

HOLLOWCORE

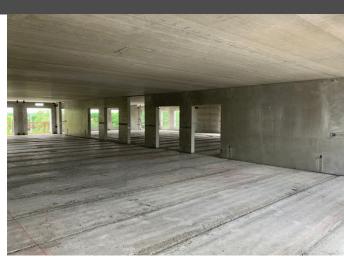
INFORMATION GUIDE



FAMILY OWNED.
PROFESSIONALLY RUN.

Hollowcore

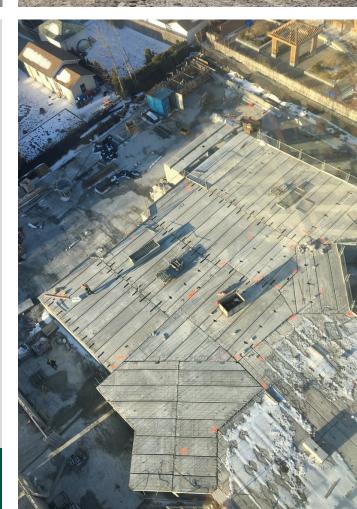








- 8", 10", 12", 14" thickness
- 5,000-7,000 sq. ft. installed in one day
- Provides an instant working deck for other trades
- Storage in yard waiting for transport
- Spans 50 feet plus
- Continuous installation minimizing down time on site for other trades
- Proper co-ordination and quick installation allows for a fast- paced construction site

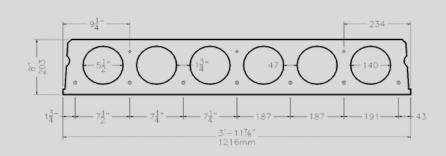


Explanation of Hollowcore Load Tables

- Superimposed loading shown in tables is factored.
- A portion of the safe load shown is assumed to be a dead load for the purpose of applying load factors and determining time-dependent cambers and deflections.
 2.4 kPa of the applied load is unfactored superimposed dead load.
- Self-weight of the hollowcore slabs is already considered; it does not need to be
 added as part of the applied loading noted. Note that toppings are an applied load
 and should be considered when calculating the Total Factored Uniformly
 Distributed Load.
- The load combination below is assumed to give the highest factored load in the majority of cases.
 - Load factors: 1.25DL + 1.5LL
- Hollowcore capacities are based on simple spans, measured center-to-center of bearing, with a bearing length of 60 mm.
- Size and location of opening reduce hollowcore capacity, see Stubbe's Precast
 Standard Coring Rules for more information.
- Prestressing strands shown in load table are required to resist the respective
 gravity loads only. Contact Stubbe's Precast Engineering if prestressing strand
 must be utilized in lateral load analysis.

Hollowcore- 8" (203 mm) Load Tables

| | Hollow Core | Slab P | roperties |
|----------------------|------------------------|--------|--------------------------------------|
| Prop | Imperial | | Metric |
| А | 233.65 in ² | | 150742 mm ² |
| l _x | 1727 in ⁴ | | 7.23x10 ⁸ mm ⁴ |
| Y _b | 3.98 in | | 101.0 mm |
| b _w | 13 in | | 353.0 mm |
| f_{pu} | 270 ksi | | 1860 Mpa |
| f'c | 7000 psi | | 48.3 Mpa |
| f' _{ci,min} | 3000 psi | | 20.7 Mpa |
| S _w | 62 psf | | 2.97 kPa |



METRIC

203 mm Hollowcore Metric Load Table- Total Factored Uniformly Distributed Applied Load- kPa (kN/m²)

| 1/2" | M _r | | | | | SIM | PLE SF | PAN - C | ENTRE | TO CI | ENTRE | OF BE | ARING | (m) | | | | |
|---------|----------------|-------|-------|-------|-------|-------|--------|---------|-------|-------|-------|-------|-------|------|------|------|------|------|
| Strands | (kN·m) | 3 | 3.5 | 4 | 4.5 | 5 | 5.5 | 6 | 6.5 | 7 | 7.5 | 8 | 8.5 | 9 | 9.5 | 10 | 10.5 | 11 |
| 7 | 157.9 | | | | | | | | | 11.55 | 10.05 | 9.60 | 8.10 | 7.80 | 7.20 | 5.85 | 4.50 | 3.30 |
| , | 138.7 | | | | | | 12.90 | 11.25 | 9.90 | 9.30 | 7.95 | 7.50 | 6.45 | 6.15 | 5.85 | 5.10 | 4.20 | 3.15 |
| 5 | 118.2 | | | | | 11.25 | 9.90 | 8.85 | 7.95 | 7.20 | 6.00 | 5.70 | 4.95 | 4.50 | 4.20 | 4.05 | | |
| 5 | 96.7 | | | 11.25 | 9.90 | 7.95 | 7.35 | 6.15 | 5.55 | 4.80 | 4.20 | 3.45 | | | | | | |
| 4 | 96.7 | | | 11.25 | 9.90 | 7.95 | 7.35 | 6.15 | 5.55 | 4.80 | 4.20 | 3.45 | | | | | | |
| 4 | 74.1 | | 17.10 | 14.40 | 12.30 | 10.35 | 8.10 | 6.30 | 4.80 | | | | | | | | | |
| 3 | 74.1 | | 17.10 | 14.40 | 12.30 | 10.35 | 8.10 | 6.30 | 4.80 | | | | | | | | | |
| 3 | 50.6 | 17.85 | 13.20 | 10.20 | 7.95 | 6.00 | 4.35 | | | | | | | | | | | |

IMPERIAL

8" Hollowcore Imperial Load Table- Total Factored Uniformly Distributed Applied Load- psf (lb/ft²)

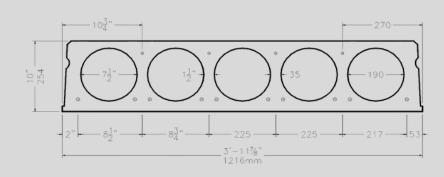
| 1/2" | M _r | | | | | SIM | IPLE S | PAN - (| CENTR | Е ТО С | ENTRE | OF BE | ARING | (ft) | | | | |
|---------|----------------|-------|-------|-------|-------|-------|--------|---------|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|
| Strands | (kip·ft) | 9.843 | 11.48 | 13.12 | 14.76 | 16.4 | 18.04 | 19.69 | 21.33 | 22.97 | 24.61 | 26.25 | 27.89 | 29.53 | 31.17 | 32.81 | 34.45 | 36.09 |
| 7 | 116.46 | | | | | | | | | 241.2 | 209.9 | 200.5 | 169.2 | 162.9 | 150.4 | 122.2 | 94.0 | 68.9 |
| , | 102.30 | | | | | | 269.4 | 235.0 | 206.8 | 194.2 | 166.0 | 156.6 | 134.7 | 128.4 | 122.2 | 106.5 | 87.7 | 65.8 |
| 5 | 87.18 | | | | | 235.0 | 206.8 | 184.8 | 166.0 | 150.4 | 125.3 | 119.0 | 103.4 | 94.0 | 87.7 | 84.6 | | |
| 3 | 71.33 | | | | 206.8 | 166.0 | 153.5 | 128.4 | 115.9 | 100.2 | 87.7 | 72.1 | | | | | | |
| 4 | 71.33 | | | 235.0 | 206.8 | 166.0 | 153.5 | 128.4 | 115.9 | 100.2 | 87.7 | 72.1 | | | | | | |
| 4 | 54.63 | | 357.1 | 300.7 | 256.9 | 216.2 | 169.2 | 131.6 | 100.2 | | | | | | | | | |
| 3 | 54.63 | | 357.1 | 300.7 | 256.9 | 216.2 | 169.2 | 131.6 | 100.2 | | | | | | | | | |
| 3 | 37.30 | 372.8 | 275.7 | 213.0 | 166.0 | 125.3 | 90.9 | | | | | | | | | | | |

- NO CORING

- CORING PERMITTED PER STUBBES PRECAST CORING RULES

Hollowcore- 10" (254 mm) Load Tables

| <u> </u> | Hollow Core Sla | b Properties |
|----------------------|------------------------|--------------------------------------|
| Prop | Imperial | Metric |
| Α | 253.81 in ² | 163748 mm ² |
| I_{x} | 3148.0 in ⁴ | 1.32x10 ⁹ mm ⁴ |
| Y _b | 4.96 in | 126.0 mm |
| b _w | 9.31 in | 288.8 mm |
| f_{pu} | 270 ksi | 1860 Mpa |
| fc | 7000 psi | 48.3 Mpa |
| f' _{ci,min} | 3000 psi | 20.7 Mpa |
| S _w | 70 psf | 3.35 kPa |



METRIC

254 mm Hollowcore Metric Load Table- Total Factored Uniformly Distributed Applied Load- kPa (kN/m²)

| 1/2" | M _r | | | | | | 8 | SIMPLE | SPAN | - CEN | TRE TO | CENT | RE OF | BEAR | ING (m |) | | | | | |
|---------|----------------|-------|-------|-------|-------|-------|-------|--------|-------|-------|--------|-------|-------|-------|--------|-------|------|------|------|------|------|
| Strands | (kN·m) | 4 | 4.5 | 5 | 5.5 | 6 | 6.5 | 7 | 7.5 | 8 | 8.5 | 9 | 9.5 | 10 | 10.5 | 11 | 11.5 | 12 | 12.5 | 13 | 13.5 |
| 10 | 287.7 | | | | | | | | | | | 13.65 | 13.20 | 12.60 | 10.80 | 10.05 | 8.40 | 7.05 | 5.70 | 4.65 | 3.60 |
| 10 | 243.1 | | | | | | | | 12.45 | 12.00 | 10.20 | 9.90 | 9.45 | 9.15 | 7.65 | 7.35 | 7.05 | 6.45 | 5.25 | 4.20 | |
| 8 | 243.1 | | | | | | | | 12.45 | 12.00 | 10.20 | 9.90 | 9.45 | 9.15 | 7.65 | 7.35 | 7.05 | 6.45 | 5.25 | 4.20 | |
| 0 | 189.2 | | | | 13.35 | 11.85 | 10.20 | 9.75 | 8.10 | 7.95 | 6.60 | 6.30 | 6.00 | 5.85 | 4.65 | 4.50 | 4.35 | 4.20 | 3.90 | | |
| 6 | 189.2 | | | | 13.35 | 11.85 | 10.20 | 9.75 | 8.10 | 7.95 | 6.60 | 6.30 | 6.00 | 5.85 | 4.65 | 4.50 | 4.35 | 4.20 | 3.90 | | |
| 0 | 160.3 | | 13.80 | 12.00 | 10.50 | 9.00 | 8.25 | 7.35 | 6.60 | 6.00 | 5.10 | 4.65 | 4.35 | 4.20 | | | | | | | |
| 4 | 130.3 | 14.10 | 12.00 | 10.20 | 8.85 | 7.65 | 6.75 | 5.85 | 5.25 | 4.65 | 4.05 | 3.60 | | | | | | | | | |
| 4 | 99.7 | 14.10 | 12.00 | 10.20 | 8.85 | 7.65 | 6.75 | 5.85 | 4.50 | 3.45 | | | | | | | | | | | |

IMPERIAL

10" Hollowcore Imperial Load Table- Total Factored Uniformly Distributed Applied Load- psf (lb/ft²)

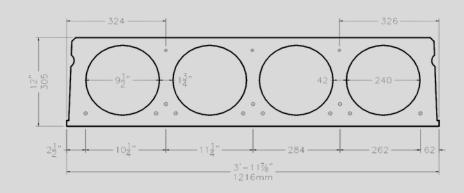
| 1/2" | M_r | | | | | | , | SIMPLE | SPAN | I - CEN | TRE TO | CEN. | TRE OF | BEAR | ING (ft |) | | | | | |
|---------|----------|-------|-------|-------|-------|-------|-------|--------|-------|---------|--------|-------|--------|-------|---------|-------|-------|-------|-------|------|------|
| Strands | (kip·ft) | 13.1 | 14.8 | 16.4 | 18 | 19.7 | 21.3 | 23 | 24.6 | 26.2 | 27.9 | 29.5 | 31.2 | 32.8 | 34.4 | 36.1 | 37.7 | 39.4 | 41 | 42.7 | 44.3 |
| 10 | 212.20 | | | | | | | | | | | 285.1 | 275.7 | 263.2 | 225.6 | 209.9 | 175.4 | 147.2 | 119.0 | 97.1 | 75.2 |
| 10 | 179.30 | | | | | | | | 260.0 | 250.6 | 213.0 | 206.8 | 197.4 | 191.1 | 159.8 | 153.5 | 147.2 | 134.7 | 109.6 | 87.7 | |
| 8 | 179.30 | | | | | | | | 260.0 | 250.6 | 213.0 | 206.8 | 197.4 | 191.1 | 159.8 | 153.5 | 147.2 | 134.7 | 109.6 | 87.7 | |
| 0 | 139.55 | | | | 278.8 | 247.5 | 213.0 | 203.6 | 169.2 | 166.0 | 137.8 | 131.6 | 125.3 | 122.2 | 97.1 | 94.0 | 90.9 | 87.7 | 81.5 | | |
| 6 | 139.55 | | | | 278.8 | 247.5 | 213.0 | 203.6 | 169.2 | 166.0 | 137.8 | 131.6 | 125.3 | 122.2 | 97.1 | 94.0 | 90.9 | 87.7 | 81.5 | | |
| 0 | 118.23 | | 288.2 | 250.6 | 219.3 | 188.0 | 172.3 | 153.5 | 137.8 | 125.3 | 106.5 | 97.1 | 90.9 | 87.7 | | | | | | | |
| 4 | 96.10 | 294.5 | 250.6 | 213.0 | 184.8 | 159.8 | 141.0 | 122.2 | 109.6 | 97.1 | 84.6 | 75.2 | | | | | | | | | |
| 4 | 73.53 | 294.5 | 250.6 | 213.0 | 184.8 | 159.8 | 141.0 | 122.2 | 94.0 | 72.1 | | | | | | | | | | | |

- NO CORING

- CORING PERMITTED PER STUBBES PRECAST CORING RULES

Hollowcore- 12" (305 mm) Load Tables

| H | ollow Core Sla | b Properties |
|----------------------|------------------------|--------------------------------------|
| Prop | Imperial | Metric |
| Α | 296.36 in ² | 191199 mm ² |
| l _x | 5300 in ⁴ | 2.21x10 ⁹ mm ⁴ |
| Y _b | 5.95 in | 151.1 mm |
| b _w | 9 in | 299.0 mm |
| f_{pu} | 270 ksi | 1860 Mpa |
| f'c | 7000 psi | 48.3 Mpa |
| f' _{ci,min} | 3000 psi | 20.7 Mpa |
| S _w | 82 psf | 3.93 kPa |



METRIC

305 mm Hollowcore Metric Load Table- Total Factored Uniformly Distributed Applied Load- kPa (kN/m²)

| 1/2" - 3/5" | M _r | | | | | | | SIM | PLE SF | PAN - (| CENTR | Е ТО С | ENTR | E OF B | EARIN | G(m) | | | | | | | |
|-------------|----------------|-------|-------|-------|------|-------|-------|-------|--------|---------|-------|--------|------|--------|-------|------|------|------|------|------|------|------|------|
| Strands | (kN·m) | 5.5 | 6 | 6.5 | 7 | 7.5 | 8 | 8.5 | 9 | 9.5 | 10 | 10.5 | 11 | 11.5 | 12 | 12.5 | 13 | 13.5 | 14 | 14.5 | 15 | 15.5 | 16 |
| 2-6 | 390.3 | | | | | | | 12.30 | 11.85 | 11.55 | 11.10 | 9.15 | 8.85 | 8.55 | 8.40 | 8.10 | 6.30 | 6.15 | 6.00 | 5.85 | 5.10 | 4.05 | 3.37 |
| 5-3 | 352.3 | | | | | | 13.05 | 11.10 | 10.80 | 10.35 | 9.90 | 8.25 | 7.80 | 7.65 | 7.50 | 7.35 | 5.55 | 5.40 | 5.25 | 5.10 | 4.80 | 3.75 | |
| 8-0 | 310.9 | | | | | 12.45 | 12.00 | 10.05 | 9.60 | 9.30 | 9.00 | 7.20 | 7.05 | 6.75 | 6.60 | 6.45 | 4.95 | 7.80 | 4.65 | 4.50 | 4.35 | | |
| 6-0 | 239.7 | 13.50 | 11.85 | 10.20 | 9.45 | 8.10 | 7.65 | 6.30 | 6.15 | 5.85 | 5.55 | 4.35 | 4.20 | 3.90 | 3.75 | 3.60 | | | | | | | |

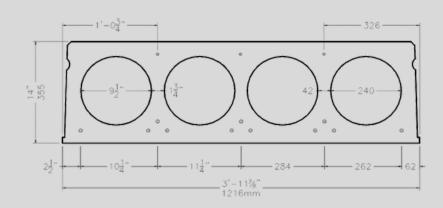
IMPERIAL

12" Hollowcore Imperial Load Table- Total Factored Uniformly Distributed Applied Load- psf (lb/ft²)

| 1/2" - 3/5" | M _r | | | | | | | SIM | PLE SF | PAN - 0 | ENTR | Е ТО С | ENTRI | OF B | EARIN | G(m) | | | | | | | |
|-------------|----------------|-------|-------|-------|-------|-------|-------|-------|--------|---------|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|
| Strands | (kN·m) | 18 | 19.7 | 21.3 | 23 | 24.6 | 26.2 | 27.9 | 29.5 | 31.2 | 32.8 | 34.4 | 36.1 | 37.7 | 39.4 | 41 | 42.7 | 44.3 | 45.9 | 47.6 | 49.2 | 50.9 | 52.5 |
| 2-6 | 287.87 | | | | | | | 256.9 | 247.5 | 241.2 | 231.8 | 191.1 | 184.8 | 178.6 | 175.4 | 169.2 | 131.6 | 128.4 | 125.3 | 122.2 | 106.5 | 84.6 | 70.4 |
| 5-3 | 259.84 | | | | | | 272.6 | 231.8 | 225.6 | 216.2 | 206.8 | 172.3 | 162.9 | 159.8 | 156.6 | 153.5 | 115.9 | 112.8 | 109.6 | 106.5 | 100.2 | 78.3 | |
| 8-0 | 229.31 | | | | | 260.0 | 250.6 | 209.9 | 200.5 | 194.2 | 188.0 | 150.4 | 147.2 | 141.0 | 137.8 | 134.7 | 103.4 | 100.2 | 97.1 | 94.0 | 90.9 | | |
| 6-0 | 176.79 | 282.0 | 247.5 | 213.0 | 197.4 | 169.2 | 159.8 | 131.6 | 128.4 | 122.2 | 115.9 | 90.9 | 87.7 | 81.5 | 78.3 | 75.2 | | | | | | | |

Hollowcore- 14" (356 mm) Load Tables

| H | ollow Core Sla | ab Properties |
|---------------------|------------------------|--------------------------------------|
| Prop | Imperial | Metric |
| А | 367.36 in ² | 237006 mm ² |
| l _x | 8728 in ⁴ | 3.59x10 ⁹ mm ⁴ |
| Y _b | 6.85 in | 174.0 mm |
| b _w | 12.375 in | 369.6 mm |
| f _{pu} | 270 ksi | 1860 Mpa |
| f'c | 7000 psi | 48.3 Mpa |
| f _{ci,min} | 3000 psi | 20.7 Mpa |
| S _w | 101 psf | 4.84 kPa |



METRIC

356 mm Hollowcore Metric Load Table- Total Factored Uniformly Distributed Applied Load- kPa (kN/m²)

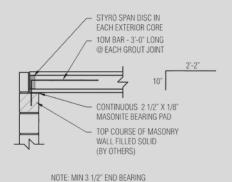
| 1/2" - 3/5" | Mr | | | | | | SI | MPLE | SPAN | - CEN | TRE TO | CEN. | TRE O | F BEA | RING (| m) | | | | | |
|-------------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|-------|-------|-------|--------|------|------|------|------|------|------|
| Strands | (kN·m) | 9 | 9.5 | 10 | 10.5 | 11 | 11.5 | 12 | 12.5 | 13 | 13.5 | 14 | 14.5 | 15 | 15.5 | 16 | 16.5 | 17 | 17.5 | 18 | 18.5 |
| 4-9 | 654.9 | | | | | | | | | | | 13.35 | 13.05 | 11.55 | 9.90 | 8.55 | 7.35 | 6.30 | 5.40 | 4.50 | 3.75 |
| 13-0 | 570.0 | | | | | | | 13.35 | 12.90 | 10.35 | 10.05 | 9.90 | 9.75 | 9.45 | 9.00 | 7.80 | 6.60 | 5.55 | 4.65 | 3.90 | |
| 11-0 | 500.2 | | | 13.20 | 11.10 | 10.80 | 10.50 | 10.20 | 10.05 | 7.65 | 7.50 | 7.35 | 7.20 | 7.05 | 6.90 | 6.60 | 6.15 | 4.35 | 4.20 | 3.45 | |
| 9-0 | 420.6 | 10.95 | 10.35 | 9.75 | 8.10 | 7.80 | 7.50 | 7.20 | 7.05 | 5.25 | 5.10 | 4.95 | 4.80 | 4.65 | 4.50 | 4.35 | 4.20 | | | | |
| 7-0 | 334.7 | 7.20 | 6.75 | 6.45 | 5.10 | 4.80 | 4.65 | 4.50 | 4.35 | | | | | | | | | | | | |

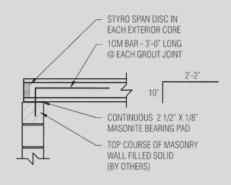
IMPERIAL

14" Hollowcore Imperial Load Table- Total Factored Uniformly Distributed Applied Load- psf (lb/ft²)

| 1/2" - 3/5" | Mr | | | | | | S | IMPLE | SPAN | - CEN | TRE T | O CEN | TRE O | F BEA | RING (| (ft) | | | | | |
|-------------|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|-------|-------|-------|-------|------|------|
| Strands | (kipft) | 29.5 | 31.2 | 32.8 | 34.4 | 36.1 | 37.7 | 39.4 | 41 | 42.7 | 44.3 | 45.9 | 47.6 | 49.2 | 50.9 | 52.5 | 54.1 | 55.8 | 57.4 | 59.1 | 60.7 |
| 4-9 | 483.03 | | | | | | | | | | | 278.8 | 272.6 | 241.2 | 206.8 | 178.6 | 153.5 | 131.6 | 112.8 | 94.0 | 78.3 |
| 13-0 | 420.41 | | | | | | | 278.8 | 269.4 | 216.2 | 209.9 | 206.8 | 203.6 | 197.4 | 188.0 | 162.9 | 137.8 | 115.9 | 97.1 | 81.5 | |
| 11-0 | 368.93 | | | 275.7 | 231.8 | 225.6 | 219.3 | 213.0 | 209.9 | 159.8 | 156.6 | 153.5 | 150.4 | 147.2 | 144.1 | 137.8 | 128.4 | 90.9 | 87.7 | 72.1 | 1 |
| 9-0 | 310.22 | 228.7 | 216.2 | 203.6 | 169.2 | 162.9 | 156.6 | 150.4 | 147.2 | 109.6 | 106.5 | 103.4 | 100.2 | 97.1 | 94.0 | 90.9 | 87.7 | | | | |
| 7-0 | 246.86 | 150.4 | 141.0 | 134.7 | 106.5 | 100.2 | 97.1 | 94.0 | 90.9 | | | | | | | | | | | | |

Hollowcore- Connections to Masonry Walls



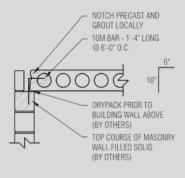


MM1

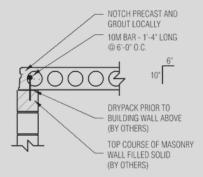
End Bearing- Half

MM2

End Bearing- Full



NOTE: SIDE BEARING NOT REQUIRED BUT MAY BE USED TO PROVIDE LATERAL SUPPORT TO WALLS



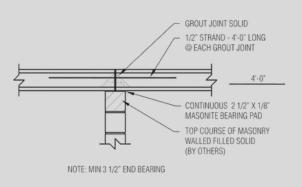
NOTE: SIDE BEARING NOT REQUIRED BUT MAY BE USED TO PROVIDE LATERAL SUPPORT TO WALLS

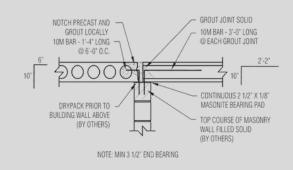
MM3

Side Bearing- Half

MM4

Side Bearing- Full





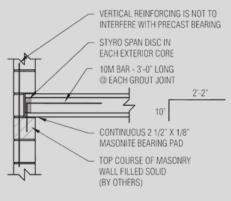
MM5

End to End Bearing

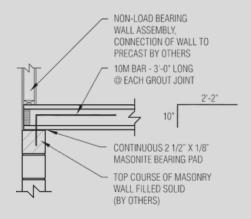
MM6

End to Side Bearing

Hollowcore- Connections to Masonry Walls



NOTE: MIN 3 1/2" [89] END BEARING

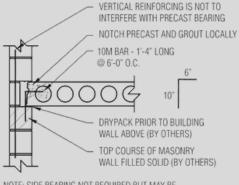


MM7

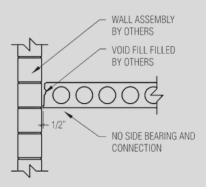
End Bearing- Half

8MM

End Bearing- Full



NOTE: SIDE BEARING NOT REQUIRED BUT MAY BE USED TO PROVIDE LATERAL SUPPORT TO WALLS

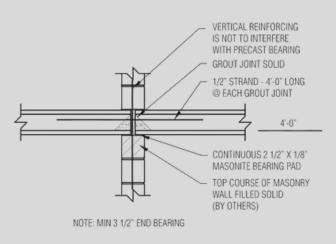


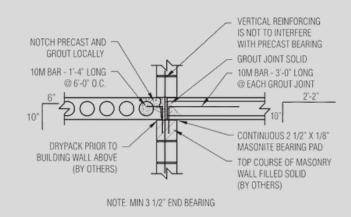
MM9

Side Bearing- Half

MM10

No Side Bearing





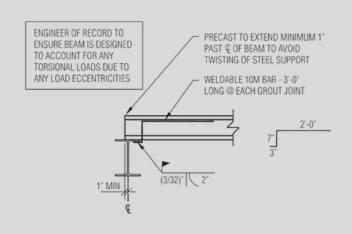
MM11

End to End Bearing

MM12

End to Side Bearing

Hollowcore- Connections to Structural Steel



NOTCH PRECAST AND GROUT LOCALLY

WELDABLE 10M BAR - 1'-4" LONG @ 6'-0" O.C.

10"

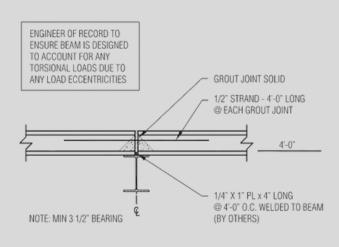
DRYPACK / STEEL SHIM VOID (BY OTHERS)

ST1

End Bearing

ST2

Side Bearing



PRECAST TO EXTEND 1" PAST

© OF BEAM TO AVOID TWISTING
OF STEEL SUPPORT
GROUT LOCALLY

WELDABLE 10M BAR - 3'-0"
LONG @ EACH GROUT JOINT

DRYPACK / STEEL
SHIM VOID
(BY OTHERS)

(3/32")

PRECAST TO EXTEND 1" PAST

© OF BEAM TO AVOID TWISTING
OF STEEL SUPPORT
GROUT JOINT SOLID

WELDABLE 10M BAR - 3'-0"
LONG @ EACH GROUT JOINT

2'-2"

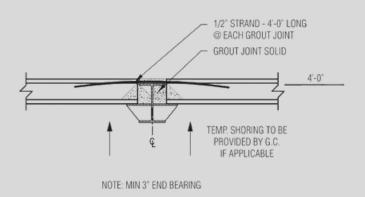
7"
3"

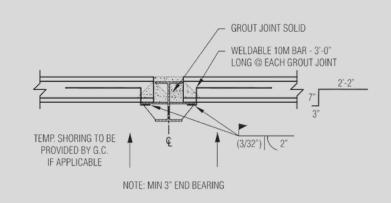
ST3

End to End Bearing

ST4

End to Side Bearing





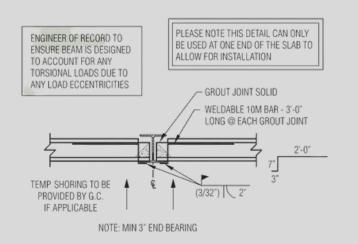
ST5

End to End Bearing- Recessed Beam

ST6

End to End Bearing-Recessed Beam

Hollowcore- Connections to Structural Steel



ENGINEER OF RECORD TO
ENSURE BEAM IS DESIGNED
TO ACCOUNT FOR ANY
TORSIONAL LOADS DUE TO
ANY LOAD ECCENTRICITIES

TEMP. SHORING TO BE
PROVIDED BY G.C.
IF APPLICABLE

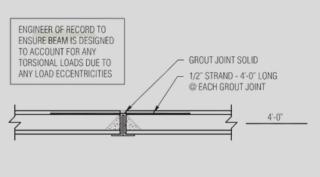
NOTE: MIN 3" END BEARING

ST7

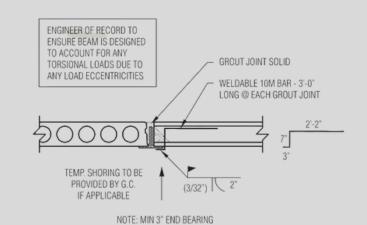
End to End Bearing-Inside Beam

ST8

End to End Bearing-HSS w/ Angles



NOTE: MIN 3" END BEARING

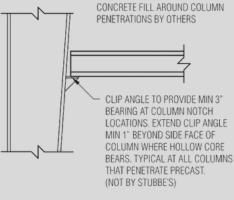


ST9

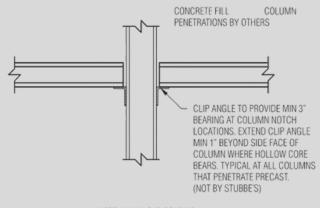
End to End Bearing-Back to Back Angles

ST10

End to Side Bearing-Back to Back Angles



NOTE: MIN 3" END BEARING



NOTE: MIN 3" END BEARING

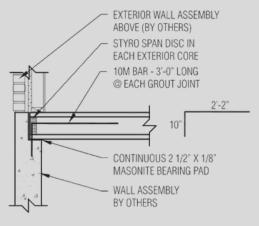
ST₁₁

Clip Angle at Tapered Column Penetration

ST12

Clip Angles at Column Penetration

Hollowcore- Connections to Poured Concrete



NOTE: 4" LEDGE w/MIN 3 1/2" END BEARING

EXTERIOR WALL ASSEMBLY
ABOVE (BY OTHERS)
NOTCH PRECAST AND GROUT LOCALLY
10M BAR - 1'-4" LONG
@ 6'-0" O.C.
6"

DRYPACK PRIOR TO
BUILDING WALL ABOVE
(BY OTHERS)
WALL ASSEMBLY BY OTHERS

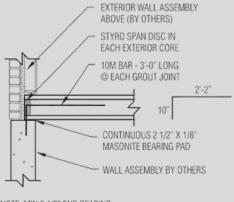
NOTE: SIDE BEARING NOT REQUIRED BUT MAY BE USED TO PROVIDE LATERAL SUPPORT TO WALLS

PW1

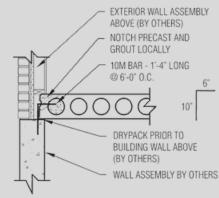
End Bearing- Half On Step Wall

PW2

Side Bearing- Half on Step Wall



NOTE: MIN 3 1/2" END BEARING



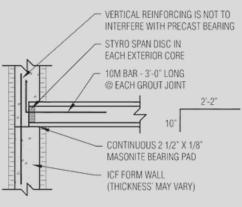
NOTE: SIDE BEARING NOT REQUIRED BUT MAY BE USED TO PROVIDE LATERAL SUPPORT TO WALLS

PW3

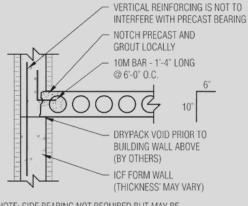
End Bearing- Half

PW4

Side Bearing- Half



NOTE: MIN 3 1/2" END BEARING ON CONCRETE



NOTE: SIDE BEARING NOT REQUIRED BUT MAY BE USED TO PROVIDE LATERAL SUPPORT TO WALLS

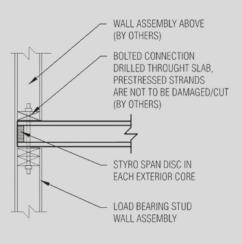
PW5

End Bearing- Half

PW6

Side Bearing- Half

Hollowcore- Connections to Structural Wood & Metal Studs



WALL ASSEMBLY ABOVE
(BY OTHERS)

BOLTED CONNECTION DRILLED THROUGHT
SLAB, PRESTRESSED STRANDS ARE NOT
TO BE DAMAGED/CUT (BY OTHERS)

DRYPACK PRIOR TO BUILDING
WALL ABOVE (BY OTHERS)

LOAD BEARING STUD
WALL ASSEMBLY

NOTE: SIDE BEARING NOT REQUIRED BUT MAY BE

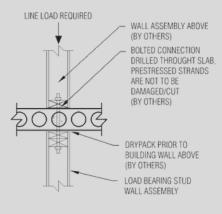
USED TO PROVIDE LATERAL SUPPORT TO WALLS

WD1

End Bearing- Full on Wood Studs

WD2

Side Bearing- Full on Wood Studs



WALL ASSEMBLY ABOVE
(BY OTHERS)

BOLTED CONNECTION
DRILLED THROUGHT SLAB,
PRESTRESSED STRANDS
ARE NOT TO BE DAMAGED/CUT
(BY OTHERS)

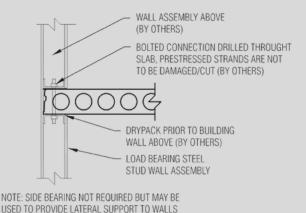
STYRO SPAN DISC IN
EACH EXTERIOR CORE
LOAD BEARING STEEL
STUD ASSEMBLY

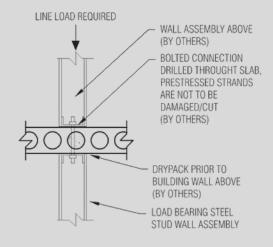
WD3

Interior Wall Connection-Wood Studs

MTL1

End Bearing- Full on Steel Studs





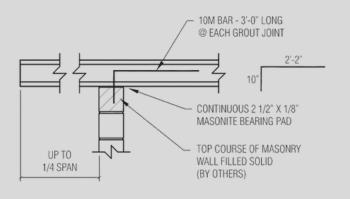
MTL2

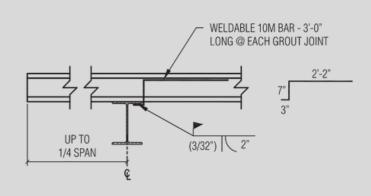
Side Bearing- Full on Steel Studs

MTL3

Interior Wall Connection- Steel Studs

Hollowcore- Miscellaneous Connections Details



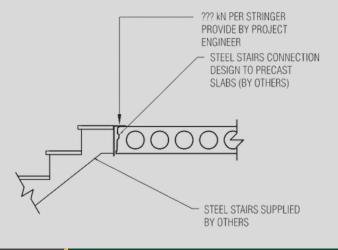


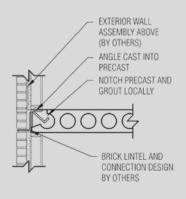
Misc 1

Cantilever Over Masonry Walls

Misc 2

Cantilever Over Steel Beams



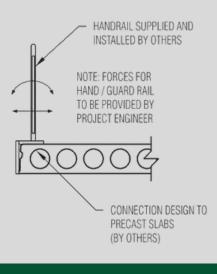


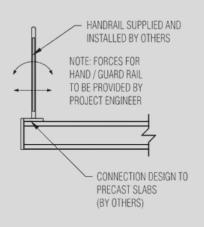
Misc 3

Stair Connection

Misc 4

Hollowcore with Cast-in Angle Cross Section





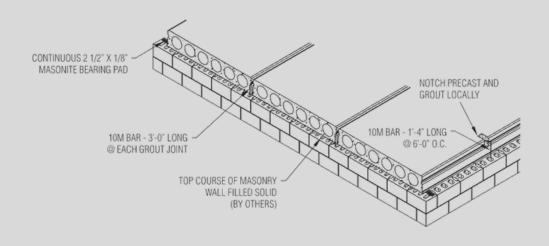
Misc 5

Handrail Connection to Hollowcore

Misc 6

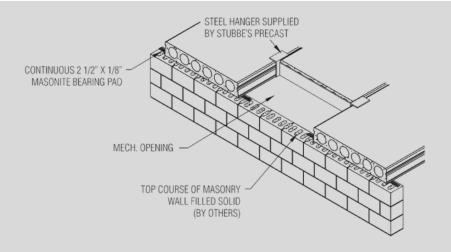
Handrail Connection to Hollowcore

Hollowcore- Miscellaneous Connections Details



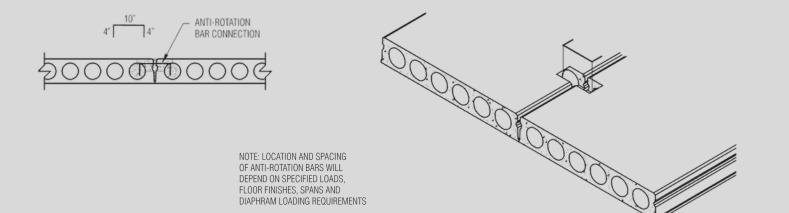
Misc 7

End Bearing Connection



Misc 8

Hanger Detail



Misc 9

Anti-rotation Connection

Hollowcore Technical Stats

FIRE RATING

The National Building Code (N.B.C.) requires the following factors in achieving a 2-hour fire rating for the precast hollowcore slabs:

- A) Table 2.2.A, subsection from sentence 2.2.1 (1) indicates a minimal thickness of 124 mm of equivalent thickness is required as a specification under subsection 1.6 of the N.B.C. The equivalent thickness of the 200 mm (8") hollowcore slab is 125 mm (therefore exceeding the 124 mm minimum).
- B) Table 2.2.B subsection from sentence 2.2.1 (2) indicates a minimal concrete coverage of 39 mm over the reinforced strands in required. The precast extrusion machine provides the minimal 39 mm coverage.

SOUND TRANSMISSION RATING

The CPCI Metric Design Manual (second edition) indicated the following standards for the 200 mm thick hollowcore slabs:

- A) The sound Transmission Rating (STC) is 50.
- B) Impact Insulation Class (IIC) is 28. Floor covering and finishes can increase the ratings (see the CPCI manual for additional information).

WARRANTY

Stubbe's Precast will guarantee the precast hollowcore will be free of any defects occurred from standard usage. The precast is C.S.A. approved and is manufactured using the standard practices.

Upon substantial completion of the project the guarantee is in effect for one (1) year.

Hollowcore Specifications

1. General:

- a. Included:
 - i. Precast hollowcore floor and roof slabs.
 - ii. Rebar connections
 - iii. Grouting of slab joints.

2. Reference Material:

- a. CSA A23. 4-09: Precast Concrete Material and Construction.
- b. Precast Concrete Institute (PCI): Manual on Design of Connections for Precast.
- c. Precast Concrete Institute (PCI): Design Handbook- Precast & Prestressed Concrete.

3. Shop Drawings:

- a. Approval drawings will require a review by the Contractor & Design Firms under contract of each project.
 - Discrepancies, questions & verification of design is required and returned in writing prior to commencement of production.
- b. Production drawings will bear a signed and sealed Engineer stamp, slab locations, identification marks, connection details, dimensions, opening larger than 6" in size, loadings and other relative information.

4. Quality Assurance:

a. Conformity to PCI manual on design of connection for Precast Prestressed Concrete, PCI Design Handbook - Precast & Prestressed Concrete, CSA A23 4.

5. Accessories:

- a. Bearing pads: 1/8" thick masonite hardboard, smooth side up.
- b. Styrofoam discs: 2" thick on exterior walls only if required.
- c. Hanger frames: Welded angles used to provide large mechanical openings through precast. Size and configuration varies with opening required.

6. Finishes:

- a. Top surface:
 - i. Extruded (standard surface from extruded method).
 - ii. Raked (roughened surface to allow improved bond with concrete topping supplied by others).

b. Bottom surface:

i. "Standard" steel form finish.

7.Installation:

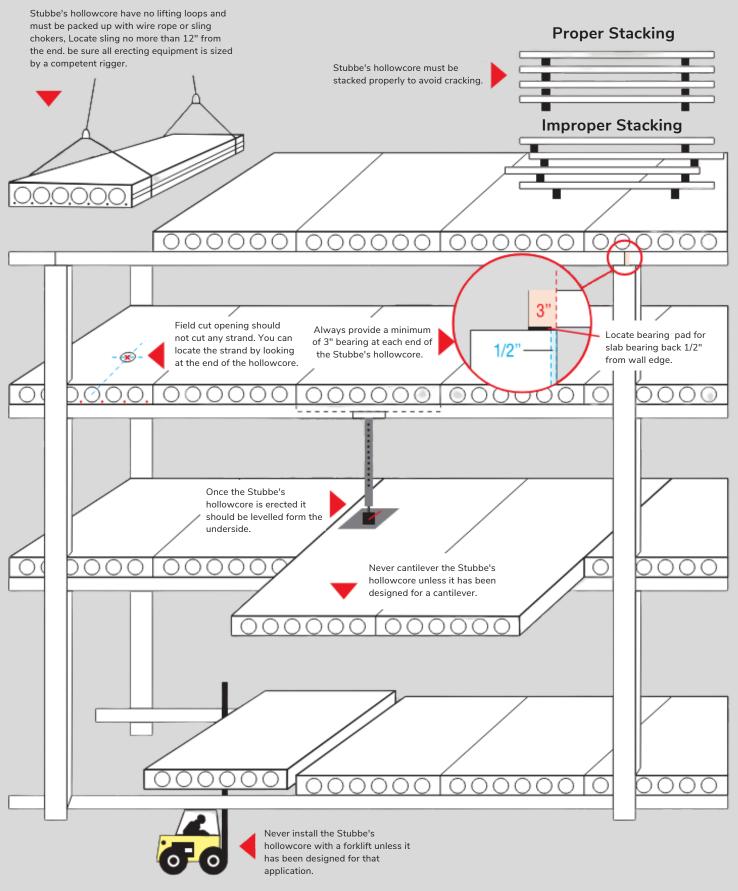
- a. Install slabs with corresponding identification marks as indicated on production/ shop drawing.
- b. Place bearing pads and insert Styrofoam discs in cores where required.
- c. Drill or weld tie steel rebar connections as per production/ shop drawings.
- d. Grout joints between precast slabs.
- e. Drill holes for pluming trade (located in field by others). Do not cut reinforcing strand unless engineered in the design.
- f. Latex caulking of joints between slabs on the underside where exposed to view.
- g. Floor preparation will vary depending on final flooring material and finish.

8. Excluded Items Related to Precast and Installation:

- a. Drypacking/ infill of gap between precast and structure.
- b. Perimeter caulking between precast and structure.
- c. Drilling of holes for electrical trade.
- d. Winter heat/ protection from weather conditions.
- e. Concrete topping if required in design.
- f. Clip angles around column penetrations through precast.
- g. Site/ field dimensions (Contractor and Project Designers responsible to provide information during shop drawing approval).

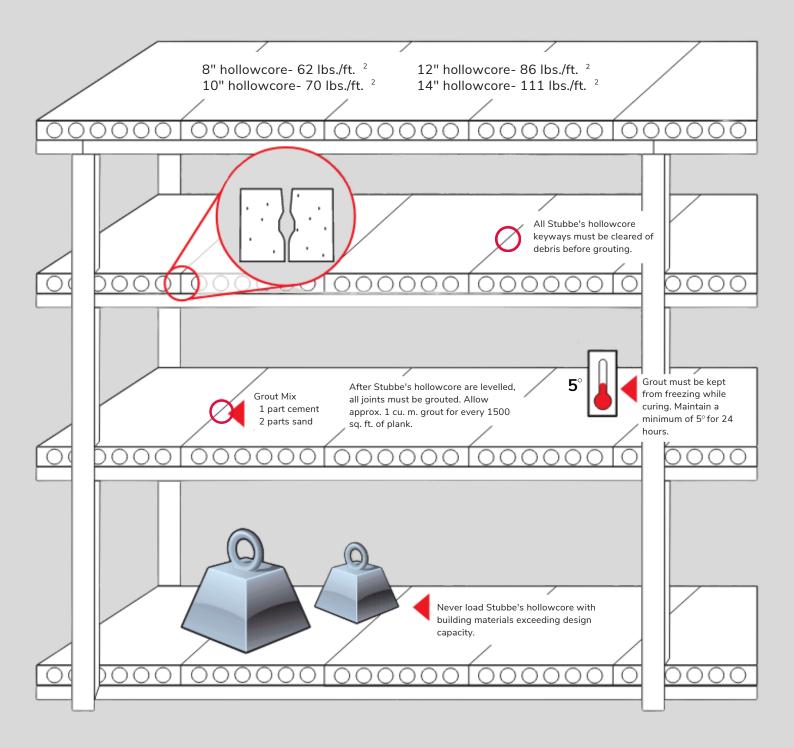
Stubbe's Precast/ Prestressed Concrete Hollowcore

RECOMMENED PROCEDURES



Stubbe's Precast/ Prestressed Concrete Hollowcore

RECOMMENED PROCEDURES



For any questions or additional information contact Stubbe's Precast:

519-424-2183 | estimating@stubbes.org | www.stubbes.org



Production takes place at three state-of-the-art manufacturing plants with over 340,000 square feet of indoor production and support facilities on over 175 acres in South Western Ontario.

A Family Company Built on Solid Values

Stubbe's was founded in 1982 by Herb Stubbe, when he designed and manufactured the first precast concrete hog feeders in Harley, Ontario. Over the years the company added multiple agricultural products including various types of bunk feeders, bunker silo walls and slats combined with structural posts and beams.

In 2001, Stubbe's entered the commercial and residential markets by introducing its hollowcore flooring system. This was followed by the introduction of structural wall panels in 2006. In 2010, Stubbe's added structural columns, beams and double tees to its product line. All these products are now combined to create Total Precast structures.

