WEST ALUMINUM TOP RAIL LAYOUT BARRIER ELEVATION LOOKING WEST SCALE 1:50

13 500 RETAINING WALL

NORTH SOUTH 12 150 ALUMINUM BARRIER RAIL 1 404 ALUMINUM POST SPACING . 1 104 5 SPACES @ 2 550 = 12 750 1 104 20 GAP 300 TYPICAL TYPICAL RAIL END SECTION -- RAIL END SECTION TOP OF SIDE WALK

668

7 186 HEAD WALL

EAST ALUMINUM TOP RAIL LAYOUT BARRIER ELEVATION LOOKING EAST

SCALE 1:50

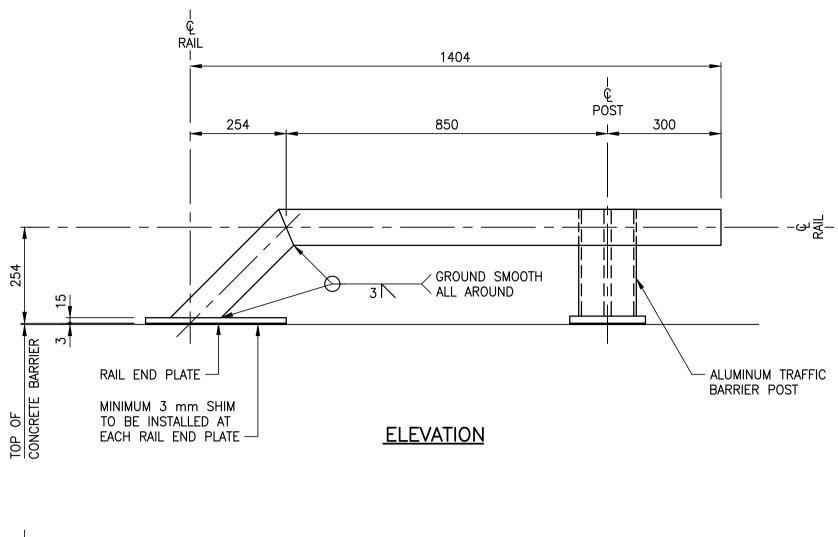
15 374 HEAD WALL

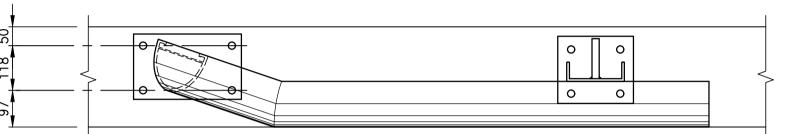
MATERIAL SPECIFICATIONS

- 1. THE 19 mm DIAMETER HOLES (4) IN THE BASE OF THE BARRIER RAIL POSTS AND RAIL PLATES ARE DESIGNED TO ACCOMMODATE 16 mm DIAMETER RAIL POST ANCHOR BOLTS AS DETAILED. SUPPLY WITH EACH ANCHOR BOLT WITH ONE STAINLESS STEEL PLAIN WASHER, ONE STAINLESS STEEL LOCK WASHER, ONE STAINLESS HEX NUT AND ONE 50 mm GALVANIZED PLATE WASHER.
- 2. EXTRUDED ALUMINUM SHAPES AND PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM B221, ALLOY 6061-T6 OR ALLOY 6351-T5 (MINIMUM ELONGATION 10%).
- 3. THE STAINLESS STEEL HEX HEAD AND SOCKET HEAD CAP SCREWS SHALL MEET THE REQUIREMENTS OF ASTM A276, TYPE 430, AND THE DIMENSIONAL REQUIREMENTS OF ANSI B18.3.
- 4. DIMENSIONAL TOLERANCES NOT SHOWN OR IMPLIED ARE INTENDED TO BE THOSE CONSISTENT WITH THE PROPER FUNCTIONING OF THE PART, INCLUDING ITS APPEARANCE, AND ACCEPTED MANUFACTURING PRACTICES.
- 5. THE POST SHAFT SHALL BE MADE FROM A SINGLE CHANNEL—SHAPE EXTRUSION WELDED TO A PLATE SHAPE. THE POST BASE AND SHAFT SHALL THEN BE WELDED TOGETHER.
- 6. WELDING SHALL CONFORM TO THE REQUIREMENTS OF CSA STANDARDS W59.2-M1991 (R2013), WELDED ALUMINUM CONSTRUCTION AND W47.2-11 (R2015), ALUMINUM WELDING QUALIFICATION CODES. ALUMINUM FILLER ALLOY SHALL BE ONE OF THE FOLLOWING: ER4043, ER5183, ER5356, ER5554, ER5556 AND ER5654.
- 7. THE CONTRACTOR SHALL SUBMIT COMPLETE SHOP DRAWINGS CONSISTING OF THREE PRINTS AND ONE REPRODUCIBLE SEPIA TO THE CONTRACT ADMINISTRATOR FOR APPROVAL
- PRIOR TO FABRICATION OF ALUMINUM TRAFFIC BARRIER COMPONENTS. 8. ANIT-SEIZE COATING TO BE APPLIED TO ALL THREADED COMPONENTS WHEN BEING ASSEMBLED [I.E., LPS-3 MANUFACTURED BY HOLT-LLOYD (CANADA) LTD. MARKHAM, ONT. L3R 2Z3].

<u>NOTE</u>

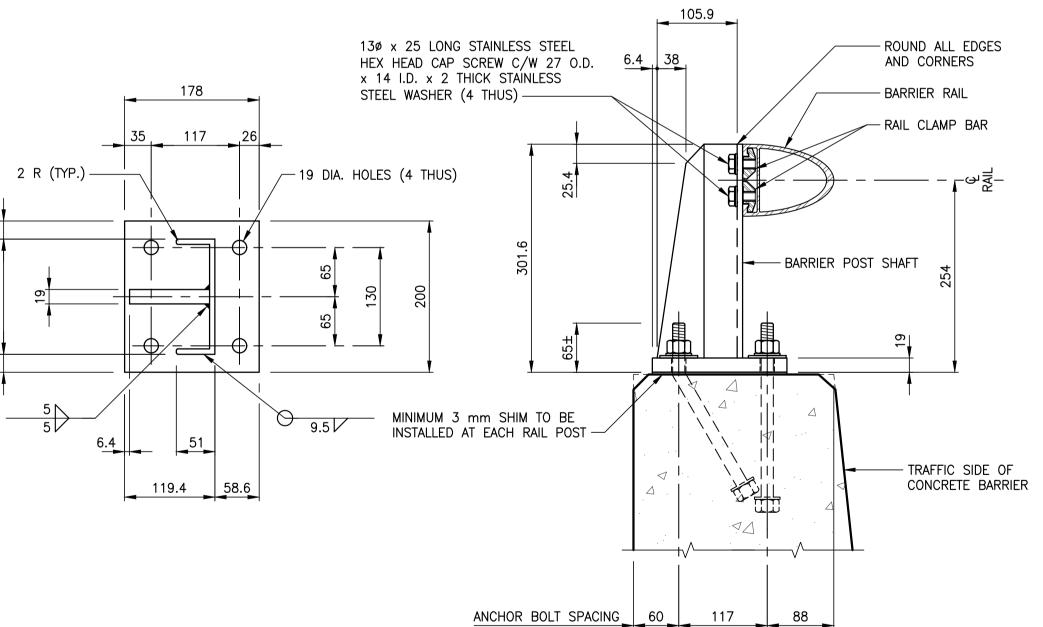
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- 2. A COMBINATION OF 1.5, 3.0 AND/OR 6.0 mm THICK ALUMINUM RAIL POST OR END PLATE SHIMS ARE TO BE USED AS REQUIRED TO SET THE BARRIER RAIL TO THE SPECIFIED HEIGHT (MINIMUM 3.0 mm SHIM REQUIRED AT EACH POST OR PLATE.
- 3. ALL EDGES AND CORNERS OF THE BARRIER POST PLATES AND EXTRUSIONS SHALL BE ROUNDED IN THE SHOP, TO A SMOOTH 2 mm RADIUS TO THE SATISFACTION OF THE CONTRACT ADMINISTRATOR.
- 4. BOTTOM SURFACE OF SHIM (SURFACE IN CONTACT WITH CONCRETE) IS TO BE PAINTED WITH 2 COATS OF ALKALI RESISTANT BITUMINOUS PAINT, EACH COAT BEING 1 mm IN THICKNESS.





<u>PLAN</u>

RAIL END SECTION DETAIL SCALE 1:10



NORTH

47.6 47.6 — 14.3 x 25.4 SLOTTED HOLE IN POST (TYPICAL) 30 70 70 30 POST 200

REAR VIEW

152.4

SIDE VIEW

ALUMINUM TRAFFIC BARRIER RAIL POST DETAILS

METRIC

ALL MEASUREMENTS IN MILLIMETRES UNLESS OTHERWISE STATED

ENGINEERS GEOSCIENTISTS **Certificate of Authorization WSP Canada Group Limited** No. 6657

UNDERGROUND STRUCTURES DATE SUPV U/G STRUCTURES OCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE BUT NO GUARANTEE IS GIVEN THAT ALL XISTING UTILITIES ARE SHOWN OR THAT THE GIVEN OCATIONS ARE EXACT CONFIRMATION OF EXISTANCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING

REVISIONS

LOCATIONS APPROVED G.B.M. = TOP NUT OF FIRST HYDRANT SOUTH OF INTERSECTION WSP Canada Group Limited BETWEEN NESS AVENUE AND LINWOOD STREET 93 Lombard Avenue, Suite 111 Winnipeg MB R3B 3B1 ELEV. = 233.659 T+ 1 204-943-3178 F+ 1 204-943-4948 www.wsp.com DESIGNED CHECKED MLW WC DRAWN APPROVED CP AS NOTED HOR. SCALE RELEASED FOR AS NOTED ISSUED FOR TENDER VERTICAL

DATE BY DATE

17.11.23

DATE

TOP VIEW

WADELIUS Member

17M-00806-00

THE CITY OF WINNIPEG PUBLIC WORKS DEPARTMENT

Winnipeg **ENGINEERING DIVISION** TRURO CREEK CULVERT REPLACEMENT

AT WINCHESTER STREET

ALUMINUM TOP RAIL DETAILS

(SHEET 1 OF 2)

C322-17-17 BID OPPORTUNITY NUMBER 1014-2017 SHEET rev 0

CITY DRAWING NUMBER

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