



# MANATEE COUNTY FLORIDA

## FACSIMILE

October 26, 2010

TO: All Interested Bidders

SUBJECT: Invitation for Bid #10-2554DC  
Metal Roof Restoration @ Civic Center  
ADDENDUM #1

Bidders are hereby notified that this Addendum shall be made a part of the above named bidding and contract documents. The following items are issued to add to, modify, and clarify the bid and contract documents. These items shall have the same force and effect as the original bidding and contract documents, and cost involved shall be included in the bid prices. Bids to be submitted on the specified bid date, shall conform to the additions and revisions listed herein.

1. Bid Opening is changed to **November 16, 2010 at 3:00 P.M.**, Manatee County Purchasing, 1112 Manatee Avenue West, Suite 803, Bradenton, Florida 34205. All questions not responded to in this Addendum are to be forwarded via email to [deborah.carey-reed@mymanatee.org](mailto:deborah.carey-reed@mymanatee.org) for inclusion in Addendum #2.
2. Attached is information for Addendum #1 as prepared by Karins Engineering Group, Inc. dated October 22, 2010 in reference to Information Conference questions.
2. Invitation For Bid, Project Manual, Section 01010 Summary Of Work, item 8, (page 2 of 2) - painting is added to the gutters and downspouts: "Install gutters, downspouts, and their sealants and paint coating in accordance with Section 07460 **and 09900.**"
3. Metal deck coating specifications and listing of equivalent products as provided by ERSystems, Bradenton, Florida, are attached.

Bids will be received at Manatee County Purchasing, 1112 Manatee Avenue West, Suite 803, Bradenton, Florida 34205 until **November 16, 2010 at 3:00 P.M.**

Sincerely,

Deborah Carey-Reed  
Construction Buyer  
/dcr

Attachments

Financial Management Department - Purchasing Division  
1112 Manatee Avenue West, Suite 803, Bradenton, FL 34205  
PHONE: 941.749.3074 \* FAX: 941.749.3034  
[www.mymanatee.org](http://www.mymanatee.org)

October 22, 2010

Frank Monhart AIA PM  
Property Management Department  
Manatee County Government  
1112 Manatee Ave. W  
Suite 868  
Bradenton, FL 34205-8926

**RE: Civic Center Metal Roof Restoration  
Manatee County IFB#10-2554DC – ADDENDUM #1  
KEG File # 09DS-0050.007**

Dear Frank:

Upon your request, Karins Engineering Group, Inc. (KEG) attended the October 12, 2010 Information Conference and we offer the following Question & Answer Addendum:

1. Q: What is the specification for the sloped roof coating?

**A: KEG scope restricted to fascia, eaves, gutter and downspout. Consult with County and/or ER Systems re sloped roof coating specification. (County distributed sample specification for ER Systems product).**

2. Q: What is the coating inside and outside for gutters and downspouts? Please confirm whether it is to be G-90 galvanizing and/or paint to match the base structure.

**A: KEG to verify with County as to paint coatings of exterior surfaces of gutters and downspouts.**

**County Response to KEG: Visible exterior surfaces of gutters and downspouts shall be coated with black color paint over the specified G-90 galvanizing. KEG to supply additional paint coating specification. (Addendum to KEG Specification Section 09900 follows).**

C. Galvanized Metal Gutters and Downspouts:

1. Power wash all galvanized metals: After pressure washing and chloride (salts) removal, existing galvanized metals must be solvent cleaned in accordance with the Society of Protective Coatings Standard, SSPC SP-1. Change cleaning rags often. Dispose of all rags in accordance with local, county, state and EPA regulations.
2. Surface temperature must be 5° F above critical dew point prior to any coatings procedure.
3. First Coat: Install Galvite HS by brush, roller or the preferred spray application at 5.0-7.0 mils wet to achieve 3.0-4.5 mils dry/226-336 square feet per gallon approximate.
4. Allow 4-5 hours dry time prior to any other procedure.
5. Do not paint unless surface temperature and air temperature are below 140 degrees F. Relative humidity is 85% maximum.
6. Second Coat: Install SW SHER-CRYL HPA S/G at 6.0-10.0 mils wet to achieve 2.5-4.0 mils dry/154-247 square feet per gallon, approximate
7. Third Coat: Repeat as above.

		WFT	DFT	THEO/COV/SF
First Coat:	SW # B50WZ30 Galvite Primer:	5.0-7.0	2.5-4.0	226-336

Second Coat: SW SHER-CRYL HPA S/G	6.0-10.0	2.5-4.0	154-247
Third Coat: SW SHER-CRYL HPA S/G	6.0-10.0	2.5-4.0	154-247
<b>Total DFT=7.5-12.0 Mills</b>			

3. Q: Section 3.02 B of ER Systems sample specification requires metal panels with excessive rust and deterioration to be replaced. Please confirm whether it is required to replace the full panel.

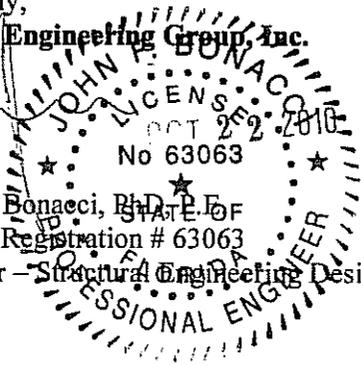
**A: KEG to analyze metal roof panels and support conditions and provide instructions. (Instructions given below):**

**Metal Roof Panels were measured to be 18" wide x 3" tall seams x 16 gage. These dimensions shall be field verified. Prior to coating application, determine the severity of the portion of deteriorated metal roof panels. If portion of deteriorated metal roof panel has loss less than 20% of cross section, treat the metal roof panel by wire brushing the affected area, clean the area of rust and debris, and then prime and coat per ER systems specification. If flat portion of deteriorated metal roof panel has cross section loss exceeding 20% or is pitting, cut flat portion of roof panel away. Replace the section removed with similar gage thickness metal sheet and overlap existing metal deck by 2" minimum on all sides. The entire perimeter of the replaced roof deck shall be waterproofed with a continuous sealant and fastened through the steel structural deck with #14 stainless steel self drilling screws at 4" on center with a minimum of (3) screw per side. All areas of metal panels with excessive rust shall be documented and photographed indicating extent of rust, size of replacement, method of correction, etc.**

We trust this information is helpful. Should questions arise, please do not hesitate to call.

Sincerely,  
**Karins Engineering Group, Inc.**

John F. Bonacci, Ph.D., P.E.  
Florida Registration # 63063  
Director – Structural Engineering Design





# METAL ROOF RESTORATION SAMPLE DESIGN GUIDELINES

## REFLECTICLEAN ACRYLIC/URETHANE



**Elastomeric Roofing Systems, Inc**

6900 Bleck Dr. Rockford, MN 55373  
800.403.7747 -or- 763.565.6900 fax: 763.565.6901

**ERSYSTEMS.COM**

email: [ersinfo@ersystems.com](mailto:ersinfo@ersystems.com)

## **METAL ROOF RESTORATION SAMPLE DESIGN GUIDELINES – REFLECTICLEAN/URETHANE COMBINATION SYSTEM**

### **PART 1 - GENERAL**

#### **1.01 DESCRIPTION**

- A.** This specification includes the installation of fluid applied ReflectiClean Acrylic roof coating to rustproof, restore, and waterproof metal roofs. The three-step process effectively protects the metal, seals seams & fasteners and renews the metal surface to extend the useful life of the roof. The system shall include waterproofing all metal roof panels, flashings, valleys, ridges, joints and junctions integrally related to the roof.
- B.** Work included is labor, materials, equipment and accessories and related services to complete the application in accordance with specifications and details as approved by ERSystems.
- C.** Work excluded is replacement of roof accessories such as gutters, drains, vents and other penetrations including structural roof repair.

#### **1.02 QUALITY ASSURANCE**

- A.** Manufacturer Qualifications: ERSystems will furnish upon request, certification the material meets the physical properties stated in this specification.
- B.** Contractor Qualifications: All work to be completed must be done by an ERSystems approved applicator.
- C.** No deviation from this specification will be accepted without prior written approval of ERSystems.

#### **1.03 SUBMITTALS**

- A.** A warranty pre-notification form is required prior to the installation of the warranted systems.

#### **1.04 PRODUCT DELIVERY, STORAGE, AND HANDLING**

- A.** Deliver material in original, unopened packages and containers.
- B.** Containers are to be labeled with manufacturer's name, product name, description, and identification.
- C.** Store materials in a dry area above 40° F. and protect from water and direct sunlight.
- D.** Any materials damaged in handling or storage must not be used.
- E.** Deliver MSDS for each product specified. Consult MSDS and Product Data Specification for each product used before beginning work.

#### **1.05 JOB CONDITIONS (CAUTIONS AND WARNINGS)**

- A.** All mechanical equipment, vents, skylights, etc., should be in place before the roofing system is installed.
- B.** Mechanical units (blowers, HVAC) should be prevented from distributing fumes into the building.
- C.** Coatings should be protected from traffic and other abuse until completely cured and installation is complete.
- D.** Application of coatings with spray equipment may require some masking and possible erection of wind screens to prevent over-spray and drift damage. Protect surfaces of unrelated areas from coatings and over-spray possibility.
- E.** Application shall proceed to dry, clean surfaces only. In planning work consider environment and weather related conditions such as frost, mist, dew, condensation, humidity, and temperature. Temperature should be above 45° F., rising, and stay above 40° F. long enough for initial cure to occur. Moisture should not be imminent.
- F.** Sufficient safety belts and lines should be provided. A wet surface or a surface that is not thoroughly cured can be very slippery. All work environments should comply with current OSHA regulations.

#### **1.06 WARRANTY**

- A.** ERSystems warrants that materials provided are free from defects in manufacturing. ERSystems will replace any material found to be defective.
- B.** ERSystems/Contractor Watertight Warranty is available through approved contractors and at a cost. Consult ERSystems for further details of the Watertight Warranty Program.

### **PART 2 - PRODUCTS**

#### **2.01 GENERAL**

- A.** The components of the coating system are to be products of ERSystems, 6900 Bleck Dr., Rockford, MN 55373 or products approved by ERSystems as compatible; or approved equal.

## **2.02 PRIMER: REFLECTIPRIME ACRYLIC PRIMER RUSTPROOFING.**

- A. See Data Sheet

## **2.03 SEALER: HER 2000 – POLYURETHANE SEALER FOR SEAMS, FASTENERS, PENETRATIONS**

- A. See Data Sheet

## **2.04 FINISH COAT: REFLECTICLEAN ACRYLIC COATING**

- A. See Data Sheet

## **2.05 RELATED MATERIALS FROM ERSystems**

- A. Gap/Joint Sealant: Erathane Polyurethane Caulk
- B. Gap/Joint Fabric: PolySoft II Polyester Knit Fabric
- C. Fasteners: Self Drilling & Self Tapping Metal
- D. Fiberglass Skylight Conditioner: Eraguard 2500 Clear Acrylic Sealer
- E. Butyl Seam Tape: Insta-Seal Butyl Tape
- F. Colored Finish Coat: ReflectiClean Acrylic

## **PART 3 - APPLICATION**

### **3.01 SUBSTRATE INSPECTION**

- A. A proper substrate shall be provided to receive ERSystems coatings. Metal surfaces must be clean, dry, and free of loose debris. Adhesion test of coating to the metal roof substrate is required; such as with Kynar 500 based finishes.

### **3.02 SURFACE PREPARATION**

- A. Walk the roof deck and tighten all loose fasteners. Replace missing fasteners and all fasteners that are stripped with oversized fasteners.
- B. Metal panels which no longer have integrity due to excessive rust and deterioration must be replaced.
- C. Panels with seam gaps of 1/8" or more must be stitched as tight as possible with additional screws. Any horizontal seams where the perlin screws are more than 2" from the overlap must be stitched tight at the seam with a minimum of 6 per 3' panel. Light gauge metal panels may flex open at the horizontal lap seam when walked on. Additional stitch screws and/or fabric faced butyl tape reinforcement may be required in the pan of the panel to reduce deflection. Eraguard 1000 Acrylic Sealant may be used to seal gaps prior to stitching metal with appropriate fasteners. Erathane Polyurethane Caulk may be used to seal gaps prior to stitching metal with appropriate fasteners.

Note: Metal fasteners are available from ERSystems.

### **3.03 CLEANING**

- A. Prepare the roof surface by high pressure washing, rinse well and let dry. Use ERSystems Envirowash or tri-sodium phosphate (TSP) substitute solution if the metal surface is especially dirty, oily, etc. Water pressure of 2000 psi to 3000 psi will be required to remove loose rust, dirt, paint and miscellaneous soils.
- B. Galvanized metal surfaces may require an acid etch to remove debris, which may interfere with proper bonding. The dilute acid solution must be thoroughly rinsed from the roof.
- C. If rust is a hard scale, it may require power brushing to remove and get down to a sound substrate.
- D. If silicone products have been used in attempts at waterproofing, they must be removed prior to coating applications.
- E. If asphalt based roof coatings have been previously used to repair roof seams and fastener heads, do not apply solvents to clean these areas. Remove asphalt coating with power washing, scraping or brushing.
- F. After pressure washing and cleaning, remove all loose coating, scale and other foreign matter with a putty knife or other appropriate tool. Brush clean and apply coating directly over the tightly bound coating which remains. Let dry completely before proceeding.

### **3.04 PRIMING**

- A. Coat all rusty surfaces with ERSystems REFLECTIPRIME or Eraguard 2000. Apply REFLECTIPRIME at 0.3 gallon per SQ. (0.5 gal/SQ of Eraguard 2000 for modest rust).
- B. Under normal drying conditions, REFLECTIPRIME and Eraguard 2000 may be re-coated within 1 to 2 hours.
- C. Primer dry film thickness shall be 2.5 mils minimum, 3 mils average.
- D. Over Kynar 500 based paints, use ReflectiClean as a primer before sealing seams and fasteners.

### **3.05 SEAMS, FASTENERS & PENETRATIONS**

- A. Waterproof seams: Apply HER 2000 by pumping a bead 1" to 1.5" wide into place along the vertical seam. Fill the underside of the seam with HER 2000 by brushing perpendicular to the seam with a 3" wide brush and then feather the HER 2000 to a 3" width along the seam. HER 2000 shall be approximately 60 wet mils (1/16") thick directly over the area of the seam. Horizontal seams are sealed in the same manner as vertical seams. Two coats may be required in some areas to achieve DMT specified. Horizontal seams may be reinforced with PolySoft II polyester fabric embedded into the HER 2000 at areas where excessive movement of the panels is known to exist or where gaps between the panels exist even after additional fasteners are added.
- B. Fasteners: HER 2000 shall be applied at 60 wet mils over all fastener heads, extending 1.5" in all directions around the fastener head.
- C. Penetrations & Flashings: Seal with HER 2000 by applying a 60 wet mils thickness for 3" to 4" around the base of the penetration. PolySoft II fabric may be embedded in the HER 2000 to bridge gaps and reinforce the membrane.
- D. Gutters & valleys: Seal with HER 2000 by applying a 60 wet mils thickness over the area to be sealed and for 3"-4" up and beyond the area to be sealed. If necessary embed PolySoft II polyester fabric of the appropriate width, and brush or roll additional HER 2000 over the fabric, making certain all wrinkles are rolled out of the fabric. Let HER 2000 cure for 24 hours prior to applying Finish Coat.
- E. Skylights: Edges shall be sealed with HER 2000 as described above. Fiberglass skylight panels may be protected with 2 coats of 1 gallon per 100 square feet of Eraguard 2500 sealer.
- F. Typical roofs will require .4 to .5 gallons per SQ of HER 2000 to complete the waterproofing of seams and fasteners. Waterproofing penetrations, valleys and repair areas will require additional HER 2000. Application of 60 wet mils requires approximately 4 gallons per 100 sf.
- G. Inspection of all HER 2000 application should be done to assure that work is satisfactory and complete, and that the sealing of gaps and bolt heads have been accomplished.
  - HER 2000 over seams, fasteners and penetrations and repair areas shall be 50 dry mils minimum.
  - The roof is watertight at this point.

### 3.06 FINISH COAT: REFLECTICLEAN

- A. Apply ReflectiClean (White) at the rate of ¾ to 1 gallon per square for a 5 year warranty to 1 to 1 ¼ gallons per square for a 10 year warranty.
- B. Finish Coat should be applied in two separate coats to achieve the best coverage for the film thickness desired.
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### PROTECTION AND CLEAN-UP

#### PROTECTION

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#### CLEAN-UP

- A. Site clean-up is the responsibility of the contractor.
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### PROTECTION AND CLEAN-UP

#### PROTECTION

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#### CLEAN-UP

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- B. All debris, containers, materials, equipment, and protection materials must be removed from the premises and properly disposed of. All work and storage areas must be in an undamaged and acceptable condition upon completion of clean-up.



## Elastomeric Roofing Systems, Inc

6900 Bleck Dr. Rockford, MN 55373  
800.403.7747 -or- 763.565.6900 fax: 763.565.6901

[ERSYSTEMS.COM](http://ERSYSTEMS.COM)

email: [ersinfo@ersystems.com](mailto:ersinfo@ersystems.com)

## ReflectiClean

### Product Data Specification

#### **TYPICAL PHYSICAL PROPERTIES**

Solids (Volume)	43%
Viscosity	1000 cps
Elongation	250% at 73° F
Tensile Strength	600 psi
Weight/Gallon	10 Lbs.
Shelf Stability	8 months

#### **DESCRIPTION**

ReflectiClean is a single component, water borne, elastomeric coating. It launders extremely well and exhibits superior adhesion to metal substrate.

#### **USES**

Primary use is as a coating over existing metal roofing substrates. ReflectiClean exhibits tenacious adhesion to existing fluoropolymer based paints (i.e. Kynar and Hylar).

#### **PACKAGING**

Packaging is standard 5 gallons pails and 55 gallon drums.

#### **APPLICATION EQUIPMENT**

Application may be brush, roller or airless spray.

**Brush or Roller:** Recommended for flashing, small inaccessible areas or where over spray may be a problem. Use a paint brush or a standard medium or coarse nap roller.

#### **APPLICATION**

To the properly prepared substrate (Contact ERSystems Technical Service if questions exist) apply two coats of ReflectiClean at ½ - gallons per SQ per coat.

#### **ADHESION TEST**

Adhesion of ReflectiClean should always be checked per Technical Bulletin #AS 04-010.

#### **TEMPERATURE CONSTRAINTS**

Do not apply below 40° F. or in weather conditions where the temperature will fall below 40° F during the cure cycle. The service temperature range is -35°F to 180°F. The substrate temperature range for application is 40°F – 120°F.

#### **LIMITATION**

Substrate must be clean, smooth and free of dirt, rust and/or moisture. Power washing of substrate is recommended.

Coating must not be applied during inclement weather and should not proceed if any precipitation is imminent.

#### **CLEAN-UP**

Flush all hoses, equipment, and tools with water immediately after use.

#### **STORAGE**

Always store above 40° F and below 85° F. Keep from freezing!

#### **CAUTION!!!!**

Avoid prolonged and repeated contact with skin. Do not take internally. Do not use in areas of standing water.

#### **WARRANTY**

**IMPORTANT:** While the information and data contained herein are presented in good faith and believed to be reliable, they do not constitute part of our terms and conditions of sale. Nothing herein shall be deemed to constitute a warranty, expressed or implied, that said information or data are correct or that the products described are merchantable or fit for a particular purpose, or that said information, data or products can be used without infringing patents of third parties.

ERSystems' sole warranty is that the product will meet the sales specification at the time of shipment. Your exclusive remedy for breach of such warranty is limited to refund of purchase price or replacement of any product shown to be other than as warranted.

**PRIOR TO USE OF THIS MATERIAL, READ ALL APPROPRIATE MATERIAL SAFETY DATA SHEETS.**

## Approved Products for the Civic Center Metal Roof Restoration IFB #10-2554DC

### **HER**

Product Data Specification

#### **TYPICAL PHYSICAL PROPERTIES**

Solids (Volume) 80%  
Viscosity Approx. 36,000 cps  
Ultimate Elongation ASTM D412 500%  
Ultimate Tensile Strength ASTM D412 450 psi  
Shore A Hardness ASTM D2240 40  
Low Temperature Flexibility ASTM D412 Pass at -600 F  
Permeability ASTM E96 1.2 perms at 30 dry mil  
Flash Point (Tag Close-Cup) 1450 F  
Resistance to Weathering ASTM D822 Excellent  
Chemical Resistance Excellent  
Shelf Stability (750 F/50% RH) 6 months

#### **DESCRIPTION**

HER is a flashing grade single component moisture-cure polyurethane roof coating. HER is a tough, seamless elastomeric roofing membrane that has excellent adhesion to a wide variety of substrates.

#### **USES**

Uses include waterproofing metal roof seams and fasteners and flashing around roof penetrations where roof movement causes cracking and moisture penetration. HER has also found extensive use in sealing metal gutters. HER will also seal polyurethane foam, wood and concrete.

### **REFLECTICLEAN**

Product Data Specification

#### **TYPICAL PHYSICAL PROPERTIES**

Solids of Fluoropolymer Resins (Volume) >30%  
Solids (Volume) 43%  
Viscosity 1000 cps  
Elongation 250% at 73o F  
Tensile Strength 600 psi  
Weight/Gallon 10 Lbs.  
Shelf Stability 8 months

**DESCRIPTION**

ReflectiClean is a single component, water borne, elastomeric coating. It launders extremely well and exhibits superior adhesion to metal substrate.

**USES**

Primary use is as a coating over existing metal roofing substrates. ReflectiClean exhibits tenacious adhesion to existing fluoropolymer based paints (i.e. Kynar and Hylar). ReflectiClean offers color retention warranties.

**REFLECTIPRIME**

Product Data Specification

**TYPICAL PHYSICAL PROPERTIES**

Solids (Volume) 43%

Viscosity 1000 cps

Elongation 300% at 73o F

Tensile Strength 210 psi

Weight/Gallon 10.1 Lbs.

Shelf Stability 8 months

**DESCRIPTION**

ReflectiPrime is a single component, water borne, elastomeric rust inhibiting coating. It launders extremely well and exhibits superior adhesion to metal substrate.

**USES**

Primary use is as a coating over existing rusted metal roofing substrates. ReflectiPrime exhibits tenacious adhesion to existing fluoropolymer based paints (i.e. Kynar and Hylar).