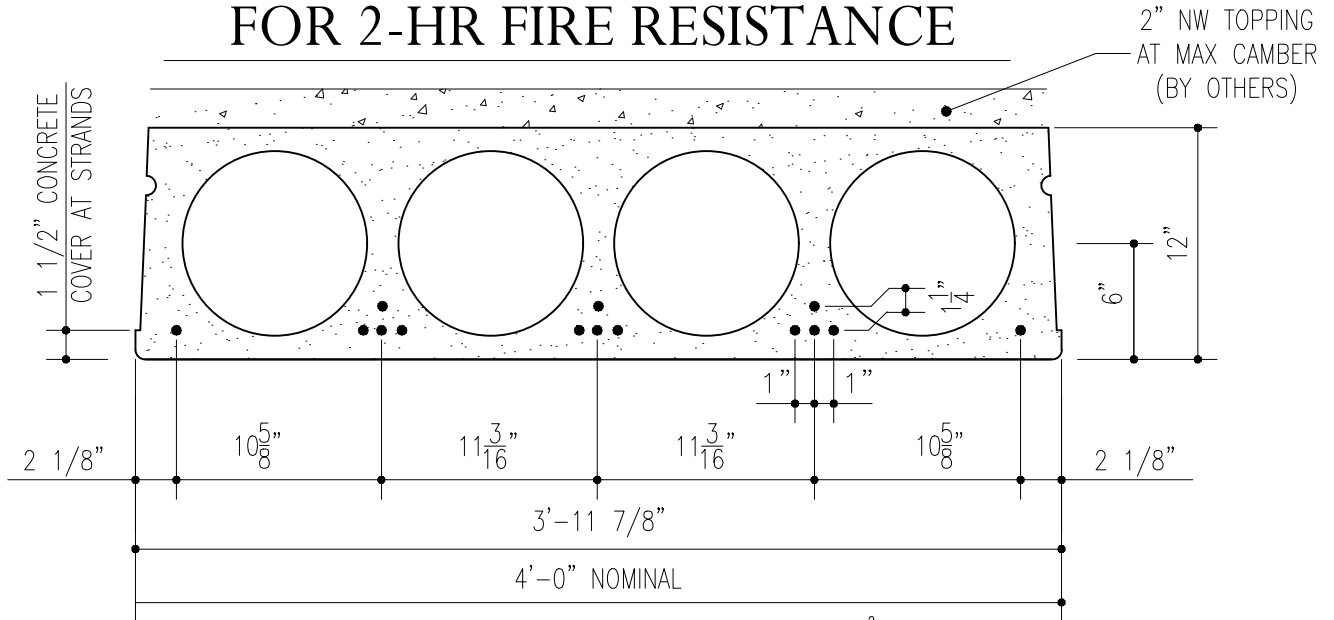




12" CELLA-CORE TECHNICAL DATA SHEET FOR 2-HR FIRE RESISTANCE



Net Area..... 275.34 in²
 Nominal Width..... 48 in
 Equivalent Thickness..... $275.34 \text{ in}^2 / 48 \text{ in} = 5.73 \text{ in} + 2 \text{ in} = 7.73 \text{ in}$

IBC 2009 and NYBC 2014: TABLE 721.2.2.1
 IBC 2012, IBC 2015, and IBC 2018: TABLE 722.2.2.1
 MINIMUM SLAB THICKNESS (INCHES)

CONCRETE AGGREGATE TYPE	FIRE-RESISTANCE RATING (HOURS)				
	1	1.5	2	3	4
SILICEOUS	3.5	4.3	5.0	6.2	7.0
CARBONATE	3.2	4.0	4.6	5.7	6.6
SAND LIGHTWEIGHT	2.7	3.3	3.8	4.6	5.4
LIGHT WEIGHT	2.5	3.1	3.6	4.4	5.1

7.73 in > 4.6 in
 2-hr Separation Rating

IBC 2009 and NYBC 2014: TABLE 721.2.3(2)
 IBC 2012, IBC 2015, and IBC 2018: TABLE 722.2.3(2)
 COVER THICKNESS FOR PRESTRESSED CONCRETE FLOOR AND ROOF SLABS (INCHES)

CONCRETE AGGREGATE TYPE	FIRE-RESISTANCE RATING (HOURS)									
	RESTRAINED					UN-RESTRAINED				
	1	1.5	2	3	4	1	1.5	2	3	4
SILICEOUS	0.75	0.75	0.75	0.75	0.75	1.125	1.50	1.75	2.375	2.75
CARBONATE	0.75	0.75	0.75	0.75	0.75	1.00	1.375	1.625	2.125	2.25
SAND LIGHTWEIGHT	0.75	0.75	0.75	0.75	0.75	1.00	1.375	1.50	2.00	2.25
LIGHT WEIGHT	0.75	0.75	0.75	0.75	0.75	1.00	1.375	1.50	2.00	2.25

1.50 in > 0.75 in

2-hr Structural Endurance Rating

1.50 in < 1.625 in

Verify the strength via the Rational Method per PCI MNL-124-11 Design for Fire Resistance of Precast/Prestressed Concrete

Note: Both end point criteria must be checked with the lowest rating selected as the actual fire rating.