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 another format.

Quantities shown are for metal pipe and will increase slightly for concrete pipe installations.

For vehicle safety, construct curbs no more than 4" above finished grade. Reduce curb height, if necessary. Do not exceed curbing requirements. No changes will be made in quantities and no additional compensation will be allowed for this work.

Provide 3'-0" footing as shown where required to maintain 6" minimum cover for pipe.

K is measured from top of curbs to inside face of pipe.

Dimensions shown are usual and maximum.

Quantities shown are one structure and only one headwall.

Max. length = 4 - H + P + 1"

Lengths of wings based on SL:1 slope along this line.

**CONCRETE HEADWALLS WITH FLARED WINGS FOR 30° SKEW ARCH PIPE CULVERTS**

**MATERIAL NOTES:**
- Prestressed C20 reinforcing steel
- Prestressed Class C concrete (f'c = 3000 psi)

**GENERAL NOTES:**
- Designed according to AASHTO LRFD Design Specifications.
- Do not mix bridge rails of any type directly to these culvert headwalls.
- This standard may not be used for wall heights, H, exceeding the values shown.

Cover dimensions are clear dimensions, unless noted otherwise. Reinforcing dimensions are outlined by bars.

---

### TABLE OF VARIABLE DIMENSIONS AND QUANTITIES FOR ONE HEADWALL

| Span | Size of Pipe Arch | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z |
|------|------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|      |                  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

### TABLE OF REINFORCING STEEL

| Bar | Size of Pipe Arch | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z |
|-----|------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|     |                  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

---

**PLAN**

**ELEVATION**

**Typical Wing Elevation**

**SECTION A-A**