



City of San Antonio

## TRANSPORTATION AND CAPITAL IMPROVEMENTS

### ADDENDUM No. 3

#### FORMAL REQUEST FOR COMPETITIVE SEALED PROPOSAL (RFCSP)

**PROJECT NAME:** FIRE STATION # 18 REPLACEMENT, Project No. 40-00015

**DATE:** February 3, 2016

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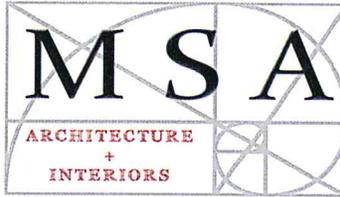
This addendum is separated into sections for convenience; however, all contractors, subcontractors, material men, and other parties shall be responsible for reading the entire addendum. The failure to list an item or items in all affected sections of this addendum does not relieve any party affected from performing as per instructions, providing that the information is set forth one time any place in this addendum. These documents shall be attached to and become part of the Contract Documents for this project. The contractor shall be required to sign an acknowledgement of the receipt of this addendum and submit with their proposal package.

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#### I. Additional Information/Revisions

**Additional information and revisions to specifications have been added.**





February 2, 2016

## **Addendum No. 3**

**City of San Antonio**

**Fire Station No. 18**

*1410 S. W.W. White Rd.*

San Antonio, TX

**A/P A2114714**

Cover Letter, Architectural/Structural Changes, Civil Changes, MEP Changes  
Attachments:

- RFI #2 & Response Including Separate Civil Response
- Revised Specifications Section 07 2400 Exterior Insulation and Finish Systems
  - Revised Specifications Section 11 3100 Residential Appliances
- City of San Antonio TCI Roadside Solar Powered Fire Station Flasher Assembly Standards

### **Request for Information**

RFI No. 2 (2 sheets at 8 ½" x 11").

### **Architectural Specifications**

REPLACE SPECIFICATIONS SECTION 07 2400 EXTERIOR INSULATION FINISH SYSTEMS (4 sheets at 8 ½" x 11"):

Clarifications to locations of Type V (High Impact as specified) & Type IV EIFS.

REPLACE SPECIFICATIONS SECTION 11 3100 KITCHEN APPLIANCES (3 sheets at 8 ½" x 11"):

Clarification to Kitchen Hood model listed and detailed and on the MEP construction documents and captured requirements in Division 23.

### **Civil**

PROVISION OF City of San Antonio TCI Roadside Solar Powered Fire Station Flasher Assembly Standards. (1 sheet at 8 ½" x 11"; 2 sheets at 11" x 17").



**AIA**<sup>®</sup>

# Document G716™ – 2004

## Request for Information (“RFI”)

**TO:**

MSA Architecture & Interiors  
16719 Huebner Rd, Bldg. 3  
San Antonio, TX 78248

**PROJECT:**

Architectural Design Services for Fire Station 18  
W.W. White & Rice Rd.  
San Antonio, TX 78220

**FROM:**

F.A. Nunnell Co.  
2922 N. Pan Am Expressway  
San Antonio, TX 78208

**ISSUE DATE:**

RFI No. 002

**PROJECT NUMBERS:** 14012 / 40-00415

**REQUESTED REPLY DATE:**

**COPIES TO:** City of San Antonio

**RFI DESCRIPTION:** *(Fully describe the question or type of information requested.)*

1. The specification calls for the insulation to be “Type V.” According to the EIFS contractors, “Type V” is a very high impact product with a compression strength (14,000 psi) four times higher than that of the more conventionally used “Type IV” (3,600 psi). Of course, it also has a price tag that is three to four times higher. Can you please confirm that the Type V insulation is in fact the desired product?
2. The Commercial Kitchen allowance was removed in Addendum #2. Spec Section 11 31 00 includes a model number but doesn’t seem to indicate which manufacturer. It also references section 23 38 13 Commercial Kitchen Hoods, but I don’t see a manufacturers listed there either. I ran back thru Addendum #2 just make sure I didn’t miss it there, but I don’t see it. Can you clarify which manufacturer the model number in section 11 31 00 pertains to? It would also help to list the manufacturer and model number in section 23 38 13, because I do think ultimately the mechanical contractors need to pick up these hoods, since there is no true kitchen equipment contractor involved, and this section does not currently cross reference section 11 31 00.
3. Sheet C 12 indicates 2” conduit running to both solar powered flashing beacons. What will be running in the conduit? There is a wireless option called out so... is that saying the contractor could run power to the flashing beacons? Is the conduit needed for the coaxial cable for antennae regardless?

**REFERENCES/ATTACHMENTS:** *(List specific documents researched when seeking the information requested.)*

**SPECIFICATIONS:**

1. Attached Revised Specification Section 07 2400
2. Attached Revised Specifications Section 11 3100

**DRAWINGS:**

**OTHER:**

3. Attached City of San Antonio TCI Roadside Solar Powered Fire Station Flasher Assembly Standards

**SENDER’S RECOMMENDATION:** *(If RFI concerns a site or construction condition, the sender may provide a recommended solution, including cost and/or schedule considerations.)*

**RECEIVER'S REPLY:** *(Provide answer to RFI, including cost and/or schedule considerations.)*

1. Refer to revised (Attached) Specifications Section 07 2400, High Impact product locations are clarified - to be located generally in exposed areas near grade; other EIFS is to be Type IV. Also refer to drawing sheets A6.1, A6.1 & A6.2A for locations and extents of High Impact EIFS.
2. Refer to revised (Attached) Specifications Section 11 3100. Also, response from MEP Engineer of record (CNG Engineering, PLCC.): "The kitchen hood model listed and detailed on the construction documents is a Captive-Aire hood. The Div 23 spec captures the requirement."
3. Refer to attachment. From Civil Engineer of Record (Camacho - Hernandez & Associates, LLC): "The conduit runs two wires for the flashing beacons if and only if the contractor goes with the wired option. If the contractor goes with the wireless option, the conduits and wires are not required. The coaxial cable is used to connect the wireless antenna on the beacon assembly to the flashing beacon control box. During construction the COSA traffic department determines/agrees to the final locations; the same goes for the assembly options."



February 2, 2016

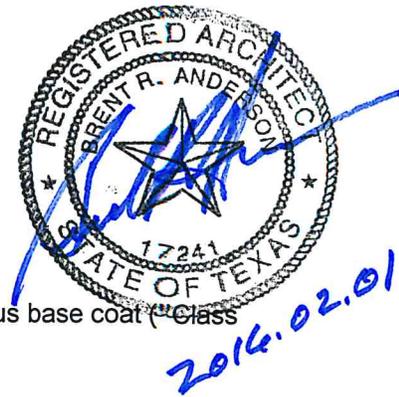
CoSA - TCI

BY

DATE

COPIES TO

**Note:** This reply is not an authorization to proceed with work involving additional cost, time or both. If any reply requires a change to the Contract Documents, a Change Order, Construction Change Directive or a Minor Change in the work must be executed in accordance with the Contract Documents.



**SECTION 07 2400**  
**EXTERIOR INSULATION AND FINISH SYSTEMS**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Composite wall rigid insulation and reinforced finish coating over cementitious base coat ("Class PM") finish compositions as shown on drawings.
- B. Drainage and water-resistive barriers behind insulation board.

**1.02 RELATED REQUIREMENTS**

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

**1.03 REFERENCE STANDARDS**

- A. ASTM B117 - Standard Practice for Operating Salt Spray (Fog) Apparatus; 2011.
- B. ASTM C150/C150M - Standard Specification for Portland Cement; 2012.
- C. ASTM C177 - Standard Test Method for Steady-State Heat Flux Measurements and Thermal Transmission Properties by Means of the Guarded-Hot-Plate Apparatus; 2013.
- D. ASTM C578 - Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation; 2014.
- E. ASTM C1397 - Standard Practice for Application of Class PB Exterior Insulation and Finish Systems (EIFS) and EIFS with Drainage; 2013.
- F. ASTM D968 - Standard Test Methods for Abrasion Resistance of Organic Coatings by Falling Abrasive; 2005 (Reapproved 2010).
- G. ASTM D2247 - Standard Practice for Testing Water Resistance of Coatings in 100% Relative Humidity; 2011.
- H. ASTM D3273 - Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber; 2012.
- I. ASTM E331 - Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference; 2000 (Reapproved 2009).
- J. ASTM E2273 - Standard Test Method for Determining the Drainage Efficiency of Exterior Insulation and Finish Systems (EIFS) Clad Wall Assemblies; 2003 (Reapproved 2011).
- K. ASTM E2486/E2486M - Standard Test Method for Impact Resistance of Class PB and PI Exterior Insulation and Finish Systems (EIFS); 2013.
- L. ASTM G153 - Standard Practice for Operating Enclosed Carbon Arc Light Apparatus for Exposure of Nonmetallic Materials; 2013.
- M. ASTM G155 - Standard Practice for Operating Xenon Arc Light Apparatus for Exposure of Nonmetallic Materials; 2013.
- N. ICC-ES AC219 - Acceptance Criteria for Exterior Insulation and Finish Systems; 2009.
- O. NFPA 259 - Standard Test Method for Potential Heat of Building Materials; 2013.
- P. NFPA 268 - Standard Test Method for Determining Ignitibility of Exterior Wall Assemblies Using a Radiant Heat Energy Source; 2012.
- Q. NFPA 285 - Standard Fire Test Method for Evaluation of Fire Propagation Characteristics of Exterior Non-Load-Bearing Wall Assemblies Containing Combustible Components; 2012.

**PART 2 PRODUCTS**

**2.01 MANUFACTURERS**

- A. Basis of Design: Sto L100X Sto Therm ci XPS Lotusan. This is a performance specification based on the intent of the work. Equal system and chemistry.

## 2.02 EXTERIOR INSULATION AND FINISH SYSTEM

- A. Exterior Insulation and Finish System: DRAINAGE type; reinforced finish coating on mechanically-fastened insulation board over sheet-type drainage layer or spacers and separate sheet-type water-resistive barrier over substrate; provide a complete system that has been tested to show compliance with the following characteristics; include all components of specified system and substrate(s) in tested samples.
- B. Fire Characteristics:
  - 1. Flammability: Pass, when tested in accordance with NFPA 285.
  - 2. Ignitibility: No sustained flaming when tested in accordance with NFPA 268.
  - 3. Potential Heat of Foam Plastic Insulation Tested Independently of Assembly: No portion of the assembly having potential heat that exceeds that of the insulation sample tested for flammability (above), when tested in accordance with NFPA 259 with results expressed in Btu per square foot (mJ/sq m).
- C. Water Penetration Resistance: No water penetration beyond the plane of the base coat/insulation board interface after 15 minutes, when tested in accordance with ASTM E331 at 6.24 psf (299 Pa) differential pressure with tracer dye in the water spray; include in tested sample at least two vertical joints and one horizontal joint of same type to be used in construction; disassemble sample if necessary to determine extent of water penetration.
- D. Drainage Efficiency: Average minimum efficiency of 90 percent, when tested in accordance with ASTM E2273 for 75 minutes.
- E. Salt Spray Resistance: No cracking, checking, crazing, erosion, blistering, peeling, delamination, or corrosion of finish coating after 300 hours exposure in accordance with ASTM B117, using at least three samples matching intended assembly, at least 4 by 6 inches (100 by 150 mm ) in size.
- F. Freeze-Thaw Resistance: No cracking, checking, crazing, erosion, blistering, peeling, delamination, or corrosion of finish coating when viewed under 5x magnification after 10 cycles, when tested in accordance with ICC-ES AC219 or AC235.
- G. Weathering Resistance: No cracking, checking, crazing, erosion, blistering, peeling, delamination, or corrosion of finish coating when viewed under 5x magnification after 2000 hours of accelerated weathering conducted in accordance with ASTM G153 Cycle 1 or ASTM G155 Cycle 1, 5, or 9.
- H. Water Degradation Resistance: No cracking, checking, crazing, erosion, blistering, peeling, delamination, or corrosion of finish coating after 14 days exposure, when tested in accordance with ASTM D2247.
- I. Mildew Resistance: No growth supported on finish coating during 28 day exposure period, when tested in accordance with ASTM D3273.
- J. Abrasion Resistance Of Finish: No cracking, checking or loss of film integrity when tested in accordance with ASTM D968 with 500 liters of sand.
- K. Impact Resistance: Construct system to provide the following impact resistance without exposure of broken reinforcing mesh, when tested in accordance with ASTM E2486/E2486M:
  - 1. Standard: 25 to 49 in-lb (2.83 to 5.54 J), for areas indicated on the drawings.
  - 2. High: 90 to 150 in-lb (10.2 to 17 J), for areas indicated on the drawings.

## 2.03 MATERIALS

- A. Finish Coating Top Coat: Water-based, air curing, acrylic or polymer-based finish with integral color and texture.
- B. Base Coat: Acrylic- or polymer-modified, fiber reinforced Portland cement coating.
  - 1. Portland Cement: ASTM C150, Type I or II.
  - 2. Base Coat Thickness: 1/4 inch (6 mm), minimum.

- C. Reinforcing Mesh: Balanced, open weave glass fiber fabric, treated for compatibility and improved bond with coating, weight, strength, and number of layers as required to meet required system impact rating.
- D. Insulation Board: Extruded polystyrene (XPS) board insulation with natural skin surfaces; ASTM C578, Type V, with the following characteristics AT ALL WAINSCOT LOCATIONS AROUND THE BUILDING NOTED AS 4'-0" HIGH FROM FINISH FLOOR. THIS ALSO INCLUDES ALL TRIM PROFILE LOCATIONS - (RE: DRAWINGS).
  - 1. Thermal Resistance: R-value (RSI-value) of 5 per 1 inch (25.4 mm) at 75 degrees F (24 degrees C) mean temperature using ASTM C177 test method.
- E. Insulation Board: Extruded polystyrene (XPS) board insulation with natural skin surfaces; ASTM C578, Type IV, with the following characteristics AT ALL LOCATIONS ABOVE WAINSCOT AND TRIM PROFILES (RE: DRAWINGS).
  - 1. Thermal Resistance: R-value (RSI-value) of 5 per 1 inch (25.4 mm) at 75 degrees F (24 degrees C) mean temperature using ASTM C177 test method.
- F. Drainage Layer or Spacers: Furnished or approved by EIFS manufacturer; capable of achieving specified drainage rate; not required to be water-resistive, air retarder, or vapor retarder.
- G. Water-Resistive Barrier Coating: Fluid-applied air and water barrier membrane; applied to sheathing; furnished or approved by EIFS manufacturer.
- H. Fluid-Applied Flashing: Flexible water based polymer material suitable for use with reinforcing mesh and, if used with water-resistive barrier sheet, certified compatible with sheet material.
- I. Flashing Tape: Self-adhering rubberized asphalt tape with polyethylene backing or other material and surface conditioner furnished or approved by EIFS manufacturer.
- J. Transition Membrane (i.e.: Sto Guard): Provide a continuous ABA evaluated air barrier building envelope system utilizing the EIFS manufacturer's vapor barrier transition membrane piece from wall to roof as per manufacturer recommendations to form a continuous air barrier system.

#### **2.04 ACCESSORY MATERIALS**

- A. Insulation Adhesive: Type required by EIFS manufacturer for project substrate.
- B. Insulation Fasteners: Fastener and plate system appropriate for substrate and as recommended by EIFS manufacturer.
- C. Trim: EIFS manufacturer's standard PVC or galvanized steel trim accessories, as required for a complete project and including starter track and drainage accessories.
- D. Sealant Materials: Compatible with EIFS materials and as recommended by EIFS manufacturer.
- E. Transition Membrane (i.e.: Sto Guard) Provide a continuous ABA evaluated air barrier building envelope system utilizing the EIFS manufacturer's vapor barrier transition membrane piece from wall to roof as per manufacturer recommendations to form a continuous air barrier system (i.e.: Sto Guard)

### **PART 3 EXECUTION**

#### **3.01 GENERAL**

- A. Install in accordance with EIFS manufacturer's instructions and ASTM C1397.
- B. Where different requirements appear in either document, comply with the most stringent.
- C. Neither of these documents supercedes the provisions of the Contract Documents that define the contractual relationships between the parties or the scope of work.

#### **3.02 INSTALLATION - WATER-RESISTIVE BARRIER**

- A. Apply barrier coating as recommended by coating manufacturer; prime substrate as required before application.

- B. Seal all substrate transitions and intersections with other materials to form continuous water-resistive barrier on exterior of sheathing, using method recommended by manufacturer.
- C. At door and window rough openings and other wall penetrations, seal water-resistive barrier and flexible flashings to rough opening before installation of metal flashings, sills, or frames, using method recommended by manufacturer.
- D. Lap flexible flashing or flashing tape at least 2 inches (50 mm) on each side of joint or transition.
- E. Install drainage layer or spacers after flashing tape has been completed.

**3.03 INSTALLATION - INSULATION**

- A. Install in accordance with manufacturer's instructions.
- B. Prior to installation of boards, install starter track and other trim level and plumb and securely fastened. Install only in full lengths, to minimize moisture intrusion; cut horizontal trim tight to vertical trim.
- C. Cut expanded polystyrene at underside of roof deck and to roof deck profile to form a continuous insulated building envelope system and as per manufacturer recommendations.
- D. Install back wrap reinforcing mesh at all openings and terminations that are not to be protected with trim.
- E. Place boards in a method to maximize tight joints. Stagger vertical joints and interlock at corners. Butt edges and ends tight to adjacent board and to protrusions. Achieve a continuous flush insulation surface, with no gaps in excess of 1/16 inch (1.6 mm).
- F. Fill gaps greater than 1/16 inch (1.6 mm) with strips or shims cut from the same insulation material.
- G. Rasp irregularities off surface of installed insulation board.

**END OF SECTION**

**SECTION 11 3100  
RESIDENTIAL APPLIANCES**



**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Kitchen appliances.
- B. Laundry appliances.

**1.02 RELATED REQUIREMENTS**

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.
- B. Section 22 1005 - Plumbing Piping: Plumbing connections for appliances.
- C. Section 26 2717 - Equipment Wiring: Electrical connections for appliances.

**1.03 REFERENCE STANDARDS**

- A. UL (EAUED) - Electrical Appliance and Utilization Equipment Directory; Underwriters Laboratories Inc.; current edition.

**1.04 SUBMITTALS**

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Manufacturer's data indicating dimensions, capacity, and operating features of each piece of residential equipment specified.
- C. Copies of Warranties: Submit manufacturer warranty and ensure that forms have been completed in Owner's name and registered with manufacturer.

**1.05 QUALITY ASSURANCE**

- A. Electric Appliances: Listed and labeled by UL and complying with NEMA standards.
- B. Gas Appliances: Bearing design certification seal of AGA.

**PART 2 PRODUCTS**

**2.01 KITCHEN APPLIANCES**

- A. **Refrigerator:** Free-standing, side-by-side, and frost-free.
  - 1. Capacity: Total storage of 24 cubic ft (0.67 cu m); minimum 25 percent freezer capacity.
  - 2. Energy Usage: meets Energy Star (trademark) standards minimum.
  - 3. Features: Include glass shelves, automatic icemaker, light in freezer compartment, and filters at ice makers.
  - 4. Exterior Finish: [], color white.
  - 5. Manufacturers:
    - a. Whirlpool model #WRS325FNA: [www.whirlpool.com](http://www.whirlpool.com).
    - b. Substitutions: Not permitted.
- B. **Range,** Wolf model # GR606DG: Natural gas, free-standing, with sealed burners standard burners and removable drip pans.
  - 1. Size: 60 inches (\_\_\_\_ mm) wide.
  - 2. Double Convection Oven: Self-cleaning with electronic ignition.
  - 3. Elements: Six (6) and griddle.
  - 4. Controls: Solid state electronic.
  - 5. Features: Include automatic meat thermometer, storage drawer, oven door window, broiler pan and grid, oven light, and stainless steel riser w/ shelf, red steel control knobs, (accessories), and insulated double convection oven.
  - 6. Exterior Finish: Stainless steel.
  - 7. Provide stainless steel backsplash with matching trim noted above from finish floor to underside of range hood - stainless steel finish to match Range.
  - 8. Manufacturers:

- a. Wolf: model GR606DG[]: [www.subzero-wolf.com](http://www.subzero-wolf.com)
- b. Substitutions: Not permitted.
- C. **Kitchen Hood**, Hood - #1: Make: Captive Aire / Model 3624ND-2-PSP-F. (re: MEP drawings & for listing & details / Section 23 3813 Commercial Kitchen Hoods for requirements).
- D. **Ice Machine**, Scotsman: Model C0330 Prodigy
  - 1. Large capacity machine with water filtration.
    - a. Provide three additional filtration cartridges in addition to installed filtration cartridge.
  - 2. Manufacturers:
    - a. Scotsman Ice Systems; Model C0330 Prodigy: [www.scotsman-ice.com](http://www.scotsman-ice.com)
    - b. Substitutions: Not permitted.
- E. **Stainless Steel Rings** (shall look similar to large grommets):
  - 1. 6" diameter to fit in 6" diameter holes at kitchen center island.
    - a. Quantity: 2.
    - b. Finish: match kitchen cabinet pulls.
  - 2. 4" diameter to fit in 4" diameter holes at kitchen outer island.
    - a. Quantity: 2.
    - b. Finish: match kitchen cabinet pulls.

## 2.02 LAUNDRY APPLIANCES

- A. Provide Equipment Eligible for Energy Star Rating: Energy Star Rated.
- B. **Clothes Washer**: Top-loading stationary.
  - 1. Color: white
  - 2. Size: 3.4 cubic feet.
  - 3. Controls: electronic.
  - 4. Cycles: Include normal.
  - 5. Finish: Painted steel with porcelain enamel top, color white.
  - 6. Manufacturers:
    - a. Sears Kenmore: Kenmore - Model 20022; [www.sears.com](http://www.sears.com).
    - b. Substitutions: Not permitted.
- C. **Clothes Dryer** : Electric, stationary. Front loaded.
  - 1. Size: 7.3 cubic feet.
  - 2. Controls: Solid state electronic, with electronic moisture-sensing dry control.
  - 3. Temperature Selections: Low, Medium-Low, Medium, Medium-High, High.
  - 4. Cycles: Include Heavy Duty Dry Cycle.
  - 5. Features: Include interior light, reversible door, stationary rack, sound insulation, and end of cycle signal.
  - 6. Finish: enamel, color white.
  - 7. Manufacturers:
    - a. Sears Kenmore: Kenmore - Model 61522; [www.sears.com](http://www.sears.com).

## PART 3 EXECUTION

### 3.01 EXAMINATION

- A. Verify utility rough-ins are provided and correctly located.

### 3.02 INSTALLATION

- A. Install in accordance with manufacturer's instructions.

### 3.03 ADJUSTING

- A. Adjust equipment to provide efficient operation.

### 3.04 CLEANING

- A. Remove packing materials from equipment and properly discard.

B. Wash and clean equipment.

**END OF SECTION**

# **FIRE STATION WARNING SYSTEM**

## **SOLAR POWERED**

The RTC Solar Powered Fire Station Warning System provides an increased level of safety for traffic approaching a fire station when emergency equipment is departing or returning. Pressing a push button, whether in the vehicle or in the fire station causes the remote warning lights (up to 1500' away) to flash. This radio controlled system alerts passing motorists to slow down and/or stop for the fire apparatus.



- > High visibility 30" x 30" Fire Station sign.
- > Dual signal indications with visors.
- > Unbreakable, vandal resistant solar panel.
- > Gel-Cell type battery for safer operation.
- > Heavy duty aluminum control cabinet:
  - DCF2 modular 2-circuit flasher
  - Solar voltage regulator
  - Wired with test switch
- > LED or halogen signal lamps.
- > Secure battery cabinet.
- > Low power, efficient radio activation.
- > Complete with mounting hardware.

# **RTC**

**RTC Manufacturing, Inc.**

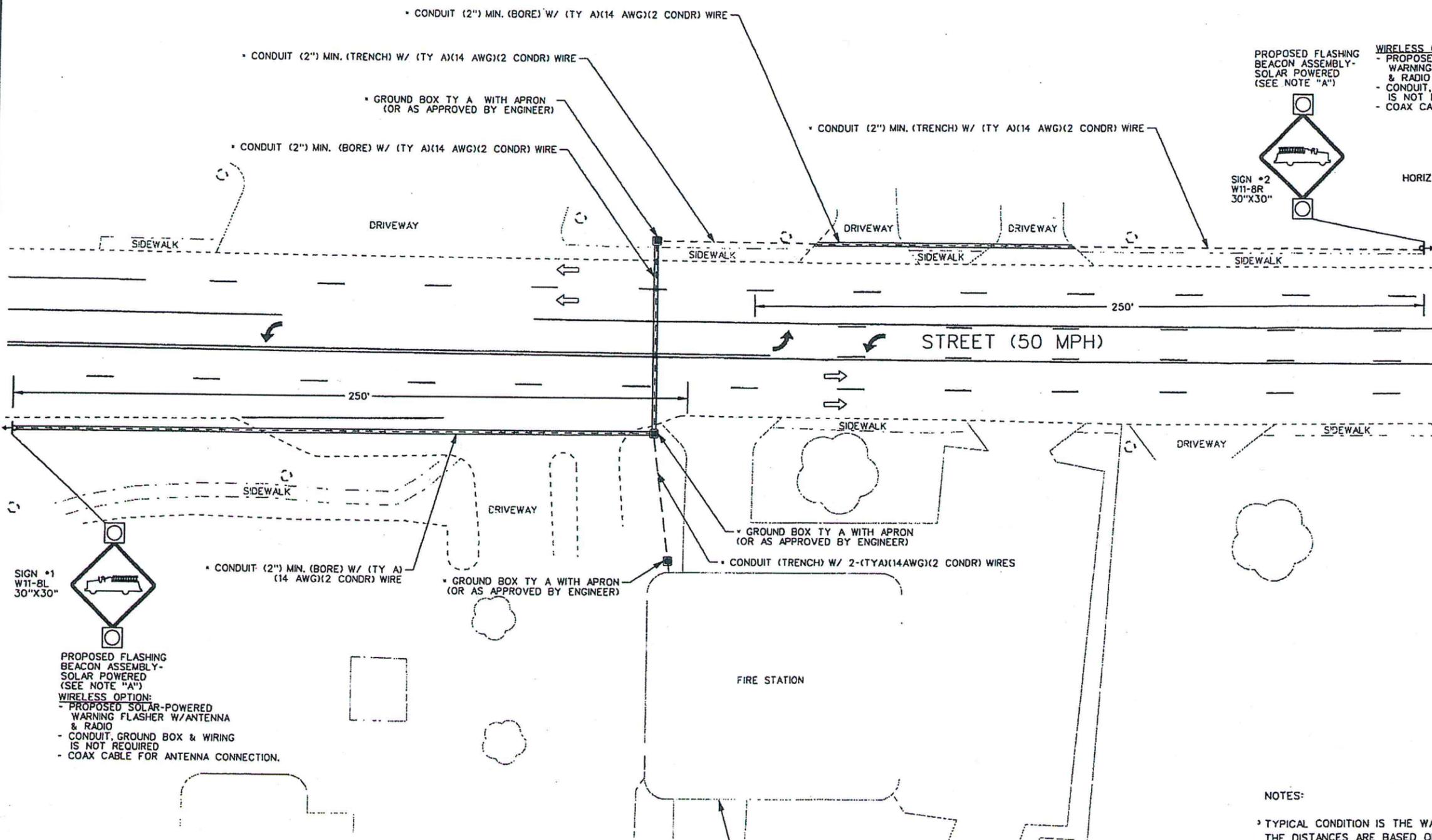
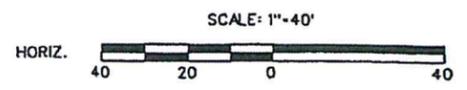
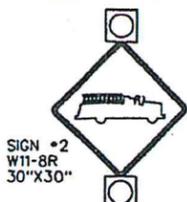
P. O. Box 150189 \* Arlington, TX 76015  
(800) 782-8721 (817) 274-3610 fax

*"Serving the traffic signal industry since 1987."*

[www.rtc-traffic.com](http://www.rtc-traffic.com)

PROPOSED FLASHING BEACON ASSEMBLY - SOLAR POWERED (SEE NOTE "A")

- WIRELESS OPTION:**
- PROPOSED SOLAR-POWERED WARNING FLASHER W/ANTENNA & RADIO
  - CONDUIT, GROUND BOX & WIRING IS NOT REQUIRED
  - COAX CABLE FOR ANTENNA CONNECTION.



- NOTE:**
- A) UNLESS OTHERWISE RECOMMENDED BY THE MANUFACTURER, USE THE FOLLOWING TABLE TO DETERMINE THE WIRE SIZE FROM CABINET TO BEACONS.
  - B) INSTALL GROUND BOX EVERY 200 FT MAX. OF CONDUIT.
  - C) TRENCH CONDUIT IN NATURAL GROUND ONLY. RESTORE NATURAL GROUND TO ORIGINAL CONDITION. BORE CONDUIT UNDER ALL WEATHER SURFACES SUCH AS PAVED STREETS, PAVED OR GRAVEL DRIVEWAYS, SIDEWALKS, ETC.

DISTANCE FROM CABINET TO BEACONS (FT.)	MINIMUM REQUIRED WIRE SIZE (AWG)
0 - 35	# 14
35 - 60	# 12
60 - 100	# 10
> 100	# 8

ADVANCE PLACEMENT DISTANCE	
POSTED OR 85TH-PERCENTILE SPEED	CONDITION B STOP CONDITION <sup>3</sup>
20 MPH	N/A <sup>3</sup>
25 MPH	N/A <sup>3</sup>
30 MPH	N/A <sup>3</sup>
35 MPH	N/A <sup>3</sup>
40 MPH	125 FT
45 MPH	175 FT
50 MPH	250 FT
55 MPH	325 FT
60 MPH	400 FT
65 MPH	475 FT
70 MPH	550 FT
75 MPH	650 FT
80 MPH	725 FT

SIGN #1  
W11-BL  
30"X30"

PROPOSED FLASHING BEACON ASSEMBLY - SOLAR POWERED (SEE NOTE "A")

- WIRELESS OPTION:**
- PROPOSED SOLAR-POWERED WARNING FLASHER W/ANTENNA & RADIO
  - CONDUIT, GROUND BOX & WIRING IS NOT REQUIRED
  - COAX CABLE FOR ANTENNA CONNECTION.

INSTALL (BY OTHERS):

- NON WIRELESS OPTION:**
- AC WALL MOUNTED CABINET W/ RECEIVER AND TRANSMIT PANEL
  - PUSH BUTTON W/ (TYA)(14AWG)(2 CONDR)
  - POWER SUPPLY

- WIRELESS OPTION:**
- AC WALL MOUNTED CABINET W/ RECEIVER AND TRANSMIT PANEL
  - PUSH BUTTON W/ (TYA)(14 AWG)(2 CONDR)
  - POWER SUPPLY
  - ANTENNA TO BE INSTALLED OUTSIDE BUILDING
  - HELIAX CABLE FOR ANTENNA CONNECTION.

NOTES:

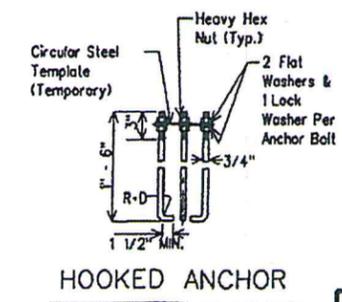
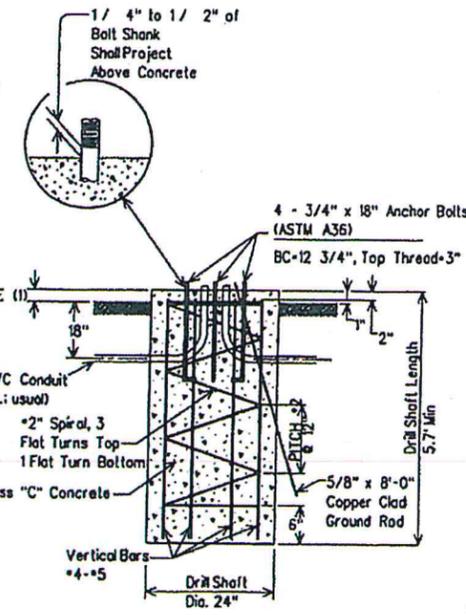
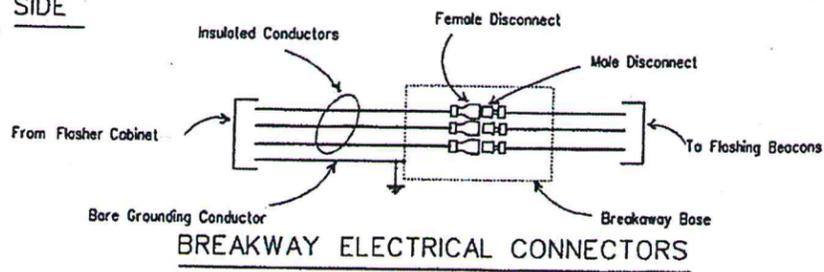
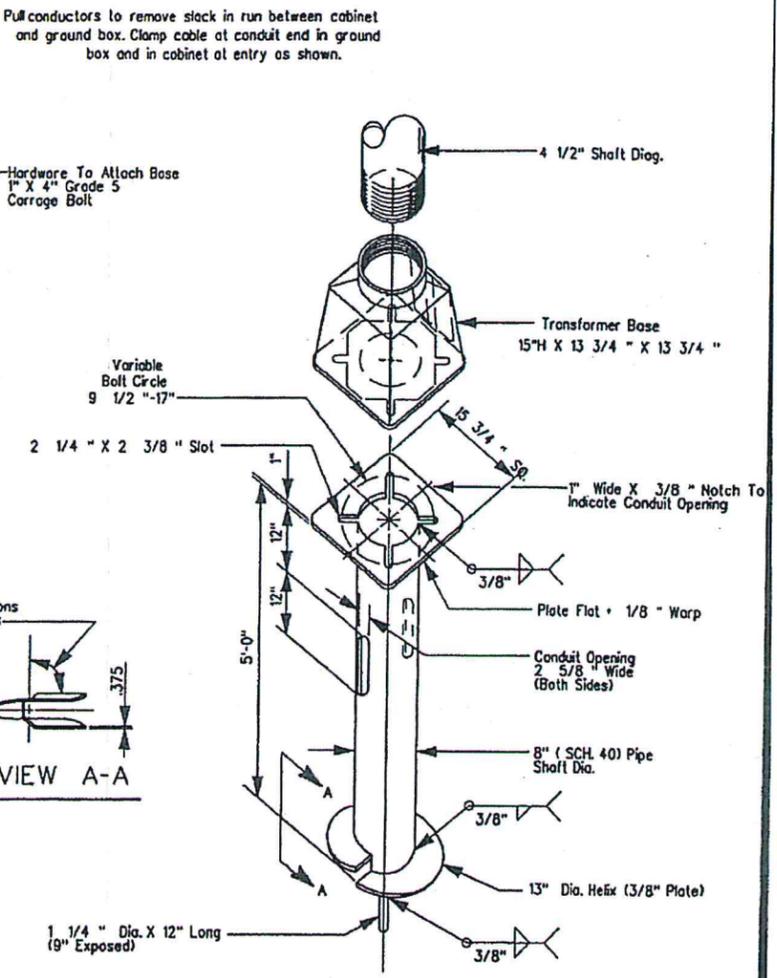
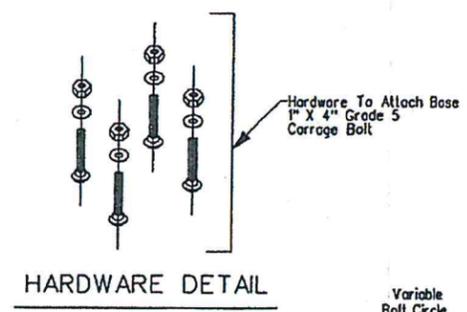
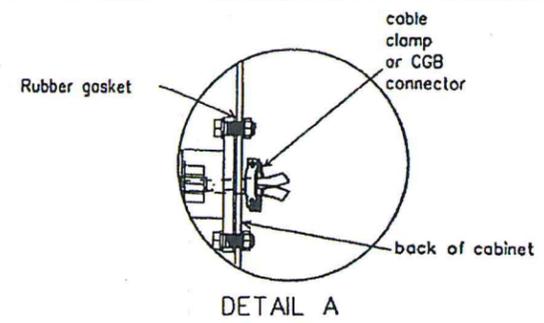
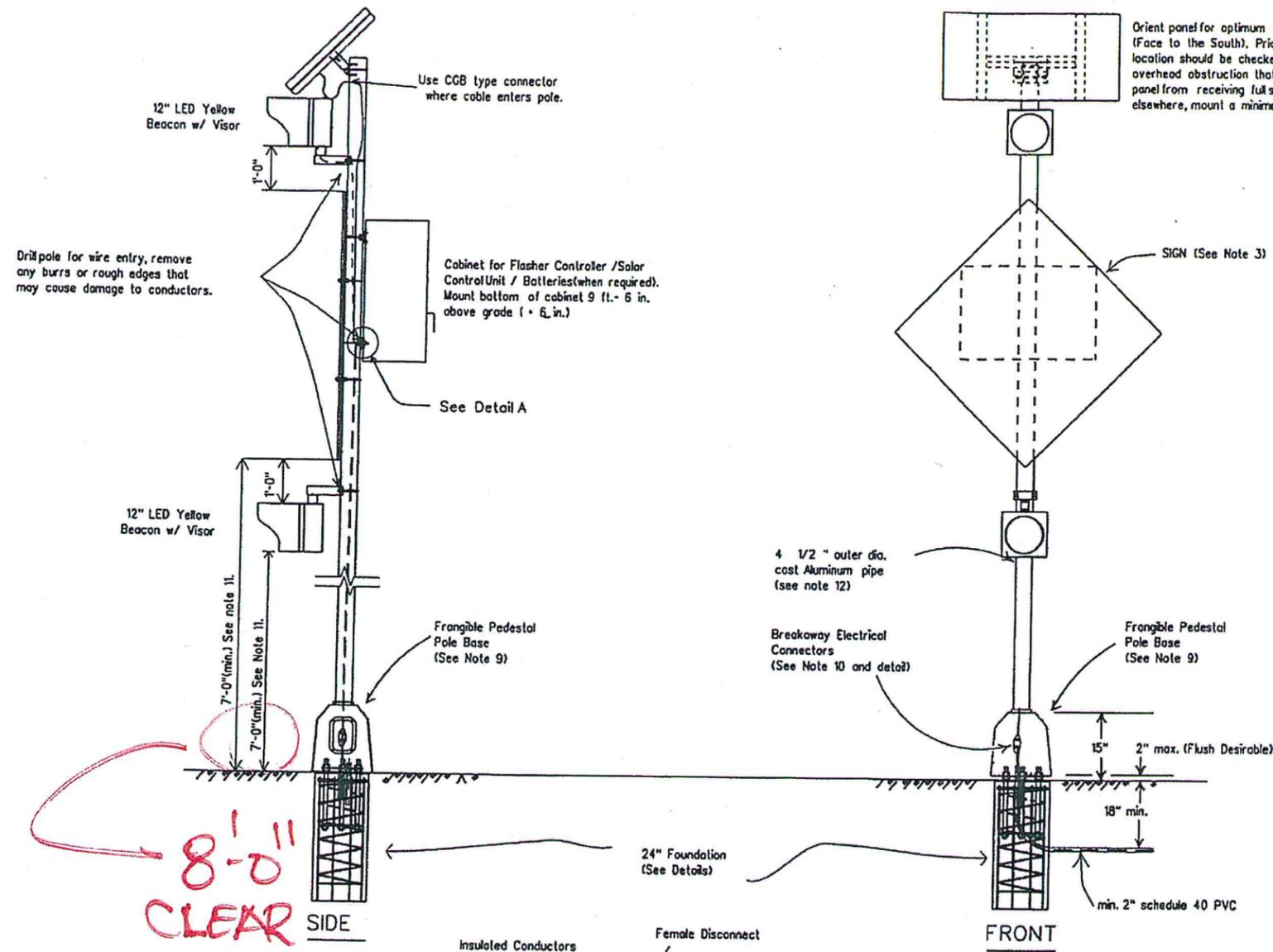
<sup>3</sup> TYPICAL CONDITION IS THE WARNING OF A POTENTIAL STOP SITUATION. THE DISTANCES ARE BASED ON THE 2001 AASHTO POLICY, STOPPING SIGHT DISTANCE, EXHIBIT 3-1, PROVIDING A PRT OF 2.5 SECONDS, A DECELERATION RATE OF 11.2 FT/SECOND SQUARE, MINUS THE SIGN LEGIBILITY DISTANCE OF 175 FT.

<sup>3</sup> NO SUGGESTED DISTANCES ARE PROVIDED FOR THESE SPEEDS, AS THE PLACEMENT LOCATION IS DEPENDENT ON SITE CONDITIONS AND OTHER SIGNING TO PROVIDE AN ADEQUATE ADVANCE WARNING FOR THE DRIVER.

**CITY OF SAN ANTONIO**  
DEPARTMENT OF PUBLIC WORKS

TRAFFIC SIGNAL STANDARDS  
**ROADSIDE SOLAR POWERED  
FIRE STATION FLASHER ASSEMBLY**  
TE-RSFSF-09

DATE:	PROJECT NO.:	% SUBMITTAL:
DATE:	DRWN. BY:	CSGN. BY:
DATE:	CHKD. BY:	SHEET NO. 1 OF 2



- NOTES:**
- Details show a typical warning sign with two flashing beacon heads, other arrangements are possible. When only one beacon is required, install the upper beacon.
  - See Item 685, "Flashing Beacon Assemblies" for further requirements.
  - See Item 531, "Signs" standard specification sheets for lateral and vertical clearances and sign mounting details. Install signs as shown on the sign layout sheets.
  - Use either a Screw-in Type Anchor Foundation or 24 in. Drill Shaft Foundation as shown in the plans. When plans require 24 in. Drill Shaft Foundation, see Item 656, "Foundations for Traffic Control Devices" standard specifications sheets. Install the Screw-in Type Anchor Foundation as shown. On slope, install one edge at ground level.
  - When used, provide one of the following Screw-in Type Anchor foundations:  
A. B. Chance Co., model C11242NG4VP; Component Products, Inc., model CPI-SLSF-5TX; Pelco Products, Inc., models PB-5359, PB-5360 or PB 5375; or Approved equal.
  - Use materials specifically designed for attaching cabinets, beacon heads, solar panels, etc., to poles.
  - Install beacon heads as shown here, as shown elsewhere on the plans, or as directed. Use hardware specifically design for mounting beacon heads on poles.
  - Conduit in foundation and within 6 in. of foundation is subsidiary to the Item 685, "Roadside Flashing Beacon Assemblies."
  - Per manufacturer's recommendations, engage all threads on the pedestal pole base and pipe unless the pipe is fully sealed into base.
  - Provide non-fused watertight breakaway electrical connectors for breakaway poles. (Bussmann HET, Littelfuse LET, Ferraz-Shawmut FEBN, or approved equal).
  - Provide clearance as shown above the sidewalk or pavement grade at the edge of the road. When a bottom beacon is not used, mount the sign at least 7 ft. above the sidewalk or pavement grade at the edge of the road.
  - Unless otherwise shown on the plans, pole shaft shall be one piece, schedule 40 Aluminum pipe, ASTM B429 or B221 (Alloy 6061-T6 only). Aluminum conduit will not develop the necessary strength and will not be allowed.

Note (1): 3" Unless Otherwise Directed By the Engineer  
24" FOUNDATION

CITY OF SAN ANTONIO  
DEPARTMENT OF PUBLIC WORKS

TRAFFIC SIGNAL STANDARDS  
**ROADSIDE SOLAR POWERED  
FIRE STATION FLASHER ASSEMBLY**  
TE-RSFSF-08

DATE:	PROJECT NO.:
DESIGN BY:	CHECKED BY:
DRAWN BY:	SHEET NO.: 2 OF 2

3/3

City of San Antonio  
**TRANSPORTATION AND CAPITAL IMPROVEMENTS**

RECEIPT OF ADDENDUM NUMBER(S) 3 IS HEREBY ACKNOWLEDGED FOR THE FIRE STATION  
#18 REPLACEMENT, PROJECT NO: 40-00015  
FOR WHICH PROPOSALS WILL BE OPENED ON FEBRUARY 9, 2016

**\*\*\*THIS ACKNOWLEDGEMENT MUST BE SIGNED AND RETURNED WITH  
THE PROPOSAL PACKAGE.\*\*\***

Company Name: \_\_\_\_\_

Address: \_\_\_\_\_

City/State/Zip Code: \_\_\_\_\_

Date: \_\_\_\_\_

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Print Name/Title