

# STREET IMPROVEMENTS

FOR

## WICHITA STREET

EVEN LOTS 2 THROUGH 32 INCLUSIVE ON WICHITA STREET EXCEPT STREET RIGHT-OF-WAY.

WEST HALF OF THE VACATED ALLEY ADJACENT AND TO THE EAST OF EVEN LOTS 2 THROUGH 32 ON WICHITA STREET EXCEPT THE SOUTH 10 FT.

SOUTH HALF OF THE VACATED ELM ADJACENT AND TO THE NORTH OF LOT 32 ON WICHITA STREET AND THE WEST HALF OF THE VACATED ALLEY.

ALL IN MUNGER'S ORIGINAL TOWN

CITY OF WICHITA, KANSAS

M.E. LINDEBAK CITY ENGINEER

PROJECT NO. 472-76-245-81735-000-000-001  
INDEX NO. 760157

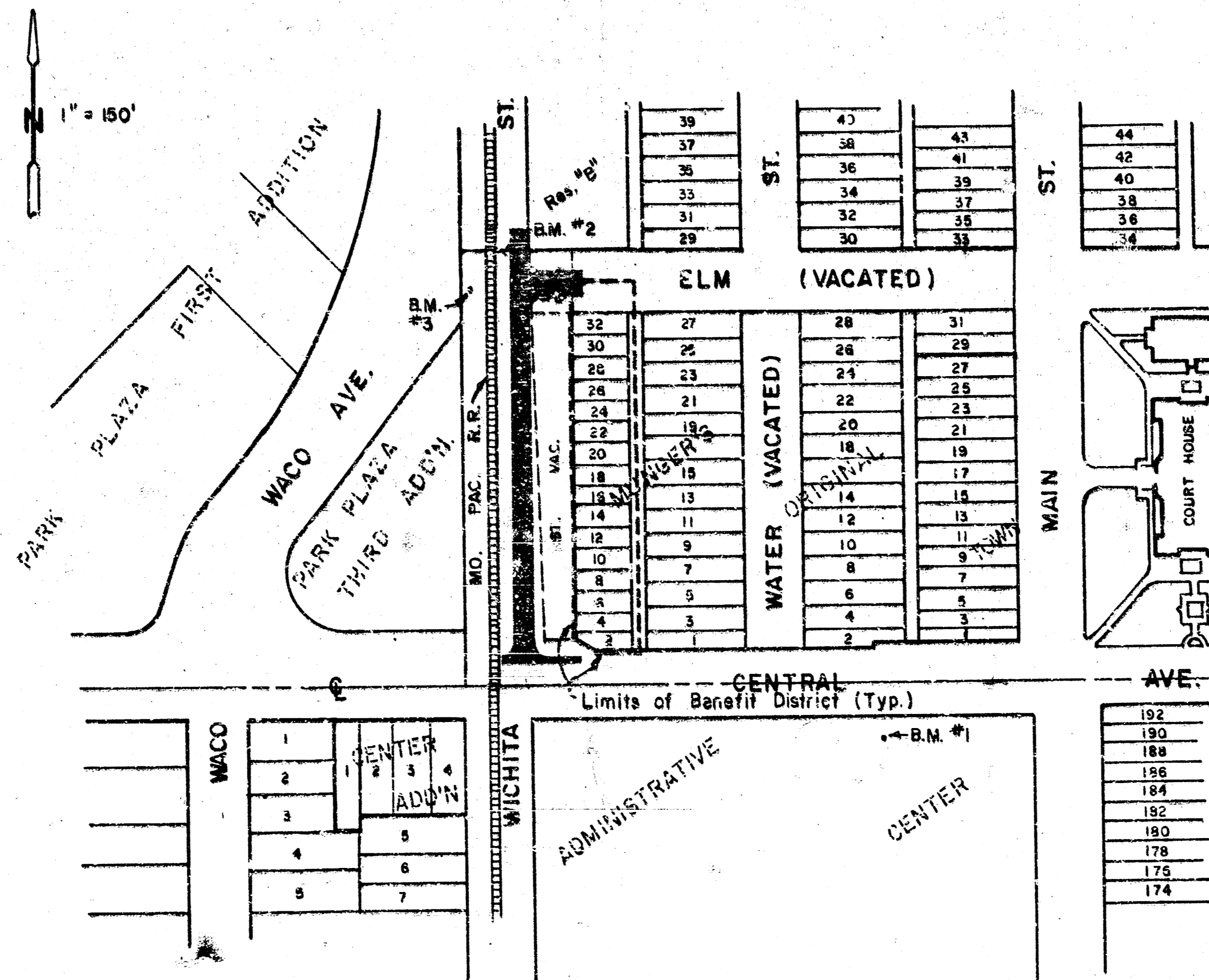
AUGUST, 1989

**NOTES:**

- CONTRACTOR WILL BE REQUIRED TO PROVIDE A MINIMUM 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 AN EMERGENCY:  
CABLEVISION 262-4270 OR 263-2061  
K.P. & L. GAS SERVICE COMPANY 263-7511  
KANSAS GAS & ELECTRIC 264-1141  
ARVLA GAS COMPANY 942-8350 OR 263-8161  
SOUTHWESTERN BELL TELEPHONE COMPANY 1-571-2611  
CITY OF WICHITA WATER DEPARTMENT 268-4909  
CITY OF WICHITA SEWER MAINTENANCE 268-4071
- INTERURBAN TRAFFIC GENERATED OUTSIDE THE PROJECT AREA IS NOT TO BE CARRIED THROUGH CONSTRUCTION.
- EXISTING UTILITIES AND THEIR LOCATION, AS SHOWN ON THE PLANS, REPRESENT THE BEST INFORMATION OBTAINABLE FOR DESIGN. THE CONTRACTOR WILL BE REQUIRED TO WORK AROUND EXISTING UTILITIES WITHIN THE RIGHT-OF-WAY WHICH DO NOT CONFLICT WITH PROPOSED CONSTRUCTION.
- 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.
- NO MORE THAN ONE (1) DRIVE 30 FEET IN WIDTH, OR EQUIVALENT COMBINATIONS THEREOF, ARE TO BE CONSTRUCTED WITH THIS PROJECT.
- WIDENED GUTTER SECTION OF COMBINED CURB AND GUTTER AT INTERSECTIONS WILL NOT BE PAID FOR DIRECTLY, AND THIS COST SHALL BE CONSIDERED AS SUBSIDIARY TO THE OTHER CONTRACT PAY ITEMS OF WORK.
- LIMITS OF EARTHWORK SHALL MATCH EXISTING GROUND ELEVATIONS AT THE RIGHT-OF-WAY LINE UNLESS OTHERWISE NOTED ON THE PLANS WITH A NEW FINISHED GRADE ELEVATION. WHEN A NEW FINISHED GRADE ELEVATION IS SHOWN, THE EARTHWORK SHALL EXTEND ONE FOOT BEYOND THE RIGHT-OF-WAY LINE AND THEN SLOPED UP OR DOWN USING PERMISSIBLE SLOPES TO MATCH THE EXISTING GROUND SURFACE.
- CONTRACTOR SHALL GIVE THE OWNER OF PROPERTY ABUTTING THIS PROJECT, WHOSE YARDS WILL BE LOWER THAN THE NEW FINISHED GRADE ELEVATIONS AT THE RIGHT-OF-WAY LINE, AN OPPORTUNITY TO UTILIZE EXCESS EXCAVATED MATERIAL FROM THE PROJECT TO REGRADE THOSE YARDS TO DRAIN TO THE NEW PAVEMENT. CONTRACTOR WILL BE REQUIRED TO DUMP AND SPREAD THE EXCESS MATERIAL AS REQUIRED BY THE SPECIFICATIONS WHEN REQUESTED BY THE PROPERTY OWNER. THE CONTRACTOR SHALL BE FURNISHED A WRITTEN REQUEST FROM THE PROPERTY OWNER BEFORE ANY SUCH EXCESS MATERIAL IS DELIVERED TO SUCH PROPERTIES.
- THE CONTRACTOR WILL BE PERMITTED TO BID ONLY ONE OF THE ALTERNATE TYPES OF SUB-GRADE TREATMENT. THE TYPE BID BY THE SUCCESSFUL BIDDER WILL BE THE TYPE OF SUB-GRADE TREATMENT USED TO CONSTRUCT THE PROJECT.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PRESERVING PROPERTY IRONS. THE CONTRACTOR WILL BE REQUIRED TO RE-ESTABLISH ANY PROPERTY IRONS WHICH ARE DAMAGED OR DESTROYED BY HIS CONSTRUCTION OPERATIONS. SUCH IRONS SHALL BE RE-ESTABLISHED BY A LICENSED LAND SURVEYOR IN ACCORDANCE WITH STATE LAWS.
- THE WATER DEPARTMENT SHALL FIELD LOCATE WATER VALVES ONE TIME DURING CONSTRUCTION WHEN REQUESTED BY THE CONTRACTOR. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PRESERVE SUCH FIELD LOCATIONS DURING THE CONSTRUCTION PROCESS. WATER VALVES, WATER VALVE BOXES OR FIRE HYDRANTS DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED BY THE CONTRACTOR AT HIS OWN EXPENSE.
- THE CONTRACTOR SHALL ADJUST WATER VALVE BOXES AS DIRECTED BY THE ENGINEER. THIS WORK TO BE SUBSIDIARY TO OTHER BID ITEMS.

**INDEX OF SHEETS**

- COVER SHEET
- PAVING PLAN, WICHITA ST.
- INTERSECTION DETAIL @ CENTRAL & WICHITA ST.; PAVING PLAN, VACATED ELM ST.
- WALK DETAILS
- SMS PLAN AND PROFILE
- TYPICAL 27" PAVEMENT DETAILS
- TYPICAL 31" PAVEMENT DETAILS
- VALLEY GUTTER DETAILS
- DRIVEWAY STANDARDS
- TYPE I-A CURB INLET DETAILS
- TYPE II CURB INLET DETAILS
- SPECIAL SHALLOW STANDARD MANHOLE DETAILS
- MANHOLE RING & COVER STANDARDS
- WICHITA ST. X-SECTIONS
- ELM ST. X-SECTIONS

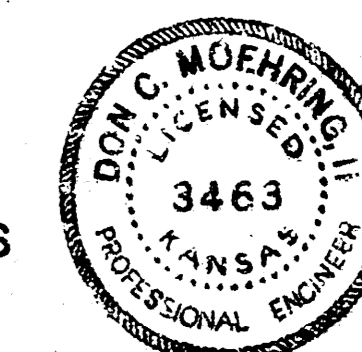


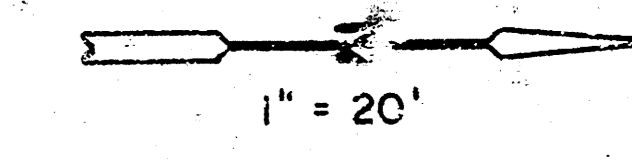
**BENCHMARKS:**

- "□" on curb SE Cor. Conc. Slab in front of Wheat Statue, N. Side of City Bldg. Elev. = 119.57 City Datum
- "□" on top of N. curb Wichita St., N. of Elm, on N. side of curb inlet. Elev. = 112.13 City Datum
- Top N. Rim SMS Mt. W. of Missouri-Pacific R.R. approx. C.L. Elm. Elev. = 112.70 City Datum

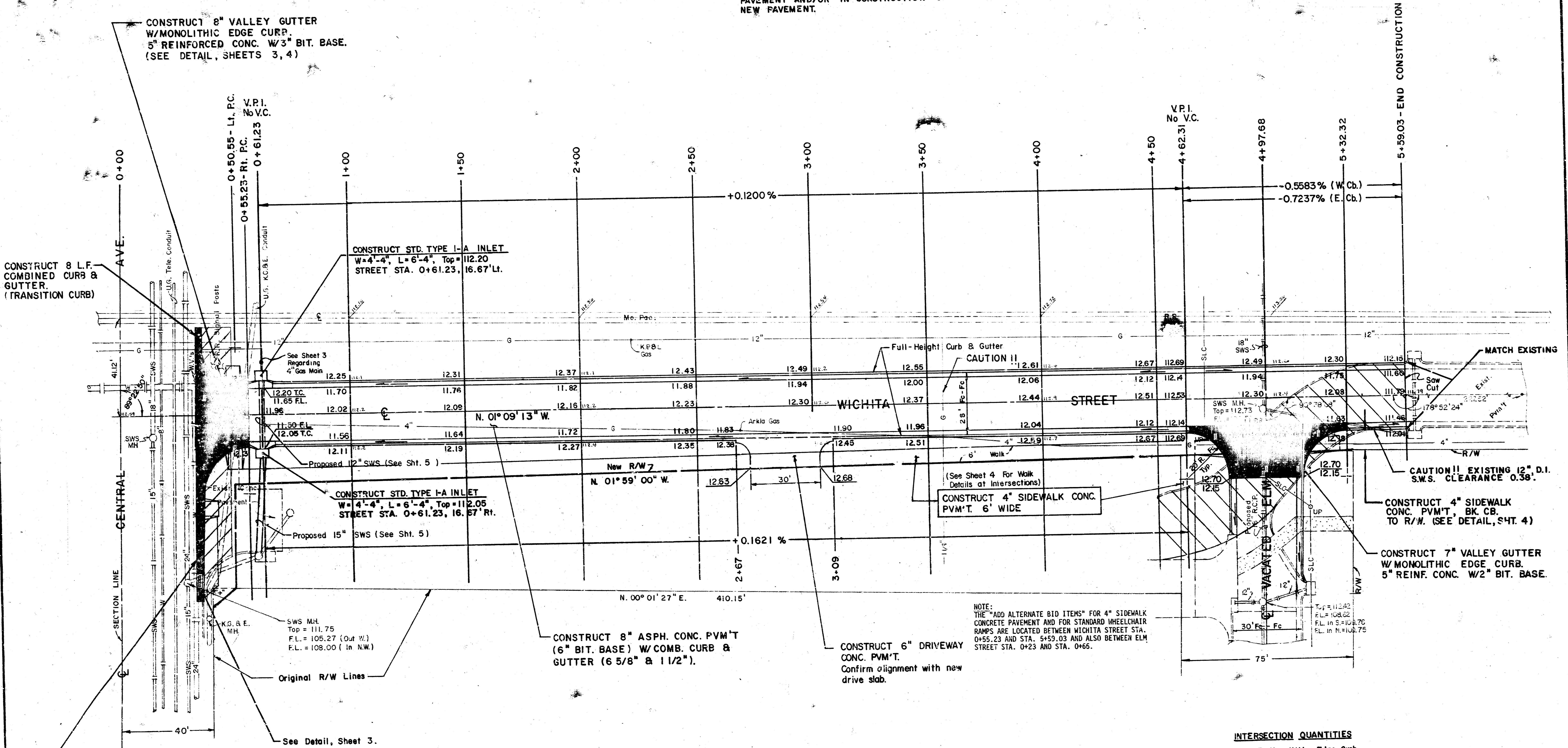
W191

MOEHRING & ASSOCIATES  
CONSULTING ENGINEERS  
WICHITA





NOTE: STORM WATER SEWER LINES AND UTILITIES ARE SHALLOW IN BOTH INTERSECTIONS. USE CAUTION WHEN EXCAVATING OR REMOVING PAVEMENT AND/OR IN CONSTRUCTION OF NEW PAVEMENT.



CONSTRUCT 8" VALLEY GUTTER W/MONOLITHIC EDGE CURB. 5" REINFORCED CONC. W/3" BIT. BASE. (SEE DETAIL, SHEETS 3, 4)

CONSTRUCT 8 L.F. COMBINED CURB & GUTTER. (TRANSITION CURB)

CONSTRUCT STD. TYPE I-A INLET W=4'-4", L=6'-4", Top=112.20 STREET STA. 0+61.23, 16.67'Lt.

CONSTRUCT STD. TYPE I-A INLET W=4'-4", L=6'-4", Top=112.05 STREET STA. 0+61.23, 16.67' Rt.

CONSTRUCT 8" ASPH. CONC. PVM'T (6" BIT. BASE) W/COMB. CURB & GUTTER (6 5/8" & 1 1/2").

CONSTRUCT 6" DRIVEWAY CONC. PVM'T. Confirm alignment with new drive slab.

CONSTRUCT 4" SIDEWALK CONC. PVM'T. 6' WIDE

CONSTRUCT 4" SIDEWALK CONC. PVM'T, BK. CB. TO R/W. (SEE DETAIL, SHT. 4)

CONSTRUCT 7" VALLEY GUTTER W/MONOLITHIC EDGE CURB. 5" REINF. CONC. W/2" BIT. BASE.

CONSTRUCT 44.75 L.F. COMBINED CURB & GUTTER. (6 5/8" & 1 1/2").

**INTERSECTION QUANTITIES**  
 52.75 L.F. Combined Curb & Gutter  
 59.60 L.F. Monolithic Edge Curb  
 113.00 S.Y. Manipulation  
 86.90 S.Y. V.G. 6" Concrete w/2" Bituminous Base

NOTE: BOTH COMBINED CURB & GUTTER AND MONOLITHIC EDGE CURB WITH TRANSITION CURB HEIGHT SHALL BE PAID FOR AS FULL-HEIGHT CURB & GUTTER.

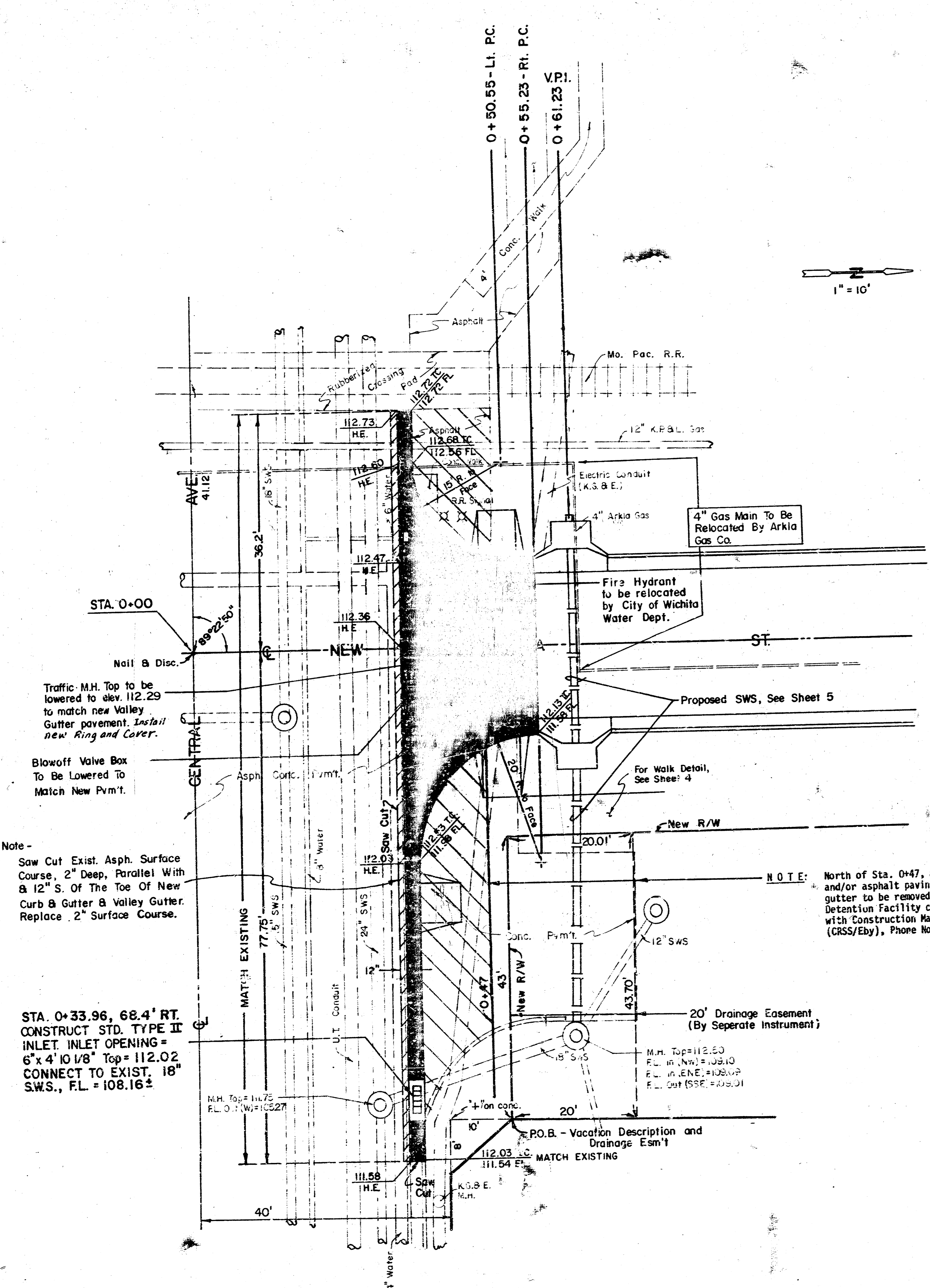
NOTE: THE "ADD ALTERNATE BID ITEMS" FOR 4" SIDEWALK CONCRETE PAVEMENT AND FOR STANDARD WHEELCHAIR RAMPS ARE LOCATED BETWEEN WICHITA STREET STA. 0+55.23 AND STA. 5+59.03 AND ALSO BETWEEN ELM STREET STA. 0+23 AND STA. 0+65.

**INTERSECTION QUANTITIES**  
 62.83 L.F. Monolithic Edge Curb  
 109.20 S.Y. Manipulation  
 101.30 S.Y. V.G. 5" Concrete w/2" Bituminous Base

Existing Pavement, Curbs and Walks to be Removed as a Part of This Project. See Notes Sheet 3, For Removal by Others.

**WICHITA STREET**  
 From The N. Line Of Central Ave., To A Point 23.65' North Of N.L. Vacated Elm Street.

**MOEHRING & ASSOCIATES**  
 CONSULTING ENGINEERS  
 WICHITA

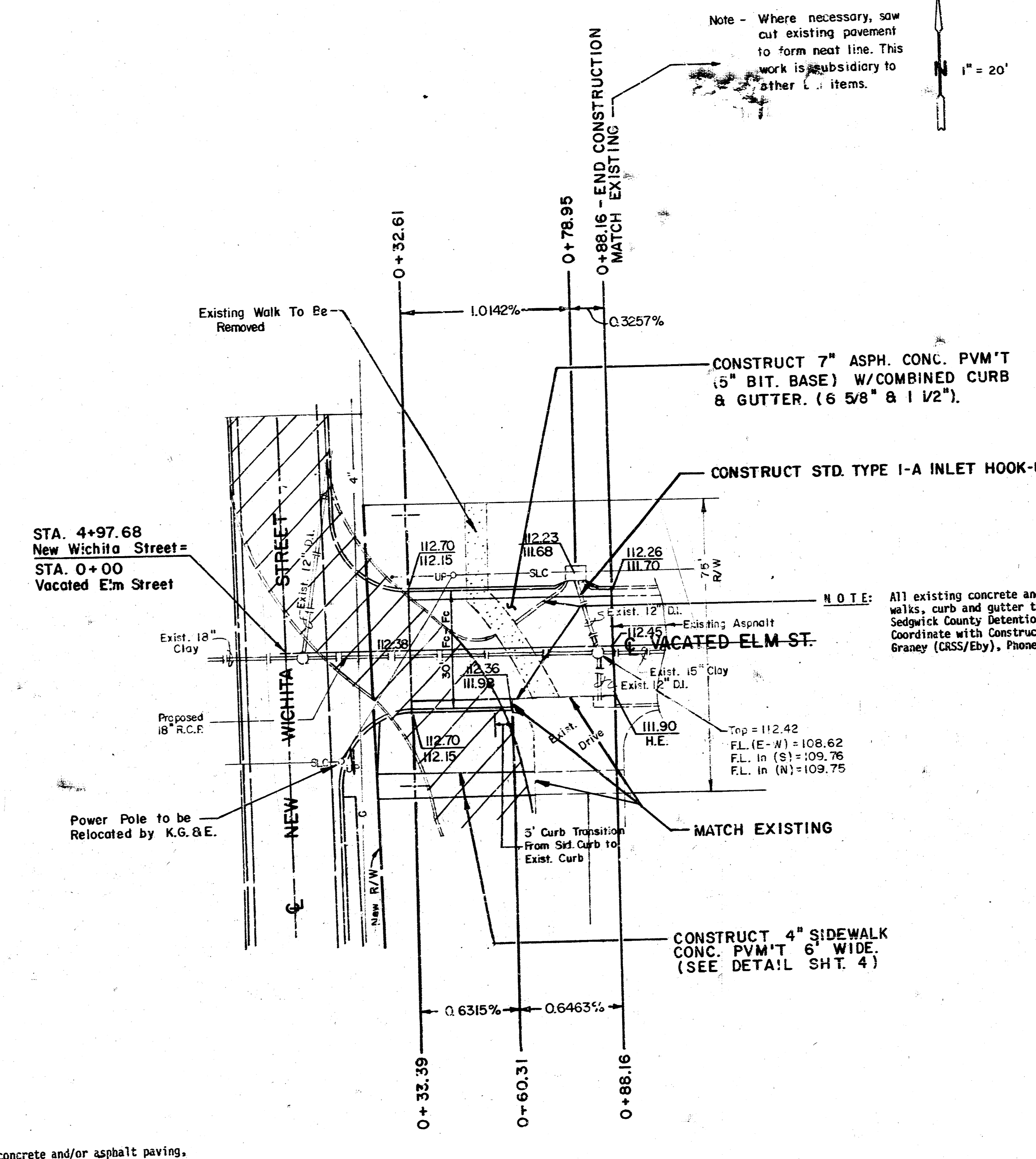


Note -  
Saw Cut Exist. Asph. Surface Course, 2" Deep, Parallel With & 12" S. Of The Toe Of New Curb & Gutter & Valley Gutter. Replace 2" Surface Course.

STA. 0+33.96, 68.4' RT. CONSTRUCT STD. TYPE II INLET. INLET OPENING = 6' x 4' 10 1/8" Top = 112.02. CONNECT TO EXIST. 18" S.W.S., F.L. = 108.16 ±

NOTE: North of Sta. 0+47, all existing concrete and/or asphalt paving, walks, curb and gutter to be removed by Sedgwick County Detention Facility contractor. Coordinate with Construction Manager Joe Graney (CRSS/Eby), Phone No. 265-6878.

All existing concrete and/or asphalt paving, walks, curb and gutter to be removed by Wichita Street contractor.



Note - Where necessary, saw cut existing pavement to form neat line. This work is subsidiary to other items.

1" = 20'

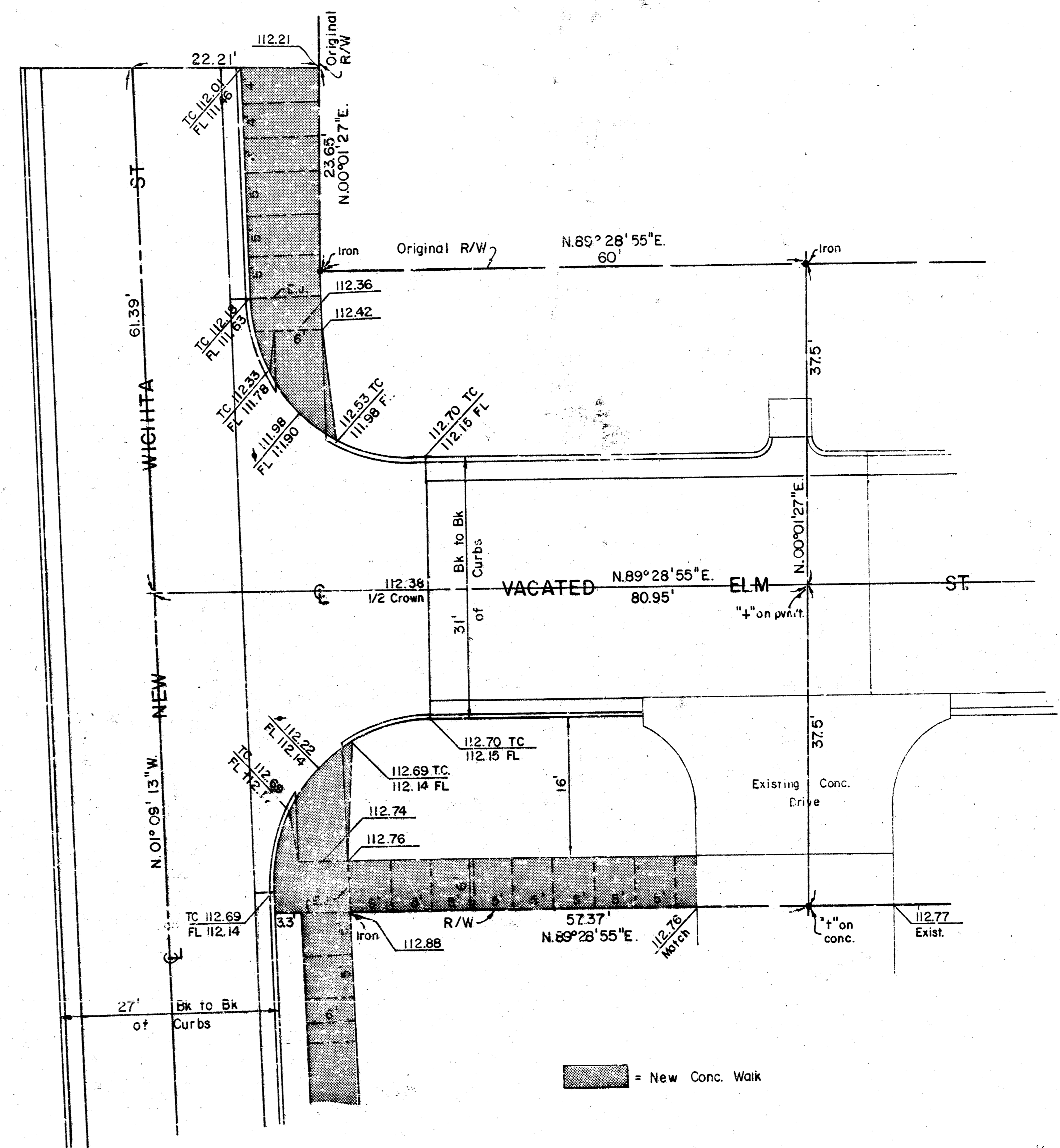
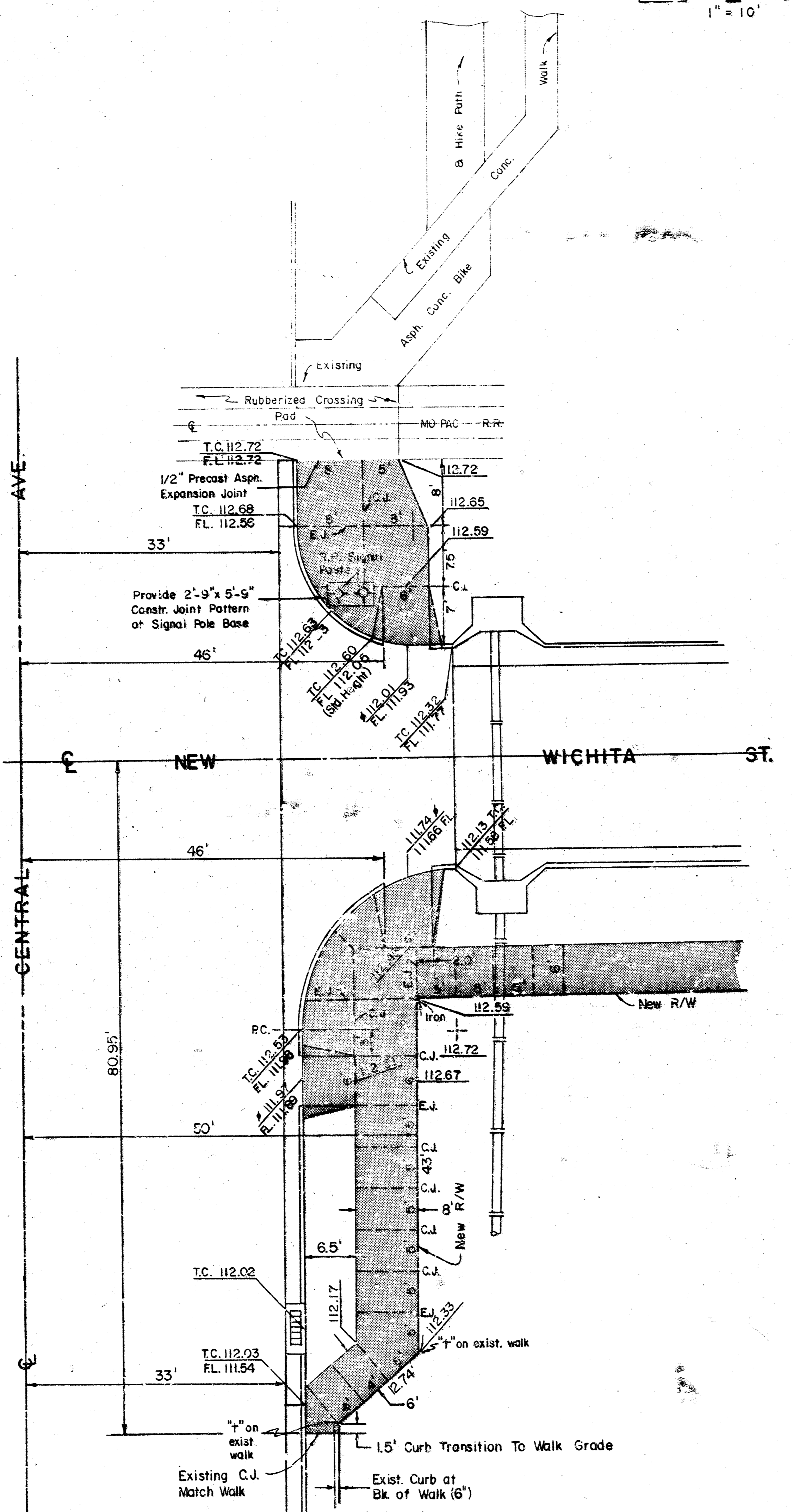
NOTE: All existing concrete and/or asphalt paving, walks, curb and gutter to be removed by Sedgwick County Detention Facility contractor. Coordinate with Construction Manager Joe Graney (CRSS/Eby), Phone No. 265-6878.

CONSTRUCT 4" SIDEWALK CONC. P.V.M'T 6' WIDE. (SEE DETAIL SHT. 4)

INTERSECTION DETAIL  
CENTRAL AT WICHITA ST.  
&  
VACATED ELM ST. PLAN  
  
MOEHRING & ASSOCIATES  
CONSULTING ENGINEERS  
WICHITA

1" = 10'

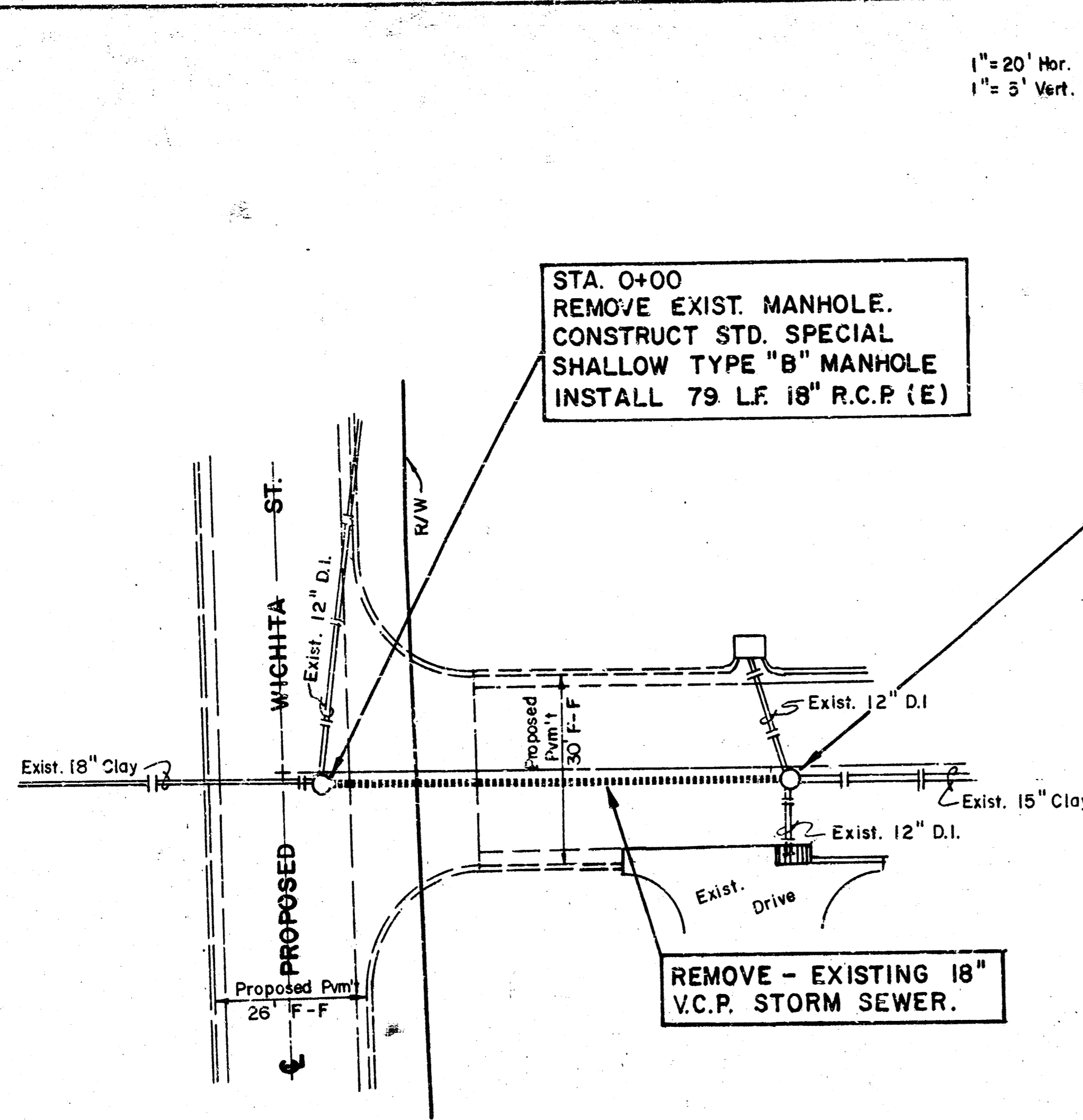
1" = 10'



⊕ = Top of Lip Curb  
 ⊙ = Toe of Wheelchair Ramp

**WALK DETAILS**  
 Wichita St. & Central Ave.  
 Wichita St. & Elm St.  
 MOEHRING & ASSOCIATES  
 CONSULTING ENGINEERS  
 WICHITA

DATE: \_\_\_\_\_ BY: \_\_\_\_\_  
 SUBMITTED: \_\_\_\_\_  
 PLAN NO. \_\_\_\_\_  
 CHECKED: \_\_\_\_\_  
 DATE: \_\_\_\_\_  
 NO. \_\_\_\_\_



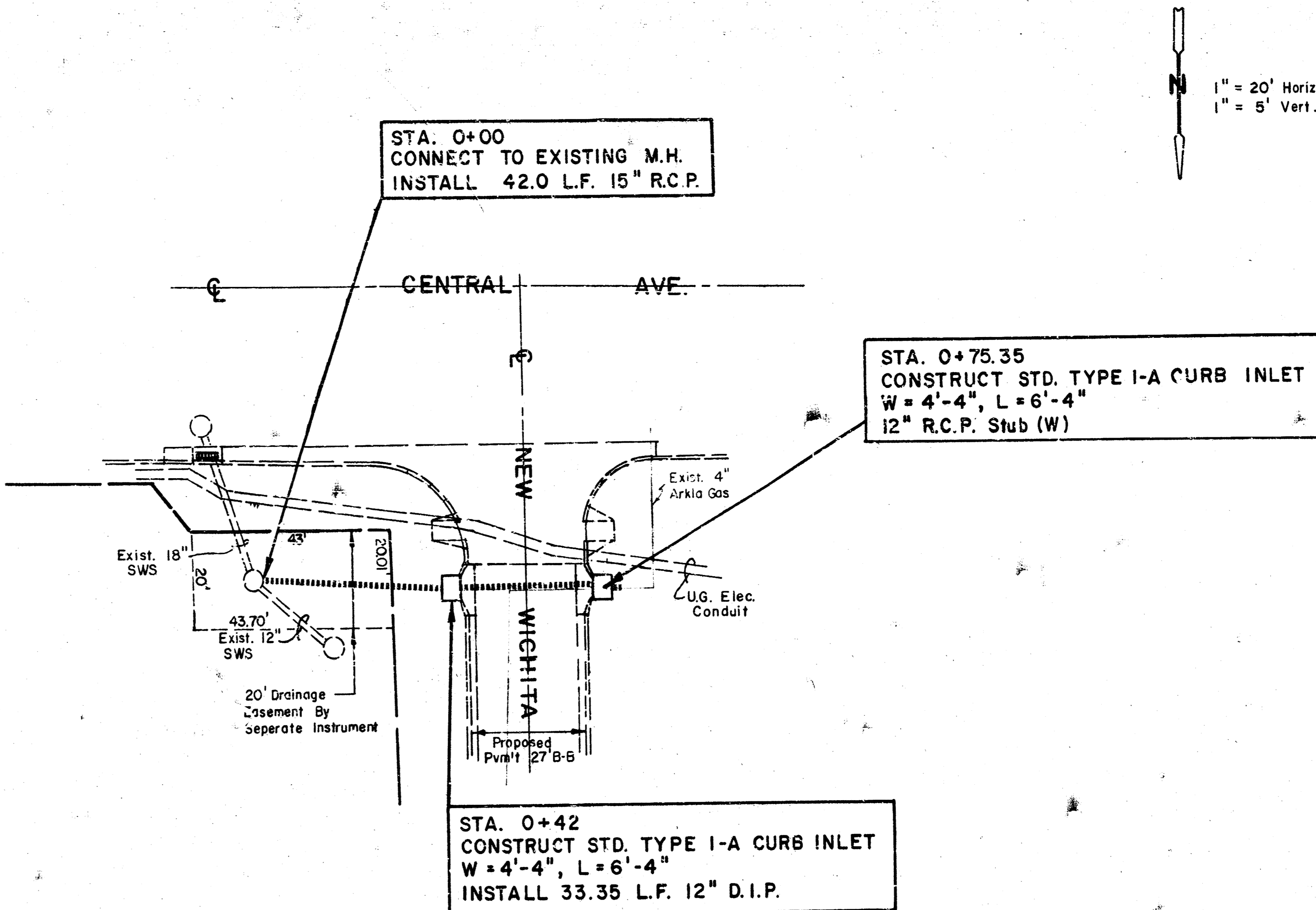
NOTE: REMOVAL OF STORM SEWER AND MANHOLE TO BE SUBSIDIARY TO OTHER CONTRACT PAY ITEMS OF WORK.

STA. 0+79  
 CONNECT TO EXISTING  
 TYPE "B" M.H.

NOTE:  
 ADJUST MANHOLE TO CONFORM TO NEW PAVEMENT SECTION, IF NECESSARY. THIS ITEM OF WORK SHALL BE SUBSIDIARY TO OTHER PAY ITEMS OF WORK.

STA. 0+00  
 REMOVE EXIST. MANHOLE.  
 CONSTRUCT STD. SPECIAL  
 SHALLOW TYPE "B" MANHOLE  
 INSTALL 79 L.F. 18" R.C.P. (E)

REMOVE - EXISTING 18"  
 V.C.P. STORM SEWER.

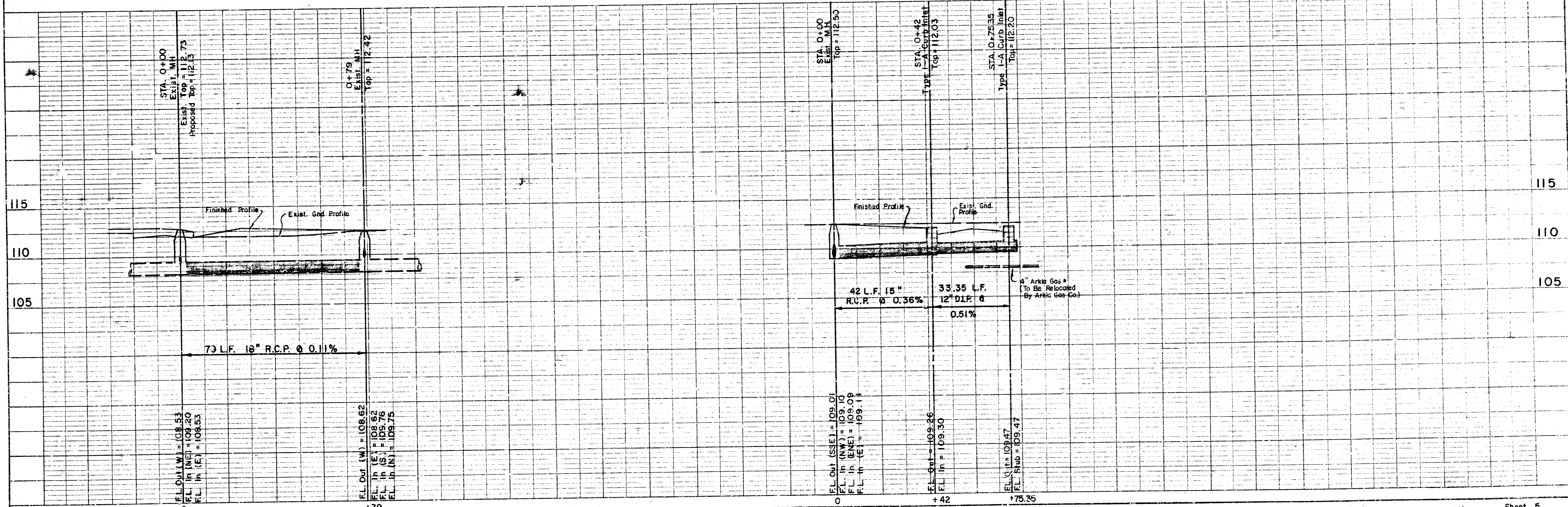


STA. 0+00  
 CONNECT TO EXISTING M.H.  
 INSTALL 42.0 L.F. 15" R.C.P.

STA. 0+75.35  
 CONSTRUCT STD. TYPE I-A CURB INLET  
 W=4'-4", L=6'-4"  
 12" R.C.P. Stub (W)

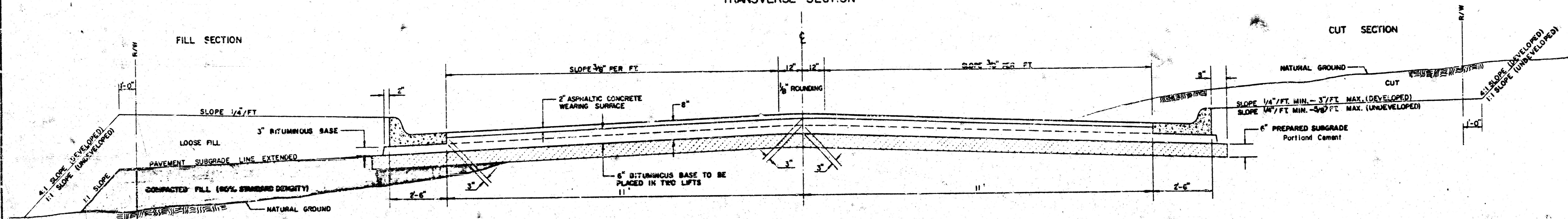
STA. 0+42  
 CONSTRUCT STD. TYPE I-A CURB INLET  
 W=4'-4", L=6'-4"  
 INSTALL 33.35 L.F. 12" D.I.P.

DATE: \_\_\_\_\_ BY: \_\_\_\_\_  
 SUBMITTED: \_\_\_\_\_  
 PROFILE NO. \_\_\_\_\_  
 CHECKED: \_\_\_\_\_  
 DATE: \_\_\_\_\_  
 NO. \_\_\_\_\_

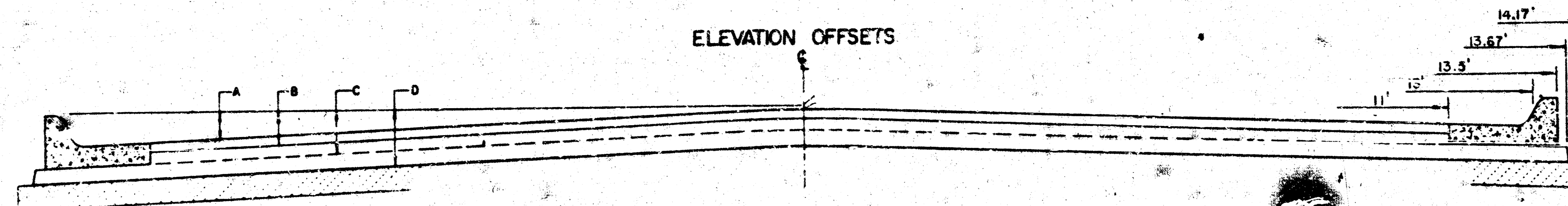


# TYPICAL 27' PAVEMENT DETAILS

## TRANSVERSE SECTION

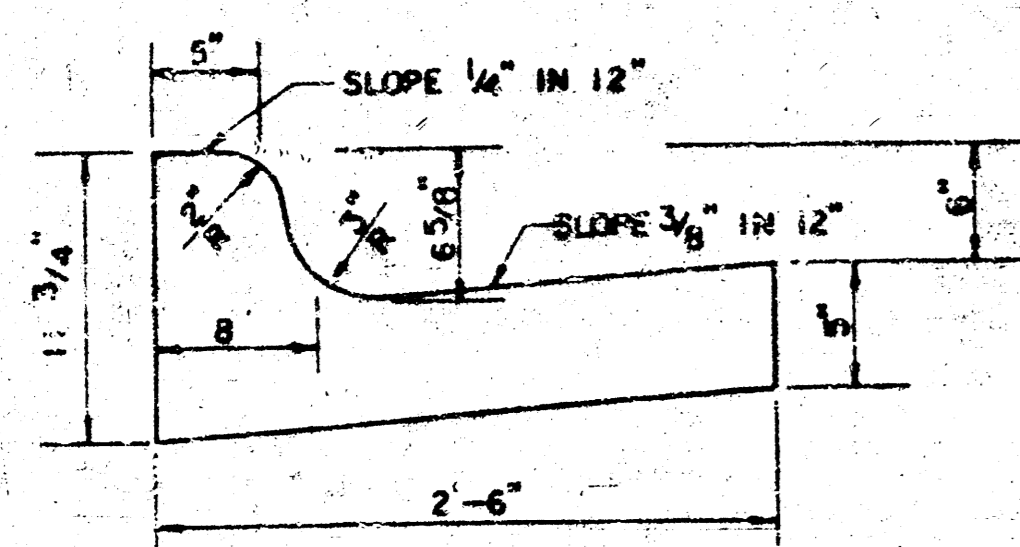


## ELEVATION OFFSETS

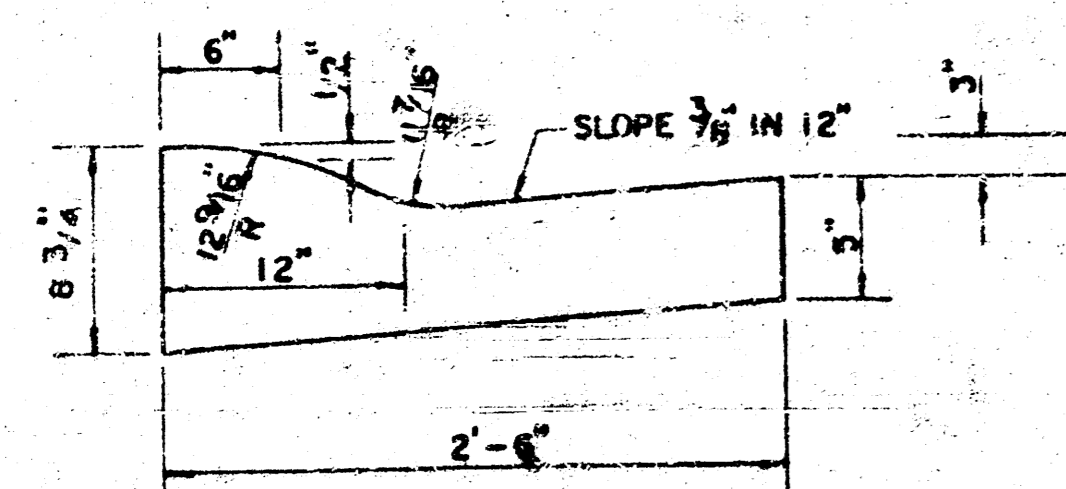


	DISTANCE FROM CENTERLINE (LT. & RT.)												
	0'	2'	4'	6'	7'	8'	10'	11'	13'	13.50'	13.67'	14.17'	
A: TOP OF CURBS TO TOP OF SURFACE LIFT	.17	.22	.29	.35	.38	.41	.47	.49	---	---	---	---	
B: TOP OF CURBS TO TOP OF UPPER BASE LIFT	.34	.38	.44	.52	.55	.58	.63	.65	---	---	---	---	
C: TOP OF CURBS TO TOP OF LOWER BASE LIFT	.50	.63	.69	.77	.80	.83	.88	.90	.97	.98	.99	---	
D: TOP OF CURBS TO TOP OF SUBGRADE	.84	.86	.94	1.02	1.08	1.08	1.13	1.15	1.22	1.23	1.24	1.26	

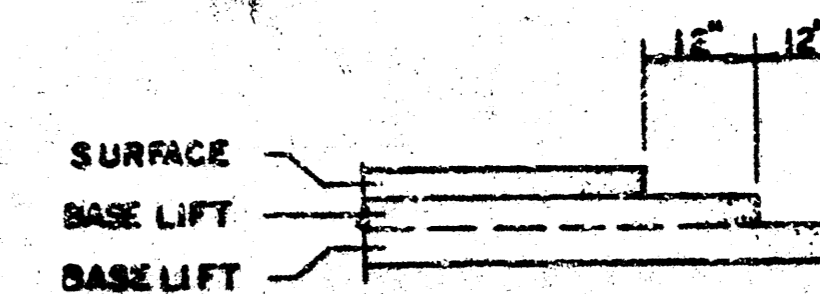
### COMBINED CURB & GUTTER



### ROLL TYPE COMBINED CURB & GUTTER



### TRANSVERSE CONSTRUCTION JOINTS



TRANSVERSE CONSTRUCTION JOINTS SHALL BE CONSTRUCTED IN FLEXIBLE BASE PAVEMENTS AT LOCATIONS WHERE PAVEMENT JOINTS EXISTING FLEXIBLE BASE PAVEMENT AS SHOWN BY THE DETAIL. ALL COSTS ASSOCIATED WITH THE CONSTRUCTION OF THE TRANSVERSE JOINT SHALL BE INCLUDED IN THE BID PRICE FOR SQUARE YARDS 8\"/>

### GENERAL NOTES

- 1) THE ASPHALTIC CONCRETE PAVEMENT BETWEEN THE COMBINED CURB AND GUTTER SHALL BE PAID AS SQUARE YARDS OF 8\"/>
- 2) THE BITUMINOUS BASE UNDER AND BEHIND THE COMBINED CURB AND GUTTER SHALL BE PAID AS SQUARE YARDS OF 3\"/>
- 3) A TACK COAT OF EMULSIFIED ASPHALT (SC-1H OR CSS-1H) SHALL BE APPLIED AT AN APPROXIMATE RATE OF 0.05 GALLONS PER SQUARE YARD BETWEEN EACH LIFT OF ASPHALTIC MATERIAL.
- 4) BITUMINOUS BASE AND ASPHALTIC CONCRETE WEARING SURFACE SHALL BE PLACED WITH LAYDOWN MACHINE HAVING AUTOMATIC CONTROLS FOR LINE AND GRADE.
- 5) CONSTRUCTION JOINTS IN EACH LIFT SHALL BE STAGGERED A MINIMUM DISTANCE OF ONE (1) FOOT FROM JOINTS IN PRECEDING LIFTS AND PLACED SO THAT A JOINT WILL BE CONSTRUCTED ON THE CENTERLINE OF THE TOP LIFT.
- 6) CONTRACTOR TO BID ONLY ONE SUBGRADE TREATMENT ALTERNATE WHEN ALTERNATES ARE PROVIDED IN THE PROPOSAL AND CONTRACT. THE ALTERNATE CHOSEN BY THE SUCCESSFUL BIDDER SHALL BE USED IN CONSTRUCTING THIS PROJECT.

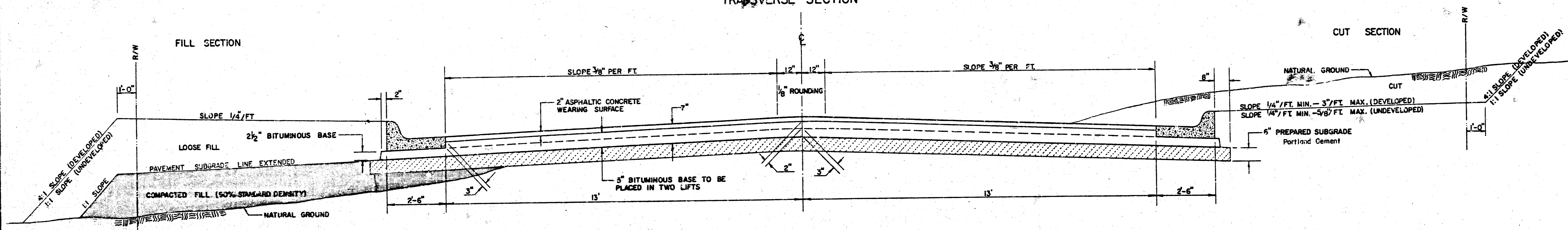
8 INCH RESIDENTIAL ASPHALTIC CONCRETE PAVEMENT WITH 6 INCH BITUMINOUS BASE  
CITY OF WICHITA, KANSAS

PROJECT NUMBER

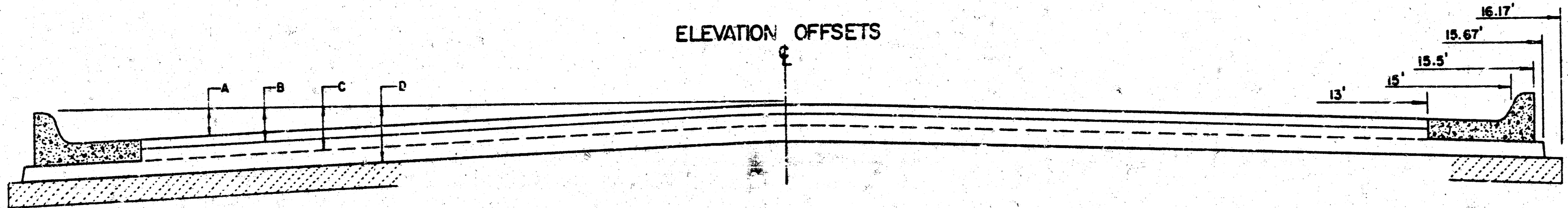
Sheet 6

# TYPICAL 3' PAVEMENT DETAILS

## TRANSVERSE SECTION

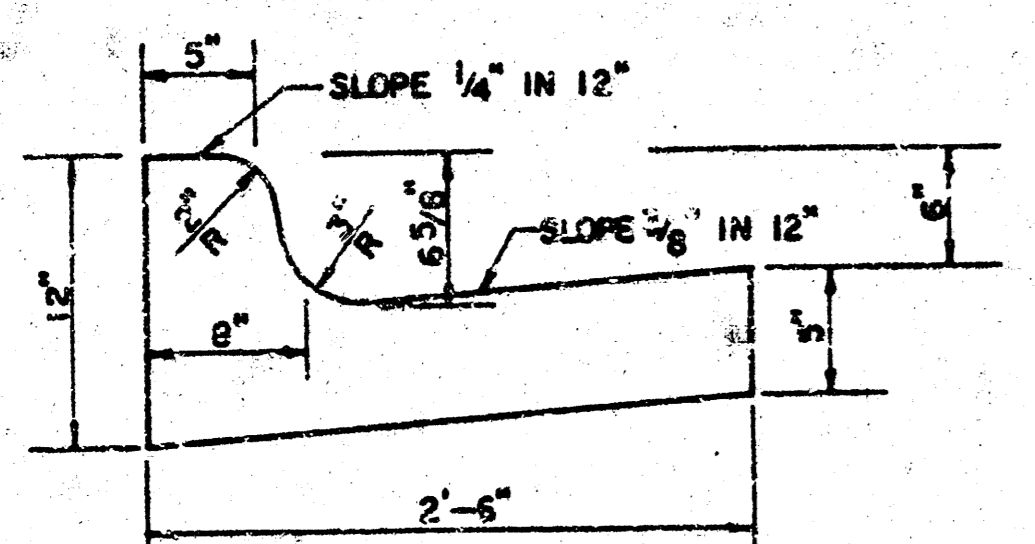


## ELEVATION OFFSETS

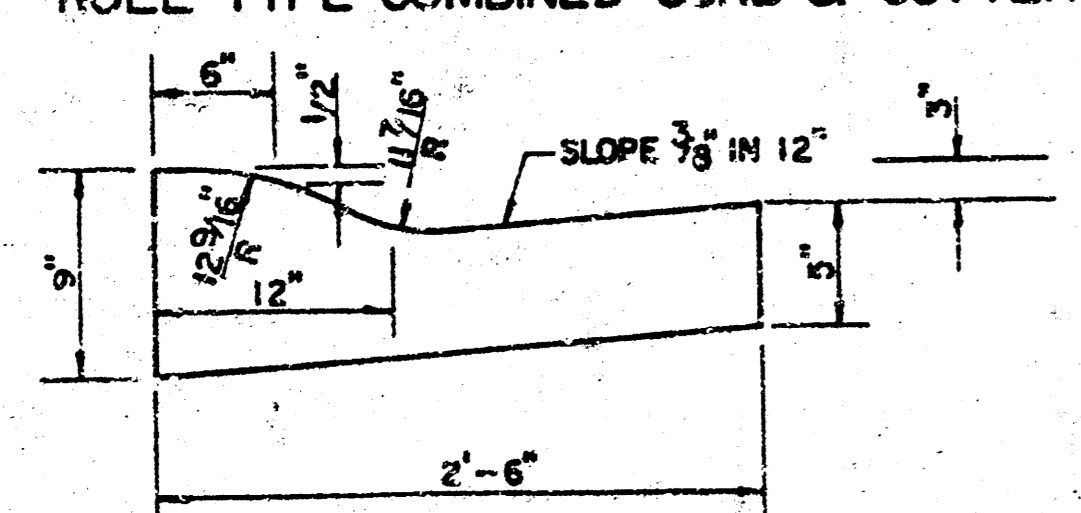


	DISTANCE FROM CENTERLINE (LT. & RT.)											
	0'	2'	4'	6'	7.5'	10'	12'	13'	15'	15.5'	15.67'	16.17'
A: TOP OF CURBS TO TOP OF SURFACE LIFT	0.10	0.14	0.21	0.27	0.32	0.39	0.46	0.49	—	—	—	—
B: TOP OF CURBS TO TOP OF UPPER BASE LIFT	0.27	0.31	0.38	0.44	0.49	0.56	0.63	0.66	—	—	—	—
C: TOP OF CURBS TO TOP OF LOWER BASE LIFT	0.44	0.49	0.57	0.64	0.70	0.79	0.87	0.90	0.98	1.00	1.00	—
D: TOP OF CURBS TO TOP OF SUBGRADE	0.69	0.73	0.80	0.87	0.93	1.01	1.08	1.12	1.19	1.21	1.21	1.23

### COMBINED CURB & GUTTER



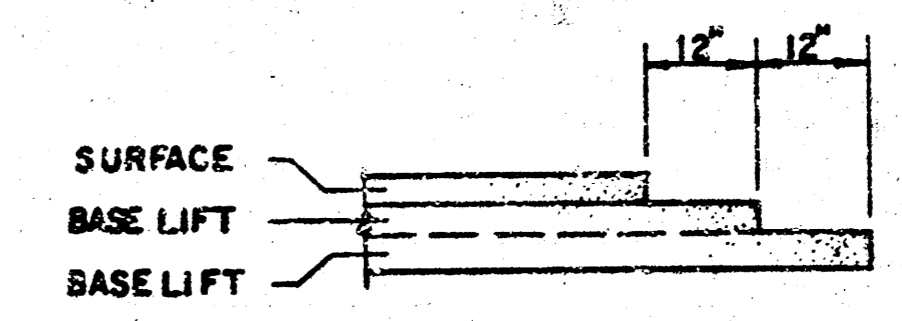
### ROLL TYPE COMBINED CURB & GUTTER



### GENERAL NOTES

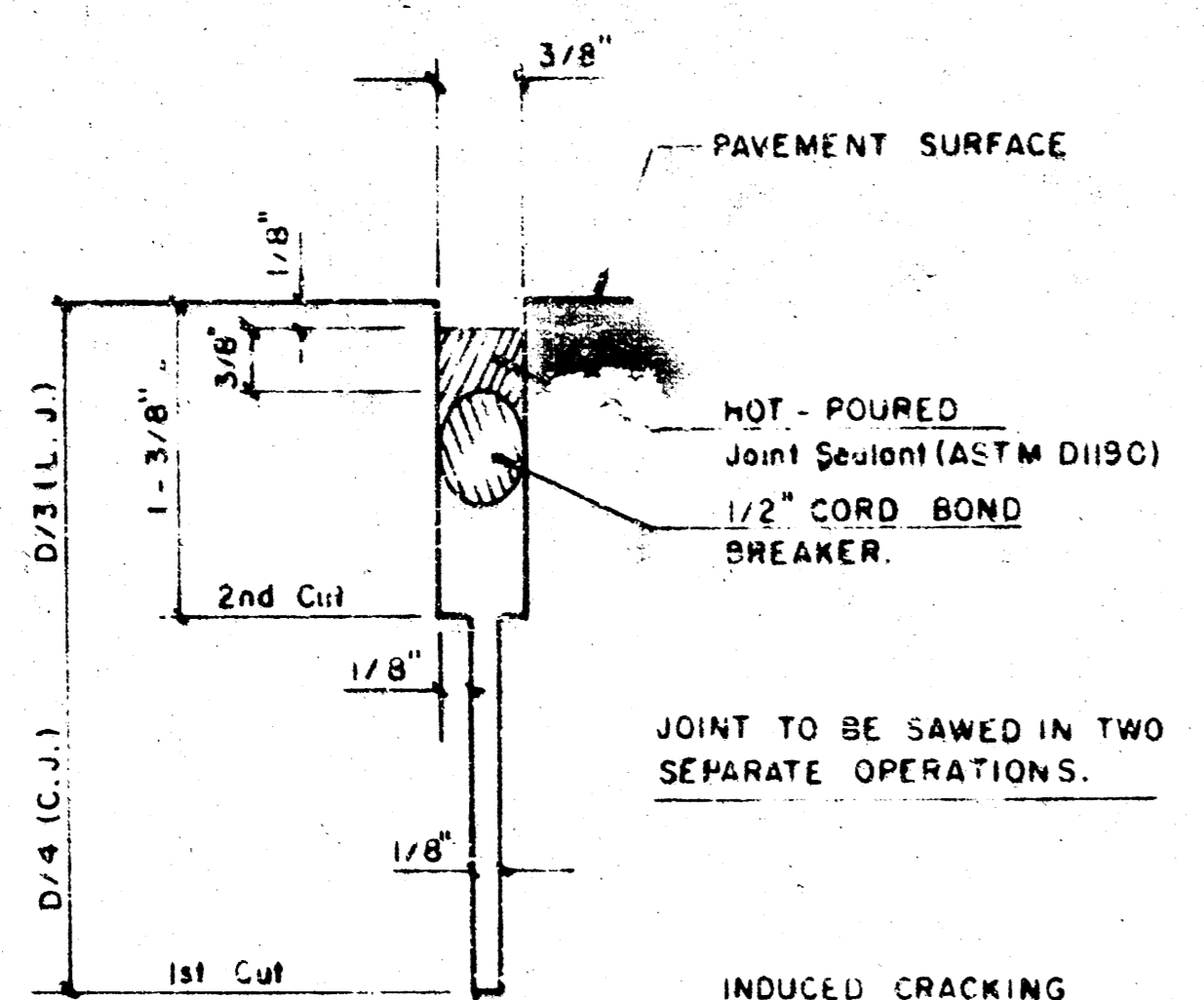
- 1) THE ASPHALTIC CONCRETE PAVEMENT BETWEEN THE COMBINED CURB AND GUTTER SHALL BE PAID AS SQUARE YARDS OF 7" ASPHALTIC CONCRETE (5" BITUMINOUS BASE).
- 2) THE BITUMINOUS BASE UNDER AND BEHIND THE COMBINED CURB AND GUTTER SHALL BE PAID AS SQUARE YARDS OF 2 1/2" BITUMINOUS BASE.
- 3) A TACK COAT OF EMULSIFIED ASPHALT (SC-1H OR CSS-1H) SHALL BE APPLIED AT AN APPROXIMATE RATE OF 0.05 GALLONS PER SQUARE YARD BETWEEN EACH LIFT OF ASPHALTIC MATERIAL.
- 4) BITUMINOUS BASE AND ASPHALTIC CONCRETE WEARING SURFACE SHALL BE PLACED WITH A LAYDOWN MACHINE HAVING AUTOMATIC CONTROLS FOR LINE AND GRADE.
- 5) CONSTRUCTION JOINTS IN EACH LIFT SHALL BE STAGGERED A MINIMUM DISTANCE OF ONE (1) FOOT FROM JOINTS IN PRECEDING LIFTS AND PLACED SO THAT A JOINT WILL BE CONSTRUCTED ON THE CENTERLINE OF THE TOP LIFT.
- 6) CONTRACTOR TO BID ONLY ONE SUBGRADE TREATMENT ALTERNATE WHEN ALTERNATES ARE PROVIDED IN THE PROPOSAL AND CONTRACT. THE ALTERNATE CHOSEN BY THE SUCCESSFUL BIDDER SHALL BE USED IN CONSTRUCTING THIS PROJECT.

### TRANSVERSE CONSTRUCTION JOINTS

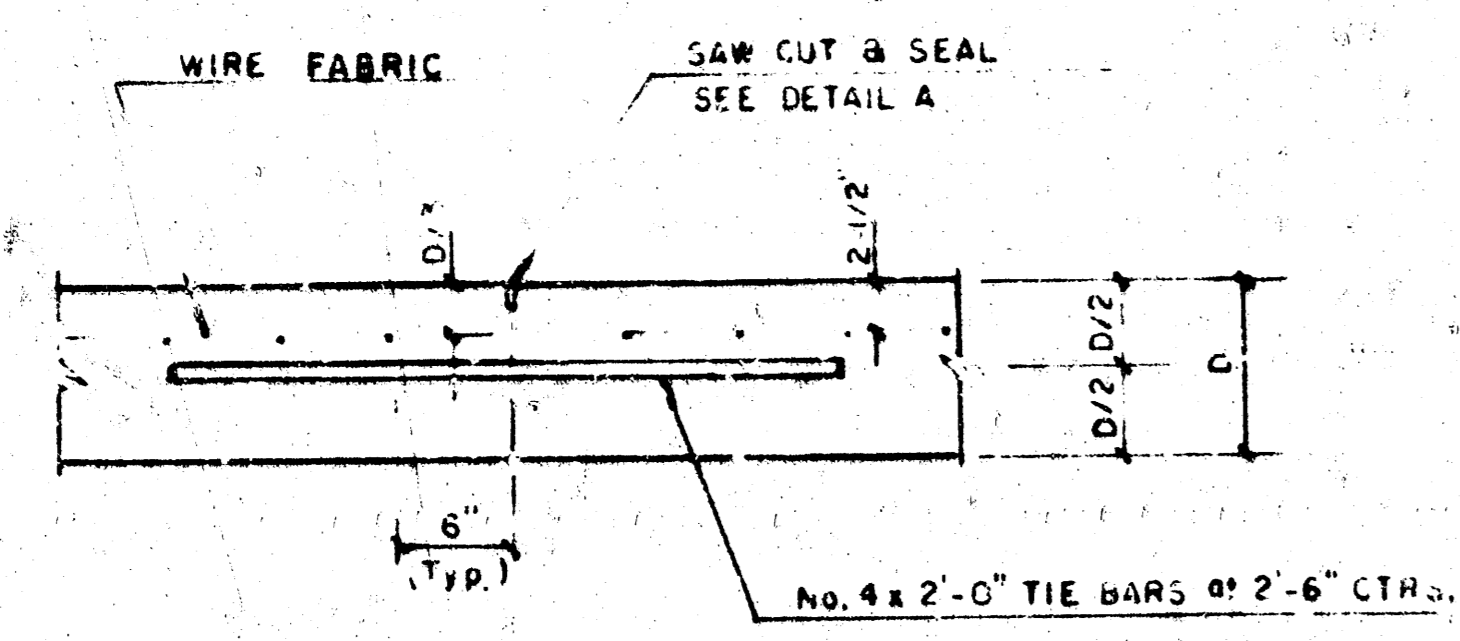


TRANSVERSE CONSTRUCTION JOINTS SHALL BE CONSTRUCTED IN FLEXIBLE BASE PAVEMENTS AT LOCATIONS WHERE PAVEMENT JOINTS EXISTING FLEXIBLE BASE PAVEMENT AS SHOWN BY THE DETAIL. ALL COSTS ASSOCIATED WITH THE CONSTRUCTION OF THE TRANSVERSE JOINT SHALL BE INCLUDED IN THE BID PRICE FOR SQUARE YARDS 7" ASPHALTIC CONCRETE (5" BITUMINOUS BASE).

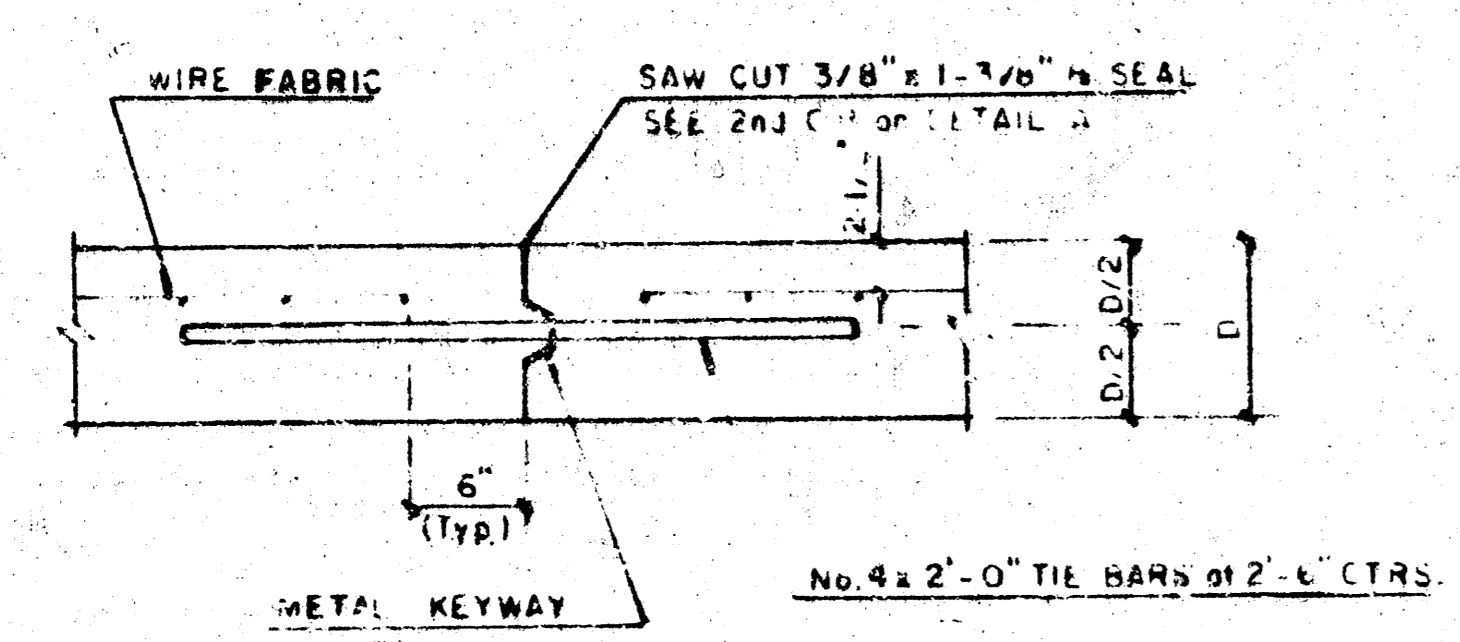
**7 INCH RESIDENTIAL ASPHALTIC CONCRETE PAVEMENT WITH 5 INCH BITUMINOUS BASE**  
**CITY OF WICHITA, KANSAS**  
 PROJECT NUMBER



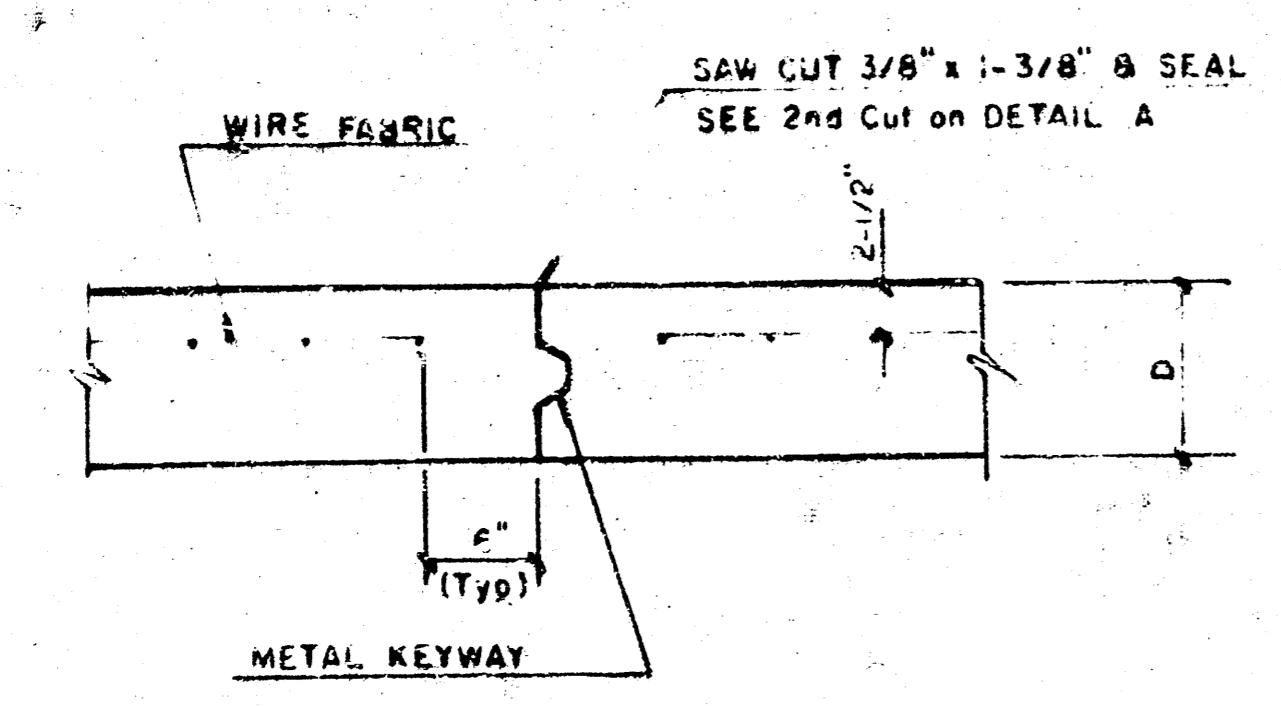
**DETAIL A**



**LONGITUDINAL JOINT DETAIL (L.J.)**

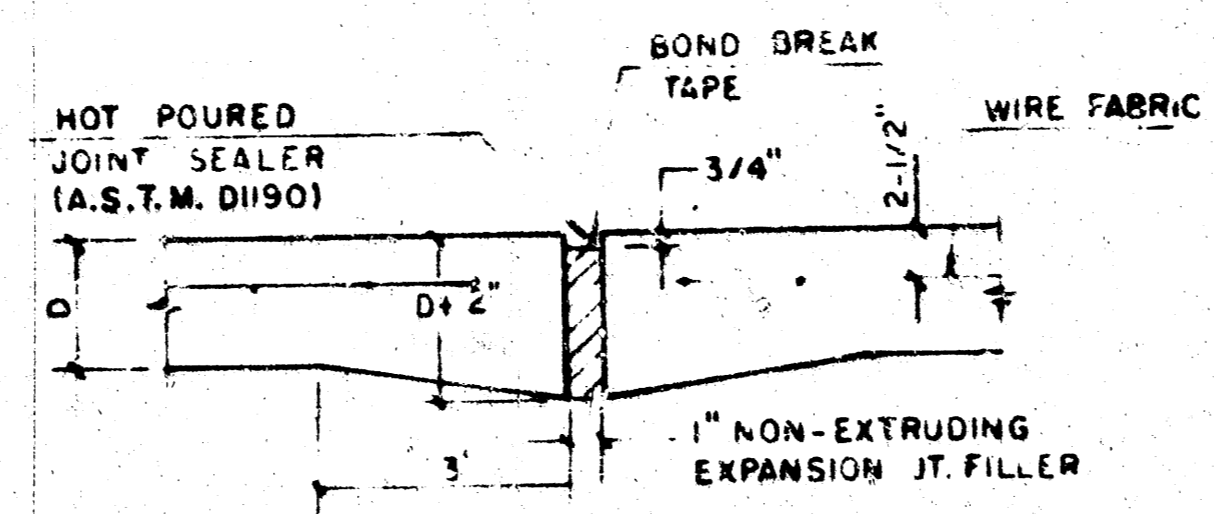


**OPTIONAL LONGITUDINAL CONSTRUCTION JOINT (L.J.) (Alternate L.J.)**

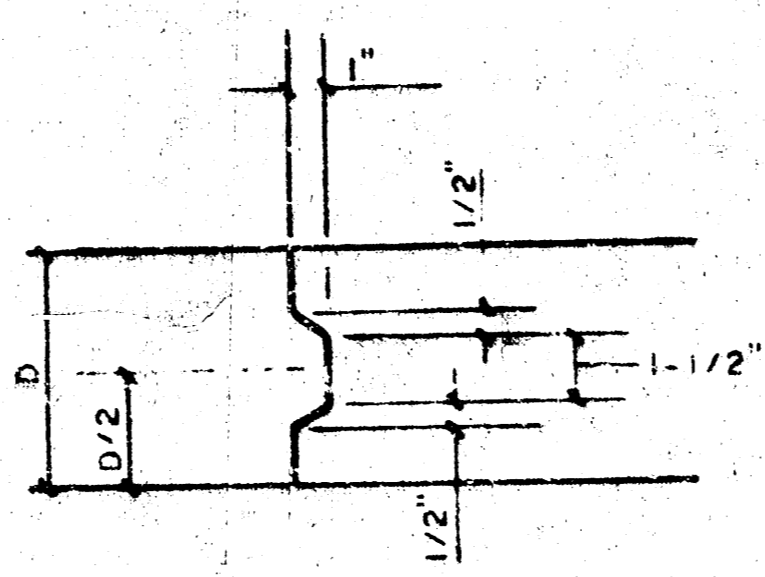


**OPTIONAL CONTRACTION CONSTRUCTION JOINT (C.J.) (Alternate C.J.)**

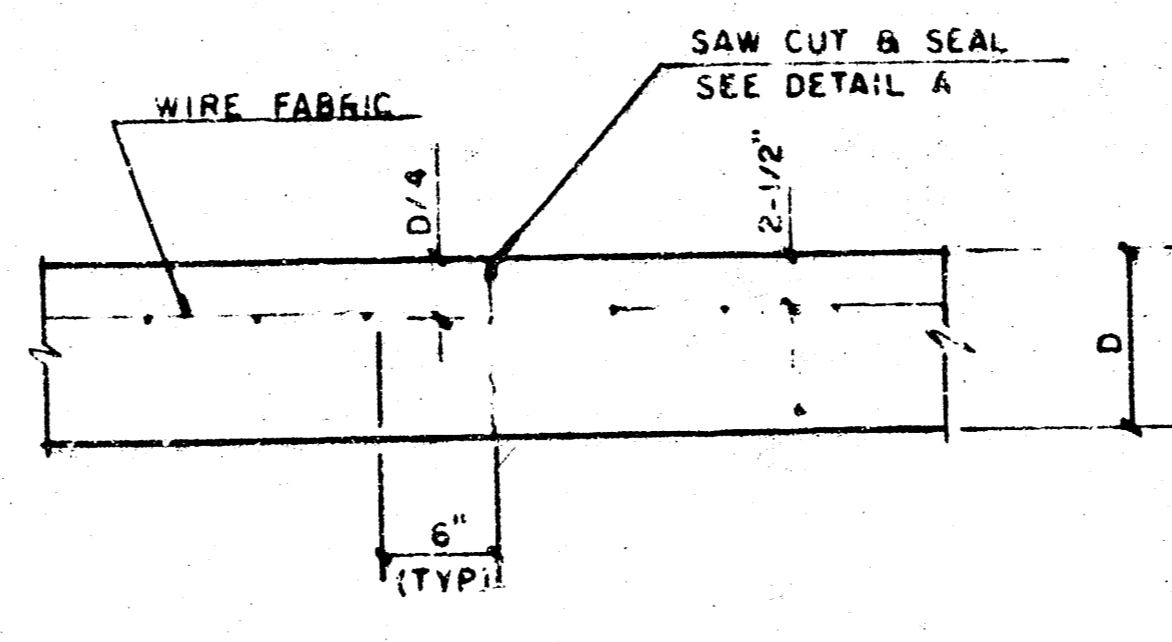
NOTE: ALL CONCRETE VALLEY GUTTER REINFORCEMENT SHALL BE ADEQUATELY SUPPORTED BY BAR CHAIRS IN THE REQUIRED POSITION UNLESS APPROVED OTHERWISE BY THE ENGINEER.



**EXPANSION JOINT**  
NOTE: EXTRA THICKNESS TO BE SUBSIDIARY TO PRICE OF 50 YDS PAVEMENT.

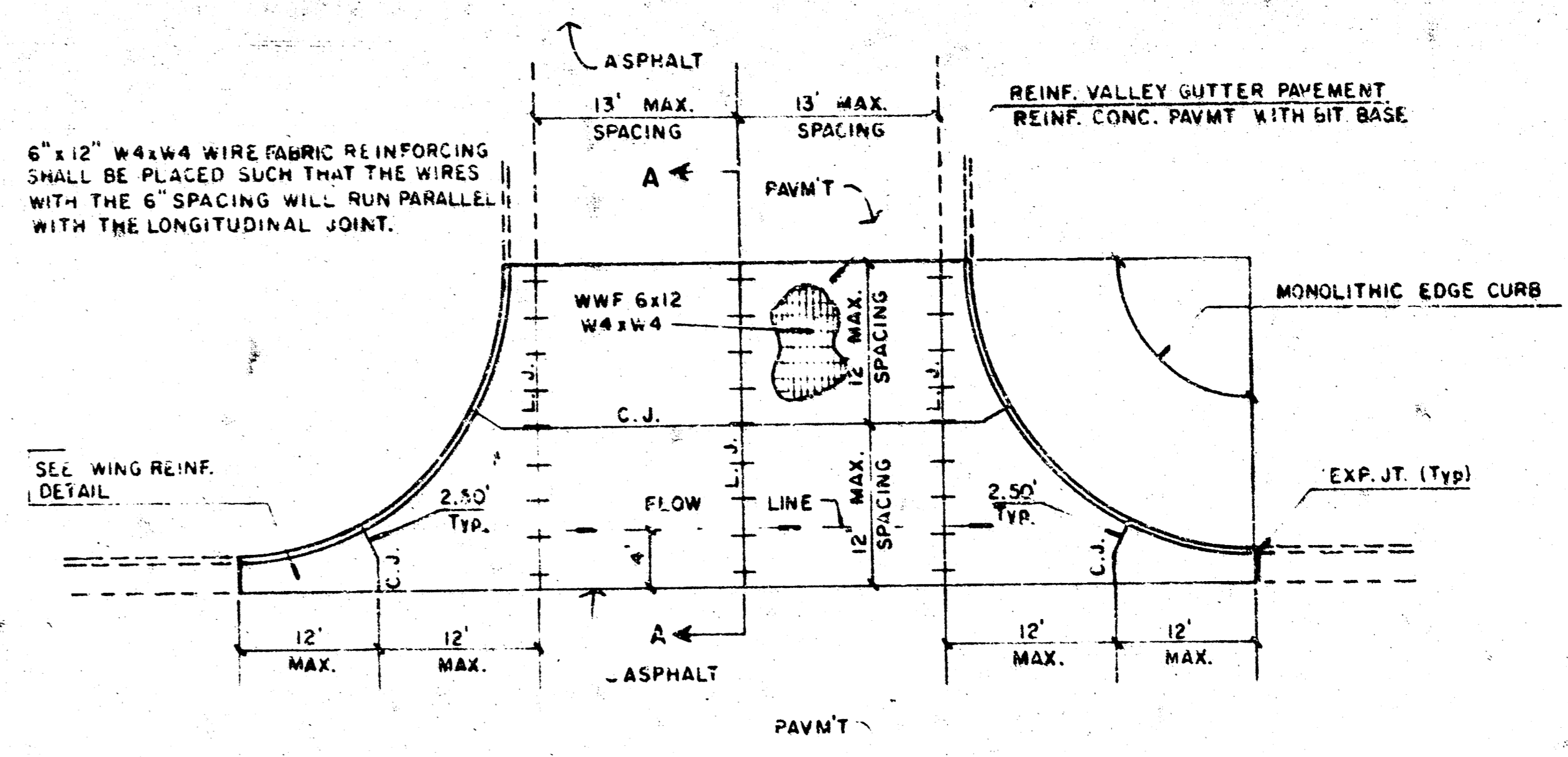


**KEYWAY DETAIL**

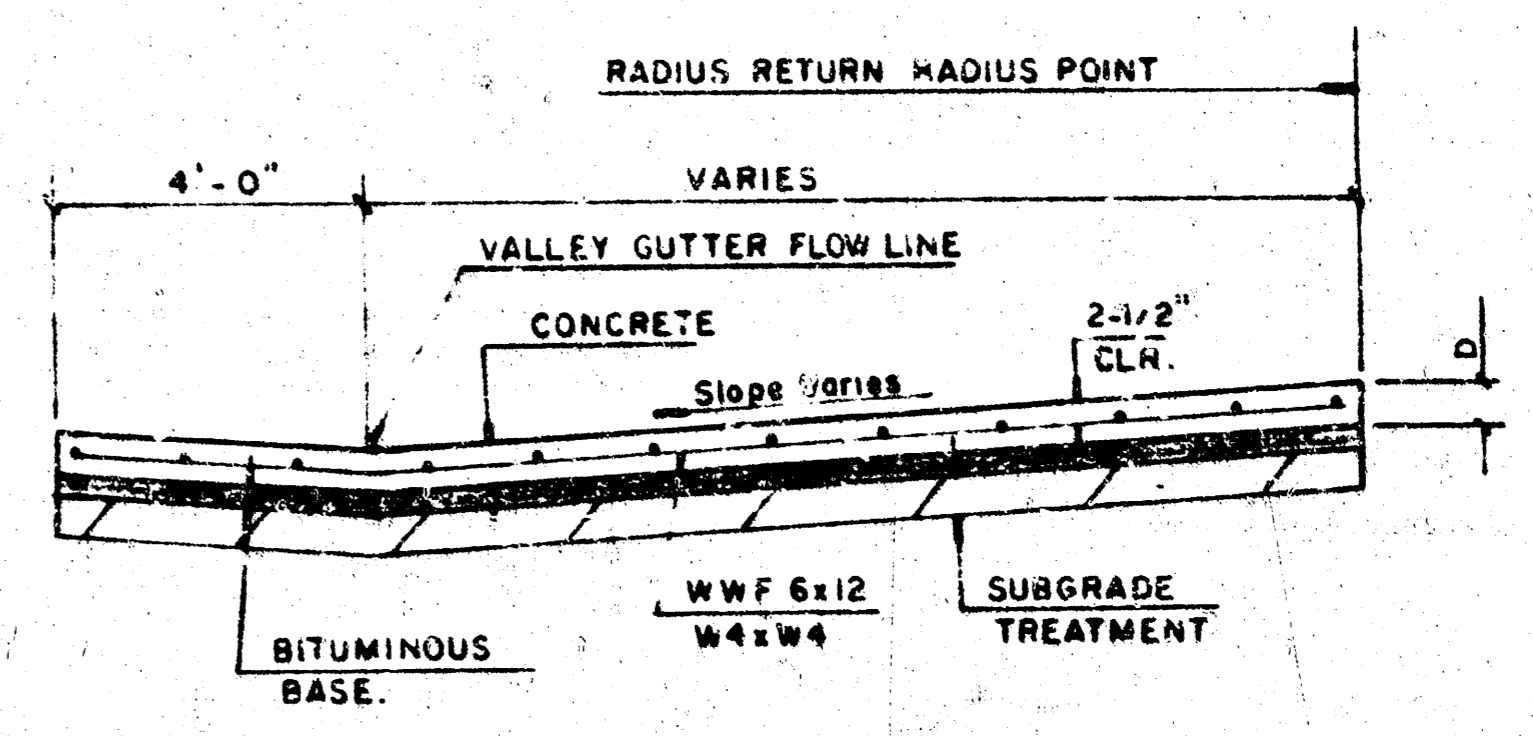


**CONTRACTION JOINT DETAIL (C.J.)**

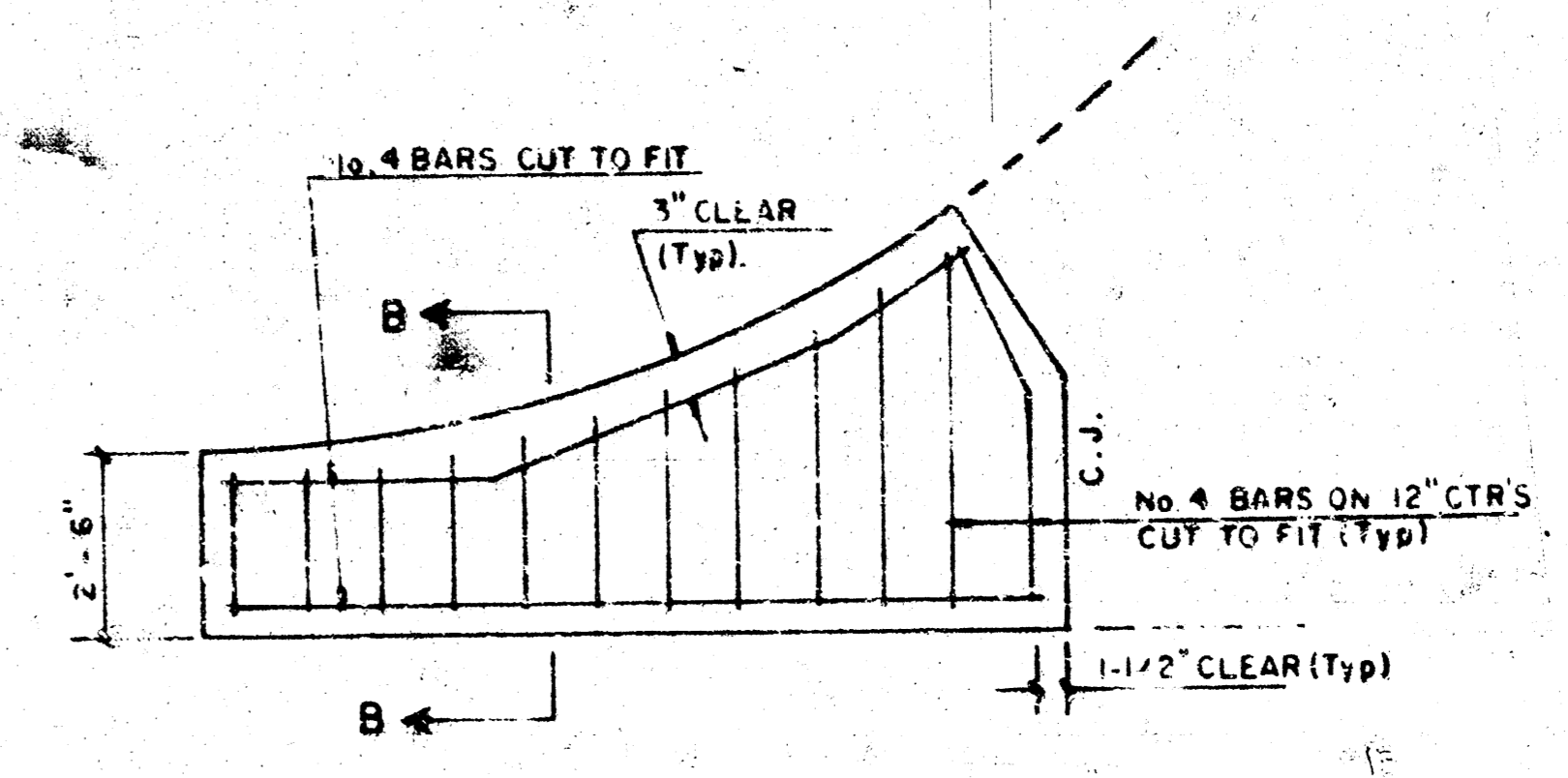
**LEGEND**  
C.J. IDENTIFIES CONTRACTION JOINT  
L.J. IDENTIFIES LONGITUDINAL JOINT



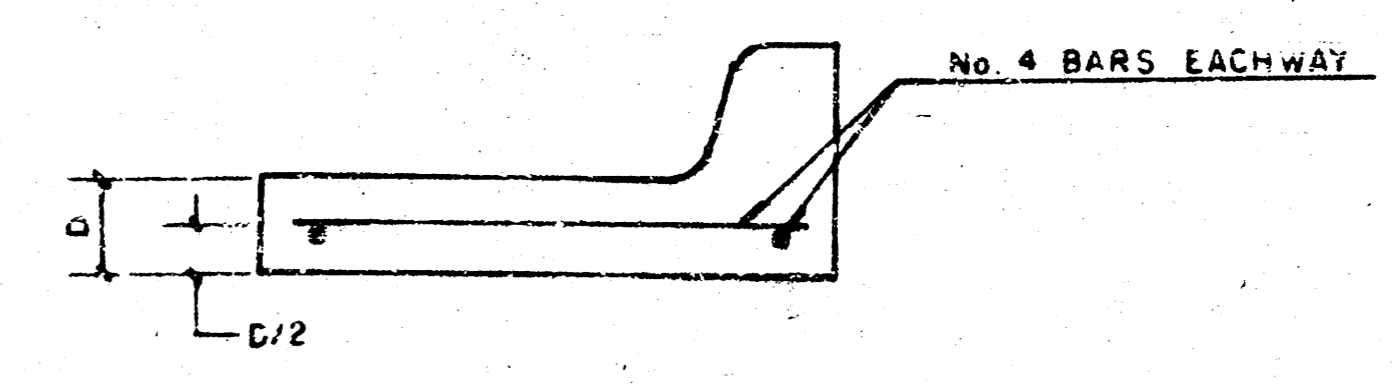
**PLAN**  
**REINFORCED VALLEY GUTTER**



**SECTION A-A**



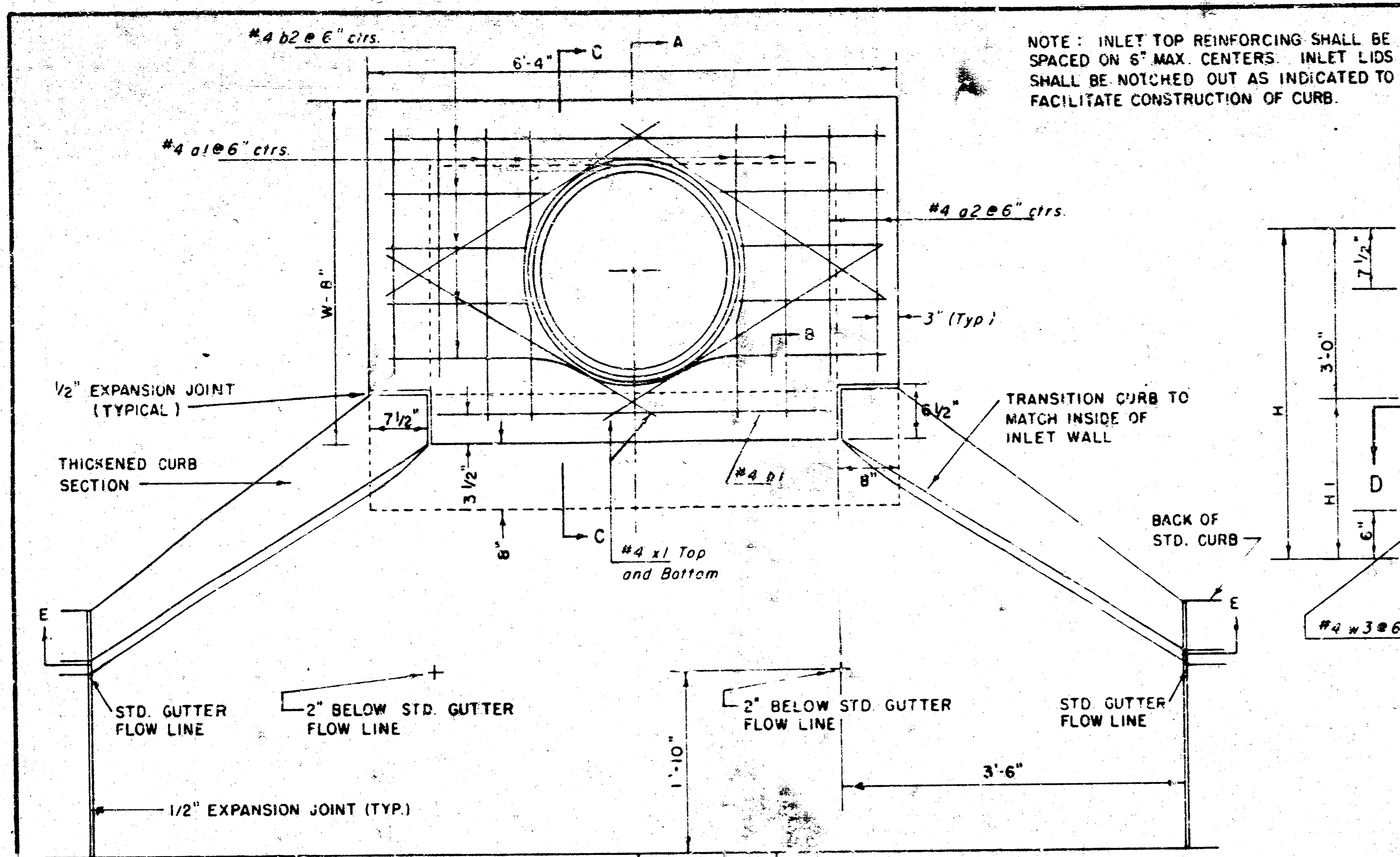
**WING REINFORCING DETAIL**



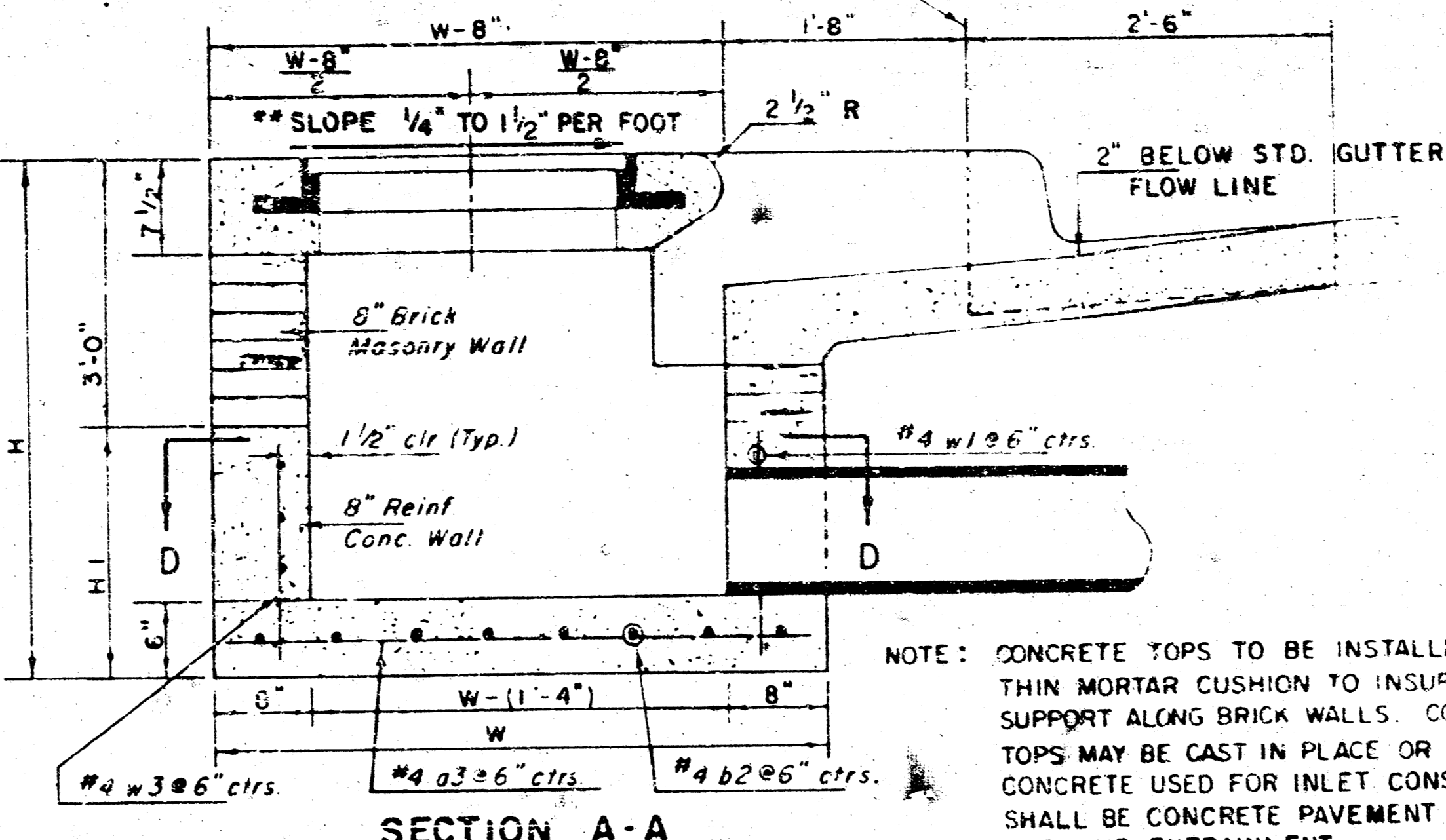
**SECTION B-B**

PROJECT DESCRIPTION  
**VALLEY GUTTER DETAILS**  
PROJECT NUMBER  
Sheet 2





NOTE: INLET TOP REINFORCING SHALL BE SPACED ON 6" MAX. CENTERS. INLET LIDS SHALL BE NOTCHED OUT AS INDICATED TO FACILITATE CONSTRUCTION OF CURB.



SECTION A-A

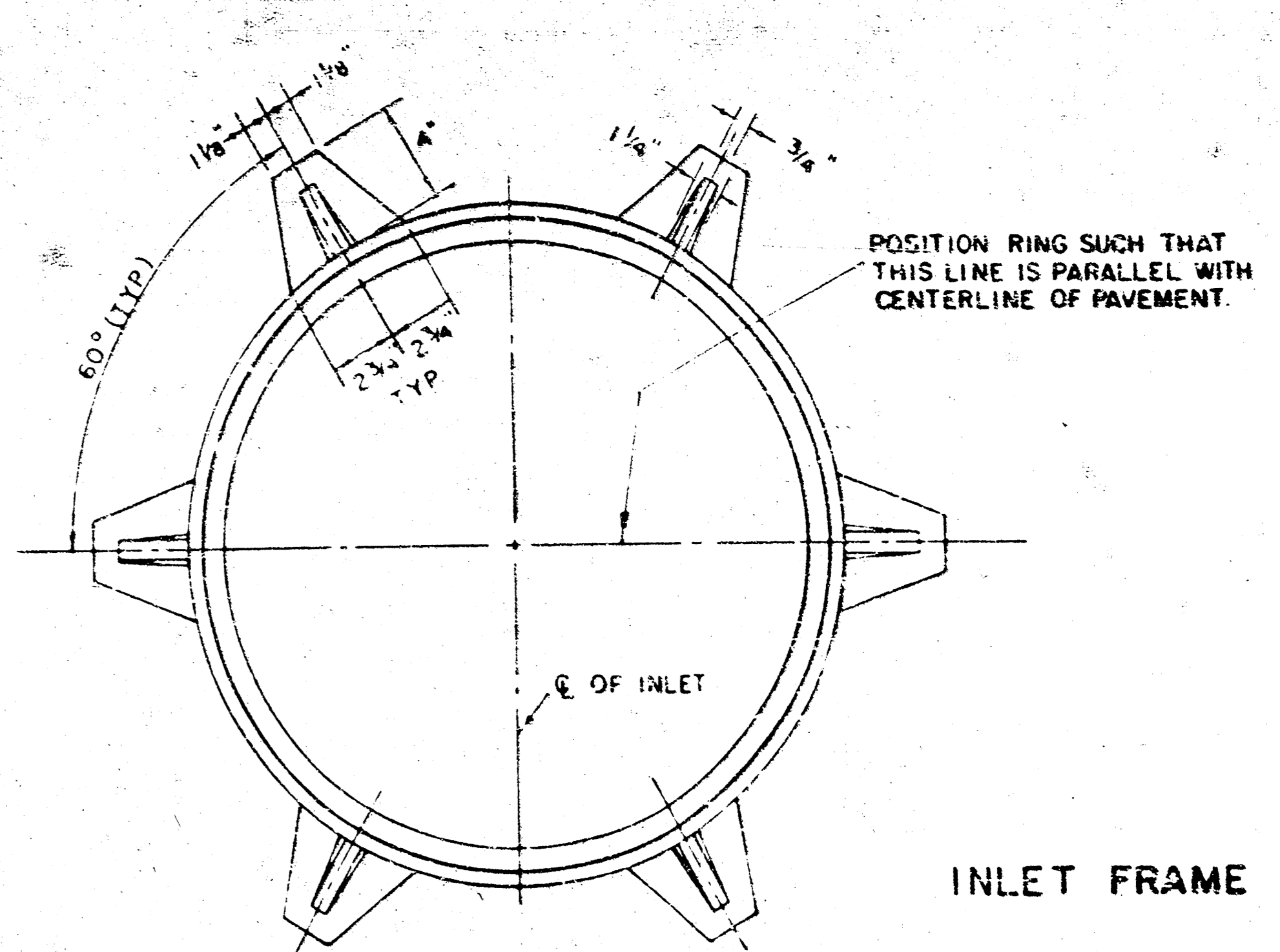
NOTE: CONTRACTOR SHALL HAVE THE OPTION OF CONSTRUCTING 8" BRICK MASONRY WALLS BETWEEN THE CONCRETE INLET BASE AND TOP ON THIS INLET WHEN W = 6'-4" AND H = 7'-0" OR LESS.

ADDITIONAL CURB AND GUTTER CONSTRUCTION NECESSARY TO CONNECT SET-BACK INLET TO PAVEMENT WILL BE PAID FOR AT THE UNIT PRICE BID FOR EACH INLET HOOKUP.

INLET INVERT SHALL BE SHAPED WITH 8" EACH SAND MIX CONCRETE TO CREATE FLOW CHANNELS AND TO IMPROVE HYDRAULIC EFFICIENCY SUCH THAT THE INLET WILL BE SELF-CLEANING BETWEEN ALL INLET AND/OR OUTLET PIPES.

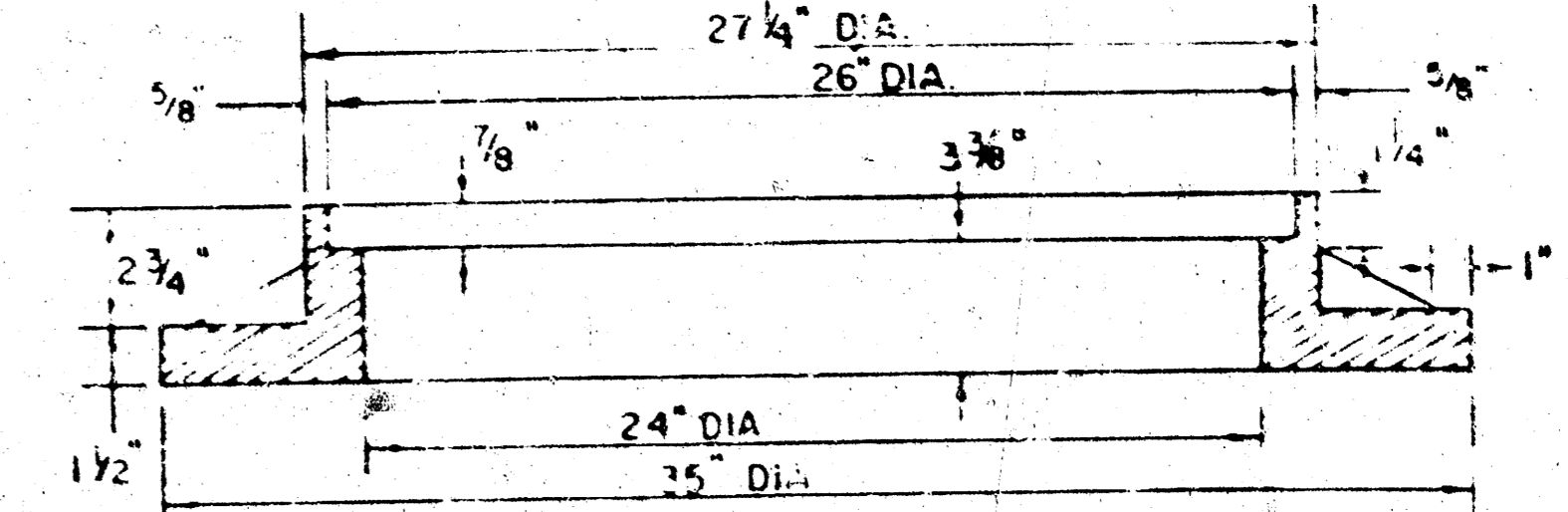
THE ENDS OF ALL PIPES INSTALLED IN INLETS SHALL BE CUT OFF FLUSH WITH THE INSIDE FACE OF THE INLET WALL.

\*\* NOTE: Slope of Inlet Tops to match Sidewalk or Parking Slopes within Limits indicated.



INLET FRAME

WEIGHT = 190 LBS.



SEE CITY OF WICHITA STANDARD MANHOLE FRAME AND COVER DETAIL SHEET FOR COVER DETAILS TO BE USED WITH INLET FRAME.

NOTE: EXPANSION JOINT ONLY IN CURB AREA WITH CONC. PAVEMENT.

PLAN

BENDING DIAGRAM

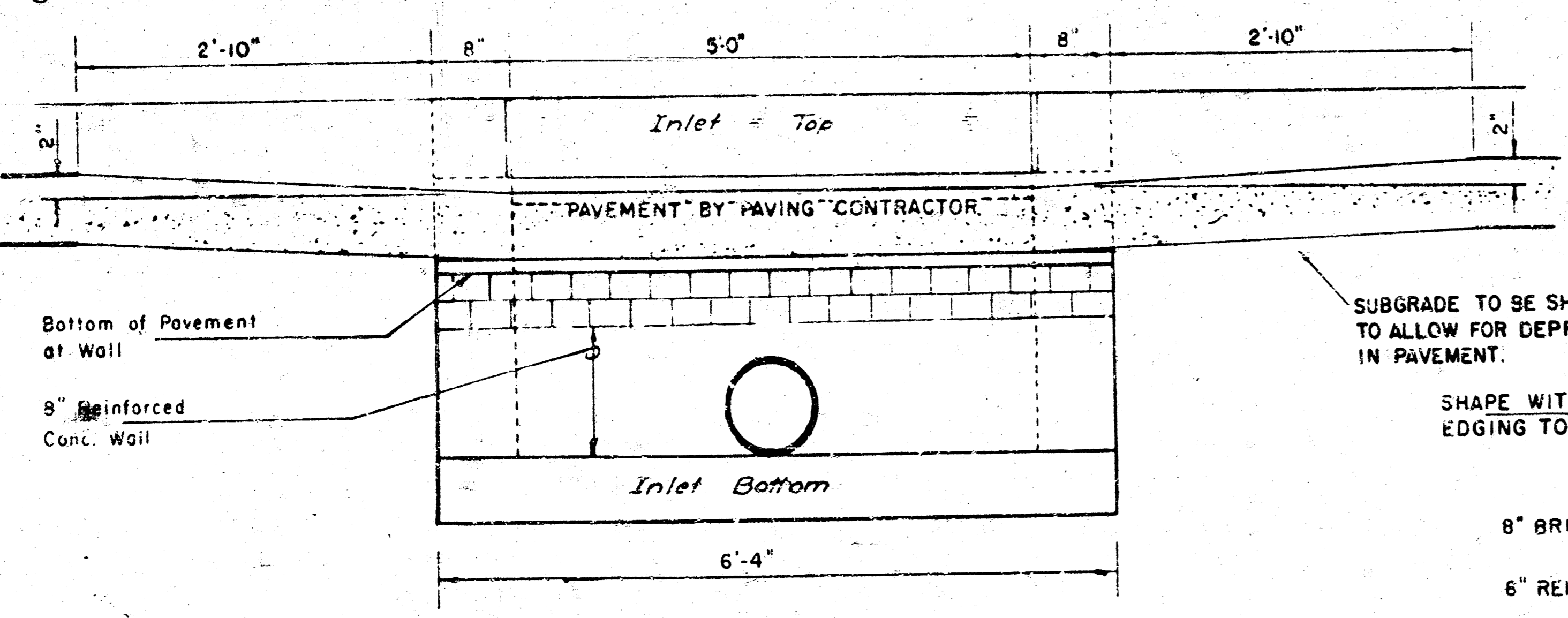
PRECAST SLAB AND FLOOR REINFORCING									
Mark	Size	No.	Length	No.	Length	No.	Length	No.	Length
a1	#4	6	6'-7"	6	8'-7"	6	10'-7"	6	12'-7"
a2	#4	4	6'-0"	4	8'-0"	4	10'-0"	4	14'-0"
a3	#4	13	4'-1"	13	5'-1"	13	6'-1"	13	8'-1"
b1	#4	1	4'-9"	1	4'-9"	1	4'-9"	1	4'-9"
b2	#4	23	6'-1"	29	8'-1"	35	6'-1"	41	6'-1"
x1	#4	8	3'-10"	8	4'-2"	8	4'-5"	8	4'-10"

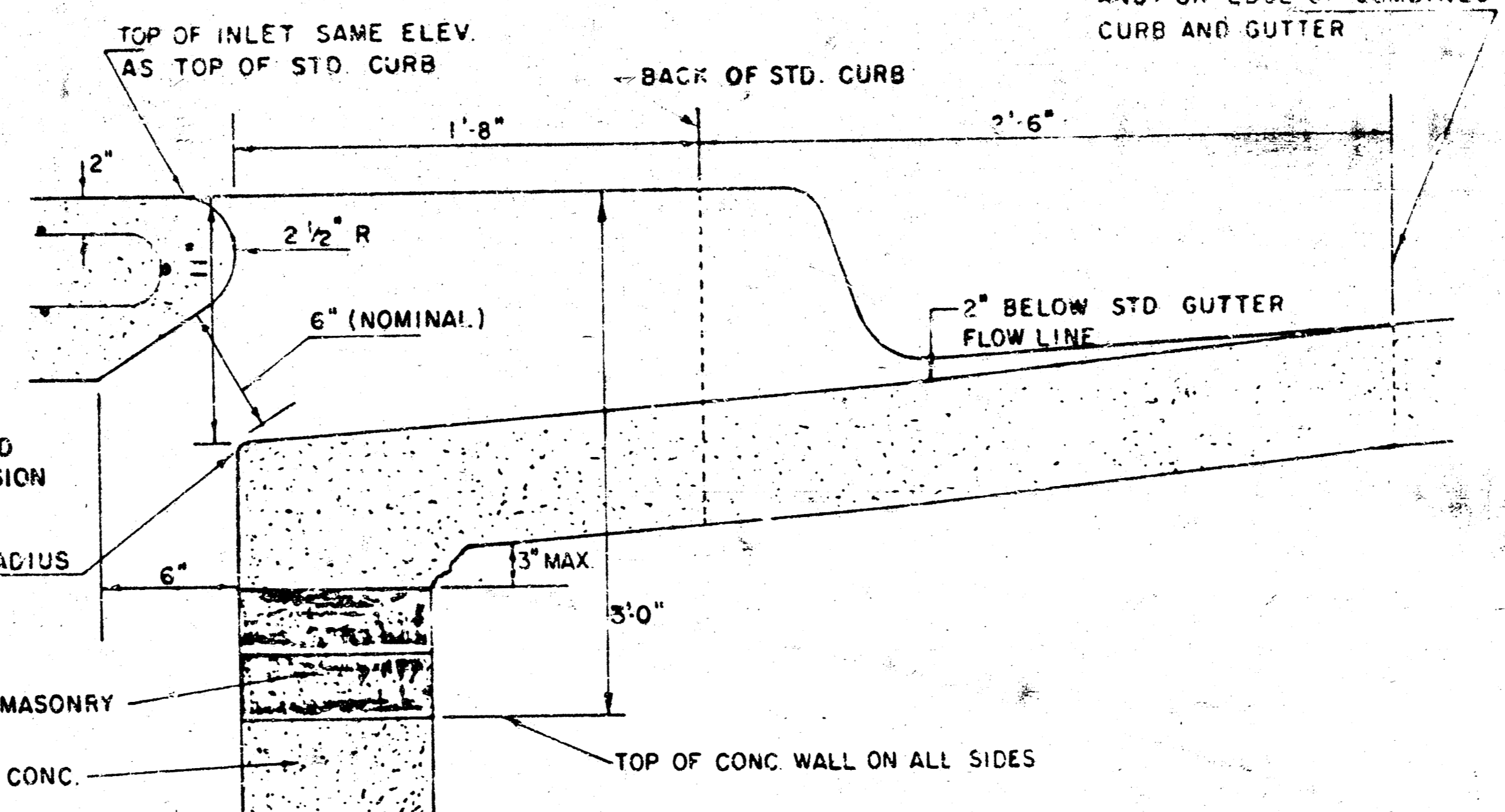
WALL REINFORCING									
Mark	Size	No.	Length	No.	Length	No.	Length	No.	Length
w1	#4	7	6'-1"	7	6'-1"	7	6'-1"	7	6'-1"
w2	#4	7	4'-1"	7	5'-1"	7	6'-1"	7	6'-1"
w3	#4	32	2	36	2	40	2	44	2

STANDARD CURB INLET PRECAST TOPS			
W	PRECAST TOP SIZE	PIPE SIZE	CU YD. CONC.
4'-4"	3'6" x 6'4" x 7 1/2"	21" B SMALLER	0.38 ±
5'-4"	4'8" x 6'4" x 7 1/2"	24" B 30"	0.51 ±
6'-4"	5'8" x 6'4" x 7 1/2"	36" B 42"	0.64 ±
7'-4"	6'8" x 6'4" x 7 1/2"	48" B 54"	0.77 ±
8'-4"	7'8" x 6'4" x 7 1/2"	60" B 66"	0.90 ±

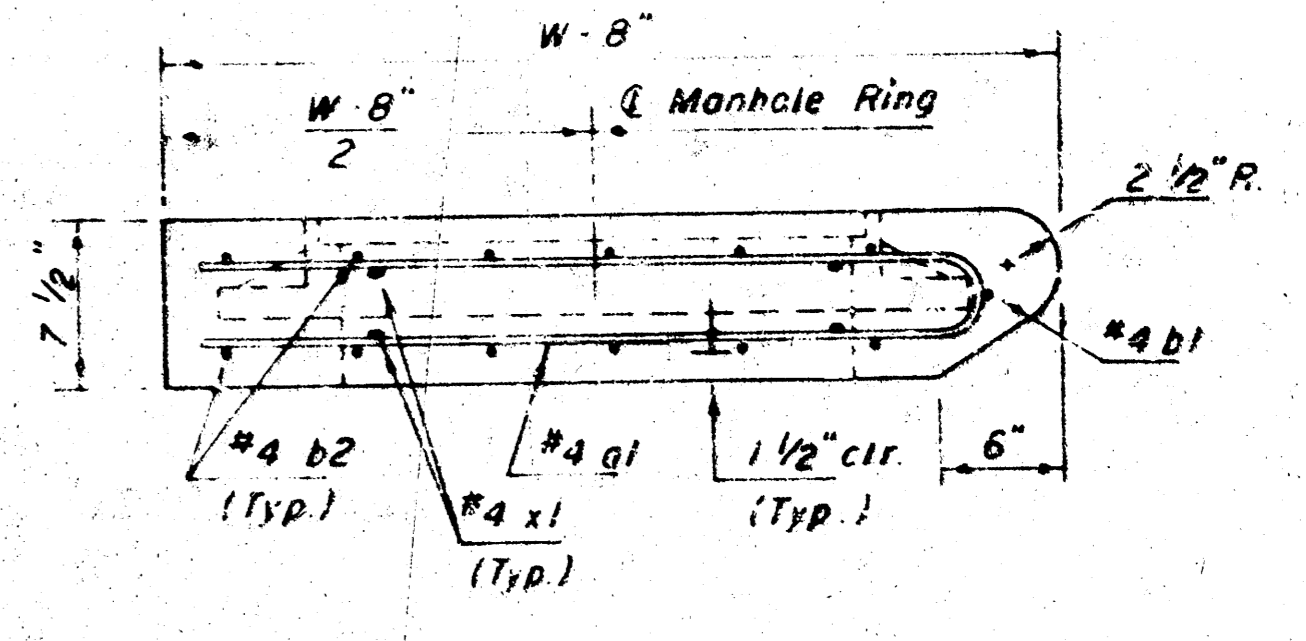
1 Field bend or cut Reinforcing as required for clearance.  
 ① 4(HI-12"), (HI-12") Round down to nearest 0.5"  
 ② HI-3"



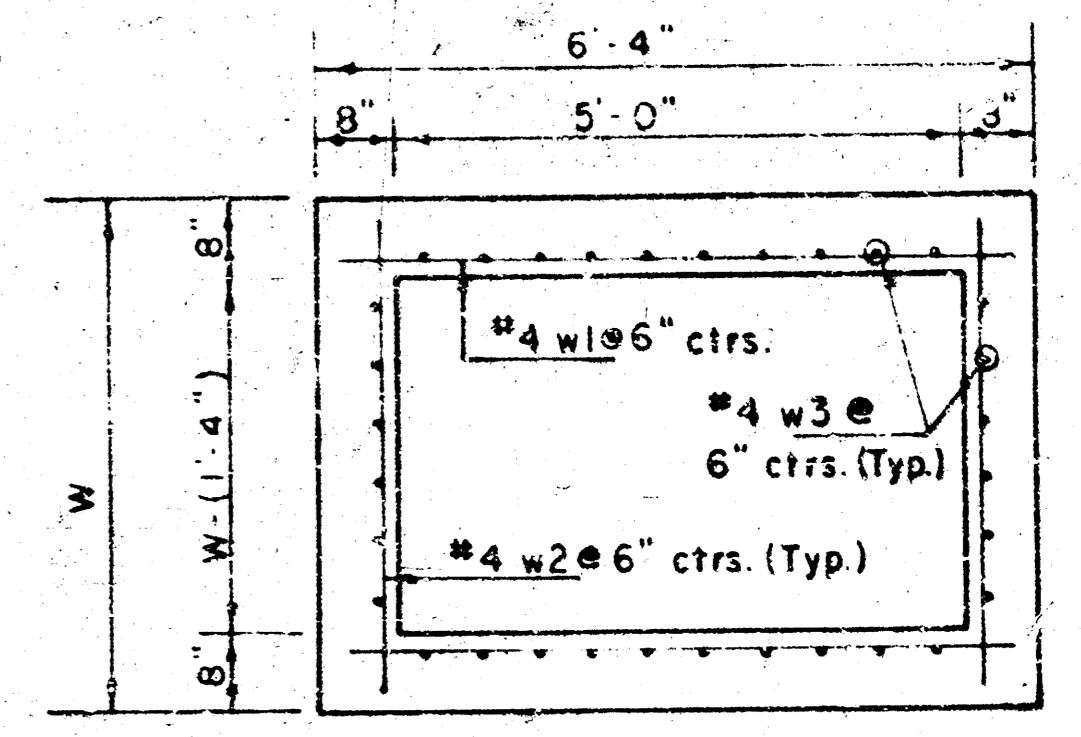
SECTION E-E



SECTION B-B



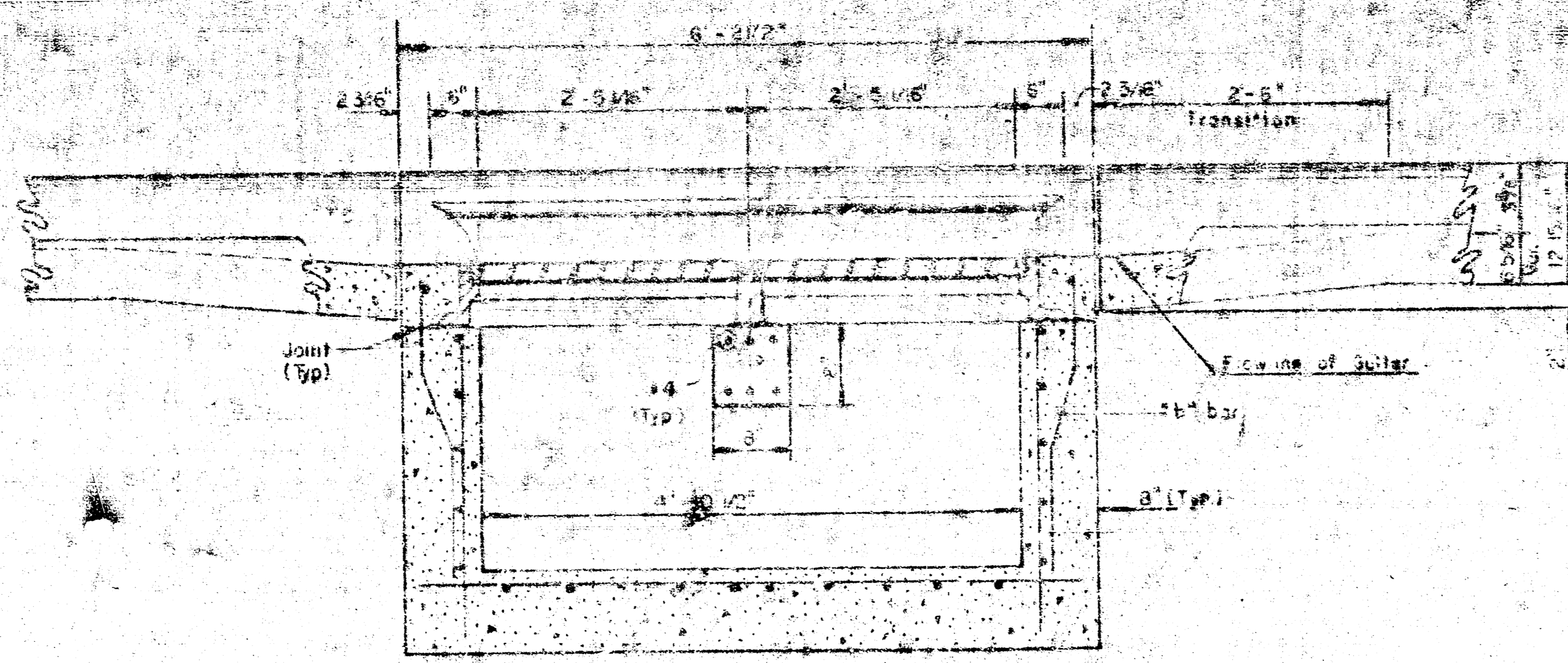
SECTION C-C



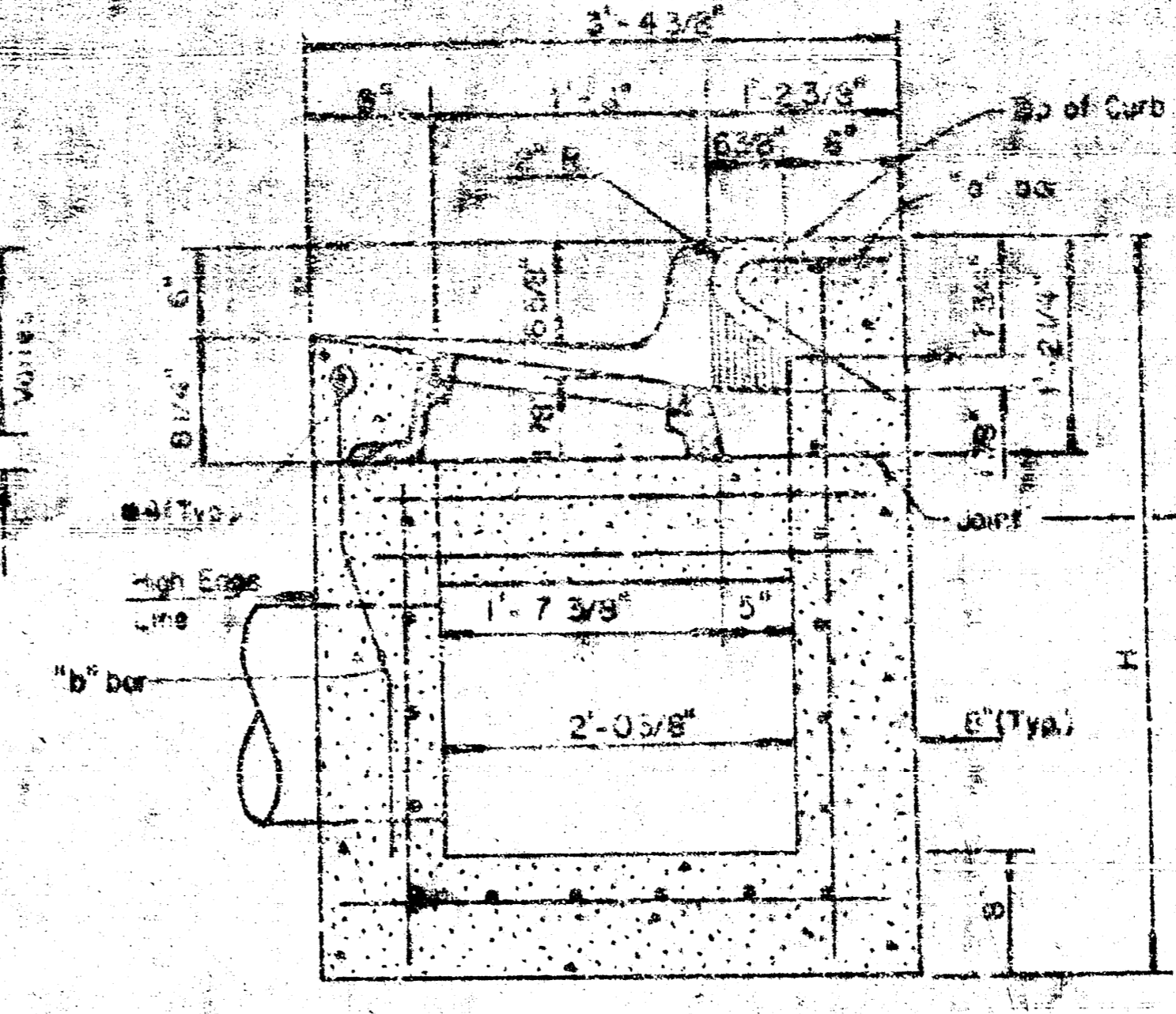
SECTION D-D

REVISED 11-30-1988  
 REVISED 12-21-1984  
 Revised 2-16-1989

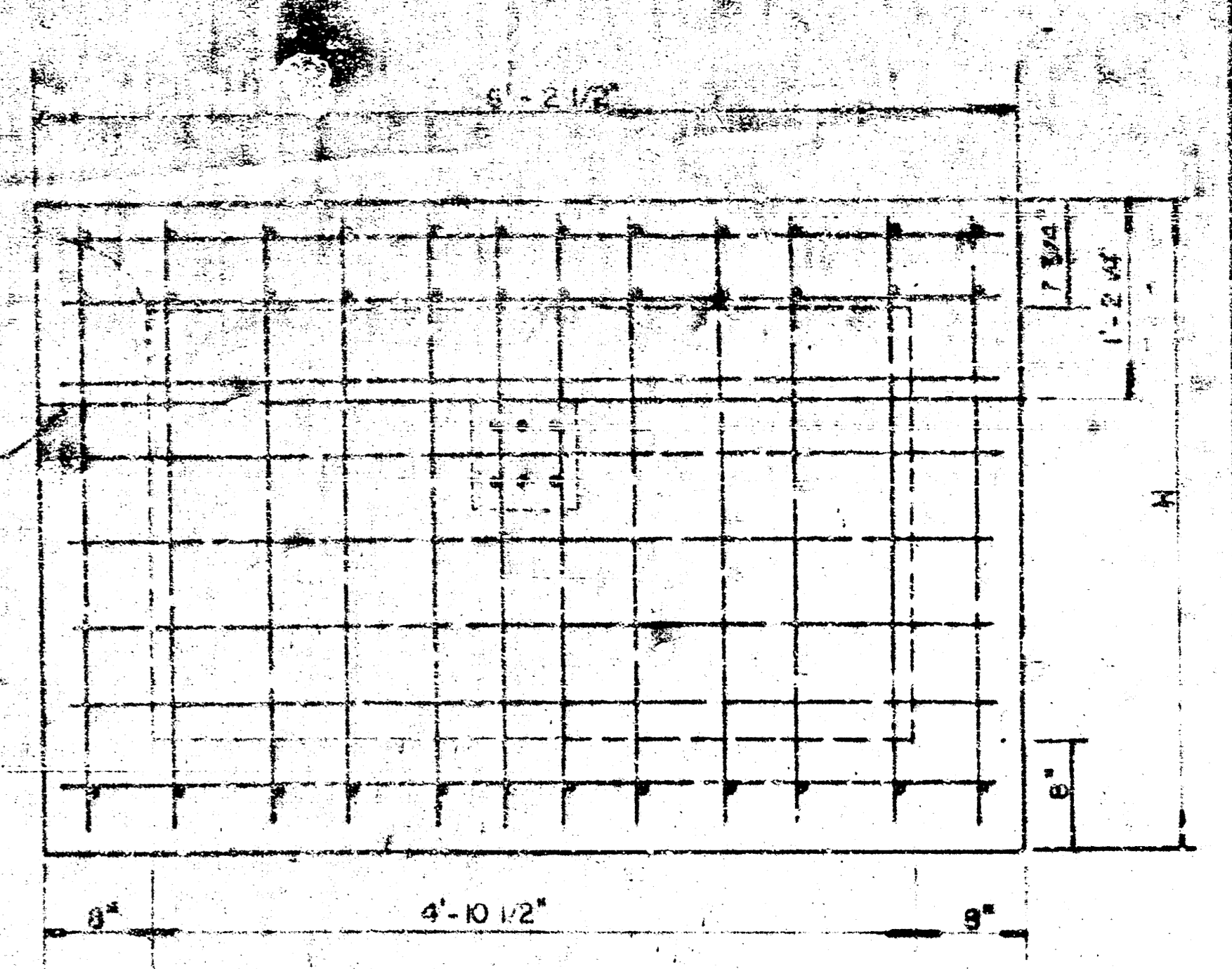
DETAIL STANDARD TYPE IA CURB INLET  
 CITY OF WICHITA, KANSAS  
 INLET OPENING = 6" x 5' 0"  
 JUNE 1984  
 Sheet 10



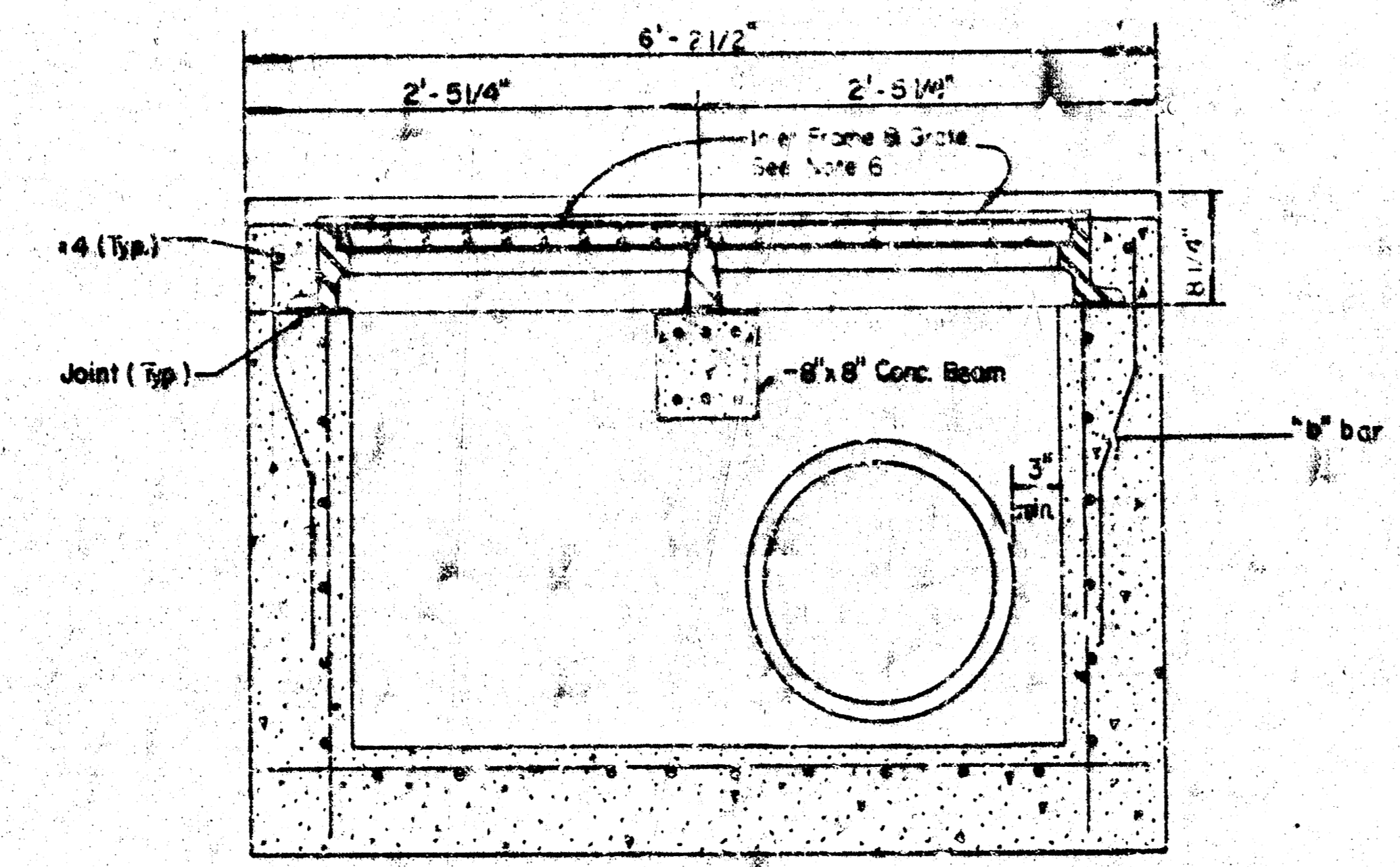
SECTION C-C



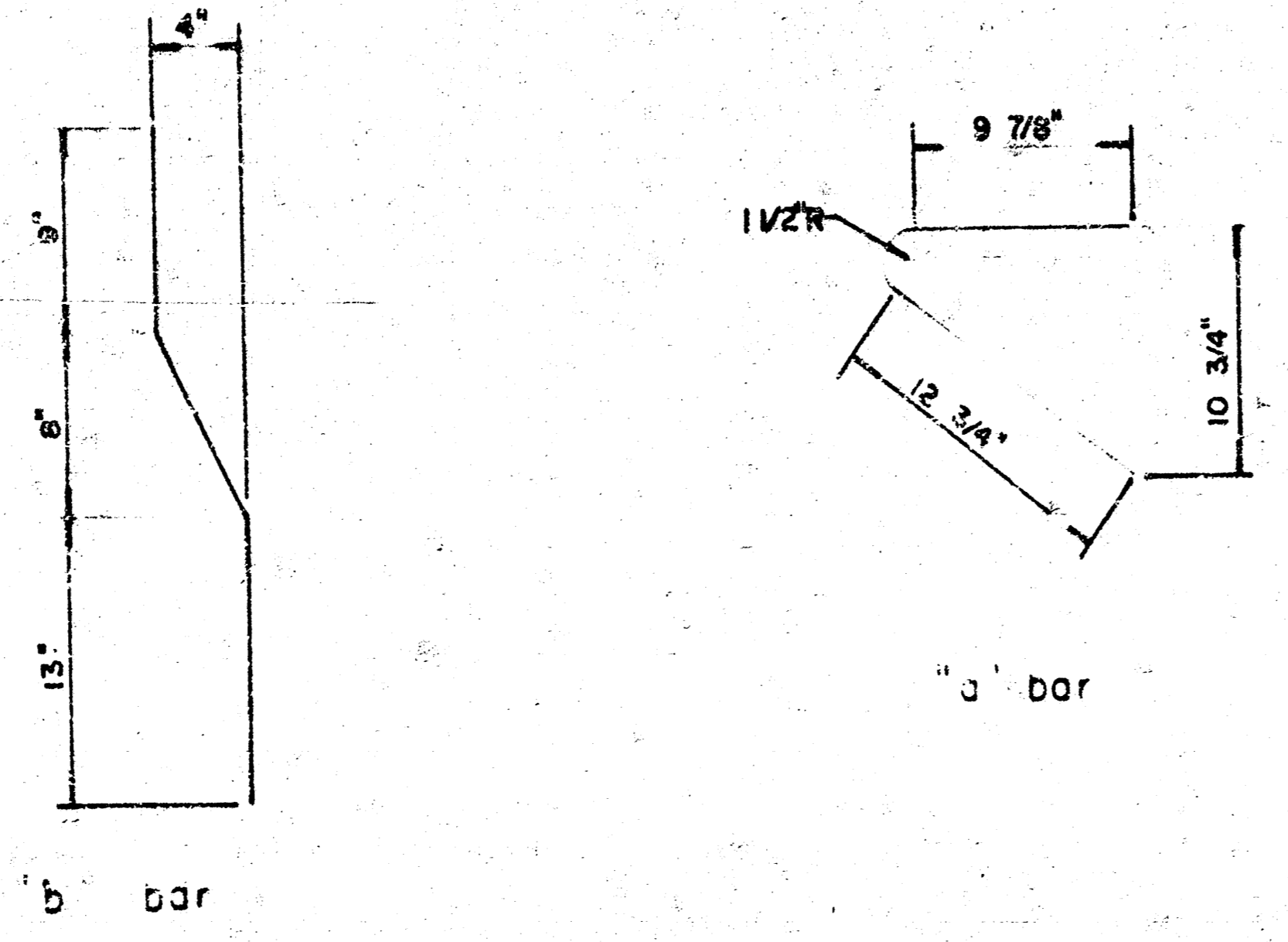
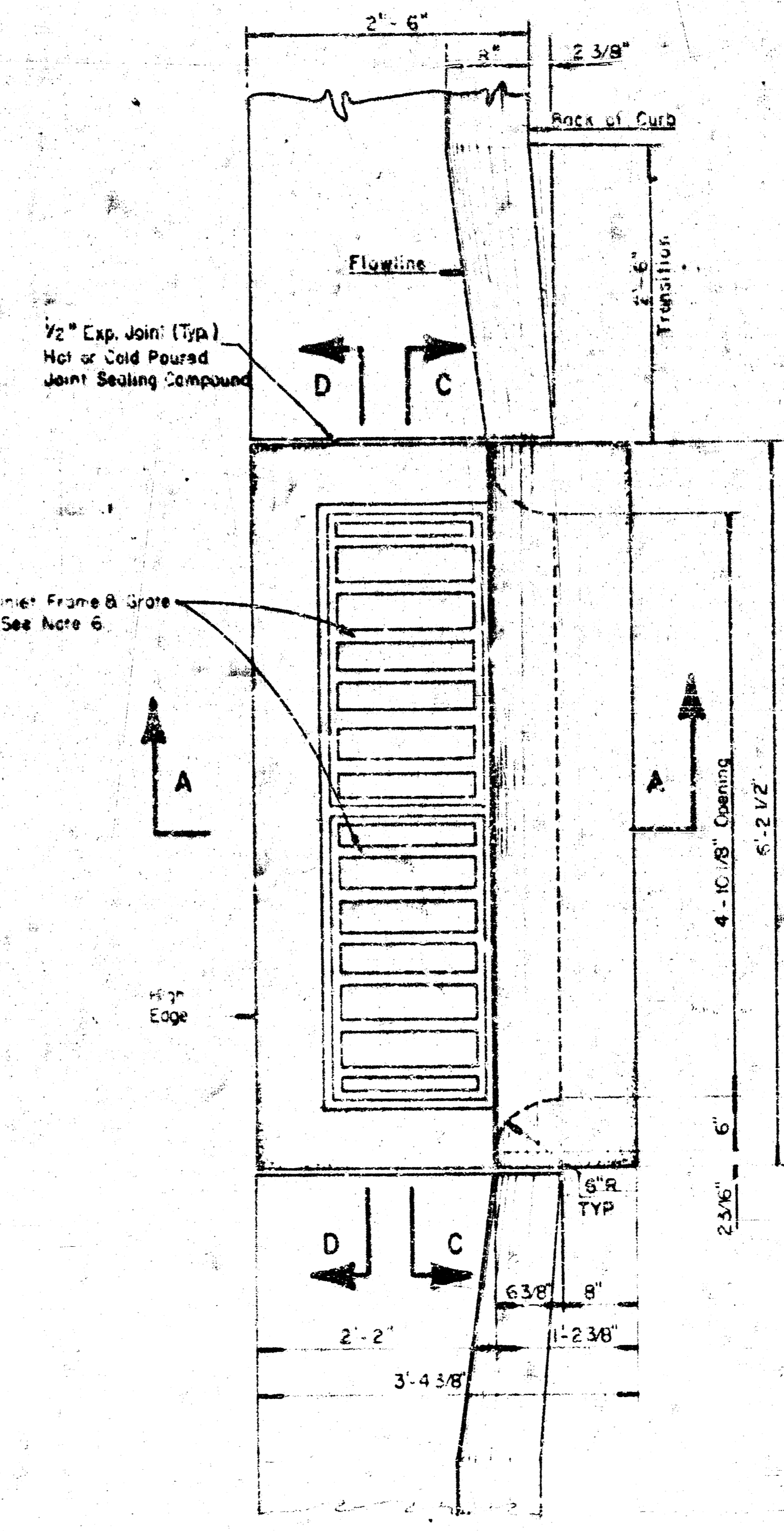
SECTION A-A



REAR WALL



SECTION D-D



BENDING DIAGRAM

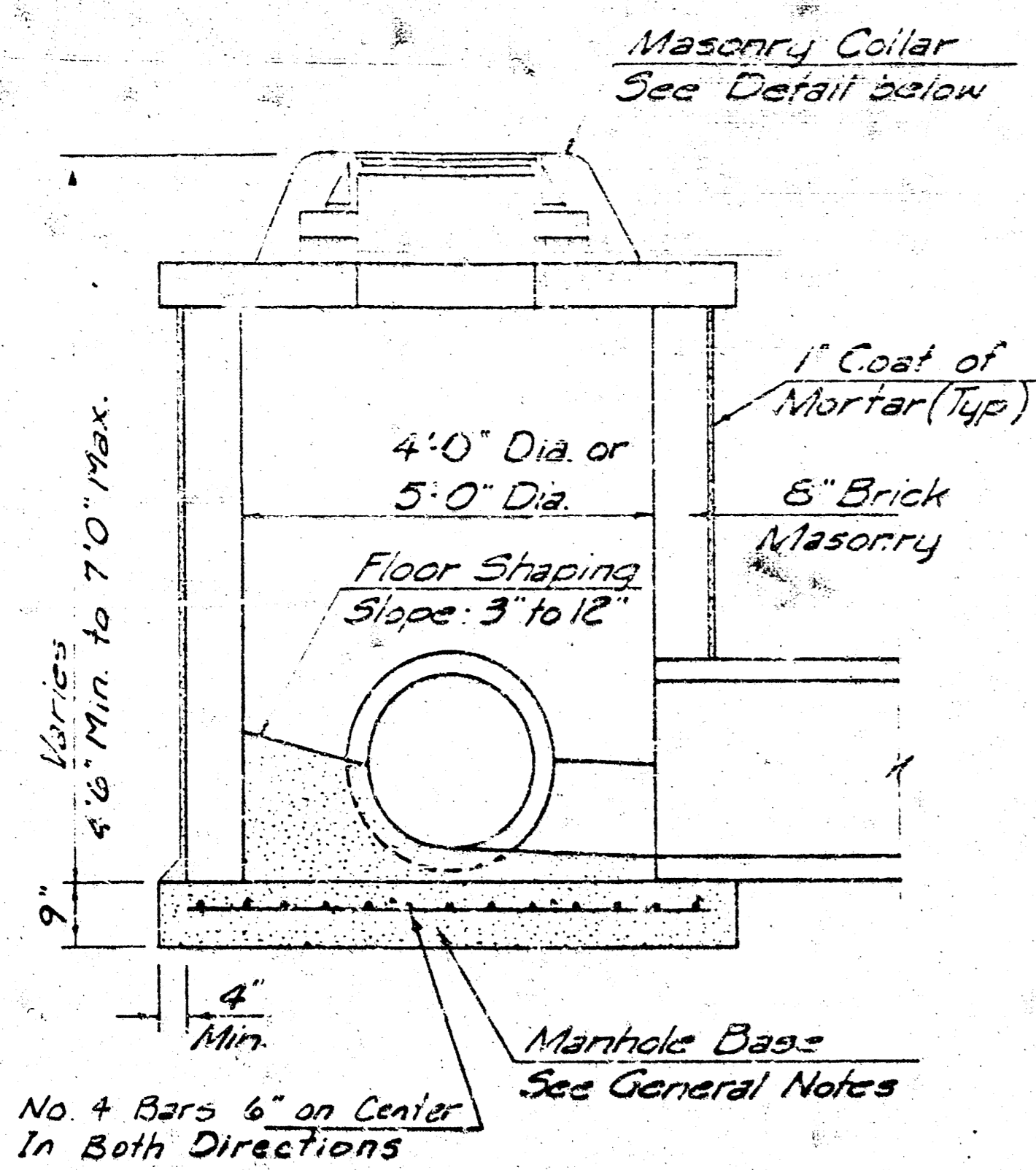
GENERAL NOTES:

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 3 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 1 1/2 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 Heenan R-3288 HM Inlet Frame with Two Piece Grate or approved equal inlet frame to be proof 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 direction of the grate shall be oriented with respect to the flow arrows shown on the plans.

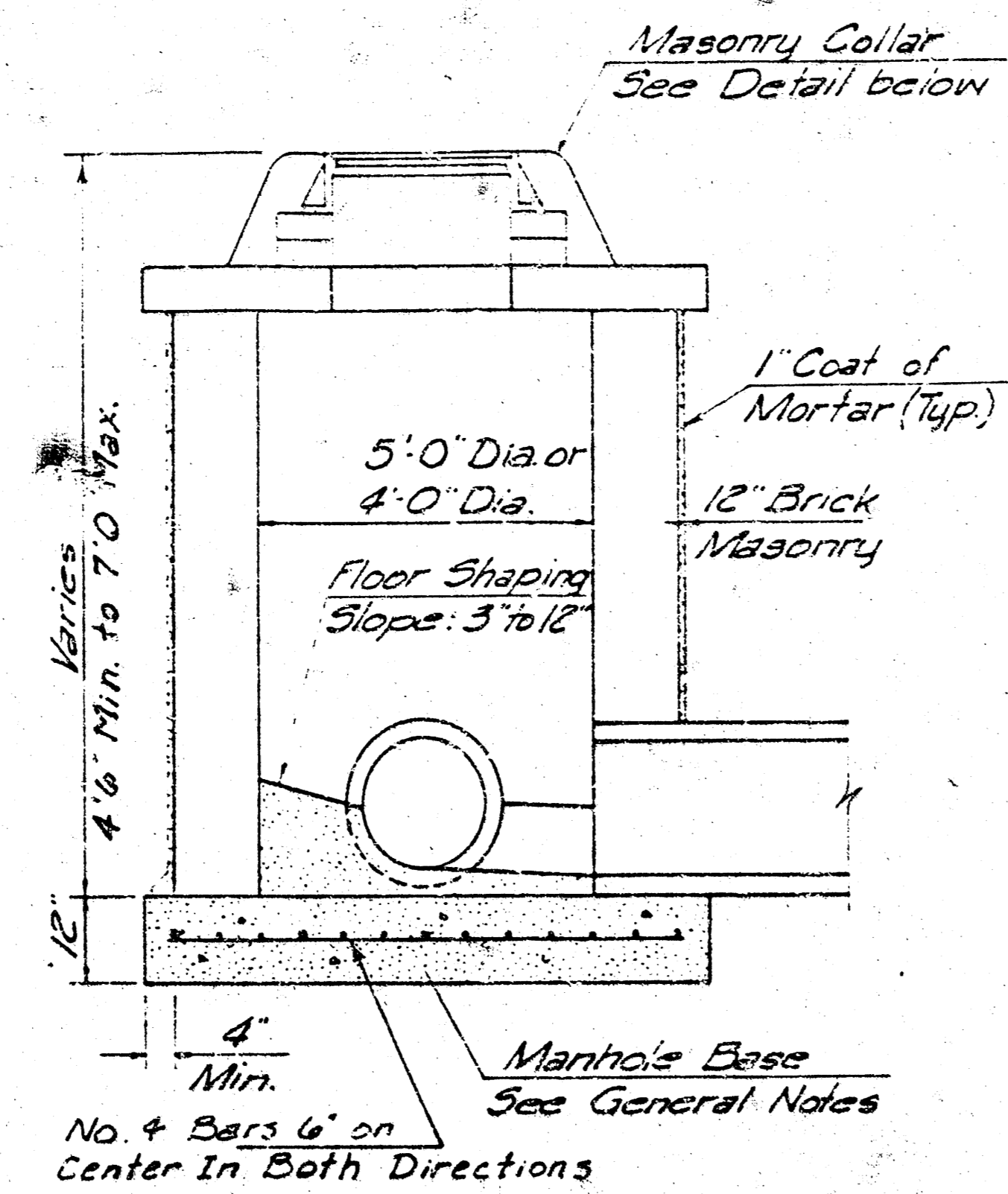
DETAIL STANDARD TYPE II CURB INLET

CITY OF WICHITA, KANSAS

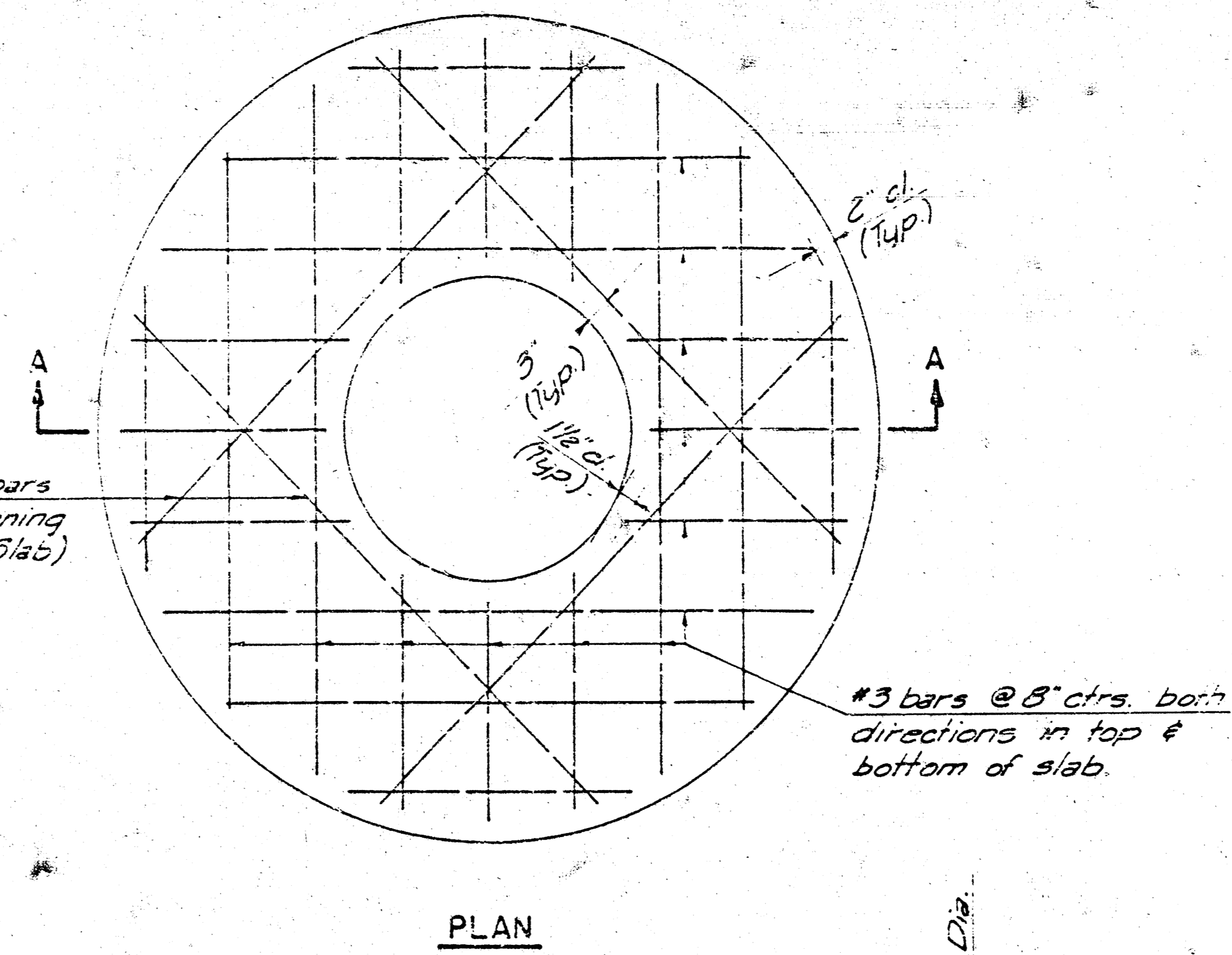
INLET OPENING - 6" x 4'-10 1/8"



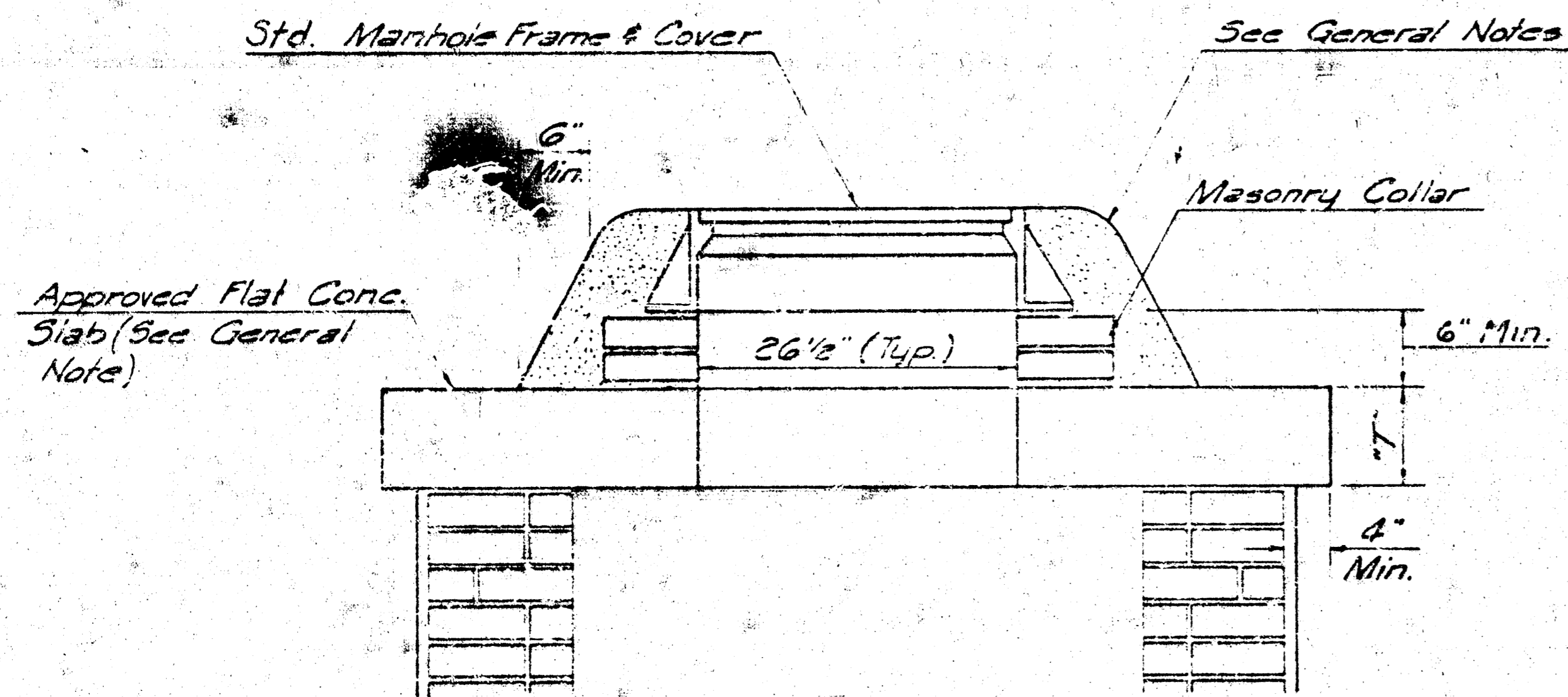
SHALLOW TYPE "A" MANHOLE



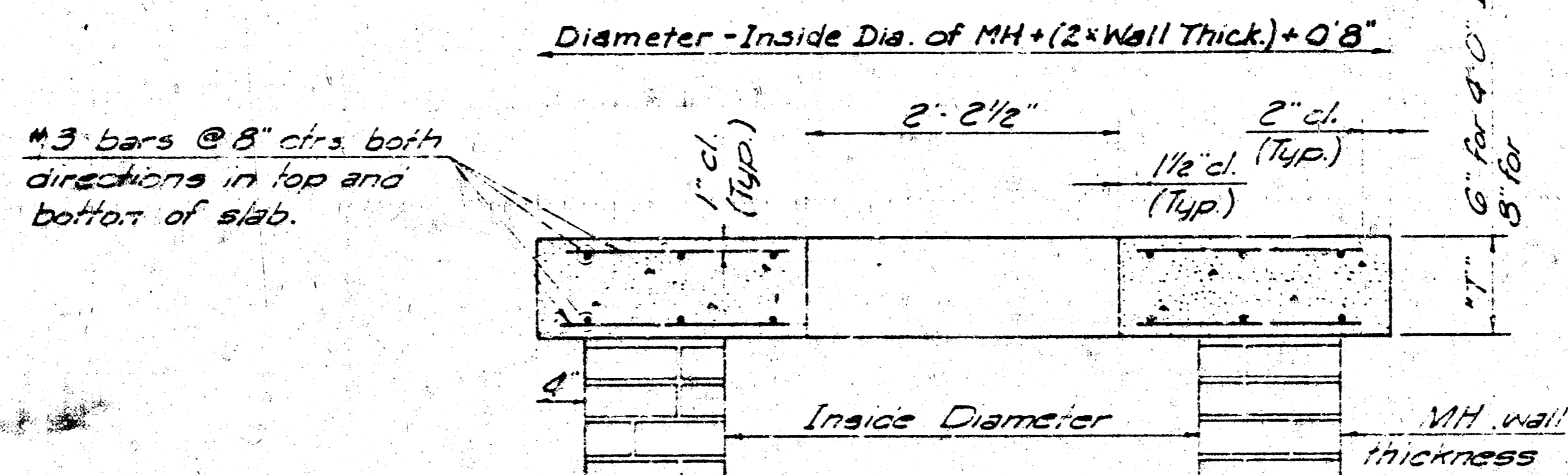
SHALLOW TYPE "B" MANHOLE



PLAN

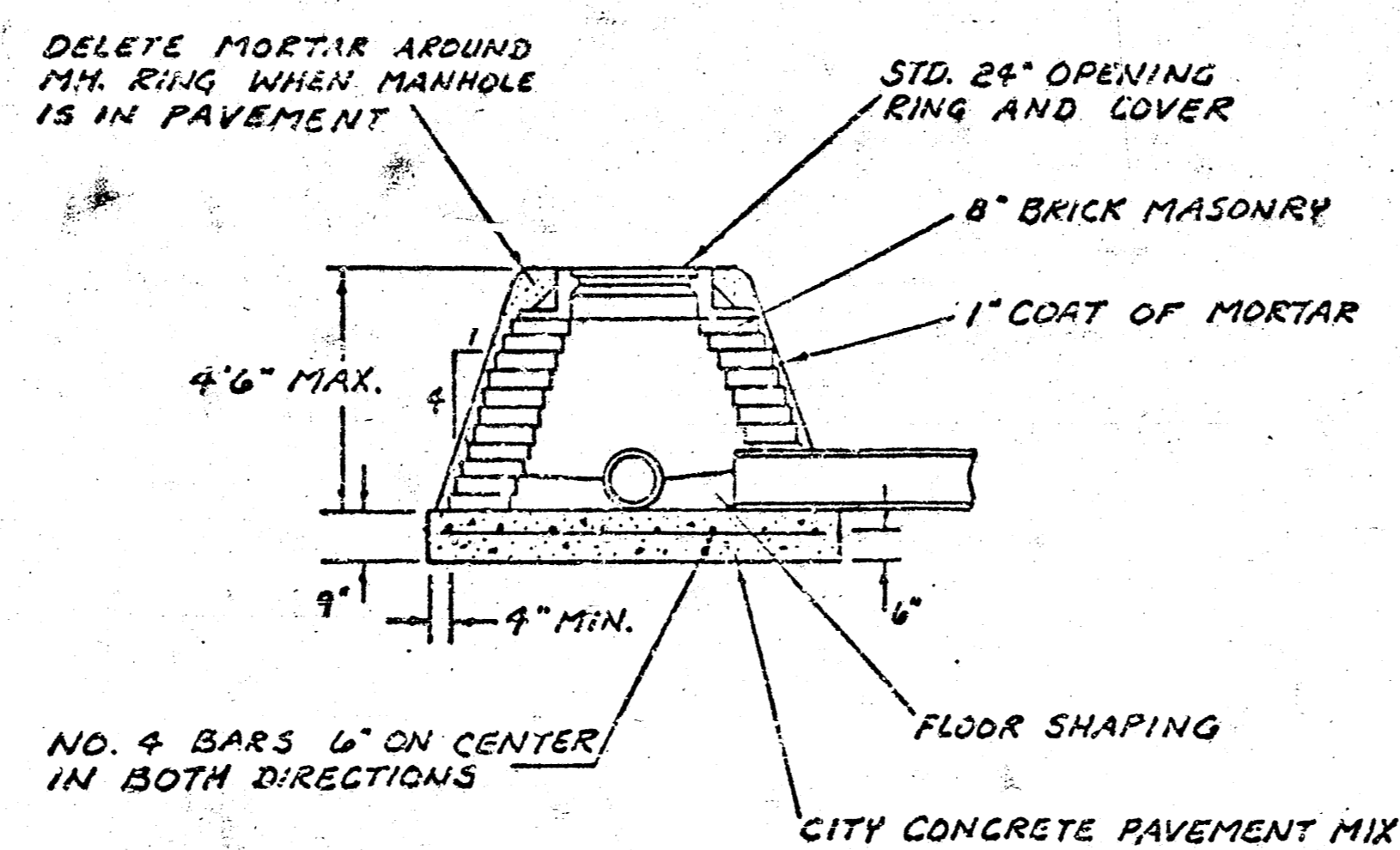


MASONRY COLLAR DETAIL

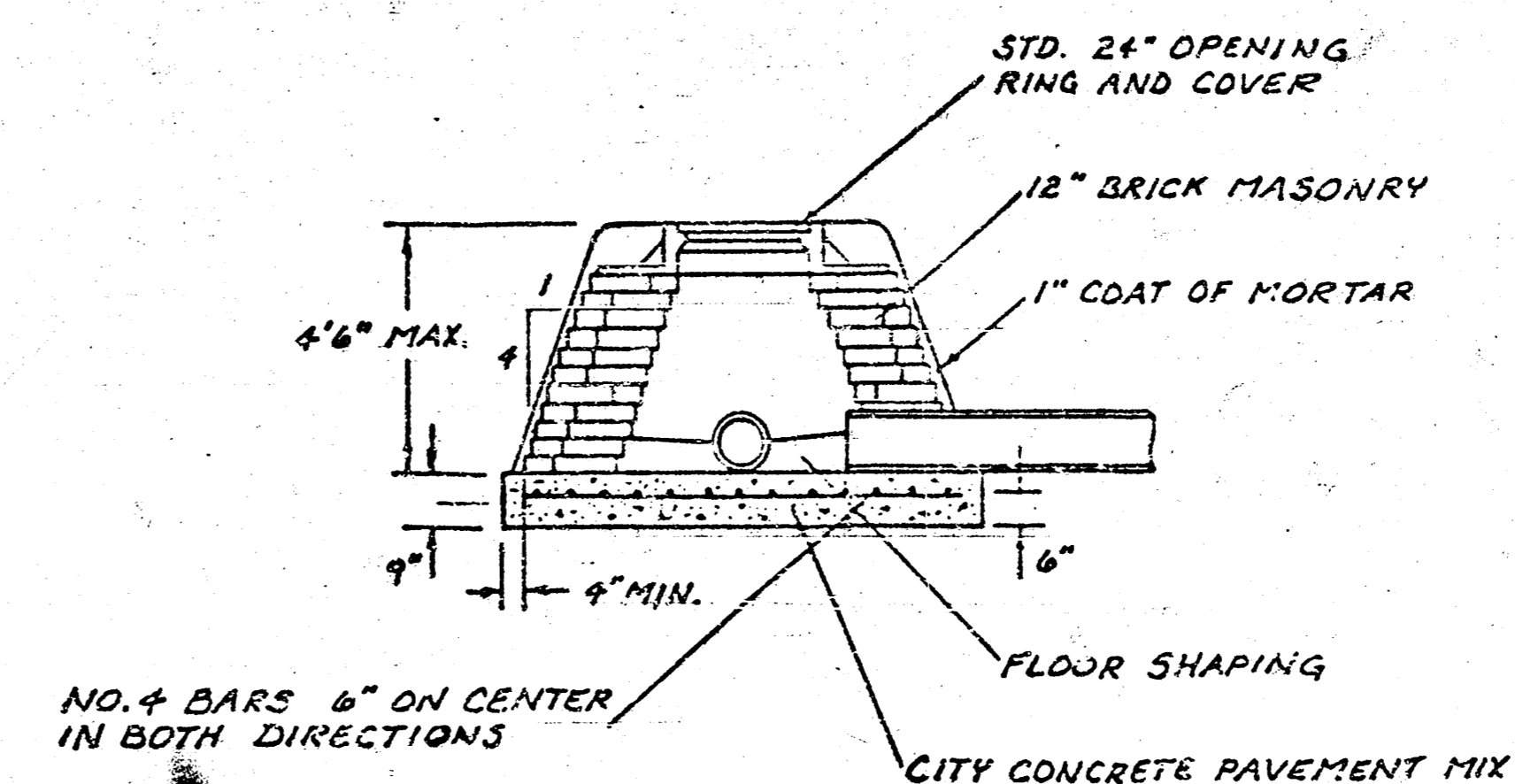


SECTION A-A

FLAT CONCRETE SLAB DETAILS



SPECIAL SHALLOW TYPE 'A' MANHOLE



SPECIAL SHALLOW TYPE 'B' MANHOLE

GENERAL NOTES

- 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 CEMENT MIX WITHOUT AIR ENTRAINING AD MIXTURE. 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 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". COMPLETED MANHOLE SHALL BE WITHOUT LEAKS AND WATER TIGHT.
- 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 5" 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.
- 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. 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 NEAR 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.
- 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 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.
- 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.
- THE CROWNS OF INFLOWING PIPES SHALL NEVER BE SET LOWER THAN THE CROWN OF THE OUTFLOWING PIPE.
- 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 MANHOLES  
TYPE 'A' AND TYPE 'B'

Designed by	Checked by
Drawn by	Job No.

# MANHOLE FRAME AND COVER DETAIL

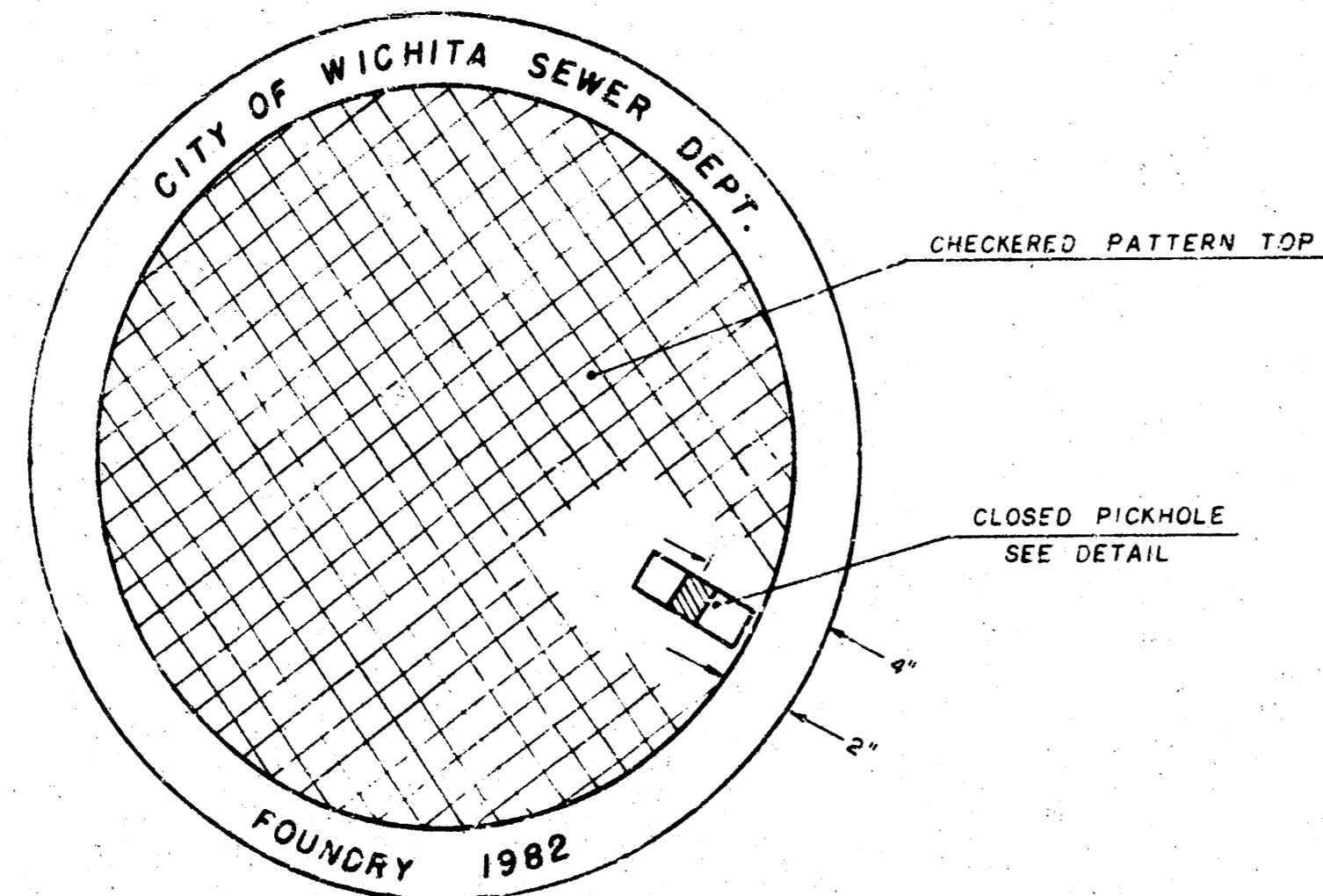
ADOPTED AS STANDARD DESIGN

BY

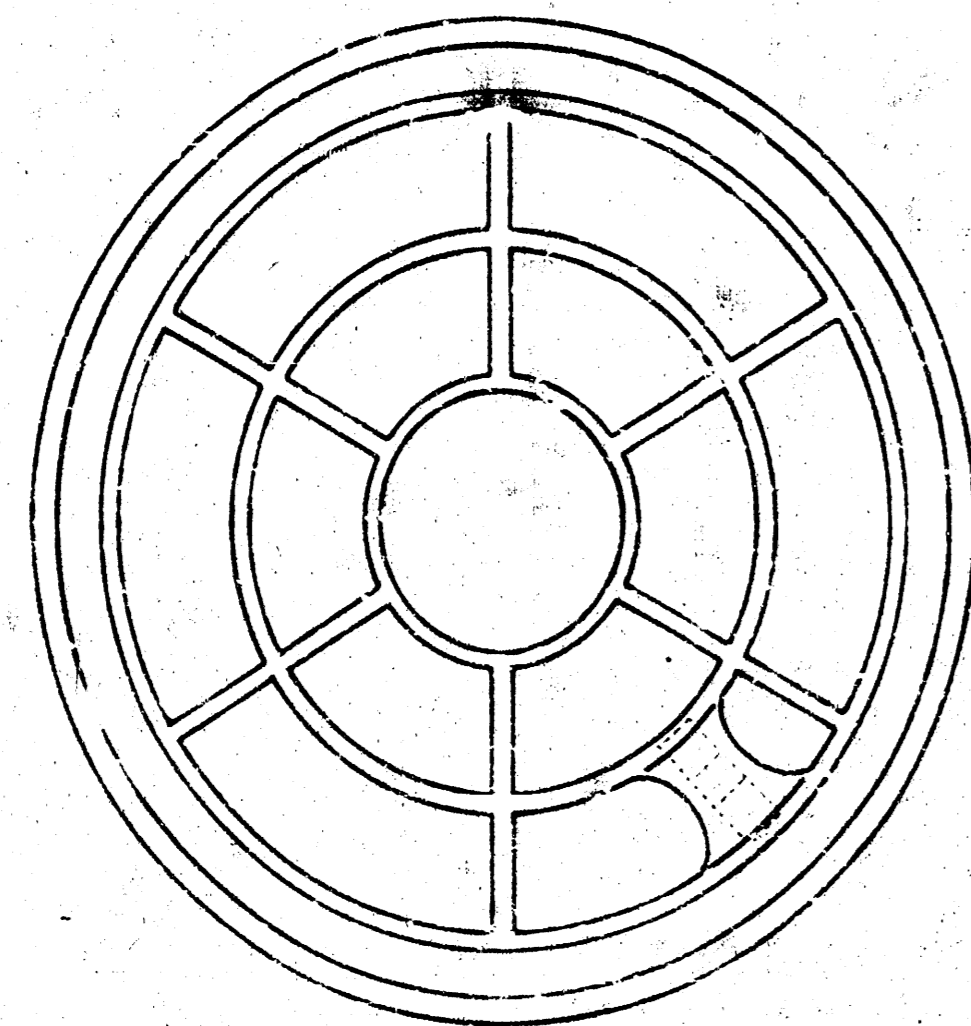
City of Wichita, Kansas

## MANHOLE COVER

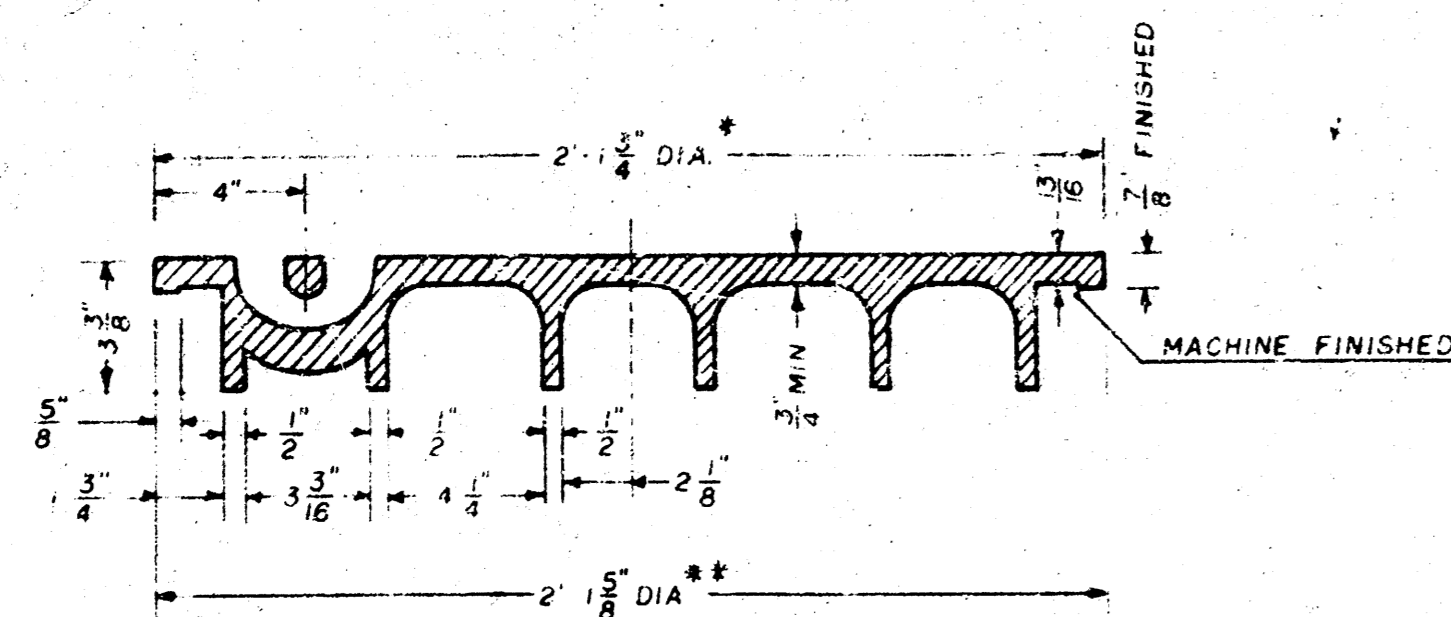
Weight: 180 Lbs.



TOP VIEW



BOTTOM VIEW

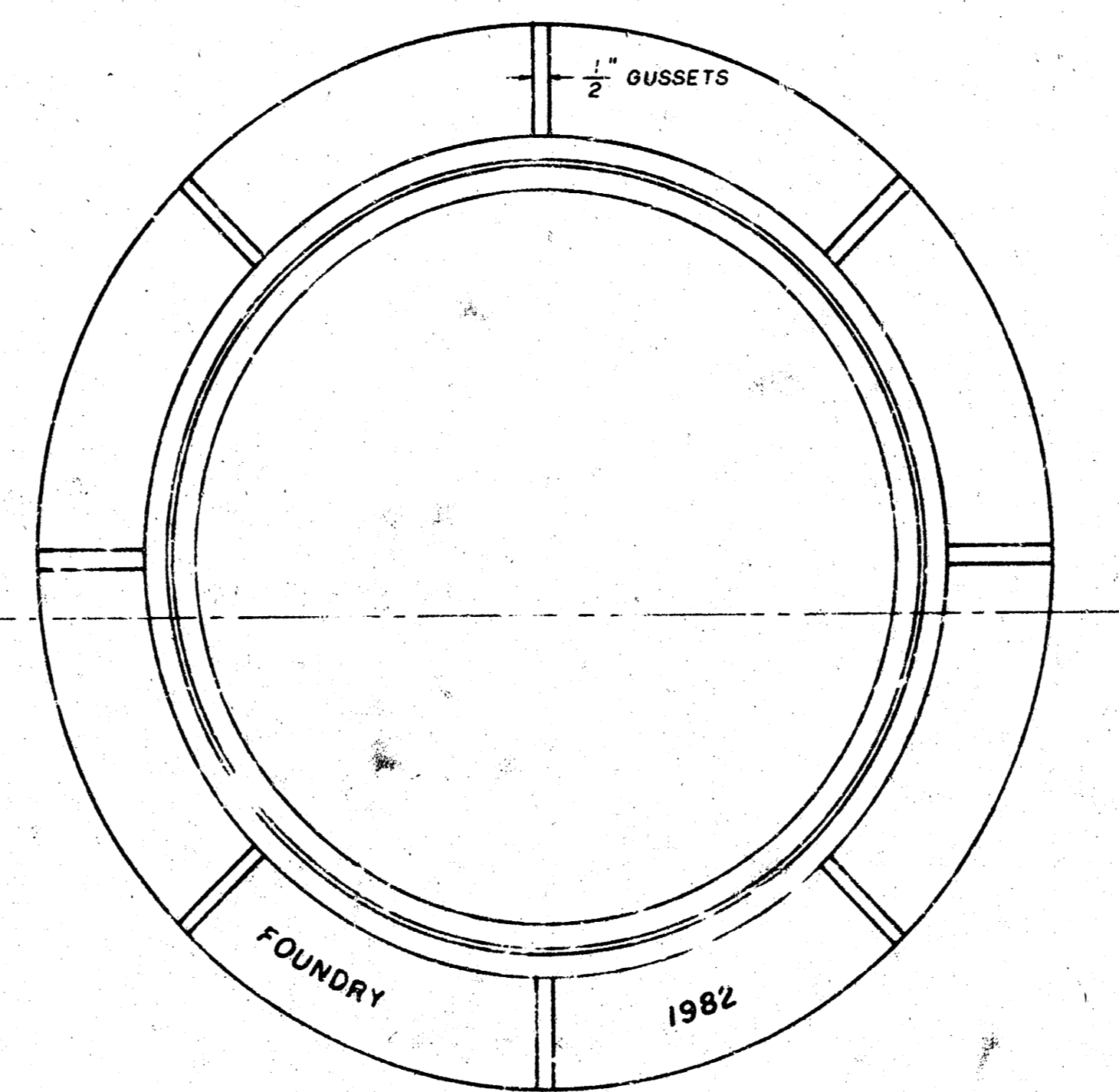


SECTION VIEW

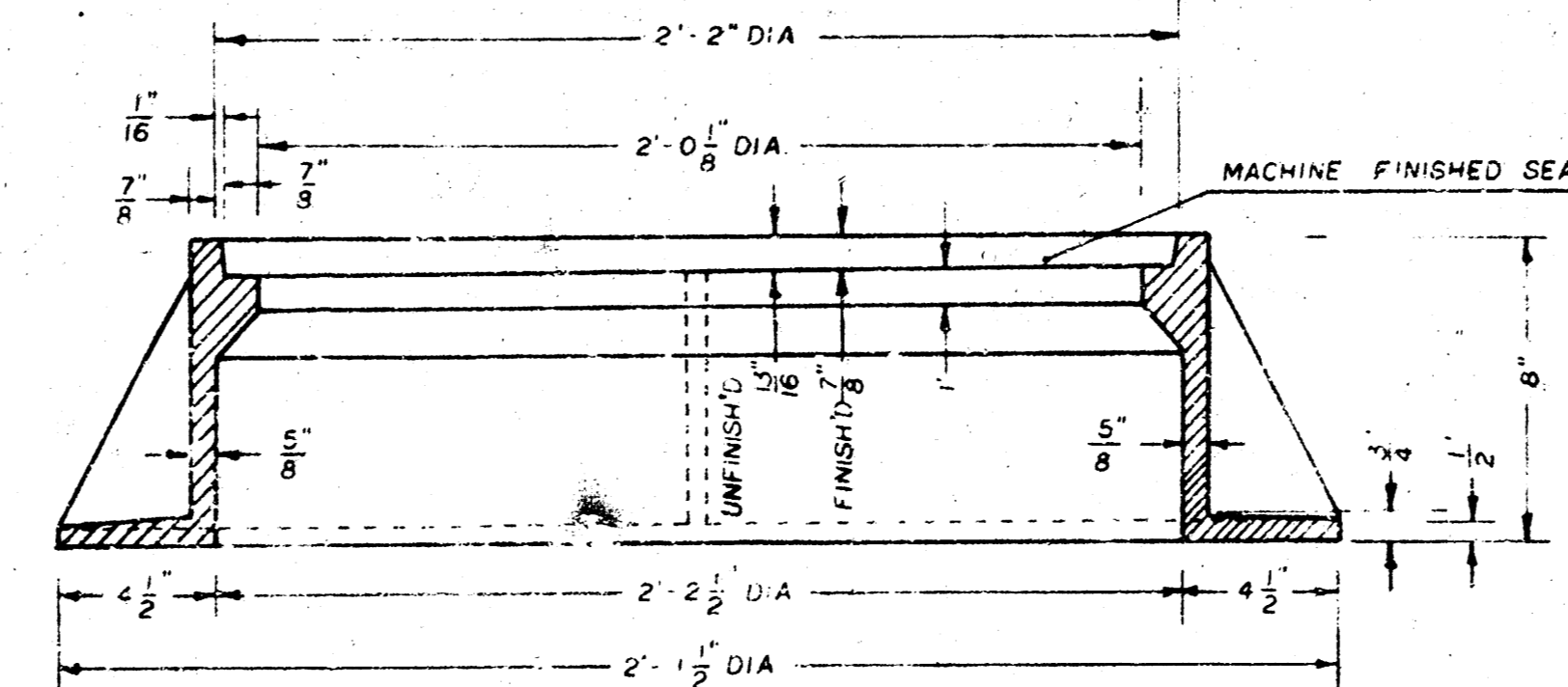
\* OUTSIDE DIA TOP OF COVER  
\*\* OUTSIDE DIA BOTTOM OF COVER

## MANHOLE FRAME

Weight: 240 Lbs.

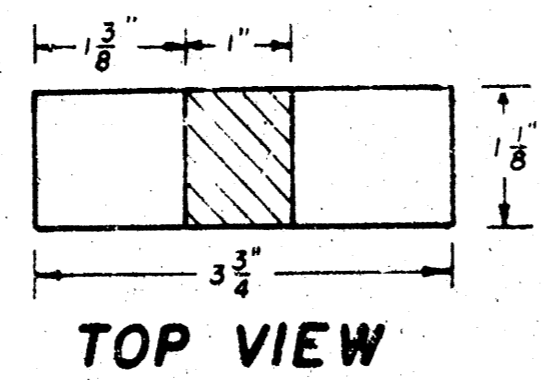


TOP VIEW

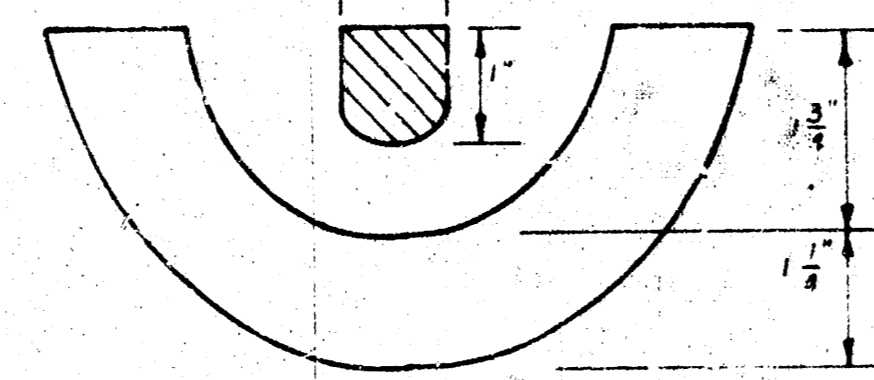


SECTION A-A

## PICKHOLE DETAIL



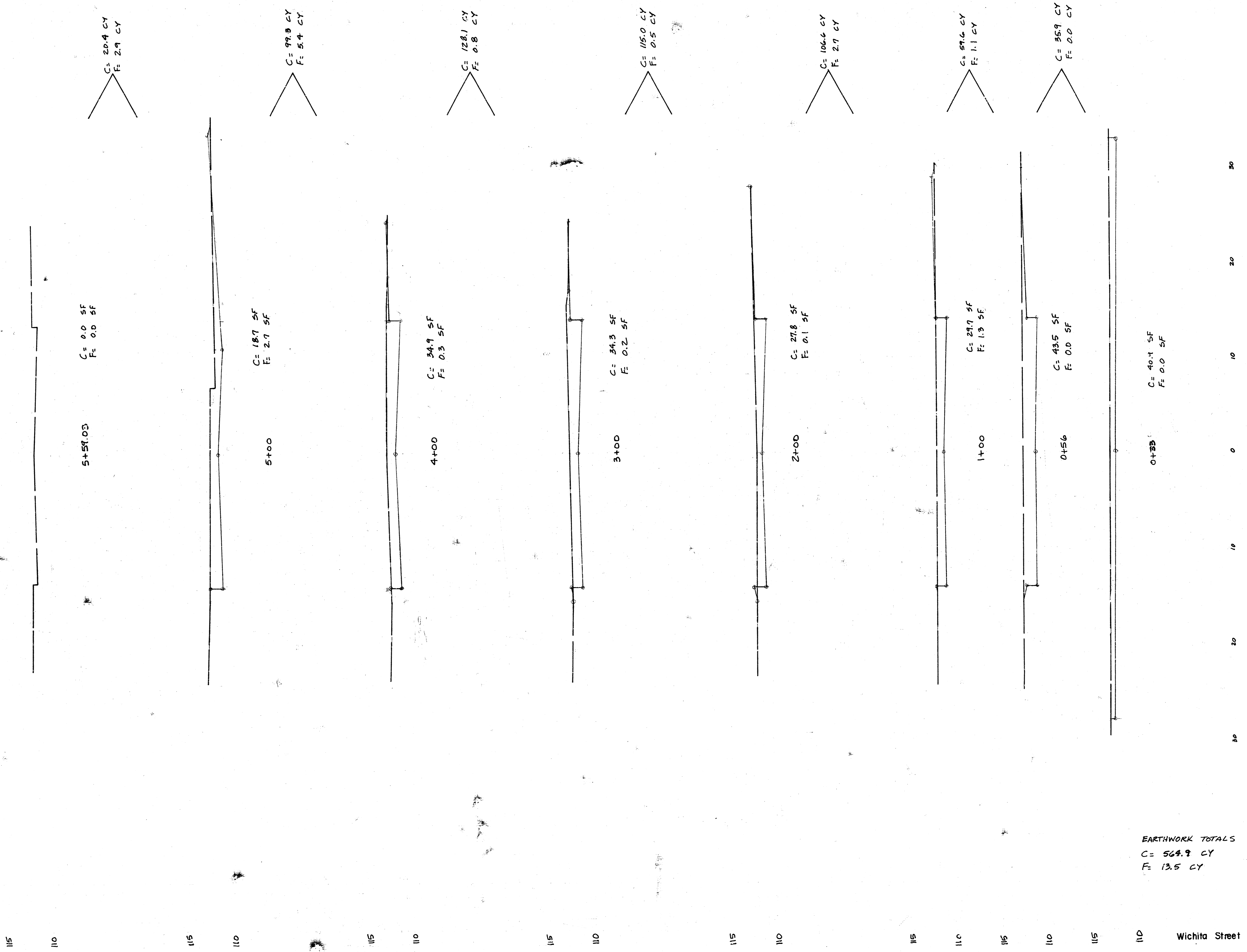
TOP VIEW



SECTION VIEW

### 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.



EARTHWORK TOTALS  
 C = 568.9 CY  
 F = 13.5 CY

115

110

0+88.14

C = 20.1 SF  
F = 3.0 SF

C = 20.6 CY  
F = 7.2 CY

115

110

0+10.31

C = 19.9 SF  
F = 10.8 SF

C = 15.3 CY  
F = 20.2 CY

115

110

0+32.61

C = 9.9 SF  
F = 28.5 SF

PROJECT NO. 472-76-215-81735-000-000-001

Elm Street X-Sections

Sheet 15

EARTHWORK THIS SHEET  
EXCAVATION = 35.9 CY  
FILL = 27.4 CY

27.5  
R/W

30

20

10

0 E

20

30

27.5  
R/W