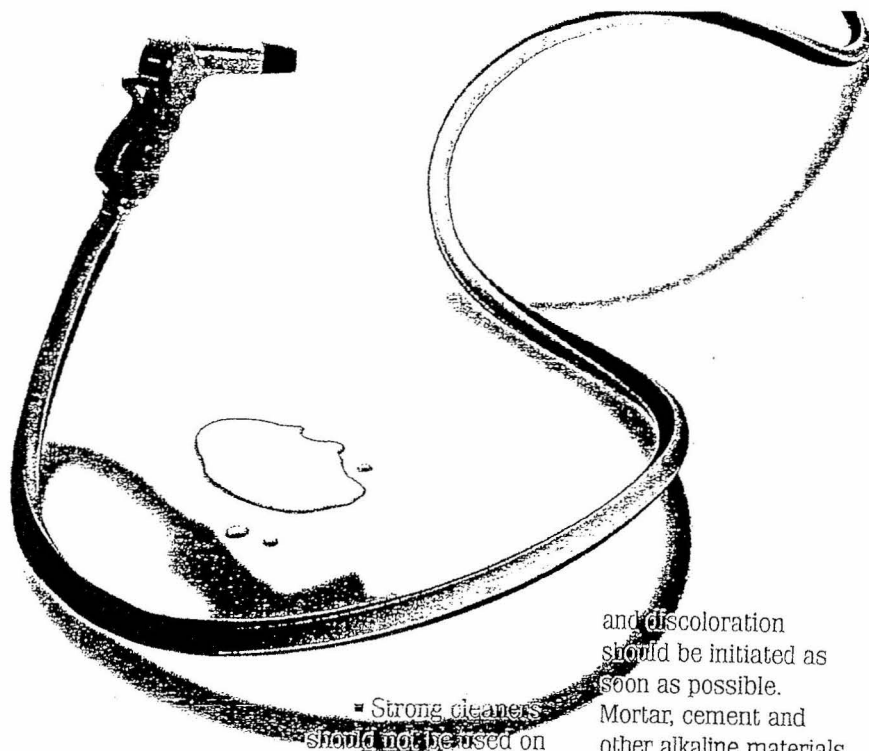
BLEACH
REGULAR

■ *Inspection*

Whether painted or anodized, architectural aluminum finishes require care before, during and after installation. Both types of finishes are resistant to corrosion, discoloration and wear. However, harsh chemicals, abuse or neglect can mar aesthetics. In addition, all exterior surfaces collect varying amounts of soil and dirt, depending upon geographic area, environmental conditions, finish and building elevation. Periodic maintenance inhibits long-term accumulation of soil, which can accelerate weathering of finishes. Frequent cleaning of finished aluminum that is exposed to harsh marine environments is particularly important.

For efficiency and economy, glass and aluminum cleaning should be scheduled at the same time. It is recommended that cleaning of the architectural aluminum be scheduled at least annually and possibly more frequently, depending upon:

- Geographic area
- Industrial vs. rural location
- Rainfall
- Foggy or coastal regions where condensation and drying cycles create atmospheric salt and dirt deposits
- Recessed or sheltered areas lacking rainfall and encouraging condensation that increases soil adhesion



General Cleaning - Painted and Anodized Finishes

Certain precautions must be taken when cleaning painted and anodized surfaces:

- Select the appropriate cleaning method after identifying the finish.
- Do not use abrasive household cleaners or materials like steel wool or hard brushes that can wear and harm finishes.
- Excessive abrasive rubbing should not be used since it can damage the finish.
- Avoid drips and splashes and remove run-downs as quickly as possible.
- Consider the effects of run-downs on shrubbery, personnel and equipment and schedule cleaning appropriately.

Strong cleaners should not be used on window glass and other components where they might come into contact with the aluminum.

Avoid temperature extremes which can accelerate chemical reactions, evaporate or strengthen cleaning solutions, cause streaking, staining or blotching.

Do not mix cleaners or substitute a heavy-duty cleaner for a safer, milder cleaner.

Never use paint removers or aggressive alkaline, acid or abrasive cleaners.

Always do a test on a small area first and follow manufacturers recommendations for mixing and diluting cleaners.

Make sure cloths, sponges and cleaning equipment are grit-free.

Cleaning procedures to remove construction or accumulated environmental soils

and discoloration should be initiated as soon as possible. Mortar, cement and other alkaline materials will quickly corrode anodic coatings if allowed to dry on the metal surface. Cleaning should start at the top of the building and proceed to the ground level in a continuous drop the width of the stage or scaffolding. The type of procedure depends upon the degree of soiling.

Removal of Light Surface Soil

Trial and error testing employing progressively stronger cleaning procedures can determine which method will be most effective:

- A forceful water rinse should create initial surface agitation.
- If soil is still present after air drying the surface, scrubbing with a soft brush or sponge and concurrent spraying with water should be attempted.
- A 5 percent solution of industrial or commercial detergent and water should be applied with soft

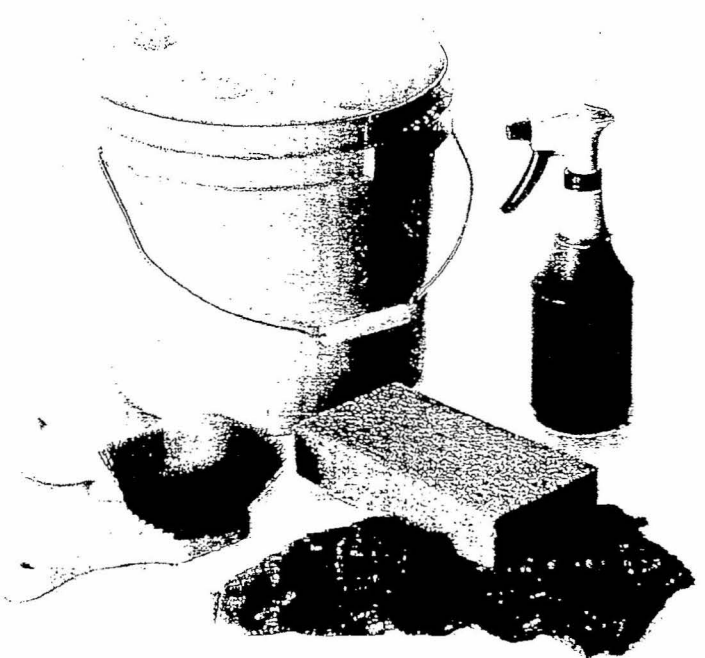
brushes, sponges or cloth using uniform alternate horizontal and vertical motion. Detergent should be safe for bare hands — stronger detergents should be spot tested.

After washing, the surface should be rinsed thoroughly with clean water and allowed to dry. Do not allow detergent solution to dry on aluminum.

Cleaner run-down should be minimized and rinsed immediately.

A thorough rinse should remove solution from joints, crevices and surfaces.

If it is necessary to remove oil, wax, polish or similar materials from anodized finishes, MEK, mineral spirits or an equivalent solvent is recommended. (See cautions † listed under "Removal of Non-Water Soluble Deposits," page 18)





Painted Finishes Removal of Stains

- Sodium hypochlorite solution (laundry bleach, Clorox) may assist in removing certain stains from painted finishes.

- Hydrochloric acid, or 10 percent muriatic acid, diluted with 10 volumes of water, may assist in removing rust or alkali mortar stains from Fluropon® or Duranar® surfaces.

- Limit contact to 5 minutes. *Caution: acid solutions are corrosive and toxic. Flush all surfaces with water immediately after use.*

- Ascetic acid (vinegar) or oxalic acid solutions may be used for the same purpose. *Flush with water.*

- Anodized surfaces should not be washed with acidic or caustic solutions.

Mildew Removal

Remove mildew from painted aluminum finishes with a basic solution of:

- 1/3 cup detergent
- 2/3 cup trisodium phosphate (TSP)
- 1 quart sodium hypochlorite, 5% solution (bleach)

Rinse with clear water immediately.

Anodized Finishes Removal of Stains

Once all the general cleaning procedures have been exhausted, cleaning with an abrasive pad soaked in clean water or a mild detergent cleaner may be tried:

- A power cleaning tool, such as an air-driven reciprocating machine fitted with cleaning pads, may be necessary for removal of unusually heavy soils. During this operation, the surface being cleaned must be continually wetted with clean water or a mild detergent cleaning solution to provide lubrication and a medium for carrying away the dirt. The machine should move in alternate vertical and horizontal strokes.

- After machine scrubbing, the area must be rinsed and thoroughly scrubbed again with a stiff bristle brush. A final rinse completes the operation and the cleaned surface is allowed to air dry or is wiped dry. It is important to remove promptly cleaner run-down on uncleaned surfaces to avoid staining.

- Using uniform pressure, hand scrub the metal surface using a palm size nylon cleaning pad. Thoroughly wet with clean water and a mild detergent cleaner or pumice powder. Start at the top and work down, rubbing in the direction of the metal grain.

- After scrubbing, the surface should be rinsed thoroughly with clean water or wiped with solvent to remove all residue.

- The surface should then be air dried or wiped dry with a chamois, squeegee or lint-free cloth, particularly if cleaner has dried on the surface.





Removal of Non-Water Soluble Deposits

†Solvents may be used to remove non-water soluble deposits such as tar, grease, oil, paint and graffiti. However, extreme care should be used when using solvents on painted surfaces. Many solvents will reduce the gloss level of painted finishes and, if allowed to remain on the finish for more than a few minutes, may soften the paint and damage the coating. It is sug-

gested that the painted area that comes into contact with the solvent be limited as much as possible.

†Extreme care must be exercised when solvents are used since they may damage organic sealants, gaskets and finishes. Solvents should never be used on anodic finishes protected by clear organic coatings, such as lacquer, unless the organic coating has deteriorated and is to

be removed. Organic solvents should be used only in accordance with manufacturers' safety recommendations.

†Most organic solvents are flammable and/or toxic and must be handled accordingly. Avoid open flames, sparks and electrical motors and use adequate ventilation, protective clothing and goggles.

Removal of Non-Water Soluble Deposits

Alcohols	Petroleum Solvents	Aromatic and Chlorinated	Ketones, Esters and Lacquer Thinner	Acetone Paint Remover
Denatured (ethanol) Isopropyl (rubbing)	VM&P Naphtha Mineral Spirits Turpentine (wood or gum spirits)	Xytol (Xylene) Toluol (Toluene)	Methyl Ethyl Ketone (MEK) Methyl Isobutyl Ketone (MIBK) Ethyl Acetate (nail polish remover) Butyl Acetate Lacquer Thinner	Acetones Paint removers
Cautions †Use with care. See cautions above.	†Use with care. See cautions above.	†Use with care. See cautions above. <i>These solvents should be used with caution on painted surfaces and limited to a maximum of five minutes exposure. A test should be carried out before using them.</i>	†Use with care. See cautions above. <i>Use with extreme caution on painted surfaces. Contact should be limited to a maximum of one minute and a test should be carried out prior to use. Manufacturers are not responsible for damage from unrestricted use.</i>	<i>These should NOT be used on painted surfaces.</i>

084126

ALL GLASS ENTRANCES &
STOREFRONTS

OLDCASTLE GLASS ENTRANCE SYSTEMS LIMITED WARRANTY

PLANT LOCATION: PERRYSBURG

CUSTOMER: Central Kentucky Glass

JOB NAME: UK Pharmacy

ADDRESS: Lexington, KY

LOCATION: Lexington, KY

DATE: December 17, 2009

INVOICES: Various

THE ENTRANCE SYSTEM PRODUCT (THE "PRODUCT") SOLD BY THE COMPANY NAMED ABOVE (THE "COMPANY") UNDER THE INVOICE REFERENCED ABOVE IS WARRANTED (1) TO MEET, IN THE UNITED STATES, THE QUALITY AND STRENGTH REQUIREMENTS OF ASTM C 1048 AND THE SAFETY CRITERIA OF CPSC 16 CFR 1201 (CATEGORIES I AND II), AND, IN CANADA, THE QUALITY AND STRENGTH REQUIREMENTS AND THE SAFETY CRITERIA OF CAN/CGSB-12.1-M AND (2) FOR A PERIOD OF TWO (2) YEARS FROM THE DATE OF MANUFACTURE, UNDER NORMAL CONDITIONS OF USE, FOR COMPONENTS INSTALLED THEREON BY THE COMPANY TO SUFFER NO SEPARATION FROM THE GLASS DUE TO DEFECTS IN MATERIALS OR WORKMANSHIP.



Oldcastle
Glass

THE EXPRESS LIMITED WARRANTY STATED HEREIN IS EXCLUSIVE AND IS IN LIEU OF AND REPLACES ANY AND ALL OTHER WARRANTIES, REPRESENTATIONS OR CONDITIONS OF ANY KIND, WHETHER WRITTEN, ORAL OR IMPLIED (INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, STATUTORY OR OTHERWISE), AND SUPERSEDES ANY ORAL OR WRITTEN WARRANTIES, REPRESENTATIONS OR CONDITIONS MADE, ASSERTED OR IMPLIED BY ANY DISTRIBUTOR, AGENT, REPRESENTATIVE OR EMPLOYEE OR CONTAINED IN ANY MANUAL, BROCHURE, LITERATURE, ADVERTISING OR OTHER MATERIALS. NO DISTRIBUTOR, AGENT, REPRESENTATIVE OR EMPLOYEE HAS THE AUTHORITY TO CHANGE, ALTER, AMEND OR OTHERWISE MODIFY THIS LIMITED WARRANTY.

SEE OTHER LIMITATIONS, EXCLUSIONS AND EXCEPTIONS ON REVERSE

Spec Section 084126 - All Glass Entrances and Storefronts

LIMITATIONS, EXCLUSIONS AND EXCEPTIONS/ENTRANCE SYSTEMS LIMITED WARRANTY.

All claims pursuant to this Limited Warranty must be presented in writing by the Purchaser of the Product (the "Purchaser") to the plant referenced on the reverse (the "Plant") and to Oldcastle Glass, Inc., 2745 North Dallas Parkway, Suite 560, Plano, Texas 75093 within thirty (30) days of the Purchaser learning the facts upon which the claim is based. No warranty claim may be made after the passage of the applicable warranty period. Any legal action in respect of any claim under this Limited Warranty shall accrue on the date the Purchaser discovers or should have discovered with reasonable diligence the facts forming the basis for such claim. Notice of any claim under this Limited Warranty shall not be considered given unless it includes a copy of the Invoice referenced on the reverse; the date and place of purchase of the Product; the name, address and telephone number of the installer of the Product; and the name, address and telephone number of the Purchaser. **NO CLAIM UNDER THIS LIMITED WARRANTY SHALL BE AVAILABLE WITHOUT PROOF OF PURCHASE OF THE APPLICABLE PRODUCT BY THE PURCHASER MAKING THE CLAIM. LIMITED WARRANTY CLAIMS MADE PRIOR TO PAYMENT IN FULL BY PURCHASER FOR THE PRODUCT SHALL NOT BE HONORED. FAILURE TO MAKE PAYMENT IN FULL FOR THE PRODUCT ON OR PRIOR TO THE DATE PAYMENT IS DUE THEREFOR SHALL VOID THIS LIMITED WARRANTY.** Upon validation by the Company of any Limited Warranty claim, the Company, at its sole option, shall either (a) furnish the Purchaser with a replacement Product or, if the Product is no longer made, a substitute product which, in the sole discretion of the Company, is comparable to the original Product, F.O.B. the Plant, freight collect, or (b) refund the original purchase price which the Purchaser paid for the failed portion of the Product (less freight and other charges). **A COMPARABLE SUBSTITUTE PRODUCT, WHETHER FABRICATED BY THE COMPANY OR BY A PARTY CHOSEN BY THE COMPANY IN ITS SOLE DISCRETION, MAY HAVE CHARACTERISTICS INCLUDING, BUT NOT LIMITED TO, COLOR, SHADING COEFFICIENT, U-VALUE AND/OR SURFACE APPEARANCE WHICH VARY FROM THE ORIGINAL PRODUCT BUT SHALL NONETHELESS SATISFY THE COMPANY'S OBLIGATION TO REPLACE THE PRODUCT.** If the Company elects to supply a replacement or substitute product, the Limited Warranty on the replacement or substitute product shall extend only for the balance of the original Limited Warranty period of the failed Product. In no event shall the Company be responsible for any costs attendant to replacing nonconforming or defective Products (including, but not limited to, labor costs), other than as specified in this paragraph. At the Company's request, all defective Product which is replaced or substituted for pursuant to this Limited Warranty shall be returned to the Company, at the Purchaser's expense, within thirty (30) days after such replacement or substitution.

NO WARRANTY IS MADE WITH RESPECT TO HARDWARE ORDERED OR INSTALLED BY THE PURCHASER OR ANY OTHER THIRD PARTY ON AND/OR IN CONNECTION WITH THE PRODUCT, INCLUDING, WITHOUT LIMITATION, LOCKS OR CLOSERS. THE PRODUCT MUST NOT BE MODIFIED OR FABRICATED (e.g., GROUND, DRILLED, SAND BLASTED OR OTHERWISE) AS THIS CAN WEAKEN THE GLASS AND/OR IMPAIR ITS SAFETY CHARACTERISTICS. ANY MODIFICATION OR FABRICATION OF THE PRODUCT VOIDS THIS LIMITED WARRANTY.

THE COMPANY SPECIFICALLY DISCLAIMS RESPONSIBILITY FOR ANY DAMAGE TO ANY PRODUCT CAUSED BY, OR WHICH RESULTS FROM, IMPROPER INSTALLATION, INCLUDING ANY INSTALLATION NOT PERFORMED IN A GOOD AND WORKMANLIKE MANNER IN ACCORDANCE WITH INDUSTRY STANDARDS AND APPLICABLE SHOP DRAWINGS, ORDINANCES AND SAFETY CODES; PROVIDED THAT, IN ADDITION, SUCH INSTALLATION SHALL BE PERFORMED AT ANY HIGHER STANDARDS AS SHALL BE SET FORTH IN ANY GLAZING OR INSTALLATION INSTRUCTIONS PROVIDED BY THE COMPANY; IMPROPER MAINTENANCE; STORAGE IN OTHER THAN A GOOD AND WORKMANLIKE MANNER; ABUSE; DAMAGE OR BREAKAGE CAUSED BY PERSONS OTHER THAN EMPLOYEES OR AGENTS OF THE COMPANY WHILE BEING HANDLED, INSTALLED, SHIPPED, GLAZED OR USED; DAMAGE OR BREAKAGE CAUSED BY IMPROPER BUILDING DESIGN OR CONSTRUCTION; THERMAL BREAKAGE; BUILDING OR FOUNDATION MOVEMENT; USE UPON THE PRODUCT OF ANY CLEANSING OR TREATING AGENTS; ATMOSPHERIC POLLUTANTS OR CONTAMINANTS, OR RUNOFF; LEACHATE FROM BUILDING COMPONENTS; USE OF THE PRODUCT WITH INCOMPATIBLE GLAZING OR OTHER MATERIALS; OR USE OF THE PRODUCT FOR PURPOSES NOT CONSIDERED SUITABLE THEREFOR BY THE GLASS INDUSTRY OR, IN ITS SOLE DISCRETION, BY THE COMPANY. NO WARRANTY IS PROVIDED IN RESPECT OF ANY DAMAGE TO OR FAILURE CAUSED BY ANY OF THE FOREGOING. ANY PRODUCT SHIPPED OUTSIDE THE UNITED STATES AND CANADA IS NOT WARRANTED BY OLDCASTLE GLASS, INC.

THE REMEDIES PROVIDED HEREIN AND IN THE COMPANY'S INVOICE FOR THE PRODUCTS CONSTITUTE THE PURCHASER'S SOLE AND EXCLUSIVE REMEDY UNDER ANY CLAIM OR THEORY OF LIABILITY IN RESPECT OF THE COMPANY'S MANUFACTURE, SALE OR PROVISION OF THE PRODUCT OR ANY WARRANTY IN CONNECTION THEREWITH, INCLUDING, WITHOUT LIMITATION, CLAIMS BASED UPON FAILURE OF, OR DEFECT IN, THE PRODUCT, WHETHER A CLAIM, HOWEVER INSTITUTED, IS BASED UPON CONTRACT, INDEMNITY, BREACH OF WARRANTY, TORT (INCLUDING NEGLIGENCE AND/OR STRICT LIABILITY) OR OTHERWISE. THE COMPANY SHALL NOT BE LIABLE FOR CONSEQUENTIAL, INDIRECT, INCIDENTAL, PUNITIVE, EXEMPLARY OR SPECIAL DAMAGES, CLAIMS OR COSTS OF ANY NATURE INCLUDING, WITHOUT LIMITATION, LABOR COSTS OF ANY KIND RELATING TO THE REMOVAL OF FAILED PRODUCTS AND/OR REINSTALLATION OF REPLACEMENT PRODUCTS THEREFORE, OR DAMAGES, CLAIMS OR COSTS OTHERWISE ARISING FROM, OR IN CONNECTION WITH, ALLEGED BREACH OF ANY LIMITED WARRANTY OR NEGLIGENCE ON THE PART OF THE COMPANY.

If Purchaser is sued by any third party for Product failure under warranty or any other theory, Purchaser shall provide the Company at its Plant and Oldcastle Glass, Inc. at its address above with written notice thereof with a copy of any and all pleadings served upon Purchaser within ten (10) days of such service and provide the Company with an opportunity to inspect the allegedly defective Product. Failure to comply with the foregoing shall void this Limited Warranty.

PRODUCTS NOT EXPRESSLY WARRANTED BY THE COMPANY ARE SOLD "AS IS, WITH ALL FAULTS" AND PRODUCT FAILURES EXPRESSLY EXCLUDED FROM THIS LIMITED WARRANTY (INCLUDING FOR EXAMPLE, BUT NOT LIMITED TO, GLASS BREAKAGE) ARE NOT COVERED BY ANY OTHER WARRANTY, REPRESENTATION OR CONDITION, EXPRESS OR IMPLIED, STATUTORY OR OTHERWISE. THE COMPANY OFFERS NO WARRANTY, EXPRESS, IMPLIED OR OTHERWISE FOR ANNEALED GLASS OR PRODUCTS CONTAINING A FILM OPACIFIER. THE COMPANY DOES NOT WARRANT COATED GLASS PROVIDED IN ITS PRODUCTS. To the extent assignable, the Company assigns to the Purchaser any warranty on the Product provided by third parties, including any warranty by a third party glass coater. These assigned warranties will generally be limited and subject to exclusions and exceptions. The Purchaser is advised to apprise itself of such limitations, exclusions and exceptions, and the Company shall have no obligation to so apprise the Purchaser. (In general the limited warranty provided by glass coaters may be void if the coated glass is installed contrary to the Company's or the respective coater's instructions, damaged by improper handling or installation, or if damaged because of scratches or abrasions which may be caused by abrasive cleaners used on the coated surface.)

Any waiver by the Company of a deviation from any of the terms or conditions in this Limited Warranty shall only be for the specific deviation so waived and shall not be construed as a waiver of any other term or condition nor a continuing waiver of the term or condition so waived.

The Company reserves the absolute right to inspect, in the field or at the Plant, any Product that is alleged by the Purchaser to be defective. Failure to afford the Company the right to inspect allegedly defective Product promptly upon the Purchaser becoming aware of any defect therein voids this Limited Warranty.

The Purchaser is solely responsible for all determinations of the compatibility of any glazing or other materials (e.g., sealants, gaskets, tapes, setting blocks, metal or finishes) with the Product. The Purchaser is advised that annealed, heat strengthened or wired glass does not meet the requirements of CPSC 16 CFR 1201 for safety glazing and should not be glazed in hazardous locations, including those defined by applicable codes and law. Hazardous locations should be glazed with approved safety glass.

IT IS THE EXPRESS WISH OF THE PARTIES THAT THIS LIMITED WARRANTY AND ANY RELATED DOCUMENTS BE DRAWN UP AND EXECUTED IN ENGLISH ONLY. IL EST LA VOLONTÉ EXPRESSE DES PARTIES QUE CETTE GARANTIE LIMITÉE ET TOUTS LES DOCUMENTS S'Y RATTACHANT SOIENT RÉDIGÉS ET SIGNÉS EN ANGLAIS SEULEMENT. THIS LIMITED WARRANTY AND ANY RELATED DOCUMENTS ARE IN THE ENGLISH LANGUAGE AND SHALL BE INTERPRETED IN ACCORDANCE WITH THE MEANINGS OF THE WORDS AND PHRASES USED HEREIN AS UNDERSTOOD IN THE STATE OR PROVINCE OF SELLER'S PLANT INDICATED ON THE FACE OF THIS LIMITED WARRANTY. THIS LIMITED WARRANTY SHALL BE GOVERNED BY, AND CONSTRUED AND INTERPRETED IN ACCORDANCE WITH, THE LAWS OF THE STATE OR PROVINCE IN WHICH THE PLANT IS LOCATED, WITHOUT REGARD TO PRINCIPLES OF CONFLICTS OF LAWS. ANY SUIT, ACTION OR PROCEEDING ARISING OUT OF OR RELATING TO THIS LIMITED WARRANTY SHALL BE INSTITUTED IN ANY COURT SITTING IN SUCH PROVINCE OR, IN THE CASE OF A STATE, IN THE COUNTY OF THE LOCATION OF THE PLANT AND ANY OBJECTION WHICH MAY NOW OR HEREAFTER EXIST TO THE LAYING OF THE VENUE OR TO THE JURISDICTION OF ANY SUCH SUIT, ACTION OR PROCEEDING IN SUCH PROVINCE OR COUNTY IS WAIVED. THE BRINGING OF ANY SUIT, ACTION OR PROCEEDING BY THE PURCHASER WHICH IS NOT IN COMPLIANCE WITH THE FOREGOING SHALL VOID THIS LIMITED WARRANTY.

THIS LIMITED WARRANTY; THE CREDIT APPLICATION, IF ANY, COMPLETED BY PURCHASER; THE COMPANY'S GLAZING INSTRUCTIONS, IF ANY; AND THE INVOICE FOR THE PURCHASE OF THE PRODUCT CONSTITUTE THE COMPLETE AND EXCLUSIVE STATEMENT OF THE TERMS OF THE AGREEMENT BETWEEN THE COMPANY AND PURCHASER WITH RESPECT TO THE SUBJECT MATTER HEREOF AND SUPERSEDE ANY OTHER WRITING, DOCUMENT OR AGREEMENT. THIS LIMITED WARRANTY MAY NOT BE MODIFIED, INCLUDING PURSUANT TO ANY ORDER MADE BY PURCHASER OR IN ANY OTHER DOCUMENT, UNLESS SUCH MODIFICATION IS MADE IN WRITING AND EXECUTED ON BEHALF OF SELLER BY ITS PRESIDENT.

THIS LIMITED WARRANTY IS EXTENDED TO THE PURCHASER OF THE PRODUCT ONLY AND ANY CLAIM HEREUNDER MAY BE MADE SOLELY BY THE PURCHASER. THIS LIMITED WARRANTY IS NOT TRANSFERABLE WITHOUT THE PRIOR WRITTEN CONSENT OF THE COMPANY, WHICH MAY BE WITHHELD ENTIRELY IN ITS DISCRETION, AND ANY ATTEMPTED ASSIGNMENT WITHOUT SUCH PRIOR WRITTEN CONSENT SHALL VOID THIS LIMITED WARRANTY.

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Spec Section 084126 - Concealed Door Closers

LIMITED WARRANTY POLICY

All products sold are warranted to be free from defects in workmanship and materials for the periods listed in the table below, from the date of manufacture. THIS COMPRISES SELLER'S SOLE AND EXCLUSIVE WARRANTY AND IS MADE EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, WRITTEN OR ORAL, EXPRESSED OR IMPLIED, STATUTORY OR OTHERWISE CONCERNING THE PRODUCTS, AND ALL OTHER WARRANTIES, INCLUDING, WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY OR FITNESS FOR INTENDED PURPOSE, ARE HEREBY DISCLAIMED AND EXPRESSLY EXCLUDED. SELLER DOES NOT WARRANT AGAINST UNITED STATES PATENT INFRINGEMENT BY WAY OF THE USE OF PRODUCTS IN COMBINATION WITH OTHER PRODUCTS.

Limited warranty period (years) by product (from date of manufacture)	Mechanical	Electrical
Door Controls (Manufactured after Aug. 1986)		
TS93, 8900, 8600, 7400, 7300, BTS75V, <u>BTS80</u>	25	n/a
RTS, ITS	10	n/a
7200	5	n/a
EMR, EMF, 1800, GSR	25	2
EMB, EM, EAC, ED800	2	2
LM, 900, 700	2	n/a
Exit Devices (Manufactured after Apr. 2001)		
AD4000, 5000, 8000	5	2
9000	10	2
Locks		
ML/MK9000, CL/CK800, D800	10	2
J200, CL/CK700, DB600	5	n/a
CL/CK600, C400	1	n/a
SKC Keys	Lifetime	n/a
All other products not listed	2	1

None of the warranties set forth herein shall extend to any products or parts thereof that have been subjected to improper installation, lack of, or improper, maintenance, improper storage, shipping and handling, ordinary wear and tear, misuse, neglect, accident, unauthorized service, use of unauthorized parts, or performance of repairs, modifications or attachment to other products outside of Seller's plant. These warranties shall neither extend to nor cover any labor charges for replacement of products or parts, adjustments, or repairs, or any other work, which costs shall be the sole responsibility of Buyer. These warranties are extended only to Seller's distributors of products and the first user who purchases products for purposes other than resale (collectively, "Buyer").

Buyer's sole and exclusive remedy against Seller for any claim, whether in contract, tort or otherwise, arising out of, or resulting from the purchase of the products shall be limited to the repair or replacement of any product or part thereof, which is proved to be other than as warranted, or, at the sole option of Seller, to the issuance of a credit in an amount not to exceed the cost of the repair or replacement. In no event shall Seller be liable to Buyer or any other party for, and Buyer waives, any and all other damages, including, without limitation, incidental, special, indirect, collateral, punitive or consequential damages, including, without limitation, loss of profits, or loss of use damages or downtime costs.

If a product is claimed to be other than as warranted, Seller, upon notice promptly given, will either examine the goods at Buyer's site or issue shipping instructions for return of product to the Seller (transportation costs prepaid by Buyer and all cost associated with the removal and reinstallation of such product to be the sole responsibility of Buyer).

Any representations, warranties or promises inconsistent with, or in addition to, the warranties contained herein are unauthorized and shall not be binding upon Seller. Because Seller has no control over the conditions under which its products are used, Seller specifically does not warrant the adequacy or sufficiency of any advice or recommendations given to Buyer. Nor does Seller warrant that every Seller product complies with every code, standard or regulation in every community except as specifically stated in a published Seller catalog or in writing signed by an officer of Seller. Seller shall not be bound by the terms of any agreements between a Buyer and third parties.



Caring for Today's Architectural Glass

Over the past 40 years, the flat glass industry has answered the calls from building architects for safer, more aesthetically pleasing, and more energy efficient glass products to replace the single pane, clear, annealed (non-heat treated) glass that has been used for centuries.

The industry's response has been high-performance glass products incorporating innovations such as heat-treating, coatings, laminating, and multi-pane insulating units. These high-performance glass products dominate the vision and non-vision (spandrel) glazing in today's building construction.

Many of these unique glass products are heat-treated during the fabrication process. Heat-treating glass involves moving cut-to-size glass pieces horizontally on ceramic rollers through an oven that heats the glass close to its softening point and then quenching the glass with high volumes of air to create the desired surface compression for increased strength, impact resistance, and other attributes of enhanced performance.

It is a scientific fact that heat-treating glass does not change the surface hardness (i.e., scratch resistance) of the glass. Annealed glass and heat-treated glass have the same glass hardness.

Heat-treating does, however, change the glass surfaces in other ways. Heat-treated glass may have slight surface markings, roller waves, or overall bow resulting from the soft glass riding on the ceramic rollers. The glass also may have microscopic particles adhering to one or both surfaces. These particles can come from any one of a variety of sources in the heat-treating process.

The glass heat-treating industry cannot guarantee or warrant that surface particles or any of the other conditions mentioned above will be completely eliminated from random occurrence on finished tempered or heat-strengthened glass products, even when using properly maintained equipment, and observing good housekeeping and fabrication processes.

Like many specially engineered products, high-performance glass products require special care and handling. The producers of these products, as well as the Glass Association of North America (GANA), have generated documents to assist building construction companies, post-construction cleaning companies, and building owners and managers to properly care for these products. These documents can be obtained free of charge from the original manufacturer of the glass product or from the GANA organization website (www.glasswebsite.com). The GANA documents *Proper Procedures for Cleaning Architectural Glass Products* and *Heat-Treated Glass Surfaces are Different*, emphasize the need to avoid the use of scrapers in the glass cleaning process because their use carries the high risk of scratching the glass surface when the scraper drags surface particles left on the glass, whether by the heat-treating process or as construction grit/dirt, across its surface.

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Glass Cleaning Procedures

Spec Section 084123 - Maintenance Data for All-Glass Systems



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Section 21-03

Glass Cleaning

Introduction

The documents included in this section are designed to help avoid problems when cleaning glass. They should be included with every project to avoid serious damage to glass that may result from improper cleaning procedures.

1. *Proper Procedures for Cleaning Architectural Glass Products*, a Glass Informational Bulletin published by the Glass Association of North America (GANA). This document highlights important information on proper glass cleaning procedures, including the following:

- Start cleaning from bottom-up or top-down.
- Advice for cleaning stucco and concrete slurry spots from glass.

- Best time of day for cleaning glass
- Avoid glass to metal contact
- What type of detergent to use
- Razor scraping is quicker, but it causes other headaches
- A quick reference list of Dos and Do Nots for cleaning glass.

2. *Heat-Treated Glass Surfaces Are Different*, a Glass Informational Bulletin published by the Glass Association of North America. This document highlights important information on the differences, between annealed and heat-treated glass surfaces, that relate to proper cleaning procedures.

Additional Glass Cleaning Tips

The following important glass cleaning tips highlight areas not covered in the above two GANA Glass Information Bulletins:

- Commence cleaning as soon as the glass is visibly dirty.
- Avoid cleaning tinted and reflective glasses in direct sunlight as the glass will be excessively hot for optimum cleaning.
- Washing of the glass should be preceded by a thorough cold-water flushing to remove all surface grit.
- Glass should be washed using a soft, clean, grit-free cloth and a mild soap, detergent, or slightly acidic cleaning solution. Glass should be rinsed immediately with clean water, and the excess water should be removed with a clean squeegee, or a clean, lint-free cloth.

Do not allow metal squeegee holders to touch the glass surface.

- If paint or glazing compounds have to be removed from the surface, conventional cleaners and solvents should be used. Do not use razor blades or broad knife blades to remove these contaminants.
- Solutions that are strongly alkaline or acidic, fluoride salts or hydrogen fluoride producing compounds, must not be used.
- Fingerprints, grease stains, smears, dirt, scum, sealant residue, scratches and abrasions are more noticeable on coated glass than on uncoated glass. Extra care should be exercised in handling and cleaning to keep such markings off of the glass.
- Abrasive cleaners must not be used on first-surface reflective glass products.

Glass Cleaning

Proper Procedures for Cleaning Architectural Glass Products

Architectural glass products play a major role in the comfort of living and working environment of today's homes and commercial office spaces. By providing natural daylight, views of the surroundings, thermal comfort and design aesthetics, glass usage and condition often affect our selection of where we live, work, shop, play and seek education.

Architectural glass products must be properly cleaned during construction activities and as a part of routine maintenance in order to maintain visual and aesthetic clarity. Since glass products can be permanently damaged if improperly cleaned, glass producers and fabricators recommend strict compliance with the following procedures for properly cleaning glass surfaces.

As dirt and residue appear, interior and exterior glass surfaces should be thoroughly cleaned. Concrete or mortar slurry that runs down (or is splashed on) glass can be especially damaging and should be washed off as soon as possible. Before proceeding with cleaning, determine whether the glass is clear, tinted or reflective. Surface damage is more noticeable on reflective glass as compared with the other glass products. If the reflective surface is exposed, either on the exterior or interior, special care must be taken when cleaning, as scratches to the reflective glass surface can result in coating removal and a visible change in light transmittance. Cleaning tinted and reflective glass surfaces in direct sunlight should be avoided, as the surface temperature may be excessively hot for optimum cleaning. Cleaning should begin at the top of the building and continue to the lower levels to reduce the risk of leaving residue and cleaning solutions on glass at the lower levels. Cleaning procedures should also ensure that the wind is not blowing the cleaning solution and residue onto already cleaned glass.

Cleaning during construction activities should begin with soaking the glass surfaces with clean

water and soap solution to loosen dirt or debris. Using a mild, nonabrasive commercial window-washing solution, uniformly apply the solution to the glass surfaces with a brush, strip washer or other nonabrasive applicator. Immediately following the application of the cleaning solution, a squeegee should be used to remove all of the cleaning solution from the glass surface. Care should be taken to ensure that no metal parts of the cleaning equipment touch the glass surface and that no abrasive particles are trapped between the glass and the cleaning materials. All water and cleaning solution residue should be dried from window gaskets, sealants and frames to avoid the potential for deterioration of these materials as the result of the cleaning process.

It is strongly recommended that window washers clean a small area or one window, then stop and examine the surface for any damage to the glass and/or reflective coating. The ability to detect certain surface damage, i.e., light scratches, may vary greatly with the lighting conditions. Direct sunlight is needed to properly evaluate a glass surface for damage. Scratches that are not easily seen with a dark or gray sky may be very noticeable when the sun is at a certain angle in the sky or when the sun is low in the sky.

The glass industry takes extreme care to avoid glass scratches by protecting all glass surfaces during glass manufacturing and fabrication, as well as during all shipping and handling required to deliver the glass to the end user. A large percentage of damaged glass results from non-glass trades working near glass. These will include painters, spacklers, ironworkers, landscapers, carpenters and others who are part of the construction process. They may inadvertently lean tools against the glass, splash materials onto the glass and/or clean the glass incorrectly, any of which can permanently damage glass.

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Glass Cleaning

Proper Procedures for Cleaning Architectural Glass Products

One of the common mistakes made by non-glass trades people, including glass cleaning contractors, is their use of razor blades or other scrapers on a large portion of the glass surface. Using 2, 3, 4, 5 inch and larger blades to scrape a window clean carries a large probability of causing irreparable damage to glass. The entire industry of glass manufacturers, fabricators, distributors and installers neither condones nor recommends widespread scraping of glass surfaces with metal blades or knives. Such scraping will often permanently damage or scratch the glass surfaces. When paint or other construction materials cannot be removed with normal cleaning procedures, a new 1" razor blade may need to be used only on noncoated glass surfaces. The razor blade should be used on small spots only. Scraping should be done in one direction only. Never scrape in a back-and-forth motion as this could trap particles under the blade that could scratch the glass. This practice may cause hairline concentrated scratches, which are not normally visible when looking through the glass, but may be visible under certain lighting conditions.

Job site storage and construction conditions can lead to stains on the glass surface. Cleaning and removal of such stains may require the use of a more aggressive cleaning solution and procedure.

If conditions are found that cannot be cleaned using the above procedures, contact the glass supplier for guidelines on stain removal.

Members of the Glass Association of North America (GANA) publish information relating to job site protection and cleaning of architectural glass products. In order to ensure long-term performance of the glass in a building, GANA encourages glazing contractors, general contractors, building management and owners to be aware of conditions that can damage glass, and to follow the handling and cleaning guidelines provided by their glass producer and fabricator.

The Glass Association of North America (GANA) has produced this Glass Informational Bulletin solely to provide general information as to basic proper procedures for cleaning architectural glass products. The Bulletin does not purport to state that any one particular type of glass cleaning process or procedure should be used in all applications or even in any specific application. The user of this Bulletin has the responsibility to ensure the cleaning instructions from the glass supplier are followed. GANA disclaims any responsibility for any specific results relating to the use of this Bulletin for any errors or omissions contained in the Bulletin and for any liability for loss or damage of any kind arising out of the use of this Bulletin.

Reprinted, with permission, from GANA, Glass Informational Bulletin, GANA TD-01-0300, *Proper Procedures for Cleaning Architectural Glass Products.*



Glass Cleaning

Quick Reference Guide to Cleaning Architectural Glass Products

The following “Dos” and “Do Nots” are offered as a supplement to the Glass Association of North America (GANA) Glass Informational Bulletin—*Proper Procedures for Cleaning Architectural Glass Products*:

The following are things to DO:

- DO** clean glass as soon as dirt and residue appear visibly.
- DO** determine if coated glass surfaces are exposed.
- DO** exercise special care when cleaning coated glass surfaces.
- DO** avoid cleaning tinted and coated glass surfaces in direct sunlight.
- DO** start cleaning at the top of the building and continue to lower levels.
- DO** soak the glass surface with a clean water and soap solution to loosen dirt and debris.
- DO** use a mild, nonabrasive commercial window cleaning solution.
- DO** use a squeegee to remove all of the cleaning solution.
- DO** dry all cleaning solution from window gaskets, sealants and frames.
- DO** clean one small window area and check to see if procedures have caused any damage.
- DO** be aware of and follow the glass supplier’s specific cleaning recommendations.
- DO** caution other trades against allowing other materials to contact the glass.
- DO** watch for and prevent conditions that can damage the glass.
- DO** read the entire GANA Bulletin on glass cleaning before starting to clean glass.

The following are things to NOT do:

- DO NOT** start cleaning without reading the entire GANA Bulletin on glass cleaning.
- DO NOT** use scrapers of any size or type for cleaning glass.
- DO NOT** allow dirt and residue to remain on glass for an extended period of time.
- DO NOT** begin cleaning glass without knowing if a coated surface is exposed.
- DO NOT** clean tinted or coated glass in direct sunlight.
- DO NOT** allow water or cleaning residue to remain on the glass or adjacent materials.
- DO NOT** begin cleaning without rinsing excessive dirt and debris.
- DO NOT** use abrasive cleaning solutions or materials.
- DO NOT** allow metal parts of cleaning equipment to contact the glass.
- DO NOT** trap abrasive particles between the cleaning materials and the glass surface.
- DO NOT** allow other trades to lean tools or materials against the glass surface.
- DO NOT** allow splashed materials to dry on the glass surface.

Glass Cleaning: Heat-Treated

Heat-Treated Glass Surfaces Are Different

Industry Cleaning Procedures Must be Followed to Avoid Glass Damage

As the use of glass increased over recent years, issues of strength, safety and thermal performance became increasingly important design considerations. The availability of tinted and coated glasses had a dramatic impact on glass use in building projects. The vastly expanded aesthetic options, combined with the improved energy-conserving and comfort capabilities of tinted and coated glasses, allowed architects to use more glass, as well as larger sizes in their designs. A consequence of this trend was a corresponding increase in the use of tempered and heat-strengthened glass in order to meet both thermal and wind load design requirements. The demand for tempered glass increased further with the passing of safety-glazing legislation in 1977, which mandated its use in certain locations.

Currently, there are two types of heat-treated glass as defined in the American Society for Testing and Materials (ASTM) C1048 - *Standard Specification for Heat-Treated Flat Glass – Kind HS, Kind FT Coated and Uncoated Glass*. The two types are heat-strengthened (Kind HS) and fully tempered (Kind FT). Both types of glass are produced using the same equipment. A majority of the heat-treated glass produced over the last 30 years has been fabricated in horizontal roller hearth furnaces. The preparation stage for the heat-treatment process requires annealed float glass to be cut to the required final size, the edges to be treated according to the specified finish (commonly seamed or polished) and the glass to be washed. The process then requires the glass to be transported on horizontal rollers through an oven and heated to approximately 1,150°F (621°C). Upon exiting the furnace, the glass is rapidly cooled (quenched) by blowing air uniformly onto both surfaces simultaneously. The cooling process leaves the surfaces of the glass in a state of compression and the central core in compensating tension.

The color, clarity, chemical composition and light transmission characteristics of glass remain essentially unchanged after heat-treating. Likewise, hardness, specific gravity, expansion coefficient, softening point, thermal conductivity, solar optical properties and stiffness remain unchanged by the heat-treating process. The only physical properties that change are improved flexural and tensile strength, and improved resistance to thermal stresses and thermal shock. Under uniform loading, heat-treated glass is stronger than annealed glass of the same size and thickness. The heat-treating process does change the break pattern of the glass—i.e., fully tempered glass disintegrates into relatively small pieces, meeting the safety-glazing requirements and thereby greatly reducing the likelihood of serious cutting or piercing injuries.

As mentioned, the heat-treating process typically involves the transport of very hot glass on rollers. As a result of this soft glass-to-roller contact, some glass surface changes will occur. Minute glass particles (fines) from the glass cutting and edging process, typical manufacturing plant airborne debris or dust, refractory particles from the tempering oven roof, as well as external airborne dirt and grit carried into the plant by the large volumes of quench air used in the process, may adhere to one or both glass surfaces. Also, the physical contact of the soft glass surface with the rollers may result in a marking or dimpling of the glass surface. Current glass quality specifications contained in ASTM C1036—*Standard Specification for Flat Glass*—establish the size and number of glass imperfections allowed based on specific visual inspection criteria. The glass surface conditions listed above are not usually visible to the eye under normal visual circumstances. These surface imperfections do not threaten the visual or structural integrity of the product, and are not reason for rejection of glass under the ASTM consensus standards.

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Glass Cleaning: Heat-Treated

Heat-Treated Glass Surfaces Are Different

However, despite being invisible, such surface conditions can be detectable to the touch. This difference in “feel,” between annealed and heat-treated glass, can lead to issues during cleaning of the glass, as glass cleaning workers attempt to remove microscopic particles. With the best of intentions, they may attempt to scrape particles that can be felt, but not seen, and very often end up scratching and chipping the glass surface.

Additionally, once the glass is delivered to the construction site, construction materials and debris may be deposited on the glass. Paint, stucco, concrete, adhesives and other materials may be splattered on the glass and left there for long periods of time. These materials and the methods for removing them may also damage the glass surface.

It is important to note that the recommended cleaning procedures for heat-treated glass are the same as for annealed glass. The use of scrapers, abrasives, and harsh chemical cleaning agents is not recommended for any glass product because they can cause irreparable damage. With the best of intentions, window cleaners, and other tradesmen, may attempt to remove construction

dirt and debris from the glass surface by scraping the surface. This can lead to glass damage, such as scratching and chipping if any microscopic particles have adhered to the surface and are dislodged and transported across the glass in the scraping process.

Acceptable cleaning procedures are available from glass manufacturers and fabricators. In addition, the Glass Association of North America has published a Glass Informational Bulletin entitled, *Proper Procedures for Cleaning Architectural Glass Products*, which includes industry-recommended cleaning procedures, as well as a list of Dos and Do Nots.

Heat-treated glass products are critical components of today’s high-performance coated, insulating, laminated, spandrel, safety glazing, bullet-resistant, blast-resistant, and hurricane-resistant fenestration products. Millions upon millions of square feet of heat-treated glass have been installed and have provided trouble-free performance for almost 50 years. Continued use of acceptable cleaning practices, combined with good judgment, will prevent glass damage and enable the glass to maintain its original attractive appearance for years to come.

Reprinted, with permission, from GANA, Glass Informational Bulletin, GANA TD-02-0402, *Heat-Treated Glass Surfaces Are Different*.





GLASS Informational Bulletin

GANA 01-0300

Proper Procedures for Cleaning Architectural Glass Products

Architectural glass products play a major role in the comfort of living and working environment of today's homes and commercial office spaces. By providing natural daylight, views of the surroundings, thermal comfort and design aesthetics, glass usage and condition often affect our selection of where we live, work, shop, play and seek education.

Architectural glass products must be properly cleaned during construction activities and as a part of routine maintenance in order to maintain visual and aesthetic clarity. Since glass products can be permanently damaged if improperly cleaned, glass producers and fabricators recommend strict compliance with the following procedures for properly cleaning glass surfaces.

As dirt and residue appear, interior and exterior glass surfaces should be thoroughly cleaned. Concrete or mortar slurry which runs down (or is splashed on) glass can be especially damaging and should be washed off as soon as possible. Before proceeding with cleaning, determine whether the glass is clear, tinted or reflective. Surface damage is more noticeable on reflective glass as compared with the other glass products. If the reflective surface is exposed, either on the exterior or interior, special care must be taken when cleaning, as scratches to the reflective glass surface can result in coating removal and a visible change in light transmittance. Cleaning tinted and reflective glass surfaces in direct sunlight should be avoided, as the surface temperature may be excessively hot for optimum cleaning. Cleaning should begin at the top of the building and continue to the lower levels to reduce the risk of leaving residue and cleaning solutions on glass at the lower levels. Cleaning procedures should also ensure that the wind is not blowing the cleaning solution and residue onto already cleaned glass.

Cleaning during construction activities should begin with soaking the glass surfaces with clean water and soap solution to loosen dirt or debris. Using a mild, non-abrasive commercial window washing solution, uniformly apply the solution to the glass surfaces with a brush, strip washer or other non-abrasive applicator. Immediately following the application of the cleaning solution, a squeegee should be used to remove all of the cleaning solution from the glass surface. Care should be taken to ensure that no metal parts of the cleaning equipment touch the glass surface and that no abrasive particles are trapped between the glass and the cleaning materials. All water and cleaning solution residue should be dried from window gaskets, sealants and frames to avoid the potential for deterioration of these materials as the result of the cleaning process.

It is strongly recommended that window washers clean a small area or one window, then stop and examine the surface for any damage to the glass and/or reflective coating. The ability to detect certain surface damage, i.e. light scratches, may vary greatly with the lighting conditions. Direct sunlight is needed to properly evaluate a glass surface for damage. Scratches that are not easily seen with a dark or gray sky may be very noticeable when the sun is at a certain angle in the sky or when the sun is low in the sky.

The glass industry takes extreme care to avoid glass scratches by protecting all glass surfaces during glass manufacturing and fabrication, as well as during all shipping and handling required to deliver the glass to the end user. A large percentage of damaged glass results from non-glass trades working near glass. This will include painters, spacklers, ironworkers, landscapers, carpenters and others who are part of the construction process. They may inadvertently lean tools against the glass, splash materials onto the glass and/or clean the glass incorrectly, any of which can permanently damage glass.

One of the common mistakes made by non-glass trades people, including glass cleaning contractors, is their use of razor blades or other scrapers on a large portion of the glass surface. Using 2, 3, 4, 5 inch and larger blades to scrape a window clean carries a large probability for causing irreparable damage to glass.

The entire industry of glass manufacturers, fabricators, distributors, and installers neither condones nor recommends widespread scraping of glass surfaces with metal blades or knives. Such scraping will often permanently damage or scratch the glass surfaces. When paint or other construction materials cannot be removed with normal cleaning procedures, a new 1" razor blade may need to be used only on non-coated glass surfaces. The razor blade should be used on small spots only. Scraping should be done in one direction only. Never scrape in a back and forth motion as this could trap particles under the blade that could scratch the glass. This practice may cause hairline concentrated scratches, which are not normally visible when looking through the glass, but may be visible under certain lighting conditions.

Jobsite storage and construction conditions can lead to stains on the glass surface. Cleaning and removal of such stains may require the use of a more aggressive cleaning solution and procedure. If conditions are found that cannot be cleaned using the above procedures, contact the glass supplier for guidelines on stain removal.

Members of the Glass Association of North America (GANA) publish information relating to jobsite protection and cleaning of architectural glass products. In order to ensure long-term performance of the glass in a building, GANA encourages glazing contractors, general contractors, building management and owners to be aware of conditions that can damage glass and to follow the handling and cleaning guidelines provided by their glass producer and fabricator.


The Glass Association of North America (GANA) has produced this Glass Information Bulletin solely to provide general information as to basic proper procedures for cleaning architectural glass products. The Bulletin does not purport to state that any one particular type of glass cleaning process or procedure should be used in all applications or even in any specific application. The user of this Bulletin has the responsibility to ensure the cleaning instructions from the glass supplier are followed. GANA disclaims any responsibility for any specific results relating to the use of this Bulletin, for any errors or omissions contained in the Bulletin, and for any liability for loss or damage of any kind arising out of the use of this Bulletin.

Quick-Reference Guide to Cleaning Architectural Glass Products

The following "Do's" and "Do Not's" are offered as a supplement to the Glass Association of North America (GANA) Glass Informational Bulletin – *Proper Procedures for Cleaning Architectural Glass Products*:

The following are things to DO:

- DO clean glass when dirt and residue appear
- DO determine if coated glass surfaces are exposed
- DO exercise special care when cleaning coated glass surfaces
- DO avoid cleaning tinted and coated glass surfaces in direct sunlight
- DO start cleaning at the top of the building and continue to lower levels
- DO soak the glass surface with a clean water and soap solution to loosen dirt and debris
- DO use a mild, non-abrasive commercial window cleaning solution
- DO use a squeegee to remove all of the cleaning solution
- DO dry all cleaning solution from window gaskets, sealants and frames
- DO clean one small window and check to see if procedures have caused any damage
- DO be aware of and follow the glass supplier's specific cleaning recommendations
- DO caution other trades against allowing other materials to contact the glass
- DO watch for and prevent conditions that can damage the glass
- DO read the entire GANA bulletin on glass cleaning before starting to clean glass

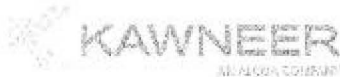


The following are things NOT to do:

- DO NOT start cleaning without reading the entire GANA bulletin on glass cleaning
- DO NOT use scrapers of any size or type for cleaning glass
- DO NOT allow dirt and residue to remain on glass for an extended period of time
- DO NOT begin cleaning glass without knowing if a coated surface is exposed
- DO NOT clean tinted or coated glass in direct sunlight
- DO NOT allow water or cleaning residue to remain on the glass or adjacent materials
- DO NOT begin cleaning without rinsing excessive dirt and debris
- DO NOT use abrasive cleaning solutions or materials
- DO NOT allow metal parts of cleaning equipment to contact the glass
- DO NOT trap abrasive particles between the cleaning materials and the glass surface
- DO NOT allow other trades to lean tools or materials against the glass surface
- DO NOT allow splashed materials to dry on the glass surface

084413

**GLAZED ALUMINUM CURTAIN
WALLS**



LIMITED WARRANTY AND REMEDY 70% FLUOROPOLYMER PAINT FINISH

Kawneer Company, Inc. hereby warrants to its dealers, customers and all subsequent purchasers and users, subject to every term, condition and limitation stated herein, that the 70% fluoropolymer finish applied at its SAMPLE, to the aluminum material on the project identified as:

Job Name: University of Kentucky - College of Pharmacy

Order #: XXXXXXXXXX

and hereinafter referred to, as "Metal" shall, for a period of "enter warranty period, 20 (Twenty) years from substantial completion of the project, provided however, that the limited warranty shall begin in no event later than six (6) months from the date of shipment by Kawneer.

1. Will not chalk more than that represented by a No. 8 rating for colors or No. 6 for whites, when measured in accordance with the standard procedures specified in ASTM D 4214, Test Method A ("Excessive Chalking");
2. Will not change color more than five (5) Hunter ΔE units as determined by ASTM D 2244 ("Excessive Color Change"); and
3. Will not crack, check or peel.

This warranty is subject to the following conditions:

1. The warranty will not apply to or cover, and Kawneer hereby disclaims all liability for,
 - (a) damage to the finish occasioned by moisture or other contamination detrimental to the finish because of improper storage of the finished Metal prior to installation;
 - (b) water damage due to condensation caused by improper repackaging of the finished Metal prior to installation;
 - (c) damage including but not limited to scratches and abrasions to the finished Metal caused by use, handling, shipping and/or installation, or by utilization of the Metal with any parts, gaskets, glazing materials, components or sealants of other manufacturers used with Kawneer products, or any lack of performance of Kawneer products attributable to such items;
 - (d) damage to finished Metal caused by exposure to caustic agents, acidic agents, or harmful fumes or other destructive foreign materials;

- (e) damage due to improper maintenance i.e. the use of chemical cleaning agents;
 - (f) corrosion of metal due to aggressive atmospheres including exposure to salt spray and/or salt mist; and
 - (g) any particular application or selection of the Metal for any particular project or design.
2. The warranty also does not cover, and Kawneer hereby disclaims all liability for, any product which has been subject to abuse, alterations, modification, neglect, misuse, abnormal use, accident, fire or other casualty or physical damage, war, flood, falling objects, external forces, earthquakes, acts of God, or to which parts not supplied by Kawneer have been added, or to defects caused by depreciation or normal wear or other occurrences beyond Kawneer's control.
3. In order for this warranty to remain valid, a systematic maintenance program must be instituted by the purchaser or user to prevent the build-up of dirt and salt deposits on the painted surface. The surface must be cleaned at least annually in accordance with AAMA 609 & 610-02 so as to prevent the accumulation of harmful deposits. More frequent cleaning is required in heavy industrialized environments or coastal environments. Coastal environments where salt spray or salt fog is present can be very detrimental to metal especially where the paint coating has been scratched or damaged. In coastal environments where metal is exposed to salt spray or salt fog or in heavy industrial environments, the metal surface must be cleaned at least once quarterly to prevent the accumulation of harmful deposits. **A FAILURE TO INSTITUTE A SYSTEMATIC MAINTENANCE PROGRAM AS DESCRIBED ABOVE WILL VOID THIS WARRANTY.**
4. Kawneer is not responsible for chalking or for fading or color changes that are less than the Excessive Chalking or Excessive Color Change referenced and warranted above. Normal weathering, such as the damaging effects of sunlight and exposure to the elements, such as extremes of weather and atmosphere, may cause any colored surface to fade, chalk, or become soiled or stained. These changes may not be uniform if the surfaces are not equally exposed to the sun and elements. The degree to which normal weathering occurs will vary depending on the air quality, the building's location and many other factors over which Kawneer has no control. Metallic/mica flake colors are not color measurable and are not applicable to the Excessive Color Change warranty set forth above.
5. All decisions regarding the existence of defects in material and workmanship and the occurrence of any of the matters described in the



preceding paragraphs of affecting this warranty shall be made by Kawneer and shall be final and binding upon the parties.

6. The sole and exclusive remedy with respect to this warranty or with respect to any other claim relating to defects or any other condition or use of the products supplied by Kawneer, however caused, and whether such claim is based upon warranty, contract, negligence, strict liability or any other theory, is limited to, at Kawneer's sole discretion, replacement or refinishing of the defective Metal or repayment by Kawneer of the purchase price paid to it. Refinishing of the defective Metal shall be performed by using standard finishing practices and materials as selected by Kawneer. Kawneer reserves the right to approve any contract for refinishing of defective Metal. The warranty on any refinished, coated and/or replacement Metal shall continue for the remainder of the original warranty period. At no time does this warranty confer upon the claiming party the right to proceed with repair, replacement or restoration, without written notice and agreement by a duly authorized officer of Kawneer. Any such work undertaken by the claiming party or any party other party shall be for the claiming party's own account and shall result in this warranty becoming null and void. IN NO EVENT SHALL KAWNEER BE LIABLE FOR ANY SPECIAL, DIRECT, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES OF ANY KIND, INCLUDING BUT NOT LIMITED TO LOSS OF PROFITS OR GOOD WILL, OR OTHER COMMERCIAL LOSS OR INJURY.
7. Claims under the warranty must be made to Kawneer in writing within sixty (60) days after discovery of the defective finished Metal and Kawneer must be given a reasonable opportunity to inspect the finished Metal claimed to be defective. In the event of a claim under the warranty, customer shall furnish proof of date of the shipment of the Metal finished with the product and shall demonstrate that the failure of the product was due to a breach of the warranty stated herein.
8. This warranty will apply only to Metal, which is finished in the "SAMPLE" plant and used within the continental United States, unless Kawneer agrees otherwise in writing.
9. All notices given under or pursuant to this Agreement shall be in writing and sent by registered mail, postage paid, return receipt requested, to the party to whom such notices is to be given, as follows:
 - (a) Kawneer: Kawneer Company, Inc.
1040 Sierra Drive
Suite 1500
Greenwood, IN 46143



(b)

Central Kentucky Glass Co.
1123 Versailles Road
Lexington, KY 40508

All such notices when deposited in U.S. mail as set forth above shall be considered served when received.

10. No terms or conditions other than those stated herein, and no agreement or understanding, oral or written, in any way purporting to modify this warranty shall be binding on Kawneer unless made in writing and signed by its authorized representative.

Customer's agreement to and acceptance of this warranty shall be indicated by signing and returning a copy of this document to Kawneer.

Kawneer Company, Inc.

By: Jeffrey Hance

Signature: _____

Date Issued: April 22, 2009

Accepted By:

Customer:

By:

Signature: _____

Title:

Date Signed:



**LIMITED WARRANTY AND REMEDY
MATERIAL & WORKMANSHIP**

This is to certify that Kawneer Company, Inc. warrants to its dealers, customers and all subsequent purchasers and users, subject to every term, condition and limitation stated herein, that the products supplied by it on the project identified as:

JOB NAME: University of Kentucky - College of Pharmacy

CUSTOMER NAME: Central Kentucky Glass

ORDER #: XYZ

shall be free from material defects, in material and workmanship, for a period of *Five (5)* years from the date of substantial completion of the project, provided however, that the Limited Warranty shall begin in no event later than six (6) months from the date of shipment by Kawneer.

This warranty applies only if Kawneer's products are installed and maintained according to Kawneer's recommended practices and installation instructions, and only to defects appearing within *Five (5)* years from substantial completion of the project and only if Kawneer is notified in writing within sixty (60) days after such defects either (i) appear or (ii) should have been discovered after the exercise of reasonable diligence. Failure of the claiming party to notify Kawneer within such period shall automatically relieve Kawneer of any and all responsibility and/or liability under this Limited Warranty. **KAWNEER DOES NOT MAKE ANY OTHER REPRESENTATIONS OR WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.**

This warranty does not cover, and Kawneer hereby disclaims all liability for, the installation of Kawneer products, any particular application or selection of the product for any particular project or design, any parts, gaskets, glazing materials, components or sealants of other manufacturers used with Kawneer products, or any lack of performance of Kawneer products attributable to such items. This Warranty also does not cover, and Kawneer hereby disclaims all liability for, any products which have been subject to abuse, alteration, neglect, misuse, abnormal use, accident, fire, war, flood, earthquakes, acts of God, or to which parts, not supplied by Kawneer have been added, or to defects caused by depreciation or normal wear. All decisions regarding the existence of defects in material and workmanship and the occurrence of any of the matters described in the preceding paragraphs or affecting this Warranty shall be made by Kawneer and shall be final and binding upon the parties.

The sole and exclusive remedy with respect to this warranty or with respect to any other claim relating to defects or any other condition or use of the products supplied by Kawneer, however caused, and whether such claim is based upon warranty, contract, negligence, strict liability, or any other theory is limited to, at Kawneer's option, repair or replacement of such products or repayment by Kawneer of the purchase price paid for it.



The products repaired, replaced, or otherwise restored shall be warranted to the same extent and to the expiration date from the original date of shipment, and this warranty shall not be deemed to have been extended from the date of such warranty work. At no time does this warranty confer upon the claiming party or any other party the right to proceed with repair, replacement, or restoration, without written notice and agreement by a duly authorized officer of Kawneer. Any such work undertaken by the claiming party or any other party shall be for the claiming party's own account and shall result in this warranty becoming null and void.

KAWNEER'S AGGREGATE TOTAL CUMULATIVE LIABILITY UNDER THIS LIMITED WARRANTY IS LIMITED TO THE DOLLAR AMOUNT OF THE PURCHASER'S ORIGINAL PAYMENT MADE TO KAWNEER FOR MATERIAL FURNISHED BY KAWNEER ONLY. IN CONSIDERATION OF THIS WARRANTY, KAWNEER SHALL NOT BE LIABLE FOR SPECIAL, DIRECT, INDIRECT, OR CONSEQUENTIAL DAMAGES OF ANY KIND, INCLUDING BUT NOT LIMITED TO LOSS OF USE, LOSS OF PROFITS OR GOODWILL, DAMAGES FOR NEGLIGENCE IN THE MANUFACTURE, DESIGN, OR INSTALLATION OF THE PRODUCTS, OR OTHER COMMERCIAL LOSS OR INJURY.

This is the only warranty made in the connection with the sale and distribution of the Products. No representative, dealer, or any other person is authorized to make or makes any warranty, representation, or promise with respect to the Products. No terms or conditions other than those stated herein, and no agreement or understanding, oral or written, in any way purporting to modify this warranty shall be binding on Kawneer unless made in writing and signed by Kawneer's authorized representative.

Laws and building and safety codes governing the design and use of glazed entrance, windows, and curtain wall products vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefore.

Customer's agreement to and acceptance of this warranty shall be indicated by signing and returning a copy of this document to Kawneer.

KAWNEER COMPANY, INC.

By Jeffrey Hance

Signature _____

Date Issued April 22, 2009



Accepted By:

Customer:

By _____

Signature _____

Title _____

Date Signed _____

SAMPLE WARRANTY



CONSIDER YOUR OPTIONS. . .

ARCHITECTURAL ALUMINUM

Finishes

084413 - Glazed Aluminum Curtainwalls Maintenance Data

084113 - Aluminum Framed Entrances Maintenance Data

 **Kawneer**
An Alcoa Company

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. . . *That Enhance, Protect and Endure*

The market for architectural aluminum products demands a greater variety of finish types and colors than ever before.

The many reasons include:

- the competitive need to distinguish buildings
- aesthetic and design requirements
- new technology that results in higher performance and durability
- owner demands for cost effectiveness
- the need to protect the building owner's investment against the elements, pedestrian traffic and environmental contaminants
- public awareness of environmental concerns
- the increase in consumer sophistication and awareness of finish types and colors

Today's paint and powder finish types and colors challenge the anodizing processes that have dominated the architectural aluminum industry for many years. This brochure is designed to assist you in your choice of architectural aluminum finishes by presenting and reviewing the various types and explaining ways to maintain them for the longest possible life.

Painted



Market demand for a variety of colors and types has resulted in increased use of painted finishes — also known as organic coatings. Although anodizing remains the most frequently specified finish for architectural aluminum, substantial improvements in paint technology provide long-term performance and durability in a wide range of climates and environments.

Finishes

(Organic Coatings)

A comparison chart representing different types of organic coatings and their performance characteristics is included on page 13 for reference.

Liquid Paint

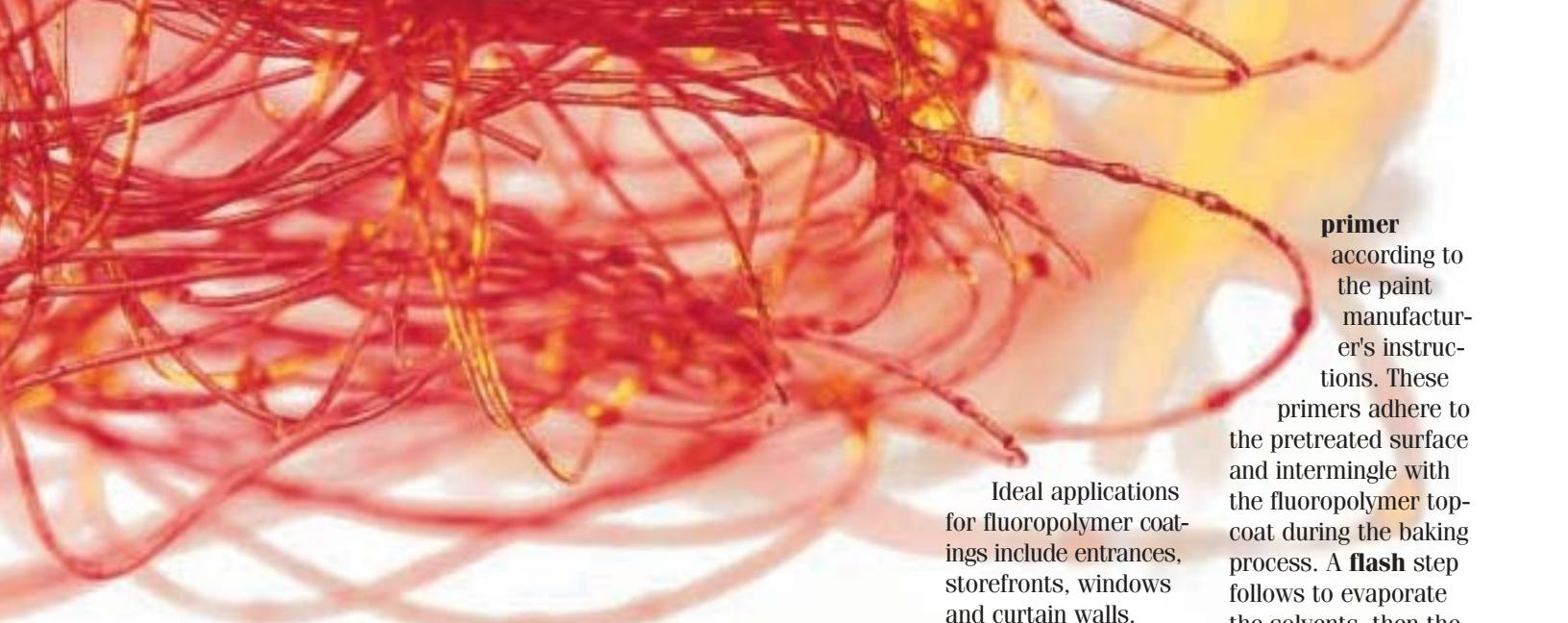
Liquid paints are typically sprayed on commercial architectural aluminum products and include acrylic, polyester and fluoropolymer. Both acrylic and polyester finishes can be modified with silicone to enhance performance.

Fluoropolymer coatings generally contain between 50 and 70 percent by weight fluoropolymer resin called polyvinylidene fluoride or PVDF. Two companies manufacture the majority of PVDF used in the United States: Elf Atochem North America, Inc., and Ausimont USA, Inc., who manufacture KYNAR 500® and HYLAR 5000™, respectively. These resin manufacturers allow paint manufacturers to use the Kynar 500 and Hylar 5000 brand names only if they incorporate a minimum of 70 percent by volume weight into the paint system. Pigment is then added to provide color.



(Left) Reciprocating paint spray gun

*(Far left) Bone White Painted Finish
Center for Environmental Sciences and Technology Management (CESTM), State University of
New York (SUNY) at Albany, New York
Architect: Cannon & Associates, Grand Island, New York*



Performance

Kawneer's 50 percent fluoropolymer paint systems meet the AAMA 2604 paint specification for high performance while the 70 percent fluoropolymer finishes also meet the superior performance of the AAMA 2605 specification (see pages 6-7). Both paint systems provide low gloss color with high performance and durability. For this reason, Kawneer and other high quality architectural aluminum product manufacturers recommend the use of fluoropolymer coatings.

When fluoropolymer finishes are baked, the resin particles, which look like balls of spaghetti, melt, uncoil and intermingle. Upon leaving the bake oven, the painted material is still "wet." Once cool, it forms a continuous, physically locked finish.

Fluoropolymer paints are extremely durable because the PVDF resin is essentially chemically inert. Modifiers must be added to give the fluoropolymer the required adhesion properties. A formulation based on 70 percent fluoropolymer resin has been found to give the optimum mixture for proper adhesion characteristics and weatherability. Textured "metallic" flake fluoropolymer finishes add increased performance and durability.

The cost of fluoropolymer paints will vary depending upon the color selected. Standard colors provided by most manufacturers will generally be considerably less expensive than custom colors. Typically, fluoropolymer paint systems require a primer and some utilize as many as three or four coats, including barrier and clear coats.

Ideal applications for fluoropolymer coatings include entrances, storefronts, windows and curtain walls. Buildings with special high performance and durability needs such as monumental projects with severe exposure to the sun's UV rays are ideal candidates for fluoropolymer finishes. For high traffic areas, textured metallic finishes and fluoropolymer coatings with greater pencil hardness provide increased abrasion resistance and toughness.

(For more specific performance information, see our separate Fluoropon®, Permadize® and Acroflur™ color cards)

Application

To apply fluoropolymer finishes during the manufacturing process, at least six steps are necessary (see diagram below). First, a multi-stage chemical pre-treatment produces a surface with a chemical conversion coating to **clean** the metal, promote primer adhesion and provide corrosion resistance. Second, the aluminum is coated with an acrylic or epoxy

primer according to the paint manufacturer's instructions. These

primers adhere to the pretreated surface and intermingle with the fluoropolymer topcoat during the baking process. A **flash** step follows to evaporate the solvents, then the fluoropolymer **finish** is sprayed on to the aluminum. Another **flash** procedure is followed by **baking** for approximately 10 minutes until the aluminum surface reaches a temperature of 450 °F. Additional clear fluoropolymer **topcoat, flash** and **bake** steps are optional.

A clear topcoat may be necessary when the material is painted with certain "metallic" flake fluoropolymer coatings. The clear topcoat seals in the metallic flakes and prevents them from corroding. Kawneer also recommends a clear topcoat application for storefront framing and entrance areas where the finish may be physically abused by pedestrian traffic or where exotic pigments are used. It is important to note that there may be a slight color difference when applying clear coat to light colored pigments such as Bone White.

Clean ► Primer ► Flash ► Finish ► Flash ► Bake

(Optional)

Topcoat ► Flash ► Bake

Powder Coatings



Sometimes known as "dry paint," Powder Coatings are solvent free and emit no volatile

organic chemicals (VOCs) into the atmosphere. These environmentally friendly "green" powder paint systems require less energy to apply and reduce waste in application as overspray can be reclaimed and reused.

Like liquid paint systems, powder paint systems are applied electrostatically to the metal substrate. Powder paints may incorporate TGIC (triglycidyl isocyanurate), polyester, acrylic, fluoropolymer or epoxy for additional performance and durability.

Performance

There are new polymer systems that allow some powder coatings to meet the performance requirements of the AAMA 2604 specification. Many also comply with most environmental regulations imposed by governments recognizing the need to preserve natural resources by imposing stricter safety and emission regulations. Powder coatings provide the solution to environmental concerns while offering high performance, durability and a wide variety of colors.

Some powder coatings



demonstrate very good color retention and provide optimal corrosion resistance. Excellent durability, mechanical properties and abrasion resistance make these coatings ideal for high traffic entrances and storefront framing. Standard offerings may be available in a variety of gloss levels.

(For more specific performance information, see our separate **Interpon® D2000** color card.)

Application

Powder Coatings are applied in a similar manner to fluoropolymer paints with a few exceptions: a primer is usually not required, the flash steps are eliminated since these coatings contain no solvents and the finish cures at lower oven temperatures.

Clean ▶ Finish ▶ Bake



Pre-treatment cleaning processes



Specifications - Painted Finishes

The American Architectural Manufacturers Association (AAMA) has developed three specifications to assist in the selection of an organic coating for a given application:

AAMA 2603 - *Voluntary Specification, Performance Requirements and Test Procedures for Pigmented Organic Coatings on Extruded Aluminum.*

This specification is intended for paints that are applied to a large variety of products, including residential sliding doors, storm doors, siding and light commercial applications.

AAMA 2604 - *Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Architectural Extrusions and Panels.*

This specification covers high performance organic coatings, which are used on exterior architectural products manufactured by Kawneer and other manufacturers of high quality products.

AAMA 2605 - *Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels.*

This specification covers superior performance organic coatings which are used on exterior architectural products manufactured by Kawneer and other manufacturers of high quality products.

The chart highlights important differences between these three specifications:

Testing thickness and color quality of painted finish

Criteria	AAMA 2603	AAMA 2604	AAMA 2605
Minimum Coating Thickness	.8 mils	1.2 mils	1.2 mils
Pre-treatment	None required	Multi-stage cleaning with chemical conversion coating 30mg/ft ² min.	Multi-Stage cleaning with Chrome Phosphate conversion coating 40mg/ft ² min.
Abrasion Resistance	No requirements	Falling sand test - Abrasion coefficient of 20 min.	Falling sand test - Abrasion coefficient of 40 min.
Chemical Resistance	Muriatic Acid/Mortar Resistance Test	Muriatic Acid/Mortar Resistance/Nitric Acid Fumes Test	Muriatic Acid/Mortar Resistance/Nitric Acid Fumes Test
Color Retention	1 year South Florida exposure	5 years South Florida exposure (Max 5Δ E)	10 years South Florida exposure (Max 5Δ E)
Gloss Retention	No requirements	Minimum of 30% after 5 years, South Florida exposure	Minimum of 50% after 5 years, South Florida exposure
Corrosion Resistance	1,500 hr. Humidity/Salt Spray	3,000 hr. Humidity/Salt Spray	4,000 hr. Humidity/Salt Spray
Chalking Resistance	No requirements	No more than #8	No more than #8 for colors (#6 for Whites)
Film Adhesion	Dry Adhesion/Wet Adhesion	Dry Adhesion/Wet Adhesion/Boiling Water Adhesion	Dry Adhesion/Wet Adhesion/Boiling Water Adhesion
Erosion Resistance	No requirements	Less than 10% after 5 years, South Florida exposure	Less than 10% after 5 years, South Florida exposure

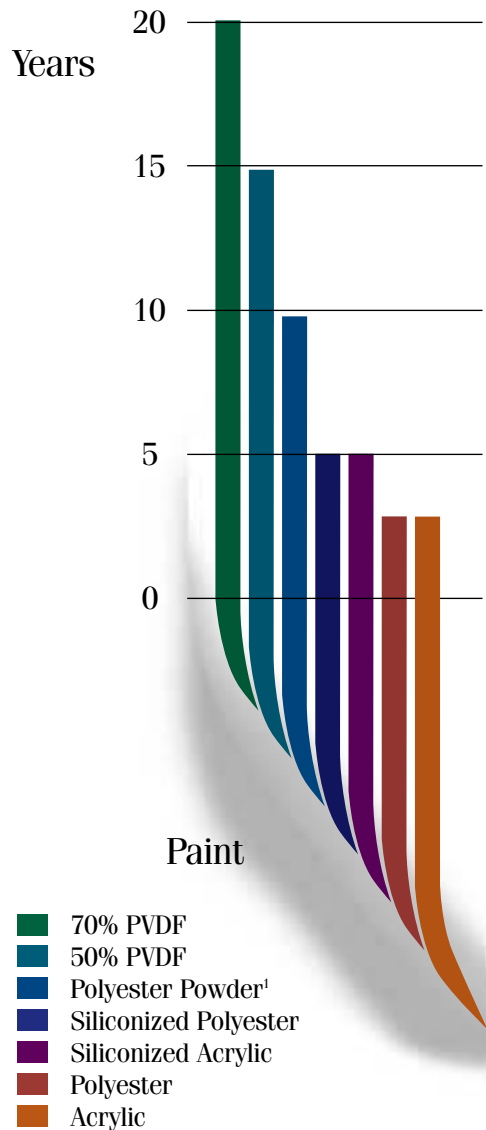
For further information or for abbreviated specification suggestions for painted finishes, contact your Kawneer regional sales office or your local representative.





*Banner Red Painted Finish
Just for Feet, Fort Lauderdale, Fla.
Architect: Mark L. Saltz Architects, Inc., Fort Lauderdale, Fla.*

Comparative Performance - Chalk & Color Retention*



* Chalk and color retention performance varies considerably depending on paint type, pigment, building location and maintenance of the finish.

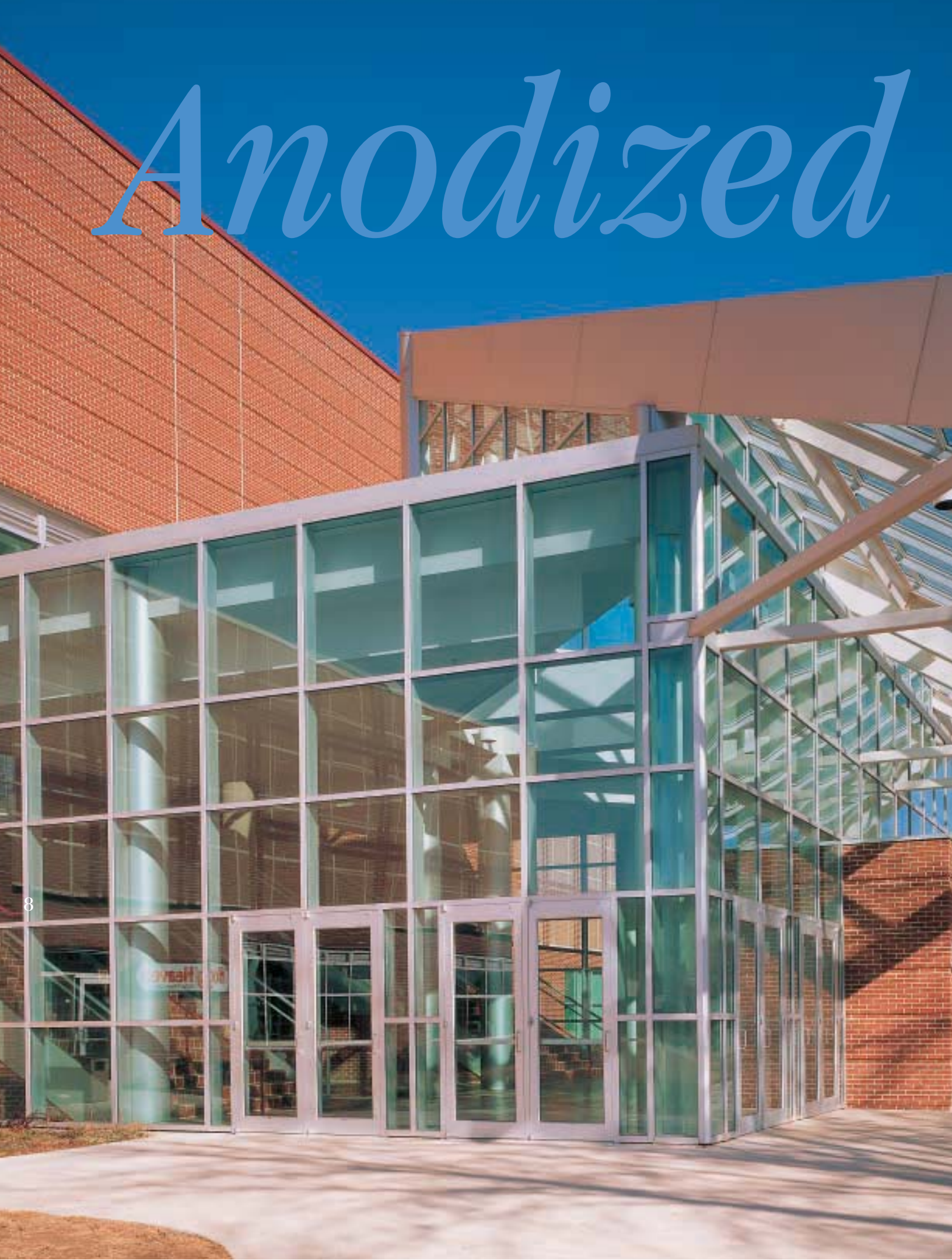
This chart represents an overall comparison only of chalk and color retention based on the limits specified within AAMA 2605.

White and light pigmented colors of some lower cost paint finishes may exceed these values. High performance PVDF coatings of certain pigments or multiple coats may also exceed these values.

For more specific performance data and warranty information, consult your paint manufacturer.

¹ Polyester Powder that meets AAMA 2605.

Anodized



Finishes

Anodizing is a general term that describes the process of converting the surface of aluminum to aluminum oxide. Under carefully controlled conditions, anodizing produces a uniform oxide coating that is two to 500 times thicker than that produced by natural oxidation which results in a very thin, blotchy finish.

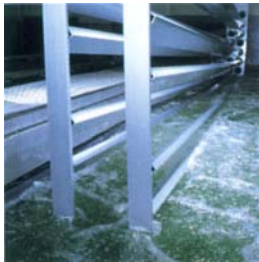
Performance

Controlled anodizing produces a coating that protects aluminum from the environment. It is a long-lasting and proven coating that resists scratching, abrasion and corrosion from marine or industrial atmospheres and provides excellent protection from the sun's damaging ultraviolet rays.

Production Process

Controlled Anodizing requires several operations where aluminum is moved in and out of tanks carrying chemical baths and rinses:

1. A non-etching cleaner removes soil and other organic deposits from the metal.
2. Caustic soda etches the aluminum, removing a thin layer of metal and eliminating imperfections from the surface while reducing the shine. The etching process by itself provides no protection.
3. The aluminum is placed into a solution of acid and water (the electrolyte) and an electrical current is passed through, causing the water molecules to separate into hydrogen and oxygen. Aluminum has an affinity for oxygen and quickly combines to form a layer of aluminum oxide. The length of time the aluminum is submerged, the temperature of the solution, the chemical concentration and the electrical current all control the thickness of the coating to produce a Class I or Class II finish.



Clear Anodized Finish

Bud Walton Arena, University of Arkansas, Fayetteville, Ark.

Architect: Rosser International, Atlanta, Ga., in association with Mott Mobley McGowan & Griffin, PA; Architects, Fort Smith, Ark.



Loading racks for the anodizing tank



Aluminum extrusions are lowered into the anodizing tank

Integral Color Anodizing vs. Electrolytically Deposited Color

Integral color anodizing is a process in which colors are part of the aluminum oxide coating process. Colors are not added but develop from alloying elements which are already present in the aluminum.

The integral color anodizing process utilizes a different acid solution from that used in clear anodizing. The processing time and density of the electrical current are also significantly different. Depending upon the alloy, the electrolyte and the process used, colors in various shades of bronze to black can be obtained.

The electrolytically deposited two-step color process is the most widely used for anodizing in the United States. The process produces colors and performance characteristics similar to those produced by the integral color anodizing process. The first step uses the same acid electrolyte as the clear finish, resulting in the same colorless oxide coating that is thick, dense and hard. The second step involves submerging the aluminum into a color tank where stable metallic compounds are electrolytically deposited at the base of the "pores" created in the previously formed oxide coating. A range of bronze colors from champagne to dark bronze and black are produced by this method.

In the production of colored anodic coatings, some variation of color is unavoidable. Whether produced by the integral color or two-step process, some slight color differences will occur among the pieces on a load and from one batch to another because of process variables. It is important that this be recognized as a characteristic of anodized finishes, so that the material can be arranged on the job to accommodate the slight color variations and even enhance appearance.

Two-Step Oxide Coating



1 - Electrolyte solution coating.



2 - Color added to bottom of coating pores.

4. Finally, the finish must be sealed to close the "pores" produced in the anodizing process — an extremely important step that prevents foreign matter from entering the base metal and causing corrosion or staining.

The Importance of Class I or Class II Designations

The designations Architectural Class I and Class II provide the best means of identifying anodized finish thickness, the most important attribute of good finish quality. Other commercial terms can represent any coating thickness and, therefore, any quality level. They only have real meaning when coupled with "Class I" and "Class II" designations.

For the best finish performance, Kawneer strongly recommends an architectural Class I designation for integral color and electrolytically deposited coatings. This thicker coating is less susceptible to weathering and more resistant to corrosion and scratching than the Architectural Class II color coatings. Thus, Kawneer's Permanodic® Class I process provides the ultimate anodized finish.

Designations for Anodized Finishes

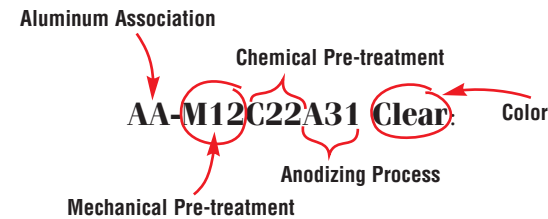
Kawneer and the majority of the architectural aluminum industry recognize the Aluminum Association designation system for aluminum finishes. This system is a general description of anodized coatings produced in all industries. For example, four of Kawneer's standard finishes are designated:

- #14 Clear AA-M12C22A41
- #17 Clear AA-M12C22A31
- #29 Black AA-M12C22A44
- #40 Dark Bronze AA-M12C22A44

Other finishes, such as #18 Champagne, #26 Light Bronze and #28 Medium Bronze (AA-M12C22A44) are available as special orders.

Designations Explained:

- The first two letters refer to the Aluminum Association.
- The letter "M" and two numbers indicate what type of



mechanical pre-treatment, if any, is used. M12 means no mechanical finishing is done. Mechanical finishing before anodizing is sometimes done to eliminate the surface defects produced by poor extrusion practices. Kawneer carefully maintains extrusion practices so that these defects do not occur.

- The "C" followed by two numbers indicate what type of chemical pre-treatment is used. C22 means that the surface is chemically etched to a medium-matte appearance.
- The letter "A" followed by two numbers indicates the general anodizing process used. For example, A31 means a clear Class II coating.

A41 is a clear Class I coating.

- These colors should be followed by the color desired, e.g. Dark Bronze.

Specifications — Anodized Finishes

The AAMA has developed a specification to provide performance criteria as well as assist in the selection of an anodized coating for a given application:

AAMA 611 — Voluntary Standards for Anodized Architectural Aluminum.

Class I — High performance anodic finishes used in exterior applications receiving periodic maintenance, such as curtain walls.

Class II — commercial anodic finish used in interior applications or exterior applications receiving regularly scheduled cleaning and maintenance such as storefronts.

The table (left) shows properties and performance for Class I and Class II anodized finishes.

Criteria	Class II Anodized Finish	Class I Anodized Finish
Oxide Coating Thickness	0.4 to 0.7 mil	Minimum of 0.7 mil
Oxide Coating Weight	2.40 mg/cm ²	4.18 mg/cm ²
Apparent Density	2.32 g/cm ³	2/32g/cm ³
Abrasion Resistance	Not degraded by abrasive paper	Not degraded by abrasive paper
Corrosion Resistance	1,000 hours	3,000 hours
Weathering	5 years, South Florida exposure	5 years, South Florida exposure
Seal Test	Minimum weight loss 40 mg/dm ³	Minimum weight loss 40 mg/dm ³

For further information or for an abbreviated specification suggestion for anodized finishes, contact your Kawneer regional sales office or local representative.

Organic Dyes

Color can also be obtained through the use of organic dyes. In this process, the dye is absorbed into the pores of an unsealed anodic coating. Various shades of red, yellow, blue and green are possible. However, many of these colors are not light fast and may fade unevenly depending upon the exposure of different sides of a building. The side exposed to the sun's ultraviolet rays will fade more than the others. Since the color is contained near the surface of the oxide coating, it can be more susceptible to abrasion and weathering. Thus, the process is more appropriate for interior work or for trim on household appliances and has not been widely used for architectural aluminum products requiring long-term color retention and performance.

Quick



Guide

	70% Fluoropolymer (PVDF) p.3-4	50% Fluoropolymer (PVDF) p.3-4	Powder p.5	Anodized p.9-11
<i>SOME TYPICAL APPLICATIONS</i>	<i>Monumental/high performance:</i> Curtain wall and architectural window applications such as high-rise offices, commercial bldgs., hospitals, universities, etc.	<i>Non-monumental Projects:</i> Heavy commercial windows, curtain wall, storefronts & entrance projects, such as shopping centers, low-rise commercial bldgs., schools, etc.	<i>Environmentally friendly, non-monumental:</i> Storefront & entrance projects Shopping centers, low-rise commercial bldgs., schools, etc.	<i>Any high or low-rise application that includes curtain wall, storefronts, entrances or windows.</i>
<i>CHARACTERISTICS</i>	Superior color and gloss retention, corrosion resistance and color range.* Meets superior paint performance level of AAMA 2605. p.6 "Soft" paint can scratch or mar more easily than 50% paints or anodizing.	A harder, more durable finish than 70%. Reduces scratches & marring near high traffic entrances. Meets high performance level of AAMA 2604. p.6. Metallic particle option provides increased abrasion resistance. Slightly less color & gloss retention than 70%. Limited in some vivid (red) colors compared to 70%* Limited to more earth tones and pastel colors.*	Environmentally friendly & solvent free. Offers superior abrasion resistance to 50% or 70% fluoropolymer paints. Full range of colors available.* Meets high performance of AAMA 2604. p.6 Slightly less color & gloss retention than 70%. Custom shades available subject to technical approval.	Superior surface hardness, abrasion resistance & scratch resistance compared to any other coating. Will not peel or chalk. Inorganic coating is an integral part of the aluminum. Meets AAMA 611. p.11 Limited color selections (clear, black and bronzes).* Poor resistance to alkaline & acid.
<i>COLOR SELECTIONS*</i>	✓✓✓✓	✓✓✓	✓✓✓	✓✓
<i>COLOR RETENTION</i>	✓✓✓✓	✓✓✓	✓✓✓	✓✓✓✓
<i>ABRASION RESISTANCE</i>	✓	✓✓	✓✓✓	✓✓✓✓
<i>ENVIRONMENTAL IMPACT</i>	✓	✓✓	✓✓✓✓ p.5, 23	✓✓✓✓
<i>ALKALINE/ACID RESISTANCE</i>	✓✓✓✓	✓✓✓	✓✓✓✓	✓
<i>UNIFORMITY OF FINISH</i>	✓✓✓✓	✓✓✓✓	✓✓✓✓	✓✓✓
<i>COST</i>	\$ \$ \$ \$	\$ \$ \$	\$ \$ \$	\$ \$

* Please see Kawneer paint color cards or anodized samples for colors and detailed performance information.

Clear Anodized Finish
Harley-Davidson Motor Company, Wauwatosa, Wis.
Architect: Klein-Dickert Milwaukee, Inc., Pewaukee, Wis.

Care - Cleaning



14

084413 - Glazed Aluminum Curtainwalls Maintenance Data
084113 - Aluminum Framed Entrances Maintenance Data

■ *Inspection*

Whether painted or anodized, architectural aluminum finishes require care before, during and after installation. Both types of finishes are resistant to corrosion, discoloration and wear. However, harsh chemicals, abuse or neglect can mar aesthetics. In addition, all exterior surfaces collect varying amounts of soil and dirt, depending upon geographic area, environmental conditions, finish and building elevation. Periodic maintenance inhibits long-term accumulation of soil, which can accelerate weathering of finishes. Frequent cleaning of finished aluminum that is exposed to harsh marine environments is particularly important.

For efficiency and economy, glass and aluminum cleaning should be scheduled at the same time. It is recommended that cleaning of the architectural aluminum be scheduled at least annually and possibly more frequently, depending upon:

- Geographic area
- Industrial vs. rural location
- Rainfall
- Foggy or coastal regions where condensation and drying cycles create atmospheric salt and dirt deposits
- Recessed or sheltered areas lacking rainfall and encouraging condensation that increases soil adhesion

General Cleaning - Painted and Anodized Finishes

Certain precautions must be taken when cleaning painted and anodized surfaces:

- Select the appropriate cleaning method after identifying the finish.
- Do not use abrasive household cleaners or materials like steel wool or hard brushes that can wear and harm finishes.
- Excessive abrasive rubbing should not be used since it can damage the finish
- Avoid drips and splashes and remove run-downs as quickly as possible.
- Consider the effects of run-downs on shrubbery, personnel and equipment and schedule cleaning appropriately.

- Strong cleaners should not be used on window glass and other components where they might come into contact with the aluminum.

- Avoid temperature extremes which can accelerate chemical reactions, evaporate or strengthen cleaning solutions, cause streaking, staining or blotching.

- Do not mix cleaners or substitute a heavy-duty cleaner for a safer, milder cleaner.

- Never use paint removers or aggressive alkaline, acid or abrasive cleaners.

- Always do a test on a small area first and follow manufacturers recommendations for mixing and diluting cleaners.

- Make sure cloths, sponges and cleaning equipment are grit-free.

Cleaning procedures to remove construction or accumulated environmental soils

and discoloration should be initiated as soon as possible. Mortar, cement and other alkaline materials will quickly corrode anodic coatings if allowed to dry on the metal surface. Cleaning should start at the top of the building and proceed to the ground level in a continuous drop the width of the stage or scaffolding. The type of procedure depends upon the degree of soiling.

Removal of Light Surface Soil

Trial and error testing employing progressively stronger cleaning procedures can determine which method will be most effective:

- A forceful water rinse should create initial surface agitation.

- If soil is still present after air drying the surface, scrubbing with a soft brush or sponge and concurrent spraying with water should be attempted.

- A 5 percent solution of industrial or commercial detergent and water should be applied with soft

brushes, sponges or cloth using uniform alternate horizontal and vertical motion. Detergent should be safe for bare hands — stronger detergents should be spot tested.

- After washing, the surface should be rinsed thoroughly with clean water and allowed to dry. Do not allow detergent solution to dry on aluminum.

- Cleaner run-down should be minimized and rinsed immediately
- A thorough rinse should remove solution from joints, crevices and surfaces

- If it is necessary to remove oil, wax, polish or similar materials *from anodized finishes*, MEK, mineral spirits or an equivalent solvent is recommended. (See cautions † listed under "Removal of Non-Water Soluble Deposits," page 18)





Painted Finishes Removal of Stains

- Sodium hypochlorite solution (laundry bleach, Clorox) may assist in removing certain stains from painted finishes.

- Hydrochloric acid, or 10 percent muriatic acid, diluted with 10 volumes of water, may assist in removing rust or alkali mortar stains from Fluropon® or Duranar® surfaces.

- Limit contact to 5 minutes. *Caution: acid solutions are corrosive and toxic. Flush all surfaces with water immediately after use.*

- Acetic acid (vinegar) or oxalic acid solutions may be used for the same purpose. *Flush with water.*

- Anodized surfaces should not be washed with acidic or caustic solutions.

Mildew Removal

Remove mildew from painted aluminum finishes with a basic solution of:

- 1/3 cup detergent
- 2/3 cup trisodium phosphate (TSP)

- 1 quart sodium hypochlorite, 5% solution (bleach)

Rinse with clear water immediately.

Anodized Finishes Removal of Stains

Once all the general cleaning procedures have been exhausted, cleaning with an abrasive pad soaked in clean water or a mild detergent cleaner may be tried:

- Using uniform pressure, hand scrub the metal surface using a palm size nylon cleaning pad. Thoroughly wet with clean water and a mild detergent cleaner or pumice powder. Start at the top and work down, rubbing in the direction of the metal grain.

- After scrubbing, the surface should be rinsed thoroughly with clean water or wiped with solvent to remove all residue.

- The surface should then be air dried or wiped dry with a chamois, squeegee or lint-free cloth, particularly if cleaner has dried on the surface.

- A power cleaning tool, such as an air-driven reciprocating machine fitted with cleaning pads, may be necessary for removal of unusually heavy soils. During this operation, the surface being cleaned must be continually wetted with clean water or a mild detergent cleaning solution to provide lubrication and a medium for carrying away the dirt. The machine should move in alternate vertical and horizontal strokes.

- After machine scrubbing, the area must be rinsed and thoroughly scrubbed again with a stiff bristle brush. A final rinse completes the operation and the cleaned surface is allowed to air dry or is wiped dry. It is important to remove promptly cleaner run-down on uncleaned surfaces to avoid staining.





Removal of Non-Water Soluble Deposits

†Solvents may be used to remove non-water soluble deposits such as tar, grease, oil, paint and graffiti. However, extreme care should be used when using solvents on painted surfaces. Many solvents will reduce the gloss level of painted finishes and, if allowed to remain on the finish for more than a few minutes, may soften the paint and damage the coating. It is sug-

gested that the painted area that comes into contact with the solvent be limited as much as possible.

†Extreme care must be exercised when solvents are used since they may damage organic sealants, gaskets and finishes. Solvents should never be used on anodic finishes protected by clear organic coatings, such as lacquer, unless the organic coating has deteriorated and is to

be removed. Organic solvents should be used only in accordance with manufacturers' safety recommendations.

†Most organic solvents are flammable and/or toxic and must be handled accordingly. Avoid open flames, sparks and electrical motors and use adequate ventilation, protective clothing and goggles.

Removal of Non-Water Soluble Deposits

Alcohols	Petroleum Solvents	Aromatic and Chlorinated	Ketones, Esters and Lacquer Thinner	Acetone Paint Remover
Denatured (ethanol) Isopropyl (rubbing)	VM&P Naphtha Mineral Spirits Turpentine (wood or gum spirits)	Xytol (Xylene) Toluol (Toluene)	Methyl Ethyl Ketone (MEK) Methyl Isobutyl Ketone (MIBK) Ethyl Acetate (nail polish remover) Butyl Acetate Lacquer Thinner	Acetones Paint removers
Cautions †Use with care. See cautions above.	†Use with care. See cautions above.	†Use with care. See cautions above. <i>These solvents should be used with caution on painted surfaces and limited to a maximum of five minutes exposure. A test should be carried out before using them.</i>	†Use with care. See cautions above. <i>Use with extreme caution on painted surfaces. Contact should be limited to a maximum of one minute and a test should be carried out prior to use. Manufacturers are not responsible for damage from unrestricted use.</i>	<i>These should NOT be used on painted surfaces.</i>



Protective Coatings

Architectural aluminum products should be protected from damage at the job site during and following installation. Cement, plaster, terrazzo, and alkaline and acid-based materials used to clean masonry are very harmful to finishes and should be removed with water and mild soap immediately or permanent staining may occur. Examples of protective coatings include:

Lacquer

It is possible to apply a clear lacquer coating to the surface of anodized aluminum. Although this coating provides additional temporary protection against corrosive chemical attack, this finish has many weaknesses:

- Lacquer changes the appearance of anodized finishes and can accentuate color variations.

- The glossy surface destroys the effect of different colors from different angles, which is often desirable with integral and two-step color.

- The surface appears painted rather than anodized.

- The coat is never completely uniform and as it weathers away, thinly coated areas become bare first, causing a blotchy appearance.

- Adhesion is not perfect and numerous, small white areas appear where there is loss of adhesion, resulting in an unattractive appearance.

Strippable Plastic

Available for years, strippable plastics have not improved sufficiently for general architectural use:

- Most of the materials are polyvinylchloride based; they are designed with cohesive strength but very low adhesive strength.

- It is difficult to obtain adequate and uniform thickness and as the film becomes thin, the cohesive strength decreases while the adhesive strength increases.

- Prolonged exposure to the sun tends to make the vinyl film brittle and make it tenacious.

- Thin coatings have to be removed in small pieces.

*Silver Painted Finish
Shanghai Securities
Exchange, Shanghai, China
Architect: The Webb Zerafa
Menkes Housden
Partnership (WZMH),
Canada*

- Thick coatings are likely to loosen with handling and tend to peel off prematurely.

- When properly applied, these coatings provide good protection, but they are expensive to apply and to remove.

In the light of the disadvantages encountered with the use of protective coatings, Kawneer does not recommend their use for most architectural aluminum product applications. It is suggested that a barrier such as Visqueen be installed around the aluminum to protect it from other construction trades.

Insulating Coatings

When aluminum is attached directly to steel or other metals, a coating should be applied to serve as an insulator between the two different metals. The most common coating is zinc-based primer, which should be applied to the steel or other metal rather than to the aluminum. Zinc pigment provides cathodic protection for the coated metal and the formulation used depends on the vehicle and solvent system.

Where aluminum is installed with direct contact with uncured concrete plaster or other alkaline material, it is advisable to apply

a coating to the aluminum to protect it from corrosion. Zinc and clear lacquer are often used for this purpose.

Bituminous paint is also used for insulation. It is an inexpensive asphalt or coal tar derivative with excellent resistance to water as well as salts, acids and alkalines that depend upon water as a carrier for ionization. The low cost encourages users to employ a thick coating which acts as an insulation barrier against galvanic action.

Bituminous paint is readily dissolved by almost any organic solvent, such as gasoline, lacquer thinner, turpentine, kerosene, etc.

Rework Procedures for Painted Finishes

There are currently no set rework procedures for all of the possible situations that arise. Whenever reworking on the surface exposes the aluminum substrate, it is safe to assume the pre-treatment of that area no longer exists and special considerations are in order. When bare aluminum has not been exposed, recoating is generally satisfactory. Touch-up enamel is intended only for scratches and minor defects. If extensive areas need to be replaced or repainted, contact the aluminum manufacturer.

Field Touch-Up Procedures for Painted Finishes (1) Surface Preparation

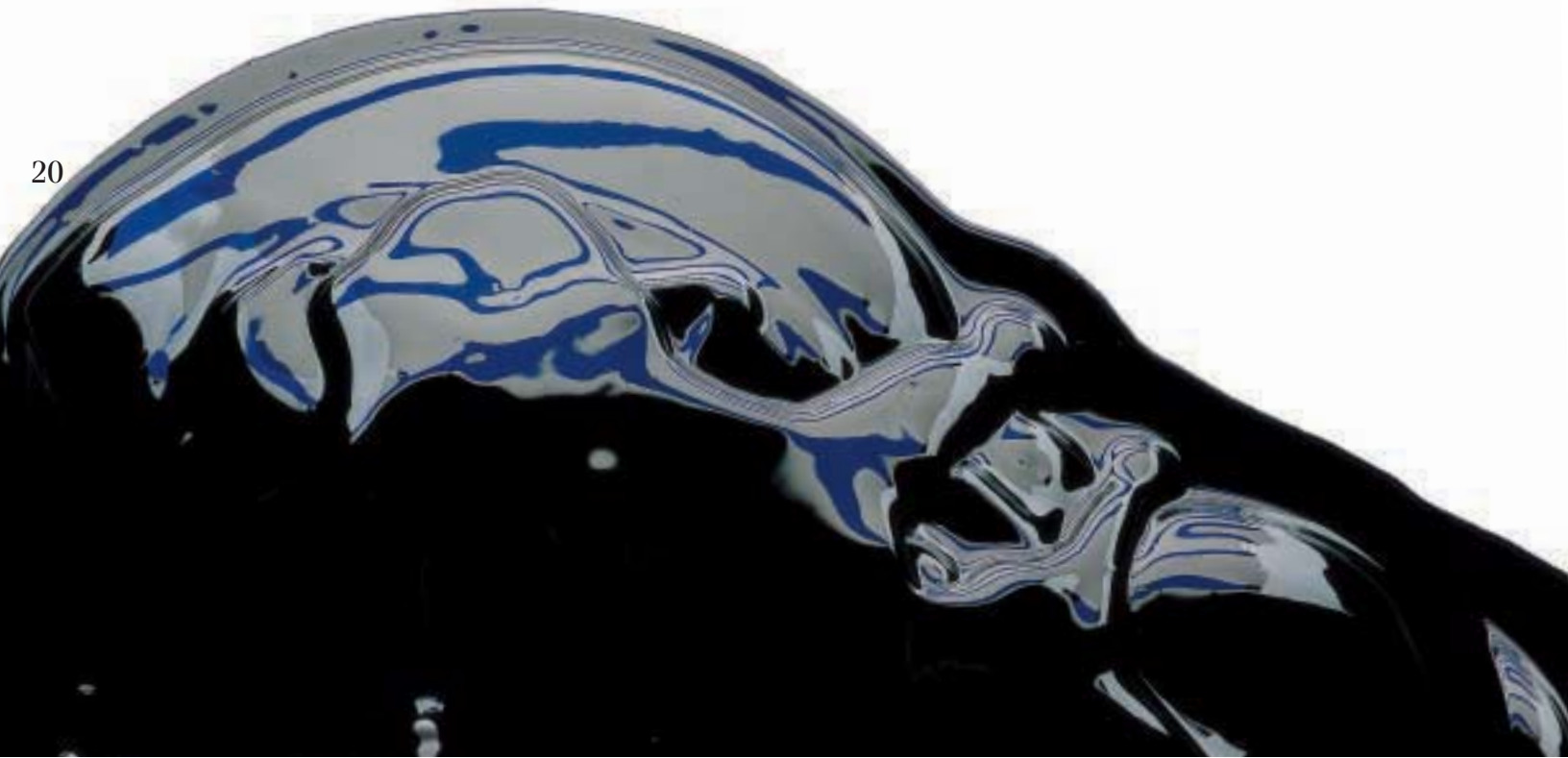
a. Surface must be clean, dry and free of foreign contaminants

b. Lightly scuff and sand surface to be recoated, feathering edges at the damaged area

c. Remove sanding dust and other contaminants with solvent dampened lint-free cloth or use tack cloths

d. Areas of bare aluminum must be pretreated with conversion coatings such as Amchems Alumiprep #33 and Alodine 1201, according to label directions given by the manufacturer

e. Immediately prime any bare aluminum with approved component wash primer. Follow label directions closely.



(2) Application of the Air Dry Touch-Up Enamel

a. Ambient air temperatures and surface temperatures should be above 50° F for application of the paint and for a reasonable length of the initial drying period (24 hours minimum).

b. Application is usually made with air spray equipment. Rolling and brushing does not provide a smooth film due to the drying speed of the touch-up type coatings, although rolling or brushing is possible for small scratches or minor defects.

c. A multiple light pass technique to slowly build to the desired 1.0 mil minimum film thickness is recommended.

(3) Touch-Up Product Reduction

Follow specific instructions for the paint product being used.



*Hartford Mist "Metallic"
Painted Finish
Park Meadows, Denver, Colo.
Architect: Anthony Belluschi
Architects, Chicago, Ill.*

Inspection

It is recommended that the building owner or manager provide an engineer or other qualified representative to inspect cleaning work on anodized and painted finishes. Care should be taken to see that metal, seams, crevices, sills and other areas that may trap water, cleaner or dirt are clean and dry. A final inspection is recommended to ensure that no discoloration or stains remain on the surface.

Reference Publications

Recognizing the need for the aluminum industry to provide information on the care and maintenance of exterior wall finishes, the AAMA has released a two publications:

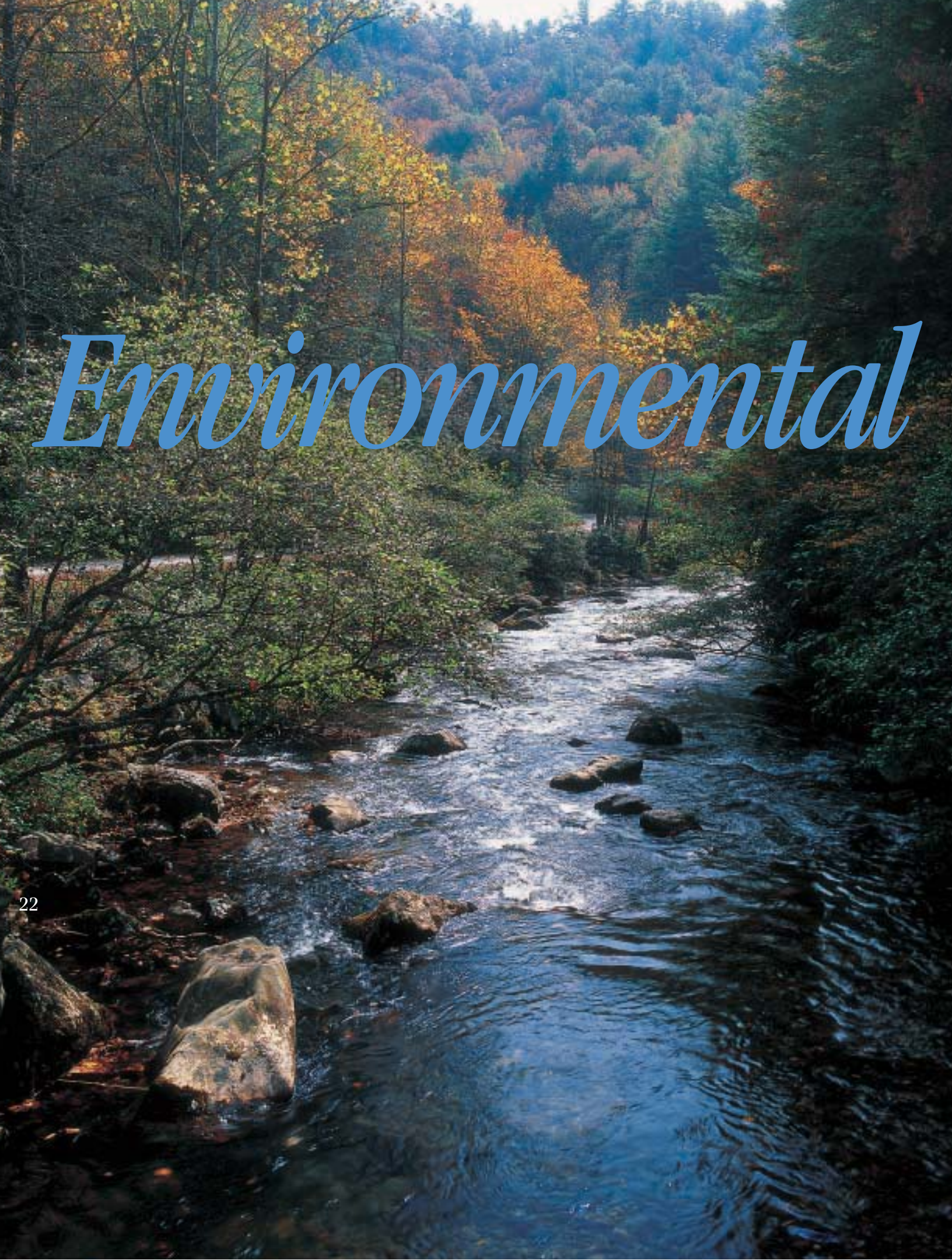
AAMA 609, Voluntary Guide Specification for Cleaning and Maintenance of Architectural Anodized Aluminum.

AAMA 610, Voluntary Guide Specification for Cleaning and Maintenance of Painted Aluminum Extrusions and Curtain Wall Panels.

These specifications have been summarized in this brochure and outline methods, equipment and materials to clean painted and anodized aluminum after construction and for subsequent, periodic maintenance. The information provided is useful to building owners, managers, architects, contractors and others in the building industry who are interested in the proper care and maintenance of architectural aluminum.

To obtain a copy of these publications, contact:

American Architectural
Manufacturers Association
1827 Walden Office Square
Suite 104
Schaumburg, Illinois 60173
Tel: 847/303-5664



Environmental

Painted Finishes

Liquid paint is composed of three basic elements: resin, which forms the body of the coating; pigment which supplies color; and solvent which allows the resin and pigment to be transferred and applied to the surface. The solvent evaporates, leaving the resin and pigment to form a dry film coating on the surface. It is this solvent evaporation that causes pollution in the form of volatile organic compounds (VOCs).

Considerations

Companies manufacturing architectural aluminum products with painted finishes should be in full compliance with all Federal and State clean air regulations. Permit conditions will vary from state to state but all include the requirements of the Federal clean air standards. Several states require paint facilities to include thermal oxidizers, which destroy VOCs at an efficiency level of 98 percent. Where applicable, painting plants also hold permits under the requirements of U.S. EPA Title V, which is a federal permit program required under the Clean Air Act Amendments of 1990.

Painting operations generate hazardous waste. All flammable material is processed as fuel for cement kilns and is, therefore, destroyed in the burning process. Chrome-bearing sludge is generated in the paint water treatment systems and is stabilized by EPA-approved companies and placed in lined landfills. Kawneer Company is in full compliance with all Federal and State clean air and waste disposal regulations for paint application.

Powder coatings contain only resin and pigment. Today's technology allows the spraying of the dry components directly onto the surface where electrostatic attraction holds the coating material in place. The powder is then subjected to heat which causes it to melt and form a solid coating on the surface. Because there is no solvent to evaporate, powder paint is considered to be environmentally friendly.



Anodized Finishes

There is no hazardous waste generated by environmentally aware manufacturers during their anodizing operations. The major waste product is hydroxide sludge, much of which is sold to chemical companies that reclaim the aluminum. Some is landfilled and many companies are investigating alternative uses for the sludge in an attempt to reduce landfill use.

Anodizing process water is purified in water treatment plants at each plant. The processed water is partially recycled into the process with the remainder entering the local sewer system. Manufacturing facilities hold permits that require regular sampling and discharge analysis. No regulated substances are introduced into the air from the anodizing process. Kawneer creates no hazardous waste in its anodizing operations and holds all necessary permits.

Warranties

Architectural aluminum product manufacturers usually provide warranties covering their finishes. It is important to read carefully this information and make comparisons as part of the decision and specification process. It is important to remember that high quality finishes that meet AAMA standards are cost effective in the long-term and frequently offer improved aesthetics.

Kawneer Company, Inc.
Technology Park/Atlanta
555 Guthridge Court
Norcross, GA 30092
770/449-5555

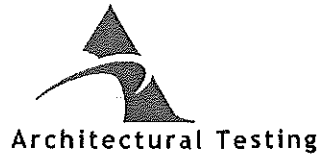
Visit our Web site at
www.kawneer.com

*Black Anodized Finish
Courtesy Corporation, Buffalo Grove, Ill.
Architect: Dobrin & Associates, Northbrook, Ill.*



Kawneer
An Alcoa Company

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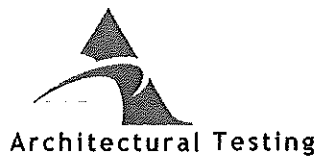
FIELD TEST REPORT

Rendered to:

CENTRAL KENTUCKY GLASS

**PROJECT: University of Kentucky-College of Pharmacy
Lexington, Kentucky**

Report No.: 96007.01-601-43
Set-Up Date: 11/09/09
Through: 11/14/09
Test Date: 11/16/09
And: 11/17/09
Report Date: 11/23/09



FIELD TEST REPORT

Rendered to:

CENTRAL KENTUCKY GLASS
1123 Versailles Road
Lexington, Kentucky 40508

Report No.: 96007.01-601-43
Set-Up Date: 11/09/09
Through: 11/14/09
Test Date: 11/16/09
And: 11/23/09
Report Date: 11/19/09

Project Identification: University of Kentucky-College of Pharmacy
Lexington, Kentucky

Project Summary: Architectural Testing, Inc. was contracted to perform on-site testing at the above referenced project. Air infiltration testing was conducted on one specimen consisting of a fixed aluminum curtain wall installed in a punched opening. Water penetration tests were conducted on three specimens consisting of fixed aluminum curtain wall, one of which was installed in a punched opening (*reference Photo Nos. 1-3*). The specimens tested met the performance requirements listed herein.

Test Methods: Tests were conducted in accordance with the following:

AAMA 503-03, *Voluntary Specification for Field Testing of Metal Storefronts, Curtain Walls and Sloped Glazing Systems*.

ASTM E 783, *Field Measurement of Air Leakage Through Installed Exterior Windows and Doors*.

ASTM E 1105, *Field Determination of Water Penetration of Installed Exterior Windows, Curtain Walls, and Doors by Uniform or Cyclic Static Air Pressure Difference*. (Uniform static air pressure difference was employed during these tests).

Pre-Test Inspection:

A visual inspection of the designated test area was performed prior to testing. The test specimen was compared to other adjacent windows on the project. No obvious deficiencies or anomalies were observed.

Test Procedure:

The perimeter of the chamber was attached and sealed to the framing conditions surrounding the opening where applicable. The chamber was equipped with a centrifugal blower/vacuum pump, air flow meter, and a pressure sensing device to maintain the desired air pressure differential across the assembly. Air infiltration tests were conducted at 1.57 psf pressure differential. Water penetration tests were conducted at 10.0 psf pressure differential while simultaneously spraying water onto the exterior face of the assembly at the required rate of 5 gph/ft². During testing, the interior face of the test area was inspected for water leakage. Testing continued for 15 minutes.

Performance Criteria: In accordance with job specifications provided by Central Kentucky Glass and Messer Construction

Maximum Allowable Air Infiltration at 1.57 psf = 0.45 cfm/ft²

Water Leakage: In accordance with ASTM E 1105 when tested at a static pressure of 10.0 psf

TEST RESULTS

Date: 11/16/09

Ambient Exterior Air Temperature: 61°

General Note: All locations referenced are as viewed from the interior unless otherwise noted. Specimens were tested in sections in order to maintain proper water pressure.

Test Specimen #1:

Manufacturer: Kawneer 1600 Series
 Description: Fixed aluminum curtain wall in a punched opening
 Overall Size: 7'-4" wide by 8'-9 3/4" high
 Location: South elevation, 4th floor, 4th window unit from west

<u>Title of Test</u>	<u>Test Results</u>	<u>Allowable</u>
Air Infiltration @ 1.57 psf	Pass 0.02 cfm/ft ²	0.45 cfm/ft ²
Water Penetration @ 10.0 psf	Pass See Note #1	No water leakage

Note #1: Water leakage occurred at four minutes, entering the interior at the base of the right vertical mullion (reference Photo No. 4). Remedial work was conducted by Central Kentucky Glass and a retest was conducted on 11/17/09 with no water entry present.

Test Results: (Continued)

Test Specimen #2:

Manufacturer: Kawneer 1600 Series
 Description: Fixed aluminum curtain wall
 Overall Size: 37'-6" wide by 11'-2" high
 Location: South elevation, 4th floor, entire curtain wall bay above central entrance

<u>Title of Test</u>	<u>Test Results</u>	<u>Allowable</u>
Water Penetration @ 10.0 psf	Pass No water leakage	No water leakage

TEST RESULTS

Date: 11/17/09

Ambient Exterior Air Temperature: 49°

Test Specimen #3:

Manufacturer: Kawneer 1600 Series
 Description: Fixed aluminum curtain wall
 Overall Size: 32'-1" wide by 10'-10" high
 Location: South elevation, 1st floor, atrium, 5th through 10th window units from east

<u>Title of Test</u>	<u>Test Results</u>	<u>Allowable</u>
Water Penetration @ 10.0 psf	Pass See Note #2	No water leakage

Note #2: At approximately four minutes and forty five seconds, water was observed entering the interior below the left side of the mullion between the 3rd and 4th lites from the right of the specimen. Water appeared on top of the anchor clip near the exterior before dripping down the curb wall (reference Photo No. 5). Following the initial fifteen minute test, observations were conducted at the exterior and a small void in the sealant was observed below the vertical mullion. Upon removal of the exterior sealant and pressure plate, a void was identified in the sealant between the anchor clip and the window frame sill (reference Photo Nos. 6-8). Testing was conducted following repairs by Central Kentucky Glass with no water entry present.

Witnesses: The following representatives witnessed all or part of the testing.

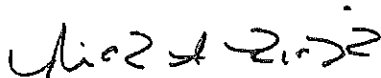
* Names and companies are spelled as was interpreted by Architectural Testing, Inc

Reggie Smith	Messer/NDS
Josh Warren	Messer
Charles Lane	UK CPMD QAQC
Rich Riedl	UK CPMD
Chris Estos	EOP Architects
Richard Polk	EOP Architects
Andre Moore	EOP Architects
Nick Rydzik	Architectural Testing, Inc
Joshua Brandt	Architectural Testing, Inc

This report is prepared for the convenience of our customer and endeavors to provide accurate and timely project information. It contains a summary of observations made by a qualified representative of Architectural Testing, Inc. This report is intended to help in your Quality Assurance Program, but it does not represent a continuous nor exhaustive evaluation. The statements made herein do not constitute approval, disapproval, certification or acceptance of performance or materials.

Detailed drawings, data sheets, a copy of this report, or other pertinent project documentation will be retained by Architectural Testing, Inc. for a period of four years from the original test date. At the end of this retention period, such materials shall be discarded without notice and the service life of this report will expire. Results obtained are tested values and were secured by using the designated test methods. This report does not constitute certification of this product nor an opinion or endorsement by this laboratory. It is the exclusive property of the client so named herein and relates only to the specimen(s) tested. This report may not be reproduced, except in full, without the written approval of Architectural Testing, Inc.

For ARCHITECTURAL TESTING, INC:



Digitally Signed by: Nick A. Rydzik

Nick A. Rydzik
Technician



Digitally Signed by: Joshua R. Brandt

Joshua R. Brandt
Senior Project Manager

NAR:hlc

Attachments (pages): This report is complete only when all attachments listed are included.
Appendix-A: Photographs (4 pages)

Revision Log

<u>Rev. #</u>	<u>Date</u>	<u>Page(s)</u>	<u>Revision(s)</u>
0	11/23/09	N/A	Original report issue

Appendix A
Photographs



Photo No. 1: Exterior view of Specimen #1

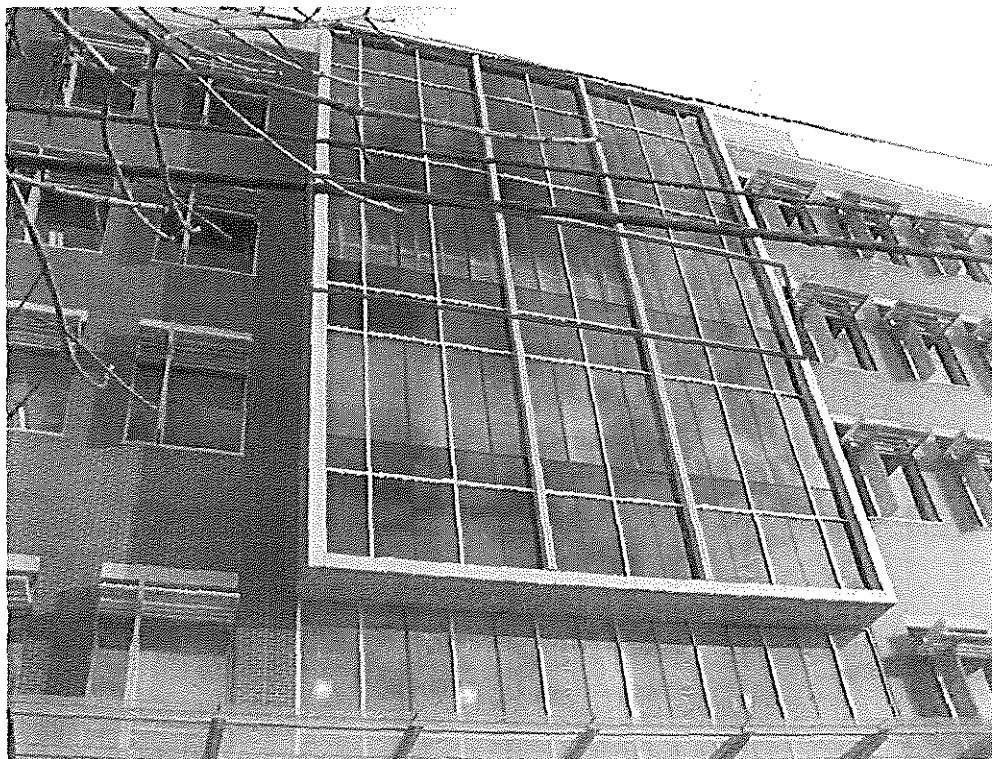


Photo No. 2: Exterior view of Specimen #2

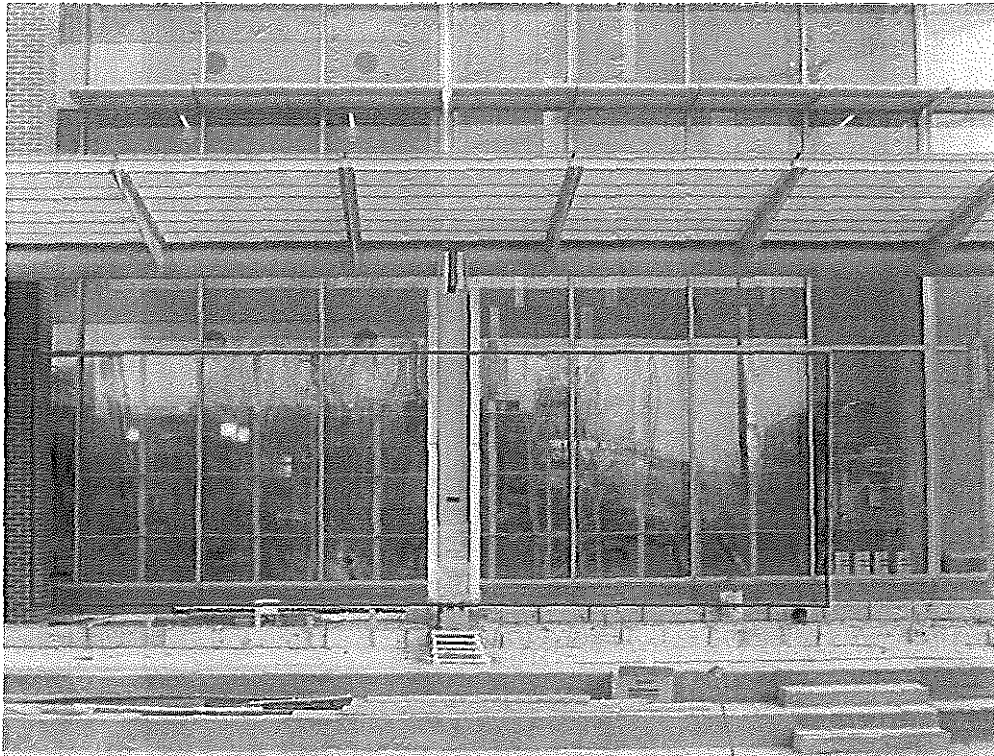


Photo No. 3: Exterior view of Specimen #3

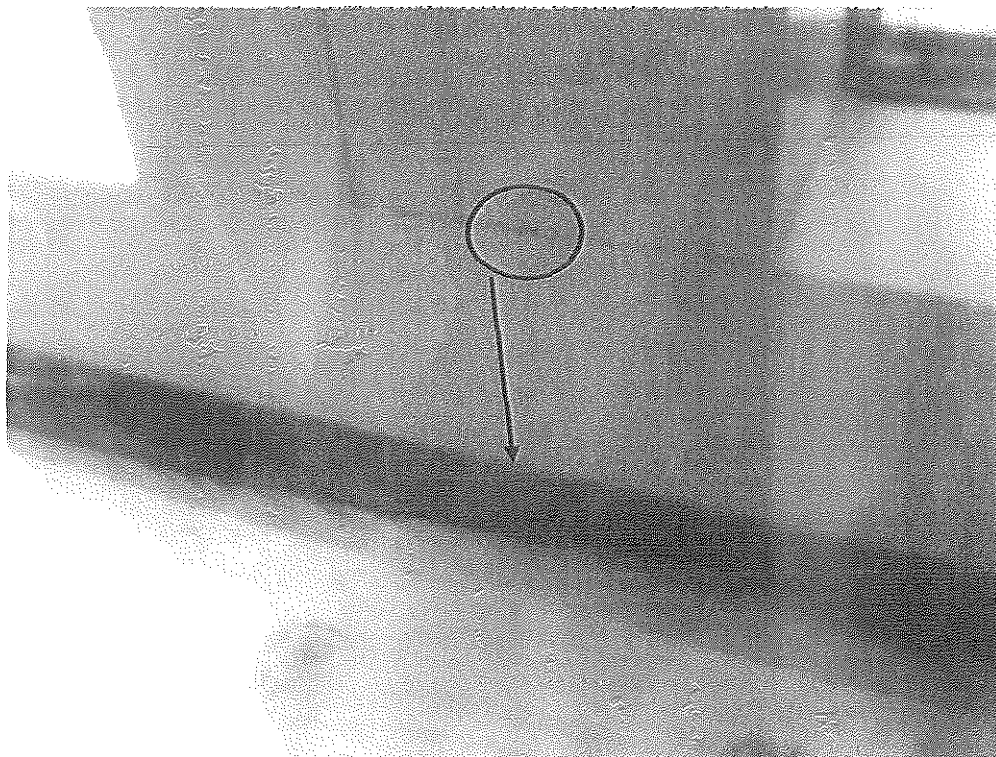


Photo No. 4: Water tracking down from the mullion/sill interface on Specimen #1

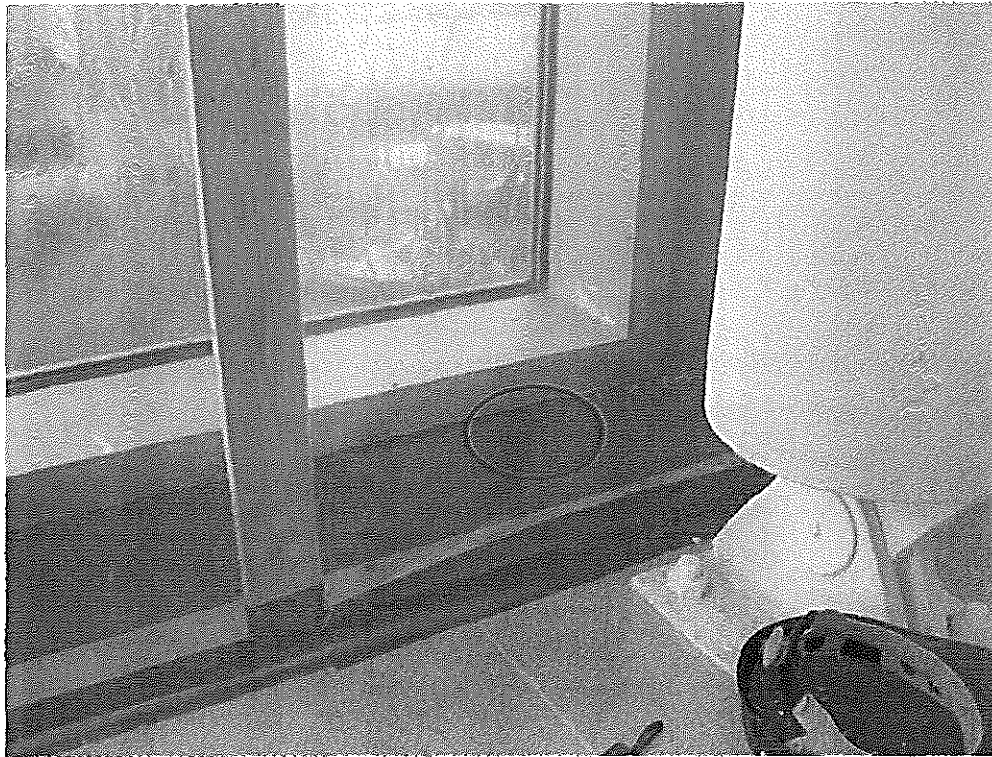


Photo No. 5: Water originating from underneath Specimen #3 and tracking down the curb wall



Photo No. 6: Exterior view of Specimen #3 at leak area with pressure plate and sealant joint removed

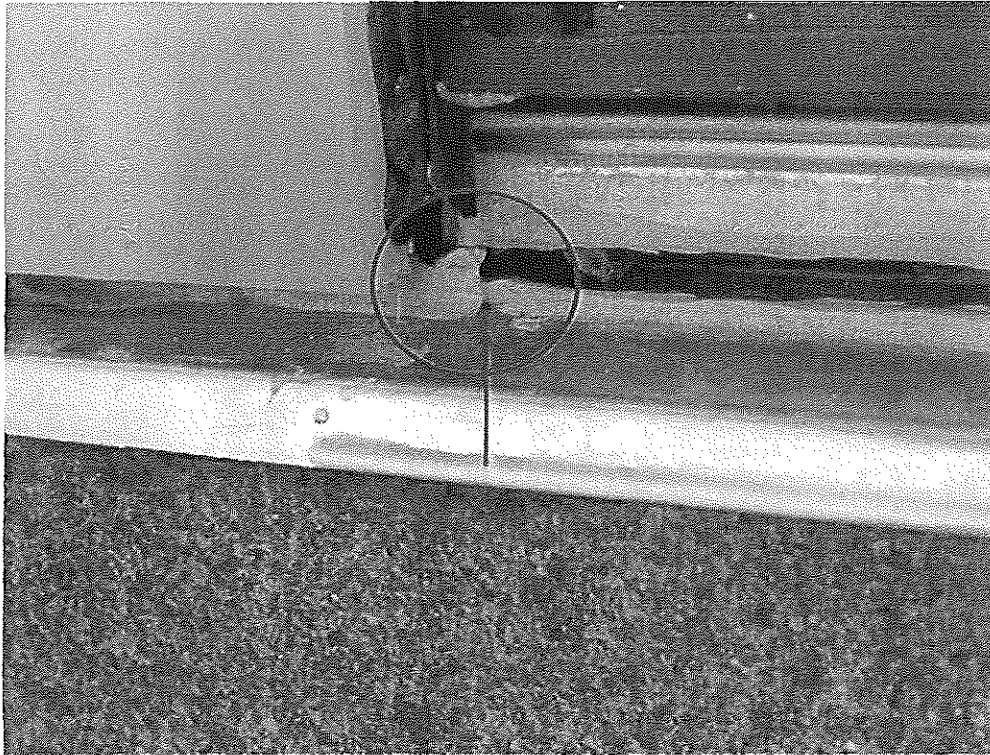


Photo No. 7: Pinhole in sealant joints below the mullion

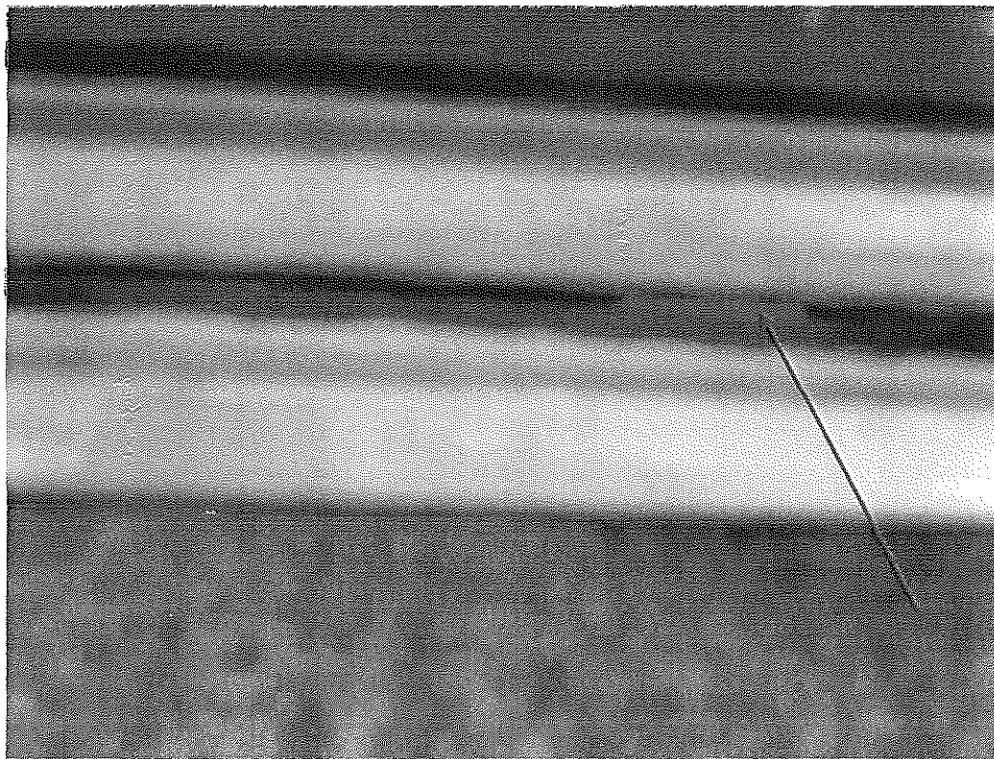


Photo No. 8: Interior light seen from exterior while viewing between the window frame and flashing on top of the curb wall

086300

METAL-FRAMED SKYLIGHTS

Central Kentucky Glass Company

1123 Versailles Road
Phone: 859-253-0710

Lexington, KY 40508
Fax: 859-255-73173

December 20, 2010

Messer Construction
146 Virginia Ave.
Lexington, KY 40508

Re: UK Pharmacy
Lexington, KY

Attn: Susan Cox

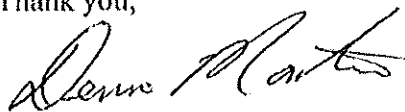
Dear Susan,

Listed below is Central Kentucky Glass' extended warranties as requested.

- 1) Oldcastle Glass – Central Kentucky Glass will add six (6) months of extended warranty. This includes: specification section 084126 - glass doors and specification section 088000 - coated glass, insulating glass and silkscreen/spandrel.
- 2) Doralco – Central Kentucky Glass will add six (6) months of extended warranty. This includes specification section 107000 – sunshade paint.
- 3) Linel Signature – Central Kentucky Glass will add six (6) months of extended warranty for specification sections 076200 and 086300 for spray coating warranties.

Please insert this in your warranty book.

Thank you,



Dennis Martin
President



DURANAR[®] SPRAY COATINGS MASTER WARRANTY AGREEMENT

THIS MASTER WARRANTY AGREEMENT is made between PPG Industries, Inc. ("PPG"), a Pennsylvania corporation, and the following building products producer (the "Customer"):

**LinEl Signature
101 Linel Drive
Mooreville, IN 46158**

This Agreement applies to any purchase from PPG by the Customer, or for it by a PPG "Warranty Approved" aluminum extrusion spray applicator (the "Applicator"), of a Duranar[®] coating listed below (the "Product") which the Customer applies, or has applied for it by the Applicator, to the exterior of an approved quality metal substrate listed for the Product which is used for an exterior aluminum extrusion or other building product (the "Metal Substrate").

Metal Substrate	Atmospheric Environment	Recommended Product
Aluminum (Spray Applied)	Normal	Duranar [®]
"	Normal, Industrial, Seacoast	Duranar [®] XL, XLBC

PPG warrants, subject to the conditions of this Agreement, that a Product, when properly factory machine applied to and cured on a properly cleaned, treated and primed Metal Substrate, will not:

- A. Peel, check or crack. Fabrication of spray applied product is not recommended or warranted; or,
- B. Chalk in excess of a numerical rating 8, as measured using the procedures of ASTM D4214-89 (Method D-659); or,
- C. Fade or change color in excess of 5 ΔE units (Hunter Color Difference), as measured using the procedure of ASTM D-2244-85, comparing an unexposed retain panel to the exposed panel after removal of dirt and chalk.

The above warranties (the "Performance Warranties") shall be 20 YEARS from the installation of the Metal Substrate coated with the Product or 21 YEARS from application of the Product to the Metal Substrate, whichever first occurs; provided, unless specifically agreed to in writing by PPG for a particular project of the Customer, where the Metal Substrate coated with the Product is not installed within continental North America the Performance Warranties shall be one-half (½) of the before stated periods.

THIS WARRANTY IS SUBJECT TO THE FOLLOWING CONDITIONS

1. The Performance Warranties apply to all Product colors unless PPG designates in writing to the Customer that a color is not covered.
2. It is acknowledged that fading or color changes may not be uniform if the surfaces are not equally exposed to the sun and elements. PPG recommends that there be a systematic fresh water rinse maintenance program in effect in areas of high salt concentration (such as adjacent to the seashore and/or in industrial atmospheres) so as to prevent the accumulation of concentrated salt deposits.
3. The Performance Warranties only will apply to Product which is applied to the Metal Substrate within six (6) months from the date PPG ships the Product. Further, the Performance Warranties only will apply to Product which is: properly factory applied to and properly cured on a properly cleaned, treated (a minimum of 40 milligrams per square foot of an approved chrome treatment per Section 6, AAMA 2605 is required for aluminum extrusion spray applicators) and primed Metal Substrate in accordance with PPG's then published Product Data Sheet and procedures and specifications (as such may be revised by PPG from time to time); and, applied in the case of a spray applicator, by an Applicator approved in advance by PPG and who has agreed in writing to comply with and be governed by the terms of this Agreement. Also, all companion products used in conjunction with the Product, such as primers, must be PPG approved products. Further, the Performance Warranties only will apply to Product applied within continental North America, unless specifically agreed to in writing by PPG for a particular project of the Customer.
4. The Performance Warranties will not apply to damage to and/or failure of the Product caused by: moisture or other contamination detrimental to the Product because of improper packaging, storage or handling of the coated Metal Substrate prior to installation; improper handling, shipping, processing, and/or installation of the coated Metal Substrate; scratching or abrading of the Product during or after installation; improper cleaning and/or pretreatment of the Metal Substrate or improper application of the Product; or, acts of God, falling objects, explosions, fire, or other such similar or dissimilar occurrences beyond PPG's control.
5. The Customer shall maintain, and as applicable, shall cause the Applicator to maintain, for the applicable warranty period, adequate records to establish identification of any Product and/or for any Metal Substrate involved in a warranty claim of: the Product batch number; the dates of application of the Product to the Metal Substrate, the quality control records, and the dates of the installation of the coated Metal Substrate; and, such other information as PPG may reasonably require from time to time. In the event of any Performance Warranties claim, these records shall be made available for inspection by PPG. Further, the Customer shall send, or cause the Applicator to send, within thirty (30) days from the date of each run of a Product purchased from PPG, to PPG four (4) 12" long production pieces from each run of a Product purchased from PPG; each being identified by extrusion production run or lot number, appropriate PPG batch numbers and date of coating, and accompanied by a legible copy of the quality control records covering these extrusions and the project name, number, location and any other information pertinent to the project.
6. PPG shall, at reasonable times and in such manner as will not unreasonably interfere with the Customer's or the Applicator's operations, be permitted to inspect and approve the production line,

coating equipment, Metal Substrate, cleaning and treatment, curing conditions, application methods and procedures and quality control of the Customer or of the Applicator.

7. PPG's exclusive liability and the Customer and the Applicator's sole remedy under this Agreement, or otherwise, shall be limited to, at PPG's option, the refinishing, or replacing, or reimbursement of the cost of refinishing or replacing the Metal Substrate exhibiting a defective Product. Such refinishing shall be performed by a PPG approved contractor, using standard finishing practices and materials as selected and/or approved by PPG (not necessarily a Product). PPG reserves the right to approve any contract for such refinishing or replacing; such approval not to be unreasonably delayed or withheld. The Performance Warranties on any refinished or replaced coated Metal Substrate shall be only for the remainder of the warranty period applicable to the Metal Substrate originally coated. Except as expressly provided above in this Section 7., in no event shall PPG be liable under any theory of recovery, whether based on negligence of any kind, strict liability or tort, for any direct, indirect, special, punitive, incidental or consequential damages in any way arising out of the purchase of a Product or from any possession or use made of a Product.

8. All claims relating to quality, condition or performance of the Product shall be waived unless made by the Customer or the Applicator in writing to PPG within the applicable warranty period, and within thirty (30) days after the Customer or Applicator is informed or becomes aware of a defect in or of the Product; and PPG must be given a reasonable and prompt opportunity to inspect said defect.

9. Except for the Performance Warranties, PPG MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE, WITH RESPECT TO ANY OF THE PRODUCTS.

10. The Performance Warranties are extended solely to the Customer and the Applicator. They are nontransferable and nonassignable, and neither the Customer nor the Applicator shall permit or authorize their employees, agents, representatives or customers to claim, represent or imply that the Performance Warranties extend to or are available to anyone other than the Customer or the Applicator.

11. In the event of a material breach by the Customer or the Applicator of any of the conditions of this Agreement, PPG shall have no liability for any Product failure claims.

12. PPG reserves the right to terminate this Agreement at any time upon sixty (60) days' prior notice, except with respect to any Product which already has been shipped to the Customer or Applicator prior to the giving of such notice.

13. All notices and claims given under or pursuant to this Agreement shall be in writing and sent by certified or registered mail, postage prepaid, return receipt requested. Unless otherwise instructed by a party by notice hereunder, all such notices to be given to: the Customer shall be sent to the address specified at the beginning of this agreement; and PPG shall be sent to the attention of : Manager, Color Services, Industrial Finishes Group, PPG Industries, Inc., 151 Colfax Street, Springdale, PA 15144. All such notices when deposited in the U.S. mail as set forth above shall be considered delivered three (3) days following such deposit.

14. PPG and the Customer agree that this Agreement does not constitute an obligation of any kind whatsoever on the part of the Customer to purchase any of the Product from PPG or an obligation on PPG's part to sell any of the Product to the Customer; but rather, it provides the governing terms and conditions as to the parties' respective liabilities and rights if, and when, any such purchases/sales of any of the Product occur.

15. No terms or conditions other than those stated herein, and no agreement or understanding, oral or written, in any way purporting to modify this Agreement shall be binding upon a party unless made in writing, expressly refers to this Agreement and is signed by that party's authorized representative. This Agreement supersedes and cancels any prior representations, warranties and agreements relating to the subject matters of this Agreement.

16. This Agreement is made under Pennsylvania law (without giving effect to the conflict of law principles thereof) and the local law of Pennsylvania shall apply to the construction, enforcement and interpretation of this Agreement.

PPG and the Customer have signed this Agreement as of the date(s) set forth below.

PPG Industries, Inc.

Customer *CINEL* SIGNATURE

By: S.D. Sturdevant (sg)
Name (Print): Shelley D. Sturdevant
Title: Manager, Color Services
Date: March 5, 2004

By: *[Signature]*
Name (Print): ROBERT B. SLOAN
Title: MANAGING MEMBER
Date: 3/15/04





DURANAR[®] SPRAY COATINGS MASTER WARRANTY AGREEMENT

THIS MASTER WARRANTY AGREEMENT is made between PPG Industries, Inc. ("PPG"), a Pennsylvania corporation, and the following building products producer (the "Customer"):

**LinEl Signature
 101 Linel Drive
 Mooresville, IN 46158**

This Agreement applies to any purchase from PPG by the Customer, or for it by a PPG "Warranty Approved" aluminum extrusion spray applicator (the "Applicator"), of a Duranar[®] coating listed below (the "Product") which the Customer applies, or has applied for it by the Applicator, to the exterior of an approved quality metal substrate listed for the Product which is used for an exterior aluminum extrusion or other building product (the "Metal Substrate").

Metal Substrate	Atmospheric Environment	Recommended Product
Aluminum (Spray Applied)	Normal	Duranar [®]
"	Normal, Industrial, Seacoast	Duranar [®] XL, XLBC

PPG warrants, subject to the conditions of this Agreement, that a Product, when properly factory machine applied to and cured on a properly cleaned, treated and primed Metal Substrate, will not:

- A. Peel, check or crack. Fabrication of spray applied product is not recommended or warranted; or,
- B. Chalk in excess of a numerical rating 8, as measured using the procedures of ASTM D4214-89 (Method D-659); or,
- C. Fade or change color in excess of 5 ΔE units (Hunter Color Difference), as measured using the procedure of ASTM D-2244-85, comparing an unexposed retain panel to the exposed panel after removal of dirt and chalk.

The above warranties (the "Performance Warranties") shall be 20 YEARS from the installation of the Metal Substrate coated with the Product or 21 YEARS from application of the Product to the Metal Substrate, whichever first occurs; provided, unless specifically agreed to in writing by PPG for a particular project of the Customer, where the Metal Substrate coated with the Product is not installed within continental North America the Performance Warranties shall be one-half (1/2) of the before stated periods.

THIS WARRANTY IS SUBJECT TO THE FOLLOWING CONDITIONS

1. The Performance Warranties apply to all Product colors unless PPG designates in writing to the Customer that a color is not covered.
2. It is acknowledged that fading or color changes may not be uniform if the surfaces are not equally exposed to the sun and elements. PPG recommends that there be a systematic fresh water rinse maintenance program in effect in areas of high salt concentration (such as adjacent to the seashore and/or in industrial atmospheres) so as to prevent the accumulation of concentrated salt deposits.
3. The Performance Warranties only will apply to Product which is applied to the Metal Substrate within six (6) months from the date PPG ships the Product. Further, the Performance Warranties only will apply to Product which is: properly factory applied to and properly cured on a properly cleaned, treated (a minimum of 40 milligrams per square foot of an approved chrome treatment per Section 6, AAMA 2605 is required for aluminum extrusion spray applicators) and primed Metal Substrate in accordance with PPG's then published Product Data Sheet and procedures and specifications (as such may be revised by PPG from time to time); and, applied in the case of a spray applicator, by an Applicator approved in advance by PPG and who has agreed in writing to comply with and be governed by the terms of this Agreement. Also, all companion products used in conjunction with the Product, such as primers, must be PPG approved products. Further, the Performance Warranties only will apply to Product applied within continental North America, unless specifically agreed to in writing by PPG for a particular project of the Customer.
4. The Performance Warranties will not apply to damage to and/or failure of the Product caused by: moisture or other contamination detrimental to the Product because of improper packaging, storage or handling of the coated Metal Substrate prior to installation; improper handling, shipping, processing, and/or installation of the coated Metal Substrate; scratching or abrading of the Product during or after installation; improper cleaning and/or pretreatment of the Metal Substrate or improper application of the Product; or, acts of God, falling objects, explosions, fire, or other such similar or dissimilar occurrences beyond PPG's control.
5. The Customer shall maintain, and as applicable, shall cause the Applicator to maintain, for the applicable warranty period, adequate records to establish identification of any Product and/or for any Metal Substrate involved in a warranty claim of: the Product batch number; the dates of application of the Product to the Metal Substrate, the quality control records, and the dates of the installation of the coated Metal Substrate; and, such other information as PPG may reasonably require from time to time. In the event of any Performance Warranties claim, these records shall be made available for inspection by PPG. Further, the Customer shall send, or cause the Applicator to send, within thirty (30) days from the date of each run of a Product purchased from PPG, to PPG four (4) 12" long production pieces from each run of a Product purchased from PPG; each being identified by extrusion production run or lot number, appropriate PPG batch numbers and date of coating, and accompanied by a legible copy of the quality control records covering these extrusions and the project name, number, location and any other information pertinent to the project.
6. PPG shall, at reasonable times and in such manner as will not unreasonably interfere with the Customer's or the Applicator's operations, be permitted to inspect and approve the production line,

coating equipment, Metal Substrate, cleaning and treatment, curing conditions, application methods and procedures and quality control of the Customer or of the Applicator.

7. PPG's exclusive liability and the Customer and the Applicator's sole remedy under this Agreement, or otherwise, shall be limited to, at PPG's option, the refinishing, or replacing, or reimbursement of the cost of refinishing or replacing the Metal Substrate exhibiting a defective Product. Such refinishing shall be performed by a PPG approved contractor, using standard finishing practices and materials as selected and/or approved by PPG (not necessarily a Product). PPG reserves the right to approve any contract for such refinishing or replacing; such approval not to be unreasonably delayed or withheld. The Performance Warranties on any refinished or replaced coated Metal Substrate shall be only for the remainder of the warranty period applicable to the Metal Substrate originally coated. Except as expressly provided above in this Section 7., in no event shall PPG be liable under any theory of recovery, whether based on negligence of any kind, strict liability or tort, for any direct, indirect, special, punitive, incidental or consequential damages in any way arising out of the purchase of a Product or from any possession or use made of a Product.

8. All claims relating to quality, condition or performance of the Product shall be waived unless made by the Customer or the Applicator in writing to PPG within the applicable warranty period, and within thirty (30) days after the Customer or Applicator is informed or becomes aware of a defect in or of the Product; and PPG must be given a reasonable and prompt opportunity to inspect said defect.

9. Except for the Performance Warranties, PPG MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE, WITH RESPECT TO ANY OF THE PRODUCTS.

10. The Performance Warranties are extended solely to the Customer and the Applicator. They are nontransferable and nonassignable, and neither the Customer nor the Applicator shall permit or authorize their employees, agents, representatives or customers to claim, represent or imply that the Performance Warranties extend to or are available to anyone other than the Customer or the Applicator.

11. In the event of a material breach by the Customer or the Applicator of any of the conditions of this Agreement, PPG shall have no liability for any Product failure claims.

12. PPG reserves the right to terminate this Agreement at any time upon sixty (60) days' prior notice, except with respect to any Product which already has been shipped to the Customer or Applicator prior to the giving of such notice.

13. All notices and claims given under or pursuant to this Agreement shall be in writing and sent by certified or registered mail, postage prepaid, return receipt requested. Unless otherwise instructed by a party by notice hereunder, all such notices to be given to: the Customer shall be sent to the address specified at the beginning of this agreement; and PPG shall be sent to the attention of: Manager, Color Services, Industrial Finishes Group, PPG Industries, Inc., 151 Colfax Street, Springdale, PA 15144. All such notices when deposited in the U.S. mail as set forth above shall be considered delivered three (3) days following such deposit.

14. PPG and the Customer agree that this Agreement does not constitute an obligation of any kind whatsoever on the part of the Customer to purchase any of the Product from PPG or an obligation on PPG's part to sell any of the Product to the Customer; but rather, it provides the governing terms and conditions as to the parties' respective liabilities and rights if, and when, any such purchases/sales of any of the Product occur.

15. No terms or conditions other than those stated herein, and no agreement or understanding, oral or written, in any way purporting to modify this Agreement shall be binding upon a party unless made in writing, expressly refers to this Agreement and is signed by that party's authorized representative. This Agreement supersedes and cancels any prior representations, warranties and agreements relating to the subject matters of this Agreement.

16. This Agreement is made under Pennsylvania law (without giving effect to the conflict of law principles thereof) and the local law of Pennsylvania shall apply to the construction, enforcement and interpretation of this Agreement.

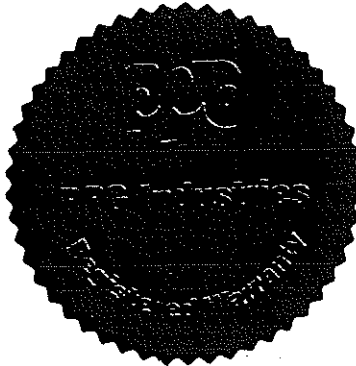
PPG and the Customer have signed this Agreement as of the date(s) set forth below.

PPG Industries, Inc.

Customer *CINEL SIGNATURE*

By: S.D. Sturdevant (agg)
Name (Print): Shelley D. Sturdevant
Title: Manager, Color Services
Date: March 5, 2004

By: *[Signature]*
Name (Print): ROBERT B. SLOAN
Title: MANAGING MEMBER
Date: 3/15/04



**LINEL SIGNATURE
LIMITED WARRANTY
(Skylight Installed Order)**

CONTRACTOR: Central Kentucky Glass
OWNER: University of Kentucky
PROJECT: UK Biological Pharmaceutical Complex- College of Pharmacy
LOCATION: Limestone Street
Lexington, KY 40507
LINEL JOB # 30601 (Spec Section 086300 - Glass Canopies)
CONTRACT/ PO #: 08-228-LEX **CONTRACT/PO DATE: 04/08/08**

Signature Skylights, LLC d/b/a LinEl Signature located at 101 Linel Drive, Mooresville, IN 46158 warrants that the materials and labor provided on this project in accordance with the plans and specifications provided by Contractor will be free from *** defective materials and installation*** which may appear within a period of 5 years after the Commencement Date as defined below (the "Warranty Period"), subject to the disclaimer, conditions, exceptions and exclusions stated below. This warranty is the exclusive warranty. The Warranty Period shall commence on installation of the materials into the project (the "Commencement Date"). The Commencement Date for this warranty is: December 17, 2009.

This warranty is non-assignable and shall terminate if the above Owner ceases to own the building during the Warranty Period.

DISCLAIMER OF WARRANTY

EXCEPT AS SPECIFIED ABOVE, ALL EXPRESS OR IMPLIED CONDITIONS, REPRESENTATIONS, AND WARRANTIES INCLUDING, WITHOUT LIMITATION, **ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE**, NON-INFRINGEMENT, SATISFACTORY QUALITY, NON-INTERFERENCE, ACCURACY OF INFORMATIONAL CONTENT, OR ARISING FROM A COURSE OF DEALING, LAW, USAGE, OR TRADE PRACTICE, **ARE HEREBY EXCLUDED** BY LINEL SIGNATURE TO THE FULL EXTENT ALLOWED BY APPLICABLE LAW AND ARE EXPRESSLY DISCLAIMED BY LINEL SIGNATURE, ITS SUPPLIERS AND LICENSORS. TO THE EXTENT AN IMPLIED WARRANTY CANNOT BE EXCLUDED UNDER APPLICABLE LAW, SUCH WARRANTY IS LIMITED IN DURATION TO THE WARRANTY PERIOD STATED ABOVE. BECAUSE SOME STATES OR JURISDICTIONS DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, THE ABOVE LIMITATION MAY NOT APPLY. THESE WARRANTIES GIVE THE CUSTOMER SPECIFIC LEGAL RIGHTS AND CUSTOMER MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM JURISDICTION TO JURISDICTION. THIS DISCLAIMER AND EXCLUSION SHALL APPLY EVEN IF THE EXPRESS WARRANTY SET FORTH ABOVE FAILS OF ITS ESSENTIAL PURPOSE.

ADDITIONAL CONDITIONS:

1. The Owner listed above shall notify LinEl Signature in writing that the materials supplied and/or installation have become defective and state the nature of the defect within fifteen (15) business days of discovery. No repairs or replacement shall be commenced except in the case of emergency or risk of imminent danger until LinEl Signature has had the opportunity to inspect as provided below.
2. The Owner shall allow LinEl Signature its agents or employees a reasonable time period after receipt of the notice, but not less than fifteen (15) business days, to examine the material and installed supplied to determine what repairs or replacements are necessary. If replacement items need to be ordered from suppliers, their standard lead times will govern the replacement lead time.
3. If repairs are performed by anyone other than LinEl Signature or their approved agents during the Warranty Period, the warranty shall be null and void.
4. LinEl Signature's warranty will be void in the event that full payment is not received for goods and services within the agreed upon terms of sale. No employee, representative, or distributor of LinEl Signature is authorized to modify this warranty.

ADDITIONAL EXCEPTIONS:

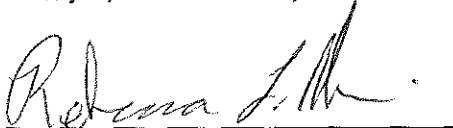
1. This warranty excludes remedy for damage or defect caused by abuse, misuse, modifications not approved and/or not executed by LinEl Signature or an authorized subcontractor or representative, improper or insufficient maintenance, improper operation, or normal wear and tear under normal usage.
2. LinEl Signature does not warrant and will not be liable for defects or damage caused by unusual, extraordinary or unforeseen conditions, such as but not limited to:
 - a. Tornadoes, hurricanes, fires, earthquakes, lightning, or any other acts of God.
 - b. Settlement, distortions, or failures of supporting structure, walls, or foundations of the building.
 - c. Objects striking the materials supplied, such as but not limited to vandalism or carelessness, or unauthorized personnel walking or climbing on the system or materials.
3. Painted surfaces shall be warranted to the extent that the specified paint manufacturer warrants the painted surfaces to LinEl Signature. If the manufacturer of the paint fails for any reason to provide a warrant to LinEl Signature, then no warranty is made by LinEl Signature. To the extent that the manufacture of the paint extends or provides a warranty, then LinEl Signature's warranty shall be limited to what is provided by the manufacturer.
4. Glass surfaces shall be warranted under the same terms, conditions, and limitations as the warranty provided by the manufacturer of the glass to LinEl Signature. If the manufacturer of the glass fails, for any reason, to provide a warranty to LinEl Signature, no glass warranty will be provided. To the extent that the manufacture of the glass extends or provides a warranty, then LinEl Signature's warranty shall be limited to what is provided by the manufacturer.
5. Acrylic surfaces shall be warranted under the same terms, conditions, and limitations as the warranty provided by the manufacturer to LinEl Signature. If the manufacturer of the acrylic fails, for any reason, to provide a warranty to LinEl Signature, no acrylic warranty will be provided. Normal amounts of infiltration of foreign materials in insulated acrylic units are excluded. To the extent that the manufacture of the acrylic surfaces provides a warranty, then LinEl Signature's warranty shall be limited to what is provided by the manufacturer.
6. If applicable, all movable parts, such as blinds, door closers, electric and manual vent mechanisms shall have a thirty (30) day warranty from the installation date, and such warranty shall be subject to the Disclaimer, Additional Conditions, Additional Exceptions and Additional Exclusions shall apply.

ADDITIONAL EXCLUSIONS:

LinEl Signature shall, in no event, be responsible for special, incidental, punitive, exemplar, consequential, or any other type of damages with respect to the material or labor provided herein. The sole remedy shall be replacement or repair of any defective materials or workmanship.

Executed this July 13, 2010 in Mooresville, Indiana.

Signed: _____



Rebecca L. Morris, Controller

LINEL SIGNATURE
LIMITED WARRANTY
(Skylight Installed Order)

CONTRACTOR: Central Kentucky Glass
OWNER: University of Kentucky
PROJECT: UK Biological Pharmaceutical Complex- College of Pharmacy
LOCATION: Limestone Street
Lexington, KY 40507
LINEL JOB # 30602 (Spec Section 086300 - Skylights)
CONTRACT/ PO #: 08-228-LEX CONTRACT/PO DATE: 04/08/08

Signature Skylights, LLC d/b/a LinEl Signature located at 101 Linel Drive, Mooresville, IN 46158 warrants that the materials and labor provided on this project in accordance with the plans and specifications provided by Contractor will be free from *** defective materials and installation*** which may appear within a period of 5 years after the Commencement Date as defined below (the "Warranty Period"), subject to the disclaimer, conditions, exceptions and exclusions stated below. This warranty is the exclusive warranty. The Warranty Period shall commence on installation of the materials into the project (the "Commencement Date"). The Commencement Date for this warranty is: December 17, 2009.

This warranty is non-assignable and shall terminate if the above Owner ceases to own the building during the Warranty Period.

DISCLAIMER OF WARRANTY

EXCEPT AS SPECIFIED ABOVE, ALL EXPRESS OR IMPLIED CONDITIONS, REPRESENTATIONS, AND WARRANTIES INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, NON-INFRINGEMENT, SATISFACTORY QUALITY, NON-INTERFERENCE, ACCURACY OF INFORMATIONAL CONTENT, OR ARISING FROM A COURSE OF DEALING, LAW, USAGE, OR TRADE PRACTICE, ARE HEREBY EXCLUDED BY LINEL SIGNATURE TO THE FULL EXTENT ALLOWED BY APPLICABLE LAW AND ARE EXPRESSLY DISCLAIMED BY LINEL SIGNATURE, ITS SUPPLIERS AND LICENSORS. TO THE EXTENT AN IMPLIED WARRANTY CANNOT BE EXCLUDED UNDER APPLICABLE LAW, SUCH WARRANTY IS LIMITED IN DURATION TO THE WARRANTY PERIOD STATED ABOVE. BECAUSE SOME STATES OR JURISDICTIONS DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, THE ABOVE LIMITATION MAY NOT APPLY. THESE WARRANTIES GIVE THE CUSTOMER SPECIFIC LEGAL RIGHTS AND CUSTOMER MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM JURISDICTION TO JURISDICTION. THIS DISCLAIMER AND EXCLUSION SHALL APPLY EVEN IF THE EXPRESS WARRANTY SET FORTH ABOVE FAILS OF ITS ESSENTIAL PURPOSE.

ADDITIONAL CONDITIONS:

1. The Owner listed above shall notify LinEl Signature in writing that the materials supplied and/or installation have become defective and state the nature of the defect within fifteen (15) business days of discovery. No repairs or replacement shall be commenced except in the case of emergency or risk of imminent danger until LinEl Signature has had the opportunity to inspect as provided below.
2. The Owner shall allow LinEl Signature its agents or employees a reasonable time period after receipt of the notice, but not less than fifteen (15) business days, to examine the material and installed supplied to determine what repairs or replacements are necessary. If replacement items need to be ordered from suppliers, their standard lead times will govern the replacement lead time.
3. If repairs are performed by anyone other than LinEl Signature or their approved agents during the Warranty Period, the warranty shall be null and void.
4. LinEl Signature's warranty will be void in the event that full payment is not received for goods and services within the agreed upon terms of sale. No employee, representative, or distributor of LinEl Signature is authorized to modify this warranty.

ADDITIONAL EXCEPTIONS:

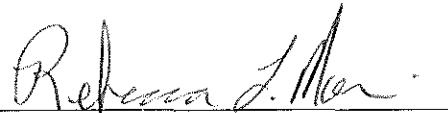
1. This warranty excludes remedy for damage or defect caused by abuse, misuse, modifications not approved and/or not executed by LinEl Signature or an authorized subcontractor or representative, improper or insufficient maintenance, improper operation, or normal wear and tear under normal usage.
2. LinEl Signature does not warrant and will not be liable for defects or damage caused by unusual, extraordinary or unforeseen conditions, such as but not limited to:
 - a. Tornadoes, hurricanes, fires, earthquakes, lightning, or any other acts of God.
 - b. Settlement, distortions, or failures of supporting structure, walls, or foundations of the building.
 - c. Objects striking the materials supplied, such as but not limited to vandalism or carelessness, or unauthorized personnel walking or climbing on the system or materials.
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ADDITIONAL EXCLUSIONS:

LinEl Signature shall, in no event, be responsible for special, incidental, punitive, exemplar, consequential, or any other type of damages with respect to the material or labor provided herein. The sole remedy shall be replacement or repair of any defective materials or workmanship.

Executed this July 13, 2010 in Mooresville, Indiana.

Signed:


Rebecca L. Morris, Controller

FIELD TEST REPORT

Rendered to:

CENTRAL KENTUCKY GLASS

**PROJECT: University of Kentucky-College of Pharmacy
Lexington, Kentucky**

BPO4 V. 2
080300
@end of section
(replace placeholder)

Report No.: 96007.02-601-43
Set-Up Date: 12/29/09
Test Date: 12/30/09
Report Date: 12/31/09



Architectural Testing

FIELD TEST REPORT

Rendered to:

CENTRAL KENTUCKY GLASS
1123 Versailles Road
Lexington, Kentucky 40508

Report No.: 96007.02-601-43
Set-Up Date: 12/29/09
Test Date: 12/30/09
Report Date: 12/31/09

Project Identification: University of Kentucky-College of Pharmacy
Lexington, Kentucky

Project Summary: Architectural Testing, Inc. was contracted to perform on-site testing at the above referenced project. Water penetration testing was conducted on one specimen consisting of fixed aluminum skylight (*reference Photo Nos. 1-2*). The specimen tested met the performance requirements listed herein.

Test Methods: Tests were conducted in accordance with the following:

AAMA 503-08, *Voluntary Specification for Field Testing of Newly Installed Storefronts, Curtain Walls and Sloped Glazing Systems.*

ASTM E 1105, *Field Determination of Water Penetration of Installed Exterior Windows, Curtain Walls, and Doors by Uniform or Cyclic Static Air Pressure Difference.* (Uniform static air pressure difference was employed during these tests).

Pre-Test Inspection:

A visual inspection of the designated test area was performed prior to testing. The test specimen was compared to other adjacent windows on the project. No obvious deficiencies or anomalies were observed of the test location, however, voids were observed in the 1st horizontal structural sealant joint from the sill of the adjacent lites towards the west (*reference Photo No.3*).

Test Procedure:

The perimeter of the chamber was attached and sealed to the exterior glass surfaces surrounding the test location at the jambs and head, and to the adjacent coping of the sill. The chamber was equipped with a centrifugal blower/vacuum pump, air flow meter, and a pressure sensing device to maintain the desired air pressure differential across the assembly. Water penetration tests were conducted at 4.18 psf pressure differential while simultaneously spraying water onto the exterior face of the assembly at the required rate of 5 gph/ft². During testing, the interior face of the test area was inspected for water leakage. Testing continued for 15 minutes.

5906 Saxon Avenue
Schofield, WI 54476
phone: 715-241-8624
fax: 715-241-8425
www.archtest.com

Performance Criteria: In accordance with AAMA 503-08 (paragraph 4.3.1 and Note #7) upon review of job specification 086300-9 provided by Central Kentucky Glass and sheet C1.01 (UK Biological Skylight Pharmaceutical Complex) provided by Messer Construction

Water Leakage: No uncontrolled water leakage in accordance with paragraph 4.3.4 of AAMA 503-08 when tested at a static pressure of 4.18 psf

TEST RESULTS

Date: 12/30/09

Ambient Exterior Air Temperature: 38° F

General Note: All locations referenced are as viewed from the interior unless otherwise noted. Specimens were tested in sections in order to maintain proper water pressure.

Test Specimen #1:

Manufacturer: Linel
Description: Fixed aluminum skylight
Overall Size: 10'-6" wide by 9'-0" high
Location: South elevation, Penthouse roof, 3rd and 4th window unit from West of the penthouse bump-out

<u>Title of Test</u>	<u>Test Results</u>	<u>Allowable</u>
Water Penetration @ 4.18.0 psf	Pass No water entry	No water leakage

Witnesses: The following representatives witnessed all or part of the testing.

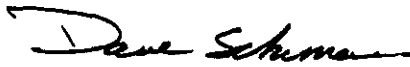
* Names and companies are spelled as was interpreted by Architectural Testing, Inc

Reggie Smith	Messer/NDS
Dennis Martin	Central Kentucky Glass
Kelvin Betze	Central Kentucky Glass
Andrew Moore	EOP Architects
Jeremy Brandt	Architectural Testing, Inc
Dave Schumann	Architectural Testing, Inc

This report is prepared for the convenience of our customer and endeavors to provide accurate and timely project information. It contains a summary of observations made by a qualified representative of Architectural Testing, Inc. This report is intended to help in your Quality Assurance Program, but it does not represent a continuous nor exhaustive evaluation. The statements made herein do not constitute approval, disapproval, certification or acceptance of performance or materials.

Detailed drawings, data sheets, a copy of this report, or other pertinent project documentation will be retained by Architectural Testing, Inc. for a period of four years from the original test date. At the end of this retention period, such materials shall be discarded without notice and the service life of this report will expire. Results obtained are tested values and were secured by using the designated test methods. This report does not constitute certification of this product nor an opinion or endorsement by this laboratory. It is the exclusive property of the client so named herein and relates only to the specimen(s) tested. This report may not be reproduced, except in full, without the written approval of Architectural Testing, Inc.

For ARCHITECTURAL TESTING, INC:



Digitally Signed by: Dave Schumann

Dave C. Schumann
Senior Technician



Digitally Signed by: Joshua R. Brandt

Joshua R. Brandt
Senior Project Manager

NAR:hlc

Attachments (pages): This report is complete only when all attachments listed are included.
Appendix-A: Photographs (2 pages)

Revision Log

<u>Rev. #</u>	<u>Date</u>	<u>Page(s)</u>	<u>Revision(s)</u>
0	12/31/09	N/A	Original report issue

Appendix A

Photographs

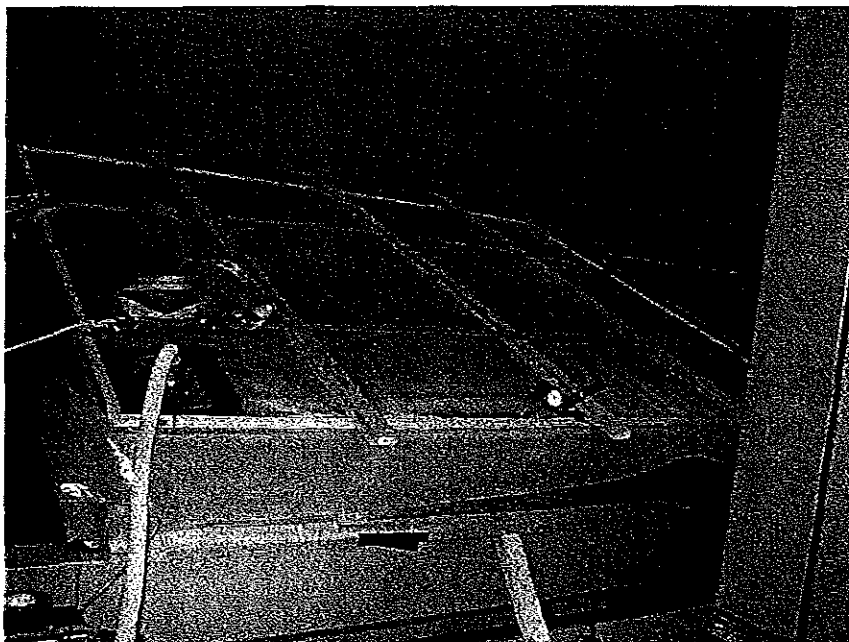


Photo No. 1: Exterior view of Specimen.

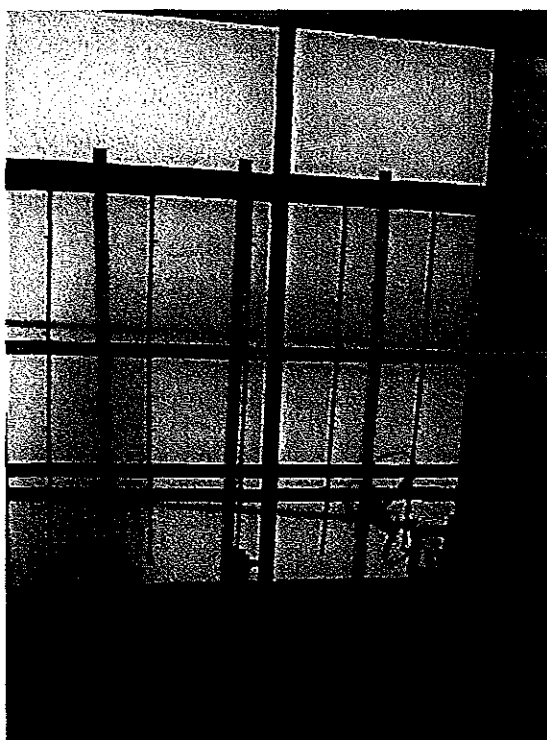


Photo No. 2: Interior view of Specimen.

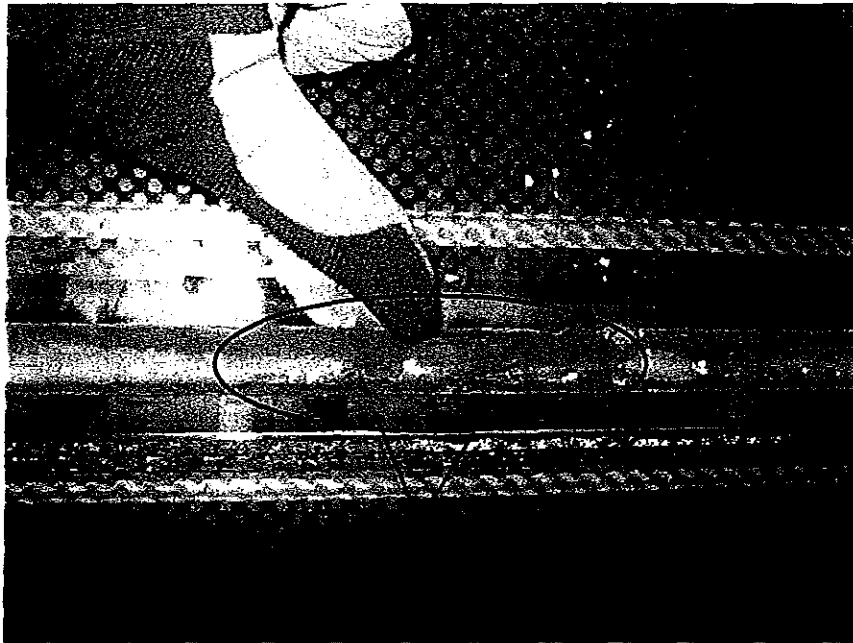


Photo No. 3: Void observed in structural seal adjacent to the test location.