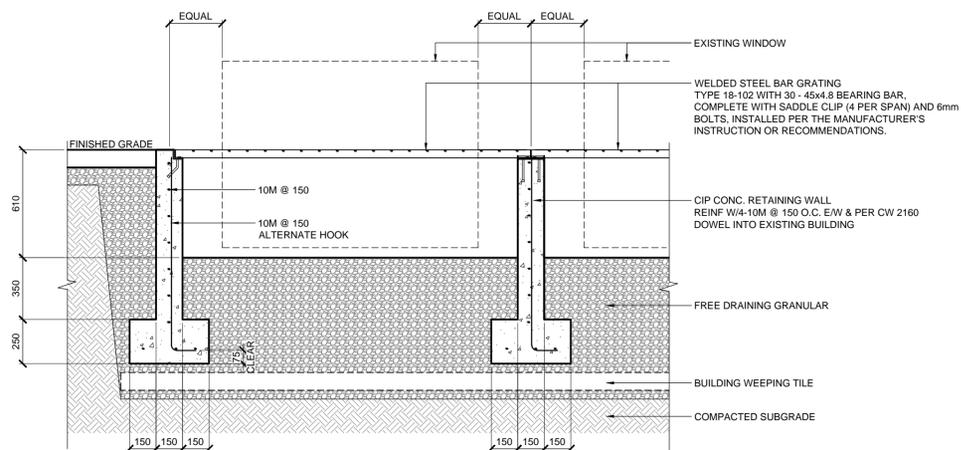
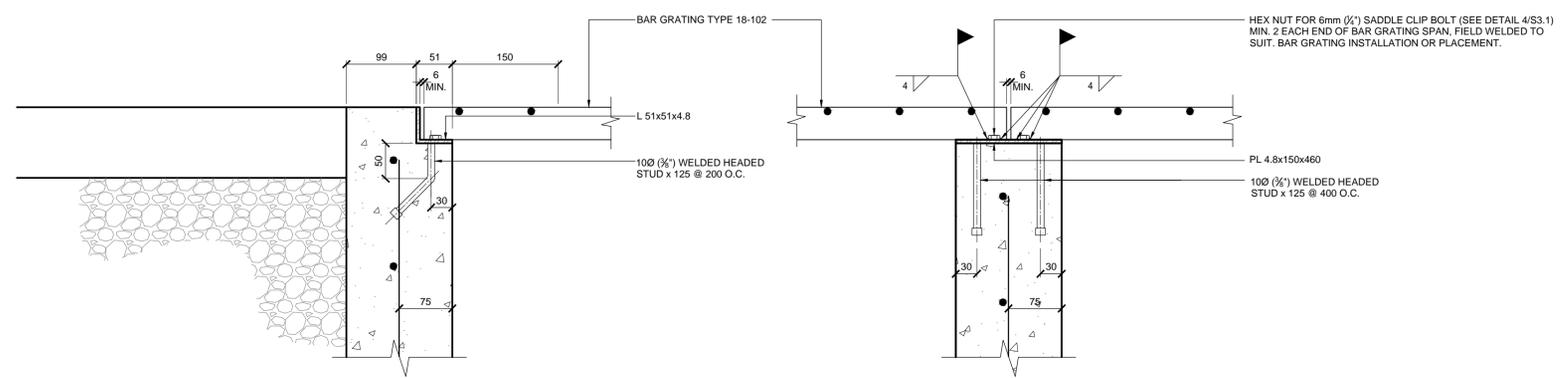


1
S3.1 SCALE 1:20
CONC. RETAINING WALL AT BERTHA WINDOW WELL



2
S3.1 SCALE 1:20
SECTION A-A



4
S3.1 SCALE 1:5
GRATE ATTACHEMENT

GENERAL NOTES:

- DESIGN IS IN ACCORDANCE WITH THE NATIONAL BUILDING CODE OF CANADA, 2010 EDITION PLUS MANITOBA AMENDMENTS.
- CONTRACTOR TO VERIFY UNDERGROUND UTILITIES AND STRUCTURES PRIOR TO CONSTRUCTION.

CAST IN PLACE CONCRETE:

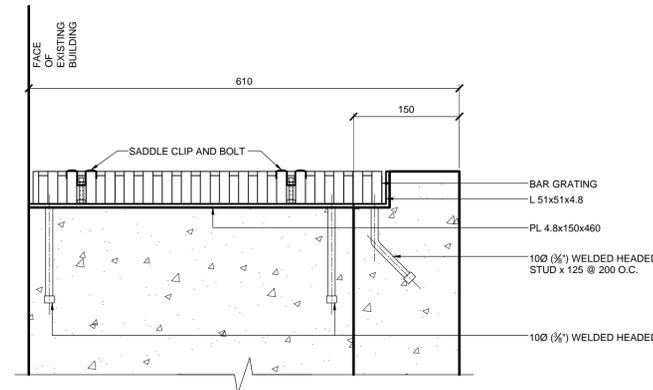
- TO BE READ IN CONJUNCTION WITH CW 2160 AND AS AMENDED IN ACCORDANCE WITH THESE NOTES.
- CONCRETE MIX:
 - CLASS OF EXPOSURE: S-1
 - MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS: 35MPa
 - MAXIMUM SLUMP: 80mm ± 20mm
 - AIR CONTENT: 5 - 8%
 - MAXIMUM WATER/CEMENT RATIO: 0.40
- CONCRETE COVER = 50mm UNLESS OTHERWISE STATED.
- ALL EXTERIOR CORNERS CHAMFERED 20mm.

REINFORCING STEEL:

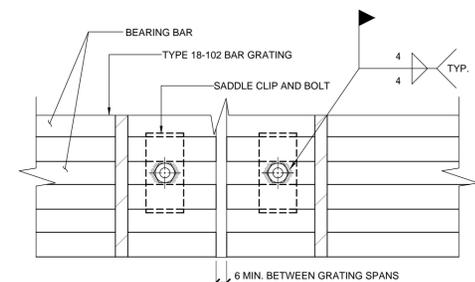
- TO BE READ IN CONJUNCTION WITH CW 2160 AND AS AMENDED IN ACCORDANCE WITH THESE NOTES.
- ALL REINFORCING STEEL SHALL CONFORM TO CSA G30.18M, GRADE 400W.
- ALL CONCRETE REINFORCING WORK SHALL BE PERFORMED IN ACCORDANCE WITH CSA A23.1.
- LAPS IN BARS SHALL BE AT LEAST 40 BAR DIAMETERS, REINFORCING SPLICES NOT INDICATED IN THE DRAWINGS SHALL BE LOCATED AT POINTS OF MINIMUM STRESS.
- BEFORE PLACING CONCRETE, REINFORCING TO BE CLEAN, FREE OF LOOSE SCALE, DIRT OR OTHER FOREIGN MATTER THAT WOULD REDUCE OR PREVENT BOND TO THE CONCRETE.

STRUCTURAL STEEL & MISCELLANEOUS NOTES:

- ALL STRUCTURAL STEEL SHAPES AND PLATES SHALL BE IN ACCORDANCE WITH CSA G40.21-M, GRADE 300W, EXCEPT W, HP AND HSS SECTIONS WHICH SHALL BE GRADE 350W CLASS C.
- ALL GALVANIZING SHALL COMPLY WITH THE LATEST EDITION OF CSA G164, WITH MINIMUM ZINC COATING OF 600g/m². TOUCH UPS MADE WITH GALVALLOY OR GAL-VIZ.
- ALL BOLTS SHALL BE ASTM A316 STAINLESS STEEL, UNLESS OTHERWISE INDICATED.
- ANCHOR RODS SHALL COMPLY WITH ASTM-F1554, GRADE 55.
- ANGLES, STEEL PLATE, GRATING & HARDWARE INCLUDING SADDLE CLIPS, AND BOLTS SHALL BE GALVANIZED AFTER FABRICATION.
- ALL WELDS SHALL BE SEALED PRIOR TO GALVANIZING.
- WELDING SHALL BE IN ACCORDANCE WITH RECOMMENDATIONS OF CSA W59-13
- APPLY GALVALLOY OR GAL-VIS TO ALL FIELD WELDS AND DAMAGED AREAS OF GALVANIZING.
- THREADED ROD, WASHER, AND NUT SHALL BE GALVANIZED OR STAINLESS STEEL.
- ROUND ALL SHARP CORNERS.



3
S3.1 SCALE 1:5
SECTION B-B



4
S3.1 SCALE 1:2
WELDED HEX NUT DETAIL

METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

APGM
Certificate of Authorization
MMM Group Limited
No. 4531

LOCATIONS APPROVED UNDERGROUND STRUCTURES		G.B.M. -	
SIGNED BY:		ELEV. -	
SUPV U/G STRUCTURES	DATE		
F			
E			
D			
C			
B	ADDENDUM 1	15/08/14	MS
A	ISSUED FOR TENDER	07/08/14	MS
NO.	REVISIONS	DATE	BY

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 EXISTANCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING

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DESIGNED BY: JH/MM
CHECKED BY: MM

DRAWN BY: JH/MS
APPROVED BY: WC

HOR. SCALE: AS NOTED
VERTICAL: AS NOTED

RELEASED FOR CONSTRUCTION

DATE: JUL 29/14

ENGINEER'S SEAL

PROVINCE OF MANITOBA
M.H.A.
MADY
Member
34376

CONSULTANT ACAD DWG. NO.
S3.1

THE CITY OF WINNIPEG
PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES DIVISION

Winnipeg

CITY OF WINNIPEG
NORTH EAST EXCHANGE DISTRICT ENGINEERING STUDY
BERTHA WINDOW WELL DETAILS

CITY DRAWING NUMBER
BID NO. 742-2014

Aug 15, 2014 - 9:15am
 P:\514201-5514098\5514098 - 2014 North East Exchange District Renewal\MM Drawings\S3.0_A1-1.dwg - tab1 Layout 2

NOTE:
These design documents are prepared solely for the use by the party with whom the design professional has entered into a contract and there are no representations of any kind made by the design professional to any party with whom the design professional has not entered into a contract.