ADDENDUM NO. 1

To: All Plan Holders of Record and Interested Parties

Project: Clinton County Government
Dewitt Annex – 2013 Renovations
IIW Project No.: 11176-05

Issue Date: Friday, June 7, 2013

Bids Due: **2:00 PM, Monday, June 17, 2013**

The following additions, revisions, corrections, and clarifications contained herein shall become part of the Construction Contract Documents for the Project, and shall be included in the Scope of Work and Bid Proposals to be submitted. References made below to Specifications and Construction Drawings shall be used as a general guide only. Bidders shall determine for themselves the full scope of work affected by the Addendum items.

The following Addendum is part of the Construction Contract Documents dated May 20, 2013.

This Addendum consists of the following:

Addendum No. 1, 5 Pages
075423 THERMOPLASTIC POLYOLEFIN (TPO) ROOFING, 8 Pages
077100 - ROOF SPECIALTIES, 10 Pages
Addendum Drawings (1 Total): E/AD1-1
Plan Holders List, 1 Page

CHANGES/CLARIFICATION TO SPECIFICATIONS:

1. APPROVED MANUFACTURERS: The approved manufacturer is solely responsible for furnishing work which meets the design, performance, service and appearance criteria established by the specifications, and the Architect's decision will be final.
   a. SECTION 047200, 2.1,A: MarcStone

2. SECTION 000110:
   a. Delete: Section 076200 - SHEET METAL FLASHING AND TRIM
   b. Add : Section 077100 – ROOF SPECIALTIES
   c. Delete Section 230914 – INSTRUMENTATION AND CONTROL DEVICES FOR HVAC
   d. Delete Section 312000 – EARTH MOVING
   e. Delete Section 321313 – PORTLAND CEMENT CONCRETE SIDEWALKS

3. SECTION 075423: ADD section in its entirety.

4. SECTION 077100: ADD section in its entirety.

5. SECTION 262726: Add the following information to Part 2:

2.11 OUTDOOR PHOTOELECTRIC SWITCHES

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Cooper Industries, Inc.
2. Intermatic, Inc.
3. NSi Industries LLC; TORK Products.
4. Tyco Electronics; ALR Brand.

B. Description: Solid state, with SPST dry contacts rated for 1800-VA tungsten or 1000-VA inductive, to operate connected relay, contactor coils, or microprocessor input; complying with UL 773A.

1. Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
2. Light-Level Monitoring Range: 1.5 to 10 fc, with an adjustment for turn-on and turn-off levels within that range.
3. Time Delay: Fifteen second minimum, to prevent false operation.
4. Surge Protection: Metal-oxide varistor.
5. Mounting: Twist lock complies with NEMA C136.10, with base-and-stem mounting or stem-and-swivel mounting accessories as required to direct sensor to the north sky exposure.

2.12 INDOOR OCCUPANCY SENSORS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Bryant Electric; a Hubbell company.
2. Cooper Industries, Inc.
3. Hubbell Building Automation, Inc.
4. Leviton Mfg. Company Inc.
5. Lightolier Controls.
6. Lithonia Lighting; Acuity Lighting Group, Inc.
7. Lutron Electronics Co., Inc.
8. NSi Industries LLC; TORK Products.
9. RAB Lighting.
10. Sensor Switch, Inc.
11. Square D; a brand of Schneider Electric.
12. Watt Stopper.

B. General Requirements for Sensors: Wall- or ceiling-mounted, solid-state indoor occupancy sensors with a separate power pack.

1. Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
2. Operation: Unless otherwise indicated, turn lights on when coverage area is occupied, and turn them off when unoccupied; with a time delay for turning lights off, adjustable over a minimum range of 1 to 15 minutes.
3. Sensor Output: Contacts rated to operate the connected relay, complying with UL 773A. Sensor is powered from the power pack.
4. Power Pack: Dry contacts rated for 20-A ballast load at 120- and 277-V ac, for 13-A tungsten at 120-V ac, and for 1 hp at 120-V ac. Sensor has 24-V dc, 150-mA, Class 2 power source, as defined by NFPA 70.
5. Mounting:
   a. Sensor: Suitable for mounting in any position on a standard outlet box.
   b. Relay: Externally mounted through a 1/2-inch knockout in a standard electrical enclosure.
   c. Time-Delay and Sensitivity Adjustments: Recessed and concealed behind hinged door.

6. Indicator: Digital display, to show when motion is detected during testing and normal operation of sensor.
7. Bypass Switch: Override the "on" function in case of sensor failure.
8. Automatic Light-Level Sensor: Adjustable from 2 to 200 fc; turn lights off when selected lighting level is present.

C. Dual-Technology Type: Ceiling mounted; detect occupants in coverage area using PIR and ultrasonic detection methods. The particular technology or combination of technologies that control on-off functions is selectable in the field by operating controls on unit.

1. Sensitivity Adjustment: Separate for each sensing technology.
2. Detector Sensitivity: Detect occurrences of 6-inch- minimum movement of any portion of a human body that presents a target of not less than 36 sq. in., and detect a person of average size and weight moving not less than 12 inches in either a horizontal or a vertical manner at an approximate speed of 12 inches/s.
3. Detection Coverage (Standard Room): Detect occupancy anywhere within a circular area of 1000 sq. ft. when mounted on a 96-inch-high ceiling.

2.13 SWITCHBOX-MOUNTED OCCUPANCY SENSORS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Bryant Electric; a Hubbell company.
2. Cooper Industries, Inc.
3. Hubbell Building Automation, Inc.
4. Leviton Mfg. Company Inc.
5. Lightolier Controls.
6. Lithonia Lighting; Acuity Lighting Group, Inc.
7. Lutron Electronics Co., Inc.
8. NSi Industries LLC; TORK Products.
9. RAB Lighting.
10. Sensor Switch, Inc.
11. Square D; a brand of Schneider Electric.
12. Watt Stopper.

B. General Requirements for Sensors: Automatic-wall-switch occupancy sensor, suitable for mounting in a single gang switchbox.

1. Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
2. Operating Ambient Conditions: Dry interior conditions, 32 to 120 deg F.
3. Switch Rating: Not less than 800-VA fluorescent at 120 V, 1200-VA fluorescent at 277 V, and 800-W incandescent.

C. Wall-Switch Sensor:

1. Standard Range: 180-degree field of view, field adjustable from 180 to 40 degrees; with a minimum coverage area of 900 sq. ft.
2. Sensing Technology: Dual technology - PIR and ultrasonic.
3. Switch Type: SP, manual "on," automatic "off."
4. Voltage: Match the circuit voltage.

5. Ambient-Light Override: Concealed, field-adjustable, light-level sensor from 10 to 150 fc. The switch prevents the lights from turning on when the light level is higher than the set point of the sensor.
6. Adaptive Technology: Self-adjusting circuitry detects and memorizes usage patterns of the space and helps eliminate false "off" switching.

CHANGES TO DRAWINGS:

1. SHEET AD1.1:
   a. Demolition Plan – Phase 2:
      i. Add Demolition Note 9 to the entire area between grids D and E, West of Grid 4.
   b. Demolition Floor Plan Notes: Note 9: Add the following" Contractor shall remove all existing flooring and adhesives down to existing concrete floor slab and patch or repair the existing floor slab as required to accept new flooring.

2. SHEET A2.1, Detail 1: Extend gypsum board above ceilings to gypsum board on bottom of roof structure.

3. SHEET A8.1:
   a. Finish Abbreviation Key: Under Ceilings, Add: GB - Gypsum Board – Painted.
   b. Room Finish Schedule:
      i. Receptionist/Files 125: Change ceiling finish to ACT
      ii. IT 137: Change ceiling finish to GB.
   c. Interior Finish Key: Delete Paint 4 in its entirety.

4. SHEET H1.1:
   a. Electric Cabinet Unit Heater: Add Berco, Heatrex and Raywall as approved manufacturers.
   b. Electric Baseboard: Add Heatrex and Raywall as approved manufacturers.
   c. Exhaust Fan Schedule: Add ACME and Pennbarry as approved manufacturers.
   d. Fire Dampers: Add Leader Industries as approved manufacturer.
   e. Diffusers & Grilles: Add Raymon-Donco as approved manufacturer.

5. SHEET P1.1:
   a. Corridor 119: Adjust existing floor cleanout as required to accommodate new flooring, refer to architectural for floor finish.
   b. Add General Note 5 to read: "Seal all penetrations through gypsum board at bottom of roof structure."

6. SHEET H1.1:
   a. Add a 10" dia. fire damper in supply duct between Corridor 131 and Meeting Hall 134.
   b. Add General Note 5 to read: "Seal all penetrations through gypsum board at bottom of roof structure."
   c. Add note #2 to Diffuser Schedule as follows: 2. Side wall diffusers serving Receptionist/Files 125 and Corridor 119 shall be painted to match wall.
   d. Change 6" duct from Meeting Hall 134 to Kitchenette 133 to be run in attic, then down into Kitchenette 133.
   e. Shift RG-1 serving Corridor 119 to the north to be in existing opening in masonry wall. Field verify size and location.
   f. Change note and routing of refrigerant line set on roof from "New line set above roof on wall" to "New line set on roof through wall and into soffit area in Meeting Hall 134. Seal penetration of line set in exterior siding.

7. SHEET E1.1:
   a. Delete Keyed note 4 at door 131B. Add note to this location to install owner provided light fixture and connect fixture to circuit 19.
   b. Keyed Note 3: Add to note: "Contractor to provide one (1) Metalux Model SSF-232-UNV-EB81 W/SSF-SYM with 2 32W T8 lamps in one attic location.

8. SHEET E2.1:
   a. Keyed Note 3: Delete “If acceptable to owner, mount circuit 11 receptacles and data jacks in wall”.
   b. Keyed Note 11: Add- “For bidding purposes, Contractor shall assume 100’ of distance between the transfer switch and the owner provided transformer.
   c. Add TV outlet @ 84” on north wall of Treasurer 121. Connect receptacles to circuit 3.
   d. Add double duplex receptacle and data outlet along west wall, south of the floor boxes in Treasurer 121. Connect receptacle to circuit 1.
   e. Insert Detail 4 per Addendum Drawing E/AD1-1 for typical TV outlet locations identified on Office Power Plan.
   f. Details 1 and 3 and One Line General Notes:
      i. Change new 150A, 3P circuit breaker in existing MDP to 125A, 3P.
      ii. Remove circuit for RTU-3 from panel 1C.
      iii. Add 40A, 3P circuit breaker to existing MDP and feed new RTU-3 from MDP.
      iv. Existing MDP AIC rating is 22; new system devices shall at minimum match existing.
      v. Change panel 1C to 125A MLO.

Sincerely,

Michael A. Ruden, AIA, NCARB, LEED AP	6.7.13 Signing Date
Ryan Larson, PE	6/07/13 Signing Date
Steven V. Sallwasser	6/07/13 Signing Date

It is required to acknowledge this addendum on the Bid Proposal Form.

END OF ADDENDUM NO. 1

SECTION 075423 - THERMOPLASTIC POLYOLEFIN (TPO) ROOFING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes the following:

1. Fully adhered TPO membrane roofing system.
2. Roof insulation.
3. Roof edge flashings.

B. Related Sections include the following:

1. Division 6 Section Miscellaneous Carpentry" for wood nailers, curbs, and blocking.
2. Division 7 Section "Roof Accessories" for roof hatch.
3. Division 7 Section "Joint Sealants."

1.3 DEFINITIONS

A. Roofing Terminology: Refer to ASTM D 1079 and glossary of NRCA's "The NRCA Roofing and Waterproofing Manual" for definition of terms related to roofing work in this Section.

B. Design Uplift Pressure: The uplift pressure, calculated according to procedures in SPRI's "Wind Load Design Guide for Fully Adhered and Mechanically Fastened Roofing Systems," before multiplication by a safety factor.

C. Factored Design Uplift Pressure: The uplift pressure, calculated according to procedures in SPRI's "Wind Load Design Guide for Fully Adhered and Mechanically Fastened Roofing Systems," after multiplication by a safety factor.

1.4 PERFORMANCE REQUIREMENTS

A. General: Provide installed roofing membrane and base flashings that remain watertight; do not permit the passage of water; and resist specified uplift pressures, thermally induced movement, and exposure to weather without failure.

B. Material Compatibility: Provide roofing materials that are compatible with one another under conditions of service and application required, as demonstrated by roofing membrane manufacturer based on testing and field experience.

C. Roofing System Design: Provide a membrane roofing system that is identical to systems that have been successfully tested by a qualified testing and inspecting agency to resist uplift pressure calculated according to ASCE 7.

D. FMG Listing: Provide roofing membrane, base flashings, and component materials that comply with requirements in FMG 4450 and FMG 4470 as part of a membrane roofing system and that are listed in FMG's "Approval Guide" for Class 1 or noncombustible construction, as applicable. Identify materials with FMG markings.

1. Fire/Windstorm Classification: Class 1A 60.

1.5 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Shop Drawings: For roofing system. Include plans, elevations, sections, details, and attachments to other Work.

1. Base flashings and membrane terminations.
2. Tapered insulation, including slopes.
3. Insulation fastening patterns.

C. Inspection Report: Copy of roofing system manufacturer's inspection report of completed roofing installation.

1.6 QUALITY ASSURANCE

A. Installer Qualifications: A qualified firm that is approved, authorized, or licensed by roofing system manufacturer to install manufacturer's product and that is eligible to receive manufacturer's warranty.

B. Source Limitations: Obtain all components specified in this Section from or approved by roofing membrane manufacturer.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Deliver roofing materials to Project site in original containers with seals unbroken and labeled with manufacturer's name, product brand name and type, date of manufacture, and directions for storing and mixing with other components.

B. Store liquid materials in their original undamaged containers in a clean, dry, protected location and within the temperature range required by roofing system manufacturer. Protect stored liquid material from direct sunlight.

1. Discard and legally dispose of liquid material that cannot be applied within its stated shelf life.

C. Protect roof insulation materials from physical damage and from deterioration by sunlight, moisture, soiling, and other sources. Store in a dry location. Comply with insulation manufacturer's written instructions for handling, storing, and protecting during installation.

D. Handle and store roofing materials and place equipment in a manner to avoid permanent deflection of deck.

1.8 PROJECT CONDITIONS

A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit roofing system to be installed according to manufacturer's written instructions and warranty requirements.

1.9 WARRANTY

A. Special Warranty: Manufacturer's standard form, without monetary limitation, in which manufacturer agrees to repair or replace components of membrane roofing system that fail in materials or workmanship within specified warranty period. Failure includes roof leaks.

1. Provide total system warranty includes metal roof edge, roofing membrane, base flashings, roofing membrane accessories, roof insulation, fasteners and other components of membrane roofing system.
2. Warranty Period: 15 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, provide products by the manufacturers specified.

1. Carlisle SynTec Incorporated.
2. Firestone Building Products Company.
3. Versico Inc.

2.2 THERMOPLASTIC POLYOLEFIN ROOFING MEMBRANE

A. Fabric-Reinforced Thermoplastic Polyolefin Sheet: ASTM D 6878, internally fabric or scrim reinforced, uniform, flexible TPO sheet.

1. Thickness: 60 mils, nominal.
2. Exposed Face Color: White
3. Physical Properties:

a. Breaking Strength: 250 lbf; ASTM D 751, grab method.
b. Elongation at Break: 25 percent; ASTM D 751.
c. Tearing Strength: 55 lbf minimum; ASTM D 751, Procedure B.

d. Brittleness Point: Minus 22 deg F.
e. Ozone Resistance: No cracks after sample, wrapped around a 3-inch- diameter mandrel, is exposed for 166 hours to a temperature of 104 deg F and an ozone level of 100 pphm; ASTM D 1149.
f. Resistance to Heat Aging: 90 percent minimum retention of breaking strength, elongation at break, and tearing strength after 166 hours at 240 deg F; ASTM D 573.
g. Water Absorption: Less than 4 percent mass change after 166 hours' immersion at 158 deg F; ASTM D 471.
h. Linear Dimension Change: Plus or minus .05 percent; ASTM D 1204.
i. Comply with ASTM D4434.

2.3 AUXILIARY MATERIALS

A. General: Auxiliary materials recommended by roofing system manufacturer for intended use and compatible with membrane roofing.

1. Liquid-type auxiliary materials shall meet VOC limits of authorities having jurisdiction.

B. Metal Termination Bars: Manufacturer's standard predrilled stainless-steel or aluminum bars, approximately 1 by 1/8 inch thick; with anchors.

C. Fasteners: Factory-coated steel fasteners and metal or plastic plates meeting corrosion-resistance provisions in FMG 4470, designed for fastening membrane to substrate, and acceptable to membrane roofing system manufacturer.

D. Miscellaneous Accessories: Provide pourable sealers, preformed cone and vent sheet flashings, preformed inside and outside corner sheet flashings, T-joint covers, termination reglets, cover strips, and other accessories.

2.4 SUBSTRATE BOARDS

A. Substrate Board: ASTM C 1177/C 1177M, glass-mat, water-resistant gypsum substrate, 1/4 inch thick.

1. Products: Subject to compliance with requirements available products that may be incorporated into the Work include, but are not limited to, the following:

a. Georgia-Pacific Corporation; Dens Deck - Primed.

B. Fasteners: Factory-coated steel fasteners and metal or plastic plates complying with corrosion-resistance provisions in FM Approvals 4470, designed for fastening substrate board to roof deck.

2.5 ROOF INSULATION

A. General: Provide preformed roof insulation boards that comply with requirements and referenced standards, selected from manufacturer's standard sizes and of thicknesses indicated.

B. Polyisocyanurate Board Insulation: ASTM C 1289, Type II, felt or glass-fiber mat facer on both major surfaces and acceptable to roofing system manufacturer.

C. Provide preformed saddles, crickets, tapered edge strips, and other insulation shapes where indicated for sloping to drain. Fabricate to slopes indicated.

D. Provide factory-tapered insulation boards fabricated to slope of ¼ inch per 12 inches, unless otherwise indicated.

2.6 INSULATION ACCESSORIES

A. General: Roof insulation accessories recommended by insulation manufacturer for intended use and compatible with membrane roofing.

B. Fasteners: Factory-coated steel fasteners and metal or plastic plates meeting corrosion-resistance provisions in FMG 4470, designed for fastening roof insulation to substrate, and acceptable to roofing system manufacturer.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with Installer present, for compliance with the following requirements and other conditions affecting performance of roofing system:

1. Verify that roof openings and penetrations are in place and set and braced and that roof drains are securely clamped in place.
2. Verify that wood blocking, curbs, and nailers are securely anchored to roof deck at penetrations and terminations and that nailers match thicknesses of insulation.
3. Verify that surface plane flatness and fastening of steel roof deck comply with requirements in Division 5 Section "Steel Deck."
4. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Clean substrate of dust, debris, moisture, and other substances detrimental to roofing installation according to roofing system manufacturer's written instructions. Remove sharp projections.

B. Prevent materials from entering and clogging roof drains and conductors and from spilling or migrating onto surfaces of other construction. Remove roof-drain plugs when no work is taking place or when rain is forecast.

C. Complete terminations and base flashings and provide temporary seals to prevent water from entering completed sections of roofing system at the end of the workday or when rain is forecast. Remove and discard temporary seals before beginning work on adjoining roofing.

3.3 INSULATION INSTALLATION

A. Coordinate installing membrane roofing system components so insulation is not exposed to precipitation or left exposed at the end of the workday.

B. Comply with membrane roofing system manufacturer's written instructions for installing roof insulation.

C. Install tapered insulation under area of roofing to conform to slopes indicated.

D. Install one or more layers of insulation under area of roofing to achieve required thickness. Where overall insulation thickness is 2 inches or greater, install 2 or more layers with joints of each succeeding layer staggered from joints of previous layer a minimum of 6 inches in each direction.

E. Trim surface of insulation where necessary at roof drains so completed surface is flush and does not restrict flow of water.

F. Install continuous perimeter treated wood blocking with thickness required to match adjacent roof insulation.

G. Install insulation with long joints of insulation in a continuous straight line with end joints staggered between rows, abutting edges and ends between boards. Fill gaps exceeding 1/4 inch with insulation.

1. Cut and fit insulation within 1/4 inch of nailers, projections, and penetrations.

H. Mechanically Fastened Insulation: Install each layer of insulation and secure to deck using mechanical fasteners specifically designed and sized for fastening specified board-type roof insulation to deck type.

1. Fasten insulation according to requirements in FMG's "Approval Guide" for specified Windstorm Resistance Classification.
2. Fasten insulation to resist uplift pressure at corners, perimeter, and field of roof.

3.4 SUBSTRATE BOARD

A. Install substrate board with long joints in continuous straight lines, perpendicular to roof slopes with end joints staggered between rows. Tightly butt substrate boards together.

1. Fasten substrate board to existing gypsum deck according to recommendations in FM Approvals' "RoofNav" and FM Global Loss Prevention Data Sheet 1-29 for specified Windstorm Resistance Classification.
2. Fasten substrate board to gypsum deck to resist uplift pressure at corners, perimeter, and field of roof according to membrane roofing system manufacturers' written instructions.

3.5 ADHERED MEMBRANE ROOFING INSTALLATION

A. Adhere membrane roofing over area to receive roofing and install according to membrane roofing system manufacturer's written instructions.

B. Start installation of membrane roofing in presence of membrane roofing system manufacturer's technical personnel.

C. Accurately align membrane roofing and maintain uniform side and end laps of minimum dimensions required by manufacturer. Stagger end laps.

D. Bonding Adhesive: Apply to substrate and underside of membrane roofing at rate required by manufacturer and allow to partially dry before installing membrane roofing. Do not apply to splice area of membrane roofing.

E. In addition to adhering, mechanically fasten membrane roofing securely at terminations, penetrations, and perimeter of roofing.

F. Apply membrane roofing with side laps shingled with slope of roof deck where possible.

G. Seams: Clean seam areas, overlap membrane roofing, and hot-air weld side and end laps of membrane roofing and sheet flashings according to manufacturer's written instructions to ensure a watertight seam installation.

1. Test lap edges with probe to verify seam weld continuity. Apply lap sealant to seal cut edges of sheet membrane.
2. Verify field strength of seams a minimum of twice daily and repair seam sample areas.
3. Repair tears, voids, and lapped seams in roofing that does not comply with requirements.

H. Spread sealant bed over deck drain flange at roof drains and securely seal membrane roofing in place with clamping ring.

3.6 METAL EDGING INSTALLATION

A. Install manufactured roof specialties level, plumb, true to line and elevation, and without warping, jogs in alignment, excessive oil-canning, buckling, or tool marks.

B. Install manufactured roof specialties to fit substrates and to result in watertight performance. Verify shapes and dimensions of surfaces to be covered before manufacture.

C. Expansion Provisions: Provide for thermal expansion of exposed manufactured roof specialties. Space movement joints at a maximum of 12 feet with no unplanned joints within 18 inches of corners or intersections.

D. Fasteners: Use fasteners of type and size recommended by manufacturer but of sizes that will penetrate substrate not less than 1-1/4 inches for nails and not less than 3/4 inch for wood screws.

E. Seal joints with sealant as required by manufacturer of roofing specialties.

F. Install cleats, anchor plates, and other anchoring and attachment accessories and devices with manufacturer's concealed recommended fasteners, suitable for application and designed to withstand design loads.

3.7 FIELD QUALITY CONTROL

A. Final Roof Inspection: Arrange for roofing system manufacturer's technical personnel to inspect roofing installation on completion and submit report to Architect.

1. Notify Architect or Owner 48 hours in advance of date and time of inspection.

B. Repair or remove and replace components of membrane roofing system where test results or inspections indicate that they do not comply with specified requirements.

C. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.

3.8 PROTECTING AND CLEANING

A. Protect membrane roofing system from damage and wear during remainder of construction period. When remaining construction will not affect or endanger roofing, inspect roofing for deterioration and damage, describing its nature and extent in a written report, with copies to Architect and Owner.

B. Correct deficiencies in or remove membrane roofing system that does not comply with requirements, repair substrates, and repair or reinstall membrane roofing system to a condition free of damage and deterioration at time of Substantial Completion and according to warranty requirements.

C. Clean overspray and spillage from adjacent construction using cleaning agents and procedures recommended by manufacturer of affected construction.

D. Clean exposed metal surfaces of substances that interfere with uniform oxidation and weathering.

E. Clean and neutralize flux materials. Clean off excess solder and sealants.

F. Remove temporary protective coverings and strippable films as manufactured roof specialties are installed. On completion of installation, clean finished surfaces, including removing unused fasteners, metal filings, pop rivet stems, and pieces of flashing. Maintain in a clean condition during construction.

G. Replace manufactured roof specialties that have been damaged or that cannot be successfully repaired by finish touchup or similar minor repair procedures.

END OF SECTION 075423

SECTION 077100 - ROOF SPECIALTIES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Copings.
2. Roof-edge specialties.
3. Roof-edge drainage systems.
4. Reglets and counterflashings.

B. Related Requirements:

1. Section 055000 "Metal Fabrications" for downspout guards and downspout boots.
2. Section 061000 "Rough Carpentry" for wood nailers, curbs, and blocking.
3. Section 077129 "Manufactured Roof Expansion Joints" for manufactured roof expansion-joint cover assemblies.
4. Section 079200 "Joint Sealants" for field-applied sealants between roof specialties and adjacent materials.
5. Section 079500 "Expansion Control" for manufactured sheet metal expansion-joint covers.

C. Preinstallation Conference: Conduct conference at Project site.

1. Meet with Owner, Architect, Owner's insurer if applicable, roofing-system testing and inspecting agency representative, roofing Installer, roofing-system manufacturer's representative, Installer, structural-support Installer, and installers whose work interfaces with or affects roof specialties, including installers of roofing materials and accessories.
2. Examine substrate conditions for compliance with requirements, including flatness and attachment to structural members.
3. Review special roof details, roof drainage, and condition of other construction that will affect roof specialties.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.

B. Shop Drawings: For roof specialties.

1. Include plans, elevations, expansion-joint locations, keyed details, and attachments to other work. Distinguish between plant- and field-assembled work.
2. Include details for expansion and contraction; locations of expansion joints, including direction of expansion and contraction.
3. Indicate profile and pattern of seams and layout of fasteners, cleats, clips, and other attachments.
4. Detail termination points and assemblies, including fixed points.
5. Include details of special conditions.

C. Samples: For each type of roof specialty and for each color and texture specified.

D. Samples for Verification:

1. Include Samples of each type of roof specialty to verify finish and color selection, in manufacturer's standard sizes.

1.4 INFORMATIONAL SUBMITTALS

A. Qualification Data: For manufacturer.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Do not store roof specialties in contact with other materials that might cause staining, denting, or other surface damage. Store roof specialties away from uncured concrete and masonry.

B. Protect strippable protective covering on roof specialties from exposure to sunlight and high humidity, except to extent necessary for the period of roof-specialty installation.

1.6 FIELD CONDITIONS

A. Field Measurements: Verify profiles and tolerances of roof-specialty substrates by field measurements before fabrication, and indicate measurements on Shop Drawings.

B. Coordination: Coordinate roof specialties with flashing, trim, and construction of parapets, roof deck, roof and wall panels, and other adjoining work to provide a leakproof, secure, and noncorrosive installation.

1.7 WARRANTY

A. Special Warranty on Painted Finishes: Manufacturer agrees to repair finish or replace roof specialties that show evidence of deterioration of factory-applied finishes within specified warranty period.

1. Fluoropolymer Finish: Deterioration includes, but is not limited to, the following:

a. Color fading more than 5 Hunter units when tested according to ASTM D 2244.

b. Chalking in excess of a No. 8 rating when tested according to ASTM D 4214.
c. Cracking, checking, peeling, or failure of paint to adhere to bare metal.

2. Finish Warranty Period: 25 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. General Performance: Roof specialties shall withstand exposure to weather and resist thermally induced movement without failure, rattling, leaking, or fastener disengagement due to defective manufacture, fabrication, installation, or other defects in construction.

B. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes to prevent buckling, opening of joints, hole elongation, overstressing of components, failure of joint sealants, failure of connections, and other detrimental effects. Provide clips that resist rotation and avoid shear stress as a result of thermal movements. Base calculations on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.

1. Temperature Change (Range): 120 deg F, ambient; 180 deg F, material surfaces.

2.2 COPINGS

A. Metal Copings: Manufactured coping system consisting of metal coping cap in section lengths not exceeding 12 feet, concealed anchorage; with corner units, end cap units, and concealed splice plates with finish matching coping caps.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

a. Architectural Products Company.
b. ATAS International, Inc.
c. Castle Metal Products.
d. Cheney Flashing Company.
e. Hickman Company, W. P.
f. Merchant & Evans, Inc.
g. Metal-Era, Inc.
h. Metal-Fab Manufacturing, LLC.
i. Perimeter Systems; a division of Southern Aluminum Finishing Company, Inc.
j. Petersen Aluminum Corporation.

2. Metallic-Coated Steel Sheet Coping Caps: Zinc-coated (galvanized) steel, nominal 0.028-inch thickness.

a. Surface: Smooth, flat finish.
b. Finish: Three-coat fluoropolymer.
c. Color: As selected by Architect from manufacturer's full range .

3. Coping-Cap Attachment Method: Snap-on, fabricated from coping-cap material.

a. Snap-on Coping Anchor Plates: Concealed, galvanized-steel sheet, 12 inches wide, with integral cleats.
b. Face-Leg Cleats: Concealed, continuous galvanized-steel sheet .

2.3 ROOF-EDGE SPECIALTIES

A. Roof-Edge Fascia: Manufactured, two-piece, roof-edge fascia consisting of snap-on metal fascia cover in section lengths not exceeding 12 feet and a continuous metal receiver with integral drip-edge cleat to engage fascia cover and secure single-ply roof membrane. Provide matching corner units.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

a. Hickman Company, W. P.
b. Metal-Era, Inc.
c. Metal-Fab Manufacturing, LLC.
d. Perimeter Systems; a division of Southern Aluminum Finishing Company, Inc.

2. Formed Aluminum Sheet Fascia Covers: Aluminum sheet, 0.050 inch thick.

a. Surface: Smooth, flat finish.
b. Finish: Three-coat fluoropolymer.
c. Color: As selected by Architect from manufacturer's full range.

3. Corners: Factory mitered and continuously welded.
4. Splice Plates: Concealed, of same material, finish, and shape as fascia cover.
5. Receiver: Aluminum sheet, 0.050 inch thick.
6. Fascia Accessories: Soffit trim.

2.4 ROOF-EDGE DRAINAGE SYSTEMS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Architectural Products Company.
2. ATAS International, Inc.
3. Berger Building Products, Inc.
4. Castle Metal Products.
5. Cheney Flashing Company.
6. CopperCraft by FABRAL; a Euramax company.
7. Hickman Company, W. P.
8. Merchant & Evans, Inc.
9. Metal-Era, Inc.
10. Metal-Fab Manufacturing, LLC.

B. Gutters: Manufactured in uniform section lengths not exceeding 12 feet, with matching corner units, ends, outlet tubes, and other accessories. Elevate back edge at least 1 inch above front

edge. Furnish flat-stock gutter straps, gutter brackets, expansion joints, and expansion-joint covers fabricated from same metal as gutters.

1. Aluminum Sheet: 0.040 inch thick.
2. Gutter Profile: Style F according to SMACNA's "Architectural Sheet Metal Manual."
3. Corners: Factory mitered and continuously welded.
4. Gutter Supports: Gutter brackets and Straps with finish matching the gutters.
5. Sizes: See sheet A3.1.

C. Downspouts: Plain rectangular complete with machine-crimped elbows, manufactured from the following exposed metal. Furnish with metal hangers, from same material as downspouts, and anchors.

1. Formed Aluminum: 0.040 inch thick.
2. Sizes: See sheet A3.1.
3. Open face bottom 12 inches of downspout.

D. Aluminum Finish: Three-coat fluoropolymer.

1. Color: As selected by Architect from manufacturer's full range.

2.5 REGLETS AND COUNTERFLASHINGS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Castle Metal Products.
2. Cheney Flashing Company.
3. Fry Reglet Corporation.
4. Heckmann Building Products Inc.
5. Hickman Company, W. P.
6. Keystone Flashing Company, Inc.
7. Metal-Era, Inc.
8. Metal-Fab Manufacturing, LLC.

B. Reglets: Manufactured units formed to provide secure interlocking of separate reglet and counterflashing pieces, from the following exposed metal:

1. Zinc-Coated Steel: Nominal 0.022-inch thickness.
2. Corners: Factory mitered and continuously welded.
3. Surface-Mounted Type: Provide reglets with slotted holes for fastening to substrate, with neoprene or other suitable weatherproofing washers, and with channel for sealant at top edge.

C. Counterflashings: Manufactured units of heights to overlap top edges of base flashings by 4 inches and in lengths not exceeding 12 feet designed to snap into reglets and compress against base flashings with joints lapped, from the following exposed metal:

1. Zinc-Coated Steel: Nominal 0.022-inch thickness.

D. Accessories:

1. Flexible-Flashing Retainer: Provide resilient plastic or rubber accessory to secure flexible flashing in reglet where clearance does not permit use of standard metal counterflashing or where reglet is provided separate from metal counterflashing.
2. Counterflashing Wind-Restraint Clips: Provide clips to be installed before counterflashing to prevent wind uplift of counterflashing lower edge.

E. Zinc-Coated Steel Finish: Three-coat fluoropolymer.

1. Color: As selected by Architect from manufacturer's full range.

2.6 MATERIALS

A. Zinc-Coated (Galvanized) Steel Sheet: ASTM A 653/A 653M, G90 coating designation.

B. Aluminum Sheet: ASTM B 209, alloy as standard with manufacturer for finish required, with temper to suit forming operations and performance required.

C. Aluminum Extrusions: ASTM B 221, alloy and temper recommended by manufacturer for type of use and finish indicated, finished as follows:

2.7 MISCELLANEOUS MATERIALS

A. Fasteners: Manufacturer's recommended fasteners, suitable for application and designed to meet performance requirements. Furnish the following unless otherwise indicated:

1. Exposed Penetrating Fasteners: Gasketed screws with hex washer heads matching color of sheet metal.
2. Fasteners for Aluminum: Aluminum or Series 300 stainless steel.
3. Fasteners for Zinc-Coated (Galvanized) Steel Sheet: Series 300 stainless steel or hot-dip zinc-coated steel according to ASTM A 153/A 153M or ASTM F 2329.

B. Elastomeric Sealant: ASTM C 920, elastomeric polyurethane polymer sealant of type, grade, class, and use classifications required by roofing-specialty manufacturer for each application.

C. Butyl Sealant: ASTM C 1311, single-component, solvent-release butyl rubber sealant; polyisobutylene plasticized; heavy bodied for hooked-type joints with limited movement.

D. Bituminous Coating: Cold-applied asphalt emulsion complying with ASTM D 1187/D 1187M.

2.8 FINISHES

A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.

B. Protect mechanical and painted finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

C. Appearance of Finished Work: Noticeable variations in same piece are unacceptable. Variations in appearance of adjoining components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

D. Coil-Coated Galvanized-Steel Sheet Finishes:

1. High-Performance Organic Finish: Prepare, pretreat, and apply coating to exposed metal surfaces to comply with ASTM A 755/A 755M and coating and resin manufacturers' written instructions.

a. Three-Coat Fluoropolymer: AAMA 621. Fluoropolymer finish containing not less than 70 percent PVDF resin by weight in both color coat and clear topcoat. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.

E. Coil-Coated Aluminum Sheet Finishes:

1. High-Performance Organic Finish: Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.

a. Three-Coat Fluoropolymer: AAMA 2605. Fluoropolymer finish containing not less than 70 percent PVDF resin by weight in both color coat and clear topcoat. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with Installer present, to verify actual locations, dimensions, and other conditions affecting performance of the Work.

B. Examine walls, roof edges, and parapets for suitable conditions for roof specialties.

C. Verify that substrate is sound, dry, smooth, clean, sloped for drainage where applicable, and securely anchored.

D. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 UNDERLAYMENT INSTALLATION

A. Self-Adhering Sheet Underlayment: Apply primer if required by manufacturer. Comply with temperature restrictions of underlayment manufacturer for installation. Apply wrinkle free, in shingle fashion to shed water, and with end laps of not less than 6 inches staggered 24 inches between courses. Overlap side edges not less than 3-1/2 inches. Roll laps with roller. Cover underlayment within 14 days.

1. Apply continuously under roof-edge specialties.

2. Coordinate application of self-adhering sheet underlayment under roof specialties with requirements for continuity with adjacent air barrier materials.

B. Felt Underlayment: Install with adhesive for temporary anchorage to minimize use of mechanical fasteners under roof specialties. Apply in shingle fashion to shed water, with lapped joints of not less than 2 inches.

C. Slip Sheet: Install with tape or adhesive for temporary anchorage to minimize use of mechanical fasteners under roof specialties. Apply in shingle fashion to shed water, with lapped joints of not less than 2 inches.

3.3 INSTALLATION, GENERAL

A. General: Install roof specialties according to manufacturer's written instructions. Anchor roof specialties securely in place, with provisions for thermal and structural movement. Use fasteners, solder, protective coatings, separators, underlayments, sealants, and other miscellaneous items as required to complete roof-specialty systems.

1. Install roof specialties level, plumb, true to line and elevation; with limited oil-canning and without warping, jogs in alignment, buckling, or tool marks.
2. Provide uniform, neat seams with minimum exposure of solder and sealant.
3. Install roof specialties to fit substrates and to result in weathertight performance. Verify shapes and dimensions of surfaces to be covered before manufacture.
4. Torch cutting of roof specialties is not permitted.
5. Do not use graphite pencils to mark metal surfaces.

B. Metal Protection: Protect metals against galvanic action by separating dissimilar metals from contact with each other or with corrosive substrates by painting contact surfaces with bituminous coating or by other permanent separation as recommended by manufacturer.

1. Coat concealed side of uncoated aluminum roof specialties with bituminous coating where in contact with wood, ferrous metal, or cementitious construction.

C. Expansion Provisions: Allow for thermal expansion of exposed roof specialties.

1. Space movement joints at a maximum of 12 feet with no joints within 18 inches of corners or intersections unless otherwise indicated on Drawings.
2. When ambient temperature at time of installation is between 40 and 70 deg F, set joint members for 50 percent movement each way. Adjust setting proportionately for installation at higher ambient temperatures.

D. Fastener Sizes: Use fasteners of sizes that penetrate wood blocking or sheathing not less than 1-1/4 inches for nails and not less than 3/4 inch for wood screws.

E. Seal concealed joints with butyl sealant as required by roofing-specialty manufacturer.

F. Seal joints as required for weathertight construction. Place sealant to be completely concealed in joint. Do not install sealants at temperatures below 40 deg F.

3.4 COPING INSTALLATION

A. Install cleats, anchor plates, and other anchoring and attachment accessories and devices with concealed fasteners.

B. Anchor copings with manufacturer's required devices, fasteners, and fastener spacing to meet performance requirements.

1. Interlock face and back leg drip edges of snap-on coping cap into cleated anchor plates anchored to substrate at manufacturer's required spacing that meets performance requirements.
2. Interlock face-leg drip edge into continuous cleat anchored to substrate at manufacturer's required spacing that meets performance requirements. Anchor back leg of coping with screw fasteners and elastomeric washers at manufacturer's required spacing that meets performance requirements.

3.5 ROOF-EDGE SPECIALITIES INSTALLATION

A. Install cleats, cants, and other anchoring and attachment accessories and devices with concealed fasteners.

B. Anchor roof edgings with manufacturer's required devices, fasteners, and fastener spacing to meet performance requirements.

3.6 ROOF-EDGE DRAINAGE-SYSTEM INSTALLATION

A. General: Install components to produce a complete roof-edge drainage system according to manufacturer's written instructions. Coordinate installation of roof perimeter flashing with installation of roof-edge drainage system.

B. Gutters: Join and seal gutter lengths. Allow for thermal expansion. Attach gutters to firmly anchored gutter supports spaced not more than 36 inches apart. Attach ends with rivets and seal with sealant to make watertight. Slope to downspouts.

1. Install gutter with expansion joints at locations indicated but not exceeding 50 feet apart. Install expansion-joint caps.

C. Downspouts: Join sections with manufacturer's standard telescoping joints. Provide hangers with fasteners designed to hold downspouts securely to walls and 1 inch away from walls; locate fasteners at top and bottom and at approximately 60 inches o.c.

1. Provide elbows at base of downspouts at grade to direct water away from building.
2. Connect downspouts to underground drainage system indicated.

3.7 REGLET AND COUNTERFLASHING INSTALLATION

A. General: Coordinate installation of reglets and counterflashings with installation of base flashings.

B. Surface-Mounted Reglets: Install reglets to receive flashings where flashing without embedded reglets is indicated on Drawings. Install at height so that inserted counterflashings overlap 4 inches over top edge of base flashings.

C. Counterflashings: Insert counterflashings into reglets or other indicated receivers; ensure that counterflashings overlap 4 inches over top edge of base flashings. Lap counterflashing joints a minimum of 4 inches and bed with butyl sealant. Fit counterflashings tightly to base flashings.

3.8 CLEANING AND PROTECTION

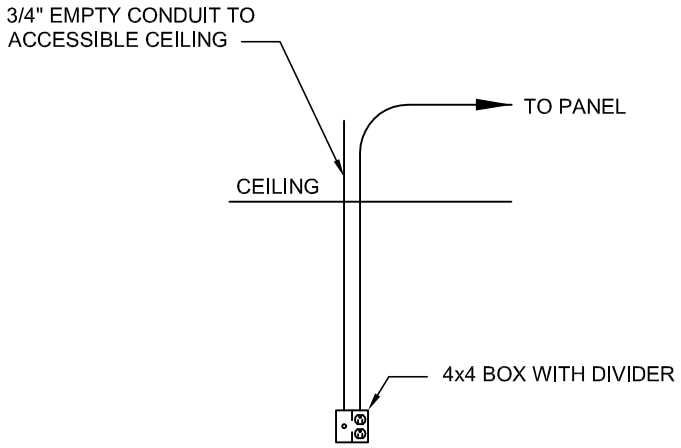
A. Clean exposed metal surfaces of substances that interfere with uniform oxidation and weathering.

B. Clean and neutralize flux materials. Clean off excess solder and sealants.

C. Remove temporary protective coverings and strippable films as roof specialties are installed. On completion of installation, clean finished surfaces, including removing unused fasteners, metal filings, pop rivet stems, and pieces of flashing. Maintain roof specialties in a clean condition during construction.

D. Replace roof specialties that have been damaged or that cannot be successfully repaired by finish touchup or similar minor repair procedures.

END OF SECTION 077100



4 TV OUTET DETAIL
NO SCALE

INTEGRITY.EXPERTISE.SOLUTIONS

ENGINEERS & SURVEYORS, P.C.

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Project Description:

TV OUTLET DETAIL
CLINTON COUNTY GOVERNMENT
DEWITT ANNEX - 2013 RENOVATIONS

Addendum Drawing Issue Information:

Drawing No:	E/AD1-1
Sheet:	1 OF 1
Date:	06/07/13
Drawn By:	SVS
Project No:	11176-05

IIW Planholders List

Clinton County Government - DeWitt Annex 2013 Renovations

Project Team: Mark Fassbinder

Engineer's Estimate: $675,000.00

Alternate A:
Alternate B:
Alternate C:

Bid Date: 6/17/2013
Bid Time: 2:00 p.m.
Addenda: 1

Project No: 11176 - 05

Company	Mailing Address				Phone	Fax
IIW Testing Dept.						
IIW Survey Dept.						
Advantage Sheet Metal	1160 East 12th St.	Dubuque	IA	52001	(563) 556-4822	(563) 556-4848
Burke Electric	4165 115 St.	Clinton	IA	52732	(563) 682-7566	(563) 682-7006
Charlotte Plumbing	P.O. Box 106	Charlotte	IA	52731	563-677-2963	
Const. Update Plan Room	645 32nd Ave. SW, Ste C	Cedar Rapids	IA	52404-3907	(319) 369-4848	(319) 369-4809
DeWitt Electric, Inc.	P.O. Box 185	DeWitt	IA	52742	(563) 659-8131	(563) 659-9509
Domestic Plumbing	P.O. Box 875	Clinton	IA	52732	563-242-0022	
Frye Builders	2213 2nd Avenue	Muscatine	IA	52761	563-264-5045	563-264-5053
GPE	1228 3rd Avenue	Rock Island	IL	61201	309-761-4020	
Hartz Lock Co.	200 North 2nd St.	Clinton	IA	52732	(563) 242-4434	(563) 242-8173
Hillebrand Construction	2324 Hickory Grove Rd.	Davenport	IA	52804	(563) 322-2009	(563) 322-5464
Illowa Builders Exchange	520 24th Street	Rock Island	IL	61201	(309) 788-9260	(309) 794-3965
Jansen Electric Inc.	P.O. Box 94	DeWitt	IA	52742-0094	(563) 659-1100	(563) 659-1100
Opening Specialists	735 Century Drive	Dubuque	IA	52002	563-583-8082	563-583-8262
Precision Builders, Inc.	1503 Holland St.	LeClaire	IA	52753	(563) 289-5511	(563) 289-5456
Reed Construction Data	30 Technology Parkway South, STE 100	Norcross	GA	30092-2912	(800) 699-8640	(800) 303-8629
Sheets Design Build	18284 Hwy. 64 West	Maquoketa	IA	52060	(563) 652-8399	(563) 652-8523
Tri City Electric	6225 N. Brady Street	Davenport	IA	52806	563-322-7181	563-322-1643
Tricon Construction Group	2245 Kerper Blvd., STE 2	Dubuque	IA	52001	(563) 588-9516	(563) 588-9519
WF Scott Decorating	2201 3rd Avenue	Rock Island	IL	61201	309-786-1221	309-786-1286

IIW Planholders List is also available on line at: iiwengr.com