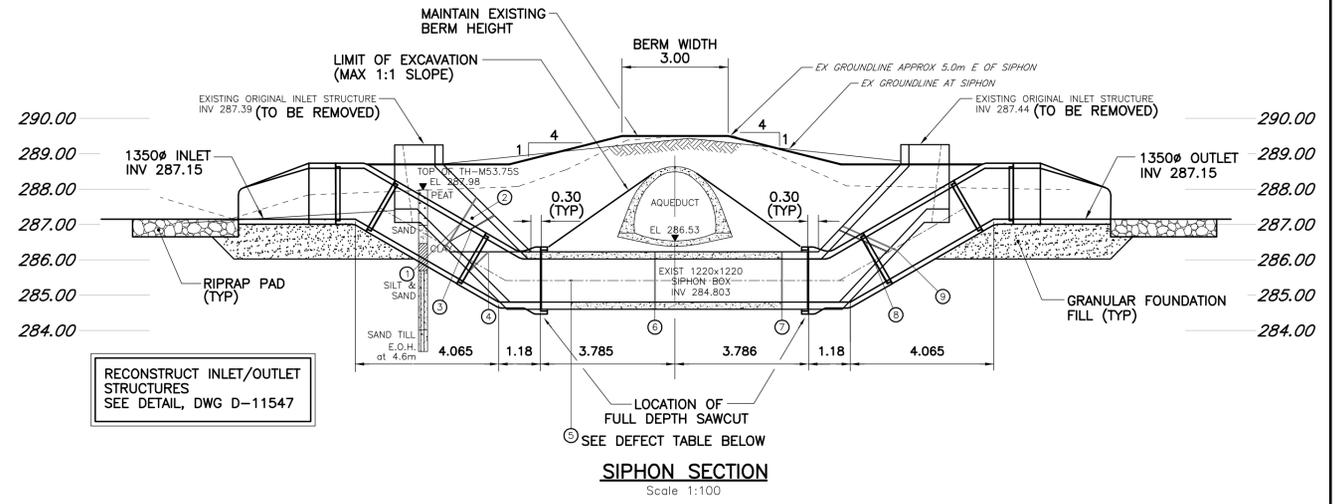
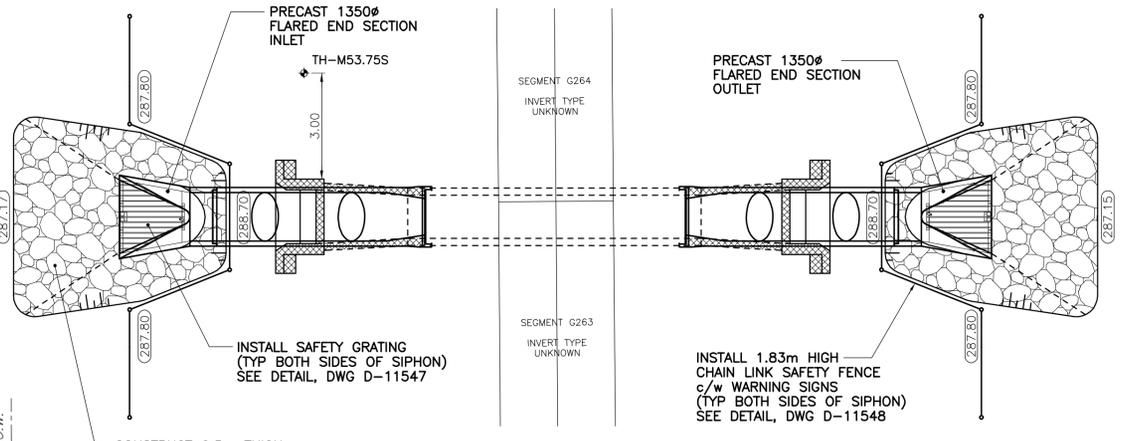


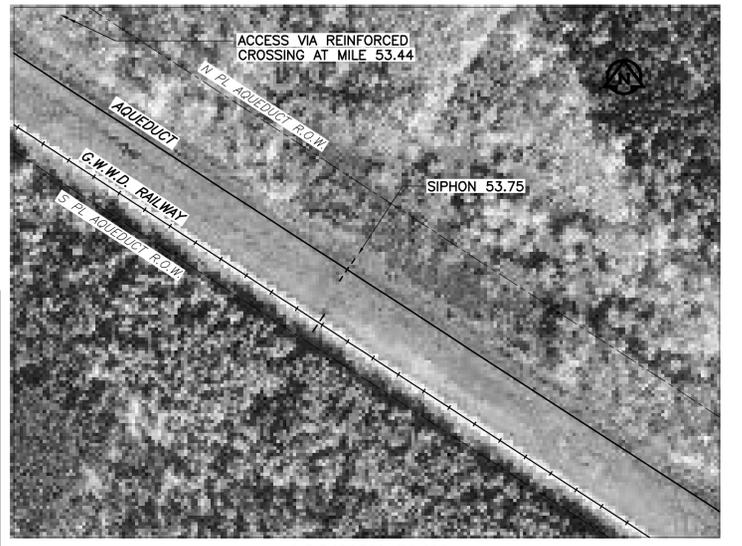
SECTION A - A  
Scale 1:200



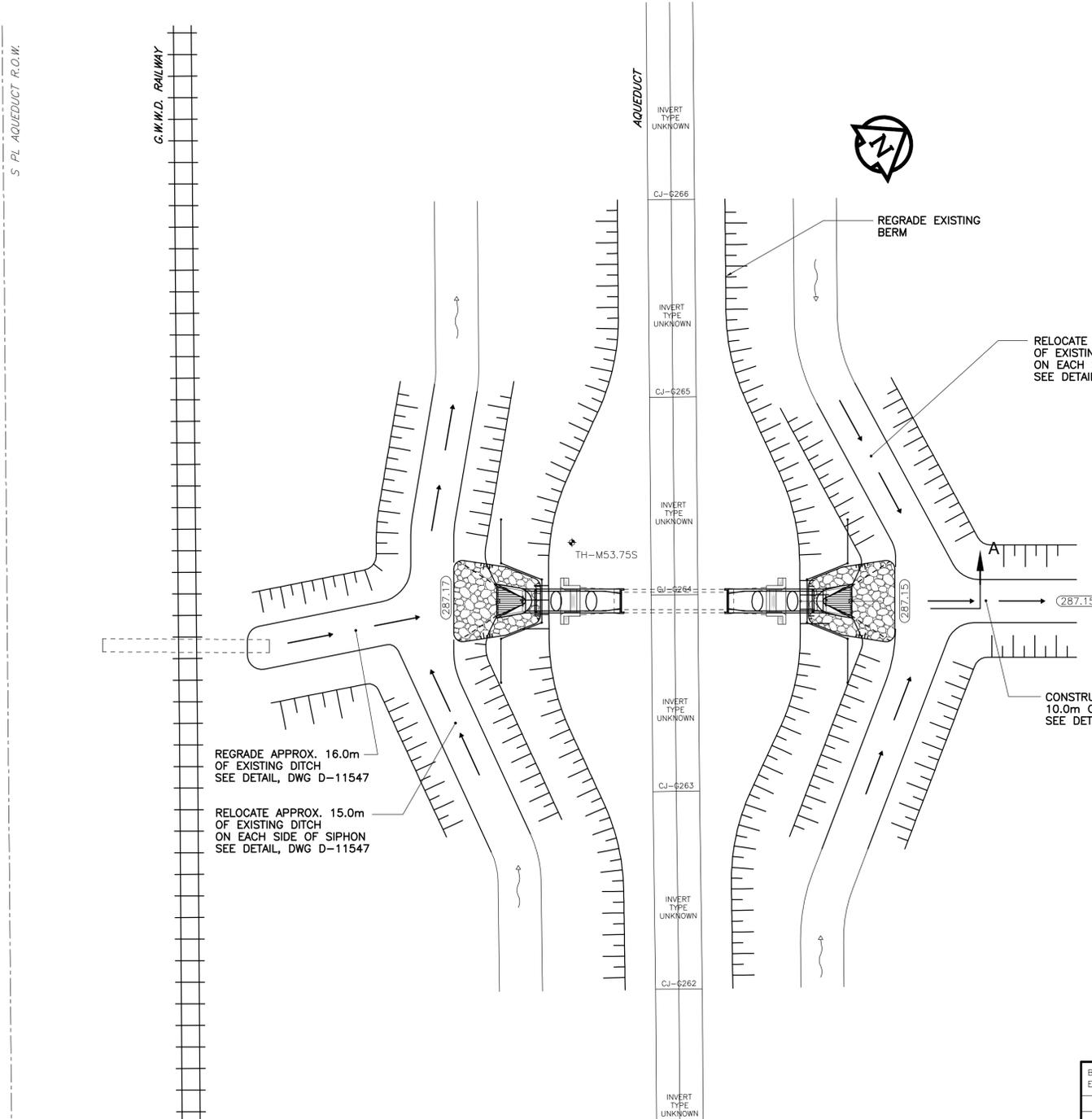
SIPHON SECTION  
Scale 1:100



SIPHON PLAN  
Scale 1:100



LOCATION PLAN  
Scale 1:2000



SITE PLAN  
Scale 1:200



**SUPERSTRUCTURE DEFECT INSPECTION**

HEADWALL	DESCRIPTION
SOUTH SIDE	- ORIGINAL HEADWALL, CONCRETE GOOD CONDITION - MINOR SPALLING AT TOP OF WALLS - MULTIPLE CRACKING ON LOWER EAST SIDE AND WING WALLS. CRACKS OPEN <1mm; NO INFILTRATION. - NO WARNING SIGN - NO INLET PROTECTION
NORTH SIDE	- ORIGINAL HEADWALL TILTED SLIGHTLY TO EAST - CONCRETE GOOD CONDITION - NO VISIBLE CRACKS - NO WARNING SIGN - NO INLET PROTECTION

**SIPHON DEFECT INSPECTION**

DEFECT	DESCRIPTION	REMEDIAL ACTION
1	COMPLETE TRANSVERSE CRACK IN THROAT 1.5m FROM HEADWALL AND 1.3m FROM INLET INVERT. CRACK OPEN 1mm.	
2	WEST WALL BROKEN TO 300mm WIDE BETWEEN DEFECTS 1 & 3.	
3	COMPLETE TRANSVERSE CRACK IN THROAT 2.1m FROM HEADWALL AND 1.3m FROM INLET INVERT. CRACK OPEN >25mm (NO OFFSET). CONCRETE DELAMINATED & SPALLED AT CEILING; REINFORCING EXPOSED.	
4	HORIZ CONSTRUCTION JOINT OPEN 10mm FROM SIPHON BOX TO 0.9m FROM BOX, WHERE 5mm CRACK IN WALLS STARTS AND RUNS TO INLET INVERT (<5mm). CONSTRUCTION JOINT SOUTH OF CRACK IS TIGHT.	
5	50' CORE HOLE IN EAST AND WEST WALLS, 1.2m FROM CEILING OF BOX. LOCATION OF CORE HOLES FROM CEILING NOT RECORDED.	POLYURETHANE INJECTION
6	TRANSVERSE CRACK 3.6m FROM S END OF BOX. OPEN 1mm. NO INFILTRATION.	POLYURETHANE INJECTION
7	TRANSVERSE CRACK 7.2m FROM S END OF BOX. OPEN <1mm. NO INFILTRATION.	POLYURETHANE INJECTION
8	COMPLETE TRANSVERSE CRACK IN THROAT 1.0m FROM CEILING OF BOX, RUNNING TO HORIZ CONSTRUCTION JOINT AT THROAT FLOOR. CRACK OPEN >25mm. CONC SPALLED FROM WEST WALL AT FLOOR. REINFORCING EXPOSED.	
9	TRANSVERSE CRACK IN EAST WALL AND CEILING OF THROAT, ABOVE DEFECT 7. CRACK OPEN <1mm.	

**NOTICE:**  
THE EXISTENCE, LOCATION AND ELEVATION OF UTILITIES AND/OR CONCEALED STRUCTURES AT THE PROJECT SITE ARE NOT GUARANTEED BY UMA ENGINEERING LTD.  
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**METRIC**  
WHOLE NUMBERS INDICATE MILLIMETRES  
DECIMALIZED NUMBERS INDICATE METRES



B.M.	WWD BM54.04	15m E of M.54 & 7.1m NN track,
ELEV.	289.609m	depth 3.658m, cone collar around mon. Marker post 1.0m S
NO.	REVISIONS	DATE BY

**AECOM**  
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DESIGNED BY	MGM/MAG	CHECKED BY	Original Signed By: FM
DRAWN BY	MAG/Wld	APPROVED BY	Original Signed By: Bryan Weber
HOR. SCALE:	AS NOTED	RELEASED FOR CONSTRUCTION	Original Signed By: Tim Shanks
VERTICAL:	AS NOTED	DATE	19 12 2008

ENGINEER'S SEAL  
ORIGINAL SEALED BY:  
Andy Nagy  
19/12/2008  
CONSULTANT DRAWING NO. 04  
D265-241-00

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

SHOAL LAKE AQUEDUCT  
DRAINAGE SIPHON REPAIRS  
MILES 50.31, 53.75 & 55.23  
DRAINAGE SIPHON 53.75  
(SITE 2)  
PLANS & SECTIONS

SHEET 4 OF 7  
CITY DRAWING NUMBER  
**D-11545**  
REV

BID OPPORTUNITY No. 926-2008