



**CONCRETE PILE FOUNDATION FOR S738**  
1:10

**PILE CONSTRUCTION NOTES**

- REINFORCING STEEL**  
 \* CSA G30.12 GR. 400  
 \* VERTICAL BARS FULL LENGTH OF PILE  
 \* HOT DIP GALVANIZED
- ANCHORS BOLTS**  
 CSA G40.21 GR. 300W  
 4-32 DIA. x 1500 LONG + 150 HOOK  
 EACH BOLT C/W 2 NUTS & 2 WASHERS  
 TOP 300 THREADED  
 HOT DIP GALVANIZED FULL LENGTH
- ANCHOR BOLTS SHALL BE ALIGNED WITH A TEMPORARY STEEL TEMPLATE. PLACEMENT OF ANCHOR BOLTS AND CONCRETE WITHOUT THE TEMPLATE WILL NOT BE PERMITTED.
- TOP 1.0 m. OF PILE SHALL BE FORMED WITH A TABULAR FORM (SONOTUBE).
- CONTRACTOR SHALL REMOVE THE BASE TEMPLATE, NUTS AND FORM, FOLLOWING A MINIMUM 24 HOUR CONCRETE CURING PERIOD.
- APPLY CONCRETE CURE AND PROTECTION SYSTEM FOR TOP 600 mm OF PILE. APPROVED PRODUCT HORSEY SET WDE (WATER-DISPERSED EPOXY), MADE BY WATSON BOWMAN ACME, AS SUPPLIED BY G.D. JOHNSTON LTD.
- CONCRETE MIX DESIGN**  
 PROPORTIONING OF FINE AGGREGATE, COARSE AGGREGATE, CEMENT, WATER, AND AIR ENTRAINING AGENT SHALL BE SUCH AS YIELD CONCRETE HAVING THE REQUIRED STRENGTH AND WORKABILITY AS FOLLOWS:  
 i) MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS = 35 MPa  
 ii) MAXIMUM WATER/CEMENT RATIO = 0.45  
 iii) MINIMUM CEMENT CONTENT = 340 kg/m  
 iv) SLUMP = 80 mm ±30 mm  
 v) AGGREGATE: 20 mm NOMINAL  
 vi) AIR CONTENT: 5.0 TO 8.0 PERCENT  
 vii) CEMENT - TYPE HS, HIGH SULFATE-RESISTANT.



B.M. ELEV.	DESIGNED BY S.S.R
	DRAWN BY N.B.G.
	CHECKED BY S.S.R.
	APPROVED BY
	HOR. SCALE AS NOTED
	VERTICAL
0 ISSUED FOR TENDER	04/07/06 S.S.R.
NO. REVISIONS	DATE BY DATE 7 APRIL 2006

**DILLON CONSULTING**

RELEASED FOR CONSTRUCTION  
**ORIGINAL SIGNED**  
DATE **APR 7/06**

ENGINEER'S SEAL

PROVINCE OF MANITOBA  
**ORIGINAL SIGNED**  
S.S. RIHAL  
**APR 6/06**  
REGISTERED PROFESSIONAL ENGINEER

CONSULTANT PROJECT NO.  
06-6011-1000

**THE CITY OF WINNIPEG**  
PUBLIC WORKS DEPARTMENT

Winnipeg

**PEMBINA HIGHWAY (SOUTHBOUND)**  
**GRANT AVENUE TO HARROW STREET**  
**STREET RESURFACING**

CITY DRAWING NUMBER  
P-3265-09  
SHEET 9 OF 9

S738 PEMBINA HIGHWAY N/B  
SOUTH OF HARROW ST.  
CONCRETE PILE FOUNDATION DETAIL