STORM WATER SEWER

TO SERVE SEDGWICK COUNTY ADULT DETENTION FACILITY

APPROVED AS NOTED
BY CITY ENGINEER OF WICHITA

Sanitary Sewers _____
Storm Sewers VRH 6/5/96
Driveway Approaches _____
Water Mains _____
Paving _____

NOTE TO CONTRACTOR

INSPECTION AND TESTING FOR THIS PROJECT IS TO BE PROVIDED BY A LICENSED CONSULTING ENGINEERING FIRM UNDER CONTRACT WITH THE OWNER/DEVELOPER. SAID INSPECTION IS TO BE IN ACCORDANCE WITH THE CITY OF WICHITA STANDARD CONSTRUCTION ENGINEERING PRACTICES AND CERTIFIED BY A LICENSED PROFESSIONAL ENGINEER. NO WORK SHALL BE PERFORMED IN DEDICATED EASEMENTS OR THE PUBLIC RIGHT-OF-WAY BY THE CONTRACTOR WITHOUT SUCH INSPECTION NOR SHALL ANY WORK BE COMMENCED IN DEDICATED EASEMENTS OR PUBLIC RIGHT-OF-WAY WITHOUT WRITTEN AUTHORIZATION BY THE CITY ENGINEER.

CITY OF WICHITA, KANSAS

M.E. LINDEBAK CITY ENGINEER

PRIVATE PROJECT NO. 632PPS
INDEX NO. 607861

June 1996

NOTES

1. THE CONTRACTOR WILL BE REQUIRED TO PROVIDE ADVANCE NOTICE OF TWENTY-FOUR (24) HOURS TO UTILITY COMPANIES PRIOR TO STARTING ANY EXCAVATION AS FOLLOWS:

KANSAS ONE-CALL	687-2470

THE CONTRACTOR MUST NOTIFY THE FOLLOWING IN CASE OF EMERGENCY:

CABLEVISION	262-4270 OR 283-2061
KANSAS GAS & ELECTRIC (GAS)	263-7311
KANSAS GAS & ELECTRIC (ELECTRIC)	264-1141
ARKLA GAS COMPANY	942-8350 OR 263-8181
SOUTHWESTERN BELL TELEPHONE	1-571-2611
CITY OF WICHITA WATER DEPT.	268-4908
CITY OF WICHITA SEWER MAINTENANCE	268-4071

2. THE CONTRACTOR SHALL NOTIFY PIPELINE COMPANIES AT LEAST 24 HOURS IN ADVANCE OF ANY WORK BEING PERFORMED ACROSS AND/OR ADJACENT TO PIPELINES.

3. THE CONTRACTOR SHALL NOTIFY KEITH DAVIS, MANAGER OF TRACK MAINTENANCE, UNION PACIFIC RAILROAD AT 298-9434 AT LEAST 48 HOURS IN ADVANCE OF ANY WORK BEING PERFORMED ACROSS AND/OR ADJACENT TO RAILROAD.

4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PRESERVING PROPERTY IRONS. THE CONTRACTOR WILL BE REQUIRED TO REESTABLISH AND PROPERTY IRONS WHICH ARE DAMAGED OR DESTROYED BY HIS CONSTRUCTION OPERATIONS. SUCH IRONS SHALL BE REESTABLISHED BY A LICENSED LAND SURVEYOR IN ACCORDANCE WITH STATE LAWS.

5. EXISTING UTILITIES AND THEIR LOCATION, AS SHOWN ON THE PLANS, REPRESENT THE BEST INFORMATION OBTAINABLE FOR DESIGN. LOCATION INFORMATION HAS BEEN OBTAINED FROM THE VARIOUS UTILITY COMPANIES AND IS EITHER FROM COMPANY RECORD DRAWINGS OR COMPANY PROVIDED FIELD LOCATIONS. THE CONTRACTOR WILL BE REQUIRED TO WORK AROUND EXISTING UTILITIES WITHIN THE RIGHT-OF-WAY WHICH DO NOT CONFLICT WITH PROPOSED CONSTRUCTION.

6. RUBBLE FROM THE REMOVAL OF MISCELLANEOUS STRUCTURES AND EXCESS EXCAVATION WHICH IS TO BE WASTED SHALL BE DISPOSED OF ON SITES TO BE PROVIDED BY THE CONTRACTOR. THESE SITES SHALL BE APPROVED BY THE ENGINEER AS TO SUITABILITY, APPEARANCE AND SITE LOCATION. LOCATIONS THAT, IN THE OPINION OF THE ENGINEER, WILL LEAVE AN UNSIGHTLY APPEARANCE WILL NOT BE APPROVED.

ALL DISPOSAL SITES MUST BE APPROVED BY THE KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT. MATERIAL EITHER STOCKPILED OR IN A FLOOD PLAIN WOULD REQUIRE A KANSAS STATE BOARD OF AGRICULTURE PERMIT. ANY MATERIAL DUMPED IN WATERS OF THE UNITED STATES OR WETLANDS IS SUBJECT TO U.S. CORPS. OF ENGINEER PERMITTING REGULATIONS. ANY MATERIAL BURIED OR STOCKPILED BEYOND APPROVED CONSTRUCTION LIMITS WOULD REQUIRE ADDITIONAL ARCHAEOLOGICAL INVESTIGATIONS UNLESS BURIED IN A PREVIOUSLY APPROVED BORROW LOCATION.

7. TREES & SHRUBS IN PUBLIC RIGHT-OF-WAY WHICH ARE IN DIRECT CONFLICT WITH PROPOSED NEW CONSTRUCTION SHALL BE REMOVED BY THE CONTRACTOR WITH THE ENGINEER'S APPROVAL. TREES & SHRUBS WHICH ARE NOT IN CONFLICT WITH PROPOSED NEW CONSTRUCTION SHALL BE SAVED AND PROTECTED FROM DAMAGE.

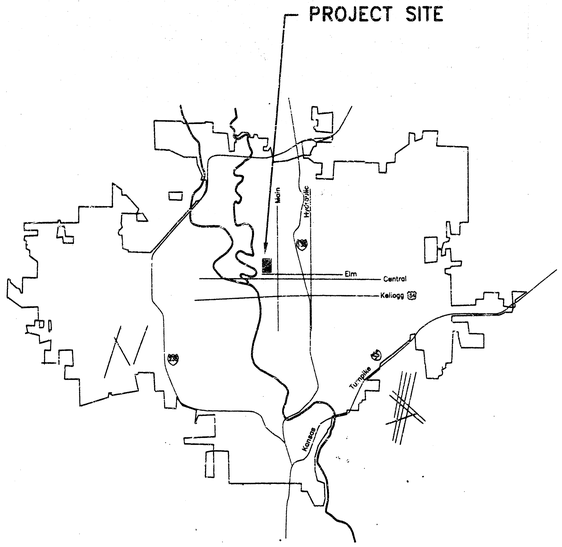
8. FROM STA. 0+00 TO STA. 6+11.47 AND FROM STA. 12+86.80 TO STA. 13+12.20, ALL LAWN/TURF AREAS DISTURBED BY CONSTRUCTION OF THE PROPOSED IMPROVEMENTS SHALL BE RESTORED WITH THE SAME GRASS/SOD AS EXISTING. RESTORATION SHALL INCLUDE, BUT NOT BE LIMITED TO, TOP SOIL PREPARATION, SEEDING, MULCH AND/OR RESEEDING. ALL SEEDING/SODDING WORK SHALL BE IN ACCORDANCE WITH THE CITY OF WICHITA STANDARD SPECIFICATIONS AND THE CITY OF WICHITA ADMINISTRATIVE REGULATION NO. AR78. ALL COSTS FOR THIS WORK SHALL BE PAID FOR AT THE PRICE BID FOR PROJECT SEEDING.

9. TRAFFIC IS TO BE CARRIED THROUGH CONSTRUCTION. SEE SPECIAL TRAFFIC NOTE, SHEET 2.

10. THE COST OF T.V. INSPECTION OF COMPLETED LINES AND THE COST OF TESTING COMPACTED BACKFILL IN STREETS SHALL BE SUBSIDIARY TO OTHER BID ITEMS.

11. THE COST OF REMOVAL OF EXISTING STORM SEWER LINES ENCOUNTERED IN THE CONSTRUCTION OF THIS PROJECT SHALL BE SUBSIDIARY TO OTHER BID ITEMS.

12. IN THE AREA OF CONSTRUCTION ADJACENT TO EXISTING RAILROAD TRACKS (STA. 1+22.92 TO STA. 6+11.47), SURCHARGE LOADS WILL BE IMPOSED BY PASSING TRAINS. THE CONTRACTOR SHALL EMPLOY CONSTRUCTION METHODS TO SAFEGUARD AGAINST FAILURE OF TRENCH WALLS AND/OR SUBSEQUENT FAILURE OF THE RAILROAD ROADBED RESULTING FROM SUCH IMPOSED LOADS. SUCH METHODS MAY INCORPORATE LIMITATIONS TO THE LENGTH OF TRENCH OPENED IN ADVANCE OF LAYING OF THE PIPE, THE USE OF A SUITABLE TRENCH BOX OR SHORING AND THE BACKFILL OF TRENCH IMMEDIATELY FOLLOWING THE INSTALLATION OF EACH LENGTH OF PIPE.



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1.	Title Sheet
2.	Key Map
3–6.	Manhole Standard Details
7.	Type II Inlet Standard Details
8–11.	Line 1 – Plan & Profile
12.	Lines 2,3,4 – Plan & Profiles

BENCHMARKS

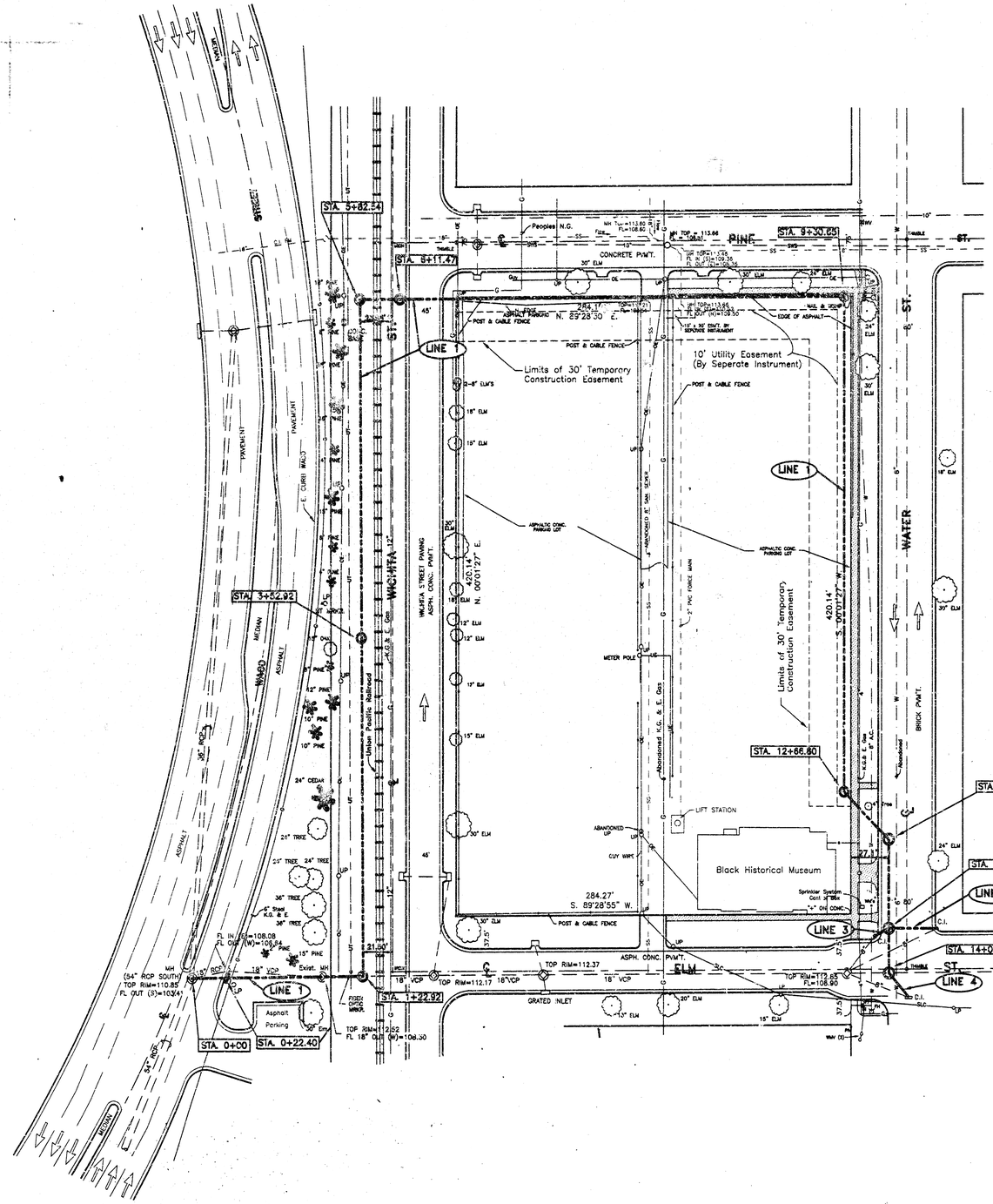
1. "K" in Mid Kansas, 7' N. and 4.5' W. of MH Sta. 0+00.
   Elev. = 111.55 City Datum
2. "□" on N. side Inlet, 65' N. and 5' E. of Iron ⊙ C.L. Elm & Water Streets.
   Elev. = 112.07 City Datum
3. NE Cor. Conc. Base, 14.5' S. & 9.5' W. of MH Sta. 5+82.54.
   Elev = 115.78 City Datum
4. "M" in Mueller on N. side FH on SW Cor. of Water & Pine Streets.
   Elev. = 115.65 City Datum
5. "+" in walk ⊙ NW Cor. Elm & Water Streets.
   Elev. = 113.30 City Datum

BOOKED
4-16-97
MCG
D-3360

"AS BUILT"

DON C. MOEHRING
LICENSED
3463
PROFESSIONAL ENGINEER

MOEHRING & ASSOCIATES
CONSULTING ENGINEERS
WICHITA



N
W E
S

1" = 40'

LEGEND

G = GAS
W = WATER
OE = OVERHEAD ELECTRIC
RR = RAILROAD
FH = FIRE HYDRANT
C.I. = CURB INLET
D.I. = DROP INLET
UT = UNDERGROUND TELEPHONE (FIBEROPTIC)
UP = UTILITY POLE
LP = LIGHT POLE
SS = SANITARY SEWER
SWS = STORM WATER SEWER

= EXIST. SWS MAIN
= EXIST. SWS MH
= PROPOSED SWS MAIN
= PROPOSED SWS MH

SPECIAL NOTE – TRAFFIC

All traffic control devices and their installation and maintenance shall comply with the requirements of the Manual on Uniform Control Devices for Streets and Highways.

WACO STREET consists of two thru traffic lanes North bound and three thru traffic lanes South bound, with additional left turn lanes at openings in the median section. Construction in Waco Street shall be scheduled to reduce the impact to traffic. Until removal and replacement of pavement is completed, the contractor will be required to maintain through traffic during construction at all times. Through traffic shall be carried using lanes a minimum of twelve feet in width. Movement of emergency vehicles will be given the right-of-way over other vehicles at all times.

The contractor may exercise the option of reducing North bound traffic to one lane, and diverting traffic through the median opening (opposite Elm Street) into the center/left turn lane of South bound traffic and continuing up to the median opening (opposite Pine Street) where traffic can be returned to the North bound lanes.

During the time of peak through traffic hours, or at such times that construction is not in progress, a minimum of two lanes, one for each direction, shall be open to traffic.

WICHITA STREET is a one-way street, North bound, with parking on East side only. Wichita street may be closed to traffic between the North line of Elm Street and the South line of Pine Street during construction across Wichita Street and/or during the process of boring and pipe installation under the railroad tracks. At all other times, a North bound lane at least twelve feet in width shall be maintained until replacement of pavement is completed.

WATER STREET is a two way street, with parking on either side. Until removal and replacement of pavement is completed, the contractor will be required to maintain through traffic at all times, both on Water and it's intersection with Elm Street. Traffic shall be carried using a minimum of two lanes twelve feet in width, one for each direction. However, through traffic routes may consist of one lane with flag persons, as required to carry two-way traffic in one lane, and then only when contractor is working on the project during non-peak traffic hours. Movement of emergency vehicles will be given the right-of-way over other vehicles at all times.

Because of potential impact to the Black Historical Museum and in particular the Sedgwick County Courthouse and Jail facilities, all work in both Water Street and it's intersection with Elm Street shall be closely coordinated with the Black Historical Museum and also with Sedgwick County through Mr. Don Brace, Director, Bureau of Central Services ☎ 383-7451.

STORM SEWER KEY MAP

MOEHRING & ASSOCIATES
CONSULTING ENGINEERS – SURVEYORS
433 S. HYDRAULIC WICHITA, KS.
(316) 263-8291

PVT. PROJ. NO. 632PPS / INDEX NO. 607861

DATE: JUNE, 1996 SHEET 2

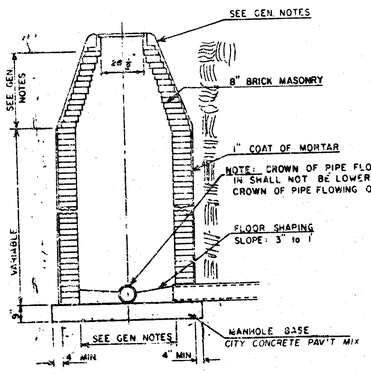
REVISED SEPTEMBER 1980
REVISED DECEMBER 1981

SEWER APPURTENANCES DETAILS

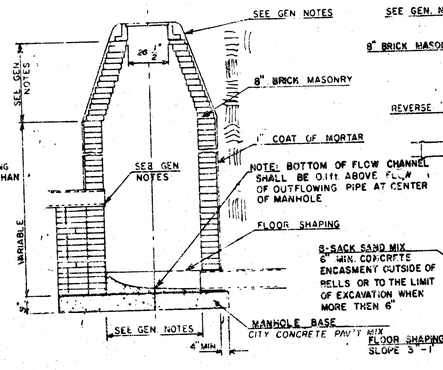
ADOPTED AS STANDARD DESIGN
BY

CITY of WICHITA, KANSAS

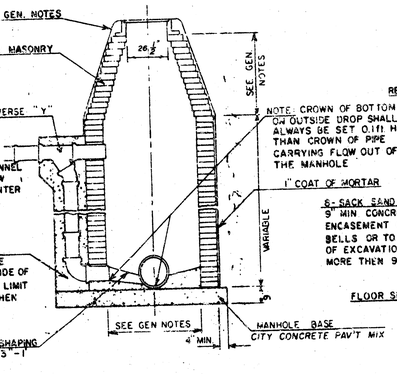
TYPE "A" MANHOLE



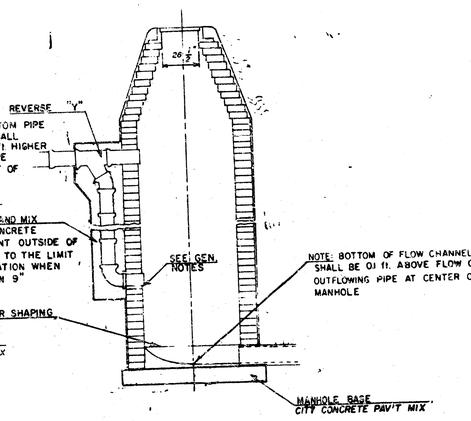
TYPE "A" INSIDE DROP MANHOLE



TYPE "A" OUTSIDE DROP MANHOLE



DETAIL OF OUTSIDE DROP
CONSTRUCTED ON EXISTING MANHOLE



GENERAL NOTES

1. MORTAR USED IN MASONRY CONSTRUCTION SHALL CONTAIN 8 SACKS OF CEMENT PER CUBIC YARD. CONCRETE USED IN MANHOLE BASES SHALL CONFORM TO THE REQUIREMENTS OF CONCRETE FOR CONCRETE PAVEMENT CONSTRUCTION AS SPECIFIED IN THE CITY STANDARD PAVING SPECIFICATIONS USING CITY CONCRETE PAVEMENT MIX WITHOUT AIR ENTRAINING ADMIXTURE. MORTAR SHALL BE PLACED AROUND THE MANHOLE RING AS SHOWN ON THE DRAWINGS WHEN MANHOLES ARE CONSTRUCTED IN UNPAVED AREAS. TYPE "A" MANHOLES CAN BE USED ON SEWERS UP TO 16' IN DEPTH WHEN THE MANHOLE IS NOT LOCATED WITHIN PUBLIC STREET PAVEMENT. MANHOLES CONSTRUCTED WHERE PIPE SIZES ARE SMALLER THAN 24" SHALL HAVE AN INSIDE DIAMETER OF 4'. MANHOLES CONSTRUCTED WHERE PIPE SIZES ARE 24" OR LARGER SHALL HAVE AN INSIDE DIAMETER OF 5'. THE HEIGHT OF THE CORBELS ON 4' DIAMETER MANHOLES SHALL BE 4". MANHOLES HAVING A DIAMETER OF 5' SHALL HAVE CORBELS 9" IN HEIGHT. COMPLETED MANHOLE SHALL BE WITHOUT LEAKS AND WATER TIGHT.

2. REINFORCING STEEL SHALL BE INSTALLED IN THE MANHOLE BASES AND SHALL CONSIST OF NO. 4 BARS PLACED ON 9" CENTERS IN BOTH DIRECTIONS. THE MANHOLE BASE REINFORCEMENT SHALL BE PLACED 6" ABOVE THE BOTTOM OF THE MANHOLE BASE. ALL COSTS FOR FURNISHING AND INSTALLING REINFORCING STEEL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE MANHOLE.

3. OPENINGS SHALL BE CUT INTO THE MANHOLE WALL WHEN OUTSIDE DROPS ARE CONSTRUCTED ON EXISTING MANHOLES. SUCH OPENINGS CUT INTO EXISTING MANHOLES SHALL BE AS SMALL AS PRACTICAL TO FACILITATE INSTALLING AND GROUTING THE NEW PIPE IN PLACE. WATERSTOP GASKETS SHALL BE USED WITH P.V.C. AND A.B.S. COMPOSITE PIPE. THE NEW PIPE SHALL BE GROUTED INTO THE OPENING USING AN APPROVED NONSHRINK GROUT FOR THE FULL MANHOLE WALL THICKNESS. THE EXTERIOR OF THE COMPLETED CONNECTION SHALL BE SEALED WITH AN APPROVED BITUMINOUS COATING SUCH THAT THE CONNECTION WILL BE WATER TIGHT. FLOOR OF MANHOLE SHALL BE MODIFIED TO FORM NEW FLOW CHANNEL FOR THE NEW CONNECTION AS INDICATED BY THE DRAWING. THE VERTICAL DROP FROM THE LOWER PIPE ON SUCH OUTSIDE DROP CONNECTIONS SHALL NOT EXCEED 4' FOR INFLOWING PIPES SIZED 12" OR SMALLER AND 2' FOR INFLOWING PIPES SIZED LARGER THAN 12", EXCEPT THE CROWN OF THE LOWER PIPE SHALL NEVER BE SET BELOW THE CROWN OF ANY LARGER OUTFLOWING PIPE. THIS WORK, INCLUDING MODIFICATION OF MANHOLE FLOOR, SHALL BE PAID FOR AT THE UNIT PRICE BID FOR OUTSIDE DROP STACK CONSTRUCTED ON EXISTING MANHOLE.

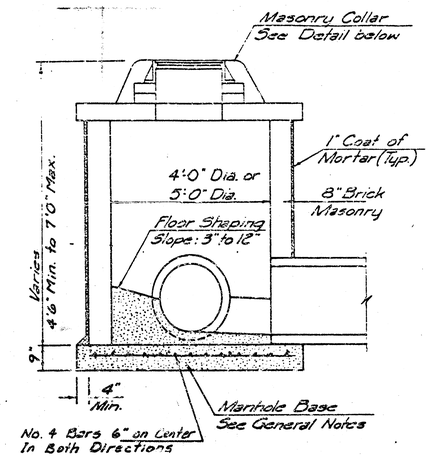
4. THE FLOORS OF ALL MANHOLES SHALL BE SHAPED WITH FLOW CHANNELS SUCH THAT THE MANHOLES WILL BE SELF CLEANING AND FREE OF AREAS WHERE SOLIDS COULD BE DEPOSITED AS SEWAGE FLOWS THROUGH THE MANHOLE FROM ALL INLET PIPES TO THE OUTLET PIPE. FLOW CHANNELS SHALL BE FORMED TO MATCH THE BOTTOM HALVES OF THE INFLOWING PIPES AND THE OUTFLOWING PIPE AS SHOWN BY THE DRAWINGS EXCEPT FOR INSIDE DROP MANHOLES. FLOW CHANNELS FOR INSIDE DROP MANHOLES SHALL BE CONSTRUCTED AS INDICATED BY THE DRAWING. MANHOLE FLOORS SHALL HAVE SLOPES OF 3 INCHES PER FOOT IN THE AREAS OUTSIDE OF THE FLOW CHANNELS SLOPED TOWARD THE FLOW CHANNELS. PIPES LAID THROUGH MANHOLES SHALL HAVE THE TOP HALF REMOVED TO NEAT LINES FOR THE FULL INSIDE DIAMETER OF THE MANHOLE. MANHOLE FLOORS SHALL THEN BE SHAPED AROUND THE BOTTOM HALF OF THE PIPE WHICH FORMS THE FLOW CHANNEL.

5. PIPES INSTALLED WITHIN THE EXCAVATION MADE FOR THE MANHOLE SHALL BE CRADLED WITH CONCRETE TO THE LIMITS OF THE MANHOLE EXCAVATION. WHEN CLAY PIPE IS USED, THE CRADLE SHALL EXTEND TO THE FIRST JOINT OUTSIDE THE MANHOLE. THE CRADLE SHALL BE FORMULATED AT THE CLAY PIPE JOINT IN A MANNER WHICH WILL INTERRUPT THE FLEXIBILITY OF THE JOINT. COST OF CRADLE WITHIN MANHOLE EXCAVATION OR TO CLAY PIPE JOINTS ADJACENT TO MANHOLE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE MANHOLE.

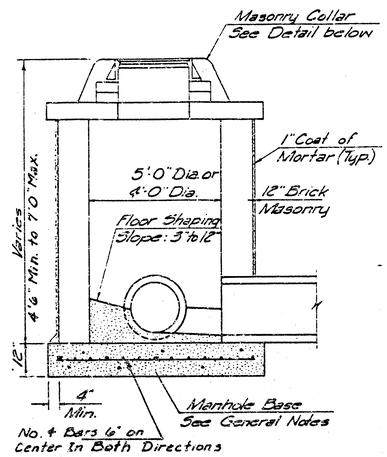
6. MANHOLE COVER CASTINGS AND MANHOLE FRAME CASTINGS SHALL CONFORM TO THE REQUIREMENTS AS INDICATED IN THE STANDARD SPECIFICATIONS AND AS SHOWN IN THE STANDARD DETAIL DRAWING.

7. THE VERTICAL DROP IN INSIDE DROP MANHOLES SHALL NOT EXCEED 4' FOR INFLOWING PIPES SIZED 12" OR SMALLER AND 2' FOR INFLOWING PIPES LARGER THAN 12". THE CROWNS OF INFLOWING PIPES SHALL NEVER BE SET LOWER THAN THE CROWN OF THE OUTFLOWING PIPE.

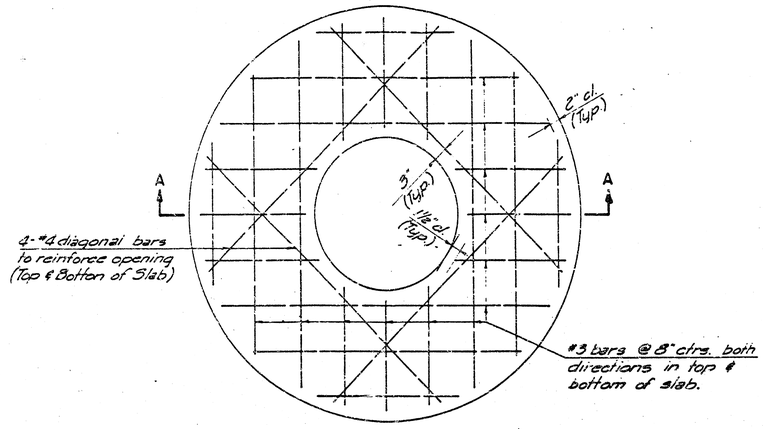
8. STANDARD MANHOLES TYPE "A" AND STANDARD INSIDE DROP MANHOLES TYPE "A" SHALL BE BID AS STANDARD MANHOLES FOR THE TYPE AND DIAMETER INDICATED. OUTSIDE DROP MANHOLES TYPE "A" SHALL BE BID AS STANDARD OUTSIDE DROP MANHOLES FOR THE TYPE AND DIAMETER INDICATED. ALL MANHOLE DIAMETERS WILL BE 4' UNLESS INDICATED OTHERWISE.



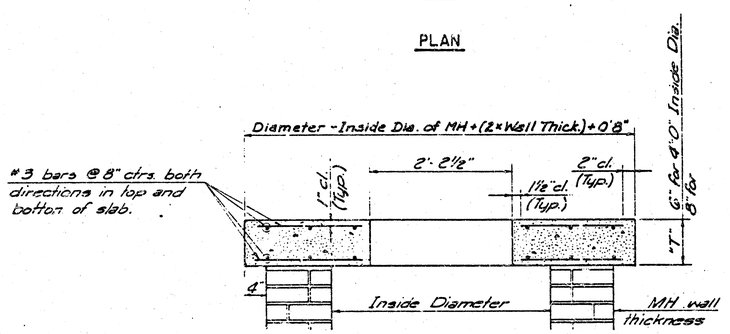
SHALLOW TYPE "A" MANHOLE



SHALLOW TYPE "B" MANHOLE

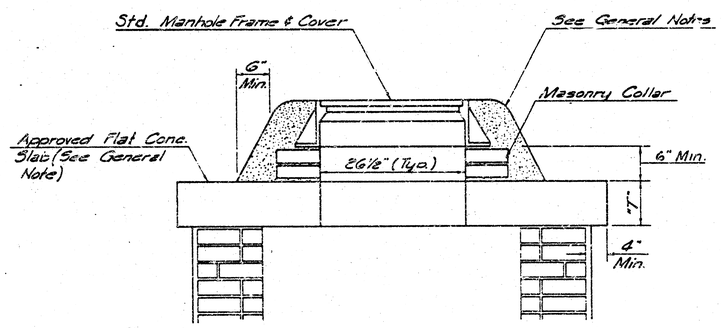


PLAN

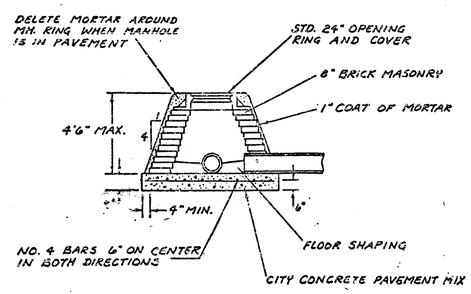


SECTION A-A

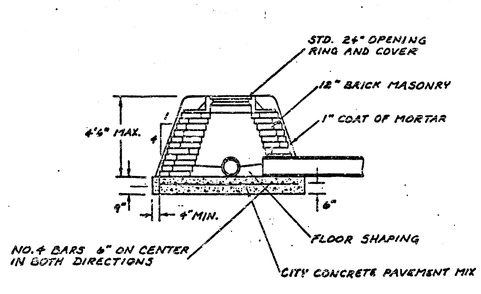
FLAT CONCRETE SLAB DETAILS



MASONRY COLLAR DETAIL



SPECIAL SHALLOW TYPE 'A' MANHOLE



SPECIAL SHALLOW TYPE 'B' MANHOLE

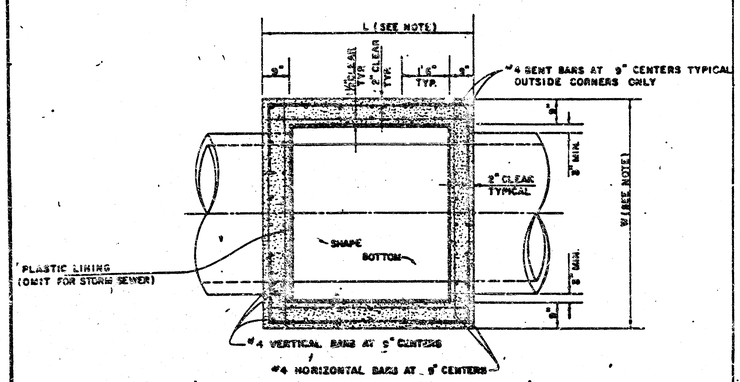
GENERAL NOTES

1. MORTAR USED IN MASONRY CONSTRUCTION SHALL CONTAIN 6 SACKS OF CEMENT PER CUBIC YARD. CONCRETE USED IN MANHOLE BASES SHALL CONFORM TO THE REQUIREMENTS OF CONCRETE FOR CONCRETE PAVEMENT CONSTRUCTION AS SPECIFIED IN THE CITY STANDARD PAVING SPECIFICATIONS USING CITY CONCRETE CEMENT MIX WITHOUT AIR ENTRAINING ADMIXTURE. MORTAR SHALL BE PLACED AROUND THE MANHOLE RING AS SHOWN ON THE DRAWINGS WHEN MANHOLES ARE CONSTRUCTED IN UNPAVED AREAS. TYPE "A" SHALLOW MANHOLES CAN BE USED ON SEWERS WHERE THE MANHOLE IS NOT LOCATED WITHIN PUBLIC STREET PAVEMENT. MANHOLES CONSTRUCTED WHERE PIPE SIZES ARE SMALLER THAN 24" SHALL HAVE AN INSIDE DIAMETER OF 4'. MANHOLES CONSTRUCTED WHERE PIPE SIZES ARE 24" OR LARGER SHALL HAVE AN INSIDE DIAMETER OF 5'. COMPLETED MANHOLE SHALL BE WITHOUT LEAKS AND WATER TIGHT.
2. REINFORCING STEEL SHALL BE INSTALLED IN THE MANHOLE BASES AND SHALL CONSIST OF NO. 4 BARS PLACED ON 6" CENTERS IN BOTH DIRECTIONS. THE MANHOLE BASE REINFORCEMENT SHALL BE PLACED 6" ABOVE THE BOTTOM OF THE MANHOLE BASE. ALL COSTS FOR FURNISHING AND INSTALLING REINFORCING STEEL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE MANHOLE.
3. THE FLOORS OF ALL MANHOLES SHALL BE SHAPED WITH FLOW CHANNELS SUCH THAT THE MANHOLES WILL BE SELF CLEANING AND FREE OF AREAS WHERE SOLIDS CAN BE DEPOSITED AS SEWAGE FLOWS THROUGH THE MANHOLE FROM ALL INLET PIPES TO THE OUTLET PIPE. FLOW CHANNELS SHALL BE FORMED TO MATCH THE SOFFIT HALVES OF THE INFLOWING PIPES AND THE OUTFLOWING PIPE AS SHOWN BY THE DRAWINGS. MANHOLE FLOORS SHALL HAVE SLOPES OF 3 INCHES PER FOOT IN THE AREAS OUTSIDE OF THE FLOW CHANNELS SLOPED TOWARD THE FLOW CHANNELS. PIPES LAID THROUGH MANHOLES SHALL HAVE THE TOP HALF REMOVED TO MATCH LINES FOR THE FULL INSIDE DIAMETER OF THE MANHOLE. MANHOLE FLOOR SHALL THEN BE SHAPED AROUND THE BOTTOM HALF OF THE PIPE WHICH FORMS THE FLOW CHANNEL.
4. PIPES INSTALLED WITHIN THE EXCAVATION MADE FOR THE MANHOLE SHALL BE CRADLED WITH CONCRETE TO THE LIMITS OF THE MANHOLE EXCAVATION. WHERE CLAY PIPE IS USED, THE CRADLE SHALL EXTEND TO THE FIRST JOINT OUTSIDE THE MANHOLE. THE CRADLE SHALL BE TERMINATED AT THE CLAY PIPE JOINT IN A MANNER WHICH WILL MAINTAIN THE FLEXIBILITY OF THE JOINT. COST OF CRADLE WITHIN MANHOLE EXCAVATION OR TO CLAY PIPE JOINTS ADJACENT TO MANHOLE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE MANHOLE.
5. MANHOLE COVER CASTINGS AND MANHOLE FRAME CASTINGS SHALL CONFORM TO THE REQUIREMENTS AS INDICATED IN THE STANDARD SPECIFICATIONS AND AS SHOWN IN THE STANDARD DETAIL DRAWINGS.
6. THE CROWNS OF INFLOWING PIPES SHALL NEVER BE SET LOWER THAN THE CROWN OF THE OUTFLOWING PIPE.
7. STANDARD SHALLOW MANHOLES TYPE "A" AND "B" SHALL BE PAID FOR AT THE UNIT PRICE BID PER EACH FOR THE TYPE AND DIAMETER INDICATED. STANDARD SPECIAL SHALLOW MANHOLES TYPE "A" AND "B" SHALL BE PAID FOR AT THE UNIT PRICE BID PER EACH FOR THE TYPE INDICATED. ALL STANDARD SHALLOW MANHOLE DIAMETERS WILL BE 4' UNLESS INDICATED OTHERWISE.

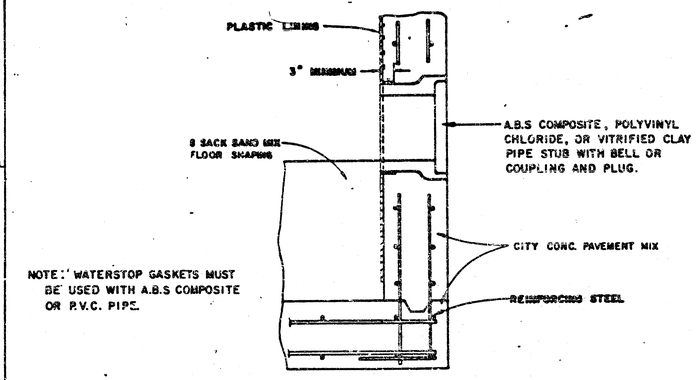
CITY OF WICHITA, KANSAS
STANDARD SHALLOW MANHOLE
TYPE 'A' AND TYPE 'B'

Designed by		Checked by	
Drawn by		Date	Job No.

Sheet 4

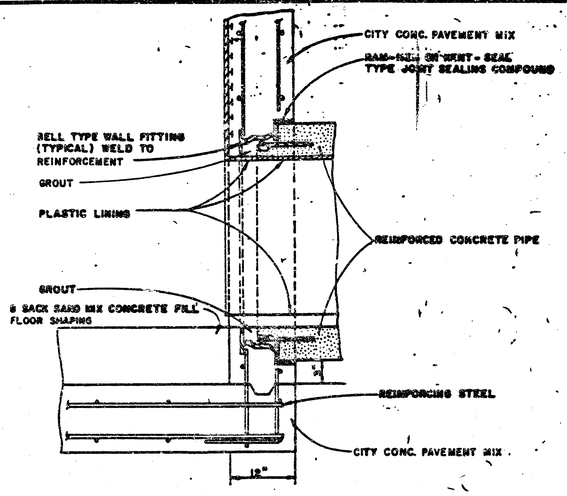


TOP VIEW

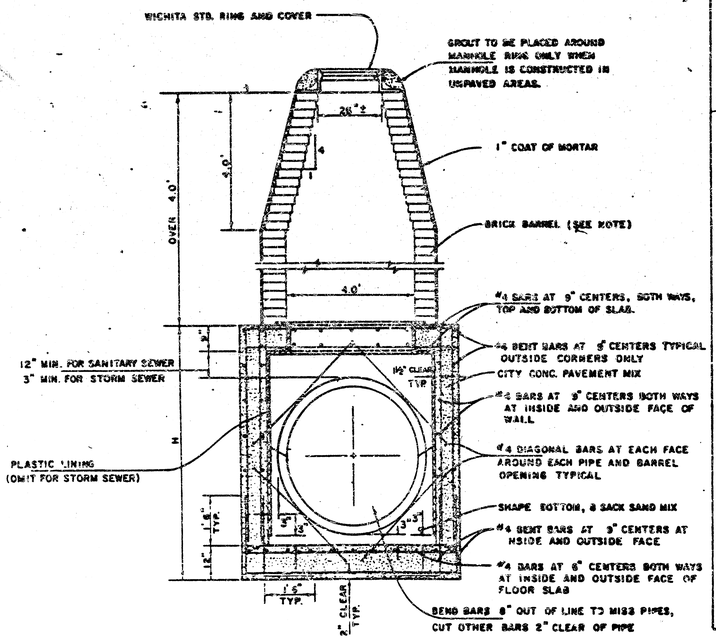


NOTE: WATERSTOP GASKETS MUST BE USED WITH A.B.S COMPOSITE OR P.V.C. PIPE.

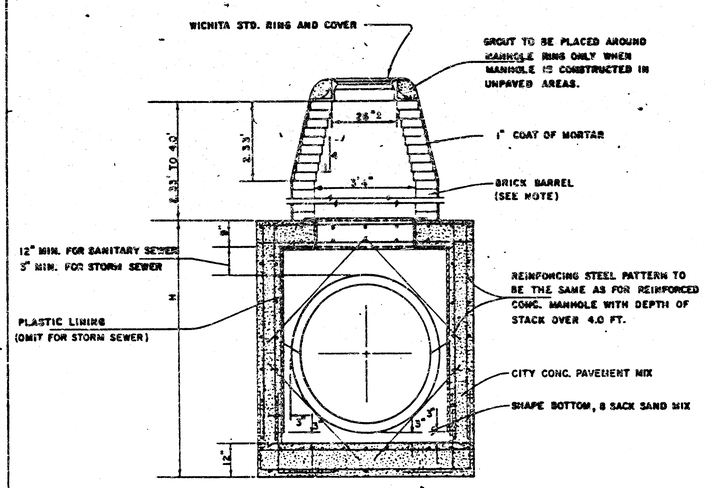
PIPE STUB DETAIL
SANITARY SEWER ONLY



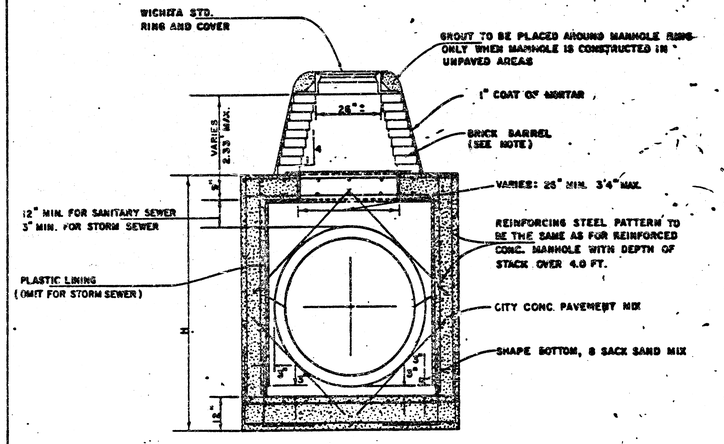
R.C.P. CONNECTION DETAIL
SANITARY SEWER ONLY



REINFORCED CONCRETE MANHOLE
DEPTH OF STACK: OVER 4.0'
SCALE 1" = 2'



REINFORCED CONCRETE MANHOLE
DEPTH OF STACK: 2.33' TO 4.0'
SCALE 1" = 2'



REINFORCED CONCRETE MANHOLE
DEPTH OF STACK: 0' TO 2.33'
SCALE 1" = 2'

NOTE:
BRICK BARRELS LESS THEN 16' DEEP SHALL HAVE 8" WALLS EXCEPT WHEN LOCATED WITHIN PUBLIC STREET OR ALLEY PAVEMENT THEN THE WALL SHALL BE 12". BRICK BARRELS MORE THEN 16' DEEP SHALL HAVE 12" WALLS. THE "L" AND "W" DIMENSIONS SHALL BE A MINIMUM OF 5'6" FOR BRICK BARRELS WITH 8" WALLS AND 6'2" FOR BRICK BARRELS WITH 12" WALLS WHEN THE BRICK BARRELS ARE OVER 4 FT. IN HEIGHT. COMLETED MANHOLE SHALL BE WITHOUT LEAKS AND WATERTIGHT.

REVISED 1-7-85

STANDARD DETAILS
REINFORCED CONCRETE MANHOLES
CITY OF WICHITA

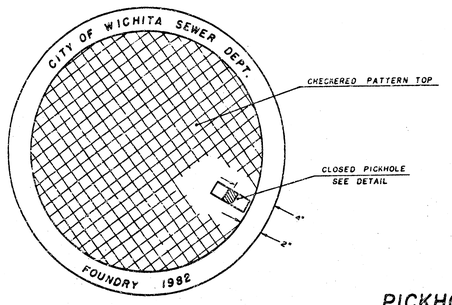
FEBRUARY 1984

Sheet 5

MANHOLE FRAME AND COVER DETAIL

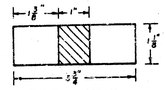
MANHOLE COVER

Weight 180 Lbs.

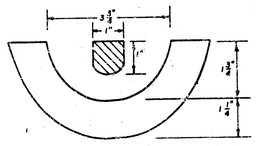


TOP VIEW

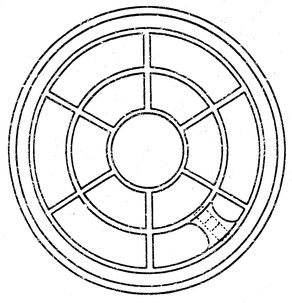
PICKHOLE DETAIL



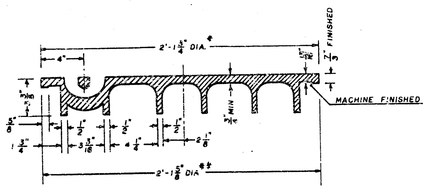
TOP VIEW



SECTION VIEW



BOTTOM VIEW



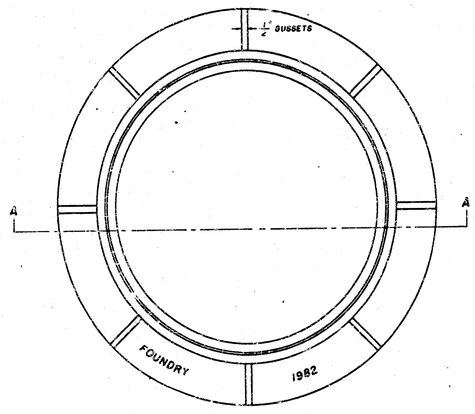
SECTION VIEW

* OUTSIDE DIA TOP OF COVER

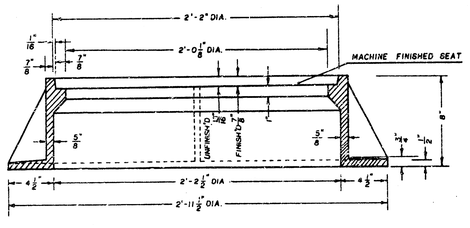
*2 OUTSIDE DIA. BOTTOM OF COVER

MANHOLE FRAME

Weight 240 Lbs.



TOP VIEW



SECTION A-A

GENERAL NOTES

1. MANHOLE CASTINGS SHALL BE MANUFACTURED USING GOOD QUALITY GRAY IRON CONFORMING TO CLASS 30 OF A.S.T.M. DESIGNATION A-48. DIMENSIONS AND WEIGHTS SHOWN ON THE DETAILED DRAWINGS SHALL BE CONSIDERED AS MINIMUM REQUIREMENTS AND ANY DEVIATIONS FROM THE DIMENSIONS SHOWN MUST BE SPECIFICALLY APPROVED. THE FINISHED CASTINGS SHALL BE OF UNIFORM QUALITY, FREE FROM BLOWHOLES, POROSITY, HARD SPOTS, SHRINKAGE DISTORTIONS OR OTHER DEFECTS.

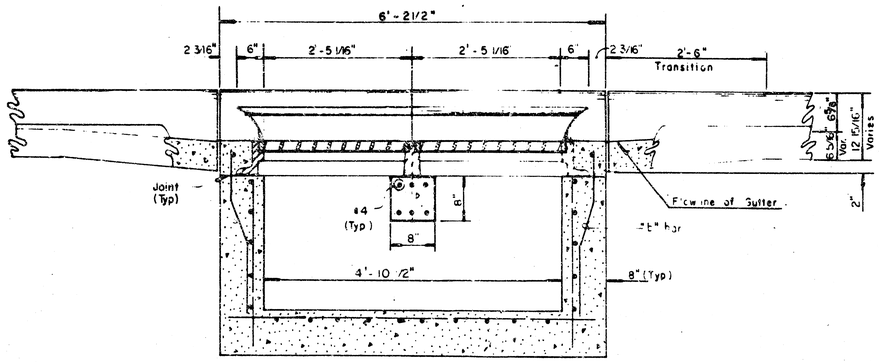
2. MANHOLE CASTINGS SHALL BE COATED WITH AN ASPHALT PAINT RESULTING IN A SMOOTH, TOUGH AND TENACIOUS COATING WHICH IS NOT BRITTLE OR TACKY.

3. MANHOLE CASTINGS SHALL BE MANUFACTURED SUCH THAT A COVER MANUFACTURED BY ANY ONE FOUNDRY WILL FIT INTERCHANGEABLY INTO A FRAME MANUFACTURED BY ANOTHER FOUNDRY AND STILL MEET ALLOWABLE CLEARANCES AND NON-ROCKING REQUIREMENTS. THIS WILL REQUIRE MANUFACTURING OF THE MATCHING FACES ON THE COVER AND THE FRAME TO CLOSE TOLERANCES.

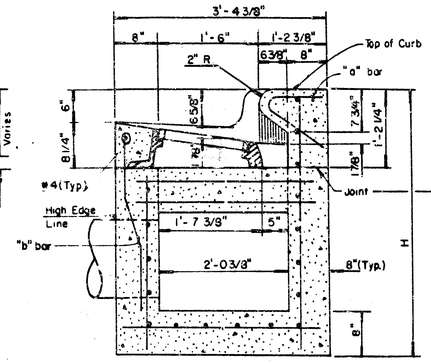
4. THE OUTSIDE CIRCUMFERENCE OF THE VERTICAL FACE OF THE COVER AND THE INSIDE CIRCUMFERENCE OF THE VERTICAL FACE IN THE FRAME RECESS SHALL BE MANUFACTURED TO TOLERANCES SUCH THAT THE CLEARANCE BETWEEN THE COVER AND FRAME WILL NOT EXCEED 1/8" AT ANY POINT AROUND THE CIRCUMFERENCE OF THE COVER. THE SEATING SURFACES BETWEEN THE COVER AND FRAME SHALL BE MACHINED SUCH THAT THESE SURFACES SHALL MAKE FULL CONTACT FOR THEIR FULL CIRCUMFERENCE TO PRECLUDE THE COVER FROM ROCKING IN THE FRAME.

5. THE MANHOLE FRAME AND COVER SHALL BE MARKED WITH LETTERING INDICATING THE NAME OF THE MANUFACTURER AND THE YEAR WHEN THE COVER OR FRAME WAS CAST. THE COVER SHALL BE FURTHER IDENTIFIED WITH REGARDS TO OWNERSHIP USING LETTERS AT LEAST 1" IN HEIGHT. THIS IDENTIFICATION SHALL BE "CITY OF WICHITA SEWER DEPARTMENT". THE WORD DEPARTMENT MAY BE ABBREVIATED. THE TEXTURE OF THE TOP SURFACE OF THE COVER SHALL BE MANUFACTURED IN A CHECKERED PATTERN DESIGN AS INDICATED ON THE DRAWINGS. SMOOTH BLOCKOUTS SHALL BE UTILIZED TO HIGHLIGHT THE LETTERING ON THE COVER SURFACE. THE TOTAL AREA OF SMOOTH SURFACE BLOCKOUT SHALL NOT EXCEED THE AREA AS INDICATED ON THE DRAWING. POSITIONING OF SMOOTH BLOCKOUTS AND LETTERING MAY VARY FROM THAT SHOWN ON THE DETAILED DRAWING.

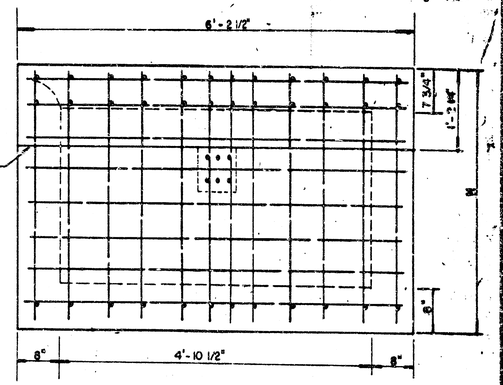
JNL DEC 1981



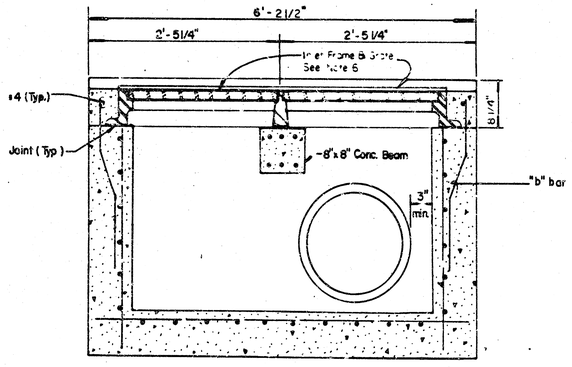
SECTION C - C



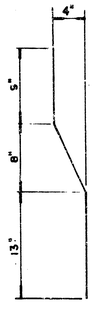
SECTION A-A



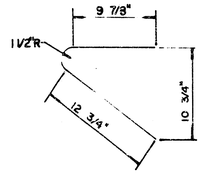
REAR WALL



SECTION D-D

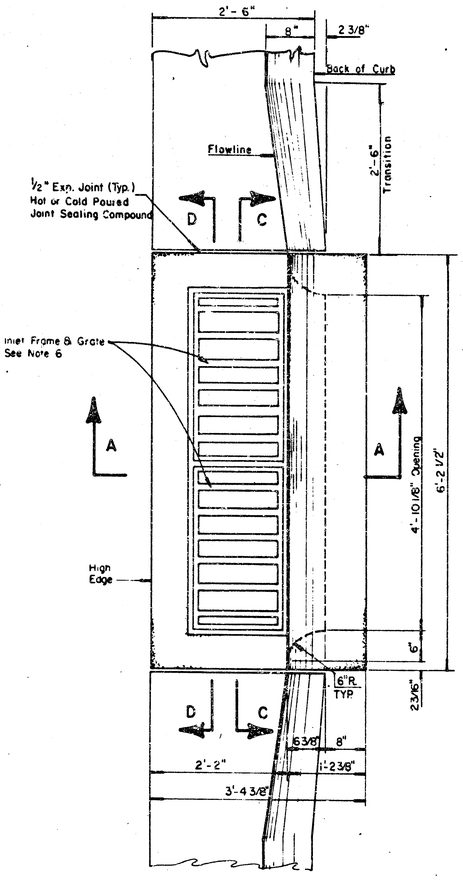


"b" bar



"a" bar

BENDING DIAGRAM



GENERAL NOTES:

1. Use the concrete mix specified for the City of Wichita concrete pavement throughout. All exposed edges shall be finished with an edging tool. Reinforcing bars shall be bent around pipe.
2. Inlet invert shall be shaped with 8 sack mix concrete to create flow channels and to increase hydraulic efficiency such that the inlet will be self cleaning between all inlet and/or outlet pipes.
3. All bars are #4 with 6" spacing and shall have a minimum clearance of 1½ inches unless otherwise noted on the plans.
4. When directed by the Engineer, a small opening may be required in the back of the inlet in order to drain a low area. Reinforcing bars will extend through the openings. No deductions in concrete quantities will be made for these openings.
5. No deductions will be made in pay length of curb, gutter, or curb and gutter through the inlet area.
6. Use Neenah R-3288 HV Inlet Frame with Two Piece Grate or approved equal. Inlet frame to be proof load tested to 40,000 lbs. on unsupported side.
7. Reinforcing bars shall be cut or bent around pipes. No deduction in concrete quantities shall be made for pipe openings.
8. The vanes of the grate shall be oriented with respect to the flow arrows shown on the plans.

DETAIL STANDARD TYPE II CURB INLET

CITY OF WICHITA, KANSAS

INLET OPENING = 6" x 4'-10 1/8"

JANUARY, 1987

Sheet 7

REMOVE EXIST. CURB INLET, MANHOLE & 18" V.C.P. BETWEEN STA. 0+00 TO 1+12.92

REMOVE & REPLACE 20 L.F. CONCRETE PVMT 15 L.F. CURB & GUTTER

STA. 0+00
CONNECT TO EXIST. MANHOLE
INSTALL 112.92 L.F. 36" RCP (E)

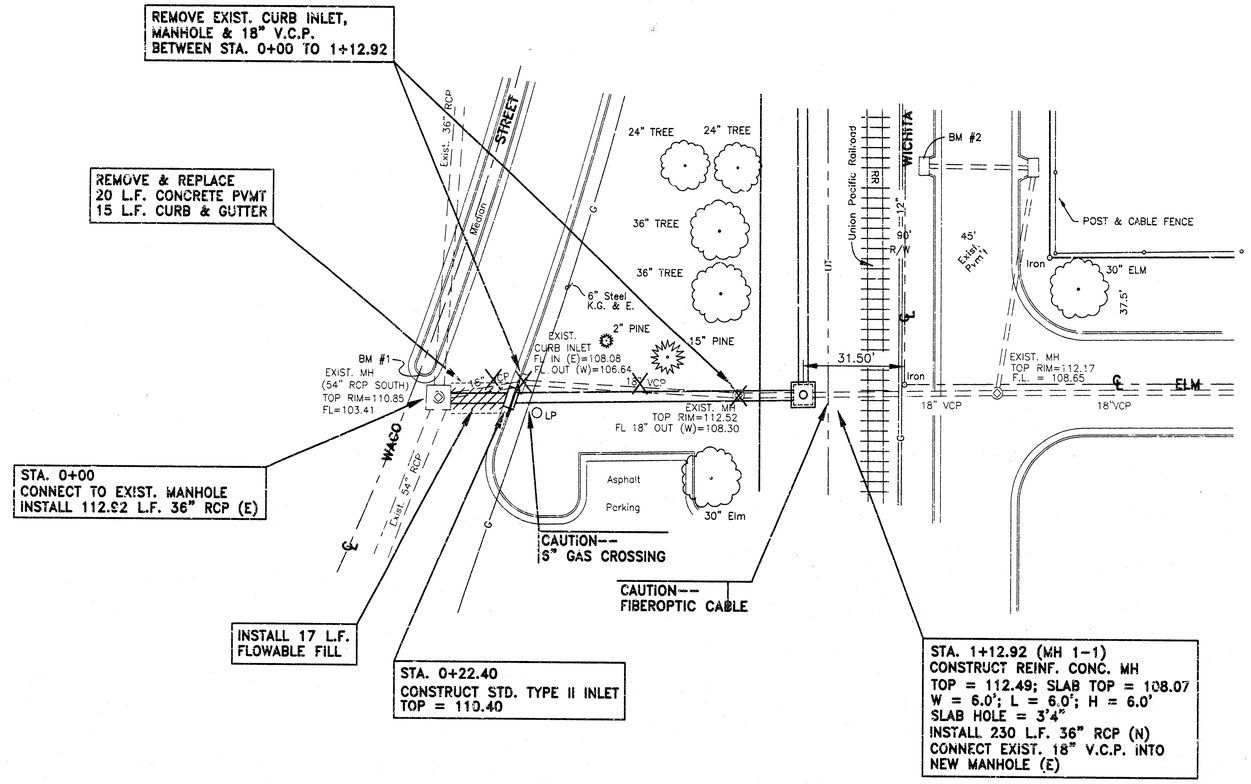
INSTALL 17 L.F. FLOWABLE FILL

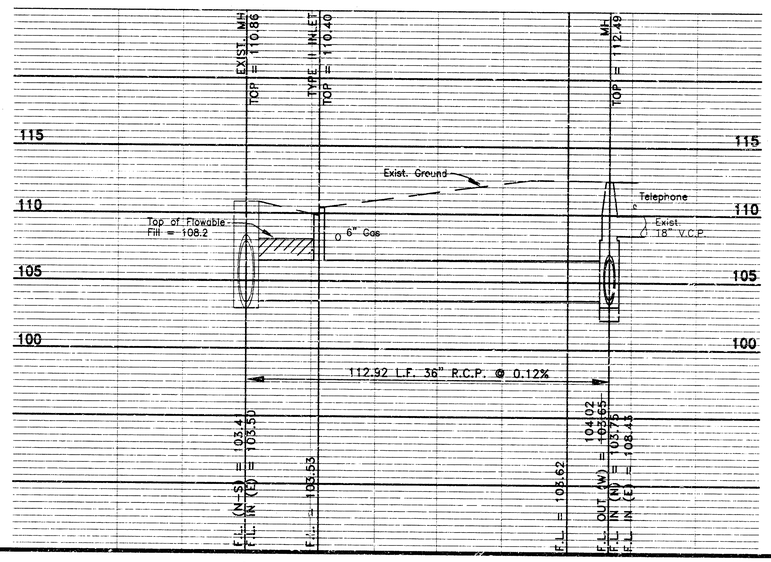
STA. 0+22.40
CONSTRUCT STD. TYPE II INLET
TOP = 110.40

CAUTION--- 8" GAS CROSSING

CAUTION--- FIBEROPTIC CABLE

STA. 1+12.92 (MH 1-1)
CONSTRUCT REINF. CONC. MH
TOP = 112.49; SLAB TOP = 108.07
W = 6.0'; L = 6.0'; H = 6.0'
SLAB HOLE = 3'4"
INSTALL 230 L.F. 36" RCP (N)
CONNECT EXIST. 18" V.C.P. INTO NEW MANHOLE (E)





N

1" = 20' Horiz.
1" = 5' Vert.

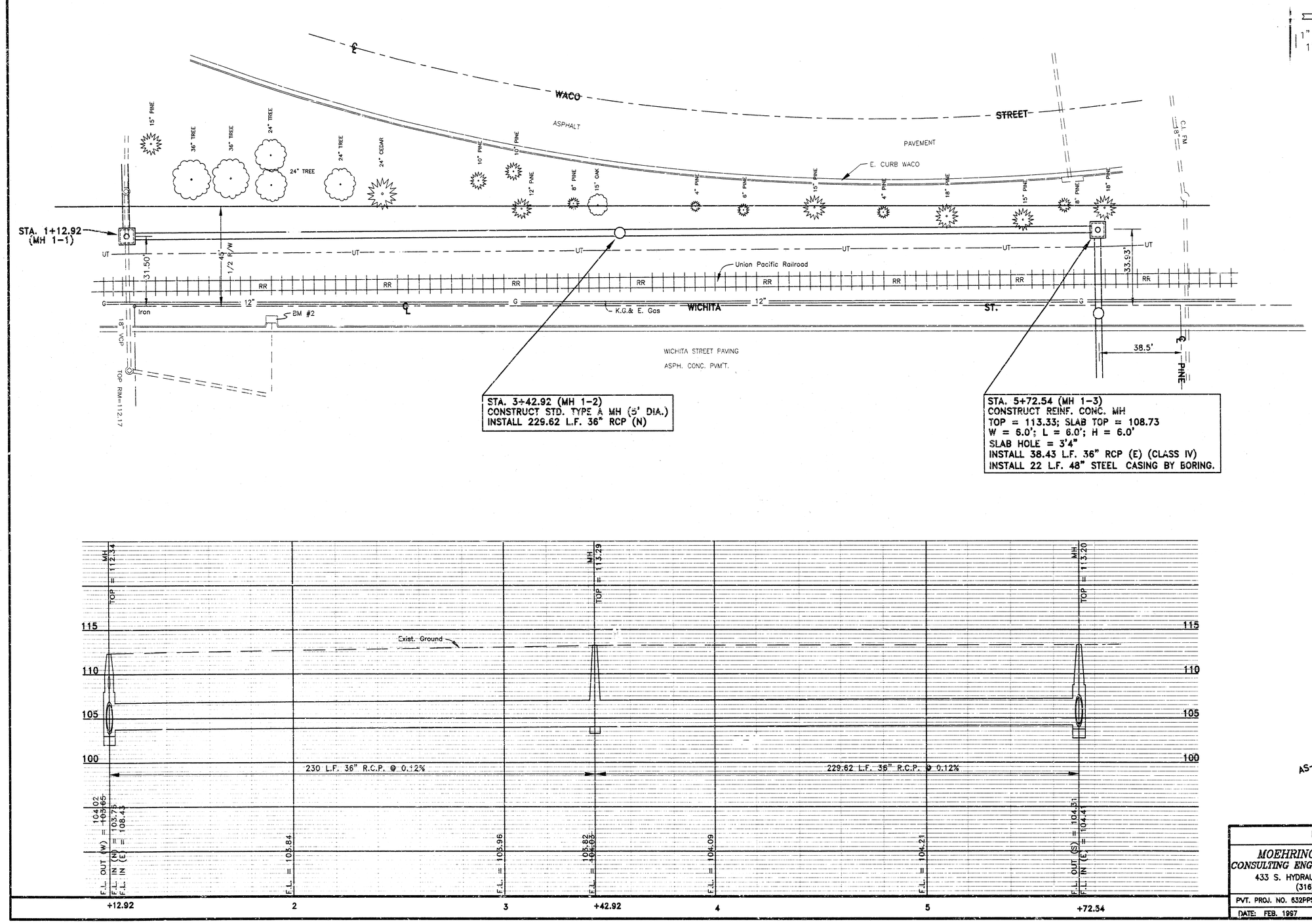
AS-BUILT

LINE 1

MOEHRING & ASSOCIATES
CONSULTING ENGINEERS – SURVEYORS
433 S. HYDRAULIC WICHITA, KS.
(316) 263-8291

PVT. PROJ. NO. 632PPS / INDEX NO. 607861

DATE: FEB. 1997 SHEET 8



AS-BUILT

LINE 1

MOEHRING & ASSOCIATES
CONSULTING ENGINEERS – SURVEYORS
433 S. HYDRAULIC WICHITA, KS.
(316) 263-8291

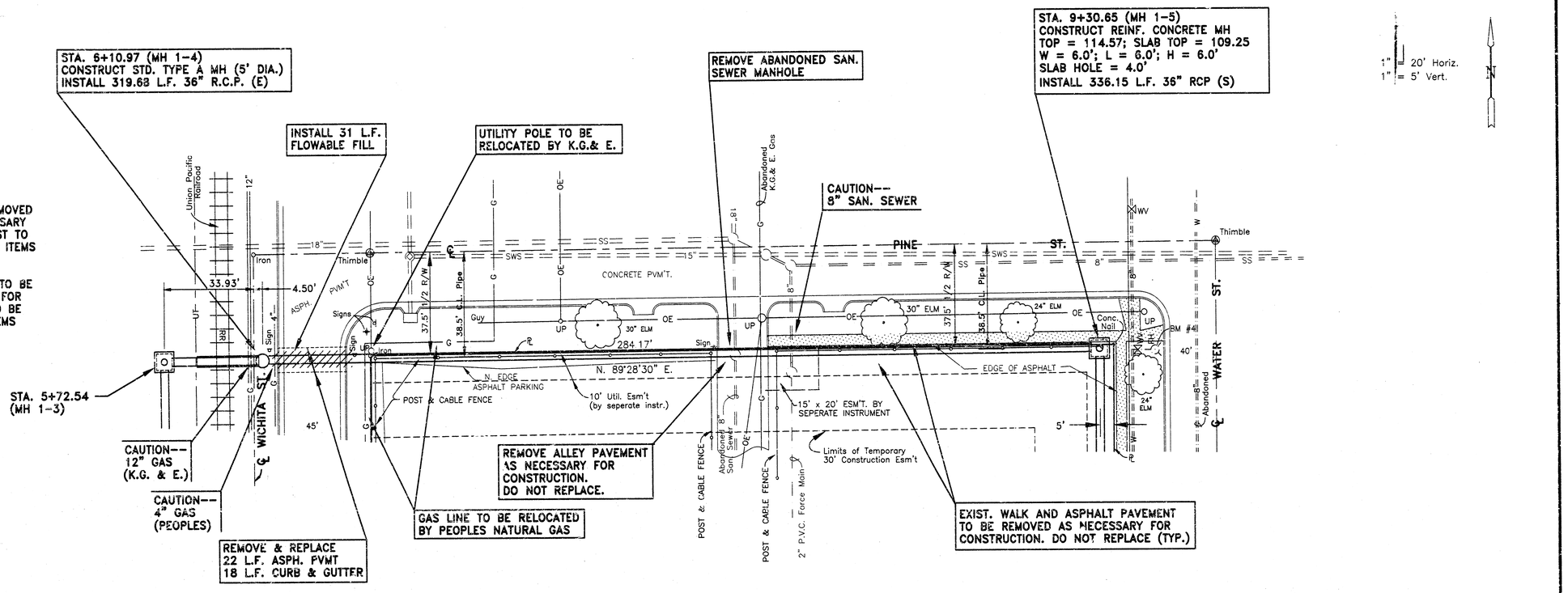
PVT. PROJ. NO. 532PPS / INDEX NO. 607861

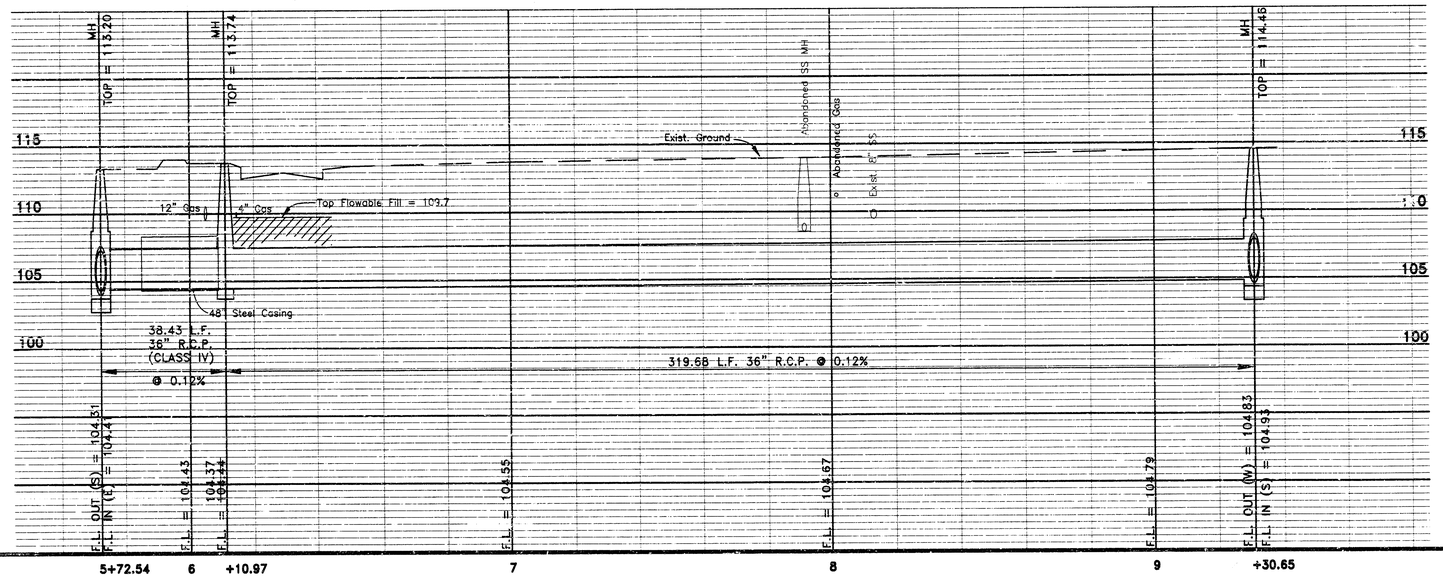
DATE: FEB. 1997 SHEET 9

NOTE

TRAFFIC SIGNS TO BE REMOVED AND REPLACED AS NECESSARY FOR CONSTRUCTION. COST TO BE SUBSIDIARY TO OTHER ITEMS OF WORK.

POST AND CABLE FENCE TO BE REMOVED AS NECESSARY FOR CONSTRUCTION. COST TO BE SUBSIDIARY TO OTHER ITEMS OF WORK.





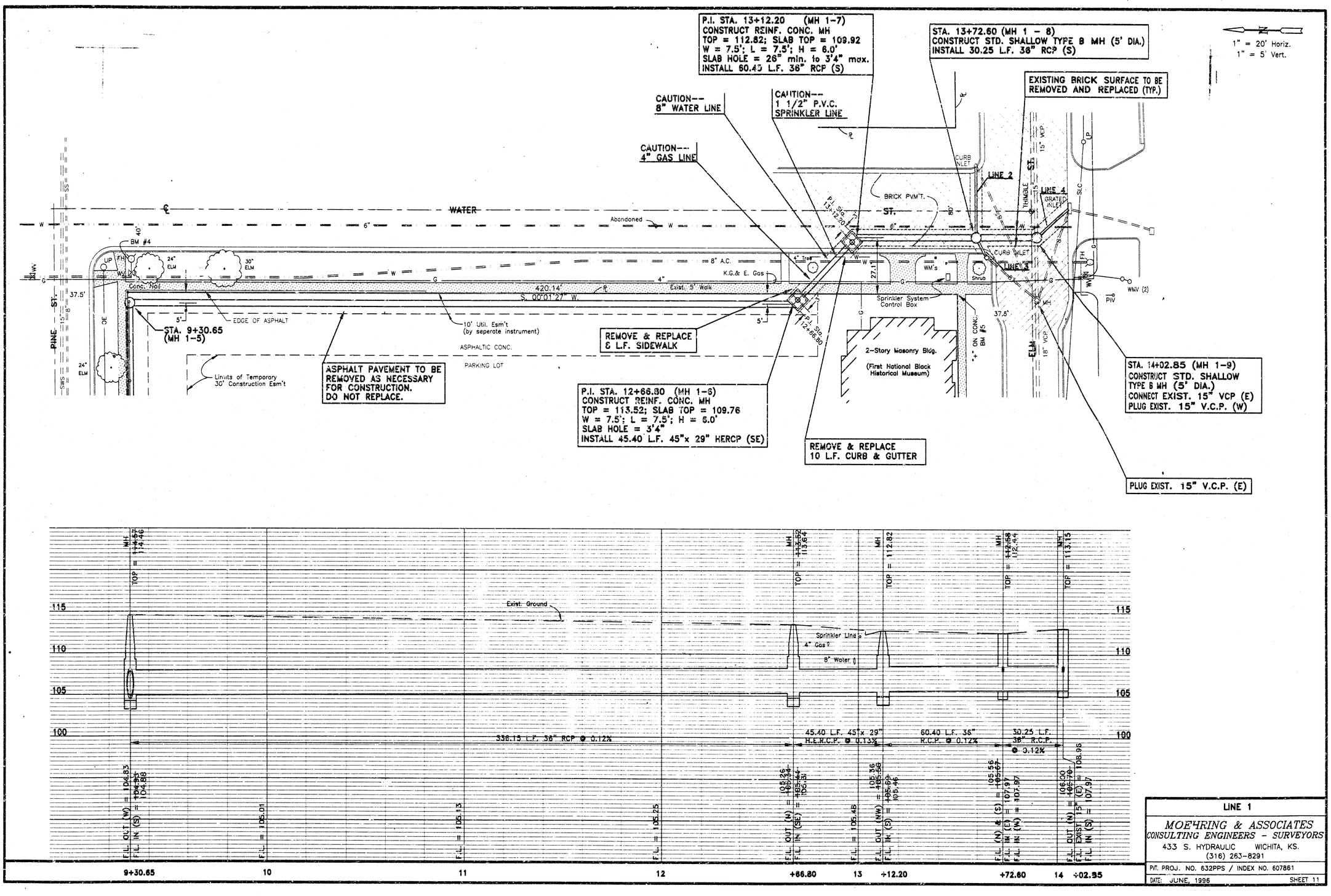
AS-BUILT

LINE 1

MOEHRING & ASSOCIATES
CONSULTING ENGINEERS – SURVEYORS
433 S. HYDRAULIC WICHITA, KS.
(316) 263-8291

PVT. PROJ. NO. 632PPS / INDEX NO. 607861

DATE: FEB. 1997 SHEET 10

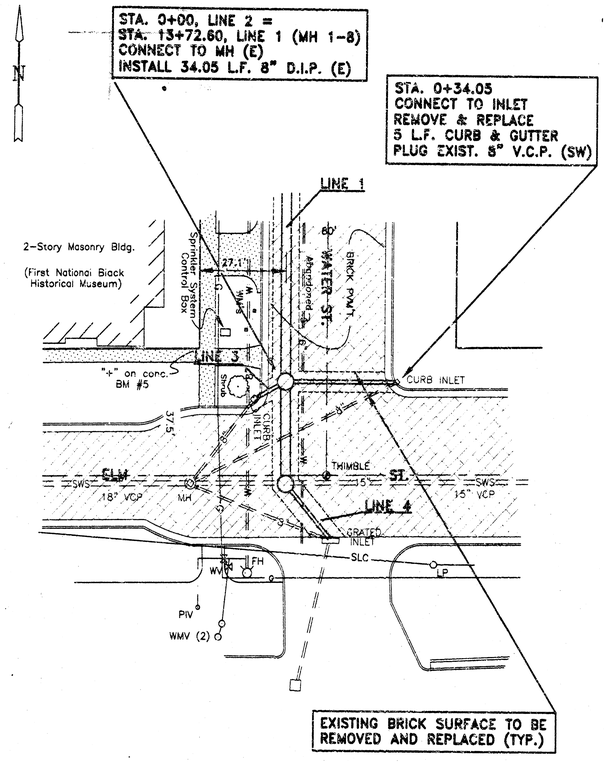


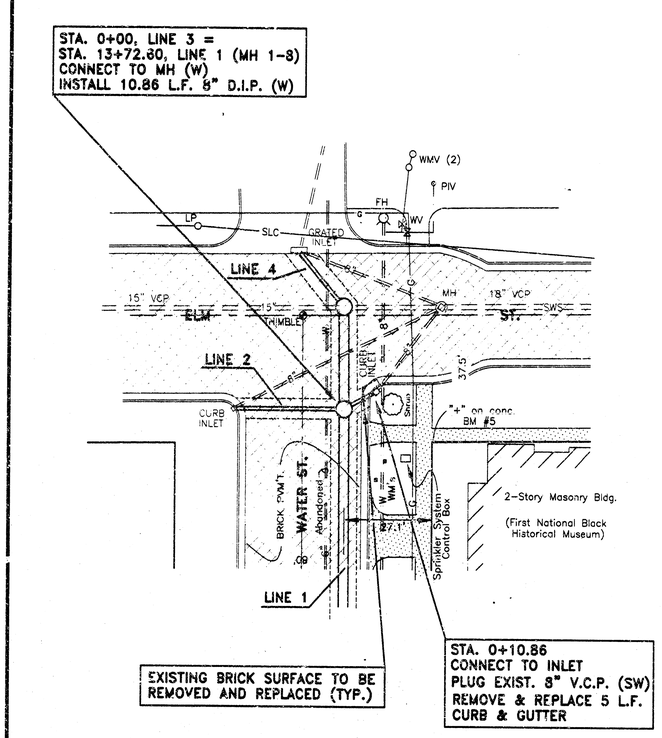
LINE 1

MOEHRING & ASSOCIATES
CONSULTING ENGINEERS - SURVEYORS
433 S. HYDRAULIC WICHITA, KS.
(316) 263-8291

PVT. PROJ. NO. 632PPS / INDEX NO. 607861

DATE: JUNE, 1996 SHEET 11





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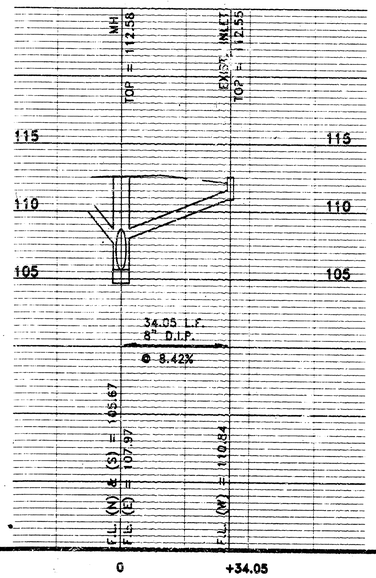

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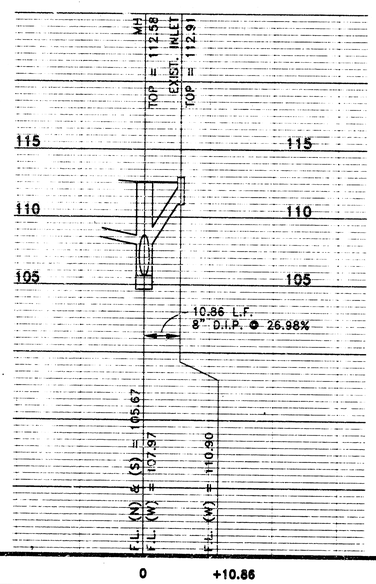

LINE 4

