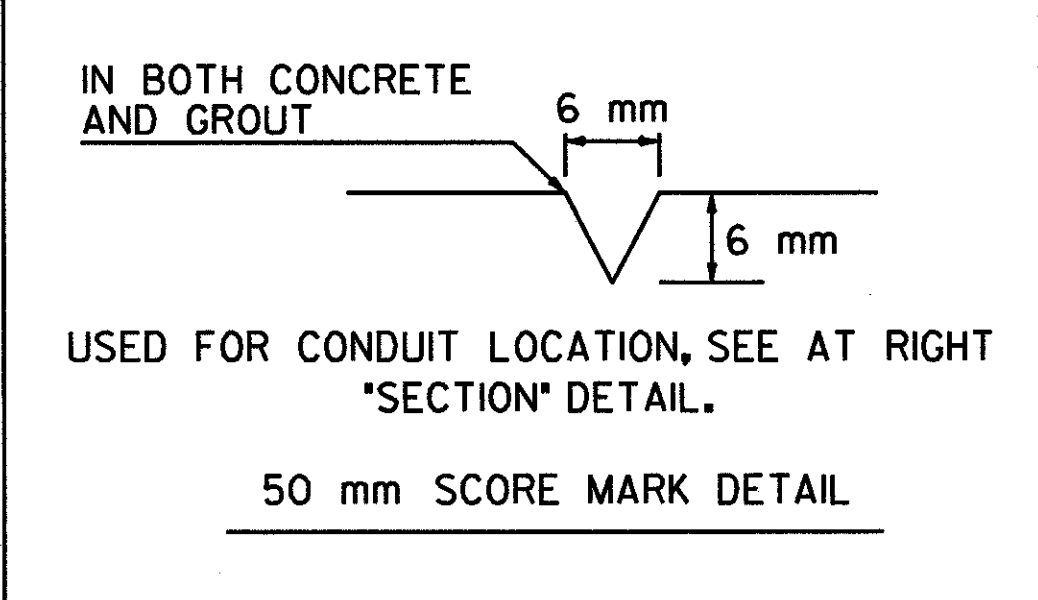
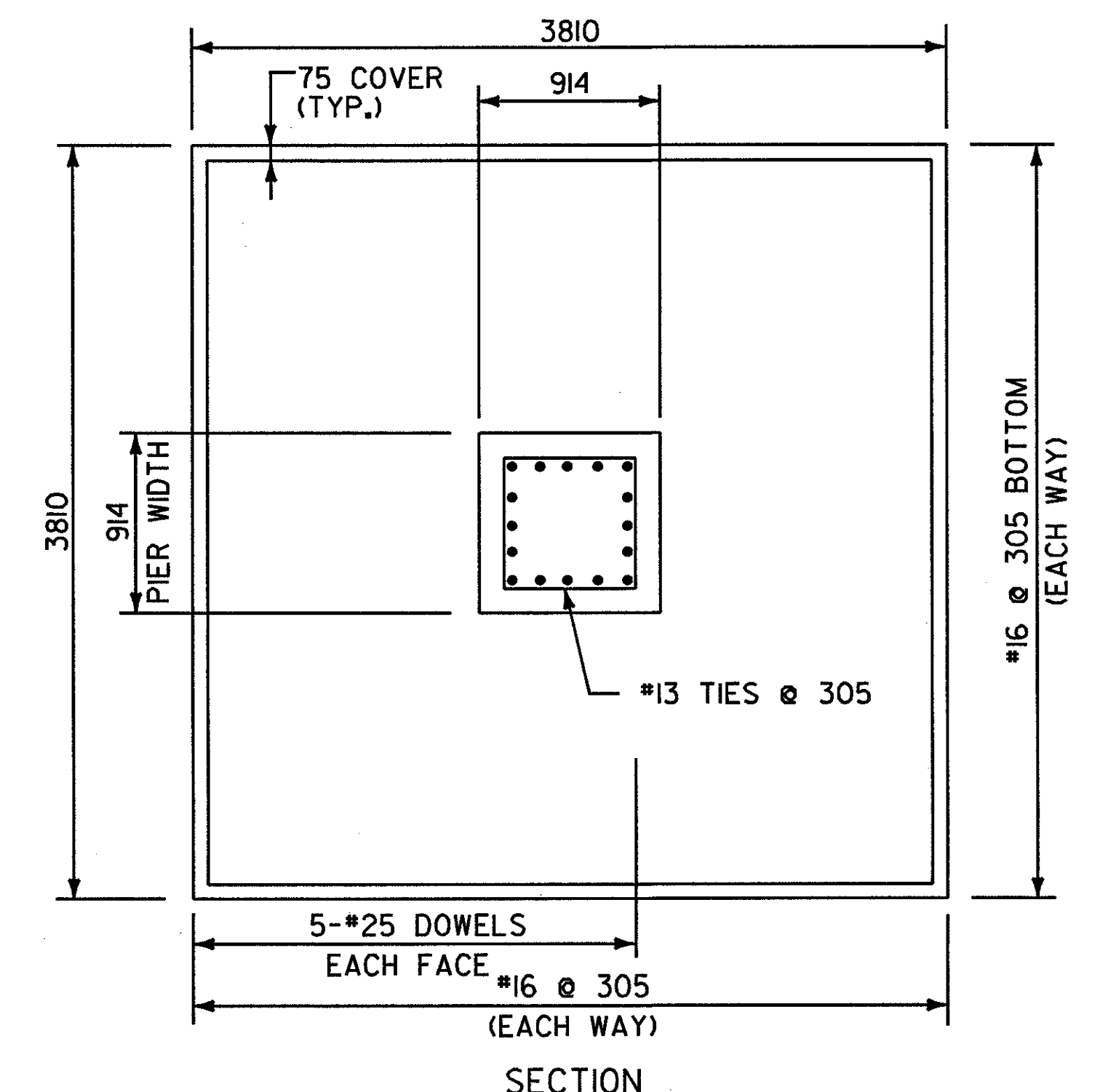


GENERAL NOTES:

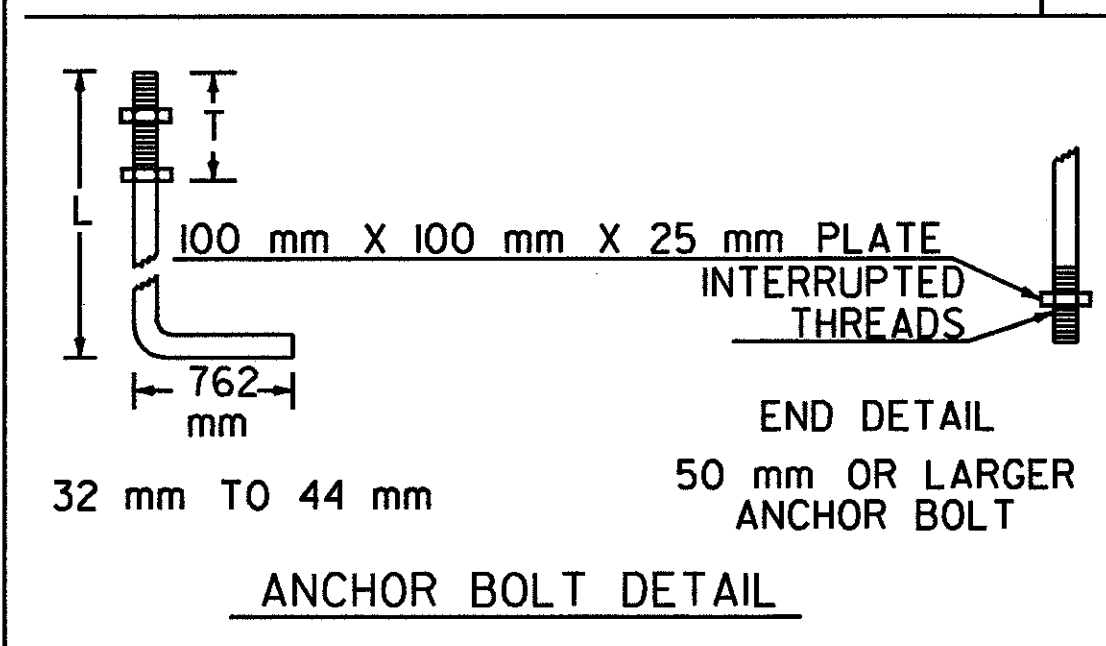
- 1.) ALL MATERIAL AND CONSTRUCTION SHALL CONFORM TO THE STATE OF VERMONT AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND AASHTO'S STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS, 1994 OR ITS LATEST EDITION.
- 2.) TRAFFIC CONTROL SIGNAL STRAIN POLES SHALL CONFORM TO THE REQUIREMENTS OF SUBSECTION 752.02 - STRAIN POLES, AND SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH SECTION 678 - TRAFFIC CONTROL SIGNALS.
- 3.) STEEL POLE CAPS SHALL BE PROVIDED WITH A 50 mm BUSHED (BLIND) ELECTRICAL ENTRANCE WHEN APPLICABLE. STRAIN POLES SHALL BE PROVIDED WITH A 50 mm (BLIND) HALF COUPLING FOR SIGNAL CABLE, LOCATED 150 mm BELOW THE SPANWIRE ATTACHMENT HEIGHT.
- 4.) FOUR STAINLESS STEEL ANCHOR BOLTS WITH TWO HEXAGON NUTS, ONE WASHER AND ONE LOCK WASHER PER BOLT SHALL BE FURNISHED WITH EACH POLE. (SEE SUBSECTION 714.09)
- 5.) BOLTS AND BASES SHALL BE OF ADEQUATE SIZE TO RESIST THE FULL BENDING MOMENT OF THE POLE AT YIELD STRENGTH STRESS.
- 6.) ADDITIONAL DESIGN CRITERIA:
 CONCRETE $f_c = 10 \text{ MPa}$, $f_c = 25 \text{ MPa}$
 REINFORCING STEEL $f_s = 165.47 \text{ MPa}$ (GRADE 420)
- 7.) CONCRETE FOR FOOTINGS SHALL CONFORM TO REQUIREMENTS OF CONCRETE CLASS "B" SECTION 501 - STRUCTURAL CONCRETE.
- 8.) BACKFILL MATERIAL PLACED ADJACENT TO THE FOOTINGS SHALL MEET THE REQUIREMENTS FOR GRANULAR BACKFILL FOR STRUCTURES. SUBSECTION 704.08.
- 9.) WHEN THE DESIGN DEPTH OF A FOOTING CANNOT BE OBTAINED DUE TO UNFORESEEN FIELD CONDITIONS, THE CONTRACTOR SHALL NOTIFY THE RESIDENT ENGINEER AND OBTAIN A REVISED FOOTING DETAIL FROM THE ENGINEER.

- 10.) EACH METAL POLE SUPPORTING VEHICLE TRAFFIC SIGNALS SHALL BE GROUNDED. THE GROUND SHALL CONSIST OF:
 - A) AN INTERNAL GROUND LUG OPPOSITE THE HAND HOLE.
 - B) A 4 mm (MIN.) SOFT DRAWN COPPER GROUNDING ELECTRODE CONDUCTOR.
 - C) A 16 mm X 2.44 m (MIN.) COPPER CLAD GROUNDING ELECTRODE.
 THE RESISTANCE TO GROUND SHALL BE 25 OHMS OR LESS. ADDITIONAL GROUNDING ELECTRODES MAY BE REQUIRED (MINIMUM SPACING SHALL BE 1.8 m). WHEN A POWER SERVICE, METER AND DISCONNECT ARE ATTACHED TO A STRAIN POLE, THERE SHALL BE A CONTINUOUS GROUNDING ELECTRODE CONDUCTOR FROM THE METER AND DISCONNECT WHICH MAY RUN INTERNAL TO THE STRAIN POLE, THROUGH THE 13 mm FLEXIBLE TUBING IN THE CONCRETE BASE TO THE REQUIRED GROUNDING ELECTRODE(S). THE GROUNDING ELECTRODE CONDUCTOR FROM THE STRAIN POLE GROUNDING LUG, CONTROLLER CABINET AND/OR LUMINAIRE MAY ATTACH TO THIS CONTINUOUS GROUNDING ELECTRODE CONDUCTOR FROM THE SERVICE METER AND DISCONNECT. THE CONTRACTOR SHALL PERFORM A RESISTANCE TO GROUND TEST ON THE CONTINUOUS GROUNDING ELECTRODE CONDUCTOR FROM THE SERVICE METER AND DISCONNECT AND PROVIDE A WRITTEN STATEMENT TO THE DISTRICT ELECTRICAL INSPECTOR THAT THE GROUNDING ELECTRODE CONDUCTOR IS CONTINUOUS FROM THE SERVICE METER AND DISCONNECT AND THE RESISTANCE TO GROUND IS 25 OHMS OR LESS.
- 11.) STRAIN POLE BASE PLATES SHALL BE STAMPED WITH POLE DIAMETER, HEIGHT, YIELD STRENGTH, AND GAUGE. ALTERNATELY, THE INFORMATION MAY BE STAMPED ON A METAL TAG ATTACHED TO THE POLE NEAR THE HANDHOLE.
- 12.) IN ACCORDANCE WITH SUBSECTION 105.03, SHOP DRAWINGS (6 COPIES) SHALL BE SUBMITTED TO THE STATE OF VERMONT, AGENCY OF TRANSPORTATION, FOR APPROVAL, PRIOR TO FABRICATION. THE SUBMITTAL SHALL INCLUDE THE FOLLOWING INFORMATION:
 - A) DETAILED DRAWING OF EACH COMPONENT OF THE STRAIN POLE.
 - B) MATERIAL SPECIFICATIONS FOR EACH COMPONENT OF THE STRAIN POLE BY COMPLETE SPECIFICATIONS OR BY REFERENCE TO APPLICABLE ASTM STANDARDS.
 - C) NOTATION OF PROJECT NAME, PROJECT NUMBER, ROUTE NUMBER, AND STRAIN POLE STATIONING. (TO BE INCLUDED ON EACH SHEET INCLUDING VAOT STANDARD SHEETS AND SPECIFICATION SHEETS).
 - D) DETAILS FOR LOCATION OF LUMINAIRE ARM(S) ON STRAIN POLES.
 - E) ALL ELEVATIONS AND DIMENSIONS NECESSARY TO PROVIDE A COMPLETE SET OF RECORD PLANS. (POLE HEIGHT, SPAN WIRE ATTACHMENT HEIGHT, POLE DIAMETER (TOP AND BOTTOM), POLE GAUGE, HANDHOLE (SIZE AND LOCATION), BASE PLATE, BOLT CIRCLE, ANCHOR BOLT SIZE)
 - F) POLE BASE STAMPING DETAIL
 - G) DEAD LOAD DEFLECTION INFORMATION
 - H) WELDING DETAILS AND PROCEDURES ARE REQUIRED FOR ALL WELDS. PROCEDURES SHALL BE SUBMITTED FOR APPROVAL WITH REFERENCE TO EACH WELD IDENTIFIED ON THE SHOP DRAWINGS. (SEE SUBSECTION 506.10)
- 13.) WHEN USING STAINLESS STEEL BOLTS DO NOT INSTALL BOLT COVERS.

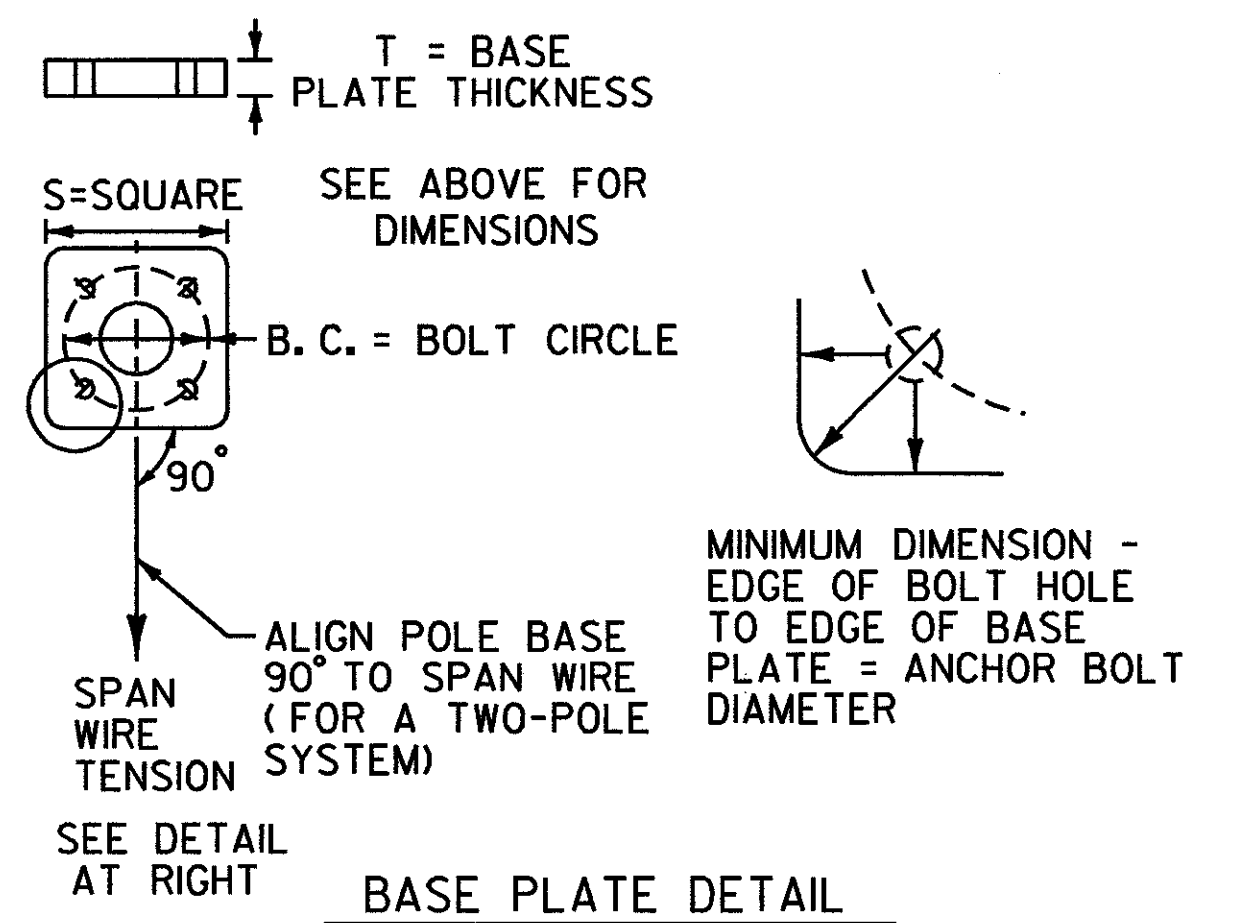
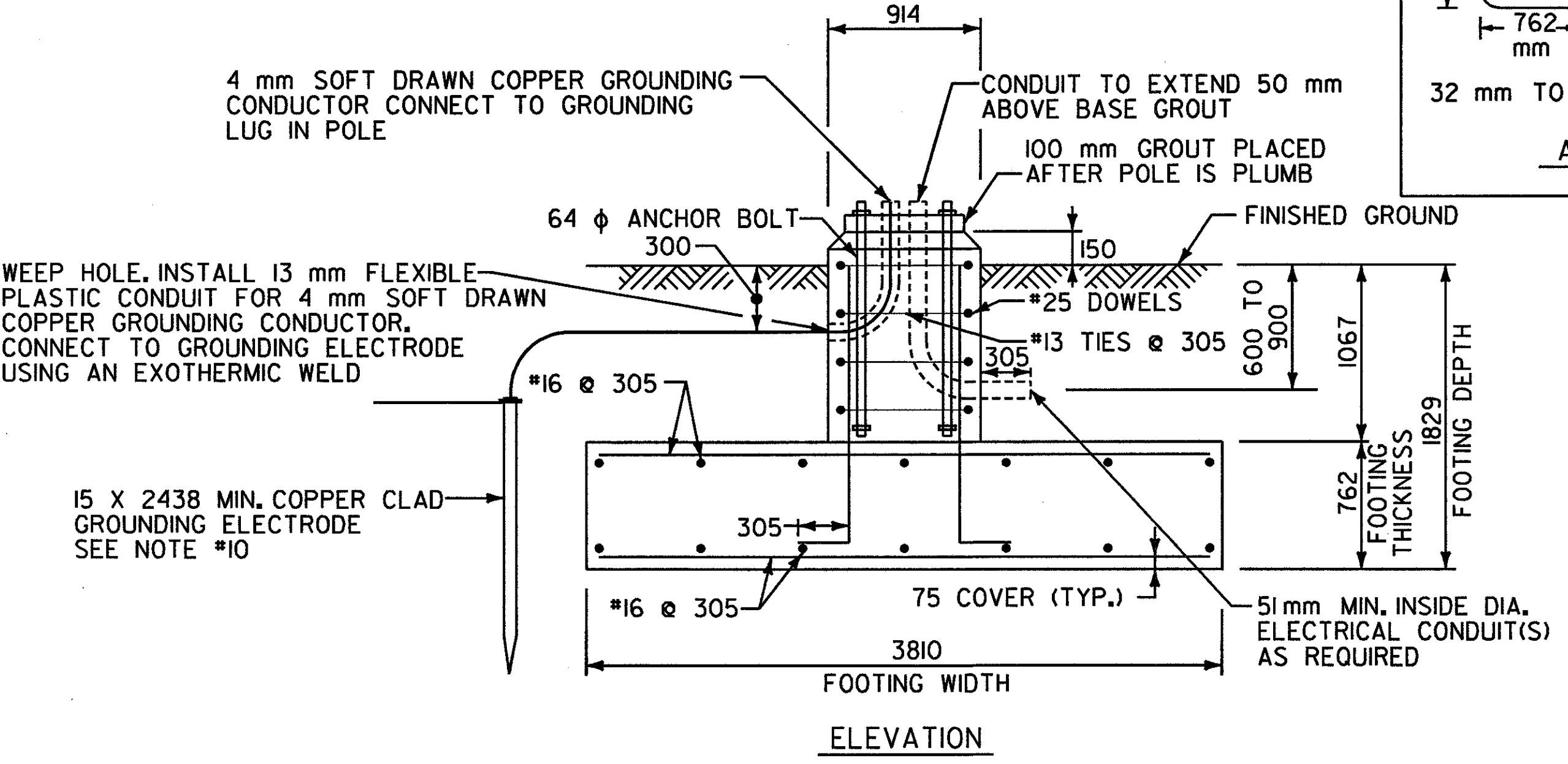


STRAIN POLE

LOCATION	POLE NO.	POLE LENGTH GAUGE & DIAMETER	BASE PLATE			PIER WIDTH	FOOTING			ANCHOR BOLTS	POLE BKRK
			CIRCLE	S	T		WIDTH	THICK	DEPTH		
RAMP CD	SP1	11.6 m, 6.4, 559 OD, WITH 3.6 m TRUSS LUMINAIRE ARM	813	787	64	914	3810	762	1829	64	61
RAMP CD	SP2	11.6 m, 6.4, 559 OD, WITH 3.6 m TRUSS LUMINAIRE ARM	813	787	64	914	3810	762	1829	64	52
RAMP AB	SP3	11.6 m, 6.4, 559 OD, WITH 3.6 m TRUSS LUMINAIRE ARM	813	787	64	914	3810	762	1829	64	53
RAMP AB	SP4	11.6 m, 6.4, 559 OD, WITH 3.6 m TRUSS LUMINAIRE ARM	813	787	64	914	3810	762	1829	64	59



SIZE (mm)	L (mm)	T (mm)
64	1470	250



NOTES:

1. ANCHOR BOLTS, BASE PLATE, AND FOOTING DIMENSIONS ARE BASED ON DESIGN POLE DIMENSIONS AND YIELD STRENGTH SHOWN. POLES SUPPLIED OF DIFFERENT SIZE OR STRENGTH MAY REQUIRE CHANGES IN THE DIMENSIONS. BACKRAKE (BKRK) SHOWN IS AS MEASURED AT THE TOP OF THE POLE.
2. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.

DESIGN CRITERIA USED:
 POLE FY = 330 MPa
 BASE PLATE FY = 250 MPa
 ANCHOR BOLTS FY = 380 MPa

NOTE: ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.

STRAIN POLE/ FOOTING DETAIL SHEET	SURVEYED BY	N/A	DATE	N/A
	DESIGNED BY	M.R.W.	DATE	9/00
	DRAWN BY	K.H.D.	DATE	9/00
	CHECKED BY	T.R.J.	DATE	9/00
DESIGN FILE NO. SPDI.DGN				
PROJ. NAME BENNINGTON - HOOSICK D.P.I. 014611 C/4				
PROJ. NO. P.I.N. 1306.60				
DWG. NO. SD-7 SHEET 174 OF 385				

FILE NAME = u:\5116\vaot\contract4\spdi.dgn
DATE/TIME = 07 SEP 2000
USER = 1459