

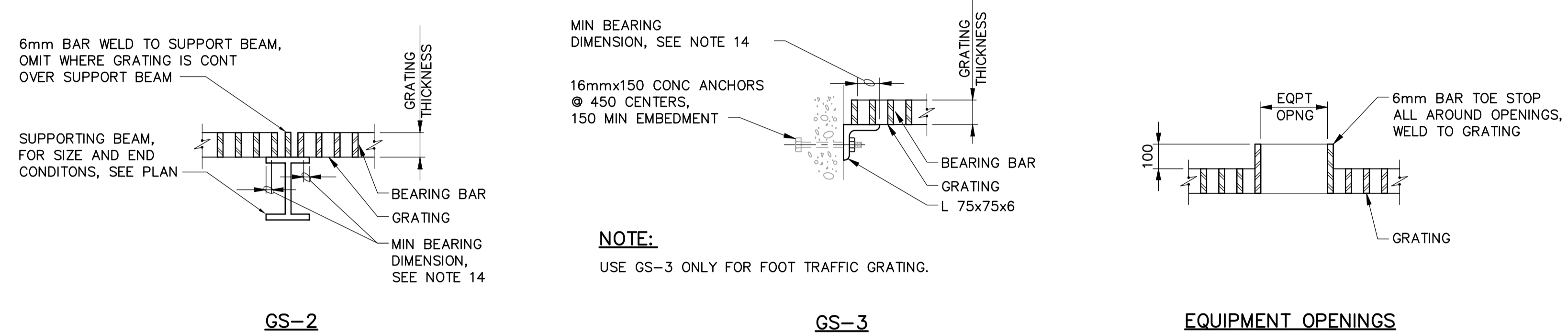
GENERAL NOTES:

- EXTEND GRATING CONTINUOUSLY OVER GATE GUIDES AND GATES.
- NOTCH GRATING SUPPORTS AT GATES AS REQUIRED.
- GRATING SPAN → SEE PLAN.
- WIDTH OF GRATING SECTIONS SHALL NOT EXCEED 900mm.
- SHOP DRAWINGS BASED ON FIELD DIMENSIONS SHALL BE SUBMITTED TO THE CONTRACT ADMINISTRATOR PRIOR TO FABRICATION.
- MATERIAL FOR SUPPORTS OF STEEL AND ALUMINUM GRATING TO BE SAME AS GRATING, EXCEPT METAL SUPPORTS THAT ARE TO BE EMBEDDED IN CONCRETE SHALL BE TYPE 316 STAINLESS STEEL.
- UNLESS NOTED OTHERWISE ON PLANS, GRATING THICKNESS SHALL BE AS TABULATED IN "GRATING THICKNESS TABLE" FOR APPLICABLE TRAFFIC.
- BEARING BAR THICKNESS FOR GRATING TO BE 4.8mm MINIMUM.
- BAND ALL EDGES WITH 5mm x DEPTH OF BEARING BAR.
- PROVIDE MISCELLANEOUS GRATING FASTENERS AS REQUIRED.
- TYPE OF MATERIAL USED SHALL BE AS SHOWN ON PLANS OR AS SPECIFIED. THIS STANDARD DETAIL INCLUDES 2 TYPES, ALTHOUGH BOTH MAY NOT BE INCLUDED IN PROJECT.
- THE HORIZONTAL CLEARANCE BETWEEN THE GRATING AND GRATING SUPPORTS SHALL NOT BE LESS THAN 6mm NOR GREATER THAN 13mm AND AS SPECIFIED.
- ALL GRATING SECTIONS, WHEN IN PLACE, SHALL ALWAYS BE FIRMLY ANCHORED TO THEIR SUPPORTS AS SPECIFIED.
- MIN BEARING HORIZONTAL DIMENSION = 25mm FOR GRATING DEPTH 57mm OR LESS, MIN BEARING HORIZONTAL = 50mm FOR GRATING DEPTH GREATER THAN 57mm

HEAVY VEHICULAR TRAFFIC HS 20-44		
MAXIMUM SPAN (mm)	BEARING BARS	
	STEEL	ALUMINUM
300	51x4.8	DO NOT USE ALUMINUM GRATING
500	64x6.4	
600	64x9.5 OR 76x6.4	
750	76x9.5 OR 102x6.4	
1000	89x9.5	
1200	102x9.5	
1500	114x9.5	

LIGHT VEHICULAR TRAFFIC (WHEEL LOAD = 900 kg OR LESS)		
MAXIMUM SPAN (mm)	BEARING BARS	
	STEEL	ALUMINUM
300	44x4.8	44x4.8
450	44x4.8	44x4.8
600	51x4.8	51x4.8
750	57x4.8	57x4.8
900	64x4.8	64x4.8
1200	64x6.4	DO NOT USE ALUMINUM GRATING
1500	64x9.5	
1800	64x9.5	
2100	76x9.5	

FOOT TRAFFIC		
GRATING THICKNESS TABLE		
MAXIMUM SPAN (mm)	ALUMINUM (mm)	STEEL (mm)
1050	32	25
1200	38	25
1350	44	25
1500	44	32
1650	51	32
1800	57	38
1950	57	38
2100	64	44



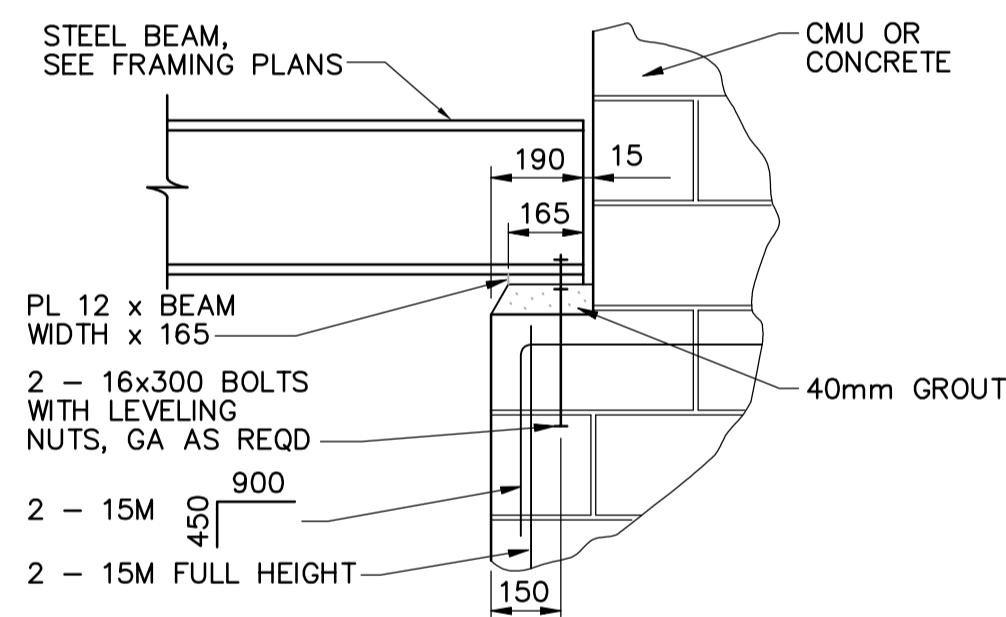
VEHICULAR TRAFFIC NOTE:

STEEL GRATING BEARING BARS FOR VEHICULAR TRAFFIC SHALL BE SPACED AT 48mm OC; ALUMINUM GRATING BEARING BARS FOR VEHICULAR TRAFFIC SHALL BE SPACED AT 30mm OC.

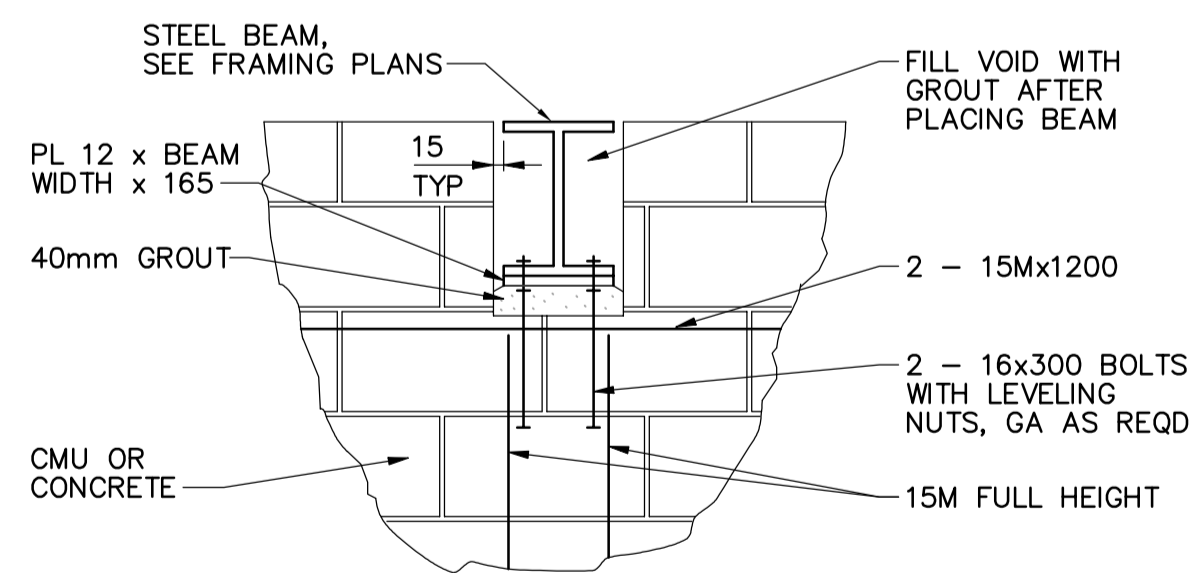
SERRATED BEARING BARS:

INCREASE GRATING THICKNESSES SHOWN IN TABLES BY 6mm FOR GRATING WITH SERRATED SLIP RESISTANT SURFACES.

1 STANDARD GRATING
- N.T.S.

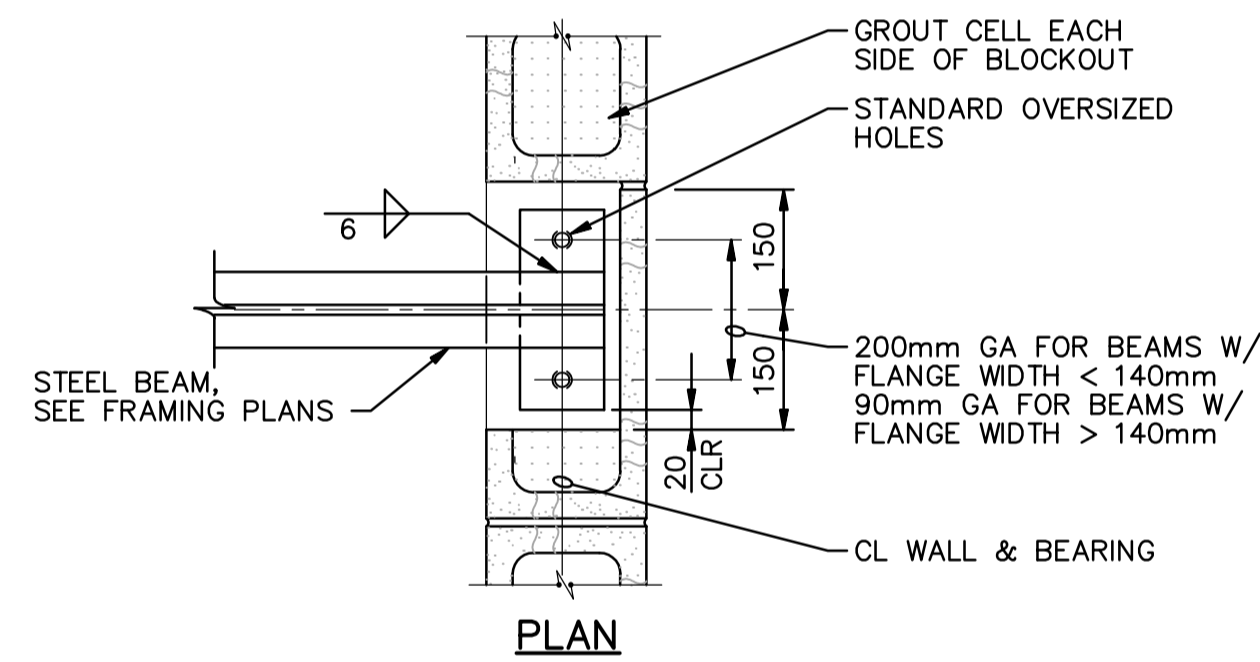


PARALLEL TO WALL

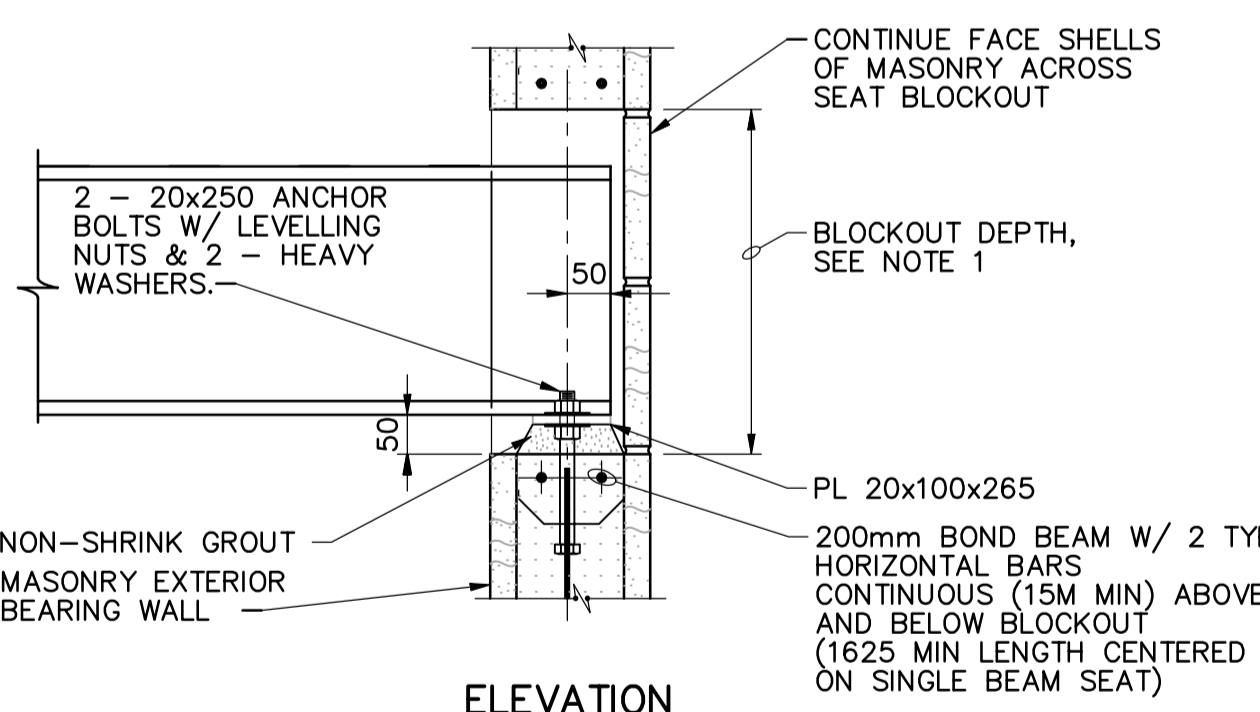


PERPENDICULAR TO WALL

2 BEAM SEAT
- N.T.S.



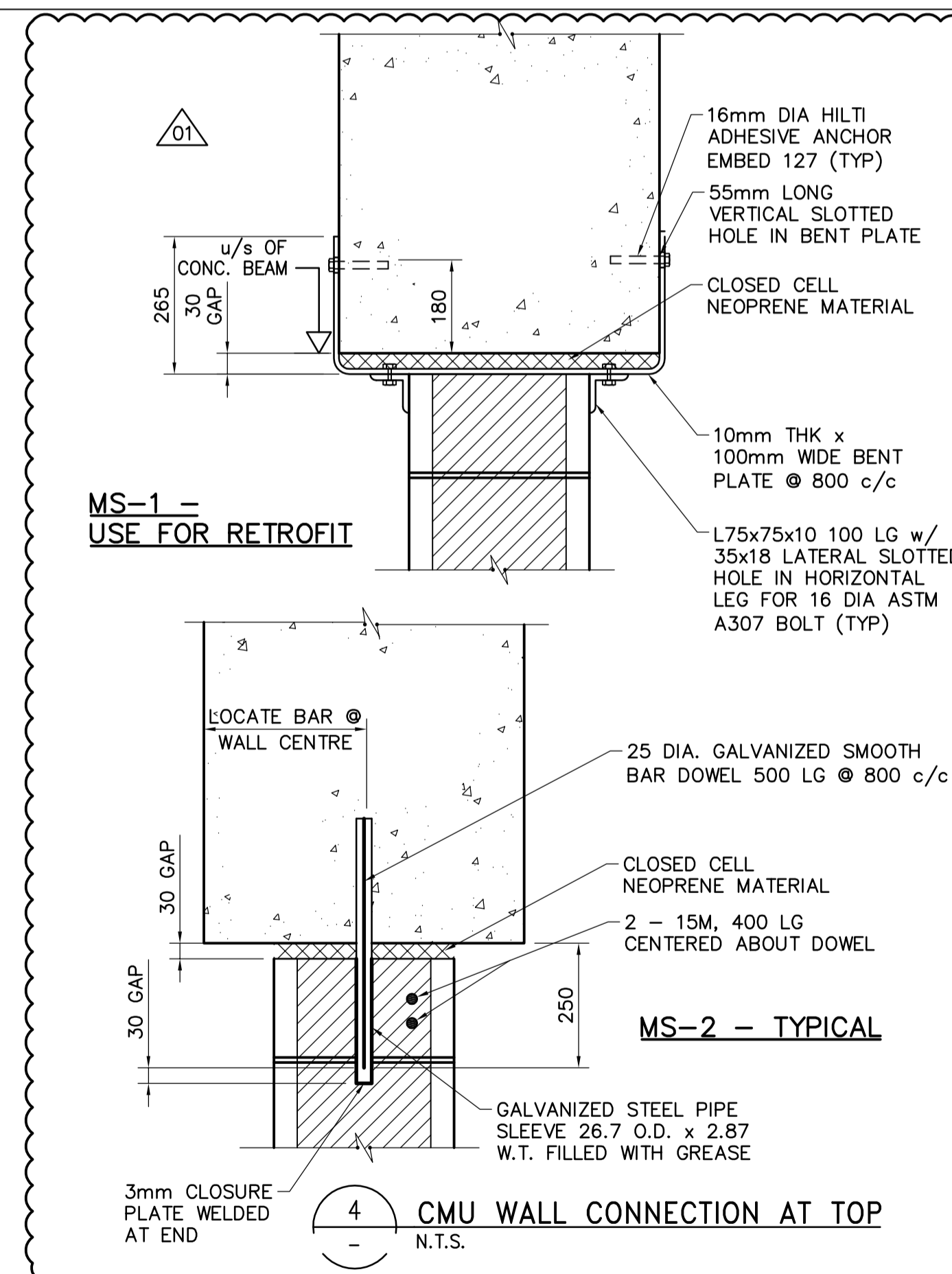
PLAN



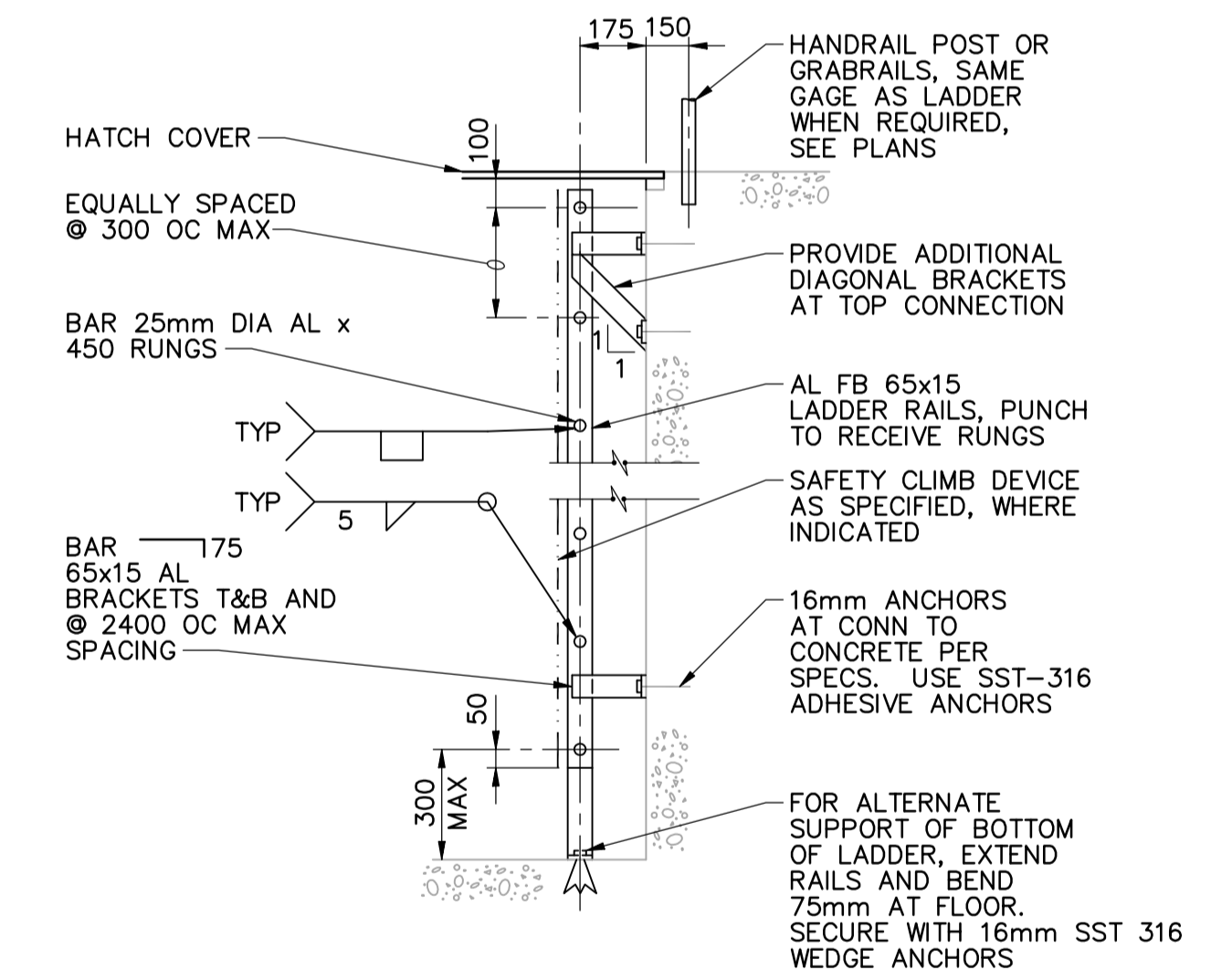
ELEVATION

NOTE:
PROVIDE BLOCKOUT DEPTH AS REQUIRED FOR SETTING BEAMS, (BEAM DEPTH + 150) MIN, OR SET BEAMS BEFORE COMPLETING WALL ABOVE.

3 BEAM SEAT/EXTERIOR WALL
- N.T.S.



4 CMU WALL CONNECTION AT TOP
- N.T.S.



TYPE A

NOTE:
1. PROVIDE PROTECTION FOR ALUMINUM IN CONTACT WITH CONCRETE AS SPECIFIED.

5 FLAT BAR LADDER UNDER COVER-ALUMINUM
- N.T.S.

 Certificate of Authorization CH2M HILL Canada Ltd. No. 1441 Expiry: April 30, 2008	B.M. ELEV.	 Frederickson Cooper ARCHITECTS DESIGNED BY MH DRAWN BY CR SCALE: NTS DATE: 2007/06/05	 A Tyco International Ltd. Company CHECKED BY AP APPROVED BY AHL RELEASED FOR CONSTRUCTION BY: R. SOROKOWSKI DATE: 2007/05/06	ENGINEER'S SEAL	 THE CITY OF WINNIPEG WATER AND WASTE DEPARTMENT ENGINEERING DIVISION WATER TREATMENT PLANT MAIN BUILDING OFFICE AND PLANT INTERIOR FINISHES STRUCTURAL STANDARD DETAILS	
	DESIGNED BY			C. MILITANO		CITY FILE NUMBER
	DATE			2007/06/05		SHEET OF
	CONSULTANT DRAWING NO.			WB-S4453		CITY DRAWING NUMBER