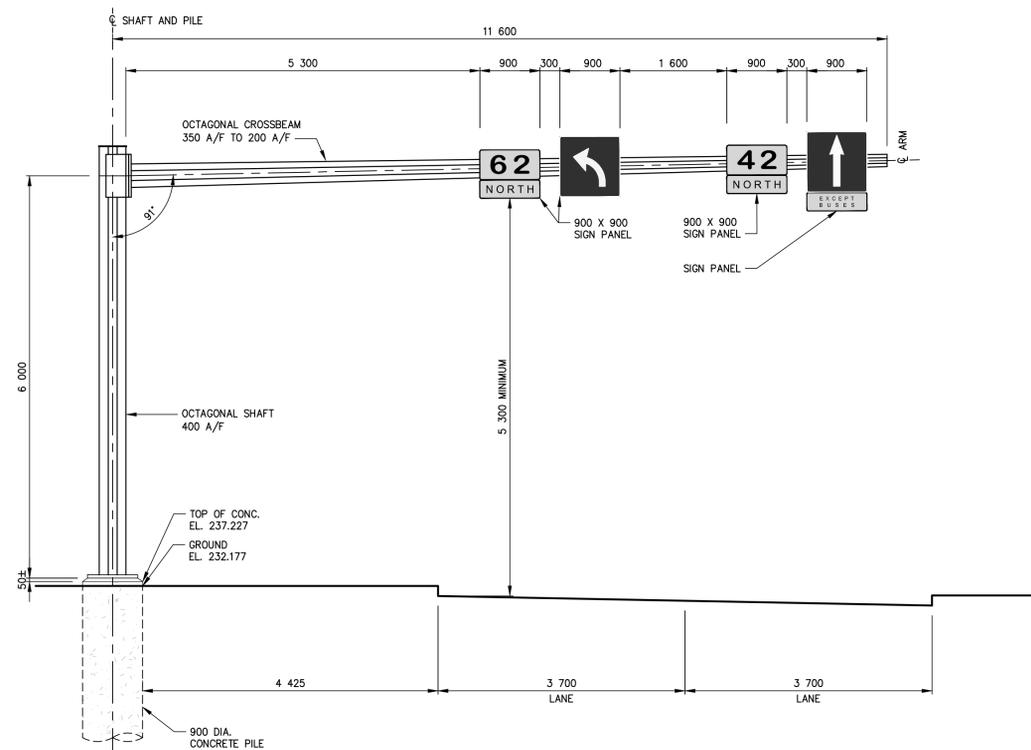
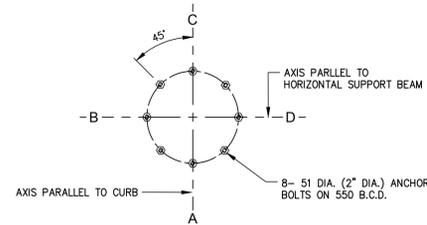


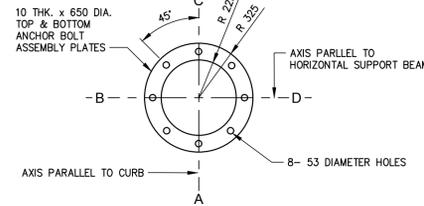
SITE PLAN
1:250



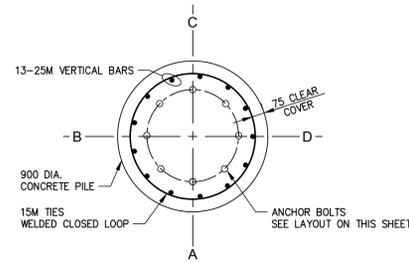
SITE ELEVATION (LOOKING EAST)
1:50



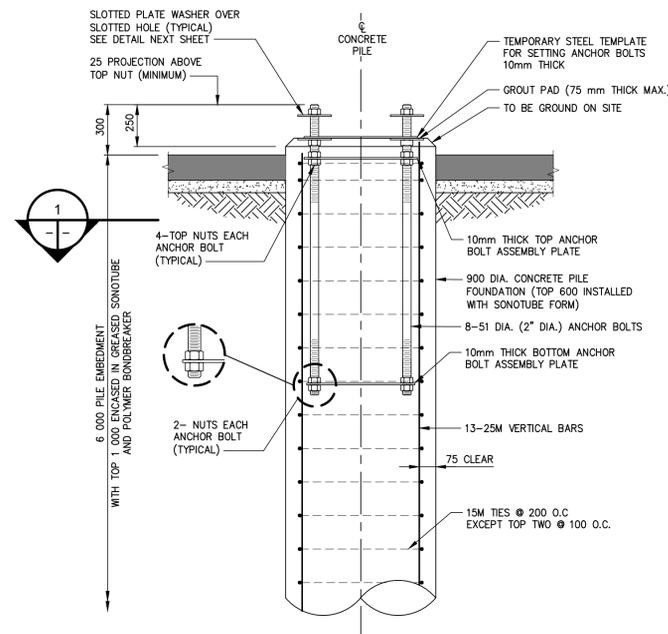
ANCHOR BOLTS LAYOUT



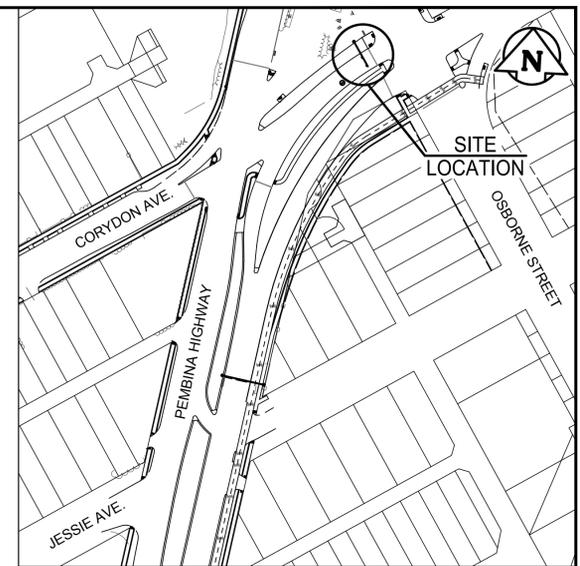
ANCHOR BOLTS ASSEMBLY PLATE



SECTION 1
1:20



CONCRETE PILE FOUNDATION DETAIL FOR S779
1:20



KEY PLAN
N.T.S.

PILE CONSTRUCTION NOTES

- GENERAL**
ELEVATIONS VERIFIED BY CONTRACTOR PRIOR TO CASTING PILES FOR CONFORMANCE WITH ACTUAL ROAD GRADES.
- REINFORCING STEEL**
 - CSA G30.18 GRADE 400W.
 - VERTICAL BARS FULL LENGTH OF PILE.
 - HOT DIP GALVANIZED TO ASTM A767.
- ANCHOR BOLTS**
 - ASTM F1554 Gr. 55.
 - 8-51 DIA. (2" DIA.) x 1 400 LONG ANCHOR BOLTS THREADED BOTH ENDS (559 TOP & 102 BOTTOM. EACH BOLT COMPLETE WITH 6 NUTS (2-BOT. END, 4- TOP END).
 - ANCHOR BOLT CAGE ASSEMBLY HOT DIP GALVANIZED FULL LENGTH AFTER FABRICATION.
 - B.C.D. = BOLT CIRCLE DIAMETER TO CENTER OF BOLT GROUP.
 - ANCHOR BOLTS ALIGNED WITH A TEMPORARY STEEL TEMPLATE. PLACEMENT OF ANCHOR BOLTS AND CONCRETE WITHOUT THE TEMPLATE NOT PERMITTED.
 - TOP 1000mm OF PILE FORMED WITH A TUBULAR FORM (SONOTUBE).
 - BASE TEMPLATE, NUTS AND FORM REMOVED BY CONTRACTOR FOLLOWING A MINIMUM 24 HOURS CONCRETE PERIOD.
- CONCRETE MIX DESIGN**
PROPORTIONING OF FINE AGGREGATE, COURSE AGGREGATE, CEMENT, WATER AND AIR ENTRAINING AGENT PREPARED SUCH AS YIELD CONCRETE HAS THE REQUIRED STRENGTH AND WORKABILITY AS FOLLOWS:
CLASS OF EXPOSURE: S1
MINIMUM COMPRESSIVE STRENGTH AT 56 DAYS = 35 MPa.
AIR CONTENT CATEGORY 2: 4.0 TO 7.0 PERCENT.
CEMENT - TYPE HS OR Hsb.

METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE
METRES



THE CITY OF WINNIPEG
PUBLIC WORKS DEPARTMENT
Winnipeg ENGINEERING DIVISION

PEMBINA HIGHWAY
FROM CARTER AVENUE TO OSBORNE STREET

OVERHEAD SIGN STRUCTURES
S779 - PEMBINA HIGHWAY AT OSBORNE STREET

CITY DRAWING NUMBER
SHEET 25 OF 27

BID NO.
386-2016

NOTE:
These design documents are prepared solely for the use by the party with whom the design professional has entered into a contract and there are no representations of any kind made by the design professional to any party with whom the design professional has not entered into a contract.

LOCATIONS APPROVED UNDERGROUND STRUCTURES		BENCHMARK LOCATION	
SIGNED BY:	DATE:	G.B.M. ELEV.	DESCRIPTION
		232.929	BENCHMARK LOCATION LOCATED ON "O" OF OPEN ON HYDRANT, SOUTHEAST CORNER OF PEMBINA HIGHWAY AND DALY STREET NORTH
LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING			
NO.	REVISIONS	DATE	BY
3	ISSUED FOR TENDER	16.MAY.16	VM
2	ISSUED TO UNDERGROUND STRUCTURES	16.MAY.16	VM
1	ISSUED FOR CLIENT REVIEW	28.APR.16	VM

MMM GROUP

DESIGNED BY: **MGM**
DRAWN BY: **KD**
APPROVED BY: **TR/EH**
APPROVED BY: **JPL**

HOR. SCALE: **AS NOTED**
VERTICAL: **AS NOTED**

RELEASED FOR CONSTRUCTION: **MAY 16 2016**

ENGINEER'S SEAL
J. P. LUKASHENKO
REGISTERED PROFESSIONAL ENGINEER

CONSULTANT ACAD DWG. NO.
5516006-S-04

May 16, 2016 - 3:06pm
 P:\2516006-5516006- Pembina Hwy Pavement Rehab & Bike Lane\MM\Drawings\Overhead Structures\5516006_Pembina Hwy Oh Signs_S01-S06.dwg - tab:5-04