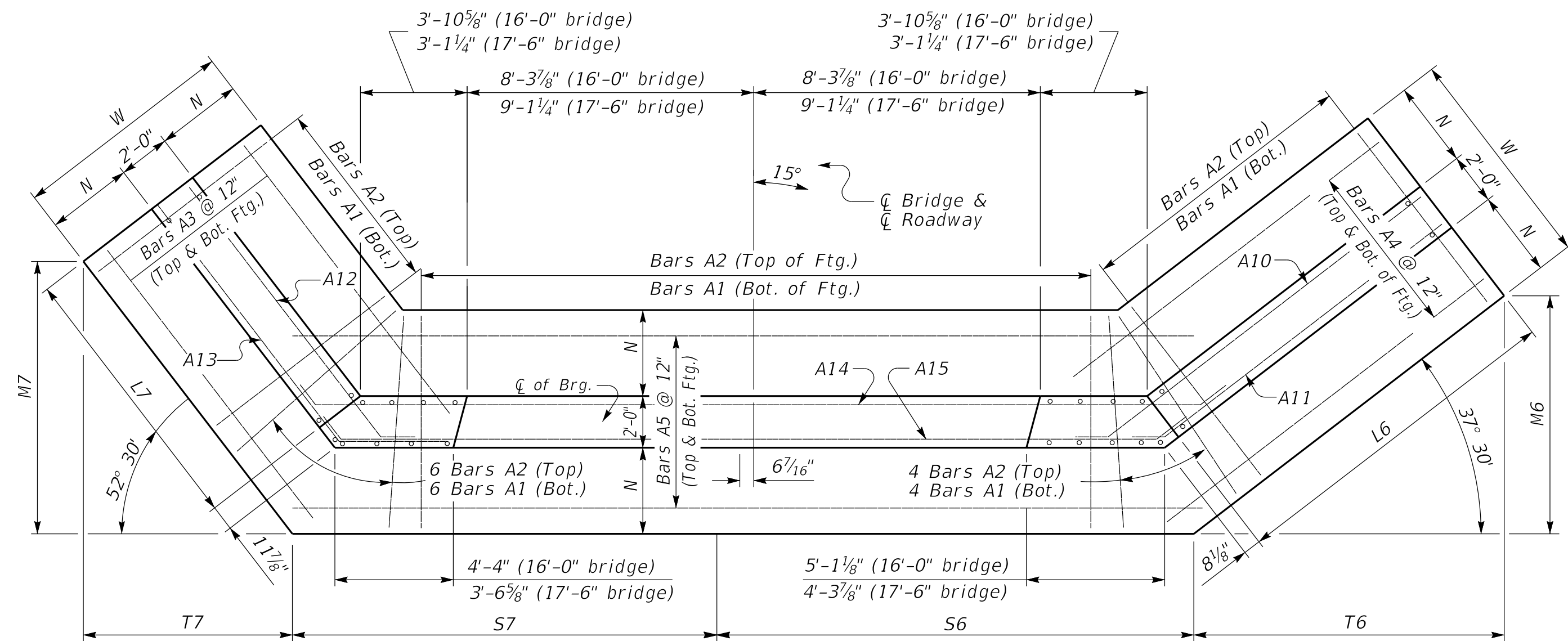


15° SKEW 16'-0" - 17'-6" BRIDGE WIDTH 2:1 FILL SLOPES

| Bill of Reinforcement |      |         |         |     |        |         |      |        |         |     |        |         |     |        |         |      |        |         |     |        |         |     |        |         |      |        |         |     |    |   |   |    |    |    |   |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    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| MARK                  | A1   |         | A2      |     | A3     | A4      | A5   | A6     |         |     |        | A7      |     | A8     |         | A9   | A10    | A11     | A12 | A13    | A14     | A15 | A16    | A17     | A18  |        |         |     |    |   |   |    |    |    |   |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    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| TYPE                  | Str. |         | Str.    |     | Str.   | Str.    | Str. | 4      |         |     |        | Str.    |     | Str.   |         | Str. | 8      | 8       | 8   | 8      | 7       | 7   | Str.   | Str.    | Str. |        |         |     |    |   |   |    |    |    |   |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    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| 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 | 12 | 65 | 10 |

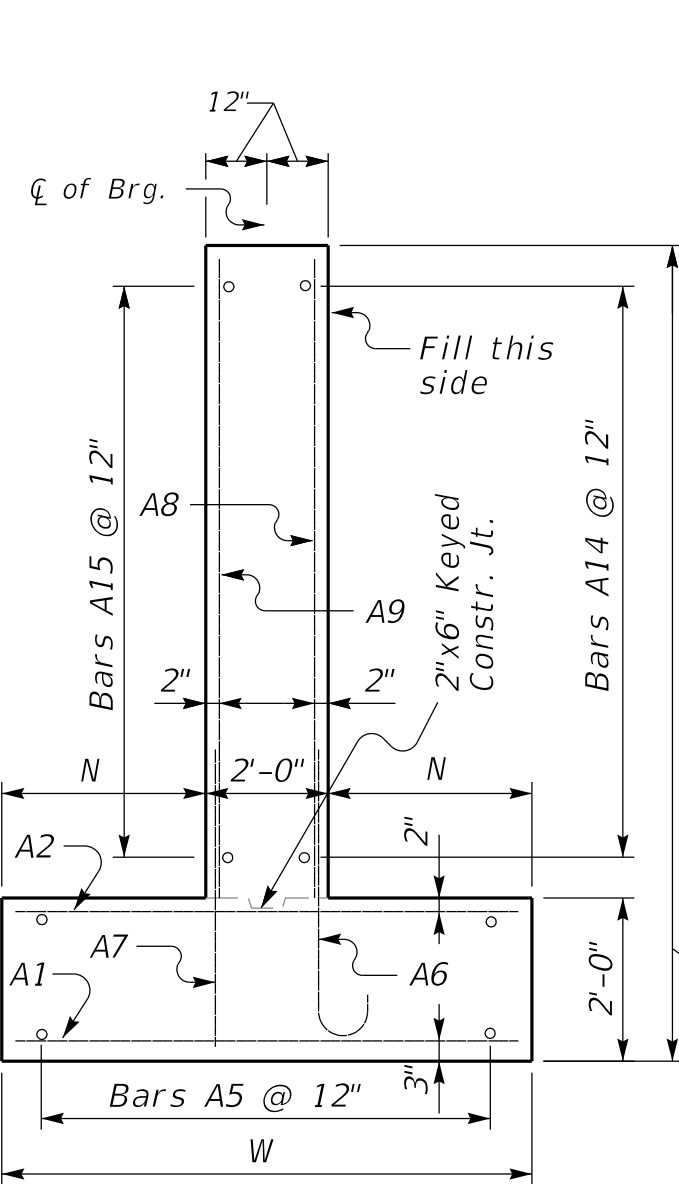
4 foot min. shoulder



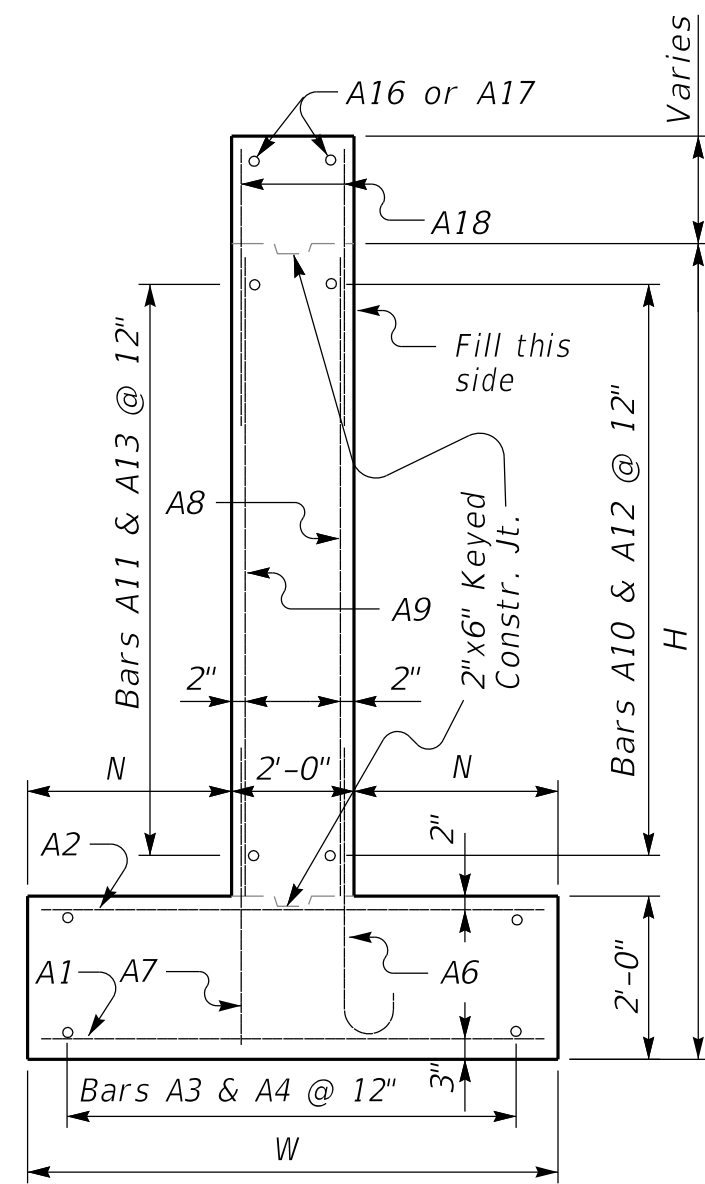
(Left Skew as shown;right skew opp. hand)

PLAN

NOTE: Trim A16 & A17 bars if necessary



WALL SECTION



WING SECTION

| Quantities |           |               |
|------------|-----------|---------------|
| H          | Concrete* | Reinforcement |
|            | C.Y.      | LBS.          |
| 5          | 32.9      | 2852          |
| 6          | 36        | 2852          |
| 7          | 46.4      | 3942          |
| 8          | 49.8      | 3942          |
| 9          | 66        | 5682          |
| 10         | 69.9      | 5682          |
| 11         | 86.7      | 8139          |
| 12         | 91        | 8139          |
| 13         | 108.2     | 11385         |
| 14         | 112.9     | 11385         |
| 15         | 132       | 14911         |
| 16         | 137.1     | 14911         |

\*Concrete quantities computed using 21" beam depth on 1/2" pad & 16'-0" Bridge Width

GENERAL NOTES

**SPECIFICATIONS:** Construct abutments according to the current edition of the Kentucky Department of Highways Standard Specifications for Road and Bridge Construction. Abutments are designed for side by side box beams as detailed in Standard Drawings BDP-001 through BDP-012, current edition. Dimensions may be adjusted to allow for 17'-6" rolled steel beam bridge width.

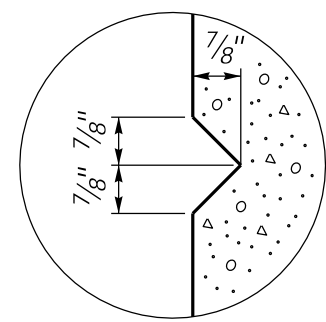
**FOUNDATION PRESSURE:** Construct abutment footings on solid rock bearing material that can support a pressure of 8000 psf service or 10,800 psf strength factored as recommended by a geotechnical engineer.

**WING LENGTHS:** Calculated assuming 21" superstructure depth and stream bank elevation at top of footing.

**FOOTING ELEVATION:** Construct bottom of footing below the anticipated scour elevation. (This typically entails embedding the footings 1'-0" to 2'-0" into rock and pouring concrete directly against cut rock faces as recommended by geotechnical engineer.)

**NOTE:** Distances to bars shown are clear dimensions unless otherwise noted.

**MATERIAL SPECIFICATIONS:**  
Concrete, Class "A" = 3500 psi  
Steel Reinforcement = Grade 60



RUSTICATION GROOVE

\*Expansion Joint Material:  
AASHTO M153  
Type-I Sponge Rubber

ELEVATION

Place 4" weep hole drains at 8'-0" centers at such elevation as to afford best drainage of backfill, in accordance with the Standard Specifications.



COMMONWEALTH OF KENTUCKY  
DEPARTMENT OF HIGHWAYS

15° SKEW 16'-0" - 17'-6" BRIDGE WIDTH ABUTMENT 2:1 FILL SLOPES, 4'-0" MIN. SHOULDER

STANDARD DRAWING NUMBER  
BSA-104-01