



STATE OF NEW YORK
OFFICE OF GENERAL SERVICES
DESIGN AND CONSTRUCTION GROUP
THE GOVERNOR NELSON A. ROCKEFELLER
EMPIRE STATE PLAZA
ALBANY, NY 12242



ADDENDUM NO. 2 TO PROJECT NO. 44722-C

**GENERAL CONSTRUCTION WORK
REPLACE WINDOWS,
RECREATION BUILDING NORTH No. 86
RECREATION BUILDING SOUTH No. 87
WOODBOURNE CORRECTIONAL FACILITY
99 PRISON ROAD; P.O. BOX 1000
WOODBOURNE, NY 12788-1000**

August 1, 2014

NOTE: This Addendum forms a part of the Contract Documents. Insert it in the Project Manual. Acknowledge receipt of this Addendum in the space provided on the Bid Form.

1. SECTION 013300 SUBMITTALS: **DELETE** pages 013300-10 through 013300-14.
2. SECTION 085663 STEEL DETENTION WINDOWS: **REPLACE** the Section bound in the Project Manual with the accompanying Section (pages 085663-1 through 085663-10) noted "REVISED 7/28/2014".

END OF ADDENDUM

Margaret F. Larkin
Acting Director of Design

SECTION 085663

STEEL DETENTION WINDOWS

PART 1 GENERAL

1.01 RELATED WORK SPECIFIED ELSEWHERE

- A. Built-In Anchors: Section 055000.
- B. Joint Sealants: Section 079200.
- C. Glass and Glazing: Section 088100.
- D. Security Glass and Glazing: Section 088853.

1.02 MANUFACTURERS

- A. Acceptable Manufacturer:
 - 1. Hope's Windows, Inc., 84 Hopkins Avenue, P.O. Box 580, Jamestown, New York 14702. Phone (716) 665-5124; www.hopeswindows.com.
 - 2. Optimum Window Mfg. Corp., 28 Canal Street, Ellenville, New York 12428, Phone (845) 647-1900; www.optimumwindow.com.

1.03 REFERENCES

- A. Except as shown or specified otherwise, the Work of this Section shall meet the requirements of the following:
 - 1. Steel Window Specifications by the Steel Window Institute (SWI).
 - 2. Structural Welding Code - Steel, AWS D1.1 and Structural Welding Code - Sheet Steel, AWS D1.3, as applicable, by the American Welding Society (AWS Codes).

1.04 WINDOW TYPES AND DESCRIPTIONS

- A. Non-Secure Windows: Steel detention windows with horizontal steel tee mullions and single-hung operable type operation with lowest pane being operable. A fixed angular safety screen is located to the exterior covering the ventilated area, unless noted otherwise.

1.05 PERFORMANCE REQUIREMENTS

- A. Air Leakage: Meet or exceed ASTM E 283, Test Method for Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors. Maximum allowable air infiltration and exfiltration 1/2 cfm/lin ft of crack perimeter when subjected to an exterior to interior static test pressure difference of 1.57 psf across window unit.
- B. Water Penetration: Meet or exceed ASTM E 331, Test Method for Water Penetration of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference. No water leakage for 15 minutes when window is

subjected to a rate of flow of 5 gal/sq ft/hr with test pressure difference across window unit of 2.86 psf.

1.06 SUBMITTALS

- A. Submittals related to this specification section shall be forwarded from the Contractor and/or his agent(s) as complete submittal packages. All information required from this section, including Installer’s Qualifications, Shop Drawings, Rough Opening Dimensions, Product Data, Samples, and Quality Control submittals shall be submitted as one complete package. Partial or incomplete submittal packages will be rejected.

- B. Shop Drawings: Show window types, quantities, fabrication details, and connections to adjacent construction, including existing jamb, head, and sill conditions, and all associated dimensions. Include documentation of rough in field dimensions obtained for each window location. Include details of screens, hardware, insulation, and glazing details.

- C. Rough Opening Dimensions: Provide a completed ‘Rough Opening Dimensioning Verification Chart’ documenting all windows (chart attached at the end of this specification). This informational submittal will be reviewed and returned as ‘Acknowledged’ only as the Contractor is solely responsible for fully verifying and coordinating this data.

- D. Product Data: Catalog sheets, specifications, and installation instructions.

- E. Samples:
 - 1. One complete window unit of each window type, with specified accessories. Deliver samples to Director’s Representative at the Site for approval. These samples, if approved, will be available for Contractor pickup and may be used in the Work.
 - 2. Approved samples may be used for benchmark installations.
 - 3. Hardware: Each item required.
 - 4. Color Samples for Factory Finished Windows: Manufacturer’s color for the specified finish listed in section 2.01, H. of this specification.

- F. Quality Control Submittals:
 - 1. Manufacturer’s Qualifications Data:
 - a. Names and addresses of 5 similar projects that have been in operation for not less than 3 years producing custom steel windows.
 - b. Manufacturer’s listed in section 1.02 are exempt from this submittal requirement.
 - 2. Installers Qualifications Data:
 - a. Name of each person who will be performing the Work and their employer's name, business address and telephone number.
 - b. Names and addresses of 3 similar projects that each person has worked on during the past 3 years.
 - 3. Test Reports:
 - a. Certified air leakage and water penetration test reports for each type of window unit required.

- G. Contract Closeout Submittals:
 - 1. Operation and Maintenance Data: Two copies of owner's manual, including instructions for cleaning windows and touching-up finish.

1.07 QUALITY ASSURANCE

- A. Detention Windows Manufacturer's Qualifications: The manufacturer shall be regularly engaged in the production of custom steel windows, shall have furnished steel windows for 5 projects of similar scale to that of this project, and that have been in operation for not less than 3 years. Window manufacturer shall be subject to the approval of the Director.
- B. Installers Qualifications: The persons installing the windows and their Supervisor shall be personally experienced in steel window work and shall have been regularly employed by a company that installs steel detention windows as a primary source of work for a minimum of 3 years.
- C. Testing Agency:
 - 1. Air infiltration and water penetration tests shall be performed by a qualified independent testing laboratory.
- D. Field Dimensioning and Existing Conditions Verification:
 - 1. Field verify all existing window opening conditions, including all rough opening dimensions. Document dimensions and confirm how variations in rough opening dimensions will be incorporated into selection of final window sizes.
 - 2. Submit summary of findings, including any conditions which deviate with Contract Drawings.
- E. Project Benchmark Installation:
 - 1. Order the approved windows for the benchmark installations only. Do not order the balance of the windows until the benchmark installations for each window type have been accepted.
 - 2. Maintain weather tightness, energy efficiency, and security throughout the removal of existing windows and the benchmark installations.
 - 3. Prior to the benchmark window installation remove one existing window of each type at locations approved by the Director's Representative. Remove hazardous materials, structural items, and other associated components as required.
 - 4. Photograph the existing window opening including the interior and exterior conditions of the remaining construction. Provide digital photos in an electronic format acceptable to the Director's Representative.
 - 5. Install each window type in its final location. Install windows with materials, fasteners, welds, joints, interior sealants, exterior sealants and other accessories required for the Work.
 - 6. Accepted benchmark installations shall be the standard of workmanship required for windows installed in similar conditions. Failure to maintain this standard will be cause for rejection of the Work.
 - 7. Maintain benchmark installations until the balance of the Work has been installed and accepted.

1.08 DELIVERY, STORAGE, AND HANDLING

- A. Deliver windows in sturdy, protective crates or containers.
- B. Store and handle windows in a manner that will not cause damage to the finish.

1.09 MAINTENANCE MATERIALS

- A. Touch-up Kit: For every 20 windows installed (and fraction thereof), furnish detention window manufacturer's factory finish touch-up kit for the factory finish on windows. Store touch-up kits at the site where directed.
 - 1. Label kits to identify locations used.
- B. Security Fastener Tools: Furnish two (2) sets of tools required for installation, adjustment, operation, maintenance, and/or removal of security fasteners.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Guard Frames, Muntins, Ventilator Frames, Ventilator Jambs, and Sill Rails composed of hot dipped galvanized hot rolled steel sections. Operable vent portion of frames shall be electro-galvanized per ASTM B633-11.
- B. Perimeter head, jamb, sills and muntins shall be hot-rolled steel sections, with hot dipped galvanized zinc coating in accordance with ASTM A123. Perimeter head, jamb, and sill shall weigh not less than 2 pounds per lineal foot and muntins shall weigh not less than 1.85 pounds per lineal foot. Frame members shall have profiles and dimensions as indicated on drawings.
- C. Glazing Beads: Formed steel glazing beads, screw-on type.
 - 1. Drill holes for screws before finishing. Space holes one inch from ends and 6 inches on center.
 - 2. Finish: Match window frame color specified below.
- D. Weatherstripping: Q-Lon Weatherseal (TM) by Schlegel.
- E. Hardware:
 - 1. Exposed Hardware: Solid bronze, tumbled and oxidized to match US20 finish, and lacquered.
- F. Anchors: Perimeter anchors shall be 1-1/4 inch x 1-1/4 inch hot-rolled steel angles or formed plate, both 3/16 inch thick.
- G. Angular Safety Screen:
 - 1. Screen frame: Angle shape formed of A60 hot-dip process zinc coating sheet steel not less than #12 gauge.
 - 2. Screen Cloth Clamping Plate: Formed of sheet steel not less than #12 gauge.
 - 3. Screen Cloth:

- a. Unless Otherwise Indicated: 0.028 inch diameter #304 stainless steel wire 12 x 12 double fold and hem the mesh at frame engagement.

- H. Factory Paint Finish:
 - 1. Pretreatment - Zinc phosphate (bonderized) treated in a multi-stage process or approved equal.
 - 2. Primer – E-COAT, PPG powercron 8000 or approved equal.
 - 3. Finish Coat – PPG two component Polyurethane or approved equal.
 - a. Custom Color, unless otherwise directed:
 - 1) Medium Bronze MP36366 (Hopes/Matthews).
 - 2) Old Bronze OP-PK612U4 (Optimum)

- I. Fasteners: Stainless steel, unless otherwise specified.
 - 1. Exposed Fasteners: Plated torx tamper-resistant truss head for exposed screws and bolts, finished to match windows.

- J. Sealing Mastic/Cap Bead: Non-staining sealant material recommended by window manufacturer.

- K. Rigid Insulation: Rigid cellular polyurethane or polyisocyanurate thermal insulation boards surfaced with aluminum foil on both sides; minimum aged R value of 3.6 @ 75 degrees F per 1/2 inch thickness meeting the requirements of ASTM C591-11.

- L. Rigid Insulation Adhesive: Type recommended by the rigid insulation manufacturer.

- M. Open-Cell Polyurethane Foam Insulation: ASTM C 1029, Type II, with maximum flame-spread and smoke-developed indexes of 75 and 450, respectively, per ASTM E 84, compatible with adjacent rigid insulation.

- N. Cold Galvanizing Compound: Single component compound giving 93 percent pure zinc in the dried film, and meeting the requirements of SSPC-Paint 20 (rev. 2002).

- O. Hardware:
 - 1. Limit device: Provide permanently installed or keyed sash travel limit device.
 - a. Install limit device to allow for maximum opening of sash.
 - 2. Counterbalance and Pulley: Two concealed per sash to operate ventilators in unison with stainless-steel-cable sash cord; of size and capacity to hold sash stationary at any open position.
 - 3. Lock: Cam-action sweep lock and keeper on meeting rail; two per sash.

2.02 FABRICATION

- A. Fabricate windows in accordance with approved shop drawings.

- B. All formed frame members and muntins shall have detailed profile shapes and dimensions as indicated on drawings.
- C. Ventilator Sections: Hot rolled steel with integral flanges providing parallel double contact surfaces around perimeter of each ventilator.
 - 1. Fabricate ventilator sections with a continuous integral dovetail groove located on the interior contact surface for the reception of weatherstripping.
 - 2. Aluminum bedding channels at ventilators are not acceptable.
- D. Angular Safety Screen:
 - 1. Screens shall be fixed, permanently fastened, and fabricated not to interfere with ventilator operation.
 - 2. Provide Angular Safety Screens at all ventilators unless specifically indicated otherwise.
 - 3. Angle frame sections shall be solidly welded at corners and all face and contact surfaces dressed smooth.
 - 4. Double fold and hem the screen cloth at the frame edge and securely attach with #10 torx taptite truss head plated steel tamper resistant screws, spaced 4 inches on centers, 1 inch from ends, which penetrate the angle frame, wire cloth and clamp plate.
 - 5. Screen shall be field attached with #10 screws, spaced 9 inches on centers and 1 inch from ends.
- E. Corners of frames, ventilators, and angular safety screens shall be mitered or coped. Exposed and contact surfaces shall be finished smooth and flush with adjacent surfaces.
 - 1. Corner joints of frames and ventilators exposed to the weather shall be continuously welded and ground smooth on the exposed surface and spot welded on the concealed surface.
 - 2. Corner joints of angular safety screens shall be continuously welded on the concealed surface.
- F. Glazing: Windows shall be factory glazed by window manufacturer. Fabricate windows for outside glazing with glazing beads, unless otherwise shown. Size glazing beads to match glazing rebates specified and to suit glass types specified.
- G. Weatherstripping: Continuous weatherstripping inserted in an integral dovetail groove located in the same plane in the interior contact surface of ventilator sections around the entire perimeter of ventilator. Weatherstripping that relies on adhesive for application, or screw applied weatherstripping will not be acceptable.
- H. Tolerance for Window Size (height and width) Dimensions: + 1/16 inch.
- I. Mullions: Fabricate to the design and profile shown on the Drawings. Finish mullions and covers to match windows.
- J. Anchor Accessories: Fabricate to shape and size, and furnish in quantity, as required to securely install and connect the Work of this Section to the construction shown.

- K. Hardware: Unless otherwise shown or specified, window manufacturer's standard hardware series produced for use with the particular type of window, location, and screen condition.

2.03 SHOP FINISHING

- A. All materials shall be either chemically or mechanically cleaned to remove mill scale, dirt, oil and other foreign matter. Provide one of the two approved shop finish systems listed below.
- B. Shop Finish System: E-COAT System:
 - 1. After fabrication; windows, covers, plates, screen frames and glazing beads shall be bonderized in a 13 stage E-COAT process, as a preparation for receiving paint.
 - 2. After pretreatment, a coat of PPG epoxy primer shall be electro-statically applied. (Type of primer depends on type of paint finish selected.)
 - 3. After prime coat, a top coat of PPG polyurethane shall be applied.
 - 4. All concealed steel members and perimeter anchors shall be protected by electro-galvanizing or zinc phosphate and prime painted.
- C. Shop Finish System: Bonderized and Polyester Powder Coat:
 - 1. Bonderizing: After shot blasting; all materials to be bonderized or pretreated by a four stage process as a preparation for receiving paint, as follows.
 - a. High pressure wash with degreaser applied at minimum 150 degrees Fahrenheit.
 - b. Warm water rinse.
 - c. Zinc or Iron phosphate applied at minimum 130 degrees Fahrenheit.
 - d. Warm water rinse with a non-chrome post treatment solution.
 - 2. Prime Paint: After bonderizing, a coat of zinc rich thermosetting epoxy prime paint shall be applied and oven baked
 - a. Bake at 325 degrees Fahrenheit.
 - b. Dry film thickness of primer to be a minimum of 1.5 mils.
 - 3. Finish Paint: After prime coat, a baked on polyester powder coat finish system shall be applied.
 - a. Bake at 410 degrees Fahrenheit.
 - b. Total dry film thickness to be a minimum of 3.0 mils.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verification of Conditions: Examine surfaces to receive detention windows for defects that will adversely affect the execution and quality of the Work. Do not proceed until unsatisfactory conditions are corrected.
 - 1. Check locations and conditions of required built-in anchors.

3.02 INSTALLATION

- A. Install the Work of this Section in accordance with the manufacturer's printed instructions, except as shown or specified otherwise.

1. Install Angular Safety Screens at all ventilators unless specifically indicated otherwise.
- B. Anchor window units securely in place, plumb, level, aligned, without warp.
 1. Weld window weld plates to windows and built-in anchors with one inch long welds spaced 9 inches on center maximum.
 2. Weld channel surrounds to interior side of frames with one inch long welds spaced 9 inches on center maximum.
- C. Seal metal to metal joints, screw heads, and unneeded fastener holes with sealing mastic.
- D. Fill all voids around head, jambs, and sill with spray foam insulation or as indicated on drawings. Insulation shall not interfere with operable hardware.

3.03 ADJUSTING

- A. Touch-up welded and abraded surfaces with a coating of cold galvanizing compound and multiple finish coats to match color and sheen of exposed factory applied finish.
- B. Adjust ventilators and hardware for smooth operation and weather tight closure. Lubricate hardware and other moving parts.

3.04 CLEANING

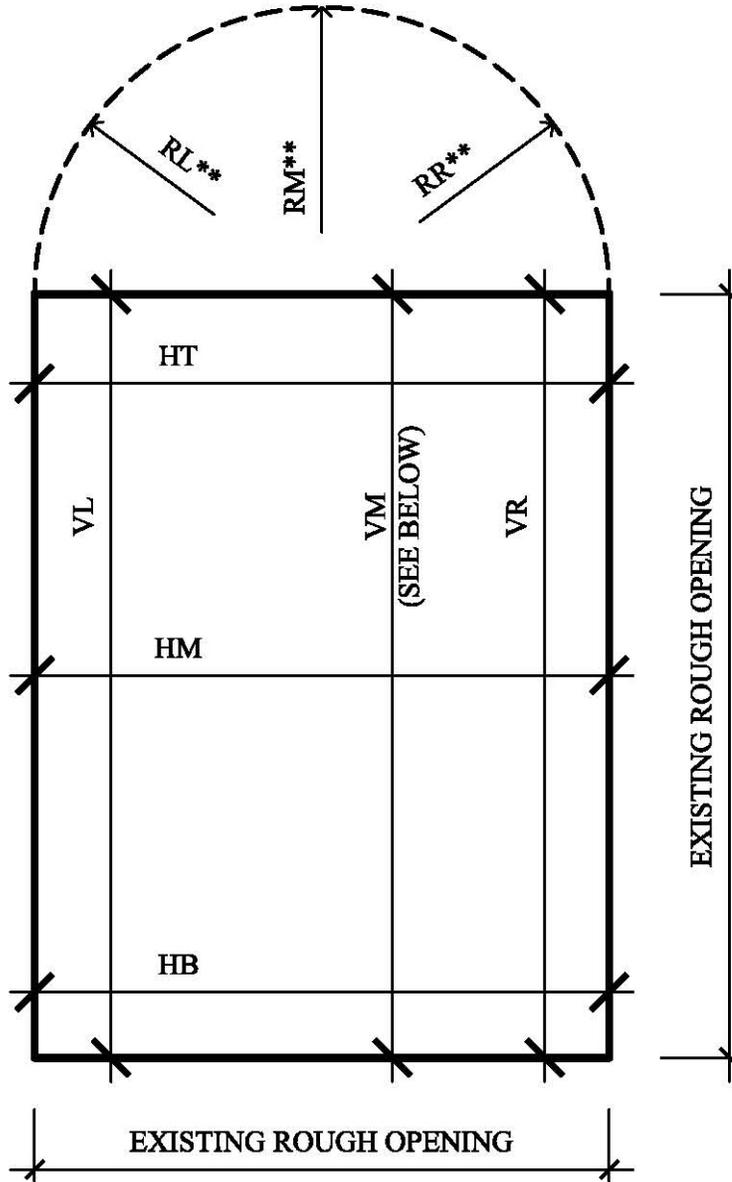
- A. Clean window units promptly after completion of installation.

3.05 PROTECTION

- A. Protect installed windows and finish as necessary from adjacent work and cleaning operations.

END OF SECTION

**ROUGH OPENING DIMENSIONING GUIDE – EXISTING WINDOW
ELEVATION
VIEW LOOKING FROM INTERIOR**



HT: HORIZONTAL

HM: HORIZONTAL
MIDDLE

HB: HORIZONTAL
BOTTOM

VM: VERTICAL
MIDDLE*

VR: VERTICAL RIGHT

RM: RADIUS MIDDLE**

RR: RADIUS RIGHT**

* VERTICAL MIDDLE DIMENSION REQUIRED WHERE WINDOW DIMENSION EXCEEDS 6'-0"

** RADII DIMENSION(S) REQUIRED WHERE WINDOW INCLUDES CIRCULAR OR ROUNDED FRAMES

AUTHOR OF THIS DOCUMENT: SUBMIT THIS CHART (or one similar) AS A PROJECT

INFORMATION SUBMITTAL

DATE SUBMITTED: _____

Rough Opening Dimension Verification Chart										
Mark	Window Description	Horizontal Dimensions			Vertical Dimensions			Radius Dimensions**		
		HT	HM	HB	VL	VM*	VR	RL	RM	RR
1										
2										
3										
4										
5										

HT: HORIZONTAL TOP VL: VERTICAL LEFT RL: RADIUS LEFT**
 HM: HORIZONTAL MIDDLE VM: VERTICAL MIDDLE* RM: RADIUS MIDDLE**
 HB: HORIZONTAL BOTTOM VR: VERTICAL RIGHT RR: RADIUS RIGHT**

* VERTICAL MIDDLE DIMENSION REQUIRED WHERE WINDOW DIMENSION EXCEEDS 6'-0"

** RADII DIMENSION(S) REQUIRED WHERE WINDOW INCLUDES CIRCULAR OR ROUNDED FRAMES