

NOTES:

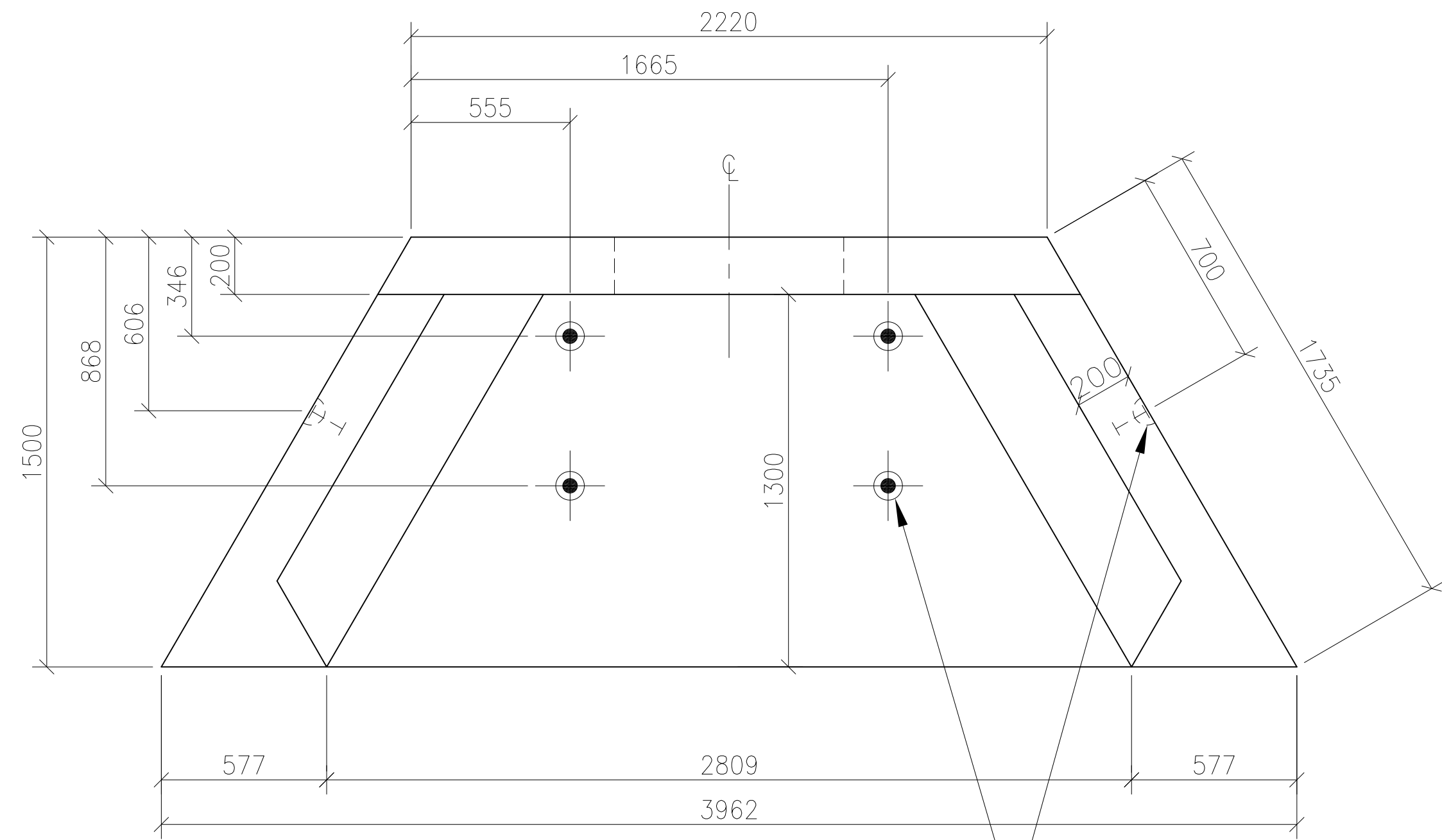
- GENERAL**
1. FOR HANDLING, STORAGE, TRANSPORTATION AND ERECTION PROCEDURES PLEASE REFER TO "PRECAST HEADWALL INSTALLATION GUIDE" AND "DAYTON/RICHMOND GUIDELINES FOR HANDLING CONCRETE PIPE AND UTILITY PRODUCTS".
 2. WEIGHT = 5400 kgs
 3. TOLERANCE FOR STRUCTURAL ELEMENTS, MATERIALS & CONSTRUCTION CONFORM TO CAN/CSA A23.4 "PRECAST CONCRETE" CLAUSE 10.
 4. PRECAST HEADWALL MUST BE FASTENED TO REINFORCED CONCRETE PIPE WITH SHAW SUPPLIED HARDWARE (SEE HEADWALL INSTALLATION GUIDE).

- GEOTECHNICAL**
1. GEOTECHNICAL ENGINEER TO PROVIDE ON-SITE INSPECTION FOR PLACEMENT AND COMPACTION OF BACKFILL.

- DESIGN**
1. THIS STRUCTURE HAS BEEN DESIGNED IN ACCORDANCE WITH CAN/CSA 56.06 UNDER THE FOLLOWING DESIGN PARAMETERS:
 - DESIGN DEAD LOAD = 2H:1V EARTH FILL TOP SLOPE.
 - CONCRETE UNIT WEIGHT = 24.0 kN/m³
 - SOIL/BACKFILL UNIT WEIGHT = 22.0 kN/m³

- REINFORCEMENT**
1. ALL REINFORCING STEEL SHALL BE GRADE 400W AND CONFORM TO CAN/CSA G30.18 (LATEST EDITION).
 2. ALL WELDED WIRE MESH SHALL HAVE A Fy = 485 MPA AND CONFORM TO ASTM A496 AND A497.
 3. ALL REINFORCING SHALL BE DETAILED, FABRICATED, PLACED AND SUPPORTED IN ACCORDANCE WITH CAN/CSA A23.4 (LATEST EDITION).
 4. THE CONCRETE COVER OVER PRINCIPAL REINFORCING SHALL BE 50mm ± 10mm AS REQUIRED BY ENVIRONMENTAL EXPOSURE 8.11.2.2 (c) IN CAN/CSA 56.06.

- CONCRETE**
1. CONCRETE MIX DESIGNS SHALL CONFORM TO REQUIREMENTS SET FORTH IN CAN/CSA A23.1 EXPOSURE CLASS F-1:
 - CONCRETE STRENGTH = 14 MPA AT TIME OF STRIPPING
 - DESIGN CONCRETE STRENGTH OF 45 MPA AT 28 DAYS OR TIME OF SHIPPING
 - 5% TO 7% AIR ENTRAINMENT
 - GALLANT AGGREGATE SHALL BE USED WITH A NOMINAL AGGREGATE SIZE OF 13mm
 2. CONCRETE CURING SHALL BE IN CONFORMANCE WITH CAN/CSA A23.1 (LATEST EDITION).
 3. SHAW CONCRETE BATCH No. SHALL BE 406.



PLAN VIEW

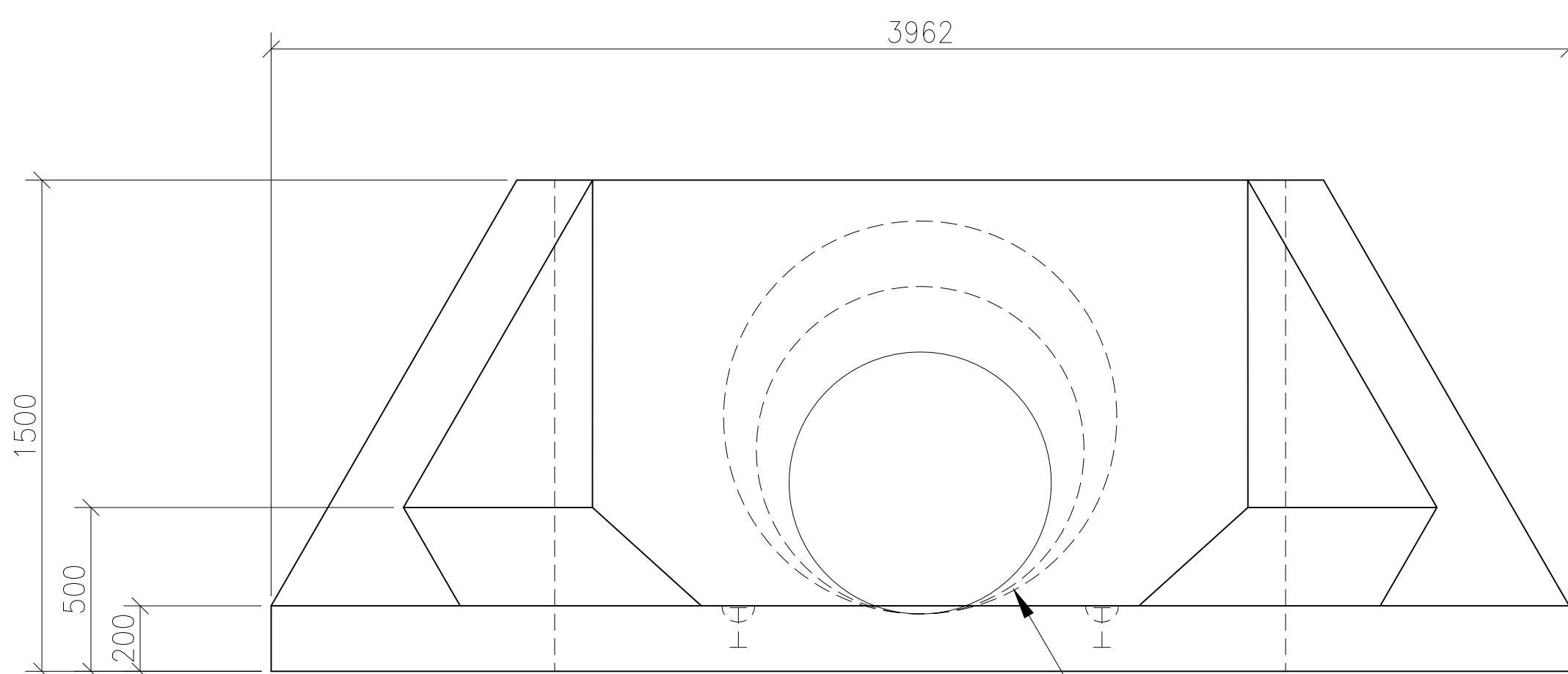
MEADOW BURKE 4 TON x 140mm DOG-BONE LIFT ANCHOR OR EQUIVALENT

SHAW SUPPLIED ITEMS	
3	STAINLESS STEEL "L" BRACKETS
6	19mmØ (¾") HDI STAINLESS ANCHORS BY HILTI
6	19mmØ (¾") x 380mm (1½") BOLTS
6	19mmØ (¾") WASHERS

1500x1500 HEADWALL	
STANDARD PIPE OPENINGS	
RCP SIZE	OPENING
600mm	800mm (32")
750mm	1000mm (40")
900mm	1200mm (48")

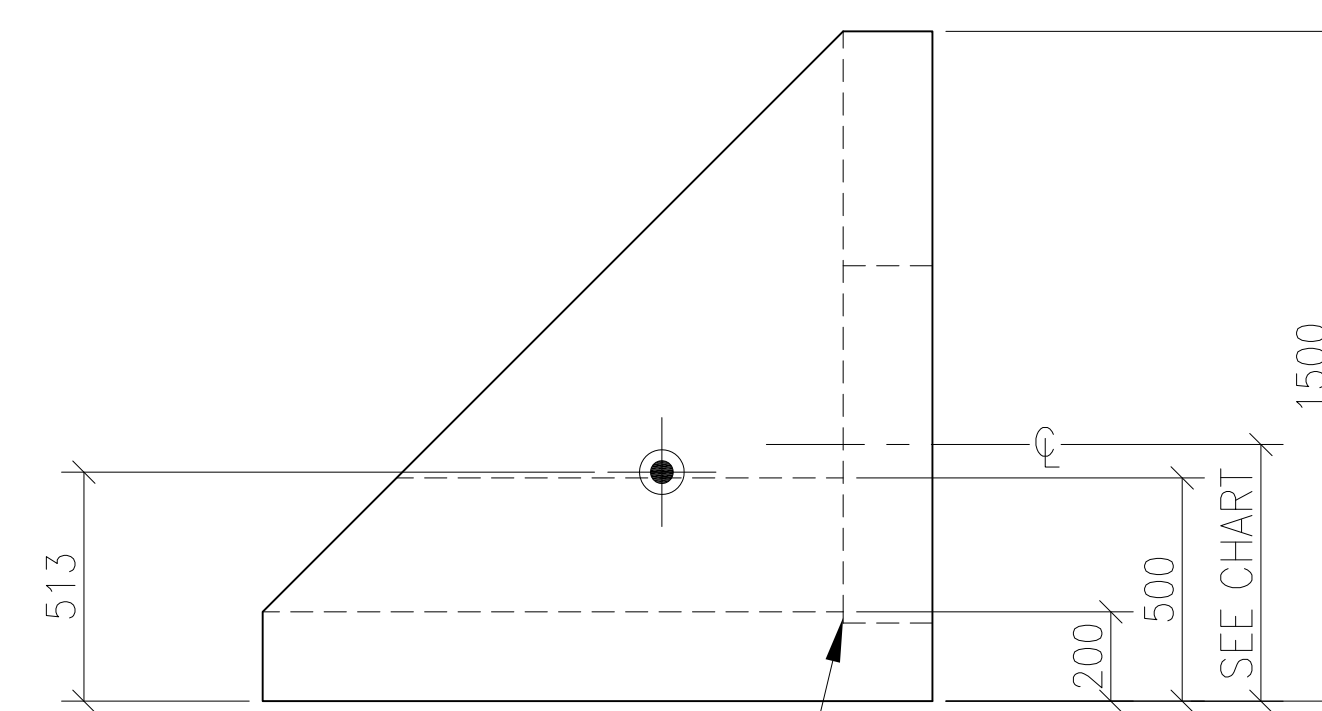
PRODUCT CODE: HRMHW600
 PRODUCT CODE: HRMHW750
 PRODUCT CODE: HRMHW900

1500x1500 HEADWALL	
SPECIAL PIPE OPENINGS	
RCP SIZE	OPENING
300mm	450mm (18")
375mm	550mm (22")
450mm	625mm (24")
525mm	725mm (28")



FRONT VIEW

1500 HEADWALL MAY ACCOMMODATE ALL PIPE SIZES FROM 300mm TO 900mm SEE PIPE OPENINGS TABLE



RECESSED OPENING IN FLOOR OF HEADWALL VARIES DEPENDING ON PIPE SIZE TO ALLOW INVERT OF PIPE TO BE FLUSH WITH FLOOR.

SIDE VIEW

1500 HEADWALL	
CENTERLINE (mm)	OPENING DIST. TO C
450	374
550	418
625	449
725	493
800	524
1000	611
1200	680

REV. NO.	REVISION	DATE

SHAW
 PRECAST SOLUTIONS

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ISO 9001
 ISO 9002

DRAWING No. **STD-HW1500**

PROJECT TITLE:
 STANDARD PRODUCT

DRAWING TITLE:
 1500x1500 HRM STYLE HEADWALL TO SUIT 300Ø - 900Ø PIPE

GEOMETRY

CONTRACTOR

DATE: MAY 2012 DESIGNED: STAFF

DRAWN: M.CAMERON CHECKED: STAFF