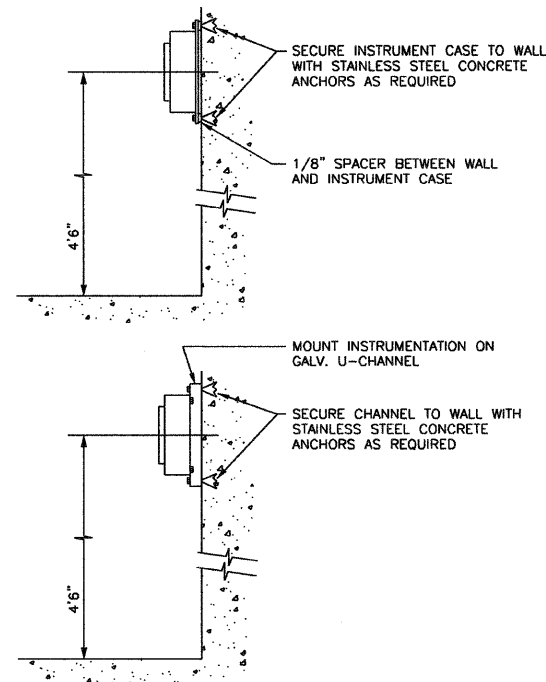


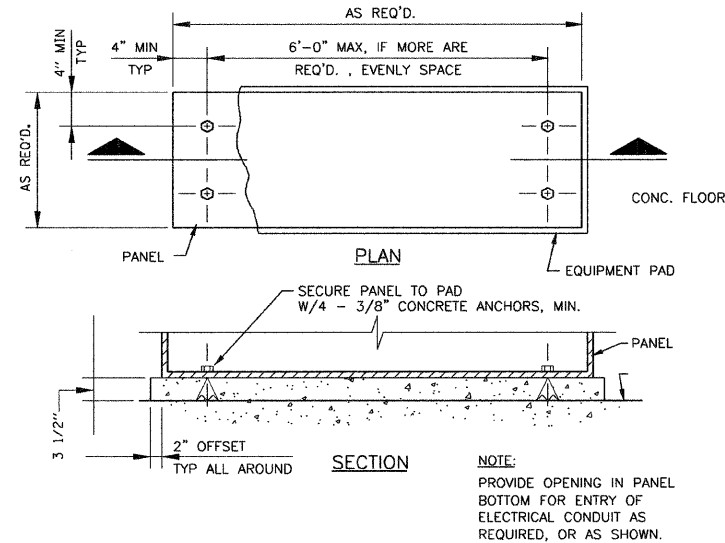
**EXTERIOR MOUNTED ALARM LIGHT AND HORN N110**

NTS



**WALL MOUNT SMALL CASE INSTRUMENTATION N171**

NTS



**FREE STANDING OR FLOOR MOUNT CONTROL PANEL N003**

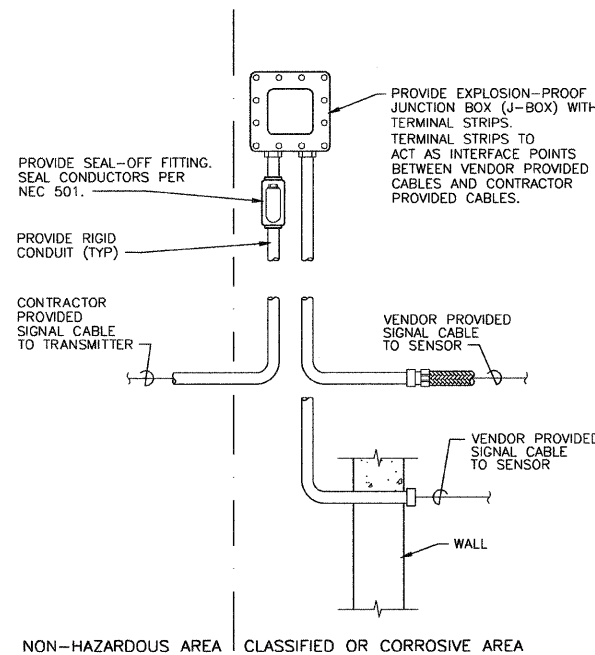
NTS

**INSTRUMENT PLAN GENERAL NOTES**

1. DRAWING SHOWS CONTROL, SIGNAL AND ASSOCIATED SINGLE PHASE POWER WIRING REQUIREMENTS.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WIRING, WHETHER SHOWN OR NOT, NECESSARY FOR A COMPLETE AND OPERABLE SYSTEM.
3. THIS DRAWING SHOWS APPROXIMATE LOCATIONS OF DEVICES AND PANELS AND IS DRAWN TO SCALE.
4. SHIELDED AND UNSHIELDED CONDUCTORS SHALL BE RUN IN CONDUIT. SHIELDED CONDUCTORS SHALL NOT BE COMBINED WITH UNSHIELDED CONDUCTORS IN ANY CONDUIT. NEITHER SHIELDED NOR UNSHIELDED CONDUCTORS SHALL BE INCLUDED IN THE SAME CONDUIT AS POWER WIRING.
5. SHIELDED AND UNSHIELDED CONDUCTORS SHALL HAVE A MINIMUM OF 6" SEPARATION BETWEEN CONDUIT ON PARALLEL RUNS.
6. SHIELDED AND UNSHIELDED CONDUCTORS SHALL BE SEPARATED BY STEEL BARRIERS IN ALL COMBINED SIGNAL JUNCTION BOXES AND INSTRUMENT TERMINATION CABINETS.
7. CONDUCTORS SHALL NOT BE SPLICED EXCEPT AT TERMINALS OR AS DESIGNATED BY ENGINEER.
8. ONLY REQUIRED CONDUCTORS ARE SHOWN ON PLAN. SPARE CONDUCTORS NOT SHOWN.
9. FOR EACH CONDUIT CONTAINING MORE THAN TWO CONDUCTORS, PROVIDE A MINIMUM OF TWO CONDUCTORS OR 10% OF TOTAL CONDUCTORS IN CONDUIT, WHICHEVER IS GREATER AS SPARES. TAG BOTH ENDS OF EACH SPARE. TERMINATE EACH END OF SPARE CONDUCTOR AT TERMINALS WHENEVER POSSIBLE.
10. CONDUIT SHALL BE SIZED TO ACCOMMODATE REQUIRED CONDUCTORS AND ANTICIPATED SPARES.
11. THIS DRAWING DOES NOT SHOW CONDUIT SYSTEMS. PROVIDE, AS A MINIMUM, PULL BOXES AS RECOMMENDED BY CONDUCTOR MANUFACTURER. CONDULETS SHALL NOT BE USED AS PULL BOXES.
12. PROVIDE EXPLOSION-PROOF SEAL-OFF FITTINGS ON ALL CONDUIT EXITING CLASSIFIED OR RATED LOCATIONS. FITTINGS SHALL BE INSTALLED IN THE CLASSIFIED OR RATED LOCATION.

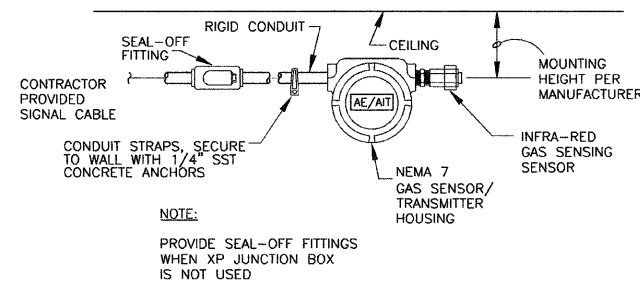
**INSTRUMENT PLAN LEGEND**

- ( ) #14 (QUANTITY) #14 THWN CONDUCTORS
- ( ) SH.PR. (QUANTITY) #16 SHIELDED PAIR
- ( ) TEL (QUANTITY) #18 TELEPHONE CABLE 4 - CONDUCTOR
- (X/Y) FOC (CABLE/STRAND QUANTITY) FIBER OPTIC CABLE
- ( ) CAT6 (QUANTITY) DATA HIGHWAY CABLE
- ( ) RG62 (QUANTITY) RG62 A/U COAXIAL CABLE
- ( ) VFC (QUANTITY) VENDOR FURNISHED CABLE
- ( ) RTD (QUANTITY) 3 WIRE RTD CABLE



**EXPLOSION-PROOF JUNCTION BOX N160**

NTS



**COMBUSTIBLE GAS SENSOR/ TRANSMITTER - INFRA-RED N004**

NTS

E21

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
PUMP STATION NO. 48  
REHABILITATION  
I&C DETAILS

SCALE: AS SHOWN  
DATE: 03-10-11  
DRAWN BY: HFF  
CHECKED BY: LET