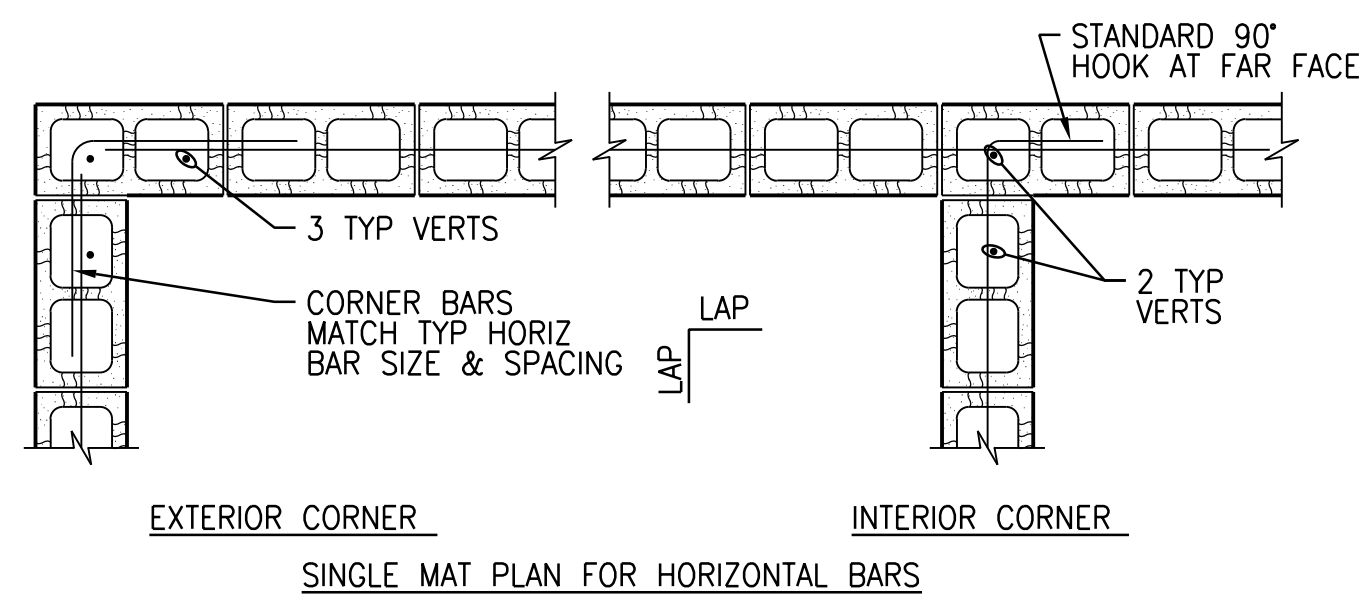
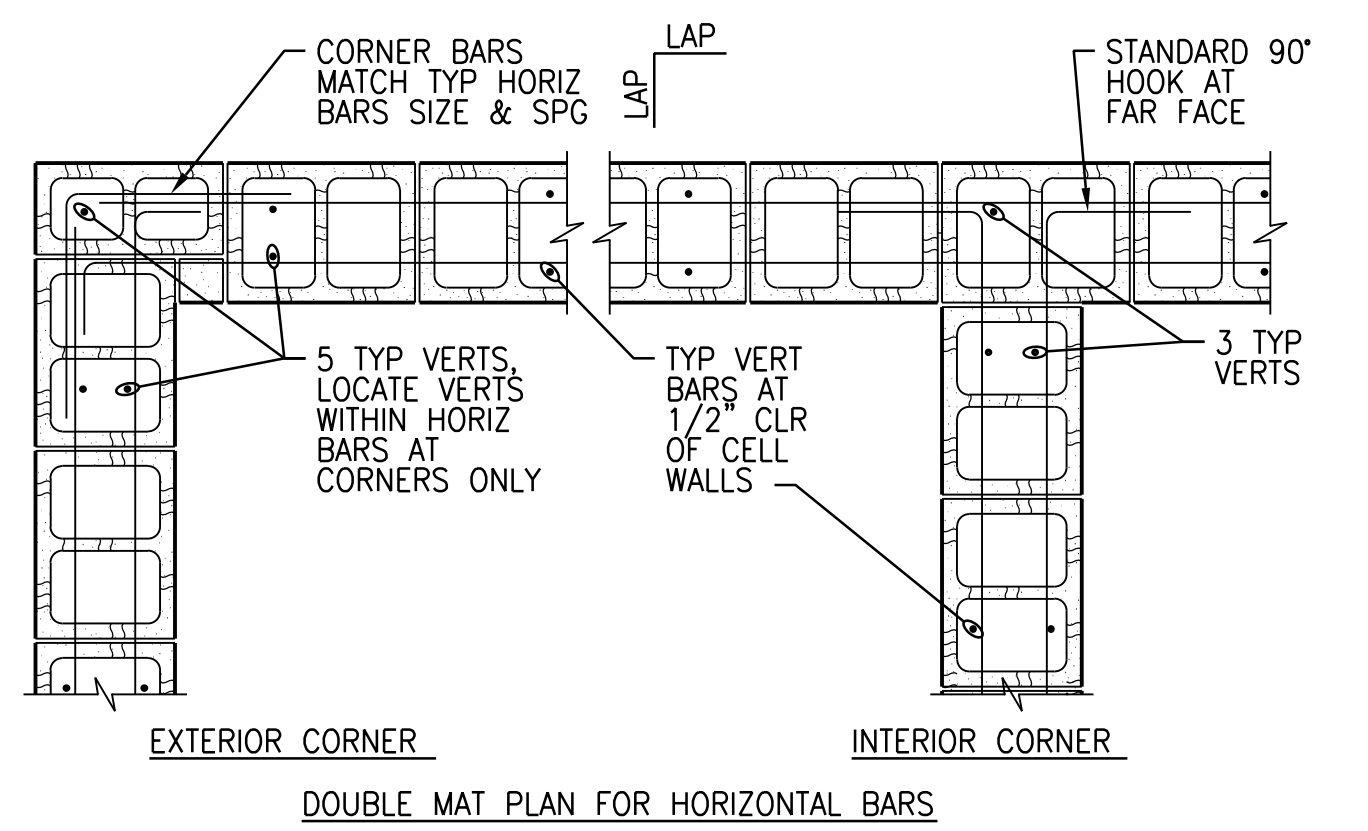


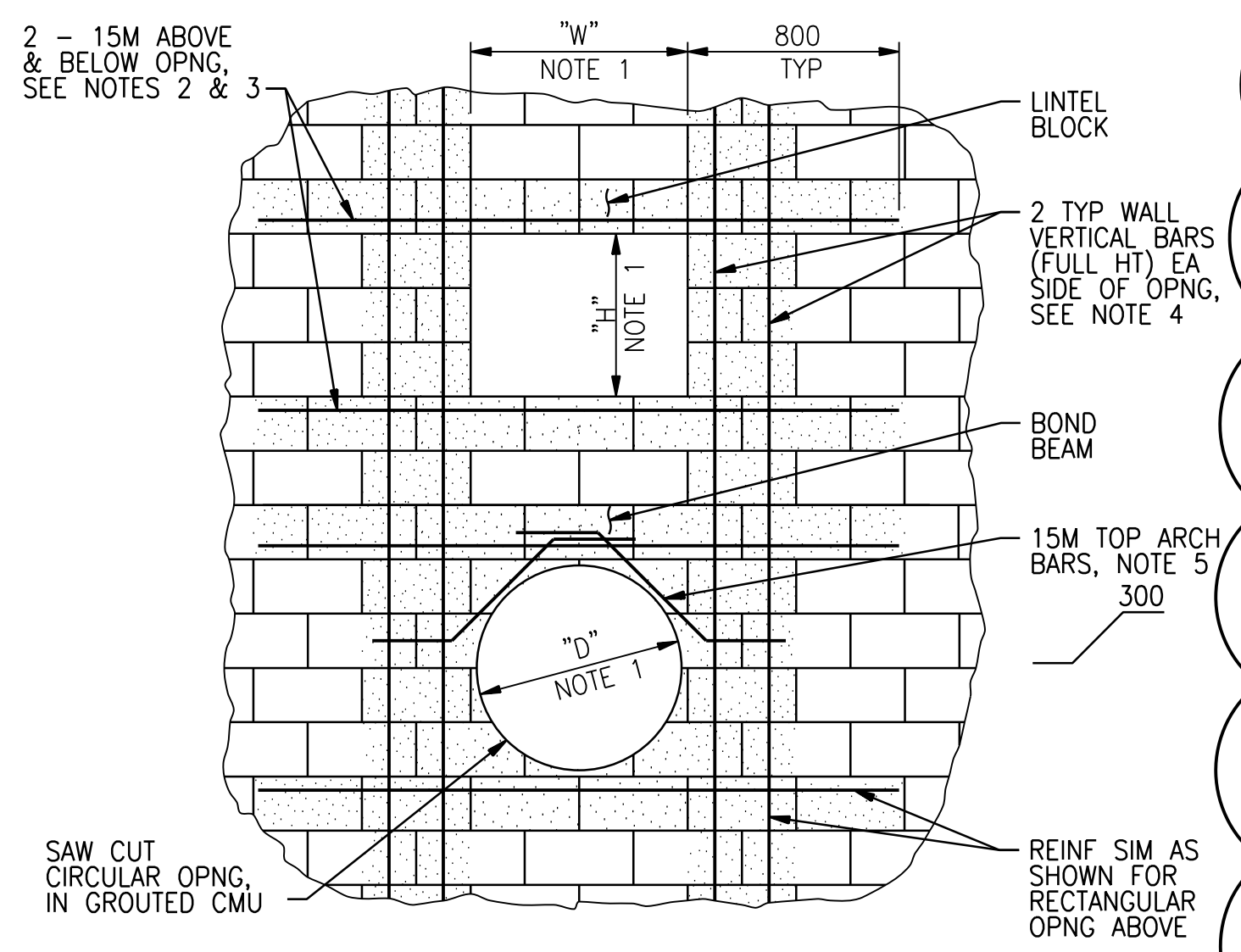
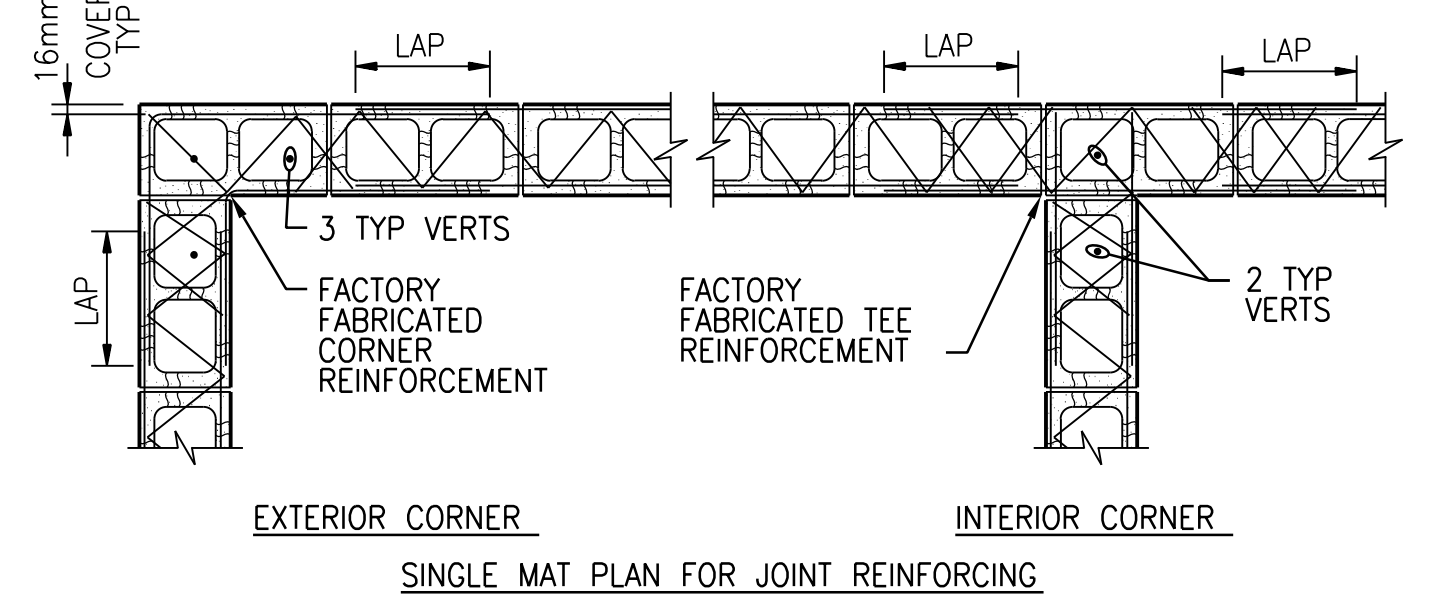
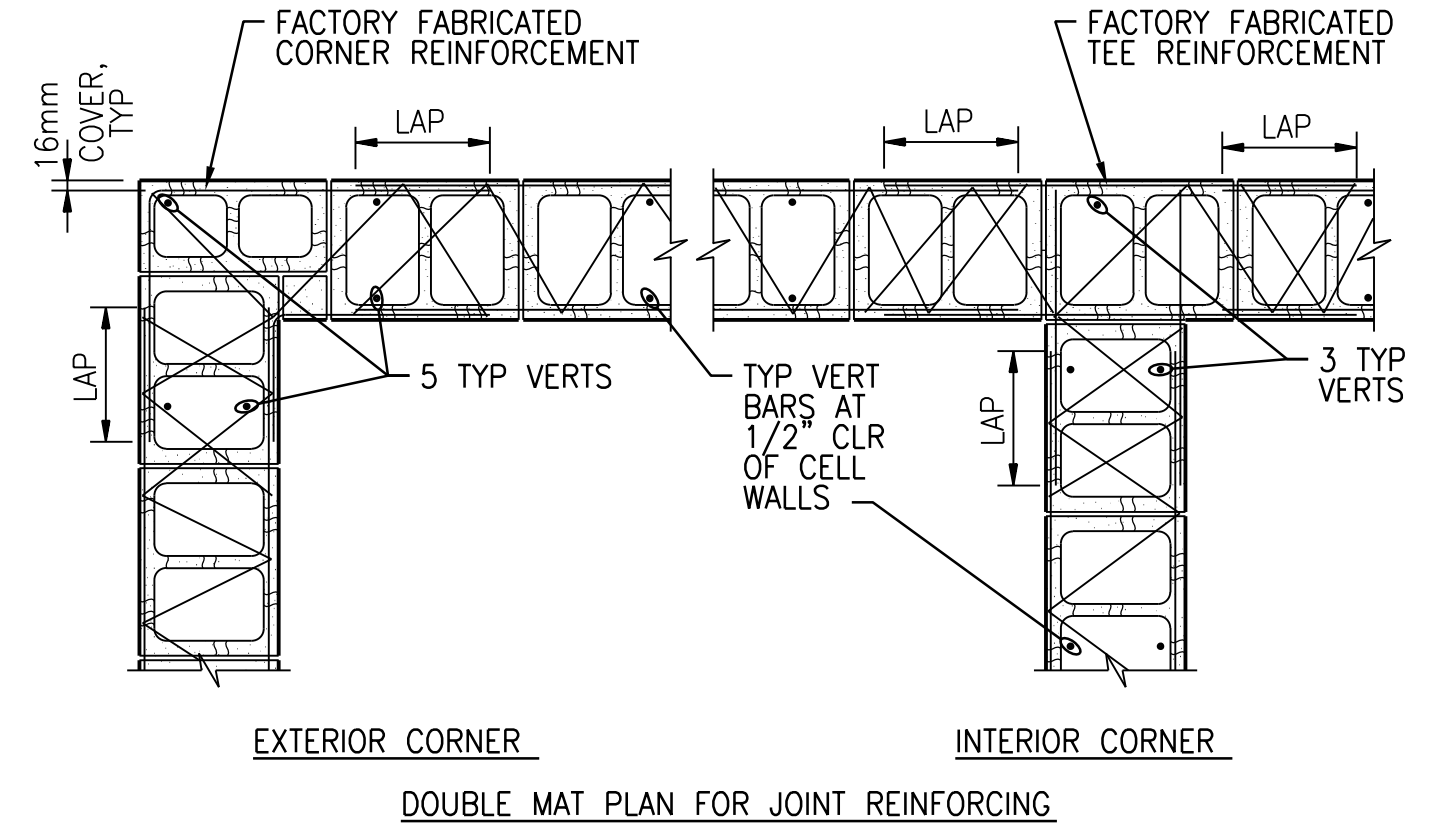
A1 SIZE - 594mm x 841mm



- NOTES:
- LAP = 400mm MINIMUM FOR JOINT REINFORCING UNLESS NOTED OTHERWISE.
 - LAP=48 BAR DIAMETERS, BUT NOT LESS THAN 600mm FOR HORIZONTAL BARS UNLESS NOTED OTHERWISE.

REINFORCED MASONRY WALL CORNERS(SINGLE & DOUBLE MAT)

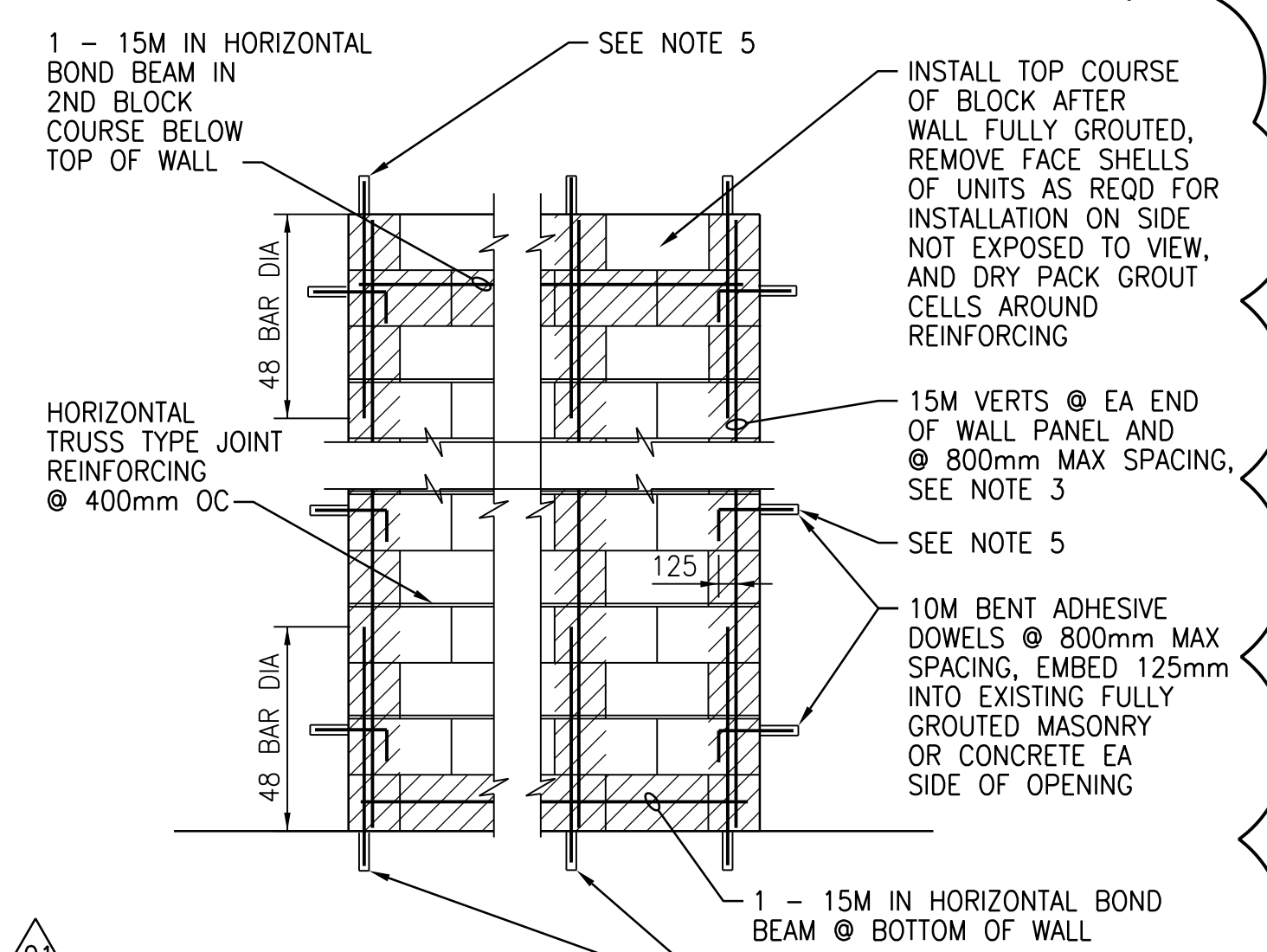
0422-001



- NOTES:
- TYPICAL FOR ALL OPENINGS WITH (W, H, OR D) 600mm OR GREATER AND 1200mm OR LESS, UNLESS NOTED OTHERWISE. SEE PLANS FOR LARGER OPENINGS.
 - AT ADJACENT OPENINGS WITH LESS THAN 2400mm WALL BETWEEN, CONTINUE HORIZONTAL REINFORCING TO 800mm BEYOND FURTHEST OPENING.
 - AT OPENINGS LOCATED WITHIN 800mm OF CORNER, CONTINUE HORIZONTAL REINFORCING AROUND CORNER PER DETAIL (0422-001)
 - LOCATE VERTICAL BARS CENTERED IN 2 ADJACENT CELLS IN 200mm WALLS, AND EACH FACE IN SINGLE GROUT CELL IN 300mm WALLS. LAP 48 BAR DIAMETERS WITH MATCHING FOUNDATION DOWELS.
 - LOCATE 15M ARCH BARS CENTERED IN 200mm WALLS, AND EACH FACE IN 300mm WALLS.

CMU OPENING REINFORCING

0422-002

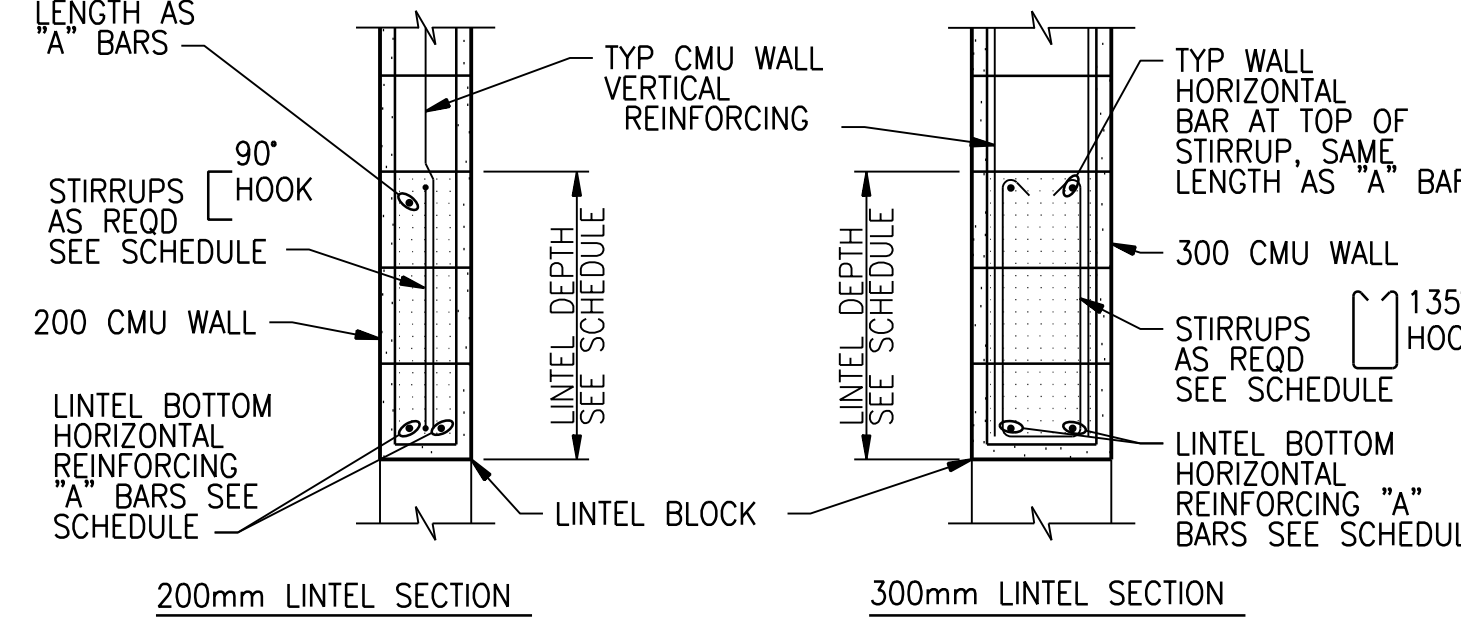
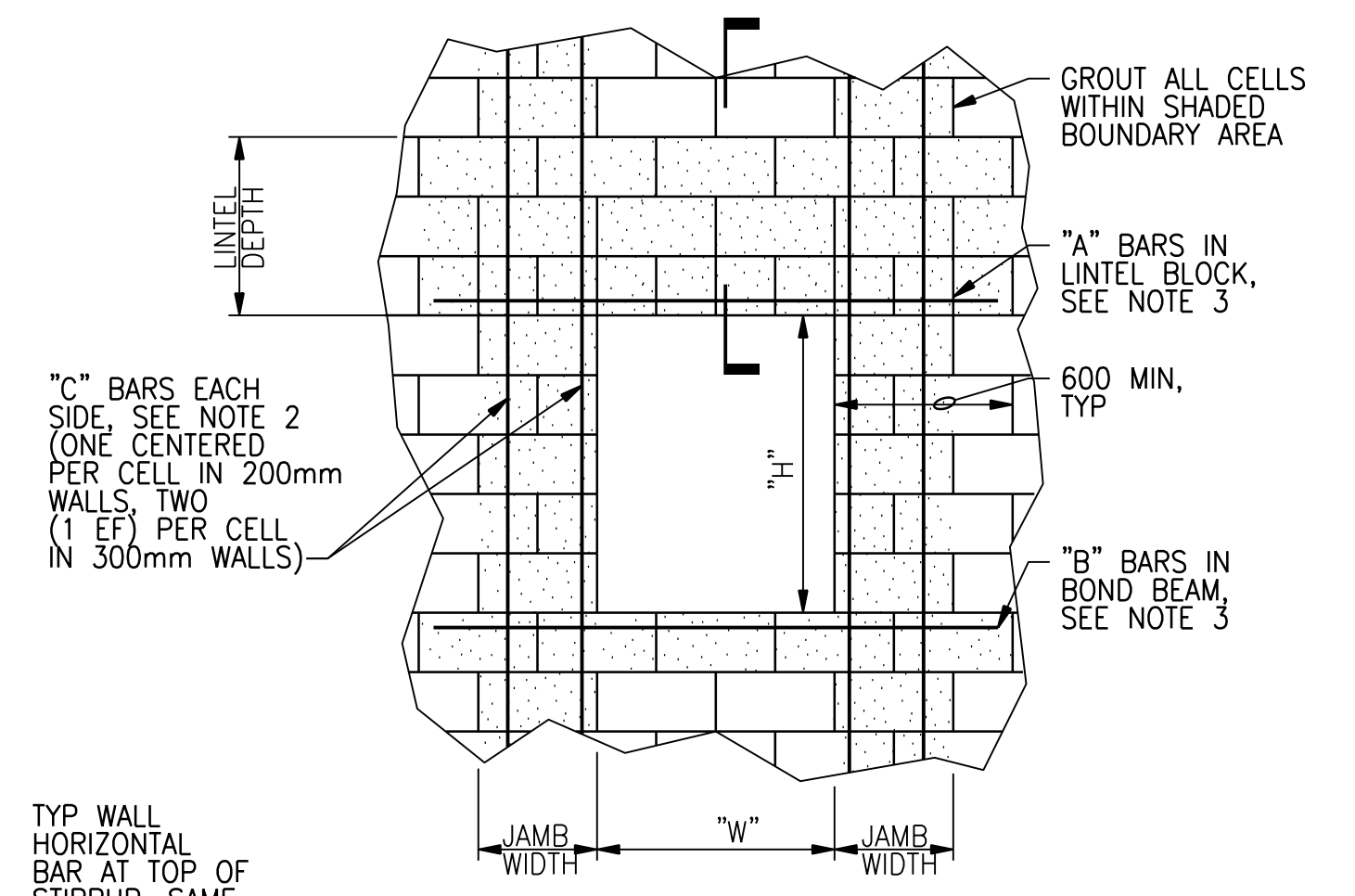


- NOTES:
- BLOCK INFILL TO MATCH EXISTING ADJACENT BLOCK SIZE, COLOR, TEXTURE, JOINT, STACKED OR RUNNING BOND.
 - FOR WALL PANELS WITH OPENINGS TO BE FILLED THAT ARE IN EXCESS OF 30% OF WALL AREA, REPLACE WALL PANEL COMPLETE.
 - LAP VERTICAL BARS 48 BAR DIAMETERS WITH TOP AND BOTTOM DOWELS AS SHOWN. ALL INTERMEDIATE LAPS SHALL BE 72 BAR DIAMETERS.
 - USE OPEN-ENDED CMU UNITS AS REQUIRED TO CONSTRUCT WALL.
 - CONTRACTOR'S OPTION TO USE DOWEL BAR SPLICERS IN PLACE OF DRILL-IN DWLS WHERE LOCATED BESIDE COLS AND UNDER BEAMS, TYP

CMU WALL OPENING INFILL

0422-010

CMU OPENING REINFORCING SCHEDULE						
200mm WALLS						
W	LINTEL DEPTH	STIRRUP SIZE, SPG	"A" BARS	"B" BARS	"C" BARS	JAMB WIDTH
≤800	200mm	-	1	1	1	200mm
>800≤1200	400mm	-	2	1	1	200mm
>1200≤1800	600mm	10M@200	2	1	2	400mm
>1800≤2400	800mm	10M@400	2	2	3	600mm
>2400≤3000	1200mm	10M@600	2	2	3	600mm
300mm WALLS						
W	LINTEL DEPTH	STIRRUP SIZE, SPG	"A" BARS	"B" BARS	"C" BARS	JAMB WIDTH
≤800	200mm	-	2	2	2	200mm
>800≤1200	400mm	-	2	2	2	200mm
>1200≤1800	600mm	10M@200	2	2	4	400mm
>1800≤2400	800mm	10M@400	2	2	6	600mm
>2400≤3000	1200mm	10M@600	2	2	6	600mm

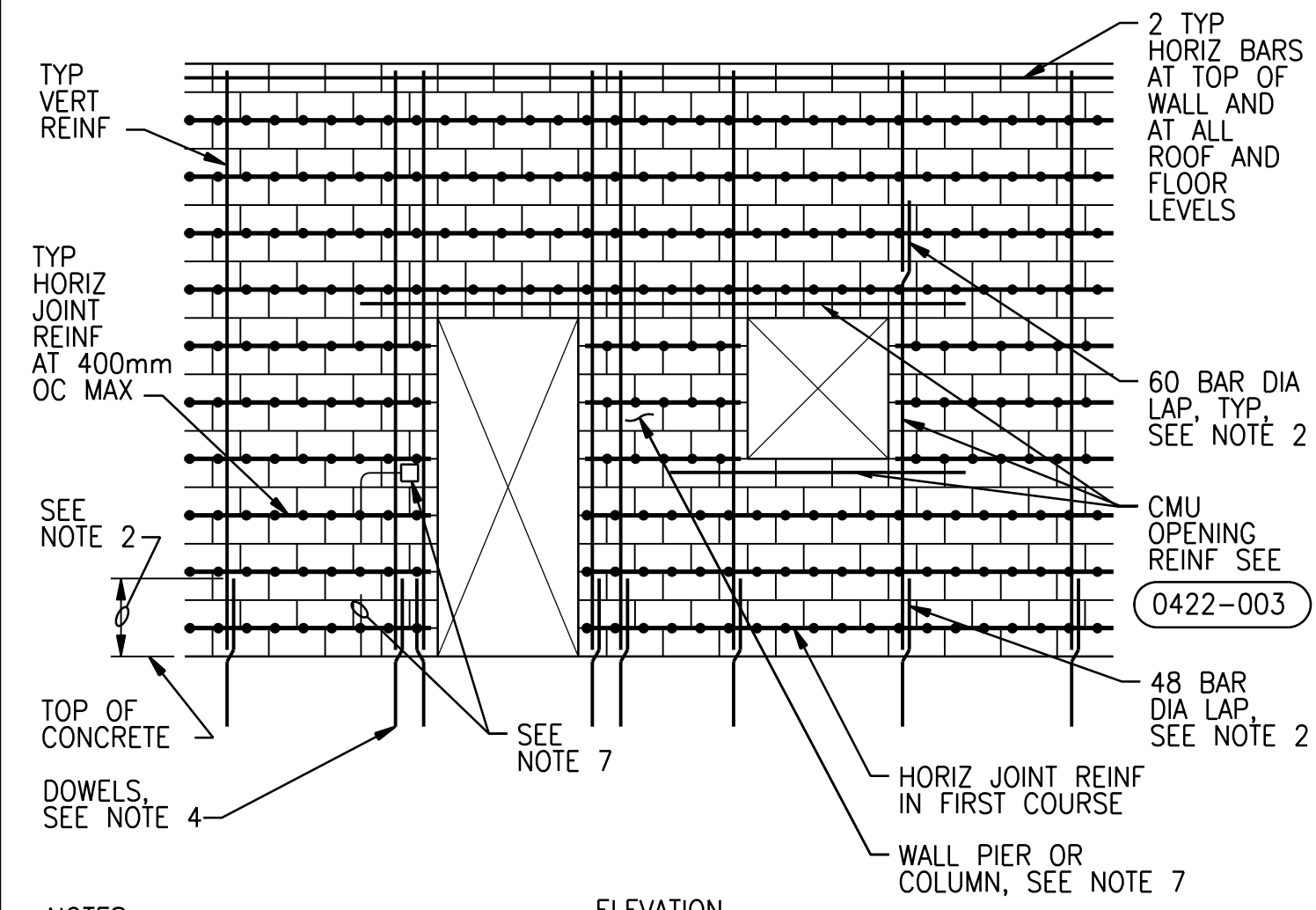


- NOTES:
- USE BAR QUANTITIES AND SIZES GIVEN IN LINTEL SCHEDULE UNLESS OTHERWISE NOTED ON THE DRAWINGS.
 - EXTEND "C" BARS 48 BAR DIAMETERS OR 600mm MINIMUM BEYOND TOP AND BOTTOM OF OPENING EXCEPT THAT WHEN "H" OR "W" EXCEEDS 600mm, "C" BARS SHALL EXTEND FULL HEIGHT. WHERE THERE IS LESS THAN 2400mm BETWEEN ADJACENT OPENINGS, EXTEND REINFORCING CONTINUOUS TO 800mm BEYOND FURTHEST OPENING.
 - "A" AND "B" BARS SHALL EXTEND 48 BAR DIAMETERS OR 600mm MINIMUM EACH SIDE OF THE OPENINGS.
 - FOR BAR SIZES, MATCH TYPICAL WALL REINFORCING AS SHOWN ON THE BUILDING WALL SECTIONS.

CMU OPENING REINFORCING

NTS

0422-003

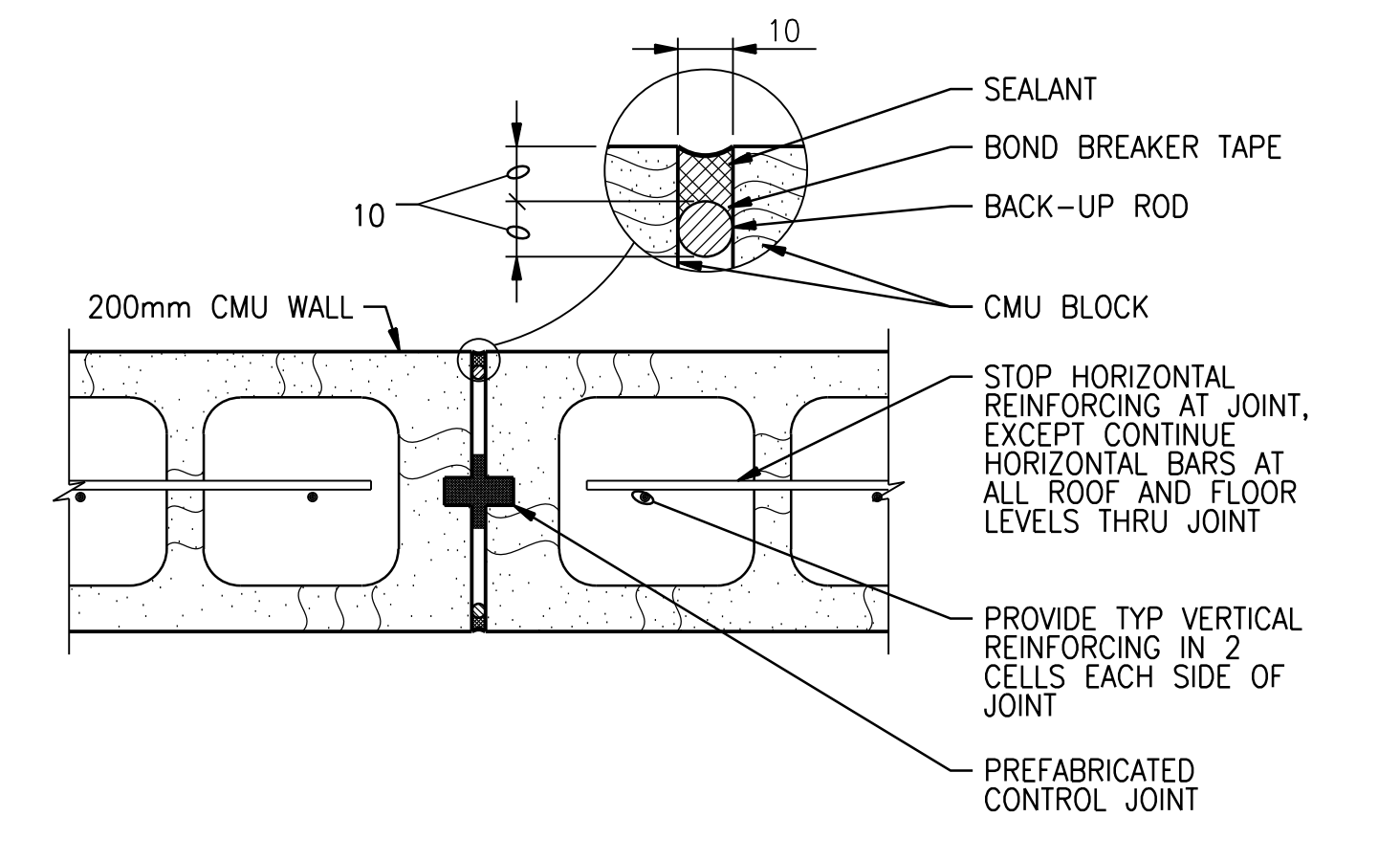


- NOTES:
- FOR TYPICAL WALL REINFORCING, SEE WALL SECTIONS AND DETAILS FOR EACH FACILITY. FOR MINIMUM REINFORCING REQUIREMENTS, SEE GENERAL STRUCTURAL NOTES.
 - LAP VERTICAL REINFORCING WITH WALL DOWELS 48 BAR DIAMETERS (600mm MIN), LAP ALL OTHER VERTICAL BARS 60 BAR DIAMETERS.
 - HORIZONTAL JOINT REINFORCEMENT SPLICE = 400mm.
 - PROVIDE DOWEL BARS IN FOUNDATION TO MATCH ALL VERTICAL REINFORCING.
 - FOR ADDED REINFORCING AT WALL INTERSECTIONS AND CORNERS, SEE (0422-001)
 - GROUT EACH SIDE OF OPENING AS NOTED IN TYPICAL OPENING REINFORCING DETAIL (0422-003)
 - DO NOT PLACE VERTICAL CONDUIT IN THE SAME CELL AS VERTICAL REINFORCING.

INTERMEDIATE REINFORCED MASONRY SHEAR WALL

NTS

0422-004



- NOTE:
- SIMILAR DETAIL FOR 300mm CMU WALL WITH 2 LAYERS OF REINFORCING.

CMU CONTROL JOINT

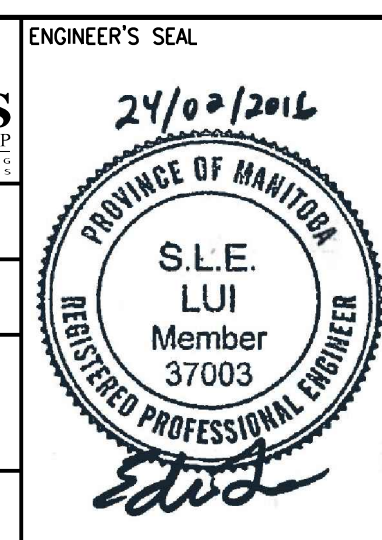
NTS

0422-031



NO.	REVISIONS	DATE	DESIGN	CHECK
01	ISSUED FOR ADD. 2 - B.O. 899-2015	02/2016	G.O. J.C.	
00	ISSUED FOR TENDER - B.O. 899-2015	01/2015	G.O. J.C.	

CH2MHILL		ENGINEER'S SEAL	
SNC-LAVALIN		24/02/2016	
DESIGNED BY: J. THANNICKAL	CHECKED BY: E. LUI		
DRAWN BY: G.OMORI	APPROVED BY: H.T. FREIHAMMER		
SCALE: NTS	ISSUED FOR CONSTRUCTION BY: T. TURZAK		
DATE: 2016/01/19	DATE: 2016/01/29		
CONSULTANT NO.: 474248			



THE CITY OF WINNIPEG
Winnipeg WATER AND WASTE DEPARTMENT

SOUTH END WATER POLLUTION CONTROL CENTRE
SEWPCU UPGRADING/EXPANSION PROJECT
STRUCTURAL
STANDARD DETAILS (14)

CITY DRAWING NUMBER: 1-0102-SDTL-A015
SHEET: 01
REV: A1
SIZE: A1

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