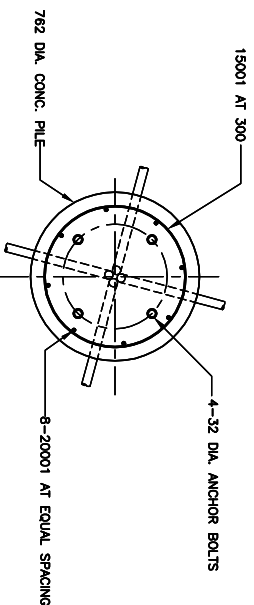
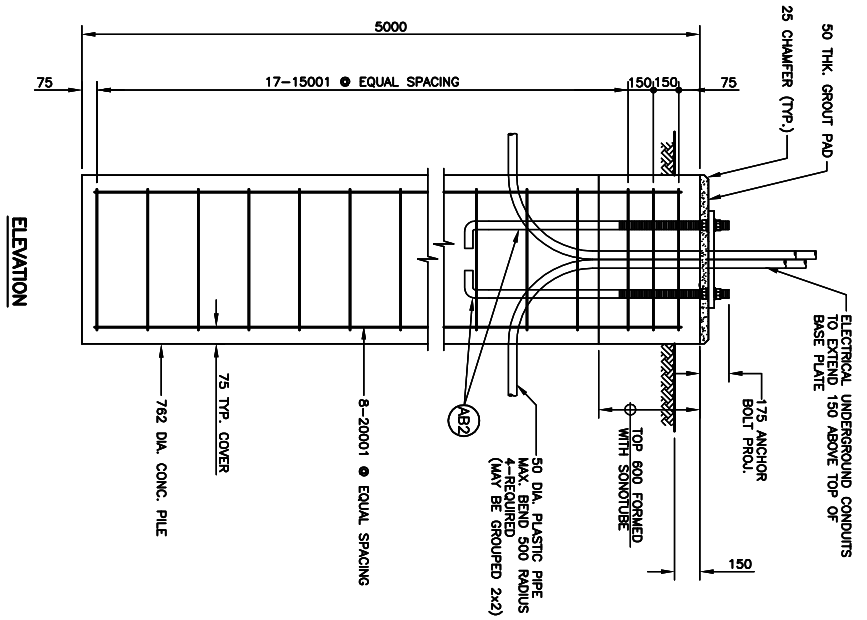


**ANCHOR BOLTS LAYOUT**



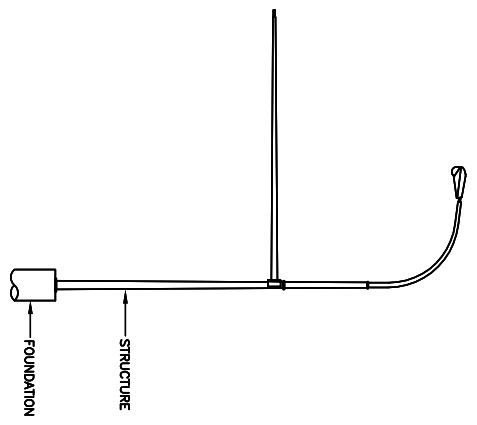
**PLAN / CONCRETE SECTION**



**ELEVATION**

**FOUNDATION DETAIL**  
N.T.S.

- GENERAL NOTES:**
- CONCRETE FOUNDATION PILES**
- PRIOR TO DRILLING PILES, CONTRACTOR SHALL ENSURE THERE ARE NO CONFLICTING SURFACE OR SUBSURFACE UTILITIES.
  - DRILL PILES TO INDICATED DEPTHS ENSURING THAT SWIFTS ARE DRY AND FREE OF DEBRIS UNTIL CONCRETE IS PLACED.
  - CONCRETE
    - CSA A23.1 EXPOSURE CLASS S-1
    - COMPRESSIVE STRENGTH  $\phi$  28 DAYS = 35 MPa
    - AIR CONTENT: CATEGORY 1
  - NOTIFY THE OWNER AND TESTING FIRM A MINIMUM OF TWENTY FOUR HOURS PRIOR TO COMMENCEMENT TO CONCRETE OPERATIONS.
  - REFER TO SPECIFICATIONS FOR CONCRETE TESTING REQUIREMENTS.
  - REINFORCING STEEL TO BE GRADE 400W, DEFORMED BILLET STEEL BARS FOR CONCRETE REINFORCEMENT CONFORMING TO CSA G30.18.
  - ANCHOR BOLTS, NUTS AND WASHERS WILL BE SUPPLIED BY THE DEPARTMENT AND SET BY THE CONTRACTOR.
  - THE ANCHOR BOLTS SHALL BE ALIGNED WITH A TOP SETTING TEMPLATE MATCHING THE BOLT HOLE. THE ANCHOR BOLT SETTING TEMPLATE SHALL BE THE SETTING TEMPLATE MATCHING THE ANCHOR BOLTS' PLACEMENT OF ANCHOR BOLTS WITHOUT THE SETTING TEMPLATE WILL NOT BE PERMITTED.
  - IF THE TEMPLATE IS DAMAGED DURING CONSTRUCTION DUE TO NEGLIGENCE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUPPLYING A NEW 10 mm THICK STEEL TEMPLATE TO THE DEPARTMENT AT HIS OWN EXPENSE.
  - SOILS INFORMATION AT SITE IS AVAILABLE FROM THE OWNER.

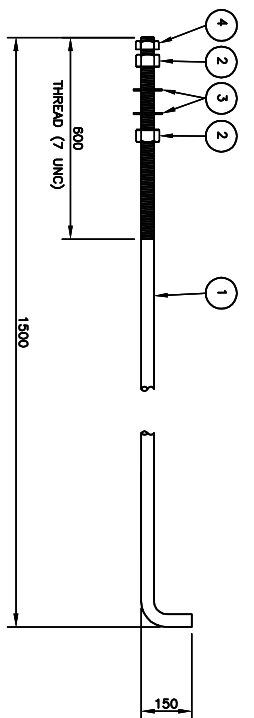


**MEDIUM SERIES COMBINATION CANTILEVER STANDARD**

**STRUCTURES FOR MEDIUM SERIES FOUNDATION TYPE F3**  
N.T.S.

**BILL OF MISCELLANEOUS METAL**

LINE NO.	QTY. REQ'D.	DESCRIPTION	SIZE	MATERIAL	REMARKS
1	4	ANCHOR BOLT	32 (1 1/4") DIA. x 1650	G40.21-M-300W GALV. FULL LENGTH	SEE DETAIL BELOW
2	8	HEAVY HEX NUT	32 (1 1/4") DIA.	ASTM A194 GRADE 2H	
3	8	HEAVY WASHER	32 (1 1/4") DIA.	G40.21-M-300W	
4	4	LOCK HEX NUT	32 (1 1/4") DIA.	ASTM A194 GRADE 2H	
5					
6					

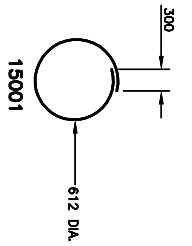


**ANCHOR BOLT ASSEMBLY MK. AB2 (STOCK CODE NO. 7559)**

- NOTES:**
- ANCHOR BOLTS SHALL BE SOLID ROUNDS G40.21-M-300W.
  - ALL PARTS OF ANCHOR BOLT ASSEMBLY SHALL BE HOT DIP GALVANIZED (FULL LENGTH) IN ACCORDANCE WITH ASTM A123-09 (PLUS LATEST REVISIONS) WITH NET RETENTION OF 610 g/m<sup>2</sup>.
  - ALL NUTS SHALL BE TAPPED OVERSIZE PRIOR TO GALVANIZING.
  - ALL NUTS AND WASHERS SHALL BE ASSEMBLED BY THE SUPPLIER PRIOR TO DELIVERY.

**BILL OF REINFORCING STEEL**

MK. NO.	SIZE	QTY. REQ'D.	LENGTH (mm)	MASS (kg)	LINE NO.
20001	20M	8	4850	91.37	1
15001	15M	19	2223	66.31	2
					3
					4
					5
					6
					7
					8
TOTAL MASS OF REINFORCING STEEL				=157.68 kg	9
TOTAL VOLUME OF CONC. CL.P. PILES				= 2.280 m <sup>3</sup>	10



**BENDING DIAGRAM**

DATE	BY	DESCRIPTION

**TRAFFIC SIGNAL AND PEDESTRIAN CORRIDOR STRUCTURES**  
MEDIUM SERIES FOUNDATION TYPE F3  
ANCHOR BOLTS, CONC. PILE, & PILE REINFORCEMENT

RELEASED FOR CONSTRUCTION  
BY: \_\_\_\_\_

**Manitoba**  
Infrastructure and Transportation  
Traffic Engineering

DESIGN: \_\_\_\_\_  
CHECKER: \_\_\_\_\_  
DATE: \_\_\_\_\_

BR: \_\_\_\_\_  
CDM: \_\_\_\_\_  
SCALE: \_\_\_\_\_  
AS SHOWN

CHECKER: \_\_\_\_\_  
SSR: \_\_\_\_\_  
SHEET No. \_\_\_\_\_  
F3

**APEN**  
Certificate of Authorization  
Dillon Consulting Limited (MB)  
No. 1789 Date: 04/03/2012

REDUCED DRAWING  
N.T.S.

**DILLON CONSULTING**  
CONSULTANT PROJECT NO. 11-5296