



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



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**ADDENDUM NO. 1 TO PROJECT NO. 44177**

**CONSTRUCTION WORK AND ELECTRICAL WORK**

**PROVIDE SECURITY MODIFICATIONS  
TABERG RESIDENTIAL CENTER FOR GIRLS  
10011 TABERG- FLORENCE RD  
RR NO. 1, BOX 139  
TABERG, NY 13741**

February 15, 2013

**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.

C CONTRACT:

SPECIFICATIONS

1. 323113 CHAIN LINK FENCE AND GATES: Discard the Section bound in the Project Manual and substitute the accompanying Section (pages 322113-1 thru 323113-12) noted "Revised 2/13/2013".

E CONTRACT:

SPECIFICATIONS

2. Page 271524-7 Change Paragraph 2.02 A.1.c. to read: "c. Fiber Type: single mode fiber."
3. Page 281300-25 Change Paragraph 2.03 Title to read: "2.03 PROGRAMMABLE LOGIC CONTROLLERS (FURNISHED BY TYCO)".
4. Page 281300-33 Change Paragraph 2.04 Title to read: "2.04 REDUNDANT COMMUNICATIONS NETWORK (FURNISHED BY TYCO)".
5. Page 281300-34 Change Paragraph 2.05 Title to read: "2.05 INTERFACE BOARDS (FURNISHED BY TYCO)".
6. Page 281300-35 Change Paragraph 2.03 Title to read: "2.03 REQUIRED SPARE PARTS (FURNISHED BY TYCO)".

**ADDENDUM NO. 1 TO PROJECT NO. 44177-CE**

7. SECTION 281301 SECURITY CONTROL AND MONITORING SYSTEM: Add the accompanying section (page 281301-1 thru 281301-5) to the Project Manual.
8. Page 323115-4, Change Paragraph 2.01 A. to Read:
  - “A. Operator System: Tymetal Corp’s Positive Locking Ultimate Sallyport System, including:
    1. Locking which is accomplished by means of a keyless locking device, engaging gate at three places in the locking pilaster.
    2. Gate movement from the closed position that is impossible except by electric or mechanical means.
    3. Lock openings in the locking pilaster that are completely closed when the gate is an open position.
    4. Gate movement not less than 30 feet per minute.
    5. Emergency operation by manual crank operation, from an emergency release column secured with a prison deadlock.
    6. Electric heating element for gear box, with thermostatic control, to ensure proper operation of the system to minus 20 degrees Fahrenheit.
    7. 20vac, 60Hz, 3 Phase 1/3 HP motor
    8. #40 Roller chain.
    9. Entire length of chain to be enclosed.”
9. Page 323115-4, Article 2.02: Delete this article in its entirety.

**DRAWINGS**

10. Revised Drawing:
  - a. Drawing Nos. E-601, and E-604, noted “REVISED 2/13/2013” accompany this Addendum and supersede the same numbered originally issued drawings.

**END OF ADDENDUM**

James Dirolf, P.E.  
Director of Design

## SECTION 281301

### SECURITY CONTROL AND MONITORING SYSTEM

#### PART 1 - GENERAL

##### 1.01 RELATED DOCUMENTS

A. Section Includes:

1. Security access control components replacing some existing access control components. Includes Gate Access Control Panel, Relays, wiring, LEDs and Key Switches.

B. Related Sections:

1. Section 282304 – Indoor and Outdoor Video Surveillance CCTV System
2. Section 323115 - Sliding Gate Operator

##### 1.02 REFERENCES (Most Current Editions of the Following)

- A. NFPA 70 (National Fire Protection Association) - National Electrical Code
- B. NFPA (National Fire Protection Association) 262 – Standard Method of Test for Flame Travel and Smoke of Wires and Cables for Use in Air-Handling Spaces
- C. IEEE (Institute of Electrical and Electronics Engineers) C62.41 – Recommended Practice for Surge Voltages in Low-Voltage AC Power Circuits
- D. FM (Factory Mutual) Global – Class 4991 – FM Approval Standard of Firestop Contractors
- E. FCIA (Firestop Contractors International Association) – Manual of Practice
- F. UL (Underwriters Laboratories, Inc.) 294 – Standard for Access Control System Units
- G. UL (Underwriters Laboratories, Inc.) 305 – Standard for Panic Hardware
- H. UL Qualified Contractor Program for Firestop Systems and Spray-Applied Fire Resistive Materials (SFRM's)

##### 1.03 PROJECT SCOPE

- A. Provide all of the access control equipment called out in this specification and shown on the project drawings. This project consists of but is not limited to the install and setup of all the necessary controllers, electric strikes, sliding gate operators, relays, network wiring, and human interface devices. Gate Access control system is a non-typical access control system meaning that the system is completely comprised of hard wired relays, electric strikes and push buttons to

operate the opening and closing of all gates. Communication with the Central Service Unit (CSU) is done by intercoms at each location.

#### **1.04 SUBMITTALS**

- A. Security Vendor to submit proof of state licensure for installation of Security Systems.
- B. Security Vendor to submit proof of installer certification for all equipment to be installed on project.
- C. Shop Drawings:
  - 1. Diagrams for cable management system.
  - 2. System labeling schedules.
  - 3. Detailed wiring diagrams, to include a detailed non-typical system one-line along with detailed device wiring.
  - 4. Cable administration drawings.
  - 5. Battery and charger calculations for central station, workstations, and controllers.
  - 6. Floor Plan drawings indicating all field device locations including unique architectural numbers or labels
  - 7. Door Schedule
  - 8. Project specific, typical, field device wiring diagrams
  - 9. Termination Schedules
  - 10. Equipment Room enclosures, equipment layout information
  - 11. System Load Calculations
  - 12. Individual Equipment wiring details

#### **1.05 GENERAL DESCRIPTION:**

- A. The Gate Access System is a hard wired door control system.
- B. The Security Control and Monitoring System interfaces directly with the following systems:
  - 1. Closed Circuit Television System (282304)

#### **1.06 SYSTEM PERFORMANCE:**

- A. The systems shall be configured to affect the following system performance criteria:
  - 1. CONTROL: Outputs to field devices such as door locks shall activate within 250 milliseconds of the discrete control switch activation.
  - 2. ANNUNCIATION: Inputs from field devices such as alarms or intercom calls shall annunciate at the master station or control panel within 250 milliseconds or the device being activated.
  - 3. SYSTEM FAULTS: System faults, crashes, reset or reboots shall not be capable of activating field outputs such as door locks.

## **PART 2 - PRODUCTS**

### **2.01 CONTROL PANEL PARTS**

- A. Momentary Push Button
  - 1. Double Pull Single Throw Momentary normally open push button actuator, 22mm, projecting button
  - 2. DPST contact block required
  - 3. Actuator Specified: McMaster-Carr 9029K12
  - 4. Contact Block Specified: McMaster Carr 9209K146
  - 5. Acceptable: Submit per Specifications
  
- B. Momentary Lever Control Switch
  - 1. Double Pull Single Throw momentary, normally closed lever switch, McMaster Carr 9209K521 with 9209K137 Contact Block
  
- C. Key Switch
  - 1. Single Pull Single Throw key switch
  - 2. Specified: McMaster-Carr 9209K63
  - 3. Contact Block: McMaster-Carr SPST- NO -9209K127
  - 4. Acceptable: Submit per Specifications
  
- D. Relays
  - 1. Compact Spade-Terminal Relays
  - 2. Specified Relays: McMaster-Carr 69585K66
  - 3. Specified Sockets: McMaster-Carr 69585K1
  - 4. Acceptable: Submit per Specifications
  
- E. LEDs
  - 1. Panel Cutout indicating lights
  - 2. Specified: McMaster-Carr 5453T12
  - 4. Acceptable: Submit per Specifications

- F. Nameplates: Precision engrave letters and numbers with uniform margins, character size minimum 3/16 inch high, engraved with door/gate number.
  - 1. Phenolic: Two color laminated engravers' stock, 1/16 inch minimum thickness, machine engraved to expose inner core color (white).
  - 2. Aluminum: Standard aluminum alloy plate stock, minimum .032 inches thick, engraved areas enamel filled or background enameled with natural aluminum engraved characters.
  - 3. Self-Adhesive.
  
- G. Control Console:
  - 1. Control console shall be suitable for connection to 15 ampere, 4 wire 120v, 60Hz circuit.
  - 2. Enclosure: Hoffman Engineering Co.'s Style PBA sloping front, to be sized according to the number of switches and LED's to accommodate.

**2.02 REQUIRED SPARE PARTS:**

- A. Two push buttons of each type
- B. Two LEDs
- C. One Relay
- D. One Keyswitch
- E. One lever switch
- F. Two contacts of each type
- G. One of each type of power supply used

**PART 3 -EXECUTION**

**3.01 EXECUTION**

- A. All components/equipment shall be fabricated into racks conforming to the UL 508A standard. (Enclosure and all internal equipment and wiring as a single entity)
- B. Prior to the installation of Security Control equipment:
  - 1. Verify that all construction activities within the Control & Equipment rooms are complete. Rooms should be temperature / humidity controlled, dust free, and secure. Do not install equipment until these conditions are met.
  - 2. When conditions dictate storing equipment prior to installation, the temporary storage location should meet the requirements of item 1. (Above)
  - 3. Verify that the permanent, surge protected, power source is available for connection to the equipment.

- C. Configure equipment with modules as required for the system to support the specific functions or applications.
- D. Provide equipment enclosures for installation of the control equipment and cable terminations to the equipment.
- E. Install all equipment in accordance with manufacturer's recommendations.
- F. Contractor shall ensure that cabinets are adequately ventilated for console mounted equipment and provide exhaust fans in each console section if required.

### **3.02 COMPLETION**

- A. Contractor shall inspect and test the installation and operations of the entire system prior to initiating acceptance tests.

**END OF SECTION 281301**

## SECTION 323113

### CHAIN LINK FENCE AND GATES

#### PART 1 GENERAL

##### 1.01 RELATED WORK SPECIFIED ELSEWHERE

- A. Wiring for Gate Systems: Section 260505.

##### 1.02 REFERENCES

- A. Comply with ASTM A 53 for requirements of Schedule 40 piping.
- B. Welding Standards: “Structural Welding Code - Steel, AWS D1.1” or “Structural Welding Code - Sheet Steel, AWS D1.3”, as applicable, by the American Welding Society (AWS Codes).
- C. Materials and Finishes Standard: ANSI/BHMA A156.18-1993, “American National Standard for Materials and Finishes”.

##### 1.03 DEFINITIONS

- A. Height of Fence: Distance measured from the top of concrete footing to the top of fabric.
- B. Company Field Advisor: An employee of the company which markets the security coils under their name and who is certified in writing by the Company to be technically qualified in design and installation of security coils or an employee of an organization certified by the foregoing company to be technically qualified in design and installation of security coils.

##### 1.04 SUBMITTALS

- A. Shop Drawings: Complete detailed drawings for each height and style of fence and gate required. Include separate schedule for each listing all materials required and technical data such as size, weight, and finish, to ensure conformance to specifications.
- B. Product Data: Manufacturer’s catalog cuts, specifications, and installation instructions for each item specified.
- C. Samples:
  - 1. Fence Fabric: Minimum one square foot.
  - 2. Fence and Gate Posts: One foot long each.
  - 3. Miscellaneous Materials and Accessories: One each.
  - 4. If directed, provide samples from materials delivered to the Site for installation.

- D. Re-Evaluation Fee: In accordance with Article 4.7 of the General Conditions, a re-evaluation processing fee will be levied against the Contractor for each re-evaluation of any Submittal Package submission that was returned for failure to comply with the submittal requirements relative to completeness, content or format. There will be a fee of \$250 levied against the Contractor for each re-evaluation of any Submittal Package submission that was returned for failure to comply with the submittal requirements relative to completeness, content or format.
- E. Quality Control Submittals:
  - 1. Test Reports: Security coils test procedure report.
  - 2. Certificates: Letter required under Quality Assurance Article.

**1.05 QUALITY ASSURANCE**

- A. Comply with standards of the Chain Link Fence Manufacturer’s Institute.
- B. Provide steel fence and related gates as a complete compatible system including necessary erection accessories, fittings, and fastenings.
- C. Posts and rails shall be continuous without splices.
- D. Security Coils Installation Certification: Letter by the Company Field Advisor stating that the fence company is certified in the installation of the security coils and meets the Contract requirements.

**1.06 DELIVERY**

- A. Coordinate delivery of anchors and other accessories to be built into other Work, to avoid delay. Furnish instructions and templates as required for accurate location.
- B. The manufacturer of the prison lock keys shall notify the Director’s Representative and the Deputy Superintendent for Administration at Taberg Residential Center for Girls a minimum of two days in advance of shipping keys. Ship all prison lock keys direct from manufacturer, through the United States Postal Service, via Registered Mail, Restricted Delivery, Return Receipt Requested, to:

Deputy Superintendent for Administration  
 Taberg Residential Center  
 10111 Taberg-Florence Road  
 Taberg, NY 13741

**1.08 UNIFORMITY OF DETENTION HARDWARE**

- A. Provide detention hardware specified in this section from the same manufacturer.
- B. The existing equipment at {facility name} is \_\_\_\_\_. Provide detention hardware specified in this section from \_\_\_\_\_.

## **PART 2 PRODUCTS**

### **2.01 COMPANIES**

- A. Allied Tube & Conduit Corp., 16100 S. Lathrop Ave., Harvey, IL 60426, (800) 882-5543.
- B. Hearne Steel Company, Inc. P.O. Box 1239 Hearne Texas 77859, www.hearnesteel.com.
- C. Anchor Fence, 6500 Eastern Ave., Baltimore, MD, (410) 633-6500.
- D. Southern Folger Detention Equipment Company, 4634 South Presa St., San Antonio, TX 78223, (210) 533-1231, www.southernfolger.com.
- E. RhinoTube LLC, North American Steelworks, 17 Wood St., West Haven, CT 06516, (800) 466-8600
- F. Tymetal Corporation, Inc., 2549 State Route 40, Greenwich, NY 12834, (518) 692-9930, www.tymetal.com
- G. Wheatland Tube Company, One Council Ave., Wheatland, PA 16161, (724) 342-6851

### **2.02 MATERIALS**

- A. Class B Steel Tubing (Option):
  - 1. SS-40 Fence Pipe by Allied Tube & Conduit Corp.
  - 2. RhinoShield R-40 Tubing by RhinoTube LLC.
  - 3. WT-40 Fence Pipe by Wheatland Tube Company.

### **2.03 STEEL FRAMEWORK (FOR FENCES 10'-1" - 16' HIGH)**

- A. End Posts, Corner Posts and Pull Posts:
  - 1. Pipe: 4 inches OD, 9.11 pounds per linear foot (Schedule 40).
  - 2. Class B Steel Tubing: 4 inches OD, 6.56 pounds per linear foot.
- B. Line Posts:
  - 1. Pipe: 2.875 inches OD, 5.79 pounds per linear foot (Schedule 40).
  - 2. Class B Steel Tubing: 2.875 inches OD, 4.64 pounds per linear foot.
- C. Light Posts:
  - 1. Pipe: 4 inches OD, 9.11 pounds per linear foot (Schedule 40).
  - 2. Class B Steel Tubing: 4 inches OD, 6.56 pounds per linear foot.

### **2.04 STEEL FABRIC**

- A. One-piece widths for fence heights up to 12'-0".
- B. Chain link, 2 inch mesh, No. 9 gauge;

- C. Selvages: Top edge and bottom edge twisted and barbed.

## **2.05 SWING GATE POSTS**

- A. Single width of gate up to 6'-0" wide and less than 10'-0" high:
  - 1. Pipe: 2.875 inches OD, 5.79 pounds per linear foot (Schedule 40).
  - 2. Class B Steel Tubing: 2.875 inches OD, 4.64 pounds per linear foot.
  - 3. Square Tubing: 2.50 inches OD, 5.70 pounds per linear foot.

## **2.06 SWING GATE FRAMES**

- A. Up to 6'-0" high, and leaf width 8'-0" or less.
  - 1. Pipe: 1.660 inches OD, 2.27 pounds per linear foot (Schedule 40).
  - 2. Class B Steel Tubing: 1.660 inches OD, 1.84 pounds per linear foot.
  - 3. Square Tubing: 1.50 inches OD, 1.90 pounds per linear foot.
- B. Assemble gate frames by welding or with special steel fittings and rivets for rigid connections. Install mid-height horizontal rails on gates over 10 feet high. When width of gate leaf exceeds 10 feet, install mid-distance vertical bracing of the same size and weight as frame members. When either horizontal or vertical bracing is not required, provide truss rods as cross bracing to prevent sag or twist.

## **2.07 SWING GATE HARDWARE**

- A. Type "B" Gates:
  - 1. Hinges: Pressed Steel Offset 180 degree gate hinge item no. 014005 or appropriate for use by Hearne Steel Company, Inc.
  - 2. Prison Deadlock: 1 - Folger Adam No.86 or Southern Steel No.1080A-2.
  - 3. Cylinder Shields: 2 - Folger Adam No. 2CS or Southern Steel No. 219 x US32D.

## **2.08 FABRICATION AND MANUFACTURE**

- A. Lock Box for Type "B" Gates: Fabricate lock box with channels, plates, angles and flat bars as indicated. Provide removable cover plate held in place with TORX center pin security machine screws. Locate removable cover plate on side of gate opposite threat side. If removable cover plate must be installed on threat side, secure plate with TORX PLUS center pin security machine screws. Galvanize entire assembly.

## **2.09 TYPE "A" GATE SYSTEM**

- A. Materials:
  - 1. Steel tubing: Hot formed, welded or seamless, structural tubing ASTM A 501.
  - 2. Miscellaneous Steel Shapes and Bars: ASTM A 36 unless otherwise specified or shown.
  - 3. Sheet Steel:
    - a. Hot-Rolled Steel Sheets and Strip: Commercial quality carbon steel, pickled and oiled, complying with ASTM A569 and ASTM A 568.
    - b. Cold-Rolled Steel Sheets Commercial quality carbon steel, complying with ASTM A 366 and ASTM A 568.

4. Steel Rods:
  - a. Steel Rods not to be Galvanized: 3/8 inch diameter, oil tempered steel rods, with a hardness on the Rockwell C Scale between 38 and 42.
  - b. Steel Rods to be Galvanized: 3/8 inch diameter, mild steel, low carbon rod
  
- B. General Hardware Notes:
  1. Deadlocks to have bolt keepers with dust box
  2. Locate centerline of mechanical deadbolt 3'-2" above finished grade.
  3. Locate centerline of door pull 4'-0" above finished grade.
  4. Weld hinges unless specified otherwise.
  5. Single Wing Escutcheons: Use on electric jamb locks.
  6. template door closers for maximum gate swing allowed.
  
- C. Hardware for Type "A" Gate:
  1. Hinges: 3 ea Stanley BBK852, MSPK855, Brookfield I-8510 series, rust inhibitor coating, weld 3 sides. Provide fittings for forced lubrication.
  2. Electric Prison Lock: 1 ea Folger Adam no. 56ELLNN, bolt remains retracted only while switch is depressed, dust box, galvanized case. Lock shall automatically deadlock when gate is closed. Provide weather tight fitting at wire penetrations and rubber gasket between frame and cover plate.
  3. Cylinder Shields: 2 ea Folger Adam No. 2CS
  4. Door Pulls: 2 ea Folger Adam No. 2
  5. Door Position Indicator Switch: 1 ea Southern Steel No. 220A-5 series, standard case, galvanized. Provide Type 1 sealant at cover to provide weather protection.
  6. Door Closers:
    - a. 1 ea LCN 4216, case and internal parts steel and cast iron, constant viscosity fluid from 120 degrees F to -30 degrees F, SRI Rust inhibitor paint, Torx screws, AL. Mount on push side of gate.
    - b. Adjust closure for ease of operation.
  7. Molex Plugs: Provide Moles connector for electric lock.
  
- D. Fabrication and Manufacture:
  1. Frames: Tubular steel members 3/16 inches thick. Miter and weld tubular members at corners.
    - a. Stops: 3/4" x 1-1/4" steel, 3 sides. Secure to gate frame with counter sunk Torx center pin security headmachine screws at 8"oc.
  2. Gates: Stiles and rails shall be tubular in cross section and shall conceal the rod mesh attachment.
    - a. Formed Tubular members: 10 gage sheet steel. Fabricate using a formed channel shape, with welded cover plate.
    - b. Reinforcement for Full Surface Hinge Application:
      - 1) Provide 1-1/2" x 2-1/2" x 3/16" x 6" long steel tubes to reinforce gate stiles at hinge locations.
      - 2) Weld steel tube reinforcements to stiles with two 1/2 inch dia. Plug welds.

- c. Miter and weld tubular members at the corners, and notch to accommodate the rod mesh.
    - d. Bevel lock edge.
  - 3. Woven Rod Mesh: Two – inch square opening, arch/intermediate/lock crimped. Extend each rod end at least ½ inch in to the frame and weld.
  - 4. Lock Box:
    - a. Lock Box: Frame pocket with channels or flat bars to suit lock specified. Close box with 3/16 inch thick steel cover plate held in place with Torx center pin security head machine screws.
    - b. Locate removable cover plate on the STP side of all Type “A” gates.
  - 5. Finishes: Galvanize entire assembly.
    - a. Galvanizing process shall conform to:
      - 1) ASTM A 123 for plain and fabricated material and assembled products.
      - 2) ASTM A 153 for iron and steel hardware.
    - b. Stamp galvanized items with name of galvanizer, weight of coating and applicable ASTM number.
- E. Accessories: Include all accessories required to perform the function as indicated on the drawings.

## **2.10 KEYING**

- A. Key locks as specified and incorporate a keying schedule into the hardware schedule for approval.
  - 1. Key changes shall be different from changes previously used at this Facility, except as noted.
  - 2. Record key changes, to avoid future unintended duplication.
  - 3. Furnish seven keys for each change, except as noted.
  - 4. Furnish extended shank keys when required.

## **2.12 MISCELLANEOUS MATERIALS AND ACCESSORIES**

- A. Rails and Post Braces:
  - 1. Pipe: 1.660 inches OD, 2.27 pounds per linear foot (Schedule 40).
  - 2. Class B Steel Tubing: 1.660 inches OD, 1.84 pounds per linear foot.
- B. Fittings and Post Tops: Steel, wrought iron, or malleable iron.
  - 1. Fasteners: Tamper-resistant cadmium plated steel screws.
- C. Stretcher Bars: One piece equal to full height of fabric, minimum cross-section 3/16 inch by 3/4 inch.
- D. Metal Bands (for securing stretcher bars): Steel, wrought iron, or malleable iron.
- E. Wire Ties: Conform to American Steel Wire gauges.
  - 1. For tying fabric to line posts, rails and braces: 9 gauge (.1483 inch) steel wire.
  - 3. For tying security coils to fence fabric, barbed wire, or adjacent coils: 16 gauge (.0625 inch) 300 Series stainless steel wire.

4. For splicing adjoining sections of security coils: 16 gauge (.0625 inch) 300 Series stainless steel wire, or 11 gauge (.1205 inch) 300 Series stainless steel hog rings.
  5. For splicing overlapped fabric at bottom rail: 11 gauge (.1205 inch) steel hog rings.
- F. Truss Rods: 3/8-inch diameter.
- G. Concrete: Portland Cement concrete having a minimum compressive strength of 2500 psi at 28 days.
- H. Spiral Paper Tubes:
1. Sonotube by Sonoco Products Co., North Second St., Hartsville, SC 29550, (800) 377-2692.
  2. Sleek/tubes by Jefferson Smurfit Corp., P.O. Box 66820, St. Louis, MO 63166, (314) 746-1100.
- I. Cold Galvanizing Compound: Single component compound giving 93 percent pure zinc in the dried film, and meeting the requirements of DOD-P-21035A (NAVY).
- M. Wedge Anchors: 1/2 inch stainless steel, Style TS-12-234SS by Unifast Industries Inc., 45 Gilpin Ave., Hauppauge, NY 11788, (516) 348-0290.
- N. Shrink-Resistant Grout (Ferrous): Factory-packaged, non-catalyzed, ferrous aggregate mortar grouting compound selected from the following:
1. Embeco 636 by Master Builders, 23700 Chagrin Blvd., Cleveland, OH 44122, (800) 227-3350.
  2. Ferrolith G-NC by Sonneborn, Chemrex, Inc., 57-46 Flushing Ave., Maspeth, NY 11378, (800) 433-9517.
  3. Ferro-Grout by L&M Construction Chemicals, 14851 Calhoun Rd., Omaha, NE 68152, (800) 362-3331.
  4. Vibra-Foil by A.C. Horn, Inc., Tamm Industries, 7405 Production Dr., Mentor, OH 44060, (800) 862-2667.
- O. Aluminum Slats:
1. Size: 1-7/8 inches wide and 1-3/4 inches wide by .009 inch to .0105 inch thick.
  2. Aluminum Alloy: 5052 H19 or 6011 T81.
  3. Finish: Baked enamel, color as indicated or directed.

### **2.13 THIRTY INCH DIAMETER SECURITY COILS**

- A. Concertina Type: Minimum 51 coil loops fabricated by wrapping a barbed tape made of AISI 430 stainless steel, whose hardness is optional, around a 300 series austenitic stainless steel core wire. Diameter of the core wire shall be 0.098 inch plus or minus 0.002 inch, and the tensile strength shall be a minimum of 140,000 psi. The barbs shall be offset from the plane of the core wire. Outside diameter of the coil loops shall be 30 inches (plus or minus 2 inches). Each loop shall consist of 24 (plus or minus one) clusters of four needle sharp barbs on four-inch centers, each barb measuring a minimum of 1.2 inches in length.

1. Adjacent coil loops shall be attached alternately at 5 points of equal spacing about the circumference with stainless steel flat metal band type clips approximately 0.375 inch wide and 0.065 inch thick. These clips shall prevent the coil loops from being pulled apart at each point of attachment when a minimum 200-pound load is applied, as specified in the barbed tape test procedure. Wrapping of barbed tape about the line wire shall be accomplished within the tolerances specified in MIL-B-52489E, except that the tape shall be wrapped a minimum of 230 degrees and shall satisfy the push test specified therein.
2. Extended length shall be 25 feet (plus or minus 2 feet), with a maximum spacing between loops of 12 inches.

## **2.16 SOURCE QUALITY CONTROL**

- A. Test Procedure - Barbed Tape Security Coils: The company producing the security coils shall have test facilities available which can demonstrate that the security coils meets the following requirements.
  1. Sampling; before delivery to job site: Samples for quality conformance inspections shall be selected in accordance with MIL-STD-105, sampling level S-1, AQL 2.5. A unit of product for sampling shall be one complete unit no less than ten feet in length.
  2. Test Equipment: The test equipment for applying and measuring force shall be capable of measuring a minimum force of 200 pounds and shall be calibrated prior to each test with standards traceable to the National Bureau of Standards.
  3. Test Specimen: The test specimen shall consist of 2 segments of barbed tape, taken from adjacent coil loops, each at least one- foot-long, containing and centered upon a point of attachment. This attachment shall be prepared in the normal course of production.
  4. Test Preparation: A pair of one inch, plus or minus 0.1 inch, cubic back-up blocks shall be centered on each side of the attachment point, in as close as possible contact with the major surfaces of the barbed tape. Barbs adjacent to the attachment point may be removed to simplify the testing process. Each leg of each barbed tape segment shall be bent at a 90-degree angle so that each segment has a major surface in contact with 3 adjoining faces of a back-up cube and so that ends of each segment are parallel to each other and to the axis of the attachment. Each back-up cube shall then be restrained in place by spot welding a straining strap to each leg of a segment so that the strap is in continuous contact with the cube face opposite the point attaching the 2 segments.
  5. Test: Two ends of one of the test segments, prepared per above, shall be joined and rigidly attached to a structure so that the retaining structure, with said attachment, will survive a minimum tensile load of 200 pounds without deflection or slippage. The 2 ends of the opposite segment shall be joined and attached to the test apparatus so that said attachment will survive a minimum tensile load of 200 pounds, without any slippage. The test equipment above shall then be used to apply up to a 200-pound minimum force (through the adjacent coil loop segment attachment point) away from the rigid retaining structure. After reaching a minimum 200 pound force, as measured by the test equipment, this force shall be maintained continuously for a least 30 seconds.

6. Test Results: At the completion of the 30-second pull test, the test specimen shall be removed from the attachments to the rigid retaining structure and to the test equipment. The back-up blocks shall be removed from the test specimen and each segment of the barbed tape shall be examined for breaks, cracks, or separation around their mutual attachment point. The test specimen shall have failed this test if any of the above have occurred or a 200-pound minimum pull cannot be applied continuously for 30 seconds.

## **2.17 FINISHES**

- A. Steel Framework:
  1. Pipe: Galvanized in accordance with ASTM A 53, 1.8 ounces zinc per square foot.
  2. Square Tubing: Galvanized in accordance with ASTM A 123, 2.0 ounces zinc per square foot.
  3. Class B Steel Tubing: Exterior; 1.0 ounces zinc per square foot plus chromate conversion coating and clear polyurethane. Interior; zinc rich organic coating.
- B. Fabric; one of the following:
  1. Galvanized Finish: ASTM A 392 class II zinc coated after weaving, with 2.0 ounces per square foot.
  2. Aluminized Finish: ASTM A 491 aluminum coated with 0.40 ounces per square foot.
- C. Fence and Gate Hardware, Miscellaneous Materials, Accessories:
  1. Wire Ties and Hog Rings: Galvanized Finish, ASTM A 90 1.6 ounces zinc per square foot, or aluminized finish, ASTM A 809 0.40 ounces per square foot.
  2. Hardware and Miscellaneous Items: Galvanized Finish, ASTM A 153 (Table 1).
  4. Angle Beams, I Beams, and Steel Shapes: Galvanized in accordance with ASTM A 123, 2.0 ounces zinc per square foot.

## **PART 3 EXECUTION**

### **3.01 PREPARATION**

- A. Do not begin installation of any fencing until finished grading has been completed.
- B. Clear and grub along fence line as required to eliminate growth interfering with alignment. Remove debris from State property.

### **3.02 INSTALLATION**

- A. Space posts equidistant in the fence line with a maximum of 10 feet on center. For fences 16 feet and higher space posts a maximum of 8 feet on center.

- B. Setting Posts in Earth: Drill holes for post footings Set posts in center of hole and fill hole with concrete. Plumb and align posts. Vibrate or tamp concrete for consolidation. Finish concrete in a dome shape above finish grade elevation to shed water. Do not attach fabric to posts until concrete has cured a minimum of 7 days.
- D. If post tops or extension arms will not be installed prior to impending rain, provide temporary covers over tops of posts to prevent posts from filling with water.
- E. Locate corner posts at corners and at changes in direction. Use pull posts at all abrupt changes in grade and at intervals no greater than 500 feet. On runs over 500 feet, space pull posts evenly between corner or end posts. On long curves, space pull posts so that the strain of the fence will not bend the line posts.
- F. Install top rail continuously through post tops or extension arms, bending to radius for curved runs. Install expansion couplings as recommended by fencing manufacturers.
- G. Install bottom and intermediate rails in one piece between posts and flush with post on fabric side using special offset fittings where necessary.
- H. Diagonally brace corner posts, pull posts, end posts, and gate posts to adjacent line posts with truss rods and truss rod tighteners.
- I. Attach fabric to security side of fence. Maintain a 2-inch clearance above finished grade except when indicated otherwise. Thread stretcher bars through fabric using one bar for each gate and end post and 2 for each corner and pull post. Pull fabric tight so that the maximum deflection of fabric is 2 inches when a 30-pound pull is exerted perpendicular to the center of a panel. Maintain tension by securing stretcher bars to posts with metal bands spaced 15 inches oc. Fasten fabric to steel framework with wire ties spaced 12 inches oc for line posts and 24 inches oc for rails and braces. Bend back wire ends to prevent injury. Tighten stretcher bar bands, wire ties, and other fasteners securely.
  - 1. If approved pre-formed ties are used to secure the fence fabric, the “pigtail” for all ties at the 8 foot high level and below shall be bent down parallel with the fence posts and/or rails.
- J. Position bolts for securing metal bands and hardware so nuts are located opposite the fabric side of fence. Tighten nuts and cut off excess threads so no more than 1/8 inch is exposed. Peen ends of all bolts below a height of 10 feet to prevent loosening or removal of nuts.
  - 1. Secure post tops and extension arms with tamper-resistant screws.
- K. Install gates plumb and level and adjust for full opening without interference. Install ground-set items in concrete for anchorage, as recommended by fence manufacturer. Adjust hardware for smooth operation and lubricate where necessary.

- L. Fence Alarm System: Where a fence mounted alarm/detection system is required, install the fence in a manner that will permit satisfactory operation of the alarm/detection system. Conform to the following:
1. Eliminate all fabric vibrations and rattles caused by wind against posts and rails. Install additional wire ties above quantity specified if deemed necessary to prevent vibrations and rattles.
  2. Eliminate all rattles from stretcher bar bands, truss rods, rail and post clamps, and other hardware.
- M. Security Coils (except Concertina Type):
1. Stretch to full preset length, determined by applying a tensile load of not more than 50 pounds at each end of the spacer wire. Attach successive units to each other to form one continuous obstacle. After the first unit is installed, orient the beginning of the second unit so that (spot weld) attachments of the second unit approximately match those at the end of the first unit. Attach the last coil loop of the first unit to the first coil loop of the second unit, with stainless steel twistable wire ties (para. 3.7. MIL-B-52775B) at the locations where the coils would have been spot welded if one continuous unit had been fabricated. Where security coils are placed on the ground, anchor each coil to the ground at 5-foot intervals using anchors formed from galvanized No. 3 reinforcement bars. Each reinforcement bar anchor shall have a 2-inch hook formed at the top and shall be driven a minimum of 30 inches into the ground.
  2. Secure coils to the side of the fence by erecting the material as described for ground installation. Attach each coil loop (or pair of coil loops where adjacent coils are spot welded) to the fence fabric with stainless steel twistable wire ties. The point of attachment shall be made where the security coils are tangent to (intersects) the fence, after it has been expanded to its full length, without tangles and free of distortion. (The location of the point of attachment to the fence will vary as the security coil rotates slightly about its longitudinal axis as it is extended to its full length.)
- N. Concertina Type Security Coils: Install in accordance with the manufacturer's printed instructions and meeting the following minimum requirements:
1. Install security coils with coil loops (apertures) equally spaced 12 inches oc (plus or minus 2 inches).
  2. Secure coils to the top of the fence by attaching each coil loop where it intersects the barbed wire and the top of the fabric with twistable stainless steel wire ties.
  3. Secure coils to the side of the fence by attaching each coil loop where it intersects the fence fabric, and any adjacent coils, with twistable stainless steel wire ties. Attach adjacent coils to each other where every other loop intersects or at 36 inches oc maximum.
  4. Where security coils are placed on the ground, anchor each coil to the ground at 5-foot intervals using anchors formed from galvanized No. 3 reinforcement bars. Each reinforcement bar anchor shall have a 2-inch hook formed at the top and shall be driven a minimum of 30 inches into the ground.
  5. Splices: Splice successive units to adjacent coil loops by overlapping end loops a minimum of two barbed clusters to form one continuous obstacle.

- a. Permanently attach barb roots together with twistable stainless steel wire ties or stainless steel hog rings.
  - b. Cross-tie barb roots with 2 stainless steel twistable wire ties or 2 stainless steel hog rings on both barbs of a 2-barb splice or the center barb of a 3-barb splice, and at all points of the splice where factory clips are installed on adjoining sections of continuous coil.
- O. Wire brush and repair welded and abraded areas of galvanized surfaces with one coat of cold galvanizing compound.
- P. Restore disturbed ground areas to original condition. Topsoil and seed to match adjacent areas.

### **3.03 ADJUSTING**

- A. Adjust operative units and equipment to work freely and easily, ready for use. Field lubricate operating and locking systems in accordance with the manufacturer's maintenance instructions. Adjust equipment when the temperature is approximately 70 degrees F.

**END OF SECTION**

CAMERA NUMBER	CAMERA LOCATION	SWITCH LOCATION	CAMERA TYPE	MOUNT TYPE	CAMERA FORMAT	VIEWING DISTANCE	LENS FOCAL LENGTH	CAMERA MODEL
S1	FENCE LINE	GYM-MANT_RM13	PTZ	POLE MOUNT	1/4"	N/A	3.4-19MM	PELCO SPECTRA HD
S2	FENCE LINE	GYM-MANT_RM13	PTZ	POLE MOUNT	1/4"	N/A	3.4-19MM	PELCO SPECTRA HD
S3	N FENCE LINE	GYM-MANT_RM13	PTZ	POLE MOUNT	1/4"	N/A	3.4-19MM	PELCO SPECTRA HD
S4	SOUTH FENCE LINE	GYM-MANT_RM13	PTZ	POLE MOUNT	1/4"	N/A	3.4-19MM	PELCO SPECTRA HD
S5	SE FENCE LINE	GYM-MANT_RM13	FIXED	POLE MOUNT	1/4"	N/A	VARIABLE 2.5-10MM	PELCO SARKI E10
S6	SW GYM CORNER	GYM-MANT_RM13	PTZ	CORNER MOUNT	1/4"	N/A	3.4-19MM	PELCO SPECTRA HD
S7	SE FENCE LINE	GYM-MANT_RM13	PTZ	POLE MOUNT	1/4"	N/A	3.4-19MM	PELCO SPECTRA HD
S8	S FENCE LINE	GYM-MANT_RM13	FIXED	POLE MOUNT	1/3"	40'	VARIABLE 2.5-10MM	PELCO SARKI E10
S9	SW FENCE LINE	GYM-MANT_RM13	FIXED	POLE MOUNT	1/3"	40'	VARIABLE 2.5-10MM	PELCO SARKI E10
S10	NW FENCE LINE	GYM-MANT_RM13	PTZ	POLE MOUNT	1/4"	N/A	3.4-19MM	PELCO SPECTRA HD
S11	SE GYM CORNER	GYM-MANT_RM13	PTZ	CORNER MOUNT	1/4"	N/A	3.4-19MM	PELCO SPECTRA HD
S12	NW RESIDENCE CORNER	GYM-MANT_RM13	FIXED	WALL MOUNT	1/3"	40'	VARIABLE 2.5-10MM	PELCO SARKI E10
S13	E FENCE LINE	GYM-MANT_RM13	FIXED	WALL MOUNT	1/3"	40'	VARIABLE 2.5-10MM	PELCO SARKI E10
S14	NW RESIDENCE CORNER	GYM-MANT_RM13	FIXED	WALL MOUNT	1/3"	40'	VARIABLE 2.5-10MM	PELCO SARKI E10
S15	E FENCE LINE	GYM-MANT_RM13	PTZ	POLE MOUNT	1/4"	N/A	3.4-19MM	PELCO SPECTRA HD
S16	N FENCE BETWEEN P3 & P4	GYM-MANT_RM13	FIXED	POLE MOUNT	1/3"	N/A	VARIABLE 2.5-10MM	PELCO SARKI E10
S17	VENUE E SALLY PORT	GYM-MANT_RM13	FIXED	POLE MOUNT	1/3"	40'	VARIABLE 2.5-10MM	PELCO SARKI E10
S18	NE FENCE BY SALLY PORT	GYM-MANT_RM13	PTZ	WALL MOUNT	1/4"	N/A	3.4-19MM	PELCO SPECTRA HD
S19	SE GYM CORNER	GYM-MANT_RM13	FIXED	WALL MOUNT	1/3"	40'	VARIABLE 2.5-10MM	PELCO SARKI E10
S20	VEHICLE SALLY PORT	GYM-MANT_RM13	FIXED	POLE MOUNT	1/3"	40'	VARIABLE 2.5-10MM	PELCO SARKI E10
S21	SE FENCE LINE	GYM-MANT_RM13	PTZ	POLE MOUNT	1/4"	N/A	3.4-19MM	PELCO SPECTRA HD
S22	SE FENCE LINE	GYM-MANT_RM13	FIXED	POLE MOUNT	1/3"	40'	VARIABLE 2.5-10MM	PELCO SARKI E10
S23	EAST RESIDENCE CORNER	RESIDENCE-FILE_RM20	FIXED	CORNER MOUNT	1/3"	40'	VARIABLE 2.5-10MM	PELCO SARKI E10
S24	NE RESIDENCE CORNER	RESIDENCE-FILE_RM20	PTZ	CORNER MOUNT	1/4"	N/A	3.4-19MM	PELCO SPECTRA HD
R1	CLASSROOM 9	RESIDENCE-FILE_RM20	FIXED	SURFACE MOUNT	1/3"	20'	VARIABLE 2.5-10MM	PELCO INSULIUV
R2	CLASSROOM 9	RESIDENCE-FILE_RM20	FIXED	SURFACE MOUNT	1/3"	20'	VARIABLE 2.5-10MM	PELCO INSULIUV
R3	VESTIBULE 6	RESIDENCE-FILE_RM20	FIXED	SURFACE MOUNT	1/3"	10'	VARIABLE 2.5-10MM	PELCO INSULIUV
R5	CORRIDOR 3	RESIDENCE-FILE_RM20	FIXED	SURFACE MOUNT	1/3"	20'	VARIABLE 2.5-10MM	PELCO ESO
R6	CLASSROOM 10	RESIDENCE-FILE_RM20	FIXED	SURFACE MOUNT	1/3"	20'	VARIABLE 2.5-10MM	PELCO INSULIUV
R7	CLASSROOM 10	RESIDENCE-FILE_RM20	FIXED	SURFACE MOUNT	1/3"	20'	VARIABLE 2.5-10MM	PELCO INSULIUV
R8	CLASSROOM 11	RESIDENCE-FILE_RM20	FIXED	SURFACE MOUNT	1/3"	20'	VARIABLE 2.5-10MM	PELCO INSULIUV
R12	LOBBY 2	RESIDENCE-FILE_RM20	FIXED	SURFACE MOUNT	1/3"	20'	VARIABLE 2.5-10MM	PELCO ESO
R13	NURSE 14	RESIDENCE-FILE_RM20	FIXED	SURFACE MOUNT	1/3"	12'	VARIABLE 2.5-10MM	PELCO INSULIUV
R14	LOBBY 2	RESIDENCE-FILE_RM20	FIXED	SURFACE MOUNT	1/3"	15'	VARIABLE 2.5-10MM	PELCO ESO
R15	CORRIDOR 18	RESIDENCE-FILE_RM20	FIXED	SURFACE MOUNT	1/3"	20'	VARIABLE 2.5-10MM	PELCO ESO
R17	KITCHEN 30	RESIDENCE-FILE_RM20	FIXED	SURFACE MOUNT	1/3"	20'	VARIABLE 2.5-10MM	PELCO INSULIUV
R18	KITCHEN 30	RESIDENCE-FILE_RM20	FIXED	SURFACE MOUNT	1/3"	20'	VARIABLE 2.5-10MM	PELCO INSULIUV
R19	VESTIBULE 33	RESIDENCE-FILE_RM20	FIXED	SURFACE MOUNT	1/3"	20'	VARIABLE 2.5-10MM	PELCO INSULIUV
R20	KITCHEN 30	RESIDENCE-FILE_RM20	FIXED	SURFACE MOUNT	1/3"	20'	VARIABLE 2.5-10MM	PELCO INSULIUV
R21	CORRIDOR 18	RESIDENCE-FILE_RM20	FIXED	SURFACE MOUNT	1/3"	20'	VARIABLE 2.5-10MM	PELCO ESO
R22	DAY ROOM 35	RESIDENCE-FILE_RM20	FIXED	SURFACE MOUNT	1/3"	40'	VARIABLE 2.5-10MM	PELCO INSULIUV
R23	VESTIBULE 42	RESIDENCE-FILE_RM20	FIXED	SURFACE MOUNT	1/3"	10'	VARIABLE 2.5-10MM	PELCO INSULIUV
R24	DAY ROOM 35	RESIDENCE-FILE_RM20	FIXED	SURFACE MOUNT	1/3"	40'	VARIABLE 2.5-10MM	PELCO INSULIUV
R25	DAY ROOM 35	RESIDENCE-FILE_RM20	FIXED	SURFACE MOUNT	1/3"	40'	VARIABLE 2.5-10MM	PELCO INSULIUV
R26	DAY ROOM 35	RESIDENCE-FILE_RM20	FIXED	SURFACE MOUNT	1/3"	40'	VARIABLE 2.5-10MM	PELCO INSULIUV
R27	CORRIDOR 27	RESIDENCE-FILE_RM20	FIXED	SURFACE MOUNT	1/3"	25'	VARIABLE 2.5-10MM	PELCO ESO
R28	DINING 28	RESIDENCE-FILE_RM20	FIXED	SURFACE MOUNT	1/3"	25'	VARIABLE 2.5-10MM	PELCO INSULIUV
R29	LAUNDRY ROOM 52	RESIDENCE-FILE_RM20	FIXED	SURFACE MOUNT	1/3"	25'	VARIABLE 2.5-10MM	PELCO INSULIUV
R30	CORRIDOR 53	RESIDENCE-FILE_RM20	FIXED	SURFACE MOUNT	1/3"	25'	VARIABLE 2.5-10MM	PELCO ESO
R31	CORRIDOR 27	RESIDENCE-FILE_RM20	FIXED	SURFACE MOUNT	1/3"	25'	VARIABLE 2.5-10MM	PELCO ESO
R32	CORRIDOR 25	RESIDENCE-FILE_RM20	FIXED	SURFACE MOUNT	1/3"	15'	VARIABLE 2.5-10MM	PELCO ESO
R33	LAUNDRY ROOM 46	RESIDENCE-FILE_RM20	FIXED	SURFACE MOUNT	1/3"	25'	VARIABLE 2.5-10MM	PELCO INSULIUV
R34	CORRIDOR 55	RESIDENCE-FILE_RM20	FIXED	SURFACE MOUNT	1/3"	25'	VARIABLE 2.5-10MM	PELCO ESO
R35	DAY ROOM 47	RESIDENCE-FILE_RM20	FIXED	SURFACE MOUNT	1/3"	40'	VARIABLE 2.5-10MM	PELCO INSULIUV
R36	DAY ROOM 47	RESIDENCE-FILE_RM20	FIXED	SURFACE MOUNT	1/3"	40'	VARIABLE 2.5-10MM	PELCO INSULIUV
R37	DAY ROOM 47	RESIDENCE-FILE_RM20	FIXED	SURFACE MOUNT	1/3"	40'	VARIABLE 2.5-10MM	PELCO INSULIUV
R38	VESTIBULE 66	RESIDENCE-FILE_RM20	FIXED	SURFACE MOUNT	1/3"	10'	VARIABLE 2.5-10MM	PELCO INSULIUV
R39	DAY ROOM 47	RESIDENCE-FILE_RM20	FIXED	SURFACE MOUNT	1/3"	40'	VARIABLE 2.5-10MM	PELCO INSULIUV
R40	DINING 28	RESIDENCE-FILE_RM20	FIXED	SURFACE MOUNT	1/3"	25'	VARIABLE 2.5-10MM	PELCO INSULIUV
R41	CLASSROOM 11	RESIDENCE-FILE_RM20	FIXED	SURFACE MOUNT	1/3"	20'	VARIABLE 2.5-10MM	PELCO INSULIUV
R42	DINING 28	RESIDENCE-FILE_RM20	FIXED	SURFACE MOUNT	1/3"	25'	VARIABLE 2.5-10MM	PELCO INSULIUV
R43	DINING 28	RESIDENCE-FILE_RM20	FIXED	SURFACE MOUNT	1/3"	25'	VARIABLE 2.5-10MM	PELCO INSULIUV
G1	GYMNASIUM 11	GYM-MANT_RM13	FIXED	SURFACE MOUNT	1/3"	80'	VARIABLE 2.5-10MM	PELCO INSULIUV
G2	GYMNASIUM 11	GYM-MANT_RM13	FIXED	SURFACE MOUNT	1/3"	80'	VARIABLE 2.5-10MM	PELCO INSULIUV
G3	GYMNASIUM 11	GYM-MANT_RM13	FIXED	SURFACE MOUNT	1/3"	80'	VARIABLE 2.5-10MM	PELCO INSULIUV
G4	GYMNASIUM 11	GYM-MANT_RM13	FIXED	SURFACE MOUNT	1/3"	80'	VARIABLE 2.5-10MM	PELCO INSULIUV
G5	CLASSROOM 9	GYM-MANT_RM13	FIXED	SURFACE MOUNT	1/3"	20'	VARIABLE 2.5-10MM	PELCO INSULIUV
G6	CLASSROOM 9	GYM-MANT_RM13	FIXED	SURFACE MOUNT	1/3"	20'	VARIABLE 2.5-10MM	PELCO INSULIUV
G7	LOBBY 2	GYM-MANT_RM13	FIXED	SURFACE MOUNT	1/3"	30'	VARIABLE 2.5-10MM	PELCO ESO
G8	LOBBY 2	GYM-MANT_RM13	FIXED	SURFACE MOUNT	1/3"	30'	VARIABLE 2.5-10MM	PELCO ESO
G9	MULTI-PURPOSE 7	GYM-MANT_RM13	FIXED	SURFACE MOUNT	1/3"	30'	VARIABLE 2.5-10MM	PELCO INSULIUV
G10	MULTI-PURPOSE 7	GYM-MANT_RM13	FIXED	SURFACE MOUNT	1/3"	30'	VARIABLE 2.5-10MM	PELCO INSULIUV
G11	VESTIBULE 1	GYM-MANT_RM13	FIXED	SURFACE MOUNT	1/3"	30'	VARIABLE 2.5-10MM	PELCO INSULIUV
G12	MULTI-PURPOSE 7	GYM-MANT_RM13	FIXED	SURFACE MOUNT	1/3"	30'	VARIABLE 2.5-10MM	PELCO INSULIUV
G13	GYMNASIUM 11	GYM-MANT_RM13	FIXED	SURFACE MOUNT	1/3"	30'	VARIABLE 2.5-10MM	PELCO INSULIUV
G14	GYMNASIUM 11	GYM-MANT_RM13	FIXED	SURFACE MOUNT	1/3"	30'	VARIABLE 2.5-10MM	PELCO INSULIUV
G15	MAINTENANCE 13	GYM-MANT_RM13	FIXED	SURFACE MOUNT	1/3"	30'	VARIABLE 2.5-10MM	PELCO INSULIUV

1 CAMERA SCHEDULE  
SCALE: NOT TO SCALE

FAS DESIGNATION	ZONE/MONITOR ZONE NUMBER	DESCRIPTION	CAMERA CALLUP UPON ALARM
FAS-1	01	ALARM/TAMPER-SENSOR CABLE ZONE 1	S18 S24
FAS-2	02	ALARM/TAMPER-SENSOR CABLE ZONE 2	S15 S24
FAS-2	03	ALARM/TAMPER-SENSOR CABLE ZONE 3	S10 S6
FAS-2	04	ALARM/TAMPER-SENSOR CABLE ZONE 4	S16 S6
FAS-3	05	ALARM/TAMPER-SENSOR CABLE ZONE 5	S8 S6
FAS-3	06	ALARM/TAMPER-SENSOR CABLE ZONE 6	S8 S1
FAS-4	07	ALARM/TAMPER-SENSOR CABLE ZONE 7	S1 S8
FAS-4	08	ALARM/TAMPER-SENSOR CABLE ZONE 8	S1 S2
FAS-5	09	ALARM/TAMPER-SENSOR CABLE ZONE 9	S2 S1
FAS-5	10	ALARM/TAMPER-SENSOR CABLE ZONE 10	S4 S7
FAS-6	11	ALARM/TAMPER-SENSOR CABLE ZONE 11	S21 S7
FAS-6	12	ALARM/TAMPER-SENSOR CABLE ZONE 12	S15 S13
FAS-7	09	ALARM/TAMPER-MICROVAVUE ZONE 13	S17 S20

2 PERIMETER ALARM SYSTEM SCHEDULE  
SCALE: NOT TO SCALE

FROM	TO	NUMBER/ SIZE	REMARKS
<b>ELECTRICAL CONDUITS</b>			
MAINTENANCE 13 - GYM	PP-1	(2) 4"	POWER WIRING
	PP-1	(2) 1.5"	(4) #10 AWG CU THHN-PRG (2) #20 AWG (2) #12 AWG
	PP-1	(2) 1.5"	(4) #10 AWG CU THHN-PRG (2) #20 AWG (2) #12 AWG
	PP-1	(1) 4"	EMPTY
	PP-1	(1) 2"	(3) #6AWG CU THHN (1) #6 AWG CU GND
	PP-1	(1) 2"	(3) #6 AWG CU THHN (1) #6 AWG CU GND
	PP-2	(1) 2"	(3) #6 AWG CU THHN (1) #6 AWG CU GND
	PP-2	(1) 4"	EMPTY
	PP-3	(1) 1.5"	(3) #6 AWG CU THHN (1) #6 AWG CU GND
	FAS-3	(1) 1.5"	(3) #6 AWG CU THHN (1) #6 AWG CU GND
	FAS-4	(1) 1.5"	(3) #6 AWG CU THHN (1) #6 AWG CU GND
	FAS-1	(1) 1.5"	(3) #6 AWG CU THHN (1) #6 AWG CU GND
	FAS-7	(1) 1.5"	(3) #6 AWG CU THHN (1) #6 AWG CU GND
	FAS-1	(1) 1.5"	(3) #6 AWG CU THHN (1) #6 AWG CU GND
	FAS-6	(1) 1.5"	(3) #6 AWG CU THHN (1) #6 AWG CU GND
	FAS-5	(1) 1.5"	(3) #6 AWG CU THHN (1) #6 AWG CU GND
<b>SIGNAL CONDUITS</b>			
MAINTENANCE 13 - GYM	SP-1	(2) 4"	(2) SFO CABLES (6) CFO CABLES
	SP-1	(1) 2"	(1) SFO CABLE (3) CFO CABLES
	SP-1	(1) 2"	(1) SFO CABLE (3) CFO CABLES
	SP-1	(1) 4"	EMPTY
	SP-2	(1) 4"	EMPTY
	SP-3	(1) 4"	EMPTY
	FAS-3	(1) 2"	(2) SFO CABLES (2) CFO CABLES
	FAS-3	(1) 2"	(1) SFO CABLE (1) CFO CABLE
	FAS-7	(1) 2"	(2) SFO CABLES
	FAS-1	(1) 1.5"	(2) SFO CABLES
	FAS-2	(1) 2"	(1) SFO CABLE (2) CFO CABLES
	FAS-1	(1) 2"	(1) SFO CABLE (3) CFO CABLES
	FAS-6	(1) 2"	(1) SFO CABLE (2) CFO CABLES
	FAS-5	(1) 2"	(1) SFO CABLE (1) CFO CABLES
	FAS-5	(1) 2"	(1) SFO CABLE (1) CFO CABLES
	FAS-2	(1) 1"	(1) CAT6 CABLE (2) #18 AWG THHN
	FAS-2	(1) 1"	(1) CAT6 CABLE (2) #18 AWG THHN
	FAS-2	(1) 1"	(1) CAT6 CABLE (2) #18 AWG THHN
	FAS-2	(1) 1"	(1) CAT6 CABLE (2) #18 AWG THHN
	FAS-3	(1) 1"	(1) CAT6 CABLE (2) #18 AWG THHN
	FAS-3	(1) 1"	(1) CAT6 CABLE (2) #18 AWG THHN
	FAS-3	(1) 1"	(1) CAT6 CABLE (2) #18 AWG THHN
	FAS-4	(1) 1"	(1) CAT6 CABLE (2) #18 AWG THHN
	FAS-4	(1) 1"	(1) CAT6 CABLE (2) #18 AWG THHN
	FAS-5	(1) 1"	(1) CAT6 CABLE (2) #18 AWG THHN
	FAS-5	(1) 1"	(1) CAT6 CABLE (2) #18 AWG THHN
	FAS-5	(1) 1"	(1) CAT6 CABLE (2) #18 AWG THHN
	FAS-6	(1) 1"	(1) CAT6 CABLE (2) #18 AWG THHN
	FAS-6	(1) 1"	(1) CAT6 CABLE (2) #18 AWG THHN
	FAS-6	(1) 1"	(1) CAT6 CABLE (2) #18 AWG THHN
	FAS-1	(1) 1"	(1) CAT6 CABLE (2) #18 AWG THHN
	FAS-1	(1) 1"	(1) CAT6 CABLE (2) #18 AWG THHN

NOTE: NUMBER AND SIZES OF CONDUITS SHOWN ARE MINIMUM ALLOWED. INCREASE CONDUIT SIZES AS REQUIRED SO THAT CONDUCTOR FILL DOES NOT EXCEED 40% OF THE CONDUIT CROSS SECTIONAL AREA.

3 CONDUIT SCHEDULE  
SCALE: NOT TO SCALE



**CBS COMPANIES**  
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**WARNING:**  
THE ATTRIBUTION OF THIS MATERIAL, IN ANY WAY, UNLESS DONE UNDER THE DIRECTION OF A COMPETENT PROFESSIONAL, I.E. ARCHITECT FOR AN ARCHITECT, ENGINEER FOR AN ENGINEER, OR LICENSED PROFESSIONAL IN ANY OTHER FIELD, IS A VIOLATION OF THE PROFESSIONAL ETHICS AND IS A CLASS "A" MISDEMEANOR.



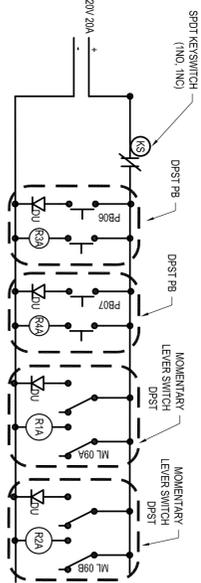
STATE OF NEW YORK  
LICENSED PROFESSIONAL ENGINEER  
NO. 22222

**ELECTRICAL**  
TITLE: PROVIDE SECURITY MODIFICATIONS TABERG RESIDENTIAL CENTER FOR GIRLS  
LOCATION: 10011 TABERG-FLORENCE RD.  
RR. NO. 1, BOX 139  
TABERG, NY 13471  
CLIENT: OFFICE OF CHILDREN AND FAMILY SERVICES

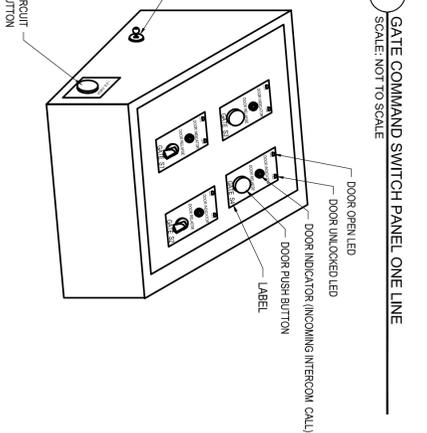
OCFS PROJECT NO. 2068

MARK	DATE	ADDITIONAL 1	DESCRIPTION
	2/13/2013		
	9/19/2012		

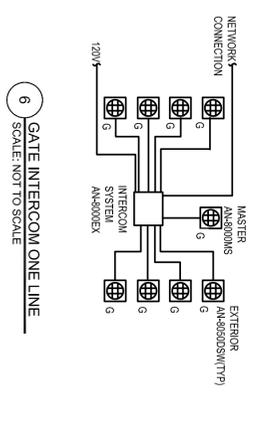
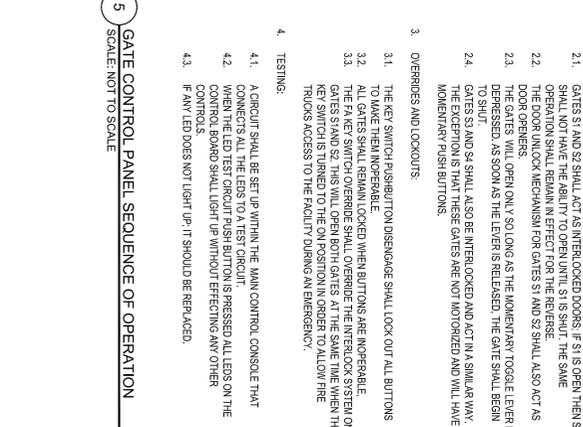
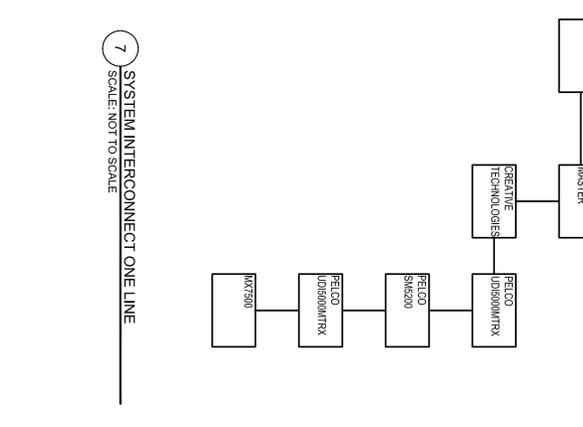
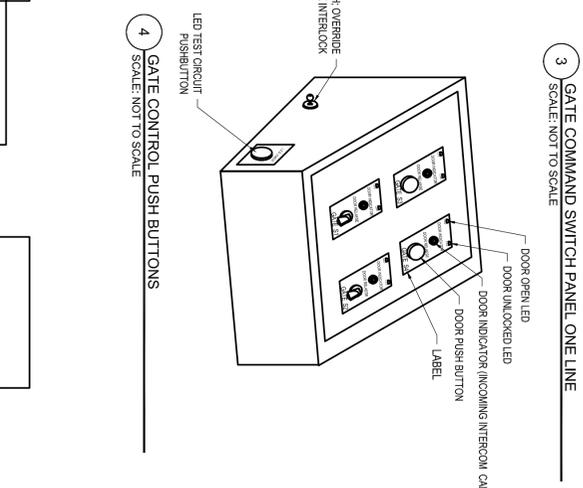
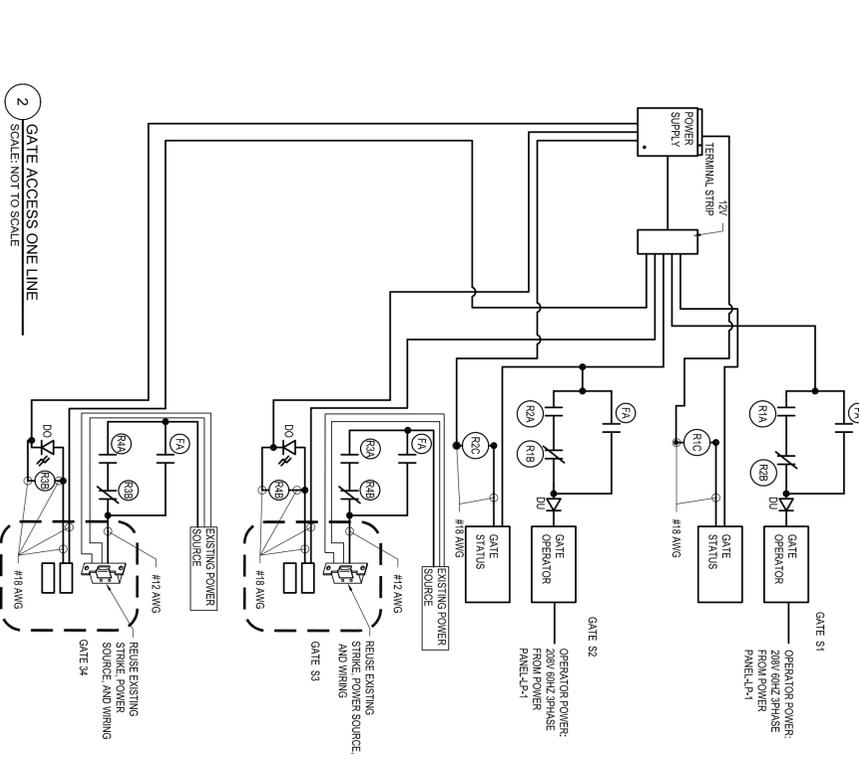
PROJECT NUMBER: **44177 - E**  
DESIGNED BY: W.B. BARLET  
DRAWN BY: D.W. BARLET  
FIELD CHECK: T.L. HEHR



- CONTROL PANEL SEQUENCE OF OPERATIONS
- GATE OPERATIONS:
    - WHEN AN INTERCOM BUTTON IS PRESSED THE SPECIFIED GATE INDICATOR LED SHALL BE ILLUMINATED ON THE CONTROL PANEL.
    - WHEN THE MOMENTARY PUSH BUTTONS PRESSED THE CORRESPONDING GATE INDICATOR LED SHALL BE ILLUMINATED AND THE GATE UNLOCKED.
    - WHEN THE GATE IS OPEN THE CORRESPONDING GATE OPEN LED SHALL BE ILLUMINATED.
    - WHEN THE MOMENTARY PUSH BUTTON IS RELEASED THE CORRESPONDING GATE SHALL BE LOCKED AND THE GATE UNLOCKED LED SHALL GO OUT.
    - WHEN THE GATE IS CLOSED THE CORRESPONDING GATE OPEN LED SHALL GO OUT.

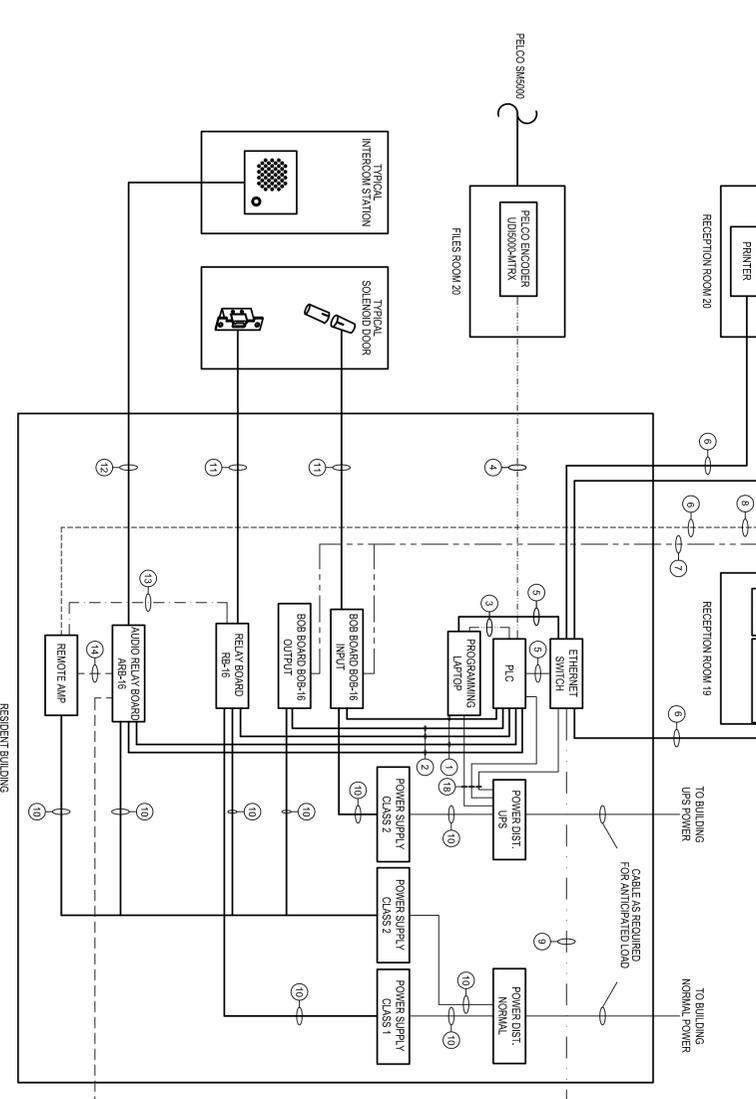


- GATE INTERLOCK:
  - GATES S1 AND S2 SHALL ACT AS INTERLOCKED DOORS. IF S1 IS OPEN THEN S2 OPERATION SHALL REMAIN IN EFFECT FOR THE REVERSE.
  - THE DOOR UNLOCK MECHANISM FOR GATES S1 AND S2 SHALL ALSO ACT AS DOOR OPENS.
  - THE GATES WILL OPEN ONLY SO LONG AS THE MOMENTARY TOGGLE LEVER IS DEPRESSED. AS SOON AS THE LEVER IS RELEASED, THE GATE SHALL BEGIN TO CLOSE.
  - THE EXCEPTION IS THAT THESE GATES ARE NOT MOTORISED AND WILL HAVE MOMENTARY PUSH BUTTONS.
- OVERIDES AND LOOKOUTS:
  - THE KEY SWITCH PUSHBUTTON DISENGAGE SHALL LOCK OUT ALL BUTTONS TO MAKE THEM INOPERABLE.
  - ALL GATES SHALL REMAIN LOCKED WHEN BUTTONS ARE INOPERABLE.
  - GATES S1 AND S2 THIS WILL OPEN BOTH GATES AT THE SAME TIME WHEN THE KEY SWITCH IS TURNED TO THE ON POSITION IN ORDER TO ALLOW THE PROCS ACCESS TO THE FACILITY DURING AN EMERGENCY.
- TESTING:
  - A CIRCUIT SHALL BE SET UP WITHIN THE MAIN CONTROL CONSOLE THAT CONNECTS ALL THE LEDS TO A TEST CIRCUIT.
  - WHEN THE LED TEST CIRCUIT PUSH BUTTON IS PRESSED ALL LEDS ON THE CONTROL BOARD SHALL LIGHT UP WITHIN 5 SECONDS OF ANY OTHER.
  - IF ANY LED DOES NOT LIGHT UP, IT SHOULD BE REPLACED.



- SYMBOLS AND ABBREVIATIONS FOR THIS SHEET ONLY:
- KS: KEY SWITCH
  - FS: FUSE
  - RS: RELAY
  - GS: GATE STATUS
  - IC: INTERCOM
  - NO: NORMALLY OPEN
  - NC: NORMALLY CLOSED
  - SPST: SINGLE THROW SINGLE THROW PUSHBUTTON
  - SPDT: SINGLE THROW DOUBLE THROW PUSHBUTTON
  - NO: NORMALLY OPEN PUSHBUTTON
  - NC: NORMALLY CLOSED PUSHBUTTON
  - DO: DOOR OPENED LED
  - DL: DOOR UNLOCKED LED
  - IC: INTERCOM LED
  - NO: NORMALLY OPEN CONTACT
  - NC: NORMALLY CLOSED CONTACT
  - RELAY: RELAY

- GATE GENERAL NOTES:
- ALL ELECTROMECHANICAL LOCKS SHALL HAVE A SPST PUSH BUTTON ASSOCIATED WITH THEM.
  - ANY LED WILL LIGHT UP IF:
    - A DOOR IS UNLOCKED (1 LED)
    - A DOOR IS OPENED (1 LED)
    - AN INCOMING CALL FROM AN INTERCOM (1 LED)
    - THE LED TEST CIRCUIT IS ACTIVATED
  - WHEN THE GATE CONTROL CONSOLE WILL BE LOCKED DOWN AND UNUSABLE WITHOUT COMPROMISING THE LOCKING INTEGRITY OF STRIKES AND UNLOCKS SHALL REMAIN LOCKED WHEN CONTROL CONSOLE IS LOCKED DOWN.



NO.	LINE	TYPE	DESCRIPTION	FAIRBY
1	---	GRP-X4X40	INPUT TO CABLE	FACTORY
2	---	GRP-OXX40	OUTPUT TO CABLE	FACTORY
3	---	HOST/PERIPH CABLE (DIP/G.O.N.V.)	HOST/PERIPH CABLE (DIP/G.O.N.V.)	FACTORY
4	---	PRE-MADE	PRE-MADE	FACTORY
5	---	RS-232 INTERFERENCE CABLE	RS-232 INTERFERENCE CABLE	FACTORY
6	---	CAT 5	ETHERNET PATCH CABLE	FACTORY
7	---	WEST PENN 234	ETHERNET CABLE	FIELD
8	---	WEST PENN 234	IC MASTER CONTROL CABLE	FIELD
9	---	WEST PENN 233 (N)	IC MASTER AUDIO CABLE	FIELD
10	---	62.5 FIBER (M)	ETHERNET FIBER BACKBONE	FACTORY
11	---	#14 THIN	BACK POWER WIRING	FACTORY
12	---	WEST PENN 305	CLASS 1 FIELD CABLE	FIELD
13	---	BEIDEN 9421	INTERCOM STATION CABLE	FACTORY
14	---	WEST PENN 203	REMOTE AMP CONTROL CABLE	FACTORY
15	---	WEST PENN 203	SHIELDED AUDIO CABLE	FACTORY
16	---	WEST PENN 225	SHIELDED AUDIO CABLE	FIELD
17	---	TV PAIR AUDIO CABLE	TV PAIR AUDIO CABLE	NOT USED
18	---	WEST PENN 225	POWER CONDUIT	NOT USED

- ACCESS CONTROL SYSTEM
1. SYMBOLS FOR THIS DETAIL DRAWING ONLY.
2. ALL FIELD WIRING BY ELECTRICAL CONTRACTOR.

OCCS PROJECT NO. 2068

REVISIONS:

NO.	DATE	DESCRIPTION
1	2/13/2013	ADDITIONAL 1
2	9/19/2012	BID DOCUMENT

PROJECT NUMBER: 44177 - E

DESIGNED BY: W.R. BARLEY

DRAWN BY: D.W. BARLEY

FIELD CHECK: T.L. HEATH

APPROVED:

REVISIONS: 2/13/2013

SECURITY ONE-LINE DIAGRAM

DRAWING NUMBER: E-604

SHEET 21 OF 21

ELECTRICAL

TITLE: PROVIDE SECURITY MODIFICATIONS TABERG RESIDENTIAL CENTER FOR GIRLS

LOCATION: 10011 TABERG-FLORENCE RD. RR. NO. 1, BOX 139 TABERG, NY 13471

CLIENT: OFFICE OF CHILDREN AND FAMILY SERVICES

CONTRACTOR: ELECTRICAL

STATE OF NEW YORK

REGISTERED PROFESSIONAL ENGINEER

NO. 03508-0001

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C&S Engineers, Inc.

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