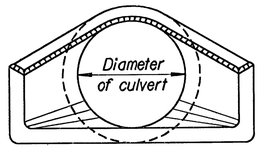
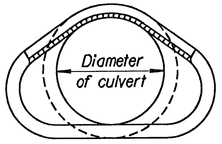
| FHWA REGION NO. | STATE | PROJECT NO. | YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 7 | KANSAS | 87-N-0033-01 | 1995 | 15 | 34 |



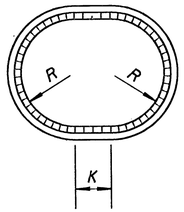

END ELEVATION (TYPE I)



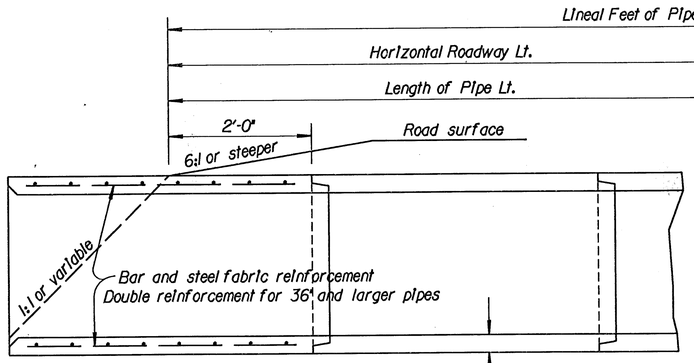




SECTION A-A

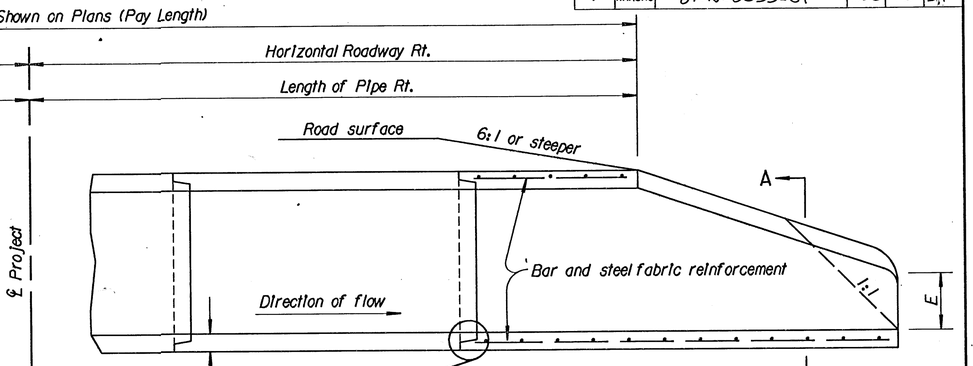
*Showing rounding of inside edge of end section.*




END ELEVATION (TYPE III)

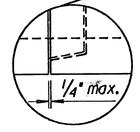



INLET END

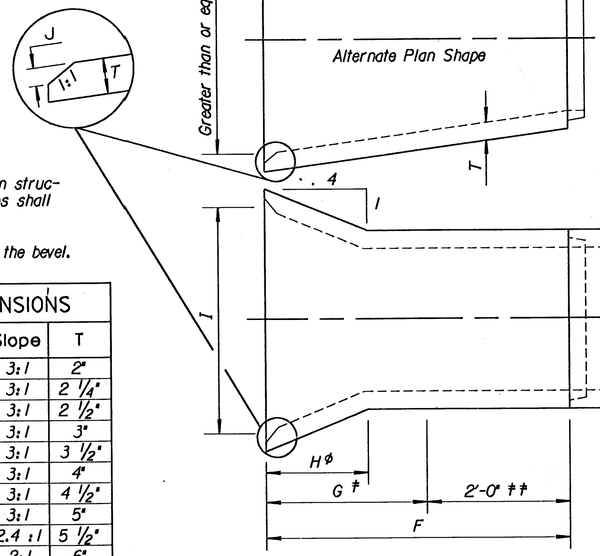



OUTLET END

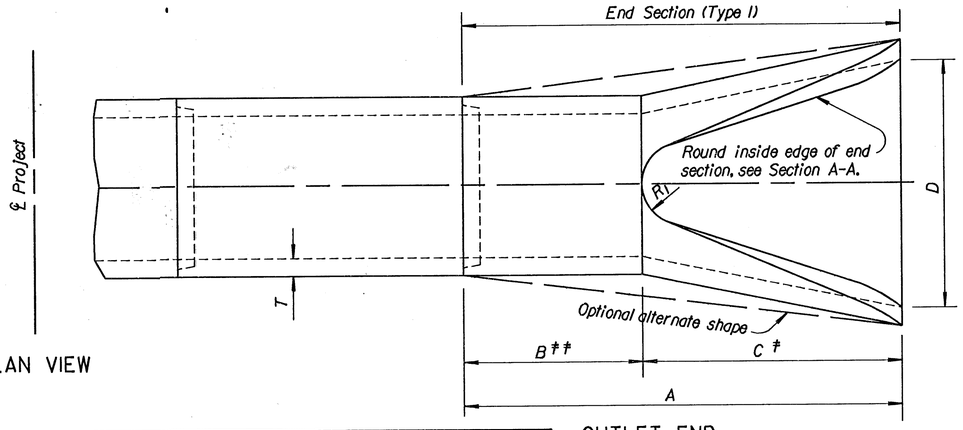
ELEVATION SECTION




Note: Gain in length due to joint fit tolerance will not be paid for.




INLET END




PLAN VIEW

OUTLET END

⌀ Transition to round pipe.
ǂ Paid for as separate item of End Section, except when structures shall bid as alternates. In that case End Sections shall be subsidiary to big item. "Drainage Structure No. ".
ǂǂ Included in pay length of pipe.
✳ Minimum waterway area is calculated at the inside of the bevel.

END SECTION (TYPE I) NOMINAL DIMENSIONS

| Diam. | A | B ǂǂ | C ǂ | D | E | $R_1$ | Slope | T |
|---|---|---|---|---|---|---|---|---|
| 12" | 6'-0 7/8" | 4'-0 7/8" | 2'-0" | 2'-0" | 4" | 9 | 3:1 | 2" |
| 15" | 6'-1" | 3'-10" | 2'-3" | 2'-6" | 6" | 11 | 3:1 | 2 1/4" |
| 18" | 6'-1" | 3'-10" | 2'-3" | 3'-0" | 9" | 12 | 3:1 | 2 1/2" |
| 24" | 6'-1 1/2" | 2'-6" | 3'-7 1/2" | 4'-0" | 9 1/2" | 14 | 3:1 | 3" |
| 30" | 6'-1 3/4" | 1'-7 3/4" | 4'-6" | 5'-0" | 1'-0" | 15 | 3:1 | 3 1/2" |
| 36" | 8'-1 3/4" | 2'-10 3/4" | 5'-3" | 6'-0" | 1'-3" | 20 | 3:1 | 4" |
| 42" | 8'-2" | 2'-11" | 5'-3" | 6'-6" | 1'-9" | 22 | 3:1 | 4 1/2" |
| 48" | 8'-2" | 2'-2" | 6'-0" | 7'-0" | 2'-0" | 22 | 3:1 | 5" |
| 54" | 8'-2 1/4" | 2'-9 1/4" | 5'-5" | 7'-6" | 2'-3" | 24 | 2.4 :1 | 5 1/2" |
| 60" | 8'-3" | 3'-3" | 5'-0" | 8'-0" | 2'-11" | 24 | 2:1 | 6" |
| 72" | 8'-3" | 1'-9" | 6'-6" | 9'-0" | 3'-0" | 24 | 1.86 :1 | 7" |
| 84" | 9'-3 1/2" | 1'-9" | 7'-6 1/2" | 10'-0" | 3'-0" | 24 | 1.6 :1 | 8" |

SIDE TAPERED INLET SECTION (TYPE III)-NOMINAL DIMENSIONS

| Diam. | Min. W.W. ✳ Area Sq.Ft. | F | G | H | I | J | K | R | T |
|---|---|---|---|---|---|---|---|---|---|
| 24" | 4.5 | 4'-3" | 2'-3" | 1'-5 1/8" | 2'-8" | 1 1/2" | 8" | 1'-0" | 3" |
| 30" | 7.0 | 4'-9 1/2" | 2'-9 1/2" | 1'-9 1/2" | 3'-4" | 2" | 10" | 1'-3" | 3 1/2" |
| 36" | 10.1 | 5'-4" | 3'-4" | 2'-1 1/2" | 4'-0" | 2" | 1'-0" | 1'-6" | 4" |
| 42" | 13.7 | 5'-10 1/2" | 3'-10 1/2" | 2'-5 7/8" | 4'-8" | 2 1/2" | 1'-2" | 1'-9" | 4 1/2" |
| 48" | 17.9 | 6'-5" | 4'-5" | 2'-10 1/8" | 5'-4" | 3" | 1'-4" | 2'-0" | 5" |
| 54" | 22.7 | 6'-11 1/2" | 4'-11 1/2" | 3'-2 1/2" | 6'-0" | 3 1/2" | 1'-6" | 2'-3" | 5 1/2" |
| 60" | 28.0 | 7'-6" | 5'-6" | 3'-6 7/8" | 6'-8" | 4" | 1'-8" | 2'-6" | 6" |
| 72" | 40.3 | 8'-7" | 6'-7" | 4'-3 5/8" | 8'-0" | 5" | 2'-0" | 3'-0" | 7" |
| 84" | 54.8 | 9'-8" | 7'-8" | 5'-0 3/8" | 9'-4" | 6" | 2'-4" | 3'-6" | 8" |

*Dimensions for alternate shapes shall be equal to or greater than those shown in the table, unless otherwise shown.*

PIPE CULVERT SUMMARY

| Station | Location | Type | Size | Crown Grade Elev. | Flow line LT. | Flow line RT. | Horizontal Roadway LT. | Horizontal Roadway RT. | Degree of Rotation | Length of Pipe LT. | Length of Pipe RT. | Lin.Ft. of Pipe | End Sects. Type I LT. | End Sects. Type I RT. | End Sects. Type III LT. | End Sects. Type III RT. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SEE SCHEDULE ON SHEET 16 | | | | | | | | | | | | | | | | |

*Note: The culverts listed on this sheet may or may not indicate that the culvert installed will be reinforced concrete, steel, or aluminum.*

| NO. | DATE | REVISIONS | BY | APP'D |
|---|---|---|---|---|
| | | | | |

KANSAS DEPARTMENT OF TRANSPORTATION

# CONCRETE END SECTIONS FOR CONCRETE PIPES TYPE I & SIDE TAPERED INLET SECTION (TYPE III)

STD. NO. 662

| | | | |
|---|---|---|---|
| FHWA APPROVAL | 1-6-92 | APP'D JAMES O. BREWER | |
| DESIGNED | DETAILED | QUANTITIES | TRACED BOWSER |
| DESIGN CK. | DETAIL CK. | QUAN.CK. | TRACE CK. SEITZ |