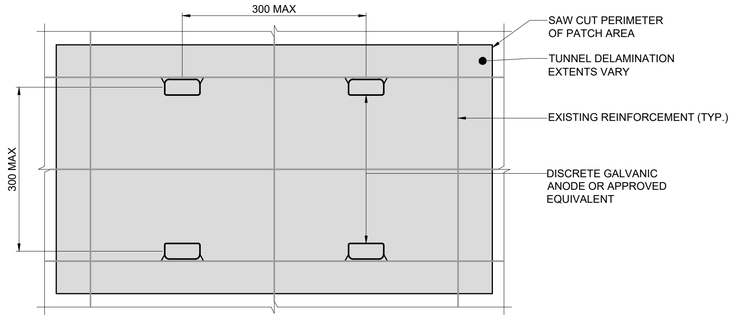
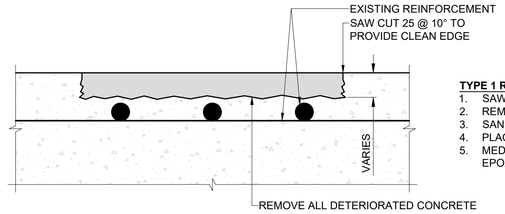
ISO A1 - 594mm x 841mm



TYPICAL TYPE 2 CONCRETE REPAIR FOR TUNNEL ROOF / FLOOR SLAB \ WALL

SCALE NTS



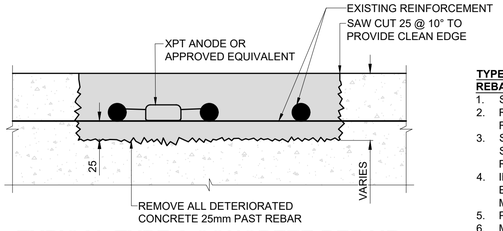
TYPE 1 REPAIR PROCEDURE (NO EXPOSED REBAR):

1. SAWCUT PERIPHERY OF REPAIR AREA TO 25 DEEP.
2. REMOVE ALL DETERIORATED CONCRETE.
3. SANDBLAST CONCRETE SURFACE.
4. PLACE NEW CONCRETE TO COMPLETE PATCH REPAIR.
5. MEDIUM CRACKS TO BE ROUTED AND INJECTED WITH EPOXY.

TYPICAL TYPE 1 CONCRETE REPAIR FOR TUNNEL FLOOR SLAB

ELEVATION

SCALE NTS



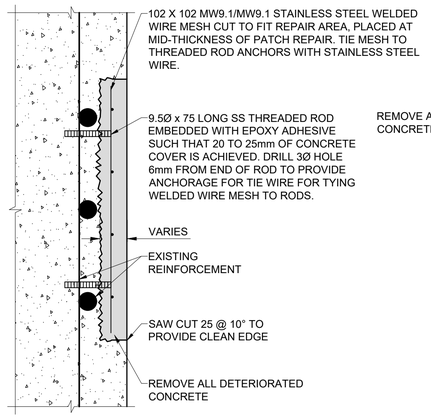
TYPE 2 REPAIR PROCEDURE (DELAMINATION EXTENDS TO REBAR):

1. SAWCUT PERIPHERY OF REPAIR AREA TO 25 DEEP.
2. REMOVE ALL DETERIORATED CONCRETE 25mm PAST REBAR.
3. SANDBLAST CONCRETE AND REINFORCING STEEL. SANDBLAST ALL EXPOSED REINFORCING STEEL ICRI REPAIR METHODS.
4. INSTALL DISCRETE GALVANIC ANODE OR APPROVED EQUIVALENT (PLACE LOW RESISTIVITY EMBEDDING MORTAR, IF REQUIRED).
5. PLACE NEW CONCRETE TO COMPLETE PATCH REPAIR.
6. MEDIUM CRACKS TO BE ROUTED AND INJECTED WITH EPOXY.

TYPICAL TYPE 2 CONCRETE REPAIR FOR TUNNEL ROOF / FLOOR SLAB

ELEVATION

SCALE NTS

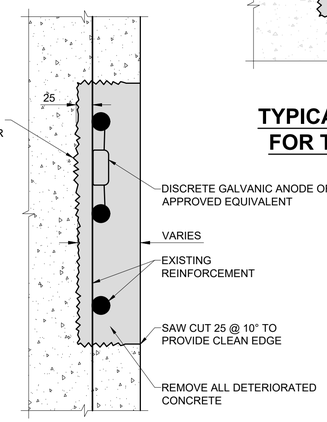


TYPICAL TYPE 1 CONCRETE REPAIR FOR WALL

SCALE NTS

TYPE 1 REPAIR PROCEDURE (NO EXPOSED REBAR):

1. SAWCUT PERIPHERY OF REPAIR AREA TO 25 DEEP.
2. REMOVE ALL DETERIORATED CONCRETE.
3. SANDBLAST CONCRETE SURFACE.
4. INSTALL THREADED RODS.
5. TIE REINFORCING MESH TO THREADED RODS.
6. PLACE NEW CONCRETE TO COMPLETE PATCH REPAIR.
7. MEDIUM CRACKS TO BE ROUTED AND INJECTED WITH EPOXY.

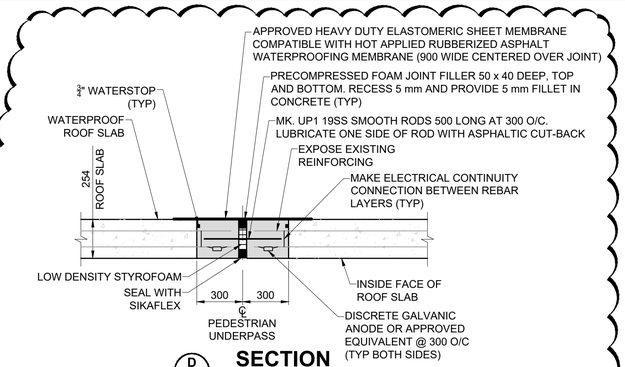


TYPICAL TYPE 2 CONCRETE REPAIR FOR WALL

SCALE NTS

TYPE 2 REPAIR PROCEDURE (DELAMINATION EXTENDS TO REBAR):

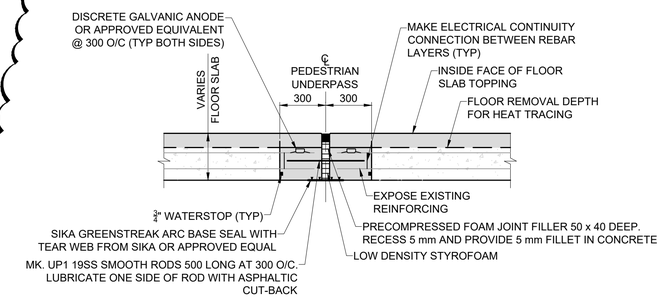
1. SAWCUT PERIPHERY OF REPAIR AREA TO 25 DEEP.
2. REMOVE ALL DETERIORATED CONCRETE.
3. SANDBLAST CONCRETE AND REINFORCING STEEL. SANDBLAST ALL EXPOSED REINFORCING STEEL ICRI REPAIR METHODS.
4. INSTALL DISCRETE GALVANIC ANODE OR APPROVED EQUIVALENT (PLACE LOW RESISTIVITY EMBEDDING MORTAR, IF REQUIRED).
5. PLACE NEW CONCRETE TO COMPLETE PATCH REPAIR.
6. MEDIUM CRACKS TO BE ROUTED AND INJECTED WITH EPOXY.



D 218 219 **SECTION**

ROOF JOINT

SCALE: 1:20

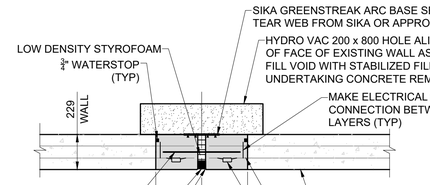


E 218 219 **SECTION**

FLOOR JOINT

SCALE: 1:20

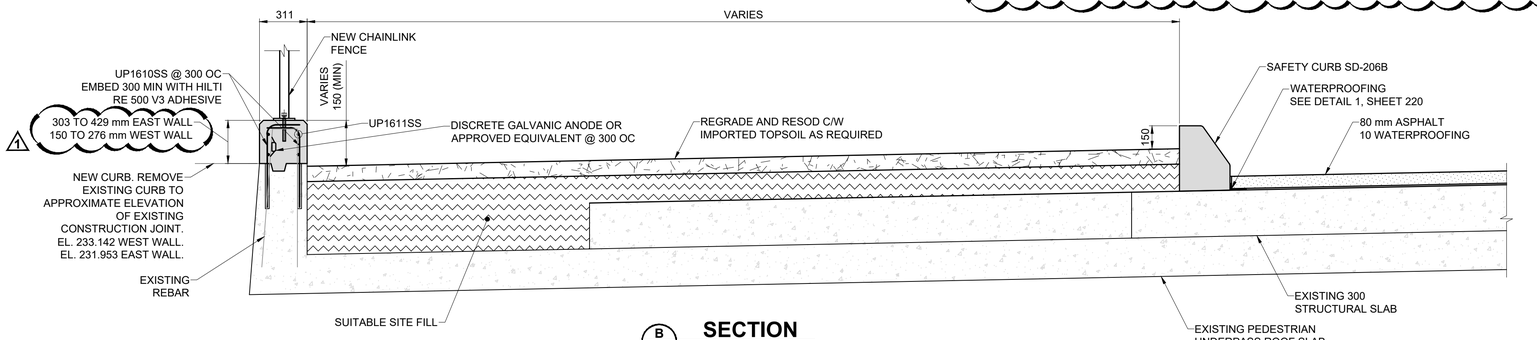
1



F 218 219 **SECTION**

WALL JOINT

SCALE: 1:20



B 217 219 **SECTION**

SCALE: 1:20

1

BILL OF REINFORCING STEEL

MARK	NO.	DESCRIPTION	SIZE	COMPONMENT MASS (kg)	TOTAL MASS (kg)
UP1	86	19 Ø x 500 LONG STAINLESS STEEL SMOOTH RODS	AS DESCRIBED	1.11	95.46
UP2	8	40 Ø x 550 LONG STAINLESS STEEL SMOOTH ROD	AS DESCRIBED	5.43	43.44
UP3	8	76 x 51 x 4.8 - 300 LONG RECTANGULAR STAINLESS STEEL SLEEVE	AS DESCRIBED	2.51	20.08

METRIC

WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

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	AS NOTED	RELEASED FOR CONSTRUCTION	
VERT SCALE			
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-CONC02.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)

CONCRETE PATCH REPAIRS - DETAILS

CITY FILE NUMBER U217-24-3

SHEET 219 OF 244

DRAWING NUMBER 219

X:\Proj\2021\21035\1000-St Vital Bridge over Red River PD\09. CAD\07 Sheets\Structural\Detailed Design\2103510-SVB DD-SPU-CONC02.dwg Last Saved: 12/13/2022 10:08 AM by KBerard Plotted: 12/13/2022 10:42 AM by Kevin Berard