SCHEDULE OF TYPICAL VERTICAL REINFORCEMENT (U.N.O.) — SCHD. V

CLASS	NOM. WYTHE THK.	WALL HEIGHT (BETWEEN LATERAL SUPPORT FROM FLOORS OR ROOF SYSTEMS) 0'-0" to 6'-9"	6'-9" to 9'-0"	9'-0" to 10'-10"	10'-10" to 12'-8"	12'-8" to 16'-8"	16'-8" to 18'-0"	18'-0" to 20'-8"	20'-8" to 24'-6"	24'-6" to 30'-0"
EXTERIOR WALLS	6"	None Req'd.	#4 @ 48" c/c	#4 @ 40" c/c	#4 @ 32" c/c	Do Not Use				→
	8"	↓	None Req'd.	#4 @ 48" c/c	#4 @ 48" c/c	#5 @ 40" c/c	#5 @ 32" c/c	#5 @ 24" c/c	Do Not Use	→
	10"	↓	↓	None Req'd.	#4 @ 48" c/c	#5 @ 48" c/c	#5 @ 40" c/c	#5 @ 32" c/c	Do Not Use	→
	12"	↓	↓	↓	None Req'd.	#4 @ 40" c/c	#4 @ 32" c/c	#5 @ 40" c/c	#6 @ 40" c/c	#6 @ 24" c/c
INTERIOR WALLS	6"	None Req'd.	None Req'd.	#4 @ 112" c/c	#4 @ 96" c/c	#4 @ 72" c/c	#4 @ 48" c/c	Do Not Use		→
	8"	↓	↓	None Req'd.	None Req'd.	#4 @ 96" c/c	#4 @ 80" c/c	#4 @ 64" c/c	Do Not Use	→
	10"	↓	↓	↓	↓	None Req'd.	#4 @ 96" c/c	#4 @ 80" c/c	#4 @ 56" c/c	→
	12"	↓	↓	↓	↓	↓	None Req'd.	#4 @ 112" c/c	#4 @ 96" c/c	#4 @ 64" c/c
SEISMIC 'D' (*) WALLS	6"	Do Not Use					→	#5 @ 24" c/c	Do Not Use	→
	8"	#5 @ 32" c/c					→	→	Do Not Use	→
	10"	#5 @ 24" c/c					→	→	→	→
	12"	#5 @ 16" c/c					→	→	→	→

(*) USE THIS PART OF CHART IF SEISMIC DESIGN CATEGORY (SDC) GIVEN IN GENERAL PROVISION NOTE 1.3.8 = 'D'.

NOTES:

1. EXTEND VERT. REINF. THROUGH BOND BEAMS (6" MIN. INTO BOND BEAMS AT T.O. WALLS).
2. EXTEND VERT. REINF. TO T.O. WALLS, INCLUDING PARAPETS WHERE APPLICABLE.
3. PROVIDE EPOXY SET DOWELS FROM CONCRETE STRUCTURE OR SLAB OF EQUAL BAR DIA. & SPACING AS REQ'D. VERT. REINF.
4. EPOXY SET DOWEL EMBEDMENT LENGTH TO BE PER OTHER TYPICAL DETAILS.
5. VERTICAL REINFORCING BAR LAPS TO BE 40xD (2'-0" MIN.).
6. PROVIDE ADDITIONAL VERT. BARS, OF SAME DIA. AS VERT. REINF. SCHEDULED ABOVE, TO COMPLY WITH THE REQUIREMENTS OF THE 'ADD'L. VERT. REINF. SCHED.', GIVEN BELOW.
7. GROUT-FILL ALL CELLS CONTAINING BAR REINFORCEMENT WITH SELF-CONSOLODATING CONCRETE (3000 psi AT 28 DAYS) – SEE ALSO TYPICAL CMU REINFORCEMENT DETAILS.
8. CMU SHALL COMPLY WITH ASTM C90 (LATEST EDITION).
9. MINIMUM COMPRESSIVE STRENGTH OF UNIT MASONRY: f'm=1500 psi.
10. REINFORCEMENT TO BE PLACED IN CENTER OF CORES (U.N.O.). USE PROPRIETORY GALVANIZED 9g BAR POSITIONERS.
11. REINFORCEMENT TO BE ASTM A615 GRADE 60.
12. SCHEDULE BASED ON MIN. REQUIREMENTS FOR SLENDERNESS AND WIND PRESSURE (20.0 PSF EXTERIOR; 5.0 PSF INTERIOR), AND SEISMIC PROVISIONS OF THE BUILDING CODE.

e.g.: (2) #5@32" c/c
(2532) – WHERE SHOWN ON PLANS, THIS REFERENCE SYMBOL INDICATES THE REQUIRED WALL REINFORCEMENT, THROUGHOUT THE WHOLE LENGTH OF THE WALL, FROM CORNER TO CORNER.

SCHEDULE OF HORIZONTAL REINFORCEMENT AND BOND BEAMS — SCHD. H

ITEM NO.		LOCATION	REINFORCEMENT
		ALL WALLS, EXCEPT SEISMIC 'D' WALLS	LADDER-TYPE JNT. REINF. IN ALTERNATE MORTAR JOINTS
1.	SDC 'D' (*)	8" & 10" WALLS	LADDER-TYPE JNT. REINF. @ 8"o.c. (3/16" dia. SIDE RODS)
		12" WALLS	LADDER-TYPE JNT. REINF. @ 16"o.c. & BOND-BMS (**) w/ (1) #5, @ 48"o.c.
2.		TOP OF WALL	(2)#5 IN BOND BEAM (**)
3.		FLOOR/ROOF LINES	(2)#5 IN BOND BEAM (**)
4.		UNDER OPENINGS (SILLS)	(2)#5 IN BOND BEAM (***)
5.		CMU LINTELS	SEE LINTEL DETAILS (***)
6.		ABOVE STR. STEEL LINTELS	LADDER-TYPE JNT. REINF. IN (2) COURSES x (OPNG. WIDTH +24" EA. END: EXCEPT AT MCJ)

NOTE:

1. SDC=SEISMIC DESIGN CATEGORY (SEE GENERAL PROVISION NOTE 1.3.8)
2. LADDER-TYPE REINF. SHALL BE "DUR-O-WAL," OR APPROVED EQUIV., w/ 9 GAGE WIRES, GALV. PER ASCE/ACI 530.1 REQUIREMENTS – U.N.O.

LEGEND:

(*) USE THIS PART OF CHART IF SEISMIC DESIGN CATEGORY (SDC) = "D"

(**) THESE BOND BEAMS TO BE "CONTINUOUS" THROUGH MCJ'S WHEN SDC = "C" OR "D"

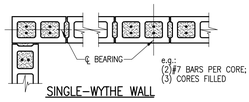
(***) WHEN SDC = "C" OR "D" SILL BOND BEAMS AND LINTELS ARE TO EXTEND THROUGHOUT THE LENGTH OF THE WALL PANEL & ADD'L HORIZ. BARS ARE REQ'D. AT THE OPENINGS. SEE "ELEVATION OF A TYP. WALL REINF."

SCHEDULE OF SPECIFIC (*) VERTICAL REINFORCEMENT — SCHD. SV

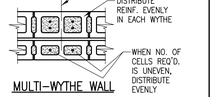
ITEM NO.	LOCATION		6" AND 8" CMU	12" CMU
1.	CONTROL JOINTS		(1) EACH SIDE – #5 MIN.	(1) EACH SIDE – #5 MIN.
2.	OPENINGS	< 2'–0" WIDE	(1) EACH SIDE – #4 MIN.	(1) EACH SIDE – #4 MIN.
		> 2'–0" WIDE < 4'–0" WIDE	(1) EACH SIDE – #5 MIN.	(2) EACH SIDE – #5 MIN.
		> 4'–0" WIDE < 6'–0" WIDE	(2) EACH SIDE – #5 MIN.	(2) EACH SIDE – #5 MIN.
		> 6'–0" WIDE	SPECIAL REINF. REQ'D., SEE PLANS	(2 – #5 EACH SIDE MIN.)
3.	WALL INTERSECTIONS		(1) – #5 MIN.	(1) – #5 MIN.
4.	FREE ENDS		(1) – #5 MIN.	(1) – #5 MIN.
5.	CONCENTRATED LOAD LOCATION (BEAMS, LINTELS, JST., GIRDERS, ETC.)		(2) – #5 MIN.	(2) – #5 MIN.
6.	WELDED TO TOP OF STEEL BEAMS SUPPORTING CMU		PLAIN ROUND STOCK x 24" LONG MIN. @ 24" c/c – 1/2" DIA. MIN.	
7.	SHEAR PANELS		SEE TYP. DETAILS – "REINF. ARRANGEMENT IN CMU SHEAR WALLS"	

(*) CAN BE COINCIDENT WITH TYPICAL REBAR (NOT REQUIRED TO BE "IN ADDITION TO") EXCEPT AT OPENINGS IN SDC "C" & "D" WALLS, REINF. IN THIS SCHEDULE

e.g.: (2) #7 IN EACH OF (3) CORES
273 – WHERE SHOWN ON PLANS, THIS REFERENCE SYMBOL INDICATES THE REQUIRED, FULL HEIGHT, WALL REINFORCEMENT AT SPECIFIC LOCATIONS

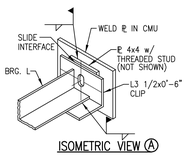


SINGLE–WYTHE WALL

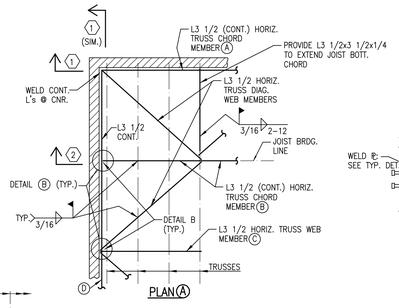


MULTI–WYTHE WALL

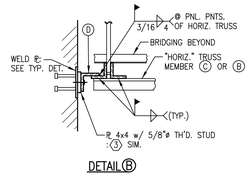
CMU WALL REINFORCEMENT SCHEDULES (U.N.O.) — 1 S0207
NOT TO SCALE



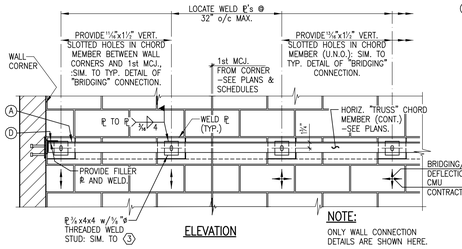
ISOMETRIC VIEW (A)



PLAN (A)



DETAIL (B)

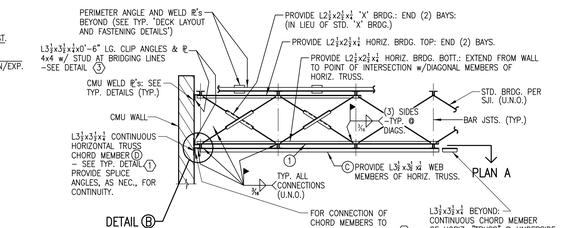


ELEVATION

NOTE:
ONLY WALL CONNECTION DETAILS ARE SHOWN HERE.

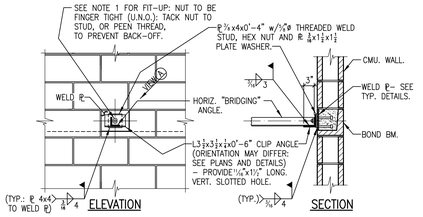
1 TYPICAL DETAIL OF HORIZONTAL "TRUSS" CHORD & ITS CONNECTION TO WALL

NOTE:
REFER TO ARCH. AND ELSEWHERE FOR FURTHER DETAILS.
ONLY BRIDGING AND BRACING REQUIREMENTS SHOWN HERE.

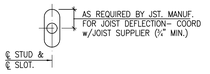


NOTE 1: BOTTOM L2½ HORIZ. BRDG. MAY BE OMITTED WHERE THE BRIDGING LINE IS COINCIDENT TO AN L3½ HORIZ. TRUSS CHORD MEMBER– SUBJECT TO CONTRACTORS' RESPONSIBILITY FOR ERECTION MEANS AND METHODS.

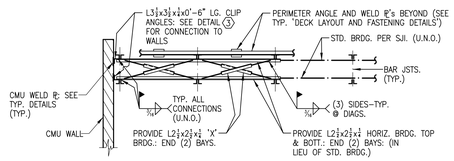
2 TYPE 2 BRACING – (WITH HORIZONTAL TRUSS MECHANISM)



NOTES:
1. INITIAL SET–UP OF STUD IN SLOT.

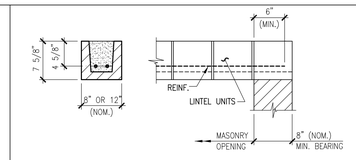


3 TYPICAL DETAIL OF HORIZONTAL "BRIDGING" CONNECTION TO WALLS

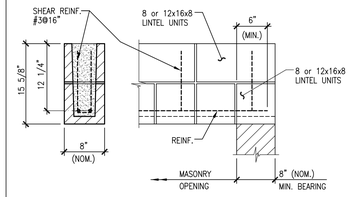


4 TYPE 1 BRACING – (WITHOUT HORIZONTAL TRUSS MECHANISM)

TYPICAL DETAIL –CMU WALL AND JOIST BRACING/BRIDGING DETAILS — 4 S0207
NOT TO SCALE



8" DEEP LINTEL



16" DEEP LINTEL w/COURSING JOINT (USE ONLY WHERE REQ'D. BY ARCHITECT)

REINFORCEMENT (SIMPLY SUPPORTED LINTELS)

LINTEL SECT. (NOM.)	MASONRY OPENING UP TO 3'–4"	3'–4" TO 5'–6"	5'–6" TO 7'–0"	7'–0" TO 8'–6"
8" W. x 8" DP.	(2)#4	(2)#5	–	–
8" W. x 16" DP.	–	(2)#4	(2)#5	(2)#6
12" W. x 16" DP.	–	(2)#4	(2)#5	(2)#6

cmu's f'm = 1500 psi
GROUT FILL fc = 3000 psi
REINF. ASTM A–615 GRADE 60

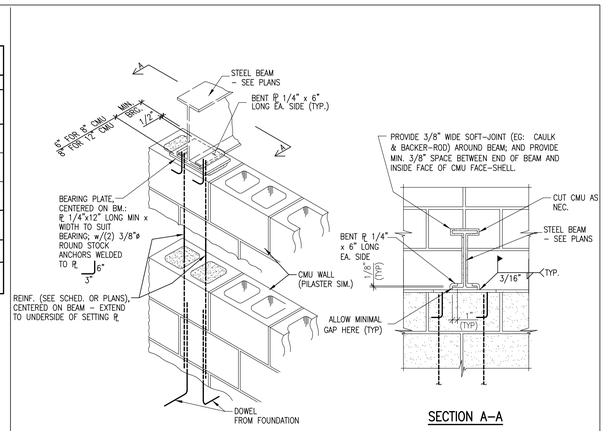
MAX. FLOOR/ROOF & WALL LOAD = 1000 plf

THIS TABLE IS BASED UPON CMU CONSTRUCTION WITH FIELD INSPECTION OF MATERIALS AND WORKMANSHIP BY ARCHITECT.

NOTES:

1. INSPECTION OF ALL LINTELS IS REQUIRED.
2. COORD. WITH TYP. CMU CONTROL JOINT & REINFORCEMENT DETAILS.
3. REFER TO THE GENERAL PROVISIONS FOR DOUBLE STACKED 8" DEEP LINTELS IN LIEU OF 16" DEEP LINTEL OPTIONS.

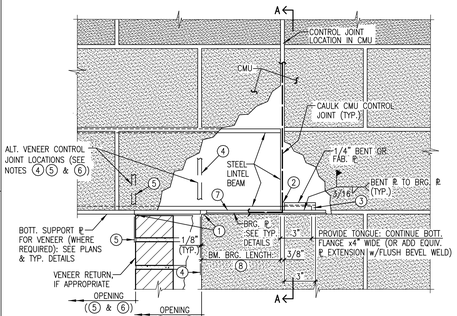
TYPICAL CMU LINTEL REINF. DETAILS — 2 S0207
NOT TO SCALE

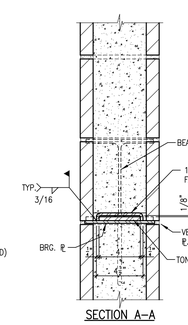


SECTION A–A

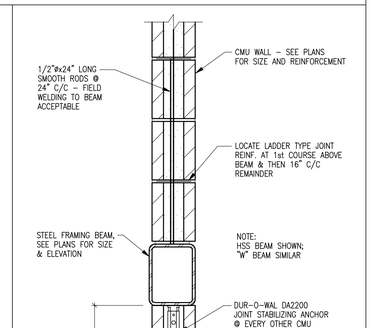
NOTE
DETAIL ILLUSTRATES PERPENDICULAR ORIENTATION. OBLIQUELY ANGLED ORIENTATIONS SIMILAR.

TYPICAL DETAIL – MASONRY WALL BEAM BEARING (NON–PARALLEL ORIENTATION) — 3 S0207
NOT TO SCALE

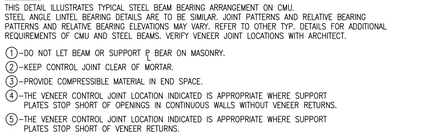




SECTION A–A



TYPICAL DETAIL – FULL HEIGHT CMU WALL INTERRUPTED BY STEEL FRAMING BEAM — 6 S0207
NOT TO SCALE



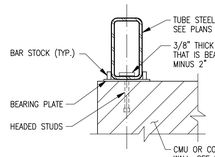
VENEER ℄ BEYOND OPNG. AND
ALT: VENEER CONTROL JOINT BEYOND OPNG. (SEE NOTE 6)

NOTES:

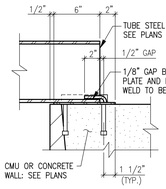
THIS DETAIL ILLUSTRATES TYPICAL STEEL BEAM BEARING ARRANGEMENT ON CMU. STEEL ANGLE LINTEL BEARING DETAILS ARE TO BE SIMILAR. JOINT PATTERNS AND RELATIVE BEARING PATTERNS AND RELATIVE BEARING ELEVATIONS MAY VARY. REFER TO OTHER TYP. DETAILS FOR ADDITIONAL REQUIREMENTS OF CMU AND STEEL BEAMS. VERIFY VENEER JOINT LOCATIONS WITH ARCHITECT.

1. DO NOT LET BEAM OR SUPPORT ℄ BEAR ON MASONRY.
2. KEEP CONTROL JOINT CLEAR OF MORTAR.
3. PROVIDE COMPRESSIBLE MATERIAL IN END SPACE.
4. THE VENEER CONTROL JOINT LOCATION INDICATED IS APPROPRIATE WHERE SUPPORT PLATES STOP SHORT OF OPENINGS IN CONTINUOUS WALLS WITHOUT VENEER RETURNS.
5. THE VENEER CONTROL JOINT LOCATION INDICATED IS APPROPRIATE WHERE SUPPORT PLATES STOP SHORT OF VENEER RETURNS.
6. IF VENEER JOINT IS SHOWN BY THE ARCHITECT TO BE OFFSET BEYOND THE OPENING (EG. OPPOSITE THE CMU JOINT) EXTEND THE SUPPORT PLATE AS ILLUSTRATED IN PLAN AT RIGHT.
7. PROVIDE ℄15 FELT, OR SIM., BEARING INTERFACE BOND BREAKER. DO NOT PERMIT CONTACT OF FELT AND CAULK.
8. 8" MIN BEARING LENGTH WHERE (2) CMU CORES ARE GROUTED. 12" MIN BEARING LENGTH WHERE (3) CMU CORES ARE GROUTED. –SEE PLANS
9. DETAIL ILLUSTRATES 8" CMU WALL & W8x24 BEAM – OTHER COMBINATIONS SIMILAR: SUBMIT FOR REVIEW

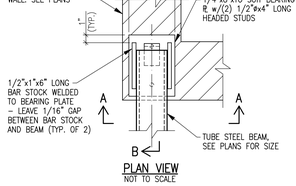
TYPICAL DETAIL – MASONRY WALL BEAM BEARING (PARALLEL ORIENTATION) — 5 S0207
NOT TO SCALE



SECTION A–A
NOT TO SCALE



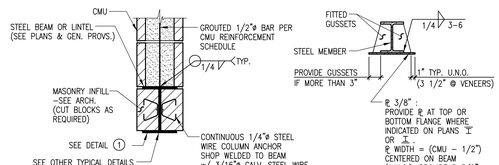
SECTION B–B
NOT TO SCALE



PLAN VIEW
NOT TO SCALE

NOTE:
TUBE STEEL BEAM DOES NOT GET WELDED DOWN TO BEARING PLATE, BAR STOCKS OR BENT PLATE

TYPICAL DETAIL – SLIP CONNECTION FOR TUBE STEEL BEAM — 7 S0207
NOT TO SCALE



DETAIL 1

TYPICAL DETAIL – STEEL BEAMS AND LINTELS AT MASONRY WALL OPENINGS — 8 S0207
NOT TO SCALE

DISCLAIMER NOTE:

THIS SET OF CONSTRUCTION DRAWINGS HAS BEEN UPDATED TO INCLUDE ANY CHANGES ISSUED THROUGH ADDENDUM OR OTHER MEANS. EVERY EFFORT HAS BEEN TAKEN TO INCLUDE ALL CHANGES TO DATE. THE CONTRACTOR IS STILL RESPONSIBLE FOR PROVIDING ANY ITEMS THAT WERE SHOWN AS PART OF THE ORIGINAL BID SET THAT MAY HAVE BEEN OVERLOOKED AND NOT INCLUDED IN THIS SET.

University of Louisville – Student Recreation Center (Phase #4 – Construction Set) **Louisville, Ky**

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CANNONDESIGN

UNIVERSITY OF LOUISVILLE

#	Revision Date

Drawing Name: TYPICAL DETAILS
U of L Project Number:
Project Number: Omni – 1105.00 Cannon – 03687.00
Date: April 16, 2012
Drawn By: VPP
Checked By: ANTHONY

S0207