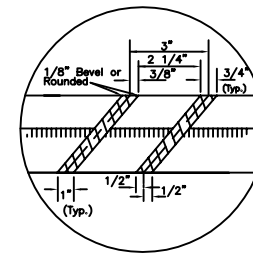
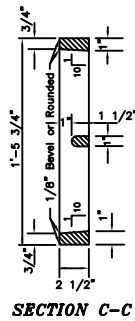
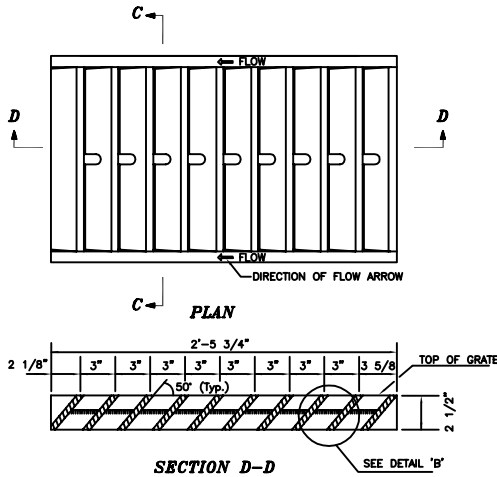


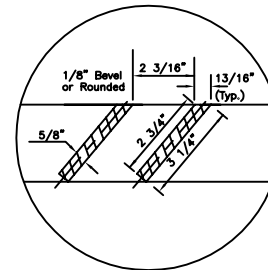
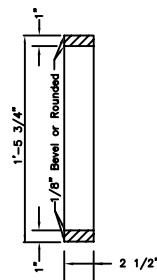
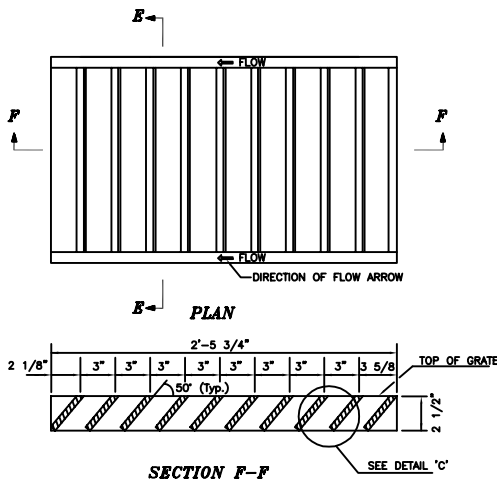
DETAIL 'A'

CAST GRATE



DETAIL 'B'

CAST GRATE



DETAIL 'C'

WELDED STEEL GRATE

GENERAL NOTES

1. Welded Steel or Cast Grates as detailed are all acceptable grates. Mixing of alternate types of grates on the same project will be permitted with the approval of the Engineer.
2. All construction and materials shall be in accordance with the current Standard Specifications.
3. Sharp edges resulting from fabrication shall be dulled by any acceptable method for safety in handling.
4. Grates shall be installed in frame with flow arrow pointing downstream or toward the low point in a sump.
5. Welded grates shall be Structural Steel conforming to the requirements of AASHTO M-183 or of corrosion resistant structural steel conforming to the requirements of AASHTO M-161 or M-222 or be made of other approved steels of equal quality. Mixing grades of steel on the same grate will not be permitted.
6. Grates made of M-183 steel shall be galvanized in accordance with AASHTO M-111 Specifications or shall be painted with inorganic zinc points, meeting the requirements of the current Standard Specifications.
7. All welds shall be a minimum of 1/4" fillet and shall conform to the Specifications for Highway Construction and to the AWS Structural Welding Code. Electrodes shall be compatible to the different grades of steel that comprise the grate member.
8. Cast grates shall be cast steel conforming to the requirements of AASHTO M-103, Grade 65-35 of ductile iron conforming to the requirements of ASTM A-536, Special Grade 60-45-10, or of grey iron conforming to the requirements of AASHTO M-105, Class 35B or ASTM A-48, Class 35B. The Specifications of general application for cast steel grates shall be AASHTO M-103, Scope 1.2.1, Grade N-1.
9. Ferrous castings shall be of uniform quality, free of blowholes, porosity, hard spots, shrinkage distortion or other defects. They shall be smooth and well cleaned by shot blasting or other approved cleaning method. After cleaning they shall be coated with asphalt base paint resulting in a smooth coating, tough and tenacious when cold, not tacky nor brittle.
10. All castings shall be manufactured true to pattern; component parts shall fit together in a satisfactory manner.

The City of End
401 West
E.O. Bag
End, Okla. 73101
Telephone: (580) 234-0000 Fax: (580) 234-8948
Contacts:
Robert Hill, Director of Engineering Services, Ext. 344
James Brinkley, Civil Engineer, Ext. 348



REVISIONS	
Number	Description
1	10/18/94 This Sheet
2	3/2/00 Specification Review Changes

Project Number:	
Project Location:	

Sheet Title: **STANDARD STORM SEWER GRATE**

Project Title: **DD - 2**



Date:	8/1/81
Scale:	NO SCALE
Cad File:	6/DATA/SPECS/002-3
Drawn By:	P.B.
Designed By:	R.H.
Approved By:	R.H.
Sheet:	of