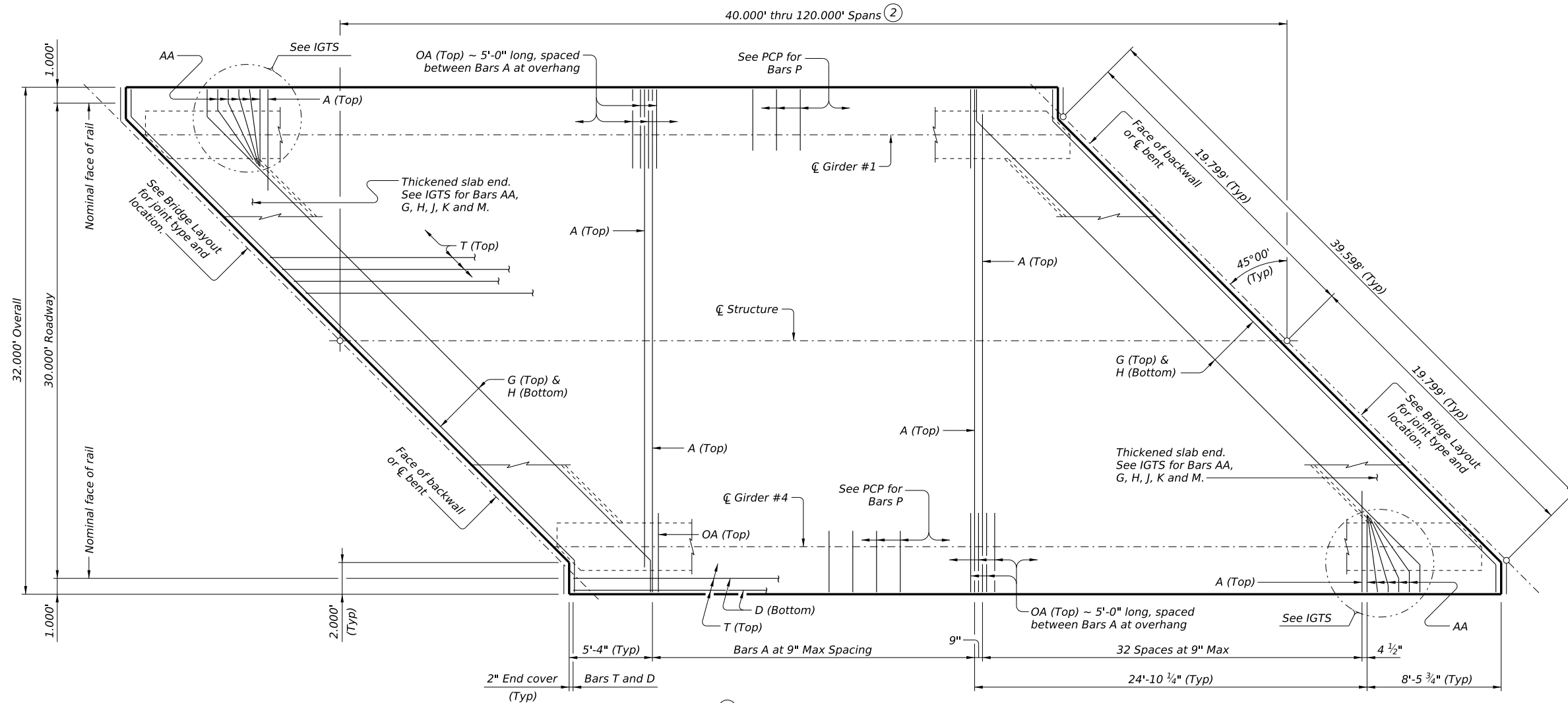


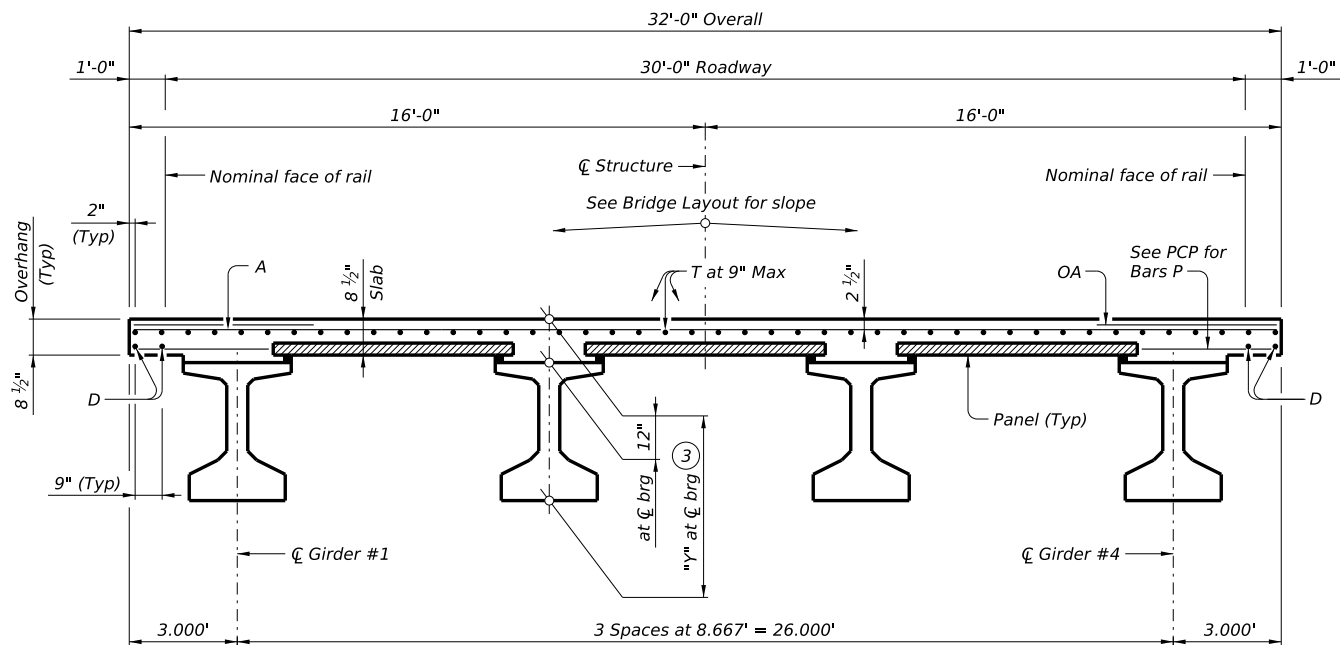
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**BAR TABLE**

BAR	SIZE
A	#4
AA	#5
D	#4
G	#4
H	#4
J	#4
K	#4
M	#4
OA	#5
P	#4
T	#4



**PLAN 1**



**TYPICAL TRANSVERSE SECTION**

(Showing girder type Tx46)

**TABLE OF SECTION DEPTHS**

GIRDER TYPE	"Y" AT $\bar{C}$ BRG (3)
	Ft/In
Tx28	3'-4"
Tx34	3'-10"
Tx40	4'-4"
Tx46	4'-10"
Tx54	5'-6"

- ① If multi-span units (with slab continuous over interior bents) are indicated on the Bridge Layout, see standard IGCS for adjustment to slab reinforcement and quantities.
- ② Span lengths for prestressed concrete I-Girder type:  
 Type Tx28 for spans lengths 40.000' thru 70.000'.  
 Type Tx34 for spans lengths 40.000' thru 80.000'.  
 Type Tx40 for spans lengths 40.000' thru 95.000'.  
 Type Tx46 for spans lengths 40.000' thru 105.000'.  
 Type Tx54 for spans lengths 40.000' thru 120.000'.
- ③ "Y" value shown is based on theoretical girder camber, dead load deflection from an 8 1/2" concrete slab, a constant roadway grade, and using precast panels (PCP). The Contractor will adjust this value as necessary for any roadway vertical curve.

HL93 LOADING SHEET 1 OF 2



**PRESTRESSED CONCRETE I-GIRDER SPANS (TYPE Tx28 THRU Tx54) 30' ROADWAY 45° SKEW**

**SIG-30-45**

FILE: IG-SIG3045-24.dgn	DN: JMH	CK: NRN	DW: JTR	CK: TAR
©TxDOT August 2017	CONT	SECT	JOB	HIGHWAY
REVISIONS				
10-19: Increased "X" and "Y" values				
01-23: Removed PCP/DI reference				
11-24: Flipped top mat				
DIST	COUNTY	SHEET NO.		

DATE: FILE:

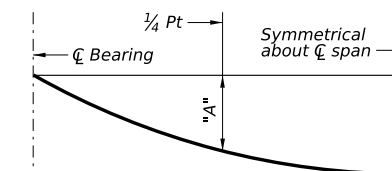
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### TABLE OF DEAD LOAD DEFLECTIONS

TYPE Tx28 GIRDERS			TYPE Tx34 GIRDERS			TYPE Tx40 GIRDERS			TYPE Tx46 GIRDERS			TYPE Tx54 GIRDERS		
SPAN LENGTH	"A"	"B"	SPAN LENGTH	"A"	"B"	SPAN LENGTH	"A"	"B"	SPAN LENGTH	"A"	"B"	SPAN LENGTH	"A"	"B"
Ft	Ft	Ft	Ft	Ft	Ft	Ft	Ft	Ft	Ft	Ft	Ft	Ft	Ft	Ft
40	0.010	0.014	40	0.006	0.008	40	0.004	0.005	40	0.003	0.004	40	0.001	0.002
45	0.016	0.022	45	0.009	0.013	45	0.006	0.009	45	0.004	0.006	45	0.003	0.004
50	0.025	0.035	50	0.015	0.021	50	0.010	0.014	50	0.006	0.009	50	0.004	0.006
55	0.037	0.052	55	0.022	0.031	55	0.014	0.020	55	0.010	0.014	55	0.006	0.009
60	0.053	0.074	60	0.031	0.044	60	0.021	0.029	60	0.014	0.020	60	0.009	0.013
65	0.073	0.103	65	0.044	0.062	65	0.028	0.040	65	0.019	0.027	65	0.013	0.018
70	0.100	0.140	70	0.060	0.084	70	0.039	0.055	70	0.026	0.037	70	0.018	0.025
			75	0.079	0.111	75	0.052	0.073	75	0.036	0.050	75	0.024	0.033
			80	0.103	0.145	80	0.068	0.095	80	0.046	0.065	80	0.031	0.043
						85	0.086	0.121	85	0.059	0.083	85	0.039	0.055
						90	0.109	0.153	90	0.075	0.105	90	0.049	0.069
						95	0.136	0.191	95	0.093	0.130	95	0.061	0.086
						100			100	0.115	0.161	100	0.076	0.106
						105			105	0.140	0.196	105	0.093	0.130
									110			110	0.112	0.157
									115			115	0.134	0.188
									120			120	0.159	0.223

### TABLE OF ESTIMATED QUANTITIES

SPAN LENGTH	REINF CONCRETE SLAB	Prestressed Concrete Girders			TOTAL REINF STEEL
		ABUT TO INT BT	INT BT TO INT BT	ABUT TO ABUT	
Ft	SF	LF	LF	LF	Lb
40	1,280	157.59	158.00	157.17	2,944
45	1,440	177.59	178.00	177.17	3,312
50	1,600	197.59	198.00	197.17	3,680
55	1,760	217.59	218.00	217.17	4,048
60	1,920	237.59	238.00	237.17	4,416
65	2,080	257.59	258.00	257.17	4,784
70	2,240	277.59	278.00	277.17	5,152
75	2,400	297.59	298.00	297.17	5,520
80	2,560	317.59	318.00	317.17	5,888
85	2,720	337.59	338.00	337.17	6,256
90	2,880	357.59	358.00	357.17	6,624
95	3,040	377.59	378.00	377.17	6,992
100	3,200	397.59	398.00	397.17	7,360
105	3,360	417.59	418.00	417.17	7,728
110	3,520	437.59	438.00	437.17	8,096
115	3,680	457.59	458.00	457.17	8,464
120	3,840	477.59	478.00	477.17	8,832



#### DEAD LOAD DEFLECTION DIAGRAM

Calculated deflections shown are due to the concrete slab on interior girders only ( $E_c = 5000$  ksi). Adjust values as required for exterior girders and if optional slab forming is used. These values may require field verification.

- ④ Fabricator will adjust lengths for girder slopes as required.
- ⑤ Reinforcing steel weight is calculated using an approximate factor of 2.3 lbs/SF.

#### MATERIAL NOTES:

Provide Class 5 concrete ( $f'_c = 4,000$  psi).  
 Provide Class 5 (HPC) concrete if shown elsewhere in the plans.  
 Provide Grade 60 reinforcing steel.  
 Provide bar laps, where required, as follows:  
 Uncoated ~ #4 = 1'-7"  
 Epoxy coated ~ #4 = 2'-5"  
 Deformed welded wire reinforcement (WWR) (ASTM A1064) of equal size and spacing may be substituted for Bars A, AA, D, OA, P or T unless noted otherwise.

#### GENERAL NOTES:

Designed according to AASHTO LRFD Bridge Design Specifications.  
 Multi-span units, with slab continuous over interior bents, may be formed with the details shown on this sheet and the I-Girder Continuous Slab Detail (IGCS) standard.  
 See I-Girder Thickened Slab End Details (IGTS) standard for details and quantity adjustments.  
 See Prestressed Concrete Panels (PCP) standard and Prestressed Concrete Panel Fabrication Details (PCP-FAB) standard for panel details not shown.  
 See I-Girder Miscellaneous Slab Details (IGMS) standard for miscellaneous details.  
 See applicable rail details for rail anchorage in slab.  
 See Permanent Metal Deck Forms (PMDf) standard for details and quantity adjustments if this option is used.  
 This standard is drawn showing right forward skew, see Bridge Layout for actual skew direction.  
 This standard does not support the use of transition bents.

Cover dimensions are clear dimensions, unless noted otherwise.

HL93 LOADING SHEET 2 OF 2

Bridge Division Standard

## PRESTRESSED CONCRETE I-GIRDER SPANS

### (TYPE Tx28 THRU Tx54)

### 30' ROADWAY 45° SKEW

## SIG-30-45

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