

TECHNICAL DETAILS

# HOLLOWCORE



**APPLICABLE FOR:**

RESIDENTIAL  
COMMERCIAL  
CIVIL  
INDUSTRIAL  
INSTITUTIONAL  
AGRICULTURAL



**FRITZ-ALDER**  
PRECAST

# What is Hollowcore?

## Quality and precision, every time

Hollowcore is extruded pre-stressed precast concrete used for floor and roof systems. The pre-stressed strands reduce the amount of reinforcement typically required for comparable spans. The slabs have continuous voids throughout, reducing weight, increasing load capacity and lowering cost. Hollowcore is engineered in such a way that, despite having voids, the product delivers immense strength and load bearing capability.

## Benefits of Hollowcore

- Consistent quality and precision
- Controlled casting conditions
- Exceeds provincial fire ratings
- Soundproof
- Longest span-to-depth ratios
- Voids allow access for trades
- Can be used as finished ceilings
- All-weather installation
- Speed of construction
- Once installed, floors provide trades with an instant working platform
- Fewer hours on site, reduces project risk



## The Fritz-Alder Precast Advantage

Fritz-Alder Precast introduces the world's most advanced technology, shear compaction, to the Ontario market. Shear compaction eliminates vibrating in the extruder, resulting in controlled consistency between slabs and reducing differential camber.

Our Hollowcore equipment provides maximum flexibility with sections, strand patterns and thicknesses (6" - 16"). Fritz-Alder Precast offers clients the most Hollowcore options in the market to best match your project requirements.

Fritz-Alder Precast's **state-of-the-art** manufacturing facility enables production of Hollowcore slabs with a reduced differential camber, and **profiles unique to the industry**. Asymmetrical voids - instead of circular voids - make the product lighter, stronger, more efficient, and have superior loading capabilities. Hollowcore can also be used as a finished ceiling.



Typical Hollowcore profile



Fritz-Alder Precast Hollowcore profile

# HOLLOWCORE - 8"/203 mm Load Tables

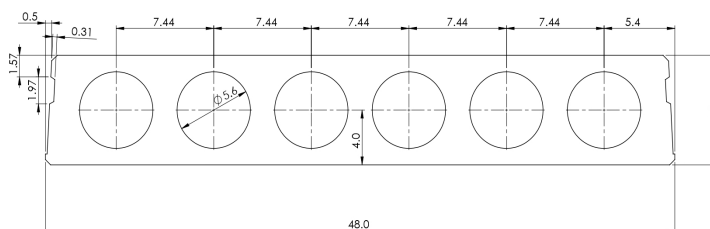
<b>IMPERIAL</b> 8" (HEAVY NEW) Hollowcore Imperial Load Table - Total Uniformly Distributed Superimposed Service Load - psf (lb/ft <sup>2</sup> )																								
Strand Code	Simple Span - Centre to Centre of Bearing - Feet																							
	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0	27.0	28.0	29.0	30.0	31.0	32.0	33.0
3 - 1/2"	368	322	274	240	212	180	154	133	115	99	86	75	-	-	-	-	-	-	-	-	-	-	-	-
4 - 1/2"	512	430	374	328	288	264	227	204	185	162	148	136	125	115	107	99	88	78	-	-	-	-	-	-
5 - 1/2"	632	539	470	408	359	319	286	258	235	215	198	183	167	159	142	133	119	107	95	85	76	-	-	-
6 - 1/2"	755	649	557	485	427	380	342	310	282	270	240	222	208	195	184	165	149	134	121	109	99	89	80	-
7 - 1/2"	863	742	638	556	491	449	408	371	340	313	290	271	254	240	216	195	176	160	145	131	119	109	99	90
2 - 0.6" + 5 - 1/2"	880	786	675	589	537	483	438	401	371	344	317	299	276	255	239	217	196	178	162	147	134	123	112	102

NOTES: (1) FIRE RATING FOR THIS CHART IS 2-HOUR; (2)  $f'_c = 7000$  psi; (3)  $f_{pu} = 70\%$ ; (4) COMPOSITE TOPPING NOT USED; (5) PLEASE CONSULT WITH FRITZ-ALDER FOR ANY SPECIAL CONDITIONS.

<b>METRIC</b> 203 mm (HEAVY NEW) Hollowcore Metric Load Table - Total Uniformly Distributed Superimposed Service Load - kPa (kN/m <sup>2</sup> )																								
Strand Code	Simple Span - Centre to Centre of Bearing - Meters																							
	3.0	3.4	3.7	4.0	4.3	4.6	4.9	5.2	5.5	5.8	6.1	6.4	6.7	7.0	7.3	7.6	7.9	8.2	8.5	8.8	9.1	9.4	9.8	10.1
3 - 1/2"	17.6	15.4	13.1	11.5	10.2	8.6	7.4	6.3	5.5	4.8	4.1	3.6	-	-	-	-	-	-	-	-	-	-	-	-
4 - 1/2"	24.5	20.6	17.9	15.7	13.8	12.6	10.9	9.8	8.9	7.8	7.1	6.5	6.0	5.5	5.1	4.8	4.2	3.7	-	-	-	-	-	-
5 - 1/2"	30.3	25.8	22.5	19.6	17.2	15.3	13.7	12.4	11.2	10.3	9.5	8.8	8.0	7.6	6.8	6.4	5.7	5.1	4.6	4.1	3.7	-	-	-
6 - 1/2"	36.2	31.1	26.7	23.2	20.5	18.2	16.4	14.8	13.5	12.9	11.5	10.7	9.9	9.3	8.8	7.9	7.1	6.4	5.8	5.2	4.7	4.3	3.9	-
7 - 1/2"	41.3	35.5	30.5	26.6	23.5	21.5	19.6	17.8	16.3	15.0	13.9	13.0	12.2	11.5	10.3	9.3	8.4	7.6	6.9	6.3	5.7	5.2	4.7	4.3
2 - 0.6" + 5 - 1/2"	42.1	37.6	32.3	28.2	25.7	23.1	21.0	19.2	17.8	16.5	15.2	14.3	13.2	12.2	11.5	10.4	9.4	8.5	7.8	7.1	6.4	5.9	5.4	4.9

NOTES: (1) FIRE RATING FOR THIS CHART IS 2-HOUR; (2)  $f'_c = 48$  MPa; (3)  $f_{pu} = 70\%$ ; (4) COMPOSITE TOPPING NOT USED; (5) PLEASE CONSULT WITH FRITZ-ALDER FOR ANY SPECIAL CONDITIONS.

Properties	Imperial	Metric
A	216.5 in <sup>2</sup>	139,677 mm <sup>2</sup>
$I_x$	1673 in <sup>4</sup>	696.4 X 10 <sup>6</sup> mm <sup>4</sup>
$Y_b$	4.51 in	114.56 mm
b	48 in	1219.2 mm
$f_{pu}$	270 ksi	1861.6 Mpa
$f'_c$	7 ksi	48 Mpa
$S_b$	370.95 in <sup>3</sup>	6,078,781 mm <sup>3</sup>
$S_t$	479.37 in <sup>3</sup>	7,855,467 mm <sup>3</sup>
$D_{sw}$	56.4 psf	2.70 kPa
$b_w$	14.9 in	379 mm
Top Flange Thickness	1.38 in	35 mm
e	2.34 in	59.4 mm



# HOLLOWCORE - 10"/254 mm Load Tables

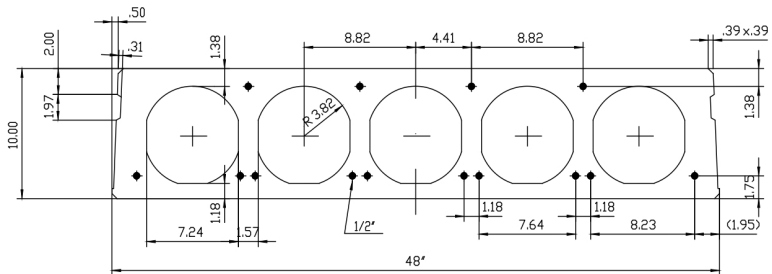
<b>IMPERIAL</b>		10" Hollowcore Imperial Load Table - Total Uniformly Distributed Superimposed Service Load - psf (lb/ft <sup>2</sup> )																						
Strand Code	Simple Span - Centre to Centre of Bearing - Feet																							
	20.0	21.0	22.0	23.0	24.0	25.0	26.0	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0
4 - 1/2"	172	153	136	121	107	96	85	76	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5 - 1/2"	266	246	230	215	202	191	172	155	140	126	114	103	93	83	75	-	-	-	-	-	-	-	-	-
6 - 1/2"	336	313	281	264	249	236	214	194	176	160	145	132	120	110	100	91	82	75	-	-	-	-	-	-
4 - 1/2" + 2 - 0.6"	352	327	306	288	272	265	246	223	203	186	169	155	141	129	118	108	99	90	83	75	-	-	-	-
7 - 1/2"	363	341	321	305	291	280	254	231	211	192	176	161	147	135	123	113	103	95	87	79	-	-	-	-
8 - 1/2"	415	390	368	350	334	322	293	267	244	223	205	188	172	159	146	134	123	114	105	96	88	81	75	-
9 - 1/2"	414	387	364	344	328	313	298	286	275	252	231	213	196	181	167	154	142	131	121	112	104	96	88	81
10 - 1/2"	437	408	383	362	344	329	313	300	275	264	255	235	217	200	185	171	159	147	136	126	117	108	100	93

NOTES: (1) FIRE RATING FOR THIS CHART IS 2-HOUR; (2)  $f_c = 7000$  psi; (3)  $f_{pu} = 70\%$ ; (4) COMPOSITE TOPPING NOT USED; (5) PLEASE CONSULT WITH FRITZ-ALDER FOR ANY SPECIAL CONDITIONS.

<b>METRIC</b>		254 mm (HEAVY NEW) Hollowcore Metric Load Table - Total Uniformly Distributed Superimposed Service Load - kPa (kN/m <sup>2</sup> )																						
Strand Code	Simple Span - Centre to Centre of Bearing - Meters																							
	6.1	6.4	6.7	7.0	7.3	7.6	7.9	8.2	8.5	8.8	9.1	9.4	9.8	10.1	10.4	10.7	11.0	11.3	11.6	11.9	12.2	12.5	12.8	13.1
4 - 1/2"	8.3	7.3	6.5	5.8	5.1	4.6	4.1	3.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5 - 1/2"	12.7	11.8	11.0	10.3	9.7	9.1	8.2	7.4	6.7	6.0	5.4	4.9	4.4	4.0	3.6	-	-	-	-	-	-	-	-	-
6 - 1/2"	16.1	15.0	13.4	12.6	11.9	11.3	10.2	9.3	8.4	7.7	7.0	6.3	5.8	5.2	4.8	4.3	3.9	3.6	-	-	-	-	-	-
4 - 1/2" + 2 - 0.6"	16.8	15.7	14.7	13.8	13.0	12.7	11.8	10.7	9.7	8.9	8.1	7.4	6.8	6.2	5.7	5.2	4.7	4.3	4.0	3.6	-	-	-	-
7 - 1/2"	17.4	16.3	15.4	14.6	14.0	13.4	12.2	11.1	10.1	9.2	8.4	7.7	7.0	6.4	5.9	5.4	5.0	4.5	4.1	3.8	-	-	-	-
8 - 1/2"	19.9	18.7	17.6	16.8	16.0	15.4	14.0	12.8	11.7	10.7	9.8	9.0	8.3	7.6	7.0	6.4	5.9	5.4	5.0	4.6	4.2	3.9	3.6	-
9 - 1/2"	19.8	18.5	17.4	16.5	15.7	15.0	14.3	13.7	13.2	12.1	11.1	10.2	9.4	8.7	8.0	7.4	6.8	6.3	5.8	5.4	5.0	4.6	4.2	3.9
10 - 1/2"	20.9	19.5	18.4	17.4	16.5	15.7	15.0	14.3	13.1	12.7	12.2	11.3	10.4	9.6	8.9	8.2	7.6	7.0	6.5	6.0	5.6	5.2	4.8	4.5

NOTES: (1) FIRE RATING FOR THIS CHART IS 2-HOUR; (2)  $f_c = 48$  MPa; (3)  $f_{pu} = 70\%$ ; (4) COMPOSITE TOPPING NOT USED; (5) PLEASE CONSULT WITH FRITZ-ALDER FOR ANY SPECIAL CONDITIONS.

Properties	Imperial	Metric
A	248.51 in <sup>2</sup>	160,330 mm <sup>2</sup>
$I_x$	3133 in <sup>4</sup>	1304 X 10 <sup>6</sup> mm <sup>4</sup>
$Y_b$	5.18 in	131.5 mm
b	48 in	1219.2 mm
$f_{pu}$	270 ksi	1861.6 Mpa
$f_c'$	7 ksi	48 Mpa
$S_b$	604.83 in <sup>3</sup>	9,911,388 mm <sup>3</sup>
$S_t$	650 in <sup>3</sup>	10,651,592 mm <sup>3</sup>
$D_{sw}$	65 psf	3.11 kPa
$b_w$	11.83 in	301 mm
Top Flange Thickness	1.38 in	35 mm
e	3.35	85 mm



# HOLLOWCORE - 12"/305 mm Load Tables

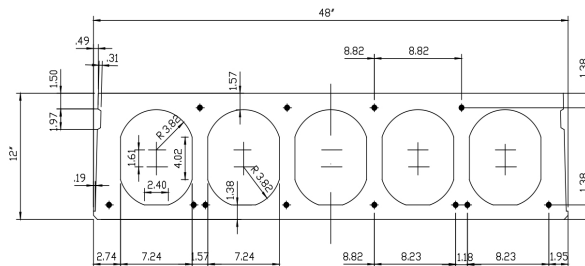
IMPERIAL																								
12" Hollowcore Imperial Load Table - Total Uniformly Distributed Superimposed Service Load - psf (lb/ft2)																								
Strand Code	Simple Span - Centre to Centre of Bearing - Feet																							
	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0	45.0	46.0	47.0	48.0	49.0	50.0
4 - 1/2"	92	82	74	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5 - 1/2"	203	184	167	151	137	124	113	102	92	84	75	-	-	-	-	-	-	-	-	-	-	-	-	-
6 - 1/2"	253	231	210	192	175	160	147	134	123	112	102	93	85	77	-	-	-	-	-	-	-	-	-	-
4 - 1/2" + 2 - 0.6"	292	267	244	223	205	188	172	158	146	134	123	113	104	95	87	80	-	-	-	-	-	-	-	-
7 - 1/2"	302	276	253	232	213	195	179	165	152	140	128	118	109	100	92	84	77	-	-	-	-	-	-	-
2 - 1/2" + 4 - 0.6"	323	302	277	254	233	215	198	182	168	155	143	132	122	112	104	95	88	81	-	-	-	-	-	-
8 - 1/2"	333	320	294	270	249	229	211	195	180	166	154	142	131	121	112	104	96	88	81	75	-	-	-	-
6 - 1/2" + 2 - 0.6"	336	322	310	299	276	255	235	218	201	187	173	160	149	138	128	119	110	102	94	87	81	74	-	-
9 - 1/2"	329	315	303	292	283	261	242	223	207	192	178	165	153	142	132	122	114	105	98	90	84	77	-	-
10 - 1/2"	337	322	309	297	287	281	271	251	233	216	201	187	174	162	151	140	131	122	113	105	98	91	85	79
8 - 1/2" + 2 - 0.6"	348	332	318	306	295	286	265	258	251	234	218	203	189	176	164	153	143	133	124	116	108	101	94	88

NOTES: (1) FIRE RATING FOR THIS CHART IS 2-HOUR; (2)  $f'_c = 7000$  psi; (3)  $f_{pu} = 70\%$ ; (4) COMPOSITE TOPPING NOT USED; (5) PLEASE CONSULT WITH FRITZ-ALDER FOR ANY SPECIAL CONDITIONS.

METRIC																								
305 mm Hollowcore Metric Load Table - Total Uniformly Distributed Superimposed Service Load - kPa (kN/m2)																								
Strand Code	Simple Span - Centre to Centre of Bearing - Meters																							
	8.2	8.5	8.8	9.1	9.4	9.8	10.1	10.4	10.7	11.0	11.3	11.6	11.9	12.2	12.5	12.8	13.1	13.4	13.7	14.0	14.3	14.6	14.9	15.2
4 - 1/2"	4.4	3.9	3.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5 - 1/2"	9.7	8.8	8.0	7.2	6.6	6.0	5.4	4.9	4.4	4.0	3.6	-	-	-	-	-	-	-	-	-	-	-	-	-
6 - 1/2"	12.1	11.0	10.1	9.2	8.4	7.7	7.0	6.4	5.9	5.4	4.9	4.5	4.1	3.7	-	-	-	-	-	-	-	-	-	-
4 - 1/2" + 2 - 0.6"	14.0	12.8	11.7	10.7	9.8	9.0	8.3	7.6	7.0	6.4	5.9	5.4	5.0	4.6	4.2	3.8	-	-	-	-	-	-	-	-
7 - 1/2"	14.5	13.2	12.1	11.1	10.2	9.3	8.6	7.9	7.3	6.7	6.1	5.7	5.2	4.8	4.4	4.0	3.7	-	-	-	-	-	-	-
2 - 1/2" + 4 - 0.6"	15.5	14.4	13.2	12.2	11.2	10.3	9.5	8.7	8.0	7.4	6.8	6.3	5.8	5.4	5.0	4.6	4.2	3.9	-	-	-	-	-	-
8 - 1/2"	16.0	15.3	14.1	12.9	11.9	11.0	10.1	9.3	8.6	8.0	7.4	6.8	6.3	5.8	5.4	5.0	4.6	4.2	3.9	3.6	-	-	-	-
6 - 1/2" + 2 - 0.6"	16.1	15.4	14.8	14.3	13.2	12.2	11.3	10.4	9.6	8.9	8.3	7.7	7.1	6.6	6.1	5.7	5.3	4.9	4.5	4.2	3.9	3.6	-	-
9 - 1/2"	15.8	15.1	14.5	14.0	13.5	12.5	11.6	10.7	9.9	9.2	8.5	7.9	7.3	6.8	6.3	5.9	5.4	5.0	4.7	4.3	4.0	3.7	-	-
10 - 1/2"	16.2	15.4	14.8	14.2	13.7	13.5	13.0	12.0	11.1	10.4	9.6	8.9	8.3	7.8	7.2	6.7	6.3	5.8	5.4	5.0	4.7	4.4	4.1	3.8
8 - 1/2" + 2 - 0.6"	16.7	15.9	15.2	14.7	14.1	13.7	12.7	12.3	12.0	11.2	10.4	9.7	9.0	8.4	7.9	7.3	6.8	6.4	6.0	5.6	5.2	4.8	4.5	4.2

NOTES: (1) FIRE RATING FOR THIS CHART IS 2-HOUR; (2)  $f'_c = 48$  MPa; (3)  $f_{pu} = 70\%$ ; (4) COMPOSITE TOPPING NOT USED; (5) PLEASE CONSULT WITH FRITZ-ALDER FOR ANY SPECIAL CONDITIONS.

Properties	Imperial	Metric
A	285 in <sup>2</sup>	183,642 mm <sup>2</sup>
$I_x$	5274 in <sup>4</sup>	2195 X 10 <sup>-6</sup> mm <sup>4</sup>
$Y_b$	5.94 in	150.6 mm
b	48 in	1219.2 mm
$f_{pu}$	270 ksi	1861.6 Mpa
$f'_c$	7 ksi	48 Mpa
$S_b$	887.87 in <sup>3</sup>	14,549,582 mm <sup>3</sup>
$S_t$	870.30 in <sup>3</sup>	14,261,661 mm <sup>3</sup>
$D_{sw}$	75 psf	3.59 kPa
$b_w$	11.83 in	301 mm
Top Flange Thickness	1.57 in	40 mm
e	4.34 in	110.24 mm



## FIRE RATING

A 2-hour fire resistance rating for our Hollowcore sections (8", 10", and 12"), is achieved by meeting or exceeding the following requirements of Ministry of Municipal Affairs and Housing (MMAH) Supplementary SB-2 2012 referenced in Ontario Building Code (OBC) 2012, and National Building Code (NBC) 2015 Appendix D Division B.

- The equivalent thicknesses of our Hollowcore sections are calculated based on MMAH SB-2 section 1.6 item (7).
- Minimum 124 mm thickness of reinforced and prestressed concrete floor and roof slabs for type N concrete, as per NBC 2015 Table D-2.1.1-A.
- Minimum 39 mm concrete cover for prestressed concrete slabs type N concrete.

## SOUND TRANSMISSION RATING

The Canadian Precast Prestressed Concrete Institute (CPCI) Design Manual (5th Edition, Section 6-26) outlines the following standards for 203 mm thick Hollowcore slabs:

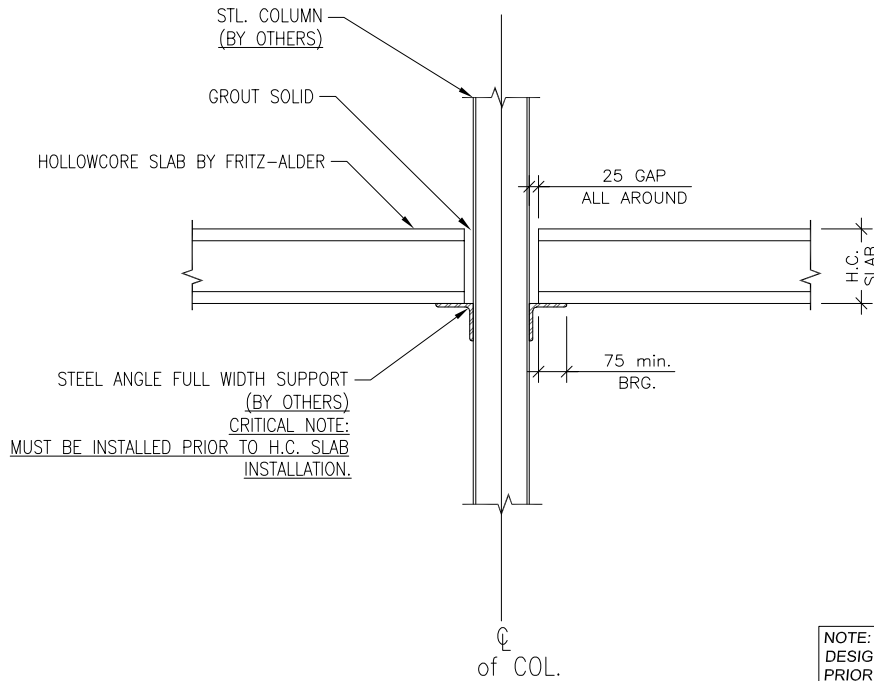
- The Sound Transmission Rating (STC) is 50.

These details are prepared by Fritz-Alder Precast based on industry best practices and standards; however all details shall be verified and approved by E.O.R. prior to use in projects as details may differ for specific projects. Any post applied connection/coring/modifications shall be verified and approved by the qualified professional engineer. For any post applied connection/modification, the actual location of strand/steel reinforcement must be found via proper testing procedures on site. In any circumstances, strand/steel rebars shall not be cut/affected. If any deviation from the detail is required, please call Fritz-Alder Precast for assistance.



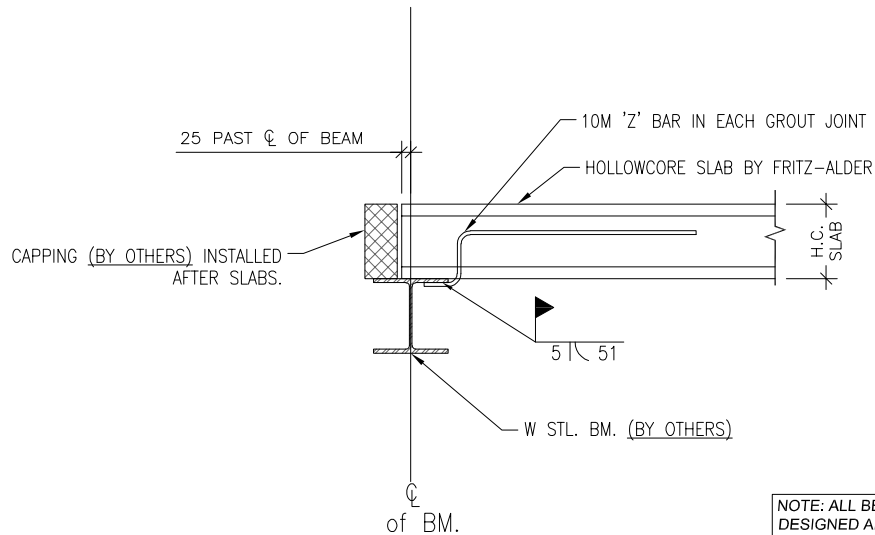
# HOLLOWCORE - Connections to Structural Steel

## 1 STL



NOTE: ALL BEARING SUPPORT TO BE DESIGNED AND PROVIDED BY OTHERS PRIOR TO INSTALLATION OF HOLLOW CORE ON SITE

## 2 STL

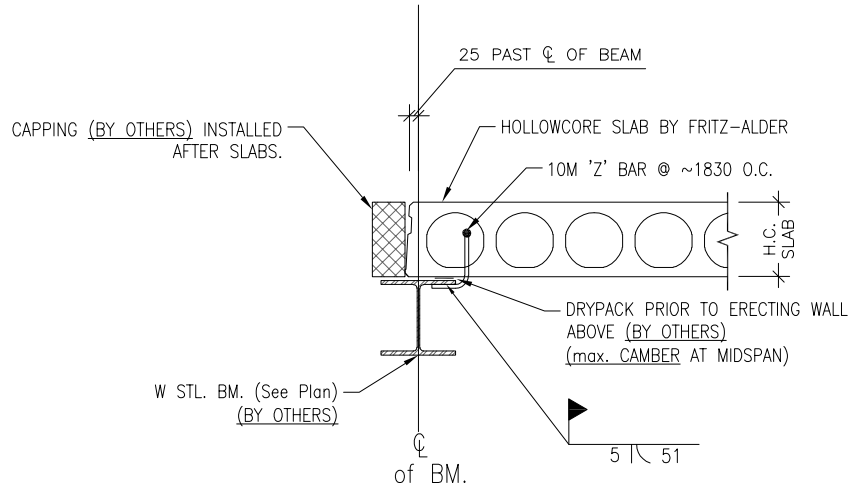


NOTE: ALL BEARING SUPPORT TO BE DESIGNED AND PROVIDED BY OTHERS PRIOR TO INSTALLATION OF HOLLOW CORE ON SITE

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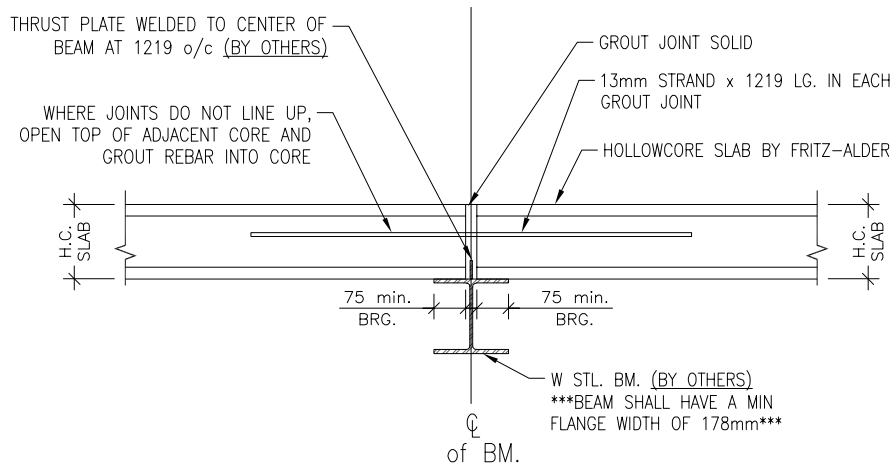
# HOLLOWCORE - Connections to Structural Steel

3  
STL



NOTE: ALL BEARING SUPPORT TO BE DESIGNED AND PROVIDED BY OTHERS PRIOR TO INSTALLATION OF HOLLOW CORE ON SITE

4  
STL



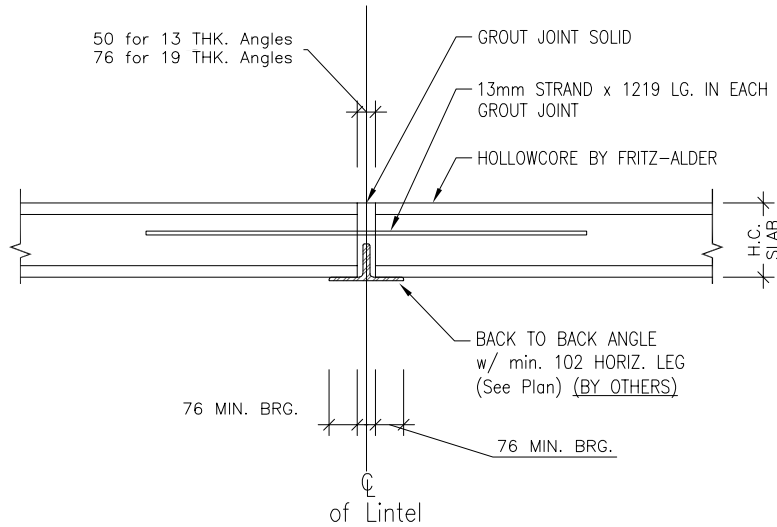
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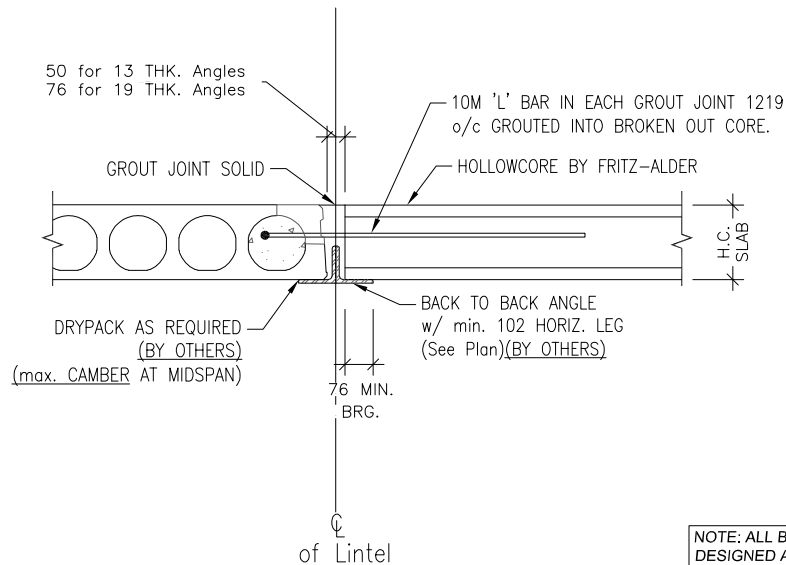
# HOLLOWCORE - Connections to Structural Steel

5  
STL



NOTE: ALL BEARING SUPPORT TO BE DESIGNED AND PROVIDED BY OTHERS PRIOR TO INSTALLATION OF HOLLOW CORE ON SITE

6  
STL

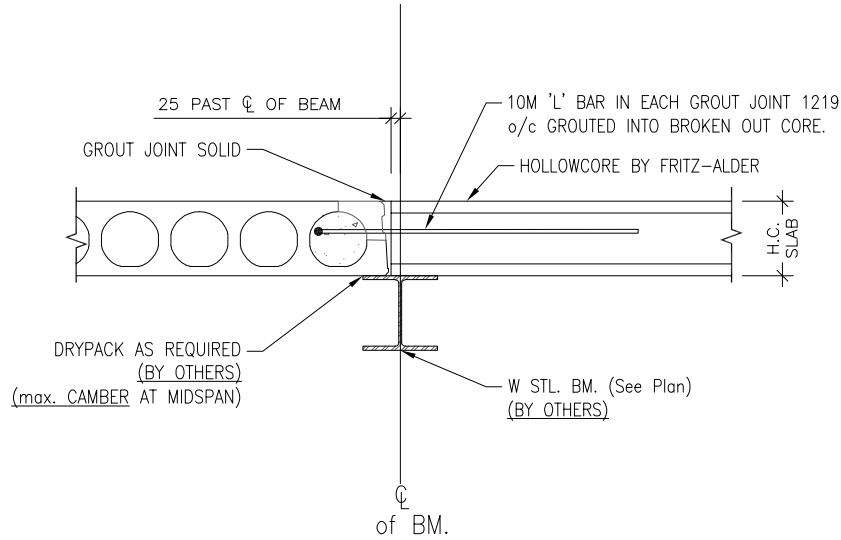


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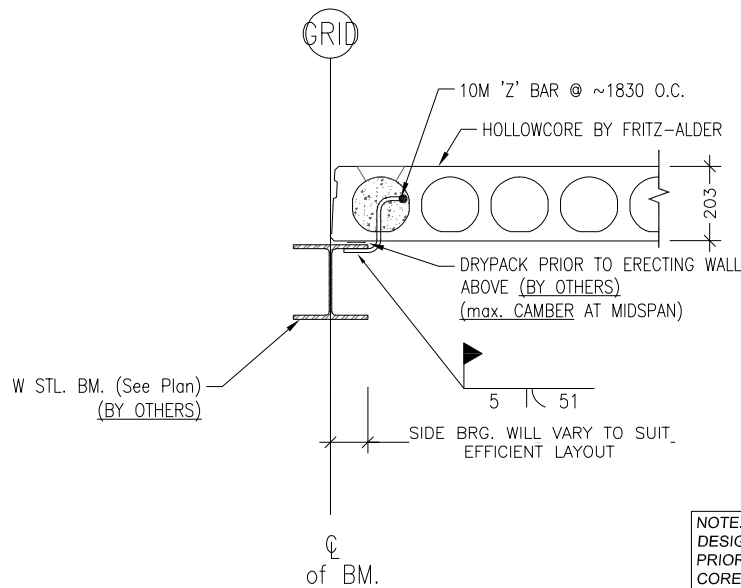
# HOLLOWCORE - Connections to Structural Steel

7  
STL



NOTE: ALL BEARING SUPPORT TO BE DESIGNED AND PROVIDED BY OTHERS PRIOR TO INSTALLATION OF HOLLOW CORE ON SITE

8  
STL

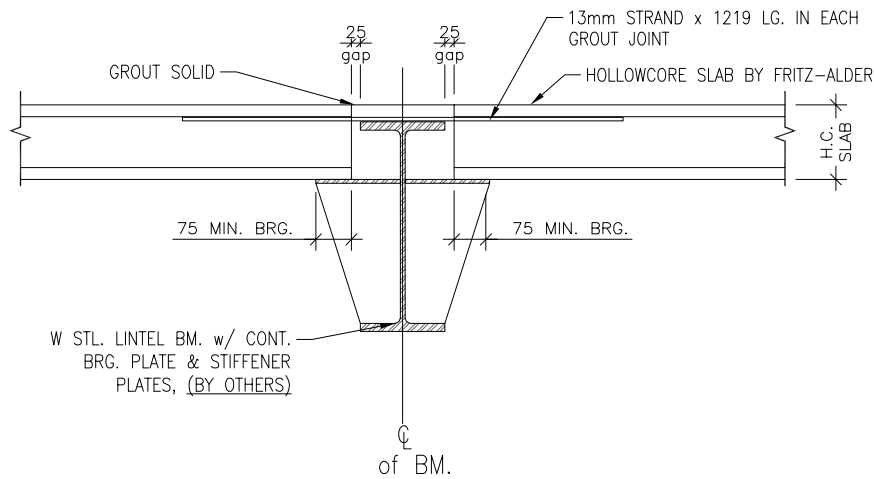


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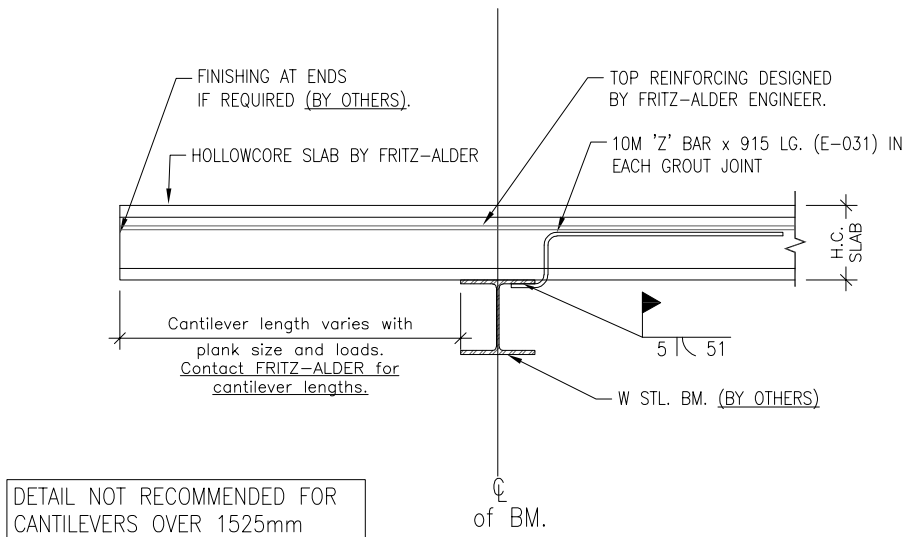
# HOLLOWCORE - Connections to Structural Steel

9  
STL



NOTE: ALL BEARING SUPPORT TO BE DESIGNED AND PROVIDED BY OTHERS PRIOR TO INSTALLATION OF HOLLOW CORE ON SITE

10  
STL



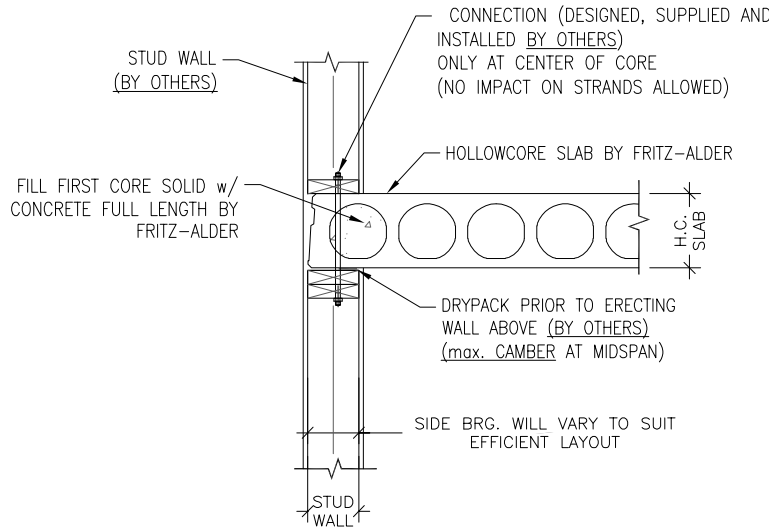
DETAIL NOT RECOMMENDED FOR CANTILEVERS OVER 1525mm

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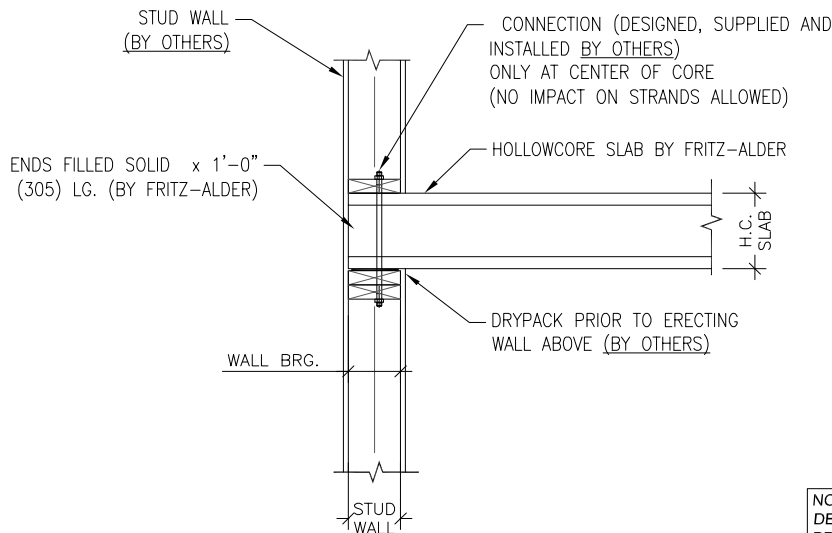
# HOLLOWCORE - Connections to Metal and Wood Stud Walls

1  
STD



NOTE: ALL BEARING SUPPORT TO BE DESIGNED AND PROVIDED BY OTHERS PRIOR TO INSTALLATION OF HOLLOW CORE ON SITE

2  
STD

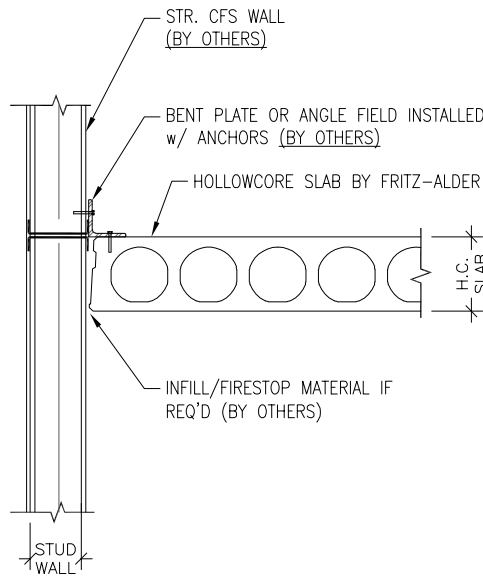


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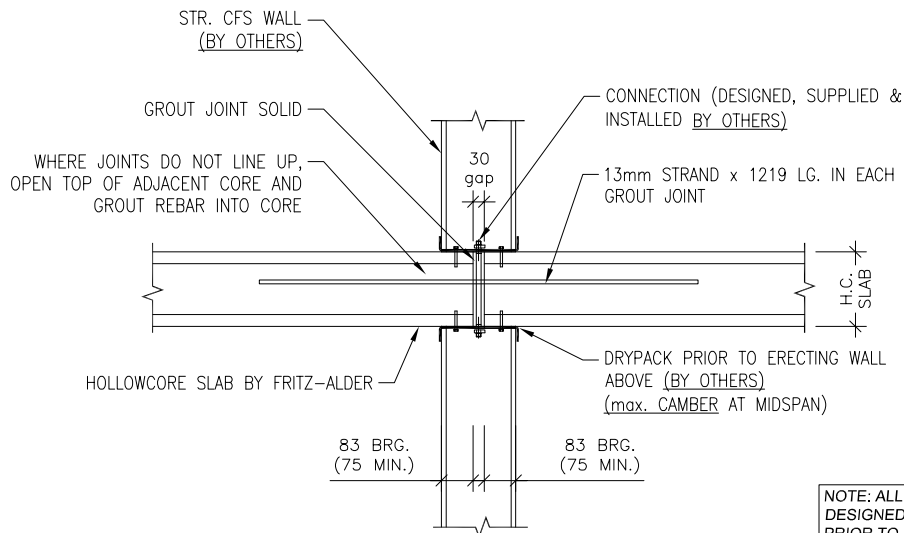
# HOLLOWCORE - Connections to Metal and Wood Stud Walls

3  
STD



NOTE: ALL BEARING SUPPORT TO BE DESIGNED AND PROVIDED BY OTHERS PRIOR TO INSTALLATION OF HOLLOW CORE ON SITE

4  
STD

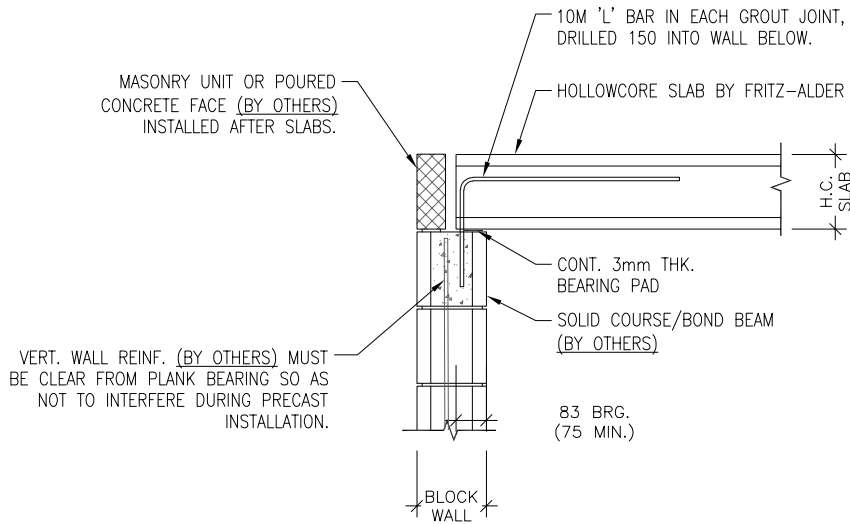


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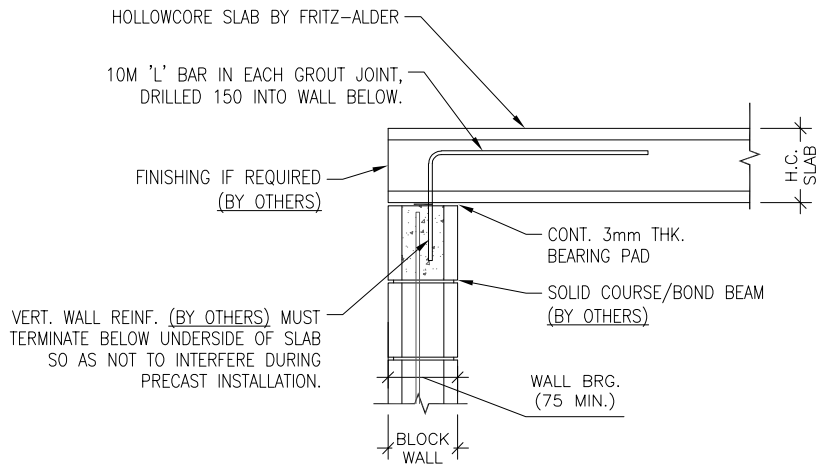
# HOLLOWCORE - Connections to Masonry Walls

1  
MW



NOTE: ALL BEARING SUPPORT TO BE DESIGNED AND PROVIDED BY OTHERS PRIOR TO INSTALLATION OF HOLLOW CORE ON SITE

2  
MW

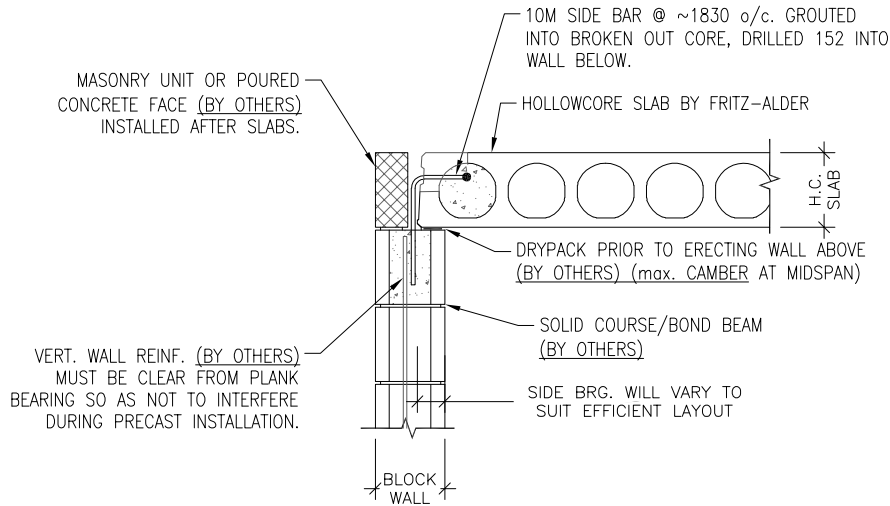


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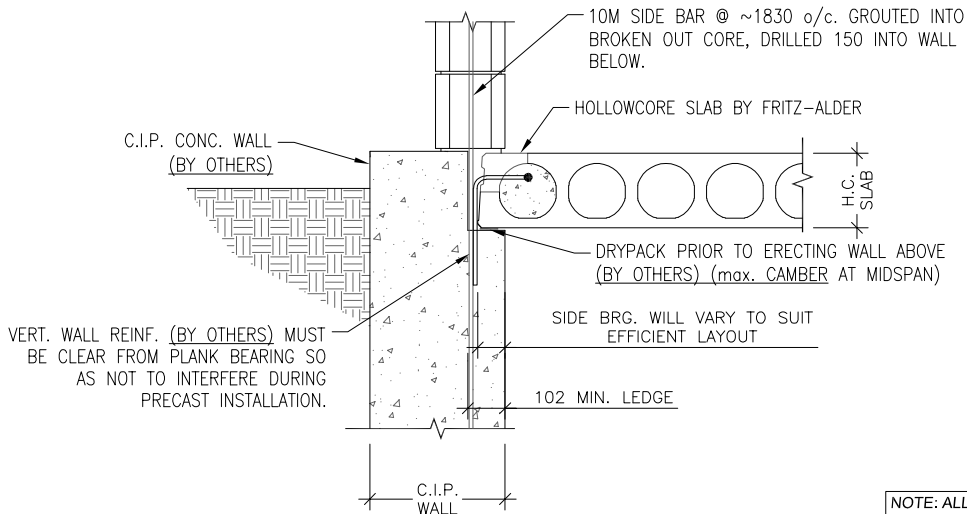
# HOLLOWCORE - Connections to Masonry Walls

3  
MW



NOTE: ALL BEARING SUPPORT TO BE DESIGNED AND PROVIDED BY OTHERS PRIOR TO INSTALLATION OF HOLLOW CORE ON SITE

4  
MW

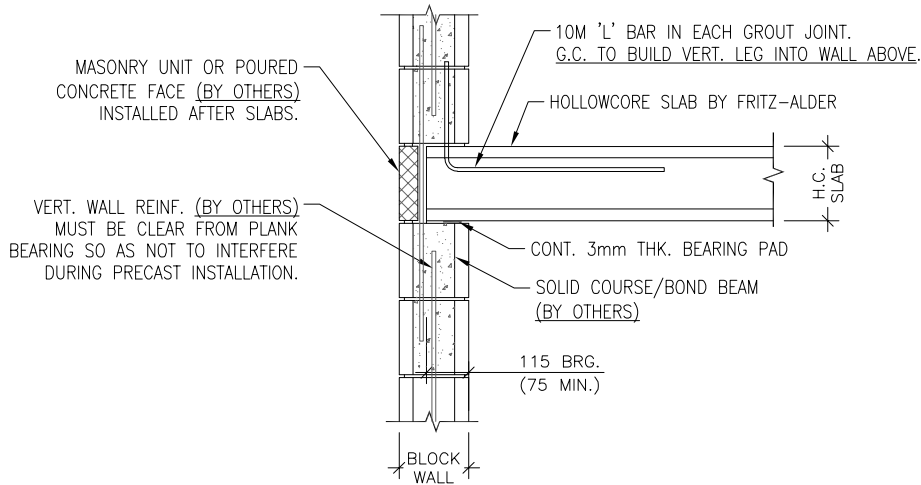


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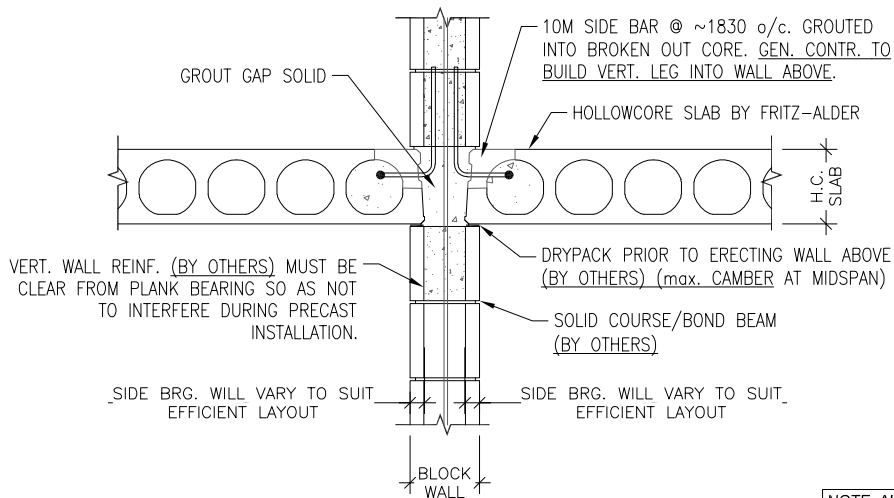
# HOLLOWCORE - Connections to Masonry Walls

5  
MW



NOTE: ALL BEARING SUPPORT TO BE DESIGNED AND PROVIDED BY OTHERS PRIOR TO INSTALLATION OF HOLLOW CORE ON SITE

6  
MW



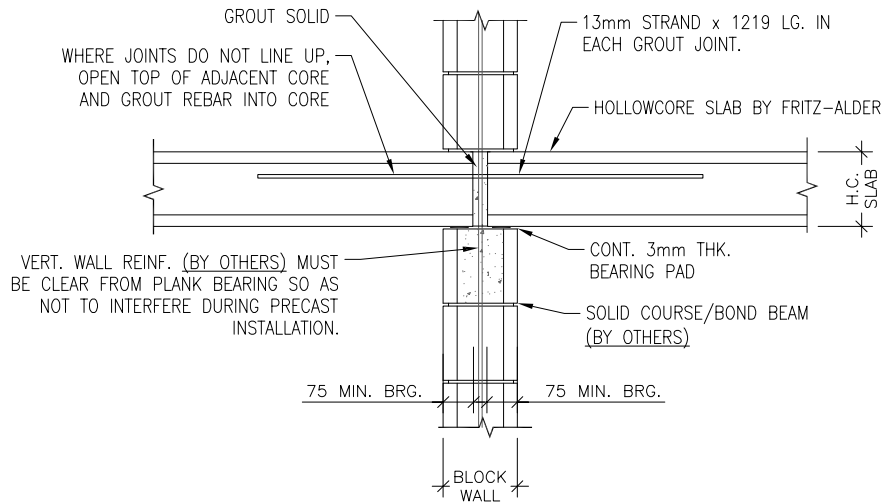
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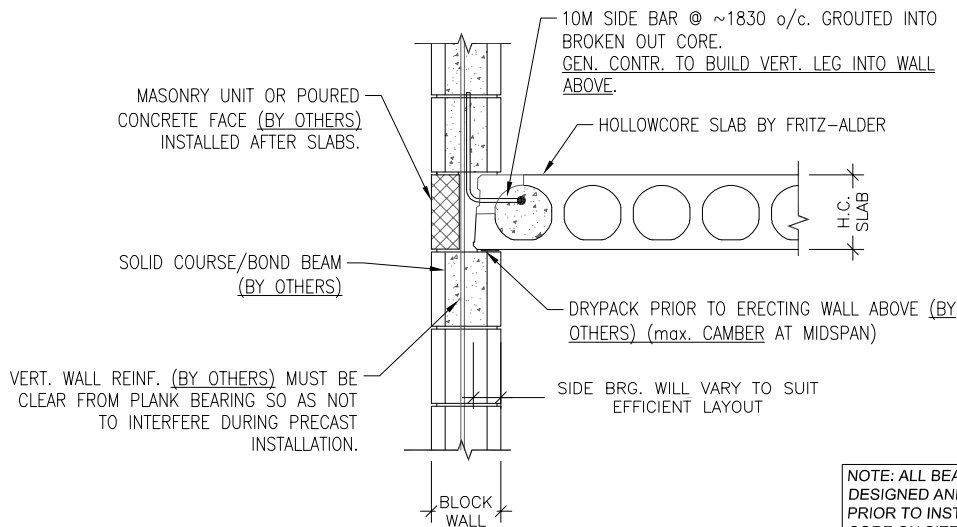
# HOLLOWCORE - Connections to Masonry Walls

7  
MW



NOTE: ALL BEARING SUPPORT TO BE DESIGNED AND PROVIDED BY OTHERS PRIOR TO INSTALLATION OF HOLLOW CORE ON SITE

8  
MW

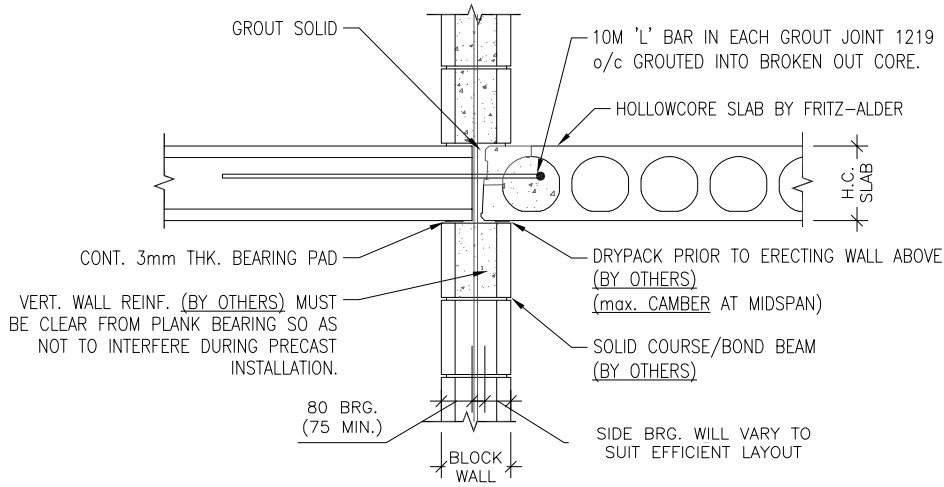


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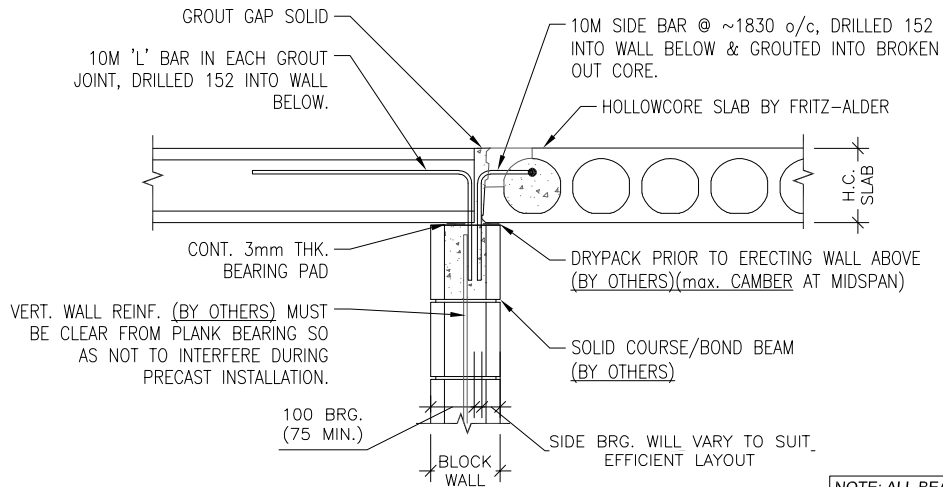
# HOLLOWCORE - Connections to Masonry Walls

9  
MW



NOTE: ALL BEARING SUPPORT TO BE DESIGNED AND PROVIDED BY OTHERS PRIOR TO INSTALLATION OF HOLLOW CORE ON SITE

10  
MW

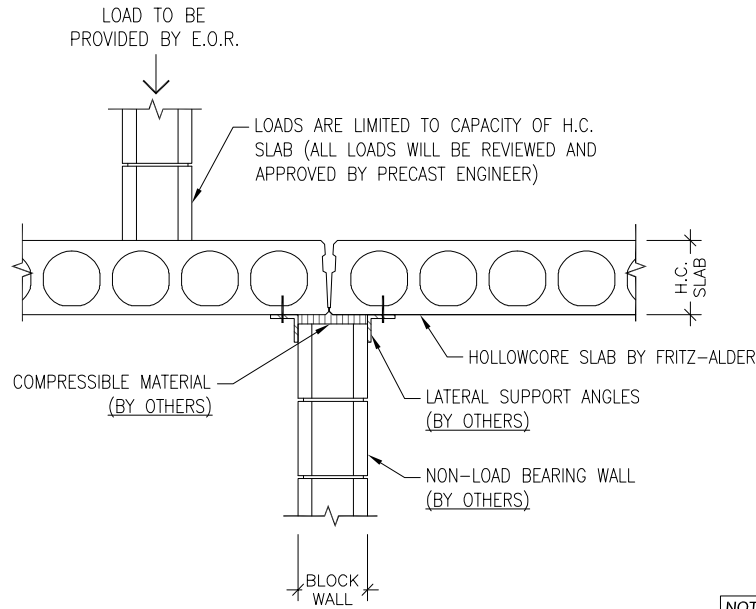


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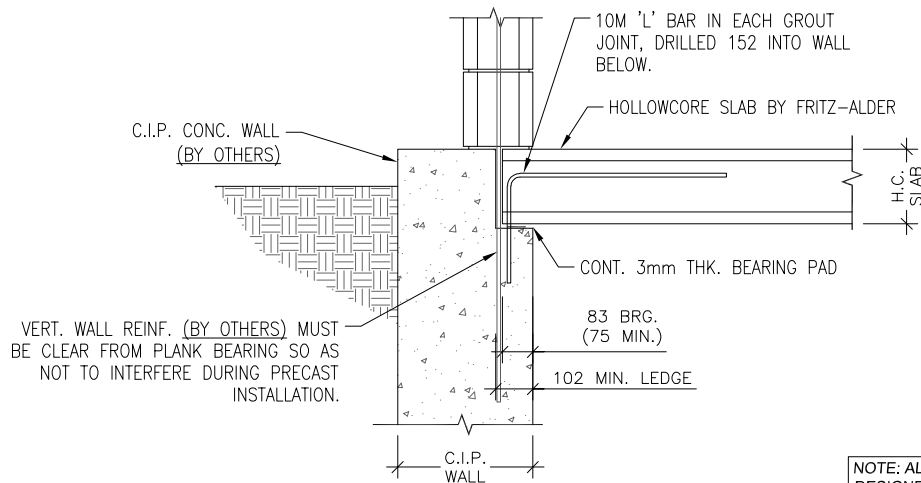
# HOLLOWCORE - Connections to Masonry Walls

11  
MW



NOTE: ALL BEARING SUPPORT TO BE DESIGNED AND PROVIDED BY OTHERS PRIOR TO INSTALLATION OF HOLLOW CORE ON SITE

12  
MW

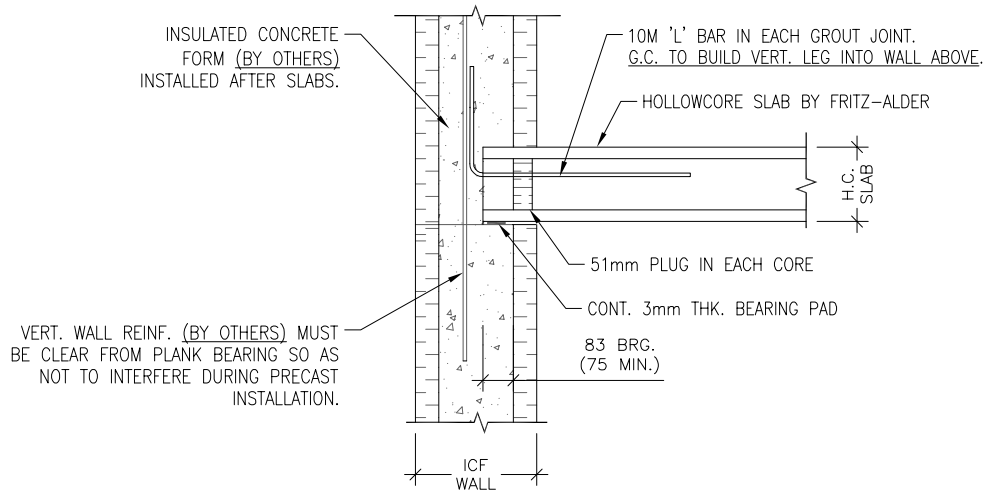


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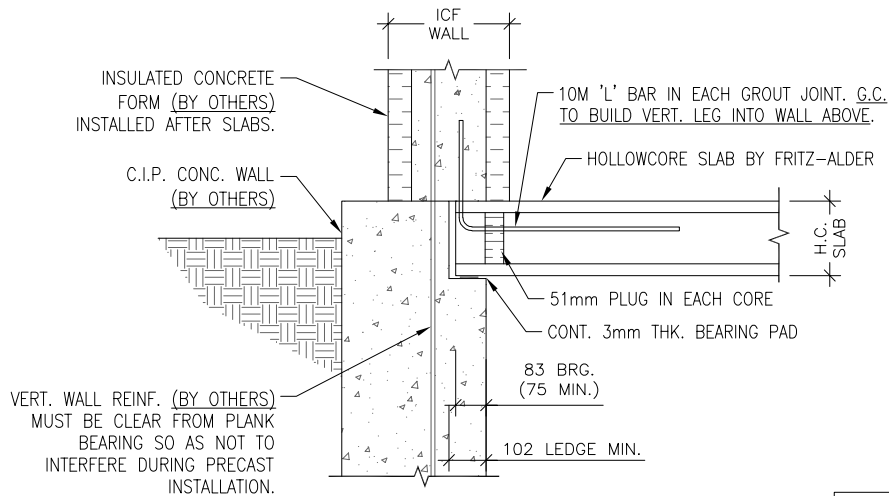
# HOLLOWCORE - Connections to ICF & Poured Concrete Walls

1  
PIP



NOTE: ALL BEARING SUPPORT TO BE DESIGNED AND PROVIDED BY OTHERS PRIOR TO INSTALLATION OF HOLLOW CORE ON SITE

2  
PIP

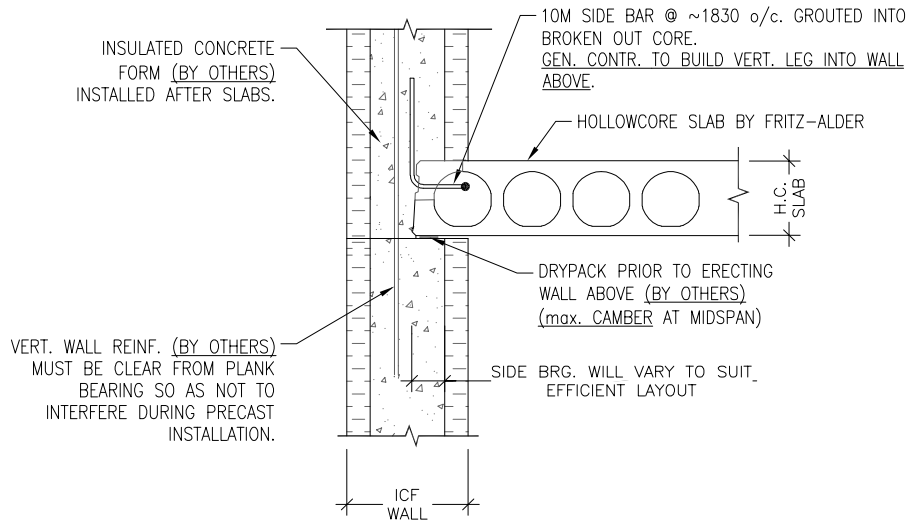


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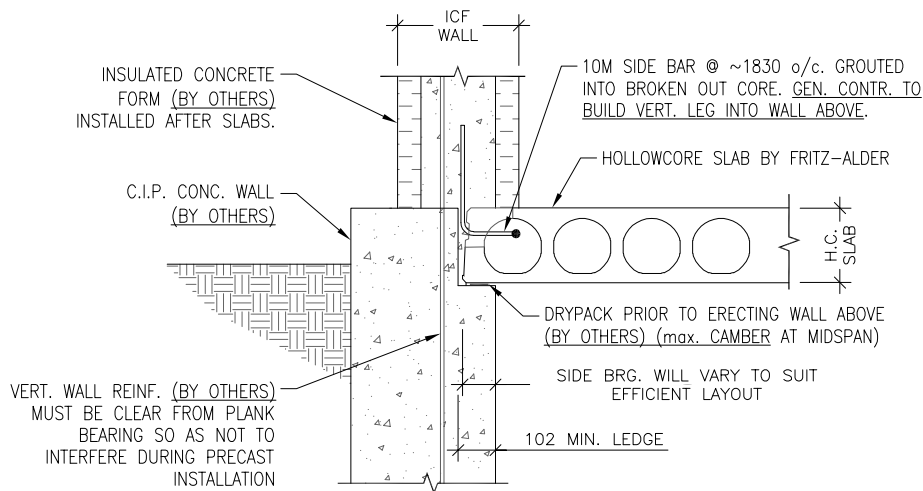
# HOLLOWCORE - Connections to ICF & Poured Concrete Walls

## 3 PIP



NOTE: ALL BEARING SUPPORT TO BE DESIGNED AND PROVIDED BY OTHERS PRIOR TO INSTALLATION OF HOLLOW CORE ON SITE

## 4 PIP

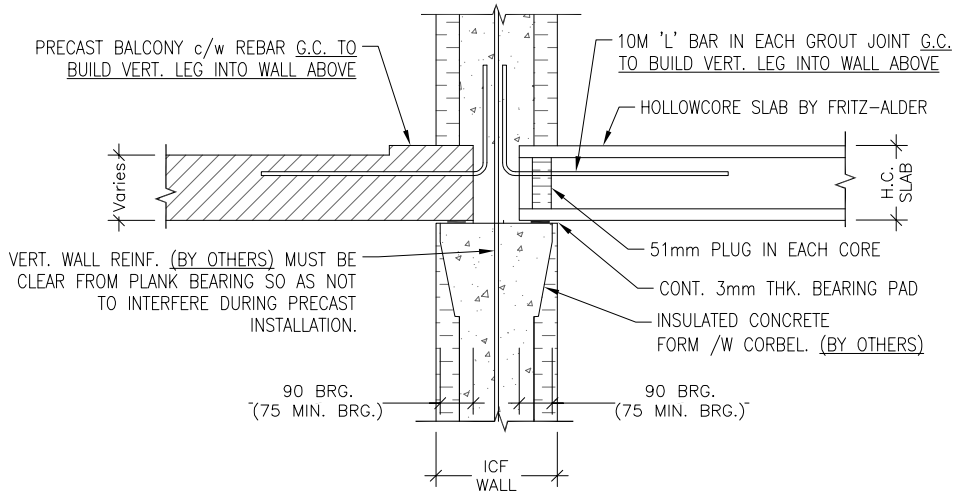


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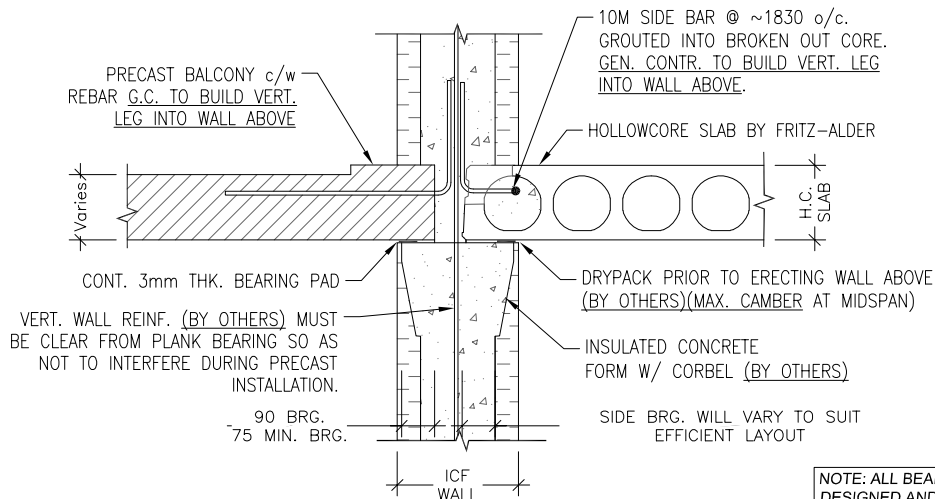
# HOLLOWCORE - ICF & Poured Concrete Wall Connections

5  
PIP



NOTE: ALL BEARING SUPPORT TO BE DESIGNED AND PROVIDED BY OTHERS PRIOR TO INSTALLATION OF HOLLOW CORE ON SITE

6  
PIP

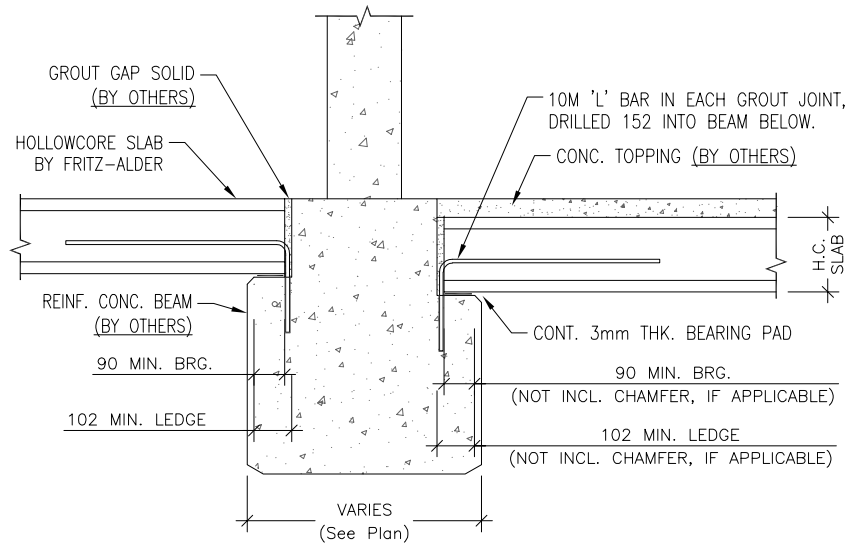


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# HOLLOWCORE - ICF & Poured Concrete Wall Connections

9  
PIP

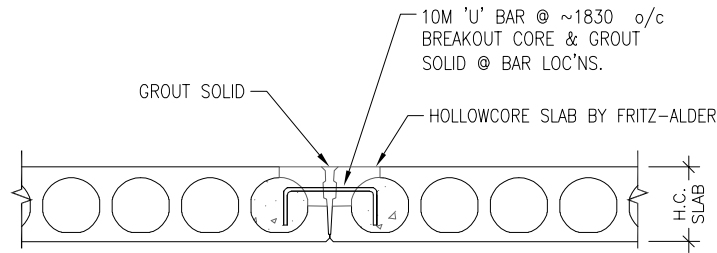


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# HOLLOWCORE - Miscellaneous Connections

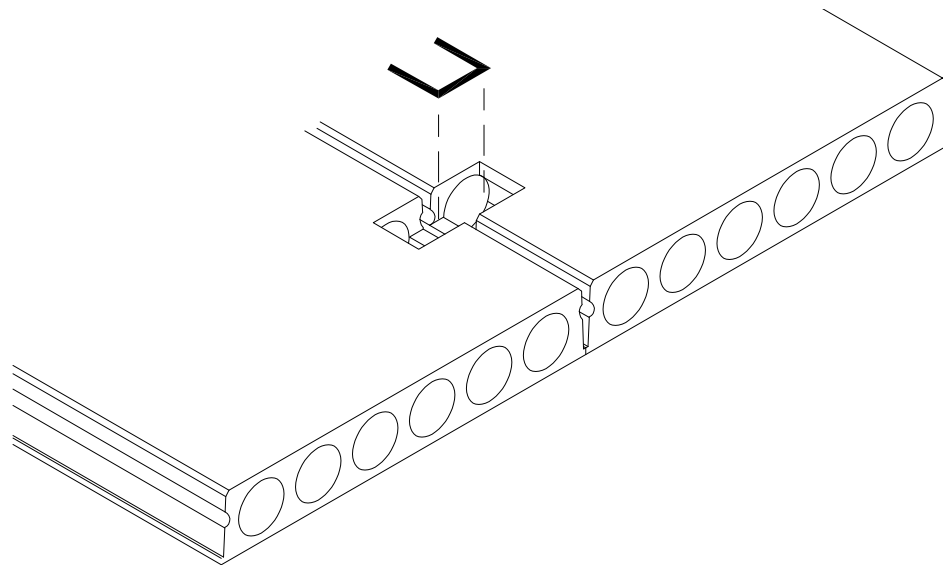
1  
MSC



## USAGE OF ANTI-ROTATION BARS HERE AS FOLLOWS:

- 1) ONLY WHERE NECESSARY FOR DESIGN AS DETERMINED BY FRITZ-ALDER'S ENGINEER (See Plan).
- 2) AS PER STRUCTURAL CONTRACT DRAWINGS DESIGN REQUIREMENTS.
- 3) 1830 o/c UNLESS SHOWN DIFFERENT ON LAYOUT PLAN, IF REQUIRED.

2  
MSC



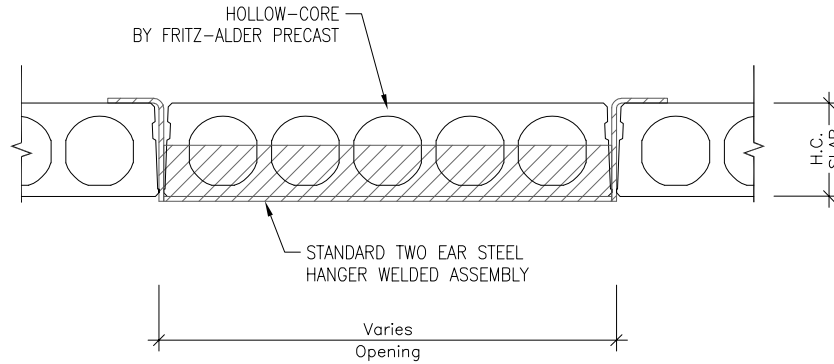
ISOMETRIC VIEW

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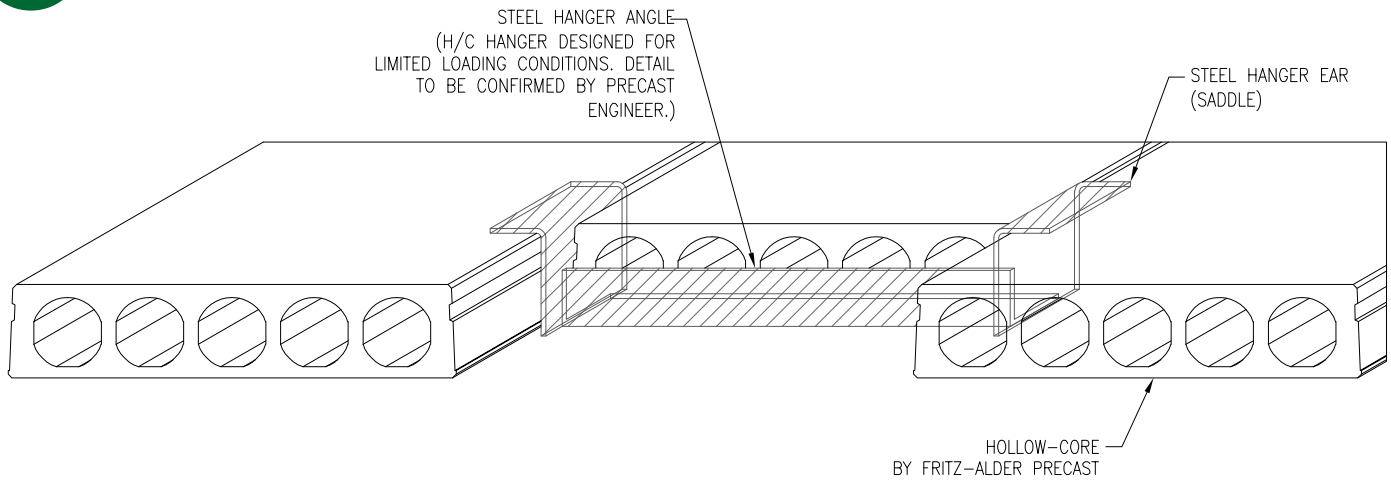


# HOLLOWCORE - Miscellaneous Connections

3  
MSC



4  
MSC

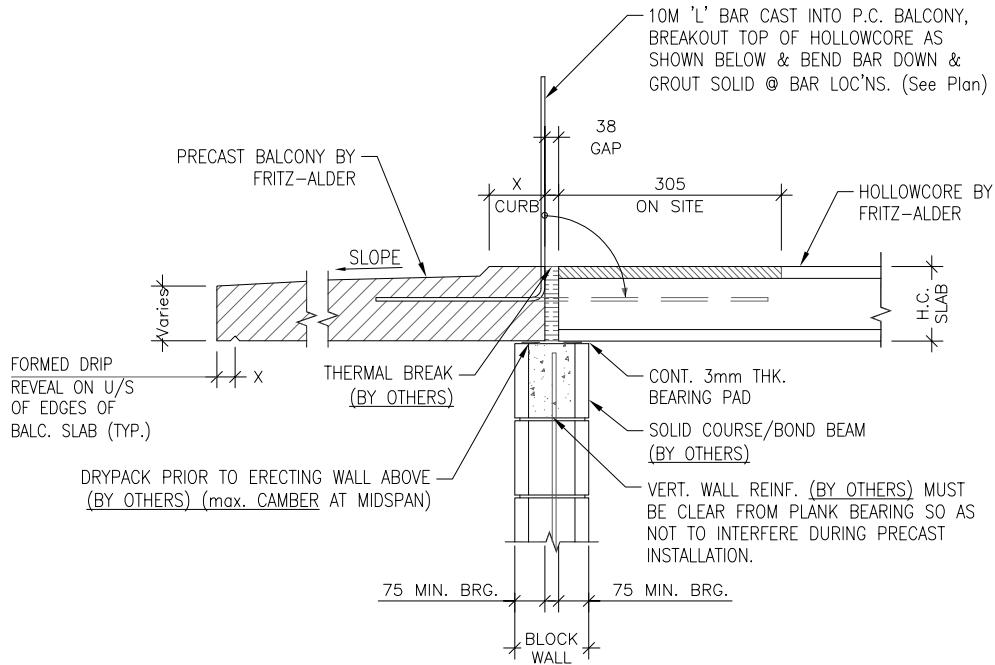


ISOMETRIC VIEW

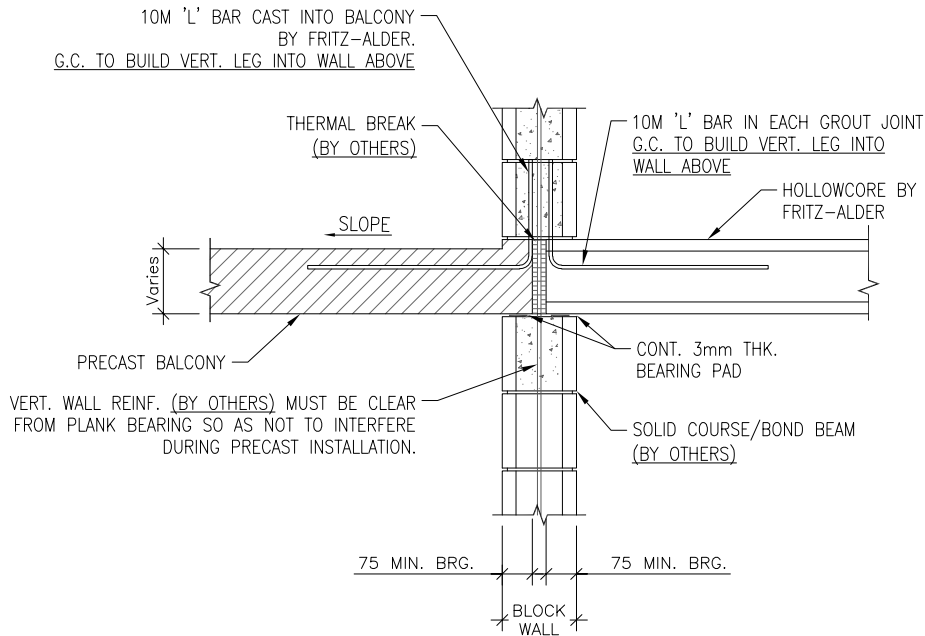
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# HOLLOWCORE - Miscellaneous Connections

5  
MSC

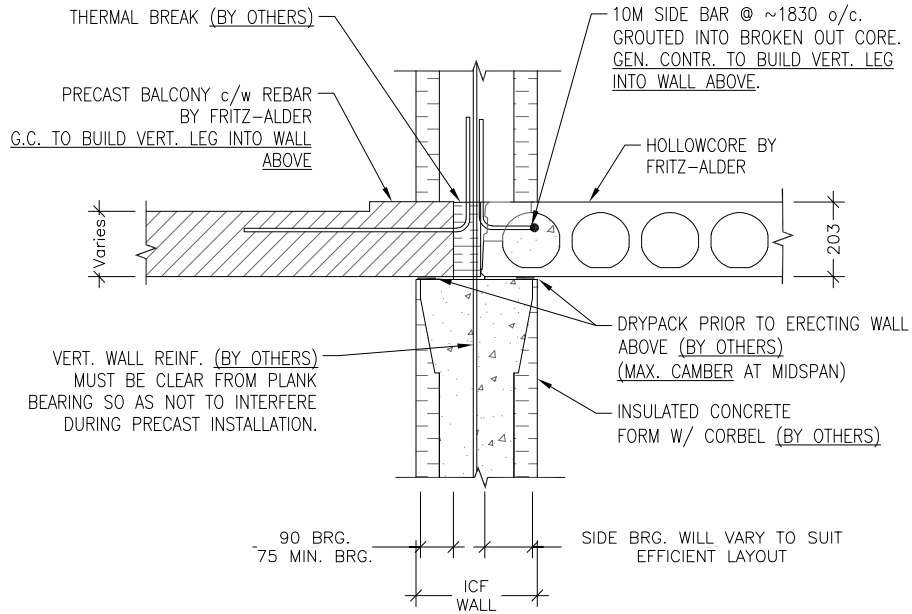


6  
MSC



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11  
MSC



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