

Aqua-Fast Seamless Roofing Membrane

**SECTION 07560
FLUID APPLIED ROOFING**

PART 1 – GENERAL

1.1 DESCRIPTION OF EXISTING SUBSTRATES

This specification is intended to outline the requirements for application of the Aqua-Fast system, in conjunction with the appropriate product technical data sheets, over approved roof substrates in acceptable condition. Specific addenda address each surface at the end of this guide specification.

1.2 DESCRIPTION OF LIQUID-APPLIED ROOFING SYSTEM

The liquid-applied system consists of a polyester-reinforced elastomeric acrylic system specifically designed for roofing installation. Meets UL-70 Class A, FMRA, ICC standards, and Miami-Dade County requirements.

1.3 SECTION INCLUDES

Fluid-applied flexible acrylic waterproofing system for use over new or existing roofing. Work shall include the preparation of the roof surface, flashing, detailing, application of the roof system, and cleanup.

1.4 RELATED WORK

Contractor shall review all sections of the project specifications to determine items of work that will interface with the application of this roofing system. Compliance with applicable building codes shall be assured by the specifier or project engineer, while coordination and execution of related sections shall be the responsibility of the approved contractor.

1.5 REFERENCES

A. NRCA Roofing and Waterproofing Manual

B. Factory Mutual RoofNav Directory

C. Underwriters Laboratories Building Materials Directory

D. Miami-Dade County Product Control Section, Board and Code Administration No other warranty except of title, shall be implied. The conditions of any tests designed to resolve any alleged breach of warranty shall be mutually agreed upon and the Company shall be notified of, and may be represented at, all such tests that may be made. The liability of the Company (except as to title) arising out of the supplying of the said Product, or its use, whether on warranties, contract, negligence or otherwise shall not in any case exceed sufficient product to restore the integrity of any product which is proven defective upon expiration of the applicable warranty period specified herein all such liability shall terminate.

E. ASTM D5034-09(2013) Breaking Strength and Elongation of Textile Fabrics

F. ASTM D3787-07(2011) Bursting Strength of Textiles

G. ASTM D1117-01 Guide for Evaluating Nonwoven Fabric

H. ASTM D1653-13 Water Vapor Transmission of Organic Coating Films

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- I. ASTM D-2370 Tensile Properties of Organic Coatings
- J. ASTM D-2370 Tensile Properties of Organic Coatings
- K. ASTM D-624 Tear Strength of Thermoplastic Elastomers
- L. ASTM D-1653 Test for Water Vapor Transmission of Organic Coating Films
- M. ASTM D-2697 Test Method for Volume Nonvolatile Matter in Pigmented Coatings
- N. ASTM D6083-05e1 Standard Specification for Liquid Applied Acrylic Coating
- O. ASTM C1549-09 Determination of Solar Reflectance at Near Ambient Temperature Using a Portable Solar Reflectometer
- P. ASTM C1371-04a(2010)e1 Determination of Emittance of Materials at Near Room Temperature Using Portable Emittance Meter

1.6 SUBMITTALS REVIEW

- A. Shop Drawings: Submit a scale drawing illustrating layout of joint reinforcing and all flashing details.
- B. Product Data: Provide manufacturer's published technical literature, SDS, and warranty on products that make up the roofing system, including coatings, reinforcing fabrics, flashing materials, roof drains, fasteners, etc.
- C. Installation Instructions: Submit all data sheets available from the manufacturer on the installation of the roofing system applicable to the project.
- D. Submit manufacturer's Certificates of Compliance or Analysis that all products meet or exceed project requirements. Contractor to supply samples or mockup, if required.
- E. Applicator is responsible for submitting proof of Approved Applicator status by manufacturer.
- F. Prior to bid, all project specifications, details, and submittals shall be reviewed by manufacturer for pre-approval and to comply with warranty requirements. Successful bidder should initiate warranty pre-inspection process before commencing work.

1.7 QUALIFICATIONS

Applicator Qualifications: The applicator of the roofing material specified herein shall be an approved applicator designated by ProGuard Building. Proof of qualification shall be by written certificate from the roofing system manufacturer.

Manufacturer Qualifications: Manufacturer shall have minimum twenty (20) years manufacturing experience in the roof coating industry.

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1.8 QUALITY CONTROL

A. Codes and Standards: The contractor shall become thoroughly familiar with all codes, regulations and standards governing the specified work. Any contradiction between the manufacturer's requirements and these specifications shall be brought to the attention of the manufacturer and the specifier/project engineer.

B. Deviations: There shall not be any deviations from these specifications unless the deviation is submitted in writing to the specifier/project engineer. Any request for deviation must be approved in writing from the roofing manufacturer's technical department delineating the details of the deviation.

C. At least one individual with Approved Applicator status shall be on site during installation of any Aqua-Fast products. A daily log of application activities and environmental conditions should be maintained and available on-site with copies of technical data/application instructions & SDS.

D. Manufacturer's Technical Representative: Manufacturer's Technical Representative is available to make site visits as needed. Labor & Material Warranties will receive a final inspection and that final inspection report is available to the building owner upon request.

1.9 DELIVERY, STORAGE & HANDLING

A. Deliver materials to jobsite in manufacturer's unopened and undamaged containers bearing the following information:

1. Name and address of manufacturer
2. Identification of contents, with product code
3. Net volume of contents
4. Lot or batch number
5. VOC content
6. Storage temperature limits
7. Shelf life expiration date
8. Mixing instructions and proportions of contents
9. Safety information and instructions

B. Store and protect materials from damage and weather in accordance with manufacturer's published instructions.

1. Ambient temperatures should range between 50 and 90°F (10 to 32°C). Keep out of direct sunlight.
2. Place stored material containers on pallets and cover with tarpaulin tied to bottom of pallets.

1.10 ENVIRONMENTAL REQUIREMENTS

Do not apply if ambient temperatures are expected to fall below 50°F (10°C), or if rain or heavy dew is anticipated before liquid coating component has cured.

1.11 WARRANTY

Provide Product or Labor & Material warranty in accordance with project specifications. Contractor shall

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follow written application process in accordance with manufacturer’s warranty program. Refer to the following table for surface prep, film thicknesses, and other details.

Table 1: Primer chart & Aqua-Fast System minimum dry film thickness (DFT) values

Existing Roof	Surface Preparation / Priming						Aqua-Fast System		Minimum Dry Film Thickness (DFT)		
	ProGuard Epoxy	ProGuard WP	ProGuard SP	ProGuard Metal	ProGuard GP	ProGuard Bleed Block/SS	FoundationBase/ Fabric/ FoundationBase component	Finish Coat component	Warranty Term Length		
									10 YR	15 YR	20 YR
BUR						x	x	x	40	45	52
Concrete/structural	x						x	x	40	45	52
Concrete/LW	x						x	x	40	45	52
EPDM		x					x	x	40	45	52
Hypalon	x		x				x	x	40	45	52
Iso Board							x	x	40	45	52
Metal	x			x			x	x	40	45	52
APP ModBit						x	x	x	40	45	52
SBS ModBit						x	x	x	40	45	52
PVC	x		x				x	x	40	45	52
SPF	x				x		x	x	30	37	45
TPO	x		x				x	x	40	45	52

PART 2 – PRODUCTS

2.1 MANUFACTURER

ProGuard Building Toll Free: (844) 776-4273
 2930 Supply Ave. Phone: (844) 776-4273
 Los Angeles, CA 90040 Fax: (888)244-5333
 Web: www.ProGuardBuilding.com

2.2 MEMBRANE COMPOUND MATERIAL

A. Waterproofing Material: **Aqua-Fast System**: three stage, fabric- reinforced, flexible acrylic coating, fluid-applied in successive steps to form a continuous, seamless, watertight membrane; 40 to 52 mils minimum cured total system thickness, comprised of the following:

1. Foundation and Saturation Coats: **Aqua-Fast Foundation Base**(highly flexible, water- based, 100% pure acrylic polymer resin coatings)
2. Fabric: **Aqua-Fast Fabric** (polyester, non-woven, stitch-bonded and heat-set fabric)
3. Finish Coat: **Aqua-Fast Finish Coat** (ultraviolet light-resistant blend of highly flexible, water-based, 100% pure acrylic polymer resin coating). Color as selected from manufacturer’s standard color chart.

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B. Reinforcing Fabric: **Aqua-Fast Fabric** shall be non-woven, 100% polyester, stitch bonded, heat-set fabric with the following characteristics:

Weight:	3 oz / per square yard (102 grams/m ²)	
Tensile Strength	MD: 124 lbs. (56 kg) CD: 77 lbs. (35 kg)	ASTM D5034
Elongation @ Break	MD: 26% CD: 64%	ASTM D5034
Ball Burst	109 lbs. (49 kg)	ASTM D3787
Trapezoid	MD: 17 lbs. (7.7 kg) CD: 20 lbs. (9.1 kg)	ASTM D1117
Thickness	0.018 inches (0.457 mm)	ASTM D1777

C. Cured Membrane Characteristics:

ASTM D-6083 Material Properties			
Property	Method	Aqua-Fast Finish Coat	Aqua-Fast Foundation Base
Krebs Viscosity	D-562	130	123
Brookfield 6 rpm Viscosity	D-2196	66,400	34,000
Volume Solids	D-2697	52	52
Weight Solids	D-1644	66	66
Tensile	D-2370	207	173
Elongation	D-2370	306	323
Elongation, Post 1,000 hrs Xenon	D-2370	148	122
Tear Resistance	D-624	93	82
Accelerated Weathering@ 1,000 hrs	D-4798	Pass, no change	Pass, no change
Low Temp Flex, Post 1,000 hrs Xenon	D-522	Pass -15°F	Pass -15°F
Water Swelling @ 7 days	D-471	9.2	7.8
Permeance (wet cup)	D-1653	3.9	4.9
Wet Adhesion	D-903	8.7	7.3
Fungi Resistance	G-21	0 rating	0 rating

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Property	Test Method	Result
Volume solids	ASTM D-2697	55.0 +2%
Weight Solids	ASTM D-1644	66.0 +2%
Tensile Strength	ASTM D-2370	500 +50 PSI
Elongation	ASTM D-2370	585 +50%
Permeability	ASTM D-1653	14 +3
Tear Resistance	ASTM D-624	140 +10 PSI
VOC	EPA Method 24	< 50 g Liter
Low temperature Flexibility (-15°, 1/2 in mandrel, 1000hrs weathering)		Pass
Hardness (Shore A)	ASTM D-2240	50 - 55
Reflectivity	ASTM C-1549	87%
Emittance	ASTM C-1371	.90
SRI	Calculated	107
Viscosity		120 +10 KU
Density		11.1 lbs per gallon
Flashpoint		None
Shelf Life		6 months
Clean Up		Water

2.3 ACCESSORIES (Refer to individual product technical data sheets, which are an integral part of this specification, for properties & installation.)

A. **Cant Strips:** Approved composition materials are EPS (Expanded Polystyrene), ISO (Polyisocyanurate), and wood (Non-Pressure Treated). Cant strips are to be installed at all internal corners, around curbs, and at all 90 degree angles as specified by Technical Sales Rep for ProGuard Building.

B. **Moisture Breathers/Vents:** Install as recommended by ProGuard Building Technical Representative.

C. **Polyisocyanurate:** 1.5" minimum thickness. Max board size: 4' x 8' if mechanically fastened or 4' x 4' if adhered with Factory Mutual approved roofing adhesive. Closed cell with factory laminated facer. Foam core to have rated flame spread of 25" or less and minimum compressive strength of 250 psi.

D. **Expanded Polystyrene:** 1.5" minimum thickness and a minimum of 1.5 lb./ft³ density. Maximum board size is 4' x 8' for mechanically fastened, or 4' x 4' if adhered with Factory Mutual approved roofing adhesive.

E. **Plywood:** 3/4" minimum thickness, tongue and groove exterior B & C grade. Plywood is to be adhered with sub-floor adhesive and deck fasteners.

F. **Densdeck:** 1/4" minimum thickness if used over an approved, smooth existing substrate. The standard thickness recommendation is 1/2".

G. **Tapered ISO or EPS:** 1.5" minimum thickness and a minimum of 1.5 lb/ft³ density. Maximum board size is 4" x 4" with a slope of not less than .25" per foot .

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H. **Adhesive:** Insta-Stick, OlyBond or FM (Factory Mutual) approved polyurethane adhesive, dispensed from pre-pressurized containers. Application guidelines should be dictated by the adhesive manufacturer.

I. **Mechanical Fasteners:** Approved mechanical fasteners with plates. Fastener patterns shall be as recommended by the board manufacturer.

J. **AF Buttergrade:** Single package, high solids acrylic, elastomeric sealant.

K. **AF Fiber Additive:** Bulking material used in conjunction with **Aqua-Fast Foundation Base** to fill cracks, voids, or low depressions on various substrates.

L. **AF Fastener Caps:** Fabric reinforcement for sealing metal fasteners.

M. **ProGuard Metal:** Red rust inhibitive primer used on direct-to-metal applications to stabilize and protect metal surfaces.

N. **ProGuard EPDM:** Water-based primer used on cleaned EPDM surfaces.

O. **ProGuard GP:** General purpose primer used for most roof or chalky surfaces.

P. **ProGuard Bleed Block/SS:** Penetrating adhesive/primer for Mod Bit and smooth surface asphalt.

Q. **ProGuard Epoxy:** All purpose epoxy primer for Metal, Single ply, SPF, Masonry, Wood

R. **ProGuard SP :** Primer for TPO, PVC, and Hypalon surfaces.

S. **ProGuard CS:** Penetrating sealer/primer for masonry surfaces including a minimum of 7 day cured concrete.

PART 3 – EXECUTION

3.1 EXAMINATION

A. Verify that substrate surfaces are durable, free of frozen matter, dampness, loose particles, cracks, pits, projections, and/or foreign matter detrimental to adhesion or application of waterproofing system.

B. Verify that substrate surfaces are smooth and not detrimental to full contact bond of waterproofing materials.

C. Verify items that penetrate surfaces to receive waterproofing are securely installed and suitably flashed.

D. Verify that substrate areas are adequately supported and firmly fastened in place.

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- E. Verify that roof deck has a minimum slope of 0.25"/foot.
- F. Verify that roof does not have areas of ponding water.
- G. Verify that all contiguous walls are properly waterproofed.

3.2 PREPARATION – GENERAL

- A. Protect adjacent surfaces not designated to receive waterproofing.
- B. At a minimum, clean and prepare surfaces to receive waterproofing by removing all dirt, dust, loose and flaking particles, grease and laitance with the use of a stiff bristle push broom and/or washing. Care should be taken not to inject water into the substrate during washing. Allow adequate time for complete drying after the cleaning process. Inspect and make all necessary repairs to substrate. Seal cracks and joints with sealant materials using depth to width ratio as recommended by sealant manufacturer. Contact an ProGuard Building Technical Representative for technical assistance.
- C. Do not apply waterproofing to surfaces unacceptable to manufacturer, or under inclement environmental conditions.

3.3 APPLICATION

Refer to individual addenda at the end of this guide specification for preparation and application requirements for specific substrates.

3.4 PROTECTION OF FINISHED WORK

Monitor finished system for seven days, sweeping off any birdbaths to allow for a full cure.

3.5 CLEANING

Immediately clean surfaces not scheduled to receive waterproofing in accordance with manufacturer's instructions.

END OF SECTION

ADDENDUM 1 – Existing Substrates (BUR and Mod Bit, EPDM, Hypalon, PVC, TPO)

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3.3 APPLICATION

A. Surface Primers – Where appropriate, and in accordance with published instructions, apply one of the following primers at the specified coverage rate. Contact ProGuard Building Technical Representative to verify if a primer is required.

1. EPDM – Apply ProGuard WP the nominal rate of 500 ft²/gal. ProGuard WP should remain on the EPDM surface for 10 to 30 minutes, followed by two separate power rinses, using clean water, at a minimum of 3,000 psi . Allow to dry, then apply ProGuard EPDM at a rate of .5 gal/100 ft².
2. Rusted Metal – Apply ProGuard Metal to all rusted metal areas at the nominal rate of .5 gals/ 100 ft². A second coat of ProGuard Metal will be required for severely rusted surfaces. Coverage rates may vary, consult the ProGuard Building Technical rep for approved coverage.
3. Modified Bitumen/Smooth Built-Up Roofing – These roofing substrates generally do not require a primer. ProGuard Bleed Block/SS can be used to enhance bleed-blocking and adhesion characteristics, as necessary. (Consult your ProGuard Building Technical Representative for additional help as necessary.)
4. All Types of Concrete – Refer to **ADDENDUM 2 – Lightweight, Structural and Precast Concrete** for details.
5. TPO, PVC, & Hypalon – Apply ProGuard SP at the rate of .5 gals/100ft².

B. Aqua-Fast Foundation Base & Fabric Components – This procedure consists of one coat of **Aqua-Fast Foundation Base (“AF Foundation Base”)** applied to the substrate at the rate of 1.5 gals/100 ft², **Aqua-Fast Fabric (“Fabric”)** (sizes vary) laid into the wet Foundation Base, and a second coat of Foundation Base immediately applied over the top at the rate of 1.5 gals/100 ft² to saturate the Fabric. Foundation Base is applied at a total rate of 3 gals/100 ft². The coverage rate will vary depending on the texture and porosity of the substrate. Foundation Base should only be applied using approved roof brushes when used in conjunction with fabric. Overall dry mil thickness shall be no less than 25 dry mils

1. Roof Perimeter- Using 12” Fabric and Foundation Base components (described above), waterproof entire roof perimeter. Continue waterproofing up vertical surfaces and onto the deck a minimum of 6” in each direction.
2. Roof Penetrations- Using 12” Fabric and Foundation Base components (described above), seal any items projecting through waterproofing material to render them watertight. Extend waterproofing vertically up penetrations a minimum of 6”.
3. Roof Field – Using 40” Fabric and Foundation Base components (as described above), reinforce the entire roof field. Overlap adjacent runs of Fabric a minimum of 4”.

C. **Aqua-Fast Finish Coat** Component:

10-Year Option – Apply 2 coats of Aqua-Fast Finish Coat (“Finish Coat”). Each Finish Coat shall be applied at .85 gals/ 100 ft² PER COAT for a total of 1.7 gals/100ft² . Minimum millage requirements are 14 mils wet and 7.5 dry per coat. Allow to dry between coats. Total Finish Coat dry film thickness should be

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15 mils. Completed Aqua-Fast System: System must be installed to a minimum 40 mils total cured thickness.

15-Year Option – Apply 2 coats of Aqua-Fast Finish Coat (“Finish Coat”). The first Finish Coat shall be applied at 1.0 gals/100 ft². Minimum millage requirements are 16 wet and 9 mils dry. Allow to dry between coats. Apply second Finish Coat at 1.3 gals/100 ft² or 21 wet mils and 11 dry mils. Total Finish Coat dry film thickness shall be 20 mils. Completed Aqua-Fast System: System must be installed to a minimum 45 mils total cured thickness.

20-Year Option – Apply 2 coats of Aqua-Fast Finish Coat (“Finish Coat”). Each Finish Coat shall be applied at 1.5 gals/100 ft². Minimum millage requirements are 24 wet and 13.5 mils dry per coat. Allow to dry between coats. Total Finish Coat dry film thickness shall be). Completed Aqua-Fast System: System must be installed to a minimum 52 mils total cured thickness.

END OF ADDENDUM 1

ADDENDUM 2 – Lightweight, Structural and Precast Concrete

3.3 APPLICATION

A. Surface Primer – Apply ProGuard CS on a clean dry surface at a rate of 0.5 gals/100 ft². Allow to dry completely before additional coatings are applied.

B. Aqua-Fast Foundation Base & Fabric Components – This procedure consists of one coat of **Aqua-Fast Foundation Base (“AF Foundation Base”)** applied to the substrate at the rate of 1.5 gals/100 ft², **Aqua-Fast Fabric (“Fabric”)** (sizes vary) laid into the wet Foundation Base, and a second coat of Foundation Base immediately applied over the top at the rate of 1.5 gals/100 ft² to saturate the Fabric. Foundation Base is applied at a total rate of 3 gals/100 ft². The coverage rate will vary depending on the texture and porosity of the substrate. Foundation Base should only be applied using approved roof brushes when used in conjunction with fabric. Overall dry mil thickness shall be no less than 25 dry mils

1. Roof Perimeter- Using 12” Fabric and Foundation Base components (described above), waterproof entire roof perimeter. Continue waterproofing up vertical surfaces and onto the deck a minimum of 6” in each direction.
2. Roof Penetrations- Using 12” Fabric and Foundation Base components (described above), seal any items projecting through waterproofing material to render them watertight. Extend waterproofing vertically up penetrations a minimum of 6”.
3. Roof Field – Using 40” Fabric and Foundation Base components (as described above), reinforce the entire roof field. Overlap adjacent runs of Fabric a minimum of 4”.

C. **Aqua-Fast Finish Coat** Component:

10-Year Option – Apply 2 coats of Aqua-Fast Finish Coat (“Finish Coat”). Each Finish Coat shall be applied at .85 gals/ 100 ft² PER COAT for a total of 1.7 gals/100ft². Minimum millage requirements are 14 mils wet and 7.5 dry per coat. Allow to dry between coats. Total Finish Coat dry film thickness should be 15 mils. Completed Aqua-Fast System: System must be installed to a minimum 40 mils total cured thickness.

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15-Year Option – Apply 2 coats of Aqua-Fast Finish Coat (“Finish Coat”). The first Finish Coat shall be applied at 1.0 gals/100 ft². Minimum millage requirements are 16 wet and 9 mils dry. Allow to dry between coats. Apply second Finish Coat at 1.3 gals/100 ft² or 21 wet mils and 11 dry mils. Total Finish Coat dry film thickness shall be 20 mils. Completed Aqua-Fast System: System must be installed to a minimum 45 mils total cured thickness.

20-Year Option – Apply 2 coats of Aqua-Fast Finish Coat (“Finish Coat”). Each Finish Coat shall be applied at 1.5 gals/100 ft². Minimum millage requirements are 24 wet and 13.5 mils dry per coat. Allow to dry between coats. Total Finish Coat dry film thickness shall be). Completed Aqua-Fast System: System must be installed to a minimum 52 mils total cured thickness.

END OF ADDENDUM 2

ADDENDUM 3 – Rigid Insulation, DensDeck & Plywood

3.3 INSTALLATION – INSULATION

Adhere insulation to deck with polyurethane adhesive or approved fasteners in accordance with manufacturer's installation instructions to meet a minimum uplift requirement of I-90. Verify the proper uplift requirements with the specifier or the local building code authority.

1. Stagger all board joints. Lay boards with edges in moderate contact, without forcing. Cut insulation to fit neatly to perimeter blocking and around penetrations through the roof.
2. Apply no more insulation than can be covered with waterproofing on the same day.
3. Install cant strips at internal corners and metal drip edge on outside perimeter.

3.4 WATERPROOFING APPLICATION

A. Aqua-Fast Foundation Base & Fabric Components – This procedure consists of one coat of Aqua-Fast Foundation Base (“AF Foundation Base”) applied to the substrate at the rate of 1.5 gals/100 ft², Aqua-Fast Fabric (“Fabric”) (sizes vary) laid into the wet Foundation Base, and a second coat of Foundation Base immediately applied over the top at the rate of 1.5 gals/100 ft² to saturate the Fabric. Foundation Base is applied at a total rate of 3 gals/100 ft². The coverage rate will vary depending on the texture and porosity of the substrate. Foundation Base should only be applied using approved roof brushes when used in conjunction with fabric. Overall dry mil thickness shall be no less than 25 dry mils.

1. Recovery Board Seams – Using 6” Fabric and Foundation Base components (as described above), waterproof all board seams, cracks and non-working joints. Center 6” fabric over all seams.
2. Roof Perimeter- Using 12” Fabric and Foundation Base components (described above), waterproof entire roof perimeter. Continue waterproofing up vertical surfaces and onto the deck a minimum of 6” in each direction.
3. Roof Penetrations- Using 12” Fabric and Foundation Base components (described above), seal any items projecting through waterproofing material to render them watertight. Extend waterproofing vertically up penetrations a minimum of 6”.

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4. Roof Field – Using 40” Fabric and Foundation Base components (as described above), reinforce the entire roof field. Overlap adjacent runs of Fabric a minimum of 4”.

B. Aqua-Fast Finish Coat Component:

10-Year Option – Apply 2 coats of Aqua-Fast Finish Coat (“Finish Coat”). Each Finish Coat shall be applied at .85 gals/ 100 ft² PER COAT for a total of 1.7 gals/100ft² . Minimum millage requirements are 14 mils wet and 7.5 dry per coat. Allow to dry between coats. Total Finish Coat dry film thickness should be 15 mils. Completed Aqua-Fast System: System must be installed to a minimum 40 mils total cured thickness.

15-Year Option – Apply 2 coats of Aqua-Fast Finish Coat (“Finish Coat”). The first Finish Coat shall be applied at 1.0 gals/100 ft² . Minimum millage requirements are 16 wet and 9 mils dry. Allow to dry between coats. Apply second Finish Coat at 1.3 gals/100 ft² or 21 wet mils and 11 dry mils. Total Finish Coat dry film thickness shall be 20 mils. Completed Aqua-Fast System: System must be installed to a minimum 45 mils total cured thickness.

20-Year Option – Apply 2 coats of Aqua-Fast Finish Coat (“Finish Coat”). Each Finish Coat shall be applied at 1.5 gals/100 ft² . Minimum millage requirements are 24 wet and 13.5 mils dry per coat. Allow to dry between coats. Total Finish Coat dry film thickness shall be 20 mils. Completed Aqua-Fast System: System must be installed to a minimum 52 mils total cured thickness.

END OF ADDENDUM 3

ADDENDUM 4 – Commercial Standing Seam Metal

3.3 APPLICATION

A. Bare Metal or Clean Rusted Metal: Remove all scale and apply ProGuard Metal at the rate of .5 gals/100 ft² to all rusted areas. Protect from weather and allow to dry. If surface is extremely rusted, a second coat will be required. Consult the ProGuard Building Technical Rep for determining how much additional product will be required.

B. Aqua-Fast Foundation Base & Fabric Components – This procedure consists of one coat of Aqua-Fast Foundation Base (“AF Foundation Base”) applied to the substrate at the rate of 1.5 gals/100 ft², Aqua-Fast Fabric (“Fabric”) (sizes vary) laid into the wet Foundation Base, and a second coat of Foundation Base immediately applied over the top at the rate of 1.5 gals/100 ft² to saturate the Fabric. Foundation Base is applied at a total rate of 3 gals/100 ft². The coverage rate will vary depending on the texture and porosity of the substrate. Foundation Base should only be applied using approved roof brushes when used in conjunction with fabric. Overall dry mil thickness shall be no less than 25 dry mils

1. Roof Penetrations – Using 12” Fabric and Foundation Base components (described above), seal any items projecting through waterproofing material watertight. Waterproof penetrations vertically a minimum of 6”.

2. Vertical Seams – In general vertical seams do not need to be reinforced with Fabric.

3. Horizontal Lap – Using 12” Fabric and Foundation Base components (described above), seal all horizontal laps. Foundation Base & Fabric components must be centered on the panel laps. Protect from weather until dry.

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4. Exposed Mechanical Fasteners – Using either an AF Fastener Cap or a 6” x 6” piece of Fabric and Foundation Base components (described above), seal all mechanical fasteners. Protect from weather until dry.

5. Parapet & Vertical Wall Junctions – Using 12” Fabric and Foundation Base components (described above), waterproof all roof/wall junctions. Continue waterproofing up vertical surfaces and onto deck a minimum of 6” in each direction.

C. Aqua-Fast Finish Coat Component:

10-Year Option – Apply 2 coats of Aqua-Fast Finish Coat (“Finish Coat”). Each Finish Coat shall be applied at .85 gals/ 100 ft² PER COAT for a total of 1.7 gals/100ft² . Minimum millage requirements are 14 mils wet and 7.5 dry per coat. Allow to dry between coats. Total Finish Coat dry film thickness should be 15 mils. Completed Aqua-Fast System: System must be installed to a minimum 40 mils total cured thickness. Non-fabric areas of the roof must have a minimum total cured thickness of 15 mils.

15-Year Option – Apply 2 coats of Aqua-Fast Finish Coat (“Finish Coat”). The first Finish Coat shall be applied at 1.0 gals/100 ft² . Minimum millage requirements are 16 wet and 9 mils dry. Allow to dry between coats. Apply second Finish Coat at 1.3 gals/100 ft² or 21 wet mils and 11 dry mils. Total Finish Coat dry film thickness shall be 20 mils. Completed Aqua-Fast System: System must be installed to a minimum 45 mils total cured thickness. Non-fabric areas of the roof must have a minimum total cured thickness of 20 mils.

20-Year Option – Apply 2 coats of Aqua-Fast Finish Coat (“Finish Coat”). Each Finish Coat shall be applied at 1.5 gals/100 ft². Minimum millage requirements are 24 wet and 13.5 mils dry per coat. Allow to dry between coats. Total Finish Coat dry film thickness shall be). Completed Aqua-Fast System: System must be installed to a minimum 52 mils total cured thickness. Non-fabric areas of the roof must have a minimum total cured thickness of 27 mils.

ADDENDUM 5 – Standard Commercial Metal Panels

3.3 APPLICATION

A. Bare Metal or Clean Rusted Metal: Remove all scale and apply ProGuard Metal at the rate of .5 gals/100 ft² to all rusted areas. Protect from weather and allow to dry. If surface is extremely rusted, a second coat will be required. Consult the ProGuard Building Technical Rep for determining how much additional product will be required.

B. Aqua-Fast Foundation Base & Fabric Components – This procedure consists of one coat of Aqua-Fast Foundation Base (“AF Foundation Base”) applied to the substrate at the rate of 1.5 gals/100 ft², Aqua-Fast Fabric (“Fabric”) (sizes vary) laid into the wet Foundation Base, and a second coat of Foundation Base immediately applied over the top at the rate of 1.5 gals/100 ft² to saturate the Fabric. Foundation Base is applied at a total rate of 3 gals/100 ft². The coverage rate will vary depending on the texture and porosity of the substrate. Foundation Base should only be applied using approved roof brushes when used in conjunction with fabric. Overall dry mil thickness shall be no less than 25 dry mils

1. Roof Penetrations – Using 12” Fabric and Foundation Base components (described above), seal any items projecting through waterproofing material watertight. Waterproof penetrations vertically a minimum of 6”.

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2. Vertical Seams – In general vertical seams do not need to be reinforced with Fabric.
3. Horizontal Lap – Using 12” Fabric and Foundation Base components (described above), seal all horizontal laps. Foundation Base & Fabric components must be centered on the panel laps. Protect from weather until dry.
4. Exposed Mechanical Fasteners – Using either an AF Fastener Cap or a 6” x 6” piece of Fabric and Foundation Base components (described above), seal all mechanical fasteners. Protect from weather until dry.
5. Parapet & Vertical Wall Junctions – Using 12” Fabric and Foundation Base components (described above), waterproof all roof/wall junctions. Continue waterproofing up vertical surfaces and onto deck a minimum of 6” in each direction.

C. Aqua-Fast Finish Coat Component:

10-Year Option – Apply 2 coats of Aqua-Fast Finish Coat (“Finish Coat”). Each Finish Coat shall be applied at .85 gals/ 100 ft² PER COAT for a total of 1.7 gals/100ft² . Minimum millage requirements are 14 mils wet and 7.5 dry per coat. Allow to dry between coats. Total Finish Coat dry film thickness should be 15 mils. Completed Aqua-Fast System: System must be installed to a minimum 40 mils total cured thickness. Non-fabric areas of the roof must have a minimum total cured thickness of 15 mils.

15-Year Option – Apply 2 coats of Aqua-Fast Finish Coat (“Finish Coat”). The first Finish Coat shall be applied at 1.0 gals/100 ft² . Minimum millage requirements are 16 wet and 9 mils dry. Allow to dry between coats. Apply second Finish Coat at 1.3 gals/100 ft² or 21 wet mils and 11 dry mils. Total Finish Coat dry film thickness shall be 20 mils. Completed Aqua-Fast System: System must be installed to a minimum 45 mils total cured thickness. Non-fabric areas of the roof must have a minimum total cured thickness of 20 mils.

20-Year Option – Apply 2 coats of Aqua-Fast Finish Coat (“Finish Coat”). Each Finish Coat shall be applied at 1.5 gals/100 ft². Minimum millage requirements are 24 wet and 13.5 mils dry per coat. Allow to dry between coats. Total Finish Coat dry film thickness shall be). Completed Aqua-Fast System: System must be installed to a minimum 52 mils total cured thickness. Non-fabric areas of the roof must have a minimum total cured thickness of 27 mils.

END OF ADDENDUM 5

ADDENDUM 6 – Historic Standing Seam Metal

3.3 APPLICATION

A. Bare Metal or Clean Rusted Metal: Remove all scale and apply ProGuard Metal at the rate of .5 gals/100 ft² to all rusted areas. Protect from weather and allow to dry. If surface is extremely rusted, a second coat will be required. Consult the ProGuard Building Technical Rep for determining how much additional product will be required.

B. Aqua-Fast Foundation Base & Fabric Components – This procedure consists of one coat of Aqua-Fast Foundation Base (“AF Foundation Base”) applied to the substrate at the rate of 1.5 gals/100 ft², Aqua-Fast Fabric (“Fabric”) (sizes vary) laid into the wet Foundation Base, and a second coat of Foundation Base immediately applied over the top at the rate of 1.5 gals/100 ft² to saturate the Fabric. Foundation

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Base is applied at a total rate of 3 gals/100 ft². The coverage rate will vary depending on the texture and porosity of the substrate. Foundation Base should only be applied using approved roof brushes when used in conjunction with fabric. Overall dry mil thickness shall be no less than 25 dry mils

1. Roof Penetrations – Using 12” Fabric and Foundation Base components (described above), seal items projecting through waterproofing material watertight. Waterproof up penetrations a minimum of 6”.
2. Valleys and Peaks- Using 12, 16 or 24” Fabric and Foundation Base components (described above), seal all valleys and peaks. Foundation Base & Fabric components must be centered in the valleys or on the peaks overlapping adjoining fabrics. Protect from weather until dry.
3. Vertical Seams- Using 6” Fabric and Foundation Base components (described above), seal all vertical seams. Foundation Base & Fabric components must be centered on the panel seams. Protect from weather until dry.
4. Vertical Pans- Using 16 or 24” Fabric and Foundation Base components (described above), seal all vertical pans. Foundation Base & Fabric components must be centered in the vertical pans overlapping both adjoining 6” fabrics used on the vertical seams. Protect from weather until dry. (Note: most historic standing seam metal roofs have standing seams that are centered on 17” or 25”. For seams centered on 17” use 16” fabric, and for 25” seams use 24” fabric.)
5. Parapet & Vertical Wall Junctions- Using 12 Fabric and Foundation Base components (described above), waterproof roof/wall junctions. Continue waterproofing up vertical surfaces and onto the roof surface a minimum of 6” in each direction.

B. Aqua-Fast Finish Coat Component:

10-Year Option – Apply 2 coats of Aqua-Fast Finish Coat (“Finish Coat”). Each Finish Coat shall be applied at .85 gals/ 100 ft² PER COAT for a total of 1.7 gals/100ft² . Minimum millage requirements are 14 mils wet and 7.5 dry per coat. Allow to dry between coats. Total Finish Coat dry film thickness should be 15 mils. Completed Aqua-Fast System: System must be installed to a minimum 40 mils total cured thickness.

15-Year Option – Apply 2 coats of Aqua-Fast Finish Coat (“Finish Coat”). The first Finish Coat shall be applied at 1.0 gals/100 ft² . Minimum millage requirements are 16 wet and 9 mils dry. Allow to dry between coats. Apply second Finish Coat at 1.3 gals/100 ft² or 21 wet mils and 11 dry mils. Total Finish Coat dry film thickness shall be 20 mils. Completed Aqua-Fast System: System must be installed to a minimum 45 mils total cured thickness.

20-Year Option – Apply 2 coats of Aqua-Fast Finish Coat (“Finish Coat”). Each Finish Coat shall be applied at 1.5 gals/100 ft². Minimum millage requirements are 24 wet and 13.5 mils dry per coat. Allow to dry between coats. Total Finish Coat dry film thickness shall be). Completed Aqua-Fast System: System must be installed to a minimum 52 mils total cured thickness.

END OF ADDENDUM 6