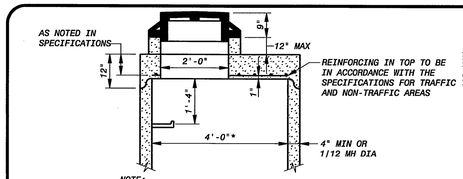
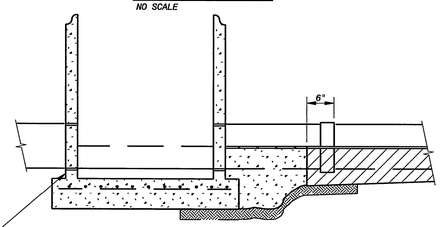


NOTE:
TO BE USED ONLY WHEN SPECIFIED IN PLANS.

STANDARD PRECAST MANHOLE (SHALLOW TYPE)

NO SCALE



THE MINIMUM DISTANCE BETWEEN THE INVERT OF THE DOWNSTREAM PIPE AND THE TOP OF THE MANHOLE BASE SHALL BE THREE (3) INCHES.

NOTES:
1ST JOINT OF PIPE SHALL BE EMBEDDED IN CONCRETE TO WITHIN 6" OF THE 1ST JOINT FOR RCP & VCP.

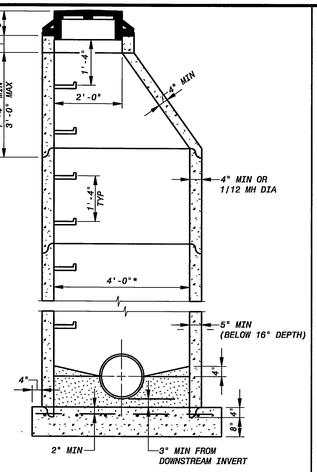
IF A FLEXIBLE WALL CONNECTION IS USED, CLASS B EMBEDMENT MAY BE USED.

IF FLEXIBLE OR SEMI-FLEXIBLE PIPE IS USED, A FLEXIBLE WALL CONNECTOR MUST BE USED.

FLEXIBLE WALL CONNECTIONS SHALL BE PRESSWEDGE, A-LOCK, PRESS-SEAL (PSX GASKET) OR APPROVED EQUAL.

MANHOLE BASE SECTION

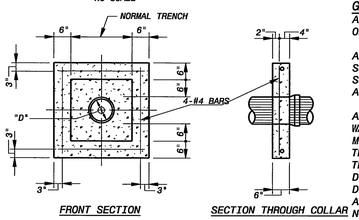
NO SCALE



* UNLESS OTHERWISE NOTED ON PLANS

STANDARD PRECAST MANHOLE (ECCENTRIC CONE)

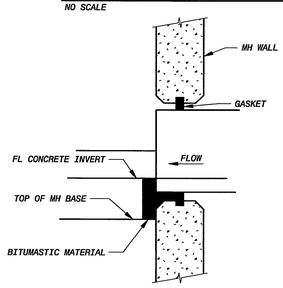
NO SCALE



FRONT SECTION — SECTION THROUGH COLLAR

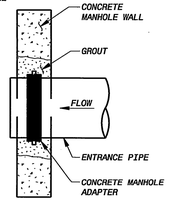
CONCRETE COLLAR DETAIL

NO SCALE



FLEXIBLE WALL CONNECTION

NO SCALE



(USE FOR PIPES ENTERING EXISTING MANHOLE WALLS)

CONCRETE MANHOLE ADAPTER

NO SCALE

GENERAL NOTES:

ALL MANHOLE RINGS SHALL BE SET IN A MINIMUM OF TWO(2) ROWS OF 3/4 TO 1 INCH PRE-FORMED BITUMASTIC JOINT SEALER.

ALL MANHOLE RINGS TO BE PLACED IN PAVEMENT OR IN AREAS TO BE SUBSEQUENTLY PAVED SHALL HAVE "MACHINED HORIZONTAL BEARING SURFACES" AND SHALL COMPLY WITH CLASS #25 AS ESTABLISHED IN ASTM A-48.

ALL MANHOLES SHALL BE PAINTED WITH AN APPROVED BITUMINUOUS WATERPROOFING MATERIAL. THE COATING SHALL BE A MINIMUM 14 MIL DRY THICKNESS AND SHALL BE APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
THE INSIDE DIAMETER OF THE MANHOLE SHALL BE 4'-0" FOR PIPE DIAMETERS FROM 8" THRU 24" AND SHALL BE 5'-0" FOR PIPE DIAMETERS FROM 27" THRU 36".
ALL MANHOLE BASES(PRE-CAST OR POURED-IN-PLACE) SHALL HAVE NO. 4 REINFORCING BARS PLACED ON 12" CENTERS BOTH WAYS.

ALL STANDARD MANHOLE RINGS AND COVERS TO BE DEETER 1315-JCS, NEENAH NF-15360009/B (FRAME) AND NF-15360010/B (COVER), OR APPROVED EQUAL.

ALL MANHOLE RINGS AND COVERS SHOWN IN PLANS TO BE "BOLT-DOWN" TO BE CLAY & BAILEY MANUFACTURING CO. NO. 20140R, NEENAH R-1915-F2 OR APPROVED EQUAL. AN EXTRA PAYMENT FOR FURNISHING "BOLT-DOWN" RING AND COVER AS SHOWN IN PLANS WILL NOT BE MADE, BUT SHALL BE CONSIDERED AS SUBSIDIARY TO THE ITEM, "STANDARD MANHOLE".

STANDARD CAST IRON MANHOLE STEPS TO BE CLAY & BAILEY MANUFACTURING CO. NO. 2102 OR APPROVED EQUAL. STEEL CORE, PLASTIC COATED STEPS MAY BE USED (M.A. IND., INC NO. PS1-PF, PS2-PF, OR APPROVED EQUAL).

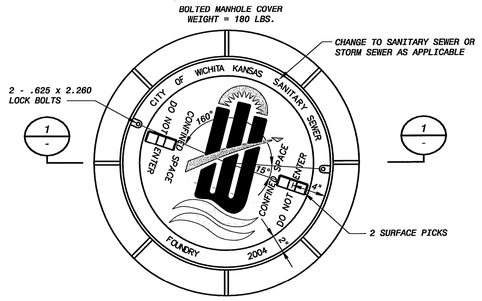
MAXIMUM GRADE ADJUSTMENT ALLOWABLE IS 12". MINIMUM ALLOWABLE THICKNESS FOR PRECAST CONCRETE GRADE ADJUSTMENT RING IS 2". Ⓒ

FOR MANHOLES INSTALLED OR MODIFIED WITHIN CREEK BANKS, INTERIOR SHALL BE LINED WITH PLASTIC.

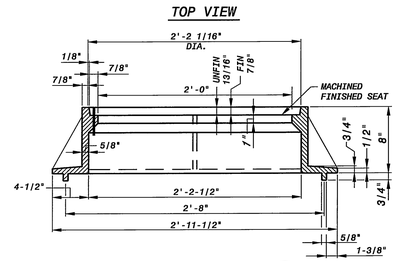
ALL EXPOSED CONCRETE ON INTERIOR OF MANHOLE SHALL BE SEALED WITH BITUMINOUS WATERPROOFING.

WATERPROOFING SEALL SHALL OVERLAP PLASTIC LINING BY AT LEAST 3 INCHES.

GENERAL NOTES FOR PRE-CAST MANHOLES
1. REINFORCEMENT IN ALL SECTIONS SHALL EQUAL OR EXCEED ASTM C-478 SPECIFICATIONS.
2. MASTIC MATERIAL TO BE USED AT ALL SECTION JOINTS. O-RINGS MAY BE USED FOR JOINTS BELOW THE CONE SECTION, BUT THE CONE SECTION ITSELF SHALL NOT HAVE O-RING JOINTS. Ⓑ
3. APPROVED GASKET AND CONCRETE MORTAR TO BE USED AROUND PIPE IN KNOCK-OUTS.

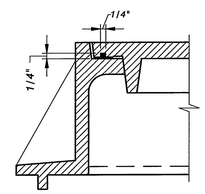


TOP VIEW



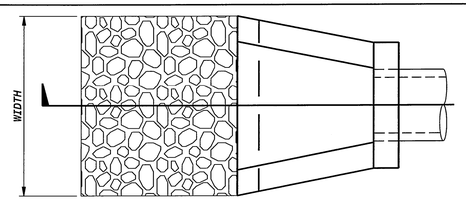
MUD RING SECTION (1)

NO SCALE — REV: 10-08-04, MCG

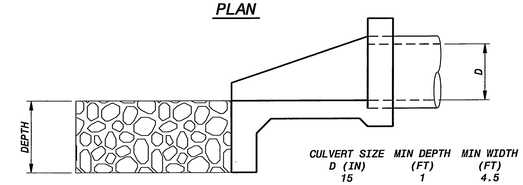


T-GASKET DETAIL (A)

NO SCALE



PLAN



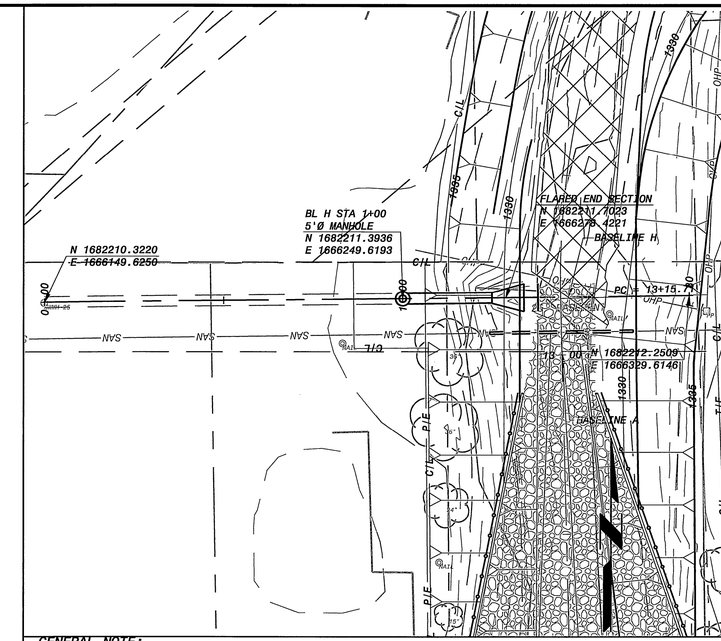
CULVERT SIZE D (IN)	MIN DEPTH (FT)	MIN WIDTH (FT)
15	1	4.5
24	1	7.5
30	1	8.5
36	1.5	11

SECTION

NOTES:
1. KDOT LIGHT 18" SERIES
2. SPLASH PAD SHALL BE PLACED IN LIFTS. VOIDS SHALL BE COMPLETELY FILLED WITH SOIL OR SAND PRIOR TO PLACEMENT OF SUCCESSIVE LIFT.

SPLASH PAD

NO SCALE



GENERAL NOTE:

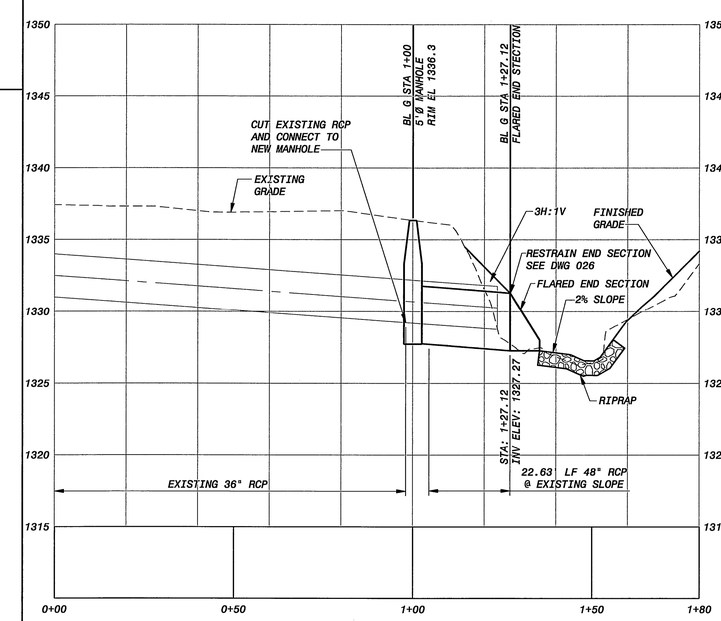
ELEVATION OF DOWNSTREAM INVERTS OF CONSTRUCTED MANHOLES AND GRATE INLETS SHALL BE DETERMINED IN FIELD BASED ON EXISTING PIPE SLOPE.

MATCH SLOPE OF NEW PIPE TO SLOPE OF EXISTING PIPE.

RESTRAIN END SECTIONS OF PIPE AND FLARED END SECTIONS WITH GASKETED PIPE JOINTS TIES SEE DWG 026.

5' 0 5' 10'
VERTICAL 1"=5'

20' 10' 0 20' 40'
HORIZONTAL 1"=20'



STORM SEWER OUTFALL BL A STA. 13+16.62

1" = 20'-0"

NO.	BY	CK	APP	DATE	REVISIONS AND RECORD OF ISSUE
4	DEC			03/19/09	FINAL - CONSTRUCTION SET
3	DEC			2/13/08	100% SUBMITTAL
2	DEC			11/21/07	90% SUBMITTAL - FOR REVIEW ONLY
1	DEC			8/31/07	70% SUBMITTAL - FOR REVIEW ONLY

CYGNET ID: 143234-320-NR-C-T0000PNEL
WF: 025.dwg
SAVED: C0037033, 3/9/2009 10:34:17 AM
PLOTTED: C0037033, 3/16/2009 8:55:07 AM
USER: C0037033
DWG VER.1.35
XREF1:Andrew Smith Seal Plan Sheet.dwg
XREF2:BVE_WKEC_topo all final.dwg
XREF3:EG contours.dwg
XREF4:BV_I.dwg
XREF5:

ANDREW J. SMITH LICENSED 17979 KANSAS PROFESSIONAL ENGINEER
03-13-09

BLACK & VEATCH
Building a world of difference.
Black & Veatch Corporation
Kansas City, Missouri

DRY CREEK CHANNEL IMPROVEMENTS
WICHITA, KANSAS

LINCOLN TO ORME
STORM SEWER OUTFALL
PLAN, PROFILE, AND DETAILS

DESIGNED: HMW
DETAILED: DEC
CHECKED: AKS
APPROVED:
DATE: 13 MAR 2009

0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE

PROJECT NO.
143234

025
SHEET
25 OF 42

FD6000
DWR