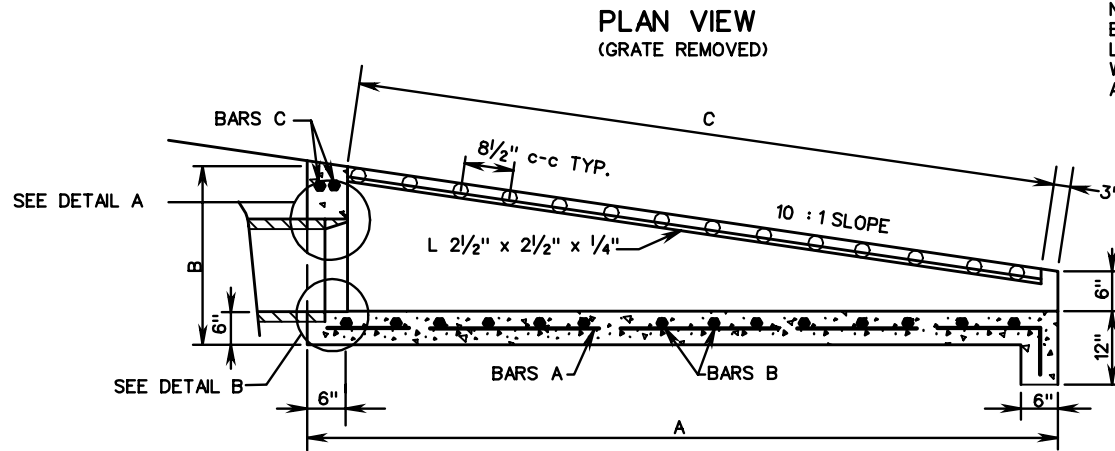
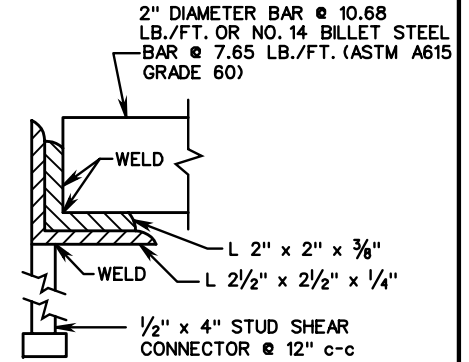


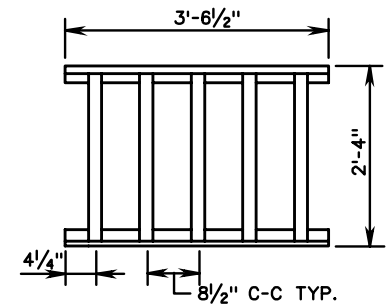
| DIMENSIONS FOR BEVEL  |           |           |
|-----------------------|-----------|-----------|
| ON HEADWALL PIPE SIZE | a         | b         |
| 12"                   | 0'-1 1/4" | 0'-1"     |
| 15"                   | 0'-1 3/4" | 0'-1 1/4" |
| 18"                   | 0'-2"     | 0'-1 1/2" |
| 21" OR 24"            | 0'-2 1/2" | 0'-2"     |



NO HOLES ARE TO BE PROVIDED IN L 2" x 2" x 3/8" WHEN SOLID BARS ARE USED.



DETAIL C



GRATE SECTION DETAIL

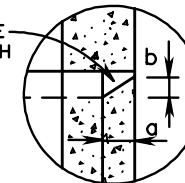
NOTES:

1. IN NO CASE SHALL TOP OF ENDWALL PROJECT ABOVE FILL SLOPE, DITCH, SLOPE, OR SHOULDER.
2. CLASS A3 CONCRETE TO BE USED IF CAST IN PLACE, 4000 PSI IF PRECAST.
3. REINFORCING STEEL TO HAVE A MINIMUM 1/2" CONCRETE COVER. FOR SCHEDULE OF REINFORCING STEEL, DIMENSIONS, AND QUANTITIES SEE SHEET 2 OF 2.
4. THIS ITEM MAY BE PRECAST OR CAST IN PLACE.
5. BOTTOM OF STRUCTURE TO BE ON THE SAME GRADE AS DRAINAGE DITCH.
6. 3/4" CHAMFER MAY BE PROVIDED ON ALL EDGES AT MANUFACTURER'S OPTION.
7. HEADWALL TO BE BEVELED IN ALL AREAS EXCEPT WHERE A CONFLICT WITH INVERT OR WINGWALLS OCCUR.

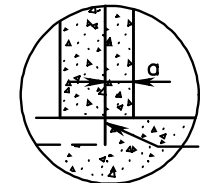
SECTION A-A

8. BEVEL EDGE IS REQUIRED ON HEADWALL AT THE INLET END OF THE CULVERT (WHERE THE FLOW ENTERS THE CULVERT). HEADWALL AT THE OUTLET END OF THE CULVERT MAY BE SQUARE EDGE OR BEVEL EDGE.
9. THE NUMBER OF GRATE SECTIONS TO BE USED FOR EACH EW-11A IS BASED ON THE LENGTH "C" SEE QUANTITIES CHART ON SHEET 2 OF 2.

SHAPE TO BE BEVELED WITH MORTAR



DETAIL A



DO NOT BEVEL INVERT

DETAIL B

SPECIFICATION REFERENCE

105  
233  
302

PIPE ENDWALL WITH LOAD-CARRYING GRATE

12" - 24" CIRCULAR PIPES

VIRGINIA DEPARTMENT OF TRANSPORTATION

VDOT

ROAD AND BRIDGE STANDARDS

REVISION DATE

SHEET 1 OF 2

101.29