- 3. EXISTING DIMENSIONS ARE APPROXIMATE ONLY. CONTRACTOR SHALL SITE VERIFY ALL DIMENSIONS.
- 4. ALL COORDINATES ARE NAD 83 UTM COORDINATES. ALL DIMENSIONS ARE GIVEN IN GROUND COORDINATES. GROUND = GRID/0.9997688

VEHICULAR LIVE LOADING

CHBDC CL-625 TRUCK AND LANE LOAD

FOUNDATIONS

1. FOUNDATION DESIGN IS BASED ON THE FOLLOWING REPORT

REPORTS PRIOR TO COMMENCING THE FOUNDATION WORK.

- "ROUTE 90 GEOTECHNICAL INVESTIGATION", PREPARED BY BY AECOM DATED FEBRUARY 2013. THE CONTRACTOR SHALL READ AND UNDERSTAND THE REQUIREMENTS OUTLINED IN THESE
- 2. PROTECT SUBSTRUCTURE FOUNDATION EXCAVATION FROM RAIN, SNOW, FREEZING TEMPERATURES AND STANDING WATER
- 3. PLACE A MAT OF LEAN MIX CONCRETE 10 MPa IMMEDIATELY UPON COMPLETION OF AN EXCAVATION
- TO MINIMIZE LOSS OF MOISTURE OR DEGRADATION OF THE BASE. 4. REMOVE GROUND WATER ENTERING EXCAVATION BY AN APPROVED DEWATERING METHOD.
- 5. DO NOT PLACE CONCRETE AGAINST FROZEN GROUND, THAW BY AN APPROVED METHOD, THEN PROTECT EXCAVATION FROM FREEZING PRIOR TO PLACING CONCRETE.
- 6. STEEL PILES SHALL CONFORM TO CAN/CSA G40.21, GRADE 350W.

CAST IN PLACE CONCRETE

- 1. CONCRETE MATERIAL, QUALITY, MIXING, PLACING, FORM WORK AND OTHER CONSTRUCTION PRACTICES TO CONFORM TO CSA-A23, 1/A23,2 - 2004
- 2. ALL EXPOSED CORNERS SHALL HAVE A 20 mm CHAMFER OR FILLET UNLESS OTHERWISE NOTED.

SUPPLY AND PLACE STRUCTURAL CONCRETE	STRENGTH (MPa)	EXP. CLASS	MINIMUM POST RESIDUAL CRACKING INDEX
FOUNDATIONS (PILE CAP)	35 @ 56 DAYS	S-1	-
SUBSTRUCTURE BELOW GRADE	35 @ 28 DAYS	C-1	0.15
SUBSTRUCTURE ABOVE GRADE	35 @ 28 DAYS	C-1	0.15
DECK, BARRIER, ROOF SLABS, APPROACH SLABS	35 @ 28 DAYS	C-1	0.15
OTHER MISCELLANEOUS CONCRETE	35 @ 28 DAYS	C-1	0.15

REINFORCING STEEL

1. FOR ALL SUBSTRUCTURE:

DEFORMED BILLET STEEL BARS FOR CONCRETE REINFORCEMENT CONFORMING TO CSA G30.18M, GRADE 400W HOT-DIP GALVANIZED.

- 2. FOR DECK, ROOF SLAB, APPROACH SLABS, BARRIERS AND ABUTMENT DIAPHRAGMS: STAINLESS STEEL CONFORMING TO ASTM A955M, GRADE 60 (420), TYPE 2205 DUPLEX (UNS S30803), TYPE 316 LN (UNS S31653), TYPE XM-28 (S24100), TYPE 2304 (UNS S32304).
- 3. GALVANIZED REINFORCEMENT SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM
- A767M-00a TO A MINIMUM ZINC THICKNESS OF 610 g/m2. 4. ALL REBAR SHALL BE STORED ON WOOD BLOCKING AT THE SITE
- 5. CONCRETE CLEAR COVER TO REINFORCEMENT UNLESS NOTED OTHERWISE:

CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	100 ± 25
FOOTING, PIER, ABUTMENT EXPOSED TO EARTH	70 ± 10
DECK TOP LAYER	60 + 10, - 0
DECK BOTTOM LAYER AT EXTERIOR OVERHANGS	60 + 10, - 0
DECK BOTTOM LAYER AT INTERIOR BAY	S 50 ± 10
BARRIER INSIDE AND OUTSIDE	60 + 10, - 0

- 6. SUPPLY SUPPORT BARS TO SUPPORT MAIN REINFORCING AS REQUIRED.
- 7. REINFORCING LAP SPLICES/PROJECTION LENGTH

INLII	REINFORGING LAF SFLICES/FROJECTION LENGTH					
	BAR SIZE					
	BLACK / GALVANIZED	STAINLESS STEEL	TOP BARS (mm)	OTHER BARS (mm)	PROJECTION (mm)	
	10	10	700	450	700	
	15	16	1000	650	1000	
	20	19	1200	800	1200	
	25	25	1900	1200	1900	
	30	29	2200	1550	2200	
	35	36	2650	1800	2650	

- 8. LOCATE REINFORCING SPLICES NOT INDICATED ON THE DRAWINGS AT POINTS OF MINIMUM STRESS. LOCATION OF SPLICES TO BE APPROVED BY THE CONTRACT ADMINISTRATOR
- 9. ALL LONGITUDINAL BARS IN PILE CAP, WALLS AND ROOF TO BE SUPPLIED CONTINUOUS FOR THE FULL STRUCTURE LENGTH.
- 10. PROJECTION SHOWN SHALL BE PROVIDED AT CONSTRUCTION JOINTS UNLESS NOTED OTHERWISE. 11. BEFORE PLACING REBAR ENSURE IT IS CLEAN, FREE OF LOOSE SCALE, DIRT OR OTHER DELETERIOUS
- MATERIAL WHICH WOULD REDUCE THE BOND TO CONCRETE.

STRUCTURAL STEEL

- 1. ALL STEEL SHALL BE WEATHERING STEEL CONFORMING TO:
- G40.21 CSA G40.21, GRADE 350 AT, CATEGORY 3 FOR GIRDERS, COVER PLATES, WELDED ATTACHMENTS, PIER & AND ABUTMENT DIAPHRAGMS AND SOLE PLATES.
- CSA G40.21, GRADE 350 A, FOR BRACING MEMBERS BOLTED TO GIRDERS.
- 2. ALL BOLTS SHALL BE HIGH STRENGTH BOLTS CONFORMING TO ASTM STANDARD A325, TYPE 3, UNLESS NOTED OTHERWISE, WEATHERING PROPERTIES AND COLOR OF BOLTS SHALL MATCH THE JOINTED STEEL.

MISCELLANEOUS METAL

1. ALL MISCELLANEOUS STEEL SHALL CONFORM TO CSA G40.21M, GRADE 300W.



	DIVIVIIIO LIGI	
SHEET No.	SHEET TITLE	CITY DWG. No.
00	COVER SHEET	B242-13-00
01	DRAWING LIST AND LEGEND	B242-13-01
02	GENERAL ARRANGEMENT	B242-13-02
03	SITE PLAN AND LOCATION OF EXISTING UTILITIES	B242-13-03
04	BORING LOGS 1 of 4	B242-13-04
05	BORING LOGS 2 of 4	B242-13-05
06	BORING LOGS 3 of 4	B242-13-06
07	BORING LOGS 4 of 4	B242-13-07
08	PILE, GRADE BEAM, ABUTMENT AND PIER FOOTING LAYOUT	B242-13-08
09	ABUTMENT SU. 1 AND SU. 3 CONCRETE DETAILS 1 of 2	B242-13-09
10	ABUTMENT SU. 1 AND SU. 3 CONCRETE DETAILS 2 of 2	B242-13-10
11	ABUTMENT SU. 1 AND SU. 3 REINFORCING DETAILS PIER SU. 2 CONCRETE DETAILS	B242-13-11 B242-13-12
12 13	PIER SU. 2 CONCRETE DETAILS PIER SU. 2 REINFORCING DETAILS	B242-13-12 B242-13-13
14	BEARING DETAILS 1 of 2	B242-13-13 B242-13-14
15	BEARING DETAILS 1 of 2	B242-13-14
16	STEEL GIRDERS - GENERAL LAYOUT	B242-13-16
17	STEEL GIRDERS - FRAMING LAYOUT	B242-13-17
18	STEEL GIRDERS - TOP FLANGE AND WEB PLATE LAYOUT	B242-13-18
19	STEEL GIRDERS - BOTTOM FLANGE AND STIFFENER DETAILS	B242-13-19
20	STEEL GIRDERS - FLANGE PLATE AND WEB PLATE DETAILS	B242-13-20
21	STEEL GIRDERS - DIAPHRAGMS AT SU. 1 AND SU. 3	B242-13-21
22	STEEL GIRDERS - DIAPHRAGM AT SU. 2	B242-13-22
23	STEEL GIRDERS - TYPICAL CROSSFRAME DETAILS	B242-13-23
24	STEEL GIRDERS - LATERAL BRACING AND STRUT DETAILS	B242-13-24
25	STEEL GIRDERS - GIRDER G1 FIELD SPLICE DETAILS	B242-13-25
26	STEEL GIRDERS - GIRDER G2 FIELD SPLICE DETAILS	B242-13-26
27	STEEL GIRDERS - ACCESS HATCH DETAILS STEEL GIRDERS - CAMBER DIAGRAM	B242-13-27 B242-13-28
28 29	DECK LAYOUT	B242-13-29
30	DECK END DIAPHRAGMS	B242-13-29 B242-13-30
31	DECK SLAB BOTTOM REINFORCING LAYOUT	B242-13-31
32	DECK SLAB TOP REINFORCING LAYOUT	B242-13-32
33	DECK SLAB REINFORCING DETAILS	B242-13-33
34	ROOF-APPROACH SLABS 1 of 2	B242-13-34
35	ROOF-APPROACH SLABS 2 of 2	B242-13-35
36	EXPANSION JOINT DETAILS 1 of 3	B242-13-36
37	EXPANSION JOINT DETAILS 2 of 3	B242-13-37
38	EXPANSION JOINT DETAILS 3 of 3	B242-13-38
39	TRAFFIC BARRIER DETAILS 1 of 2	B242-13-39
40	TRAFFIC BARRIER DETAILS 2 of 2	B242-13-40
41	NORTHWEST AND SOUTHWEST MSE WALL LAYOUT NORTHEAST AND SOUTHEAST MSE WALL LAYOUT	B242-13-41 B242-13-42
42 43	SOUTHWEST MSE WALL PLAN AND ELEVATION	B242-13-42 B242-13-43
44	NORTHWEST MSE WALL PLAN AND ELEVATION	B242-13-44
45	SOUTHEAST MSE WALL PLAN AND ELEVATION 1 of 3	B242-13-45
46	SOUTHEAST MSE WALL PLAN AND ELEVATION 2 of 3	B242-13-46
47	SOUTHEAST MSE WALL PLAN AND ELEVATION 3 of 3	B242-13-47
48	NORTHEAST MSE WALL PLAN AND ELEVATION	B242-13-48
49	MSE WALL DETAILS 1 of 3	B242-13-49
50	MSE WALL DETAILS 2 of 3	B242-13-50
51	MSE WALL DETAILS 3 of 3	B242-13-51
52	APPROACH GUARDRAIL LAYOUT	B242-13-52
53	APPROACH GUARDRAIL DETAILS 1 of 2	B242-13-53
54	APPROACH GUARDRAIL DETAILS 2 of 2	B242-13-54
55 56	ET-PLUS DETAILS	B242-13-55
56 57	BRIDGE ELECTRICAL1 OF 2 BRIDGE ELECTRICAL 2 OF 2	B242-13-56 B242-13-57
57 58	REINFORCING SCHEDULE - ABUTMENTS, PIER, ROOF AND APPROACH SLABS	B242-13-57 B242-13-58
59	REINFORCING SCHEDULE - DECK, BARRIERS, MSE WALL COPING	B242-13-59
		DZ-7Z-10-00
	ABBREVIATIONS	

ABUT.	- ABUTMENT	E.F.	- EACH FACE	N.S.W.L.	- NORMAL SUMMER WATER LEVEL
A.D.	- ALGEBRAIC DIFFERENCE	ELEV.	- ELEVATION	N.T.S.	- NOT TO SCALE
APPROX.	- APPROXIMATELY	EVCS	- END VERTICAL CURVE STATION	PCS.	- PIECES
ATP	- ACTIVE TRANSPORTATION PATH	EVCE	- END VERTICAL CURVE ELEVATION	O.C.	- ON CENTER
BV	- BOULEVARD	EXP. JT.	- EXPANSION JOINT	O.F.	- OUTSIDE FACE
BVCS	- BEGIN VERTICAL CURVE STATION	EXIST.	- EXISTING	P.I.	- POINT OF INTERSECTION
BVCE	- BEGIN VERTICAL CURVE ELEVATION	E.S.	- EQUALLY SPACED	PVI	- POINT OF VERTICAL INTERSECTION
B.C.	- BEGINNING OF CURVE	F.F.	- FAR FACE	R.C.	- REINFORCED CONCRETE
BRG.	- BEARING	FOC	- FIBRE OPTIC CABLE	R.P.	- REFERENCE POINT
BTM	- BOTTOM	F.R.E.	- FIBER REINFORCED EPOXY	S/B	- SOUTHBOUND
B.O.	- BOTTOM OF	FTG.	- FOOTING	SL	- STREET LIGHT
©	- CENTER LINE	G.B.M.	- GEODETIC BENCH MARK	SLP.	- SLOPE
C/A	- CONTRACT ADMINISTRATOR	H.P.	- HIGH PRESSURE	STA.	- STATION
CONC.	- CONCRETE	I.F.	- INSIDE FACE	SU.	- SUBSTRUCTURE UNIT
CSC	- CORRUGATED STEEL CULVERT	INV.	- INVERT	TC	- TANGENT TO CURVE
CT	- CURVE TO TANGENT	L.D.S	- LAND DRAINAGE SYSTEM	T.O.	- TOP OF
C/W	- COMPLETE WITH	L.L.	- LIVE LOAD	T.H.	- TEST HOLE
DIA.	- DIAMETER	LVC	- LENGTH OF VERTICAL CURVE	TYP.	- TYPICAL
DO.	- DITTO	MK.	- MARK	U/N	- UNLESS NOTED OTHERWISE
D.L.	- DEAD LOAD	M.P.	- MONITORING PILE	U/S	- UNDERSIDE
DWL.	- DOWEL	N.F.	- NEAR FACE	W/B	- WESTBOUND
E/B	- EASTBOUND	N/B	- NORTHBOUND	W.P.	- WORKING POINT
E.C.	- END OF CURB	No.	- NUMBER	W.W.S.	- WASTE WATER SEWER

ENGINEER'S SEAL **ERIC**

SHEET No.

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SHEET TITLE

REMOVALS 1 OF 3

REMOVALS 2 OF 3

REMOVALS 3 OF 3

GENERAL ARRANGEMENT - ROADWORKS

TRAFFIC STAGING STAGE 1 - STA 0+785 TO 1+160

TRAFFIC STAGING STAGE 1 - STA 1+160 TO 1+535

TRAFFIC STAGING STAGE 1 - STA 1+480 TO 1+870

TRAFFIC STAGING STAGE 1 - STA 1+800 TO 2+180

TRAFFIC STAGING STAGE 1 - STA 2+180 TO 2+550

TRAFFIC STAGING STAGES 2A - STA 1+480 TO 1+870

TRAFFIC STAGING STAGES 2B - STA 1+480 TO 1+870

TRAFFIC STAGING STAGES 2A - STA 1+800 TO 2+180

TRAFFIC STAGING STAGES 2B - STA 1+800 TO 2+180

TRAFFIC STAGING STAGES 2A & 2B - STA 0+785 TO 1+160

TRAFFIC STAGING STAGES 2A & 2B - STA 1+160 TO 1+535

TRAFFIC STAGING STAGES 2A & 2B - STA 2+180 TO 2+550

TRAFFIC STAGING STAGES 2C & 2D - STA 0+785 TO 1+160

TRAFFIC STAGING STAGES 2C & 2D - STA 1+160 TO 1+535

TRAFFIC STAGING STAGES 2C & 2D - STA 1+480 TO 1+870

TRAFFIC STAGING STAGES 2C & 2D - STA 1+800 TO 2+180

TRAFFIC STAGING STAGES 2C & 2D - STA 2+180 TO 2+550

PLAN AND PROFILE - KENASTON EB STA: 0+905 TO 1+100

PLAN AND PROFILE - KENASTON EB STA: 1+100 TO 1+440

PLAN AND PROFILE - KENASTON EB STA: 1+350 TO 1+680

PLAN AND PROFILE - KENASTON EB STA: 1+460 TO 1+800

PLAN AND PROFILE - KENASTON EB STA: 1+680 TO 2+010

PLAN AND PROFILE - KENASTON EB STA: 2+010 TO 2+260

PLAN AND PROFILE - KENASTON EB STA: 2+260 TO 2+520

PLAN AND PROFILE - KENASTON SB STA: 3+445 TO 3+770

PLAN AND PROFILE - BISHOP GRANDIN EB STA: 6+000 TO 6+338

HORIZONTAL GEOMETRY STA: 0+905 TO 1+580

HORIZONTAL GEOMETRY STA: 1+580 TO 1+920

HORIZONTAL GEOMETRY STA: 1+920 TO 2+450

HORIZONTAL GEOMETRY

PLAN - KENASTON MEDIAN SWALE

PLAN AND PROFILE - ATP 4 1 OF 2

PLAN AND PROFILE - ATP 4 2 OF 2

PLAN AND PROFILE - ATP 1 & 1A

PLAN AND PROFILE - ATP 1

PLAN AND PROFILE - ATP 5

CROSS SECTIONS 1 OF 5

CROSS SECTIONS 2 OF 5

CROSS SECTIONS 3 OF 5

CROSS SECTIONS 4 OF 5

CROSS SECTIONS 5 OF 5

CONCRETE JOINT PLAN 1 OF 2

CONCRETE JOINT PLAN 2 OF 2

S771 - FABRICATION DETAILS

S772 - FABRICATION DETAILS

S772 - ET-PLUS FOR GUARDRAIL

S773 - FABRICATION DETAILS

S774 - FABRICATION DETAILS

S775 - FABRICATION DETAILS

S775 - ET-PLUS FOR GUARDRAIL

S772 - GUARDRAIL LAYOUT

S772 - GUARDRAIL DETAILS

ET-PLUS FOR GUARDRAIL AT 1+460

GUARDRAIL LAYOUT AT 1+460 TO 1+515

GUARDRAIL DETAILS AT 1+460 TO 1+515

S771 - KENASTON BV SB AT STA: 0+370

S773 - KENASTON BV SB AT STA: 1+698

S775 - KENASTON BV NB AT STA: 6+173

S774 - BISHOP GRANDIN BV EB AT STA: 2+691

S775 - GUARDRAIL LAYOUT AT BRIDGE PIER

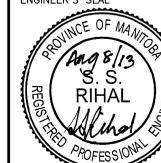
S775 - GUARDRAIL DETAILS NB KENASTON AT PIER SHAFT

S772 - KENASTON BV SB SOUTH OF SCURFIELD

DETAILS 1 OF 3

DETAILS 2 OF 3

DETAILS 3 OF 3





Winnipeg

THE CITY OF WINNIPEG PUBLIC WORKS DEPARTMENT

CITY DWG. No.

B242-13-60

B242-13-61

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B242-13-122

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B242-13-125 B242-13-126

B242-13-127

B242-13-128

WAVERLEY WEST ARTERIAL ROADS PROJECT CITY DRAWING NUMBER B242-13-01 (WWARP) PART 3 - CONTRACT 2 ROUTE 90 TO ROUTE 165, OVERPASS (KENASTON BLVD.) 01 ^{OF} 128 SHEET AND ASSOCIATED WORKS CONSULTANT DRAWING NUMBER DRAWING LIST AND LEGEND

UNDERGROUND STRUCTURES DRAWN CGC SUPV. U/G STRUCTURES DATE **DILLON** APPROVED

DATE BY

DATE 2013/08/01

0 ISSUED FOR TENDER

REVISIONS

HOR. SCALE AS SHOWN VERTICAL 13/08/08 | MBL

CONSULTING

CONSULTANT PROJECT NUMBER 12-6606

Dillon Consulting Limited (MB) No. 1789 Date: 2013/08/01

Certificate of Authorization