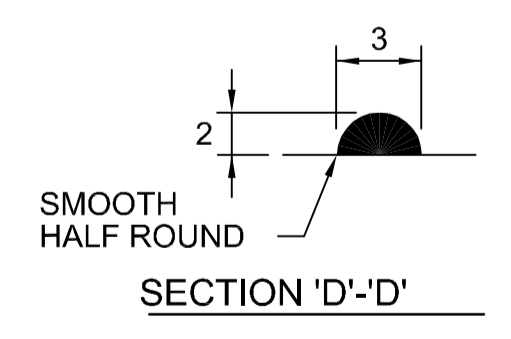
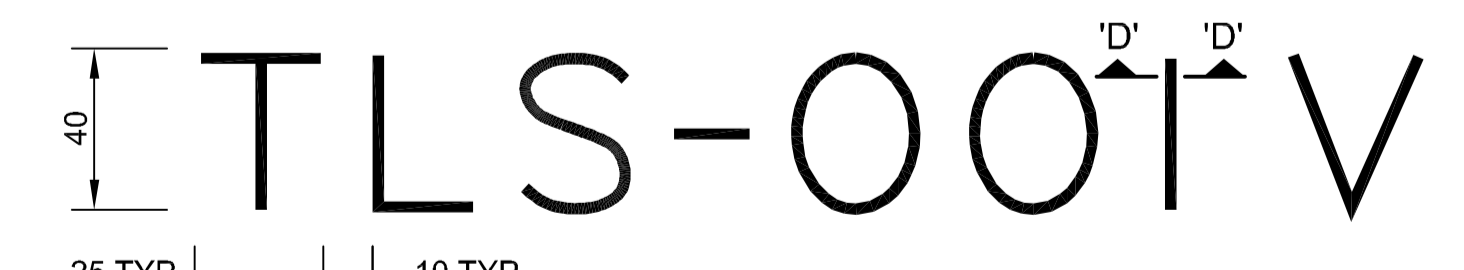


HANDHOLE-MARK H1 & H2

- NOTES
- PROVIDE "RAISED" IDENTIFICATION NO. WITH WELDING ELECTRODE FOR THE SIGN STRUCTURE.
 - GRIND ALL SHARP POINTS AND EDGES.



BILL OF MATERIALS		
MK.	QTY.	DESCRIPTION
1	1	DODECAGONAL SHAFT 240 A/F TO 200 A/F x 6.35
2	1	DODECAGONAL ARM 200 A/F TO 130 A/F x 6.35
3	1	BASE PLATE 40 THICK
4	1	BACKUP STRIP 40 X 6 (FOR SHAFT)
5	1	BACKUP STRIP 40 X 6 (FOR ARM)
6	1	END PLATE 130 A/F OCTAGONAL 6 THICK
7	8	19 DIA. A325 BOLTS GALVANIZED
8	2	FLANGE PLATE 400 x 400 x 32
9	2	SIDE GUSSET PLATE 20 x 400 x 135
10	1	TOP GUSSET PLATE 10 THICK
11	1	BOTTOM GUSSET PLATE 10 THICK
12	1	COVER PLATE 210 DIA x 10 THICK
13	2	DODECAGONAL INTERIOR GUSSET PLATE 8 THICK
HANDHOLE MARK H1		
14	1	COVER PLATE 11 GA. x 160x 340 (A569)
15	1	REINFORCING RING 8 x 65 x 830
* 16	2	CLAMP BAR 6 x 40 x 180
* 17	2	10 DIA. x 140 BOLT S/S (TYPE 316)
* 18	1	GROUND STUD ASSEMBLY 10 DIA. x 40
HANDHOLE MARK H2		
19	1	COVER PLATE 11 GA. x 130 x 220 (A569)
20	1	REINFORCING RING 8 x 65 x 555
* 21	1	CLAMP BAR 6 x 40 x 150
* 17	1	10 DIA. x 140 BOLT S/S (TYPE 316)
* 18	1	GROUND STUD ASSEMBLY 10 DIA. x 40

- NOTES:
- MARK NO. 16 & 21 C/W 8-DIA. PUNCHED 10 N.C. TAPPED AT THE CENTER OF PLATE.
 - MARK NO. 17 C/W CUP WASHER.
 - MARK NO. 18 C/W 2-10 DIA. HEX NUT, 2-TERMINAL WASHER, & 1-LOCKWASHER
- GENERAL NOTES
- DESIGN DATA
AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS, 4TH EDITION, 2001.

DESIGN WIND LOAD = 1.44 kPa (30 PSF)

DESIGN ICE LOAD = 0.15 kPa (3 PSF)
 - ALL MATERIALS SHALL BE CSA G40.21 - 350W STRUCTURAL STEEL UNLESS OTHERWISE NOTED.
 - ALL MATERIALS EXCEPT STAINLESS STEEL AND ALUMINUM SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH CSA G164 TO A MIN. NET RETENSION OF 600 g/m²
 - ALL AREAS OF DAMAGED GALVANIZING SHALL BE REPAIRED WITH SELF-FLUXING LOW TEMPERATURE, ZINC BASED ALLOY ROD OR SPRAY-ON COATING CALLED "ZINGA".
 - NEW STRUCTURE TO BE INSTALLED ON NEW CONCRETE PILE FOUNDATION AND ANCHOR BOLTS.
 - NEW 50 mm. MAX. GROUT PAD TO BE PROVIDED AFTER INSTALLING THE STRUCTURE.
 - SIGN PLATE
MAXIMUM SIZE 900 x 1500 mm. SUPPLIED AND INSTALLED BY THE CITY OF WINNIPEG TRAFFIC SERVICES BRANCH.

<table border="1"> <tr> <td>150 mm W.M.</td> <td>WATER MAIN</td> <td>150 mm W.M.</td> <td>HYDRO</td> <td>150 mm W.M.</td> <td></td> </tr> <tr> <td>○</td> <td>HYDRANT</td> <td>○</td> <td>M.T.S.</td> <td>○</td> <td></td> </tr> <tr> <td>⊗</td> <td>VALVE</td> <td>⊗</td> <td>CONCRETE</td> <td>⊗</td> <td></td> </tr> <tr> <td>300 mm L.D.S.</td> <td>LAND DRAINAGE SEWER</td> <td>300 mm L.D.S.</td> <td>ASPHALT</td> <td>300 mm L.D.S.</td> <td></td> </tr> <tr> <td>250 mm W.W.S.</td> <td>WASTE WATER SEWER</td> <td>250 mm W.W.S.</td> <td>PLANNING</td> <td>250 mm W.W.S.</td> <td></td> </tr> <tr> <td>○</td> <td>MANHOLE</td> <td>●</td> <td>SIDEWALK</td> <td>○</td> <td></td> </tr> <tr> <td>□</td> <td>CATCH BASIN</td> <td>■</td> <td>PAVING STONES</td> <td>□</td> <td></td> </tr> <tr> <td>▽</td> <td>CURB INLET</td> <td>▽</td> <td>PARTIAL DEPTH REPAIR</td> <td>▽</td> <td></td> </tr> <tr> <td>⊕</td> <td>JUNCTIONS</td> <td>⊕</td> <td>PROPERTY LINE</td> <td>⊕</td> <td></td> </tr> <tr> <td>⊚</td> <td>CULVERT</td> <td>⊚</td> <td>SURVEY BAR</td> <td>⊚</td> <td></td> </tr> <tr> <td>⊚</td> <td>GAS</td> <td>⊚</td> <td>PARAPLEGIC RAMP</td> <td>⊚</td> <td></td> </tr> <tr> <td>EXISTING</td> <td>LEGEND-PLAN</td> <td>PROPOSED</td> <td>EXISTING</td> <td>LEGEND-PLAN</td> <td>PROPOSED</td> </tr> </table>						150 mm W.M.	WATER MAIN	150 mm W.M.	HYDRO	150 mm W.M.		○	HYDRANT	○	M.T.S.	○		⊗	VALVE	⊗	CONCRETE	⊗		300 mm L.D.S.	LAND DRAINAGE SEWER	300 mm L.D.S.	ASPHALT	300 mm L.D.S.		250 mm W.W.S.	WASTE WATER SEWER	250 mm W.W.S.	PLANNING	250 mm W.W.S.		○	MANHOLE	●	SIDEWALK	○		□	CATCH BASIN	■	PAVING STONES	□		▽	CURB INLET	▽	PARTIAL DEPTH REPAIR	▽		⊕	JUNCTIONS	⊕	PROPERTY LINE	⊕		⊚	CULVERT	⊚	SURVEY BAR	⊚		⊚	GAS	⊚	PARAPLEGIC RAMP	⊚		EXISTING	LEGEND-PLAN	PROPOSED	EXISTING	LEGEND-PLAN	PROPOSED	<p>UNDERGROUND STRUCTURES</p> <p>SUPY. U/G STRUCTURES COMMITTEE</p> <p>DATE</p>		<p>B.M. ELEV.</p>		<p>DESIGNED BY: SSR</p> <p>DRAWN BY: TJH</p> <p>CHECKED BY: NBU</p> <p>APPROVED BY:</p>		<p>ENGINEER'S SEAL</p> <p>PROVINCE OF MANITOBA</p> <p>ORIGINAL STAMPED BY S.S. RIHAL 08/15/08</p> <p>REGISTERED PROFESSIONAL ENGINEER</p>		<p>THE CITY OF WINNIPEG TRANSIT DEPARTMENT</p> <p>ON STREET TRANSIT PRIORITY IMPROVEMENTS - PHASE 2</p> <p>STRUCTURAL DETAILS (2 OF 2)</p>		<p>CITY DRAWING NUMBER</p> <p>SHEET 11 OF 11</p>	
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<p>NOTE:</p> <p>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 WITH CONSTRUCTION.</p>						<p>2 ISSUED FOR TENDER 08/15/08 TJH</p> <p>1 ISSUED FOR REVIEW 07/29/08 TJH</p> <p>NO. REVISIONS DATE BY</p>		<p>HOR. SCALE</p> <p>VERTICAL</p>		<p>RELEASED FOR CONSTRUCTION</p> <p>DATE</p>		<p>CONSULTANT PROJECT NO. 08-8900</p>																																																																													