



NOTES:

- MANHOLES TO BE CONSTRUCTED IN ACCORDANCE WITH AASHTO M-199 (ASTM C 478) UNLESS OTHERWISE SHOWN ON PLANS OR NOTED IN THE STANDARD SPECIFICATIONS.
- HANDHOLES IN ADJUSTMENT SECTION SHALL HAVE 3' MIN. CLEARANCE. STEPS IN MANHOLE SHALL HAVE 6" MIN. CLEARANCE. FOR DETAILS SHOWING GRADE RINGS, LADDER, STEPS, HANDHOLDS, AND TOP SLAB SEE STANDARD PLAN SS - 140 "MISCELLANEOUS MANHOLE DETAILS".
- ALL REINFORCED CAST IN PLACE CONCRETE SHALL BE CLASS 4000. NON-REINFORCED CONCRETE IN CHANNEL AND SHELF SHALL BE CLASS 3000. ALL PRECAST CONCRETE SHALL BE CLASS 4000.
- PRECAST BASES SHALL BE FURNISHED WITH CUTOUTS OR KNOCKOUTS WITH A WALL THICKNESS OF 2" MIN.
- ALL BASE REINFORCING STEEL SHALL HAVE A MINIMUM YIELD STRENGTH OF 60,000 AND BE PLACED IN THE UPPER HALF OF THE BASE WITH 1" MIN. CLEARANCE.
- NPC SEALS OR APPROVED EQUAL AT ALL JOINTS.
- KOR-N-SEAL BOOTS OR APPROVED EQUAL REQUIRED FOR ALL CONNECTIONS.
- CHANNEL CONSTRUCTED FOR SANITARY SEWER MANHOLES ONLY. FOR STORM DRAIN MANHOLES LEAVE FLAT INVERT ONE FOOT BELOW OUTLET PIPE OUTFLOW.
- FOR END OF LINE MANHOLE LOCATE FRAME AND LID OVER OUTFALL LINE. FOR INLINE MANHOLES LOCATE FRAME AND LID OVER UPSTREAM LINE.
- MANHOLE FRAME TO CENTERED OVER FLOW THROUGH.
- GROUT KOR-N-SEAL BOOTS FLUSH TO MANHOLE.
- FOUNDATION MATERIAL TO BE PLACED AS REQUIRED AND AS DIRECTED BY THE ENGINEER.
- GEOTEXTILE SHALL MEET THE REQUIREMENTS OF SECTION 9-33 & AS NOTED IN THE CITY SPECIAL PROVISIONS HEREIN.
14. GROUTING SHALL BE SUFFICIENT TO PREVENT LEAKS BETWEEN THE PRECAST COMPONENTS OF THE COMPLETED STRUCTURE & SHALL BE PERFORMED INSIDE, BETWEEN & OUTSIDE OF ALL RISERS, JOINTS & PIPE PENETRATIONS.



FLAT TOP SANITARY SEWER MANHOLE

STANDARD PLAN:
SS - 030

DATE: **FEB. 2008**

CITY ENGINEER APPROVAL:

Longview: **C.B.**

Kelso: **S.Z.**