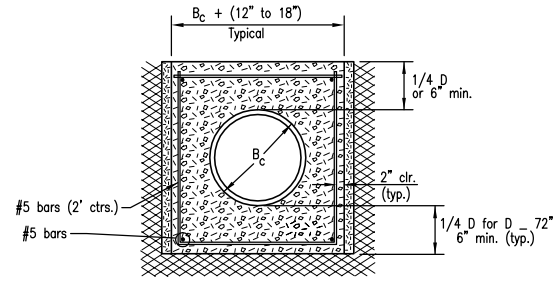


BENCHMARKS

- BM#1 1344.21 Datum Bench Mark #1
USGS Bench Mark Disk in the East end of the South bridge abutment of the I-135 Southbound Bridge over 37th Street North. 75' +/- South of the centerline of 37th Street North and 26.5' +/- East of the centerline of the Southbound Lanes.
- BM#2 1325.69 City of Wichita Bench Mark Disk in the North side of the concrete base of a steel High Line Pole, 50' +/- West of the centerline of Hydraulic Avenue and 36' +/- South of the centerline of 37th Street North. Published Elevation = 1325.73 (City of Wichita Bench Mark Book).
- BM#3 1330.16 Chiseled Square on the West end of the North Headwall of the RCB under the North drive into the U.S.D. # 259 Food Services Building. 1295' North and 45' East of the SW Corner Sec 27, T 26 S, R 1 E.
- BM#4 1341.17 City of Wichita Bench Mark Disk in the North end of the East Hub Guard of the Hydraulic Avenue Bridge over Middle Fork Chisholm Creek. 250' +/- South of the West 1/4 Corner of Sec 27, T 26 S, R 1 E. Published Elevation = 1341.07 (Sedgwick County Bench Mark Book).
- BM#5 1340.89 City of Wichita Bench Mark Disk in the East end of the North Hub Guard of a Bridge on 45th Street North, 150' +/- West of Hydraulic Avenue. RM 55 on FEMA FIRM Map 200321 0150 A. Published Elevation = 1340.72.
- BM#6 1354.11 RR Spike in the North face of a Power Pole on the South side of 45th Street North, 95' +/- West of the SE Corner, West 1/2, SW 1/4, Sec 22, T 26 S, R 1 E.
- BM#7 1346.25 City of Wichita Bench Mark Disk in the middle of the North Hub Guard of the 45th Street Bridge over Middle Fork Chisholm Creek.
- BM#8 1346.24 Chiseled Square on the East end of the South Hub Guard of the 45th Street Bridge over Middle Fork Chisholm Creek. RM 51 on FEMA FIRM Map 200321 0150 A. Published Elevation = 1346.07.
- BM#9 1348.18 Chiseled Square on the West nose of Traffic Island under Highway K-254 at the West Bound Entrance Ramp on 45th Street North.
- BM#10 1359.70 Chiseled Square on the middle of the East Headwall of a RCB under Hillside Avenue, 100' +/- South of the centerline of 45th Street North and 35' +/- East of the centerline of Hillside Avenue. Published Elevation = 1359.54 (Sedgwick County Bench Mark Book).
- BM#11 1354.49 City of Wichita Bench Mark Disk in the South end of the East concrete traffic rail on the Hillside Avenue Bridge over Middle Fork Chisholm Creek. 190' South and 26.7' East of the West 1/4 Corner Sec 23, T 26 S, R 1 E.
- BM#12 1369.43 RR Spike in the SW Face of a Guy Pole, 45' +/- East of the centerline of Hillside Avenue and 36' +/- North of the centerline of 53rd Street North. Published Elevation = 1369.36 (Sedgwick County Bench Mark Book).
- BM#13 1356.79 Datum Bench Mark #2
City of Wichita Bench Mark Disk in the East end of the North Hub Guard of the 53rd Street North Bridge over Middle Fork Chisholm Creek. 185' East and 14' North of the SW Corner, East 1/2, SW 1/4, Sec 14, T 26 S, R 1 E. RM 53 on FEMA FIRM Map 200321 0150 A. Published Elevation = 1356.79.

CONTROL POINTS

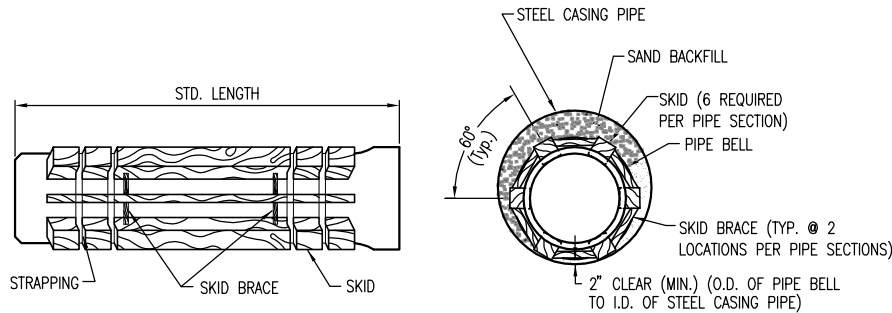
H.C.#100 South 1/4 Corner Sec. 27, T26S, R1E 1/2" Pipe in Thimble 0.6' below Road Surface N=1710013.77 E=1657043.47	H.C.#109 Southeast Corner West 1/2, SW 1/4, Sec. 14, T26S, R1E 5/8" Bar in Thimble 0.6' below Road Surface N=1720667.64 E=1660903.25	H.C.#208 5/8" Bar with Red "MKEC Design Point" Cap N=1718906.47 E=1660473.22
H.C.#101 Southwest Corner Sec. 27, T26S, R1E 3/4" Pinched Pipe in Thimble N=1709965.27 E=1654411.86	H.C.#110 South 1/4 Corner Sec. 14, T26S, R1E 3/4" Pipe N=1720685.46 E=1662223.54	H.C.#209 5/8" Bar with Red "MKEC Design Point" Cap N=1719427.07 E=1660852.32
H.C.#102 West 1/4 Corner Sec. 27, T26S, R1E 5/8" Bar 1.6' below Road Surface N=1712621.61 E=1654379.52	H.C.#112 Center Sec. 27, T26S, R1E 5/8" Bar with "Mid Kansas" Cap N=1712661.27 E=1657040.56	H.C.#210 5/8" Bar with Red "MKEC Design Point" Cap N=1718264.33 E=1659600.74
H.C.#103 Southwest Corner Sec. 22, T26S, R1E 3/4" Bar at Road Surface N=1715289.85 E=1654349.09	H.C.#6607 Southeast Corner, West 1/2, NW 1/4, Sec. 23, T26S, R1E 0.3' North-South by 0.5' East-West Stone N=1718007.13 E=1660946.25	H.C.#212 5/8" Bar with Red "MKEC Design Point" Cap N=1716758.97 E=1659253.10
H.C.#104 SE Corner West 1/2, SW 1/4, Sec. 22, T26S, R1E 1" Bar N=1715297.26 E=1655693.55	H.C.#200 5/8" Bar with Red "MKEC Design Point" Cap N=1710958.39 E=1654430.98	H.C.#400 5/8" Bar with Red "MKEC Design Point" Cap N=1715076.52 E=1657551.05
H.C.#105 South 1/4 Corner Sec. 22, T26S, R1E 1" Pipe at Road Surface N=1715304.75 E=1657037.64	H.C.#201 5/8" Bar with Red "MKEC Design Point" Cap N=1711753.61 E=1654409.13	H.C.#1827 5/8" Bar with Red "MKEC Design Point" Cap N=1719896.45 E=1660852.51
H.C.#106 Southwest Corner Sec. 23, T26S, R1E 5/8" Bar in Thimble N=1715346.96 E=1659659.97	H.C.#202 5/8" Bar with Red "MKEC Design Point" Cap N=1711297.75 E=1654800.96	H.C.#4000 5/8" Bar with Red "MKEC Design Point" Cap N=1716252.43 E=1659217.15
H.C.#107 West 1/4 Corner Sec. 23, T26S, R1E 3/4" Pipe 0.9' below Road Surface N=1717983.42 E=1659623.41	H.C.#203 5/8" Bar with Red "MKEC Design Point" Cap N=1711328.27 E=1655686.44	H.C.#4001 5/8" Bar with Red "MKEC Design Point" Cap N=1715989.82 E=1658630.93
H.C.#108 Southwest Corner Sec. 14, T26S, R1E 3/4" Pipe 0.1' below Road Surface N=1720649.63 E=1659582.57	H.C.#204 5/8" Bar with Red "MKEC Design Point" Cap N=1711953.35 E=1655818.52	H.C.#4003 5/8" Bar with Red "MKEC Design Point" Cap N=1711279.69 E=1655317.86
	H.C.#205 5/8" Bar with Red "MKEC Design Point" Cap N=1712518.77 E=1655728.21	H.C.#4004 5/8" Bar with Red "MKEC Design Point" Cap N=1714649.28 E=1657217.52
	H.C.#207 5/8" Bar with Red "MKEC Design Point" Cap N=1718269.13 E=1660082.86	H.C.#5000 5/8" Bar with Red "MKEC Design Point" Cap N=1715280.64 E=1657738.96
		H.C.#5002 5/8" Bar with Red "MKEC Design Point" Cap N=1715547.85 E=1657839.45



- B_c = Outside Pipe Diameter
- D = Inside Pipe Diameter
- d = Depth of Bedding Material Below Pipe
- [Symbol] = Compacted Embedment
- [Symbol] = Concrete

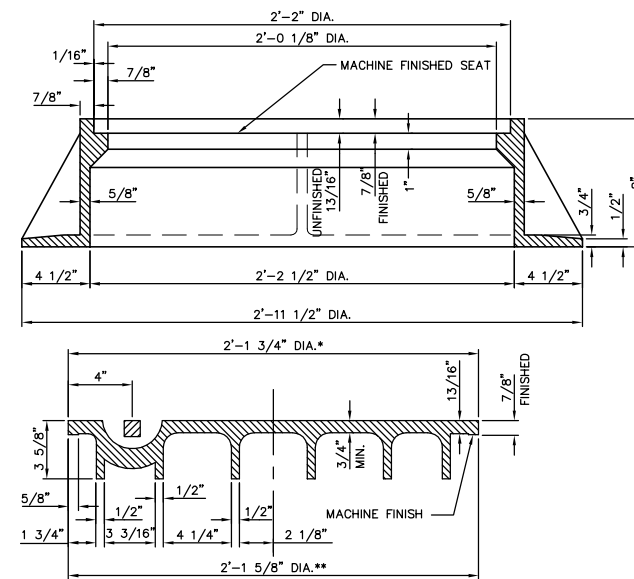
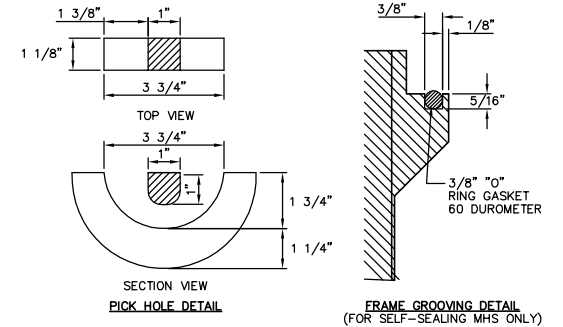
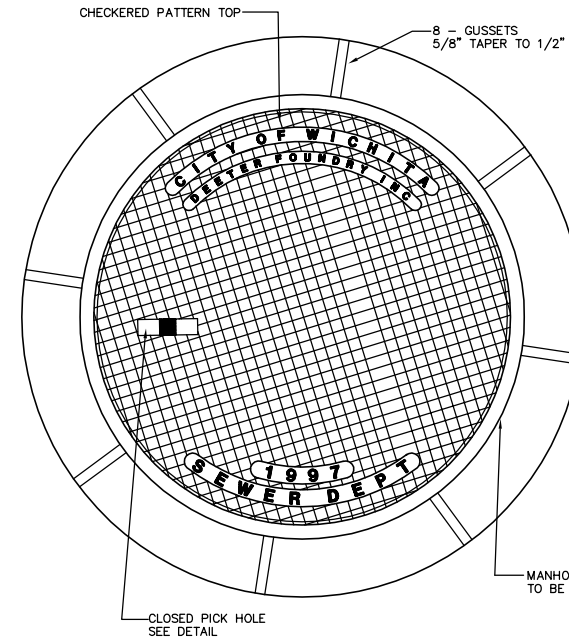
CONCRETE ENCASEMENT

N.T.S.



STEEL ENCASEMENT DETAIL

N.T.S.



*OUTSIDE DIA. TOP OF COVER
**OUTSIDE DIA. BOTTOM OF COVER

MANHOLE FRAME AND COVER

(TOTAL WEIGHT = 430 LBS.)

- ### MANHOLE FRAME AND COVER NOTES
1. CAST IRON MANHOLE FRAME AND COVER SHALL CONFORM TO ASTM A-48, CLASS 30, OR BETTER.
 2. THE FRAMES AND COVERS SHALL BE OF A NONROCKING TYPE OR WITH MACHINED BEARING SURFACES SO FITTING PARTS WILL NOT RATTLE OR ROCK UNDER TRAFFIC.
 3. MANHOLE CASTINGS SHALL BE DEETER FOUNDRY INC. NO. 1261 OR APPROVED EQUAL, UNLESS OTHERWISE SPECIFIED IN THE SPECIAL CONDITIONS. (MINIMUM WT.-430 LBS.) ALL MANHOLE CASTINGS, REGARDLESS OF TYPE, SHALL BE CONSIDERED SUBSIDIARY TO THE UNIT PRICES BID FOR THE VARIOUS MANHOLE TYPES.
 4. GRIND ALL BURRS SMOOTH, CLEAN THOROUGHLY, THEN APPLY SHOP COAT OF ASPHALT BASE PAINT.
 5. THE MANUFACTURER SHALL SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL PRIOR TO MANUFACTURE. THE ENGINEER SHALL RETAIN THE RIGHT TO REJECT CASTINGS NOT CONFORMING TO THE SPECIFICATIONS OR THE APPROVED SHOP DRAWINGS.
 6. WHERE SELF-SEALING MANHOLE FRAMES ARE SPECIFIED ON THE PLANS, THE MANHOLE FRAME SHALL BE FURNISHED WITH AN APPROVED "O" RING GASKET GROOVED INTO THE BEARING SURFACE OF THE MANHOLE FRAME (PER DETAIL). THE "O" RING GASKET SHALL NOT BE INSTALLED IN THE MANHOLE FRAME UNTIL AFTER FINAL INSPECTION AND ACCEPTANCE OF THE PROJECT BY THE ENGINEER. THE CONTRACTOR SHALL SUPPLY TO THE OWNER ONE (1) REPLACEMENT "O" RING GASKET FOR EACH SELF-SEALING MANHOLE SPECIFIED.



MAIN 13, SS #23 (PHASE 2)

PROJECT NAME
MISC. DETAILS, BENCHMARKS, AND CONTROL POINTS
SHEET TITLE

D. CAUDILL DESIGN BY: RDH DRAWN BY: D. CAUDILL CHECKED BY:
411 N. WEBB ROAD WICHITA, KS. 67206 316-684-9600
DATE: **SEPTEMBER 30, 2002** DRAWING NAME: **01138BD2** SHEET / OF: **3 / 12**