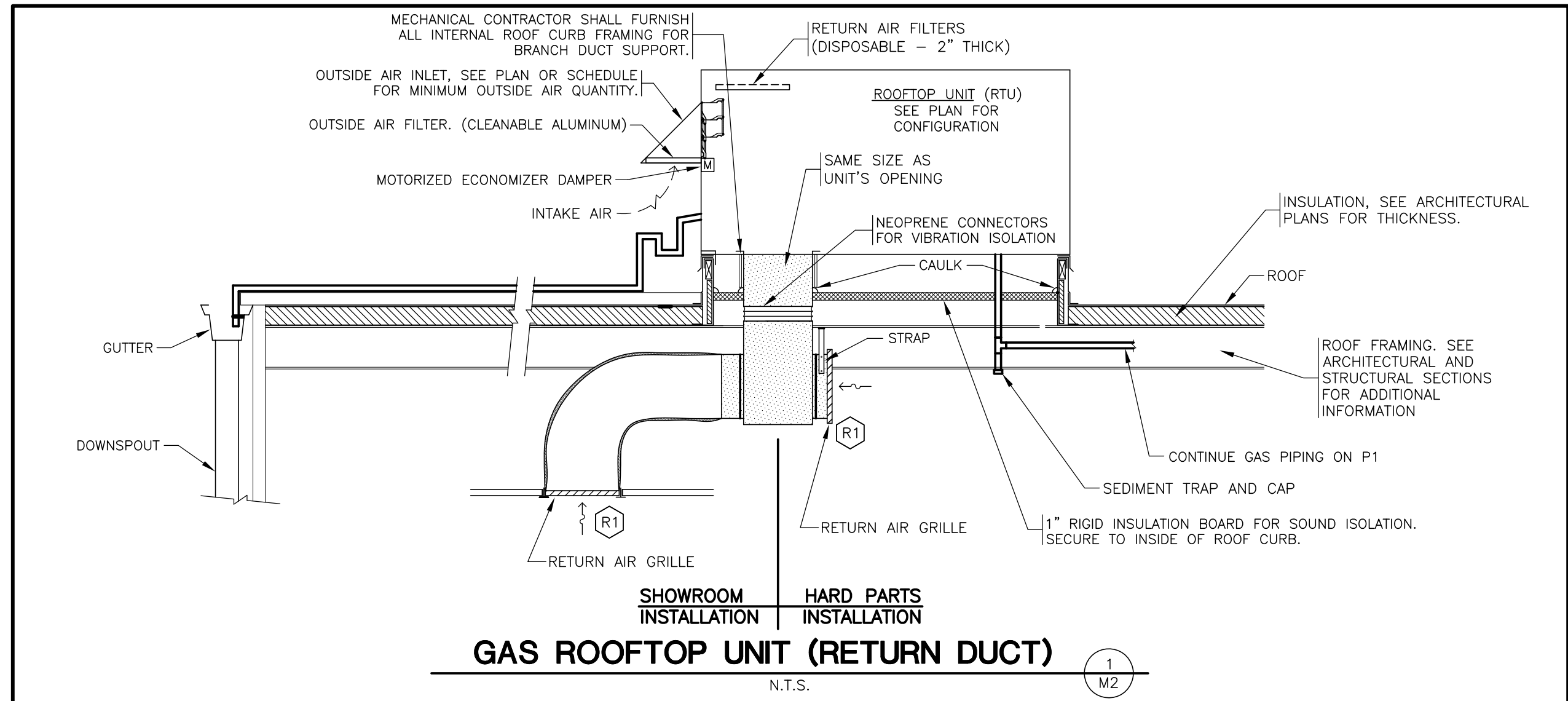
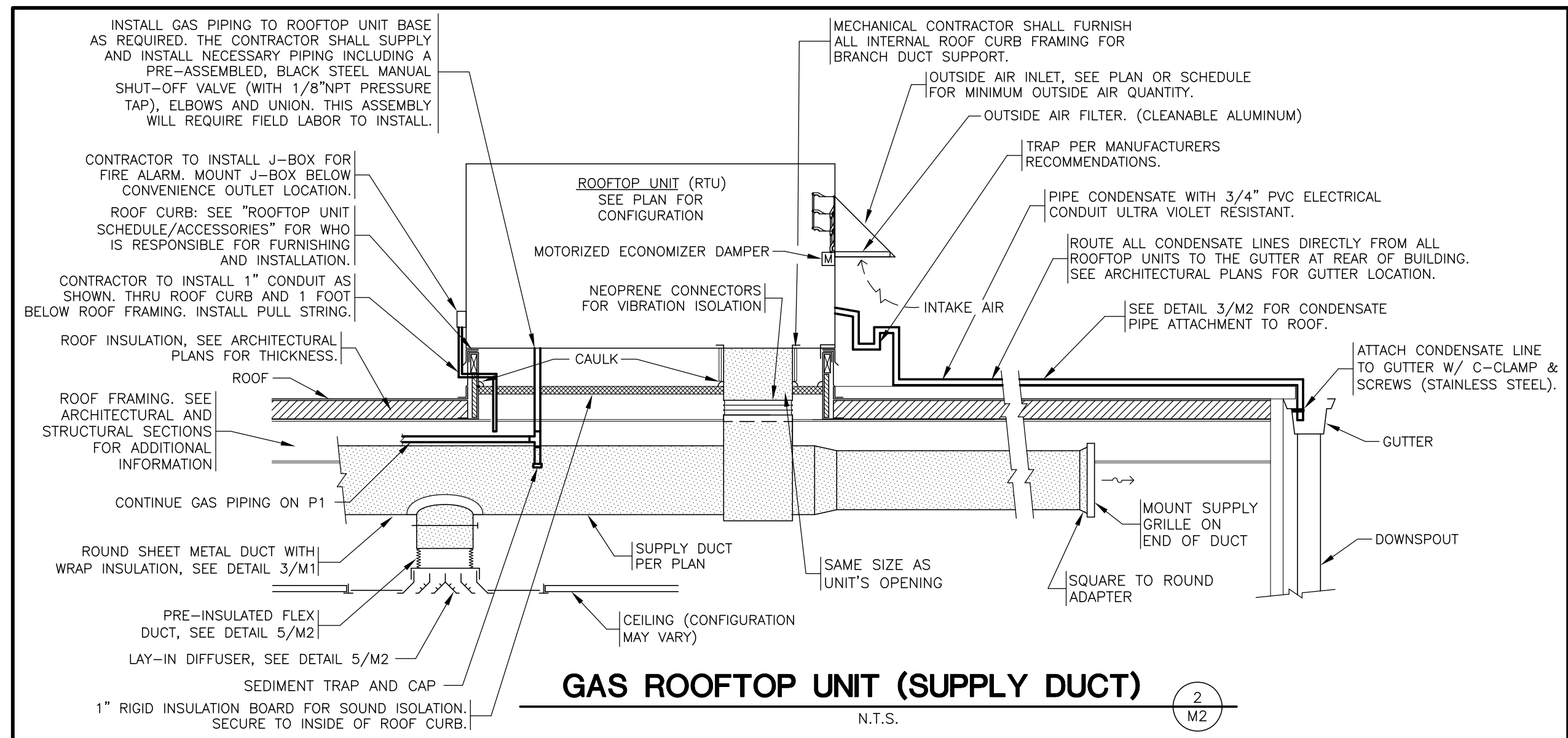






| NATIONAL ACCOUNT ROOFTOP UNIT SCHEDULE - 5 TON - GAS (3-PHASE) - BY O'REILLY  |   |         |                    |                               |                               |                     |                |                  |       |       |  |      |      |     |      |            |  |               |             |         |  |                            |              |        |    |     |
|---|---|---------|--------------------|-------------------------------|-------------------------------|---------------------|----------------|------------------|-------|-------|--|------|------|-----|------|------------|--|---------------|-------------|---------|--|----------------------------|--------------|--------|----|-----|
| RTU - RESPONSIBILITIES  |   |         |                    |                               |                               |                     |                |                  |       |       | CALL THE CARRIER CUSTOMER SERVICE REP. BELOW FOR CONFIRMATION OF ORDERS.<br>DO NOT CALL CARRIER FOR QUOTES!  |      |      |     |      |            |  |               |             |         |  |                            |              |        |    |     |
| 1.) ALL CARRIER HVAC UNITS ARE OWNER SUPPLIED BY O'REILLY AUTOMOTIVE.<br>2.) MECHANICAL CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION OF ALL CARRIER HVAC UNITS.<br>3.) MECHANICAL CONTRACTOR IS RESPONSIBLE FOR THE FIRST YEAR LABOR WARRANTY ON ALL OWNER SUPPLIED EQUIPMENT.<br>4.) MECHANICAL CONTRACTORS WORKING ON O'REILLY PROJECTS MUST CALL "CARRIER CORPORATION'S NATIONAL ACCOUNTS" DEPARTMENT FOR CONFIRMATION OF ORDERS ONLY!<br>5.) MECHANICAL CONTRACTOR IS RESPONSIBLE FOR SCHEDULING, SHIPPING & RECEIVING OF ALL CARRIER UNITS FROM CARRIER NATIONAL ACCOUNTS. CONTACT CUSTOMER SERVICE REP. LISTED TO THE RIGHT.            |   |         |                    |                               |                               |                     |                |                  |       |       | CARRIER CORPORATION,<br>STRATEGIC ACCOUNTS<br>CARRIER PARKWAY<br>SYRACUSE, NEW YORK 13221  |      |      |     |      |            | CUSTOMER SERVICE REPS:<br>MARIA CAMPANELLO 315-432-3946<br>Maria.campanello@carrier.utc.com<br>StrategicAccount2@carrier.utc.com |               |             |         | ACCOUNT MANAGER:<br>PAUL WITZ<br>CELL 315-317-2481<br>paul.witz@carrier.utc.com  |                            |              |        |    |     |
| MARK  | DESCRIPTION                                     | MFR.    | CATALOG NUMBER     | HTG. MBH<br>STAGE 1<br>IN/OUT | HTG. MBH<br>STAGE 2<br>IN/OUT | TTL. HTG.<br>IN/OUT | THERM.<br>EFF. | CLG. MBH<br>TOT. | SENS. | SEER  | EER  | CFM  | O.A. | ESP | HP   | SUPPLY FAN | ELECTRICAL   | WT.<br>(lbs.) | ACCESSORIES | REMARKS | REF.<br>DTL.   |                            |              |        |    |     |
| RTU-3<br>RTU-4  | WEATHERMASTER<br>PACKAGED ROOFTOP<br>UNIT 5-TON | CARRIER | 48HCTAD6K2M5-4F1D0 | 120/96                        | 30/24                         | 150/120             | 80%            | 60.4             | 48.0  | 15.20 | 12.45  | 2000 | △    | 0.6 | 1.50 |            | V/PH   | MCA           | MOCP        | 750     | HE,SD,MB,HG,<br>VS,EC,UPO,TBEG,<br>SS,RC1,AF,DS,<br>CO2,TS1,COF,<br>RS,HS,A,RTRS | △<br>△<br>△<br>△<br>△<br>△ | 1/M2<br>2/M2 |        |    |     |
|   |   |         |                    |                               |                               |                     |                |                  |       |       |  |      |      |     |      |            | 208/3ø   | 30            | 45*         |         |  |                            |              | 230/3ø | 30 | 45* |
| ACCESSORIES - FACTORY SUPPLIED AND INSTALLED  |   |         |                    |                               |                               |                     |                |                  |       |       | ACCESSORIES - FACTORY SUPPLIED & FIELD INSTALLED   |      |      |     |      |            |  |               |             |         |  |                            |              |        |    |     |
| HE - STAINLESS STEEL GAS HEAT EXCHANGER (HIGH HEAT) (15 YEAR WARRANTY)<br>SD - RETURN AIR SMOKE DETECTOR<br>COF - CONDENSATE OVERFLOW SWITCH<br>MB - MEDIUM STATIC BLOWER (SINGLE SPEED)<br>HC - LOUVERED HAIL GUARDS<br>UPO - UN-POWERED CONVENIENCE OUTLET (FIELD POWERED), 15AMP, 120V, GROUND FAULT CIRCUIT INTERRUPTER (GFCI) TYPE<br>TBEG - THRU-THE-BOTTOM-ELECTRIC & GAS SERVICES. (SEE ROOF TOP UNIT DETAILS)<br>SS - HI & LOW REFRIGERANT SAFETY SWITCHES (STANDARD ON EVERY UNIT)<br>AF - 2" RETURN AIR FILTERS (STANDARD ON EVERY UNIT)<br>VS - VENSTAR SURVEYOR (COP & SENSORS)<br>EC - ENTHALPY ECONOMIZER IV W/BAROMETRIC RELIEF |   |         |                    |                               |                               |                     |                |                  |       |       | CO2 - CO2 SENSOR WALL MOUNT. #33ZCSPTC02LCD-01<br>CO2/SPACE TEMPERATURE SENSOR WITH LCD DISPLAY & NO OVERRIDE<br>RTRS - REMOTE TEST/RESET STATION CARRIER #SD-TRM4(CRSDTEST001400) FOR REMOTE TESTING/RESETTING OF DUCT SMOKE DETECTOR. SEE HVAC PLAN FOR MOUNTING LOCATIONS<br>HSA - ALARM-STROBE CARRIER #6536-G5(CRSDHNSB001A00). AUDIBLE/VISUAL SIGNAL DEVICE FOR SIGNALING ALARM OF DUCT SMOKE DETECTOR. SEE HVAC PLAN FOR MOUNTING LOCATIONS |      |      |     |      |            |  |               |             |         |  |                            |              |        |    |     |
| ACCESSORIES - O'REILLY SUPPLIED & FIELD INSTALLED   |   |         |                    |                               |                               |                     |                |                  |       |       | ACCESSORIES - FIELD SUPPLIED & FIELD INSTALLED   |      |      |     |      |            |  |               |             |         |  |                            |              |        |    |     |
| TS1 - VENSTAR COMMUNICATION THERMOSTAT (NO SUBSTITUTIONS). REFER TO SHEET VS1<br>RS - VENSTAR REMOTE SENSOR (NO SUBSTITUTIONS). REFER TO SHEET VS1<br>DS - NON-FUSED DISCONNECT SWITCH (GRAYBAR/O'REILLY) SUPPLIED W/ ELECTRICAL BILL OF MATERIALS  |   |         |                    |                               |                               |                     |                |                  |       |       | RC1 - ROOF CURB (12" STANDARD, 14" IN EXTREME SNOW DRIFT AREA'S) ON NEW BUILDING, ROOF CURB IS BY BUILDING MANUFACTURER. ON EXISTING BUILDING, ROOF CURB IS BY GENERAL CONTRACTOR. WEIGHT OF ROOF CURB IS NOT INCLUDED IN THE WEIGHT ABOVE   |      |      |     |      |            |  |               |             |         |  |                            |              |        |    |     |
| REMARKS   |   |         |                    |                               |                               |                     |                |                  |       |       |  |      |      |     |      |            |  |               |             |         |  |                            |              |        |    |     |
| △ COOLING CAPACITY BASED ON 80°F EDB AND 67°F EWB.  |   |         |                    |                               |                               |                     |                |                  |       |       |  |      |      |     |      |            |  |               |             |         |  |                            |              |        |    |     |
| △ CAPACITY BASED ON 95°F AMBIENT TEMPERATURE.   |   |         |                    |                               |                               |                     |                |                  |       |       |  |      |      |     |      |            |  |               |             |         |  |                            |              |        |    |     |
| △ <b>NOTE: HVAC COMPLETION.</b> AT CONSTRUCTION COMPLETION:<br>1. CONTRACTOR SHALL REPLACE ALL RETURN AIR FILTERS INSIDE ALL HVAC UNITS W/CLEAN NEW AIR FILTERS.<br>2. CONTRACTOR SHALL SUPPLY AN ADDITIONAL CLEAN SET OF FILTERS TO THE OWNER AT JOB COMPLETION.<br>3. CONTRACTOR SHALL SHOW THE STORE MANAGER THE LOCATION OF & INSTRUCT HIM/HER HOW TO CHANGE ALL AIR FILTERS.   |   |         |                    |                               |                               |                     |                |                  |       |       |  |      |      |     |      |            |  |               |             |         |  |                            |              |        |    |     |
|   |   |         |                    |                               |                               |                     |                |                  |       |       | △ FACTORY EQUIPPED WITH STANDARD LOW AMBIENT COOLING TO 35°F ODB.<br>△ OUTSIDE AIR, SEE PLAN FOR UNIT(S) REQUIRING OUTSIDE AIR.<br>△ REFRIGERANT = R410A (PURON).<br>• MAXIMUM CIRCUIT BREAKER OR TIME-DELAY FUSE.   |      |      |     |      |            |  |               |             |         |  |                            |              |        |    |     |

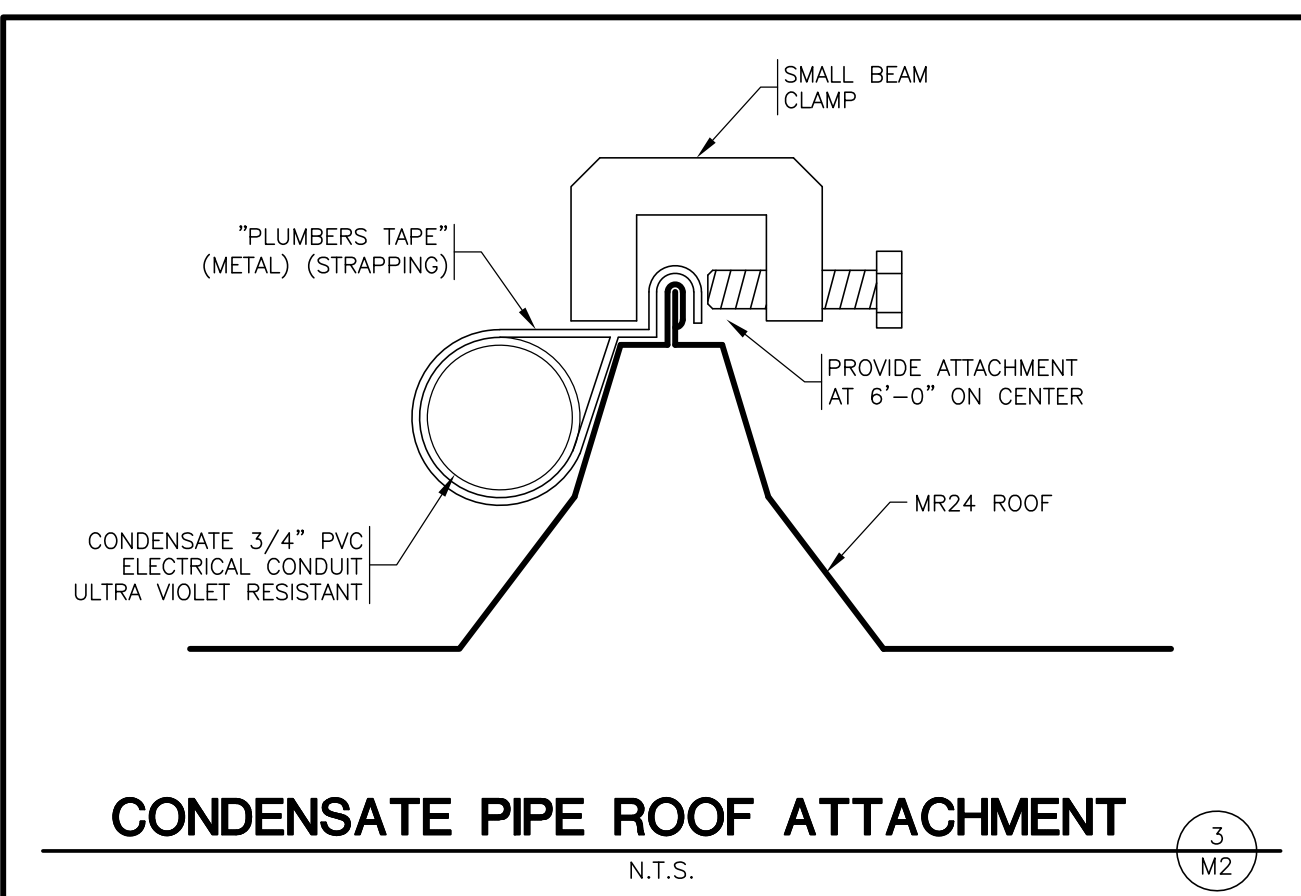
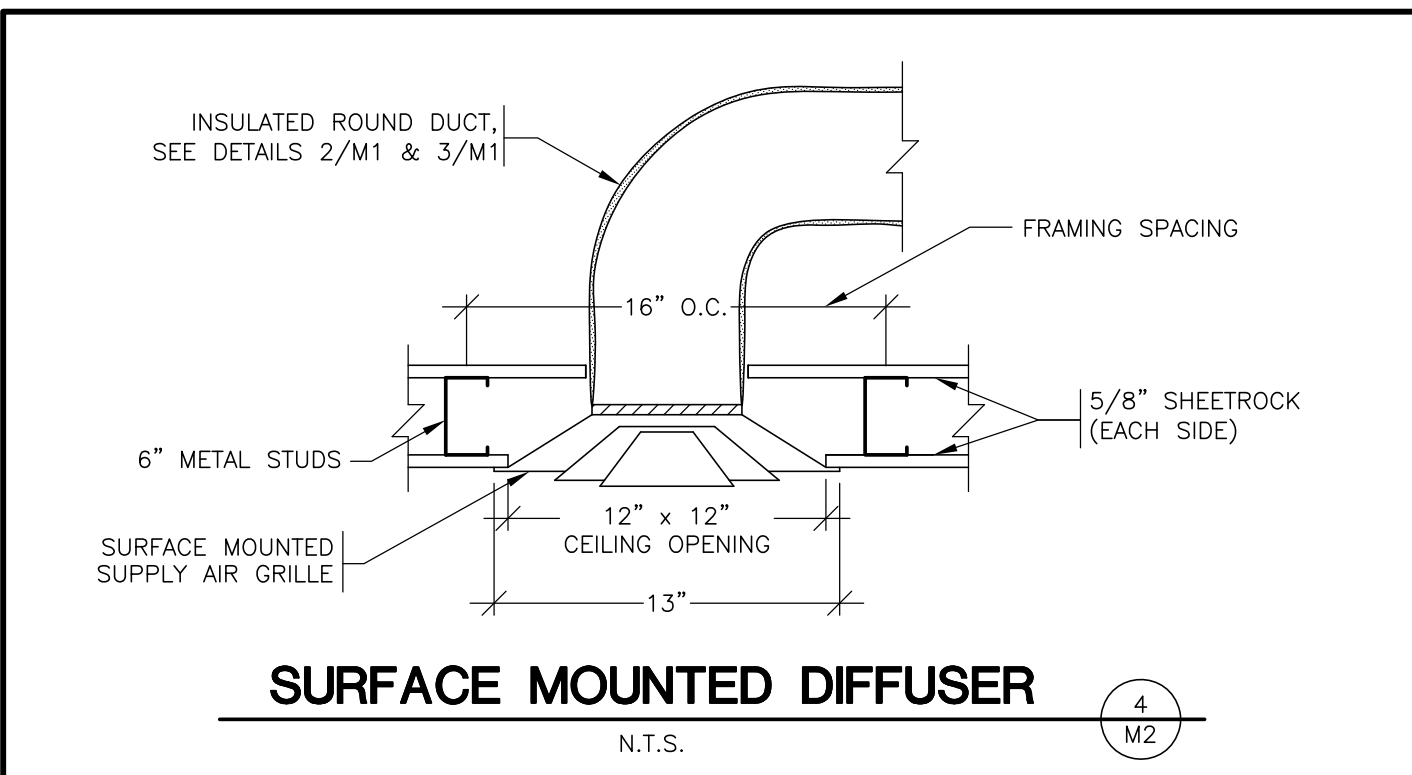
| NATIONAL ACCOUNT - ROOFTOP UNIT SCHEDULE - 7.5 TON - GAS (3-PHASE) - BY O'REILLY  |   |         |                    |                |                |                  |             |                    |                    |   |            |       |      |      |            |      |              |             |         |           |  |                     |              |
|---|---|---------|--------------------|----------------|----------------|------------------|-------------|--------------------|--------------------|---|------------|-------|------|------|------------|------|--------------|-------------|---------|-----------|--|---------------------|--------------|
| <b>RTU - RESPONSIBILITIES</b><br>1.) ALL CARRIER HVAC UNITS ARE OWNER SUPPLIED BY O'REILLY AUTOMOTIVE.<br>2.) MECHANICAL CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION OF ALL CARRIER HVAC UNITS.<br>3.) MECHANICAL CONTRACTOR IS RESPONSIBLE FOR THE FIRST YEAR LABOR WARRANTY ON ALL OWNER SUPPLIED EQUIPMENT.<br>4.) MECHANICAL CONTRACTORS WORKING ON O'REILLY PROJECTS MUST CALL "CARRIER CORPORATION'S NATIONAL ACCOUNTS" DEPARTMENT FOR CONFIRMATION OF ORDERS ONLY!<br>5.) MECHANICAL CONTRACTOR IS RESPONSIBLE FOR SCHEDULING, SHIPPING & RECEIVING OF ALL CARRIER UNITS FROM CARRIER NATIONAL ACCOUNTS. CONTACT CUSTOMER SERVICE REP. LISTED TO THE RIGHT. |   |         |                    |                |                |                  |             |                    |                    | <b>CALL THE CARRIER CUSTOMER SERVICE REP. BELOW FOR CONFIRMATION OF ORDERS. DO NOT CALL CARRIER FOR QUOTES!</b><br><br>CARRIER CORPORATION, STRATEGIC ACCOUNTS<br>CARRIER PARKWAY<br>SYRACUSE, NEW YORK 13221<br><br>CUSTOMER SERVICE REPS:<br>MARIA CAMPANELLO 315-432-3946<br>Maria.campanello@carrier.utc.com<br>StrategicAccounts2@carrier.utc.com<br><br>ACCOUNT MANAGER:<br>PAUL WITZ<br>CELL 315-317-2481<br>paul.witz@carrier.utc.com           |            |       |      |      |            |      |              |             |         |           |  |                     |              |
| MARK  | DESCRIPTION                                 | MFR.    | CATALOG NUMBER     | HTG. MBH       |                |                  | THERM. EFF. | CLG. MBH           |                    |   | SUPPLY FAN |       |      |      | ELECTRICAL |      | Wt. (lbs.)   | ACCESSORIES | REMARKS | REF. DTL. |  |                     |              |
|   |   |         |                    | STAGE 1 IN/OUT | STAGE 2 IN/OUT | TTL. HTG. IN/OUT |             | STAGE 1 TOT./SENS. | STAGE 2 TOT./SENS. | TTL. COOL. TOT./SENS.   | IEER       | EER   | CFM  | O.A. | ESP        | HP   |              |             |         |           | MCA  | MOCP                |              |
| RTU-1<br>RTU-2  | WEATHERMASTER PACKAGED ROOFTOP UNIT 7.5-TON | CARRIER | 48HCRD08K2M5-4F1D0 | 120/98         | 60/50          | 180/148          | 82%         | 46.5/36            | 46.5/36            | 93/72   | 13.00      | 12.00 | 3000 | △    | 0.6        | 1.50 | 208V/230V/3ø | 41          | 50*     | 1172      | HE,SD,MB,HG,VS,EC,UPO,TBEG,SS,RC1,AF,DS,CO2,TS1,RS,COF,HS,A,RTRS | △△△<br>△△△<br>4,5/6 | 1/M2<br>2/M2 |
| ACCESSORIES - FACTORY SUPPLIED AND INSTALLED  |   |         |                    |                |                |                  |             |                    |                    | ACCESSORIES - FACTORY SUPPLIED & FIELD INSTALLED  |            |       |      |      |            |      |              |             |         |           |  |                     |              |
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| ACCESSORIES - O'REILLY SUPPLIED & FIELD INSTALLED   |   |         |                    |                |                |                  |             |                    |                    | ACCESSORIES - FIELD SUPPLIED & FIELD INSTALLED  |            |       |      |      |            |      |              |             |         |           |  |                     |              |
| TS1 - VENSTAR COMMUNICATION THERMOSTAT. (NO SUBSTITUTIONS). REFER TO SHEET VS1.<br>RS - VENSTAR REMOTE SENSOR. (NO SUBSTITUTIONS). REFER TO SHEET VS1.<br>DS - NON-FUSED DISCONNECT SWITCH. (GRAYBAR/O'REILLY) SUPPLIED W/ ELECTRICAL BILL OF MATERIALS.  |   |         |                    |                |                |                  |             |                    |                    | RC1 - ROOF CURB. (12" STANDARD, 14" IN EXTREME SNOW DRIFT AREA'S) ON NEW BUILDING, ROOF CURB IS BY BUILDING MANUFACTURER. ON EXISTING BUILDING, ROOF CURB IS BY GENERAL CONTRACTOR. WEIGHT OF ROOF CURB IS NOT INCLUDED IN THE WEIGHT ABOVE.  |            |       |      |      |            |      |              |             |         |           |  |                     |              |
| REMARKS   |   |         |                    |                |                |                  |             |                    |                    |   |            |       |      |      |            |      |              |             |         |           |  |                     |              |
| △ COOLING CAPACITY BASED ON 80°F EDB AND 67°F EWB.  |   |         |                    |                |                |                  |             |                    |                    |   |            |       |      |      |            |      |              |             |         |           |  |                     |              |
| △ CAPACITY BASED ON 95°F AMBIENT TEMPERATURE.   |   |         |                    |                |                |                  |             |                    |                    |   |            |       |      |      |            |      |              |             |         |           |  |                     |              |
| △ NOTEL HVAC COMPLETION. AT CONSTRUCTION COMPLETION:<br>1. CONTRACTOR SHALL REPLACE ALL RETURN AIR FILTERS INSIDE ALL HVAC UNITS W/CLEAN NEW AIR FILTERS.<br>2. CONTRACTOR SHALL SUPPLY AN ADDITIONAL CLEAN SET OF FILTERS TO THE OWNER AT JOB COMPLETION.<br>3. CONTRACTOR SHALL SHOW THE STORE MANAGER THE LOCATION OF & INSTRUCT HIM/HER HOW TO CHANGE ALL AIR FILTERS.  |   |         |                    |                |                |                  |             |                    |                    |   |            |       |      |      |            |      |              |             |         |           |  |                     |              |
| △ FACTORY EQUIPPED WITH STANDARD LOW AMBIENT COOLING TO 35°F ODB.   |   |         |                    |                |                |                  |             |                    |                    |   |            |       |      |      |            |      |              |             |         |           |  |                     |              |
| △ OUTSIDE AIR, SEE PLAN FOR UNIT(S) REQUIRING OUTSIDE AIR.  |   |         |                    |                |                |                  |             |                    |                    |   |            |       |      |      |            |      |              |             |         |           |  |                     |              |
| △ REFRIGERANT = R410A (PURON).<br>* MAXIMUM CIRCUIT BREAKER OR TIME-DELAY FUSE.   |   |         |                    |                |                |                  |             |                    |                    |   |            |       |      |      |            |      |              |             |         |           |  |                     |              |



### CONDENSATE OVERFLOW SWITCH, TYPICAL ALL RTU (COF)

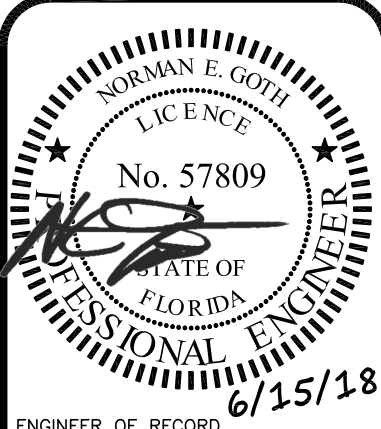
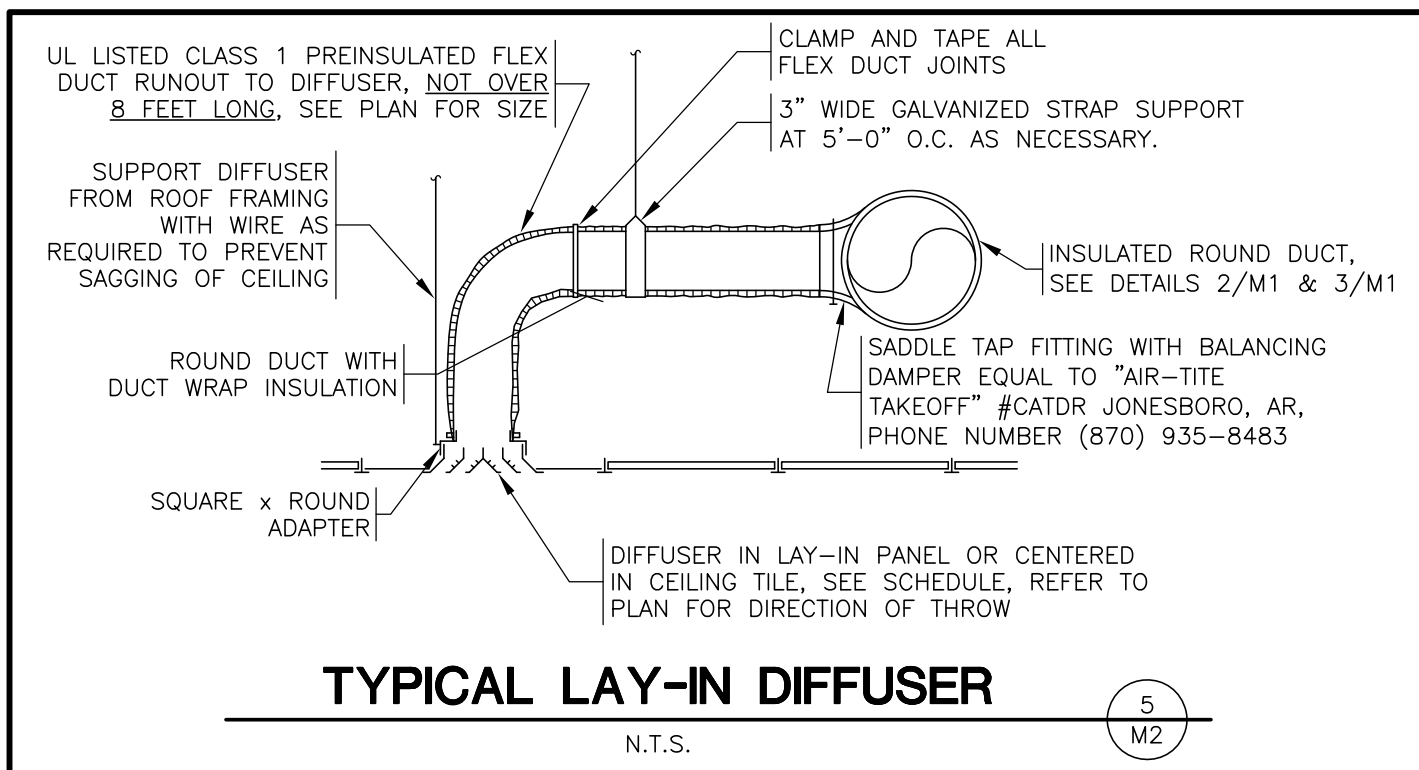
THIS SENSOR AND RELATED CONTROLLER MONITORS THE CONDENSATE LEVEL IN THE DRAIN PAN AND SHUTS DOWN COMPRESSION OPERATION WHEN OVERFLOW CONDITIONS OCCUR. IT INCLUDES:

- INDICATOR LIGHT - SOLID RED (MORE THAN 10 SECONDS ON WATER CONTACT - COMPRESSORS DISABLED), BLINKING RED (SENSOR DISCONNECTED)
- 10-SECOND DELAY TO BREAK - ELIMINATED NUISANCE TRIPS FROM SPLASHING OR WAVES IN PAN (SENSOR NEEDS 10 SECONDS OF CONSTANT WATER CONTACT BEFORE TRIPPING)
- DISABLES THE COMPRESSOR(S) OPERATION WHEN CONDENSATE PLUG IS DETECTED, BUT STILL ALLOWS FANS TO RUN FOR ECONOMIZER.

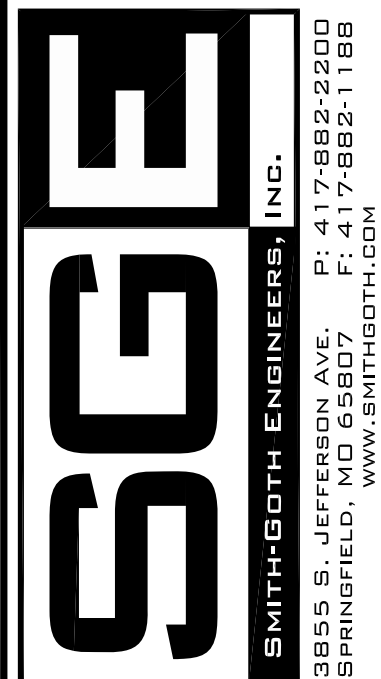


| FAN SCHEDULE   |                    |      |                |           |               |            |                 |     |      |             |             |
|--|--------------------|------|----------------|-----------|---------------|------------|-----------------|-----|------|-------------|-------------|
| MARK   | DESCRIPTION        | MFR. | CATALOG NUMBER | CFM (NOM) | STATIC PRESS. | MOTOR H.P. | ELECTRICAL V/PH | MCA | MOCP | ACCESSORIES | REF. DETAIL |
| EF-1   | INLINE EXHAUST FAN | COOK | GN-642         | 500       | 0.1           | 195W       | 120/1           | -   | -    | BD,DS,WC    | △△          |
| EF-2   | INLINE FAN         | COOK | GN-642         | 500       | 0.1           | 195W       | 120/1           | -   | -    | BD,DS,SS    | △           |
| <b>ACCESSORIES</b><br>BD - GRAVITY BACK DRAFT DAMPER<br>DS - DISCONNECT SWITCH<br>WC - WALL CAP, "COOK" #WCA-6, ALUMINUM<br>SS - FAN SPEED SWITCH "COOK" #FSC (OFFICE ONLY)  |                    |      |                |           |               |            |                 |     |      |             |             |
| <b>REMARKS</b><br>△ ADJUST FOR CFM REQUIRED.<br>△ EXHAUST FAN SHALL BE WIRED BY THE ELECTRICAL CONTRACTOR TO OPERATE WITH EITHER RESTROOM'S LIGHT SWITCH.<br>△ FAN IN OFFICE TO BE CONTROLLED BY FAN SPEED SWITCH. |                    |      |                |           |               |            |                 |     |      |             |             |
| <b>APPROVED ALTERNATE MANUFACTURER'S</b><br>FANS: *GREENHECK *CARNES   |                    |      |                |           |               |            |                 |     |      |             |             |

| GRILLE AND DIFFUSER SCHEDULE      |                 |           |                |            |        |  |                  |             |                     |             |
|-----------------------------------|-----------------|-----------|----------------|------------|--------|--|------------------|-------------|---------------------|-------------|
| MARK                              | DESCRIPTION     | MFR.      | CATALOG NUMBER | SIZE (In.) | FINISH | MOUNTING   | BRANCH DUCT SIZE | ACCESSORIES | REMARKS             | REF. DETAIL |
| (G)                               | SUPPLY GRILLE   | ANEMOSTAT | S2H0           | 14x14      | WHITE  | DUCT   | SEE PLAN         | OB          | △                   | -           |
| (S)                               | SUPPLY DIFFUSER | ANEMOSTAT | E-1-D          | 12x12      | WHITE  | SURFACE  | SEE PLAN         | DT          | △△                  | 4/M2        |
| (S2)                              | SUPPLY DIFFUSER | ANEMOSTAT | EPL            | 24x24      | WHITE  | DUCT/LAY-IN  | SEE PLAN         | -           | △                   | 5/M2        |
| (R)                               | RETURN GRILLE   | ANEMOSTAT | GC5            | 24x24      | WHITE  | LAY-IN/EXPOSED   | SEE PLAN         | -           | NON-FILTERED GRILLE | 5/M2        |
| (R2)                              | RETURN GRILLE   | ANEMOSTAT | GC5            | 12x12      | WHITE  | SURFACE  | SEE PLAN         | -           | NON-FILTERED GRILLE | 4/M2        |
| (K)                               | EXHAUST GRILLE  | ANEMOSTAT | S3HS           | 12x12      | WHITE  | CEILING  | SEE PLAN         | OB          | -                   | -           |
| ACCESSORIES                       |                 |           |                |            |        | REMARKS  |                  |             |                     |             |
| OB - OPPOSED BLADE DAMPER.        |                 |           |                |            |        | △ 1-WAY  |                  |             |                     |             |
| DT - DIRECTIONAL TABS.            |                 |           |                |            |        | △ 4-WAY  |                  |             |                     |             |
| APPROVED ALTERNATE MANUFACTURER'S |                 |           |                |            |        | △ DIRECTIONAL TABS, ADJUST TO PROVIDE THROW AS INDICATED ON PLANS. |                  |             |                     |             |
| GRILLES, DIFFUSERS & DAMPERS:     |                 |           |                |            |        |  |                  |             |                     |             |
| *TUTTLE & BAILEY                  |                 | *TAILOR   |                | *ARROW     |        | *CARNES  |                  |             |                     |             |
| *PRICE INDUSTRIES                 |                 | *TITUS    |                | *KRUERGER  |        |  |                  |             |                     |             |



ENGINEER OF RECORD  
**NORMAN E. GOTH**  
 FIRM LICENSE NUMBER: **27905**  
 ENGINEER LICENSE NUMBER: **57809**  
 SHEETS BEARING THIS SEAL ARE AUTHENTICATED. RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS OR INSTRUMENTS ARE DISCLAIMED.



PROJECT:  
**NEW O'REILLY AUTO PARTS STORE**  
**6179 SW HWY 200**  
**OCALA, FL 34476**  
**HVAC SCHEDULES**

**O'Reilly AUTO PARTS**  
 CORPORATE OFFICES  
 233 SOUTH PATTERSON  
 SPRINGFIELD, MISSOURI 65802  
 (417) 862-2674 TELEPHONE

DRAWN BY: **JJW** CHECKED BY: **BLC/ALT**  
 DATE: **06/15/2018**  
 REVISION:  
 PROJECT NUMBER: **18078-OF4**  
 SHEET NUMBER: **M2**



## Factory Installed Smoke Detector Specification Sheet

For Factory Installed smoke detectors on 2-28 ton Commercial Rooftop Units

**APPLICABLE UNITS:** 48/50PG, PM, PD 03-28  
48/50TC 04-30, 48/50HC 04-28,  
50TCO 04-24, 50HCO 04-12  
48/50HE, 50HEO 003-006  
48/50HU, TM, TF 004-014  
50HUQ, TFQ 004-012

### GENERAL DATA

Type: TelAir SuperDuct, 4-wire Photoelectric Sensing detector and control module  
The Carrier factory installed smoke detector system comprises a four-wire controller and one or two sensors (Return Air and/or Supply Air). Its primary function is to shut down the rooftop unit in order to prevent smoke from circulating throughout the building. It is not to be used as a life saving device. Factory installed smoke detectors require no additional sampling tubes to be field installed.

### SYSTEM DESCRIPTION

Controller - The controller includes a controller housing, a printed circuit board, and an easily removable clear plastic cover for access to the multiple terminal connections and relay contacts for connection to fire alarm systems, HVAC controls, and other auxiliary functions. A remote test/reset/visual alarm station can be connected to the controller.

Detectors - The detector includes a plastic housing, a printed circuit board, a clear plastic cover, an exhaust tube, and a sampling tube. The exhaust tube and sampling tube are attached during factory installation. The sampling tube varies in length depending on the size of the rooftop unit. The clear plastic cover permits visual inspections without having to disassemble the sensor. The cover forms an airtight chamber around the sensing electronics.

For installations using two detectors, the controller does not differentiate which detector signals an alarm or trouble condition. A rapid change in environmental conditions, such as smoke, causes the sensor to signal an alarm state but dust and debris accumulated over time does not. When the sensor's ability to compensate for environmental changes has reached its limit (100% dirty), the sensor signals a trouble condition. Air is introduced to the duct smoke detector's sensing chamber through a sampling tube that extends into the HVAC duct and is directed back into the ventilation system through an exhaust tube. The difference in air pressure between the two tubes pulls the sampled air through the sensing chamber. When a sufficient amount of smoke is detected in the sensing chamber, the sensor signals an alarm state and the controller automatically takes the appropriate action to shut down the unit via the factory installed wiring connections. Additional functions such as integration with a Building Alarm System, additional fans and blowers, notify the fire alarm control panel, etc., require field wiring and configuration.

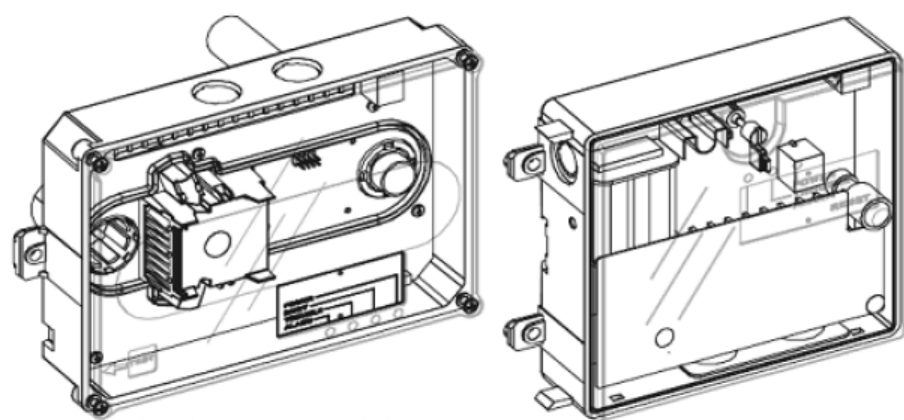


Fig. 1 - Controller and Detector (Sensor) Modules

1/2

11/1/2008

## GUIDE SPECIFICATIONS

### System Specifications:

- System Type:
  - Separate controller and detector modules
  - Four Wire Controller and Detector
  - Photoelectric Sensing
  - Environmental compensation with differential sensing for reliable, stable, and drift-free sensitivity
- Operating environment:
  - Temperature: -20° to 158°F (-39° to 70° C)
  - Humidity: 10% to 93% RH, non-condensing
- Magnet-activated test/reset sensor switches
- Tool-less connection terminal access
- Recessed momentary switch for testing and resetting the detector

Table 1 - Controller Terminal Connections

| Terminal Number | Name              |
|-----------------|-------------------|
| 1               | AUX (-)           |
| 2               | Reset             |
| 3               | SUPV Contact COM  |
| 4               | Alarm Contact COM |
| 5               | Alarm Contact NO  |
| 6               | AUX 1 Contact COM |
| 7               | AUX 2 Contact NO  |
| 8               | AUX 2 Contact NC  |
| 9               | 24V AC/DC In (+)  |
| 10              | 24V AC/DC In (-)  |
| 11              | Not used          |
| 12              | Multi-Shutdown    |
| 13              | SUPV Contact NO   |
| 14              | SUPV Contact NC   |
| 15              | REM Alarm LED Out |
| 16              | AUX 1 Contact NC  |
| 17              | AUX 1 Contact NO  |
| 18              | AUX 2 Contact COM |
| 19              | 18 VDC Output (+) |
| 20              | 18VDC Output (-)  |
| TSB-1           | Not Used          |
| TSB-2           | Not Used          |
| N               | AC Neutral        |
| L               | AC Line           |

### Controller specifications:

- Controller shall include:
  - One set of normally open alarm initiation contacts for connection to an initiating device circuit on a fire alarm control panel
  - Two Form-C auxiliary alarm relays for interface with rooftop unit or other equipment
  - One Form-C supervision (trouble) relay to control the operation of the Trouble LED on a remote test/reset station
  - Capable of direct connection to two individual detector modules
  - Can be wired to up to 14 other duct smoke detectors for multiple fan shutdown applications

Wire Size:  
High voltage terminals: 12-22 AGW  
All others: 14-22 AGW  
Operating voltages: 20-29 VAC, 50/60 Hz  
120 VAC, 50/60 Hz  
220/240 VAC, 50/60 Hz

Operating current:  
20-29VDC: 175 mA  
24VAC: 500 mA at 50/60 Hz  
120VAC: 100 mA, 50 Hz  
75 mA at 60 Hz  
220/240 VAC: 53 mA at 50 Hz  
40 mA at 60 Hz

LED indicators:  
Red (Alarm)  
Yellow (Trouble)  
Green (Power)

Relays:  
Alarm initiation relay:  
Quantity: 1  
Style: Normally open  
Ratings: 2.0A at 30 VDC (resistive)

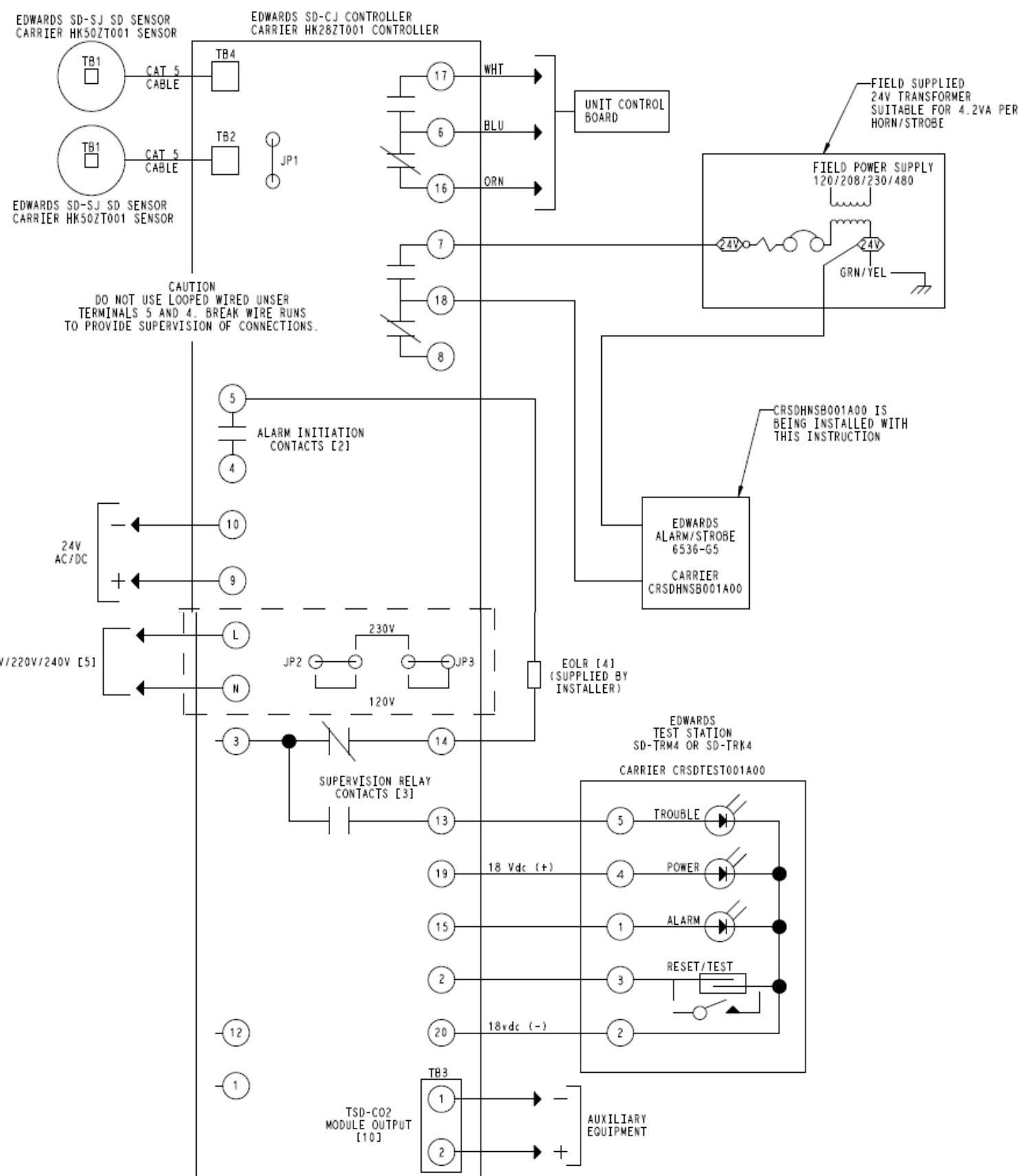
Auxiliary relays:  
Quantity: 2  
Style: Form C  
Ratings: 10A at 30 VDC, 10A at 30 VDC

Supervision (trouble) relay:  
Quantity: 1  
Style: Form C  
Ratings: 2.0A at 30 VDC (resistive)

**Detector specifications:**  
Sensor:  
Smoke detection method: 8.70x5.45x1.90 in.  
Photoelectric  
Air velocity (min-max): 100 - 4,000 f/min  
Pressure differential (min-max): 0.005 - 1.00 in  
Sensitivity: 0.67 to 2.48 % obscuration/ft  
Wire size: 14 to 22 AGW  
Reset time: 2 seconds maximum  
Power up time: 8 seconds max  
Alarm test response time: 5 to 7 seconds  
LED indicators: Red (alarm)  
Yellow (Trouble)  
Yellow (Dirty)  
Green (Power)

2/2

11/1/2008



## CARRIER RTU/WIRING DIAGRAM FOR CONNECTION OF DUCT DETECTOR TO TEST STATION AND ALARM/STROBE

CRSDTEST001A00

REMOTE TEST/RESET STATION SD-TRM4  
FOR SMOKE DETECTORS  
COMMERCIAL ROOFTOP UNIT  
3-27.5 TONS

## Installation Instructions

**IMPORTANT:** Read these instructions completely before attempting to install the accessory Remote Magnetic Test/Reset Station.

### SAFETY CONSIDERATIONS

Installation and servicing of air-conditioning equipment can be hazardous due to system pressure and electrical components. Only trained and qualified personnel should install, repair, or service this equipment.

Untrained personnel can perform basic maintenance functions such as cleaning and replacing air filters. All other operations must be performed by trained service personnel. When working on air conditioning equipment, observe precautions in the literature, on tags, and on labels attached to or shipped with the unit and other safety precautions that may apply.

Follow all safety codes. Wear safety glasses, protective clothing, and work gloves. Use quenching cloth for brazing operations. Have fire extinguisher available. Read these instructions thoroughly and follow all warnings or cautions included in literature and attached to the unit. Consult local building codes, the current editions of the National Electrical Code (NEC) NFPA 70. In Canada refer to the current editions of the Canadian electrical Code CSA C22.1.

Recognize safety information. This is the safety-alert symbol. When you see this symbol on the unit and in instructions or manuals, be alert to the potential for personal injury. Understand these signal words: DANGER, WARNING, and CAUTION. These words are used with the safety-alert symbol. DANGER identifies the most serious hazards which will result in severe personal injury or death. WARNING signifies hazards which could result in personal injury or death. CAUTION is used to identify unsafe practices which may result in minor personal injury or product and property damage. NOTE is used to highlight suggestions which will result in enhanced installation, reliability, or operation.

### WARNING

#### ELECTRICAL SHOCK HAZARD

Failure to follow this warning could result in personal injury or death.  
Before installing or servicing system, always turn off main power to system and install lockout tag. There may be more than one disconnect switch. Turn off accessory heater power switch if applicable.

### CAUTION

#### CUT HAZARD

Failure to follow this caution may result in personal injury.  
Sheet metal parts may have sharp edges or burrs. Use care and wear appropriate clothing.

### WARNING

#### PERSONAL INJURY AND ENVIRONMENTAL HAZARD

Failure to relieve system pressure could result in personal injury and/or death.  
1. Relieve pressure and recover all refrigerant before servicing existing equipment, and before final unit disposal. Use all service ports and open all flow-control devices, including solenoid valves.  
2. Federal regulations require that you do not vent refrigerant into the atmosphere. Recover during system repair or final unit disposal.

## GENERAL

The SD-TRM4 Remote Test/Reset Station is used with the SuperDuct™ four-wire duct smoke detector. Each remote test/reset station provides a green LED to indicate power, a red LED to indicate alarms, and a yellow LED to indicate trouble and detector dirty levels. The SD-TRM4 requires a magnetic to activate test and reset functions. (See Fig. 1.)

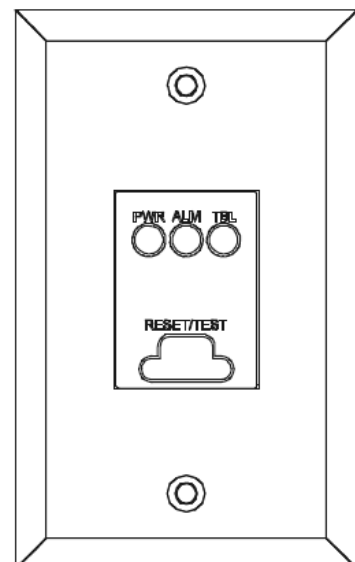


Fig. 1 - SD-TRM4

## SPECIFICATIONS

|                             |  |
|-----------------------------|--|
| Compatible Electrical Boxes | North American 1-gang box<br>Standard 4-in square box<br>1-1/2-in deep with 1-gang cover |
| LED Indicators              | Alarm (red)<br>Trouble (yellow)<br>Power (green)   |
| LED Type                    | Clear lens   |
| Wire Size                   | 14 to 22 AWG   |
| Resistance Per Wire         | 10 Ω, max  |
| Current Requirements        | Included in controller specification   |
| Compatible Detectors        | SuperDuct™ Four-Wire Smoke Detectors   |
| Operating Environment       |  |
| Temperature                 | 32° - 131°F (0° - 55°C)  |
| Humidity                    | 93% RH, non-condensing   |
| Storage Temperature         | -20° to 60°C (-4° to 140°F)  |

## REMOTE TEST/RESET STATION TESTS

Test/reset station alarm test using the SuperDuct™ Four-Wire Smoke Detector

The test/reset station alarm test checks a test/reset station's ability to initiate and indicate an alarm state.

### CAUTION

**ALARM SYSTEM ACTIVATION HAZARD**  
Failure to follow this caution may result in emergency alarm system activation and possible fines.  
This test places the duct detector into the alarm state. Unless part of the test, disconnect all auxiliary equipment from the controller before performing the test. If the duct detector is connected to a fire alarm system, notify the proper authorities before performing the test.

- To perform the alarm test using an SD-TRM4:
- Hold the test magnet to the target area for seven seconds.
  - Verify that the test/reset station's Alarm LED turns on.
  - After performing an alarm test using an SD-TRM4, reset the sensor by holding the test magnet to the target area for two seconds.
  - Verify that the test/reset station's Alarm LED turns off.

## INSTALLATION

Mount the remote test/reset station on a single gang box as shown in Fig. 2.

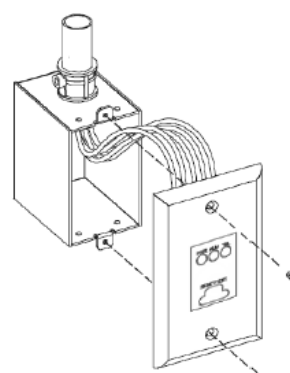


Fig. 2 - SD-TRM4 Installation Diagram

## WIRING

Wire the remote test/reset station to the four-wire controller as shown in Fig. 3.

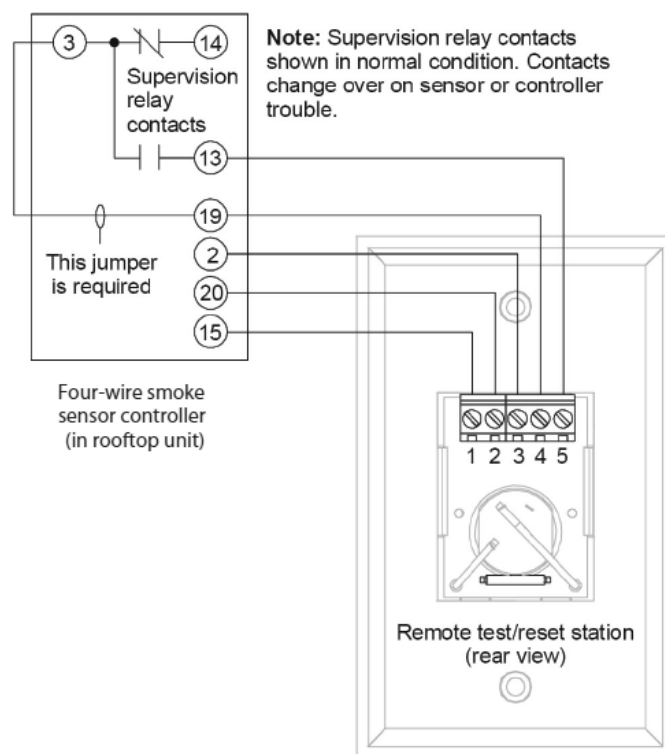


Fig. 3 - Wiring Diagram

## EDWARDS SIGNALLING PRODUCTS

### Description

The 6536-G5 is an audible/visual signal UL Listed for general purpose signaling applications.

### Installation

A qualified electrician familiar with National Electrical Code and local code requirements must install this product. Failure to follow the safety precautions in this instruction sheet could result in product or property damage, severe personal injury or death.

### WARNING

To reduce the risk of shock, do not remove lens or tamper with unit when the circuit is energized. Disconnect power and allow five (5) minutes for stored energy to dissipate before starting work or disassembly. High energy could be stored in the strobe circuit once it is energized.

- Install an appropriate electrical box using suitable hardware.

## Installation Instructions for the 6536-G5 Horn/Strobe

- Connect the horn/strobe wire leads and terminals (Figure 2). The horn and strobe are connected together at the factory.

**NOTE:** To connect the horn and strobe to different circuits, loosen the terminals, remove the two wires and cap off with wire nuts.

- Mount the horn/strobe onto the electrical box. Secure it using two screws (supplied).
- Perform an operational test.

### Maintenance

### WARNING

To reduce the risk of shock, do not remove lens or tamper with unit when the circuit is energized. Disconnect power and allow five (5) minutes for stored energy to dissipate before starting work or disassembly. High energy could be stored in the strobe circuit once it is energized.

Perform regularly scheduled testing at least twice a year or more often as dictated by local authorities having jurisdiction.

Table 1. Specifications

| Operating Voltage | 24V 50/60 Hz | 24V DC |
|-------------------|--------------|--------|
| Alarm Current     | 175 mA       | 125 mA |

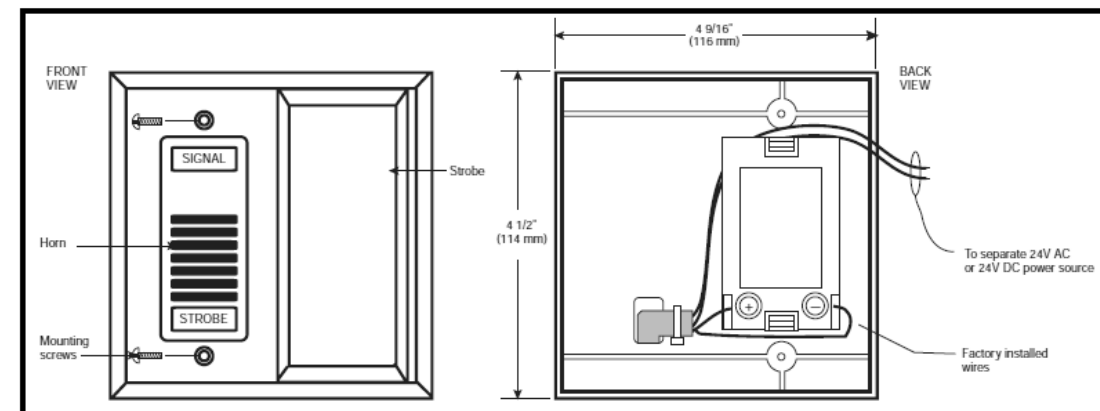


Figure 1. Details of Horn/Strobe

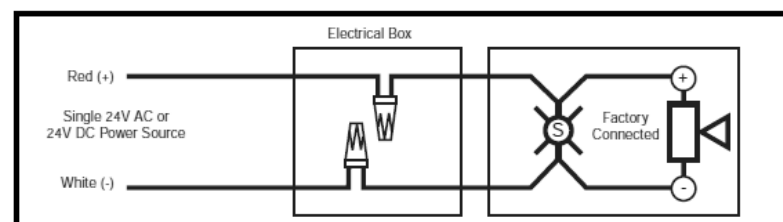


Figure 2. Connecting the Horn and Strobe

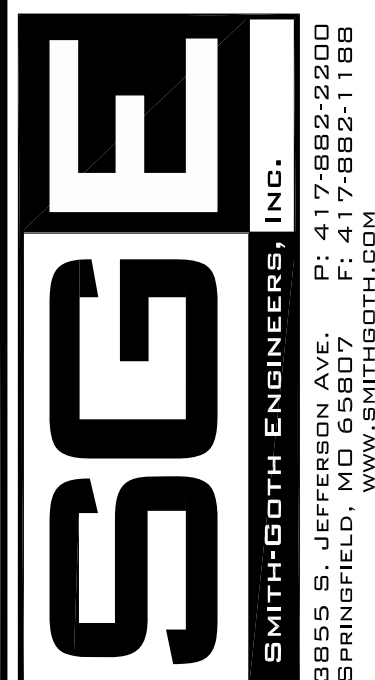
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## DUCT DETECTOR - TEST STATION - ALARM/STROBE



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PROJECT:  
**NEW O'REILLY AUTO PARTS STORE**  
6179 SW HWY 200  
OCALA, FL 34476  
**HVAC SPECIFICATIONS**

**O'Reilly AUTO PARTS**  
CORPORATE OFFICES  
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SPRINGFIELD, MISSOURI 65802  
(417) 862-2674 TELEPHONE

DRAWN BY: **JJW** CHECKED BY: **BLC/ALT**

DATE: **06/15/2018**

REVISION:

PROJECT NUMBER:  
**18078-OF4**

SHEET NUMBER

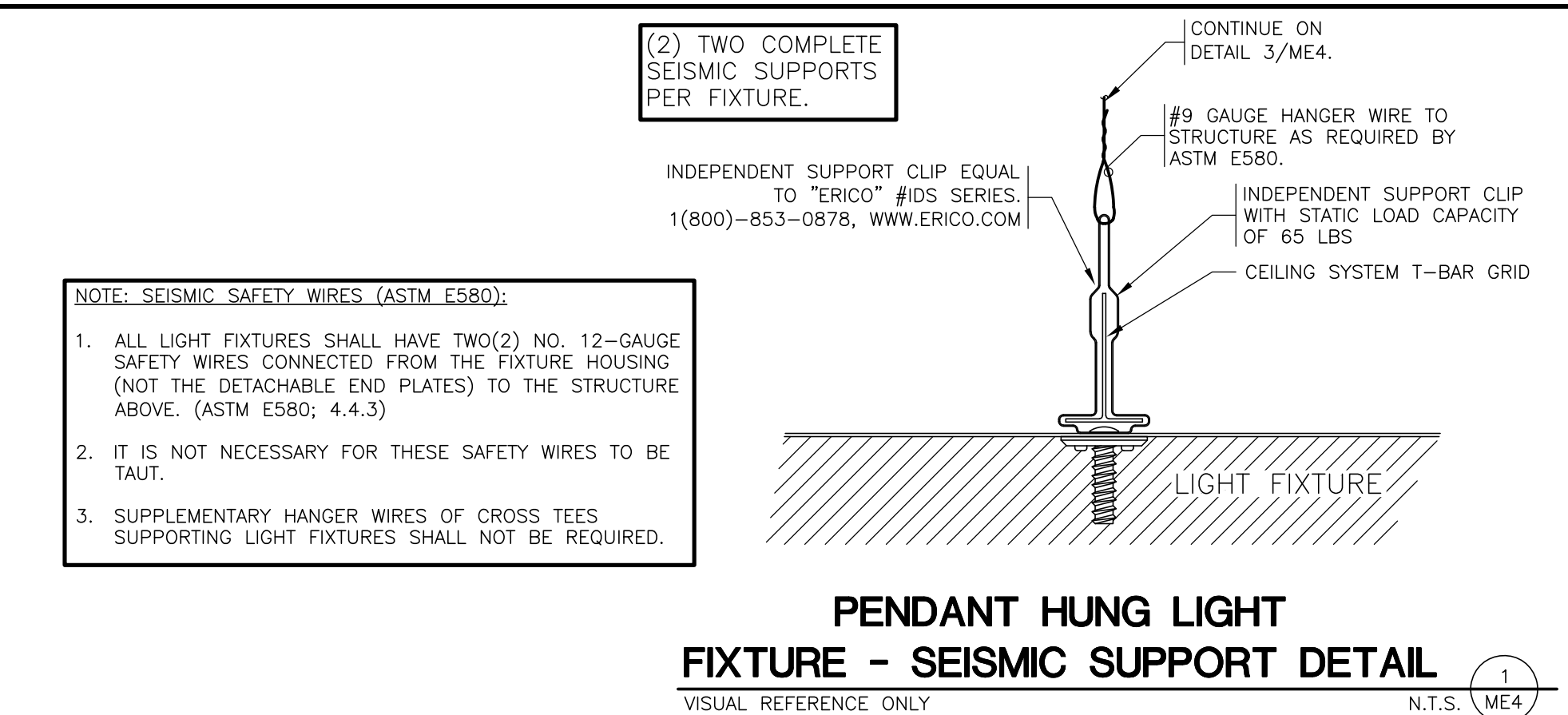
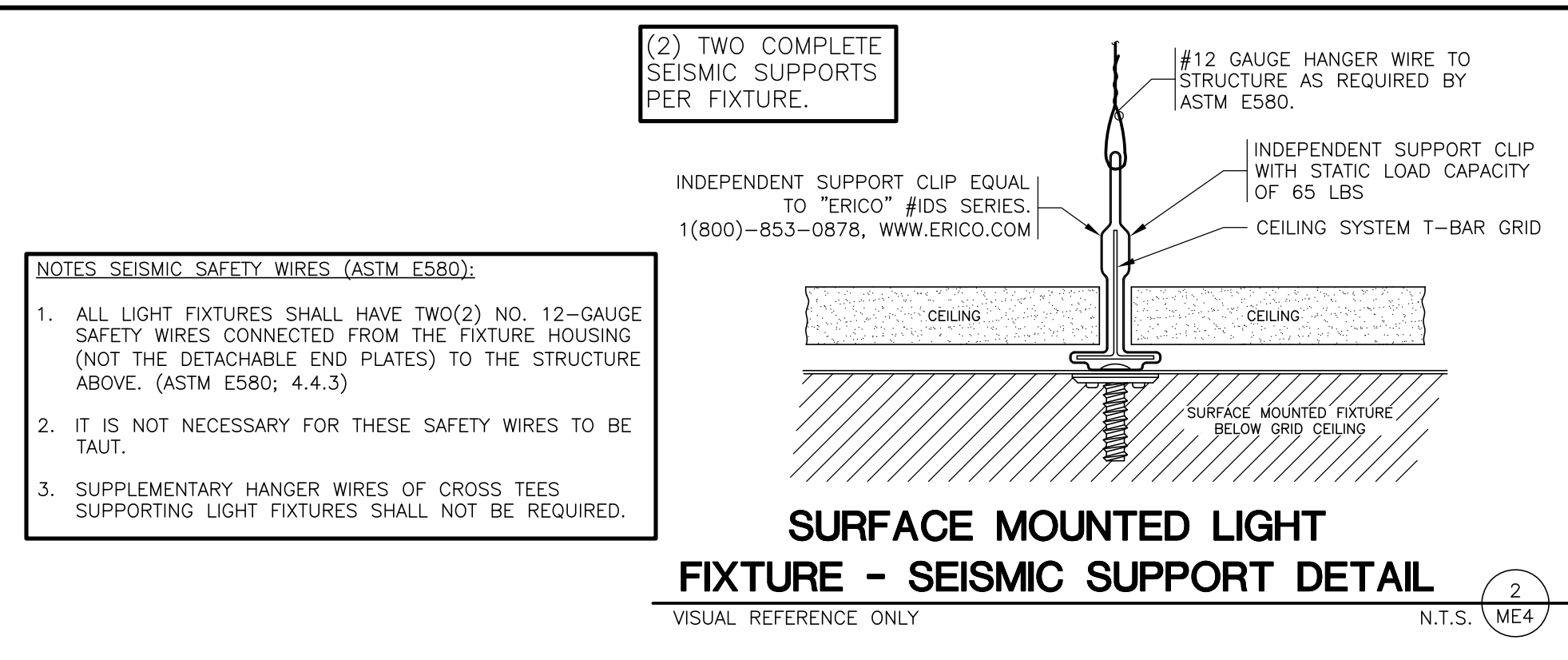
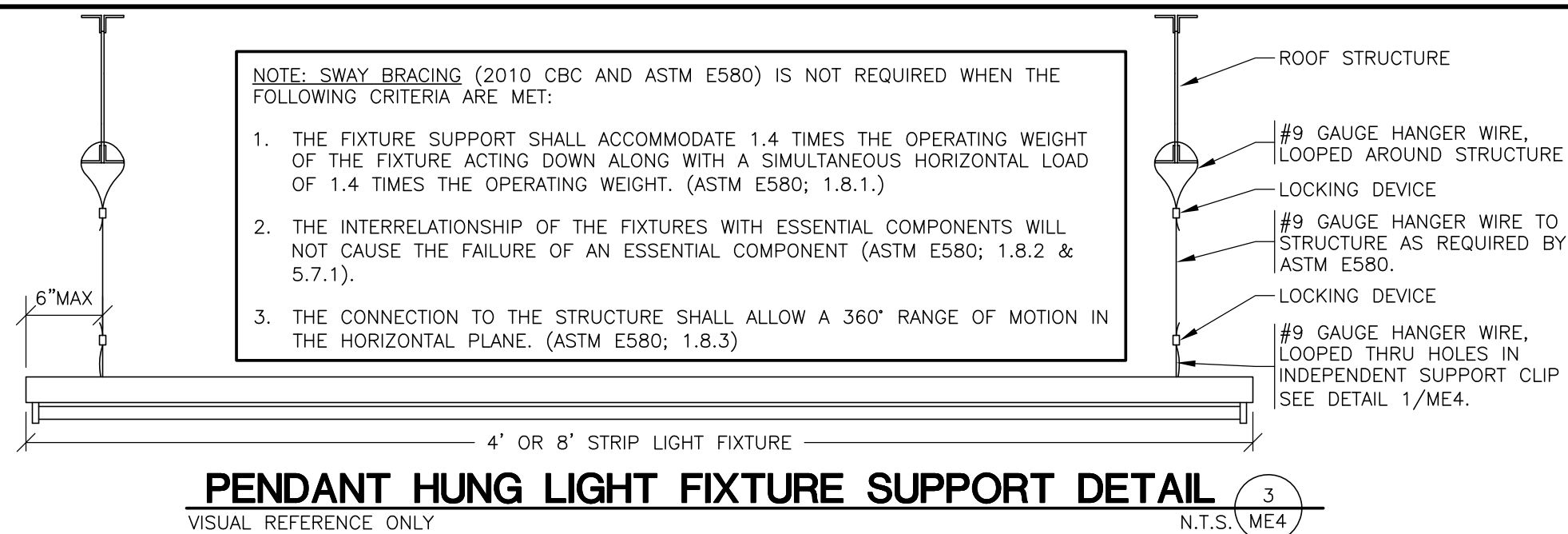
**M3**



# ELECTRICAL

## CONTRACTOR TO REFER TO ARCHITECTURAL SHEET G1.1 FOR SEISMIC DESIGN CATEGORY. SEISMIC RESTRAINTS (ONLY REQUIRED FOR SEISMIC DESIGN CATEGORIES C,D,E,F)

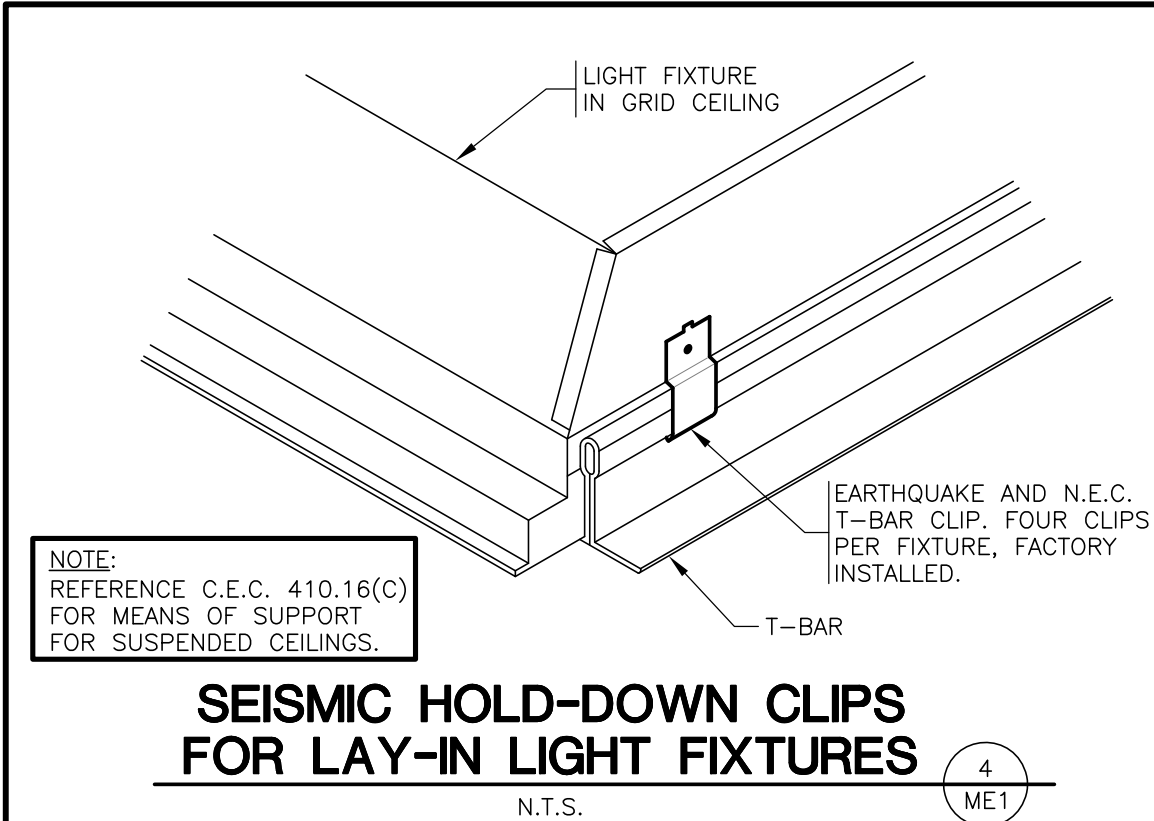
CONTRACTOR TO PROVIDE SEISMIC BRACING AS REQUIRED BY CODE.  
IF SEISMIC BRACING IS REQUIRED SEE BRACING DETAILS THIS SHEET.



### SEISMIC RESTRAINT ELECTRICAL CONDUITS

TRANSVERSE BRACING WITH CONCRETE ATTACHMENTS OR STRUCTURAL STEEL ATTACHMENTS AS REQUIRED, SHALL BE USED FOR THE FOLLOWING:

1. ALL CONDUIT 1" INSIDE DIAMETER AND LARGER SUSPENDED MORE THAN 12" BELOW STRUCTURE.
2. ALL CONDUIT IN THE MECHANICAL ROOM 1-1/4" INSIDE DIAMETER AND LARGER SUSPENDED MORE THAN 12" BELOW STRUCTURE.
3. ALL OTHER CONDUIT 2-1/2" INSIDE DIAMETER AND LARGER SUSPENDED MORE THAN 12" BELOW STRUCTURE.
4. SEE DETAILS "TRAPEZE TRANSVERSE AND LONGITUDINAL BRACING FOR PIPE & CONDUIT" AND "SINGLE PIPE & CONDUIT BRACING".



# HVAC

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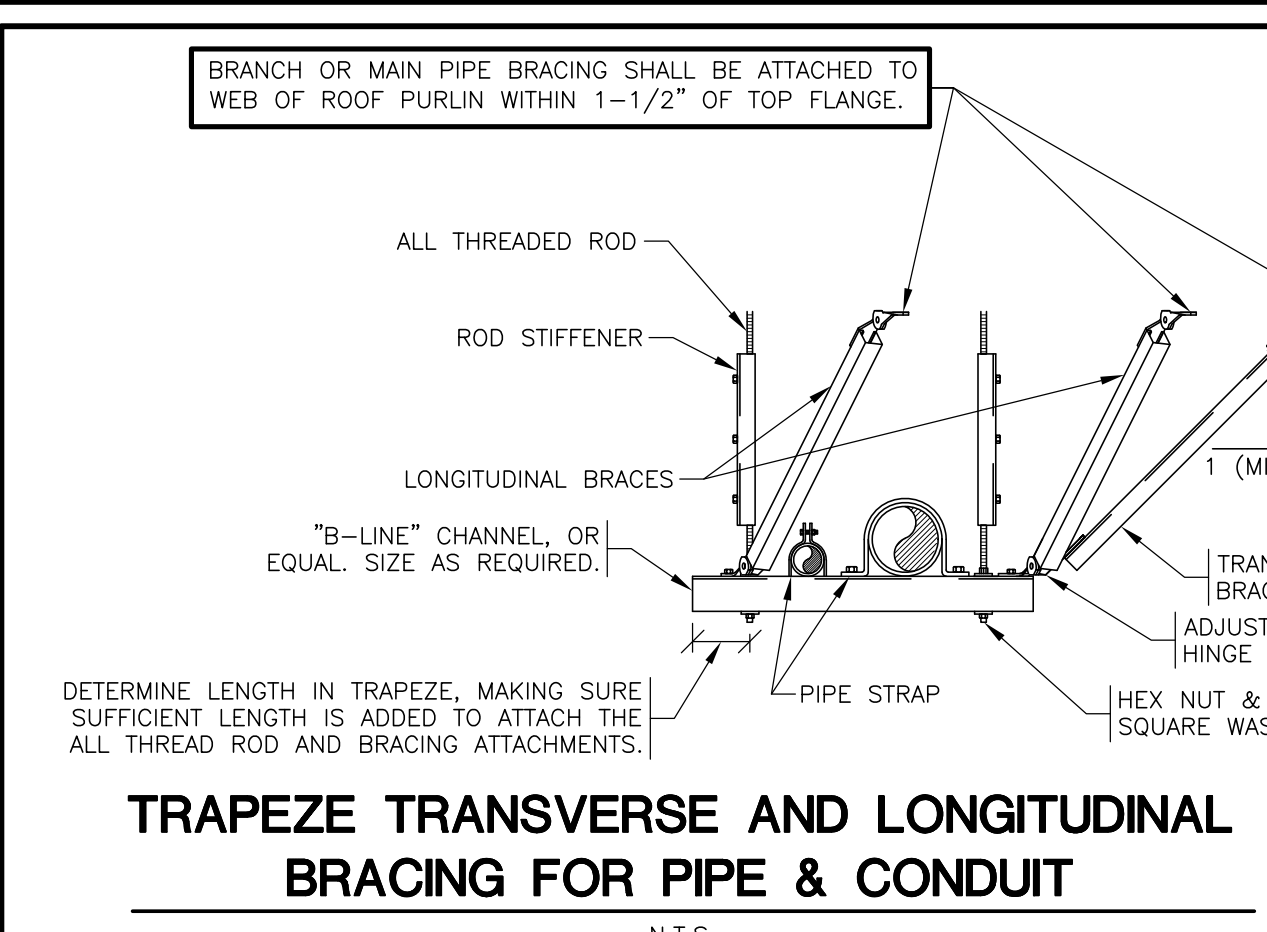
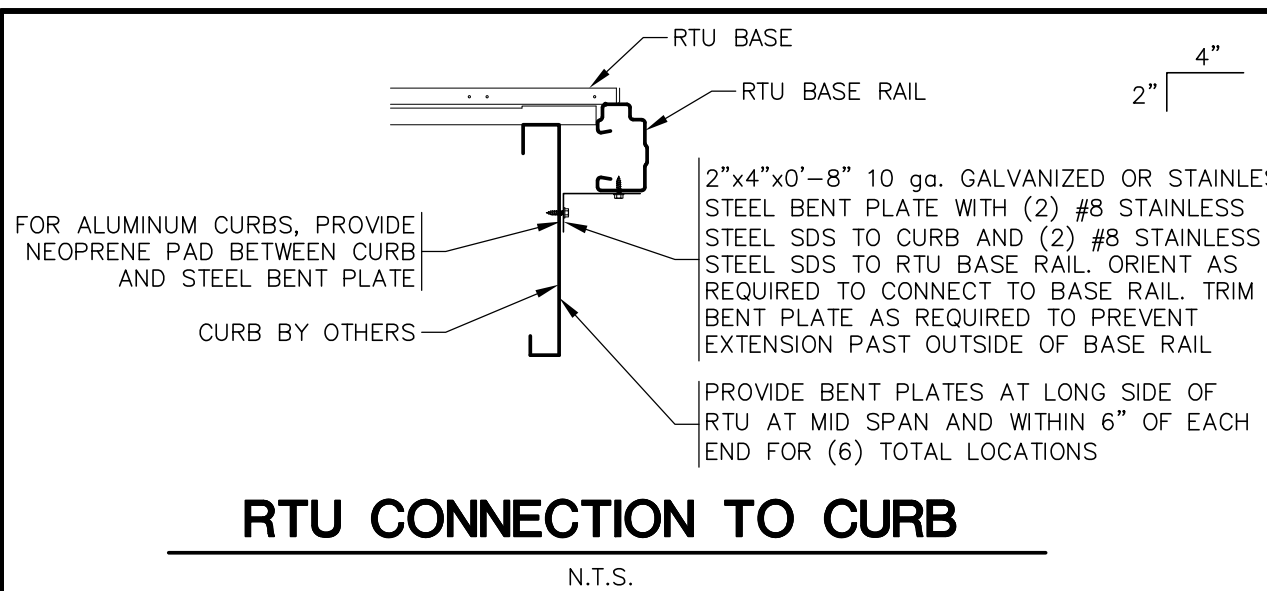
CONTRACTOR TO PROVIDE SEISMIC BRACING AS REQUIRED BY CODE.  
IF SEISMIC BRACING IS REQUIRED SEE BRACING DETAILS THIS SHEET.

1. ALL PIPING WHICH REQUIRES RESTRAINT SHALL BE PROVIDED WITH SEISMIC EXPANSION DEVICES.
2. BRANCH OR MAIN PIPE BRACING SHALL BE ATTACHED TO WEB OF ROOF PURLIN WITHIN 1-1/2" OF TOP FLANGE.
3. SEE DETAILS "TRAPEZE TRANSVERSE AND LONGITUDINAL BRACING FOR PIPE & CONDUIT" AND "SINGLE PIPE & CONDUIT BRACING".

### SEISMIC RESTRAINT

TRANSVERSE BRACING WITH CONCRETE ATTACHMENTS OR STRUCTURAL STEEL ATTACHMENTS AS REQUIRED, SHALL BE USED FOR THE FOLLOWING:

1. ALL PIPE 1" INSIDE DIAMETER AND LARGER SUSPENDED MORE THAN 12" BELOW STRUCTURE.
2. ALL PIPING IN THE MECHANICAL ROOM 1-1/4" INSIDE DIAMETER AND LARGER SUSPENDED MORE THAN 12" BELOW STRUCTURE.
3. ALL OTHER PIPING 2-1/2" INSIDE DIAMETER AND LARGER SUSPENDED MORE THAN 12" BELOW STRUCTURE.
4. ALL RECTANGULAR AIR DUCTS WITH CROSS SECTIONAL AREA OF 6 SQUARE FEET OR LARGER SUSPENDED MORE THAN 12" BELOW STRUCTURE.
5. ALL PIPING WHICH REQUIRES RESTRAINT PER THE ABOVE SHALL BE PROVIDED WITH SEISMIC EXPANSION DEVICES.

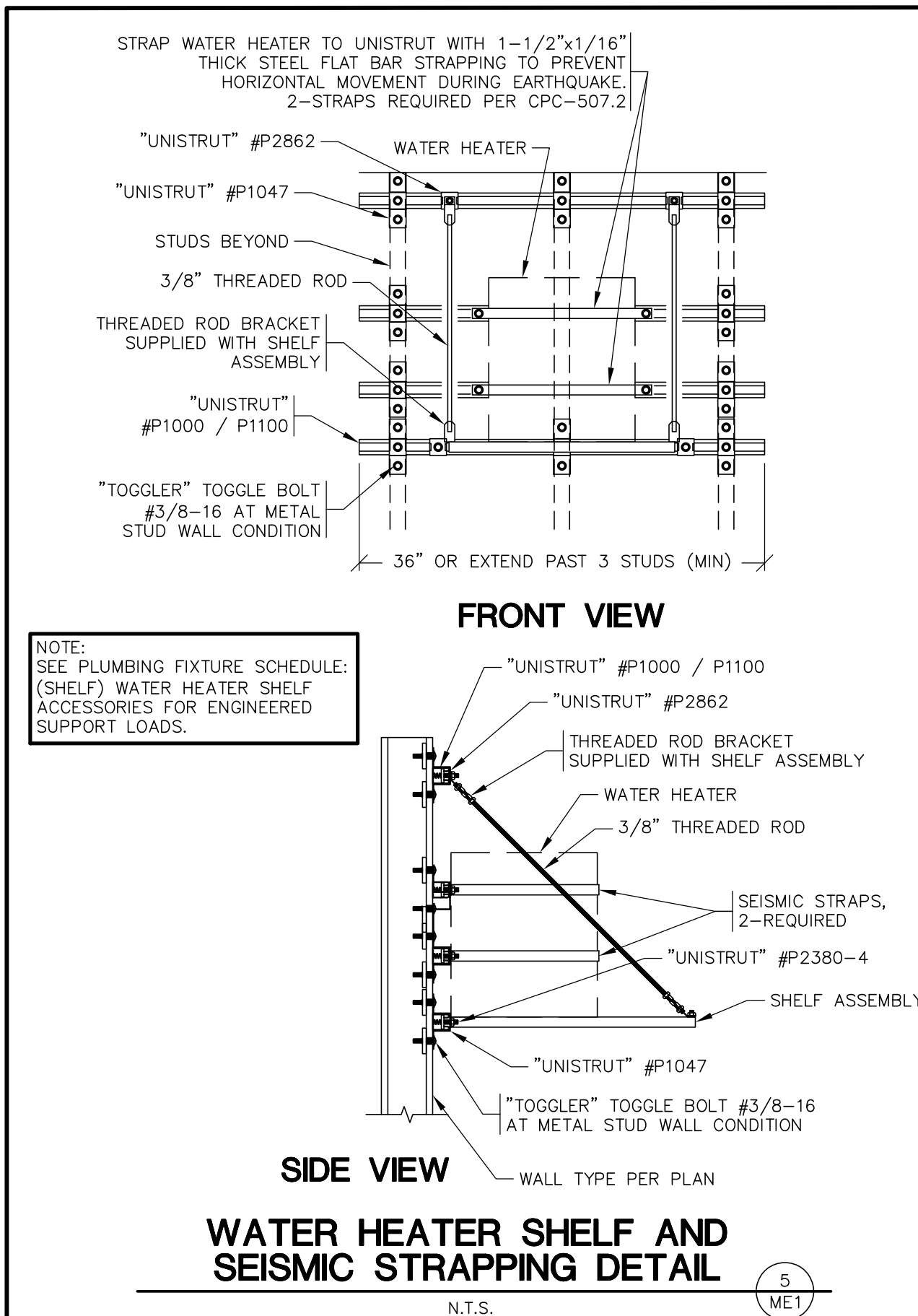


# PLUMBING

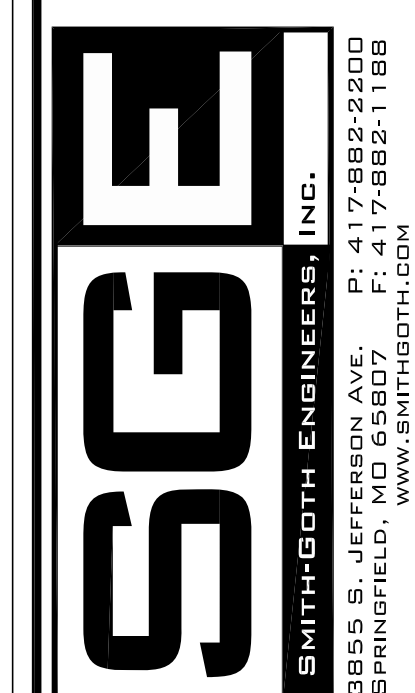
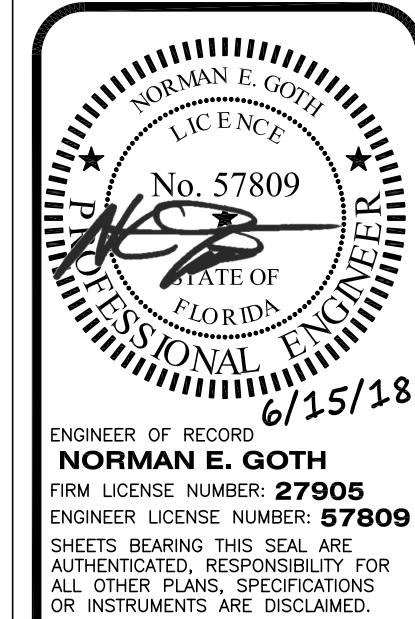
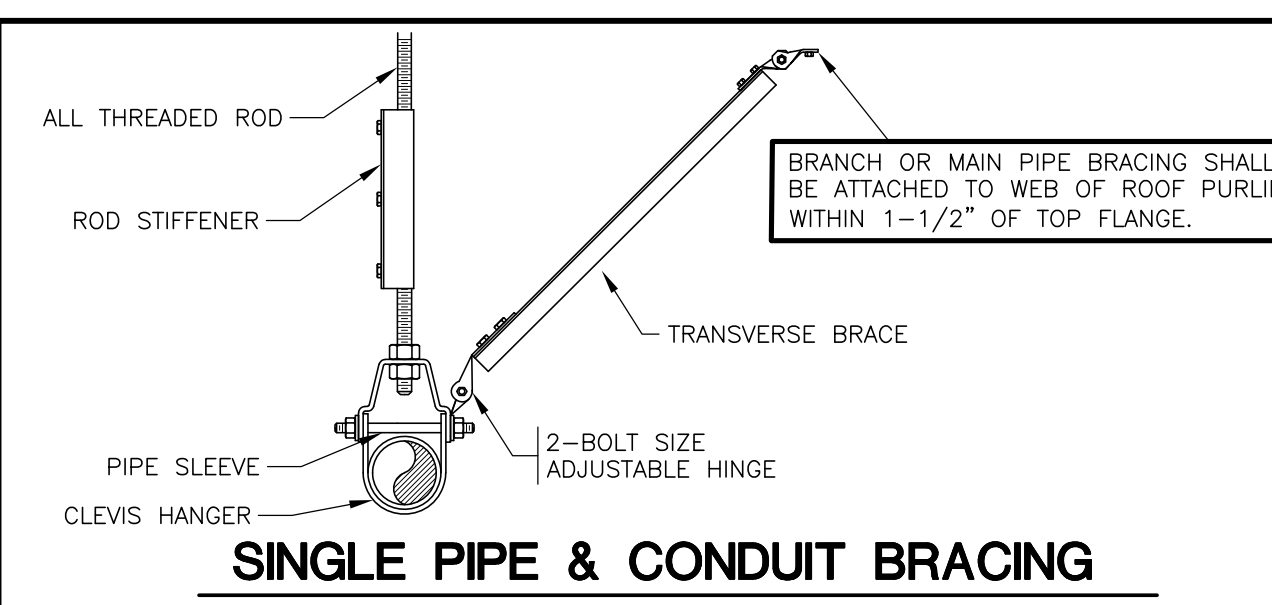
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### PIPE & CONDUIT BRACING DETAILS



PROJECT: NEW O'REILLY AUTO PARTS STORE  
6179 SW HWY 200  
OCALA, FL 34476

SEISMIC DETAILS

O'Reilly AUTO PARTS

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ME1