

GENERAL NOTES

1. CENTRAL AVENUE AND SOCORA SHALL REMAIN OPEN TO TRAFFIC AT ALL TIMES. INTERURBAN TRAFFIC GENERATED OUTSIDE THE PROJECT AREA IS TO BE CARRIED THROUGH CONSTRUCTION. LOCAL RESIDENTIAL TRAFFIC GENERATED WITHIN THE PROJECT AREA IS TO BE CARRIED THROUGH CONSTRUCTION AS FURTHER PROMULGATED BY PROJECT SPECIAL PROVISIONS.

2. UTILITY SERVICE LINES, POLES, VALVE BOXES, METERS, AND ETCETERA ARE TO BE ADJUSTED AS NECESSARY BY OTHERS PRIOR TO CONSTRUCTION UNLESS THE PLANS SPECIFICALLY CALL FOR THEIR ADJUSTMENT BY THE CONTRACTOR OR UNLESS THE PLANS SPECIFICALLY IDENTIFY A UTILITY TO BE ADJUSTED BY ITS OWNER DURING CONSTRUCTION. EXISTING UTILITIES AND THEIR LOCATION, AS SHOWN ON THE PLANS, REPRESENT THE BEST INFORMATION OBTAINABLE FOR DESIGN. THE PLAN LOCATIONS ARE NOT GUARANTEED AND ADDITIONAL UTILITIES MAY ALSO BE ENCOUNTERED. THE CONTRACTOR WILL BE REQUIRED TO WORK AROUND EXISTING UTILITIES WITHIN THE RIGHT-OF-WAY WHICH DO NOT CONFLICT WITH PROPOSED CONSTRUCTION.

3. THE COST OF CONCRETE DRIVEWAY REMOVAL SHALL INCLUDE A SAW CUT OF A MINIMUM DEPTH OF ONE FOURTH OF THE PAVEMENT THICKNESS. THE SAW CUT SHALL AT THE PROPERTY LINE OR THE NEAREST JOINT. THE EXACT LOCATION SHALL BE DETERMINED BY THE FIELD ENGINEER.

4. 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 DISPOSED OF IN A FLOODPLAIN 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 ENGINEERS PERMITTING REGULATIONS. ANY MATERIAL BURIED OR STOCKPILED BEYOND APPROVED CONSTRUCTION LIMITS WOULD REQUIRE ADDITIONAL ARCHAEOLOGICAL INVESTIGATIONS UNLESS BURIED IN A PREVIOUSLY APPROVED BORROW LOCATION.

5. CONTRACTOR WILL BE REQUIRED TO PROVIDE A MINIMUM ADVANCE NOTICE OF FORTY-EIGHT(48) HOURS TO UTILITY COMPANIES PRIOR TO STARTING ANY EXCAVATION AS FOLLOWS:

KANSAS ONE CALL 1-800-344-7233
687-2470 (LOCAL WICHITA)

THE CONTRACTOR MUST NOTIFY THE FOLLOWING IN CASE OF AN EMERGENCY:

SOUTHWESTERN BELL TELEPHONE 1-571-2115
MULTIMEDIA CABLEVISION 262-0661
K.P.A.L. GAS SERVICE COMPANY 263-7511
KANSAS GAS & ELECTRIC 264-1141
ARKLA GAS COMPANY 942-8350 OR 263-8161
CITY OF WICHITA WATER & SEWER 268-4908
CITY OF WICHITA SEWER 268-4071

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

6. MAILBOXES WITHIN THE LIMITS OF THE PROJECT SHALL BE REMOVED AND REPLACED BY THE CONTRACTOR AS APPROVED BY THE ENGINEER. CONTRACTOR WILL BE REQUIRED TO MAKE SATISFACTORY PROVISIONS FOR MAIL DELIVERY TO PROPERTIES AFFECTED BY THIS PROJECT DURING CONSTRUCTION.

7. PROPERTIES WITHIN THE PROJECT LIMITS MAY HAVE UNDERGROUND SPRINKLER SYSTEMS IN PUBLIC RIGHT-OF-WAY WHICH CONFLICT WITH NEW CONSTRUCTION. CONTRACTOR WILL BE REQUIRED TO REMOVE SUCH IMPROVEMENTS SHOULD THEY NOT BE REMOVED BY THEIR OWNER AT THE TIME OF CONSTRUCTION OF THE PROJECT. THE CONTRACTOR WILL BE REQUIRED TO SALVAGE ALL SPRINKLER HEADS AND/OR VALVES AND GIVE SUCH MATERIAL TO THEIR OWNER. PORTIONS OF UNDERGROUND SPRINKLER SYSTEMS NOT IN CONFLICT WITH NEW CONSTRUCTION SHALL BE PROTECTED FROM DAMAGE AND SHALL REMAIN IN PLACE. ALL WORK IN CONNECTION WITH UNDERGROUND SPRINKLER SYSTEMS SHALL BE CONSIDERED SUBSIDIARY TO THE CONTRACT PAY ITEMS OF WORK.

8. TREES AND 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 AND SHRUBS WHICH ARE NOT IN DIRECT CONFLICT WITH PROPOSED NEW CONSTRUCTION SHALL BE SAVED AND PROTECTED FROM DAMAGE.

9. 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.

10. THE CONTRACTOR SHALL GIVE ALL PROPERTY OWNERS AND/OR TENANTS OF DEVELOPED PROPERTY DIRECTLY ADJUTING THE CONSTRUCTION OF THIS PROJECT A MINIMUM OF TEN(10) DAYS ADVANCE NOTICE PRIOR TO START OF CONSTRUCTION.

11. ALL WATER METER BOXES IN DIRECT CONFLICT WITH CONSTRUCTION WILL BE MOVED BY THE CONTRACTOR. ALL WATER VALVES IN DIRECT CONFLICT WITH CONSTRUCTION MUST BE ADJUSTED BY THE CONTRACTOR. ALL COSTS FOR THE RELOCATION OF EXISTING WATER MAINS, WATER VALVES AND WATER METER BOXES SHALL BE CONSIDERED SUBSIDIARY TO OTHER ITEMS OF WORK IN THE CONTRACT.

12. THE CONTRACTOR SHALL ADJUST WATER VALVE BOXES AND FIRE HYDRANTS AS DIRECTED BY THE ENGINEER. COST FOR THIS WORK WILL BE SUBSIDIARY TO OTHER ITEMS OF WORK IN THE CONTRACT. 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.

13. THE CONTRACTOR MUST EXAMINE THE CONSTRUCTION SITE PRIOR TO BIDDING AND BE SATISFIED AS TO THE WORK SHOWN FOR COMPLETION. AFTER BIDS HAVE BEEN RECEIVED, THE CONTRACTOR SHALL NOT ASSERT THAT THERE WAS A MISUNDERSTANDING OF THE QUANTITIES OF WORK OR OF THE NATURE OF THE WORK TO BE COMPLETED.

14. ALL WATER MAINS AND APPURTENANCES SHALL BE INSTALLED IN ACCORDANCE WITH CITY OF WICHITA, KANSAS STANDARD SPECIFICATIONS FOR WATER MAIN INSTALLATIONS NO. 14533.

15. CONTRACTOR SHALL CONTACT THE CITY OF WICHITA WATER DEPARTMENT FOR THE LOCATION OF THE VALVE CLOSEST TO THE LOWERING OF THE WATERLINE. OPENING AND CLOSING WATER VALVES SHALL BE DONE SLOWLY TO PREVENT DAMAGE TO THE WATER DISTRIBUTION SYSTEM FROM WATER HAMMER. ALL VALVES CLOSED BY THE CONTRACTOR MUST BE REOPENED AS NEW CONSTRUCTION PERMITS. PROJECT INSPECTOR MUST ASCERTAIN THAT ANY VALVE CLOSED BY THE CONTRACTOR IS REOPENED. CONTRACTOR WILL BE PERMITTED TO OPERATE WATER VALVES ONLY WHEN THE PROJECT INSPECTOR ASSIGNED TO THE PROJECT IS PRESENT.

STORM WATER SEWER EXTENSION FOR WEST WICHITA MEDICAL PARK LOT 1, TYLER ACRES 6TH ADDITION WICHITA, SEDGWICK COUNTY, KANSAS

CITY OF WICHITA PRIVATE PROJ. NO. 424PPS(607861)
MIKE LINDEBAK, P.E., CITY ENGINEER

NOVEMBER, 1993

AS BUILT PLAN
BY Handwritten Signature
DATE 2-16-94

INDEX OF SHEETS

1. TITLE SHEET
2. -- 3. PLAN-PROFILE SHEETS
4. WATERLINE LOWERING PLAN
5. -- 6. TYPE 1A CURB INLET
7. REINFORCED CONCRETE MANHOLE
8. MANHOLE LID FRAME AND GRATE
9. CONCRETE END SECTION
10. WWMP SITE STORM SEWER PLAN

APPROVED AS NOTED
By CITY ENGINEER OF WICHITA

Sanitary Sewers _____
Storm Sewers VRH 11/18/93
Driveway Approaches _____
Water Mains _____
Paving _____

NOTE TO CONTRACTOR

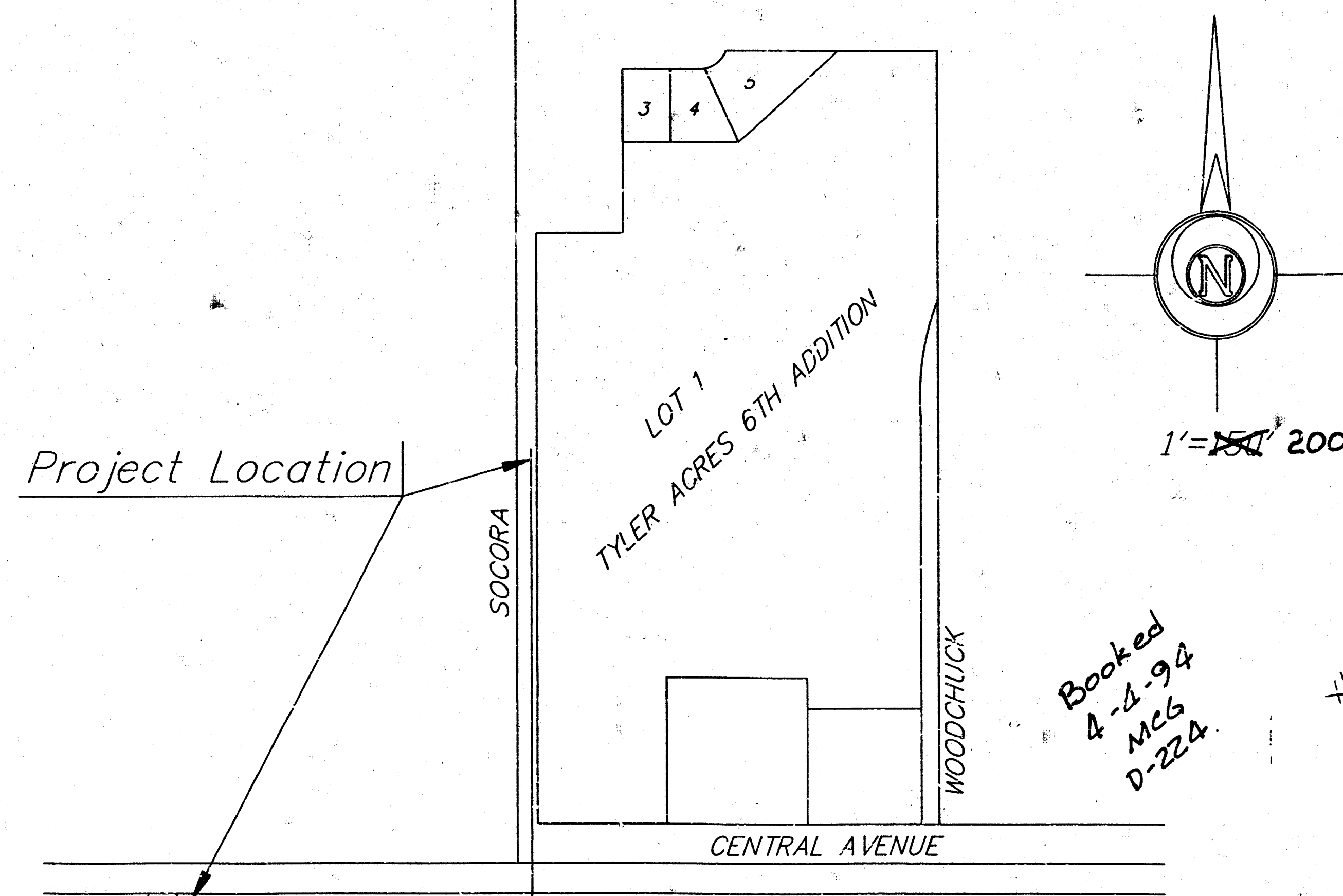
INSPECTION AND TESTING FOR THIS PROJECT IS TO BE PROVIDED BY A LICENSED CONSULTING ENGINEERING FIRM UNDER CONTRACT WITH THE OWNER/DEVELOPER. SAID INSPECTION TO BE IN ACCORDANCE WITH THE CITY OF WICHITA STANDARD CONSTRUCTION ENGINEERING PRACTICES AND CERTIFIED BY A LICENSED PROFESSIONAL ENGINEER. NO WORK 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.

LEGEND

- iron pipe found
- sign
- power pole
- u storm inlet
- Δ gas meter
- manhole
- w water valve
- Transformer
- tree
- property line
- center line
- easement line
- fence
- underground utility

S.W. 1/4, Sec. 16, T.27S., R.1W.

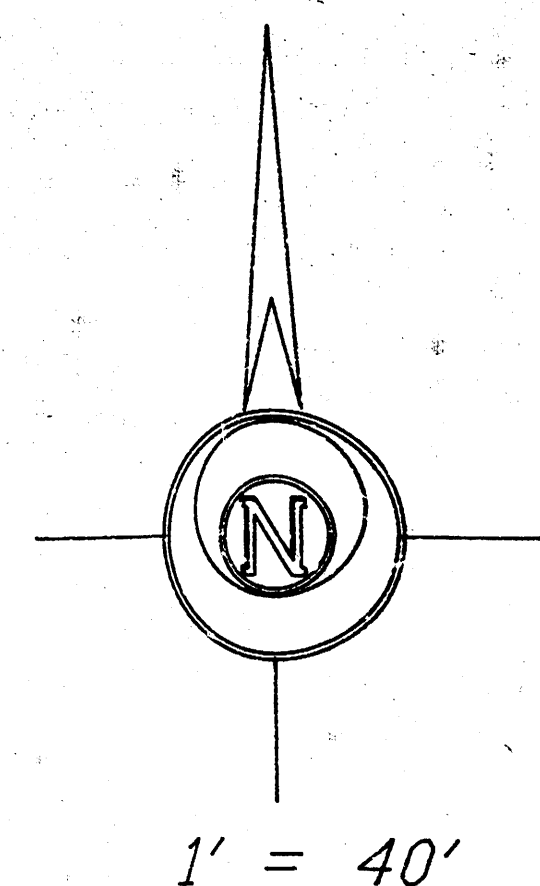
S.E. 1/4, Sec. 16, T.27S., R.1W.



LOT 1, BISHOP CARROLL HIGH SCHOOL ADDITION

N.W.1/4, Sec. 21, T.27S., R.1W.

City of Wichita Proj. No. 424PPS(607861)	
CERTIFIED ENGINEERING DESIGN	
CED	1990 E. FIRST, # 113 WICHITA, KANSAS 67214 (316) 262-8808
	SHEET 1 TOTAL 10



NOTE: Gas & Water Lines present
on west side of Socora

Sta. 0+00 - 60' S. of Central Avenue,
1345.19' West of N.E. Corner, N.W. 1/4,
Sec. 21, T.27S, R.2W.

Install 25 sq.yd. Concrete
bag Riprap

Regrade channel approximately 200' south
to daylight flowline from storm sewer

30 l.f. of 42" RCP @ 0.15%

Sta. 0+24.57 - Construct Reinf. Conc.
M.H., Install 42" x 33" RCP w/ End Section

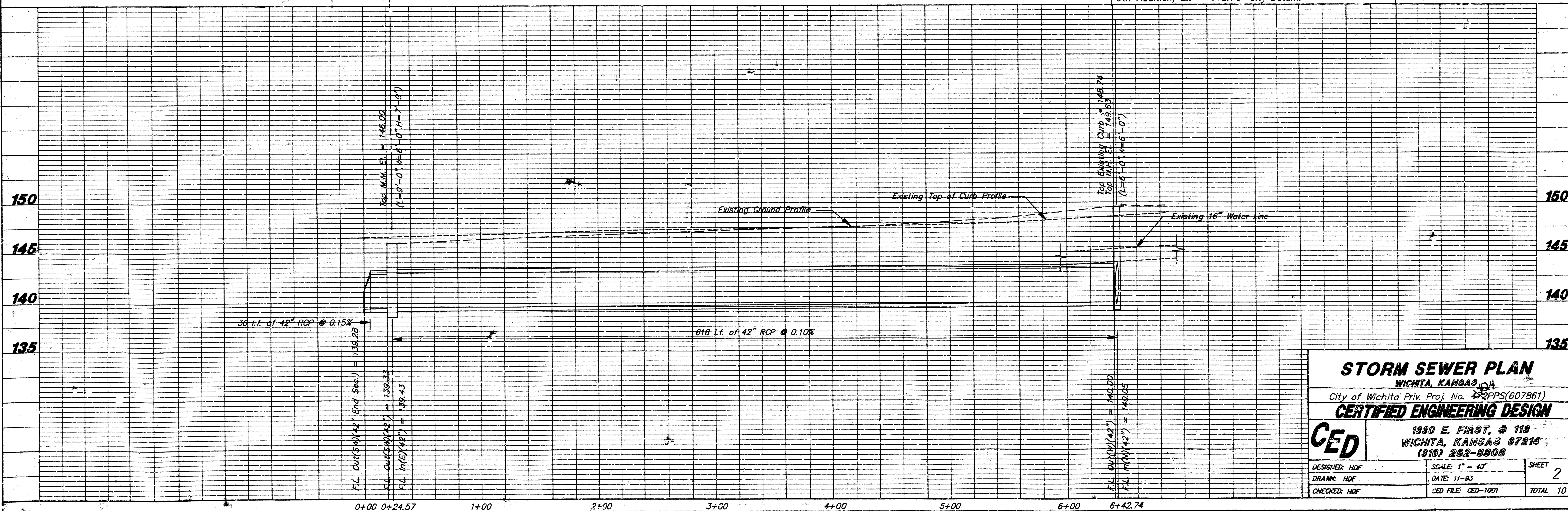
618 l.f. of 42" RCP @ 0.15%

Key No.: D-27788
Legal Description: Lot 1, Notre Dame High School Addition
Owner: Bishop Carroll High School

Sta. 6+42.74 - Construct Reinf. Concrete
Manhole, Install 42" x 612" RCP

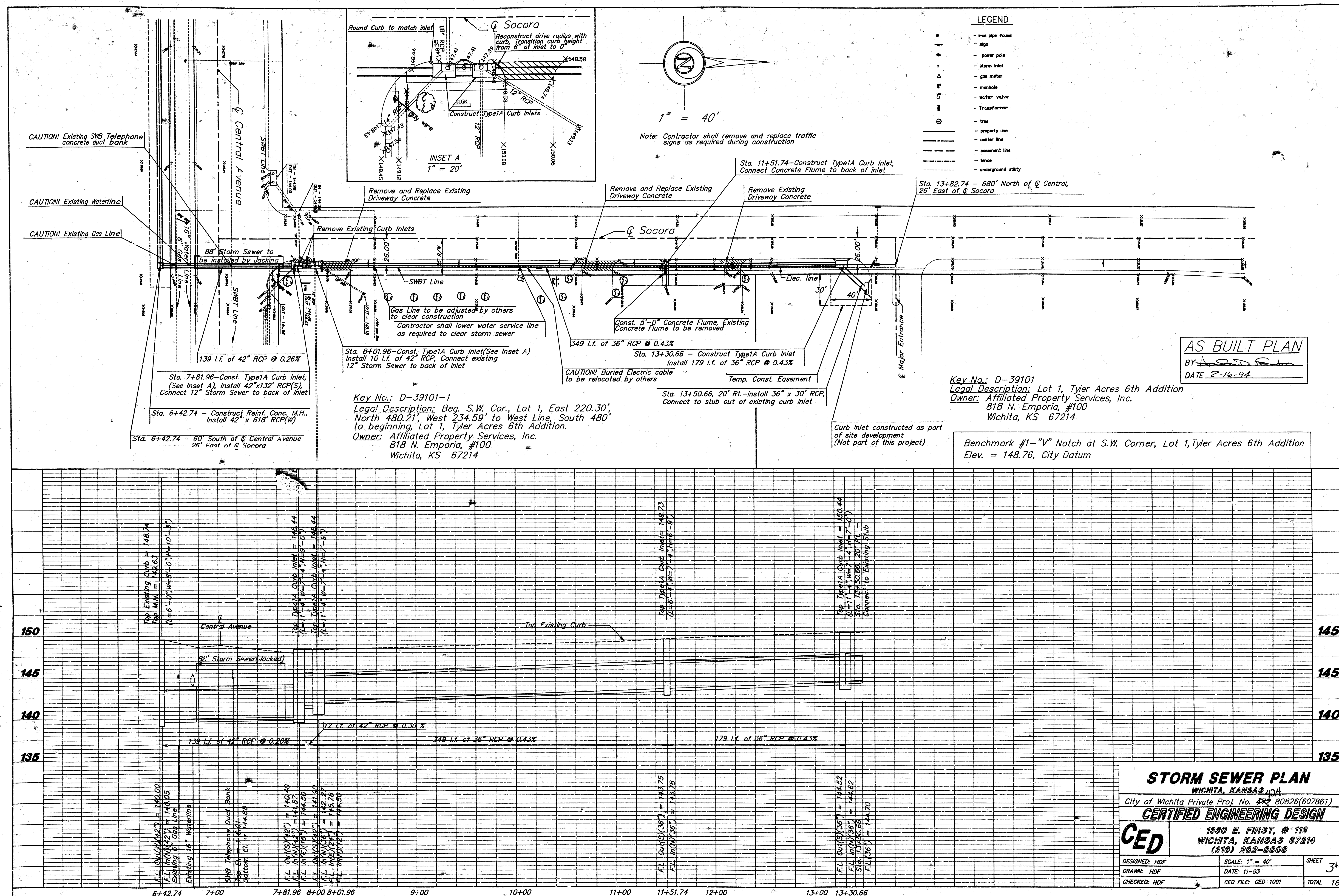
AS-BUILT PLAN
BY H. G. G.
DATE 2-16-74

Benchmark #1: "V" Notch at S.W. Cor. Lot 1, Tyler Acres
6th Addition, El. = 148.76 City Datum.



STORM SEWER PLAN
WICHITA, KANSAS
City of Wichita Priv. Proj. No. 22PPS(607861)
CERTIFIED ENGINEERING DESIGN
CED
1930 E. FIRST, # 119
WICHITA, KANSAS 67214
(913) 262-8808

DESIGNED: HOF	SCALE: 1" = 40'	SHEET
DRAWN: HOF	DATE: 11-93	2
CHECKED: HOF	CED FILE: CED-1001	TOTAL 10



LEGEND

- iron pipe found
- sign
- power pole
- storm inlet
- gas meter
- manhole
- water valve
- transformer
- tree
- property line
- center line
- easement line
- fence
- underground utility

AS BUILT PLAN
BY: [Signature]
DATE: 2-16-94

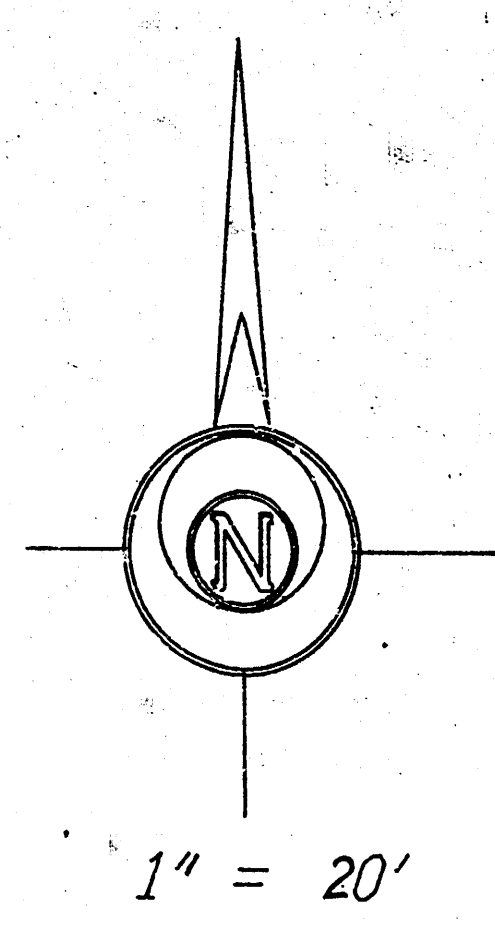
Key No.: D-39101
Legal Description: Lot 1, Tyler Acres 6th Addition
Owner: Affiliated Property Services, Inc.
818 N. Emporia, #100
Wichita, KS 67214

Benchmark #1 - "V" Notch at S.W. Corner, Lot 1, Tyler Acres 6th Addition
Elev. = 148.76, City Datum

STORM SEWER PLAN
WICHITA, KANSAS

City of Wichita Private Proj. No. 80826(607861)		
CERTIFIED ENGINEERING DESIGN		
CED		
1330 E. FIRST, # 119 WICHITA, KANSAS 67214 (316) 262-8808		
DESIGNED: HDF	SCALE: 1" = 40'	SHEET
DRAWN: HDF	DATE: 11-93	3
CHECKED: HDF	GED FILE: CED-1001	TOTAL 16

Benchmark #1: "V" Notch at S.W. Cor. Lot 1, Tyler Acres
6th Addition, El. = 148.76, City Datum

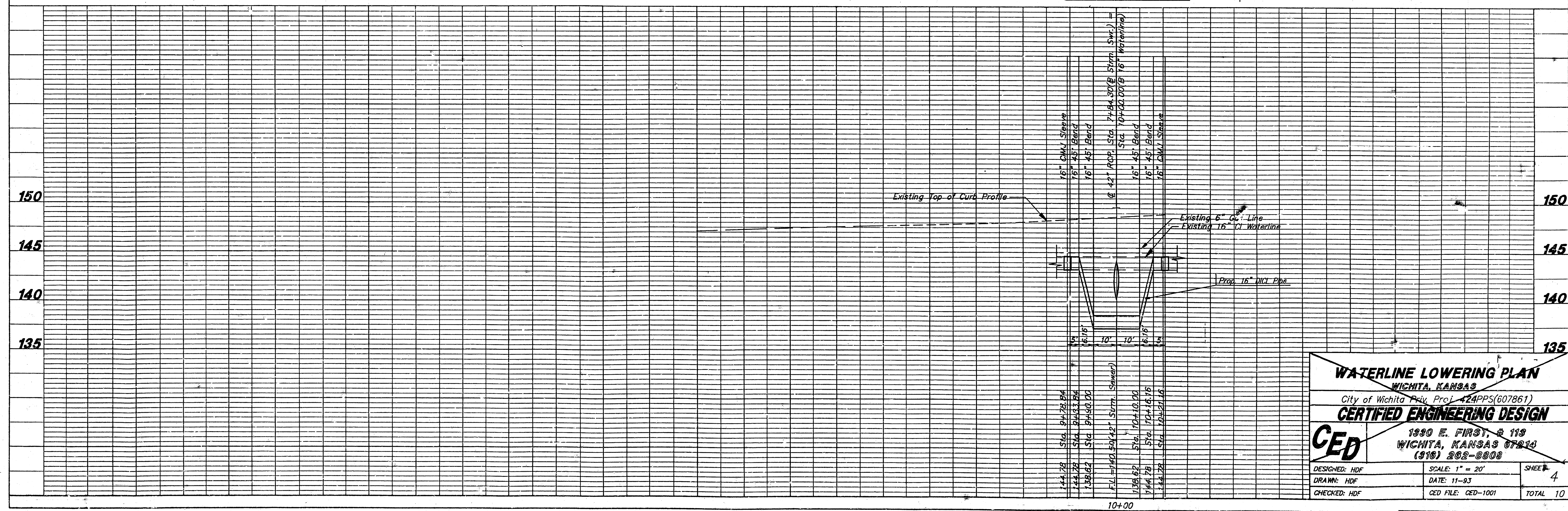
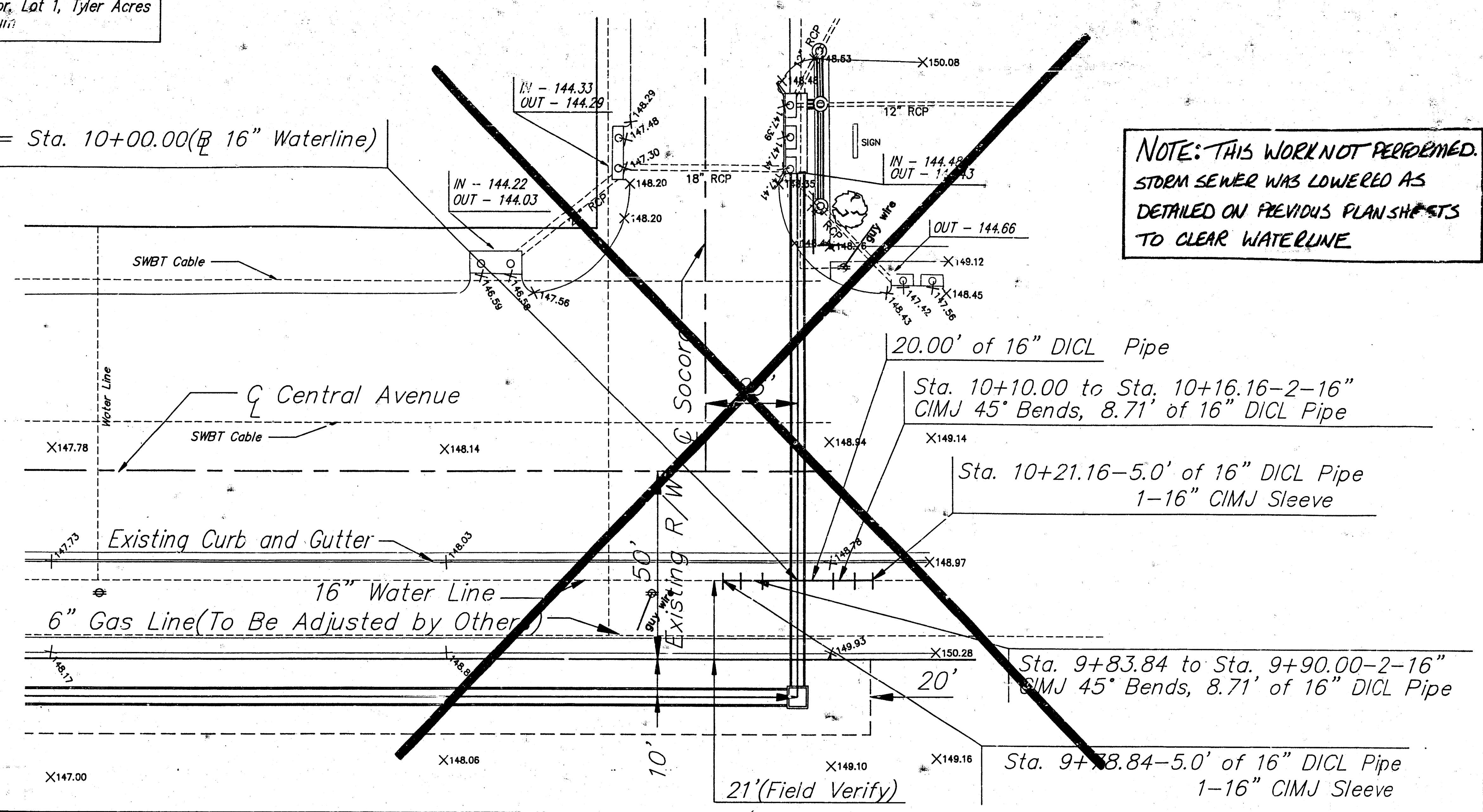


Sta. 7+84.80 @ Storm Sewer = Sta. 10+00.00 @ 16" Waterline

NOTE: THIS WORK NOT PERFORMED.
STORM SEWER WAS LOWERED AS
DETAILED ON PREVIOUS PLANSHEETS
TO CLEAR WATERLINE

NOTE: Contractor shall conform to City of Wichita
Specifications.
Thrust Blocks shall be constructed at all
Vertical Bends.

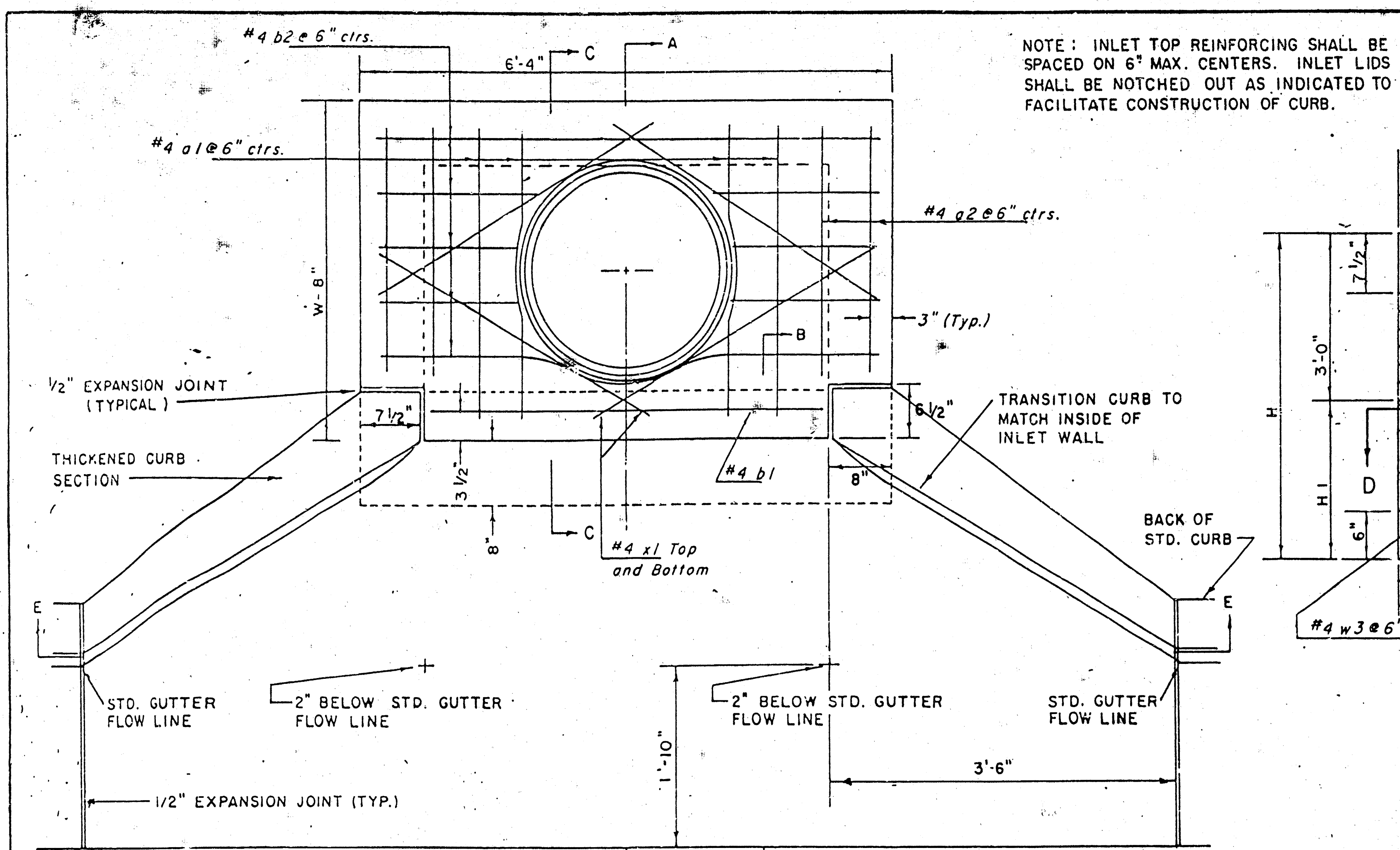
Key No.: D-27788
Legal Description: Lot 1, Notre Dame High School Addition
Owner: Bishop Carrol High School
8101 W. Central
Wichita, KS 67212



WATERLINE LOWERING PLAN
WICHITA, KANSAS
City of Wichita Proj. #24PPS(007861)
CERTIFIED ENGINEERING DESIGN
CED 1930 E. FIRST, # 119
WICHITA, KANSAS 67214
(916) 262-8808

DESIGNED: HDF	SCALE: 1" = 20'	SHEET 4
DRAWN: HDF	DATE: 11-93	TOTAL 10
CHECKED: HDF	CED FILE: CED-1001	

AS BUILT PLAN
BY: [Signature]
DATE: 3-16-94

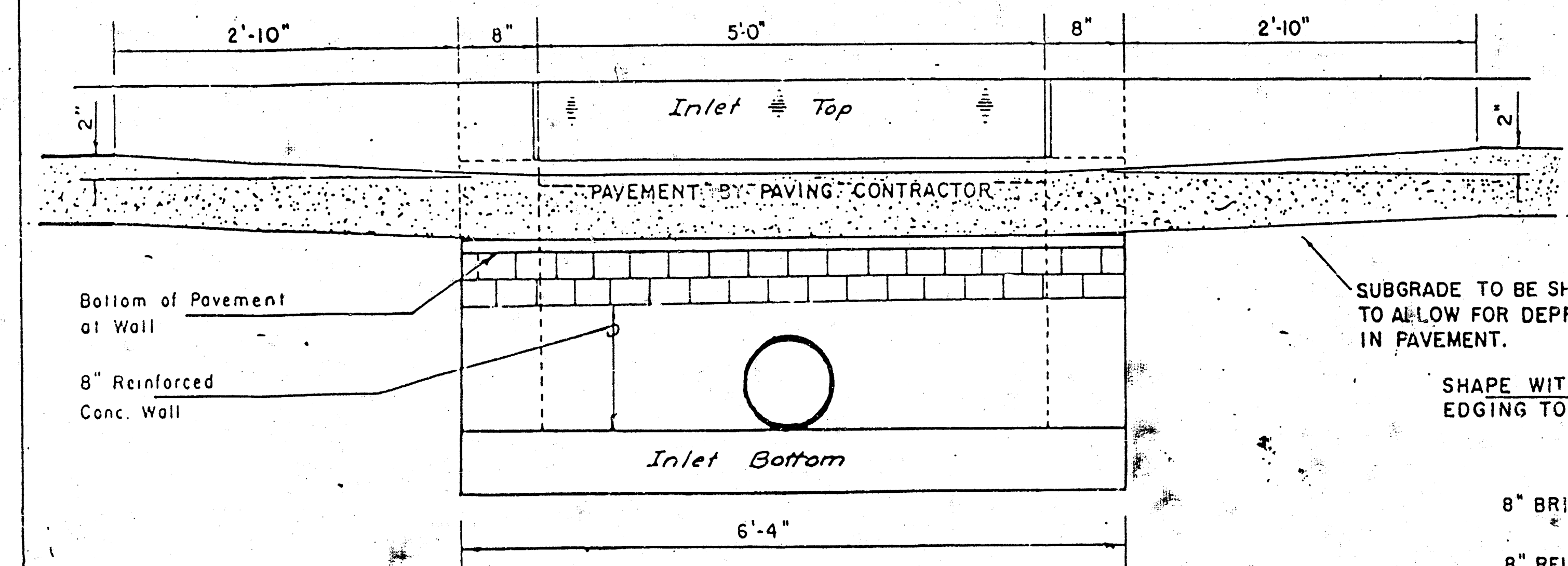


PLAN

Mark	Size	No.	Length	No.	Length	No.	Length	No.	Length	No.	Length
a1	#4	6	6'-7"	6	8'-7"	6	10'-7"	6	12'-7"	6	14'-7"
a2	#4	4	6'-0"	4	8'-0"	4	10'-0"	4	12'-0"	4	14'-0"
a3	#4	13	4'-1"	13	5'-1"	13	6'-1"	13	7'-1"	13	8'-1"
b1	#4	1	4'-9"	1	4'-9"	1	4'-9"	1	4'-9"	1	4'-9"
b2	#4	23	6'-1"	29	6'-1"	35	6'-1"	41	6'-1"	47	6'-1"
x1	#4	8	3'-10"	8	4'-2"	8	4'-6"	8	4'-10"	8	5'-2"

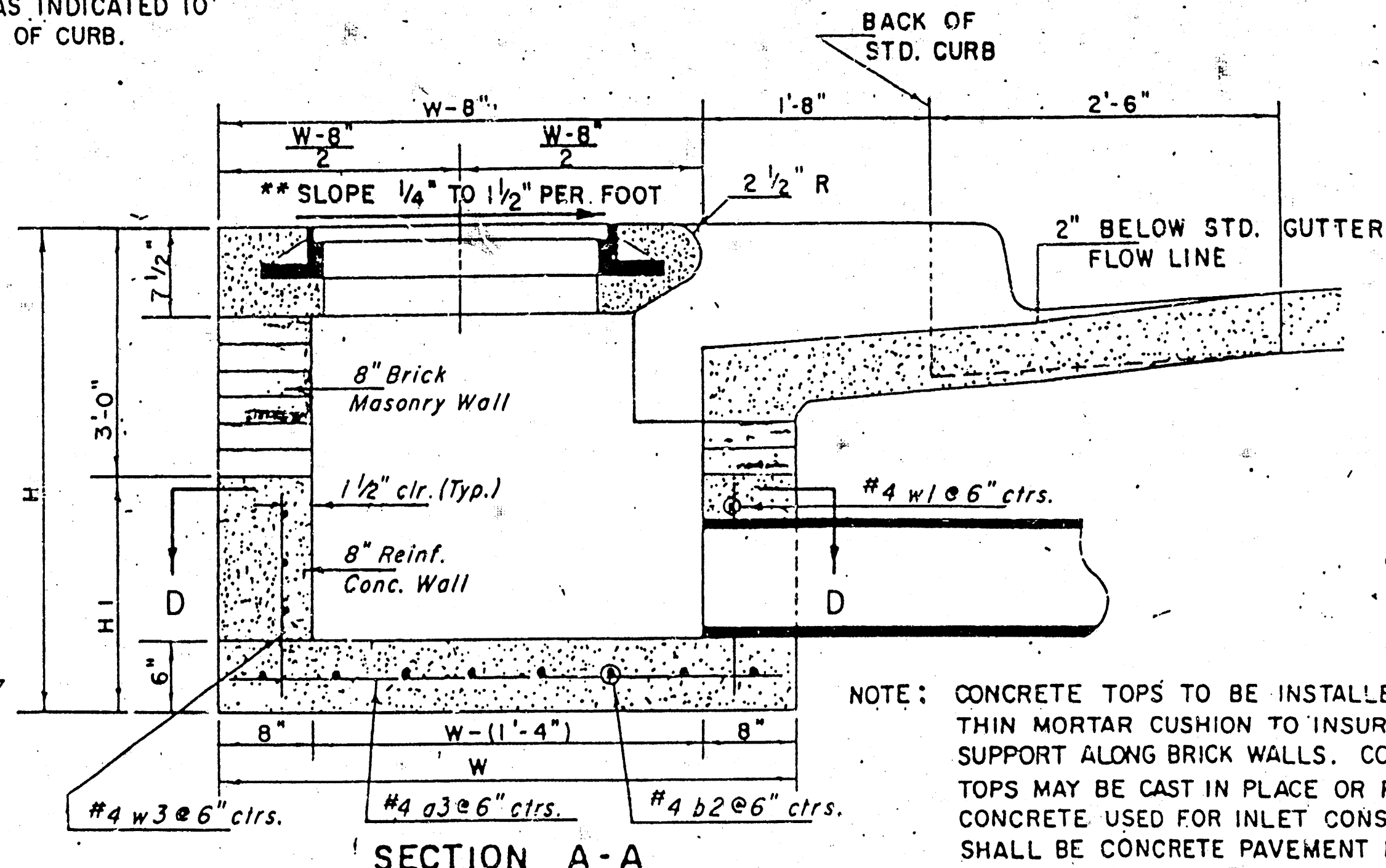
Mark	Size	No.	Length	No.	Length	No.	Length	No.	Length	No.	Length
w1	#4	0	6'-1"	0	6'-1"	0	6'-1"	0	6'-1"	0	6'-1"
w2	#4	0	4'-1"	0	5'-1"	0	6'-1"	0	7'-1"	0	8'-1"
w3	#4	32	4"	36	4"	40	4"	44	4"	48	4"

* 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

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: CONCRETE TOPS TO BE INSTALLED ON THIN MORTAR CUSHION TO INSURE FULL SUPPORT ALONG BRICK WALLS. CONCRETE TOPS MAY BE CAST IN PLACE OR PRECAST. CONCRETE USED FOR INLET CONSTRUCTION SHALL BE CONCRETE PAVEMENT MIX WITH AIR ENTRAINMENT.

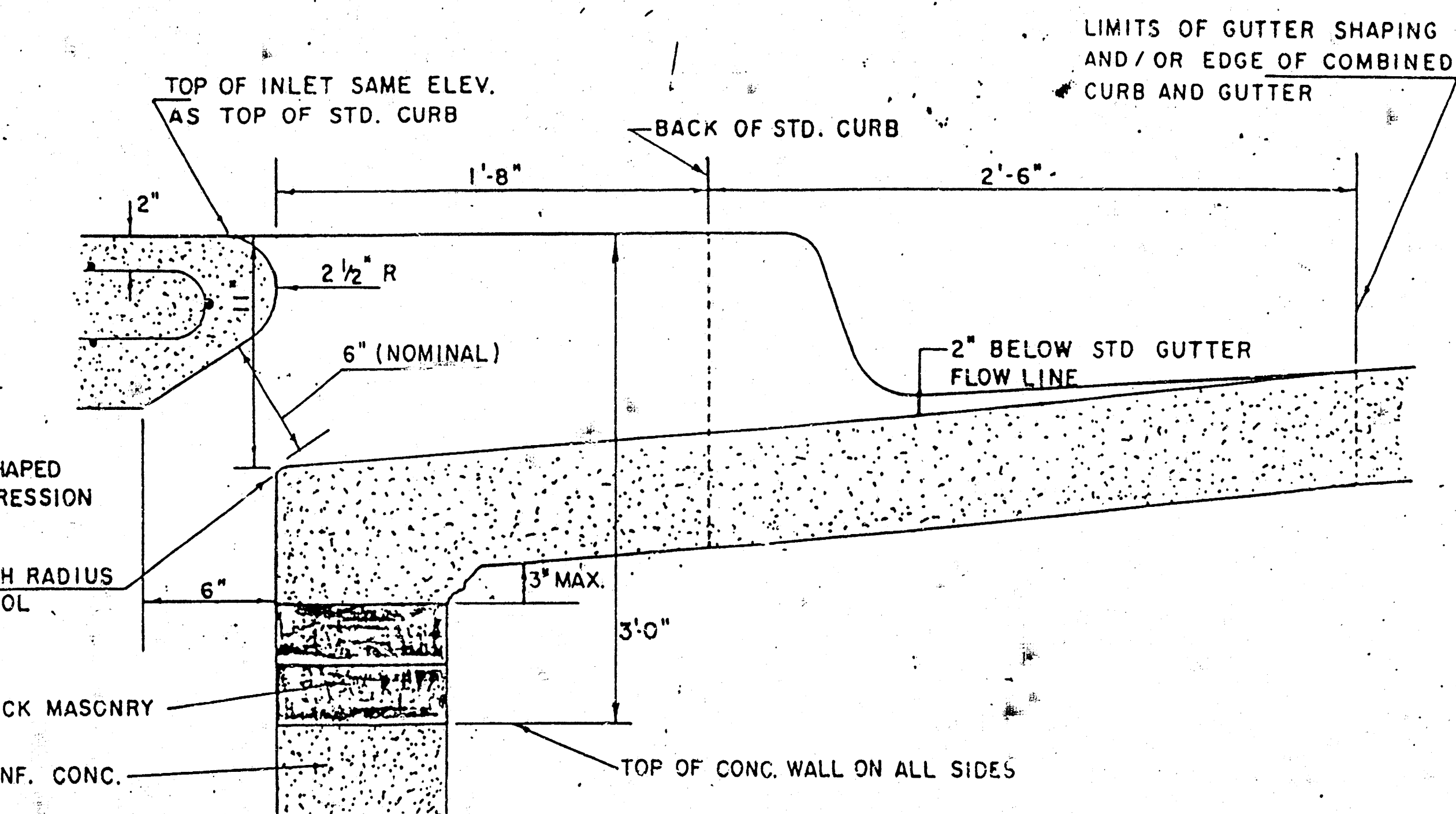
NOTE: CONTRACTOR SHALL HAVE THE OPTION OF CONSTRUCTING 8" BRICK MASONRY WALLS BETWEEN THE CONCRETE INLET BASE AND TOP ON THIS INLET WHEN W = 6'-4" AND H = 7'-0" OR LESS.

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.

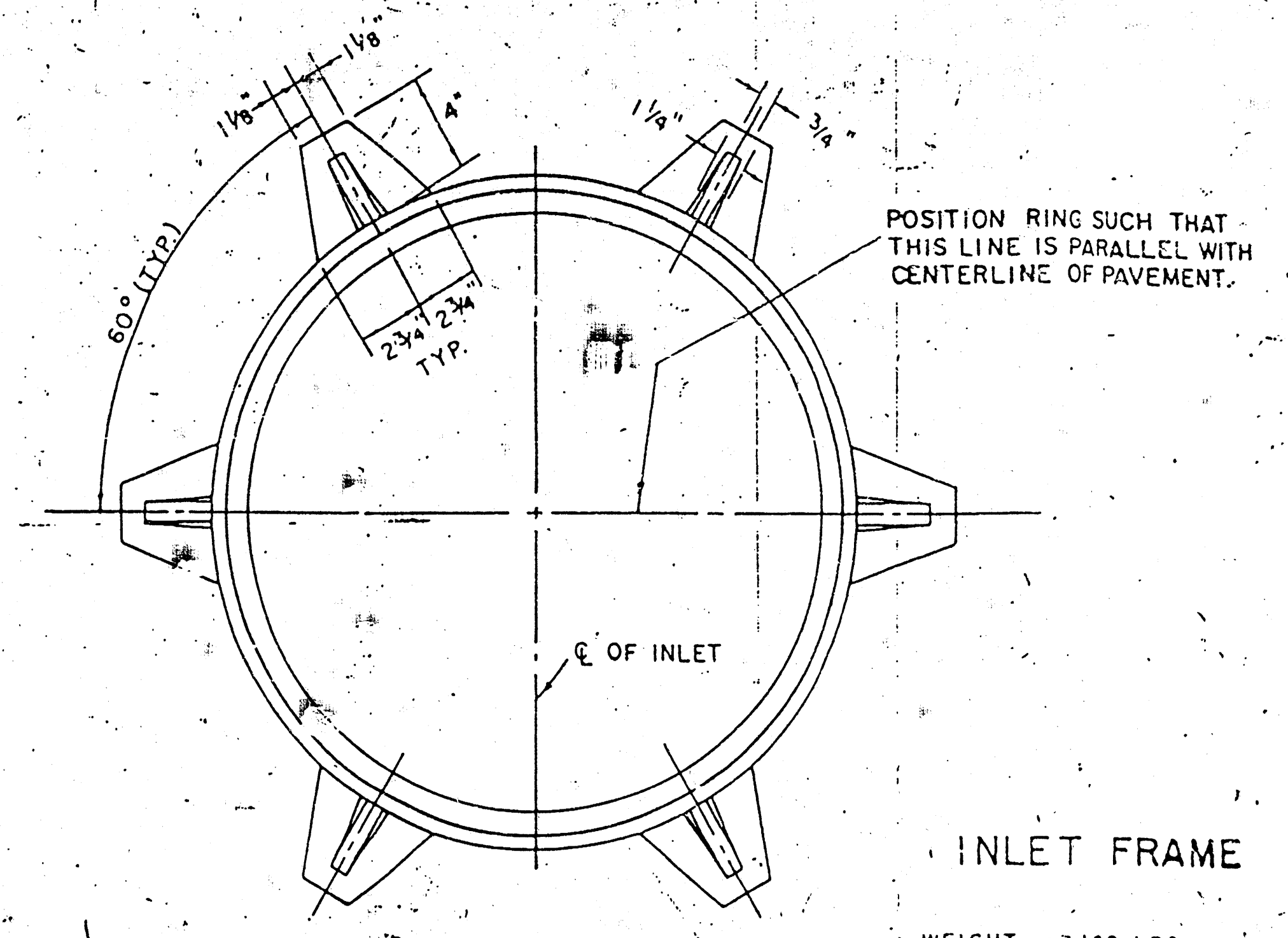
INLET INVERT SHALL BE SHAPED WITH 8 SACK SAND MIX CONCRETE TO CREATE FLOW CHANNELS AND TO INCREASE HYDRAULIC EFFICIENCY SUCH THAT THE INLET WILL BE SELF-CLEANING BETWEEN ALL INLET AND/OR OUTLET PIPES.

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

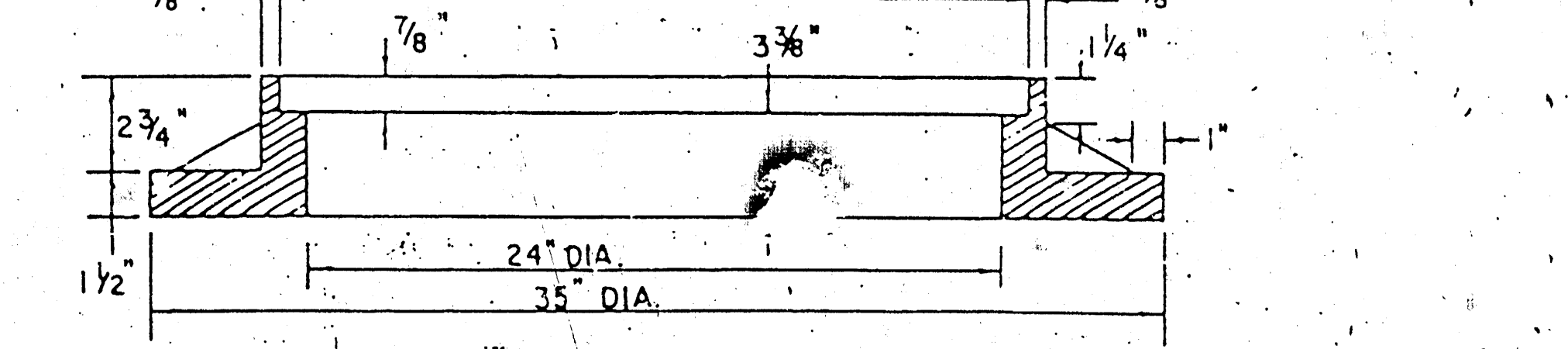
**NOTE: Slope of Inlet Tops to match Sidewalk or Parking Slopes within Limits indicated.



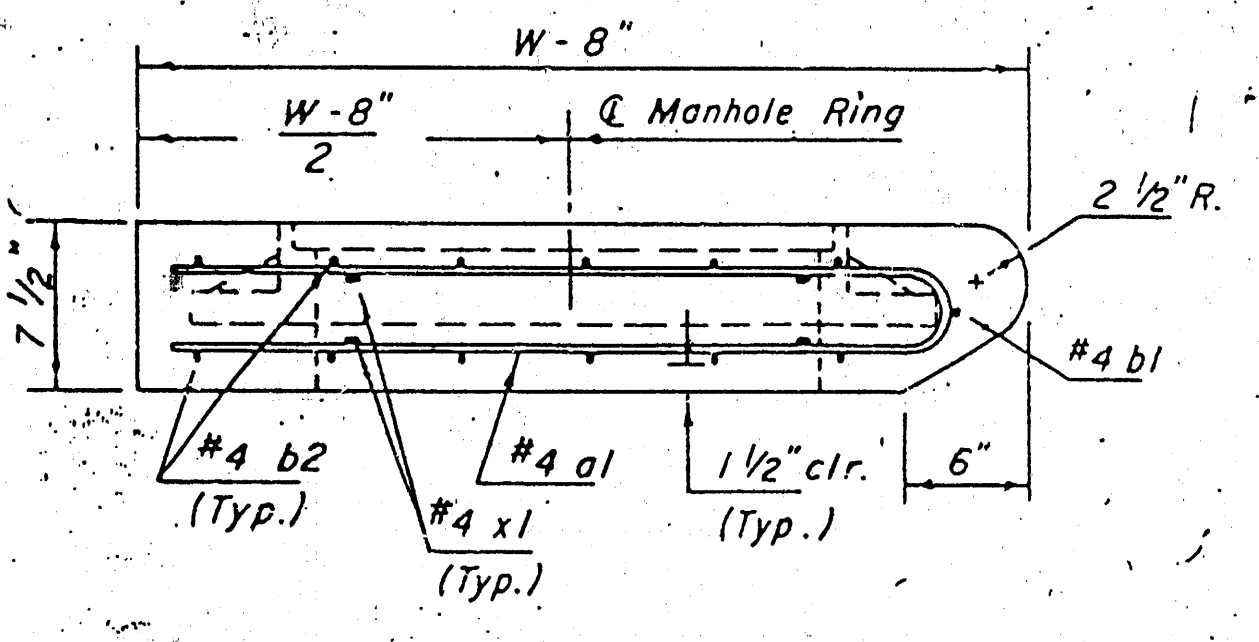
SECTION B-B



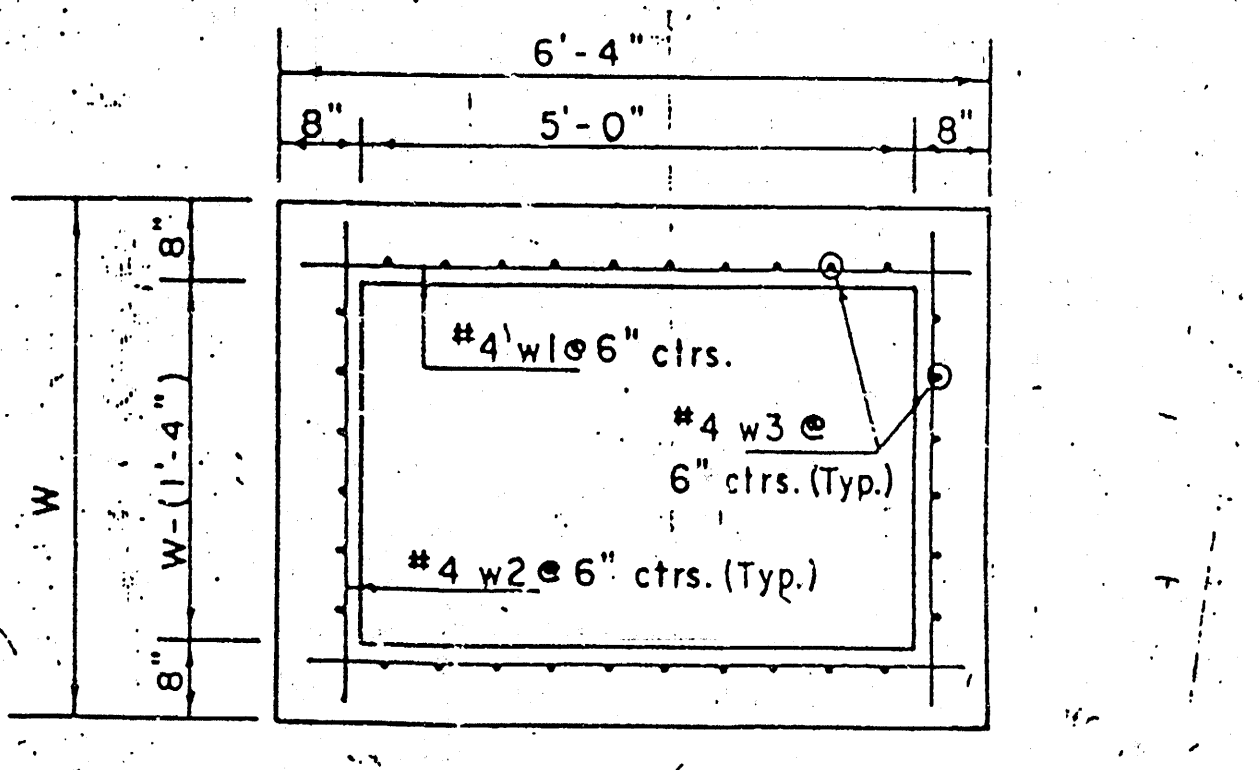
INLET FRAME



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



SECTION C-C



SECTION D-D

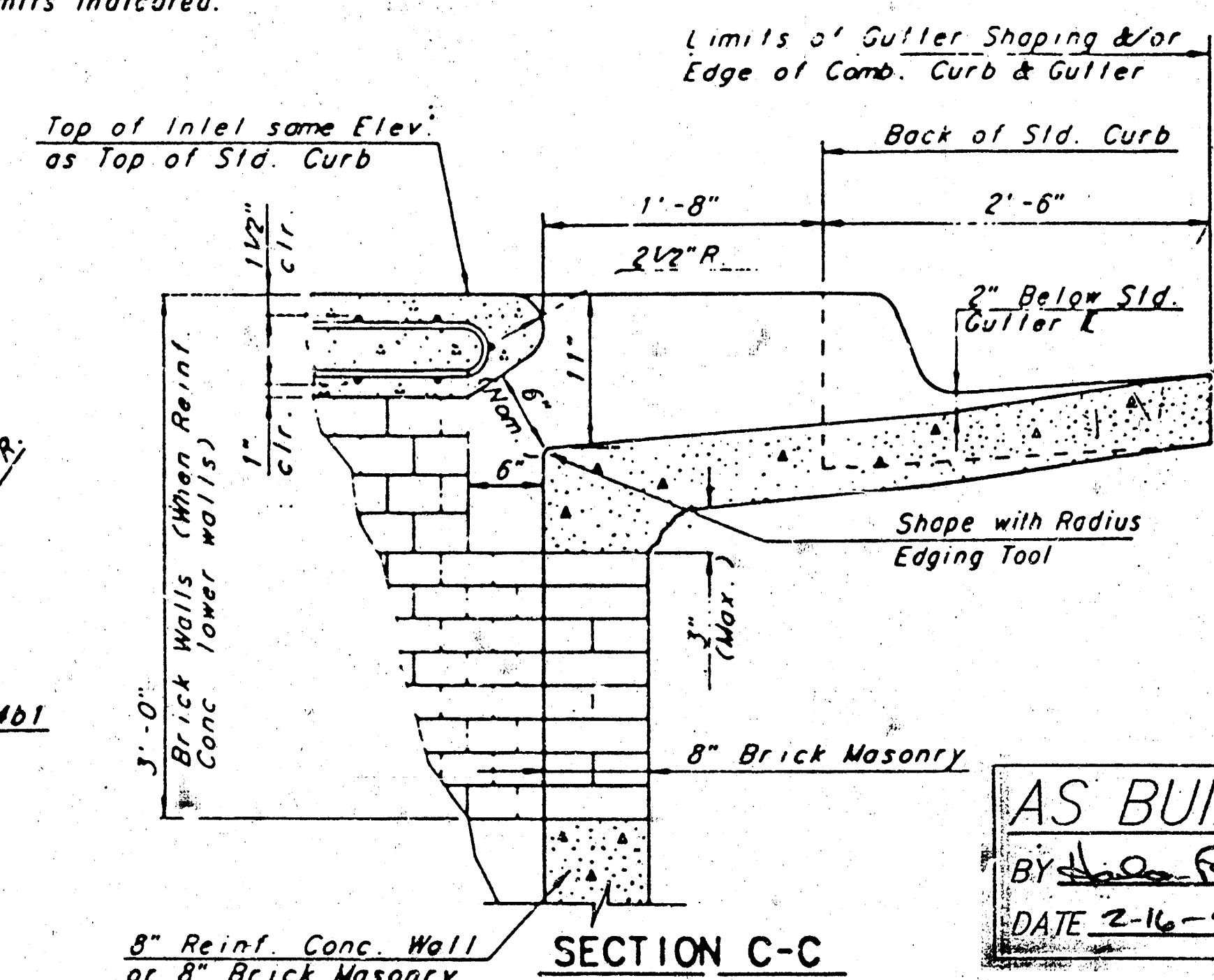
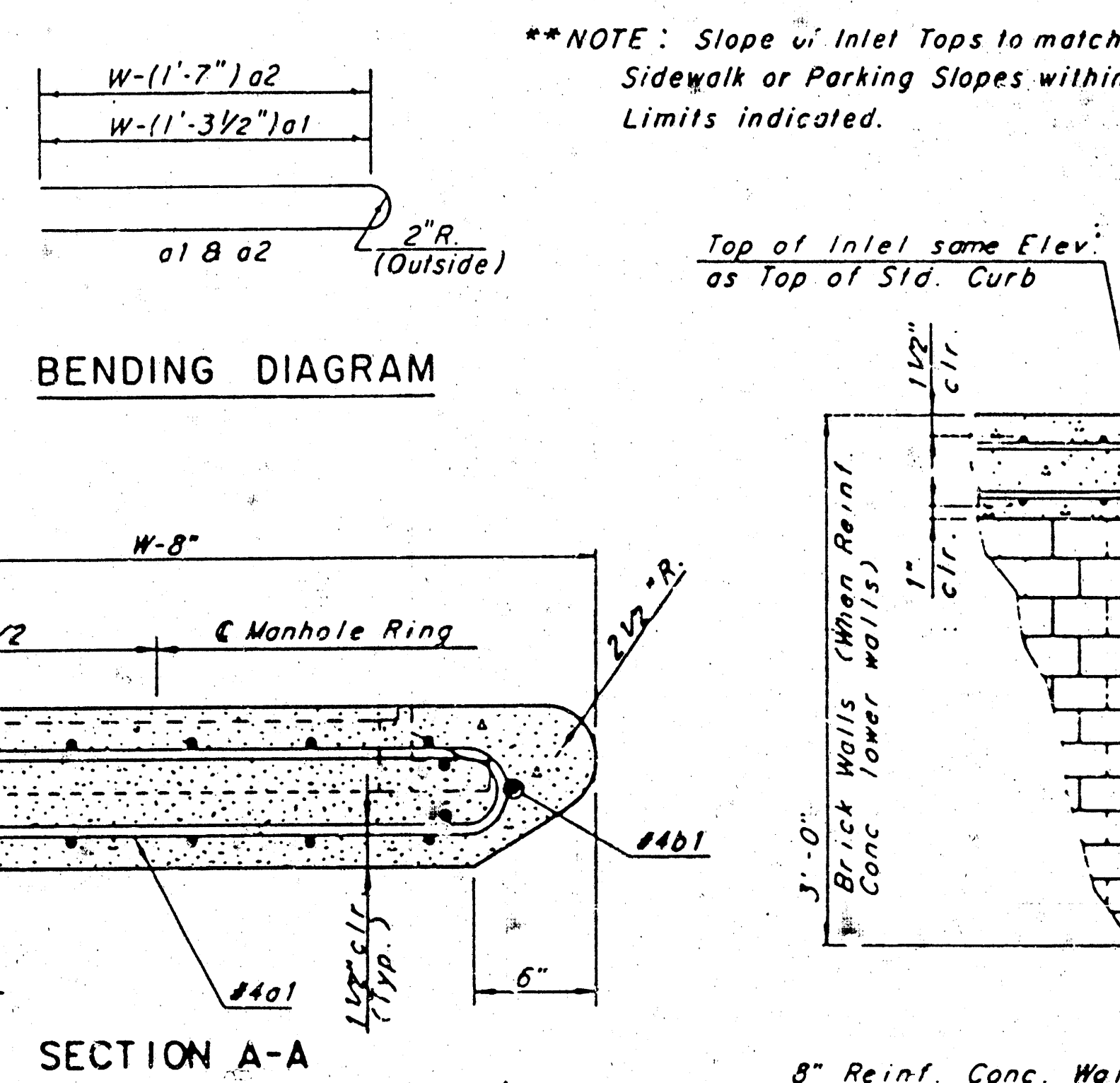
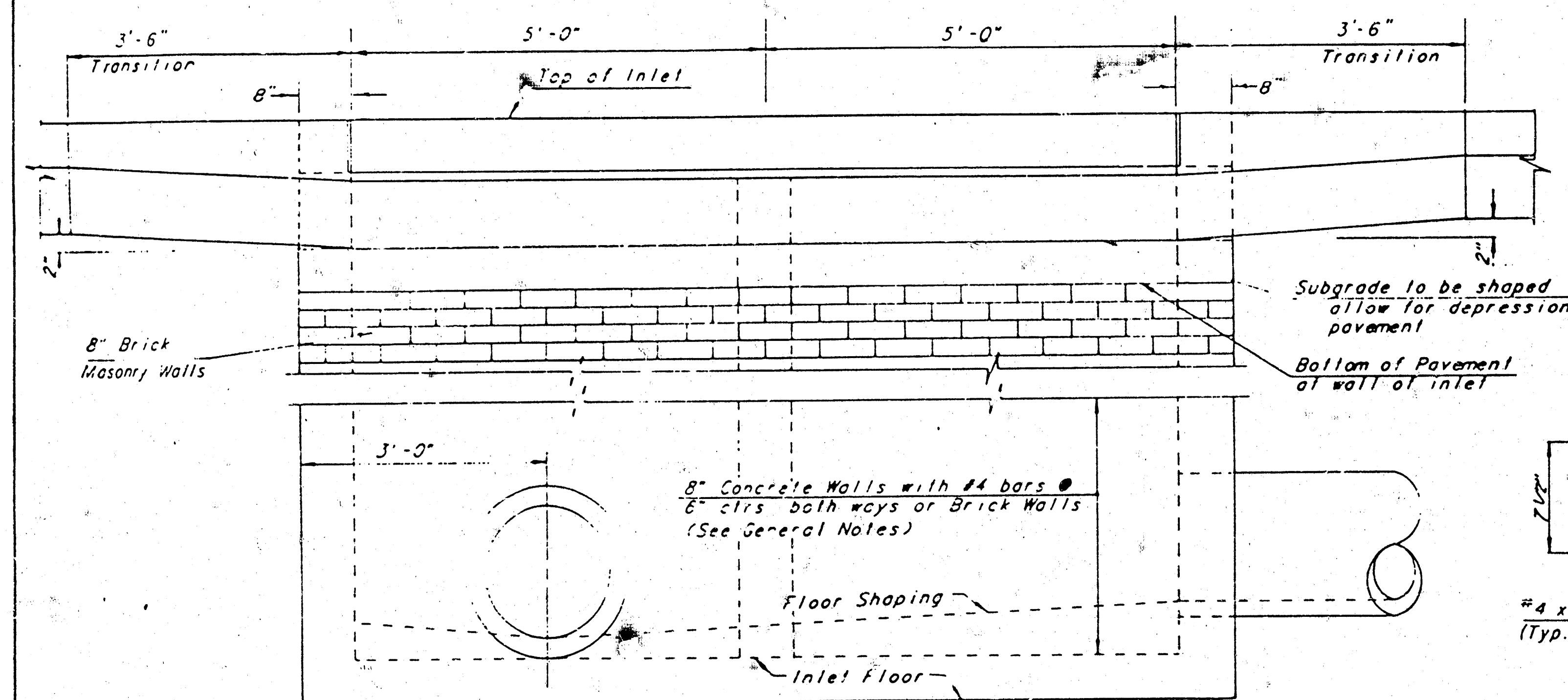
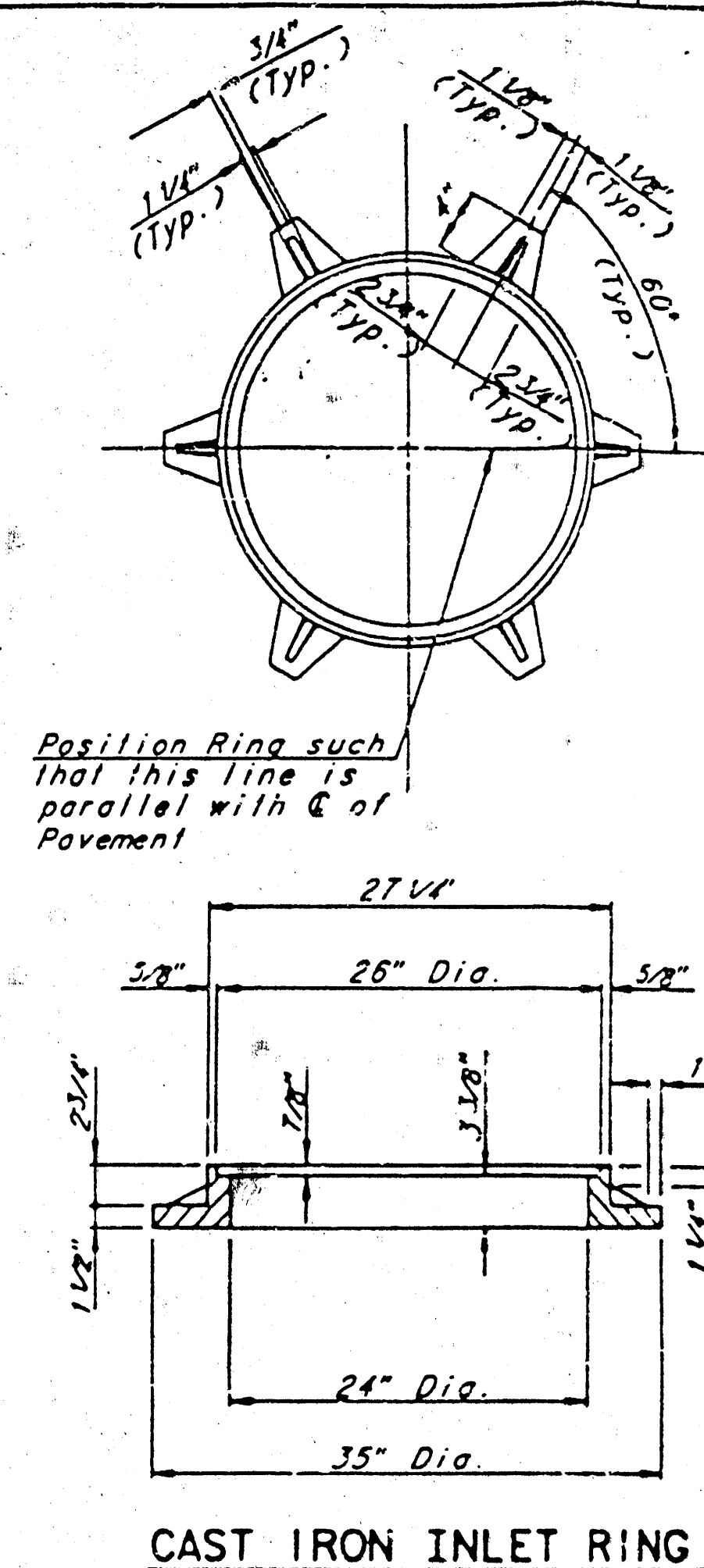
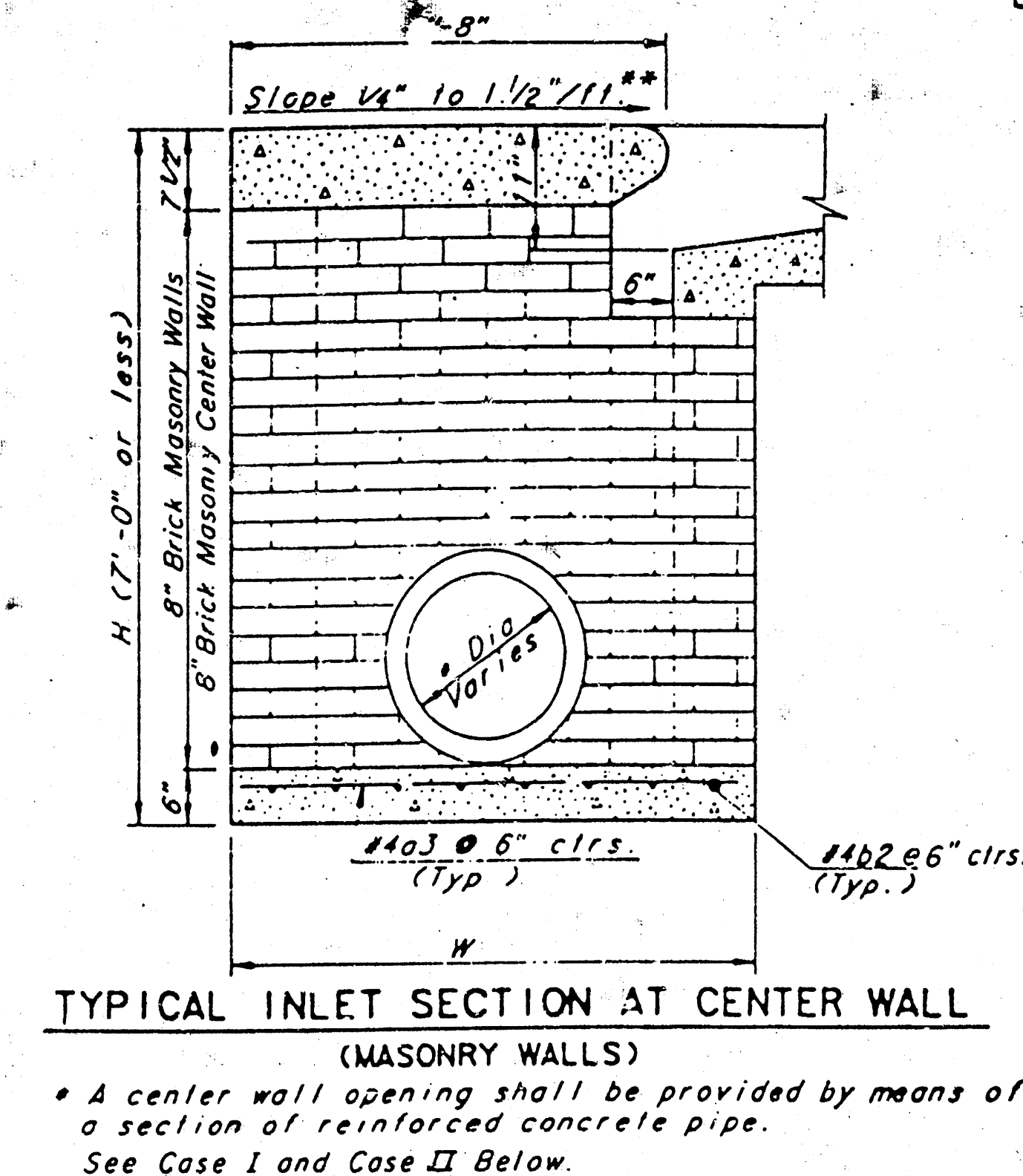
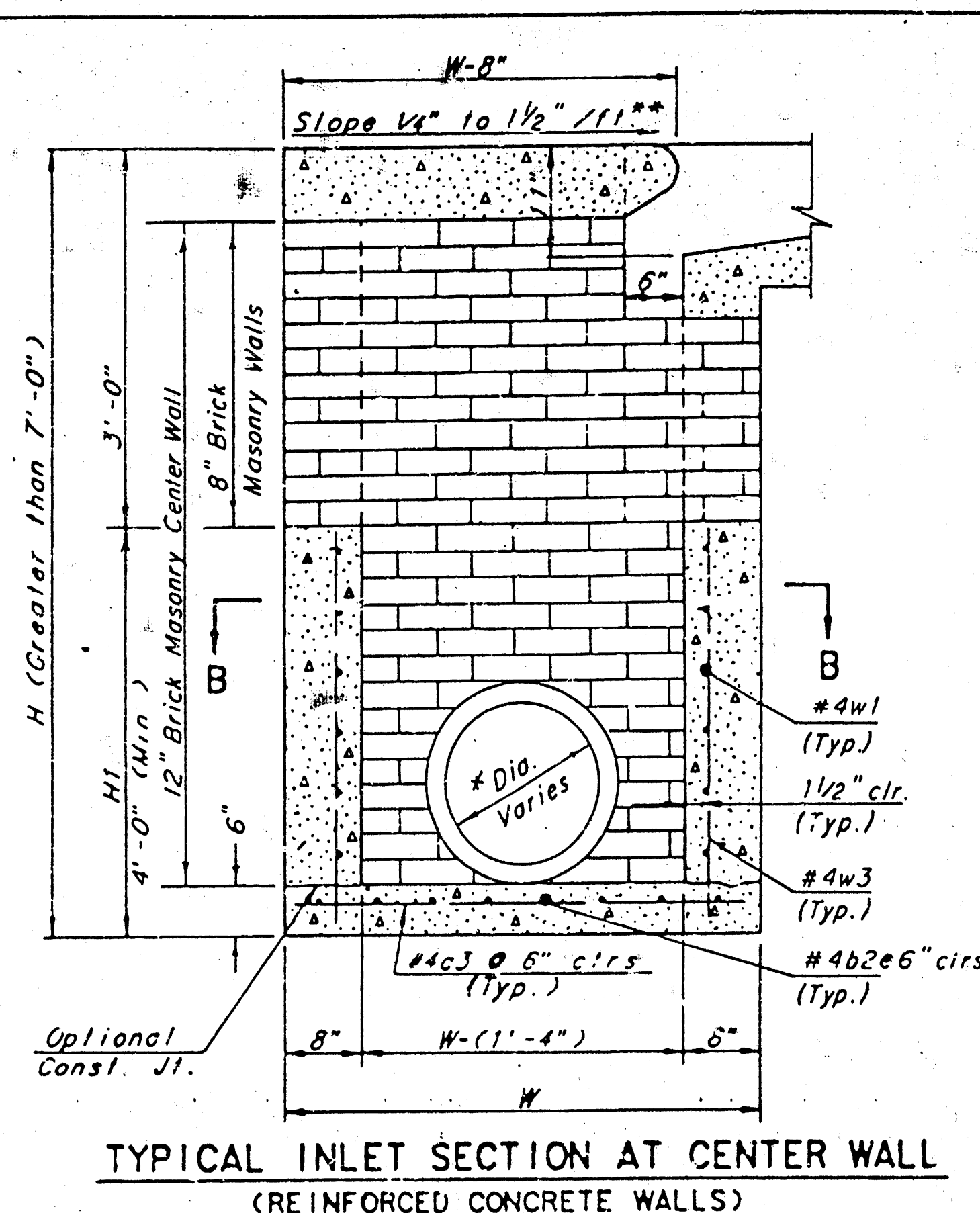
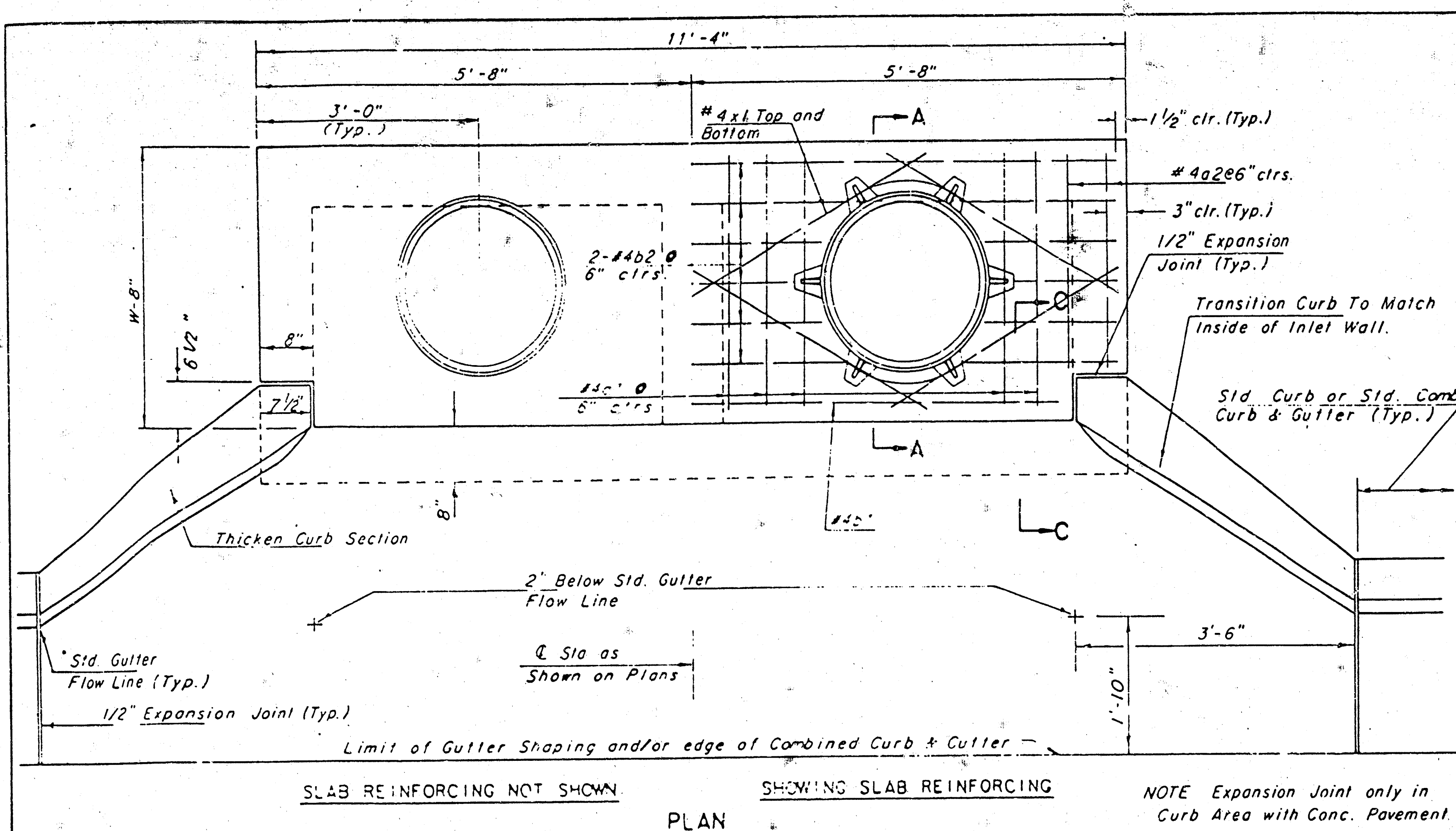
REVISED 11-30-1988
 REVISED 12-21-1984
 Revised 2-16-1989

DETAIL STANDARD TYPE 1A CURB INLET
 CITY OF WICHITA, KANSAS
 INLET OPENING = 6" x 5' 0"

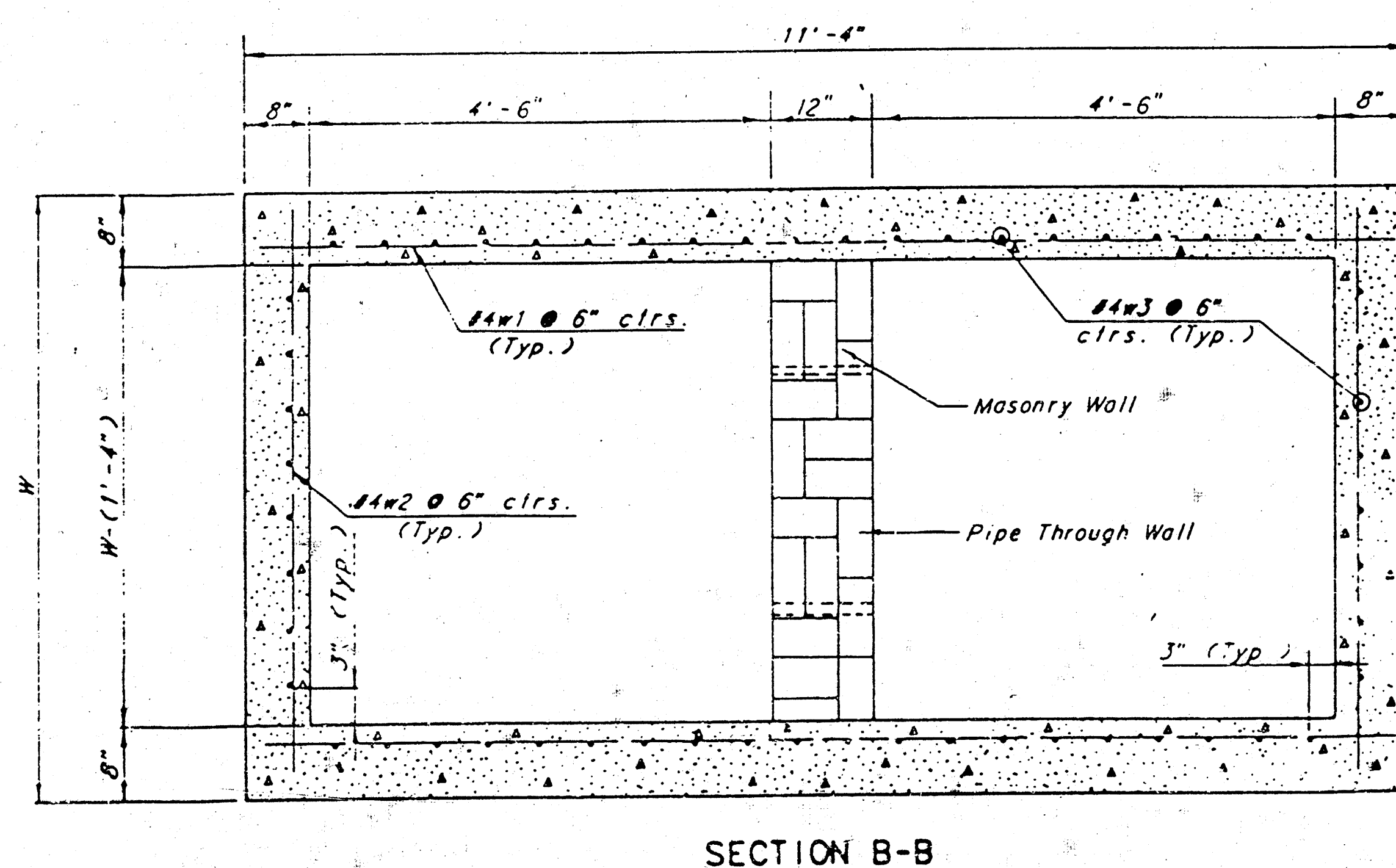
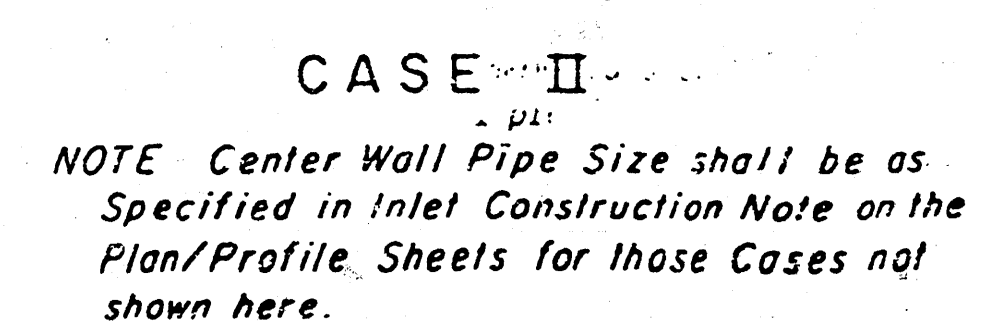
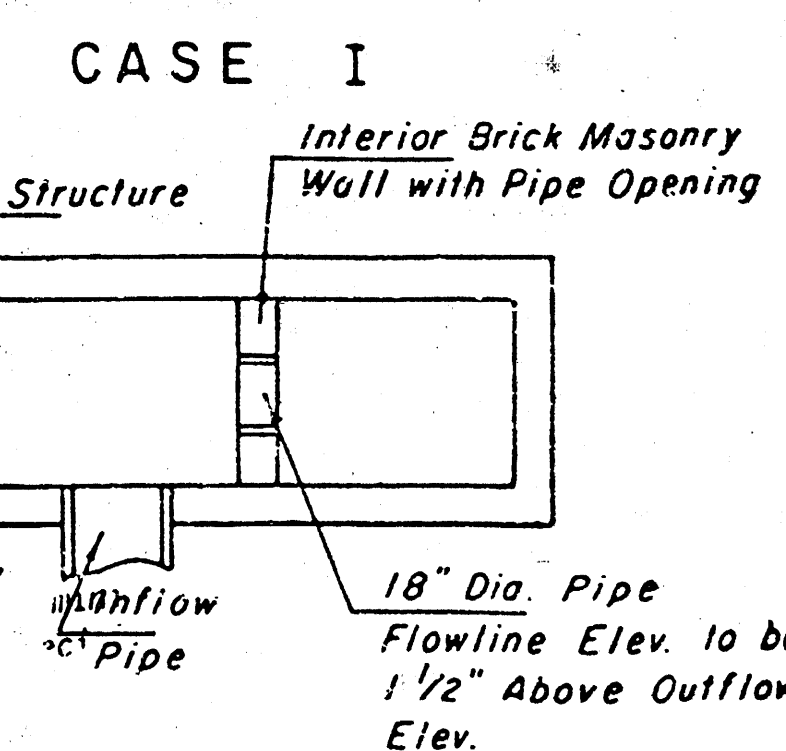
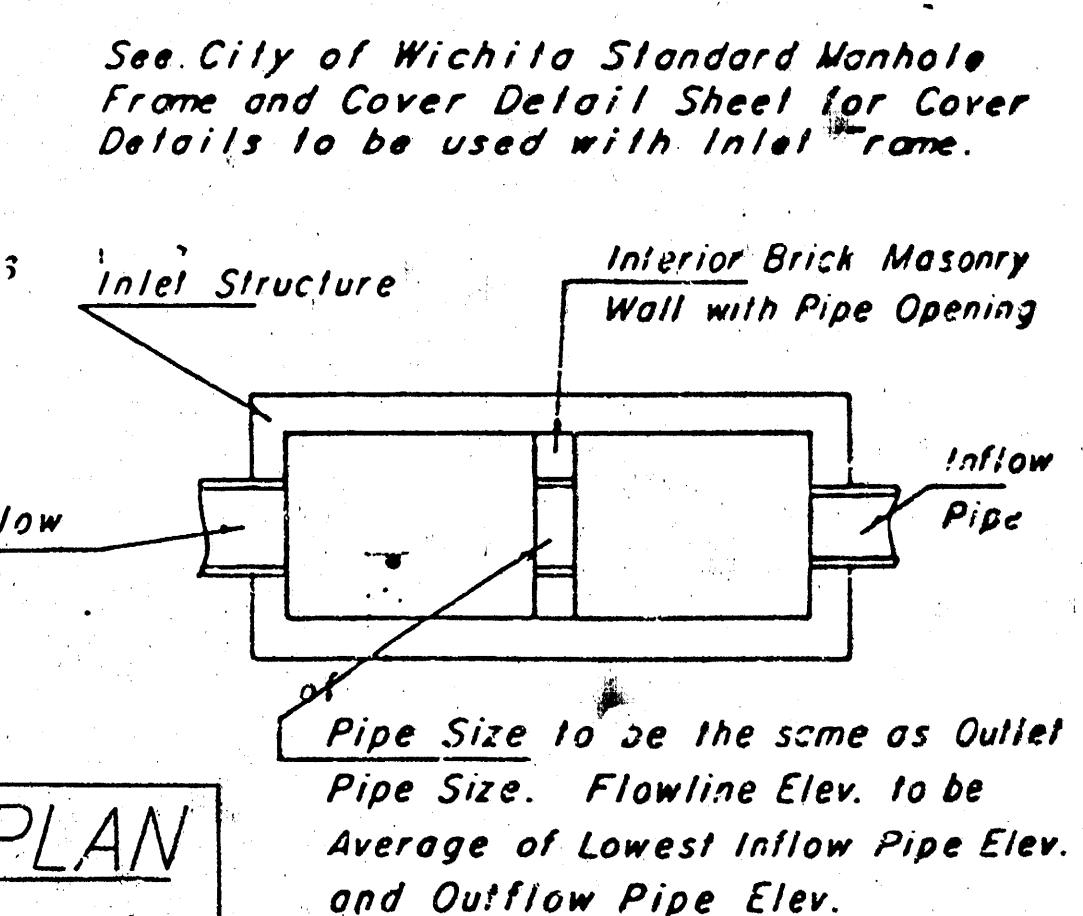
JUNE 1984

AS BUILT PLAN
 BY [Signature]
 DATE 2-16-94

PROJECT NO.	SHEET NO.	TOTAL SHEETS
	6	10



AS BUILT PLAN
BY *[Signature]*
DATE 2-16-99



SLAB AND FLOOR REINFORCING									
MARK	SIZE	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH
a1	#4	13	6'-7"	13	8'-7"	13	10'-7"	13	12'-7"
a2	#4	4	6'-0"	4	8'-0"	4	10'-0"	4	14'-0"
a3	#4	23	4'-1"	23	5'-1"	23	6'-1"	23	8'-1"
b1	#4	1	9'-9"	1	9'-9"	1	9'-9"	1	9'-9"
b2	#4	23	11'-1"	29	11'-1"	35	11'-1"	47	11'-1"
x1	#4	16	3'-10"	16	4'-2"	16	4'-6"	16	5'-2"

WALL REINFORCING									
MARK	SIZE	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH
w1	#4	①	11'-1"	①	11'-1"	①	11'-1"	①	11'-1"
w2	#4	①	4'-1"	①	5'-1"	①	6'-1"	①	7'-1"
w3	#4	52	②	56	②	60	②	64	②

* Field bend or cut Reinforcing as required for clearance
① 4(HI-12") (HI-12") Rounded down to nearest 0.5'
② HI-3"

- GENERAL NOTES
- THE CONTRACTOR SHALL BE REQUIRED TO CONSTRUCT 8" BRICK MASONRY WALLS BETWEEN THE CONCRETE INLET BASE AND TOP ON THIS INLET WHEN W=6'-4" OR LESS AND H=7'-0" OR LESS. WHEN W IS GREATER THAN 6'-4" AND H IS LESS THAN 7'-0" THE OUTSIDE INLET WALLS BELOW THE BRICK STACK SHALL BE REINFORCED CONCRETE CONSTRUCTION AND THE CENTER WALL SHALL BE OF MASONRY CONSTRUCTION AS SHOWN FOR THE MASONRY WALL OPTION.
 - INLET INVERT SHALL BE SHAPED WITH 8 SACK SAND 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.
 - CONCRETE TOPS TO BE INSTALLED ON THIN MORTAR CUSHION TO INSURE FULL SUPPORT ALONG BRICK WALLS. CONCRETE TOPS MAY BE CAST IN PLACE OR PRECAST. CONCRETE USED FOR INLET CONSTRUCTION SHALL BE CONCRETE PAVEMENT MIX.
 - INLET TOP REINFORCING SHALL BE SPACED @ 6" MAX. CENTERS. INLET LIDS SHALL BE NOTCHED OUT AS INDICATED TO FACILITATE CONSTRUCTION OF CURB BARS IN INLET TOP TO BE FIELD BENT OR CUT TO CLEAR MANHOLE RING.
 - THE ENDS OF ALL PIPES INSTALLED IN INLETS SHALL BE CUT OFF FLUSH WITH THE INSIDE FACE OF THE INLET WALL.

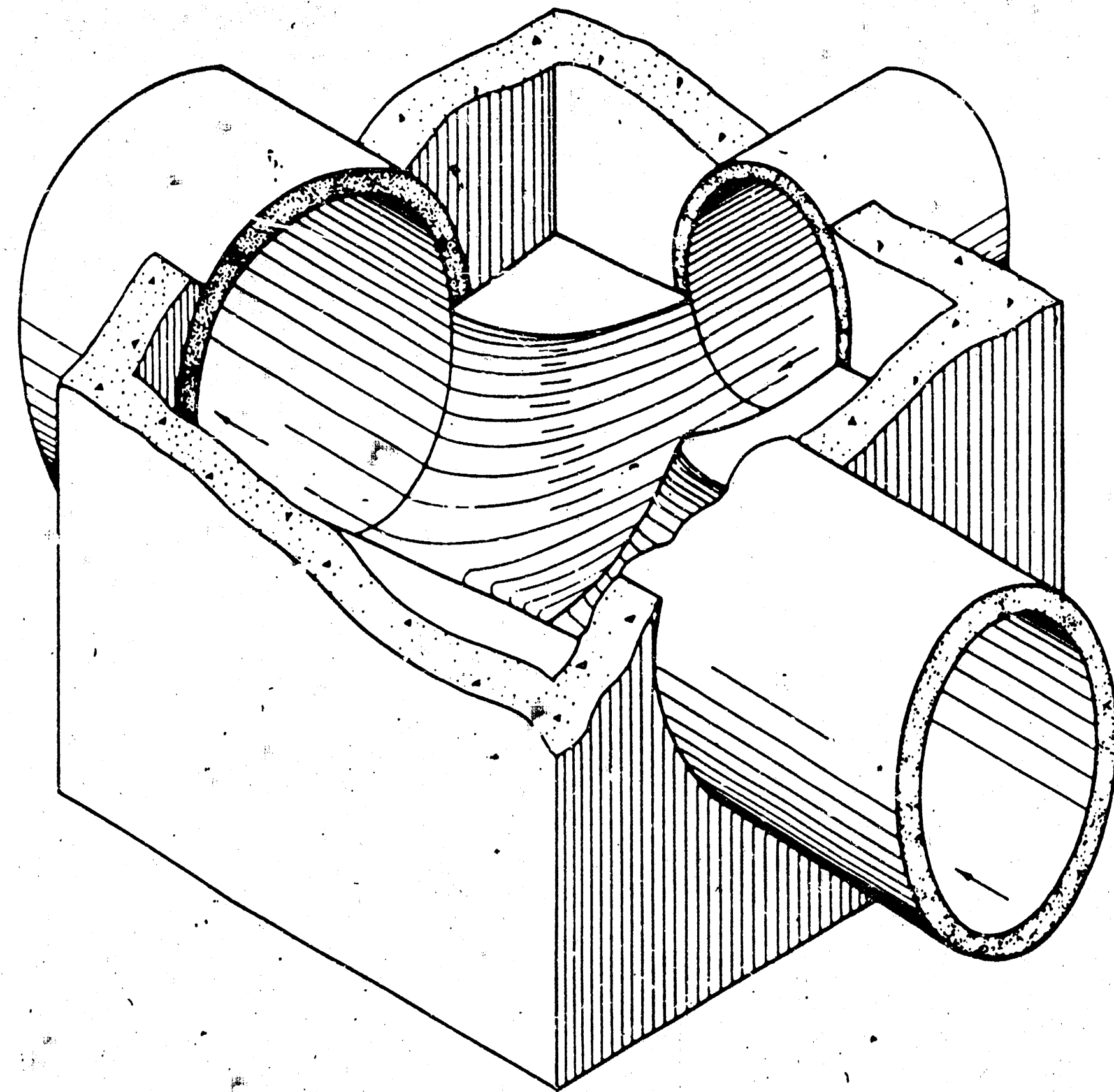
STANDARD CURB INLET PRECAST TOPS			
W	PRE-CAST TOP SIZE	SIDE OR INTERIOR WALL PIPE SIZE	CU. YD. CONC.
4'-4"	3'-8" x 11'-4" x 7 1/2"	21" & SMALLER	0.83 ±
5'-4"	4'-0" x 11'-4" x 7 1/2"	24" & 30"	1.09 ±
6'-4"	5'-8" x 11'-4" x 7 1/2"	36" & 42"	1.35 ±
7'-4"	6'-8" x 11'-4" x 7 1/2"	48" & 54"	1.61 ±
8'-4"	7'-8" x 11'-4" x 7 1/2"	60" & 66"	1.87 ±

STANDARD TYPE 1A
CURB INLET
INLET OPENING = 6"x10'-0"

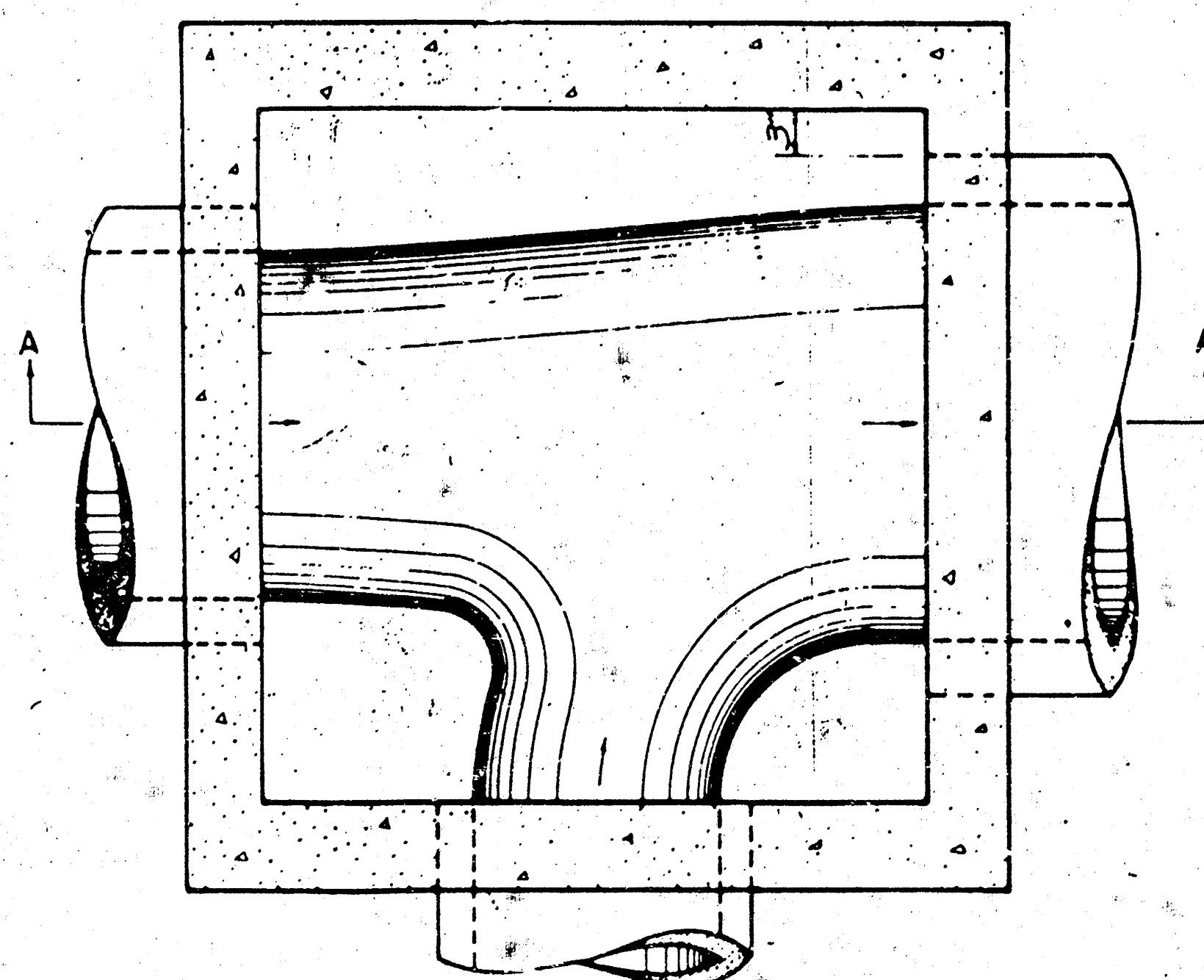
WICHITA, KANSAS

Revised 2-16-89

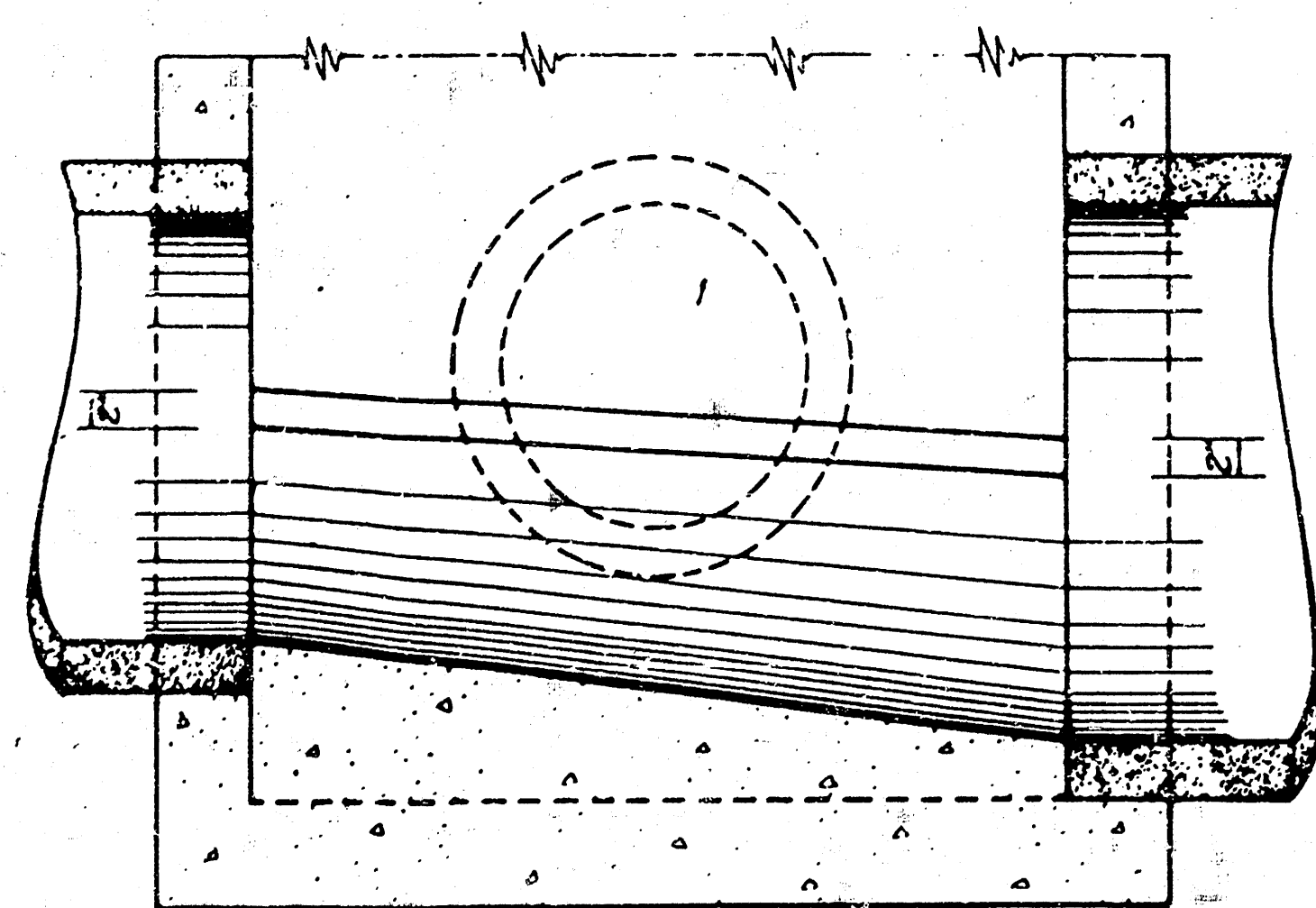
Designed by *[Signature]* Checked by *[Signature]*
Drawn by *[Signature]* Date Nov., 1984 Job No.



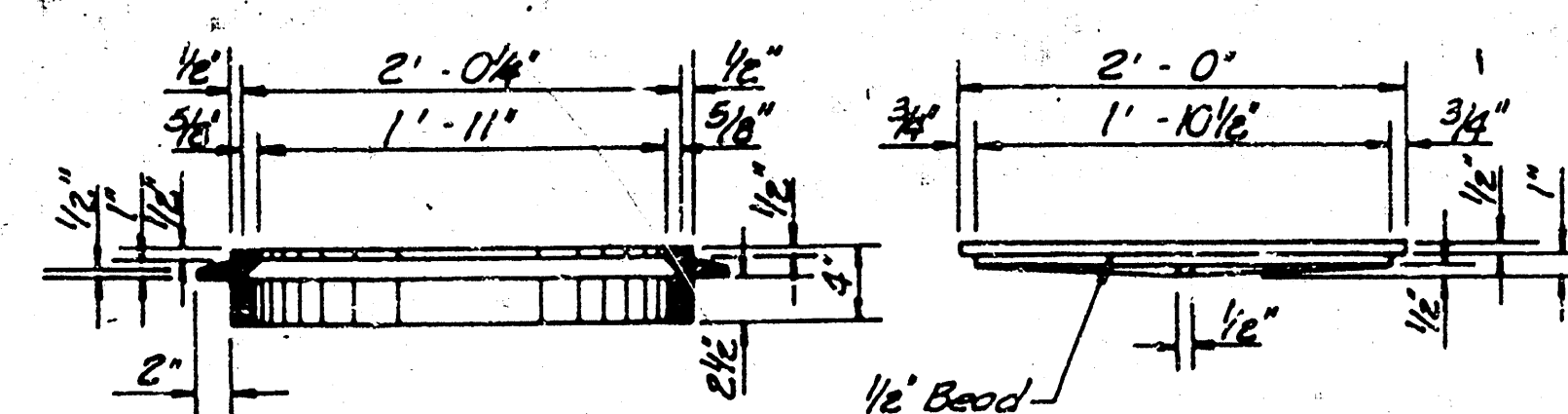
SECTIONAL VIEW (EXAMPLE IV)
Showing Floor Shaping



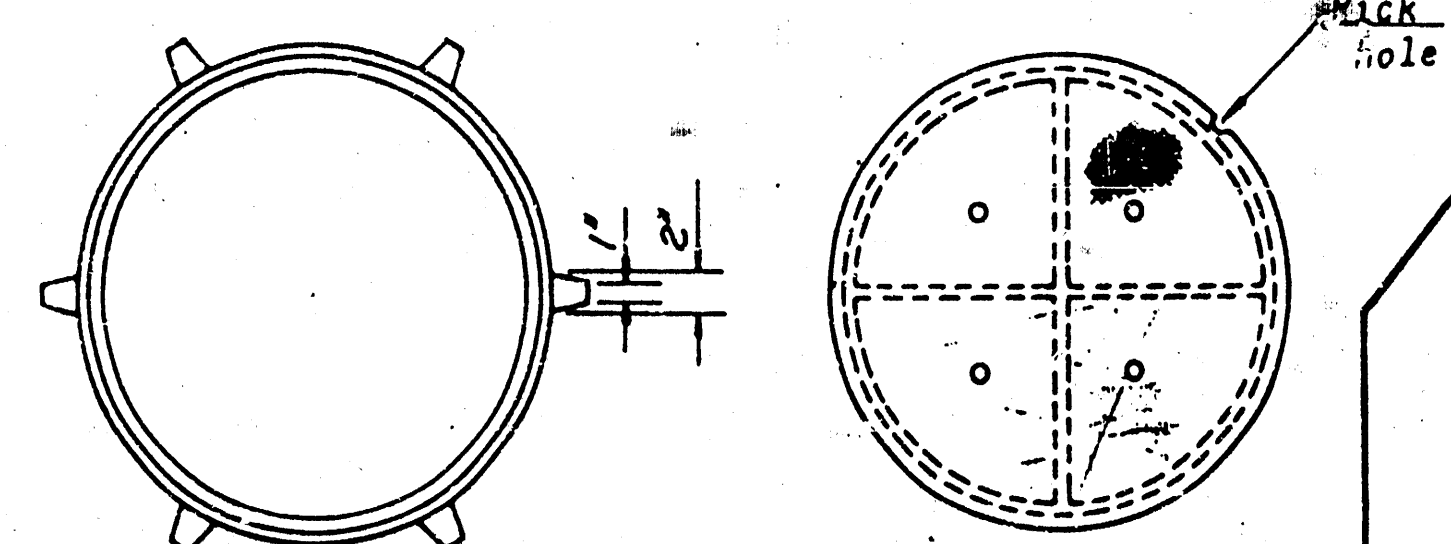
FLOOR PLAN (EXAMPLE IV)



SECTION A-A (EXAMPLE IV)



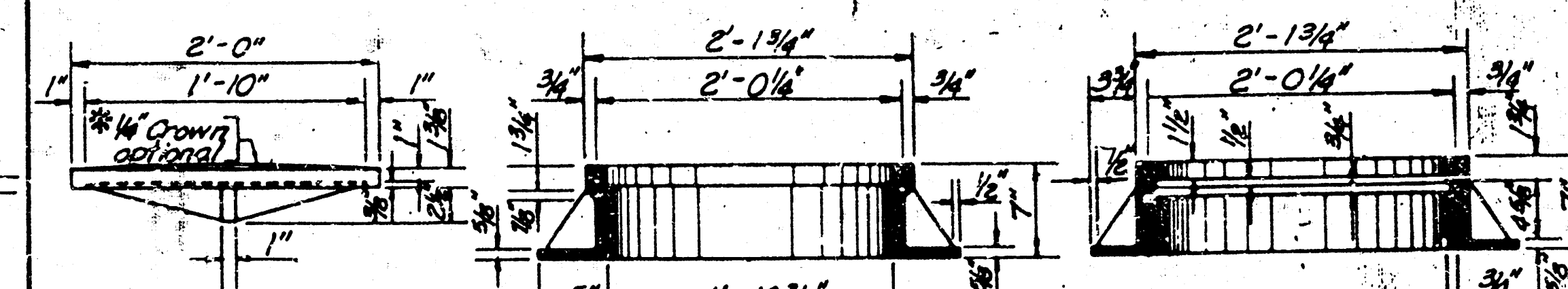
NOTE: Weight of castings includes no allowance for fillets and overruns.



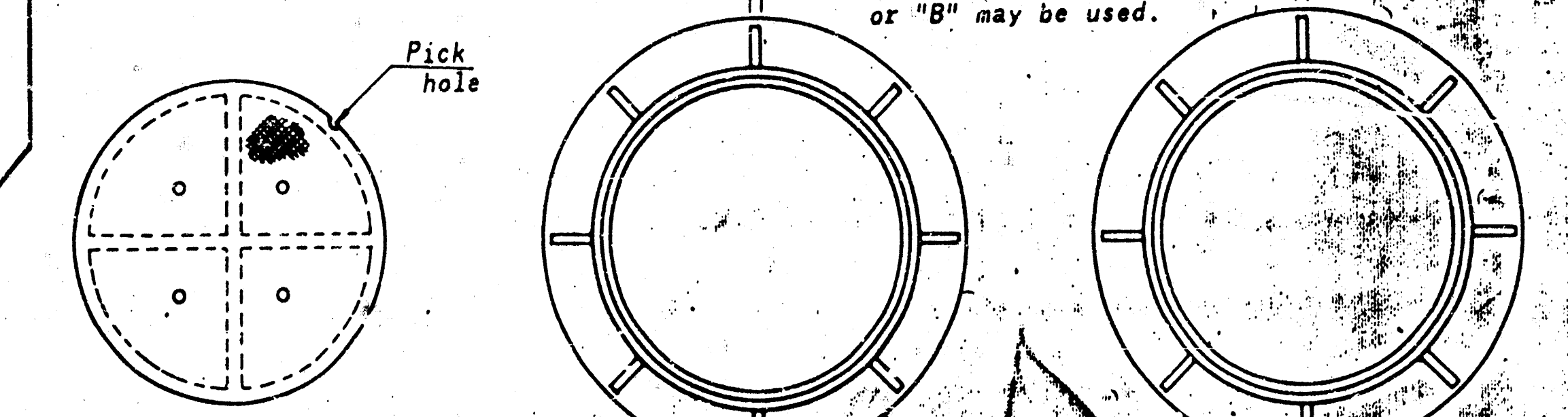
TYPE C
CAST IRON MANHOLE RING
Weight=53 lbs.
CAST IRON MANHOLE COVER
Weight=64 lbs.

LIGHT TYPE MANHOLE COVER & RING

*Rings with four equally spaced lugs will be permitted.



NOTE: Either Type "A" or "B" may be used.



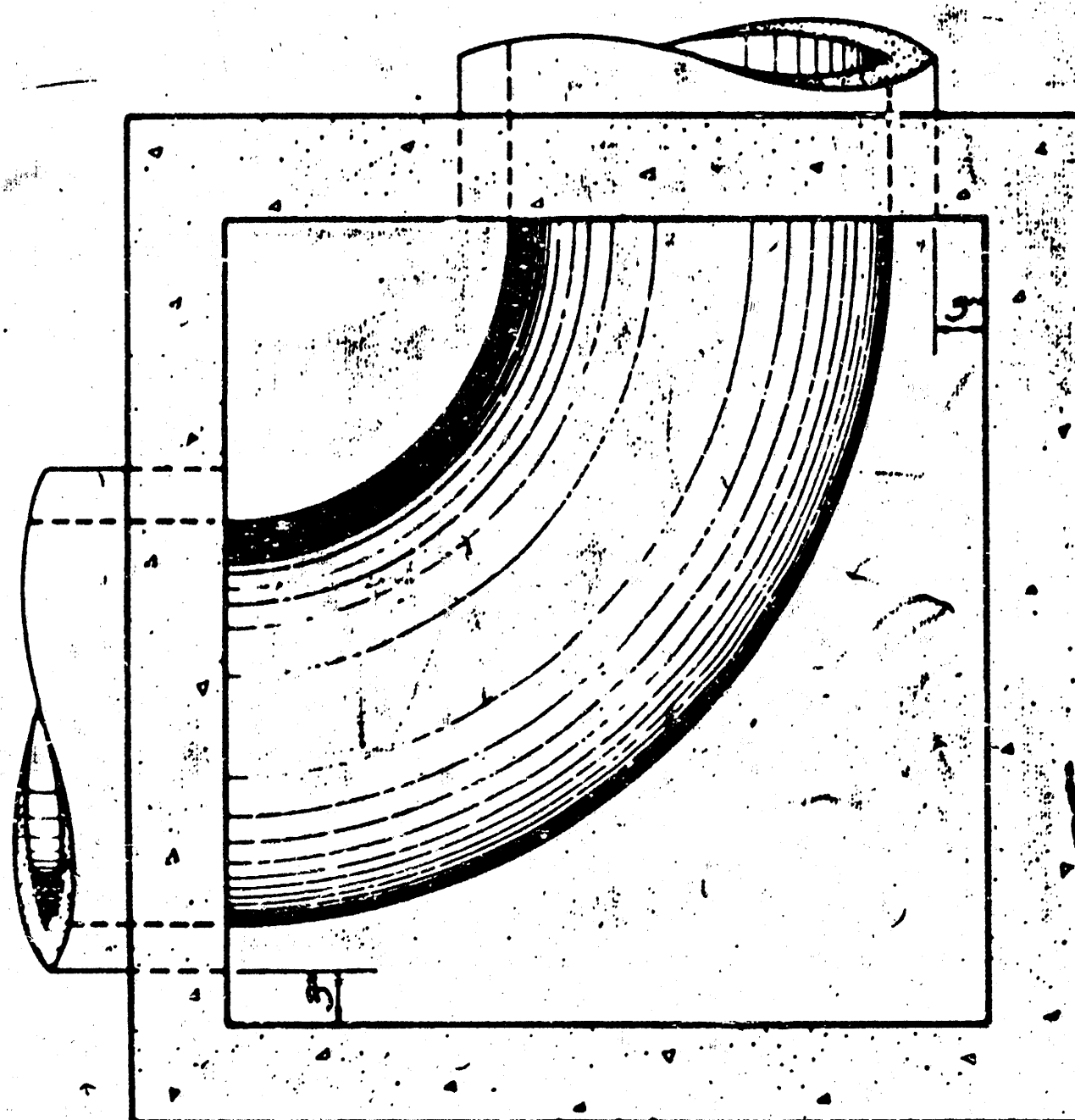
TYPE A & B
CAST IRON MANHOLE COVER
Weight=134 lbs.
TYPE A
CAST IRON MANHOLE RING
Weight=122 lbs.
TYPE B
CAST IRON MANHOLE RING
Weight=198 lbs.

HEAVY TYPE MANHOLE COVER & RING

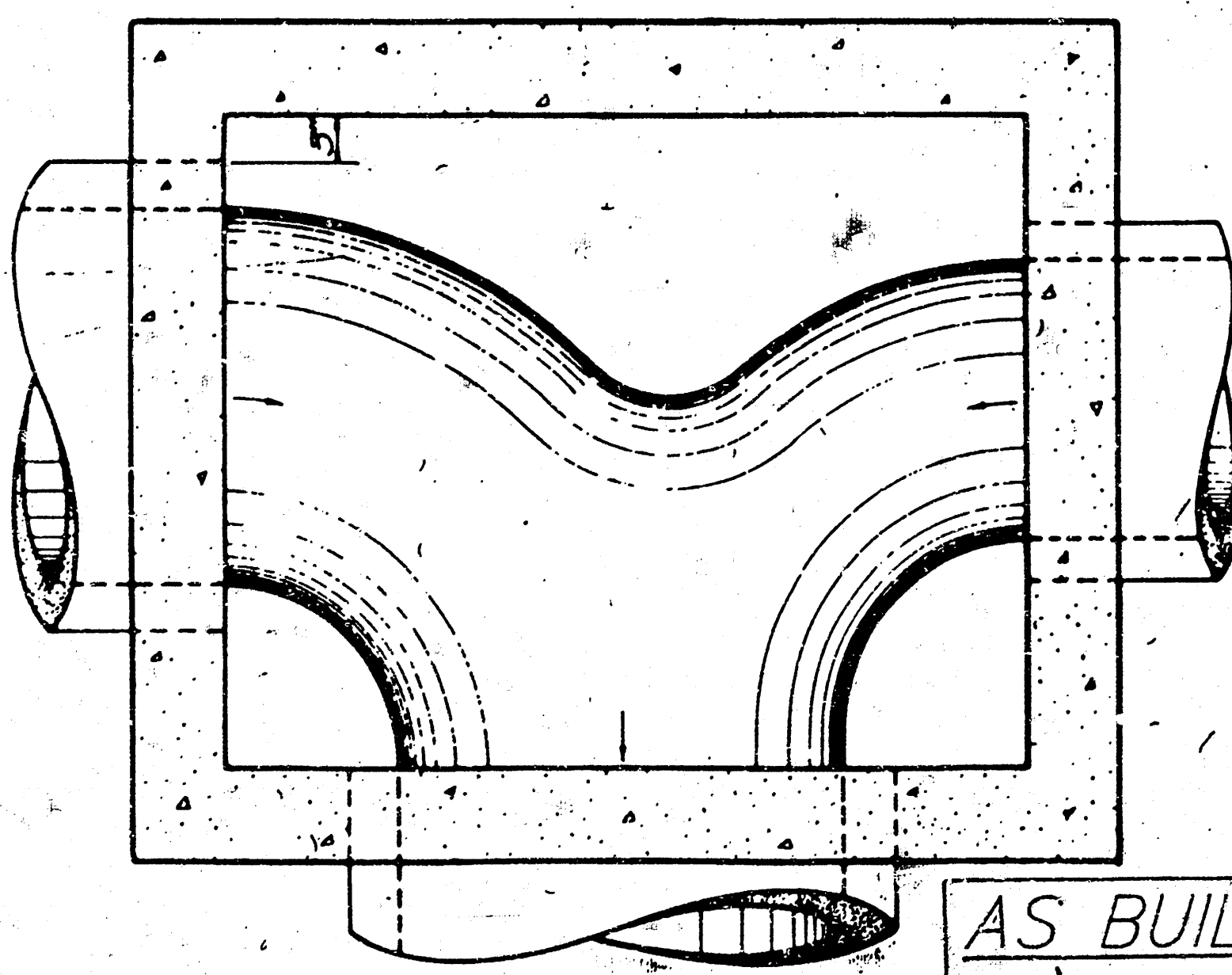
NOTE: The weight without 1/4" crown shall be 9 lbs. less than shown above.

TYPICAL EXAMPLES OF VARIOUS PIPE COMBINATIONS

Showing method of shaping floor of manholes to provide increased hydraulic efficiency. For reinforcing & other features see "PLAN" and "SECTION"

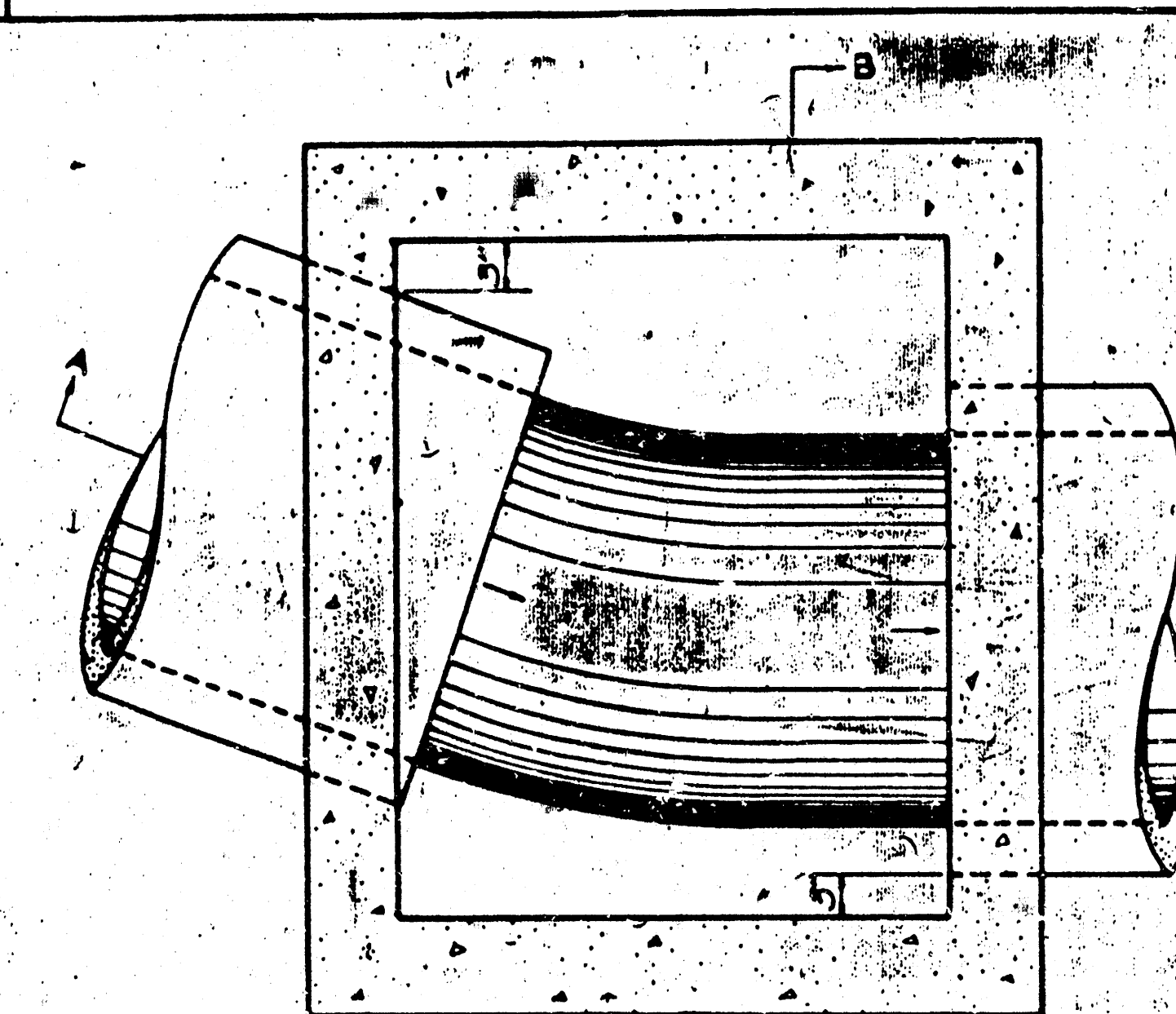


FLOOR PLAN (EXAMPLE II)

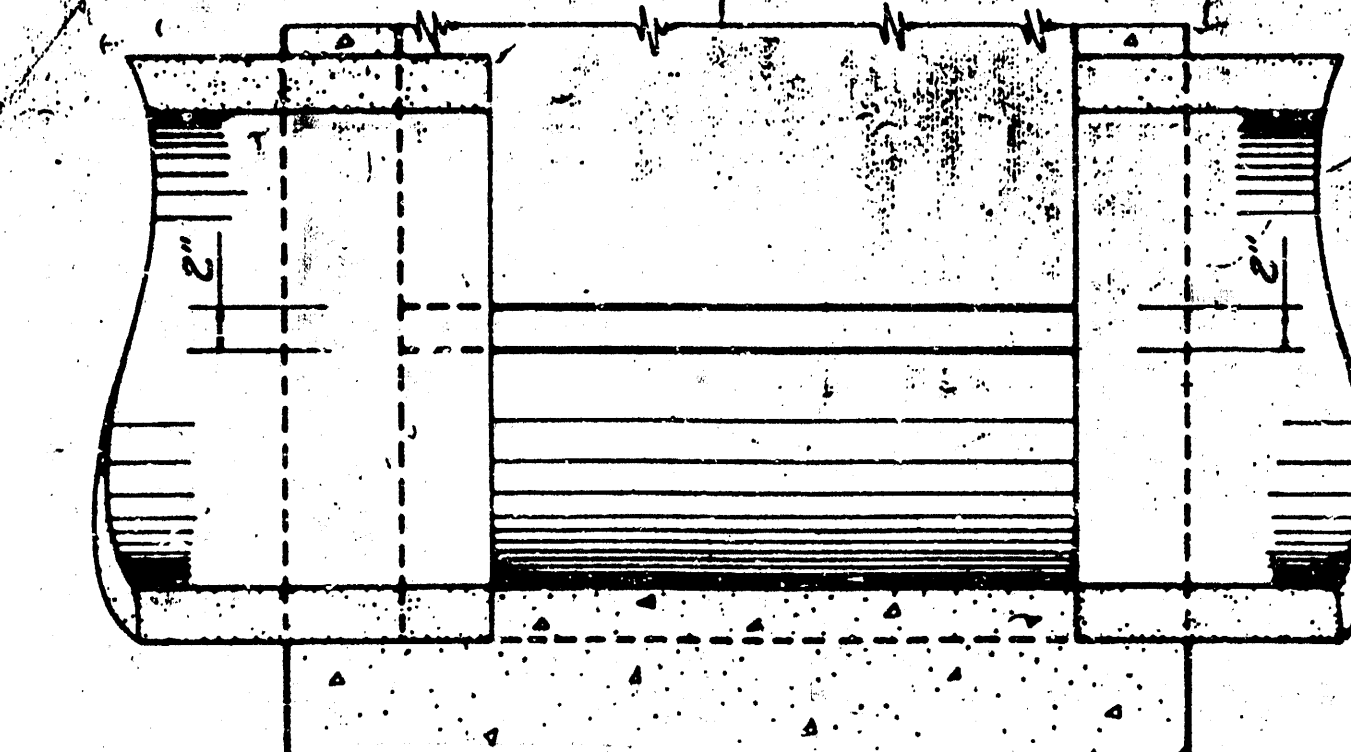


FLOOR PLAN (EXAMPLE III)

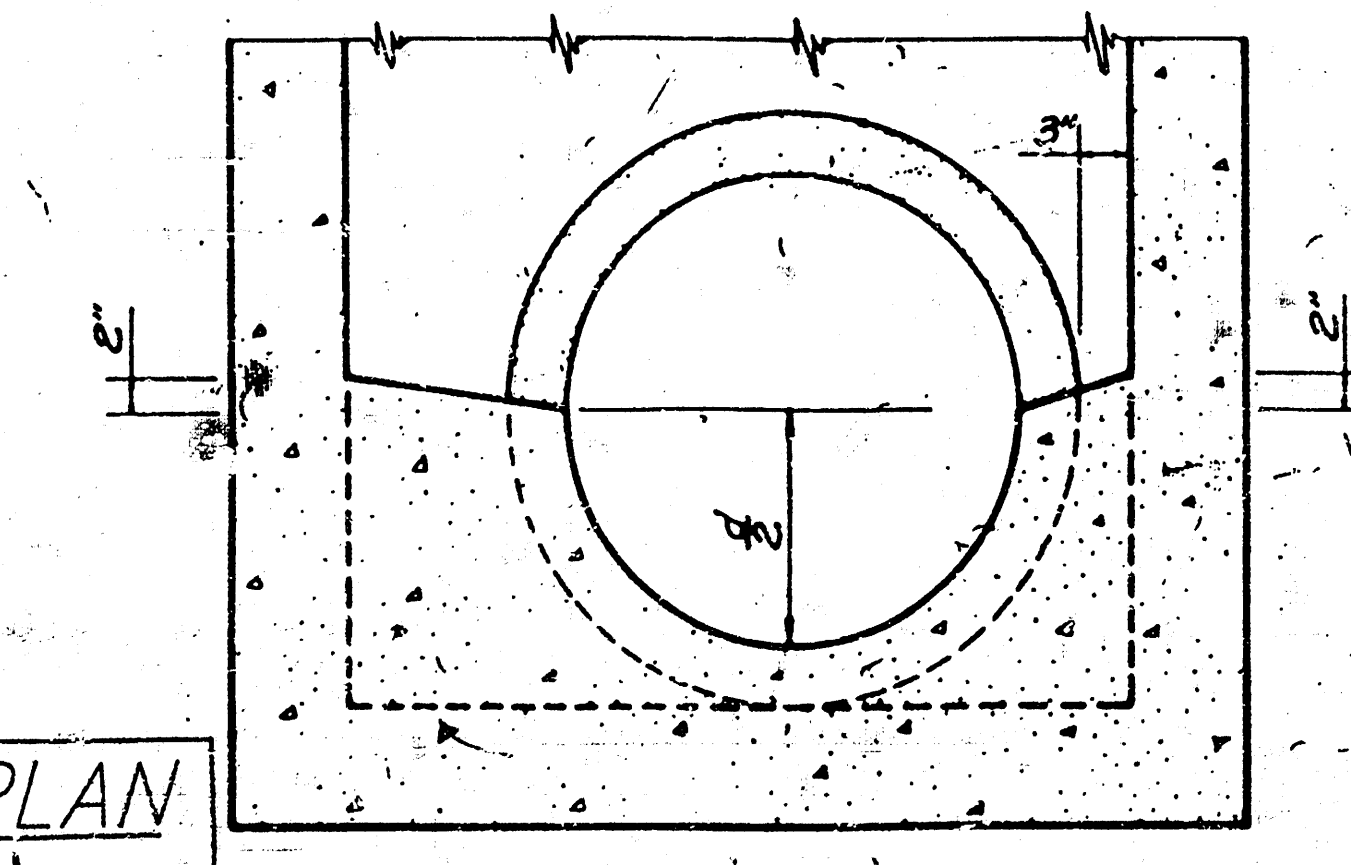
AS BUILT PLAN
BY ADD
DATE 2-16-94



FLOOR PLAN (EXAMPLE I)



SECTION A-A (EXAMPLE I)



SECTION B-B (EXAMPLE I)

NOTE: Use class A Concrete throughout. All exposed edges shall be finished with an edging tool.

At the contractor's option, Class A Concrete (AC) or "mix" used in Conc. Pvc. may be used throughout.

In general, pipes will enter and leave the manhole at various positions where possible, bend bars around pipes.

Floor of manhole to be shaped as shown in various "EXAMPLES" with unreinforced Class "A" concrete.

Manhole opening shall be where used, shall be placed to afford easy access to top of shaped inverted top reinforcing bars to be adjusted accordingly.

All castings shall be gray iron and shall comply with the "Standard Specifications."

All exposed cast iron surfaces (rings & covers) not subjected to traffic, shall be painted either in the shop or in the field with one coat of a zinc dust paint, followed by two field coats of aluminum paint.

No deductions in concrete quantities shall be made for pipe openings.

No additions in concrete quantities shall be made for shaping floor of manholes.

When so ordered by the Engineer, the top of the manhole shall be sloped slightly to approximately fit the ground line or other conditions.

Dimensions and weights of cast iron as shown on this sheet are minimum. Larger dimensions and/or heavier weights of cast iron may be used.

NOTE: Contractor has the option of using precast manholes, as approved by the Engineer (See Special Provision). Payment of quantities shall be on a cast-in-place basis.

NOTE: Steps not to be used where "H" is less than 6 feet.

Weight 18 lbs. Scale: 1/2" = 1'

CAST IRON STEP

NOTE: Steps not to be used where "H" is less than 6 feet.

Weight 18 lbs. Scale: 1/2" = 1'

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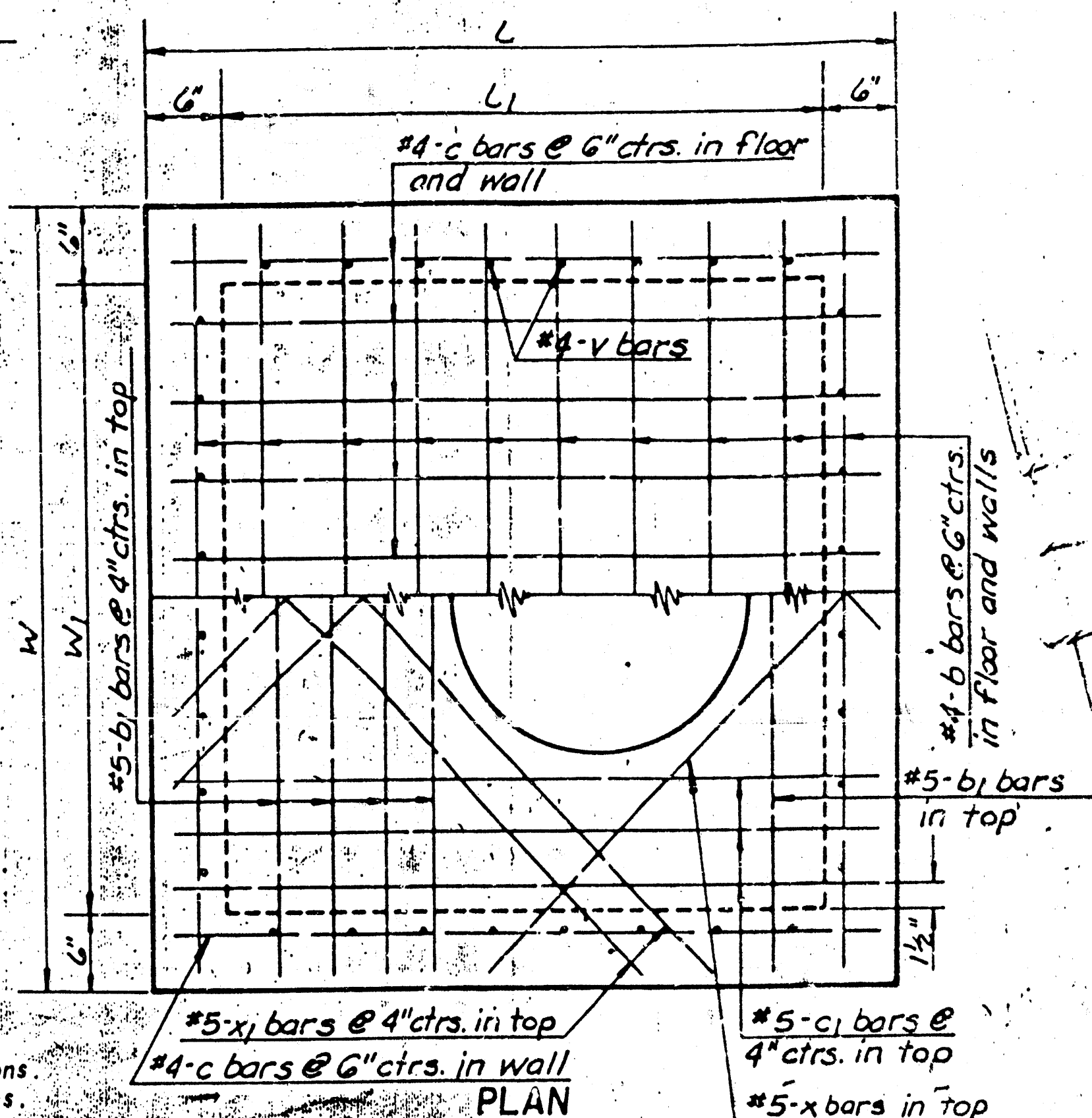
NOTE: Steps not to be used where "H" is less than 6 feet.

Weight 18 lbs. Scale: 1/2" = 1'

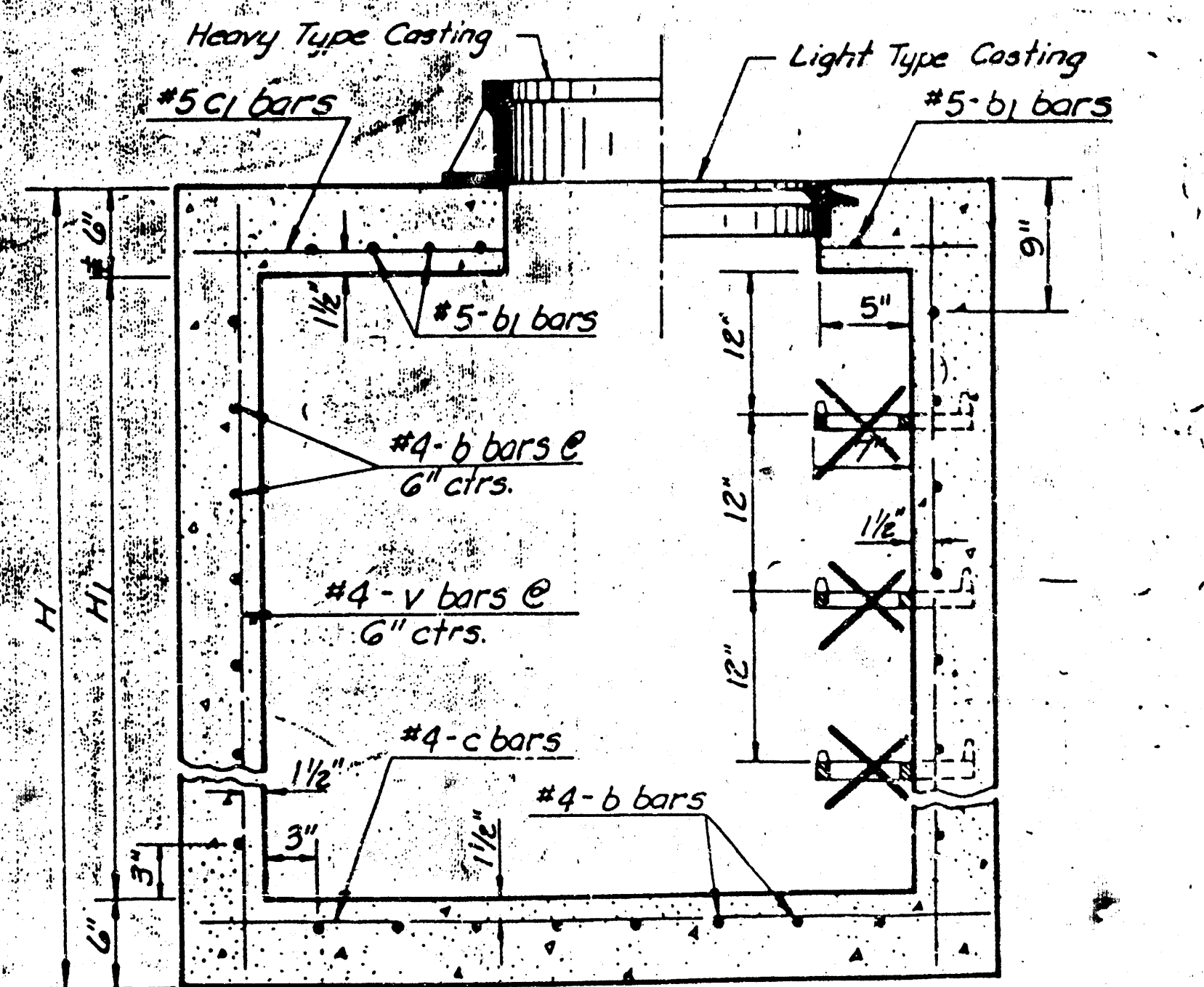
CAST IRON STEP

REGION	STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
7	KANSAS		19	7	10

Where dimension "L" or "W" is greater than 6', use 8" slab thickness.



PLAN (Showing top floor reinforcing)



SECTION (Exclusive of floor shaping)

As an alternate to the cast iron step shown, either an aluminum or a plastic coated steel step complying with the same minimum clear opening dimensions may be used. The minimum length of rung shall be 14 inches and the minimum distance of rung from wall shall be 6 inches.

The cast aluminum extruded bar (1/2" minimum) shall comply with the Standard Specifications (ASTM A 1136-81).

The plastic coated step shall be made from a No. 2 steel plate having bars incorporated in plastic to provide a minimum cross-section of 1 inch by 1 inch and shall comply with the special provision.

The rung shall be designed so the foot cannot slide off the end.

26	9-28-82	Rev Step from 16" to 14" clear opening	W.L.H.	L.R.P.
25	8-19-80	Revised to Standard Specs.	W.L.H.	L.R.P.
24	4-2-80	Labeled bars same as Steel table	W.L.H.	L.R.P.
NO.	DATE	REVISIONS	BY	APP'D

KANSAS DEPARTMENT OF TRANSPORTATION

REINFORCED CONCRETE MANHOLE

SHEET NO. 7	SCALE 1/2" = 1'	APP'D <u>P.H. Vancura</u>	4-5-44
DESIGNED BY <u>ADD</u>	TRACED BY <u>W.B.</u>	QUANT. OK <u>W.B.</u>	TRACE OK <u>W.B.</u>
DESIGN OK <u>ADD</u>	DETAIL OK <u>W.B.</u>		

MANHOLE FRAME AND COVER DETAIL

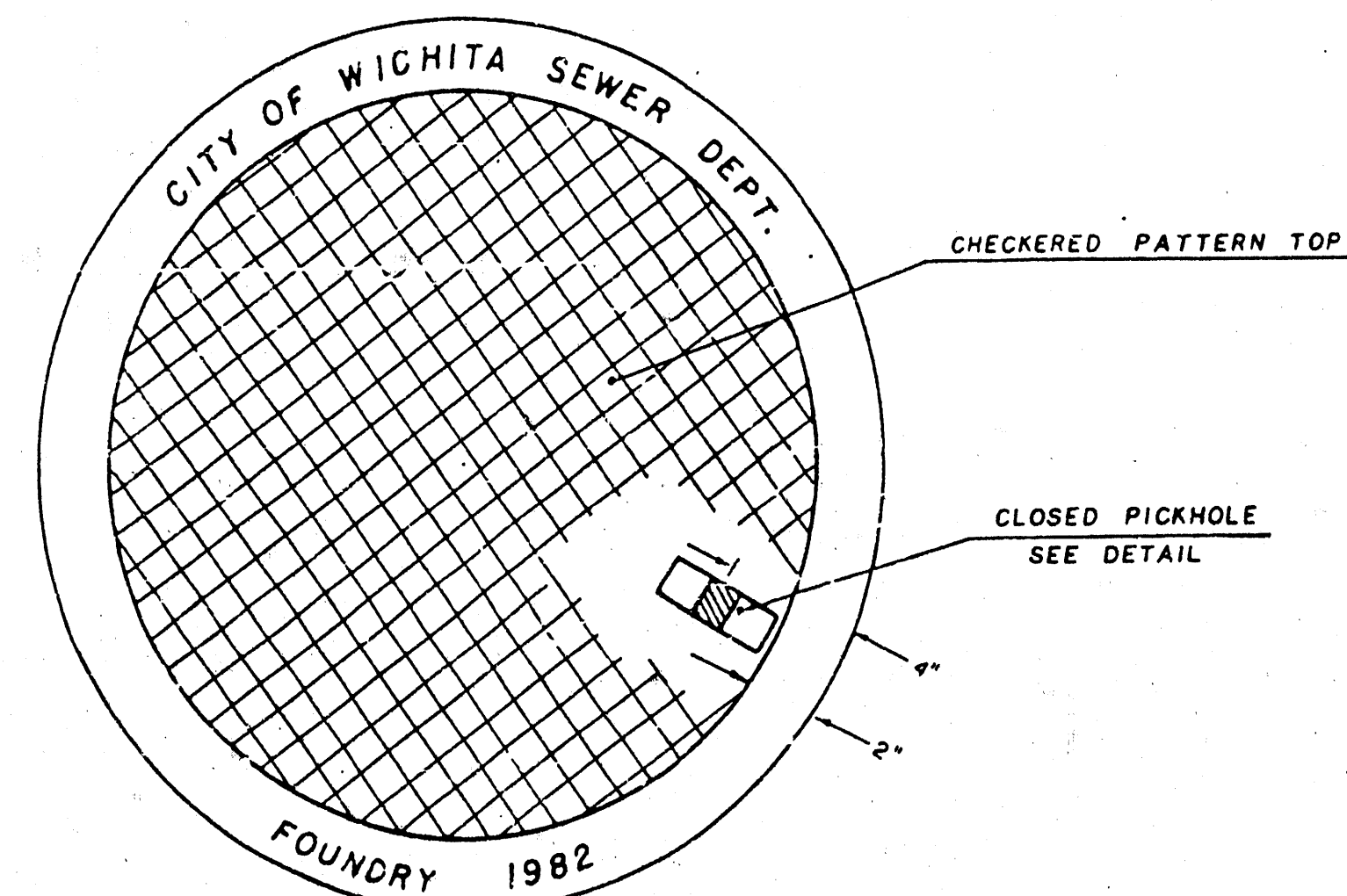
ADOPTED AS STANDARD DESIGN

BY

City of Wichita, Kansas

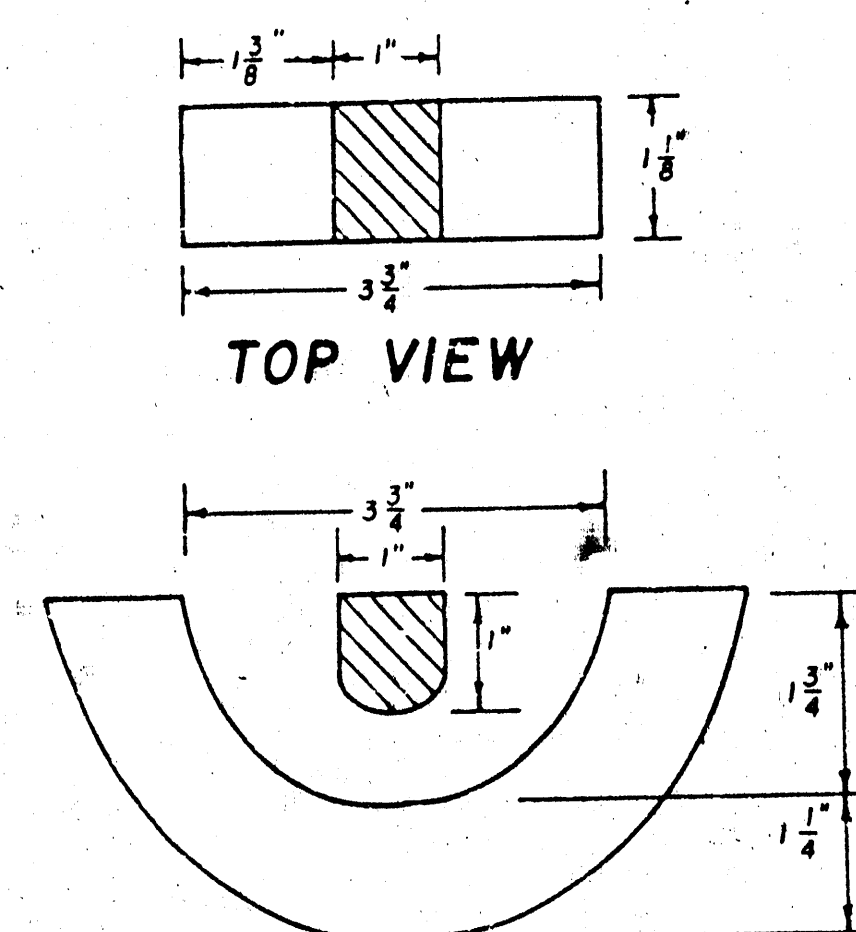
MANHOLE COVER

Weight: 180 Lbs.

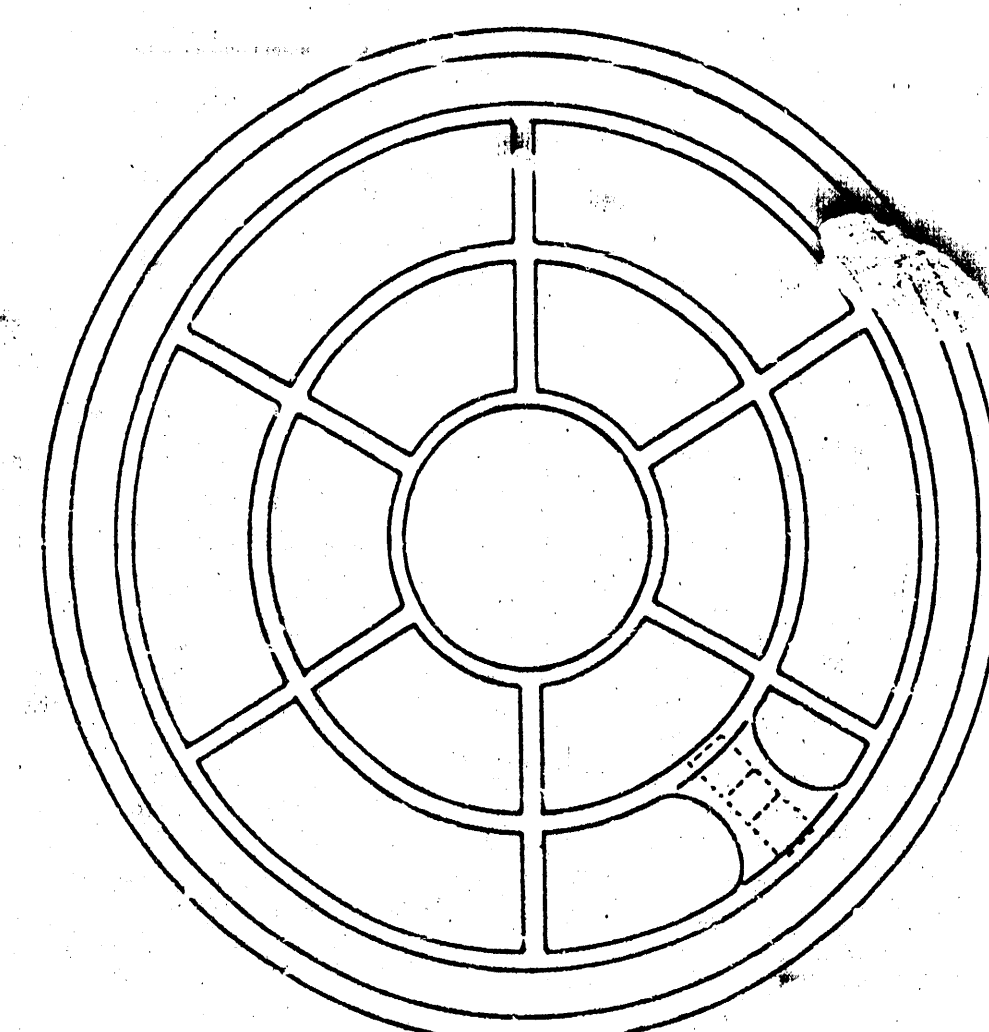


TOP VIEW

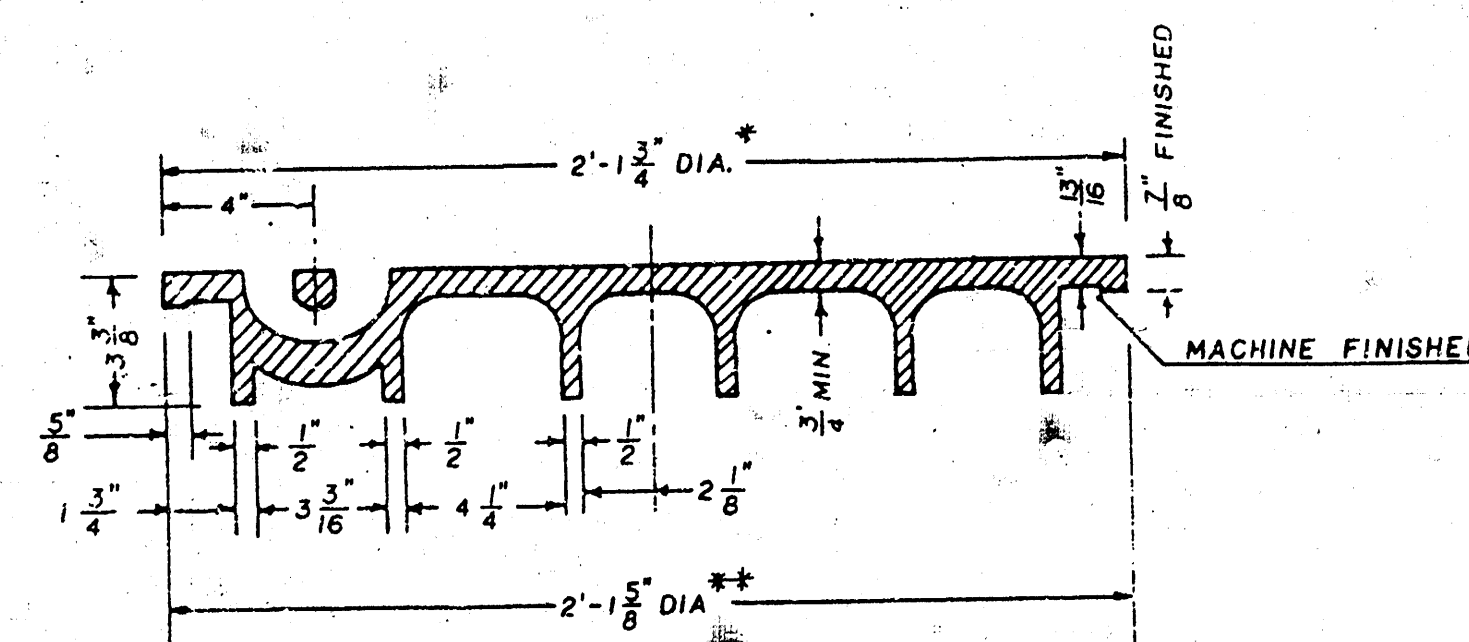
PICKHOLE DETAIL



SECTION VIEW



BOTTOM VIEW

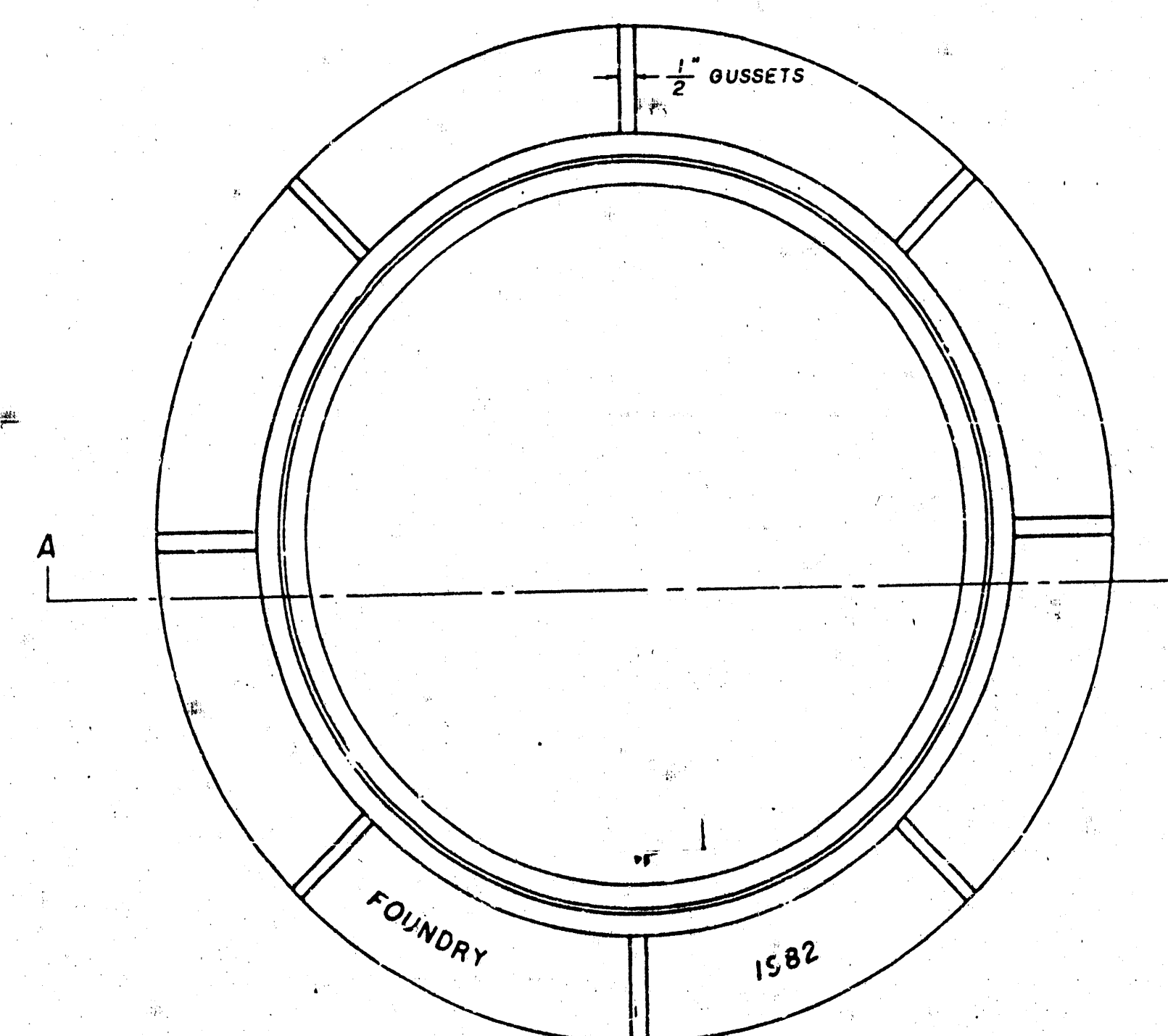


SECTION VIEW

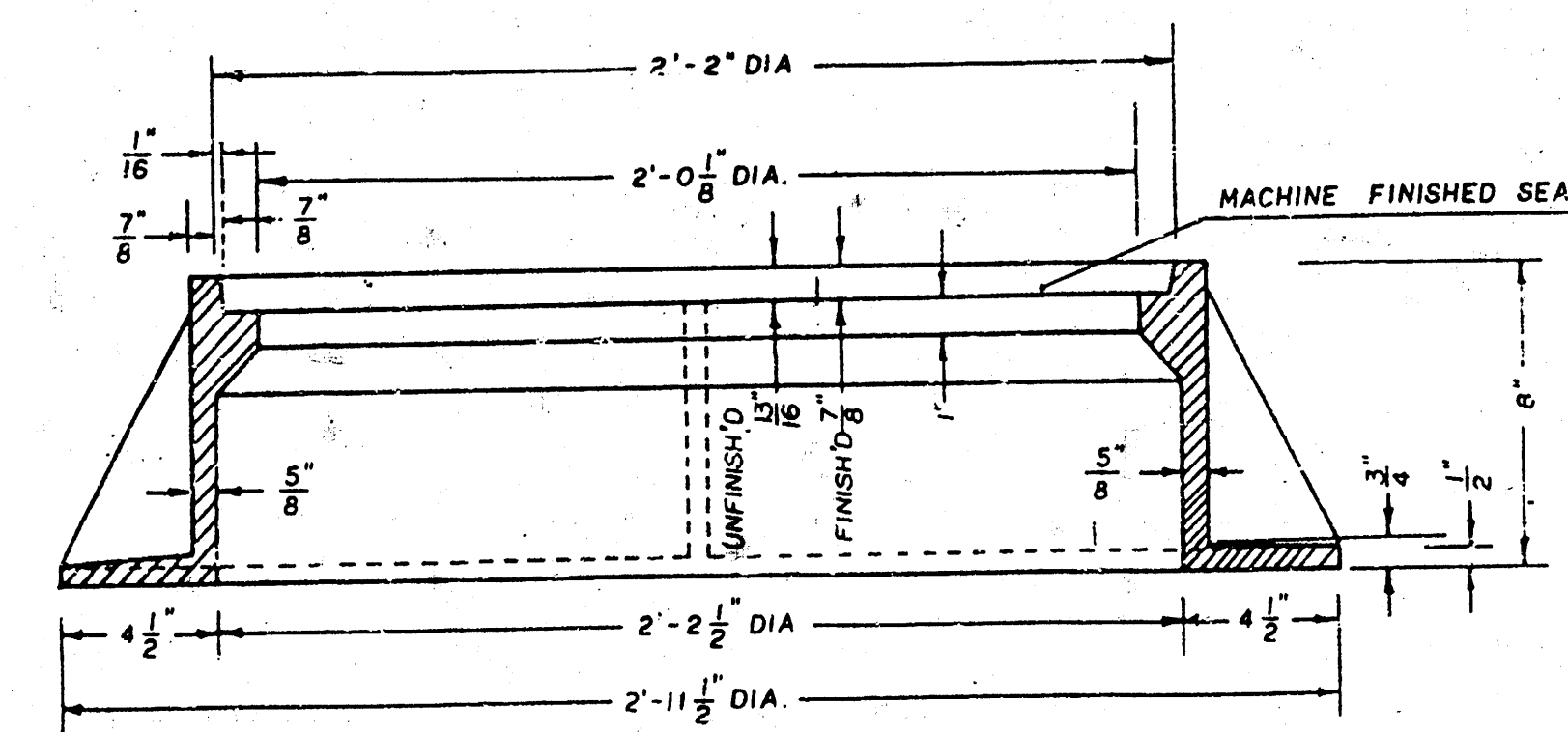
* OUTSIDE DIA. TOP OF COVER
** OUTSIDE DIA. BOTTOM OF COVER

MANHOLE FRAME

Weight: 240 Lbs.



TOP VIEW



SECTION A-A

GENERAL NOTES

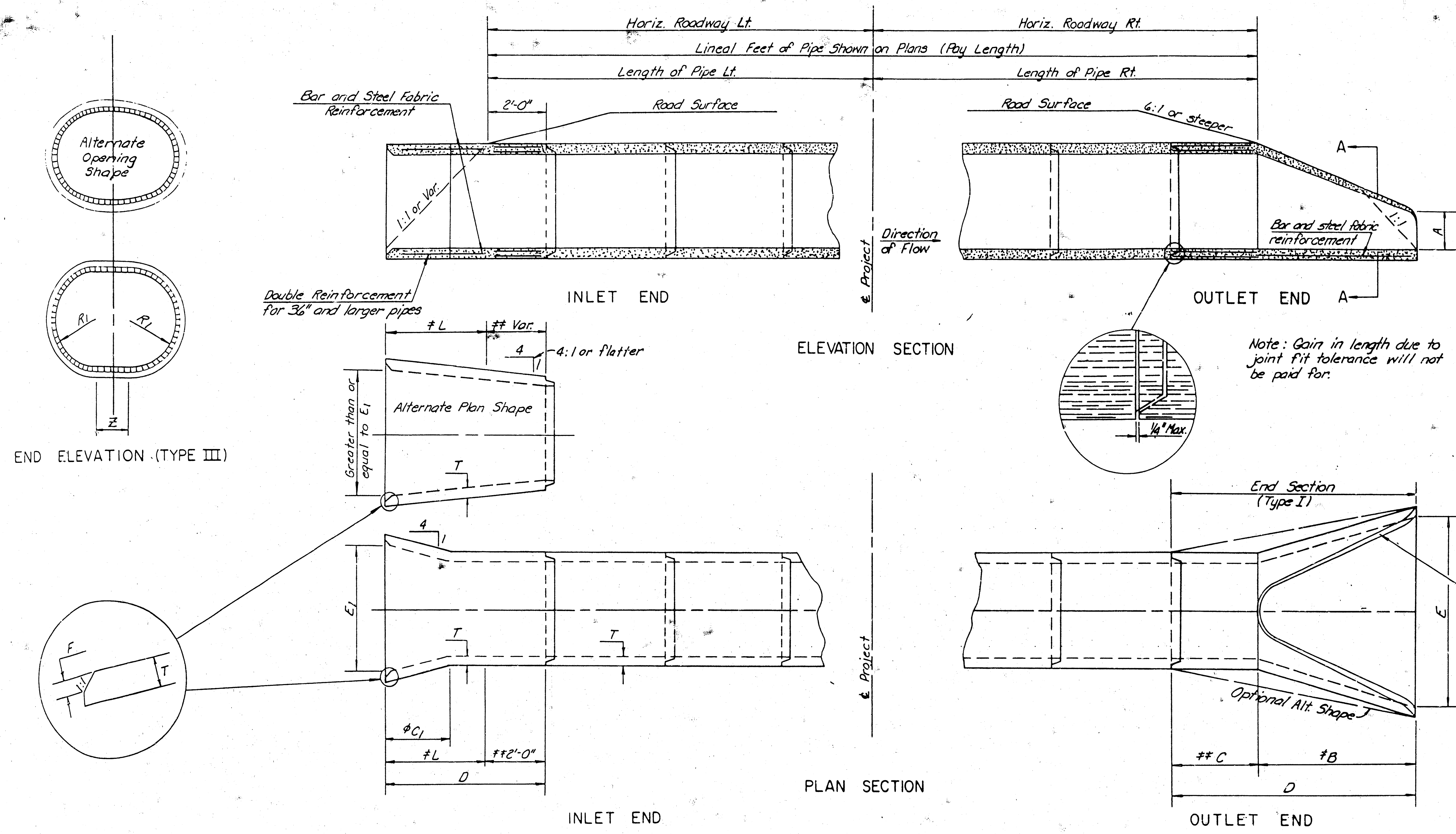
1. MANHOLE CASTINGS SHALL BE MANUFACTURED USING GOOD QUALITY GRAY IRON CONFORMING TO CLASS 30 OF A.S.T.M. DESIGNATION A-48. DIMENSIONS AND WEIGHTS SHOWN ON THE DETAILED DRAWINGS SHALL BE CONSIDERED AS MINIMUM REQUIREMENTS AND ANY DEVIATIONS FROM THE DIMENSIONS SHOWN MUST BE SPECIFICALLY APPROVED. THE FINISHED CASTINGS SHALL BE OF UNIFORM QUALITY, FREE FROM BLOWHOLES, POROSITY, HARD SPOTS, SHRINKAGE DISTORTIONS OR OTHER DEFECTS.
2. MANHOLE CASTINGS SHALL BE 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.
3. 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.
4. 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.

AS BUILT PLAN
BY DO. S. G.
DATE 2-16-94

REVISED MAY 1993

8/10

PROJECT NUMBER	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
		9	10



φ Transition to round pipe.
 * Min. Water Way area is calculated at the inside of the bevel.

SIDE TAPERED INLET SECTION (TYPE III) - NOMINAL DIMENSIONS									
Diameter	* Min. W.W. Area Sq. Ft.	R _I	T	L	E _I	Σ	F	D	C _I
24"	4.5	1'-0"	3"	2'-3"	2'-8"	8"	1 1/2"	4'-3"	1'-5 1/8"
30"	7.0	1'-3"	3 1/8"	2'-9 1/2"	3'-4"	10"	2"	4'-9 1/8"	1'-9 1/8"
36"	10.1	1'-6"	4"	3'-4"	4'-0"	1'-0"	2"	5'-4"	2'-1 1/8"
42"	13.7	1'-9"	4 1/2"	3'-10 1/2"	4'-8"	1'-2"	2 1/2"	5'-10 1/8"	2'-5 1/8"
48"	17.9	2'-0"	5"	4'-5"	5'-4"	1'-4"	3"	6'-5"	2'-10 1/8"
54"	22.7	2'-3"	5 1/2"	4'-11 1/2"	6'-0"	1'-6"	3 1/2"	6'-11 1/8"	3'-2 1/8"
60"	28.0	2'-6"	6"	5'-6"	6'-8"	1'-8"	4"	7'-6"	3'-6 1/8"
72"	40.3	3'-0"	7"	6'-7"	8'-0"	2'-0"	5"	8'-7"	4'-3 3/8"
84"	54.8	3'-6"	8"	7'-8"	9'-4"	2'-4"	6"	9'-8"	5'-0 3/8"

Dimensions for alternate shapes shall be equal to or greater than those shown in the table, unless otherwise shown.

PIPE CULVERT SUMMARY															
Station	Location	Type	Size	Crown Grade Elev.	Flow Line		Horizontal Roadway		Degree of Rotation	Length of Pipe		Lin. Ft. of Pipe	End Sects.		
					Lt.	Rt.	Lt.	Rt.		Lt.	Rt.		Type I	Type II	Type III
0+00	21.5' Rt.	RCP	42"	—	—	—	—	—	—	—	—	—	—	1	—
							</								

END SECTION (TYPE I) NOMINAL DIMENSIONS									
Diam.	# Wt./Sec. Pounds	Slope	A	# B	# C	D	E	T	
12"	530	3:1	4"	2'-0"	4'-0 1/2"	6'-0 1/2"	2'-0"	2"	
15"	740	3:1	6"	2'-3"	3'-10"	6'-1"	2'-6"	2 1/4"	
18"	990	3:1	9"	2'-3"	3'-10"	6'-1"	3'-0"	2 1/2"	
24"	1,520	3:1	9 1/2"	3'-7 1/2"	2'-6"	6'-1 1/2"	4'-0"	3"	
30"	2,190	3:1	1'-0"	4'-6"	1'-7 3/4"	6'-1 3/4"	5'-0"	3 1/2"	
36"	4,100	3:1	1'-3"	5'-3"	2'-10 3/4"	8'-1 3/4"	6'-0"	4"	
42"	5,380	3:1	1'-9"	5'-3"	2'-11"	8'-2"	6'-6"	4 1/2"	
48"	6,550	3:1	2'-0"	6'-0"	2'-2"	8'-2"	7'-0"	5"	
54"	8,240	2.4:1	2'-3"	5'-5"	2'-9 1/2"	8'-2 1/4"	7'-6"	5 1/2"	
60"	8,730	2:1	2'-11"	5'-0"	3'-3"	8'-3"	8'-0"	6"	
72"	12,520	1.84:1	3'-0"	6'-6"	1'-9"	8'-3"	9'-0"	7"	
84"	18,160	1.6:1	3'-0"	7'-6"	1'-9"	9'-3 1/2"	10'-0"	8"	

** Included in pay length of pipe.
 ⊕ Weight may vary slightly for alternate shape.
 * Paid for as separate item of End Section, except when structures are bid as alternates, then End Sections are subsidiary to bid item. "Drainage Structure No."

11-6-80	Remove note on 8:1 Slope 1/4th of pipe W.L.H.	LRP
6-18-80	Pipe length & S.D.R. Entrance W.L.H.	LRP
3-24-80	Added alternate plan shape Ty. III W.L.H.	LRP

KANSAS DEPARTMENT OF TRANSPORTATION			
CONCRETE END SECTIONS FOR CONCRETE PIPES			
TYPE I & SIDE TAPERED INLET SECTION (TYPE III)			
STD. NO. 302.1	11-6-80	2-16-99	1-21-78
DAC	LDY	ANB	W.L.H.

AS BUILT PLAN
 BY David Smith
 DATE 2-16-99

4-5-4