

KEY

- ① METER BASE PER SERVING UTILITY REQUIREMENTS ~ AS A MINIMUM, THE METER BASE SHALL BE SAFETY SOCKET BOX WITH FACTORY-INSTALLED TEST BYPASS FACILITY THAT MEETS THE REQUIREMENTS OF **EUSERC DRAWING 305** ~ WHEN THE UTILITY REQUIRES METER BASE TO BE MOUNTED ON THE SIDE OR BACK OF THE SERVICE CABINET, THE METER BASE ENCLOSURE SHALL BE FABRICATED FROM TYPE 304 STAINLESS STEEL
- ② MAIN BREAKER ~ DPST ~ SIZE PER BREAKER SCHEDULE
- ③ PHOTOCELL BREAKER ~ SPST 15 AMP - 120/240 VOLT
- ④ TEST SWITCH ~ SPDT SNAP ACTION - POSITIVE CLOSE 15 AMP - 120/277 VOLT - "T" RATED
- ⑤ PHOTOELECTRIC CONTROL ~ SEE **STANDARD SPECIFICATION 9-29.11(2)**
- ⑥ BRANCH BREAKER ~ SEE BREAKER SCHEDULE
- ⑦ SIGNAL BREAKER ~ SEE BREAKER SCHEDULE
- ⑧ CONTACTOR (BEHIND DEAD FRONT) ~ SEE BREAKER SCHEDULE
- ⑨ RECEPTACLE BREAKER ~ SPST 20 AMP - 120/240 VOLT
- ⑩ RECEPTACLE (GROUNDED) ~ GFCI 20 AMP - 125 VOLT
- ⑪ ISOLATED NEUTRAL BUSS ~ 14 LUG COPPER
- ⑫ PHOTOCELL ENCLOSURE ~ ENCLOSURE TO BE FABRICATED FROM 5/8" (IN) EXPANDED STEEL MESH WITH WELDED SEAMS AND MOUNTING FLANGES ~ HOT-DIP GALVANIZED AFTER FABRICATION ~ TYPE 5052 - H32 ALUMINUM WITH 5/8" (IN) x 5/8" (IN) OPENINGS EQUIVALENT TO 5/8" (IN) EXPANDED STEEL MESH MAY BE USED AS ALTERNATIVE MATERIAL ~ SEE PHOTOCELL MOUNTING DETAIL
- ⑬ HINGED FRONT FACING DOOR WITH 4" (IN) x 4" (IN) MINIMUM POLISHED WIRE GLASS WINDOW
- ⑭ HINGED DEAD FRONT WITH 1/4 TURN FASTENERS OR SLIDE LATCHES ~ DEAD FRONT PANEL BOLTS SHALL NOT EXTEND INTO VERTICAL LIMITS OF THE BREAKER ARRAY(S)
- ⑮ CABINET MAIN BONDING JUMPER ASSEMBLY ~ BUSS SHALL BE 14 LUG TINNED COPPER ~ SEE CABINET MAIN BONDING JUMPER ASSEMBLY DETAIL
- ⑯ SPARE BRANCH BREAKER ~ DPST 20 AMP - 120/240 VOLT
- ⑰ METAL WIRING DIAGRAM HOLDER
- ⑱ 1/4" (IN) DIAMETER DRAIN HOLE ~ DRILL BEFORE GALVANIZING
- ⑲ MOUNTING HOLE ~ SEE SERVICE CABINET MOUNTING DETAILS
- ⑳ 18-CIRCUIT PANEL BOARD ~ MINIMUM SIZE WITH SEPARATE MAIN BREAKER
- ㉑ LABEL CABINET WITH BUSSWORK RATING



SERVICE CABINET TYPE B MODIFIED (0 - 200 AMP TYPE 120/240 SINGLE PHASE) STANDARD PLAN J-10.20-01

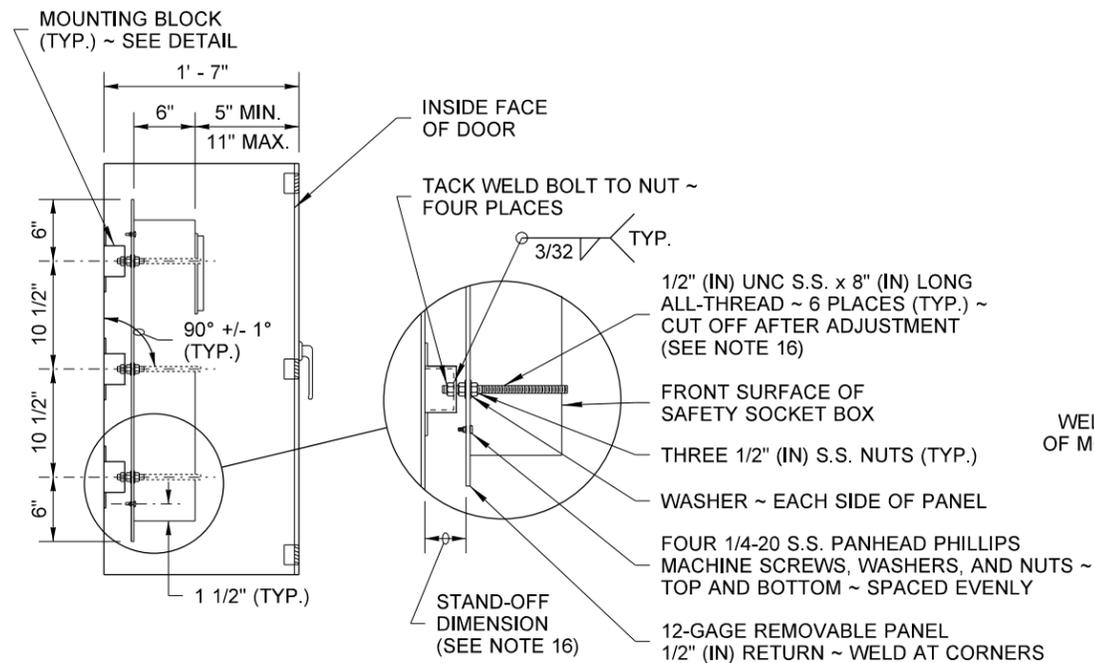
SHEET 1 OF 5 SHEETS

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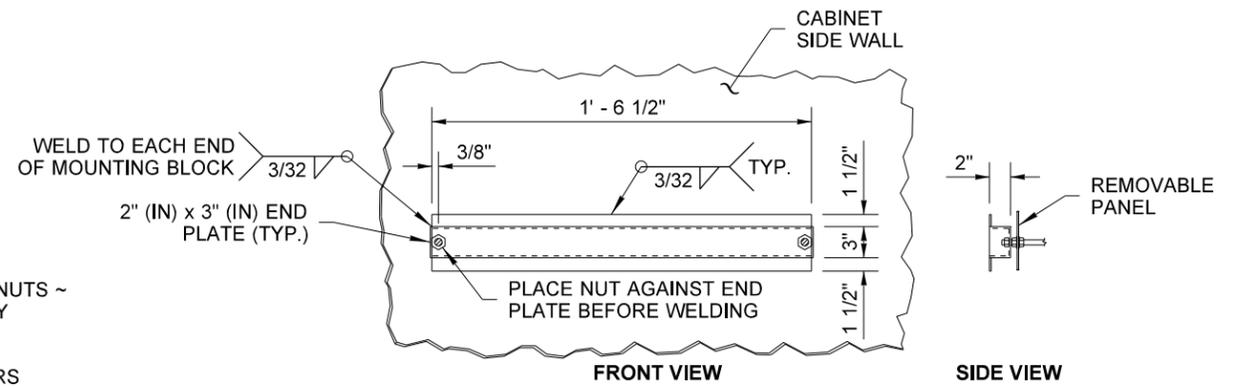
NOTES (200 AMP TYPE 120/240 1Ø SERVICE CABINET)

- See **Standard Specification 9-29.24** (Service Cabinets).
- Hinges shall have stainless steel or brass pins.
- Cabinets shall be rated NEMA 3R and shall include two rain-tight vents.
- Metering equipment door shall be pad-lockable. Each door shall be gasketed. Install Best CX Construction Core on right side door. See Door Hinge Detail.
- The following equipment within the service enclosure shall have an appropriately engraved phenolic name plate attached with screws or rivets:
Key Numbers 2, 3, 4, 6, 7, 8, 9, & 16
Key Number 4 name plate shall read:
"PHOTOCELL BYPASS TEST ON" and "PHOTOCELL TEST OFF-AUTOMATIC". See Service Cabinet Detail.
- Metering arrangements vary with different serving Utilities. The Utility may require meter base mounting in the enclosure, on the side, or on the back of the enclosure. The Utility may require the dimension between the door and the front of the safety socket box to be less than the 11" (in) shown in the Left Side - Safety Socket Box Mounting Detail. The Contractor shall verify the serving Utility's requirements prior to fabrication and installation of the service equipment.
- Dimensions shown are minimum and shall be adjusted to accommodate the various sizes of equipment installed.
- All busswork shall be high-grade copper and shall equal or exceed the main breaker rating. All breakers shall bolt onto the busswork. Jumpering of breakers shall not be allowed. Busswork shall accommodate all future equipment as shown in the breaker schedule.
- The photocell unit shall be centered in the photocell enclosure to permit 360 degree rotation of the photocell without removal of the photocell unit or the photocell enclosure.
- All internal wire runs shall be identified with "TO - FROM" coded tags labeled with the code letters and/or numbers shown on the schedules. Approved PVC or polyolefin wire marking sleeves shall be used.
- All nuts, bolts, and washers used for mounting the photocell enclosure shall be stainless steel.
- A 1% tolerance is allowed for all dimensions.
- Slotted steel channel and mounting hardware components shall be stainless steel. Conduit clamps shall be hot-dipped galvanized steel or stainless steel.
- The meter base portion of this service was designed to meet metering portion of **EUSERC Drawing 309** requirements.
- When using alternate door hinge:
Remove hinge pin prior to welding hinge to cabinet and prior to hot-dip galvanizing. After galvanizing, replace pin with brass pin and solder in place.
- Verify the service utility stand-off dimension. Adjust the removable panel to the measurement provided by the Utility Company. After adjustment, cut off all-thread bolts so that no less than two and no more than three full threads extend past the face of the nuts.
- As an alternate to the bolted or field welded strut mount supports, 1 5/8" (in) x 3 1/4" (in) 12-gage continuous slotted steel channel or factory welded 1 5/8" (in) x 1 5/8" (in) 12-gage back to back continuous slotted steel channel may be used. Three pairs required.

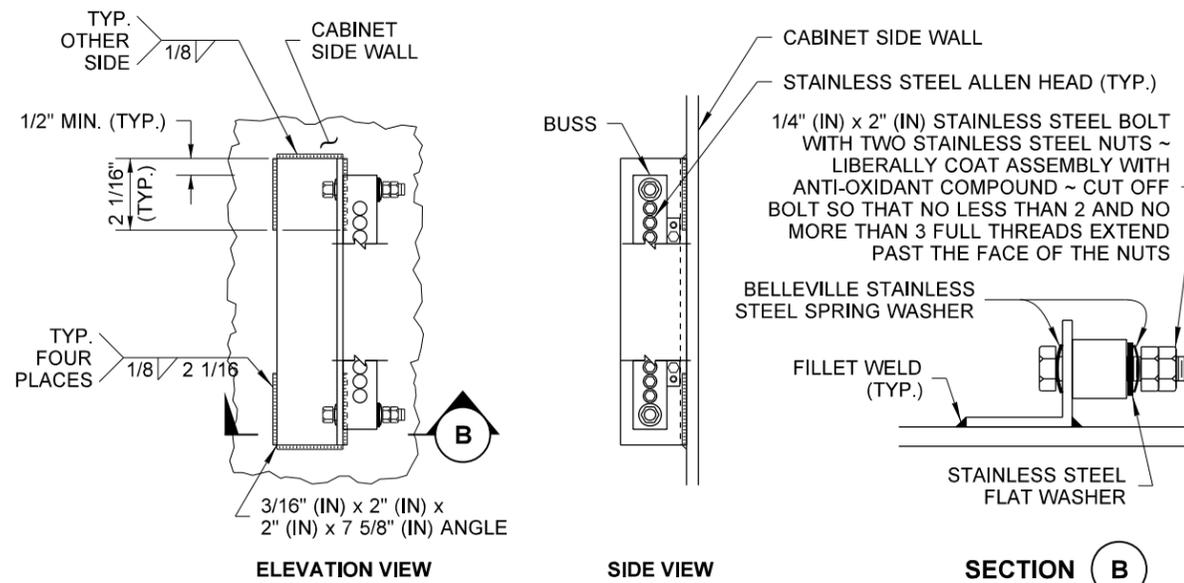
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LEFT SIDE - SAFETY SOCKET BOX MOUNTING DETAIL



**MOUNTING BLOCK DETAIL
12-GAGE ~ MATERIAL SHALL BE THE
SAME AS CABINET MATERIAL**



CABINET MAIN BONDING JUMPER ASSEMBLY DETAIL

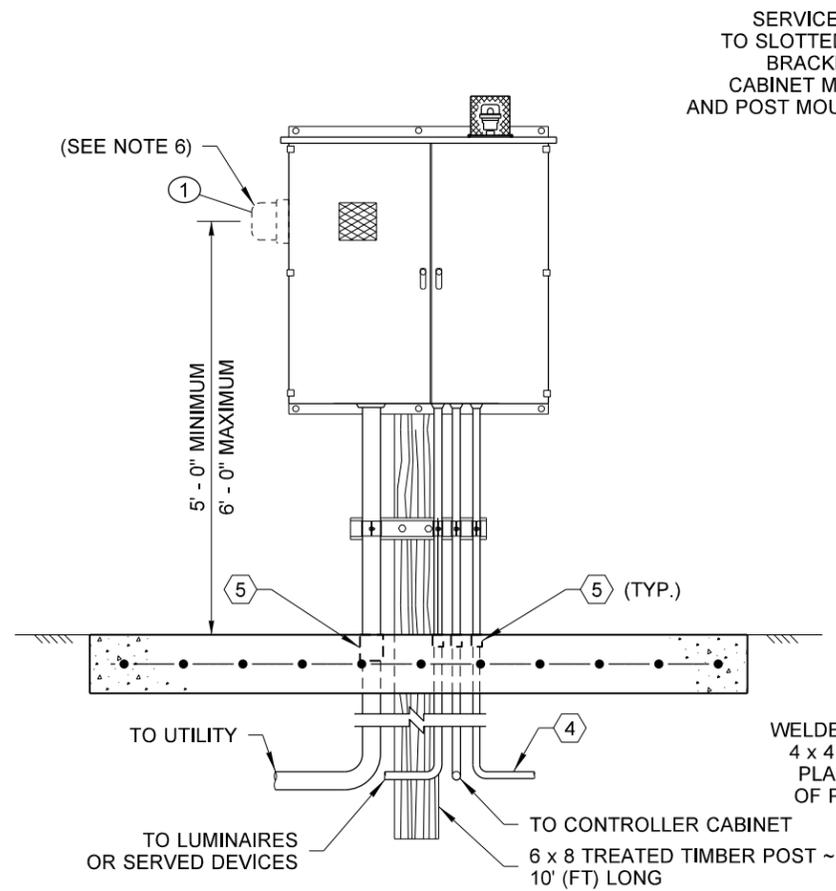


**SERVICE CABINET TYPE B
MODIFIED (0 - 200 AMP TYPE
120/240 SINGLE PHASE)
STANDARD PLAN J-10.20-01**

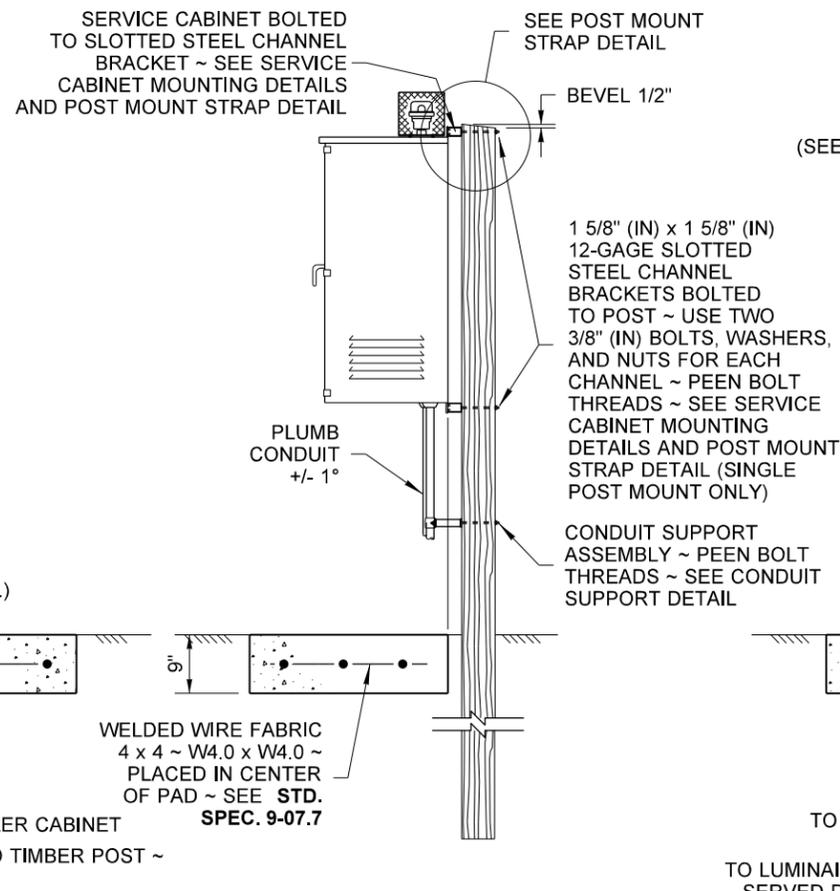
SHEET 2 OF 5 SHEETS

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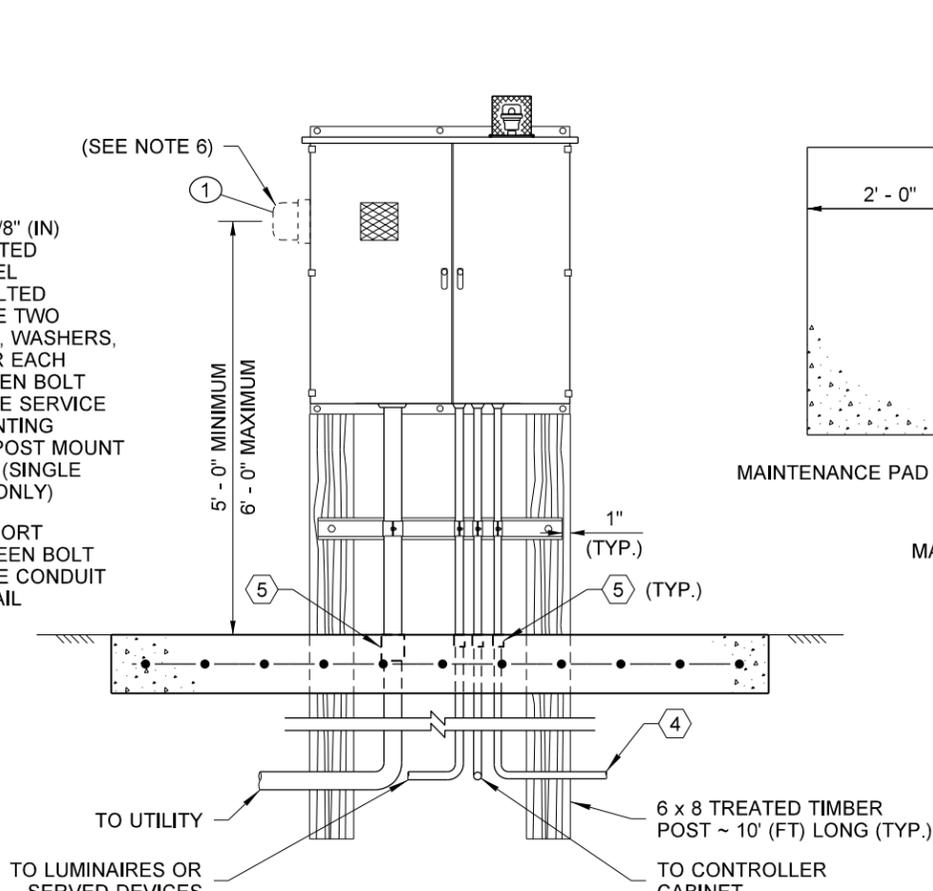
STATE DESIGN ENGINEER
Washington State Department of Transportation



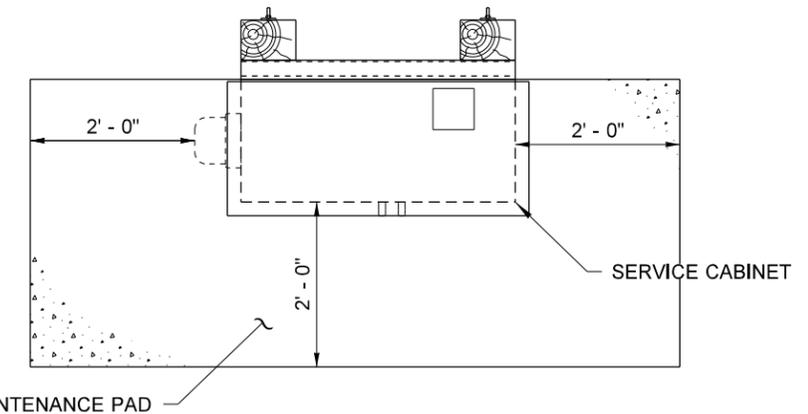
**FRONT OF SERVICE CABINET
SINGLE POST MOUNT**



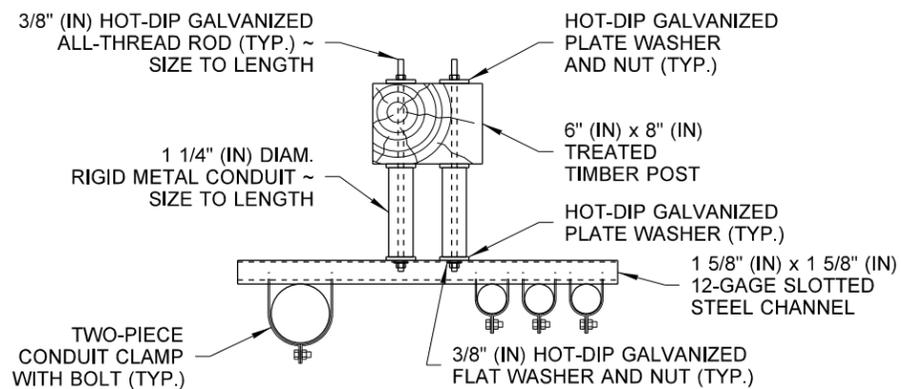
**RIGHT SIDE OF SERVICE CABINET
(FOR SINGLE POST AND TWO POST MOUNTS)**



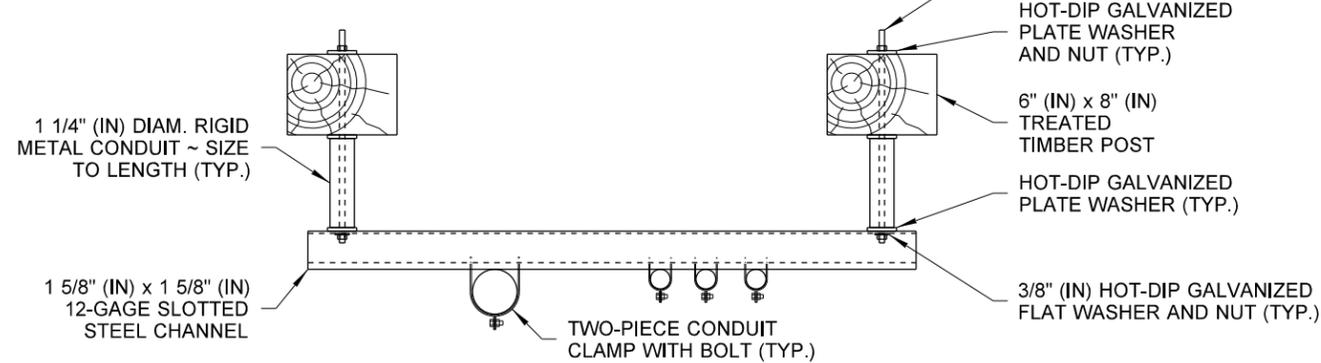
**FRONT OF SERVICE CABINET
TWO POST MOUNT**



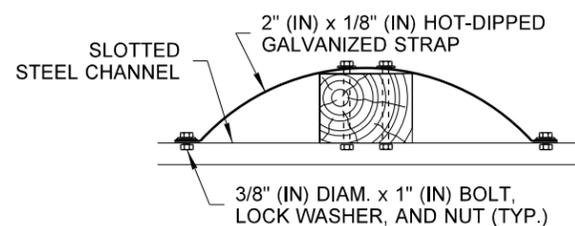
**PLAN VIEW
MAINTENANCE PAD (FOR SINGLE POST AND TWO POST MOUNTS)**



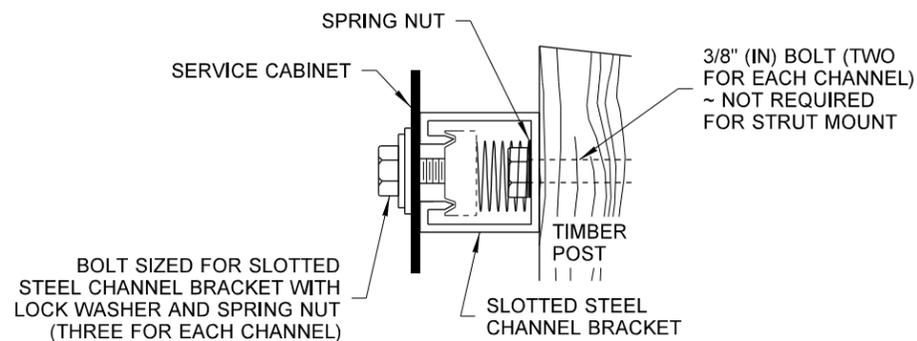
**CONDUIT SUPPORT DETAIL
(SINGLE POST MOUNT ONLY)**



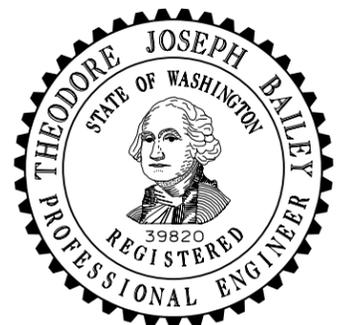
**CONDUIT SUPPORT DETAIL
(TWO POST MOUNT ONLY)**



**POST MOUNT STRAP DETAIL
(SINGLE POST MOUNT ONLY)**



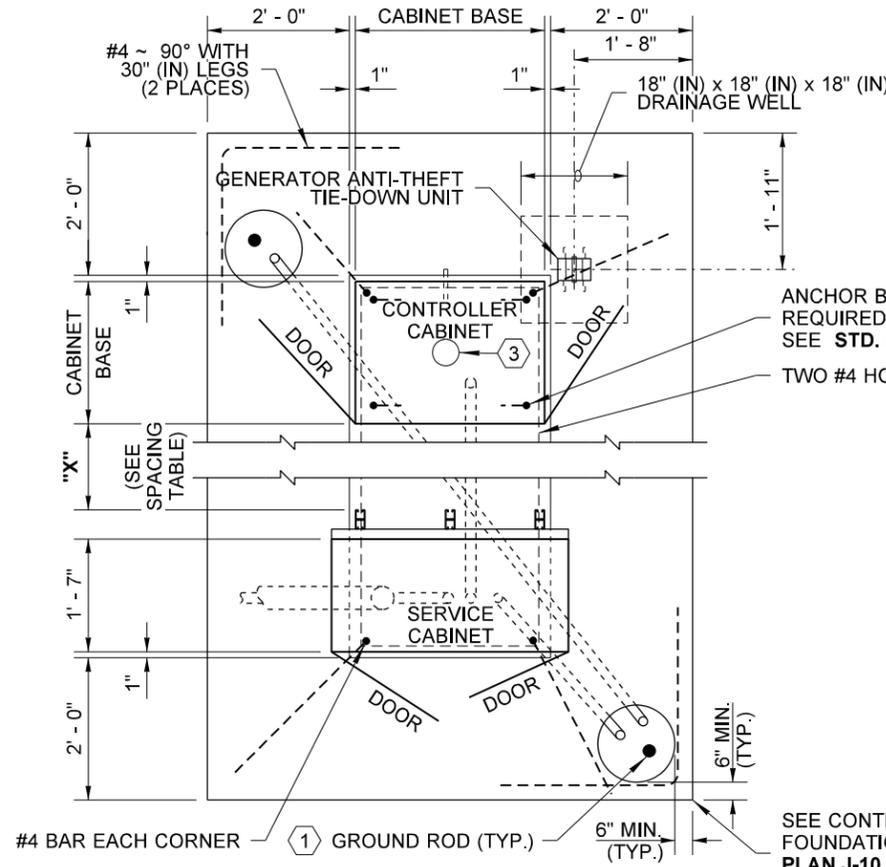
**CABINET BRACKET MOUNTING DETAIL
(FOR SINGLE POST AND TWO POST MOUNTS)**



**SERVICE CABINET TYPE B
MODIFIED (0 - 200 AMP TYPE
120/240 SINGLE PHASE)
STANDARD PLAN J-10.20-01**

SHEET 3 OF 5 SHEETS

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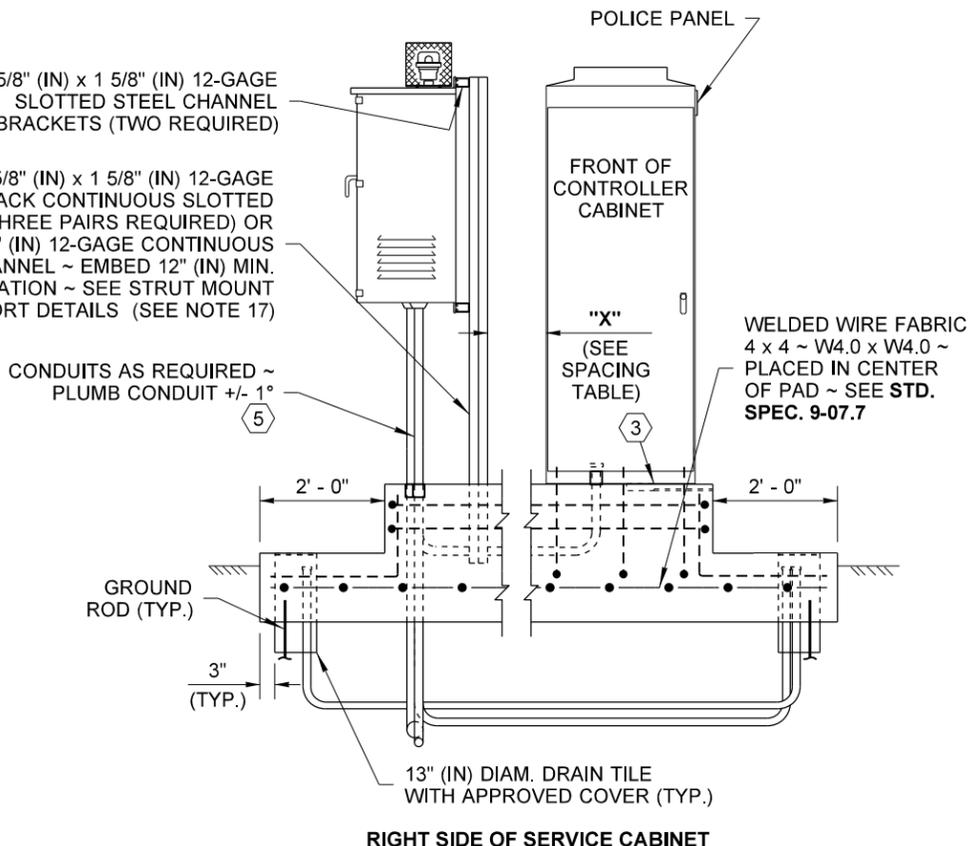
PLAN VIEW OF SERVICE CABINET

SPACING TABLE	
CABINET TYPE	"X"
332 OR 334 TYPE CABINET	26"
333SD TYPE CABINET	24"
332D OR 334D TYPE CABINET	26"
NEMA P44 TYPE CABINET	46 1/2"
FOR A SPECIAL DESIGN CABINET THAT IS NOT LISTED ON STD. PLAN J-10.10 : "X" = WIDTH OF DOOR OPEN TO 180° PLUS 2 INCHES	

SEE CONTROLLER CABINET FOUNDATION DETAILS ON **STANDARD PLAN J-10.10** FOR CABINET DIMENSION TABLE AND DETAILS NOT SHOWN

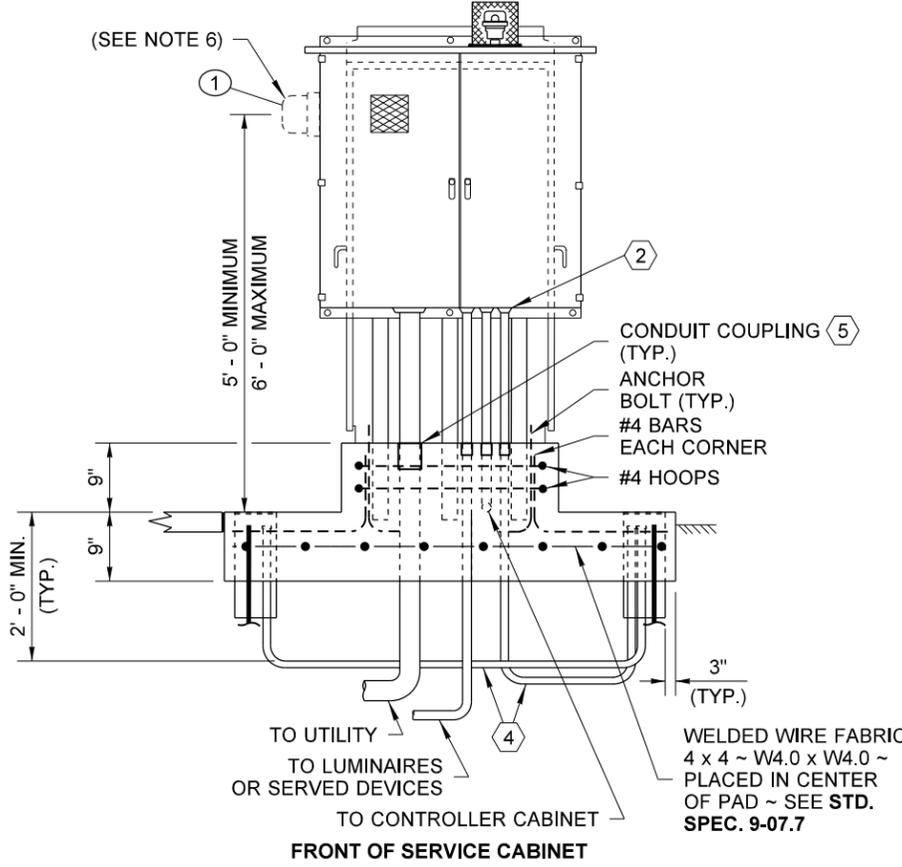
1 5/8" (IN) x 1 5/8" (IN) 12-GAGE SLOTTED STEEL CHANNEL BRACKETS (TWO REQUIRED)

TWO 1 5/8" (IN) x 1 5/8" (IN) 12-GAGE BACK-TO-BACK CONTINUOUS SLOTTED STEEL CHANNEL (THREE PAIRS REQUIRED) OR 1 5/8" (IN) x 3 1/4" (IN) 12-GAGE CONTINUOUS SLOTTED STEEL CHANNEL ~ EMBED 12" (IN) MIN. IN FOUNDATION ~ SEE STRUT MOUNT SUPPORT DETAILS (SEE NOTE 17)

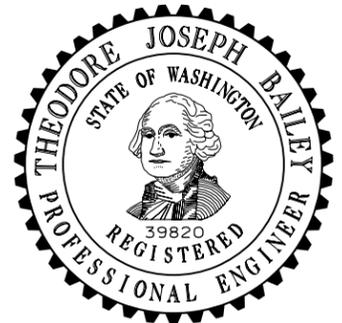
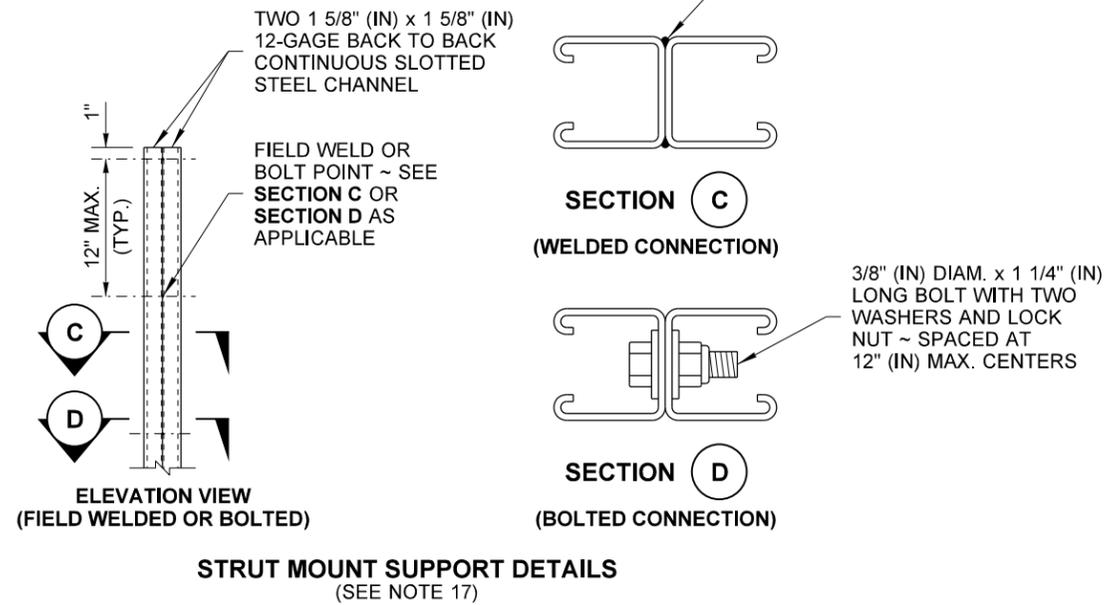


RIGHT SIDE OF SERVICE CABINET

- 1 DRIVE GROUND RODS BEFORE PLACING CONCRETE ~ MOVE ROD(S) AND DRAIN TILE(S) WITH COVER(S) AS REQUIRED TO ACHIEVE FULL GROUND PENETRATION ~ MAINTAIN A 6' (FT) MINIMUM CLEARANCE BETWEEN GROUND RODS AS DETAILED ON **STANDARD PLAN J-60.05**
- 2 ALL RMC CONDUITS PENETRATING CABINET SHALL BE TERMINATED WITH GROUNDING END BUSHING AND BONDED TO THE CABINET GROUNDING BUSS
- 3 4" (IN) DIAM. x 1/2" (IN) DEEP SUMP. SLOPE FOUNDATION TOWARD SUMP ~ 3/8" (IN) DIAM. POLYETHYLENE OR COPPER DRAIN PIPE ~ SLOPE TO DRAIN OUTSIDE FOUNDATION ~ LOCATE DRAIN AWAY FROM ACCESS DOORS
- 4 TO SERVICE GROUND ~ PER **STANDARD PLAN J-60.05**
- 5 INSTALL CONDUIT COUPLINGS ON ALL CONDUITS ~ TOP OF CONDUIT COUPLINGS SHALL BE FLUSH WITH TOP OF CONCRETE ~ IF PVC CONDUITS ARE SPECIFIED, THE CONDUIT STUB AND END BELL BUSHING SHALL NOT BE GLUED TO THE COUPLING



FRONT OF SERVICE CABINET



SERVICE CABINET TYPE B MODIFIED (0 - 200 AMP TYPE 120/240 SINGLE PHASE) STANDARD PLAN J-10.20-01

SHEET 4 OF 5 SHEETS

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BRONZE GROUND CLAMP ~ WITH BRONZE U-BOLT, WASHERS AND SET SCREWS

6 INSULATED STRANDED

CONDUIT

DETAIL A

BRONZE GROUND CLAMP (TYP.)

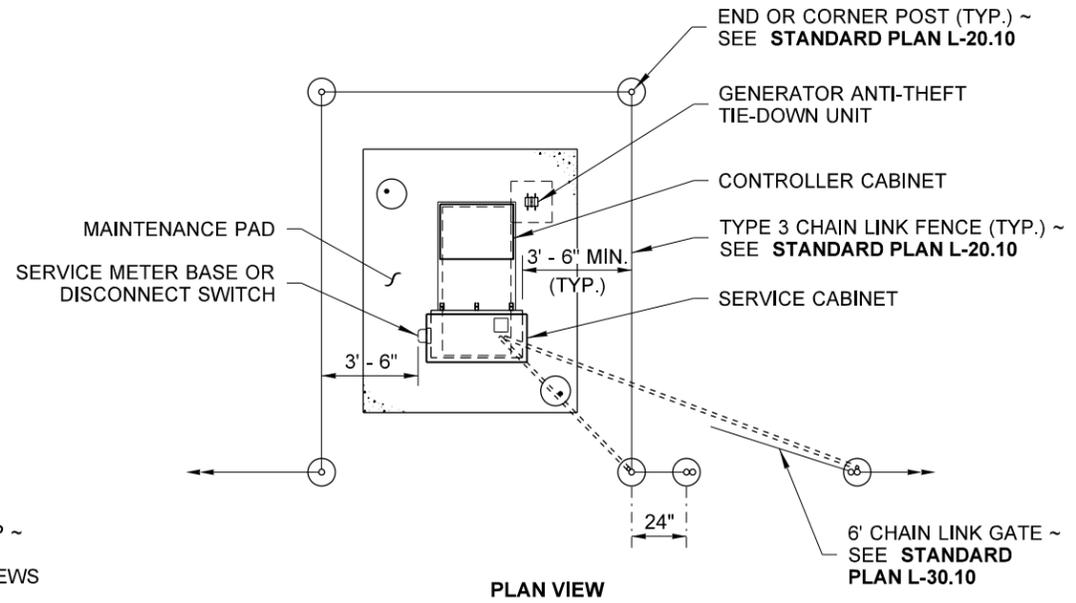
6 INSULATED STRANDED

CONDUIT

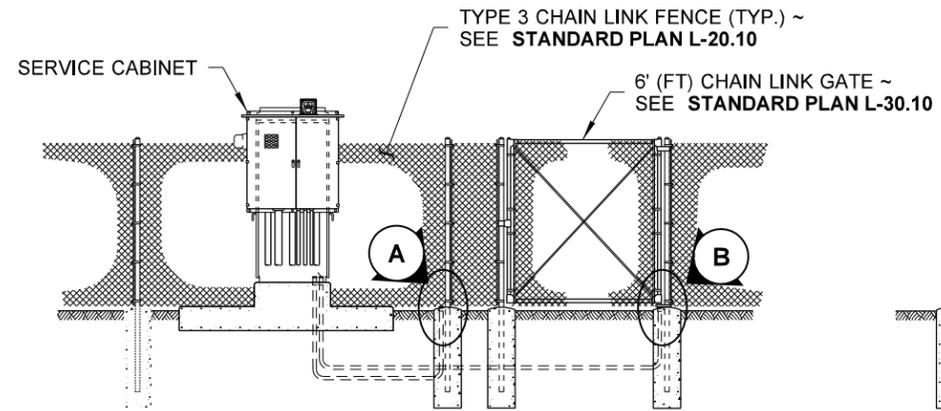
DETAIL B

8 AWG MIN. x 1 FT OF TINNED BRAIDED COPPER

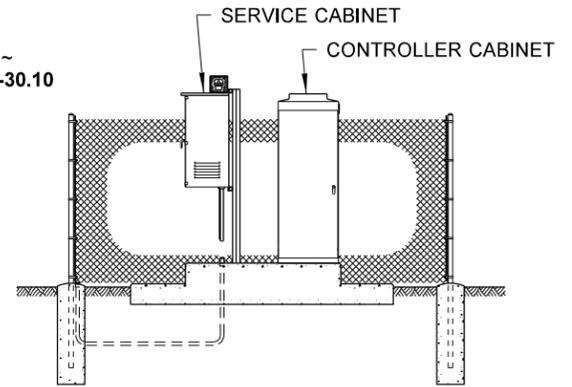
BRONZE GROUND CLAMP ~ WITH BRONZE U-BOLT, WASHERS AND SET SCREWS



PLAN VIEW



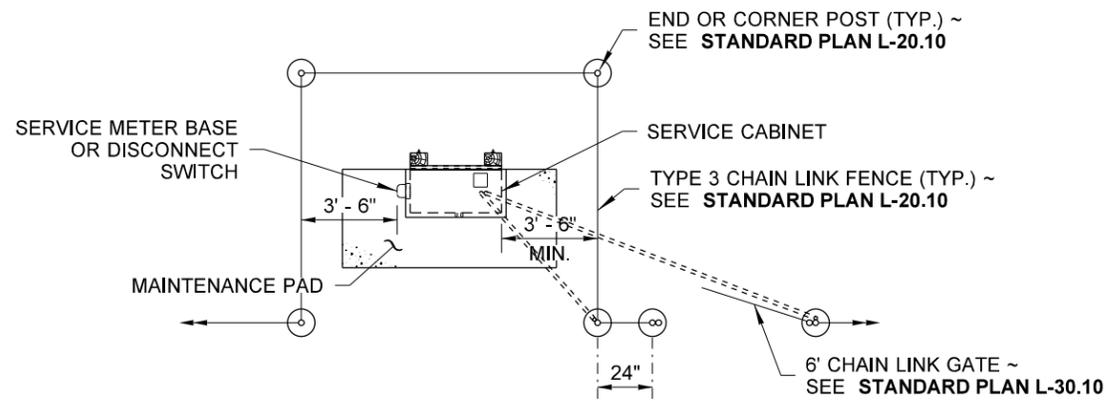
ELEVATION VIEW



SIDE VIEW

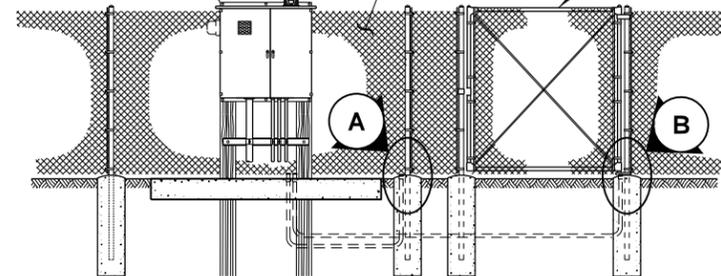
PAD MOUNTED SERVICE CABINET WITHIN RIGHT-OF-WAY FENCE

FOR CONDUITS NOT SHOWN, DRAIN TILE FOR GROUNDING, DRAIN TUBES, REINFORCING STEEL, ETC. OMITTED FOR CLARITY, SEE SHEET 4 FOR ADDITIONAL DETAILS.

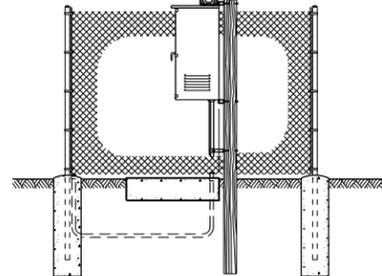


PLAN VIEW

SERVICE CABINET



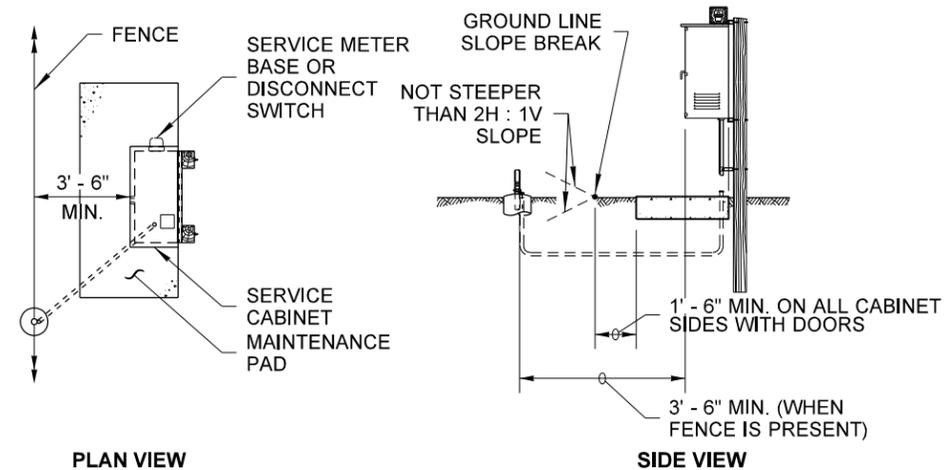
ELEVATION VIEW



SIDE VIEW

POST MOUNTED SERVICE CABINET WITHIN RIGHT-OF-WAY FENCE

FOR CONDUITS NOT SHOWN, DRAIN TILE FOR GROUNDING, DRAIN TUBES, REINFORCING STEEL, ETC. OMITTED FOR CLARITY, SEE SHEET 4 FOR ADDITIONAL DETAILS.

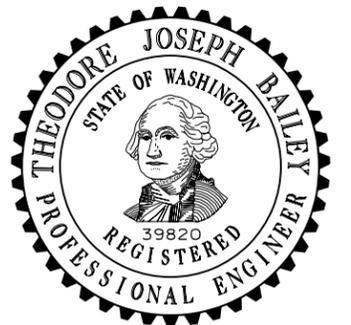


PLAN VIEW

SIDE VIEW

SERVICE CABINET IN VICINITY OF CHAIN LINK FENCE

POST MOUNTED SERVICE CABINET SHOWN, PAD MOUNTED SERVICE CABINET SIMILAR



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SHEET 5 OF 5 SHEETS

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