

CONCRETE REINFORCEMENT DEVELOPMENT / SPLICE LENGTHS

BAR SIZE	BAR DIA. (inches)	3 BAR DIAMETERS (inches)	SPLICE LENGTH	
			TOP BARS	OTHER BARS
#3	0.375	1.125	24	19
#4	0.5	1.500	32	25
#5	0.625	1.875	40	31
#6	0.75	2.250	48	37
#7	0.875	2.625	70	54
#8	1.000	3.000	80	62
#9	1.125	3.375	91	70
#10	1.250	3.750	102	79
#11	1.375	4.125	113	87

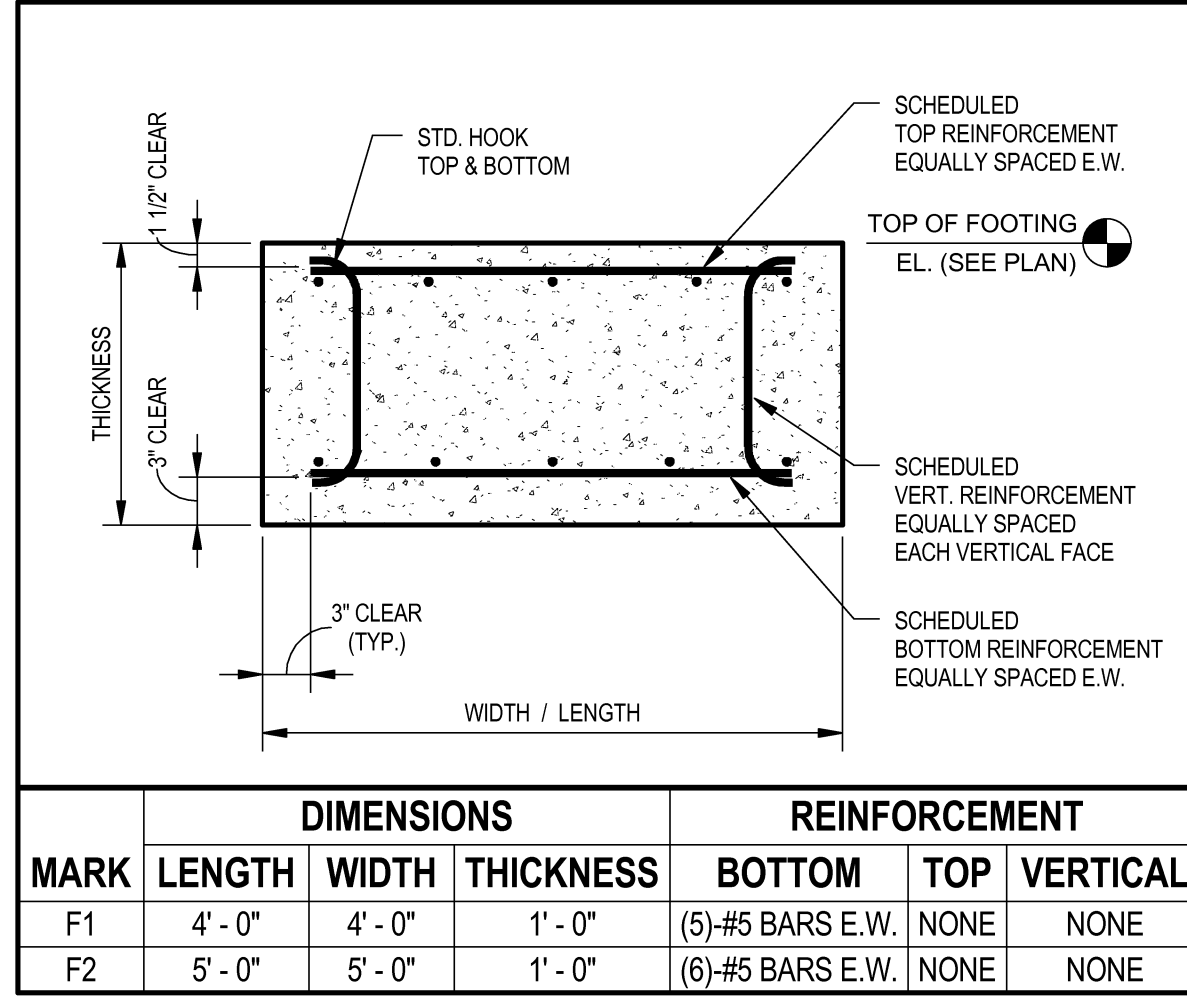
- NOTE:**
- Tabulated values are based on Grade 60 reinforcing bars and 4,000 psi normal weight concrete. Lengths are in inches.
 - Tabulated values shall only be used for instances where the concrete cover is at least 1.0 bar diameter and the center to center spacing of the bars is at least 3.0 bar diameters. Contact the engineer for lap splice lengths for bars with less cover or spacing's.
 - Top bars are horizontal bars with more than 12 in. of concrete cast below the bars.
 - Where bars of different sizes are to be spliced, the splice length for all bars shall be that required for the largest bar size.

CMU REINFORCEMENT SPLICE LENGTHS

BAR SIZE	BAR DIA. (inches)	MINIMUM LENGTHS (inches)		
		8" CMU	10" CMU	12" CMU
#3	0.375	13	13	13
#4	0.5	18	18	18
#5	0.625	22	22	22
#6	0.75	38	35	35
#7	0.875	53	41	41

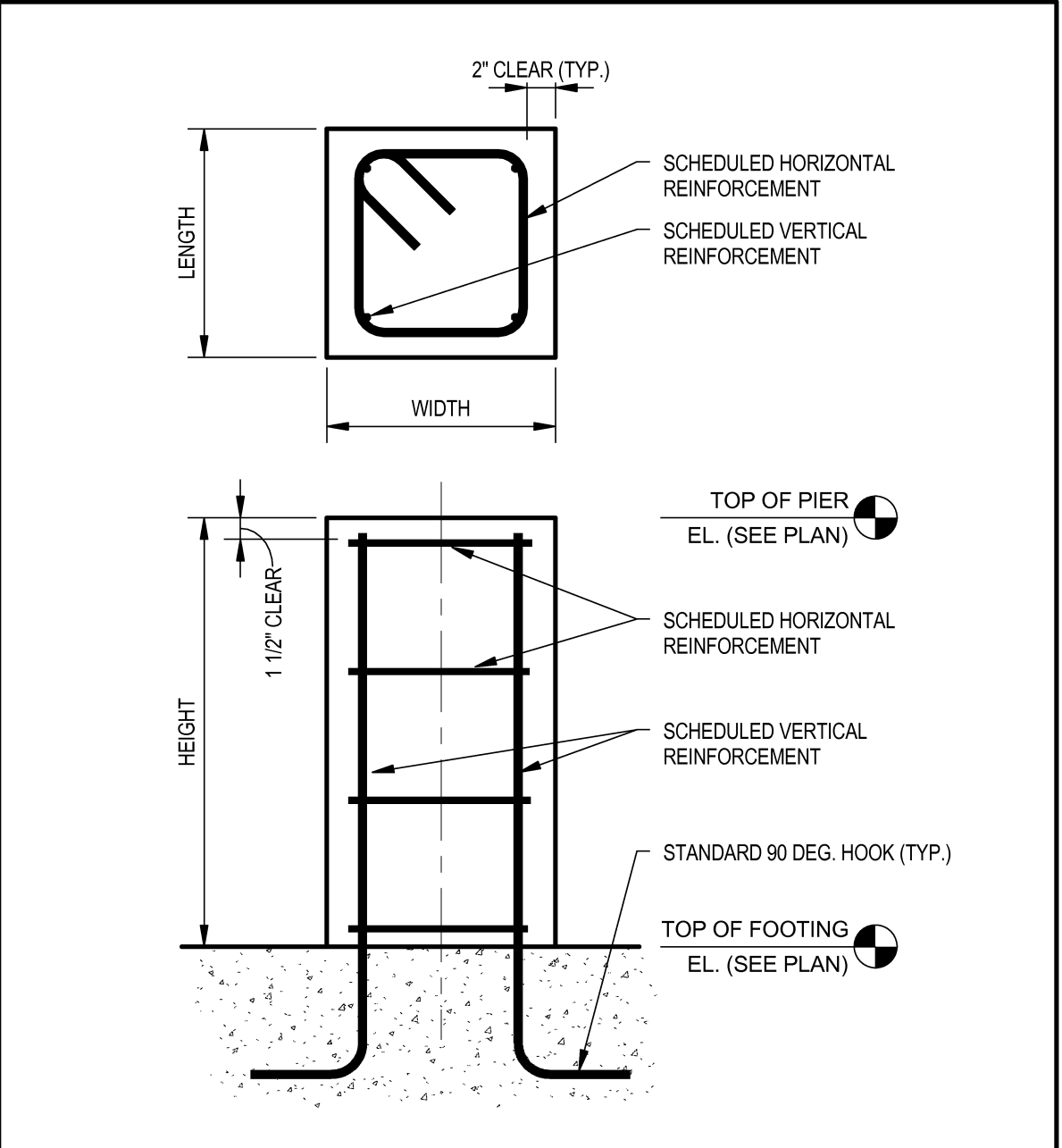
- NOTE:**
- This table is only applicable for cmu with a minimum net-area compressive strength (f_m) equal to or greater than 1900 psi.

COLUMN FOOTING (F) SCHEDULE



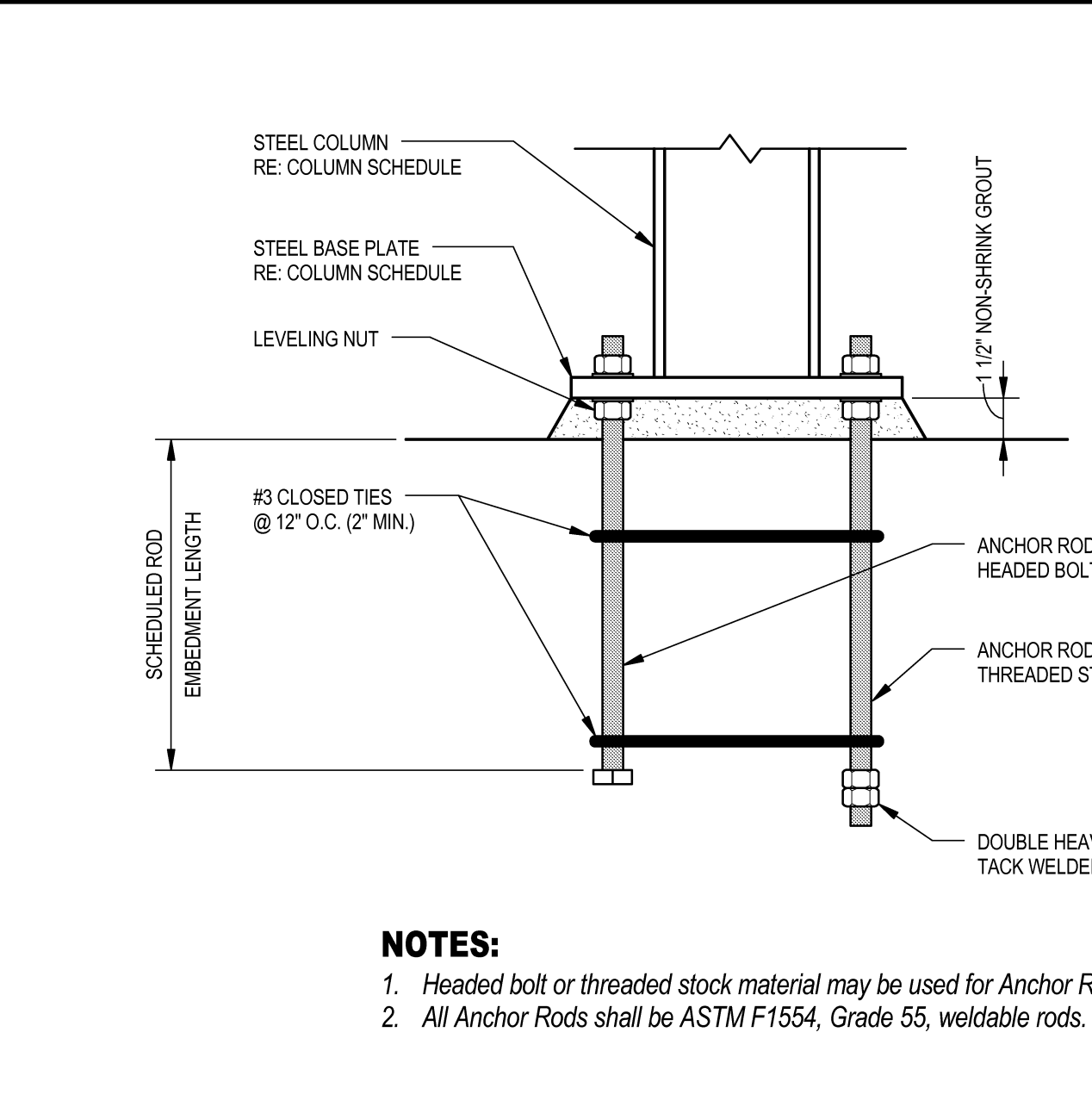
MARK	DIMENSIONS			REINFORCEMENT		
	LENGTH	WIDTH	THICKNESS	BOTTOM	TOP	VERTICAL
F1	4'-0"	4'-0"	1'-0"	(5)#5 BARS E.W.	NONE	NONE
F2	5'-0"	5'-0"	1'-0"	(6)#5 BARS E.W.	NONE	NONE

PIER (P) SCHEDULE



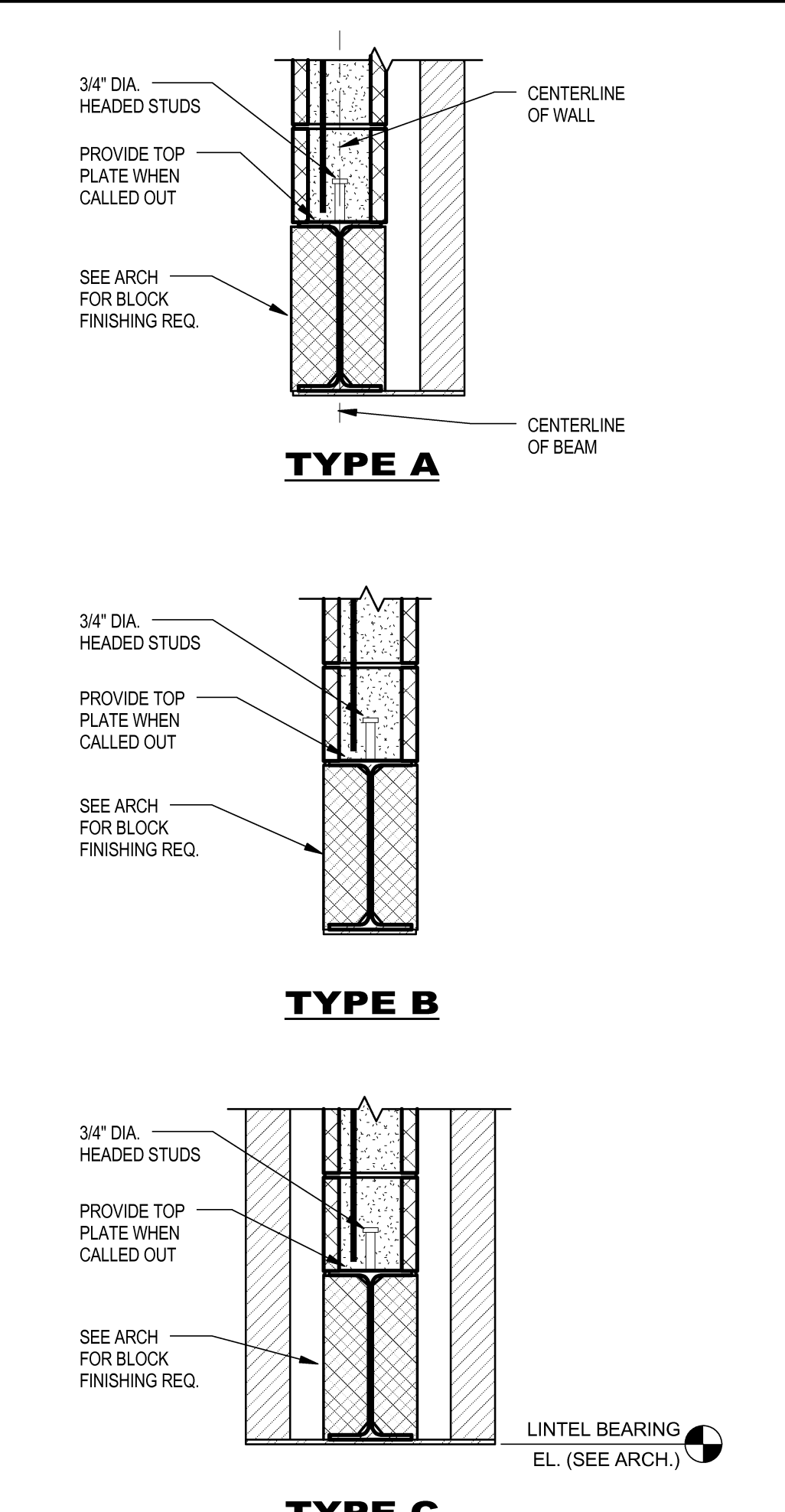
MARK	SIZE (in)	REINFORCEMENT		REMARKS
		VERTICAL	HORIZONTAL	
P1	18 x 18	(4)#6 BARS	#3 CLOSED TIES @ 10" o.c.	

COLUMN (C) SCHEDULE



MARK	SIZE	BASE PLATE SIZE (T x B x N)	ANCHOR RODS (DIA. x EMBEDMENT)	BASE PLATE TYPE	REMARKS
C2	HSS6x3x3/8	3/4" x 8" x 10"	SEE BRACE DETAILS	BP-1	Parallel w/ wall
C3	HSS 6x6x3/8	3/4" x 7" x 14"	3/4" x 12"	BP-2	Re. detail for anchors at High Roof columns
C4	HSS 6x3x3/8	SEE BRACE DETAILS	SEE BRACE DETAILS	BP-3	Parallel w/ wall
C5	HSS6x2x3/8	3/4" x 8" x 10"	SEE BRACE DETAILS	BP-1	Parallel w/ wall

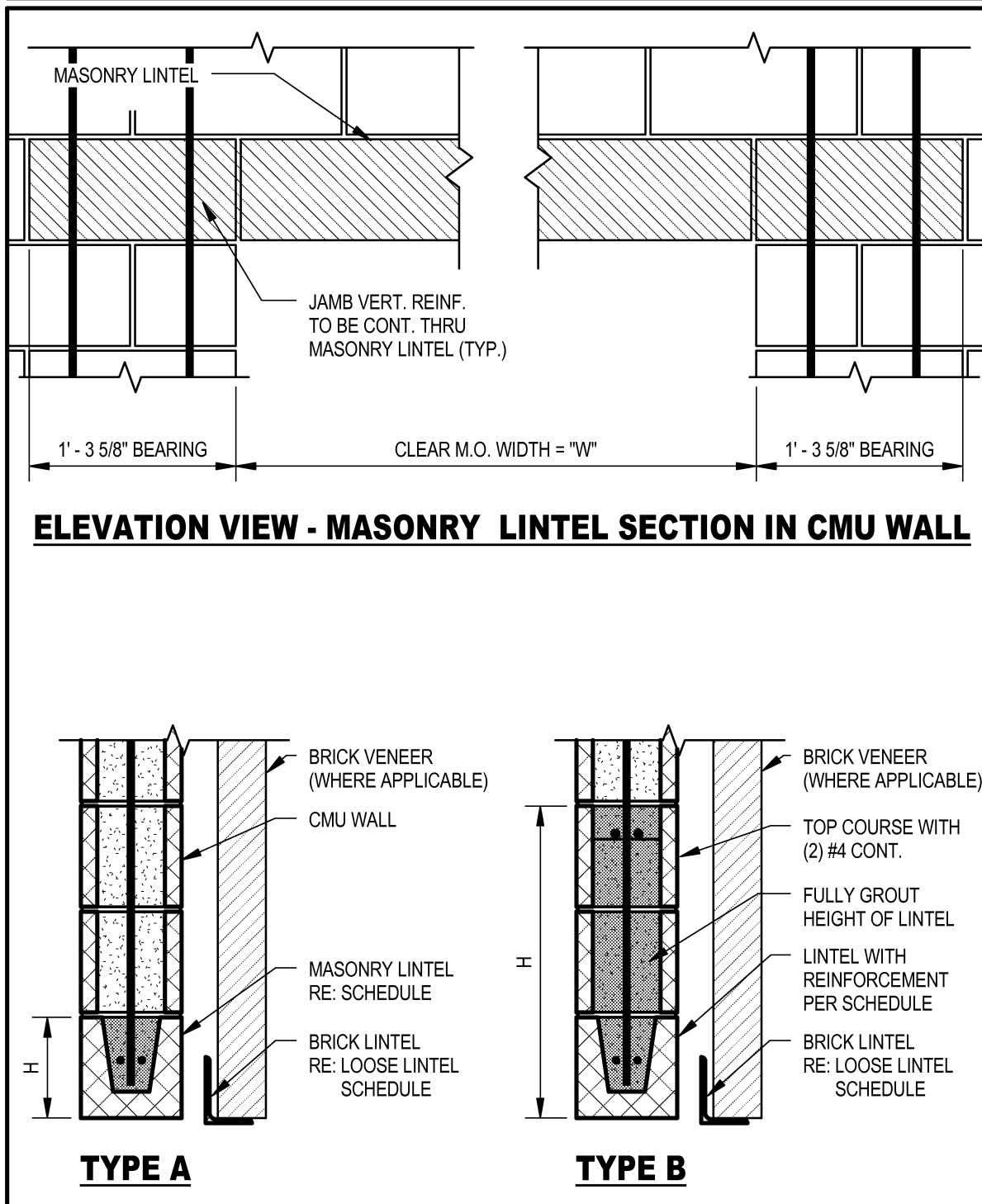
STEEL LINTEL SCHEDULE (SL) SCHEDULE



- NOTES:**
- When span exceeds 6'-0", shore the lintel during construction.
 - Grout all cells solid to 16" above the lintel.
 - For Type "C" lintels, use brick ties at 16" o.c.
 - Cover plates shall extend to Lintel end.
 - Bearing length on each end shall equal 1/12 x Lintel Span (8" minimum). Install on fresh mortar bed.
 - All lintels in exterior walls shall be galvanized.
 - See the architectural plans & the structural plans for loose steel lintels as may be required to support face brick & other non-load bearing masonry.
 - All plates shall be welded to both sides of the bottom flanges of the steel beams above. Welds shall be 3/16" & stitched 3" at 6" o.c.

MARK	TYPE	LINTEL / PLATE SIZE	REMARKS
SL1	A	W16x40 / 8"x3/8"	BOTTOM PLATE
SL2	A	W8x21 / 11"x3/8"	BOTTOM PLATE
SL3	A	W24x76 / 11"x3/8"	BOTTOM PLATE
SL4	B	W24x103 / 11"x3/8"	LINTEL IS SHIFTED 1-3/8" OFF CENTER SEE DETAIL
SL5	B	W24x130 / NONE	LINTEL IS SHIFTED 2" OFF CENTER SEE DETAIL
SL6	A	W16x26 / 11"x3/8"	BOTTOM PLATE
SL7	A	W8x24 / 15"x3/8"	BOTTOM PLATE
SL8	A	W8x10 / 15"x3/8"	BOTTOM PLATE
SL9	B	W8x24 / 7"x3/8"	BOTTOM PLATE
SL10	B	W8x10 / 7"x3/8"	BOTTOM PLATE
SL11	B	W8x24 / 11"x3/8"	BOTTOM PLATE
SL12	B	W8x10 / 11"x3/8"	BOTTOM PLATE
SL13	B	W24x55 / NONE	
SL14	A	W16x57 / 15"x3/8"	BOTTOM PLATE

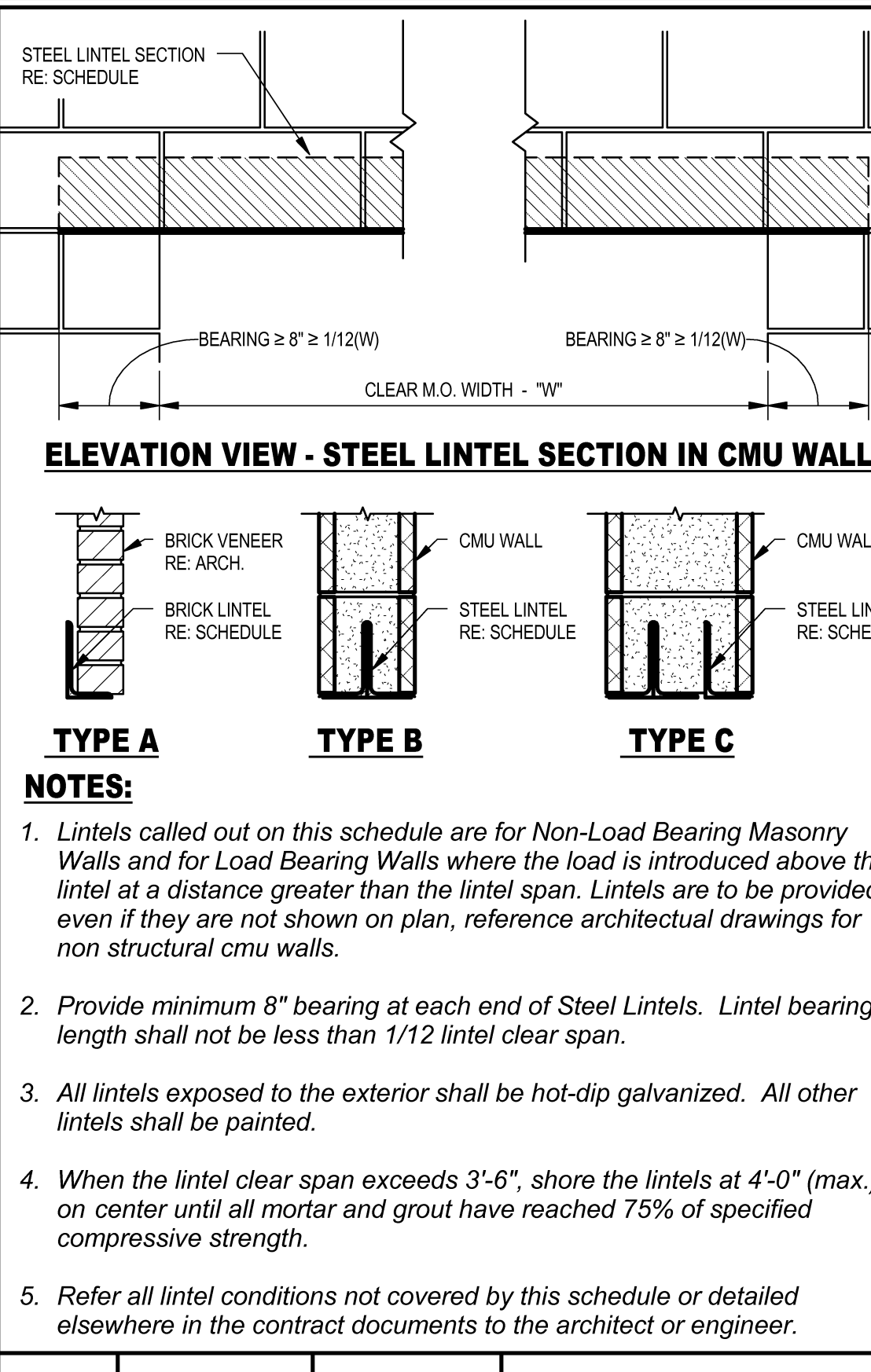
MASONRY LINTEL (ML) SCHEDULE



- NOTES:**
- Lintels called out on this schedule are for Non-Load Bearing Masonry Walls and for Load Bearing Walls where the load is introduced above the lintel at a distance greater than the lintel span.
 - Provide minimum 16" bearing at each end of Masonry Lintels. Lintel bearing length shall not be less than 1/12 lintel clear span.
 - When the lintel clear span exceeds 3'-6", shore the lintels at 4'-0" (max.) on center until all mortar and grout have reached 75% of specified compressive strength.
 - Refer all lintel conditions not covered by this schedule or detailed elsewhere in the contract documents to the architect or engineer.

WALL TYPE	NOMINAL WALL THICKNESS	CLEAR M.O. WIDTH "W"	MASONRY LINTEL SECTION		
			TYPE	H	REINF.
CONCRETE MASONRY UNIT	6"	W ≤ 7'-0"	A	8"	(1) #6
		W ≤ 7'-6"	A	8"	(2) #6
		7'-6" < W ≤ 8'-8"	B		
	8"	7'-6" < W ≤ 8'-8"	B		
		8'-8" < W ≤ 10'-0"	B		
		W ≤ 9'-6"	A	8"	(2) #6
10"	9'-0" < W ≤ 11'-0"	B			
	W ≤ 7'-6"	A	8"	(3) #6	
	7'-6" < W ≤ 8'-8"	B			
12"	8'-8" < W ≤ 10'-0"	B			

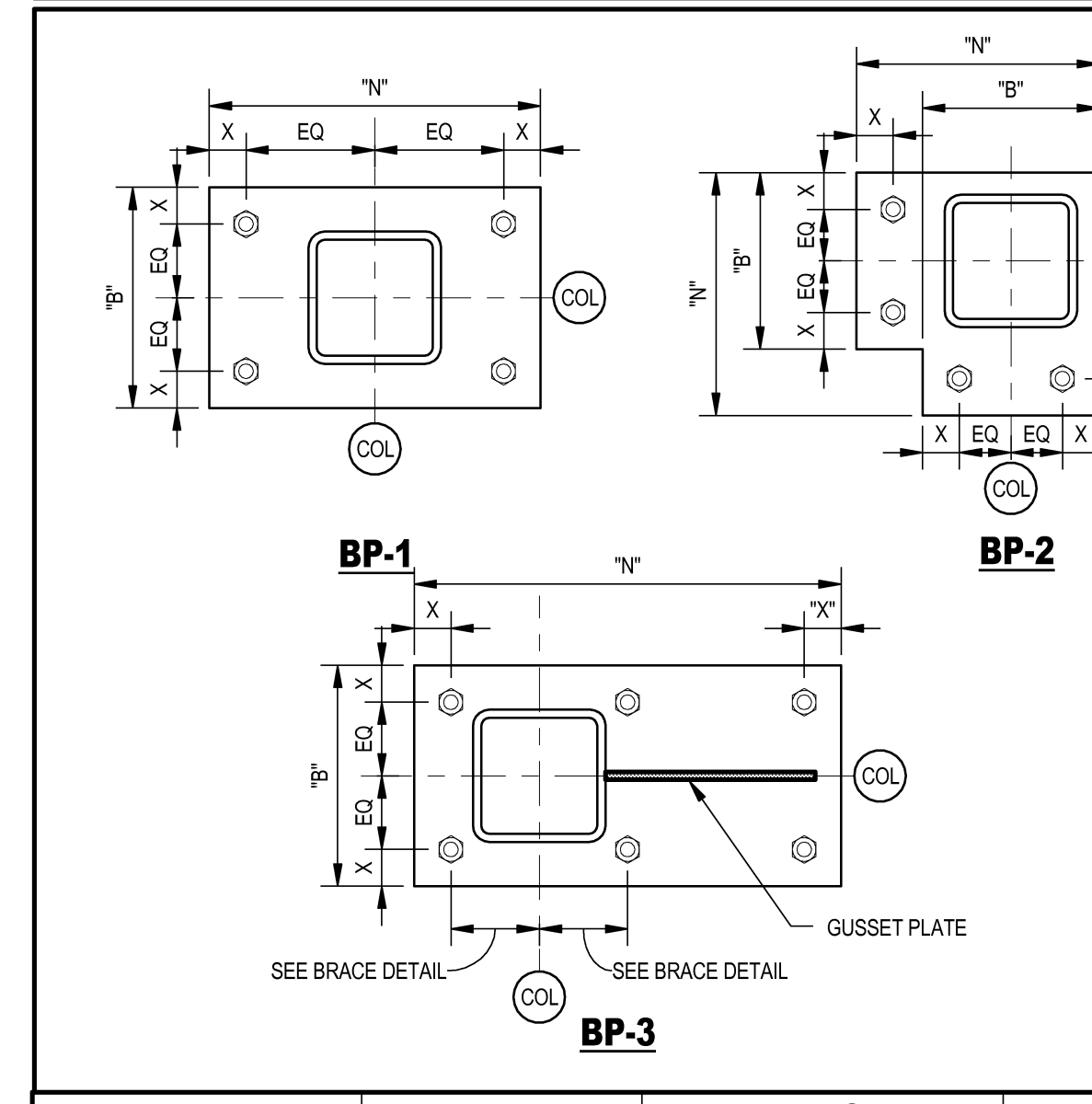
LOOSE LINTEL (LL) SCHEDULE



- NOTES:**
- Lintels called out on this schedule are for Non-Load Bearing Masonry Walls and for Load Bearing Walls where the load is introduced above the lintel at a distance greater than the lintel span. Lintels are to be provided even if they are not shown on plan, reference architectural drawings for non structural cmu walls.
 - Provide minimum 8" bearing at each end of Steel Lintels. Lintel bearing length shall not be less than 1/12 lintel clear span.
 - All lintels exposed to the exterior shall be hot-dip galvanized. All other lintels shall be painted.
 - When the lintel clear span exceeds 3'-6", shore the lintels at 4'-0" (max.) on center until all mortar and grout have reached 75% of specified compressive strength.
 - Refer all lintel conditions not covered by this schedule or detailed elsewhere in the contract documents to the architect or engineer.

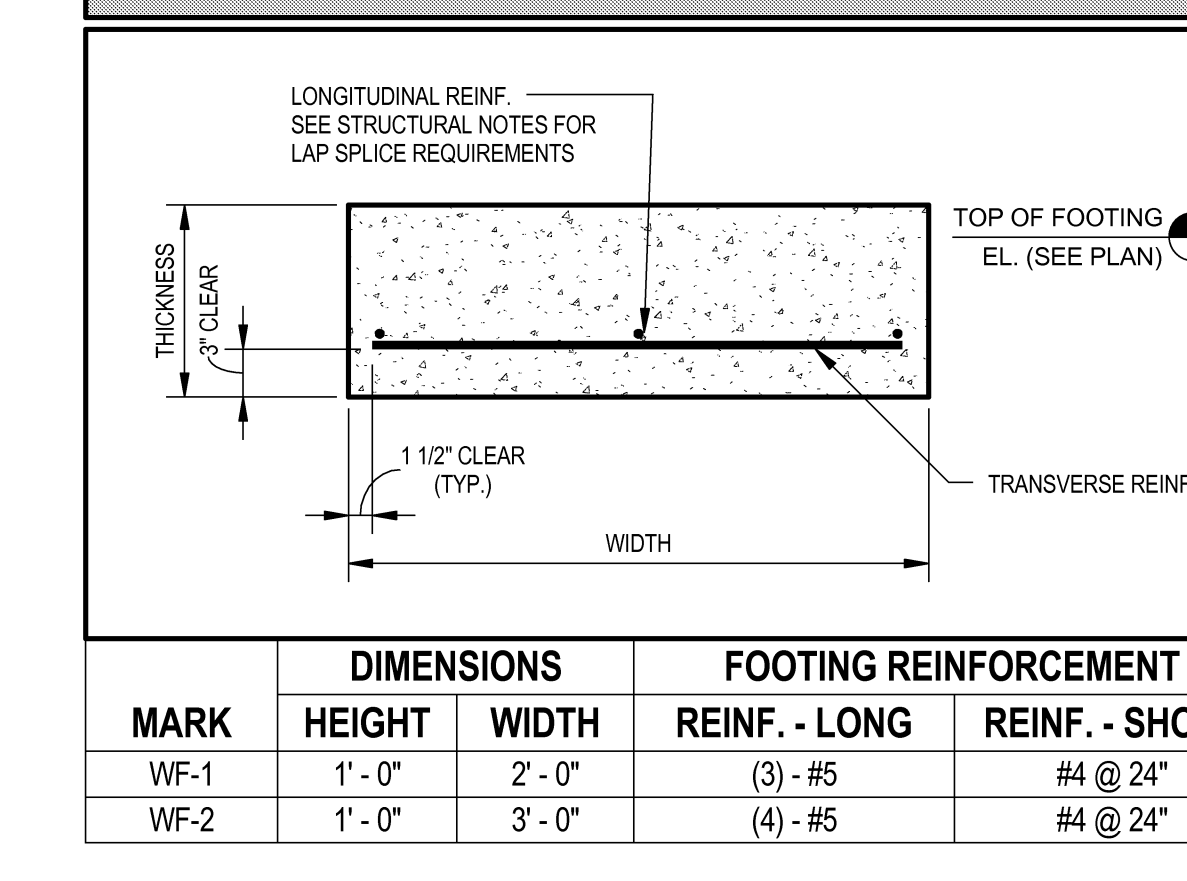
WALL TYPE	NOMINAL WALL THICKNESS	CLEAR M.O. WIDTH "W"	STEEL LINTEL SECTION	
			TYPE	SIZE
FACE BRICK	4"	W ≤ 6'-6"	A	L4 x 3 1/2 x 5/16 (LLV)
		6'-6" < W ≤ 7'-6"	A	L5 x 3 1/2 x 5/16 (LLV)
		7'-6" < W ≤ 8'-6"	A	L6 x 3 1/2 x 5/16 (LLV)
UTILITY BRICK	4"	W ≤ 7'-0"	A	L4 x 3 1/2 x 5/16 (LLV)
		7'-0" < W ≤ 8'-0"	A	L5 x 3 1/2 x 5/16 (LLV)
		8'-0" < W ≤ 9'-0"	A	L6 x 3 1/2 x 5/16 (LLV)
CONCRETE MASONRY UNIT	6"	W ≤ 7'-0"	B	(2) L3 1/2 x 2 1/2 x 5/16 (LLV)
		W ≤ 7'-6"	B	(2) L4 x 3 1/2 x 5/16 (LLV)
		7'-6" < W ≤ 8'-8"	B	(2) L5 x 3 1/2 x 5/16 (LLV)
	8"	8'-8" < W ≤ 10'-0"	B	(2) L6 x 3 1/2 x 5/16 (LLV)
		W ≤ 9'-6"	B	(2) L6 x 4 x 5/16 (LLV)
		9'-0" < W ≤ 11'-0"	B	(2) L7 x 4 x 5/16 (LLV)
10"	W ≤ 7'-6"	C	(3) L4 x 3 1/2 x 5/16 (LLV)	
	7'-6" < W ≤ 8'-8"	C	(3) L5 x 3 1/2 x 5/16 (LLV)	
	8'-8" < W ≤ 10'-0"	C	(3) L6 x 3 1/2 x 5/16 (LLV)	

BASE PLATE (BP) SCHEDULE

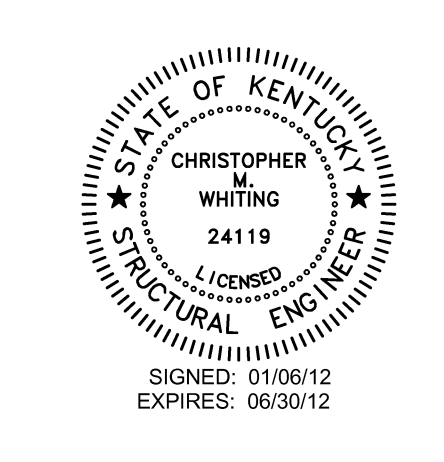


ANCHOR ROD DIA.	MAX. HOLE DIA.	MIN. WASHER			"X"
		SIZE	THICKNESS		
3/4"	1 5/16"	2"	1/4"	1 1/2"	
7/8"	1 9/16"	2 1/2"	5/16"	1 3/4"	
1"	1 13/16"	3"	3/8"	2"	
1 1/4"	2 1/16"	3"	1/2"	2 1/4"	
1 1/2"	2 5/16"	3 1/2"	1/2"	2 5/8"	
1 3/4"	2 3/4"	4"	5/8"	3"	
2"	3 1/4"	5"	3/4"	3 1/2"	
2 1/2"	3 3/4"	5 1/2"	7/8"	4"	

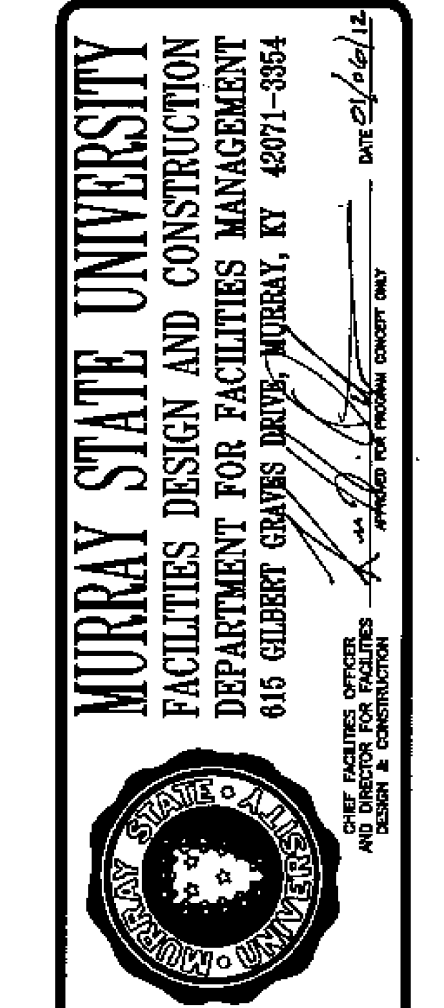
WALL FOOTING (WF) SCHEDULE



MARK	DIMENSIONS		FOOTING REINFORCEMENT	
	HEIGHT	WIDTH	REINF. - LONG	REINF. - SHORT
WF-1	1'-0"	2'-0"	(3) - #5	#4 @ 24"
WF-2	1'-0"	3'-0"	(4) - #5	#4 @ 24"



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 REVISIONS

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 FDC Project No - 10-007
 BFW Project No - 11194
 Marcum Project No - 11557
 Sheet Name - STRUCTURAL SCHEDULES



S1.02