

# DESIGN AND CONSTRUCTION GROUP THE GOVERNOR NELSON A. ROCKEFELLER EMPIRE STATE PLAZA ALBANY, NY 12242

## ADDENDUM NO. 1 TO PROJECT NO. 44559

## CONSTRUCTION WORK, HVAC WORK, PLUMBING WORK, AND ELECTRICAL WORK PROVIDE STATE POLICE FORENSIC IDENTIFICATION UNIT BUILDING, HEADQUARTERS ADDITION AND COLD STORAGE BUILDING TROOP E HEADQUARTERS 1569 ROCHESTER ROAD CANANDAIGUA, NEW YORK

### February 5, 2016

**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.

### CONSTRUCTION WORK SPECIFICATION

- Refer to Specifications, Section 081102 STEEL DOORS AND FRAMES delete this Specification Section in its entirety and replace with the following Specification Section 081102 – STEEL DOORS AND FRAMES, Updated 12/19/12.
- Refer to Specification Section 265629 STEET LIGHTING ANDF GROUNDS LIGHTING: Discard the Section bound in the Project Manual and substitute the accompanying Sections (pages 265629 – 1 thru 265629 - 6) noted "Revised 02/03/2016".
- 3. Refer to Specification Section144216 VERTICAL WHEELCHAIR LIFT, PART 1 GENERAL

#### ADD 1.05 WARRANTY

A. Warranty: Manufacturer shall warrant the wheelchair lift materials and workmanship for two years following completion of installation.

PART 2 PRODUCTS, 2.01 VERTICAL WHEELCHAIR LIFT.

CHANGE: Item #9 reference to 42 inch TO 42-1/8" inch.

CHANGE: Item #10 FROM Lower landing door arranged with a 72" high self closing door.

- a. Door shall be of transparent material.
  - TO Lower landing platform gate arranged with a 42-1/8" high self closing gate.
  - a. Gate shall be manufacturers standard material..
  - b. Platform Gate: Travels with platform and opens at lower landing.

Item #12 reference to "company standard color" TO "as selected from the manufacturers full range of colors."

**ADD**: TO item #3 a. Drive Type: Self-lubricating acme screw drive.

- b. Emergency Operation: Manual handwheel device to raise or lower platform.
- c. Safety Devices:
  - 1. Integral safety nut assembly with safety switch.
- d. Travel Speed: 10 fpm (3.0 m/minute).
- e. Motor: 2.0 hp (560 W).
- f. Power Supply:
  - 1. 120 VAC single phase; 60 Hz on a dedicated 20 amp circuit.

ADD:

- #15. Platform Configuration:
  - a. Straight Through: Front and rear openings.

#16. Power Gate Operators:

- 1. Location:
  - a. Platform Gate: Travels with platform and opens lower landing.
  - b. Upper Landing Gate.
  - 2. Automatically opens the gate when platform arrives at a landing. Will also open at landing by pressing call button.
    - 3. ADA Compliant and obstruction sensitive.
    - 4. Low voltage, 24 VDC with all wiring concealed.
- #17. Landing Openings: Gates shall be self closing type.
  - a. Gate Height: 42-1/8 inches (1070 mm).
    - b. Gate Width: 41-3/4 inches (1060 mm).
    - c. Platform Gate: Travels with platform and opens at lower landing.
    - d. Upper Landing Gate: Installed at upper landing.
- #18. Lift Components:
  - a. Machine Tower: Custom aluminum extrusion.
  - b. Base Frame: Structural steel.
  - c. Platform Side Wall Panels: 16 gauge (1.5 mm) galvanized steel sheet.
  - d. Platform Access Ramp: 12 gauge (2.5 mm) galvanized steel plates; slip resistant surfaces.
  - e. Ramp: Automatic folding type.
  - f. Side Guard Panels: 42-1/8 inches (1070 mm) high mounted on platform.
- #19. Base Mounting at Lower Landing:
  - a. Floor Mount: Base of lift shall be mounted on the floor surface of the lower landing. For access onto the platform provide a ramp of 16 gauge (1.5 mm) galvanized steel sheet with a slip resistant surface.
- #20. Platform Controls: 24 VDC control circuit with the following features.
  - 1. Direction Control: Constant pressure rocker switch.
  - 2. Illuminated and audible emergency stop switch shuts off power to lift and activates audio alarm with battery backup.
  - 3. Keyless operation.
  - 4. Arrival Gong and Digital Floor Display.

#### CONSTRUCTION WORK DRAWINGS

#### ADDENDUM NO. 1 TO PROJECT NO. 44559

- 1. Drawing C-106, noted "REVISED DRAWING 2/2/2016" accompanies this Addendum and supersedes the same numbered originally issued drawing.
- 2. Drawing A-101 F, noted "REVISED DRAWING 2/2/2016" accompanies this Addendum and supersedes the same numbered originally issued drawing.
- Refer to Drawing A-103 H PARTIAL FIRST FLOOR REMOVAL PLAN. ADD Removal Note F5: Existing ceramic tile floor system to be removed in it's entirety down to structural slab.

Prepare area to accommodate work to be provided. Coordinate with MEP Contracts ADD REMOVAL NOTE F5 TO TLT. H192.

#### **DELETE** Removals Note F2 and replace with:

REMOVALS NOTE F2: Remove existing wood frame ramp and metal railing system in their entirety. Existing concrete stair to remain.

- 4. Refer to Drawing A-401 H, A-402 H, A-403 H and A-404 H. **DELETE** GENERAL NOTE 7.and replace with:
  - GENERAL NOTE 7: Patch and repair existing floors, walls and ceilings to match existing adjacent materials and finishes where toilet partitions, plumbing fixtures, toilet accessories, etc. have been removed. Refer to Room Finish Schedule.

Attachments: Section 081102 – STEEL DOORS AND FRAMES Section 265629 - STREET LIGHTING AND GROUNDS LIGHTING Drawing C-106 – UTILITY PLAN Drawing A-101 F– FLOOR PLAN

### END OF ADDENDUM

Margaret F. Larkin Executive Director Design and Construction

#### **SECTION 081102**

#### **STEEL DOORS AND FRAMES**

#### PART 1 GENERAL

### **1.01 SECTION INCLUDES**

A. Steel doors and frames, including borrowed lites; sidelights; vision lites; glass moldings and stops; louvers; panels; hardware reinforcements; and accessories as shown in the contract documents.

#### **1.02 REFERENCES**

- A. ANSI- American National Standard Institute
  - 1. A240: Standard Specification for Chromium and Chromium-Nickel Stainless Steel Plate, Sheet and Strip for Pressure Vessels and for General Applications.
  - 2. A250.4-2001 Test Procedure and Acceptance Criteria for Physical Endurance for Steel Doors and Hardware Reinforcings.
- B. NAAMM National Association of Architectural Metal Manufacturers
  - 1. HMMA 830-1997 Hardware Preparations and Locations for Hollow Metal Doors and Frames.
  - 2. HMMA 831-1997 Recommended Hardware Locations for Hollow Metal Doors and Frames.
  - 3. HMMA 840-1999 Guide Specification for Installation and Storage of Hollow Metal Doors and Frames.
  - 4. HMMA 861-2000 Guide Specification for Commercial Hollow Metal Doors and Frames.
- C. NFPA National Fire Protection Association
  - 1. NFPA 80- 2010 Standard for Fire Doors and other Opening Protectives.

### **1.03 DEFINITIONS**

- A. Steel Door and Frame Manufacturer: Manufacturer of steel doors and frames regularly engaged in the manufacturing of such products for use in commercial, institutional, educational and other similar applications.
- B. Company Field Advisor(s): An employee of the steel door and frame manufacturer who is certified in writing by the manufacturer to be technically qualified in design, installation, and servicing of products.
- C. Steel Door and Frame Distributor: Distribution Company who regularly engages in the distribution of steel doors and frames of the manufacturer whose doors and frames are submitted for this project.
- D. Certified Installation Supervisor: Designated supervisor/installer, who has a minimum three years experience in steel frame and door installation, and is certified in writing by the steel door and frame manufacturer as qualified and responsible to ensure approved steel frames and doors are installed, adjusted, and operate properly.

## 1.04 SUBMITTALS

- A. Waiver of Submittals: "Waiver of Certain Submittal Requirements" in Section 01330 does not apply to this Section.
- B. Submittals Packages
  - 1. Door and Frame Schedule and Shop Drawings Package: Submit as a complete package. Incomplete packages will be returned unreviewed.
    - a. Quality Assurance Submittal
      - 1) Certification of Compliance as described in the Quality Assurance Article.
      - 2) Company Field Advisor's Qualification Data
        - a) Name of Company Field Advisor and Employer's name, business address and telephone number and e-mail address.
        - b) Names and addresses of 3 similar projects Company Field Advisor has worked on during the past three years.
        - c) Written certification on steel door and frame manufacturer's letterhead that Company Field advisor is technically qualified in design, installation, and servicing of the products furnished for this Project.
      - 3) Certified Supervisor's and Installer's Qualification Data
        - a) Name of Supervisor and each Installer performing Work, and Employer's name, business address and telephone number.
        - b) Names and addresses of 3 similar projects Supervisor and each Installer has worked on during the past three years.
        - c) Written certification on steel door and frame manufacturer's letterhead that Supervisor/Installer is technically qualified to ensure approved steel frames and doors are installed, adjusted, and operate properly.
    - b. Door and Frame Schedule:
      - 1) Include a Cover Sheet that lists:
        - a) OGS project name, project number, and project address.
        - b) Manufacturer's name, address, and telephone number.
        - c) Distributor's name, address, and telephone number.
        - d) Shop drawing preparer's name, and telephone number and e-mail address.
        - e) Submission date.
      - 2) List by opening
        - a) Door and Frame number and location by building and room name. Use same reference numbers for openings and as those shown on Contract Drawings.
        - b) Door width, height, thickness, type, gage, and options
        - c) Frame type, width, height, jamb depth, gage, anchor type and options.
        - d) Door and frame elevations; head and jamb

profiles and details; welding requirements; and reinforcements.

- e) Fire Rating.
- f) Glass type.
- g) Undercut.
- h) Electric preparations, if any.
- i) Hardware Set.
- Show dimensioned elevations; construction details of each door including vertical and horizontal edge details; and frame details for each type, including dimensions profiles; locations for finish hardware, including cutouts and reinforcements; gage of reinforcements; details of connections; anchors and accessories; and details of conduit and preparations for electrified door hardware and controls.
- Product Data: Manufacturer's catalog sheets, specifications, and detailed installation instructions. Highlight products and options pertaining to this Project. Cross out information irrelevant to this Project.
- 4) Manufacturer's Written Certification of Compliance that their products conform to the requirements of the references named in the References Article of this specification section, and as modified by this specification.
- 5) Samples:
  - a) Frames: Corner sample of each type, 18 x 18 inches, with mortises and reinforcements, factory primed or factory finished, as required.
  - b) Doors: Corner sample of each type construction, 18 x 18 inches, with mortises and reinforcements, factory primed or factory finished, as required.
- 2. Closeout Submittals: Submit as a complete package.
  - a. Operation and Maintenance Manuals: Furnish 2 (two) hard cover three ring binders with project name and number prominently displayed on the front cover and the spine.
  - b. Listing of Manufacturer, address and contact information
  - c. Approved Door and Frame Submittal including shop drawings and product data sheets
  - d. Manufacturer's dated warranty for this specific project identified by Facility, OGS project number, and manufacturer's order number.
  - e. Certification: Written certification from the Company Field Advisor that their products are installed according to manufacturer's printed installation instructions, and are operating properly.

## 1.05 QUALITY ASSURANCE

- A. Uniformity and single source responsibility:
  - 1. Provide steel doors and frames from a single source manufacturer who specializes in this type of work.
- B. Certification of Compliance: A statement, written on steel door and frame

manufacturer's letterhead, that certifies their products, submitted for this Project, have been tested and comply with references named in the References Article of this specification section, and as modified by other requirements this specification.

- C. Construction Verification: In order to determine if the products furnished comply with the specifications, the Director may choose one or more doors and frames for examination. The examination may involve cutting doors to expose the internal construction to inspect reinforcements, cores, welds and other construction details.
- D. Field Measurements: Verify existing openings by field measurements before fabrication and indicate measurements on shop drawings.
- E. Pre-Submittal Conference: Pre-Submittal Conference: Before the steel door and frame submittals are written, the contractor, the steel door and frame distributor, the steel door and frame shop drawing preparer, and the steel door and frame designer shall attend a conference to discuss the contract requirements for the steel door and frame submittal package, including but not limited to, quality assurance items to be submitted, the cover sheet, index, page numbering, schedule formatting, product nomenclature, installation notes, preparations for electric hardware, and product data sheets.
- F. Pre-installation Conference: When steel frames are on site, and before steel frame installation begins, the Director's Representative shall call a conference at the site to review the approved Steel Door and Frame Submittal, approved Finish Hardware Submittals, and proper installation procedures for the Work as well as: 1. Pre-installation inspection of Doors and Frames
  - a. Use and coordination of approved Steel Door and Frame submittals with approved Finish Hardware Submittals in the pre-installation inspection process
  - b. Reading and understanding manufacturer's Door and Frame tags
  - c. Inspection and verification of labeling and label placement
    - 1) Specified fire labels (attached metal labels) on doors and frames,
    - 2) Label locations
    - 3) Label legibility
  - d. Inspection and verification of proper welding of frames
  - e. Inspection and verification of hardware reinforcement and preparations in frame head and jambs.
  - f. Inspection and verification of required anchors and fasteners.
  - g. Inspection and verification of glass kit preparations in doors
  - h. Inspection and verification of Electric hardware preparation in frames and doors
  - 2. Review of maximum allowable clearances between frames and doors; doors and floor; and meeting stiles of doors, and verification methods.
  - 3. Verification of plumb, square and level frame installation with jamb rabbets parallel to one another.
  - 4. Review of proper frame installation tools.

The contractor, frame installers, certified Company Field Advisor, OGS designer; and OGS inspector shall attend the conference. Facility personnel may attend. The OGS designer will present installation information.

### 1.06 DELIVERY, STORAGE, AND HANDLING

- A. Deliver doors and frames in heavy paper cartons or other protective packaging. Remove any plastic protective wrap from the package.
- B. Store doors and frames under cover, in a dry area, on raised platforms in vertical position with minimum 4 inch blocking between units to allow air circulation.
- C. Clearly label packaging, and doors and frames, for identification and installation location.

## PART 2 PRODUCTS

### 2.01 MATERIALS

- A. Hot-Rolled Steel Sheets and Strip: Commercial quality carbon steel, pickled and oiled, complying with ASTM A1011/A1011M-04a 2004.
- B. Cold-Rolled Steel Sheets: Commercial quality carbon steel complying with ASTM A1008/A1008M-04b 2004.
- C. Galvannealed Steel Sheets: Zinc Iron Alloy-Coated carbon steel sheets of commercial quality complying with ASTM A 653/653M, with A 60 zinc coating.
- D. Anchors and Supports: Fabricate of not less than 16 gage sheet steel unless otherwise indicated.
  - 1. Galvanized Units: Galvanize anchors and supports to be used with galvanized frames, complying with ASTM A 153, Class B.
- E. Anchorage Devices, Bolts, and Other Fasteners: Manufacturer's standard units unless otherwise indicated.
  - 1. Galvanized Units: Galvanize items and comply with ASTM A 153, Class C or D as applicable.
- F. Solid Block polyurethane core with minimum .07 U Factor.
- G. Polystyrene slab with a minimum .24 U factor.
- H. Extruded polystyrene rigid insulation.

### 2.02 DOORS

- A. General:
  - 1. Design and Thickness: 2 outer stretcher-leveled steel sheets not less than 14 gage, seamless, hollow construction, 1-3/4 inches thick.
  - 2. Construct doors with smooth flush surfaces without visible joints or seams on exposed faces or stile edges, except around glass and louver panels. Continuously MIG, ARC or laser weld vertical edges full height of door, grind smooth, and dress to achieve seamless edge. Tack welded, putty filled edges are not acceptable.
  - 3. Reinforce vertical edges by a continuous steel channel not less than 14ga extending the full height of door.
  - 4. Close top and bottom of horizontal edges with 14 gage steel channel spot welded to the inside of the face sheets a maximum of 4 inches on center.
  - 5. Continuously weld the closing end channels to the vertical edge reinforcing channel at all four corners producing a fully welded exterior.
  - 6. Provide minimum 16 gage flush steel top and bottoms caps, notched at

both ends to fit hinge and lock channels, installed with a minimum of 6 welds per cap. Grind welds, body fill and finish smooth.

- 7. Sound Deadening (ASTM E 90): Minimum Sound Transmission Class of 25.
- 8. Door Edges: Bevel lock stile edge of single acting hinged doors 1/8 inch in 2 inches. "V" bevel meeting stiles of pairs of doors, except at double egress locations where meeting stiles are parallel. Bevel hinge edge at continuous hinge.
- 9. Glazing Stops and Beads: Fixed steel stops, formed integral with door on non-threat side of doors. Removable steel beads, of not less than 14 gage formed steel sheet or solid bar stock, on other side of doors secured with torx head machine screws. Form corners with butted hairline joints. Coordinate width of rabbet between fixed stop and removable bead, and depth of rabbet, with type of glass and glazing required.
- B. Fire Rated Assemblies: Wherever a fire resistance classification is shown or scheduled for steel doors and frames; provide fire rated units that have been tested as fire door assemblies, and comply with National Fire Protection Association (NFPA) Standard No. 80 and these specifications.
  - 1. Identify each door and frame with a factory applied metal UL, FM, or WHI label.
  - 2. Label shall remain legible, and shall not be obscured by prime painting or finish painting.
  - 3. Indicate the applicable fire rating on the door label.
  - 4. Locate labels on the hinge edge of door and jamb rabbet of frame.
  - 5. Where continuous hinges are specified, apply labels on the header rabbet of frame and on top exposed edge of door. Locate labels as close to hinge edge as possible.
  - 6. At the manufacturer's and/or contractor's expense, retain a third party inspector to recertify fire rated doors and frames, and to replace primed and finish painted labels.
- C. Oversize Assemblies Requiring Fire Rating: Whenever fire rated assemblies are larger than size limitations established by NFPA and testing laboratories, provide the manufacturer's certification, by affixing a metal label construction label, that the assemblies have been constructed with materials and methods equivalent to requirements for fire rated construction.
- D. Exterior Doors:
  - 1. Fabricate exterior doors with 2 outer stretcher-leveled, A60 galvanized steel sheets.
  - 2. Reinforce inside of doors with the following:
    - a. Solid block polyurethane core, with a minimum .07 U factor, that fills the entire door cavity and is chemically bonded to all surfaces.
- E. Interior Doors:
  - 1. Fabricate doors with 2 outer stretcher-leveled, A60 galvanized steel sheets.
  - 2. Reinforce inside of doors with polystyrene slab with a minimum .24 U factor, permanently bonded to inside of each face sheet.

## 2.03 FRAMES

A. General:

- 1. Furnish steel frames for doors, transoms, sidelites, borrowed lites, and other openings, as shown, of size and profile as indicated.
- 2. Construction: Full welded unit construction, with corners mitered and continuously welded full depth and width of frame, unless otherwise specified or shown. Knock-down type frames will not be accepted.
  - a. Fixed Stops: Integral 5/8 inch stop unless otherwise shown.
  - b. Removable Beads: Removable steel beads secured with machine screws. Form corners with butted hairline joints.
- 3. Do not drill frames for silencers.
- 4. Weld steel shipping spreaders to the underside of the jamb legs, requiring removal of the spreaders prior to frame installation.
- B. Interior and Exterior Frames: Form of hot-rolled steel sheets, not less than 14 gage, zinc alloy iron coated A60 galvannealed.
- C. Mullions and Transom Bars:
  - 1. Furnish closed or tubular mullions and transom bars where shown. Fasten mullions and transom bars at crossings and to jambs by butt welding. Reinforce joints between frame members with concealed clip angles or sleeves of same metal and thickness as frame.
  - 2. Where installed in masonry, leave vertical mullions in frames open at the top so they can be filled with grout.
- D. Wall Anchors: Unless otherwise specified or shown, formed of not less than 16 gage galvannealed steel.
  - 1. Masonry Construction: Adjustable, corrugated or perforated T-shaped to suit frame size with leg not less than 2 inches wide by 10 inches long. Furnish at least 3 anchors per jamb up to 7'6" jamb height; 4 anchors per jamb up to 8 foot jamb height; one additional anchor per jamb for each 24 inches or fraction thereof over 8 feet high.
  - 2. Steel Stud Construction: Weld-in type welded to back of frame unless otherwise indicated or approved. Furnish at least 4 anchors per jamb up to 7'-6" jamb height; 5 anchors per jamb to 8 foot jamb height; one additional anchor per jamb for each 24 inches or fraction thereof over 8 feet high.
  - 3. Wood Stud Construction: Weld-in type welded to back of frame unless other wise indicated or approved. Furnish at least 3 anchors per jamb.
  - 4. Anchors for Completed Openings: Anchorage devices designed to secure frame to in-place concrete or in-place masonry construction, as applicable. Furnish at least 5 anchors per jamb up to 7'-6" jamb height; 6 anchors per jamb to 8 foot jamb height; one additional anchor per jamb for each 12 inches or fraction thereof over 8 feet high.
- E. Floor Anchors: Furnish floor anchor for each jamb and mullion which extends to floor, formed of not less than 16 gage steel, with 2 holes to receive fasteners, welded to bottom of jamb or mullion, and galvanized if used with galvanized frames. Reverse floor shoes at completed openings.

## 2.04 FABRICATION

A. Fabricate steel door and frame units to be rigid, neat in appearance, and free

from warp, buckle and defects. Accurately form metal to required sizes and profiles, with minimum radius for thickness of metal. Where practical, fit and assemble units in manufacturer's plant. To assure proper assembly at Project site, clearly identify items that cannot be permanently factory-assembled before shipment.

- B. Exposed Fasteners: Countersunk flat, or oval head torx center pin screws and bolts. Unless otherwise indicated, locate fasteners 2 inches from ends of members and not more than 12 inches apart.
- C. Finish Hardware Reinforcements:
  - 1. Minimum 10 gage continuous reinforcement for continuous hinges.
  - 2. Install 7 gage reinforcement for butt hinges, or hinge reinforcement in door edge may be one piece 12 gage channel full door height with extruded hinge screw holes having an average minimum thread pull-out strength of 1600 pounds per hole.
  - 3. Minimum 12 gage reinforcement for other hardware.
  - 4. Weld 14 gage steel tongues, 1-1/2 inches high, inside lock mortise to keep lock body centered in door.
  - 5. Closer reinforce doors and provide full profile closer reinforcement in frames for full width of opening, whether or not closers are specified.
- D. Finish Hardware Preparation:
  - 1. Factory prepare doors and frames to receive mortised and concealed hardware, including cutouts; reinforcing; drilling and tapping, in accordance with approved Finish Hardware Schedule and templates furnished by hardware manufacturers.
  - 2. Factory reinforced doors and frames to receive surface applied hardware. Drill and tap for surface applied hardware at project site.
- E. Finish Hardware Locations: Locate hardware reinforcements and mortises so hardware locations comply with requirements of HMMA 831, "Recommended Hardware Locations for Custom Hollow Metal Doors and Frames", and as follows:
  - 1. Knobs, Levers, Crescents : Centerline 3'2" from finished floor.
  - 2. Mortise Deadlocks: Centerline not to exceed 48" above finished floor.
- F. Clearances: Fabricate doors for their respective frames within the following clearances:
  - 1. Jambs and Head: 3/32 to 1/8 inch.
  - 2. Meeting Edges of Pairs: 1/8 to 3/16 inch.
  - 3. Bottom (no threshold): 3/4 inch, maximum to finished surface.
  - 4. Bottom (at threshold): 3/8 inch, maximum to top of threshold or carpet.
  - 5. Fire Rated Doors: Comply with clearances specified in NFPA Standard No.80.
  - 6. Measure door clearances from stile edge to jamb.
- G. Factory Prefinish Painting:
  - 1. Chemically wash, rinse, and dry exposed and concealed surfaces of fabricated units.
  - 2. Apply one coat of primer with vinyl binder to surfaces and oven-bake units.
  - 3. Units shall be capable of passing the following tests:
    - a. Salt Spray Test complying with ASTM B 117-97 for 120 continuous hours.

- b. Water Fog Test complying with ASTM D 1735-97 for 240 continuous hours.
- 4. Factory pre-finish doors and frames where indicated on the Door Schedule.
  - a. Provide custom color(s) as selected by the Director's Representative.
  - b. Provide 3 (three) touch-up paint kits for field repair. Turn over remaining paint to the Facility.omit

## PART 3 EXECUTION

### 3.01 EXAMINATION

A. Verification of Conditions: Examine substrates, areas and conditions, with installer present under which frames are to be installed for defects that will adversely affect execution and quality of Work. Do not proceed until unsatisfactory conditions are corrected.

### 3.02 **PREPARATION**

- A. Prior to installation adjust and securely brace door frames for squareness, alignment, twist, and plumb to the following tolerances:
  - 1. Squareness: Plus or minus 1/16 inch, measured at door rabbet on a line 90 degrees from jamb perpendicular to frame head.
  - 2. Alignment: Plus or minus 1/16 inch, measured at jambs on a horizontal line parallel to plane of wall.
  - 3. Twist: Plus or minus 1/16", measured at opposite face corners of jambs on parallel lines, and perpendicular to plane of wall.
  - 4. Plumbness: Plus or minus 1/16 inch, measured at jamb face on a perpendicular line from head to floor.
- B. Drill and tap doors and frames to receive non-templated mortised and surface mounted hardware.

## 3.03 INSTALLATION

- A. General: Install steel doors and frames plumb, rigid, properly aligned, and securely fastened in place; comply with Drawings and manufacturer's written instructions.
  - 1. Frames: Install frame of size and profile indicated. Set frames accurately in position; plumbed, aligned, and braced securely until permanent anchors are set.
    - a) Remove temporary braces necessary for installation only after frames have been properly set and secured.
    - b) Check plumb, squareness, and twist of frames as walls are constructed. Adjust as necessary to comply with installation tolerances.
  - 2. Installation Tolerances: Adjust door frames for squareness, alignment, twist, and plumb to the following tolerances:
    - a) Squareness: Plus or minus 1/16 inch, measured at door rabbet on a line 90 degrees from jamb perpendicular to frame head.
    - b) Alignment: Plus or minus 1/16 inch, measured at jambs on a horizontal line parallel to plane of wall.
    - c) Twist: Plus or minus 1/16 inch, measured at opposite face corners of jambs on parallel lines, and perpendicular to plane of wall.

- d) Plumbness: Plus or minus 1/16 inch, measured at jambs at floor.
- B. Doors: Fit non-fire-rated doors accurately in frames with the following clearances:
  - 1. Jambs and Head: 1/8 inch plus or minus 1/16 inch.
  - 2. Between Bottom of Door and Top of Threshold: Maximum 3/8 inch.
  - 3. Between Bottom of Door and Top of Finish Floor (No Threshold): Maximum 3/4 inch.

## 3.04 ADJUSTING AND CLEANING

- A. Final Adjustments:
  - 1. Check and readjust operating hardware items immediately before final inspection.
  - 2. Leave work in complete and proper operating condition.
  - 3. Remove and replace defective work including doors or frames that are warped, bowed, or otherwise unacceptable.
- B. Clean foreign materials off steel doors and frames immediately after installation.

### 3.05 FINAL INSPECTION

- A. Upon completion of the project, the Director's representative will schedule a final inspection to verify doors and frames are properly installed and adjusted. The contractor, door and frame installer, and design representative will attend.
- B. Upon verification, the design representative will certify in writing components are properly installed and adjusted within referenced tolerances in accordance with this specification. Include this certification in the Close-out Submittals.

### END OF SECTION

FJH

#### **SECTION 265629**

### STREET LIGHTING AND GROUNDS LIGHTING

### PART 1 GENERAL

#### 1.01 RELATED WORK SPECIFIED ELSEWHERE

- A. Earthwork: Section 310000.
- B. Cast-In-Place Concrete: Section 033001.

### **1.02 SUBMITTALS**

- A. Waiver of Submittals: The "Waiver of Certain Submittals Requirements" in Section 013300 does not apply to the following products specified in this Section:
  - 1. Lighting standards.
  - 2. Luminaires.
  - 3. Bases.
- B. Product Data: Catalog sheets, specifications and installation instructions. Include candlepower distribution curves for each type fixture if different from Company or catalog number specified.

#### 1.03 QUALITY ASSURANCE

- A. Equipment Qualifications For Products Other Than Those Specified:
  - 1. At the time of submission provide written notice to the Director of the intent to propose an "or equal" for products other than those specified. Make the "or equal" submission in a timely manner to allow the Director sufficient time to review the proposed product, perform inspections and witness test demonstrations.
  - 2. If products other than those specified are proposed for use furnish the name, address, and telephone numbers of at least 5 comparable installations that can prove the proposed products have performed satisfactorily for 3 years. Certify in writing that the owners of the 5 comparable installations will allow inspection of their installation by the Director's Representative and the Company Field Advisor.
    - a. Make arrangements with the owners of 2 installations (selected by the Director) for inspection of the installations by the Director's Representative. Also obtain the services of the Company Field Advisor for the proposed products to be present. Notify the Director a minimum of 3 weeks prior to the availability of the installations for the inspection, and provide at least one alternative date for each inspection.
    - b. Only references from the actual owner or owner's representative (Security Supervisor, Maintenance Supervisor, etc.) will be accepted. References from dealers, system installers or others,

who are not the actual owners of the proposed products, are not acceptable.

- 1) Verify the accuracy of all references submitted prior to submission and certify in writing that the accuracy of the information has been confirmed.
- 3. The product manufacturer shall have test facilities available that can demonstrate that the proposed products meet the contract requirements.
  - Make arrangements with the test facility for the Director's Representative to witness test demonstrations. Also obtain the services of the Company Field Advisor for the proposed product to be present at the test facility. Notify the Director a minimum of 3 weeks prior to the availability of the test facility, and provide at least one alternative date for the testing.
- 4. Provide written certification from the manufacturer that the proposed products are compatible for use with all other equipment proposed for use for this system and meet all contract requirements.

## PART 2 PRODUCTS

## 2.01 LUMINAIRES

- A. Shall be USA made LED lighting as provided by LLPEnergy (LLPEnergy.com) specified below or approved equal;
  - <u>Type 1</u>: 158w LED, 16" Shoebox Apollo, 120-277v, 22155 Nominal Lumens, 400-650w HID Replace, USA made, 5700k color temp, dark bronze finish, standard 6" mounting arm for 0° mount.
  - <u>Type 2</u>: 158w LED, 16" Shoebox Apollo, 120-277v, 22155 Nominal Lumens, 400-650w HID Replace, USA made, 5700k color temp, dark bronze finish, standard 2 3/8" slipfitter to adapt to bullhorns.
- B. Provide photocell for each fixture to control.

## 2.02 LIGHTING STANDARDS

- A. 20 Foot Height: Steel, 4 inch square non-tapered shaft, as provided by LPPEnergy having:
  - 1. Finish to match luminaire.
  - 2. 11 gauge inch wall thickness. One-piece construction fabricated from hotrolled commercial quality carbon steel tubing with minimum yield strength of 42,000 psi.
  - 3. Loading Capacity: 9.6 EPA & 240 LBS at 80mph or as recommended by lighting standards manufacturer.
  - 4. Number and size of anchor bolts as recommended by lighting standard manufacturer. Threaded end hot dipped galvanized for a minimum of 10 inches. Galvanized nut, lockwasher and flatwasher with each bolt.
  - 5. Template for setting anchor bolts.
  - 6. One 1/8 inch and two 1/16 inch aluminum shims for each standard.
  - 7. Provisions for Luminaire Mounting:

- <u>Type 1</u>: Holes predrilled to accommodate direct arm mounted luminaires.
- <u>Type 2</u>: Pole top tenon to accommodate tenon mounted luminaires.
- 8. Base cover attached to base with vandal resistant fasteners.
- 9. Ground lug at base.

## 2.03 RACEWAYS

- A. Rigid Ferrous Metal Conduit: Steel, hot dipped galvanized on the outside and inside (conduit enameled on the inside will not be accepted), UL categorized as Rigid Ferrous Metal Conduit (identified on UL Listing Mark as Rigid Metal Conduit - Steel, or Rigid Steel Conduit), as manufactured by Allied Tube & Conduit Corp., Midwest Electric, Occidental Coating Co., Robroy Industries Inc., Steelduct Conduit Products, Triangle PWC Inc., or Wheatland Tube Co.
- B. Rigid Nonmetallic Conduit, Fittings, and Accessories: Carlon's Plus 40, Certain Teed Corp.'s Schedule 40, National Pipe Co.'s Schedule 40, or Queen City Plastics Inc.'s Schedule 40.

### 2.04 CONCRETE BASES

A. As detailed on the drawings. Bases may be precast or poured in place.

### 2.05 FUSE HOLDERS AND FUSES

A. Enclosed waterproof in-line fuse holders rated 600 volts; Bussmann Div. Cooper Industries TRON waterproof fuseholder Symbol HEB with Buss Symbol KTK fuses, or Gould Shawmut's GEB Series with ATM fuses.

### 2.06 TAGS

A. Embossed or engraved aluminum tags with one inch high characters stating lighting standard number.

### 2.07 GROUT

A. L&M Const. Chemicals Inc.'s Crystex, Protex Industries Inc.'s Propak, Sonneborn's Sonogrout, or U.S. Grout Corp.'s 5 Star Grout.

### 2.08 THRU WALL SEALING BUSHINGS

- A. For Walls Which Have Or Will Have Membrane Waterproofing:
  - 1. Cast-In-Place Installations: OZ/Gedney Co.'s Type FSK thruwall seal and Type FSKA membrane clamp adapter.
  - 2. Core Drilled or Sleeved Installations: OZ/Gedney Co.'s Type CSM and Type CSMC with membrane clamp adapter.
- B. For Walls Which Will Not Have Membrane Waterproofing:
  - 1. Cast-In-Place Installations: OZ/Gedney Co.'s Type FSK.
  - 2. Core Drilled or Sleeved Installations: OZ/Gedney Co.'s Type CSM or

#### Thunderline Corp.'s Link-Seal.

### 2.09 SPLICE CONNECTORS FOR EQUIPMENT GROUNDING CONDUCTOR

- A. Exothermic Type Weld: Erico Products Inc.'s Cadweld Process.
- B. Compression Connectors: AMP Special Industries' Ampact Grounding System, Burdy Corp.'s Hyground System, or Thomas & Betts Corp.'s Grid and Ground Rod System.
- C. Indent Type: Burndy Corp.'s Hydent, or Thomas and Betts Corp.'s Compression Connectors.

### 2.10 INSULATED GROUNDING BUSHINGS

A. Appleton Electric Co.'s GIB-50 Series, Efcor Inc.'s 56-50-4 Series, Midwest Electric Mfg. Corp.'s GLL Series, OZ/Gedney Co.'s IBC-50L Series, Raco Inc.'s 1212 Series, or Thomas & Betts Corp.'s 3870 Series.

### 2.11 LAMPS

A. As manufactured by LPP Energy, 158w LED, 16" Shoebox Apollo, 120-277v w/ 480v Option, 22155 Nominal Lumens, 400-650w HID Replace, USA Made.

### PART 3 EXECUTION

### 3.01 PREPARATION

A. Before installing any Work, lay out the proposed course for the conduits, location of lighting standards, etc. and have same approved.

### 3.02 INSTALLATION

- A. Lighting Standards:
  - 1. Install each lighting standard on concrete base.
  - 2. Prepare a level surface on compacted earth, undisturbed earth or concrete footing. Set bases on the prepared surface. Have all bases checked and approved by the Director's Representative for level and elevation prior to making any conduit connections.
  - 3. Install lighting standards vertical:
    - a. Use 2 nuts on each anchor bolt. Run first nut down on the thread to the top of the foundation.
    - b. Install pole, run second nut down.
    - c. Adjust pole if necessary, then tighten nuts in accordance with pole manufacturer's recommendations.
    - d. Grout voids between metal base of lighting standard and concrete base. Create a drain through the grout by slipping a short length of conduit under the base in the wet grout, projecting it into the large drain hole in the base of the lighting standard. Rotate the

#### conduit to finish the drain, then remove conduit.

- B. Conduit System:
  - 1. Use rigid ferrous metal conduit in all locations unless otherwise specified or indicated.
  - 2. Rigid nonmetallic conduit may be used except:
    - a. Where conduits enter lighting standard bases, manholes or buildings (Use 10 foot length of rigid ferrous metal conduit at these locations).
    - b. Where conduits are jacked.
  - 3. Depth: Unless otherwise indicated or directed, install conduits so that the top of the conduits are at least at the following depths:

	BELOW FINISHED GRADE (INCHES)	BELOW TOP SURFACES OF ROADS & PARKING LOTS (INCHES)
Rigid Ferrous Metal Conduit	24	24
Rigid Nonmetallic Conduit	24	30

- 4. Conduits Entering Buildings: Conduit entrances into building shall be watertight.
- 5. Cleaning Conduits: Take precautions to prevent foreign matter from entering conduits during installation. After installation, clean conduits with tools designed for the purpose.
- 6. Jacking Conduits: Rigid ferrous metal conduit may be jacked under roads, parking lots, etc. Submit jacking details for approval.
- 7. Concrete encasement is not required for street lighting and grounds lighting conduit system.
- C. Grounding:
  - 1. Provide a bare copper equipment grounding conductor (same size as phase conductors) installed within the conduit. Terminate and bond equipment grounding conductor with suitable fitting in panel.
  - 2. Bond lighting standards, conduit and equipment grounding conductors in lighting standard base with indent type splice connectors, insulated grounding bushings and ground lug on standard.
  - 3. Bond rigid ferrous metal conduit in manholes to the equipment grounding conductor.
  - 4. Make grounding splice connections in manholes with exothermic type weld or compression connectors.
- D. Fuse Holder and Fuses: Install in base of each lighting standard an inline fuse holder and 5 ampere fuse for each ungrounded conductor. Install fuse holders so that fuse is not energized when fuse holder is uncoupled.
- E. Wiring Inside Lighting Standards: Install No. 8 AWG Type THW, XHHW, THWN or Type USE insulated conductors from fuse holder to luminaire.

F. Tags: Install aluminum tags with lighting standard numbers thereon. Fasten tags to standards with vandal resistant screws, 4 feet above finished grade, facing roadway.

# **END OF SECTION**





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