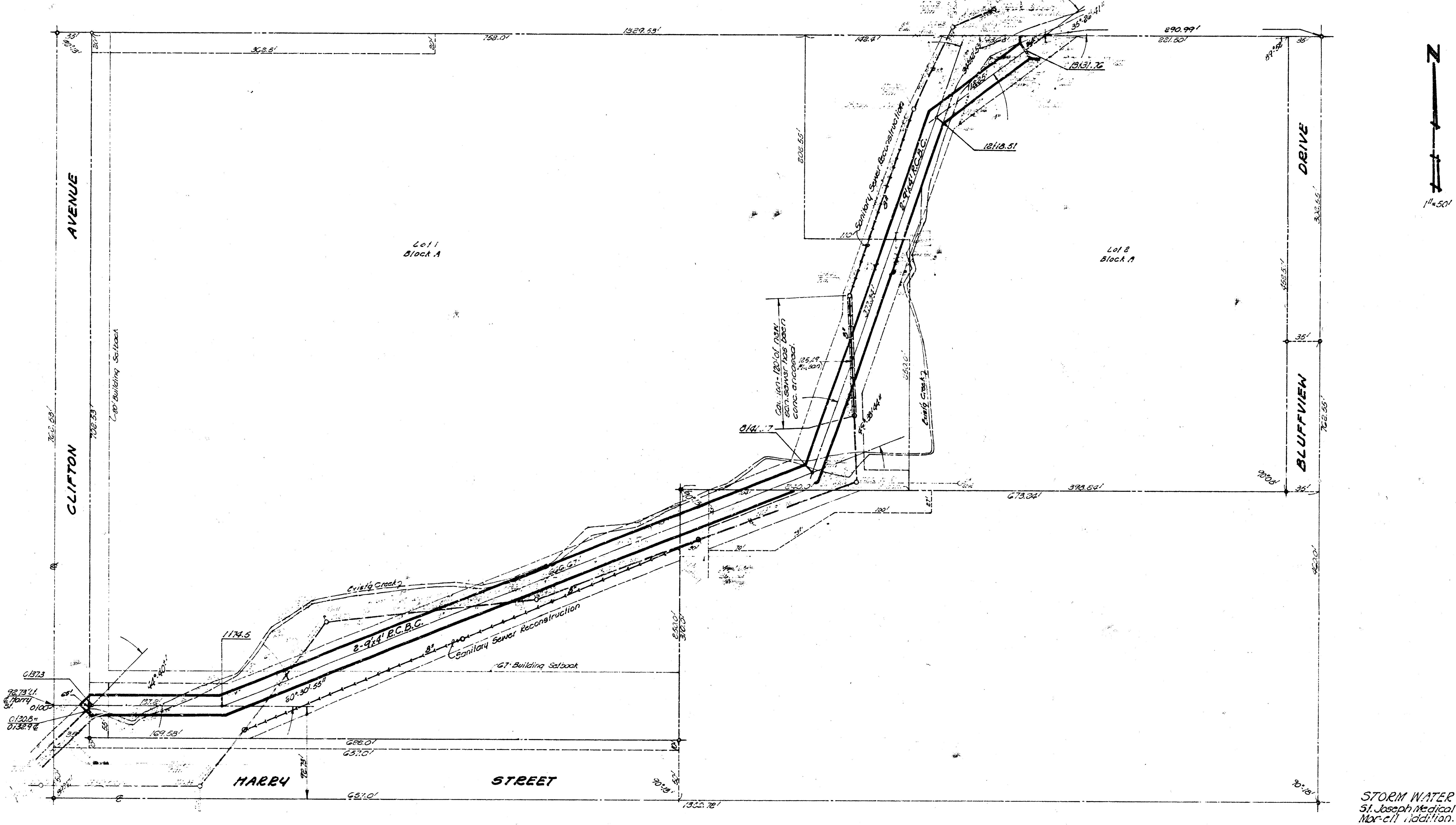

CLIFTON AVENUE
BLUFFVIEW DRIVE
HARRY STREET
Lot 1
Block A
Lot 2
Block A
N
1" = 50'
2-9'x4' R.C.B.C.
Sanitary Sewer Reconstruction
Exist'g Creek
67' Building Setback
Building Setback
Caution - 120' of new san. sewer has been conc. encased.
13131.76
12118.51
8141.17
1174.5
0137.3
92.73' Lt. ℄ Harry St. 0100
0130.8=
0132.9 ℄
35°26'41"
60°30'55"
44°40'
169.58'
137.2'
628.0'
657.0'
657.0'
1300.78'
673.34'
398.84'
890.99'
1329.53'
142.4'
208.55'
377.33'
550.0'
250.0'
370.0'
666.67'
100'
70'
92.73'

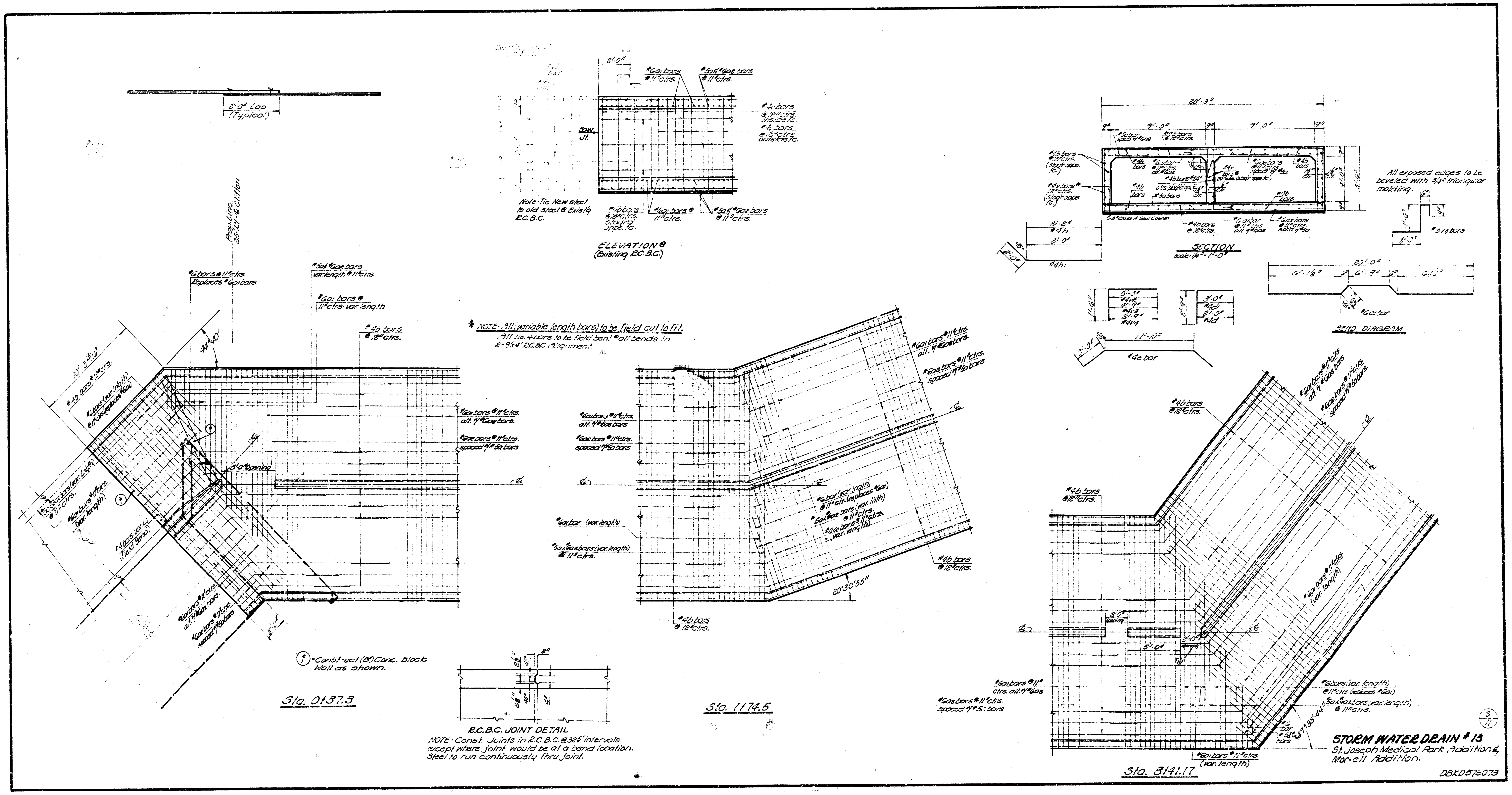
STORM WATER DRAIN # 13

St. Joseph Medical Park Addition &
Mor-ell Addition.

MAY 1974

DBKD 573073

1/11


8'-0" Lap (Typical)
Prop. Line 35' Rt. ℄ Clifton
#6 bars @ 11" ctrs. Replaces #6a1 bars
#5a & #6a2 bars var. length @ 11" ctrs.
#6a1 bars @ 11" ctrs. var. length
#4b bars @ 18" ctrs.
44°40'
10'-3 13/16"
#4b bars @ 12" ctrs.
#6 bars (var. lngth) @ 11" ctrs (replaces #6a1)
#5a & #6a2 bars (var. Lngth) @ 11" ctrs.
#6a1 bars @ 11" ctrs. (var. length)
#4 bars (var. L.) (Field Bend)
5'-0" Opening
#6a1 bars @ 11" ctrs. alt. w/ #6a2 bars.
#6a2 bars @ 11" ctrs. spaced w/ #5a bars
Sta. 0137.3
8'-0"
#6a1 bars @ 11" ctrs.
#5a & #6a2 bars @ 11" ctrs.
Sawn Jt.
#4i bars @ 18" ctrs. inside fc.
#4i bars @ 12" ctrs. outside fc.
#4b bars @ 18" ctrs. stagg'd opps. fc.
#6a1 bars @ 11" ctrs.
#5a & #6a2 bars @ 11" ctrs.
℄
#6a1 bar (var. length)
#5a & #6a2 bars (var. length) @ 11" ctrs.
#6 bar (var. lngth) @ 11" ctrs. (replaces #6a1)
#5a & #6a2 bars (var. lnth) @ 11" ctrs.
#6a1 bars @ 11" ctrs. (var. length)
#4b bars @ 12" ctrs.
#4b bars @ 18" ctrs.
20°30'55"
Sta. 1174.5
8"
2 1/2"
4 1/2"
4"
20'-3"
9"
9'-0"
9"
9'-0"
9"
#5a bar spac'd w/ #6a2
#4b bars @ 12" ctrs.
#4b bars @ 18" ctrs. (stagg'd opps. fc.)
#4v bars @ 12" ctrs. (stagg'd opps. fc.)
#4b bars
#6a1 bar @ 11" ctrs. alt. #6a2
#4b bars @ 24" ctrs. (stagg'd opps. fc.)
#5a bars
#4v bars @ 24" ctrs. (stagg'd opps. fc.)
#6a2 bars @ 11" ctrs. spac'd w/ #5a
1 1/2" clr.
3" Class A Seal Course
#4b bars @ 12" ctrs.
#6a1 bar @ 11" ctrs. alt. w/ #6a2
#6a2 bars @ 11" ctrs. spac'd w/ #5a
9"
4'-0"
9"
5'-6"
8'-8"
#4h
8'-0"
21'-0"
45°
#4h1
6"
1'-6"
4"
8'-0"
#5v5 bars
20'-0"
6'-1 1/8"
6"
6'-9"
6"
6'-1 1/8"
45°
#6a1 bar
BEND DIAGRAM
11'-6"
5'-3"
#4v2
4'-9"
#4v3
2'-9"
#4v4
8'-9"
3'-0"
#4d1
2'-0"
#4d
17'-10"
3'-0"
45°
#4c bar
#6a1 bars @ 11" ctrs. alt. w/ #6a2 bars
#6a2 bars @ 11" ctrs. spaced w/ #5a bars
#4b bars @ 12" ctrs.
#6a1 bars @ 11" ctrs. (var. length)
8'-0" opening
5'-0"
2'-0" opening
#6a1 bars @ 11" ctrs. alt. w/ #6a2
#6a2 bars @ 11" ctrs. spaced w/ #5a bars
#6 bars (var. length) @ 11" ctrs. (replaces #6a1)
#5a & #6a2 bars (var. length) @ 11" ctrs.
#6 bar
#5a & #6a2 bars
49°35'44"
#6a1 bars @ 11" ctrs. (var. length)
Sta. 3141.17
3/11

ELEVATION @ (Existing R.C.B.C.)

Note - Tie New steel to old steel @ Exist'g R.C.B.C.

SECTION
scale: 1/8" = 1'-0"

All exposed edges to be beveled with 3/4" triangular molding.

* NOTE - All (variable length bars) to be field cut to fit.
All No. 4 bars to be field bent @ all bends in 8-9'x4' R.C.B.C. Alignment.

Ⓣ - Construct (8") Conc. Block Wall as shown.

R.C.B.C. JOINT DETAIL

NOTE - Const. Joints in R.C.B.C. @ 32.5' intervals except where joint would be at a bend location. Steel to run continuously thru joint.

STORM WATER DRAIN # 13
St. Joseph Medical Park Addition &
Mor-ell Addition.

DBKD575073

GENERAL NOTES

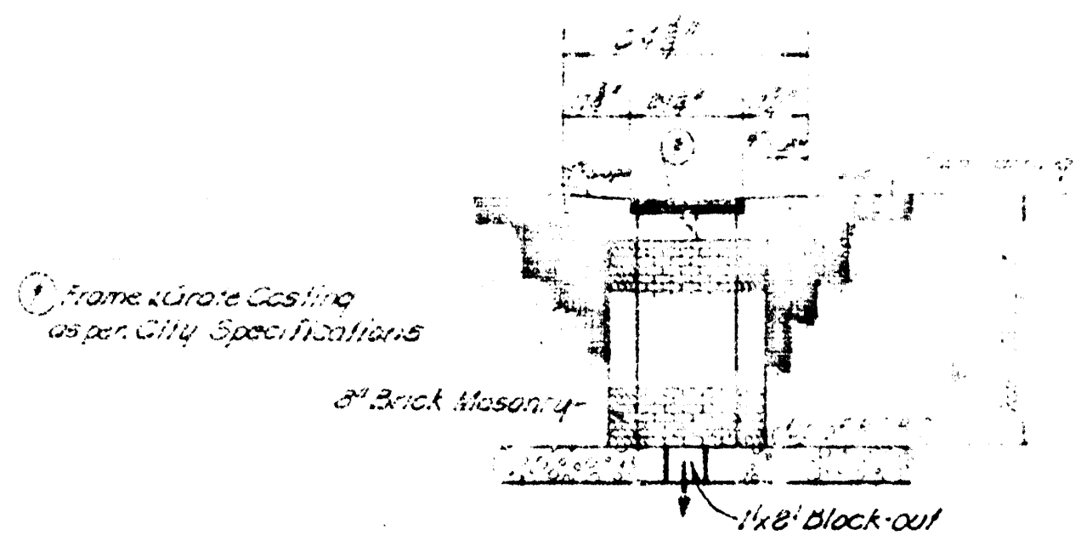
1. CLASS A-E CONCRETE - SHALL BE USED THROUGHOUT CULVERT CONSTRUCTION. ALL REINFORCING STEEL SHALL CONFORM TO A.S.T.M. SPECIFICATIONS.

2. EARTHWORK - ALL EARTH WORK SHALL BE CONSIDERED AS "COMMON EXCAVATION" EXCEPT FOR TOE WALL EXCAVATION SHALL BE INCLUDED IN LUMP SUM BID OF R.C.B.C. ALL MATERIALS SUITABLE FOR BACKFILL TO REMAIN ON PROJECT.

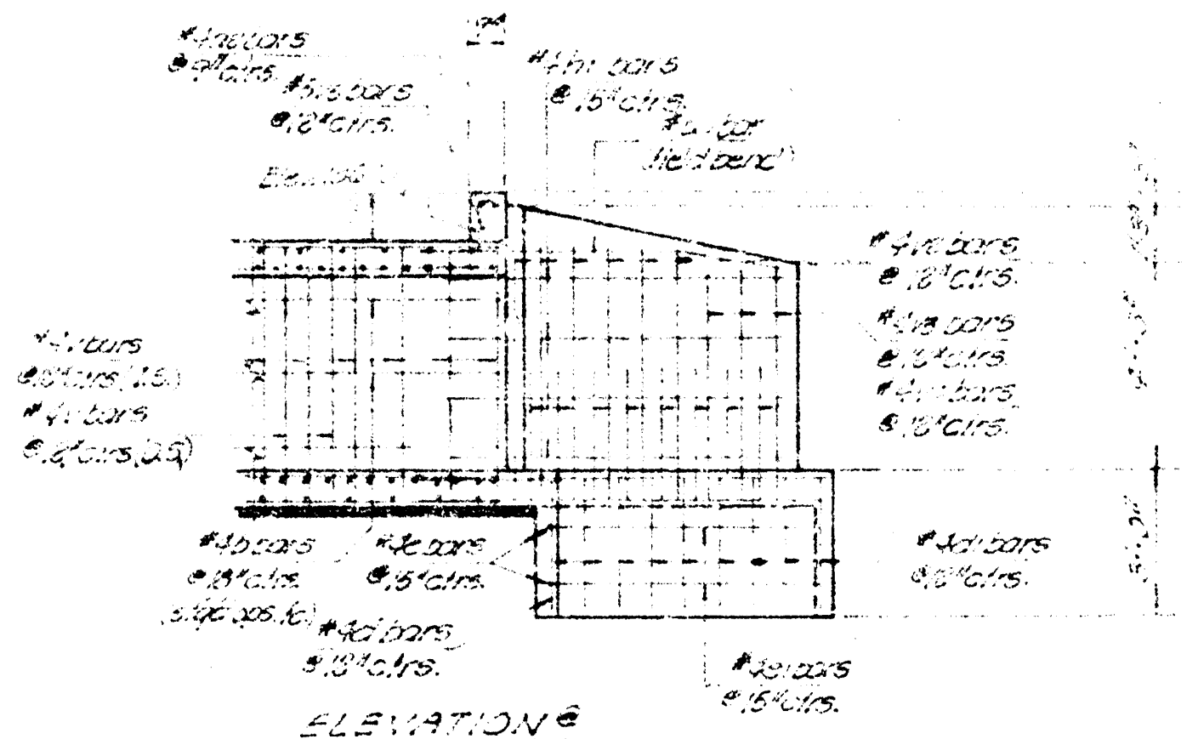
3. BACKFILL - SHALL BE COMPACTED TO TOP OF NEW STRUCTURE. ALL BACKFILL AND EXCAVATION TO EXTEND TO (2') BEYOND WALLS OF BOX AND WING WALLS. BACKFILL OF WING WALLS TO BE PNUEMATICALLY HAND TEMPED OR EQUAL AS DIRECTED BY FIELD ENGINEER. THIS WORK TO BE CONSIDERED AS PART OF C.Y. COMPACTED FILL AND WILL BE INCLUDED IN "LUMP SUM BID" OF R.C.B.C.

4. SEAL COURSE - CONSISTING OF (3") CLASS (A) CONCRETE SHALL BE CONSTRUCTED ONLY WHERE SPECIFIED ON PLANS OR BY THE ENGINEER. NO REINFORCING STEEL SHALL BE PLACED UNTIL SEAL COURSE HAS GAINED SUFFICIENT STRENGTH TO PERMIT WORKING UPON IT WITHOUT INJURY. THIS ITEM SHALL BE PAID AS PLAN QUANTITY IF USED.

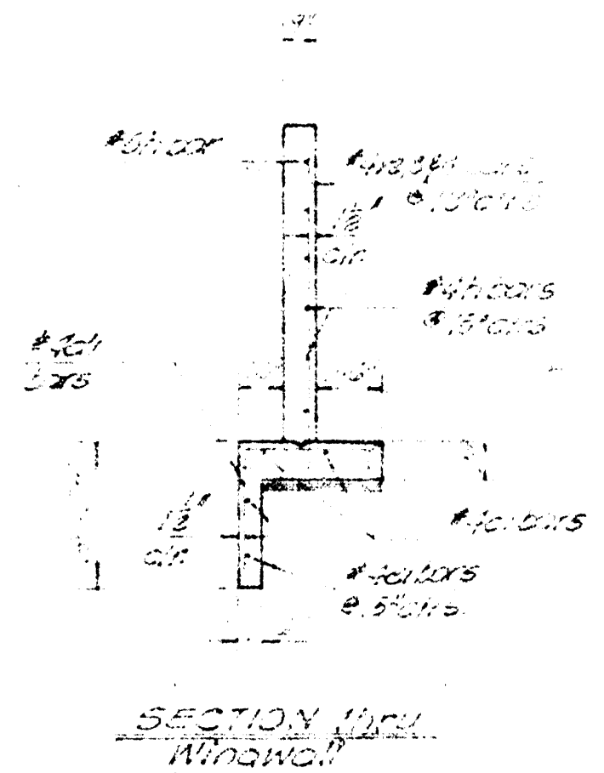
BIDDING OF CULVERT - THE CULVERT SHALL BE BID AS A "LUMP SUM BID" EXCEPT FOR THE FOLLOWING ITEMS: CLASS (A) CONCRETE, DOUBLE 2' x 2' INLETS, CLEARING OF RIGHT-OF-WAY. THE INSTALLATION OF STUB OUTS FOR STORM WATER LEADS TO BE CONSIDERED A PART OF THE LUMP SUM BID OF R.C.B.C. THE ITEMS IN THE "BILL OF MATERIALS" AND THE "BAR SCHEDULE" ARE FOR ESTIMATING PURPOSES ONLY. THE CONTRACTOR IS TO SATISFY HIMSELF TO THE QUANTITIES AND THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THEIR ACCURACY. THE CONTRACTOR WILL HAVE FULL RESPONSIBILITY FOR PROVIDING ALL MATERIALS SHOWN ON THE DETAILED PLANS NECESSARY TO COMPLETE THIS PROJECT.



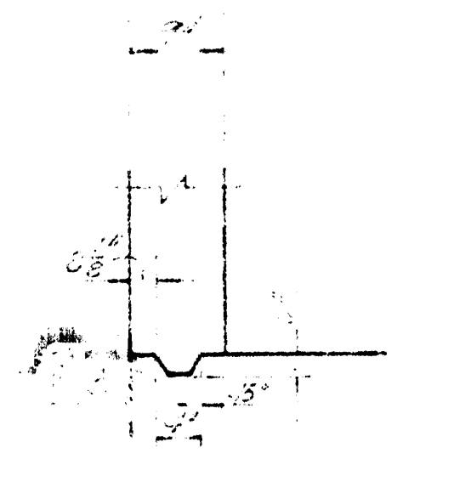
DOUBLE 2'x2' DROP INLET DETAIL



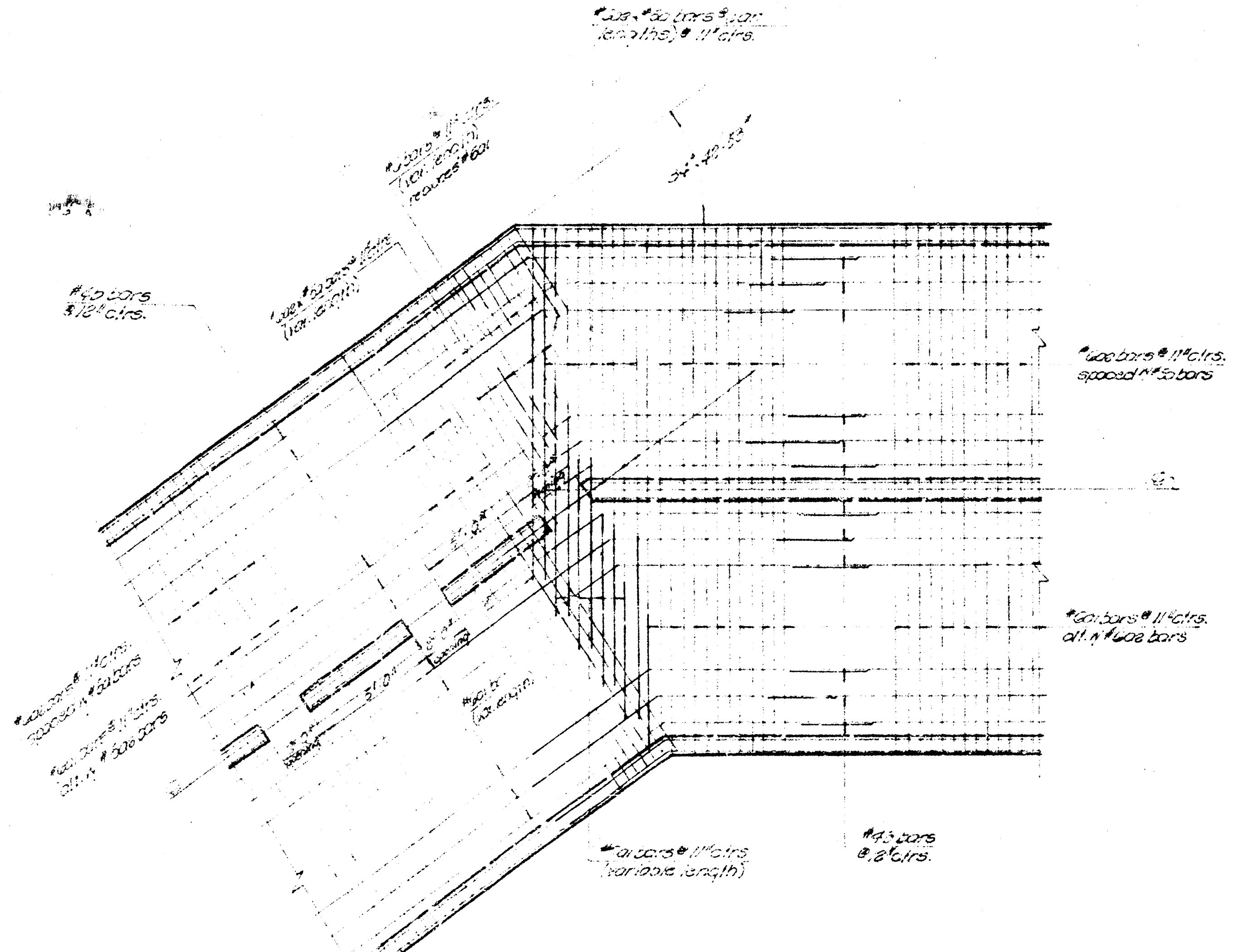
ELEVATION @ Wingwall



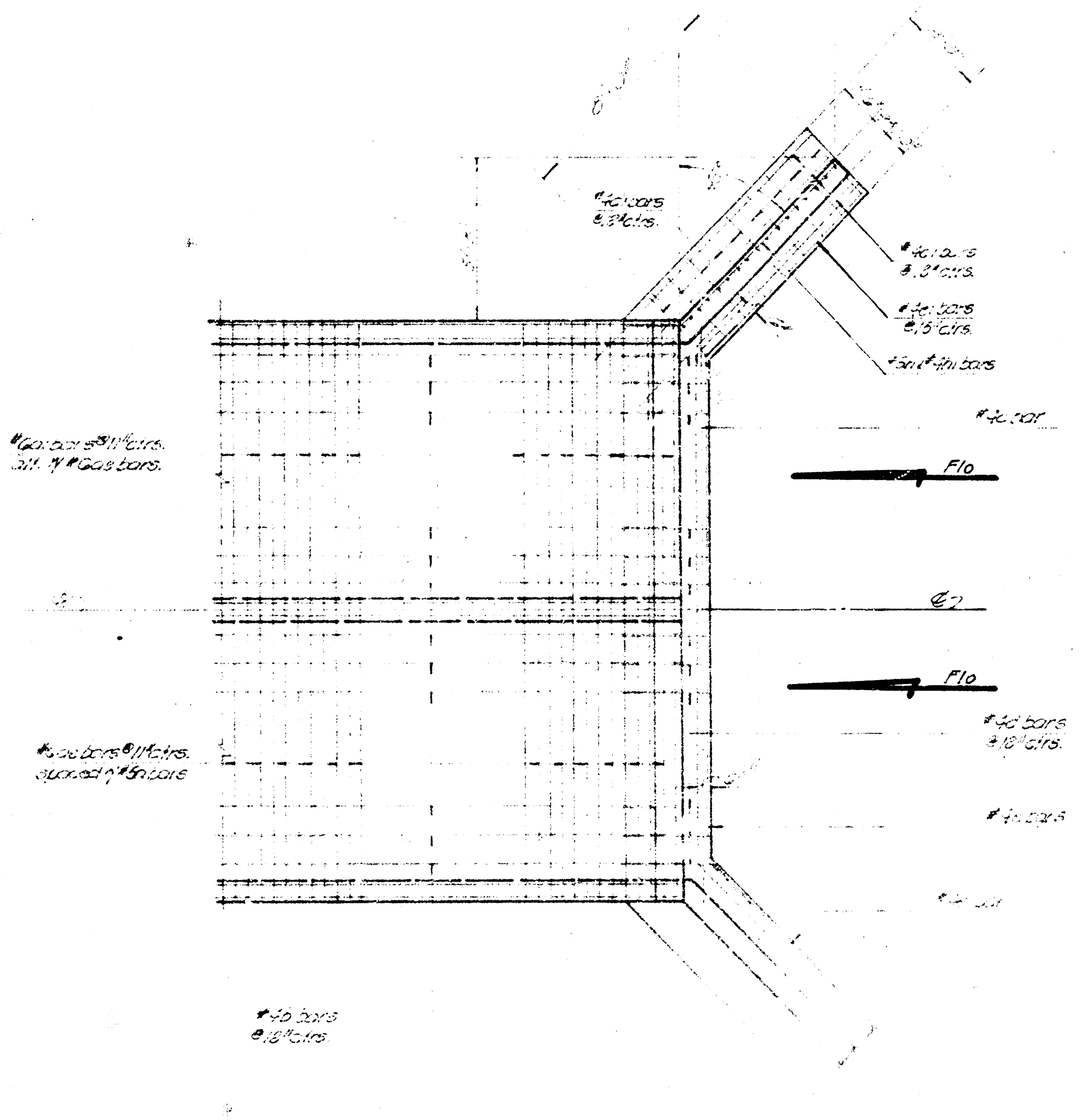
SECTION thru Wingwall (no scale)



KEY JOINT DETAIL (Typical)



Sta. 121+13.51



Sta. 131+31.75

SUMMARY OF QUANTITIES

CLASS A-AE CONCRETE	1924.05	cu. yds.
COMMON EXCAVATION	8512.2	cu. yds.
COMPACTED BACKFILL	1529.9	cu. yds.
REINFORCING STEEL	316,620.0	lbs.
DOUBLE 2' x 2' INLETS	2	each
CLEARING OF RIGHT-OF-WAY	LUMP SUM	
CLASS (A) CONCRETE (SEAL COURSE)	245.0	cu. yds.
CONCRETE BLOCK WALLS	19.3	lin. ft.

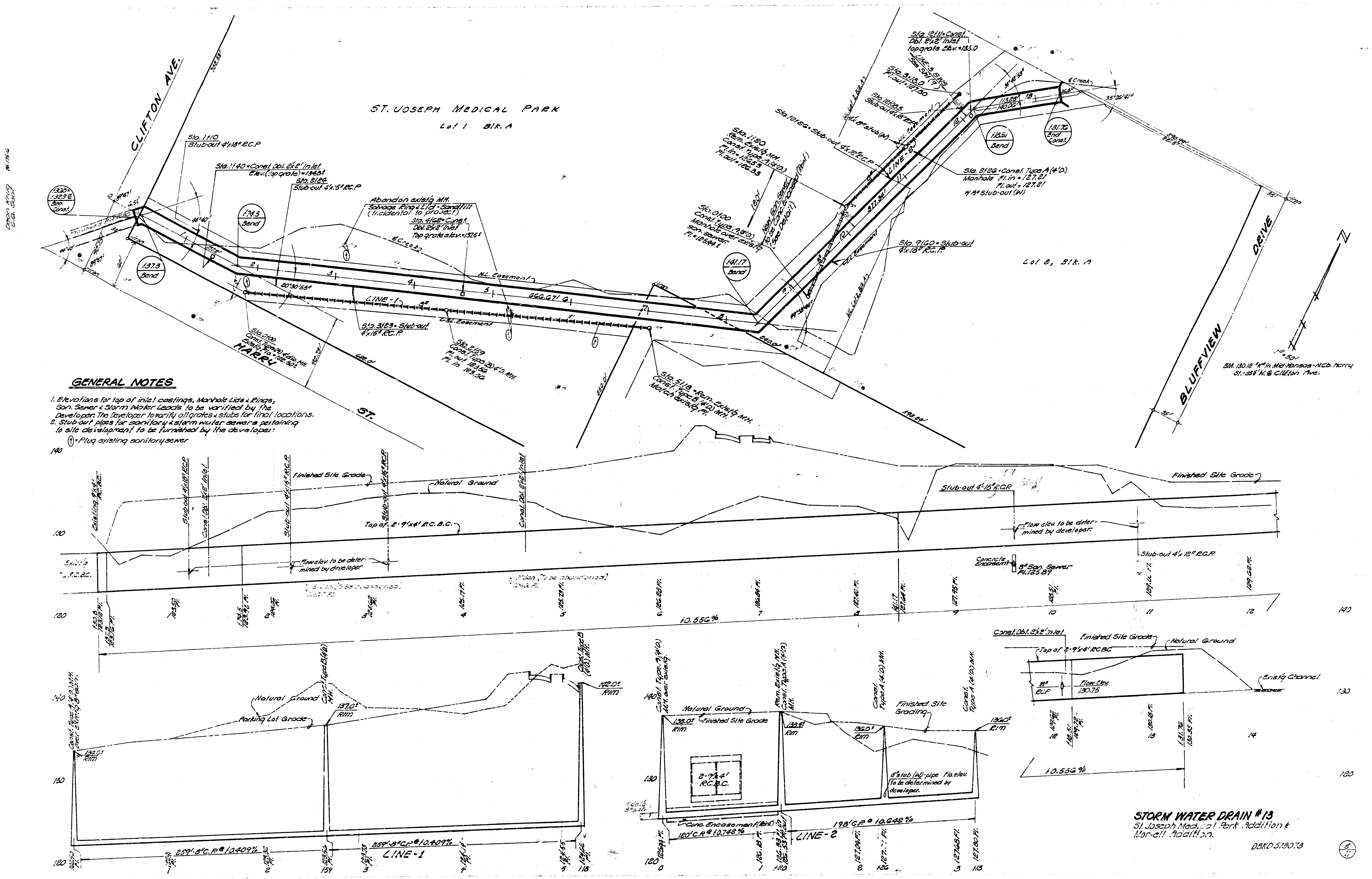
BAR SCHEDULE

TYPE	SIZE	NO.	LENGTH	SHAPE	POUNDS
a	5	2788	20'.0"	—	58,157.6800
a1	6	2796	20' - 05"	⌒	35,741.6700
a2	6	2788	20' - 0"	—	83,751.5200
b	4	2680	34' - 6"	—	61,765.2800
c	4	1	20' - 0"	—	13.3600
c1	4	6	11' - 0"	—	44.0880
d	4	18	4' - 9"	¬	57.1140
d1	4	18	5' - 9"	¬	69.1380
e	4	2	21' - 10"	⌒	29.1693
e1	4	4	8' - 0"	—	21.3760
h	5	2	10' - 2"	⌐	21.2077
h1	4	8	10' - 0"	⌐	53.4400
h2	4	3	20' - 0"	—	40.0800
v	4	6533	5' - 3"	—	22,911.2310
v2	4	12	6' - 9"	¬	54.1080
v3	4	6	6' - 3"	¬	25.0500
v4	4	16	4' - 3"	¬	45.4240
v5	5	21	4' - 4"	┘	94.9130
a	5	100	var.	—	1129.7428
a1	6	44	var.	⌒	694.6750
a2	6	100	var.	—	1626.9162
Extra Steel	6	33	var.	—	274.1150
				G.T.=	316,619.2980 lbs.
				=	158.3096 tons

STORM WATER DRAIN #13
St. Joseph Medical Park Addition & Mor-ell Addition.

3/11

DBC0573073


CLIFTON AVE.
ST. JOSEPH MEDICAL PARK
Lot 1 Blk. A
Sta. 1+10
Stub-out 4'x18" R.C.P
Sta. 1+40 = Const. Dbl. 2'x2' Inlet
Elev. (top grate) = 134.8±
Sta. 2+24
Stub-out 4'x15" R.C.P
Abandon exist'g M.H.
Salvage Ring & Lid - Sand Fill
(Incidental to project)
Sta. 4+68 = Const.
Dbl. 2'x2' Inlet
Top grate elev. = 137.5±
174.5
Bend
137.3
Bend
130.8 = 132.9 E
Beg. Const.
Proposed 9'x4' R.C.B.C.
44°40'
20°30'55"
N.L. Easement
℄ Creek
LINE-1
666.67'
S.L. Easement
Sta. 3+23 = Stub-out
4'x15" R.C.P.
Sta. 0+00
Const. Type (A) 4' dia. M.H.
Exist'g. Flo. = 122.50±
Sta. 2+59
Const. Type (B) 4' D. M.H.
Fl. out 123.56
Fl. in 123.56
HARRY
ST.
622.0'
92.73'
60'
702.53'
Sta. 5+18 = Rem. Exist'g M.H.
Const. Type B (4' D.) M.H.
Match exist'g Fl.
141.17
Bend
Sta. 0+00
Const. Type A (4' D.)
Manhole over exist'g
San. sewer
Fl. = 125.94±
Sta. 1+80
Rem. Exist'g M.H.
Const. Type A (4' D.)
Fl. in = 126.53
Fl. out = 126.33
180'
New San. Sewer
to be Conc. Encased (Reinf.)
(See Detail)
Sta. 10+86 = Stub-out 4'x12" R.C.P.
4'-8" stub (W)
Sta. 12+11 = Const.
Dbl. 2'x2' Inlet
top grate Elev. = 133.0
LINE-3 SWS
See Sht. (9)
Sta. 3+18.0
Fl. out = 127.30
Sta. 12+85
Stub-out 4'x18" R.C.P.
LINE-2
377.34'
Sta. 2+26 = Const. Type A (4' D.)
Manhole Fl. in = 127.21
Fl. out = 127.21
W/ 8" Stub-out (W)
Sta. 9+60 = Stub-out
4'x18" R.C.P.
C.L. Easement
113.25'
140.06'
34°42'53"
35°26'41"
℄ Creek
118.51
Bend
131.76
End Const.
290.99'
Lot 8, Blk. A
BLUFFVIEW DRIVE
35'
398.29'
N
1" = 50'
BM. 130.12 "K" in Mid-Kansas-N.Cb. Harry
St. - 35± W. & Clifton Ave.
Deon Krug
S.G. Seal
Bk. 176-G
140
130
120
Existing 9'x4' R.C.B.C.
Stub-out 4'x18" R.C.P.
Const. Dbl. 2'x2' Inlet
Stub-out 4'x15" R.C.P.
Stub-out 4'x18" R.C.P.
Const. Dbl. 2'x2' Inlet
Finished Site Grade
Natural Ground
Top of 2-9'x4' R.C.B.C.
Flow elev. to be determined by developer
Stub-out 4'-15" R.C.P.
Flow elev. to be determined by developer
Stub-out 4'x 12" R.C.P.
Concrete Encasement
8" San. Sewer
Fl. 125.87
Finished Site Grade
10.556%
1
2
3
4
5
6
7
8
9
10
11
12
Const. Dbl. 2'x2' Inlet
Finished Site Grade
Natural Ground
Top of 2-9'x4' R.C.B.C.
Flow Elev. 130.75
Exist'g Channel
12
13
14
10.556%
Const. Type (A) 4' D. M.H.
Natural Ground
Parking Lot Grade
137.0±
Rim
142.0±
Rim
259'-8" C.P. @ 10.409%
259'-8" C.P. @ 10.409%
LINE-1
Natural Ground
Finished Site Grade
Finished Site Grading
2-9'x4' R.C.B.C.
8" stub (W) pipe. Flo. elev. to be determined by developer.
Conc. Encasement (Reinf.)
180' C.P. @ 10.742%
198' C.P. @ 10.648%
LINE-2
Rim
0
1
2
3

GENERAL NOTES

1. Elevations for top of inlet castings, Manhole Lids & Rings, San. Sewer & Storm Water Leads to be varified by the Developer. The Developer to varify all grates & stubs for final locations.
2. Stub-out pipes for sanitary & storm water sewers pertaining to site development to be furnished by the developer.

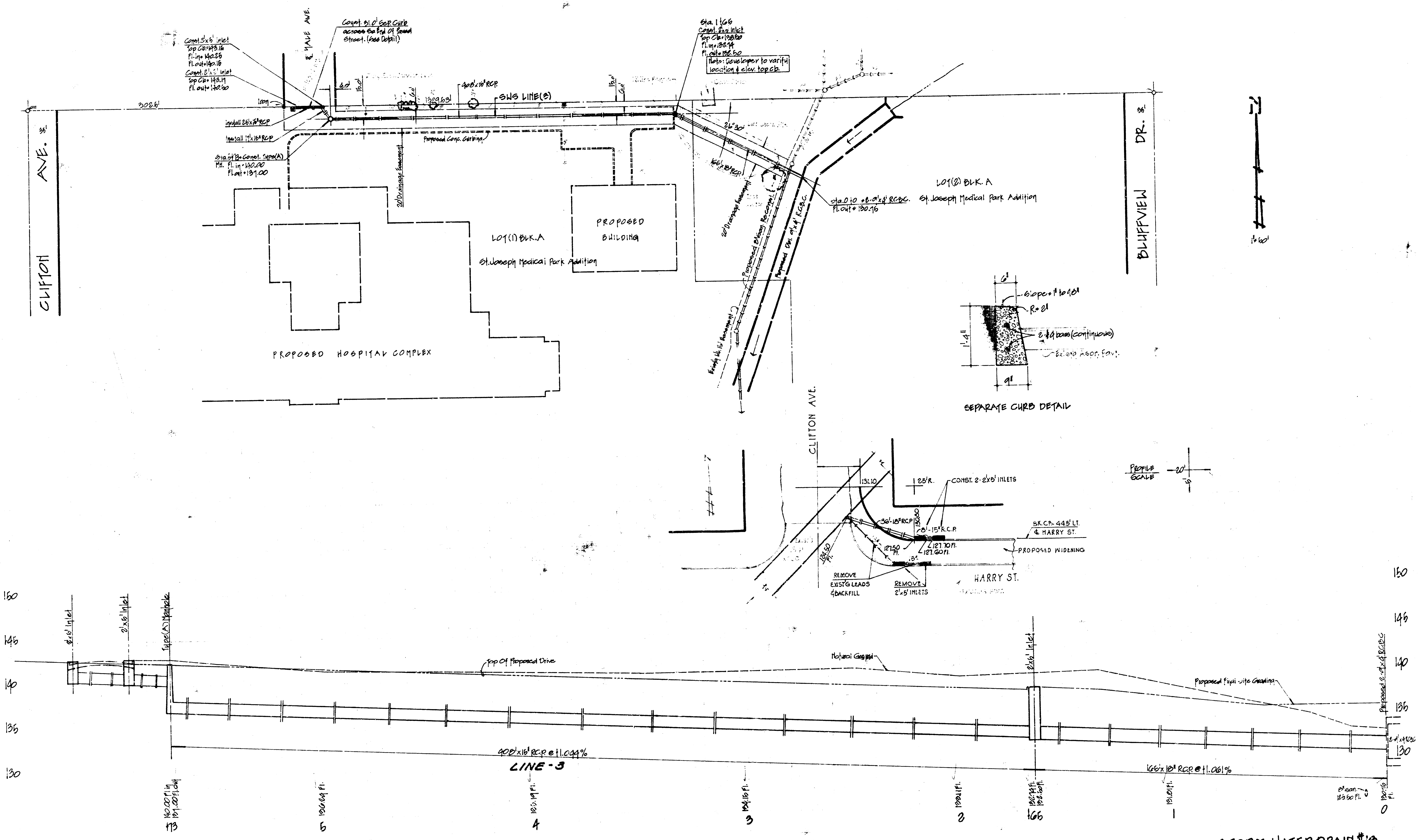
Ⓟ = Plug existing sanitary sewer

STORM WATER DRAIN #13

St. Joseph Medical Park Addition &
Mor-ell Addition.

DBKD 5730.73

8/11


CLIFTON AVE.
HALE AVE.
BLUFFVIEW DR.
302.6'
Iron
Const. 3'x5' inlet
Top Cb.=143.16
Fl. in=140.25
Fl. out=140.15
Const. 2'x5' inlet
Top Cb.=143.17
Fl. out=140.50
Const. 31.0' Sep. Curb across So. End Of Paved Street. (See Detail)
Install 25'x18" RCP
Install 17'x18" RCP
Sta. 5+73 Const. Type(A) M.H.
Fl. in=140.00
Fl. out=137.00
4.0'
15.0'
6.0'
408'x18" RCP
SWS LINE(3)
Proposed Conc. Curbing
20' Drainage Easement
Sta. 1+66
Const. 2'x5' Inlet
Top Cb.=138.50
Fl. in=138.74
Fl. out=138.50
Note: Developer to varify location & elev. top cb.
26°30'
166'x18" RCP
20' Drainage Easement
Proposed 8" San. Recons't.
Proposed Dbl. 8'x4' R.C.B.C.
Sta. 0+0 = 2-8'x4' R.C.B.C.
Fl. out = 130.16
LOT(1) BLK. A
St. Joseph Medical Park Addition
LOT(2) BLK. A
St. Joseph Medical Park Addition
PROPOSED BUILDING
PROPOSED HOSPITAL COMPLEX
1"=60'
6"
Slope=1" to 0.8'
R=2"
2-#4 bars (continuous)
Exist'g Aspr. Pav't.
1'-4"
9"
SEPARATE CURB DETAIL
CLIFTON AVE.
131.10
25' R.
CONST. 2-2'x5' INLETS
36'-18" RCP
8'-15" R.C.P.
130.80
BK. C.B. 44.5' LT. ℄ HARRY ST.
PROPOSED WIDENING
127.50 Fl.
127.70 Fl.
127.60 Fl.
124.50 Fl.
15"
REMOVE EXIST'G LEADS & BACKFILL
REMOVE 2'x5' INLETS
HARRY ST.
PROFILE SCALE
20'
5'
150
145
140
135
130
2'x5' Inlet
2'x5' Inlet
Type(A) Manhole
Top Of Proposed Drive
Natural Ground
2'x5' Inlet
Proposed Final Site Grading
Proposed 2-8'x4' R.C.B.C.
2-8'x4' R.C.B.C.
408'x18" RCP @ 1.099%
LINE-3
166'x18" RCP @ 1.061%
140.00 Fl. in
137.00 Fl. out
136.84 Fl.
135.19 Fl.
134.15 Fl.
133.11 Fl.
132.74 Fl.
132.50 Fl.
131.01 Fl.
8" san.
125.50 Fl.
130.16 Fl.
5+73
5
4
3
2
1+66
1
0

STORM WATER DRAIN #13

St. Joseph Medical Park Addition & Morell Addition.

Proj. No. DAKD 573013

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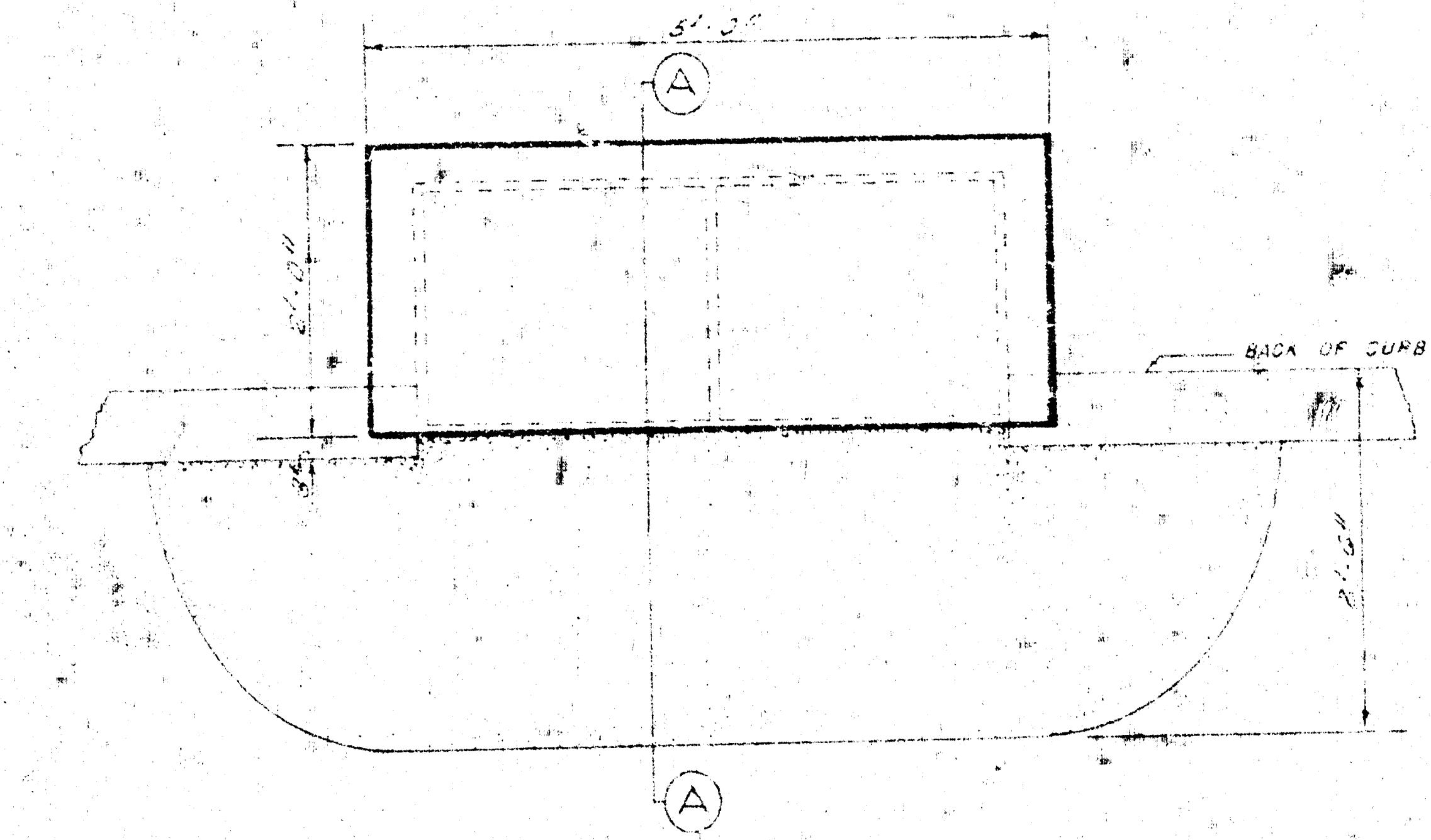
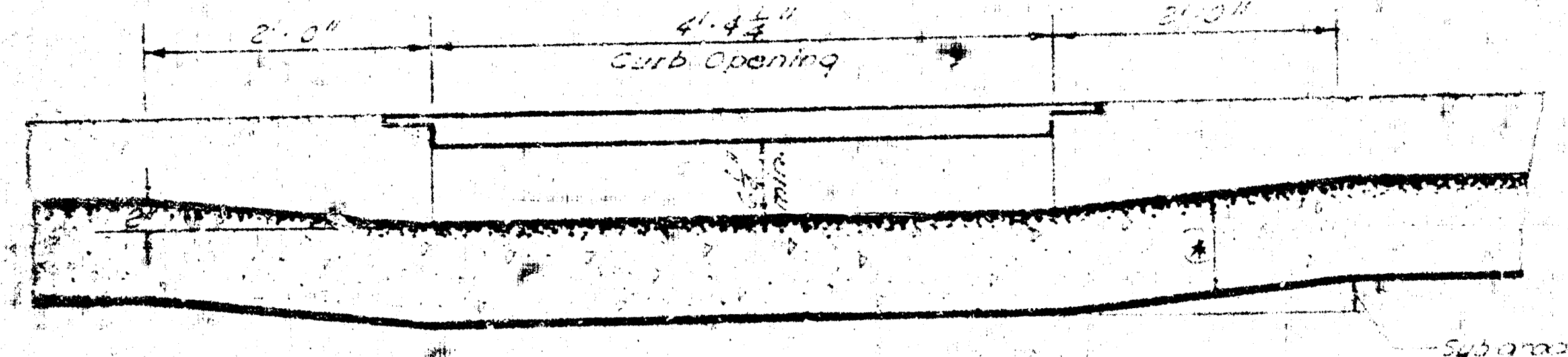
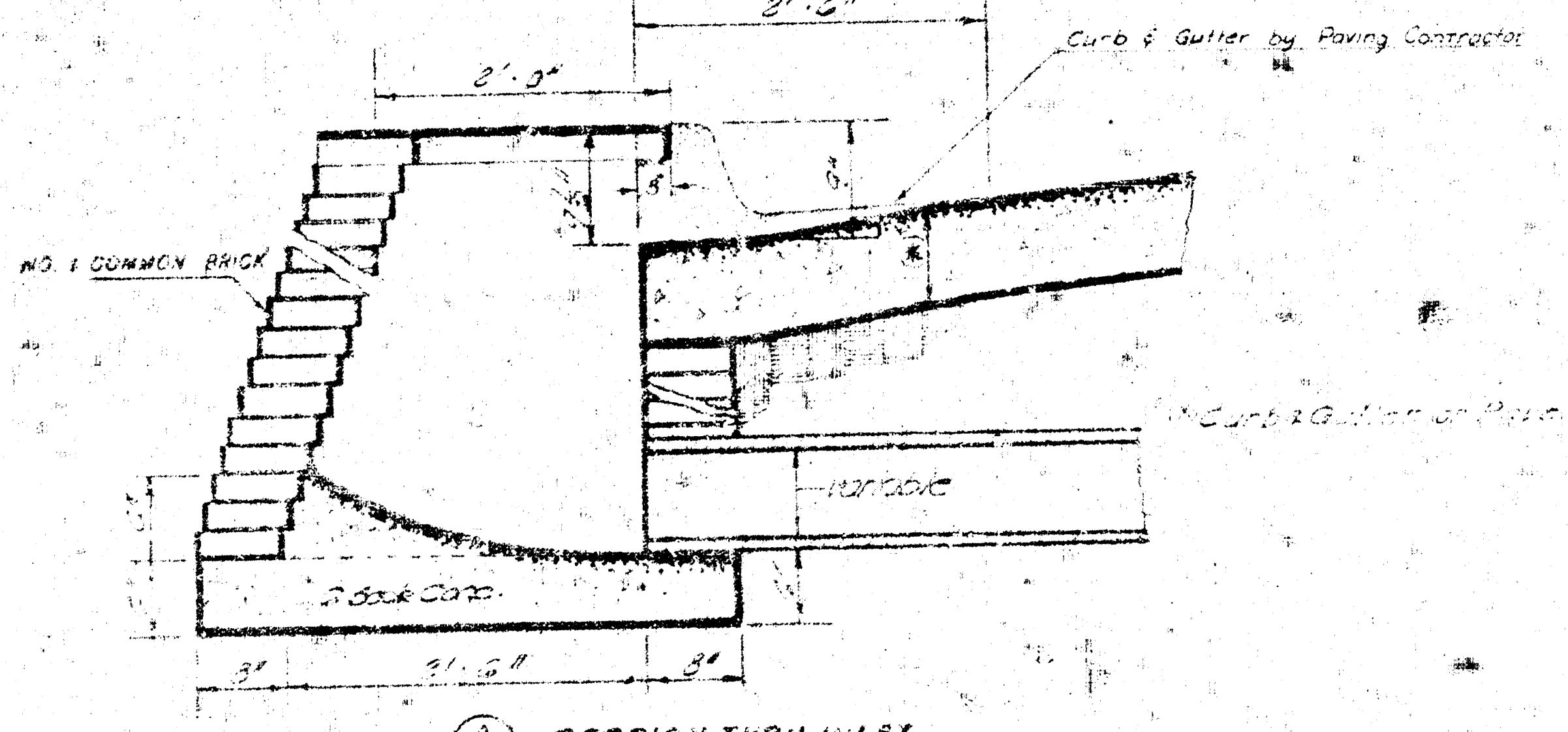

5'-0"
A
2'-0"
BACK OF CURB
2'-6"
A

PLAN


2'-0"
4'-4½"
Curb Opening
2'-0"

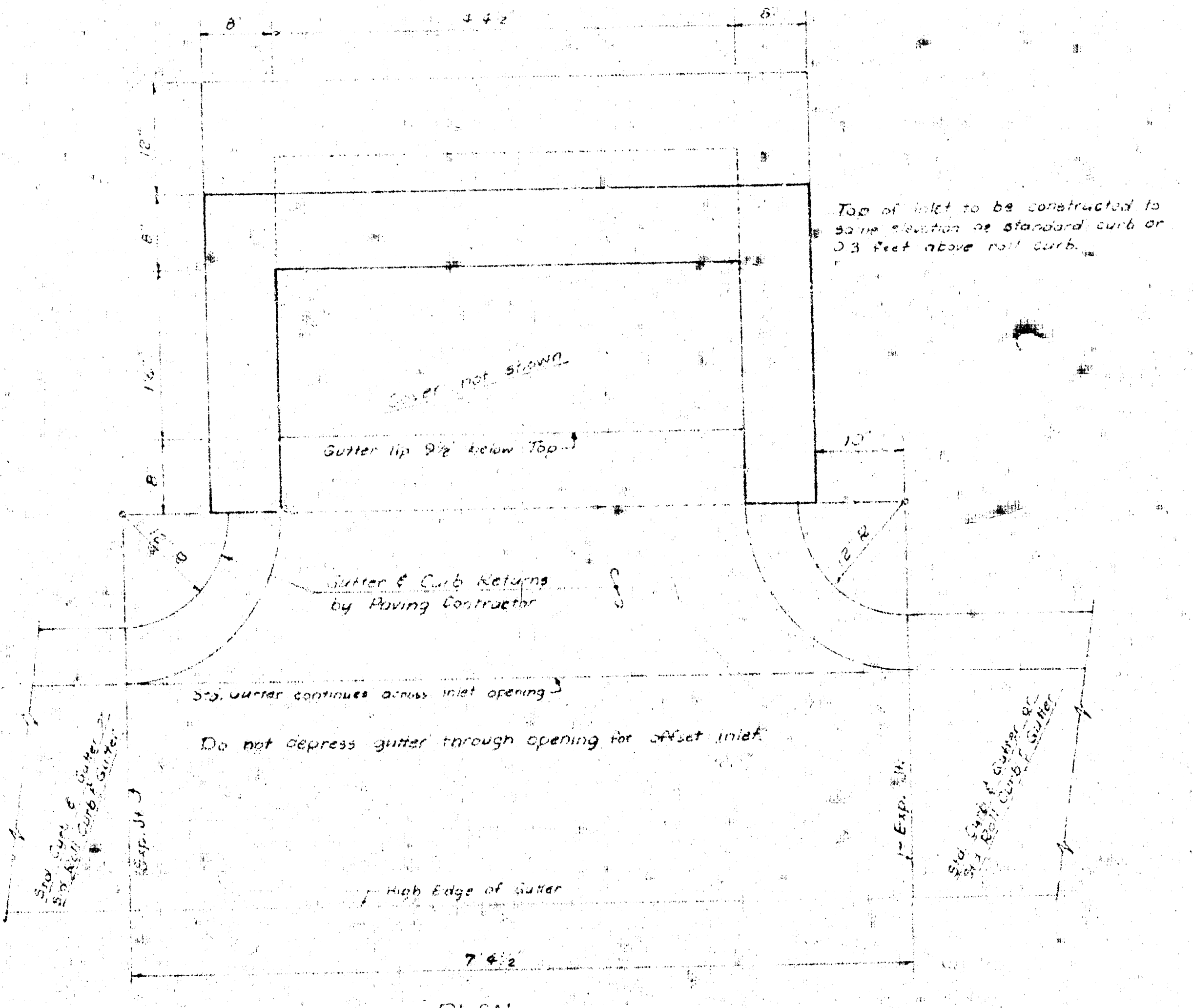
Subgrade to be shaped to allow for depression in pavement.

ELEVATION


2'-6"
2'-0"
Curb & Gutter by Paving Contractor
NO. 1 COMMON BRICK
Variable
3"
2'-6"
8"

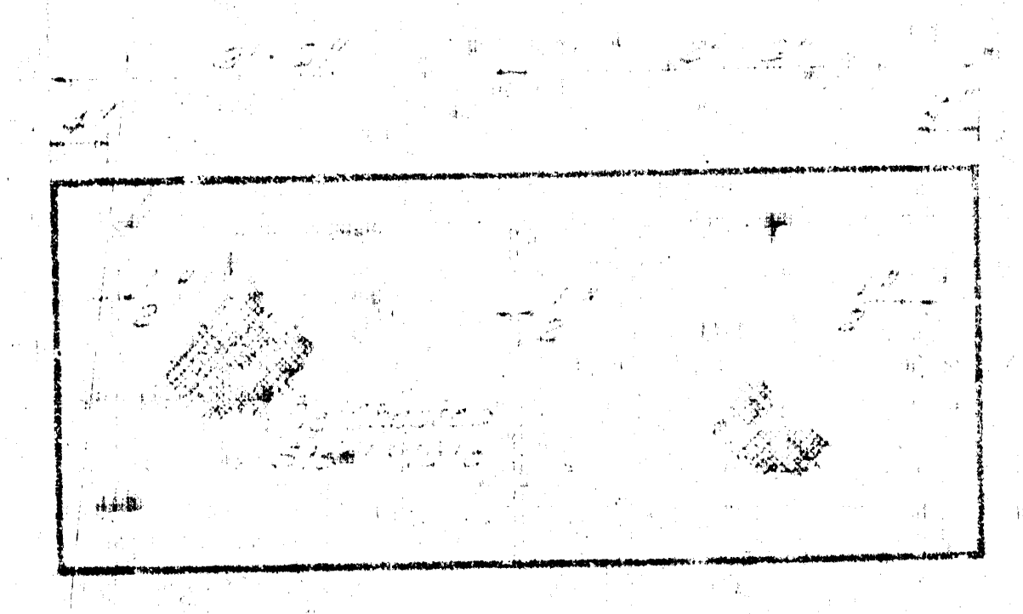
Curb & Gutter or Pavement Thickness

(A/A) SECTION THRU INLET
2'x5' INLET DETAIL
Scale 1"=1'-0"

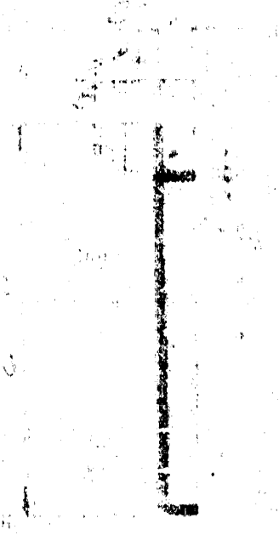

8"
4'4½"
8"
12"
8"
12"
8"
10"
Cover not shown
Gutter lip 9½" below Top
Gutter & Curb Returns by Paving Contractor
Std. Gutter continues across inlet opening
Do not depress gutter through opening for offset inlet.
Std. Curb & Gutter or Roll Curb & Gutter
Exp. Jt.
High Edge of Gutter
7'4½"

Top of inlet to be constructed to same elevation as standard curb or 0.3 feet above roll curb.

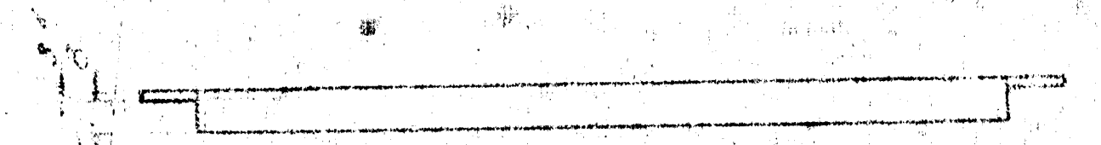
PLAN
STANDARD 2'x5' INLET AT SET-BACK LOCATION
Scale: 1"=1'0"



PLAN



SECTION

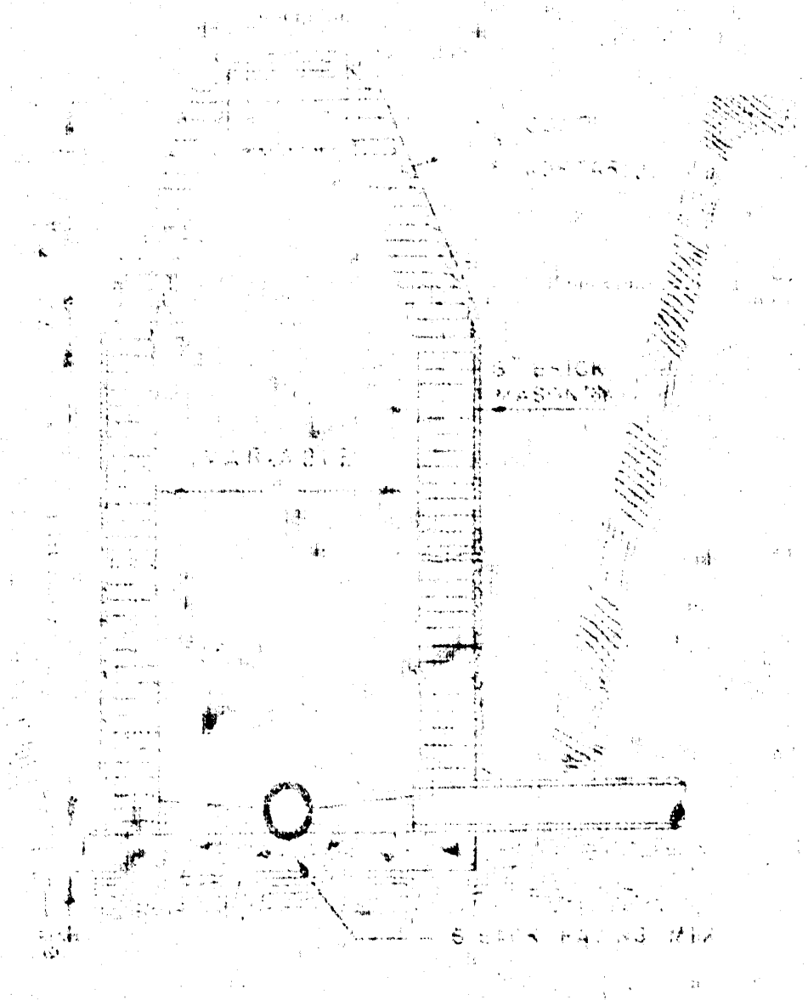


ELEVATION

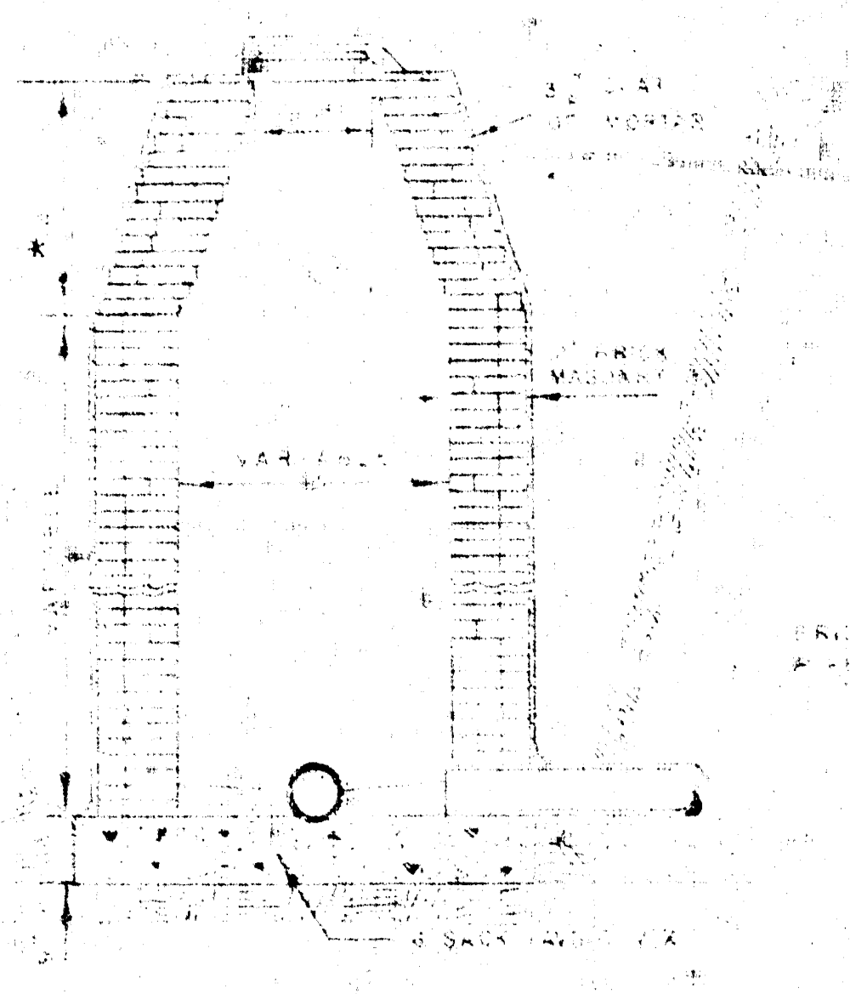
CITY OF WICHITA

DETAIL
STANDARD 2'x 5' INLET.

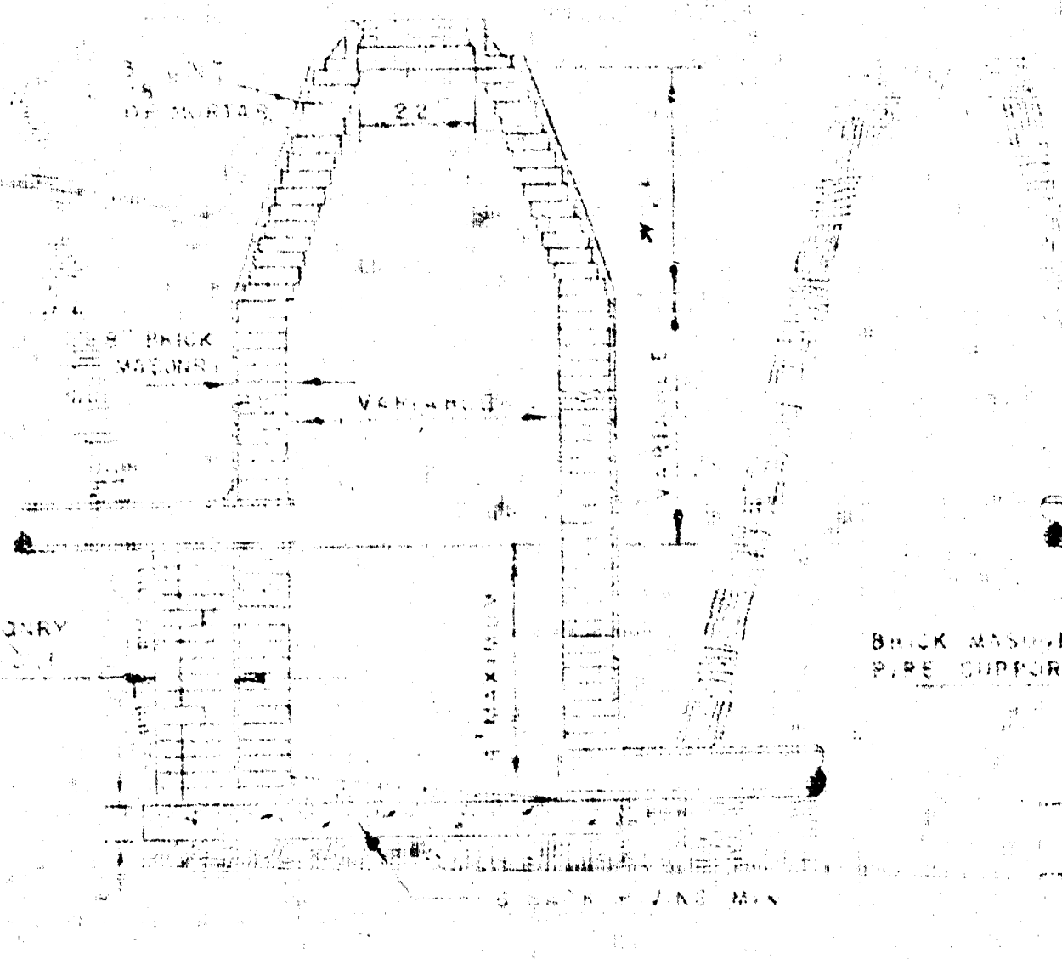
CITY OF WICHITA, KANSAS
R. W. LINN CITY ENGINEER
SEPT. 1973



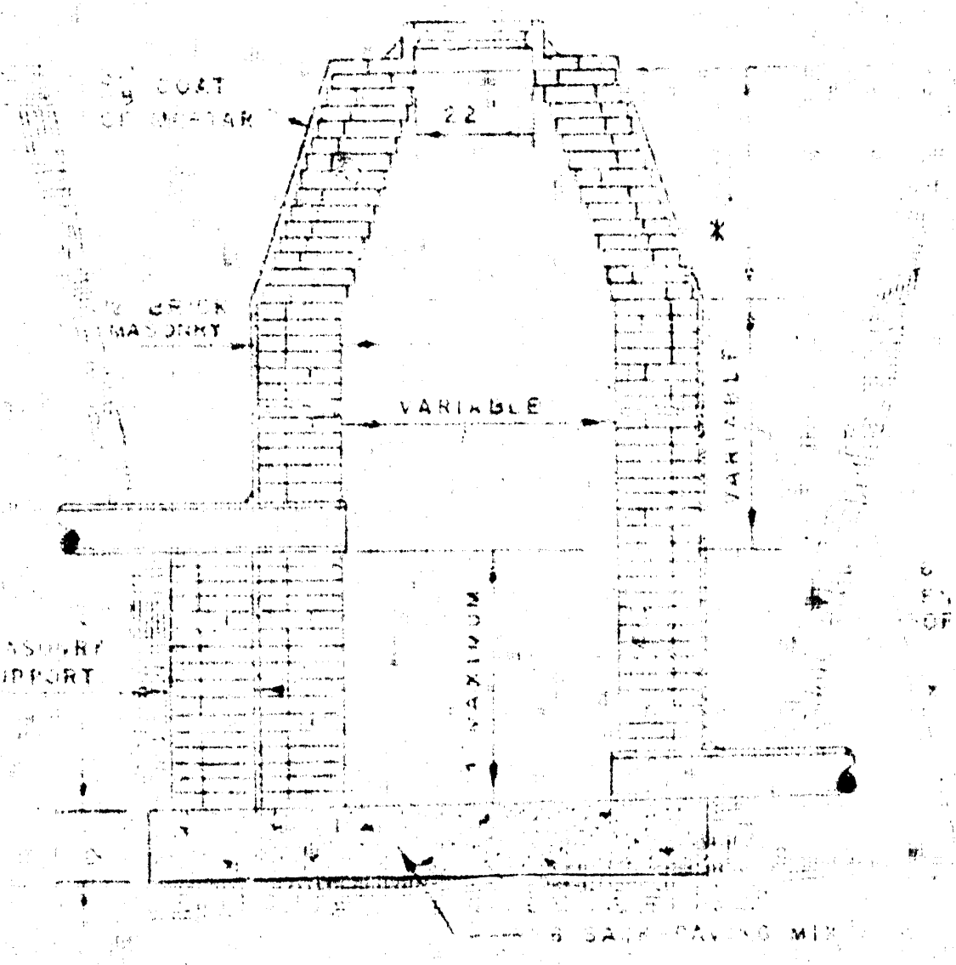
STANDARD MANHOLE
TYPE "A"



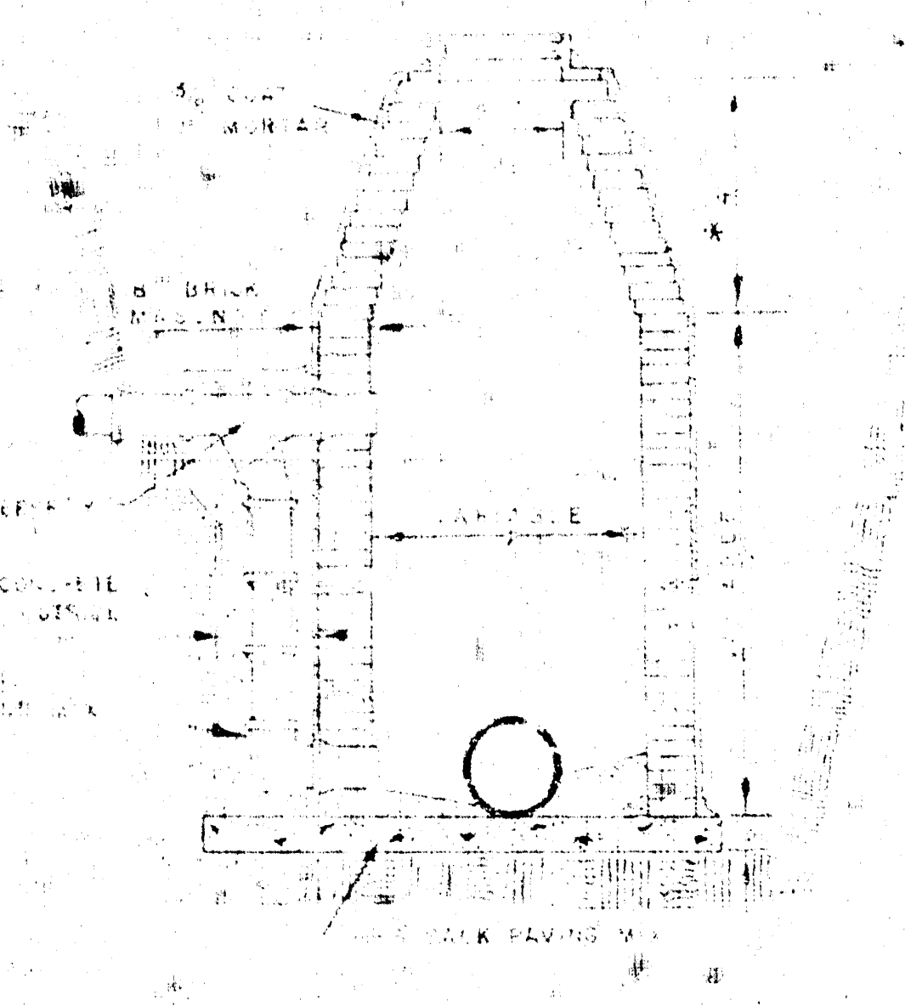
STANDARD MANHOLE
TYPE "B"



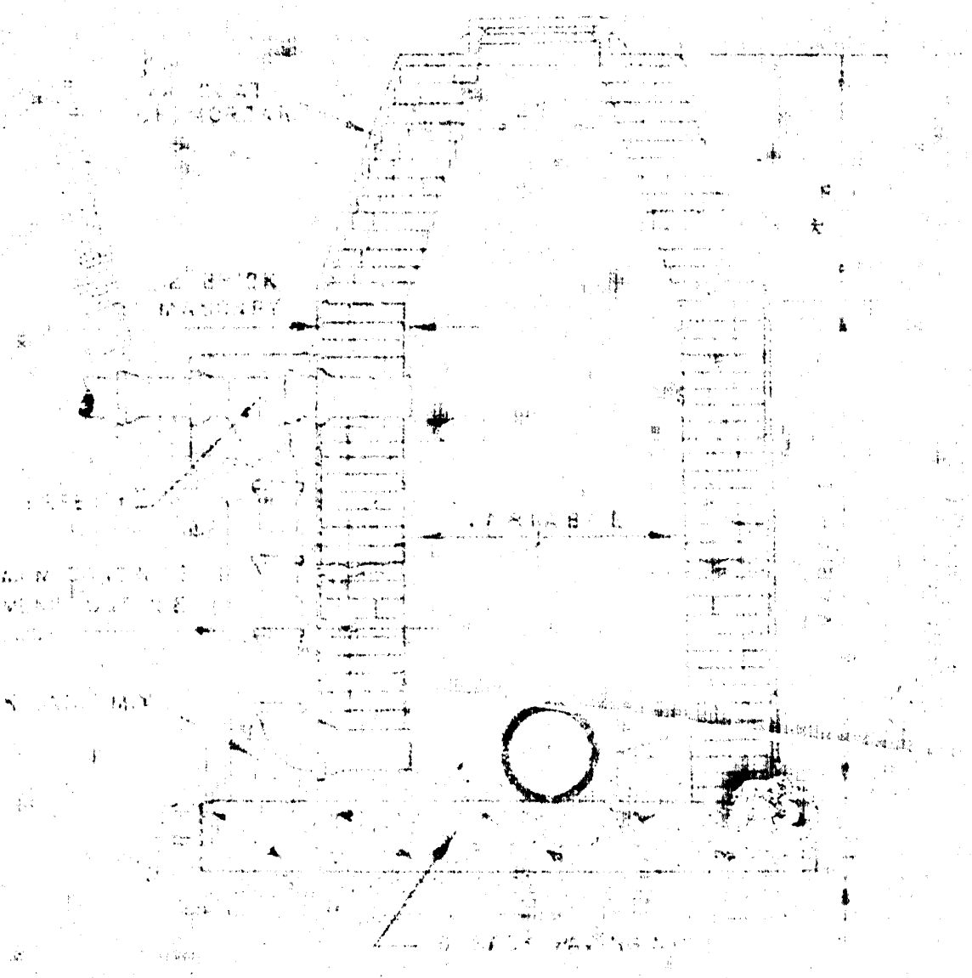
DROP MANHOLE
TYPE "A"



DROP MANHOLE
TYPE "B"

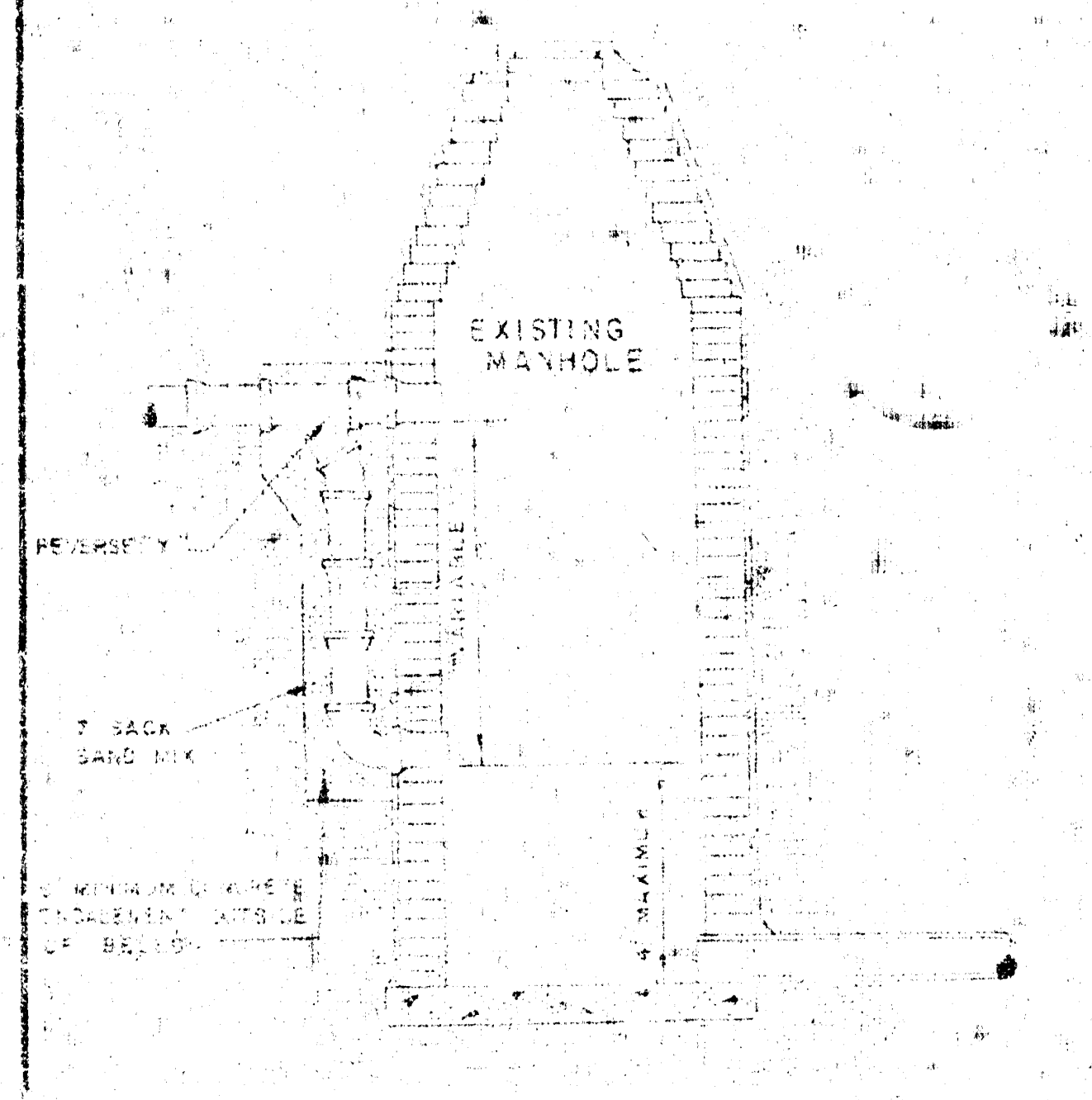


OUTSIDE DROP MANHOLE
TYPE "A"

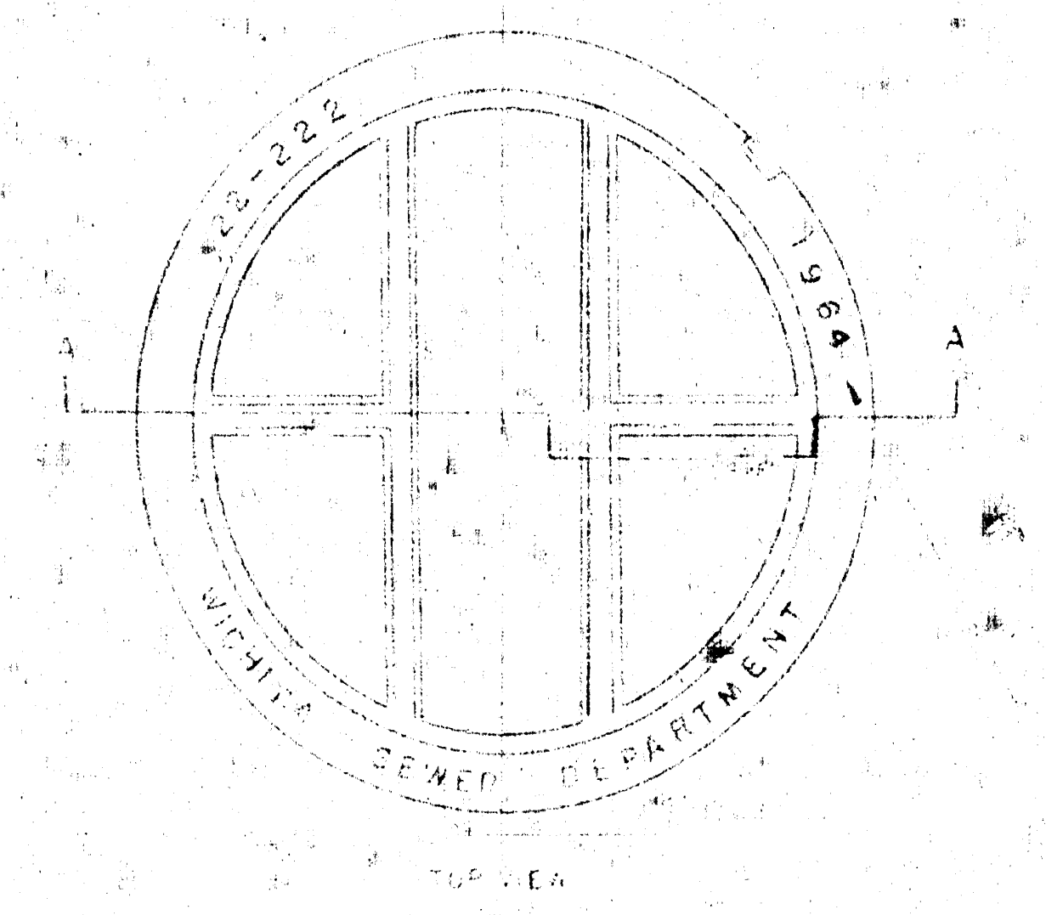


OUTSIDE DROP MANHOLE
TYPE "B"

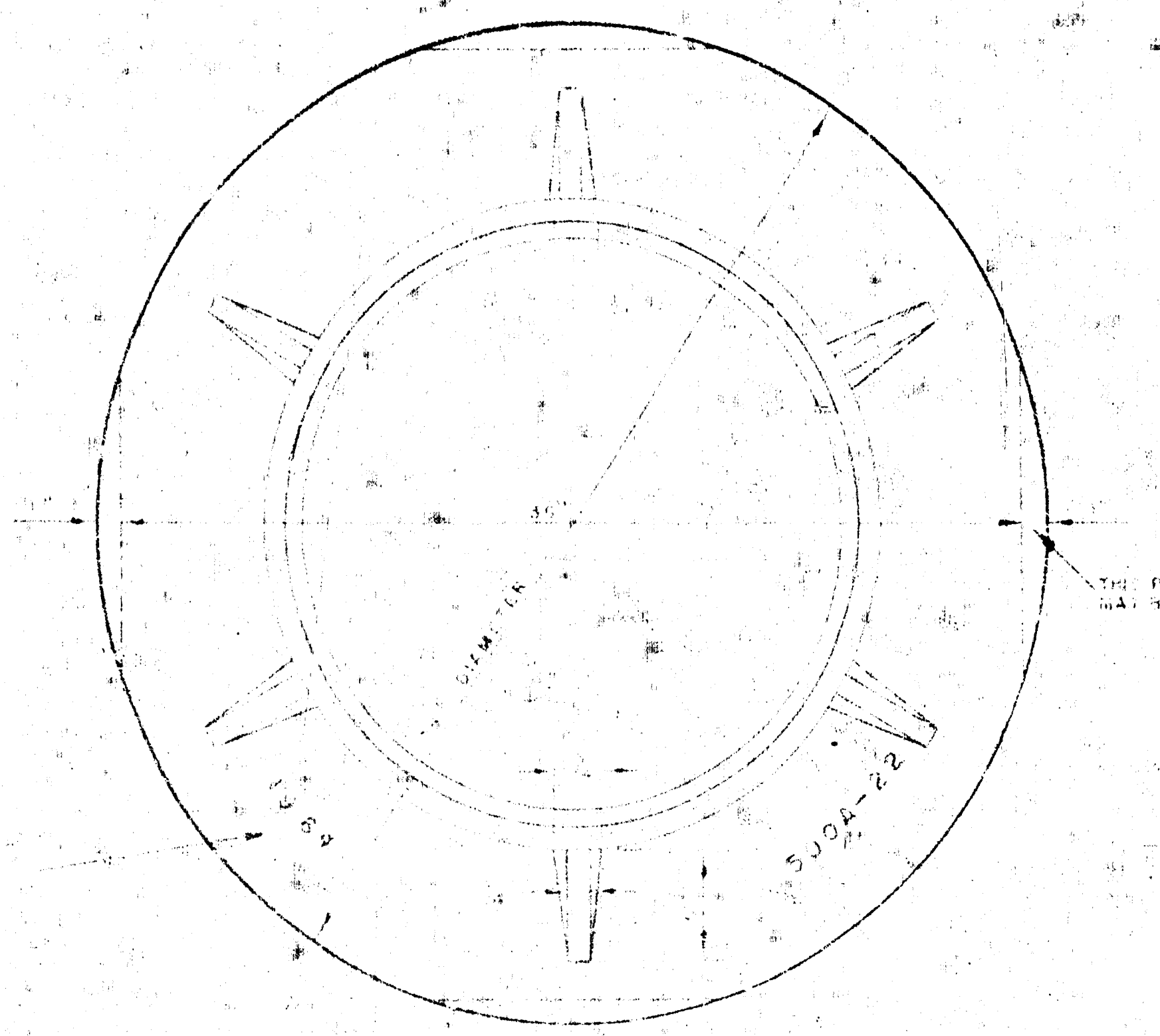
* DRAW 6" ON 5' DIA. M.H.


EXISTING MANHOLE
MAXIMUM

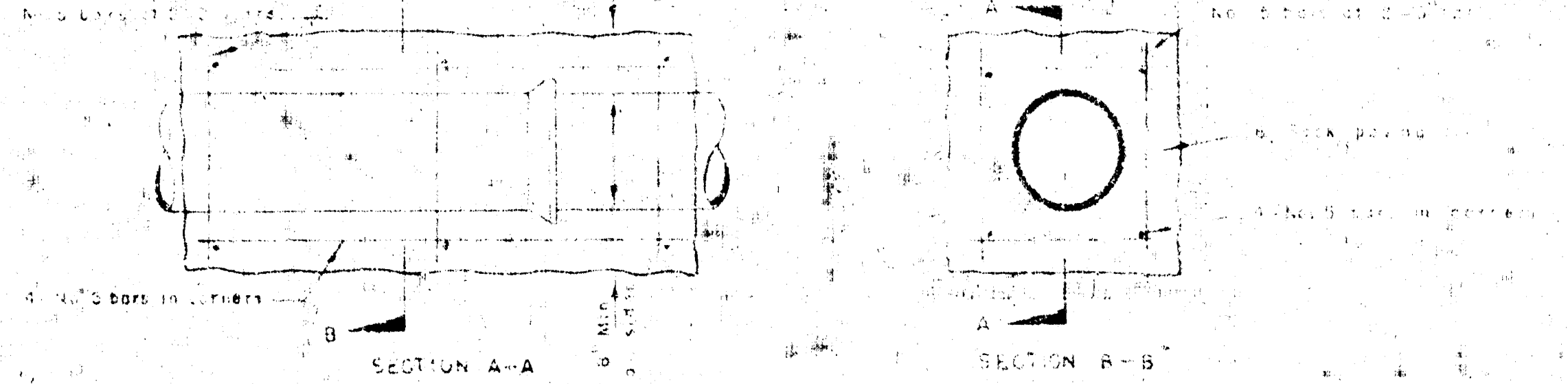
DETAIL OF DROP STACK
FOR EXISTING MANHOLES IN GROUND WATER


WICHITA SEWER DEPARTMENT
1964
A

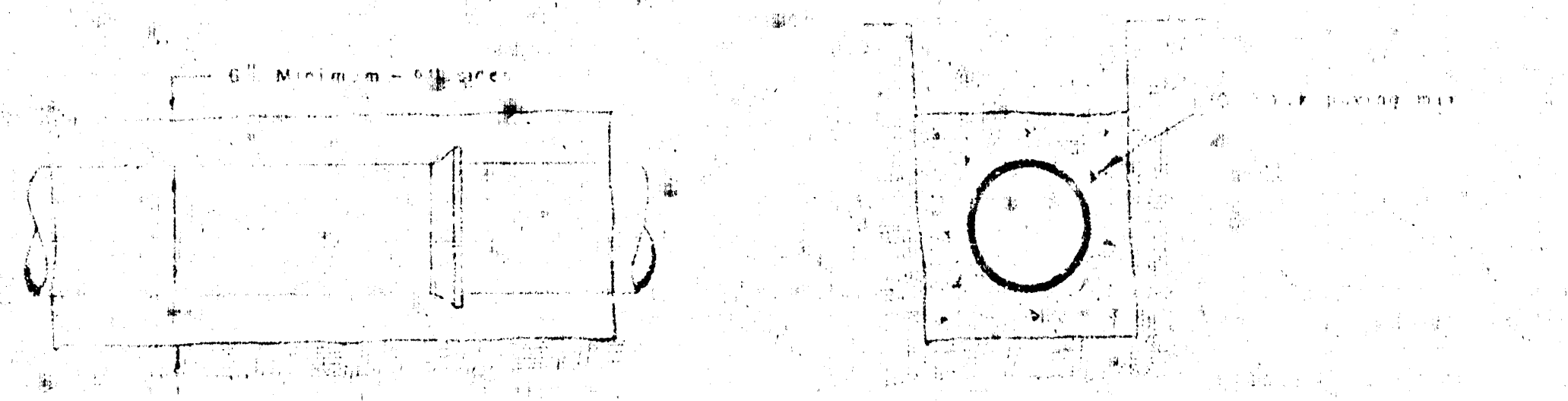
TOP VIEW
MANHOLE COVER


THIS PORTION OF FLANGE MAY BE OMITTED
1964

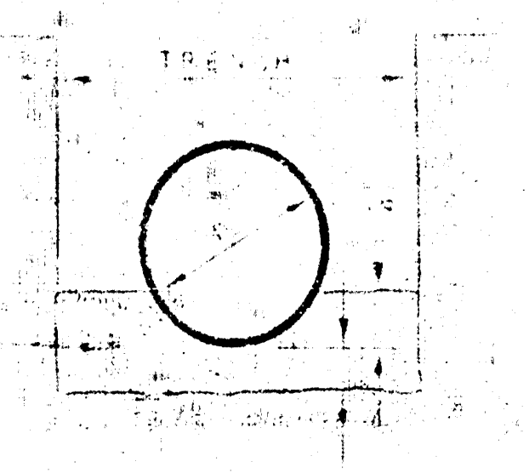
TOP VIEW
MANHOLE RING


B
A
4-No. 5 bars in corners
SECTION A-A
SECTION B-B

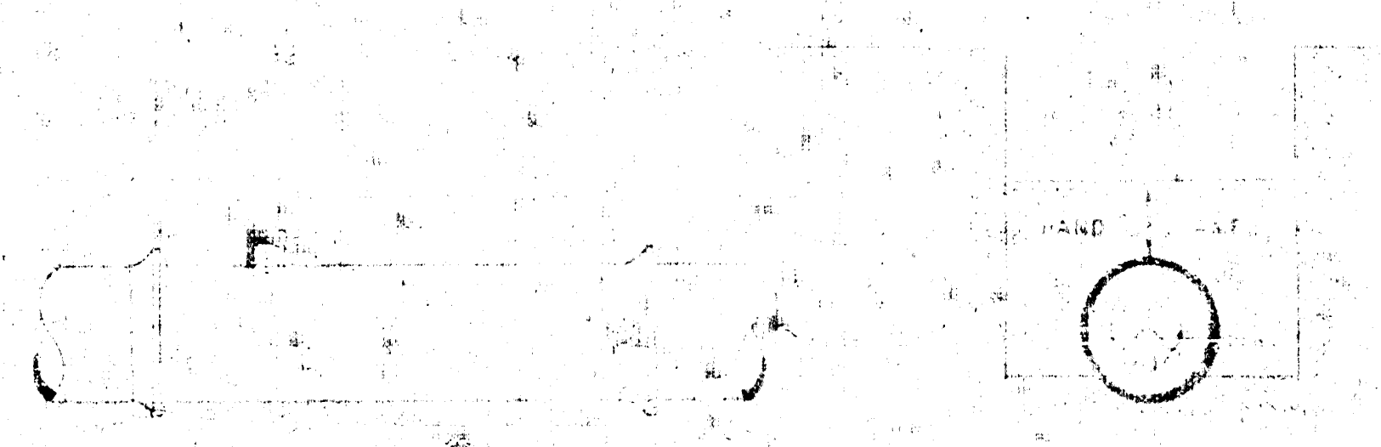
REINFORCED CONCRETE ENCASEMENT
FOR STRENGTH



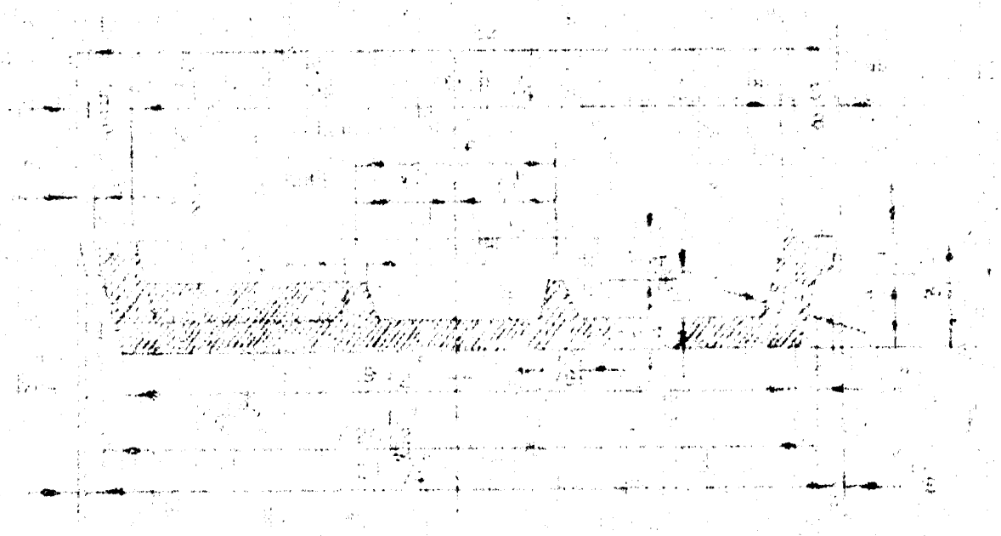
CONCRETE ENCASEMENT
FOR COVER



DETAIL OF CONCRETE CRADLE

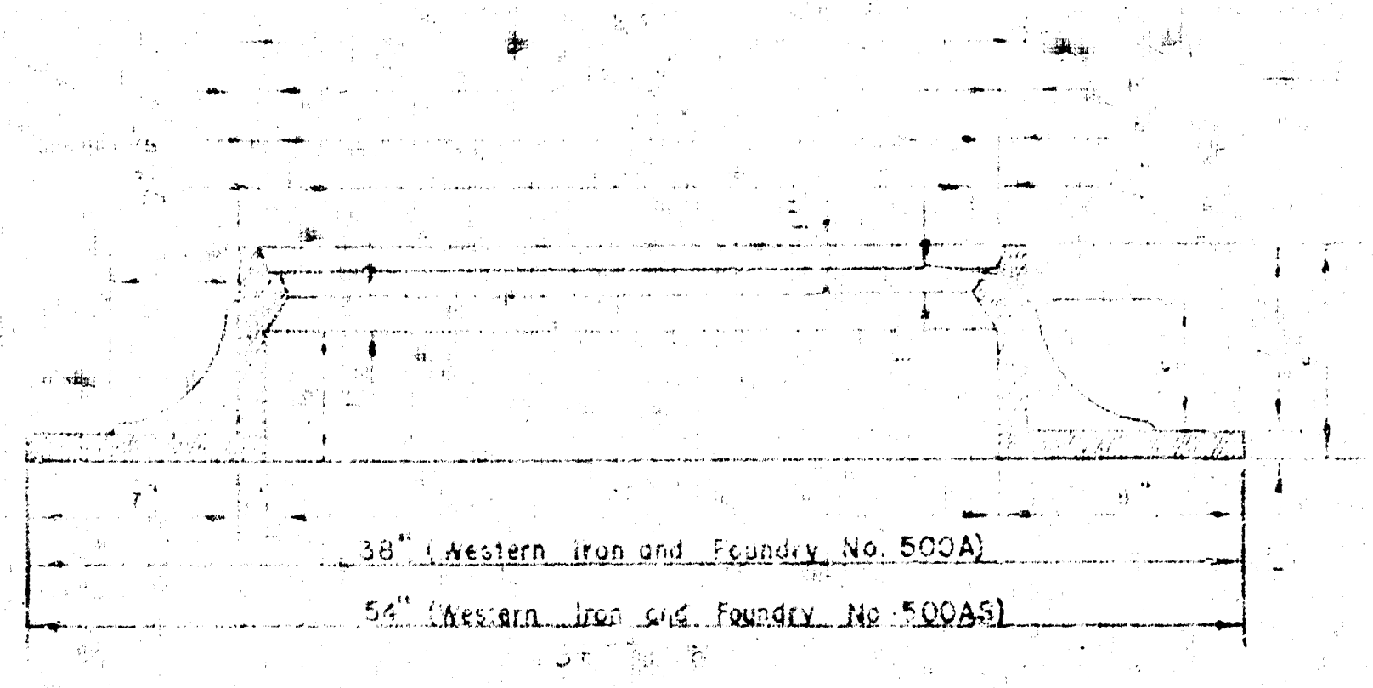


ORDINARY BEDDING METHOD



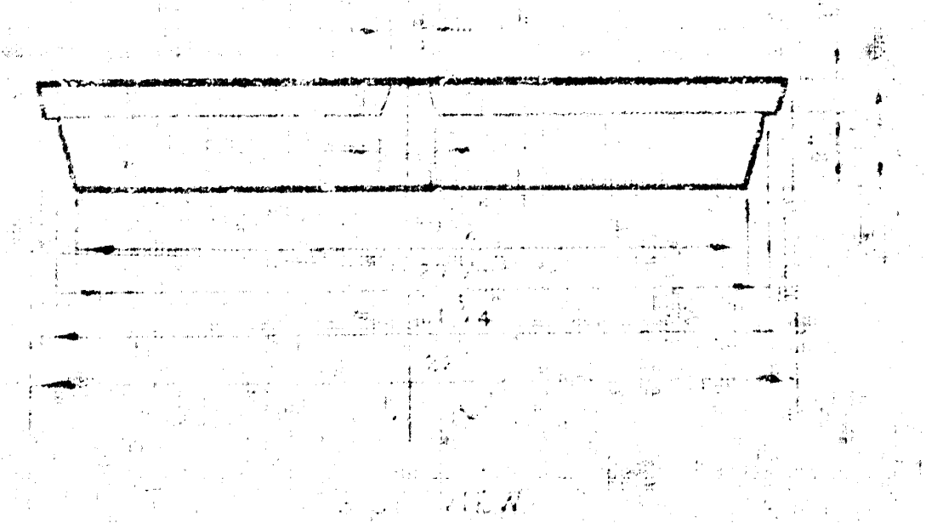
SECTION A-A

MANHOLE COVER

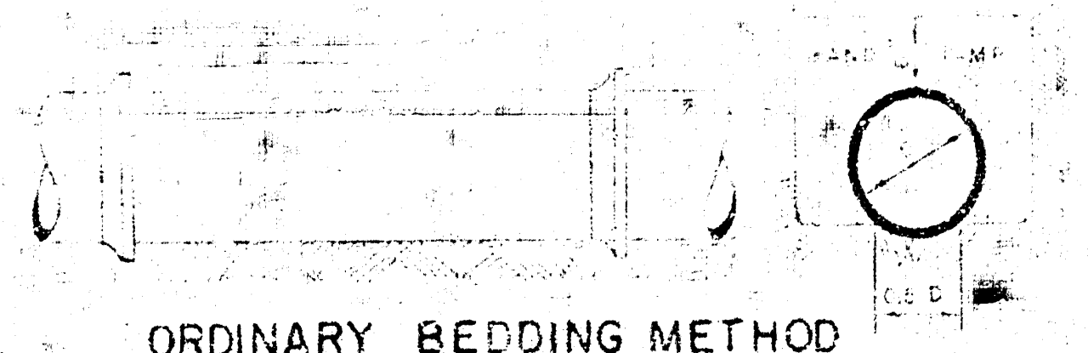

38" (Western Iron and Foundry No. 500A)
54" (Western Iron and Foundry No. 500AS)

MANHOLE RING

OUTSIDE CIRCUMFERENCE OF COVER AND THE INNER FACE AND SEAT OF RING TO BE MACHINE FIT.



MANHOLE COVER


HAND TAMP
O.D.

ORDINARY BEDDING METHOD
FOR REINFORCED CONCRETE PIPE

DETAILS OF
SEWER APPURTENANCES
ADOPTED AS STANDARD DESIGN
BY
ENGINEERING DIVISION
CITY OF WICHITA, KANSAS
R. W. LINN CITY ENGINEER
1964

14 6 3 45