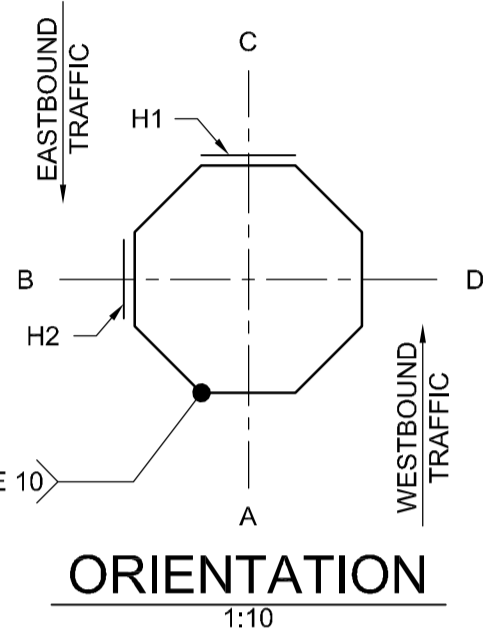
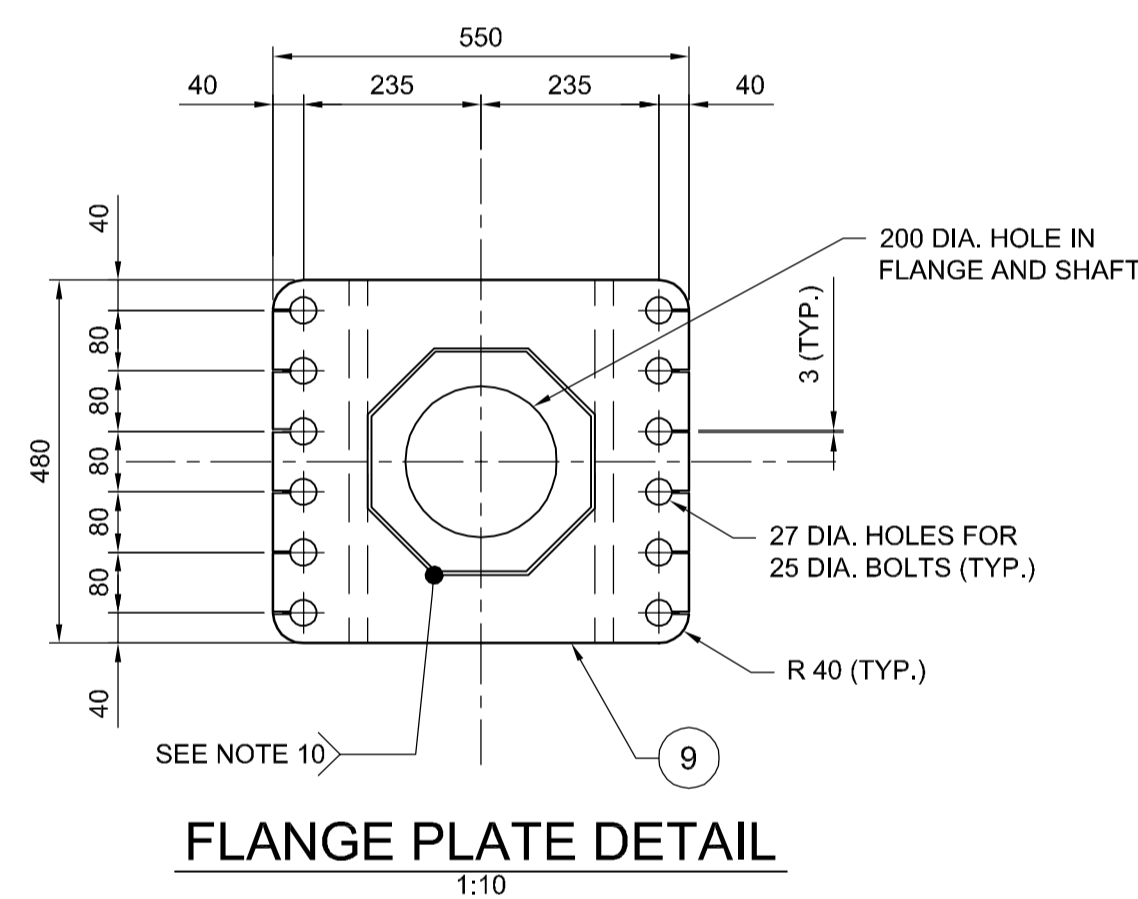


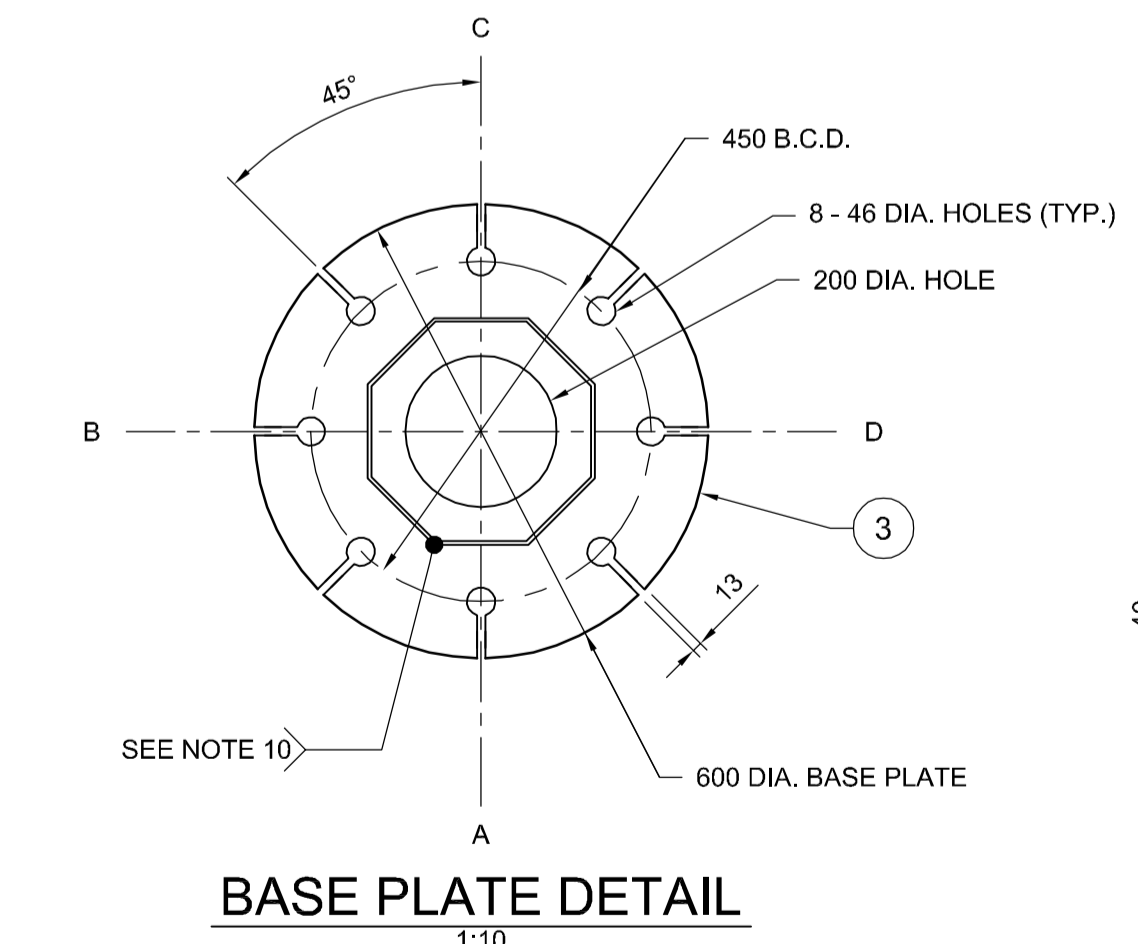
**ELEVATION**  
1:75



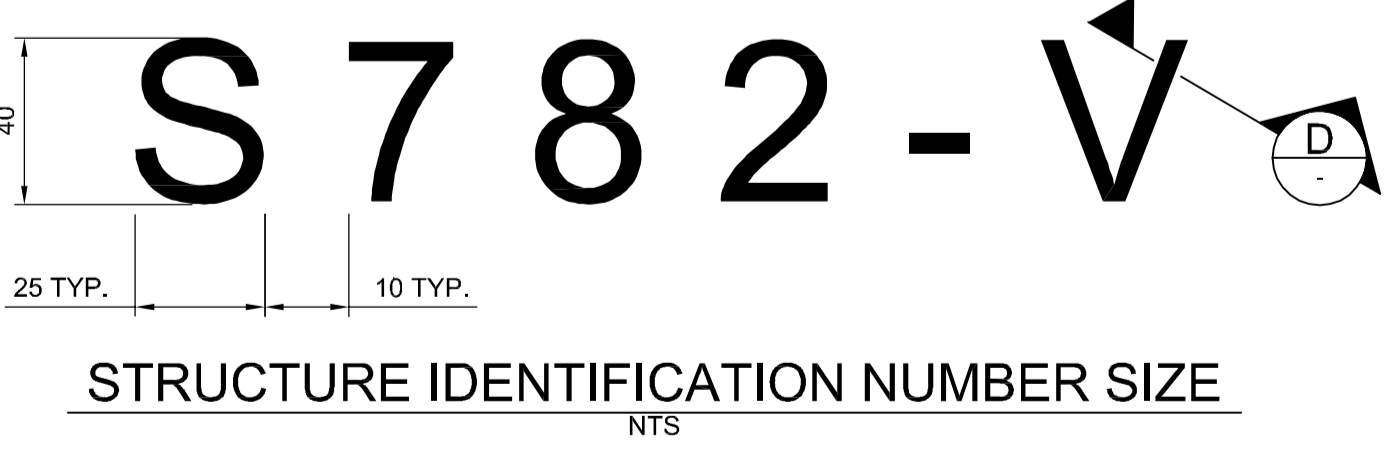
**ORIENTATION**  
1:10



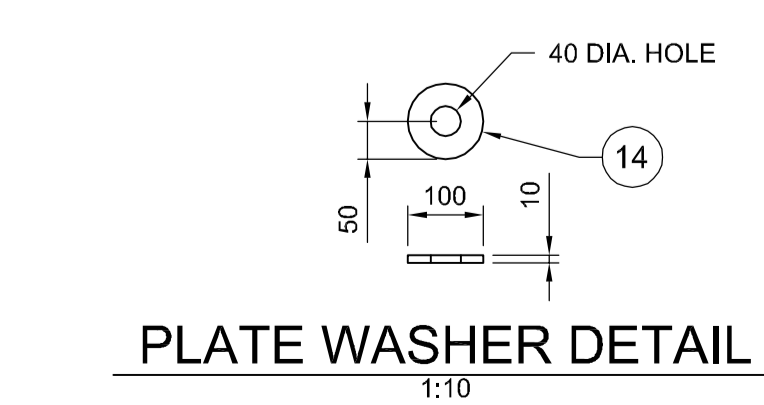
**FLANGE PLATE DETAIL**  
1:10



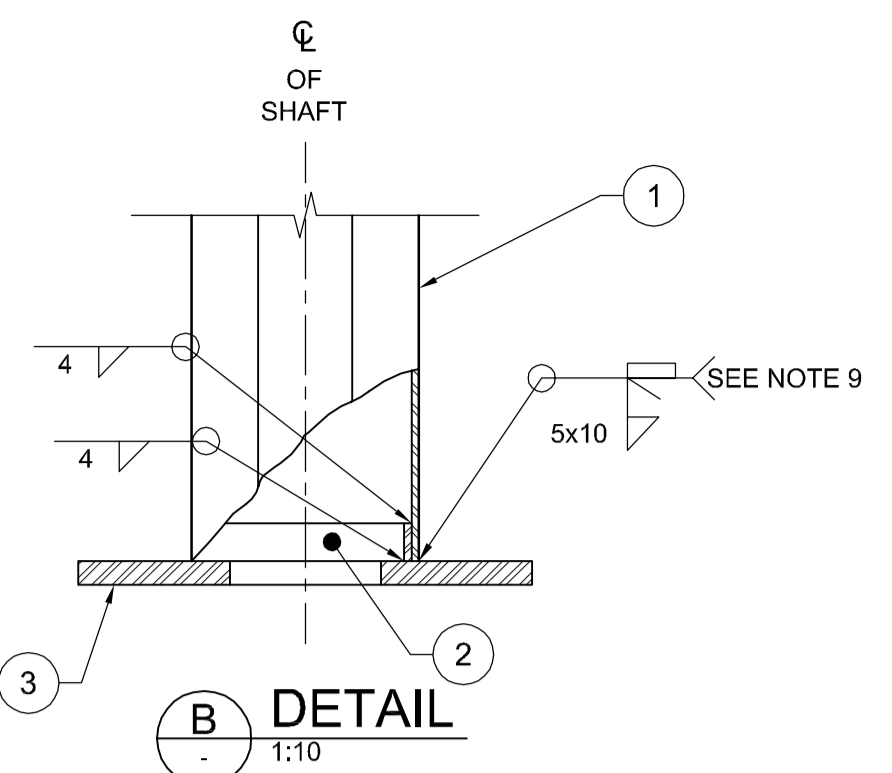
**BASE PLATE DETAIL**  
1:10



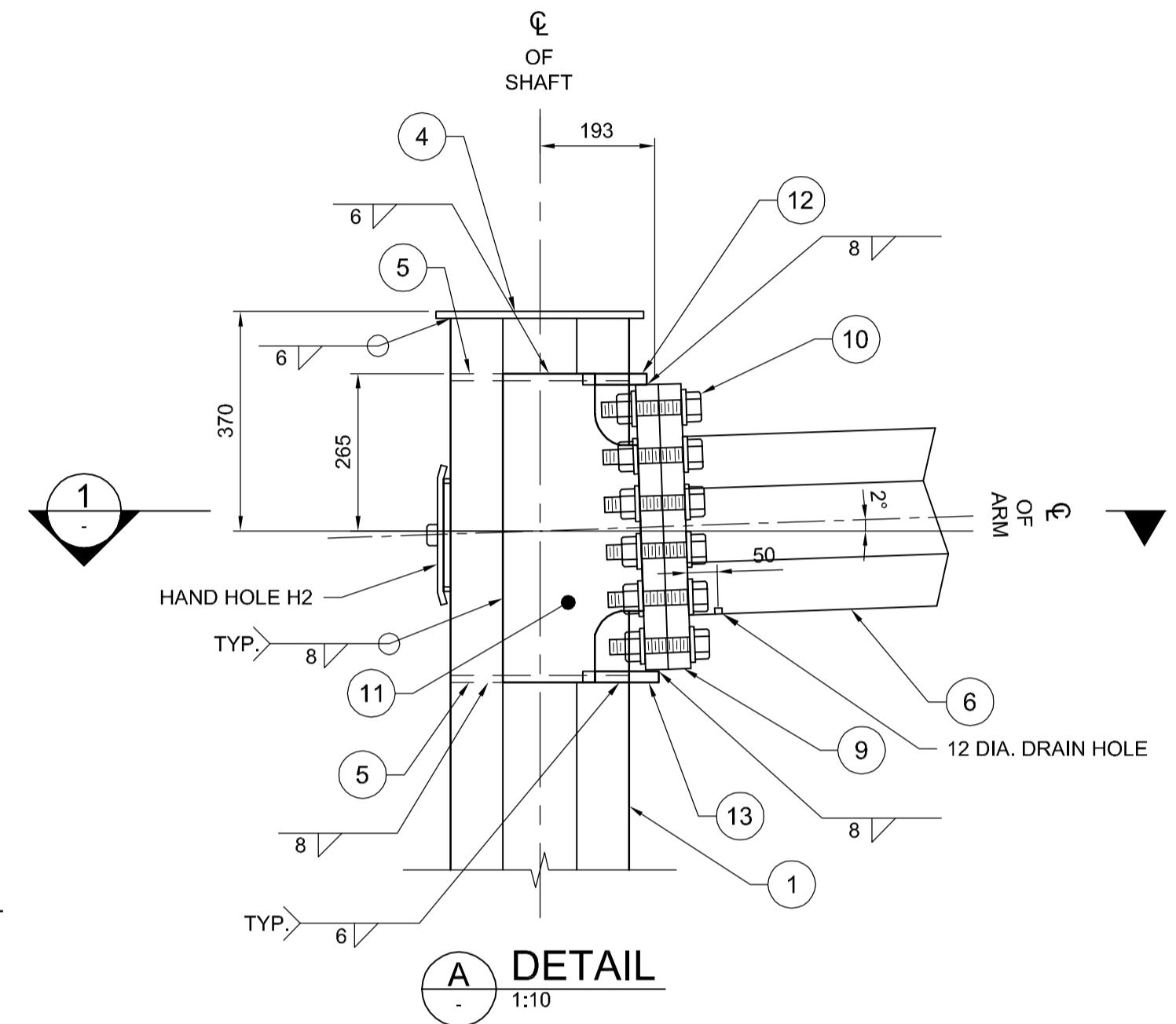
**STRUCTURE IDENTIFICATION NUMBER SIZE**  
NTS



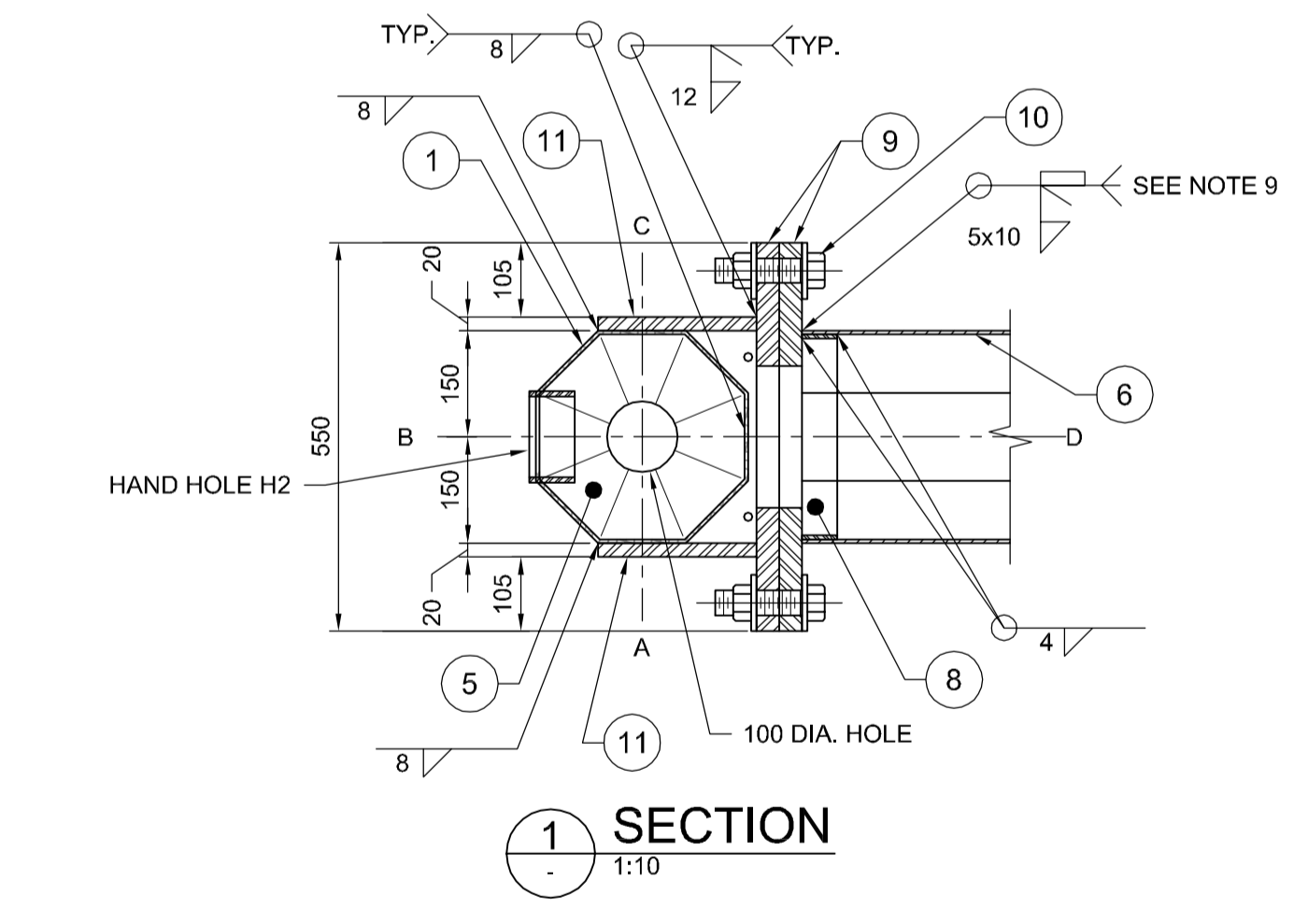
**PLATE WASHER DETAIL**  
1:10



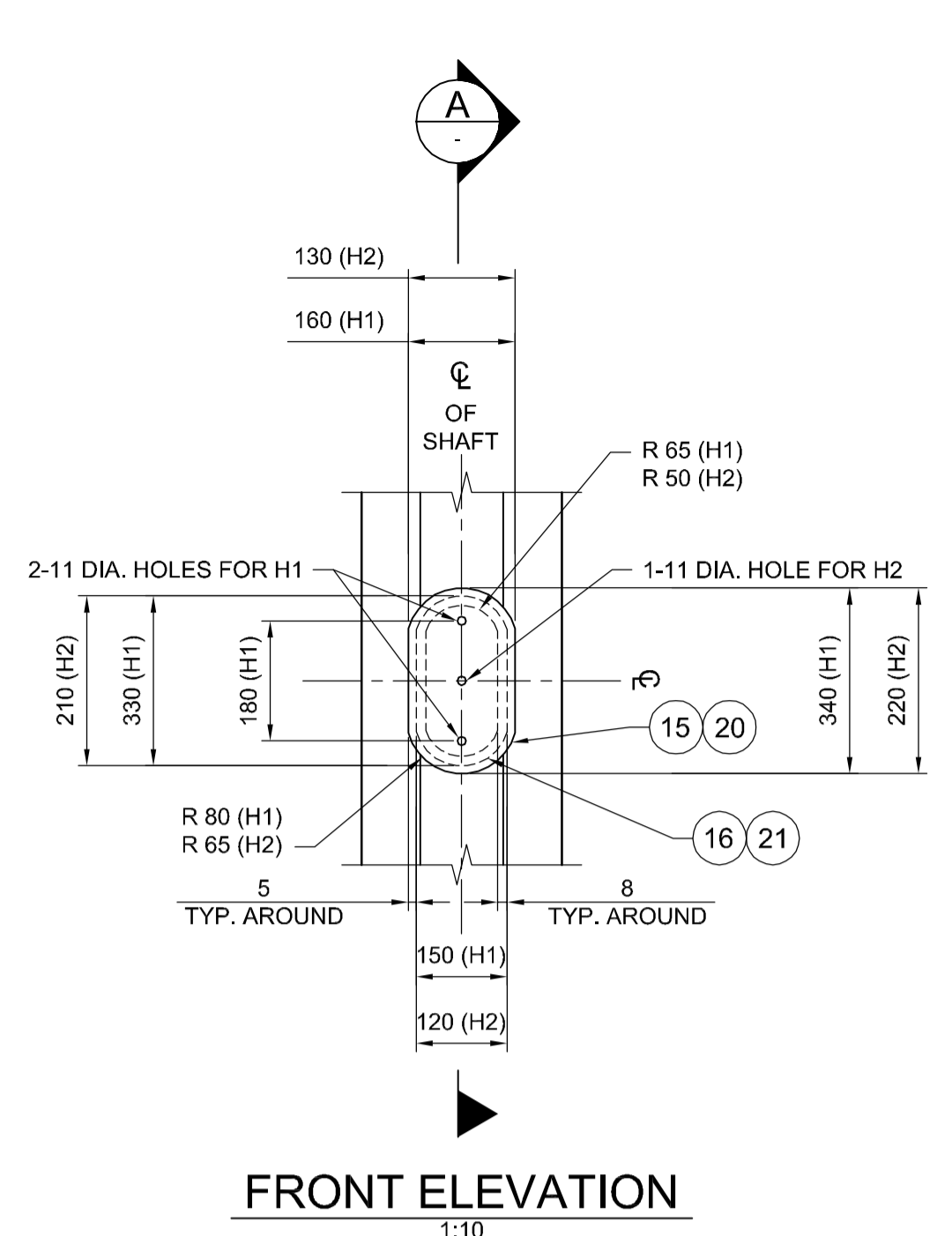
**DETAIL B**  
1:10



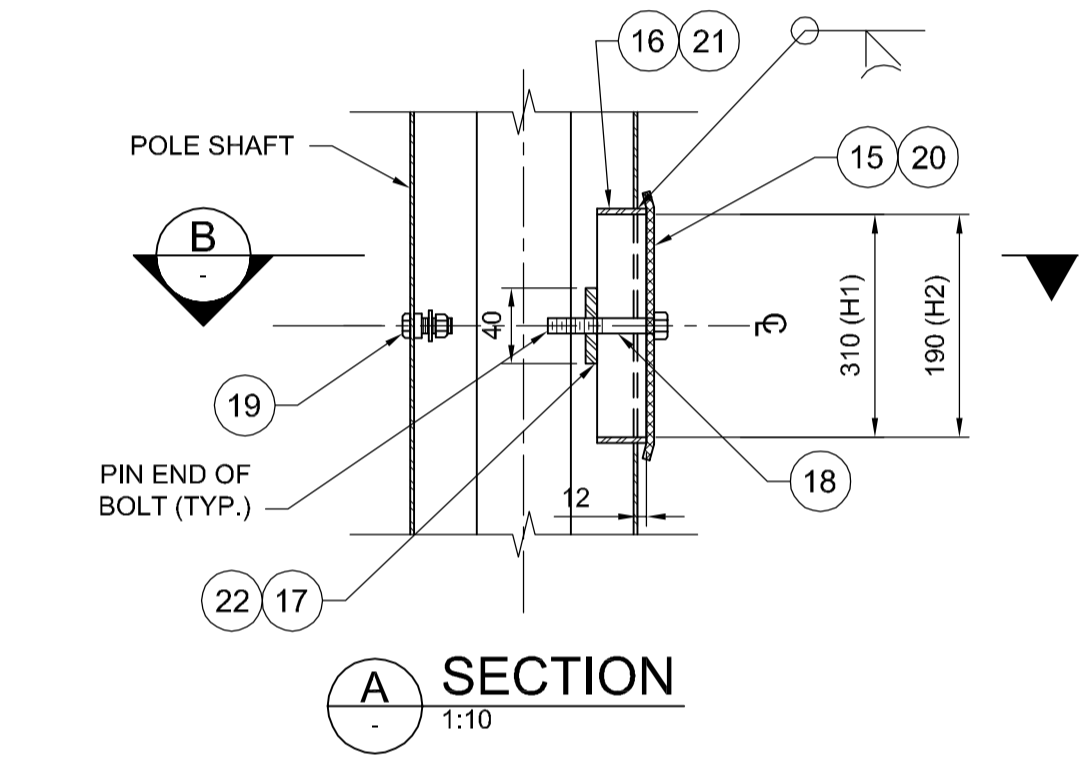
**DETAIL A**  
1:10



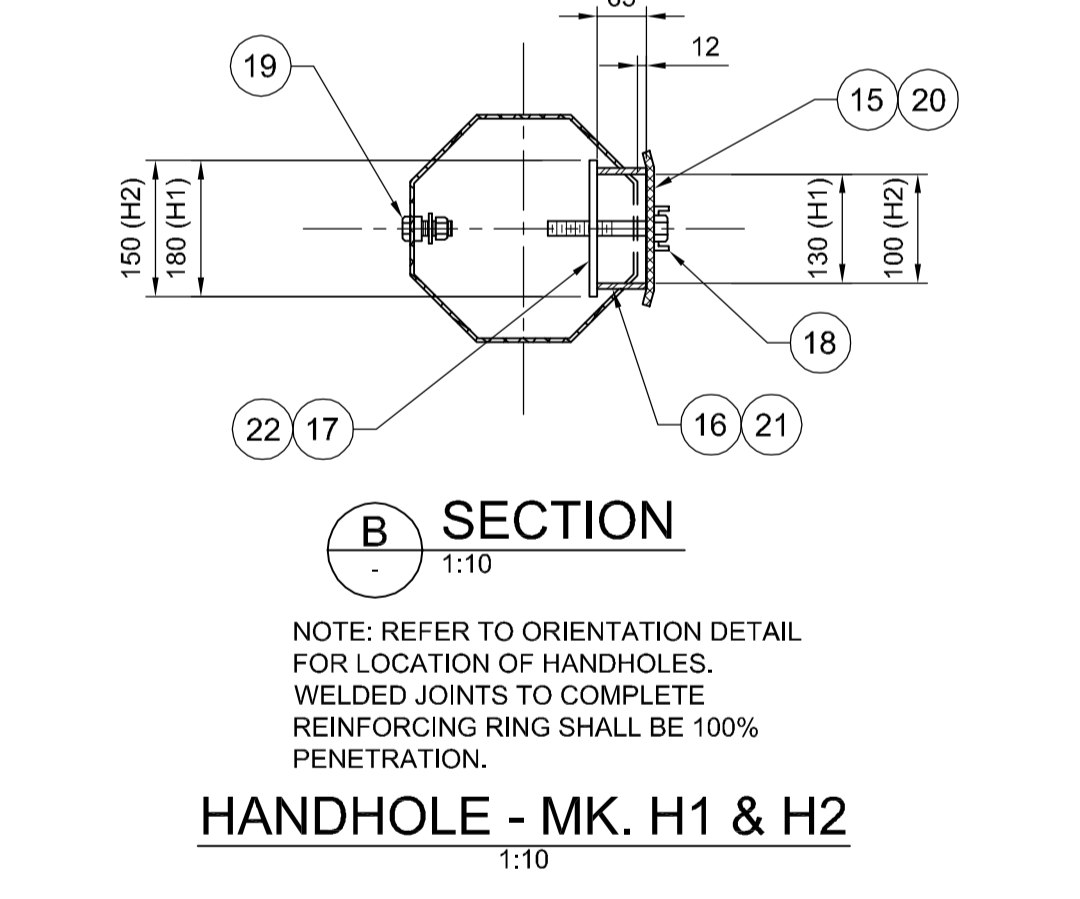
**SECTION 1**  
1:10



**FRONT ELEVATION**  
1:10

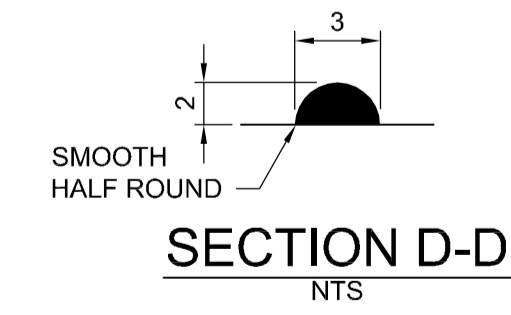


**SECTION A**  
1:10

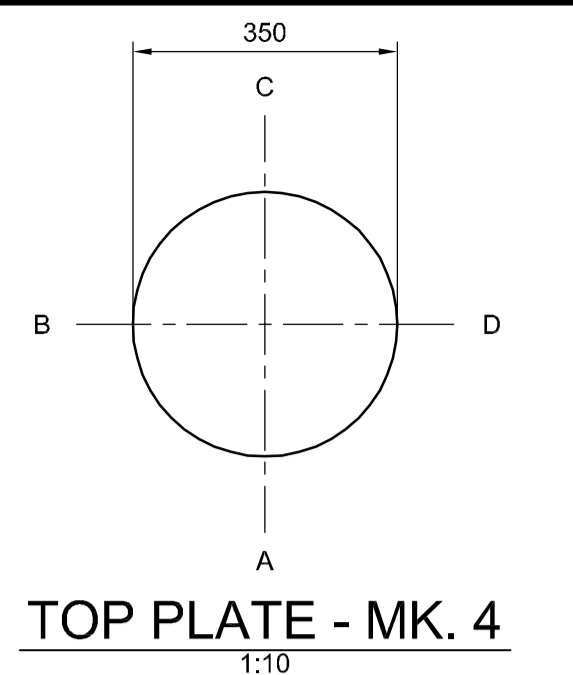


**SECTION B**  
1:10

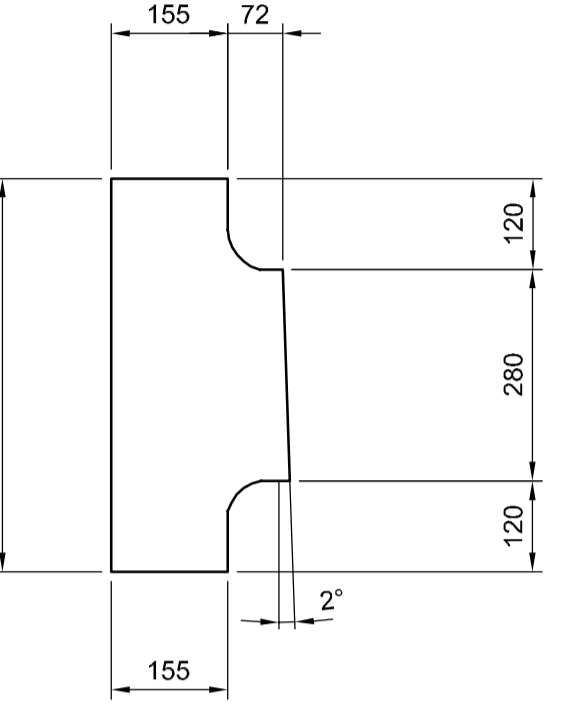
**HANDHOLE - MK. H1 & H2**  
1:10



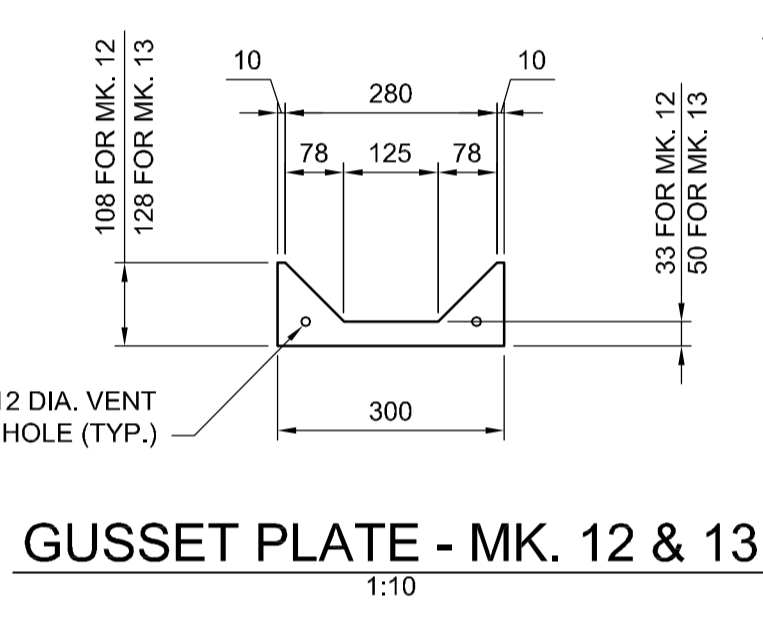
**SECTION D-D**  
NTS



**TOP PLATE - MK. 4**  
1:10



**GUSSET PLATE - MK. 11**  
1:10



**GUSSET PLATE - MK. 12 & 13**  
1:10

**GENERAL NOTES**

- DESIGN DATA**
  - AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS, 5TH EDITION, 2009, PLUS INTERIMS.
  - DESIGN WIND LOAD = 1.5 kPa
  - DESIGN ICE LOAD = 0.15 kPa
  - FATIGUE CATEGORY I CONSIDERING NATURAL WIND GUSTS AND TRUCK INDUCED GUSTS. FATIGUE CATEGORY II FOR GALLOPING.
- ALL PLATE MATERIALS SHALL BE CSA G40.21 - 300W STRUCTURAL STEEL.
- ALL MATERIALS EXCEPT STAINLESS STEEL AND ALUMINUM SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH ASTM A123 TO A MIN. NET RETENTION OF 610 g/m<sup>2</sup> UNLESS INDICATED OTHERWISE.
- ALL AREAS OF DAMAGED GALVANIZING SHALL BE REPAIRED WITH SPRAY-ON COATING CALLED "ZINGA" OR APPROVED EQUIVALENT HAVING A MINIMUM 96% ZINC CONTENT IN THE DRY FILM.
- ALUMINUM T-BARS & SIGNS**
  - CONTRACTOR SHALL SUPPLY AND DELIVER ALUMINUM T-BARS TO THE CITY OF WINNIPEG TRAFFIC SERVICES SIGN SHOP A MINIMUM OF 3 WEEKS IN ADVANCE OF INTENDED DATE FOR PICKUP. CITY WILL INSTALL SIGN PLATES ON SUPPLIED T-BARS.
  - 3 SIGN PANELS, MAXIMUM SIZE 1220 x 915 mm AS SHOWN ON SHEET 072. SUPPLIED AND INSTALLED BY THE CITY OF WINNIPEG TRAFFIC SERVICES BRANCH.
  - SIGN PANELS SHALL BE INSTALLED ON THE SIGN SUPPORT STRUCTURE IMMEDIATELY FOLLOWING ERECTION OF THE SUPPORT STRUCTURE (SAME DAY).
- INSTALL HOLES IN THE GUSSET PLATES FOR DRAINAGE DURING GALVANIZING AS DETAILED.
- PROVIDE "RAISED" IDENTIFICATION NO. WITH WELDING ELECTRODE FOR THE SIGN STRUCTURE.
- GRIND ALL SHARP POINTS AND EDGES.
- EXTERIOR WELD JOINING SHAFT TO TRANSVERSE PLATE SHALL BE AN UNEQUAL LEG COMPLETE PENETRATION WELD WITH THE LONG LEG OF THE WELD ALONG THE SHAFT TERMINATING AT 30° FROM THE SHAFT SURFACE.
- SEAM WELDS SHALL BE 100% PENETRATION WITHIN 200mm OF BOTH ENDS OF THE VERTICAL AND ARM SHAFTS.

**BILL OF MATERIALS**

MK.	QTY.	DESCRIPTION
1	1	OCTAGONAL SHAFT 300 A/F x 4.763 THICK PLATE
2	1	BACK-UP STRIP 50 x 4.763
3	1	BASE PLATE 600 DIA. x 38 THICK
4	1	TOP PLATE 350 DIA. x 12 THICK
5	2	OCTAGONAL GUSSET PLATE 12 THICK
6	1	OCTAGONAL ARM 300 A/F TO 125 A/F x 4.763 THICK
7	1	OCTAGONAL END PLATE 125 A/F x 4.763 THICK
8	1	BACK-UP STRIP 50 x 4.763
9	2	FLANGE PLATE 38 THICK
10	12	25 DIA. BOLTS C/W NUT & 2 WASHERS (ASTM A325, TYPE 1, GALV.)
11	2	SIDE GUSSET PLATE 20 THICK
12	1	GUSSET PLATE 12 THICK
13	1	GUSSET PLATE 12 THICK
14	16	PLATE WASHER 10 THICK
		HANDHOLE MARK H1
15	1	COVER PLATE 11 GA. x 160x 340 (ASTM A569)
16	1	REINFORCING RING 8 x 65 x 830
17	2	CLAMP BAR 6 x 40 x 180
18	2	10 DIA. x 140 BOLT S/S (TYPE 316)
19	1	GROUND STUD ASSEMBLY 10 DIA. x 40
		HANDHOLE MARK H2
20	1	COVER PLATE 11 GA. x 130 x 220 (ASTM A569)
21	1	REINFORCING RING 8 x 65 x 555
22	1	CLAMP BAR 6 x 40 x 150
18	1	10 DIA. x 140 BOLT S/S (TYPE 316)
19	1	GROUND STUD ASSEMBLY 10 DIA. x 40
20	1	HALF COUPLING (1 1/2" NOMINAL) ASTM A105 3000 lb

- \* NOTES:**
- MARK NO. 17 & 22 C/W 8-DIA. PUNCHED 10 N.C. TAPPED AT THE CENTER OF PLATE.
  - MARK NO. 18 C/W CUP WASHER.
  - MARK NO. 19 C/W 2-10 DIA. HEX NUT, 2-TERMINAL WASHER & 1-LOCKWASHER.

**METRIC**

WHOLE NUMBERS INDICATE MILLIMETRES  
DECIMALIZED NUMBERS INDICATE METRES

**WARNING**

IF POWER EQUIPMENT OR EXPLOSIVES ARE TO BE USED FOR EXCAVATION ON THIS PROJECT THE CONTRACTOR MUST:

- NOTIFY THE GAS COMPANY OF THE PROPOSED LOCATION OF EXCAVATION.
- TAKE PRECAUTION TO AVOID DAMAGE TO GAS COMPANY INSTALLATIONS SEE PROVINCIAL REGULATION 210/72 FOR DETAILS.
- OBTAIN EXCAVATION PERMITS PRIOR TO CONSTRUCTION.

G:\CAD\163353\Technical Workspace\Engineering\Drawings and Figures\Structures\Contract\163353-C2-COIN-CS-0HSS-S782.dwg

**APEGM**  
Certificate of Authorization  
Dillon Consulting Limited (MB)  
No. 1789 Date: 2017/01/09

NO.	REVISIONS	DATE	BY	DATE
0	ISSUED FOR TENDER	17/01/09	DA	

DESIGNED BY		CHECKED BY	
DRA		SSR	
DRAWN BY		APPROVED BY	
MDG		DBW	
HOR. SCALE		RELEASED FOR CONSTRUCTION	
AS SHOWN			
VERTICAL SCALE		DATE	
AS SHOWN			

ENGINEER'S SEAL  
PROVINCE OF MANITOBA  
**D.R.C. AMORIM**  
Member  
33215  
REGISTERED PROFESSIONAL ENGINEER  
CONSULTANT PROJECT NUMBER  
16-3353

**THE CITY OF WINNIPEG**  
PUBLIC WORKS DEPARTMENT  
Winnipeg  
WAVERLEY STREET UNDERPASS AT CN MILE 3.89 RIVERS SUB  
CONTRACT 2: UNDERPASS STRUCTURE, RAILWORKS,  
ROADWORKS, LAND DRAINAGE SEWER, PUMPING STATION  
AND LANDSCAPING WORKS  
CITY DRAWING NUMBER  
U-239-2016-C2-CS-073  
SHEET 073 OF 085  
CONSULTANT DRAWING NUMBER  
C2-CS-073