

PREFACE TO PRODUCT LOAD TABLES

The following pages contain load tables for the standard products available from Coreslab Structures (ARIZ) Inc. Load capacities are in conformance with the American Concrete Institute "Building Code Requirements for Structural Concrete (ACI 318-05)". However, values given in the tables are intended for preliminary member selections, not final designs. These values assume that the safe superimposed load is composed of 60% dead load and 40% live load.

In some cases, loads in excess of those shown can be accommodated by modifying the general parameters such as concrete strength and/or reinforcing patterns.

GENERAL NOTATION

Width of Precast Section (ft)	Depth of Precast Section (in)	Description of Section
		DT = Double Tee Slab IT = Inverted Tee Beam LB = ELL Beam

MATERIAL PROPERTIES

Concrete:

Compressive Strength
 Final (28-day) = 5000 psi (Precast)
 = 3000 psi (Topping)
 At Prestress Release = 3500 to 4000 psi when
 maximum load is used.
 Otherwise a lower
 strength may be sufficient.

Normal Weight = 150 pcf
 Modulus of Elasticity = $W^{1.5} 33\sqrt{f'c}$

Steel:

Prestressing Strand:
 Sizes: 1/2" Diameter
 Ultimate Strength = 270,000 psi
 Initial Tension = 70 to 75% of Ult. Strength
 Modulus of Elasticity = 28,000,000 psi

Reinforcing Steel:
 Bar Sizes: 4, 5 and 6 are A706, Grade 60
 Bar Sizes: 7 and larger are A615, Grade 60

FLEXURAL MEMBERS

In general, maximum spans shown for the various prestressing conditions will result in an upward camber under dead load, after loss of prestress has occurred. Roof deflection, however, should always be checked. It is recommended that a positive slope always be provided for roofs. Whenever span-to-depth ratio exceeds 30 for double tees a positive roof slope is essential to preclude ponding. Also, see the 2006 Edition "International Building Code" IBC.

Topping Slab Design by Others

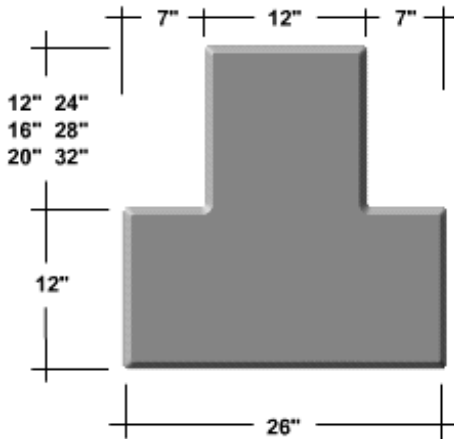
For composite members, reinforcement (i.e., welded wire fabric or reinforcing bar) is generally required for the structural design of the topping slab. The Engineer of Record should furnish this design.

DESIGN RECOMMENDATIONS	Maximum Bottom Tension Stress	Range of Maximum Precast Span-To-Depth Ratio
Double Tee Floor Slabs	$12\sqrt{f'c}$	25 to 30
Double Tee Roof Slabs	$12\sqrt{f'c}$	35 to 40
Inverted Tee or ELL Beams	$6\sqrt{f'c}$	10 to 20
Hollow Core Slabs	$6\sqrt{f'c}$	45 to 50

The required depth of a beam or slab is influenced by the ratio of live load to total load. When this ratio is high, deeper sections may be needed.

PRESTRESSED INVERTED TEE BEAMS

Non-Composite IT Beam - 12 inch Ledge

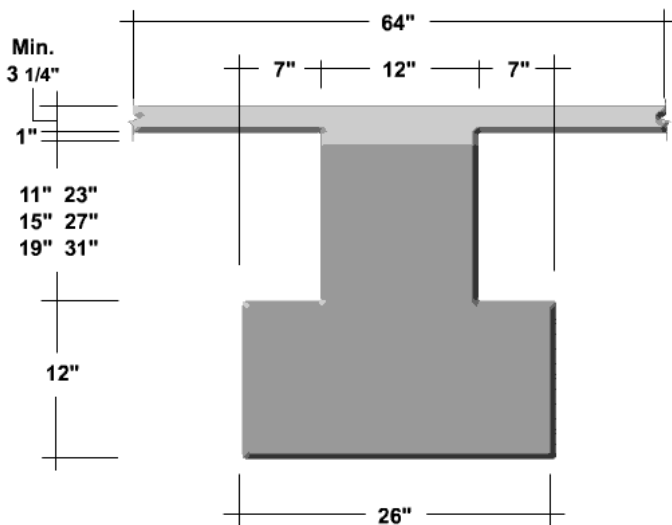


Allowable Superimposed Service Load, Kips per Lineal Foot

Span(ft)	20	22	24	26	28	30	32	34	36	38	40
26IT24	6.9	5.6	4.7	3.9	3.3	2.8					
26IT28	9.5	7.8	6.5	5.4	4.6	3.9	3.4				
26IT32	12.6	10.3	8.6	7.3	6.2	5.3	4.6	4.0	3.5		
26IT36	16.2	13.2	11.0	9.3	7.9	6.8	5.9	5.2	4.6	4.0	3.6
26IT40	20.0	16.4	13.8	11.6	9.9	8.6	7.4	6.5	5.7	5.1	4.5
26IT44	24.3	20.0	16.7	14.1	12.1	10.5	9.2	8.0	7.1	6.3	5.6

Beam Type	Depth (in)	Weight (plf)
26IT24	24	469
26IT28	28	519
26IT32	32	569
26IT36	36	619
26IT40	40	669
26IT44	44	719

Composite IT Beam - 12 inch Ledge



Allowable Superimposed Service Load, Kips per Lineal Foot

Span(ft)	20	22	24	26	28	30	32	34	36	38	40
26IT23	12.0	9.9	8.2	7.0	5.9	5.1	4.5	3.9	3.4		
26IT27	15.0	13.0	10.8	9.2	7.8	6.8	5.9	5.2	4.6	4.0	3.6
26IT31	18.9	15.8	13.2	11.1	9.5	8.2	7.2	6.3	5.6	4.9	4.4
26IT35	22.5	19.3	16.2	13.7	11.7	10.1	8.9	7.8	6.9	6.1	5.5
26IT39	27.5	22.6	18.9	16.0	13.7	11.9	10.4	9.1	8.1	7.2	6.4
26IT43	30.4	25.3	21.2	18.0	15.4	13.3	11.6	10.2	9.1	8.1	7.2

Beam Type	Depth (in)	Weight (plf)
26IT23	23	456
26IT27	27	506
26IT31	31	556
26IT35	35	606
26IT39	39	656
26IT43	43	706