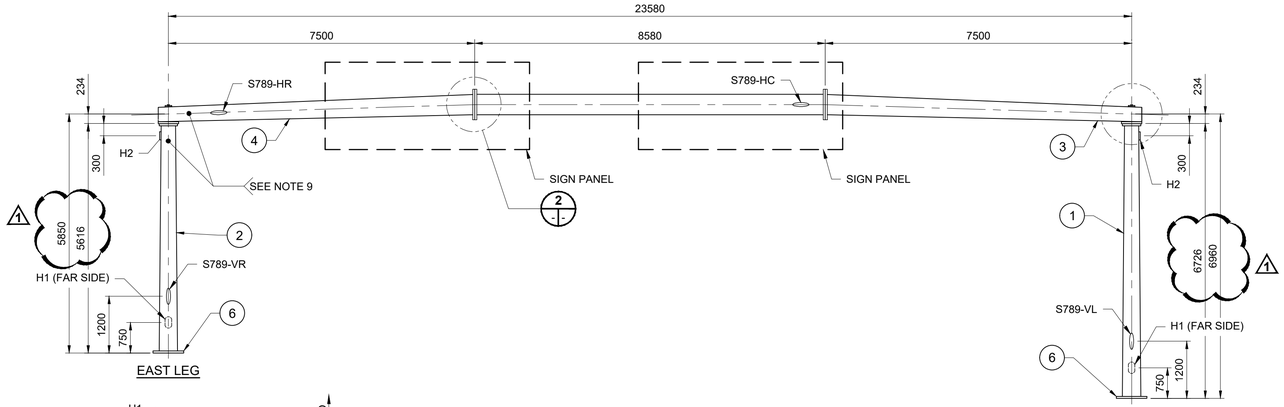
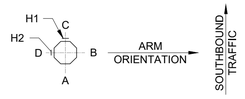
ISO A1 - 594mm x 841mm

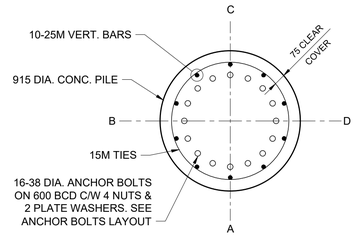




S791 ELEVATION

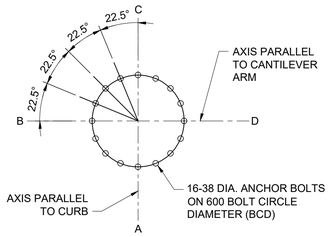
1:75

DIMENSIONS ARE SHOWN FOR LOADED CONDITION. FABRICATOR TO VERIFY UNLOADED DIMENSIONS PROVIDE DESIRED LOADED CAMBER AND ROADWAY CLEARANCE.



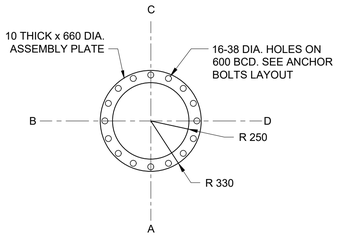
SECTION

SCALE: 1:20



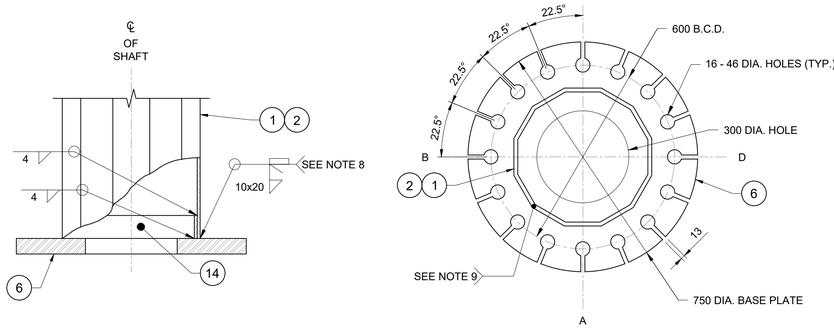
ANCHOR BOLTS LAYOUT

1:20



ANCHOR BOLT ASSEMBLY TEMPLATE

1:20



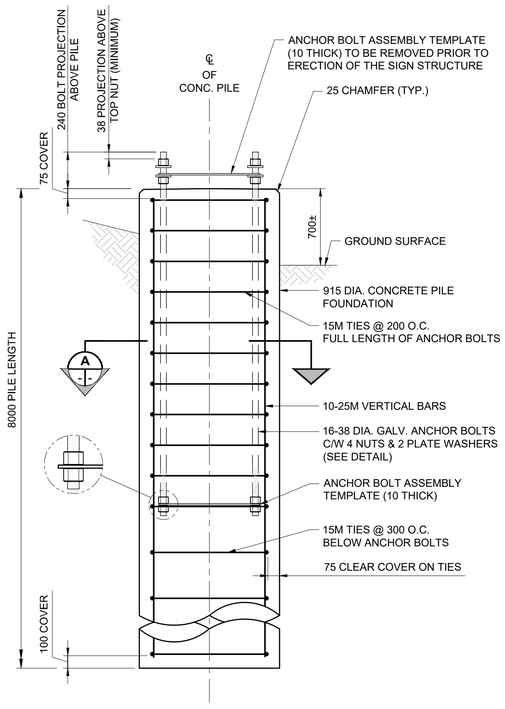
ELEVATION

PLAN

BASE PLATE DETAIL

1:10

TYP. BOTH LEGS



CONCRETE PILE FOUNDATION DETAIL FOR S791 - PILE P1

1:20

PILE P2 SIMILAR

TOP OF PILE P1 CL 75± ABOVE MEDIAN

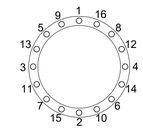
PILE CONSTRUCTION NOTES

1. REINFORCING STEEL

- CSA G30.18 GR. 400W
- VERTICAL BARS FULL LENGTH OF PILE
- HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM A767

2. ANCHOR BOLTS

- ASTM F1554 GR.55 (380 MPa)
- 16-38 DIA. ANCHOR BOLTS 2.0m LONG
- EACH BOLT C/W 4 NUTS & 2 PLATE WASHERS (SEE PLATE WASHER DETAIL FOR MK. 20)
- TOP 300 THREADED UNC CLASS 2A
- BOTTOM 100 THREADED UNC CLASS 2A
- HOT DIP GALVANIZED FULL LENGTH, IN ACCORDANCE WITH ASTM A153 CLASS C
- B.C.D. = BOLT CIRCLE DIAMETER TO CENTRE OF BOLT GROUP
- ANCHOR BOLTS SHALL BE ALIGNED WITH TEMPORARY STEEL TEMPLATES. PLACEMENT OF ANCHOR BOLTS AND CONCRETE WITHOUT THE TEMPLATES WILL NOT BE PERMITTED.
- CONTRACTOR SHALL REMOVE THE TOP ANCHOR BOLT SETTING TEMPLATE, NUTS AND FORM, FOLLOWING A MINIMUM 24 HOUR CONCRETE CURING PERIOD.
- FOLLOWING INSTALLATION OF THE STEEL STRUCTURE, TIGHTEN THE LOWER LEVELING NUTS AND UPPER ANCHOR NUTS TO A SNUG-TIGHT CONDITION, FOLLOWED BY 1/3 NUT ROTATION (+20°/-0°) OF THE UPPER ANCHOR NUTS.
- ANCHOR BOLTS SHALL BE TIGHTENED USING A STAR PATTERN TIGHTENING SEQUENCE.



3. FORM TOP OF PILE WITH A TUBULAR FORM (SONOTUBE):
   - 1m FOR DRILLED SHAFTS
   - 1.5m FOR HYDRO-EXCAVATED SHAFTS

4. 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) CLASS OF EXPOSURE: S-1 AND F-1
ii) MINIMUM COMPRESSIVE STRENGTH AT 56 DAYS = 35 MPa
iii) MAXIMUM WATER/CEMENT RATIO = 0.40
iv) AIR CONTENT: CATEGORY 1 PER TABLE 4 OF CSA A23.1-14 (5-8%)
v) TYPE HS, HSb OR HSe CEMENT IN ACCORDANCE WITH CSA A23.1-14

STRUCTURE IDENTIFICATION NUMBER SIZE

NTS

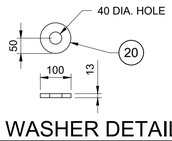
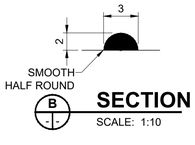


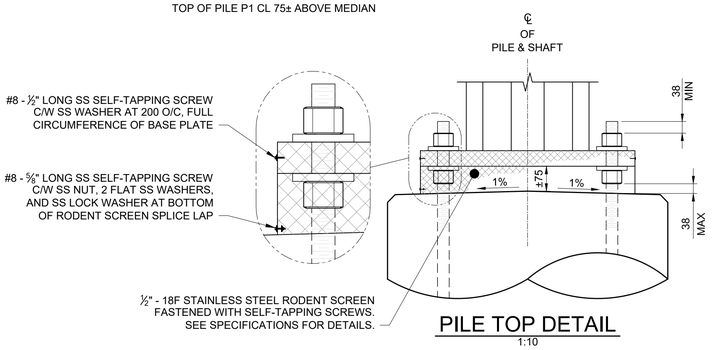
PLATE WASHER DETAIL

1:10



SECTION

SCALE: 1:10



PILE TOP DETAIL

1:10

ENGINEERS GEOSCIENTISTS MANITOBA
Certificate of Authorization
MORRISON HERSHFIELD
No. 1736

TENDER No. 615-2022

LOCATION APPROVED
UNDERGROUND STRUCTURES

SUPR, U/G STRUCTURES COMMITTEE — DATE

NOTE:
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 WITH CONSTRUCTION.

BM 54-006 ELEV 228.166 m — Tblt. in S. face of E. Conc. pier in 1st row of Conc. piers N. of S. end of St. Vital Bridge over Red River, N. of Kingston Row, 5 m W. of E. end of Pier.

No.	REVISIONS	YY/MM/DD	BY
1	REVISED FOR ADDENDUM 1	22/12/13	BAP
0	ISSUED FOR TENDER	22/11/24	BAP

MORRISON HERSHFIELD

DESIGNED BY	TN	CHECKED BY	GQW
DRAWN BY	AH	APPROVED BY	BE
HOR SCALE / VERT SCALE	AS NOTED	RELEASED FOR CONSTRUCTION	
DATE	NOV 24, 2022	DATE	

PROFESSIONAL'S SEAL
PROVINCE OF MANITOBA — T.A.B. NEIRINCK — Member 37947 — 2022-12-13 — REGISTERED PROFESSIONAL ENGINEER

CONSULTANT FILE NAME
2103510-SVB
DD-OHSS-FERMOR DTL01.dwg

Winnipeg

THE CITY OF WINNIPEG
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

ST. VITAL TWIN BRIDGE OVER THE RED RIVER REHABILITATION AND RELATED WORKS

STEEL OVERHEAD SIGN STRUCTURE S791
FABRICATION DETAILS 1 OF 2

CITY FILE NUMBER: OHSS-24-2
SHEET 224 OF 244
DRAWING NUMBER: 224

METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

X:\Proj\2021\2103510\00-St Vital Bridge over Red River PD\09. CAD\07 Sheets\Structural\Detailed Design\2103510-SVB DD-OHSS-FERMOR DTL01.dwg Last Saved: 12/13/2022 10:40 AM by KBerard Plotted: 12/13/2022 10:47 AM by Kevin Berard