FRAME & GRATE SHALL CONFORM WITH STD. 208
ADJUSTING RINGS
(SEE NOTE 1)
REDUCING CONE REQUIRED UNLESS
APPROVED BY THE ENGINEER
RUNGS (SEE NOTE 2)
PLASTER INTERIOR AND EXTERIOR OF ALL JOINTS
WITH NON-SHRINKING GROUT (GROUT SHALL BE
"RECRETE" OR APPROVED EQUAL). SEAL
LIFTING HOLES INSIDE AND OUT.
ALL JOINTS BETWEEN SECTIONS SHALL BE
SEALED BY "RAM-NEK", "RUB-R-NEK", OR
OTHER APPROVED GASKET MATERIAL
BARREL JOINT MUST BE ABOVE HIGH
GROUND WATER TABLE, OR SEAL
WITH AN APPROVED JOINT EXTERIOR
WATERPROOFING SYSTEM.
ALL PIPE SHALL EXTEND MIN 1" AND MAX,
2" INTO MANHOLE. GROUT INSIDE AND
OUTSIDE OF ALL PIPES. (GROUT SHALL BE
"RECRETE" OR APPROVED EQUAL).
RUNG (SEE NOTE 2)
BED MANHOLE WITH A MINIMUM OF 12" OF SAND,
D-1 OR WASHED ROCK. EXISTING NFS GRANULAR
MATERIAL MAY BE USED IF COMPACTED TO 95%
of MAXIMUM DENSITY PER ASTM 1557.

NOTES
1. THE AREA BETWEEN THE TOP OF THE CATCH BASIN AND THE FRAME SHALL BE FILLED WITH CONCRETE MEETING THE REQUIREMENTS OF CBJ
SPECIFICATION 03302—CONCRETE STRUCTURES. NO BRICKS, WOOD, STONES, ADJUSTING RINGS OR OTHER GRADE ADJUSTMENT DEVICES SHALL BE
USED. TEMPORARY FORM WORK SHALL BE CONSTRUCTED TO PROVIDE A SMOOTH INSIDE EXPOSED SURFACE FREE OF VOIDS AND PROJECTIONS. THE
CONSTRUCTED FRAME SUPPORT MUST MATCH THE INTERIOR OF THE FRAME INSTALLED AS APPROVED BY THE ENGINEER.
2. RUNGS TO BE PLACED 12" O.C. ON UNOBSERVED SIDE OF MANHOLE. LAST RUNG SHALL BE 18" MAX FROM BOTTOM OF MANHOLE, AND TOP RUNG
SHALL BE 6" MAXIMUM FROM TOP OF CONE. IF UNOBSERVED SIDE NOT AVAILABLE, LAST RUNG SHALL BE PLACED 6" OVER SMALLEST PIPE.
REFER TO A.S.T.M. C-476 FOR DESIGN REQUIREMENTS AND C-476-69 FOR MINIMUM STEEL FOR BARREL. BARREL SHALL BE IMBEDDED IN BASE SO
THAT FIRST BARREL SECTION IS CONNECTED WITH BASE. BLOCKOUTS MUST BE FORMED.
4. FOR TYPE I MANHOLE, PRIMARY LEADS SHALL NOT EXCEED 30° C.M.P. OR 27° R.C.P. WITH INCLUDED ANGLE BETWEEN LEADS NO LESS THAN 135°
5. OR PRIMARY LEAD NOT TO EXCEED 24° C.M.P. OR 21° R.C.P. WITH INCLUDED ANGLE LESS THAN 135°.
   FOR TYPE II MANHOLE, PRIMARY LEADS SHALL NOT EXCEED TWO 42° C.M.P. OR 36° R.C.P. WITH INCLUDED ANGLE BETWEEN LEADS NO LESS THAN
   135°. OR PRIMARY LEADS NOT TO EXCEED TWO 36° C.M.P. OR R.C.P. WITH INCLUDED ANGLE BETWEEN LEADS NO LESS THAN 135°.

SCALE: NTS
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CHECKED BY: STAFF
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CITY AND BOROUGH OF JUNEAU, ALASKA
STORM DRAIN MANHOLE
TYPES I & II
STANDARD 303