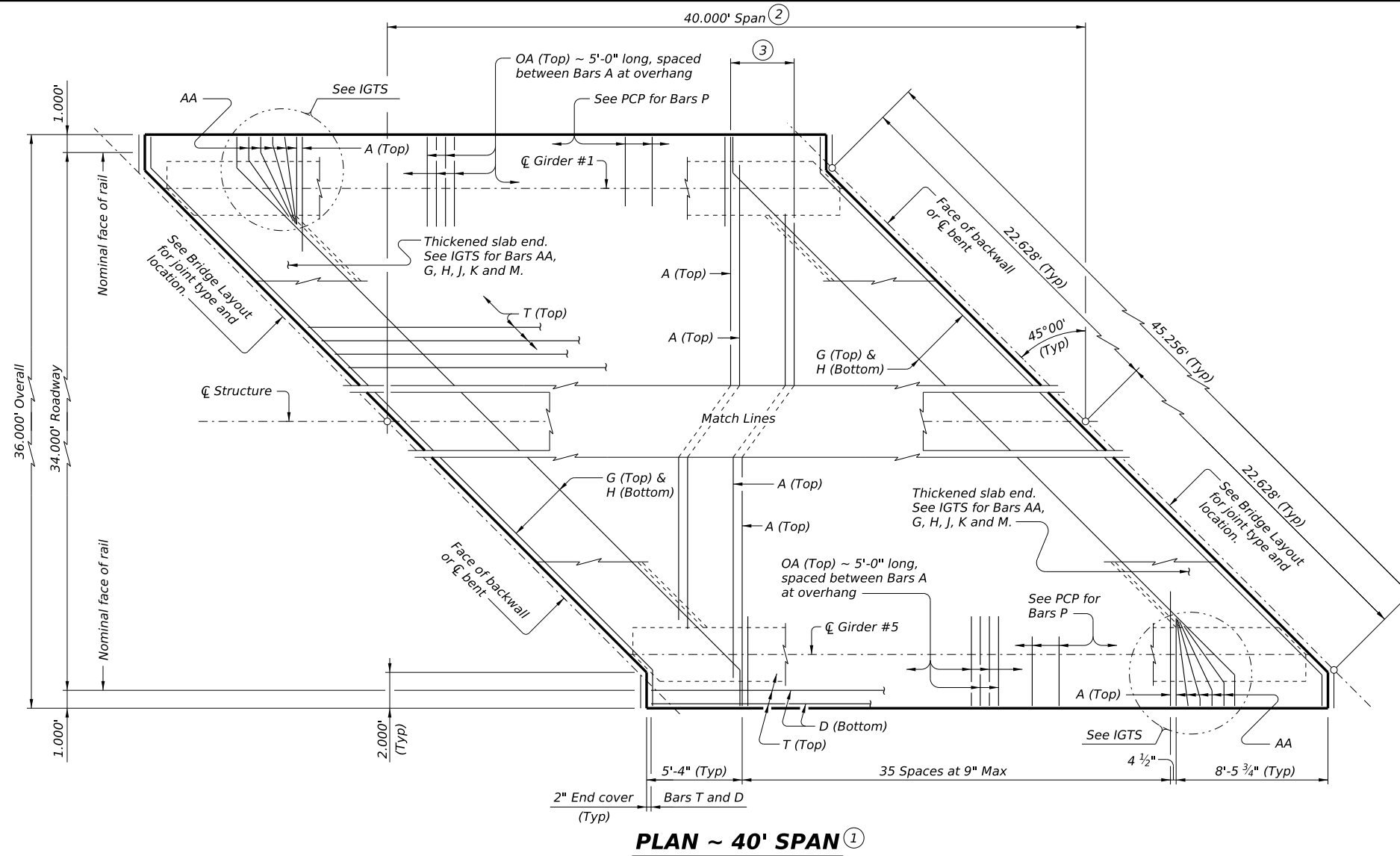


DISCLAIMER: The use of this standard is governed by the "Texas Engineering Practice Act." No warranty of any kind is made by TxDOT for any purpose whatsoever. TxDOT assumes no responsibility for the conversion of this standard to other formats or for incorrect results or damages resulting from its use.

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 |



- 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 75.000'.
 Type Tx34 for spans lengths 40.000' thru 85.000'.
 Type Tx40 for spans lengths 40.000' thru 95.000'.
 Type Tx46 for spans lengths 40.000' thru 110.000'.
 Type Tx54 for spans lengths 40.000' thru 125.000'.
 See appropriate "Plan Detail" for span length.
- 3 Bars A (Top) at 9" Max Spacing.
- 4 "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.

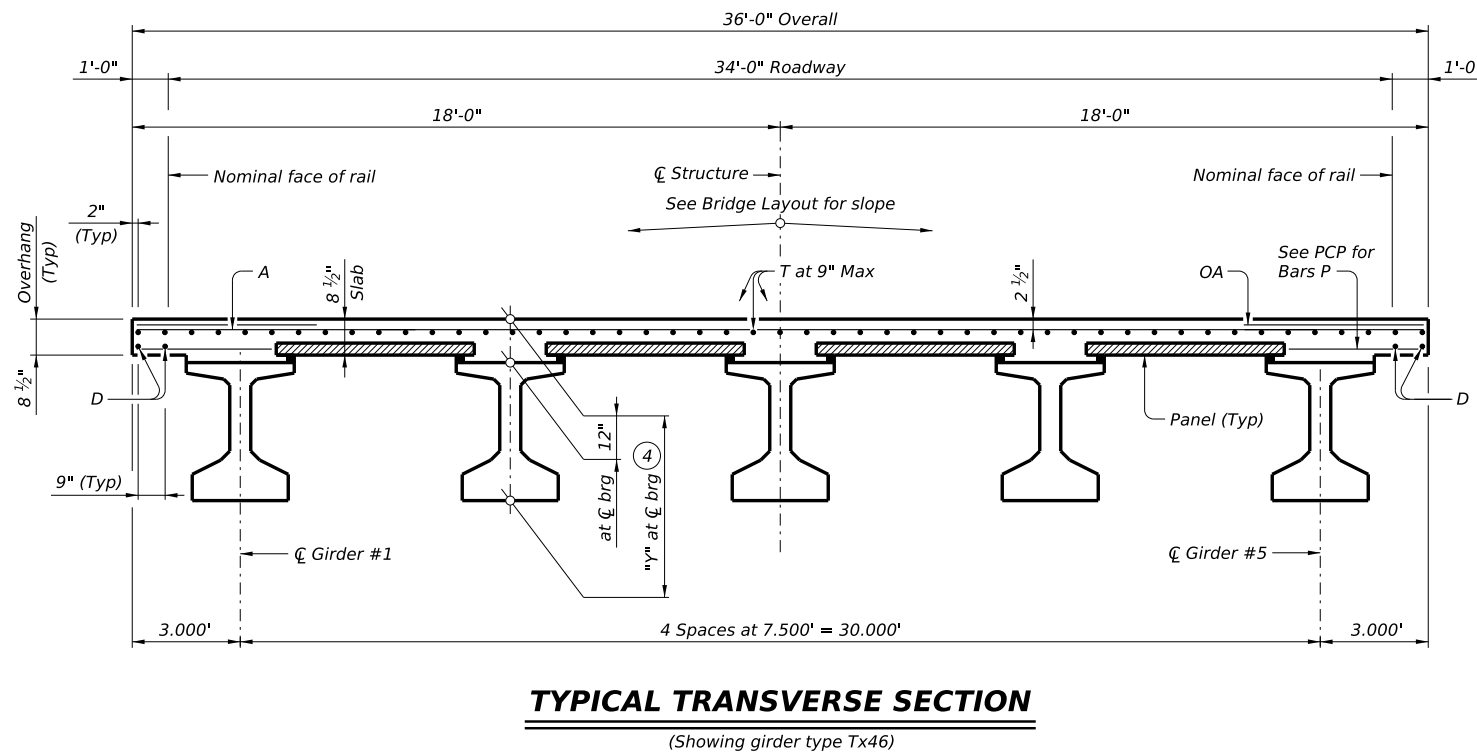


TABLE OF SECTION DEPTHS

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

HL93 LOADING SHEET 1 OF 2



PRESTRESSED CONCRETE I-GIRDER SPANS (TYPE Tx28 THRU Tx54) 34' ROADWAY 45° SKEW

SIG-34-45

| | | | | |
|-------------------------|---------|--------|-----------|---------|
| FILE: IG-SIG3445-24.dgn | DN: TAR | CK: VC | DW: SFS | CK: TAR |
| © TxDOT January 2023 | CONT | SECT | JOB | HIGHWAY |
| REVISIONS | | | | |
| 11-24: Flipped top mat | DIST | COUNTY | SHEET NO. | |

DATE: FILE:

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DATE: FILE:

TABLE OF DEAD LOAD DEFLECTIONS

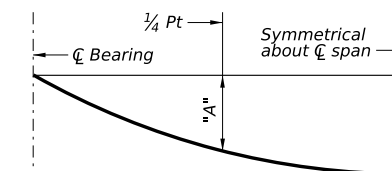
| TYPE Tx28 GIRDERS | | | TYPE Tx34 GIRDERS | | | TYPE Tx40 GIRDERS | | | TYPE Tx46 GIRDERS | | | TYPE Tx54 GIRDERS | | |
|-------------------|-------|-------|-------------------|-------|-------|-------------------|-------|-------|-------------------|-------|-------|-------------------|-------|-------|
| 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 | 0.008 | 0.012 | 40 | 0.005 | 0.007 | 40 | 0.003 | 0.005 | 40 | 0.002 | 0.003 | 40 | 0.001 | 0.002 |
| 45 | 0.014 | 0.019 | 45 | 0.008 | 0.012 | 45 | 0.005 | 0.008 | 45 | 0.004 | 0.005 | 45 | 0.002 | 0.003 |
| 50 | 0.021 | 0.030 | 50 | 0.013 | 0.018 | 50 | 0.008 | 0.012 | 50 | 0.006 | 0.008 | 50 | 0.004 | 0.005 |
| 55 | 0.031 | 0.045 | 55 | 0.019 | 0.027 | 55 | 0.012 | 0.017 | 55 | 0.008 | 0.012 | 55 | 0.006 | 0.008 |
| 60 | 0.045 | 0.064 | 60 | 0.027 | 0.038 | 60 | 0.018 | 0.025 | 60 | 0.012 | 0.017 | 60 | 0.008 | 0.011 |
| 65 | 0.063 | 0.089 | 65 | 0.037 | 0.053 | 65 | 0.025 | 0.035 | 65 | 0.017 | 0.024 | 65 | 0.011 | 0.016 |
| 70 | 0.085 | 0.121 | 70 | 0.051 | 0.073 | 70 | 0.033 | 0.047 | 70 | 0.023 | 0.032 | 70 | 0.015 | 0.021 |
| 75 | 0.113 | 0.161 | 75 | 0.068 | 0.096 | 75 | 0.044 | 0.063 | 75 | 0.030 | 0.043 | 75 | 0.020 | 0.028 |
| | | | 80 | 0.088 | 0.125 | 80 | 0.058 | 0.082 | 80 | 0.039 | 0.056 | 80 | 0.026 | 0.037 |
| | | | 85 | 0.113 | 0.161 | 85 | 0.074 | 0.105 | 85 | 0.050 | 0.072 | 85 | 0.033 | 0.047 |
| | | | | | | 90 | 0.093 | 0.133 | 90 | 0.064 | 0.090 | 90 | 0.042 | 0.060 |
| | | | | | | 95 | 0.117 | 0.166 | 95 | 0.079 | 0.113 | 95 | 0.052 | 0.075 |
| | | | | | | | | | 100 | 0.098 | 0.139 | 100 | 0.065 | 0.092 |
| | | | | | | | | | 105 | 0.119 | 0.170 | 105 | 0.079 | 0.112 |
| | | | | | | | | | 110 | 0.144 | 0.205 | 110 | 0.095 | 0.136 |
| | | | | | | | | | 115 | 0.114 | 0.163 | 115 | 0.114 | 0.163 |
| | | | | | | | | | 120 | 0.136 | 0.193 | 120 | 0.136 | 0.193 |
| | | | | | | | | | 125 | 0.161 | 0.228 | 125 | 0.161 | 0.228 |

- 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.
- Span lengths for prestressed concrete I-Girder type:
 Type Tx28 for spans lengths 40.000' thru 75.000'.
 Type Tx34 for spans lengths 40.000' thru 85.000'.
 Type Tx40 for spans lengths 40.000' thru 95.000'.
 Type Tx46 for spans lengths 40.000' thru 110.000'.
 Type Tx54 for spans lengths 40.000' thru 125.000'.
 See appropriate "Plan Detail" for span length.
- Bars A (Top) at 9" Max Spacing.

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 | 1,440 | 196.98 | 197.50 | 196.46 | 3,312 |
| 45 | 1,620 | 221.98 | 222.50 | 221.46 | 3,726 |
| 50 | 1,800 | 246.98 | 247.50 | 246.46 | 4,140 |
| 55 | 1,980 | 271.98 | 272.50 | 271.46 | 4,554 |
| 60 | 2,160 | 296.98 | 297.50 | 296.46 | 4,968 |
| 65 | 2,340 | 321.98 | 322.50 | 321.46 | 5,382 |
| 70 | 2,520 | 346.98 | 347.50 | 346.46 | 5,796 |
| 75 | 2,700 | 371.98 | 372.50 | 371.46 | 6,210 |
| 80 | 2,880 | 396.98 | 397.50 | 396.46 | 6,624 |
| 85 | 3,060 | 421.98 | 422.50 | 421.46 | 7,038 |
| 90 | 3,240 | 446.98 | 447.50 | 446.46 | 7,452 |
| 95 | 3,420 | 471.98 | 472.50 | 471.46 | 7,866 |
| 100 | 3,600 | 496.98 | 497.50 | 496.46 | 8,280 |
| 105 | 3,780 | 521.98 | 522.50 | 521.46 | 8,694 |
| 110 | 3,960 | 546.98 | 547.50 | 546.46 | 9,108 |
| 115 | 4,140 | 571.98 | 572.50 | 571.46 | 9,522 |
| 120 | 4,320 | 596.98 | 597.50 | 596.46 | 9,936 |
| 125 | 4,500 | 621.98 | 622.50 | 621.46 | 10,350 |

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



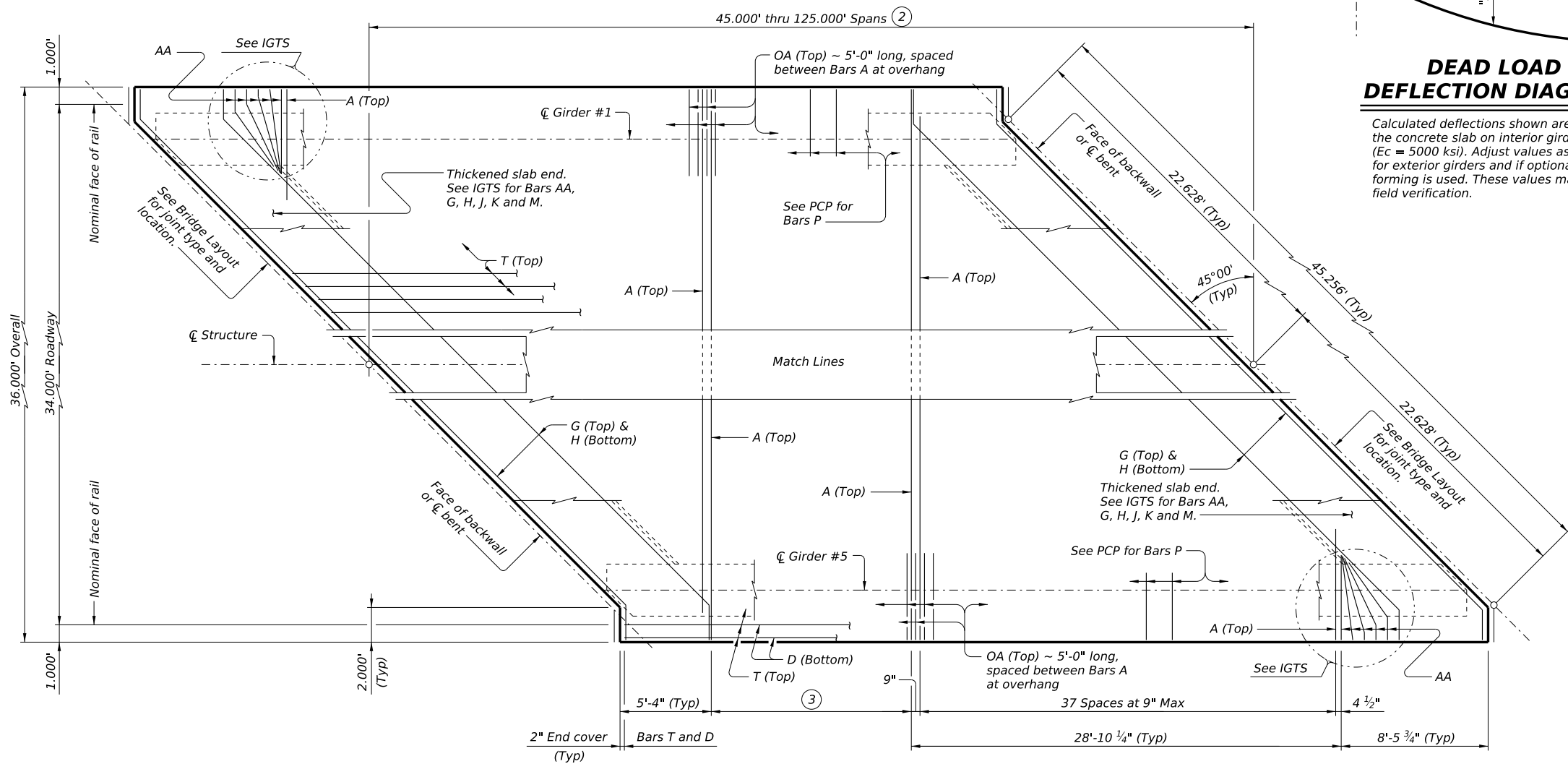
DEAD LOAD DEFLECTION DIAGRAM

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.

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 (PMD) 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.



PLAN ~ 45' THRU 125' SPAN

HL93 LOADING SHEET 2 OF 2

Texas Department of Transportation Bridge Division Standard

PRESTRESSED CONCRETE I-GIRDER SPANS (TYPE Tx28 THRU Tx54) 34' ROADWAY 45° SKEW

SIG-34-45

| | | | | |
|-------------------------|---------|--------|---------|-----------|
| FILE: IG-SIG3445-24.dgn | DN: TAR | CK: VC | DW: SFS | CK: TAR |
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| REVISIONS | | | | |
| 11-24: Flipped top mat | DIST | COUNTY | | SHEET NO. |