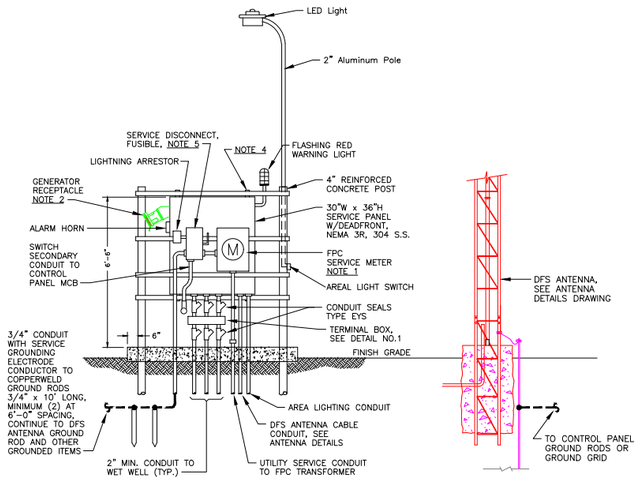
REQUIRED LIFT STATION ELECTRICAL DATA

SERVICE SIZE_____AMPS_____VOLTS_____PHASE_____WIRE

AVAILABLE SHORT CIRCUIT AMPS FROM UTILITY CO._____SCA

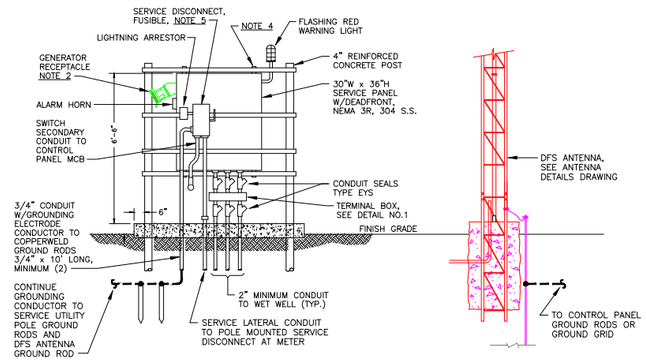
OVER CURRENT PROTECTION EQUIPMENT INTERRUPTING CAPACITY_____AIC



TYPICAL CONTROL PANEL WITH ELECTRICAL METER ON EQUIPMENT RACK

NOTES:

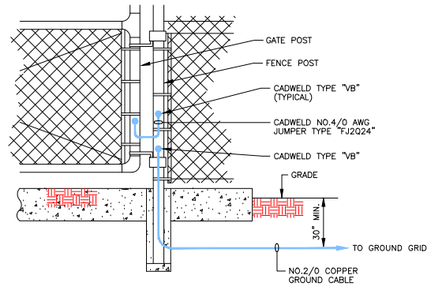
1. ELECTRIC METER AND PRIMARY DISCONNECT MOUNTED TO STAINLESS STEEL UNISTRUT ON BACK SIDE OF EQUIPMENT RACK.
2. EMERGENCY GENERATOR RECEPTACLES: RUSSELL & STOLL, JRSB 1044FR (100 amp), 2044FR (200 amp).
3. ALL POWER AND CONTROLS WIRING SHALL BE CONTINUOUS (NO SPLICES).
4. PANEL MOUNTED TO STAINLESS STEEL UNISTRUT BY WELDED TABS ON PANEL.
5. SERVICE DISCONNECT SWITCH, NEMA 3R STAINLESS STEEL OR NON-METALLIC ENCLOSURE, FUSIBLE, SERVICE ENTRANCE RATED WITH NEUTRAL BAR, GROUND BAR AND BONDING PER N.E.C. 250-28. ALL SWITCH HARDWARE SHALL BE STAINLESS STEEL.
6. THE CONTRACTOR SHALL VERIFY THE POWER SERVICE AVAILABLE FROM THE POWER COMPANY AND COORDINATE THE LIFT STATION CONTROL PANEL AND ALL OTHER EQUIPMENT WITH THE AVAILABLE SERVICE PRIOR TO THE PURCHASE OF ANY EQUIPMENT. IF THE POWER SERVICE AVAILABLE IS A 230/120V HIGH-LEG SERVICE, THE CONTRACTOR SHALL INSURE THAT THE 120V LOADS IN THE LIFT STATION CONTROL PANEL ARE NOT CONNECTED TO THE HIGH-LEG.



TYPICAL CONTROL PANEL WITH ELECTRICAL METER ON UTILITY POLE

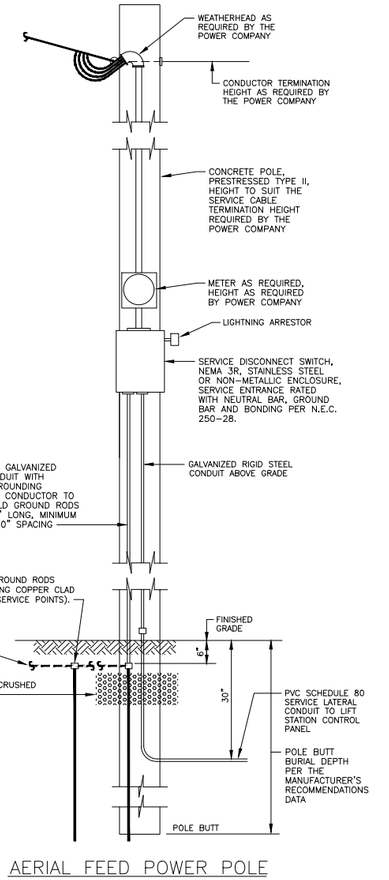
NOTES:

1. ELECTRIC METER AND PRIMARY DISCONNECT MOUNTED TO STAINLESS STEEL UNISTRUT ON BACK SIDE OF EQUIPMENT RACK.
2. EMERGENCY GENERATOR RECEPTACLES: RUSSELL & STOLL, JRSB 1044FR (100 amp), 2044FR (200 amp).
3. ALL POWER AND CONTROLS WIRING SHALL BE CONTINUOUS (NO SPLICES).
4. PANEL MOUNTED TO STAINLESS STEEL UNISTRUT BY WELDED TABS ON PANEL.
5. PRIMARY DISCONNECT SWITCH, NEMA 3R STAINLESS STEEL OR NON-METALLIC ENCLOSURE, FUSIBLE, WITH NEUTRAL BAR AND GROUND BAR. ALL SWITCH HARDWARE SHALL BE STAINLESS STEEL.
6. THE CONTRACTOR SHALL VERIFY THE POWER SERVICE AVAILABLE FROM THE POWER COMPANY AND COORDINATE THE LIFT STATION CONTROL PANEL AND ALL OTHER EQUIPMENT WITH THE AVAILABLE SERVICE PRIOR TO THE PURCHASE OF ANY EQUIPMENT. IF THE POWER SERVICE AVAILABLE IS A 230/120V HIGH-LEG SERVICE, THE CONTRACTOR SHALL INSURE THAT THE 120V LOADS IN THE LIFT STATION CONTROL PANEL ARE NOT CONNECTED TO THE HIGH-LEG.

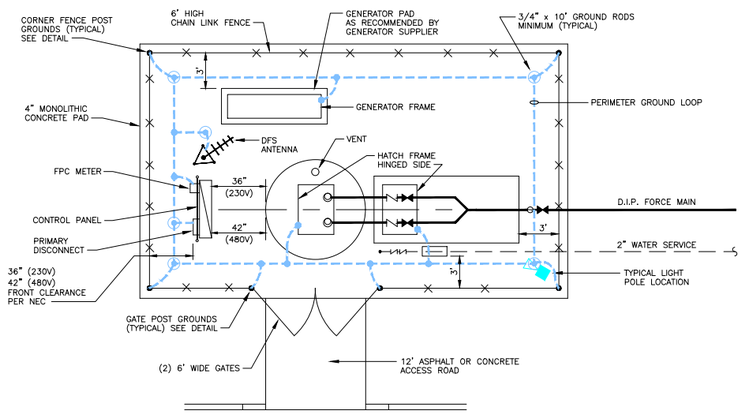


TYPICAL GATE GROUNDING DETAIL

N.T.S.



AERIAL FEED POWER POLE

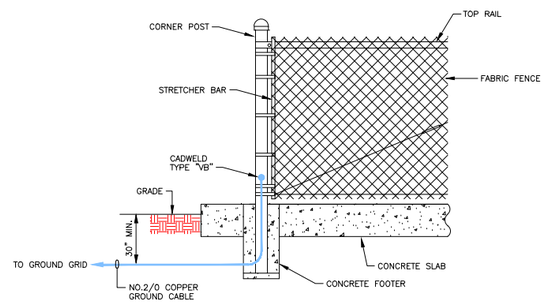


TYPICAL LIFT STATION GROUNDING PLAN

N.T.S.

GROUNDING NOTES:

1. GROUNDING INSTALLATION SHALL BE IN ACCORDANCE WITH REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE AND SUCH LOCAL CODES WHICH HAVE PRECEDENCE.
2. LOCATION OF GROUNDING LOOP IS SHOWN DIAGRAMATICALLY. EXACT LOCATION TO MAINTAIN CLEARANCE FROM FOOTERS SHALL BE DETERMINED IN THE FIELD.
3. PROVIDE 3/4" DIA. x 10' LONG COPPERWELD SECTIONAL GROUND ROD(S) COUPLED TOGETHER AS REQUIRED TO GIVE A MAXIMUM SYSTEM RESISTANCE OF 5 OHMS TO GROUND.
4. TOP OF GROUNDING RODS SHALL BE 30" BELOW GRADE.
5. NO.2/0 AWG BARE STRANDED COPPER GROUND WIRE IS TO BE USED FOR THE MAIN GROUND LOOP AND SHALL BE BURIED A MINUMUM OF 30" BELOW GRADE. NO.2/0 AWG BARE STRANDED COPPER GROUND WIRE IS TO USED FOR THE TAPS. AT A MINIMUM, THE FOLLOWING ITEMS SHALL BE BONDED TO THE MAIN GROUND LOOP:
   A. MAIN SERVICE GROUNDING ELECTRODE CONDUCTOR
   B. CONTROL PANEL PRIMARY DISCONNECT
   C. UTILITY METER PER UTILITY COMPANY REQUIREMENTS
   D. CORNER AND GATE FENCE POSTS
   E. WET WELL AND DRY WELL HATCH FRAMES (HINGED SIDE)
   F. LIGHT POLE AND/OR UTILITY POLE
   G. GENERATOR
   H. TELEMETRY ANTENNA GROUND ROD
6. GROUND WIRE RUNS, BETWEEN POINT OF CONNECTIONS, SHALL BE AS SHORT AND STRAIGHT AS POSSIBLE.
7. ALL SURFACES TO BE GROUNDED SHALL BE THOROUGHLY CLEANED TO BARE METAL BEFORE ATTACHING GROUND CONNECTION.
8. GROUND RESISTANCE SHALL NOT EXCEED 5 OHMS. THE RESISTANCE TO GROUND SHALL BE MEASURED BY A LOW RESISTANCE TYPE OF MEGGAR. MEASUREMENTS SHALL BE MADE BY FALL-OF-POTENTIAL OR 3-POINT METHOD AS DESCRIBED IN JAMES G. BIDDLE PUBLICATION NO. 25-J-3. THE 5 OHMS SHALL BE MEASURED WITH THE GROUND POINT ISOLATED AND NO OTHER GROUND WIRES OR POINTS TIED INTO THE GROUND RODS UNDER TEST. THERE SHALL BE NO TREATMENT OF THE SOIL AROUND THE GROUND RODS TO IMPROVE THE RESISTANCE.
9. IF THE MEASURED RESISTANCE TO GROUND DOES NOT MEET THE REQUIRED VALUE, EXTENSIONS SHALL BE COUPLED TO THE ROD OR ADDITIONAL RODS SPACED 10' APART SHALL BE DRIVEN AND CONNECTED BY NO.2/0 AWG BARE STRANDED COPPER CABLE.
10. WHERE GROUNDING WIRE RISES TO ELECTRICAL EQUIPMENT, COLUMNS, POSTS, VESSELS, ETC. THROUGH EARTH OR CONCRETE SLABS, THE WIRE SHALL BE PROTECTED BY SCHEDULE 80 PVC CONDUIT.
11. ALL BELOW GRADE OR CONCRETE SLAB GROUNDING CONNECTIONS SHALL BE MADE USING THE EXOTHERMIC WELDING PROCESS, CADWELD OR APPROVED EQUAL.



CHAIN LINK FENCE CORNER POST GROUNDING DETAIL

N.T.S.

ISSUE CODE
NCH 11-08-22
ROS 03-14-24

CITY OF LAKE WALES
111 EAST CENTRAL AVE. LAKE WALES, FLORIDA 33859-3320

ISSUE CODE		A	PRELIMINARY	B	DESIGN
C	BIDS	D	CONSTRUCTION	E	APPROVAL
DESIGN:	AND	CHK'D BY:		SCALE:	NONE
				DATE:	9/1/07
DRAWN BY:	JHH-34243			ENGR.	

DRAWING TITLE
LIFT STATION ELECTRICAL DETAILS
JOB NO.
WASTEWATER ELECTRICAL DETAILS
AREA
CITY-OF-LAKE-WALES
REV.