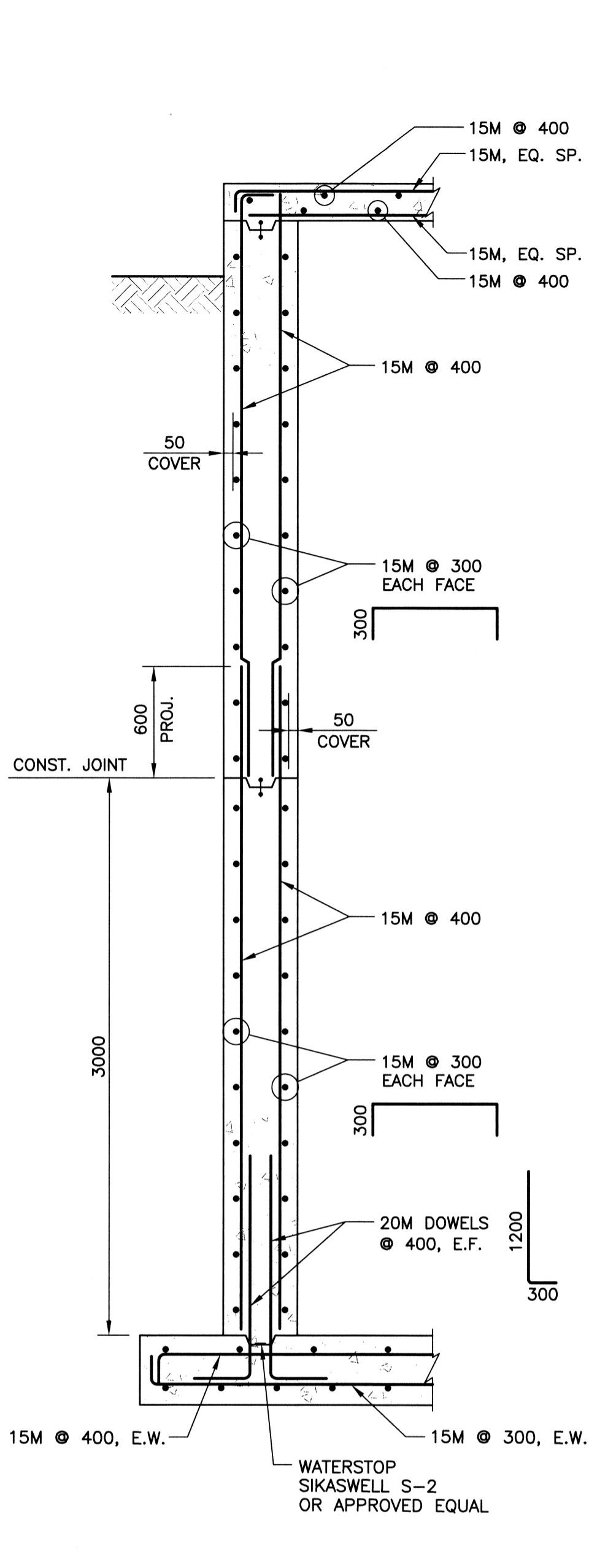
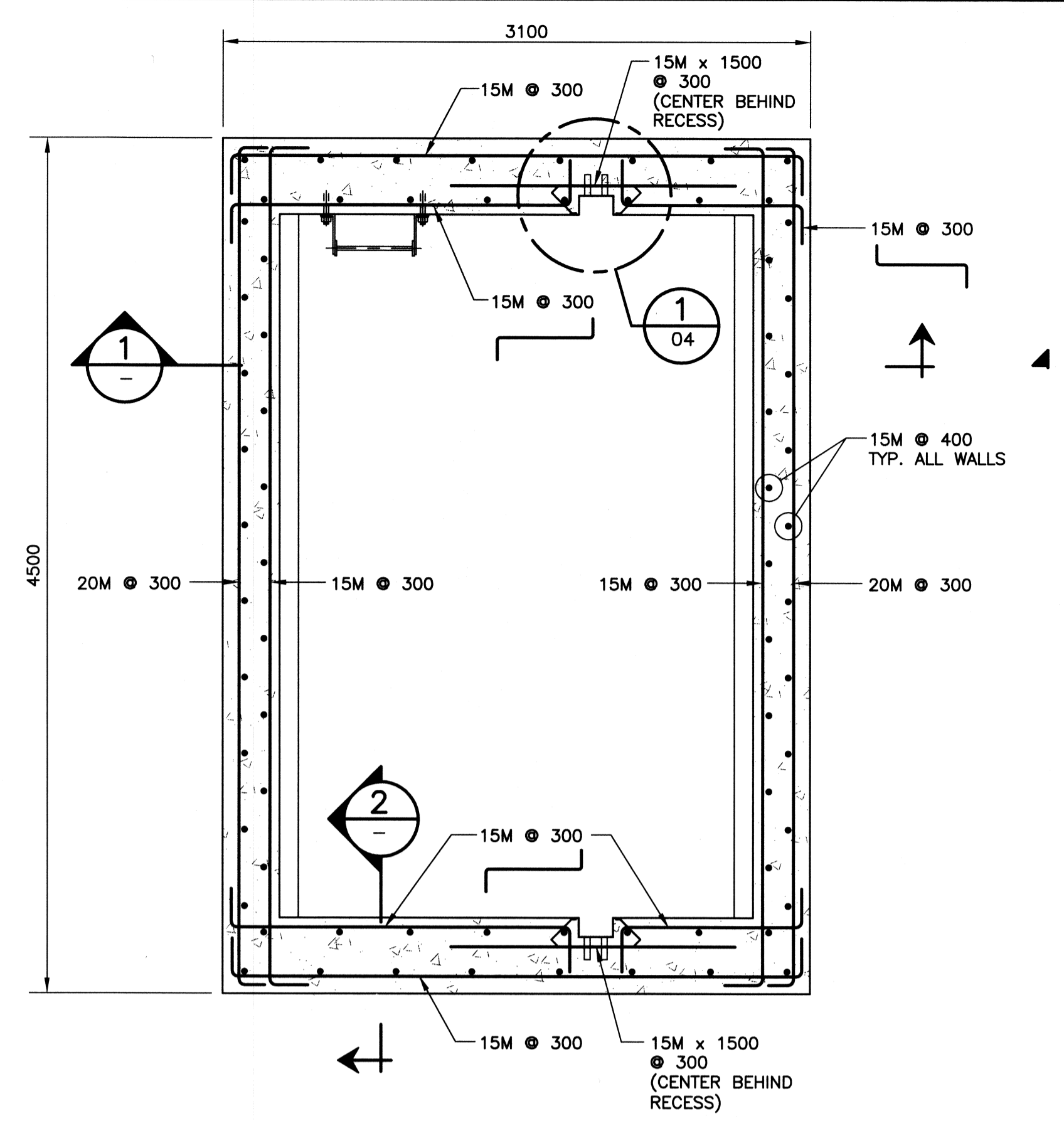


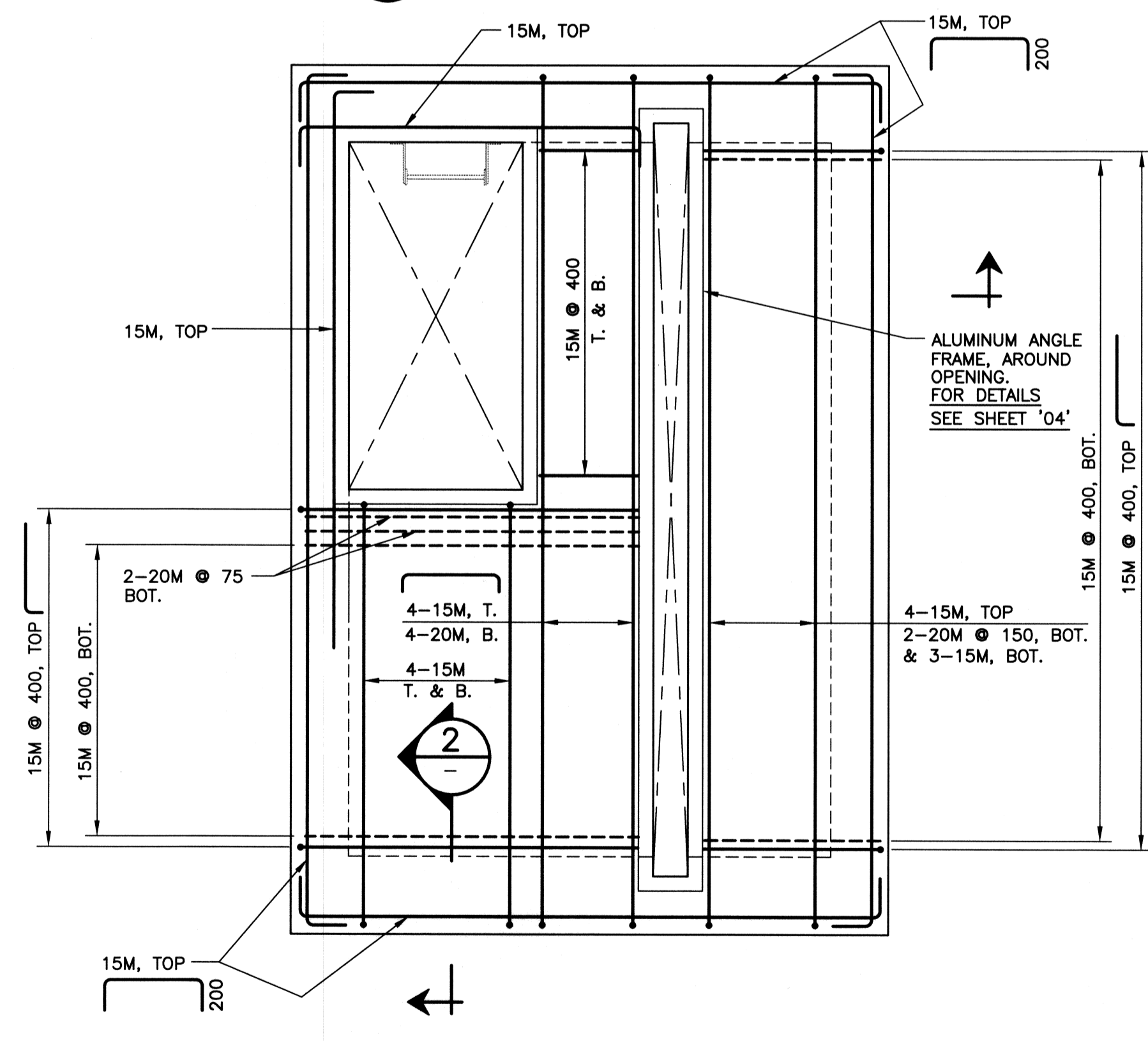
1 SECTIONAL ELEVATION
SCALE: 1:25



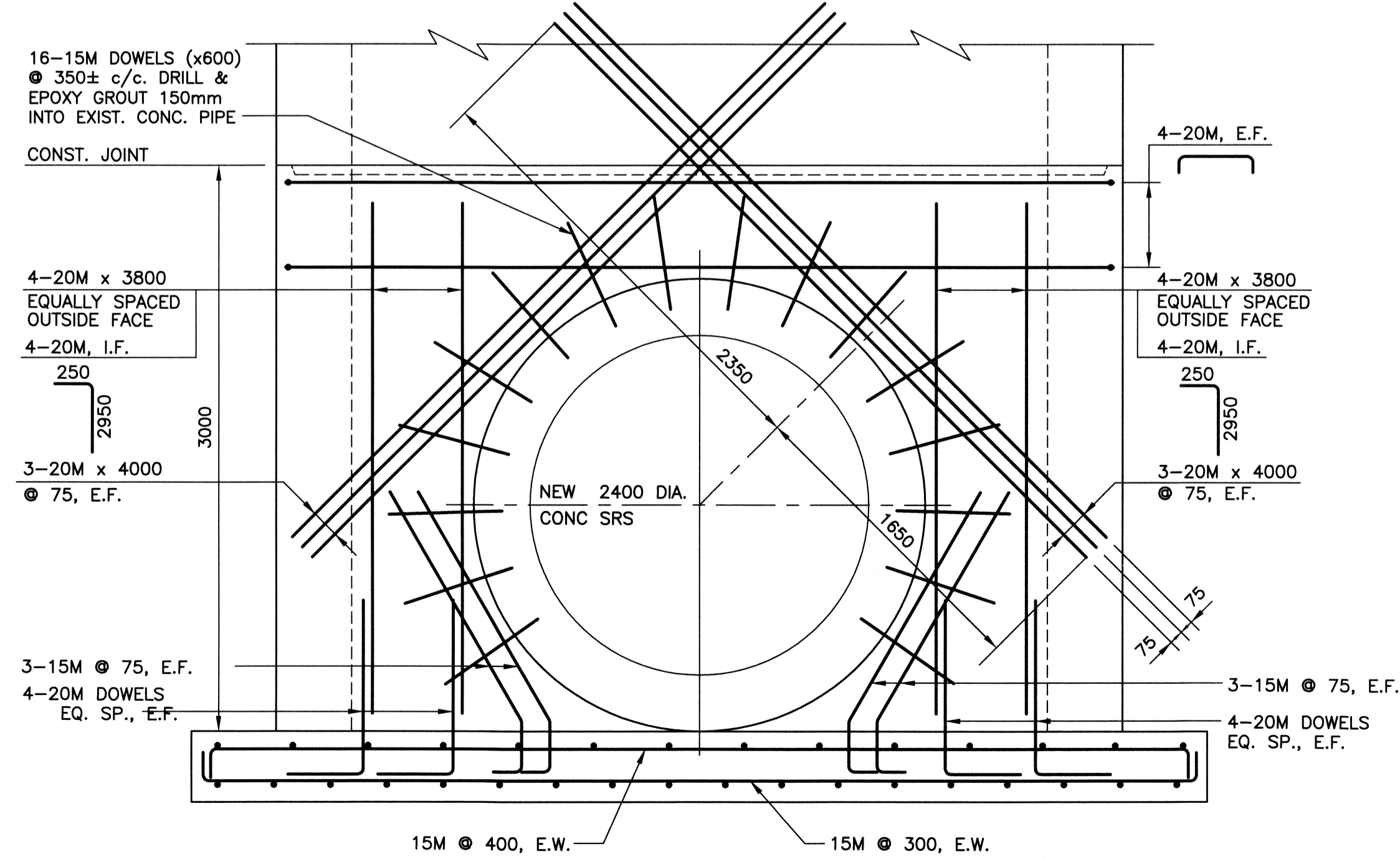
2 PART SECTIONAL ELEV.
SCALE: 1:25



3 SECTIONAL PLAN
SCALE: 1:25



4 PLAN - ROOF SLAB
SCALE: 1:25



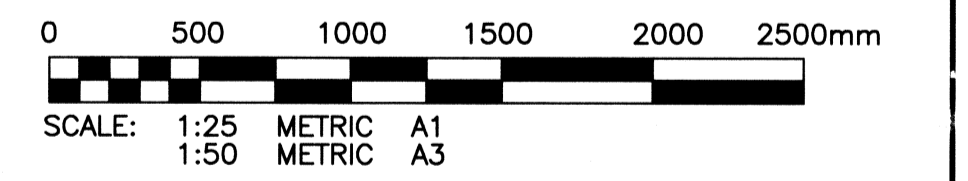
5 PART ELEVATION
SCALE: 1:25

6 PART ELEVATION (SIMILAR)
SCALE: 1:25

- NOTES:**
- CONCRETE**
- CONCRETE MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH CAN/CSA-A23.1/ A23.2 (LATEST). SEE BELOW FOR MIX REQUIREMENTS.
 - CONCRETE MATERIALS, FORMING, PLACING, FORM REMOVAL, REINFORCING, ETC. TO ACI RECOMMENDATIONS AND ACCEPTABLE PRACTICE.
 - MIX WATER SHALL BE POTABLE. CALCIUM CHLORIDE SHALL NOT BE USED.
 - PROVIDE ADEQUATE FROST PROTECTION FOR CONCRETE DURING CURING PERIOD.
 - CONCRETE MIX DESIGN SHALL BE PROPORTIONED AS FOLLOWS:

28 DAY COMP. STRENGTH	30 MPa
CEMENT	TYPE MS
W/C RATIO	0.45
AGGREGATE SIZE (MAX.)	3/4"
ENTRAINED AIR	4%-6%
SLUMP (MAX.)	90mm (±10mm)
 - FOR WALL POURS SUPPLY SUPER PLASTICIZER (SLUMP PRIOR TO ADDING PLASTICIZER TO BE 60mm ±10mm AND 200mm ±25mm WITH PLASTICIZER).

- REINFORCING STEEL**
- REINFORCING STEEL TO BE NEW DEFORMED BILLET STEEL BARS CONFORMING TO CAN/CSA G30.18-M92. GRADES TO BE: 400 MPa FOR 15M BARS AND LARGER; 300 MPa FOR 10M BARS.
 - REINFORCING STEEL SHALL BE CLEAN, FREE OF RUST, DIRT, LOOSE SCALE, OIL, GREASE OR ANY OTHER MATERIAL WHICH WOULD REDUCE BOND WITH THE CONCRETE.
 - PROVIDE MINIMUM CONCRETE COVER FOR REINFORCING AS SHOWN ON DRAWING.



METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

APEGN
Certificate of Authorization
KGS Group
No. 245 Date: 16/02/07

PROJECT COMPLETION DATE

LOCATION APPROVED
UNDERGROUND STRUCTURES

SUPV. U/G STRUCTURES COMMITTEE DATE

NOTE:
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.

NO.	REVISIONS	DATE	BY
0	ISSUED FOR TENDER	03/12/07	RJH

KGS GROUP CONSULTING ENGINEERS & PROJECT MANAGERS
WINNIPEG (204) 896-1209
THUNDER BAY (807) 345-2233

DESIGNED BY: RJL
CHECKED BY: RJL

DRAWN BY: JF
APPROVED BY:

HOR. SCALE: 1:250
VERTICAL:

RELEASED FOR CONSTRUCTION: DATE

ENGINEER'S SEAL
R.J. LONG
REGISTERED PROFESSIONAL ENGINEER

CONSULTANT DRAWING NO.
07-0107-08 09

THE CITY OF WINNIPEG
WATER & WASTE DEPARTMENT

Fort Rouge Park
OUTFALL PIPE REPLACEMENT

SHEET 09 OF 10
CAD FILE DRAWING NUMBER 07-0107-08-09
CITY DRAWING NUMBER LD-3781

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PLOT 1:1 A1