CLAY AND BAILEY NO 2008, NEENAH NO R1536, DEETER NO 1315, PAMREX, PAMIGHT RING AND LID. COVER STAMPED "LIBERTY—SEWER".

4" or 6" CONCRETE ADJUSTING RINGS
MAXIMUM 12" ADJUSTMENT

PROVIDE MASTIC SEALANT BETWEEN ALL JOINTS

INTERNAL RUBBER CHIMNEY SEAL—CRETEX SPECIALTY PRODUCTS, OR APPROVED EQUAL. (ONLY WHEN BOLT DOWN LIDS ARE REQUIRED.)

GASKET SHALL BE KENT—SEAL
# 2 MIN 2—1" DIA OR 1—2" DIA BEAD, OR APPROVED EQUAL.

4" MIN.

5" MIN BELOW 16’ IN DEPTH

3000 P.S.I. CONCRETE

SECTION

#4 REBAR @ 6" CTRS. EA. WAY @ MIDDLE OF DEVELOPED BASE

NOTES:

1. PRECAST CONCRETE MANHOLES SHALL CONFORM TO ASTM C478 EXCEPT AS MODIFIED BY THE SPECIFICATIONS.

2. BASES NOT BUILT MONOLITHIC WITH BOTTOM SECTION SHALL BE Poured OF 3000 PSI CONCRETE.

3. MANHOLE MAY BE TRANSITIONED TO 4’ DIA., 8’ ABOVE F.L. OF OUTFALL FOR 5’ & 6’ MANHOLES.

4. THE BOTTOM SECTION OF ALL PRECAST MANHOLES NOT BUILT MONOLITHIC WITH THE BASE SHALL BE SET INTO A STEEL REINFORCED Poured CONCRETE BASE A MIN OF 4”. (#4 @ 6” E.W.)

5. WATERPROOFING WILL BE REQUIRED ON THE EXTERIOR SURFACE OF MANHOLE STRUCTURES FROM BASE TO MANHOLE RINGS. PRECAST MANHOLES WILL BE SHOP COATED. THE WATERPROOFING COATING SHALL BE KOPPERS COMPANY, INC. BITUMASTIC NO. 50 OR TNEMEC COMPANY, INC. ASPHALT BASE FOUNDATION COAT AND SHALL CONSIST OF TWO COATS WET THICKNESS OF 22—26 MILS WITH A COMBINED DRY THICKNESS OF 31 MILS.

6. THE COMPRESSIVE STRENGTH OF CONCRETE USED IN THE CONSTRUCTION OR PRECAST REINFORCED CONCRETE MANHOLES SHALL NOT BE LESS THAN 4000 PSI.

7. ONLY ECCENTRIC MANHOLE CONES WILL BE ALLOWED UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.

8. ADDITIONAL BASE THICKNESS FOR MANHOLES GREATER THAN 20’ DEEP SHALL BE APPROVED BY CITY ENGINEER WITH SUBMITTAL OR APPROPRIATE CALCULATIONS.

9. ALL MANHOLE JOINTS SHALL BE SEALED WITH AN EXTERNAL RUBBER SLEEVE, INFI-SHIELD GATOR WRAP AS MANUFACTURED BY SEALING SYSTEMS, INC., OR APPROVED EQUAL.

CITY OF LIBERTY, MO
DEPARTMENT OF PUBLIC WORKS

STANDARD
PRECAST MANHOLE DETAIL

D31—1A

REV 2016
TYPICAL CROSS SECTION

1. STONE BEDDING SHALL CONFORM TO SECTIONS 3012 AND 3016.

2. IF MANHOLE EXCAVATION BOTTOM IS IN UNSUITABLE MATERIAL, SUITABLE FILL MATERIAL AND MIRAFI 140N OR APPROVED EQUAL FILTER FABRIC WILL BE REQUIRED PRIOR TO PLACEMENT OF BEDDING.
1. FOR ALL DIMENSIONS NOT SHOWN, SEE STANDARD MANHOLE DETAIL.
2. WATERPROOFING WILL BE REQUIRED ON THE EXTERIOR SURFACE OF MANHOLE STRUCTURES FROM BASE TO MANHOLE RINGS. PRECAST MANHOLES WILL BE SHOP COATED. THE WATERPROOF COATING SHALL BE KOPPERS COMPANY, INC. BITUMASTIC NO. 50 OR TNEMEC CO., INC. ASHALT BASE FOUNDATION COAT AND SHALL CONSIST OF TWO COATS WET THICKNESS OF 22–26 MILS WITH A COMBINED DRY THICKNESS OF 31 MILS.
3. ALL MANHOLE JOINTS SHALL BE SEALED WITH AN EXTERNAL RUBBER SLEEVE, INFI-SHIELD GATOR WRAP AS MANUFACTURED BY SEALING SYSTEMS INC., OR APPROVED EQUAL.
SPECIFICATIONS:

1) CLAMP AND BRACKETS IS TYPE 'A - A'
   304 STAINLESS STEEL, 11 GAUGE (.1196").

2) 3/8" Ø PINCH BOLT AND NUTS
    IS TYPE 18-8 STAINLESS STEEL.

3) WIDE RANGE OF SIZES FOR
    SDR35, SCH40, CIOD-C900 STOCKED
    FOR 4" - 30"
    OTHER SIZES AVAILABLE.

REV 2009
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3. ALL MANHOLE JOINTS SHALL BE SEALED WITH AN EXTERNAL RUBBER SLEEVE, INFI-SHIELD GATOR WRAP AS MANUFACTURED BY SEALING SYSTEMS INC. OR APPROVED EQUAL.
NOTES:

1. ALL PIPE CONNECTIONS TO EXISTING MANHOLES SHALL BE CORE-DRILLED.
REDUCER GRADE RING  
WEIGHT: 165 LB.

GRADE RING  
WEIGHT: 41 LB./V IN.

NOTES:
GRADE RINGS SHALL MEET REQUIREMENTS OF  
ASTM DESIGNATION C-478-80 STANDARD  
SPECIFICATION FOR PRECAST REINFORCED  
CONCRETE MANHOLE SECTIONS.

CONCRETE: 4000 P.S.I.

REINFORCEMENT: #4 WIRE, ASTM-82

REV 2009