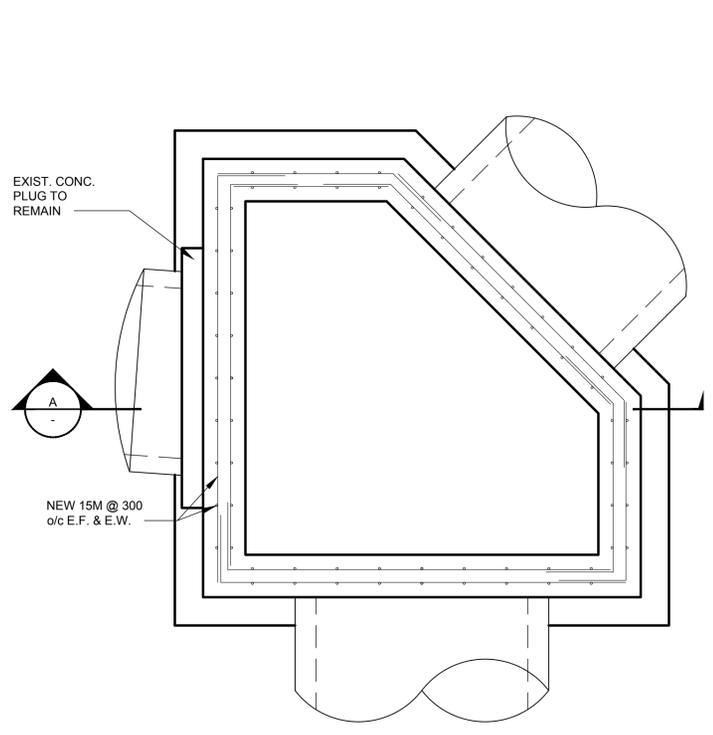
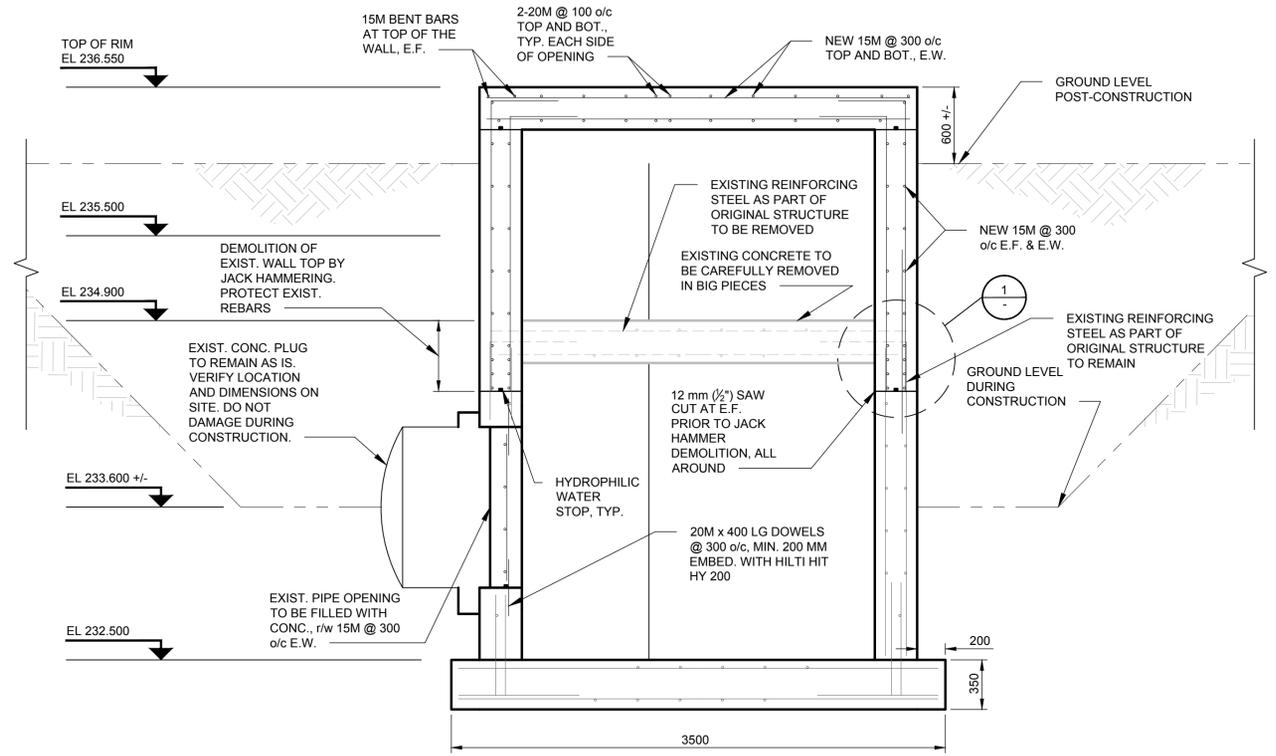


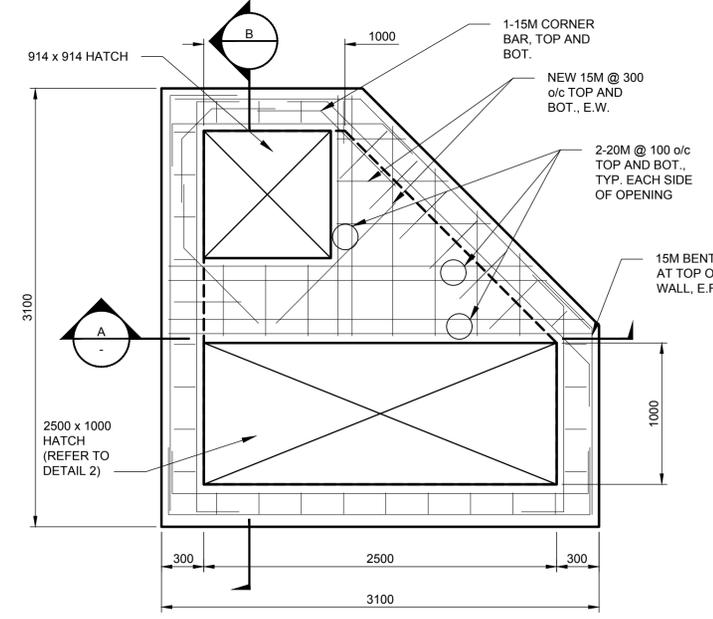
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 A1 SIZE - 594mm x 841mm



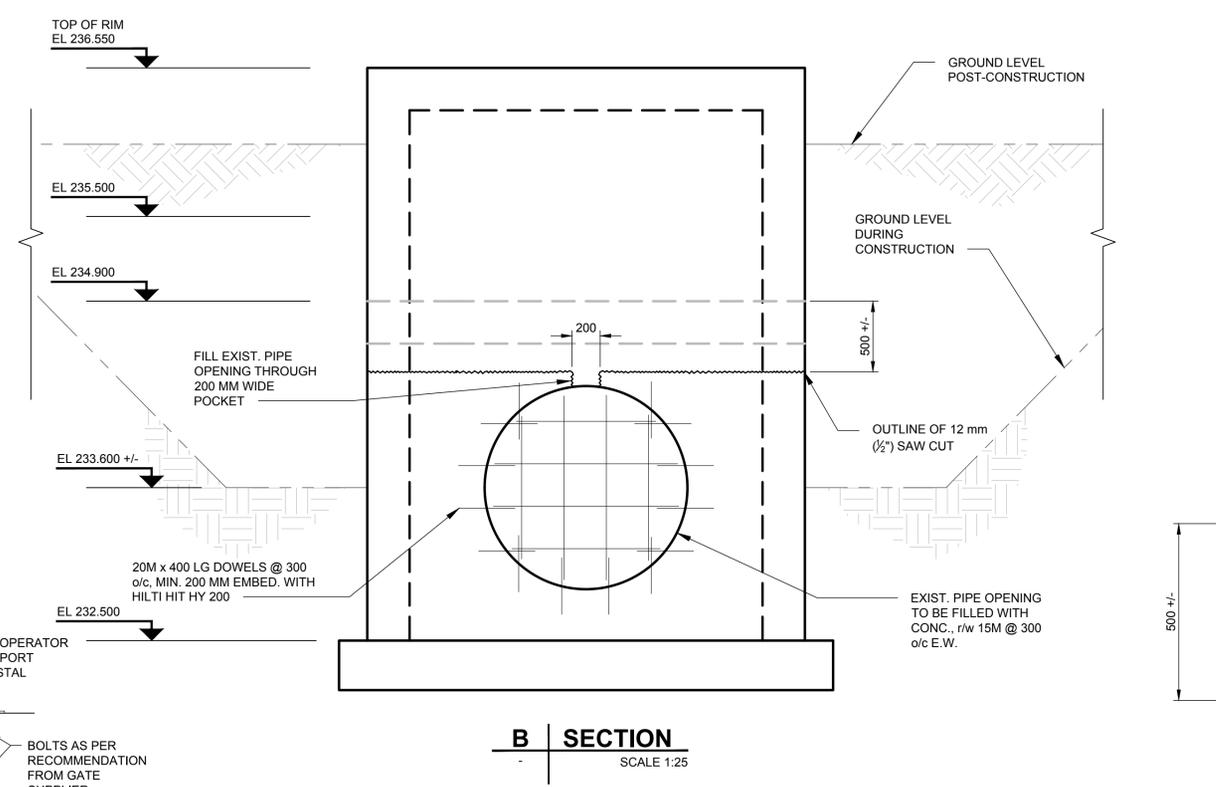
**PLAN AT ELEV. 235.500 m**  
Scale 1:25



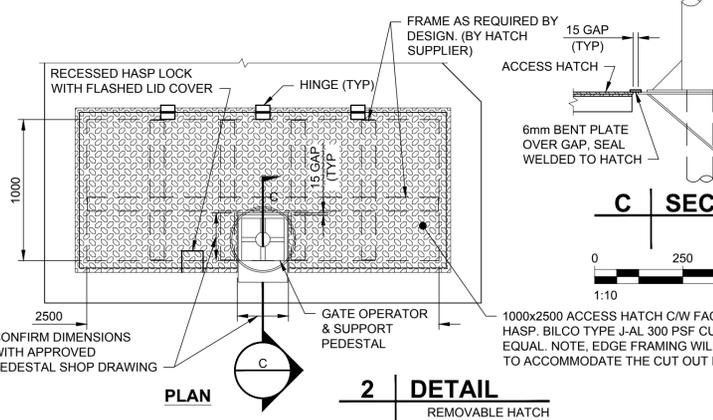
**A SECTION**  
SCALE 1:25



**PLAN AT ELEV. 236.550 m**  
Scale 1:25



**B SECTION**  
SCALE 1:25



**C SECTION**  
SCALE 1:25

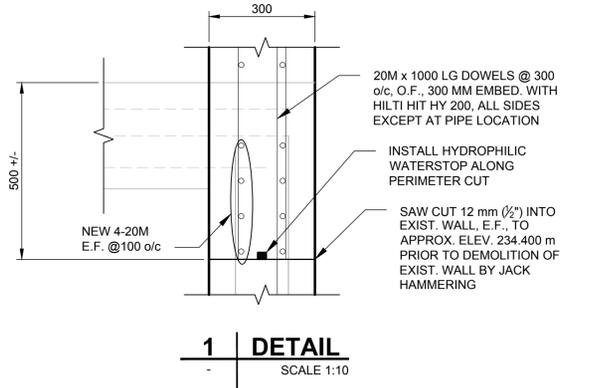


**2 DETAIL**  
REMOVABLE HATCH  
SCALE 1:25

- GENERAL NOTES**
1. READ THE STRUCTURAL DRAWINGS IN CONJUNCTION WITH ALL OTHER PERTINENT CONTRACT DOCUMENTS.
  2. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS SHOWN ON THE STRUCTURAL DRAWINGS AGAINST THE PROCESS DRAWINGS AND THE EXISTING SITE CONDITIONS BEFORE BEGINNING CONSTRUCTION, AND REPORT DISCREPANCIES TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK. DO NOT SCALE DRAWINGS.
  3. THE DESIGN AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE NATIONAL BUILDING CODE OF CANADA 2010, ITS SUPPLEMENTS AND THE LATEST EDITIONS OF REFERENCED CODES AND STANDARDS THEREIN, UNLESS NOTED OTHERWISE. IMPORTANCE CATEGORY: POST-DISASTER.
  4. CONTRACTOR TO CONFIRM WITH EQUIPMENT SUPPLIERS DIMENSIONS, WEIGHTS AND ALL OTHER CRITICAL DETAILS PRIOR TO CONSTRUCTION AND INSTALLATION. REPORT DISCREPANCIES TO THE ENGINEER AND OBTAIN AUTHORIZATION IN WRITING PRIOR TO PROCEEDING WITH CONSTRUCTION.
  5. NOTIFY THE CONTRACT ADMINISTRATOR 48 HOURS IN ADVANCE FOR SITE REVIEW.
  6. DRAWINGS SHOW COMPLETED STRUCTURES ONLY. PROVIDE TEMPORARY BRACING FOR CONSTRUCTION LOADING CONDITIONS AND STABILITY OF THE STRUCTURE DURING CONSTRUCTION. CONSTRUCTION LOADS SHALL NOT EXCEED THE DESIGN LOADS SHOWN ON DRAWINGS.
  7. CONSTRUCTION METHODS REQUIRING TEMPORARY SHORING, OR BRACING, SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW. THE CONTRACTOR SHALL RETAIN A PROFESSIONAL ENGINEER, REGISTERED IN THE PROVINCE OF MANITOBA, TO PROVIDE ENGINEERING DESIGN AND TAKE RESPONSIBILITY FOR ANY SHORING AND BRACING OR OTHER WORK REQUIRING ENGINEERING CONSTRUCTION.
  8. VERIFY LOCATION OF ALL UNDERGROUND SERVICES AND BE RESPONSIBLE FOR DISRUPTIONS.
  9. ALL REFERENCED CODES SHALL BE OF THE LATEST EDITIONS.
- DESIGN LOADS:**
- THE FOLLOWING LOADS ARE SERVICE LOADS:
1. LATERAL LOADS:
    - 1) EARTH PRESSURE (D)
    - 2) AASHTO H-20 TRUCK TIRES (L)
  2. GRAVITY LOADS:
    - 1) SELF WEIGHT (D)
    - 2) GROUND SNOW LOAD (S)
    - 3) LIVE LOAD (L)
- Ss = 1.9 kPa  
Sr = 0.2 kPa  
L = 4.8 kPa
- NOTE: (D) = DEAD, (L) = LIVE, (S) = SNOW

- CONCRETE NOTES**
1. PROVIDE CONCRETE AND PERFORM WORK TO CSA A23.1. THE CONTRACTOR SHALL HAVE A COPY OF THIS STANDARD ON SITE AT ALL TIMES.
  2. TEST CONCRETE IN ACCORDANCE WITH CSA A23.2.
  3. CONCRETE REQUIREMENTS:
 

STRENGTH	EXPOSURE CLASS	MIX TYPE
35 MPa	S-1	HS/HSb
  4. HEATING AND HOARDING, WHEN REQUIRED, SHALL BE PROVIDED AT CONTRACTOR'S COST.
  5. CONCRETE COVER:
    - WALLS (OUTSIDE FACE): 75 mm
    - WALLS (INSIDE FACE): 60 mm
    - MANHOLE COVER: 60 mm
- CONCRETE REINFORCEMENT**
1. DEFORMED BARS CONFORMING TO CSA-G30.18 GRADE 400W.
  2. REINFORCING WORK SHALL BE IN ACCORDANCE WITH CSA A23.1 AND CSA A23.3.
  3. REINFORCING STEEL SHALL BE DETAILED IN ACCORDANCE WITH THE LATEST EDITION OF THE RSIC "REINFORCING STEEL MANUAL OF STANDARD PRACTICE".
  4. DOWELS SHALL BE SECURED IN POSITION BY MEANS OF TEMPLATES BEFORE CONCRETE IS CAST.
- SHOP DRAWING SUBMISSIONS**
1. CONCRETE MIX DESIGN AS PER CSA A23.1, SIGNED & SEALED BY MIX DESIGN ENGINEER, REGISTERED IN THE PROVINCE OF MANITOBA.
  2. CONCRETE REINFORCEMENT SHOP DRAWING.



**1 DETAIL**  
SCALE 1:10

NOTE: EXISTING AND NEW REINFORCEMENT, EXCLUDING THE BARS AND DOWELS SHOWN FOR THE EXISTING PIPE OPENING, IS NOT SHOWN FOR CLARITY.

**ENGINEERS GEOSCIENTISTS MANITOBA**  
Certificate of Authorization  
AECOM Canada Ltd.  
No. 4671 Date: 2022-09-07

NO.	REVISIONS	DATE	DESIGN	CHECK
PD	ISSUED FOR CONSTRUCTION	22/08/29	MG	MM
PC	ISSUED FOR 90%	22/07/18	MG	MM
PB	ISSUED FOR 30%	22/04/14	MG	MM

**AECOM**

DESIGNED BY: AI  
CHECKED BY: MH  
DRAWN BY: AI  
APPROVED BY: KWF  
SCALE: AS SHOWN  
RELEASED FOR CONSTRUCTION BY: MATTHEW SKINNER  
DATE: 2022-09-07  
DATE: SEPT 8, 2022  
CONSULTANT NO.: S-0001

ENGINEER'S SEAL  
ORIGINAL SIGNED BY M.M. HOQUE  
SEPTEMBER 7, 2022

**THE CITY OF WINNIPEG**  
WATER AND WASTE DEPARTMENT

WATER TREATMENT PLANT - FLOOD PROTECTION  
YARD PIPING  
STRUCTURAL  
MANHOLE No. 1  
STRUCTURAL DETAILS

CITY DRAWING NUMBER: 1-0601Y-S0001-001  
SHEET: 010  
REV: PD  
SIZE: A1

TENDER NO. 672-2022

**METRIC**  
WHOLE NUMBERS INDICATE MILLIMETRES  
DECIMALIZED NUMBERS INDICATE METRES