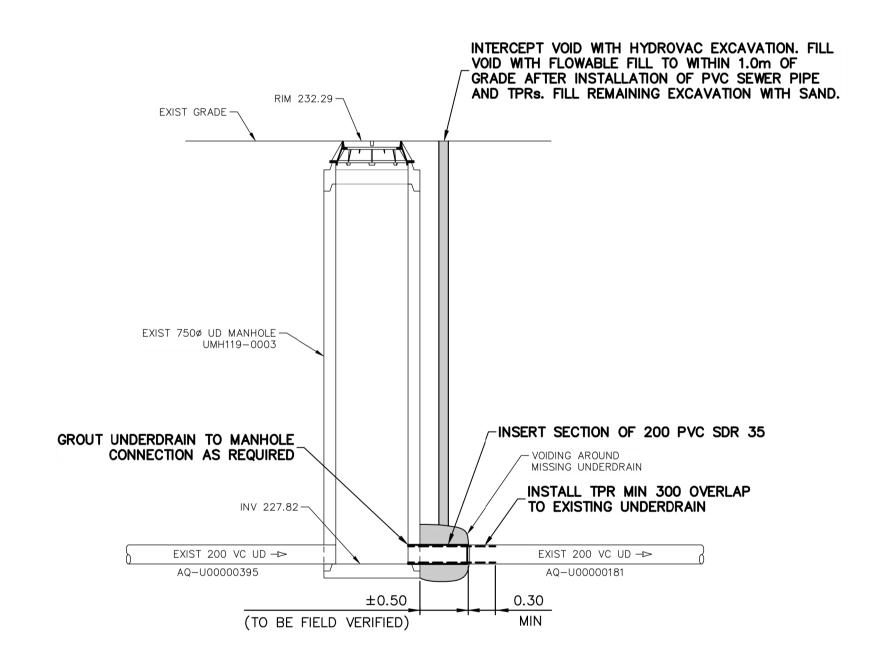
## FINAL BACKFILL TO BE TO CLASS 4 STANDARDS (NON-PAVED AREAS) OR GRANULAR TO CLASS 2 STANDARDS WITHIN 1m OF PAVED AREA INCLUDING SIDEWALKS EXIST GRADE -±1.70 (ORIGINAL TRENCH) (ORIGINAL TRENCH) -SHORING (INDICATIVE ONLY) MIN 1.00 SHORING (INDICATIVE ONLY)-MIN GRANULAR INITIAL BACKFILL CW 2030 TYPE 2 MATERIAL (COMPACTED TO-1650 RCP 95% SPD IN LIFTS) BRANCH I AQUEDUCT NON-WORKING SIDE TO BE EXCAVATED DOWN TO SPRINGLINE (MIN) WITHIN REPAIR ZONE PLACE NEW CW 3120 GRANULAR DRAINAGE MATERIAL AND WRAP WITH A NON-WOVEN GEOTEXTILE FABRIC -UNDISTURBED INSITU SOILS -NEW DRAINAGE PIPE EXIST UNDERDRAIN — UNDERDRAIN FOUNDATION CW 2030 TYPE EXIST CONCRETE PIPE CRADLE -(DIAMETER VARIES) -2 MATERIAL COMPACTED 95% SPD, EXIST 150 GRANULAR BEDDING -INSTALL NEW CW 3120 GRANULAR DRAINAGE EXIST UNDERDRAIN-FLEXIBLE TRANSITION COUPLING-100 MIN THICKNESS (AS REQUIRED) MATERIAL C/W NON-WOVEN GEOTEXTILE WRAPPING. TIE INTO EXISTING UD AND DRAINAGE ROCK AT ENDS OF REPAIR. REPLACE EXIST UNDERDRAIN AS REQUIRED. SEE SECTION. SECTION NON-WORKING SIDE WORKING SIDE BRANCH I AQUEDUCT UNDERDRAIN EXTERNAL POINT REPAIR



UMH119-0003/AQ-U00000181 REPAIR DETAIL

SCALE: 1:40 

## VERTICAL DATUM: CGVD28 (HT2.0 Geoid) LOCATION APPROVED UNDERGROUND STRUCTURES

REVISIONS

SUPV. U/G STRUCTURES COMMITTEE 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

**Stantec** HORIZONTAL DATUM: NAD83 (June 1990), Zone 14 DESIGNED CHECKED DRAWN APPROVED DML RELEASED FOR SCALE: CONSTRUCTION HORIZONTAL JESSICA McCOMBE, P. Eng. VERTICAL ISSUED FOR CONSTRUCTION 2024/09/23 ADB

YYYY/MM/DD BY

DATE SEPTEMBER 23, 2024

ENGINEER'S SEAL A.D. BRAUN Member 24453

Winnipeg

## FOR INDEX SEE DWG 1-0751A-D0007-001

THE CITY OF WINNIPEG WATER AND WASTE DEPARTMENT

ENGINEERING SERVICES DIVISION

BRANCH I AQUEDUCT UNDERDRAIN OUTFALL REPAIRS

CITY DRAWING NUMBER

BRANCH I AQUEDUCT UNDERDRAIN REPAIRS DETAILS I

1-0751N-C0013-001

SHEET 16 OF 17

UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.

ENGINEERS GEOSCIENTISTS

Certificate of Authorization

Stantec Consulting Ltd.

No. 1301

WHOLE NUMBERS INDICATE MILLIMETRES

DECIMALIZED NUMBERS INDICATE METRES

UNLESS OTHERWISE NOTED

DATE SEPTEMBER 23, 2024

NOTES:

**CONSTRUCTION NOTES:** 

IN ACCORDANCE WITH THE SPECIFICATIONS.

• EXCAVATING MUST BE PROGRESSED WITH SHORING. ALL SHORING SYSTEMS SHALL BE CLOSE FITTING.

UNDERDRAIN, OR EMBEDMENT MATERIALS.

UNDERDRAIN EPR CONSTRUCTION NOTES:

SHORING SYSTEMS SHALL NOT IMPART LOADING ON THE BRANCH I AQUEDUCT.

• REMOVE BROKEN SECTION OF UNDERDRAIN AND ORIGINAL DRAIN ROCK.

NEATLY CUT EXISTING UNDERDRAIN PIPE TO MAKE CONNECTION.

INSTALL NEW DRAIN PIPE C/W FLEXIBLE TRANSITION COUPLINGS.

• ALL EXCAVATIONS SHALL MEET WORKPLACE HEALTH AND SAFETY REQUIREMENTS.

BOTH FROM DAMAGE DURING PLACEMENT AND COMPACTION OF BACKFILL MATERIALS.

• ALL WORK IN CLOSE PROXIMITY TO THE BRANCH I AQUEDUCT SHALL BE COMPLETED WITH AN ABUNDANCE OF CAUTION AND

• NO HYDRAULIC OR PNEUMATIC BREAKERS MAY BE USED DURING PAVEMENT REMOVALS OR EXCAVATIONS. NO CONSTRUCTIONS

 BRANCH I AQUEDUCT EXCAVATION TO PROCEED CAREFULLY AND UNIFORMLY TO AVOID ASYMMETRIC LOADING ON THE PIPE. EXCAVATIONS BELOW TOP OF PIPE MUST NOT PROGRESS MORE THAN 300 mm AT A TIME ON EITHER SIDE OF THE PIPE

METHODS IMPARTING EXCESSIVE VIBRATIONS MAY BE EMPLOYED IN CLOSE PROXIMITY TO THE BRANCH I AQUEDUCT.

• SHORING SYSTEMS SHALL NOT COME IN CONTACT WITH THE BRANCH I AQUEDUCT, CONCRETE CRADLE, OR UNDERDRAIN.

CAREFULLY PLACE INITIAL BACKFILL AROUND UNDERDRAIN AND BRANCH I AQUEDUCT. CARE MUST BE TAKEN TO PROTECT

• IF ORIGINAL TIMBER SHORING PLANKS ARE ENCOUNTERED THEY SHALL NOT BE PUSHED DOWN OR PULLED UP AS THIS COULD

SHORING REMOVAL (IF REQUIRED) SHALL BE COMPLETED IN A MANNER WHICH NOT DISTURB THE BRANCH I AQUEDUCT,

LEAD TO MOVEMENT OF THE BRANCH I AQUEDUCT. ORIGINAL SHORING SHALL BE CAREFULLY EXPOSED AND CUT OFF.

CAREFULLY EXPOSE THE EXISTING UNDERDRAIN, CONCRETE CRADLE, AND ORIGINAL GRANULAR BEDDING.

PLACE NEW CW 3120 GRANULAR DRAINAGE MATERIAL AND WRAP WITH A NON-WOVEN GEOTEXTILE FABRIC.

BRANCH I AQUEDUCT TO BE LOCATED VIA HYDRO EXCAVATION PRIOR TO PROCEEDING WITH EXCAVATION.

FILE PATH: X:\Proj\2023\230393399-branch 1 aqueduct underdrain outfall\09. cad\07 sheets\2 detailed design\FILE NAME: 16 UNDERDRAIN REPAIRS — DETAILS I.dwg

CONSULTANT DRAWING NUMBER