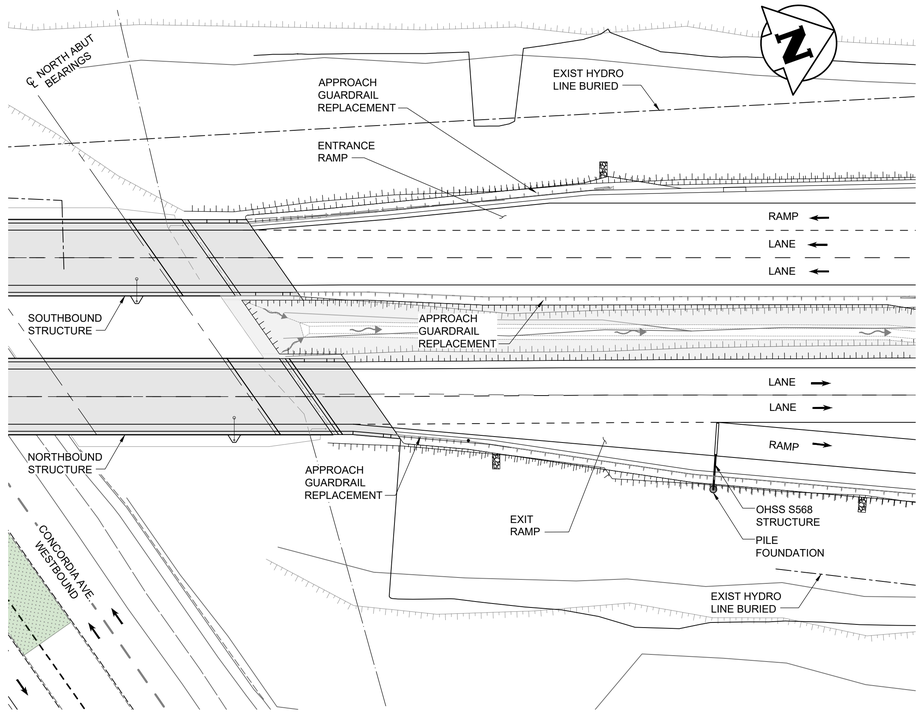
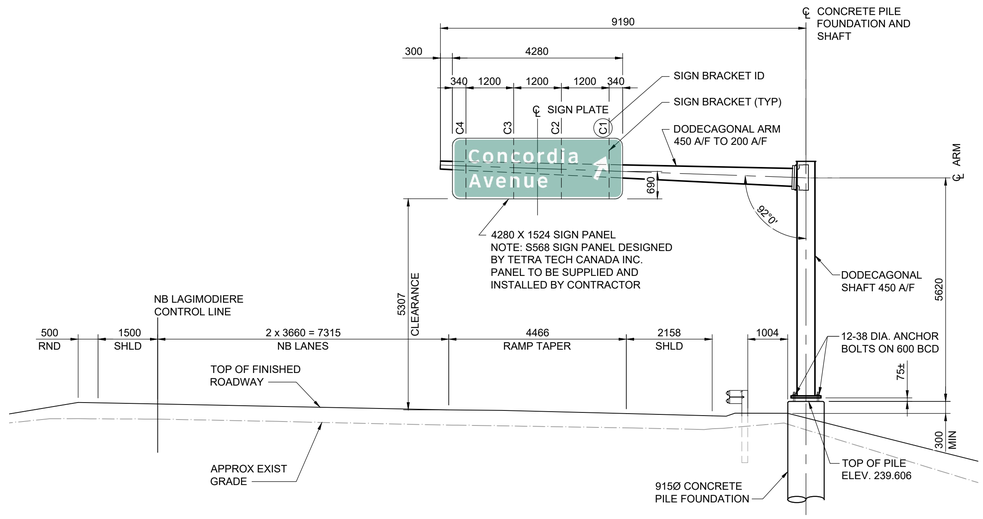


1 - PLAN

1 : 400

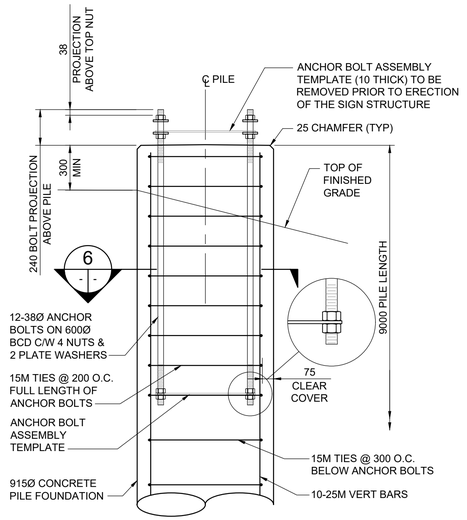
- EXISTING UNDERGROUND UTILITIES SHOWN FOR REFERENCE, TO BE FIELD VERIFIED.



2 - S568 ELEVATION - LOOKING NORTH

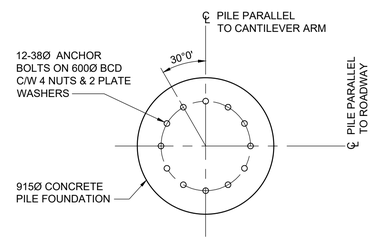
1 : 75

NOTE:
ELEVATIONS SHOWN ARE APPROXIMATE. CONTRACTOR SHALL VERIFY ALL ELEVATIONS PRIOR TO INSTALLATION OF THE CONCRETE PILE FOUNDATION.



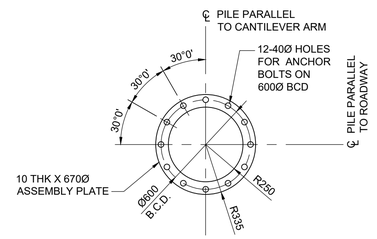
3 - CONCRETE PILE FOUNDATION DETAIL FOR S568

1 : 20



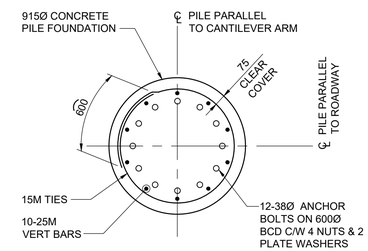
4 - ANCHOR BOLTS LAYOUT

1 : 20



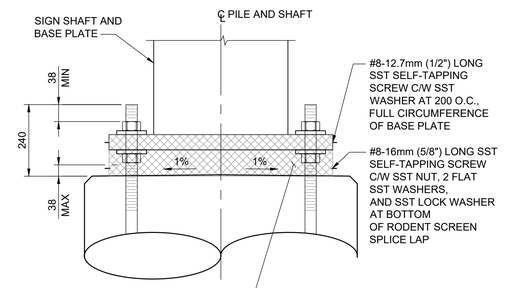
5 - ANCHOR BOLT ASSEMBLY TEMPLATE PLAN

1 : 20



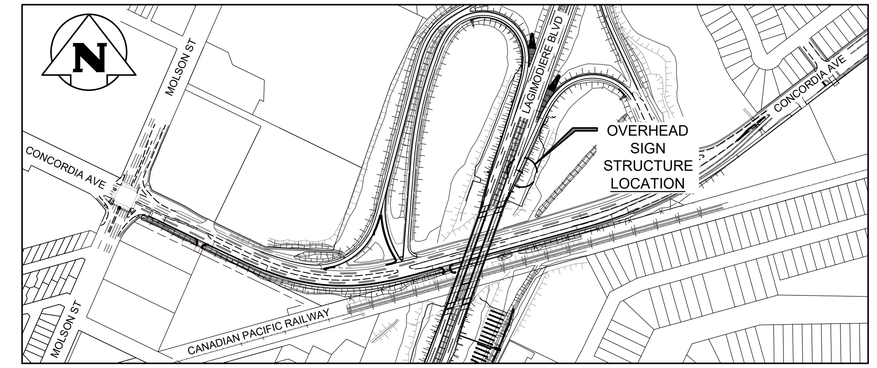
6 - SECTION

1 : 20



7 - PILE TOP DETAIL

1 : 10



KEY PLAN

PILE CONSTRUCTION NOTES:

GENERAL

1. PILE CONSTRUCTION SHALL NOT COMMENCE UNTIL THE CONTRACTOR HAS OBTAINED CLEARANCE FROM THE APPROPRIATE UTILITY AUTHORITIES.
2. THE DEVIATION OF THE AXIS OF ANY FINISHED PILE SHALL NOT DIFFER BY MORE THAN 1 PERCENT FROM THE VERTICAL.

STRUCTURAL CONCRETE

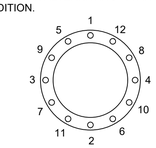
1. CAST-IN-PLACE CONCRETE PILES
   - CSA A23.1:24, EXPOSURE CLASS S-1
   - f'c= 35MPa @ 56 DAYS
   - AIR CONTENT CATEGORY 2
   - MAXIMUM WATER/CEMENT RATIO = 0.40
2. CEMENTITIOUS MATERIALS SHALL CONFORM TO THE REQUIREMENTS OF THE LATEST EDITION OF CA/CSA A3001. SILICA FUME SHALL NOT EXCEED 8% BY MASS OF CEMENT. FLY ASH SHALL BE CLASS C1 OR F AND NOT EXCEED 30% BY MASS OF CEMENT.
3. ALL EXPOSED EDGES OF CONCRETE PILES TO BE CHAMFERED 25 mm UNO.
4. FORM TOP OF PILE WITH TUBULAR FORM (SONOTUBE):
   - 1m FOR DRILLED SHAFTS
   - 1.5m FOR HYDRO EXCAVATED SHAFTS

REINFORCING STEEL

1. CONCRETE COVER SHALL BE 75mm UNLESS OTHERWISE NOTED
2. REINFORCING STEEL SHALL CONFORM TO THE REQUIREMENTS OF THE LATEST EDITION OF CAN/CSA G30.18, GRADE 400W
3. VERTICAL BARS SHALL BE FULL LENGTH OF PILE
4. ALL REINFORCING STEEL SHALL BE HOT-DIP GALVANIZED AND CONFORM TO THE REQUIREMENTS OF THE LATEST EDITION OF CAN/CSA G164 AND ASTM A767, TO A MINIMUM RETENTION OF 610 g/m2.

ANCHOR BOLTS

1. ANCHOR BOLTS, NUTS, AND WASHERS SHALL CONFORM TO THE REQUIREMENTS OF THE LATEST EDITION OF ASTM F1554, GRADE 55 (380 MPa).
2. 12 - 38Ø ANCHOR BOLTS, 2000mm LONG.
3. EACH BOLT C/W 4 NUTS & 2 PLATE WASHERS (SEE PLATE WASHER DETAIL FOR MK. 14)
4. ALL ANCHOR BOLTS AND ACCESSORIES SHALL BE HOT-DIP GALVANIZED FULL LENGTH IN ACCORDANCE WITH ASTM A153 CLASS C AND CONFORM TO THE REQUIREMENTS OF THE LATEST EDITION OF ASTM F2329.
5. THE TOP 300 mm AND BOTTOM 100 mm OF THE ANCHOR BOLTS SHALL BE THREADED UNC CLASS 2A.
6. BCD = BOLT CIRCLE DIAMETER TO CENTRE OF BOLT GROUP.
7. ANCHOR BOLTS SHALL BE ALIGNED WITH TEMPORARY STEEL TEMPLATES AS SPECIFIED. PLACEMENT OF ANCHOR BOLTS AND CONCRETE WITHOUT TEMPLATES WILL NOT BE PERMITTED.
8. CONTRACTOR SHALL REMOVE THE TOP SETTING TEMPLATE, NUTS AND FORM FOLLOWING A MINIMUM 24 HOUR CONCRETE CURING PERIOD.
9. BOTTOM ANCHOR BOLT TEMPLATES TO BE CAST INTO THE PILE CONCRETE SHALL BE CAN/CSA G40.21 GRADE 300W, MINIMUM 10 mm THICK STEEL. TEMPLATES SHALL BE HOT-DIP GALVANIZED TO PREVENT A DISSIMILARITY OF METALS AND CONFORM TO THE REQUIREMENTS OF THE LATEST EDITION OF ASTM A123, TO A MINIMUM NET RETENTION OF 610 g/m^2
10. FOLLOWING INSTALLATION AND LEVELLING OF THE STEEL STRUCTURE, THE TOP ANCHOR NUTS SHALL BE TIGHTENED IN AN ALTERNATING "STAR" PATTERN 1/3 OF A TURN (+20°, -0°) PAST A SNUG TIGHT CONDITION.



CENTRE OF PILE LAYOUT TABLE

STRUCTURE	STATION	O/S	NORTHING	EASTING
S568	21+413.716	16.297 R	5530644.524	639609.698

ENGINEERS GEOSCIENTISTS MANITOBA
Certificate of Authorization
Tetra Tech Canada Inc.
No. 6499

B.M.
ELEV.

NO.	REVISIONS	DATE	BY
0	ISSUED FOR TENDER	25.08.07	ZM

TETRA TECH

DESIGNED BY ZM | REVIEWED BY SA
DRAWN BY EV | APPROVED BY KA
SCALE: AS NOTED | ACCEPTED BY CAM WARD, P.ENG. DATE 25.08.07
DATE 25.08.07

PROVINCE OF MANITOBA 2025-08-07 Z MILUTINOVIC Member 42659 REGISTERED PROFESSIONAL ENGINEER

CONSULTANT DRAWING NO.
704-INF.MBI03007.01-DWG-S2401

Winnipeg

THE CITY OF WINNIPEG
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

LAGIMODIERE TWIN OVERPASSES
OVER CPKC KEEWATIN
REHABILITATION AND RELATED WORKS

CITY DRAWING NUMBER S568-25-2401
SHEET 1 OF 2

OVERHEAD SIGN STRUCTURE S568
PLAN, ELEVATION AND PILE FOUNDATION DETAILS

2401