

BILL OF MATERIALS

MK.	QTY.	DESCRIPTION
1	1	OCTAGONAL SHAFT 400 A/F TO 300 A/F x 9.525
2	1	OCTAGONAL SHAFT 400 A/F TO 300 A/F x 9.525
3	1	OCTAGONAL SHAFT 450 A/F TO 300 A/F x 9.525
4	1	OCTAGONAL SHAFT 450 A/F TO 300 A/F x 9.525
5	2	BASE PLATE 700 DIA. x 50 THICK (GR. 300W)
6	4	BACKUP STRIP 19 x 500 x 600 (FOR SHAFT)
7	2	TOP SHAFT BEARING PLATE 25 x 500 x 500 (GR. 300W)
8	2	END CROSSBEAM BEARING PLATE 19 x 500 x 600
9	16	25 DIA. x 90 BOLT A325 GALV. C/W NUT & WASHER
10	4	SIDE GUSSET PLATE 19 x 150 x 500
11	4	FRONT & BACK GUSSET PL. 6 x 88 x 88
12	4	FRONT & BACK GUSSET PL. 6 x 88 x 88
13	2	END CROSSBEAM COVER PLATE 6 x 300 OCTAGONAL SHAPE
14	2	BACKUP STRIP 6 x 40 (FOR CROSSBEAM)
15	2	FLANGE PLATE 700 DIA. x 38 THICK (GR. 300W)
16	16	25 DIA. x 150 BOLT A325 GALVANIZED C/W NUT & WASHER
17	2	WEDGE PLATE 700 DIA. x THICKNESS VARIES
HANDHOLE MK. H1 (2 REQUIRED)		
18	1	COVER PLATE 11 GA. x 160 x 340 (ASTM A569)
19	1	REINFORCING RING 8 x 65 x 830
20	2	CLAMP BAR 6 x 40 x 180
21	2	10 DIA. x 140 BOLT S/S (TYPE 316)
22	1	GROUND STUD ASSEMBLY 10 DIA. x 40 (STAINLESS STEEL)
HANDHOLE MARK H2 (2 REQUIRED)		
23	1	COVER PLATE 11 GA. x 130 x 220 (ASTM A569)
24	1	REINFORCING RING 8 x 65 x 555
25	1	CLAMP BAR 6 x 40 x 180
26	1	10 DIA. x 140 BOLT S/S (TYPE 316)
27	1	GROUND STUD ASSEMBLY 10 DIA. x 40 (STAINLESS STEEL)
SIGN MOUNTING BRACKET BR1 (8 REQUIRED)		
28	2	CLAMP BAR 10 x 76 (LENGTH TO SUIT)
29	1	BRACKET PLATE 10 THICK
30	2	3/4" DIA. GALVANIZED THREADED ROD, LENGTH TO SUIT
31	2	3/4" DIA. x 2" S/S BOLT (TYPE 316)
32	32	ROUND PLATE WASHER 114 DIA. x 6 THICK
33	32	SLOTTED PLATE WASHER 150 x 100 x 10 THICK

- NOTES**
- MK. 20 & 25 CLAMP BARS C/W TAPPED HOLE IN CENTRE FOR MK. 21 & 26 BOLT. RE-TAP AFTER GALVANIZING.
  - MK. 21 AND 26 BOLTS C/W TAMPER PROOF ALUMINUM CAP WASHER.
  - MK. 22 AND 27 GROUND STUD ASSEMBLY C/W HEW NUT, 2 TERMINAL WASHERS AND 1 LOCK WASHER (ALL STAINLESS STEEL).

**GENERAL NOTES**

- "RAISED" IDENTIFICATION NO. WITH WELDING ELECTRODE PROVIDED FOR THE SIGN STRUCTURE.
- ALL SHARP POINTS AND EDGES ROUND.

METRIC  
WHOLE NUMBERS INDICATE MILLIMETRES  
DECIMALIZED NUMBERS INDICATE METRES



**THE CITY OF WINNIPEG**  
PUBLIC WORKS DEPARTMENT  
Engineering Division

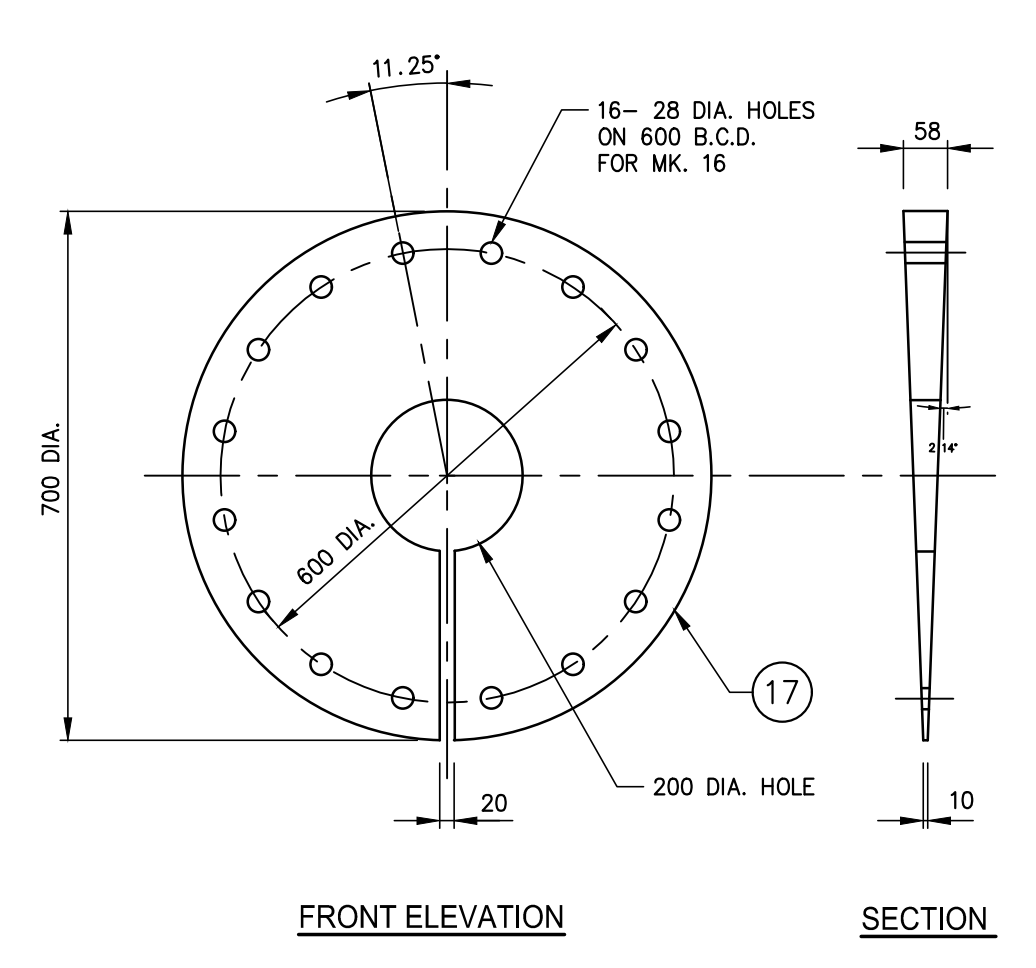
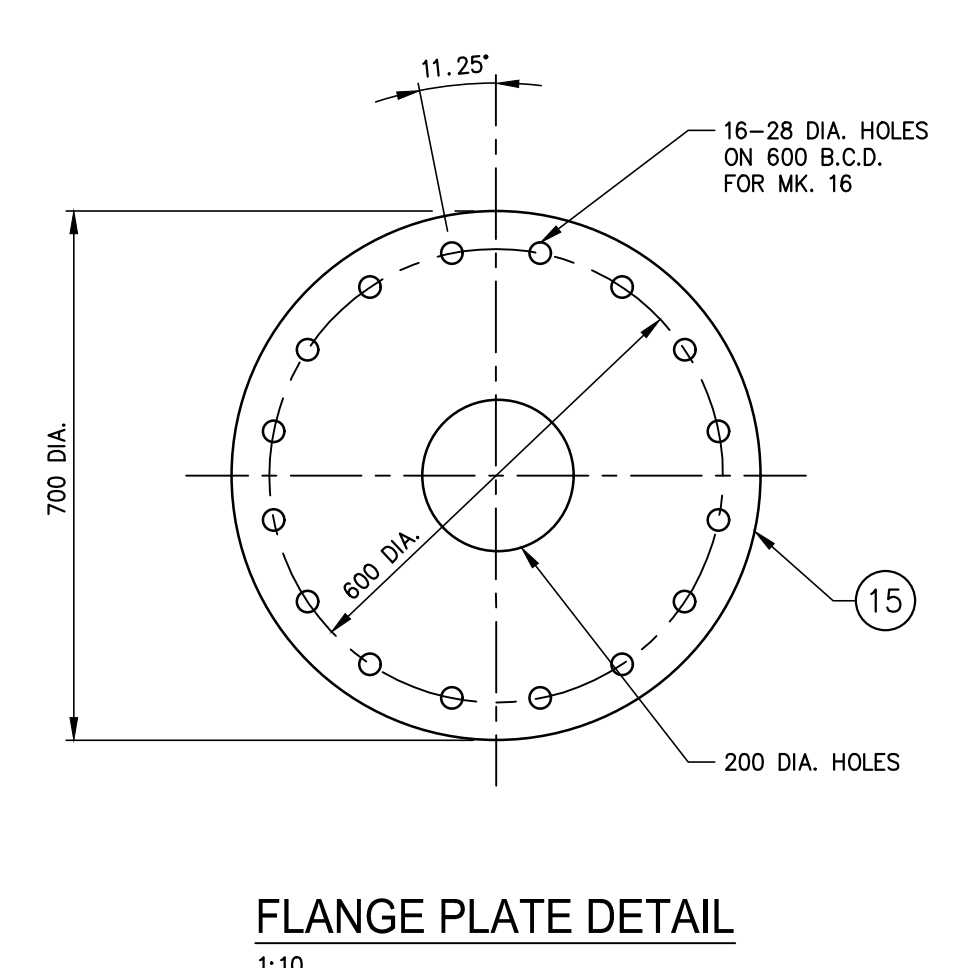
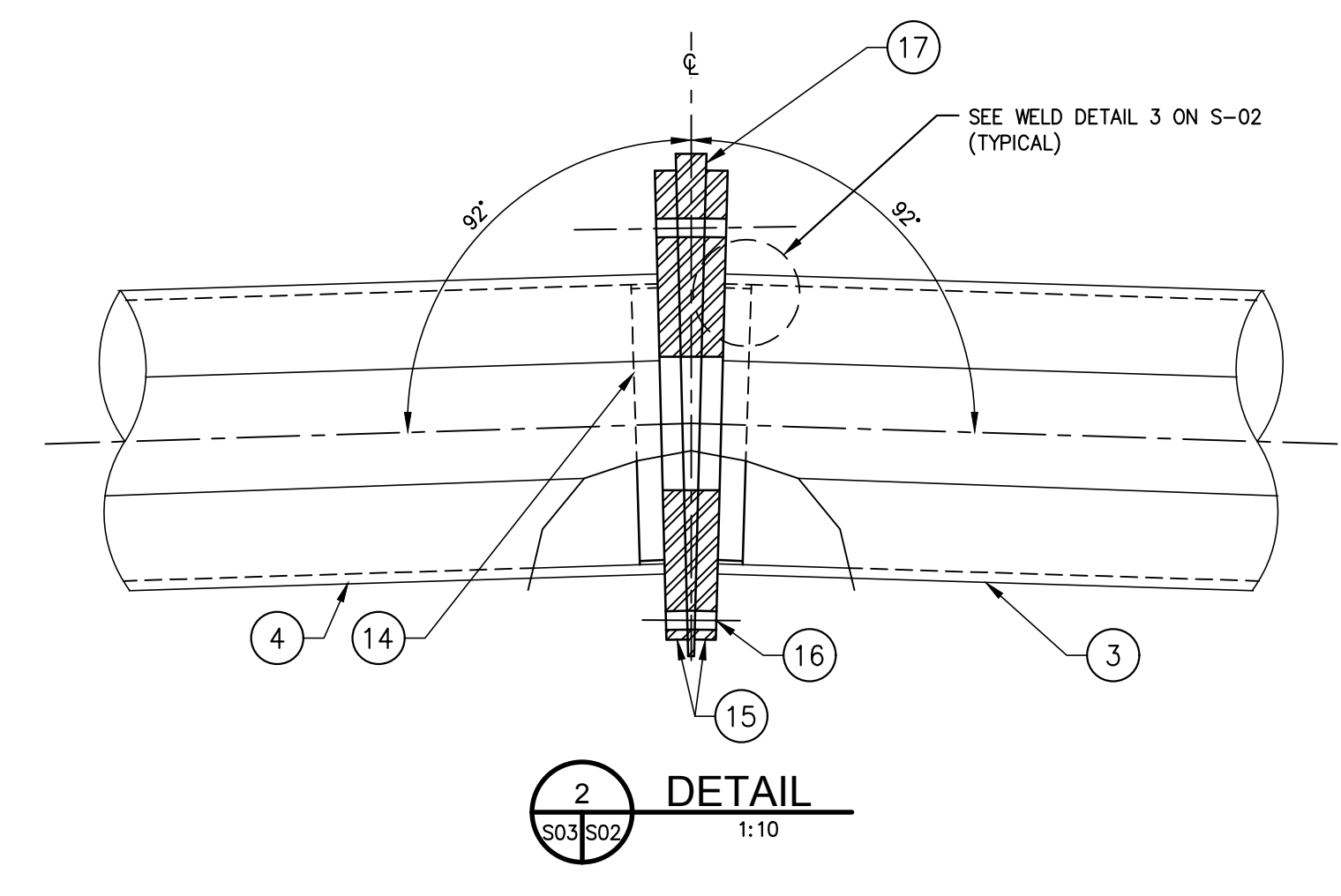
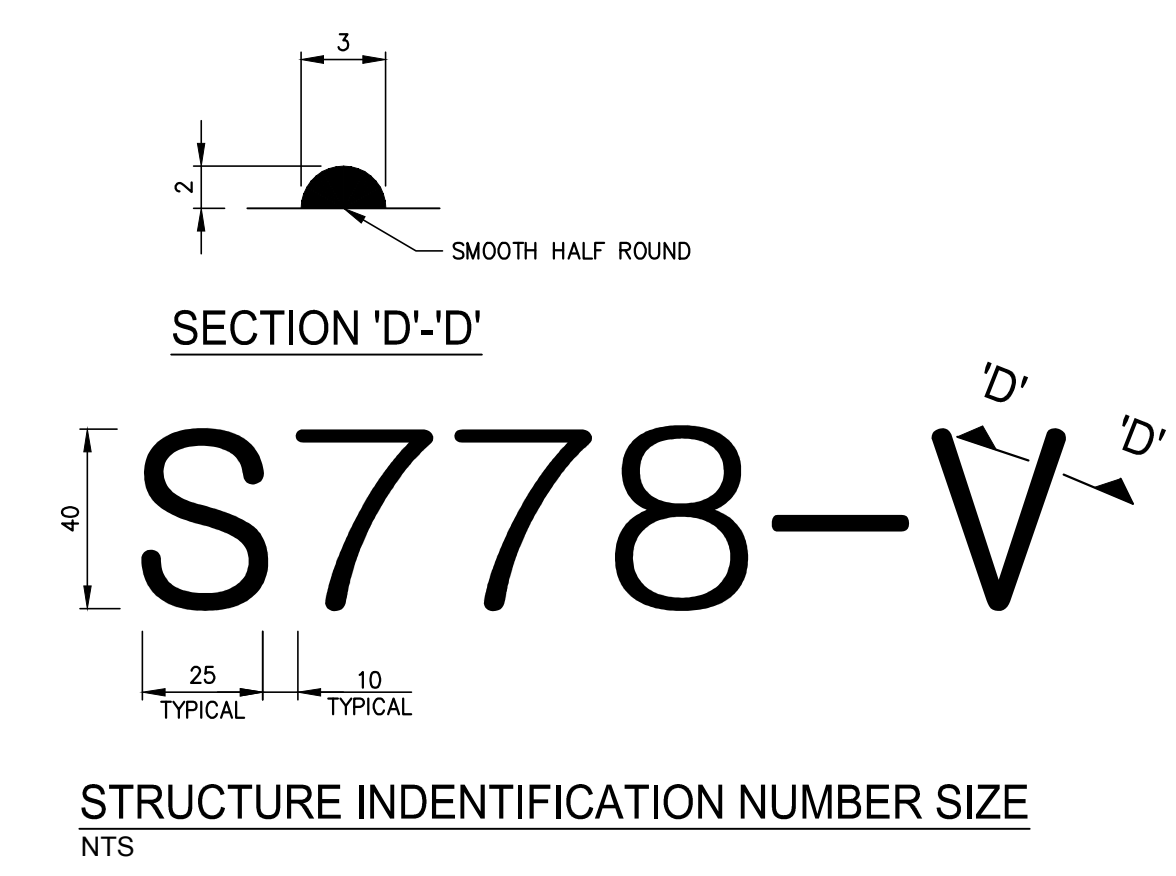
**Winnipeg**

PEMBINA HIGHWAY  
FROM CARTER AVENUE TO OSBORNE STREET

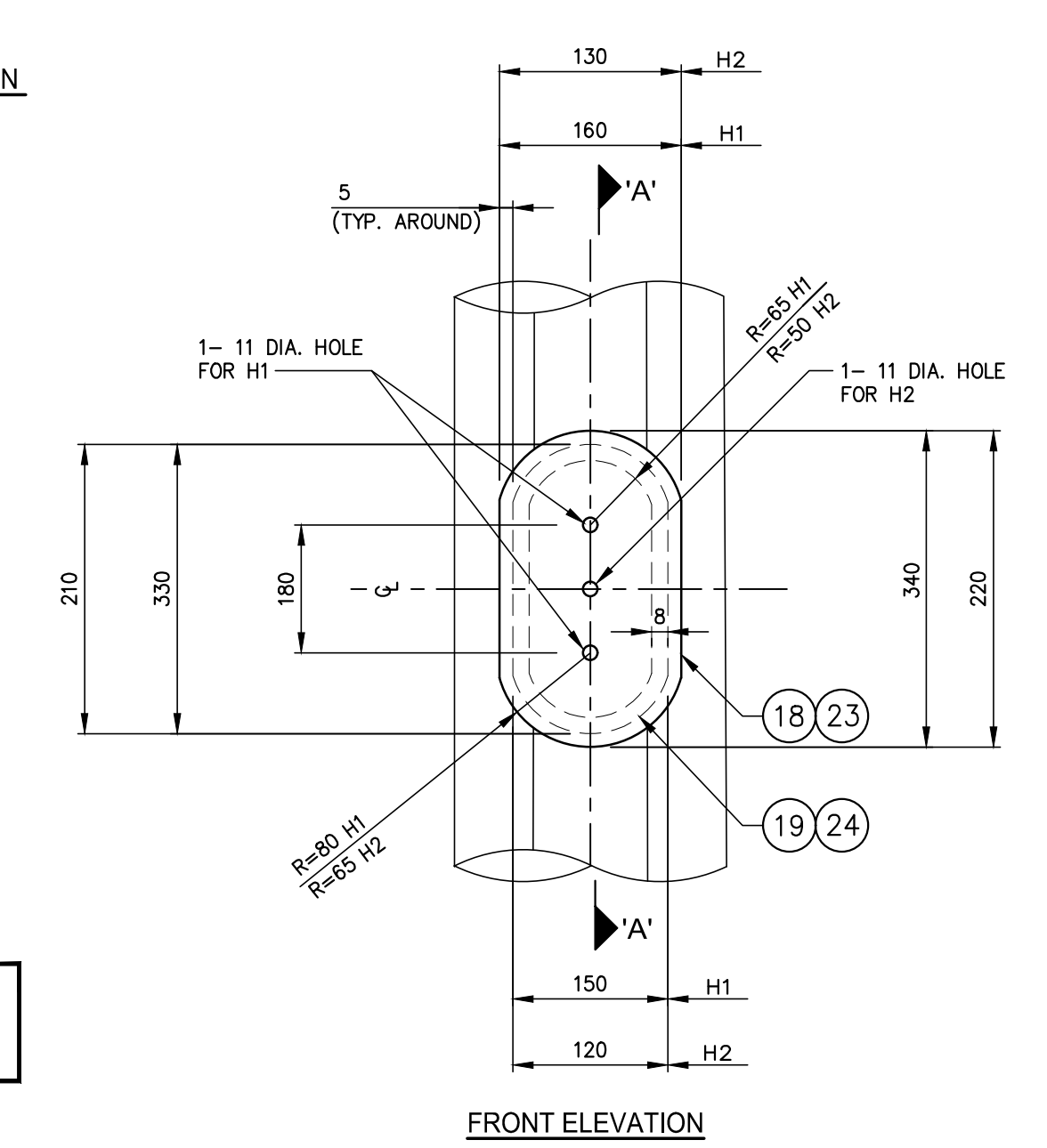
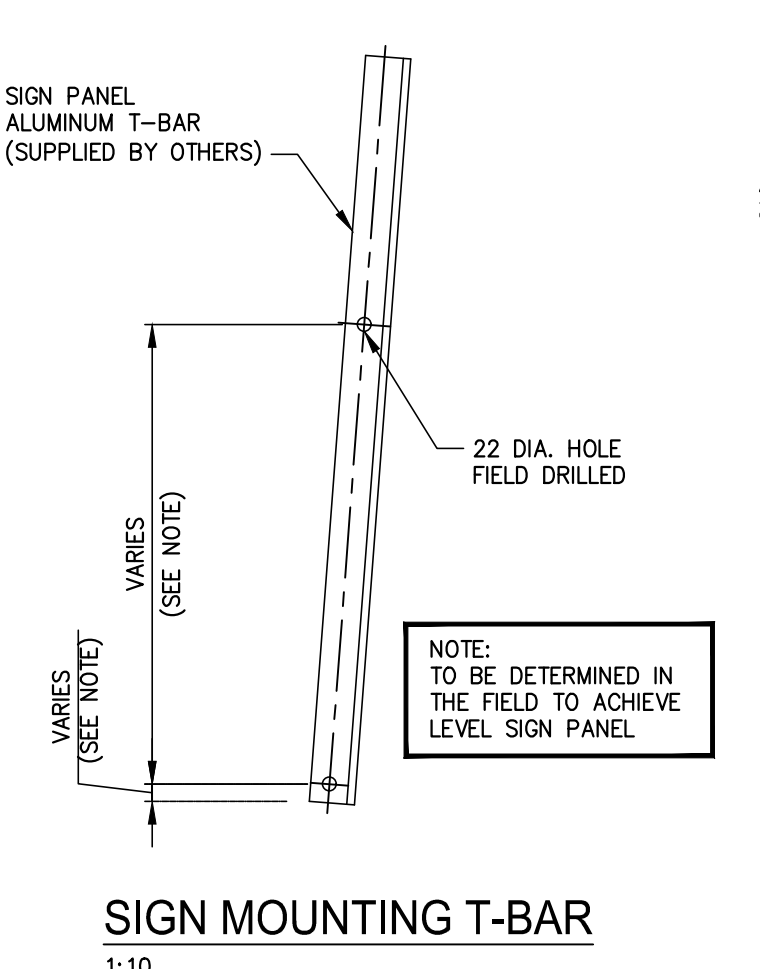
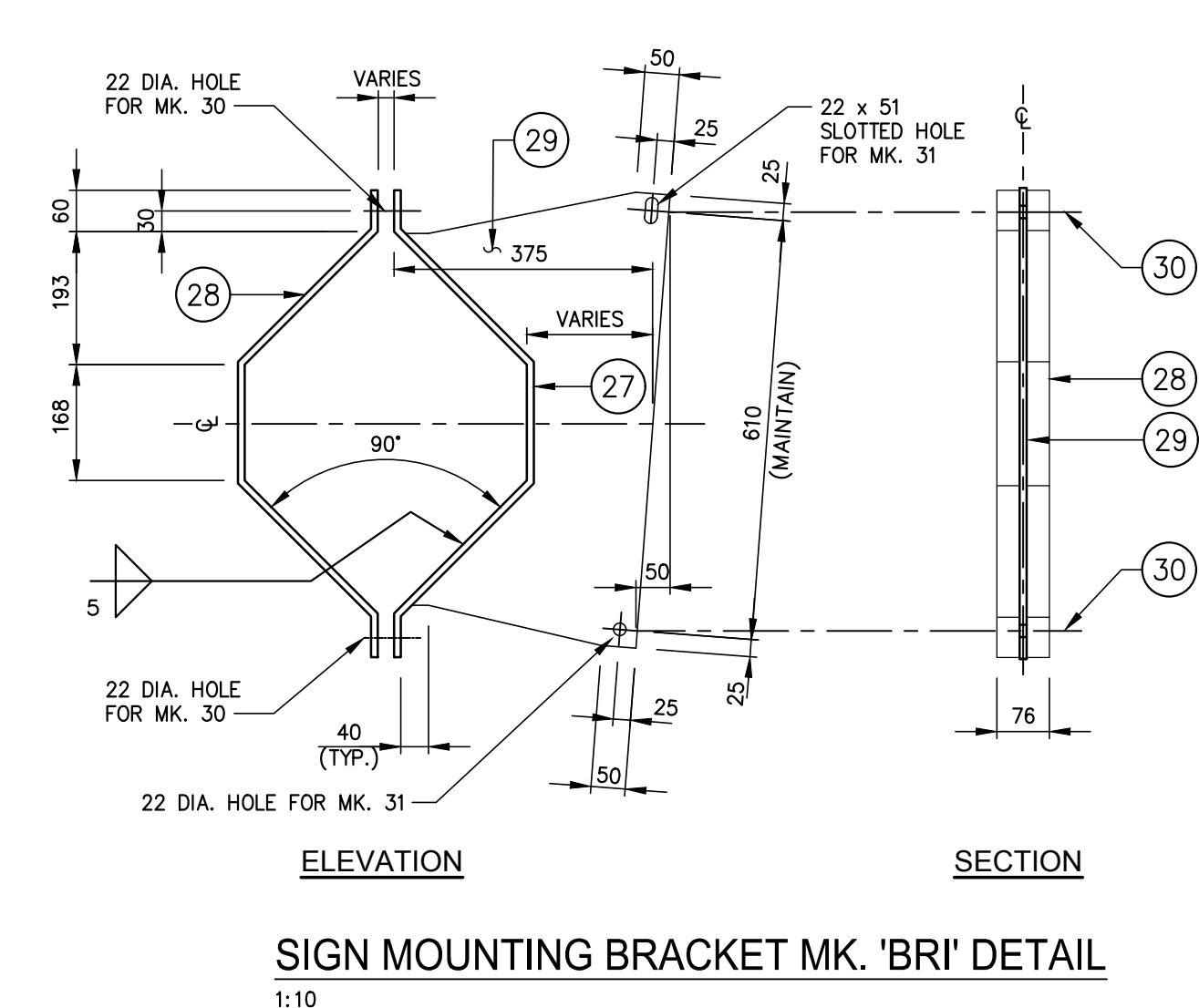
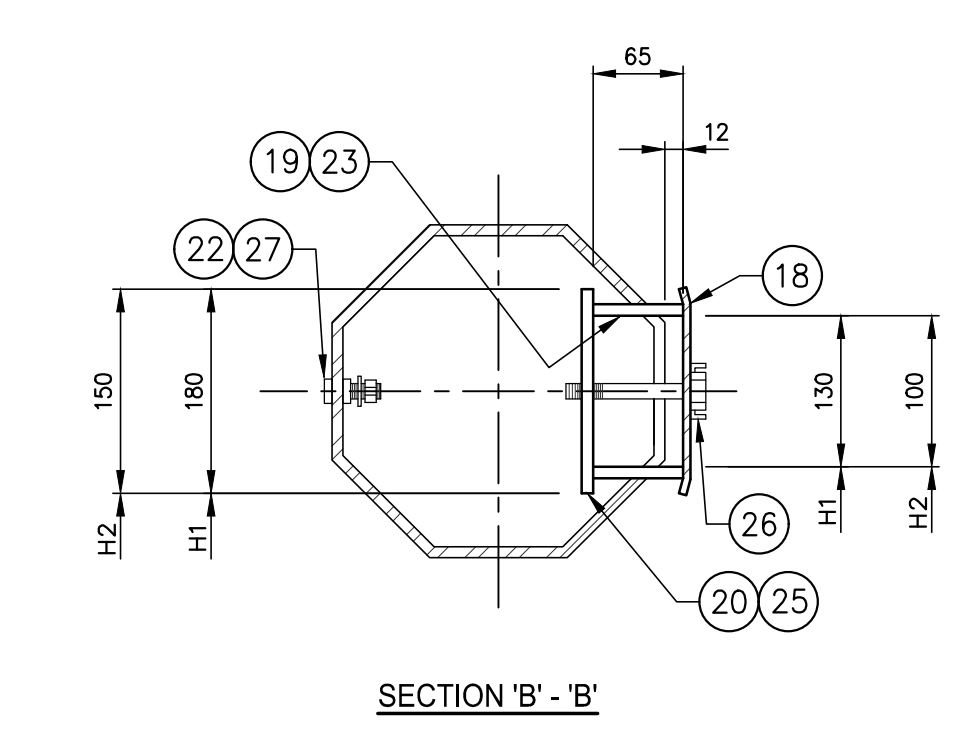
OVERHEAD SIGN STRUCTURES  
S778 - FABRICATION DETAILS (2 OF 2)

CITY DRAWING NUMBER  
SHEET 24 OF 27

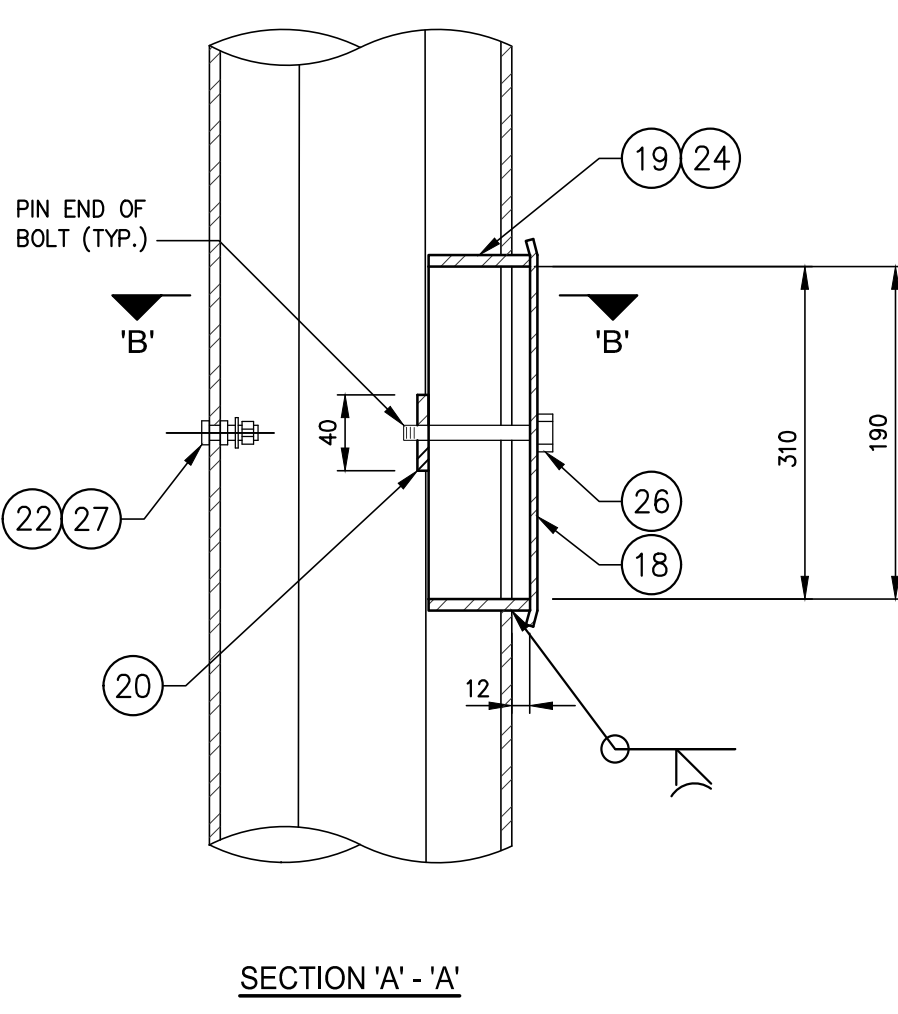
BID NO.  
386-2016



WEDGE PLATE DETAIL  
1:10



HANDHOLE MK. 'H1' & 'H2'  
1:10



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.

LOCATIONS APPROVED UNDERGROUND STRUCTURES				BENCHMARK LOCATION				MMM GROUP				ENGINEER'S SEAL	
SIGNED BY: _____ DATE: _____				ELEV. 232.929									
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 UTILITIES BEFORE PROCEEDING				BENCHMARK LOCATION LOCATED ON "O" OF OPEN ON HYDRANT, SOUTHEAST CORNER OF PEMBINA HIGHWAY AND DALY STREET NORTH				DESIGNED BY: MGM CHECKED BY: TR/EH DRAWN BY: KD APPROVED BY: JPL HOR. SCALE: AS NOTED VERTICAL: AS NOTED DATE: MAY 16 2016				CONSULTANT ACAD DWG. NO. 5516006-S-03	
3 ISSUED FOR TENDER 16.MAY.16 VM 2 ISSUED TO UNDERGROUND STRUCTURES 16.MAY.16 VM 1 ISSUED FOR CLIENT REVIEW 28.APR.16 VM NO. REVISIONS DATE BY				MMM Group Limited Suite 111 - 93 Lombard Ave Winnipeg, MB R3B 3B1 t. 204.943.3178 f. 204.943.4948 www.mmmgrouplimited.com				THE CITY OF WINNIPEG PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION		CITY DRAWING NUMBER SHEET 24 OF 27			
								RELEASED FOR CONSTRUCTION DATE				OVERHEAD SIGN STRUCTURES S778 - FABRICATION DETAILS (2 OF 2)	
												BID NO. 386-2016	

May 16, 2016 - 3:26pm  
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