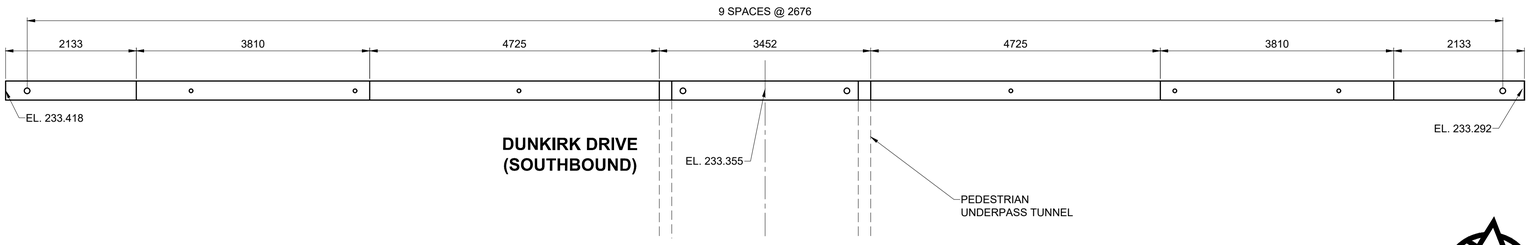
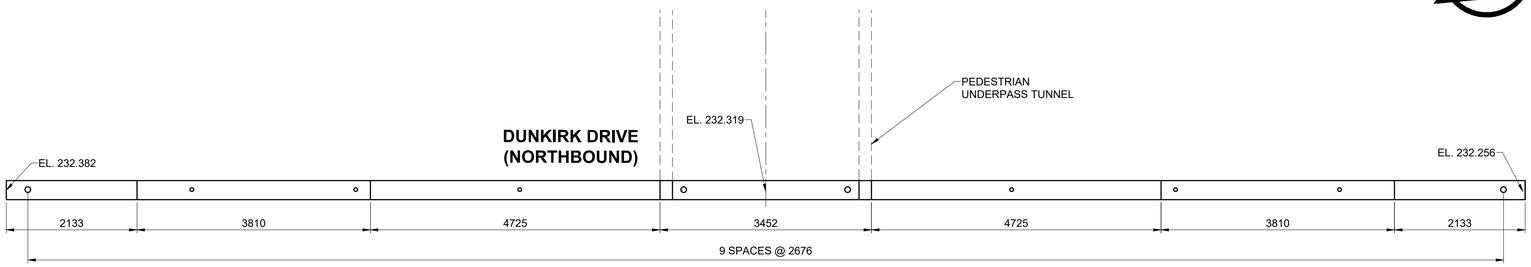


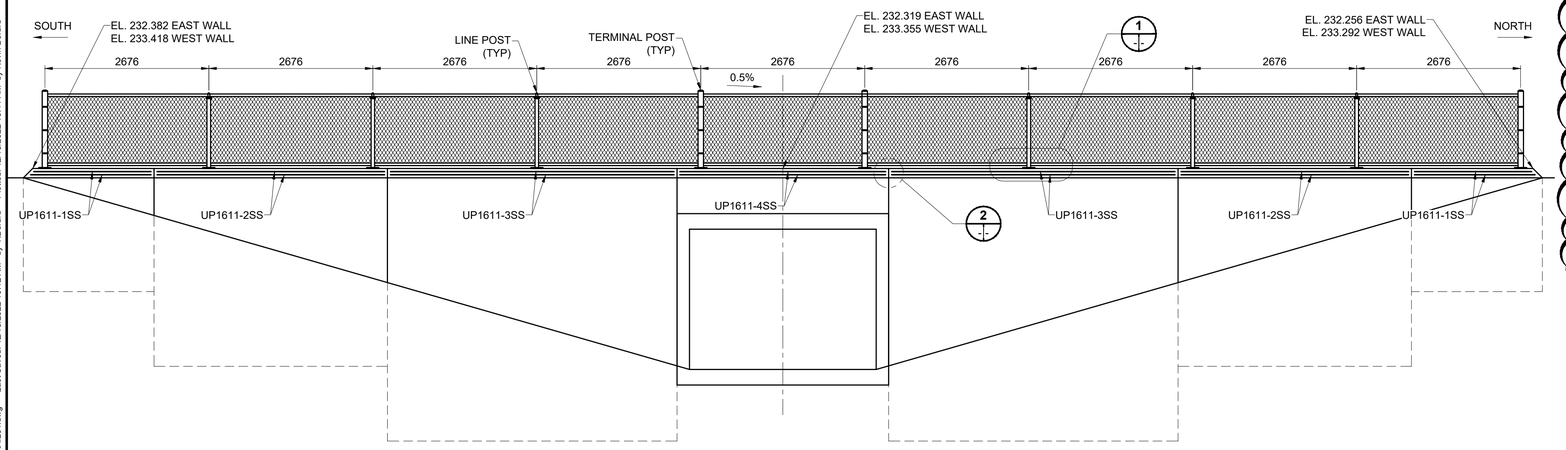
WEST SIDE FENCE PLAN

SCALE 1:50



EAST SIDE FENCE PLAN

SCALE 1:50



SOUTH PEDESTRIAN UNDERPASS ELEVATION

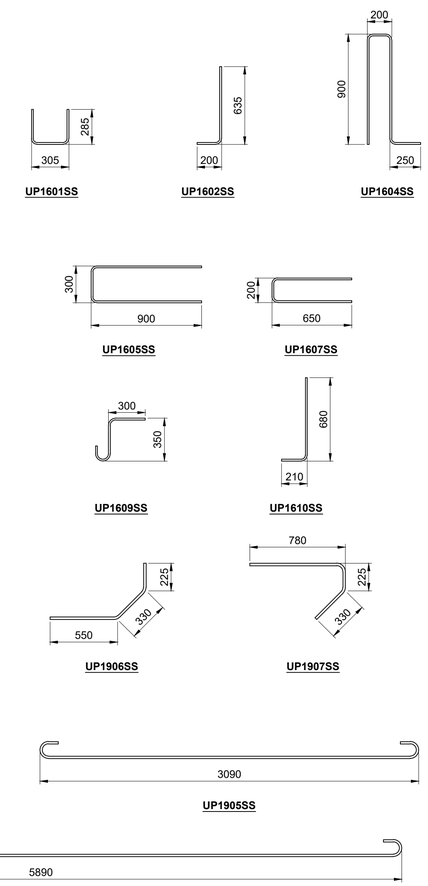
SCALE 1:50

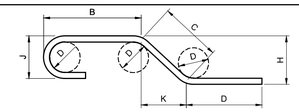
BILL OF REINFORCING STEEL

UNDERPASSES (UP)

MARK	TYPE	PIN DIAMETER	LENGTH (mm)	NO. BARS	MASS
STAINLESS STEEL					
UP1601SS	BENT	90	875	344	468.356
UP1602SS	BENT	90	835	344	446.945
UP1603-1SS	STR	-	2020	24	75.435
UP1603-2SS	STR	-	3695	24	137.986
UP1603-3SS	STR	-	4610	24	172.156
UP1603-4SS	STR	-	3390	12	63.298
UP1604SS	BENT	90	2250	68	238.068
UP1605SS	BENT	90	2100	136	444.394
UP1606SS	STR	-	4650	64	463.066
UP1607SS	BENT	90	1500	16	37.344
UP1608SS	STR	-	200	4	1.245
UP1609SS	BENT	90	820	4	5.104
UP1610SS	BENT	90	845	344	452.298
UP1611-1SS	STR	-	2020	16	50.290
UP1611-2SS	STR	-	3690	16	91.866
UP1611-3SS	STR	-	4610	16	114.771
UP1611-4SS	STR	-	3330	8	41.452
UP1901SS	STR	-	6290	8	112.717
UP1902SS	BENT	100	5890	8	105.549
UP1903SS	STR	-	3090	126	872.122
UP1904SS	STR	-	3090	4	27.686
UP1905SS	BENT	100	3490	4	31.270
UP1906SS	BENT	100	1105	8	19.802
UP1907SS	BENT	100	1335	8	23.923
UP1908SS	STR	-	900	8	16.128
UP1909SS	STR	-	1050	4	9.408
TOTAL REINFORCING STEEL MASS (kg):					4522.677
BLACK STEEL					
UP1501	STR	-	1000	16	25.120
UP1502	STR	-	700	24	26.376
UP1503	STR	-	900	16	22.608
UP1504	STR	-	700	24	26.376
TOTAL REINFORCING STEEL MASS (KG):					100.480
BLACK STEEL HEAT TRACING MESH					
TOTAL REINFORCING STEEL MASS (KG)					850

BENDING DIAGRAM (NTS)

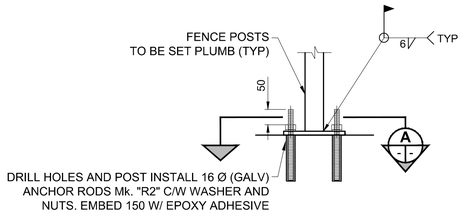




ENLARGED VIEW BAR BENDING DETAILS

NOTES:

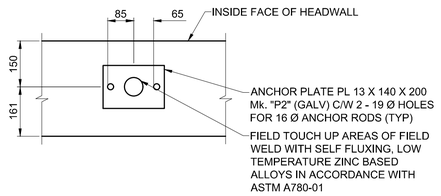
1. ALL DIMENSIONS GIVEN IN BENDING DIAGRAM ARE OUT-TO-OUT, EXCEPT RADII AND EXTENSIONS ON 90°, 135° & 180° HOOKS. EXTENSIONS ON 90°, 135° & 180° HOOKS ARE THE "A" OR "G" DIMENSIONS FOR THE STANDARD 90°, 135° & 180° HOOKS REFERENCED FROM THE RSIC "MANUAL OF STANDARD PRACTICE". RADII ARE INSIDE DIMENSIONS. ALL REINFORCING STEEL SHALL CONFORM TO THE LATEST EDITION OF CAN/CSA-S6 CLAUSE 8.14 "DETAILS OF REINFORCEMENT AND SPECIAL DETAILING PROVISIONS", UNLESS NOTED OTHERWISE IN THE BILL OF REINFORCING STEEL.
2. ALL REINFORCING STEEL SHALL BE DEFORMED STEEL, UNLESS NOTED OTHERWISE IN THE BILL OF REINFORCING STEEL.
3. ALL REINFORCING WITH SUFFIX "SS" SHALL BE STAINLESS STEEL CONFORMING TO THE REQUIREMENTS OF ASTM A955M, 300 SERIES, MINIMUM GRADE 420, OF ONE OF THE FOLLOWING UNS DESIGNATIONS: S31653, S31803, OR S32304.
4. ALL REINFORCING STEEL SHALL CONFORM TO THE LATEST EDITION OF CAN/CSA G30.18 "CARBON STEEL BARS FOR CONCRETE REINFORCEMENT" GRADE 400W, UNLESS NOTED OTHERWISE.
5. LIKE BARS SHALL BE BUNDLED, SECURELY TIED AND IDENTIFIED AS TO MARK AND SITE NO. BY APPROPRIATE MEANS. ALL OTHER ITEMS TO BE IDENTIFIED IN A SIMILAR FASHION.
6. UNLESS OTHERWISE NOTED DIAMETER "D" IS THE SAME ALL HOOKS AND BENDS ON A BAR. WHERE SLOPE DIFFERS FROM 45° DIMENSIONS "H" AND "K" MUST BE SHOWN.
7. BILL OF REINFORCING AND BENDING DIAGRAMS DO NOT INCLUDE CHANGES MADE DURING CONSTRUCTION. RECORD DRAWING REINFORCEMENT CHANGES ARE INCLUDED IN THE RESPECTIVE REINFORCING DETAILS.



1 DETAIL

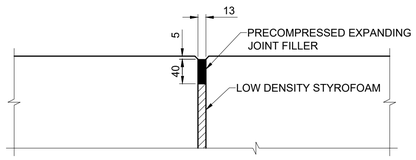
FENCE POST TO WINGWALL/HEADWALL CONNECTION

SCALE: 1:10



A SECTION

SCALE: 1:10



NOTE: TYPICAL ALL CURB JOINTS

2 DETAIL

JOINT REPLACEMENT

SCALE: 1:5

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	AG	CHECKED BY	BAP
DRAWN BY	KMB	APPROVED BY	BE
HOR SCALE / VERT SCALE	AS NOTED	RELEASED FOR CONSTRUCTION	
DATE	NOV 24, 2022	DATE	

PROFESSIONAL'S SEAL
PROVINCE OF MANITOBA — A.D.G. GILARSKI — Member 32144 — 2022-12-13 — REGISTERED PROFESSIONAL ENGINEER

CONSULTANT FILE NAME
2103510-SVB
DD-SPU-RAIL01.dwg

Winnipeg

THE CITY OF WINNIPEG
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

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

GOLF COURSE PEDESTRIAN UNDERPASS (UNDER DUNKIRK DR)

CHAINLINK FENCE DETAILS

CITY FILE NUMBER: U217-24-6

SHEET 222 OF 244

DRAWING NUMBER: 222

METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

ISO A1 - 594mm x 841mm

X:\Proj\2021\21035\1000-St Vital Bridge over Red River PD\09. CAD\07 Sheets\Structural\Detailed Design\2103510-SVB DD-SPU-RAIL01.dwg Last Saved: 12/13/2022 10:12 AM by KBerard Plotted: 12/13/2022 10:44 AM by Kevin Berard