

PHASE II ... CHANNEL

SOUTH SENECA DRAINAGE IMPROVEMENTS

STORM WATER DRAIN NO. 87

PROJECT NO. 468-82036

CITY OF WICHITA, KANSAS
MICHAEL E. LINDEBAK, CITY ENGINEER

OCTOBER, 1992
INDEX CODE: 724039

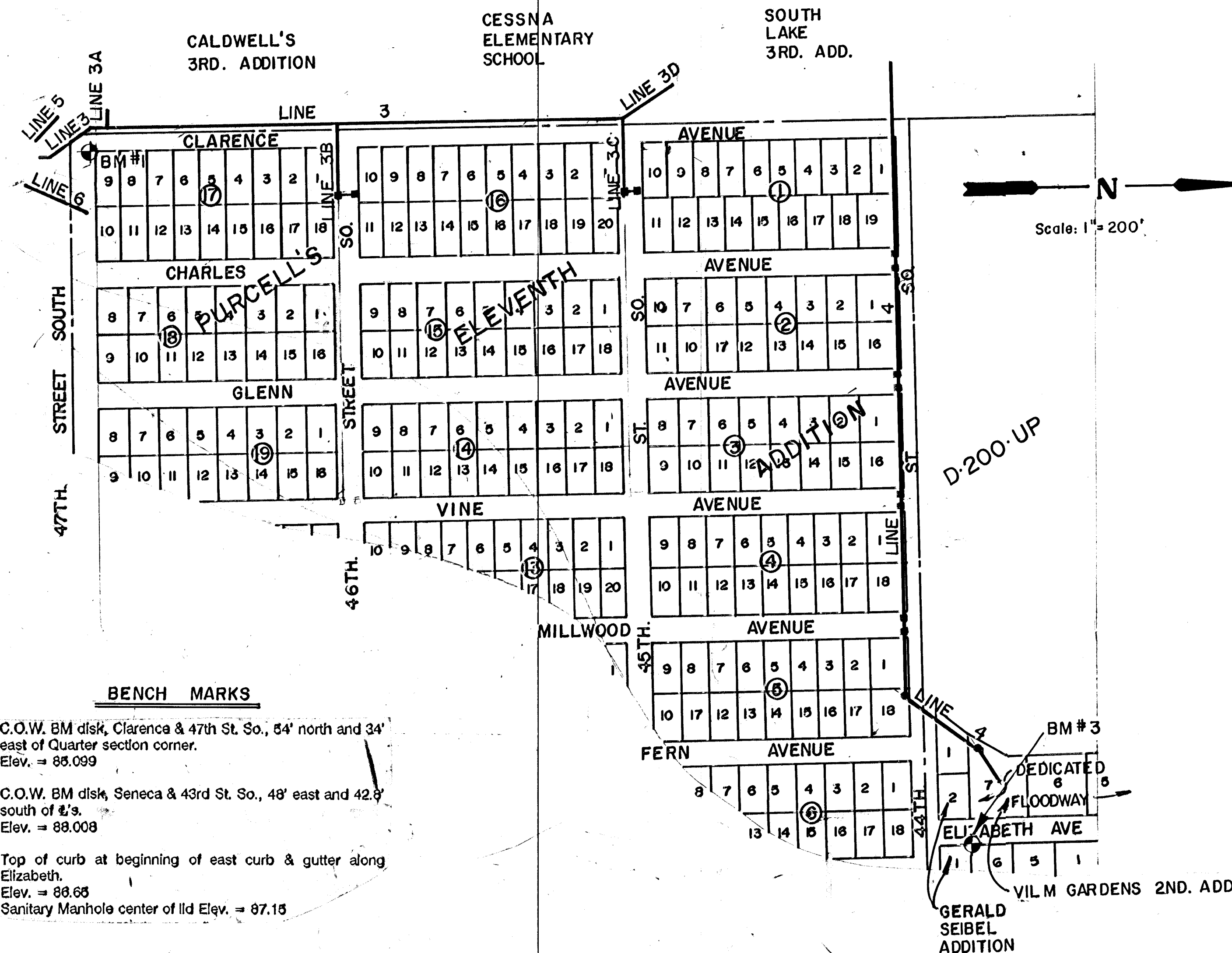
GENERAL NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PRESERVING PROPERTY IRONS. THE CONTRACTOR SHALL 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.
2. TREES TO BE REMOVED ARE MARKED. ALL TREES WHICH IN THE OPINION OF THE FIELD ENGINEER CAN BE SAVED, SHALL BE SAVED.
3. ALL CONCRETE SHALL BE STANDARD PAVING MIX UNLESS OTHERWISE NOTED.
4. UNDERGROUND UTILITY SERVICE LINES AND OVERHEAD UTILITY POLE LINES ARE TO BE ADJUSTED AS NECESSARY BY OTHERS PRIOR TO CONSTRUCTION UNLESS THE PLANS SPECIFICALLY IDENTIFY A UTILITY TO BE ADJUSTED BY ITS OWNER DURING CONSTRUCTION. EXISTING UTILITIES AND THEIR LOCATIONS, 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.

NOTE: NOTIFY ALL THE FOLLOWING COMPANIES PRIOR TO ANY EXCAVATION:

KANSAS ONE-CALL	1-800-344-7233
ARKLA GAS COMPANY	942-9350
KANSAS GAS & ELECTRIC	264-1141
KPL GAS SERVICE	263-7511
MULTIMEDIA CABLEVISION	262-0661
SOUTHWESTERN BELL TELEPHONE	571-2115
CITY OF WICHITA WATER & SEWER	263-4908

5. ALL AREAS DISTURBED BY EXCAVATION OF THE DETENTION SITE AND/OR CHANNEL ABOVE THE NORMAL WATER SURFACE SHALL BE SEEDED & MULCHED. GRASS SEED SHALL BE A BUFFALO GRASS - BLUE GRAMA GRASS MIX, SO AS TO MINIMIZE WIND & WATER EROSION, AND MAINTENANCE. GRASS SEED SHALL BE PLACED AS PER USDA-SCS RECOMMENDATIONS FOR SEEDING RATE AND SPECIFICATIONS. CONTRACTOR SHALL INSURE THAT ALL DISTURBED AREAS TO BE SEEDED SHALL HAVE A MINIMUM OF 6" TOPSOIL. COST SHALL BE INCIDENTAL TO PROJECT.
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 DISPOSED OF 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 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.
7. THE CONTRACTOR SHALL USE FLOWABLE FILL IN PLACE OF COMPACTED PIPE BEDDING MATERIAL AT SIDES AND ABOVE ALL STORM SEWER LINES RUNNING UNDER PAVEMENT IN PUBLIC RIGHT OF WAY. A MINIMUM OF 12 INCHES OF FLOWABLE FILL SHALL BE PLACED OVER THE STORM SEWER LINE OR UP TO 2 FEET BELOW BOTTOM OF PAVEMENT (USE HIGHER ELEVATION).
8. CITY OF WICHITA MANAGER'S POLICY: ANY AREA DISTURBED BY CONSTRUCTION SHALL BE COMPLETELY RESTORED TO A CONDITION EQUAL TO OR BETTER THAN THE ORIGINAL CONDITION. THIS APPLIES TO CONSTRUCTION AREA ALONG CLARENCE AVENUE, 44TH STREET SOUTH, 45TH STREET SOUTH, AND 46TH STREET SOUTH.
9. THE CONTRACTOR MAY TEMPORARILY CLOSE 47TH STREET SOUTH JUST LONG ENOUGH TO REMOVE TIMBER BRIDGE, EAST OF CLARENCE, PLACE COMPACTED FILL AND PAVING 47TH STREET SOUTH.
10. FOAM GASKET, OMNIFLEX GASKET OR APPROVED EQUAL CLOSED CELL GASKET SHALL BE USED INSTEAD OF BUTYL RUBBER SEALANT AT ALL RCB AND RCP JOINTS. THE GASKET MATERIAL SHALL BE APPLIED AT THE PLANT.
11. THE CONTRACTOR MAY CONSTRUCT THE REINFORCED CONCRETE BOX STRUCTURE-IN-PLACE. THE CONTRACTOR WILL BE REQUIRED TO SUBMIT SHOP DRAWINGS SEALED BY A REGISTERED ENGINEER AND DESIGNED FOR WHEEL LOADING, FOR APPROVAL BY THE CITY OF WICHITA ENGINEER.
12. THE CONTRACTOR MAY USE ALTERNATE PIPE MATERIALS FOR LINE 4, AND LINE 5. THE SAME MATERIAL MUST BE USED BETWEEN STRUCTURES. THE ALTERNATE PIPE MATERIALS ARE:
 - 1) RCP
 - 2) HDPE (SMOOTH INTERIOR)
 - 3) ALUMINIZED STEEL PIPE (SMOOTH INTERIOR) WITH REROLLED ANNULAR ENDS, HUGGER BANDS, AND O-RING GASKETS.



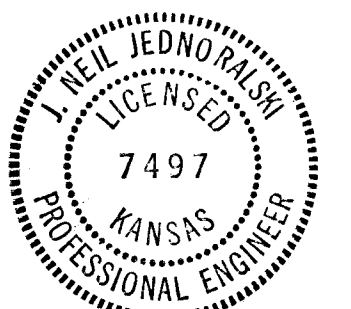
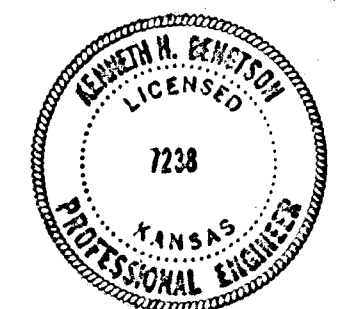
BENCH MARKS

- BM #1 - C.O.W. BM disk, Clarence & 47th St. So., 54' north and 34' east of Quarter section corner.
Elev. = 88.099
- BM #2 - C.O.W. BM disk, Seneca & 43rd St. So., 48' east and 42.9' south of E.S.
Elev. = 88.008
- BM #3 - Top of curb at beginning of east curb & gutter along Elizabeth.
Elev. = 88.68
Sanitary Manhole center of 11d Elev. = 87.15

INDEX TO DRAWINGS

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2-3	PLAN & PROFILE - LINE 3
4	PLAN & PROFILE - LINE 3 & 3D
5	PLAN & PROFILE - LINE 3B & 3C
6	PLAN - SOUTH LAKE 3RD. DETENTION POND
7-10	PLAN & PROFILE LINE 4
11	PLAN - LINE 5 & 6
12	SITE GRADE - CLARENCE-EUCLID & 47TH. ST. SO.
13	TYPE I-A CURB INLET DETAILS (5' OPENING)
14	TYPE I-A CURB INLET DETAILS (10' OPENING)
15	TYPE "A" & TYPE "B" SHALLOW MANHOLE DETAILS
16	TYPE I-A DITCH INLET DETAILS
17	SPECIAL DETAILS
18	STD. "P" MANHOLE DETAIL

Booked
12-15-93
MCG



SOUTH SENECA
DRAINAGE IMPROVEMENTS
PHASE II CHANNEL
STORM WATER DRAIN NO. 87

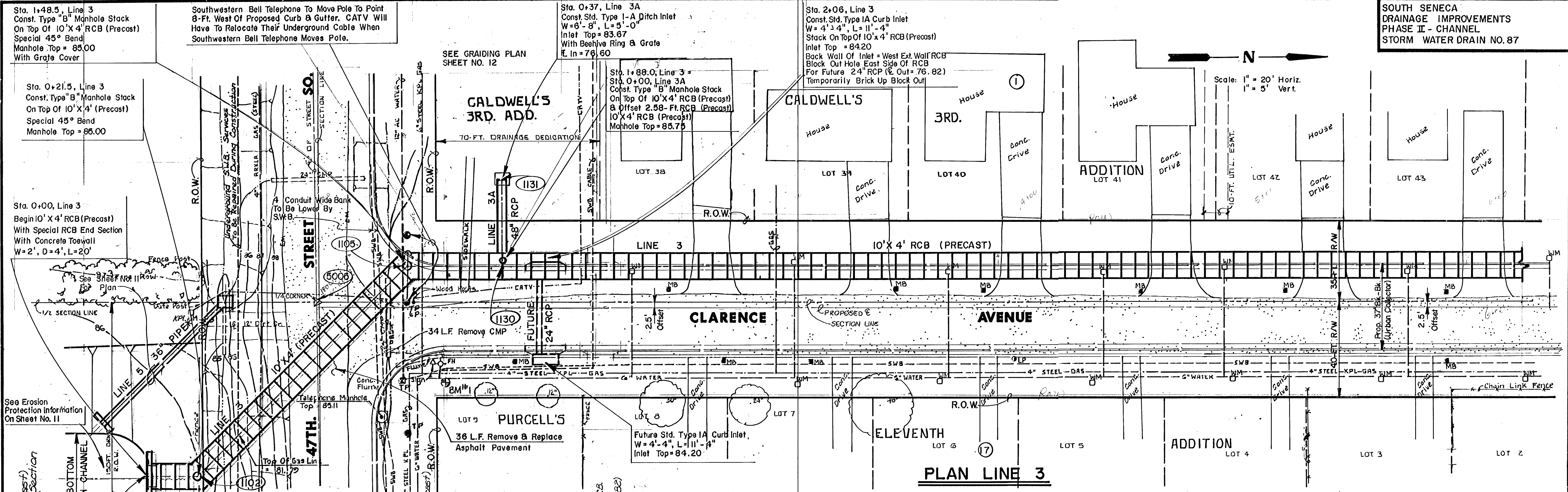
MID-KANSAS ENGINEERING CONSULTANTS PA
3500 NORTH ROCK ROAD
BUILDING #800
WICHITA, KANSAS 67226

636-5666

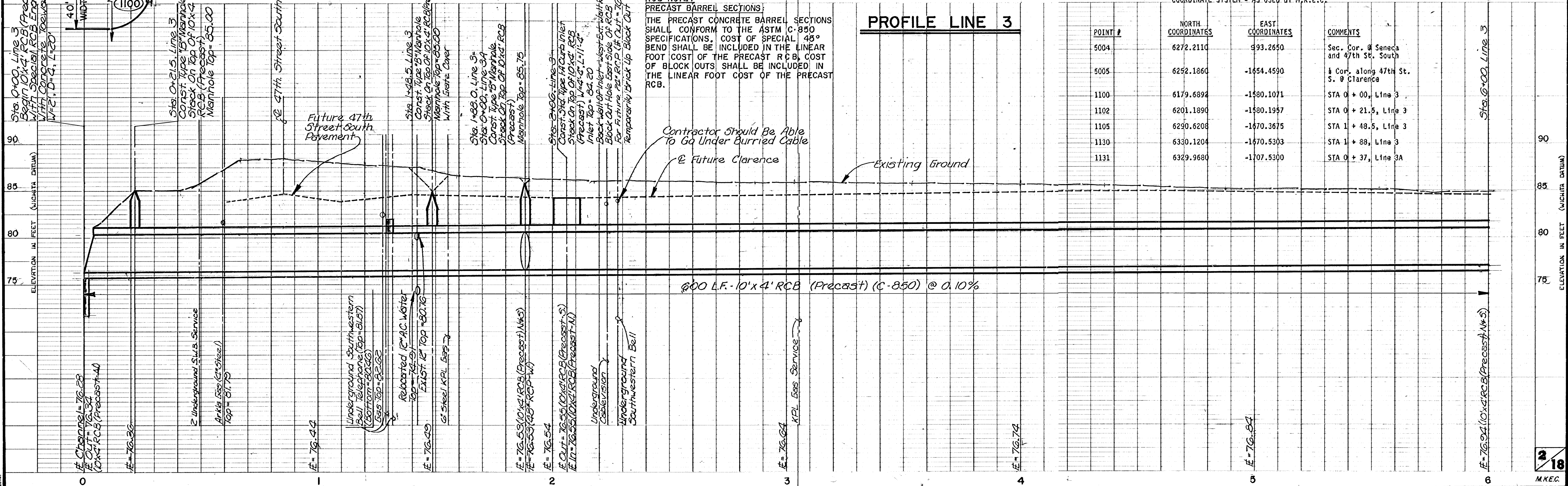
Design
JNJ
Drawn by
KSM/DLM
Checked by
Date
October, 1992
Job no.

Sheet
1
of 18

SOUTH SENECA
DRAINAGE IMPROVEMENTS
PHASE II - CHANNEL
STORM WATER DRAIN NO. 87



PROFILE LINE 3



POINT #	NORTH COORDINATES	EAST COORDINATES	COMMENTS
5004	6272.2110	993.2650	Sec. Cor. @ Seneca and 47th St. South
5005	6252.1860	-1654.4590	1/4 Cor. along 47th St. S. @ Clarence
1100	6179.6892	-1580.1071	STA 0 + 00, Line 3
1102	6201.1890	-1580.1957	STA 0 + 21.5, Line 3
1105	6290.6208	-1670.3675	STA 1 + 48.5, Line 3
1130	6330.1204	-1670.5303	STA 1 + 88, Line 3
1131	6329.9680	-1707.5300	STA 0 + 37, Line 3A

RCB NOTE:
PRECAST BARREL SECTIONS:
THE PRECAST CONCRETE BARREL SECTIONS SHALL CONFORM TO THE ASTM C-850 SPECIFICATIONS. COST OF SPECIAL 45° BEND SHALL BE INCLUDED IN THE LINEAR FOOT COST OF THE PRECAST RCB. COST OF BLOCK OUTS SHALL BE INCLUDED IN THE LINEAR FOOT COST OF THE PRECAST RCB.

Contractor Should Be Able To Go Under Buried Cable @ Future Clearance

Existing Ground

800 L.F. 10' x 4' RCB (Precast) (C-850) @ 0.10%

Sta. 7+10.0, Line 3
Const. Std. Type I-A Curb Inlet Stack On
Top Of 10'x4' RCB (Precast).
W=4'-4", L=6'-4"
Inlet Top=84.20
Back Wall Of Inlet=West Ext. Wall RCB
Block Out Hole East Side Of RCB For
Future 24" RCP. (E. Out=77.30)
Temporarily Brick Up Block Out.

Sta. 7+31.0, Line 3
Offset West 2.6'

Sta. 7+18.0, D-153
SANITARY SEWER MANHOLE
RIM=81.50
E. = 80.38
N.E. = 80.43
W.S. = 80.43

Sta. 7+37.0, Line 3
Slide Tongue Of 5'x4' RCB (Precast)
Into Groove Of 10'x4' RCB (Precast).
Slide 5'x4' RCB (Precast) To R.O.W.
Side Of 10'x4' RCB (Precast).
8" Thick Precast Concrete Plug
Difference At End Of 10'x4' RCB

RCB NOTE:
PRECAST BARREL SECTIONS:
THE PRECAST CONCRETE BARREL SECTIONS
SHALL CONFORM TO THE ASTM C-850
SPECIFICATIONS. COST OF BLOCK OUTS SHALL
BE INCLUDED IN THE LINEAR FOOT COST OF THE
PRECAST RCB.

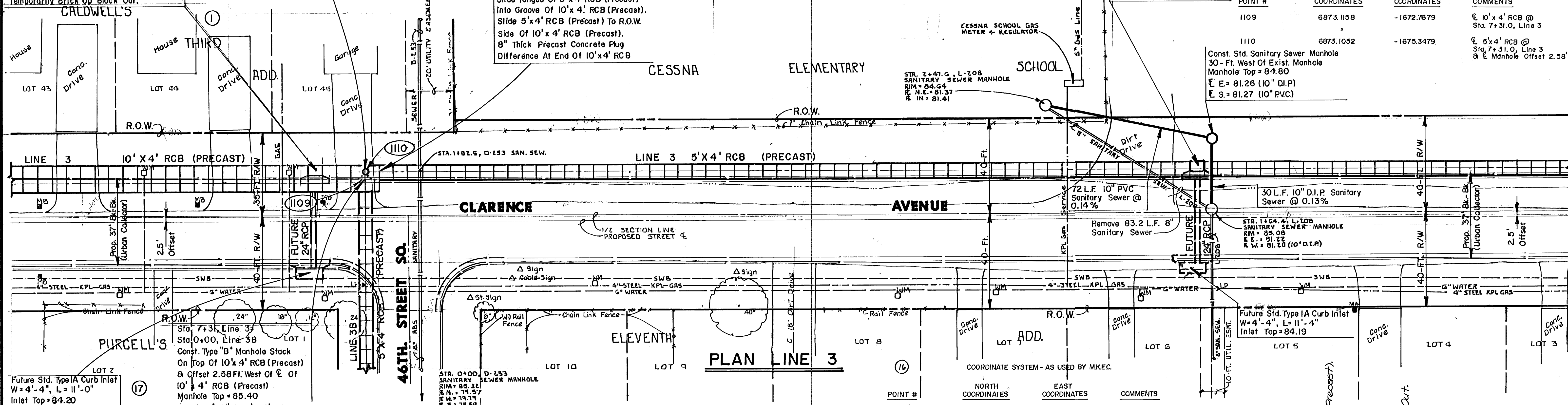
Scale: 1" = 20' Horiz.
1" = 5' Vert.

Sta. 10+82.0, Line 3
Const. Std. Type I-A Curb Inlet
Stack On Top Of 5'x4' RCB (Precast)
W=4'-4", L=6'-4"
Inlet Top=84.19
Back Wall Of Inlet=West Ext. Wall RCB.
Block Out Hole East Side Of RCB
For Future 24" RCP. (E. Out=77.67)
Temporarily Brick Up Block Out.

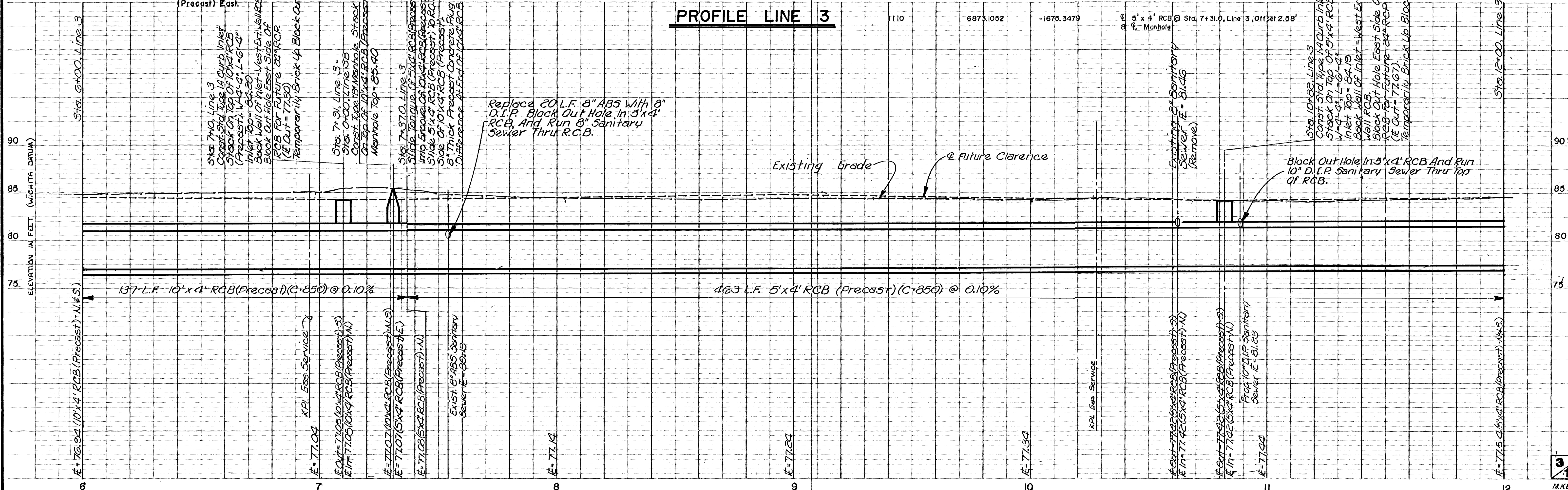
SOUTH SENECA
DRAINAGE IMPROVEMENTS
PHASE II - CHANNEL
STORM WATER DRAIN NO. 87

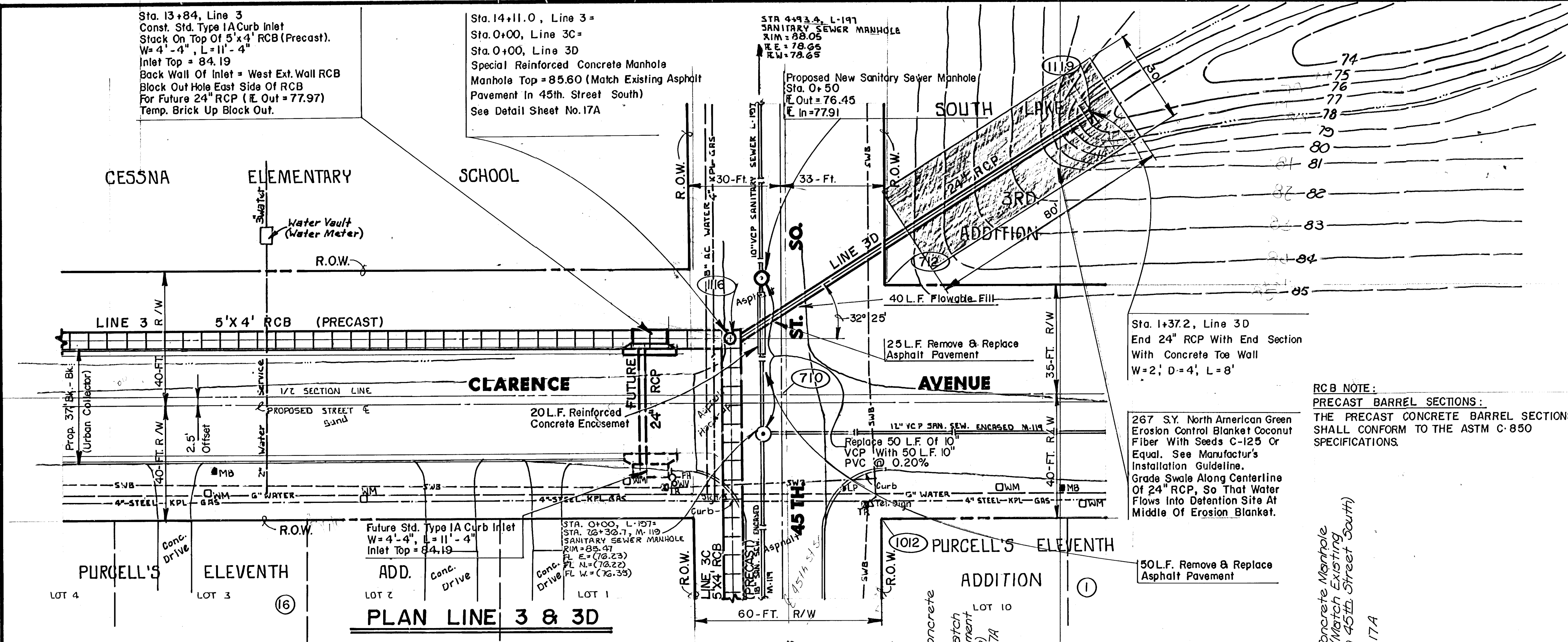
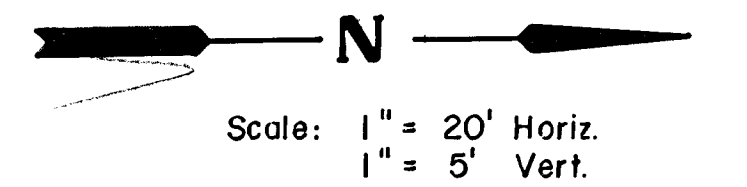
COORDINATE SYSTEM - AS USED BY M.K.E.C.

POINT #	NORTH COORDINATES	EAST COORDINATES	COMMENTS
1109	6873.1158	-1672.7679	10'x4' RCB @ Sta. 7+31.0, Line 3
1110	6873.1052	-1675.3479	5'x4' RCB @ Sta. 7+31.0, Line 3 & Manhole Offset 2.58'



PROFILE LINE 3





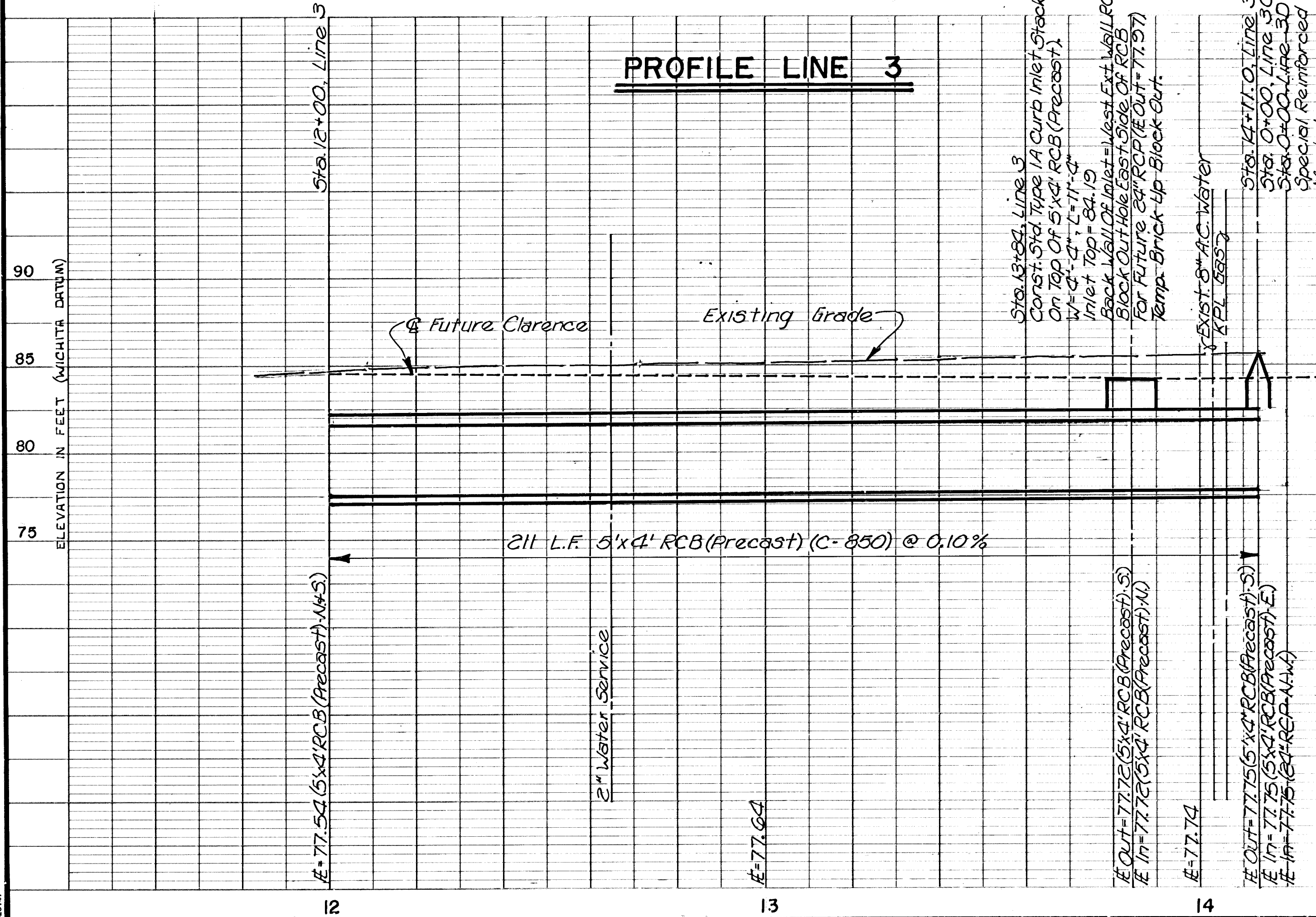
RCB NOTE:
PRECAST BARREL SECTIONS:
THE PRECAST CONCRETE BARREL SECTIONS
SHALL CONFORM TO THE ASTM C-850
SPECIFICATIONS.

267 S.Y. North American Green
Erosion Control Blanket Coconut
Fiber With Seeds C-125 Or
Equal. See Manufacturer's
Installation Guideline.
Grade Swale Along Centerline
Of 24" RCP, So That Water
Flows Into Detention Site At
Middle Of Erosion Blanket.

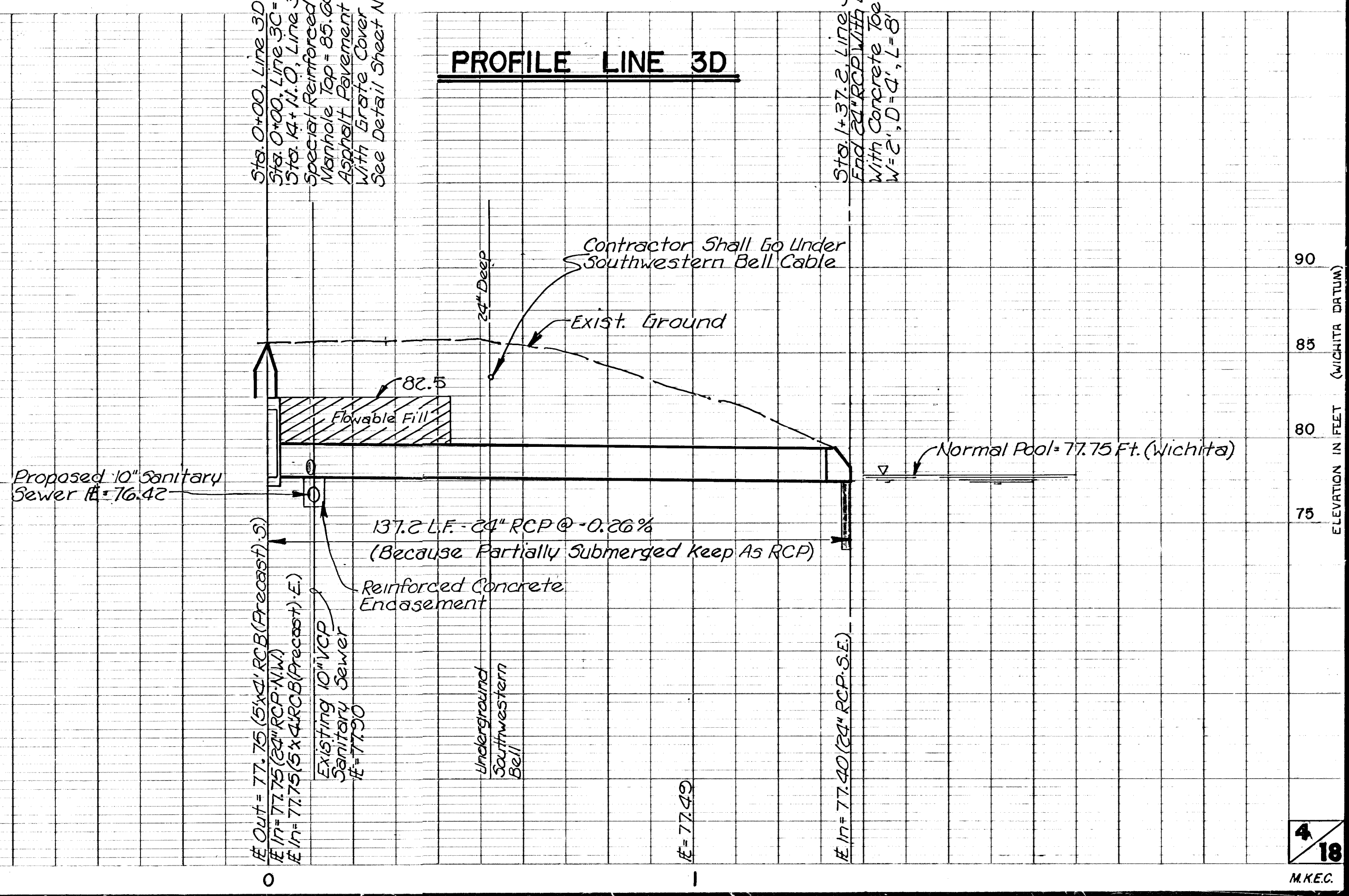
COORDINATE SYSTEM - AS USED BY M.K.E.C.

POINT #	NORTH COORDINATES	EAST COORDINATES	COMMENTS
1116	7553.0994	-1678.1501	CL's 5'x4' RCB @ STA 14+11.0, Line 3
1119	7669.1631	-1750.2990	STA 1+37.2, Line 3D
710	7569.5348	-1659.8876	CL Clarence & 45th Street South
712	7602.3440	-1659.0231	S.E. Corner - South Lake 3rd Addition
1012	7600.834	-1620.715	S.W. Corner - Block 1 - Purcell's 11th Add.

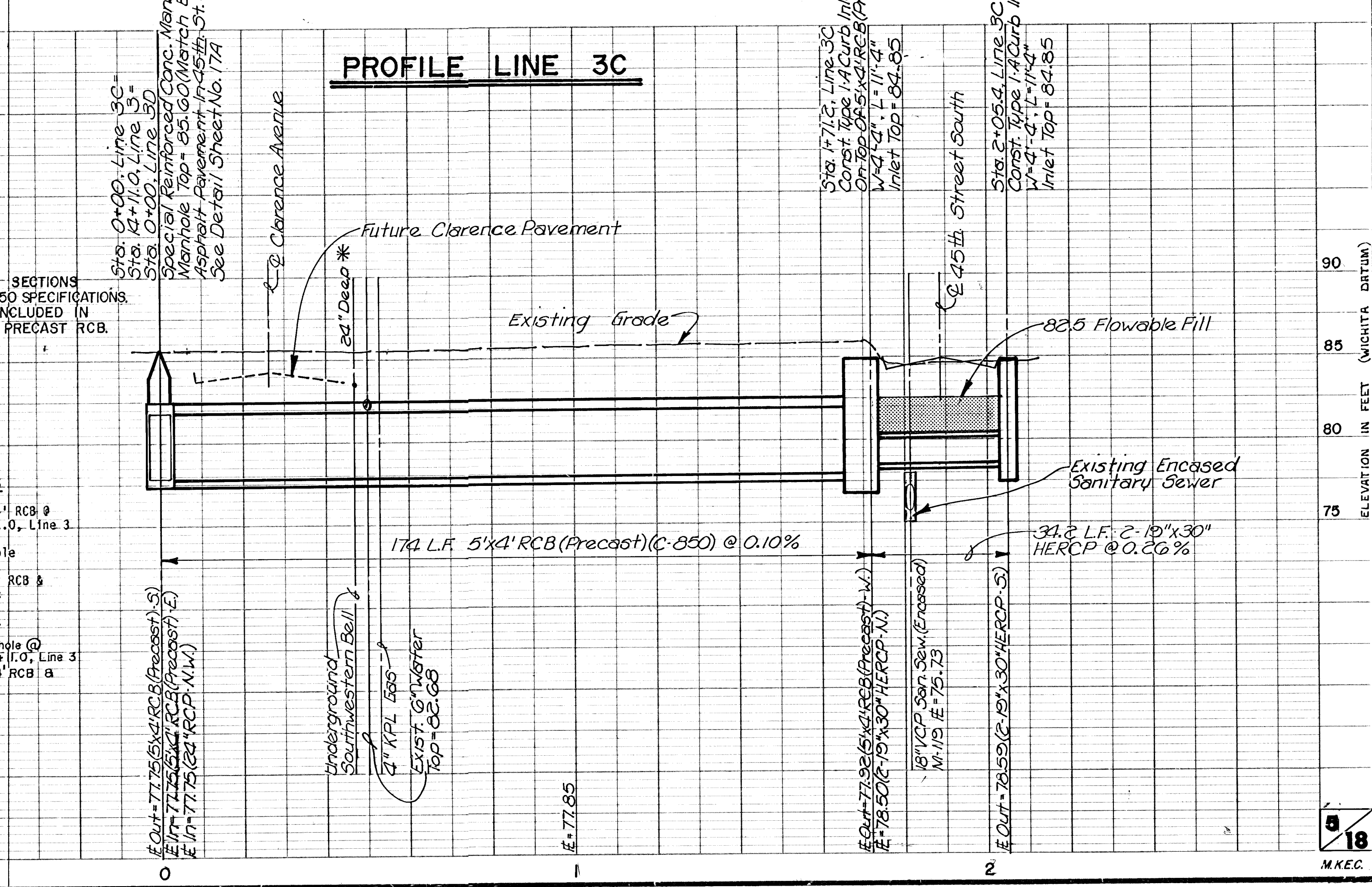
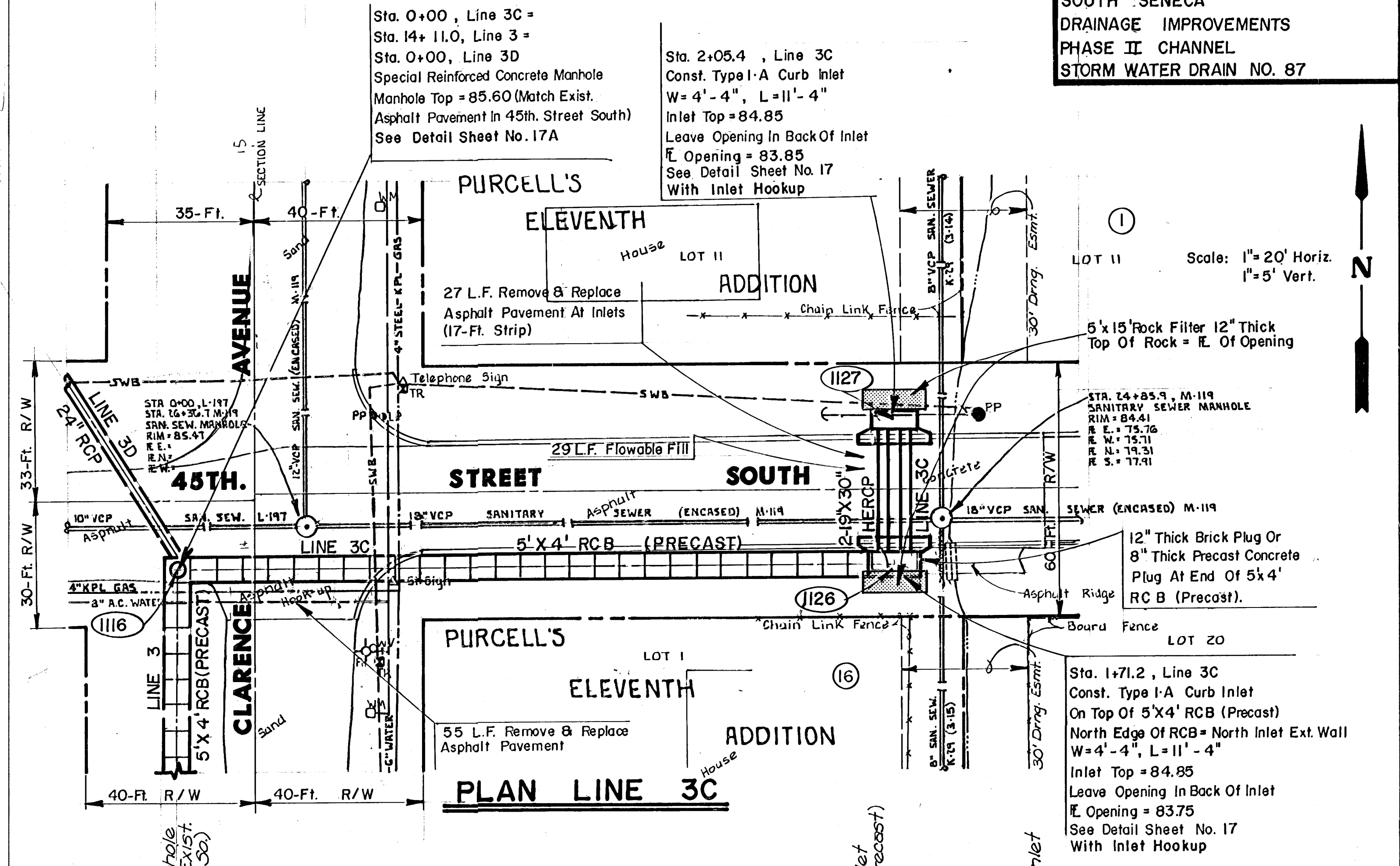
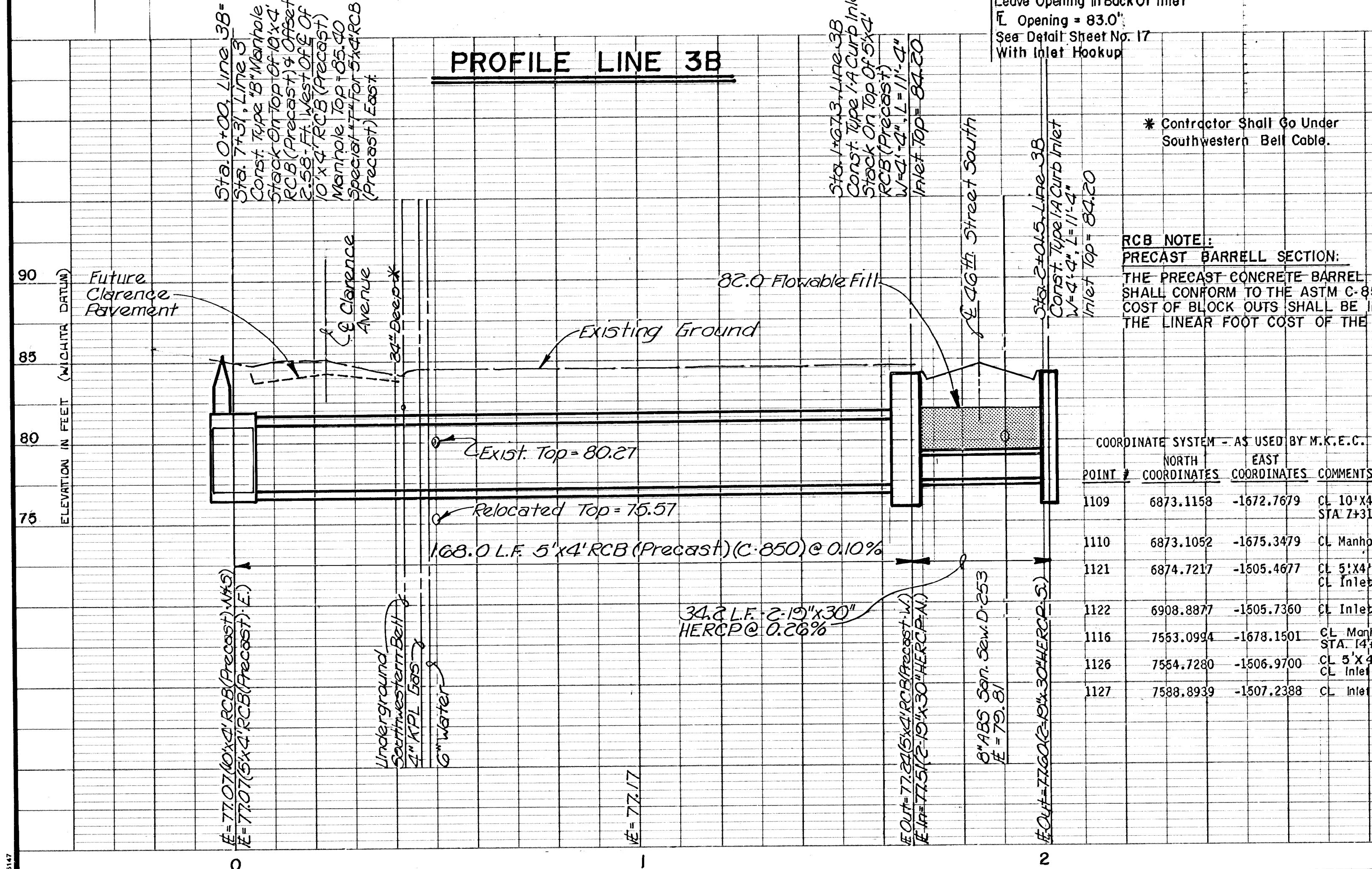
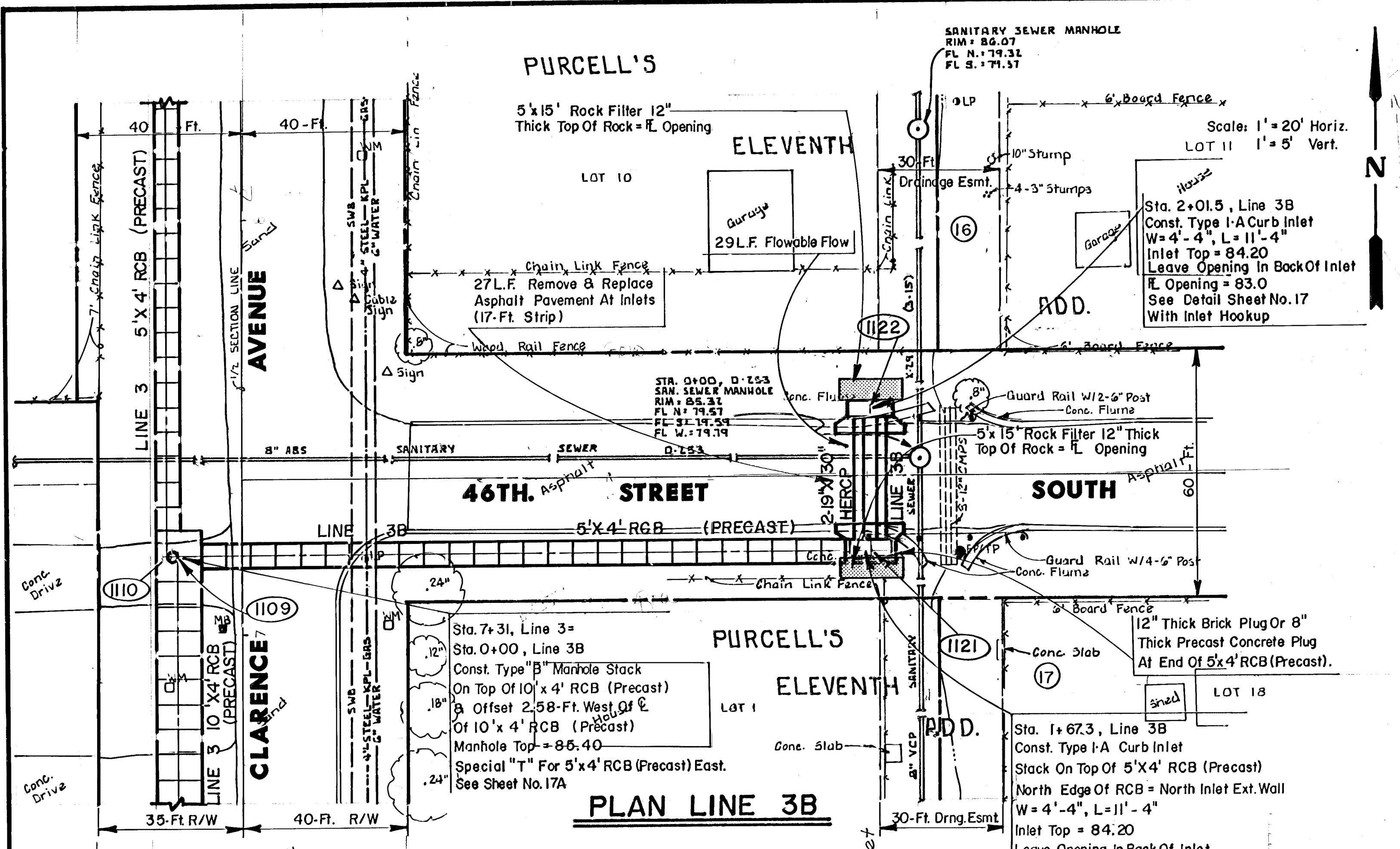
PROFILE LINE 3



PROFILE LINE 3D



**SOUTH SENECA
DRAINAGE IMPROVEMENTS
PHASE II CHANNEL
STORM WATER DRAIN NO. 87**



RCB NOTE:
PRECAST BARRELL SECTION:
THE PRECAST CONCRETE BARRELL SECTIONS
SHALL CONFORM TO THE ASTM C-850 SPECIFICATIONS.
COST OF BLOCK OUTS SHALL BE INCLUDED IN
THE LINEAR FOOT COST OF THE PRECAST RCB.

COORDINATE SYSTEM - AS USED BY M.K.E.C.

POINT	NORTH COORDINATES	EAST COORDINATES	COMMENTS
1109	6873.1158	-1672.7679	CL 10' x 4' RCB @ STA 7+31.0, Line 3
1110	6873.1052	-1675.3479	CL Manhole
1121	6874.7217	-1605.4677	CL 5' x 4' RCB & CL Inlet
1122	6908.8877	-1605.7360	CL Inlet
1116	7553.0994	-1678.1501	CL Manhole @ STA. 14+11.0, Line 3
1126	7554.7280	-1506.9700	CL 5' x 4' RCB @
1127	7588.8939	-1507.2388	CL Inlet

NOTE:
CONSTRUCT 1'-0" HIGH BERM AROUND TOP
EDGE OF DETENTION SITE TO PREVENT
WATER FROM ENTERING, EXCEPT AT THE
CORNERS.

580 S.Y. (40'x130') Tensar Erosion Mat
TM 3000 Or Equal,
Side Lap At Edges 6" (Min.).
Stake Mat With Steel Or Plastic Pins
At 2 Staples Per Square Yard.
See Manufacturer's Installation Guidelines.
Fill Erosion Mat With Soil & Seed.

Scale: 1" = 50'

580 S.Y. (40'x130') Tensar Erosion Mat
TM 3000 Or Equal,
Side Lap At Edges 6" (Min.).
Stake Mat With Steel Or Plastic Pins.
At 2 Staples Per Square Yard.
See Manufacturer's Installation
Guidelines.
Fill Erosion Mat With Soil & Seed.

555 S.Y. North American Green Erosion
Control Blanket, Coconut Fiber With
Seeds, C-125, Or Equal.
Stake Mat With Steel Or Plastic Pins
At 2 Staples Per Square Yard.
See Manufacturer's Installation Guidelines.
Grade Swale Along Centerline Of Blanket
So That Water Flows In The Middle Of
Blanket.

1040 S.Y. North American Green Erosion Control
Blanket, Coconut Fiber With Seeds, C-125, Or Equal.
Stake Mat With Steel Or Plastic Pins.
At 2 Staples Per Square Yard.
See Manufacturer's Installation Guidelines.
Grade Swale Along Centerline Of Blanket So That
Water Flows In The Middle Of Blanket.

495 S.Y. North American Green Erosion
Control Blanket, Coconut Fiber With Seeds,
C-125, Or Equal.
Stake Mat With Steel Or Plastic Pins At
2 Staples Per Square Yard.
See Manufacturer's Installation Guidelines.
Grade Swale Along Centerline Of Blanket,
So That Water Flows In The Middle Of
Blanket.

NORMAL POOL = 77.75 FT. (WICHITA)
MAX. FLOOD POOL = 85.0 FT. (WICHITA)
STORAGE 68.5 AC.-FT. DETENTION STORAGE FOR
ES-1 (101) - (36 AC)
WS-2 (1002) - (29 AC)
WS-4 (1004) - (18 AC)
PART WS-8 (1008) - (22.5 AC)
WS-1 (1001) - (78 AC)

NOTE:
ALL AREA DISTURBED BY EXCAVATION ABOVE THE NORMAL
POOL ELEVATION OF 77.75 FT. (WICHITA) SHALL BE SEED-ED
& MULCHED. GRASS SEED SHALL BE A BUFFALO GRASS -
BLUE GRAMA GRASS MIX, SO AS TO MINIMIZE WIND & WATER
EROSION, AND MAINTENANCE. GRASS SEED SHALL BE PLANTED
AS PER USDA - SCS RECOMMENDATIONS FOR SEEDING RATE
AND SPECIFICATIONS. CONTRACTOR SHALL INSURE THAT
ALL DISTURBED AREAS TO BE SEED-ED SHALL HAVE A
MINIMUM OF 6" TOPSOIL. COST SHALL BE INCIDENTAL
TO PROJECT. CONTRACTOR SHALL BE RESPONSIBLE FOR
SITE UNTIL GRASS COVER IS ESTABLISHED.

400 S.Y. (40'x90') Tensar Erosion Mat
TM 3000 Or Equal,
Side Lap At Edges 6" (Min.).
Stake Mat With Steel Or Plastic Pins
At 2 Staples Per Square Yard.
See Manufacturer's Installation Guidelines.
Fill Erosion Mat With Soil & Seed.

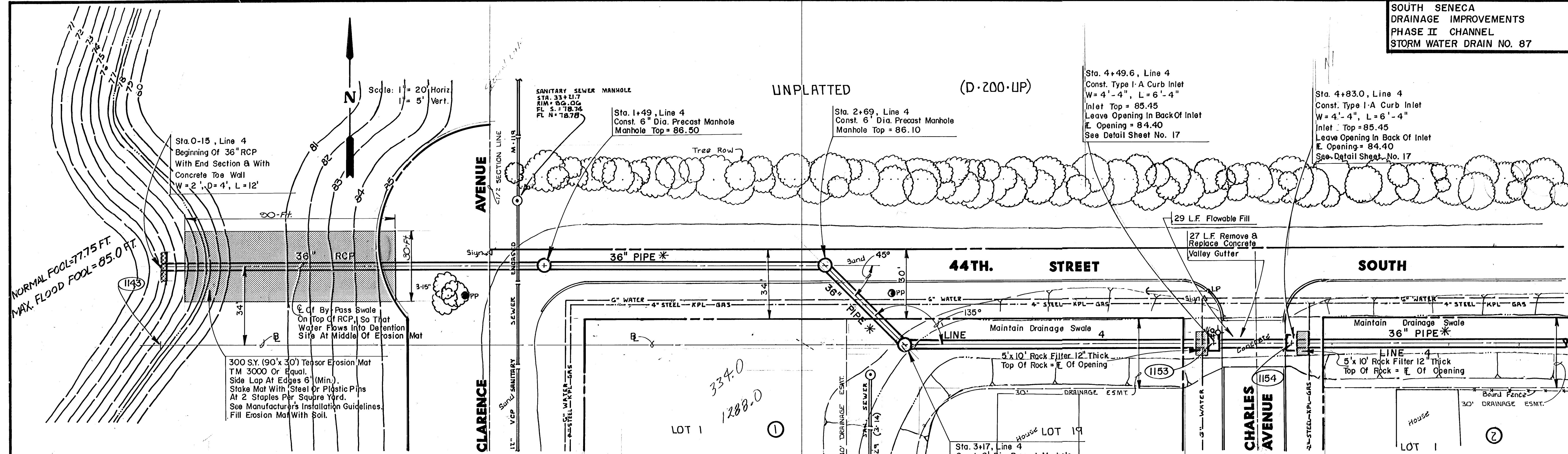
PHASE II CHANNEL STORM WATER DRAIN NO. 87
REVISED 8 AUG. 91 JNJ

	SOUTH LAKE 3RD. ADDITION	
	PROPOSED DETENTION SITE	
	MID-KANSAS ENGINEERING CONSULTANTS PA 3600 NORTH ROCK ROAD BUILDING #800 WICHITA, KANSAS 67226	
	636-6666	

Sheet 6
18

MKEB Proj. No 88-70-113-Drng

South Lake 3rd Add. Detention

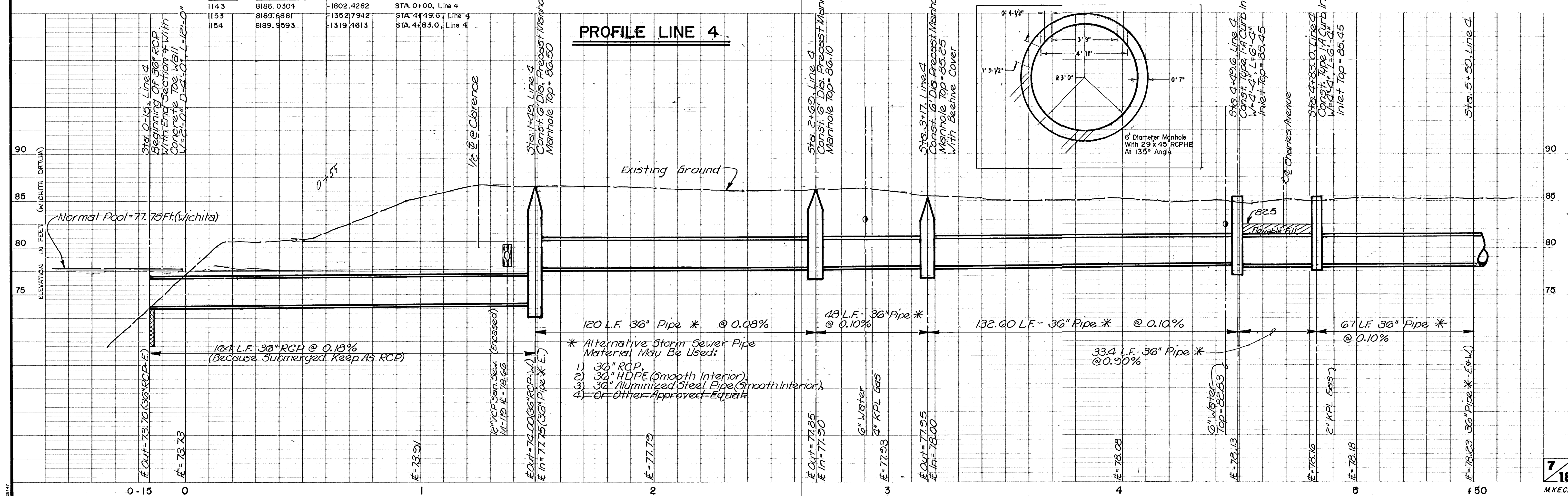


COORDINATE SYSTEM-AS USED BY MKEC

POINT #	NORTH COORDINATES	EAST COORDINATES	COMMENTS
1143	8186.0304	-1802.4282	STA. 0+00, Line 4
1153	8189.6881	-1352.7942	STA. 4+49.6, Line 4
1154	8189.9593	-1319.4613	STA. 4+83.0, Line 4

PLAN LINE 4

PROFILE LINE 4



120 L.F. 36" Pipe * @ 0.08%

- * Alternative Storm Sewer Pipe Material May Be Used:
- 1) 36" RCP
 - 2) 36" HDPE (Smooth Interior)
 - 3) 36" Aluminized Steel Pipe (Smooth Interior)
 - 4) Or Other Approved Equivalent

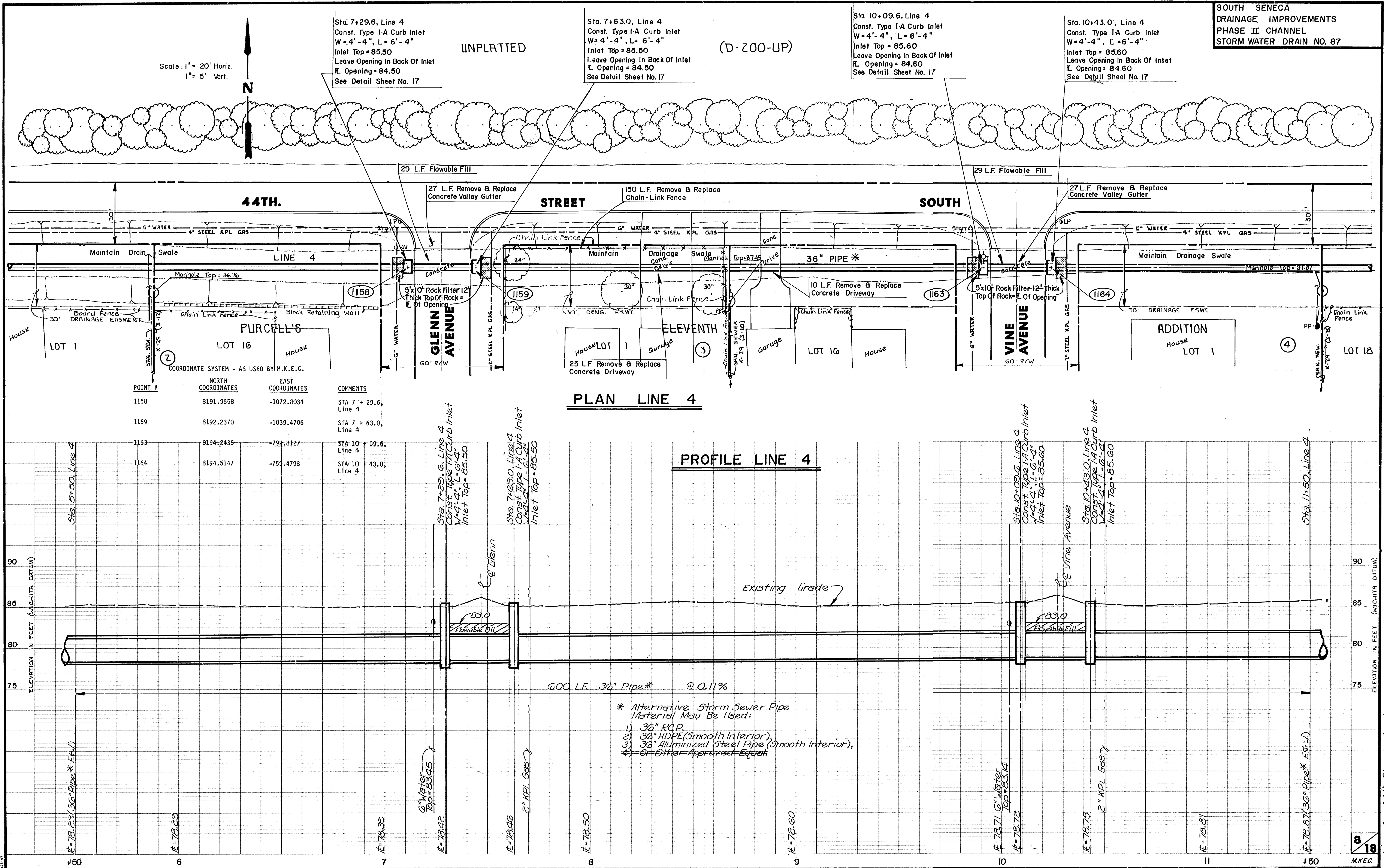
48 L.F. 36" Pipe * @ 0.10%

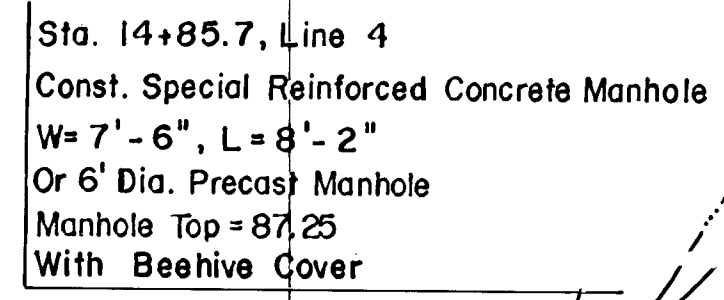
132.40 L.F. 36" Pipe * @ 0.10%

33.4 L.F. 36" Pipe * @ 0.20%

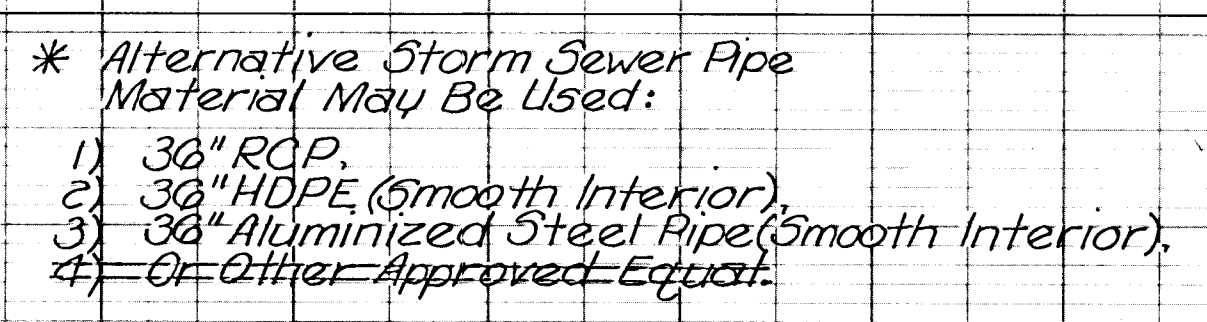
67 L.F. 36" Pipe * @ 0.10%

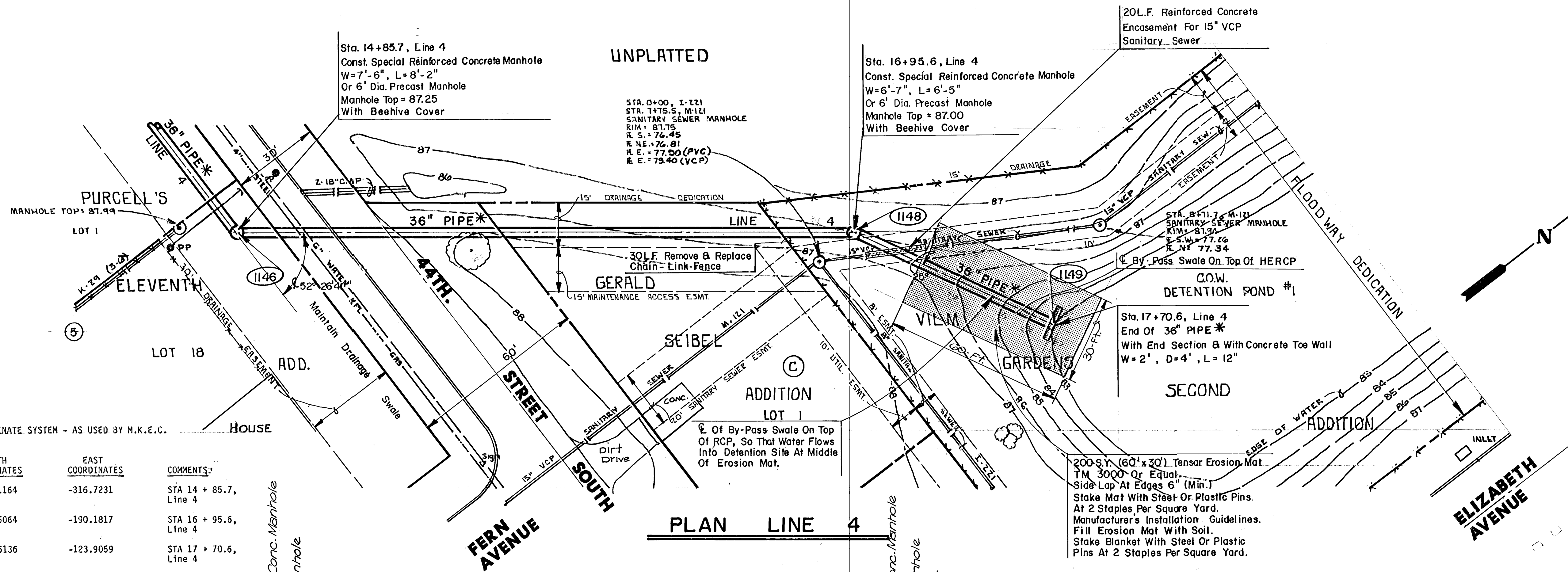
**SOUTH SENECA
DRAINAGE IMPROVEMENTS
PHASE II CHANNEL
STORM WATER DRAIN NO. 87**





COORDINATE SYSTEM - AS USED BY M.K.E.C.			
<u>POINT #</u>	<u>NORTH COORDINATES</u>	<u>EAST COORDINATES</u>	<u>COMMENTS</u>
1173	8196.6571	-496.1225	STA 13 + 06.3, Line 4
1174	8196.9282	-462.7896	STA 13 + 39.7, Line 4
1146	8198.1164	-316.7281	STA 14 + 85.7, Line 4

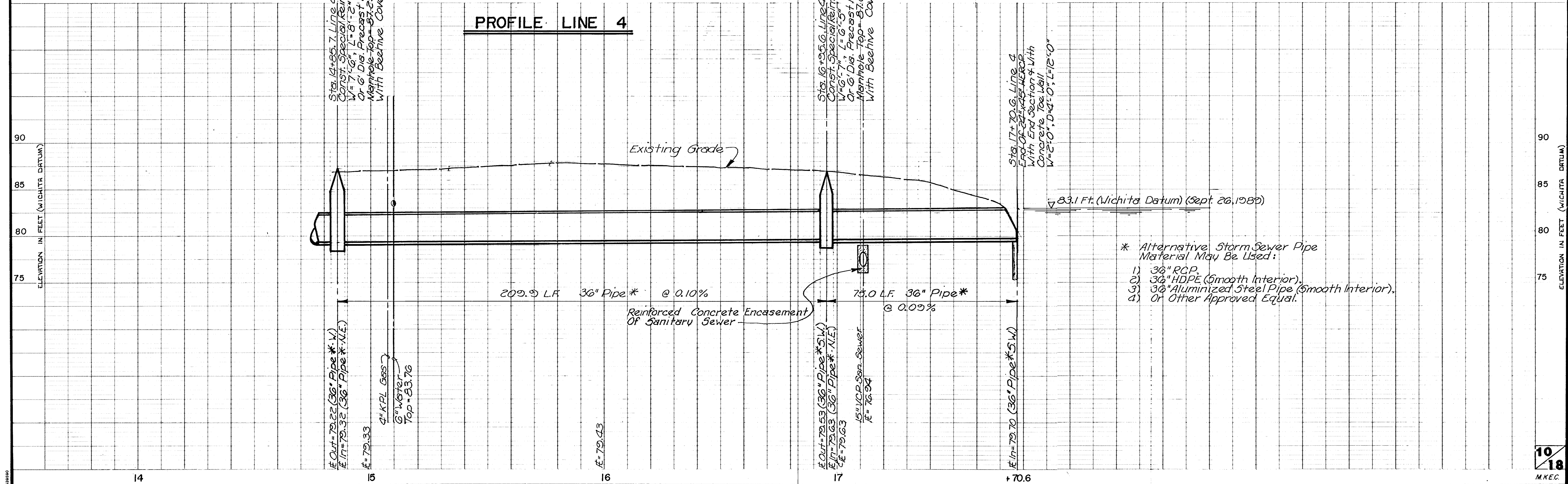




COORDINATE SYSTEM - AS USED BY M.K.E.C.

POINT #	NORTH COORDINATES	EAST COORDINATES	COMMENTS
1146	8198.1164	-316.7231	STA 14 + 85.7, Line 4
1148	8365.5064	-190.1817	STA 16 + 95.6, Line 4
1149	8400.6136	-123.9059	STA 17 + 70.6, Line 4

PROFILE LINE 4



- * Alternative Storm Sewer Pipe Material May Be Used:
- 1) 36" RCP
 - 2) 36" HDPE (Smooth Interior)
 - 3) 36" Aluminized Steel Pipe (Smooth Interior)
 - 4) Or Other Approved Equal

BANNON

BUILDING

PROPERTY

150 L.F. Remove & Replace Barb Wire Fence (Cost Subsidiary To Project)

Const. Area Inlet
W=5'-6" L=6'-0"
Inlet Top=84.80
E Out=79.85 (36" RCP - S.E.)
[75 L.F. 36" RCP]

20 L.F. Remove Entrance Pipe

CALDWELL'S
3RD. ADD.

N
Scale: 1" = 20'

LEGEND

Flag Set By Long

LIMITS OF EXCAVATION

935 S.Y. Heavy Stone Rip-Rap

Const. Concrete Toe Wall
W=2'-0"
D=4'-0"
L=10'-0"

Const. Concrete Toe Wall
W=2'-0"
D=4'-0"
L=12'-0"

LIMITS OF EXCAVATION

LONG

* ALTERNATE STORM SEWER PIPE MATERIAL MAY BE USED:

- 1) 36" RCP,
- 2) 36" HDPE (SMOOTH INTERIOR),
- 3) 36" ALUMINIZED STEEL PIPE (SMOOTH INTERIOR)
- 4) OR OTHER APPROVED EQUAL.

PROPERTY

ARKLA 4" Gas Line
Top=80.33
(Conflict With Top Of 48" RCP)
E 48" RCP=78.83
5" Wall Thickness

NOTE:

AREA UNDER EAST SPAN OF BRIDGE AND AREA TO SOUTH OF TIMBER BRIDGE HAS BEEN BACKFILLED WITH BROKEN CONCRETE TO SLOW EROSION AT BRIDGE SITE.

SOUTH STREET

CLARENCE

PURCELL'S

HOUSE
4 Conduit Wide Bank To Be Lower By Southwestern Bell

11 TH.

6" Water Line Exist. Top=81.11
Relocated Top=75.56

ADD.

Const. Area Inlet
W=5'-6" L=6'-0"
Inlet Top=82.40
E Out=77.00 (48" RCP - S.W.)
[54 L.F. 48" RCP]
Center On Lot Corner

Southwestern Bell Telephone Conduit
Top=80.70
Bottom=79.37
(Conflict With Top Of 48" RCP)
E 48" RCP=78.95
5" Wall Thickness

Remove Timber Bridge
Compact Fill
100 S.Y. Asphalt Pavement

2 Underground Southwestern Bell Services To Be Repaired During Construction

6" Asphalt & 10" Rock Base Or
10" Asphalt & 6" Treated Subgrade
As Per C.O.W. Pavement Specifications.

98% Compaction

TEMPORARY ASPHALT REPLACEMENT
TYPICAL ROAD CROSS SECTION AT BRIDGE REMOVAL SITE

NOTE:

All Area Disturbed By Excavation Shall Be Seeded & Mulched. Grass Seed Shall Be A Buffalo Grass- Blue Grama Grass Mix, So As To Minimize Wind & Water Erosion, And Maintenance. Grass Seed Shall Be Planted As Per U.S.D.A.- SQS Recommendations For Seeding Rate And Specifications.

PHASE II - CHANNEL - STORM WATER DRAIN NO. 87



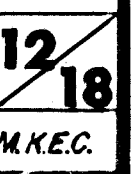
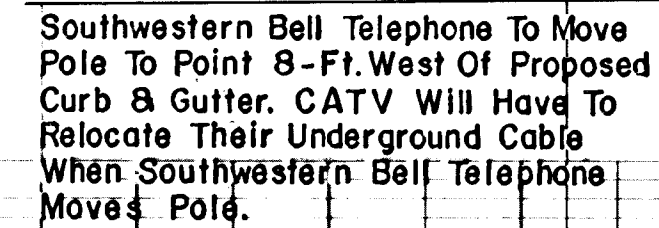
PLAN
LINE 5 & 6

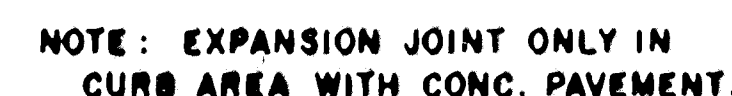
MID-KANSAS ENGINEERING CONSULTANTS, P.A.
3500 NORTH ROCK ROAD
BUILDING 1800
WICHITA, KANSAS 67226

636-5566

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Job no.
Sheet
11
of 18

MKEC Proj. No. 88-70-113-Drng.





PLAN

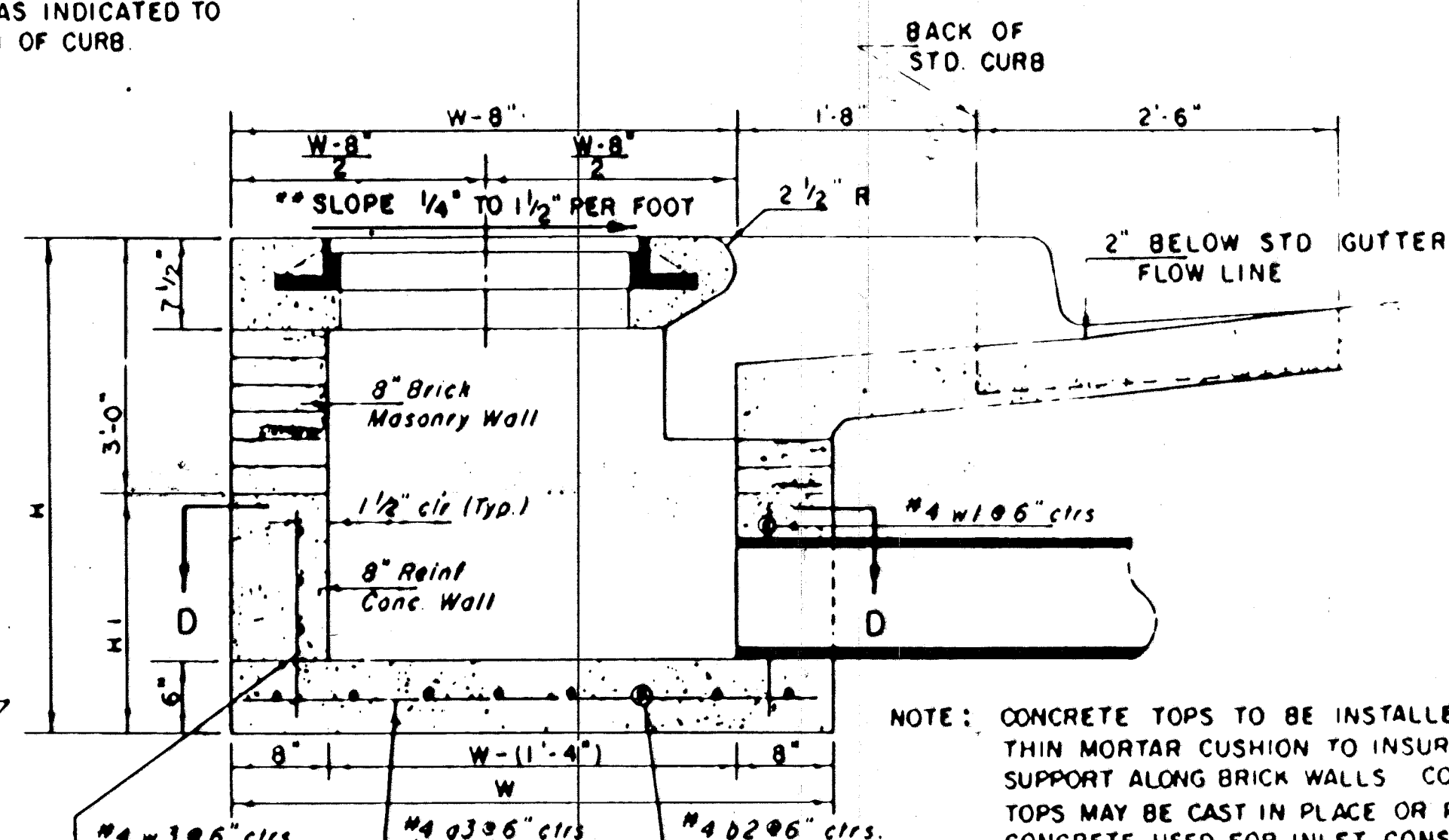
• Field bend or cut Reinforcing as required for clearance

① $4(HI-12")$; $(HI-12")$ Round down to nearest 0.3'

② $HI-3"$



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 = 8'4" 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.

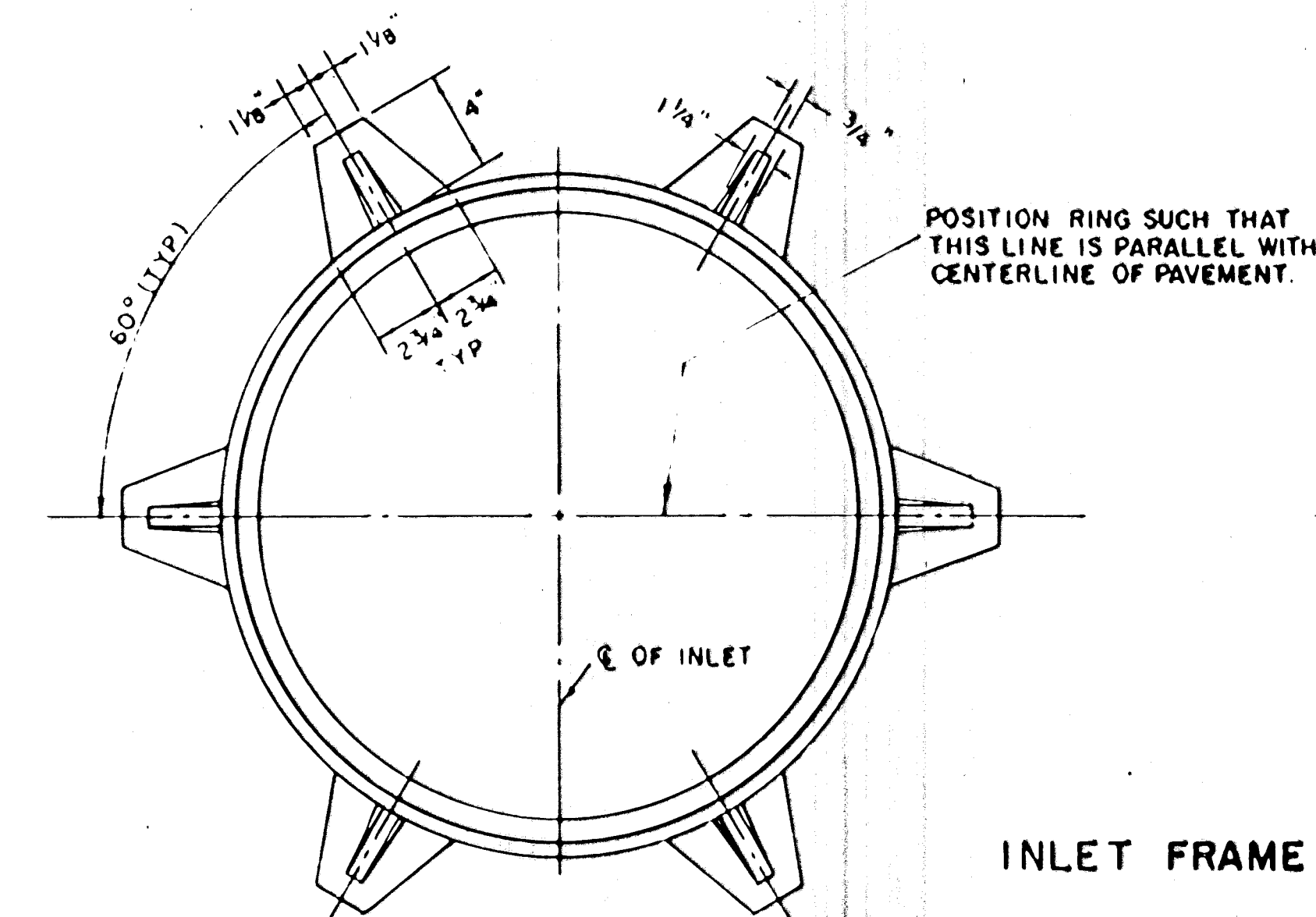
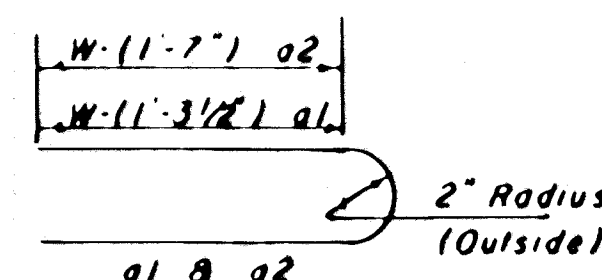
INLET INVERT SHALL BE SHAPED WITH 8 SACK SAND MIX CONCRETE TO
CREATE FLOW CHANNELS AND TO INCREASE HYDRAULIC EFFICIENCY SUCH
THAT THE INLET WILL BE SELF CLEANING BETWEEN ALL INLET AND/OR
OUTLET PIPES.

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.**

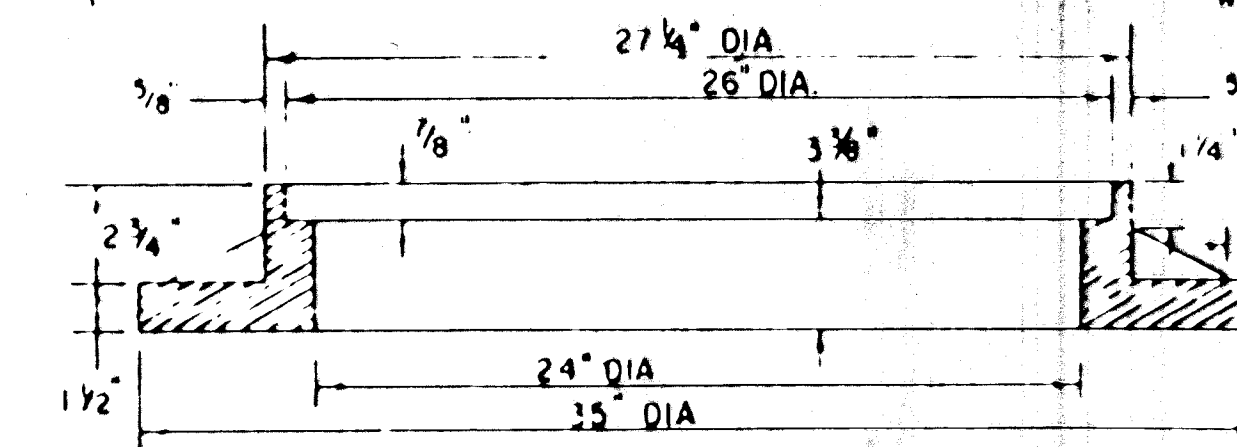
STANDARD CURB INLET PRECAST TOPS			
W	PRE-CAST TOP SIZE	PIPE SIZE	CU YD CONV
4' 4"	3' 6" x 6' 4" x 7' 1/2"	21" Ø SMALLER	0.38 ±
5' 4"	4' 6" x 6' 4" x 7' 1/2"	24" Ø 30"	0.51 ±
6' 4"	5' 6" x 6' 4" x 7' 1/2"	36" Ø 42"	0.64 ±
7' 4"	6' 6" x 6' 4" x 7' 1/2"	48" Ø 54"	0.77 ±
8' 4"	7' 6" x 6' 4" x 7' 1/2"	60"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

BENDING DIAGRAM

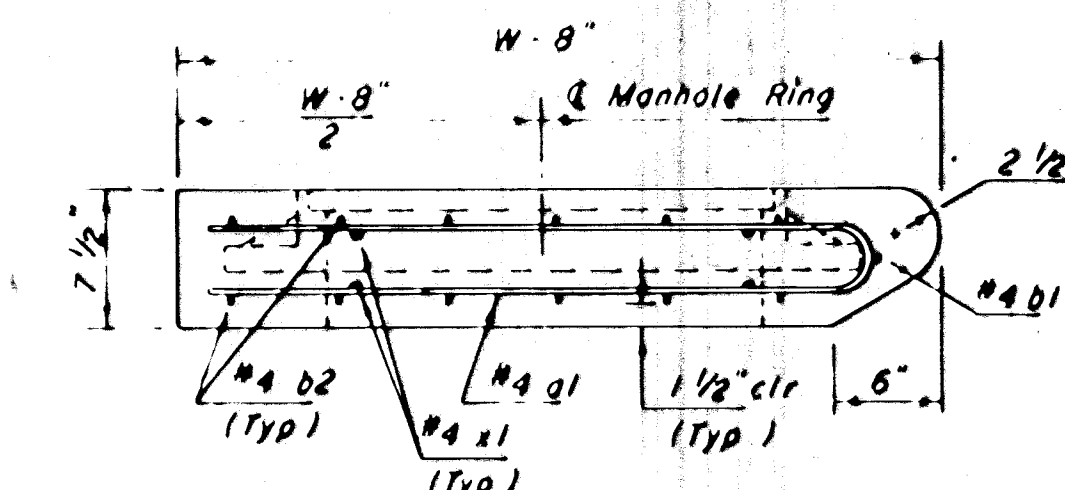


INLET FRAME

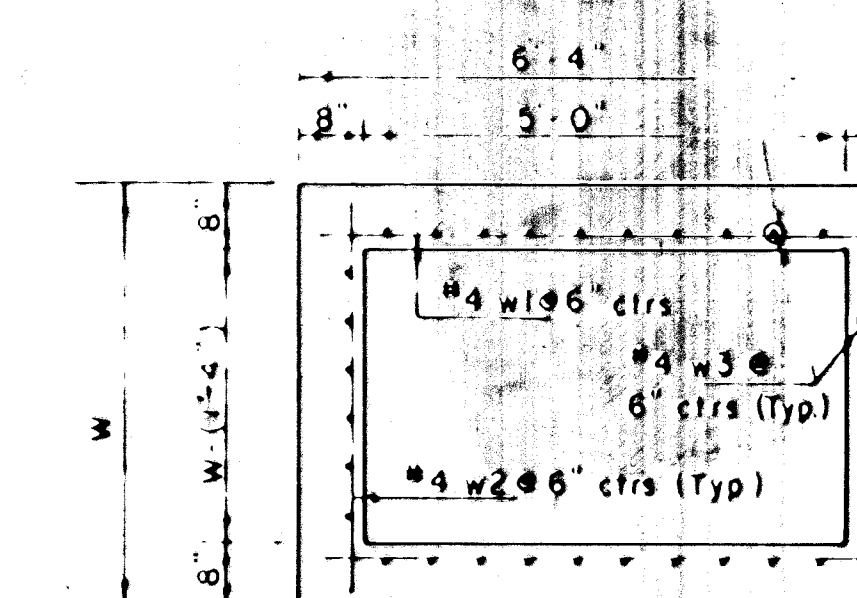
WEIGHT - 180 LBS



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 11-30-1966~~~~REVISED 12-21-1984~~

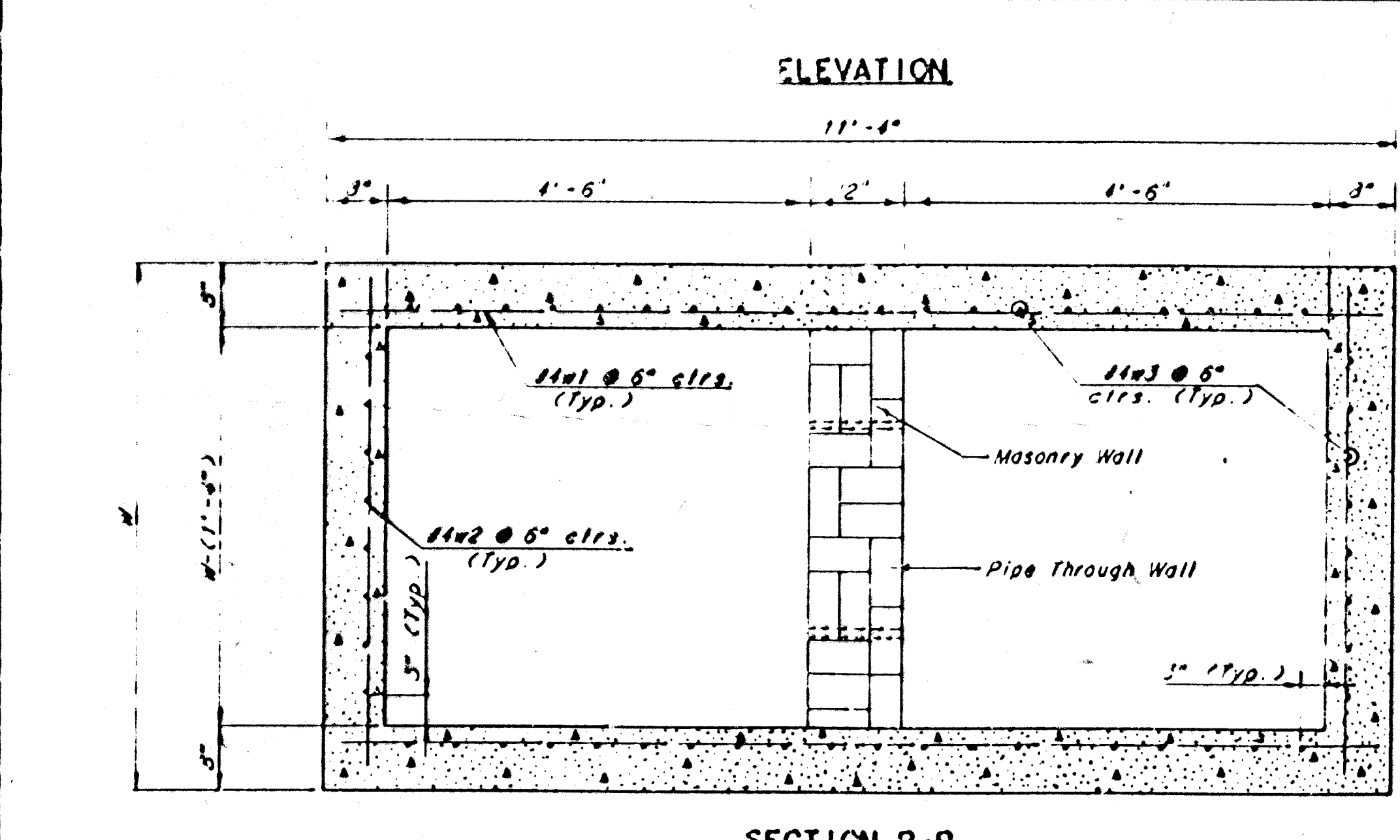
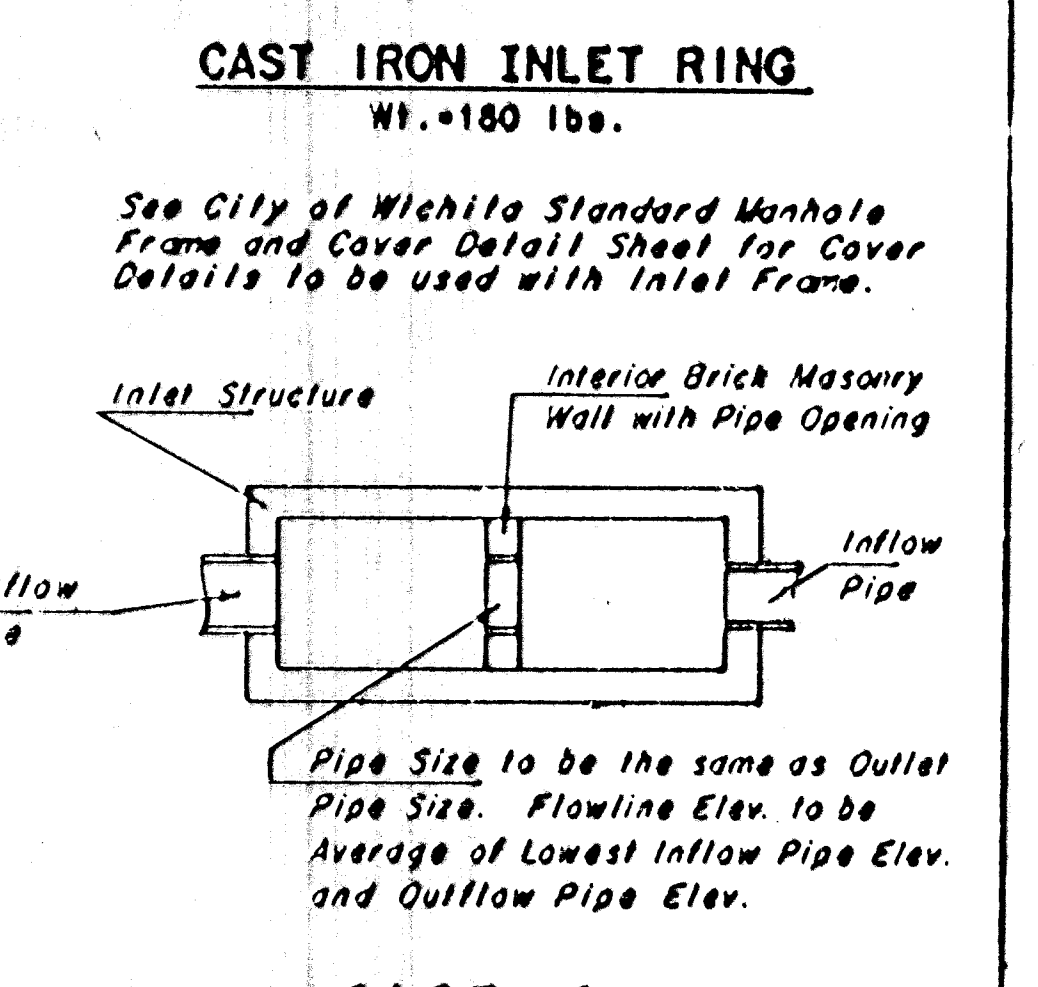
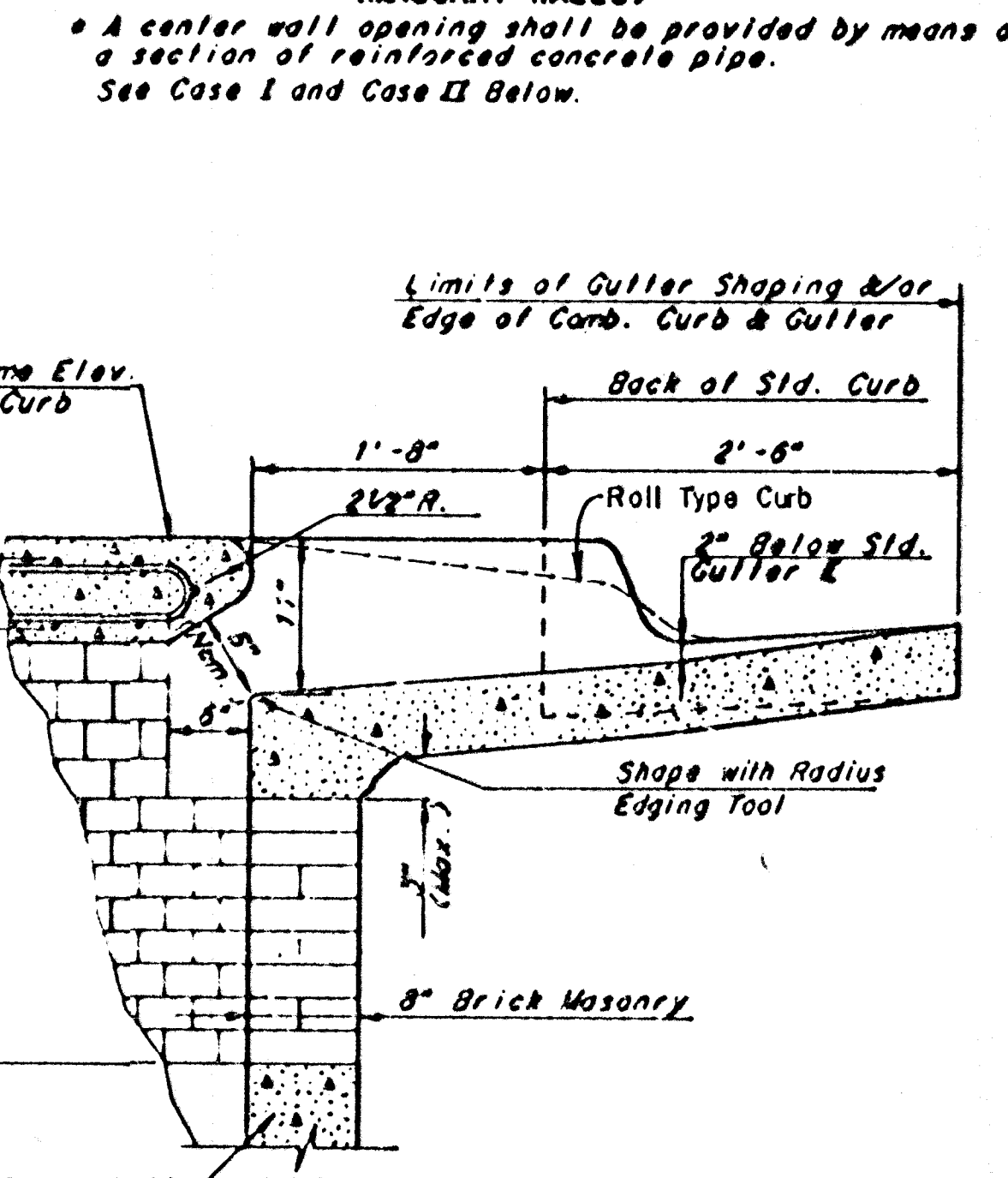
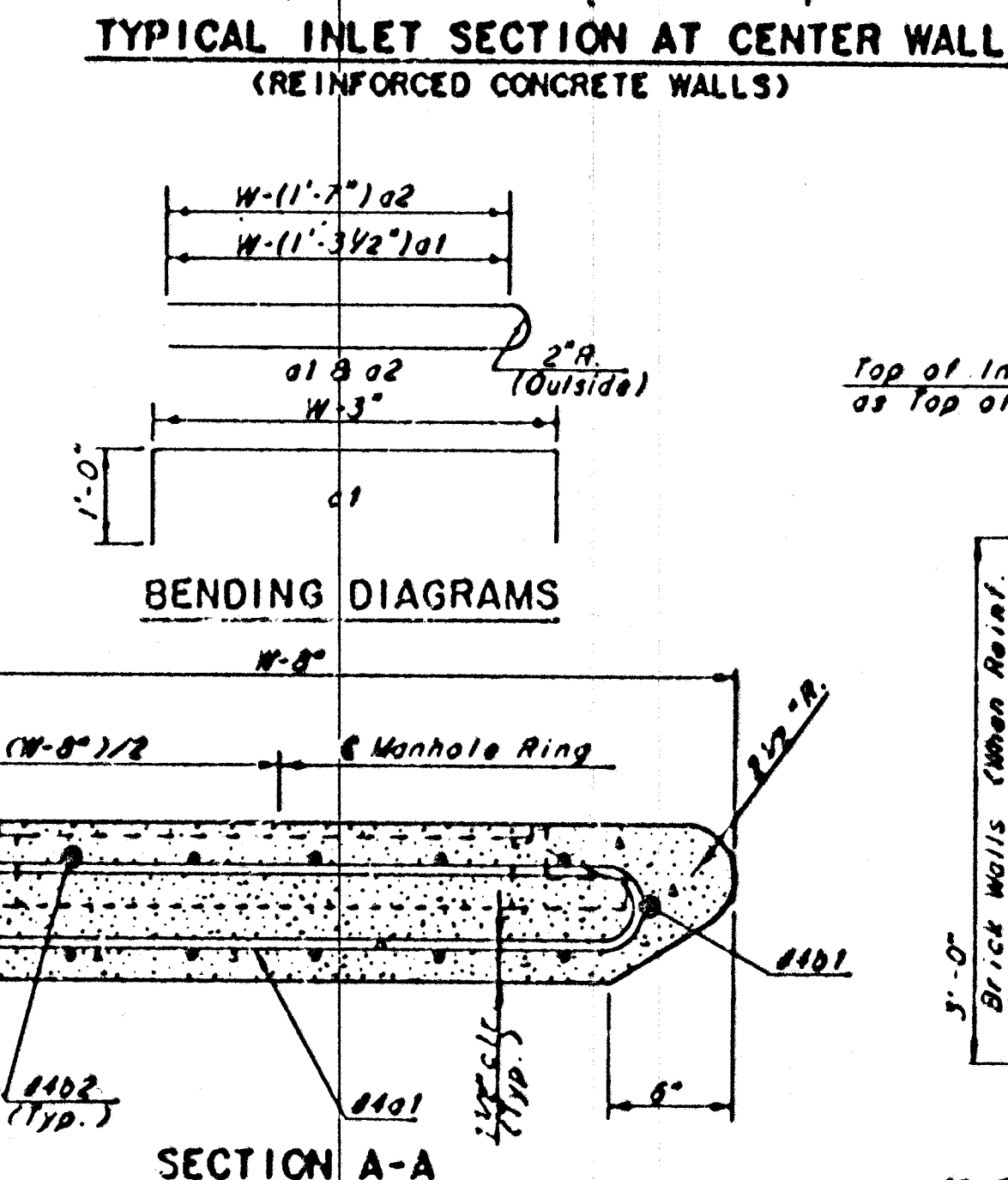
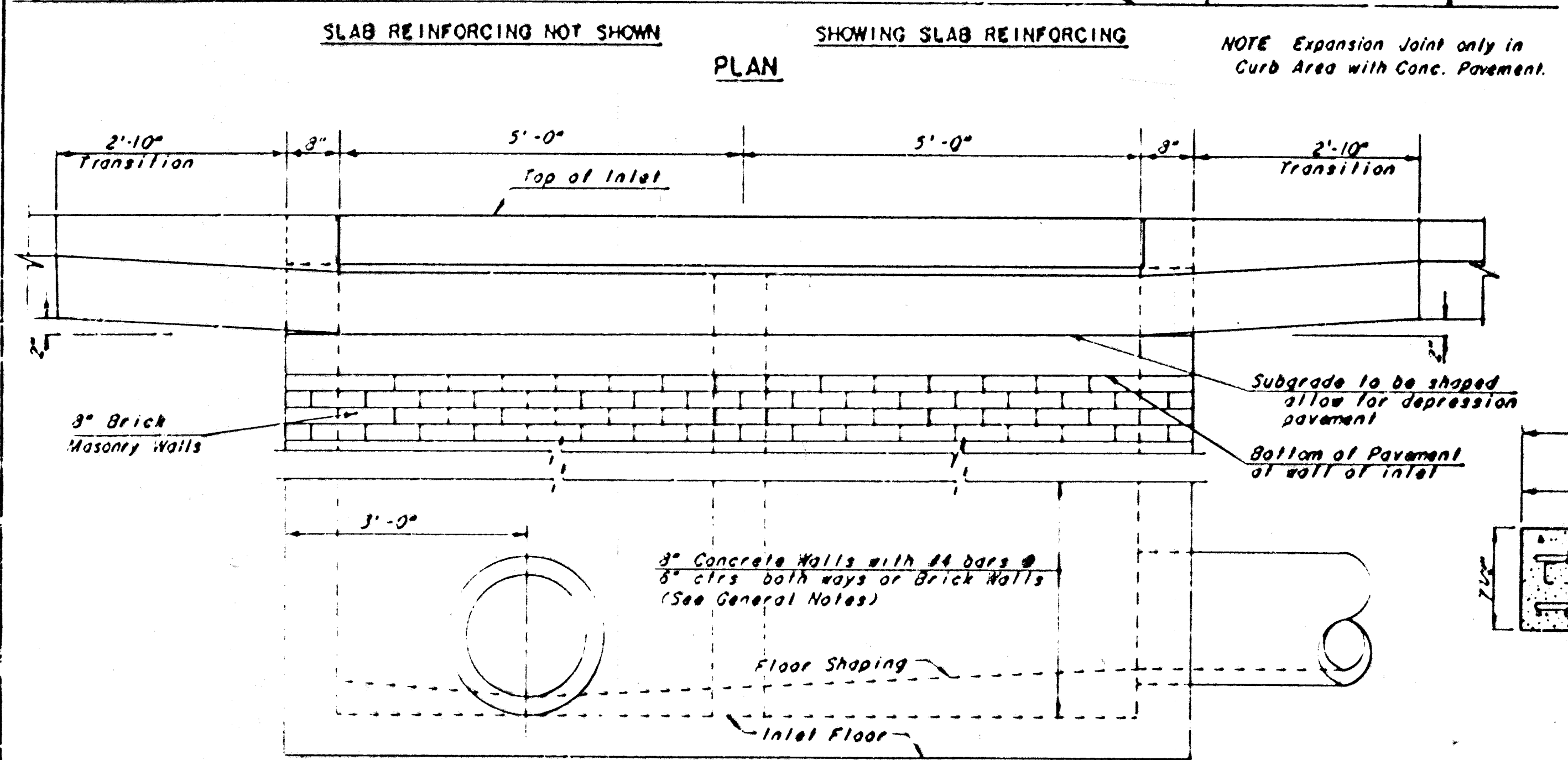
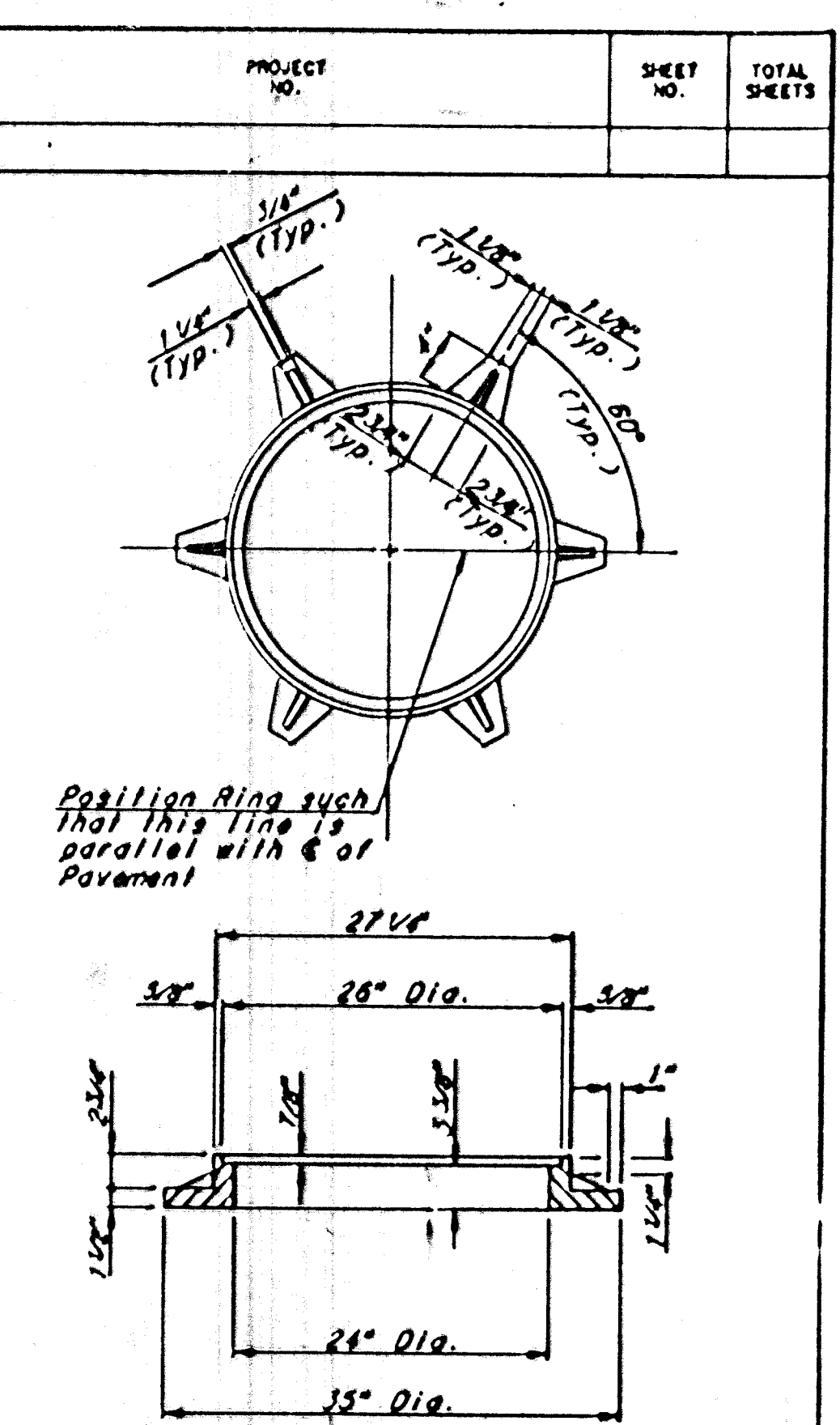
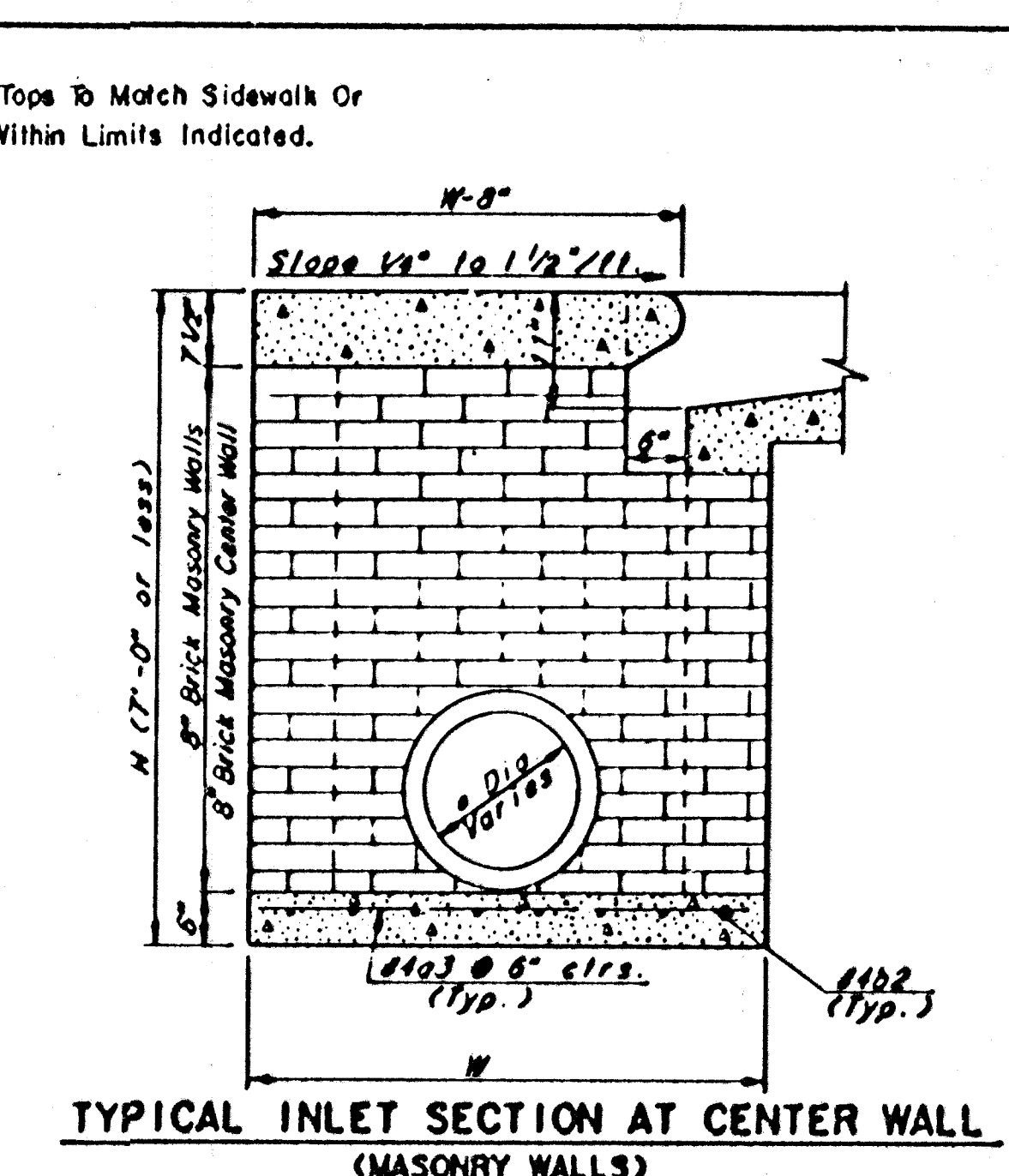
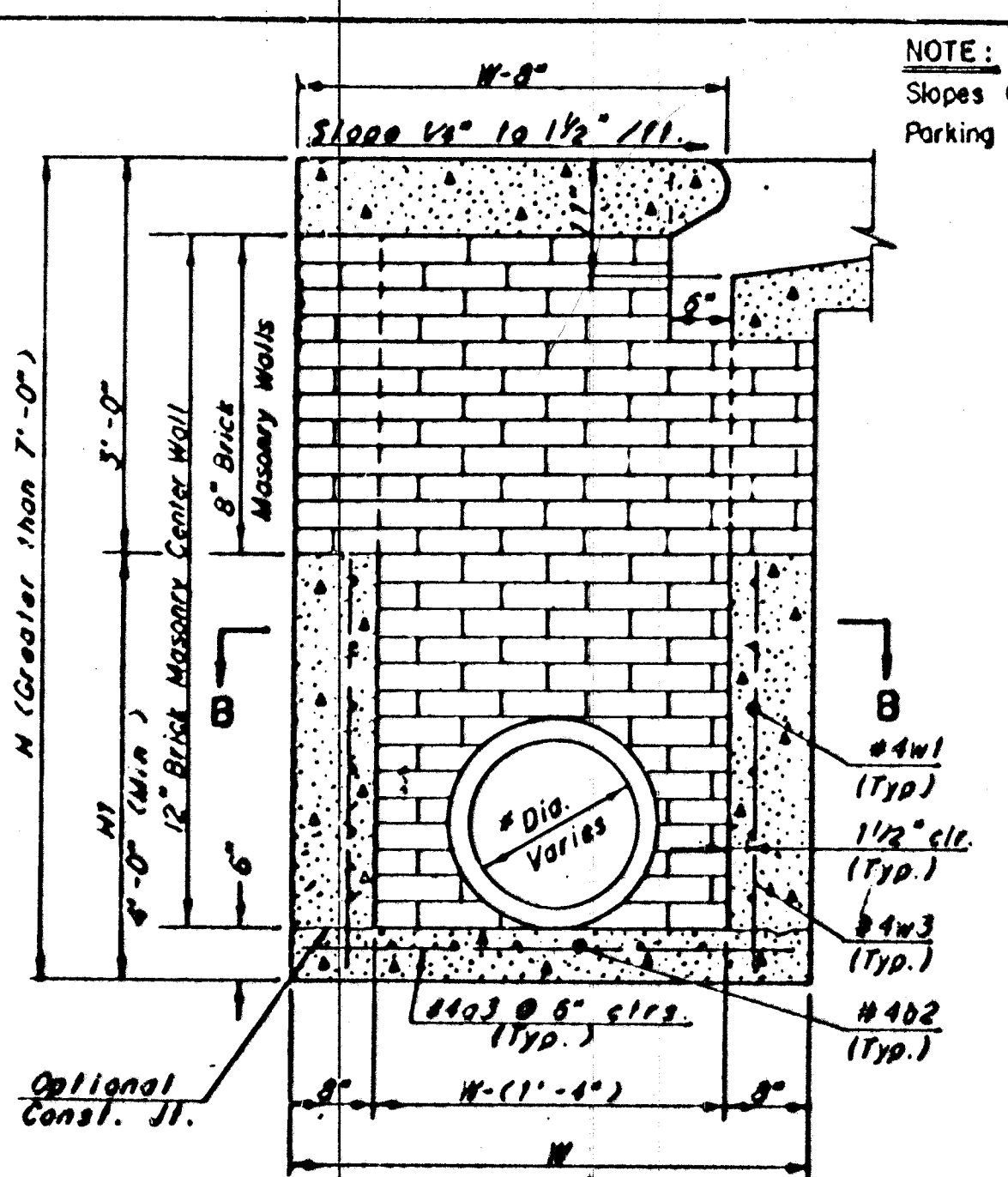
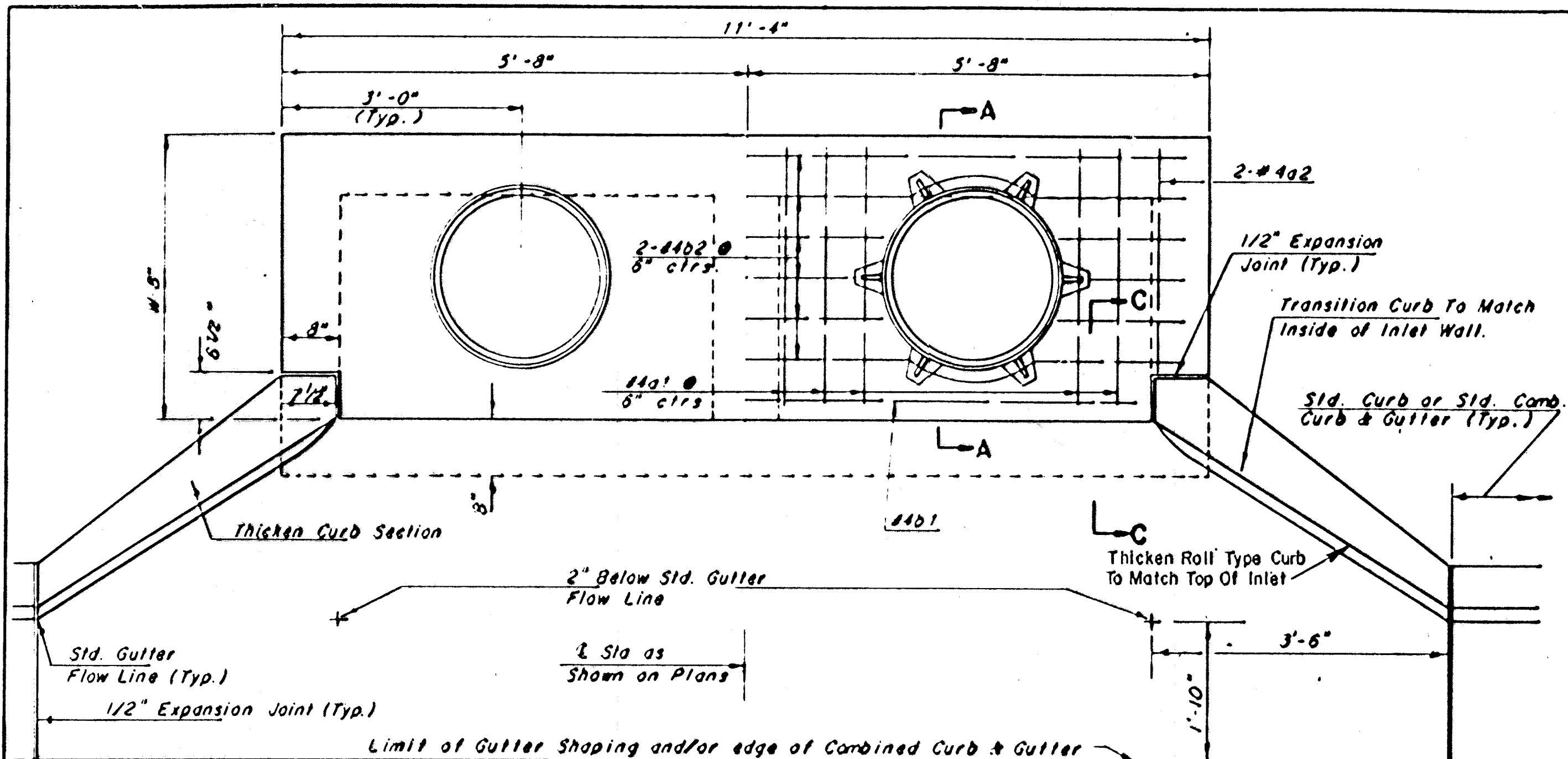
Revised: 2-16-1989

DETAIL STANDARD TYPE 1A CURB INLET

CITY OF WICHITA, KANSAS

INLET OPENING = 6" x 5' 0"

JUNE 1984

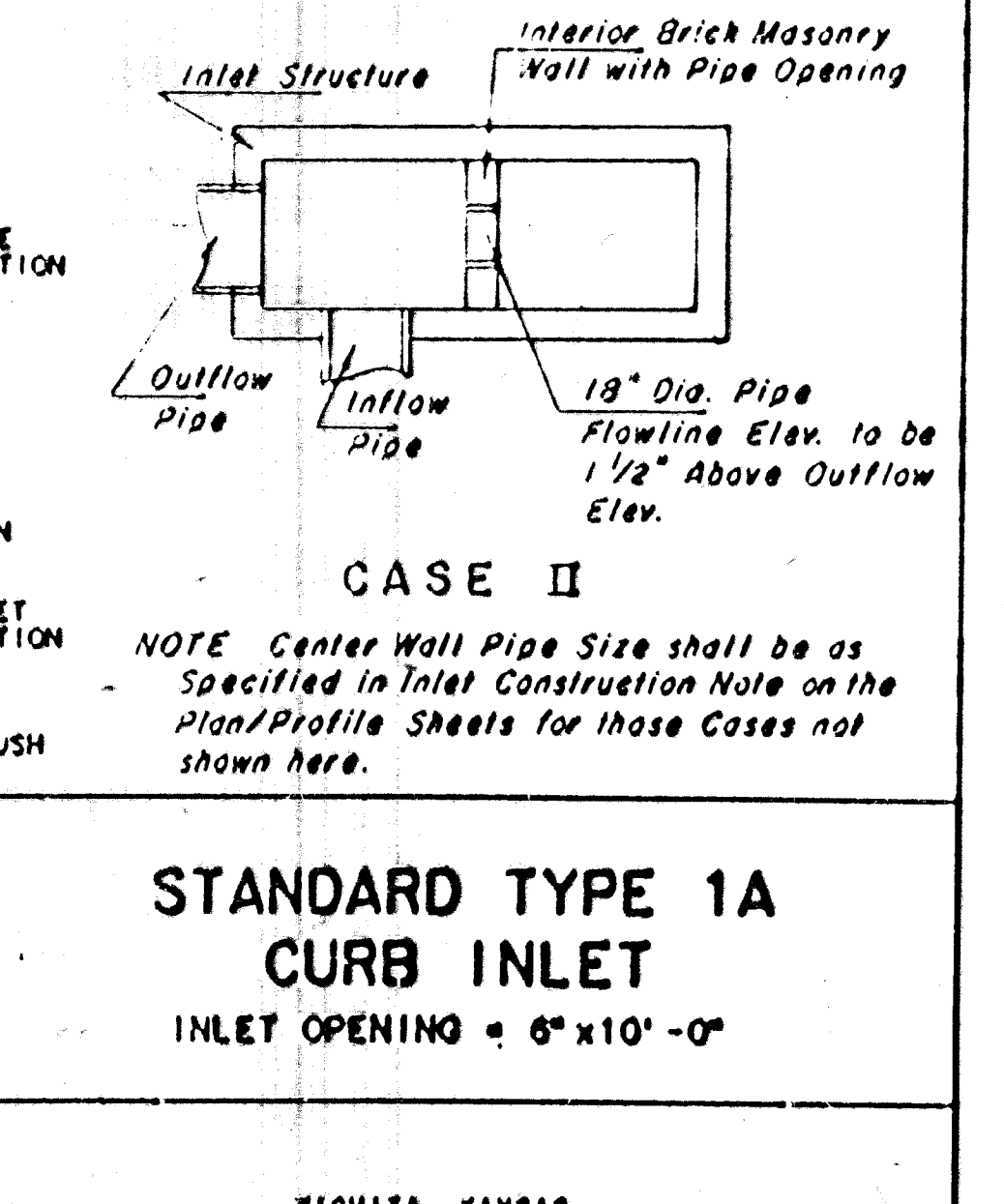


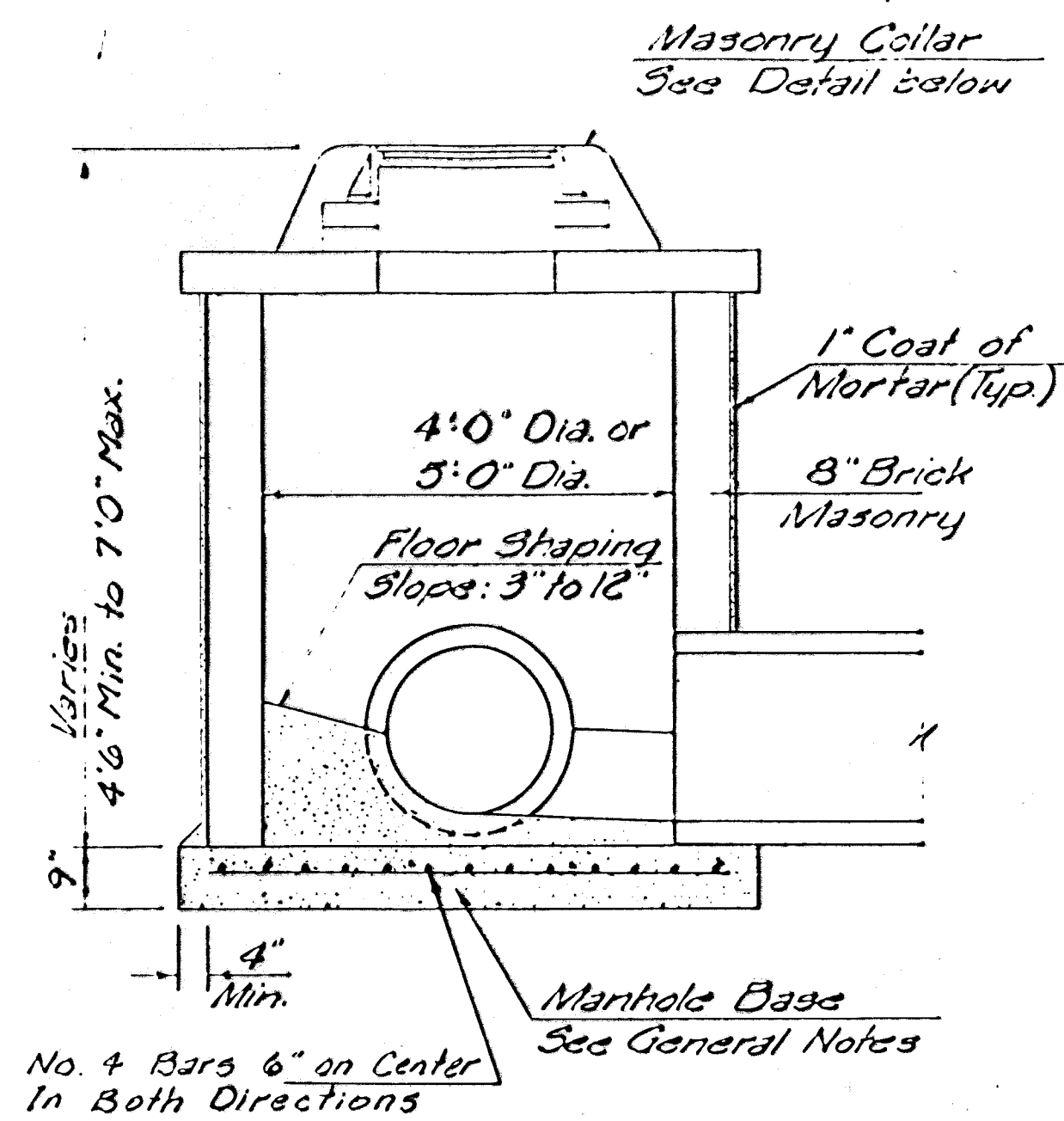
MARK	SIZE	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH
a1	#4	13	6'-7 1/2"	13	8'-7 1/2"	13	10'-7 1/2"	13	12'-7 1/2"	13	14'-7 1/2"
a2	#4	2	8'-0"	2	8'-0"	2	10'-0"	2	12'-0"	2	14'-0"
a3	#4	20	4'-1"	20	5'-1"	20	6'-1"	20	7'-1"	20	8'-1"
b1	#4	1	9'-8"	1	9'-8"	1	9'-8"	1	9'-8"	1	9'-8"
b2	#4	18	11'-1"	24	11'-1"	30	11'-1"	36	11'-1"	42	11'-1"

MARK	SIZE	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH
c1	#6	4	8'-1"	4	7'-1"	4	6'-1"	4	5'-1"	4	4'-1"
#1	#4	①	11'-1"	①	11'-1"	①	11'-1"	①	11'-1"	①	11'-1"
#2	#4	①	8'-1"	①	5'-1"	①	6'-1"	①	7'-1"	①	8'-1"
#3	#4	②	②	②	②	②	②	②	②	②	②

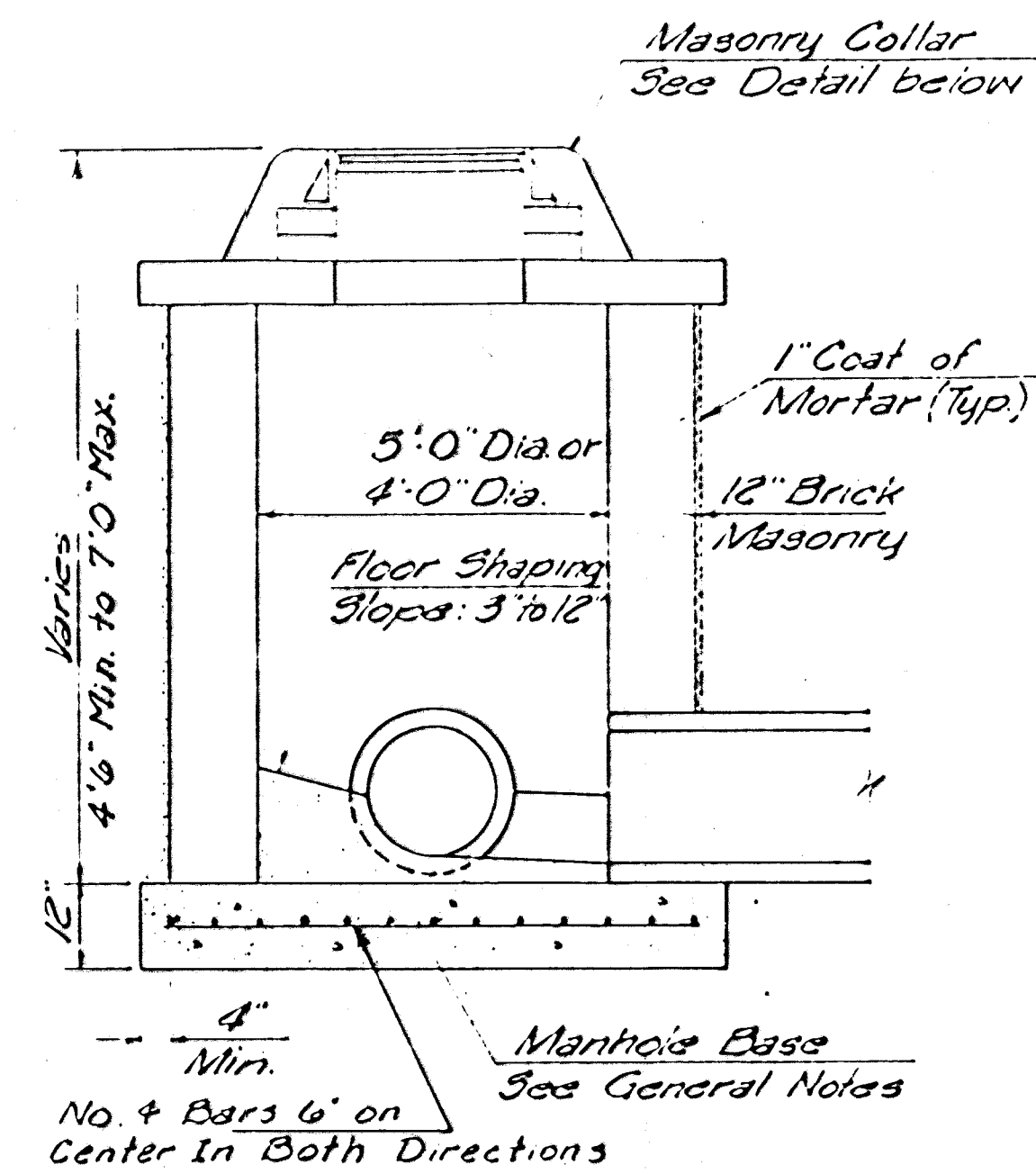
- GENERAL NOTES**
- THE CONTRACTOR SHALL BE REQUIRED TO CONSTRUCT 8" BRICK MASONRY WALLS BETWEEN THE CONCRETE INLET BASE AND TOP ON THIS INLET WHEN W IS 6'-4" OR LESS AND H IS 7'-0" OR LESS. WHEN W IS GREATER THAN 6'-4" AND H IS LESS THAN 7'-0", THE OUTSIDE INLET WALLS BELOW THE BRICK STACK SHALL BE OF MASONRY CONSTRUCTION AND THE CENTER WALL SHALL BE OF REINFORCED CONCRETE 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 ON 8" 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.

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'-8" 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 ±

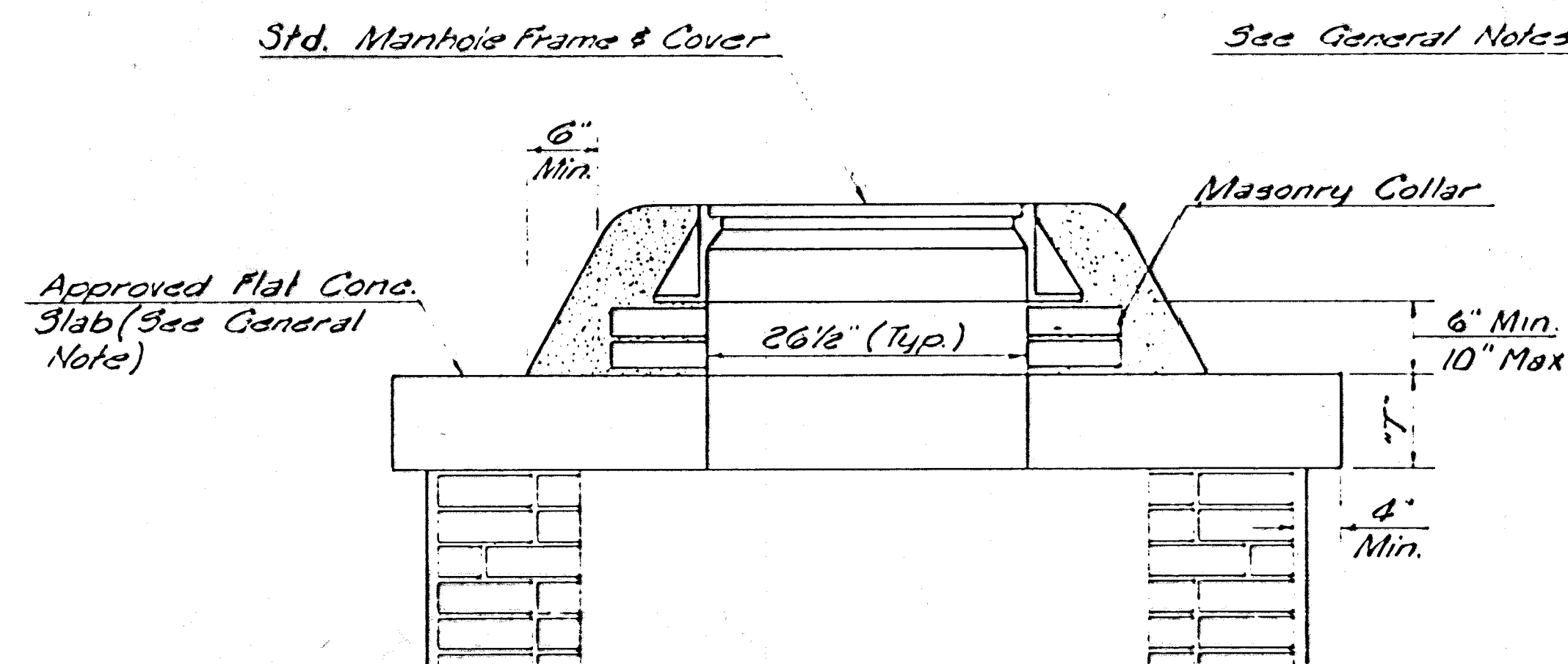




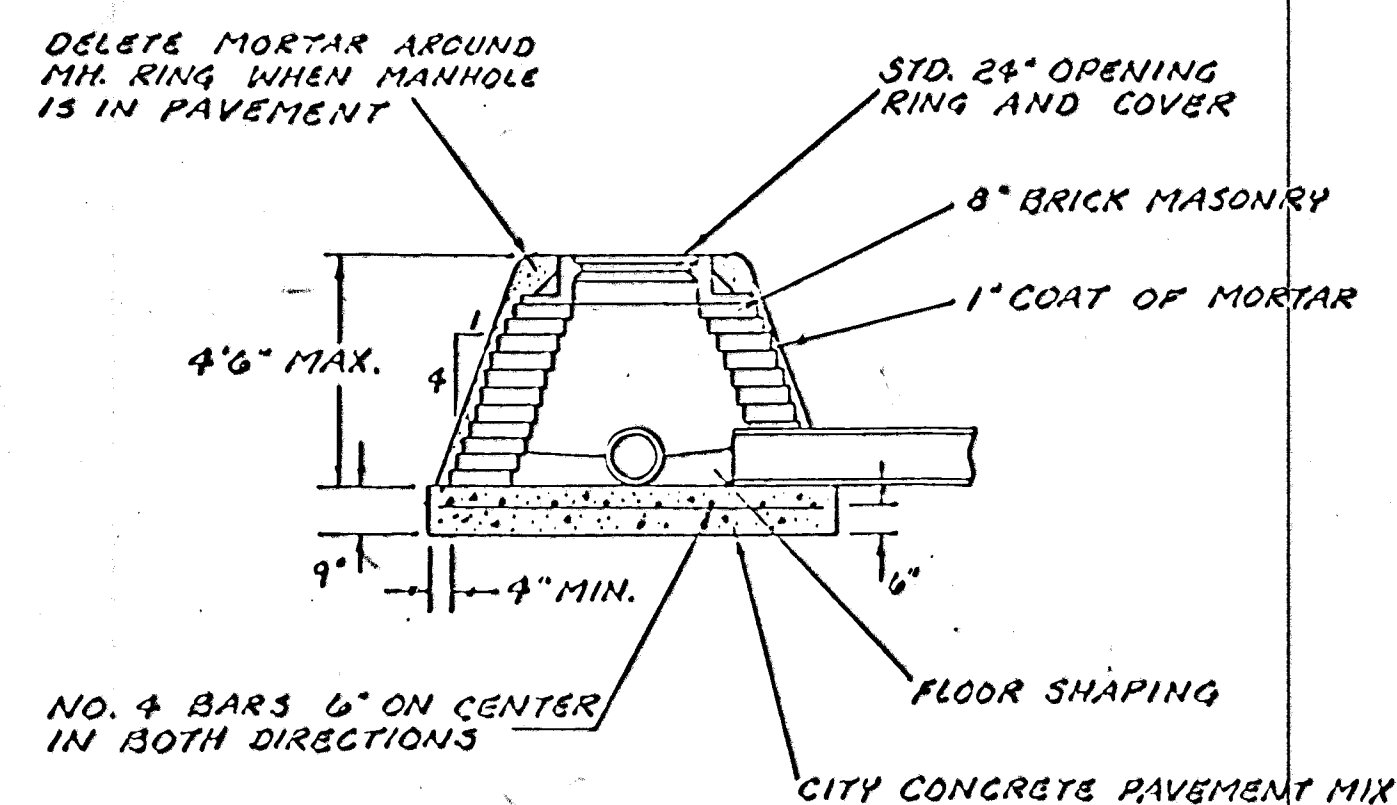
SHALLOW TYPE "A" MANHOLE



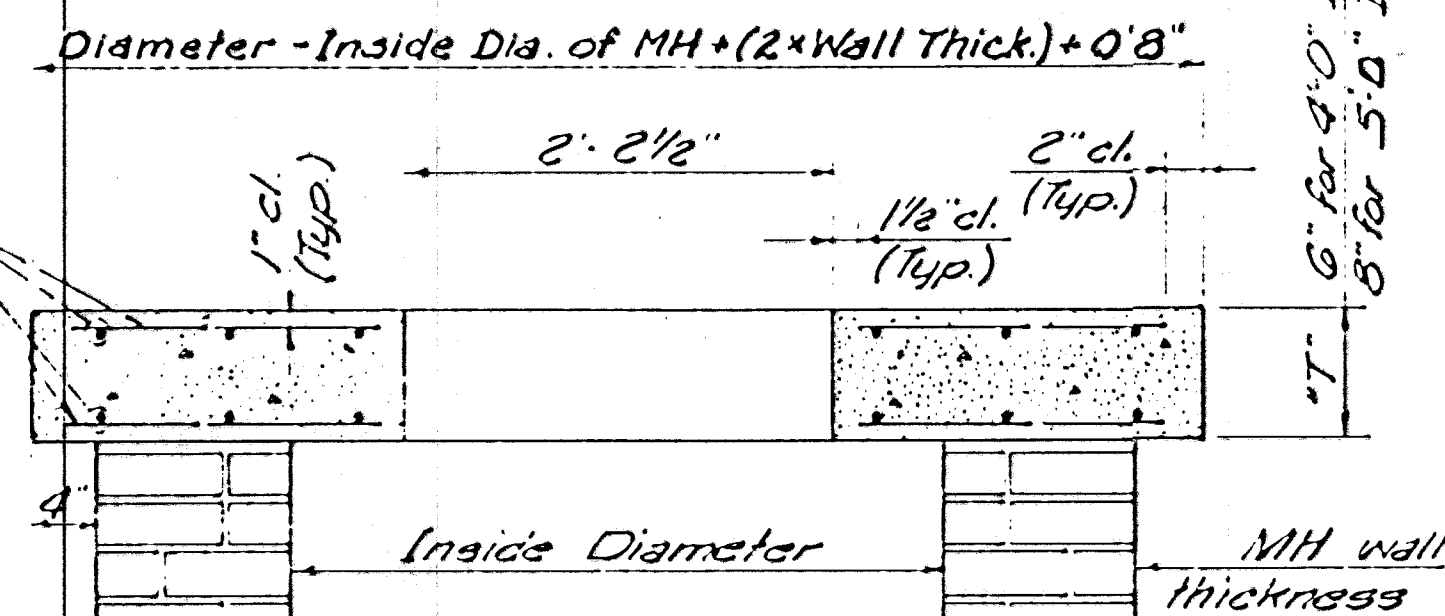
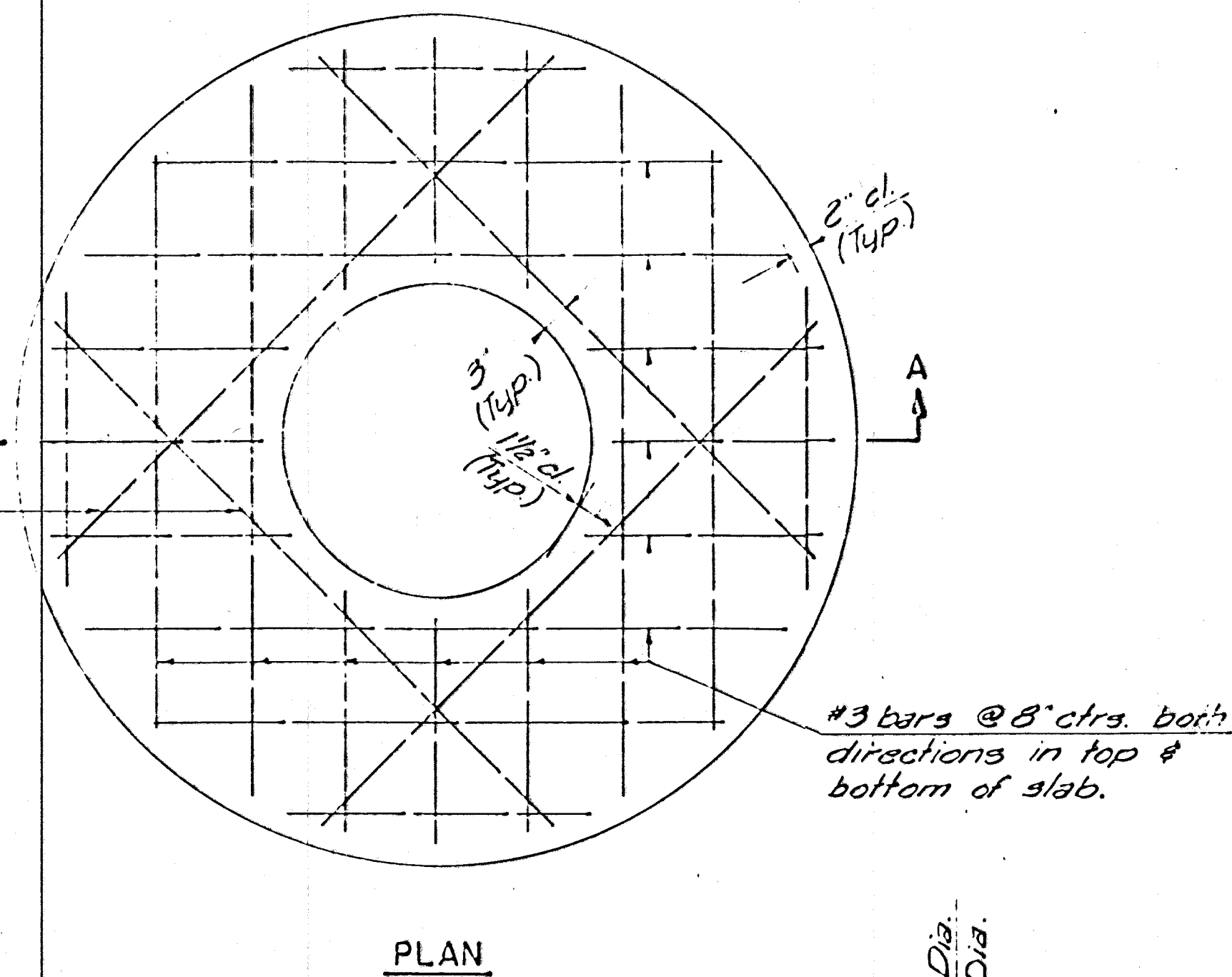
SHALLOW TYPE "B" MANHOLE



MASONRY COLLAR DETAIL

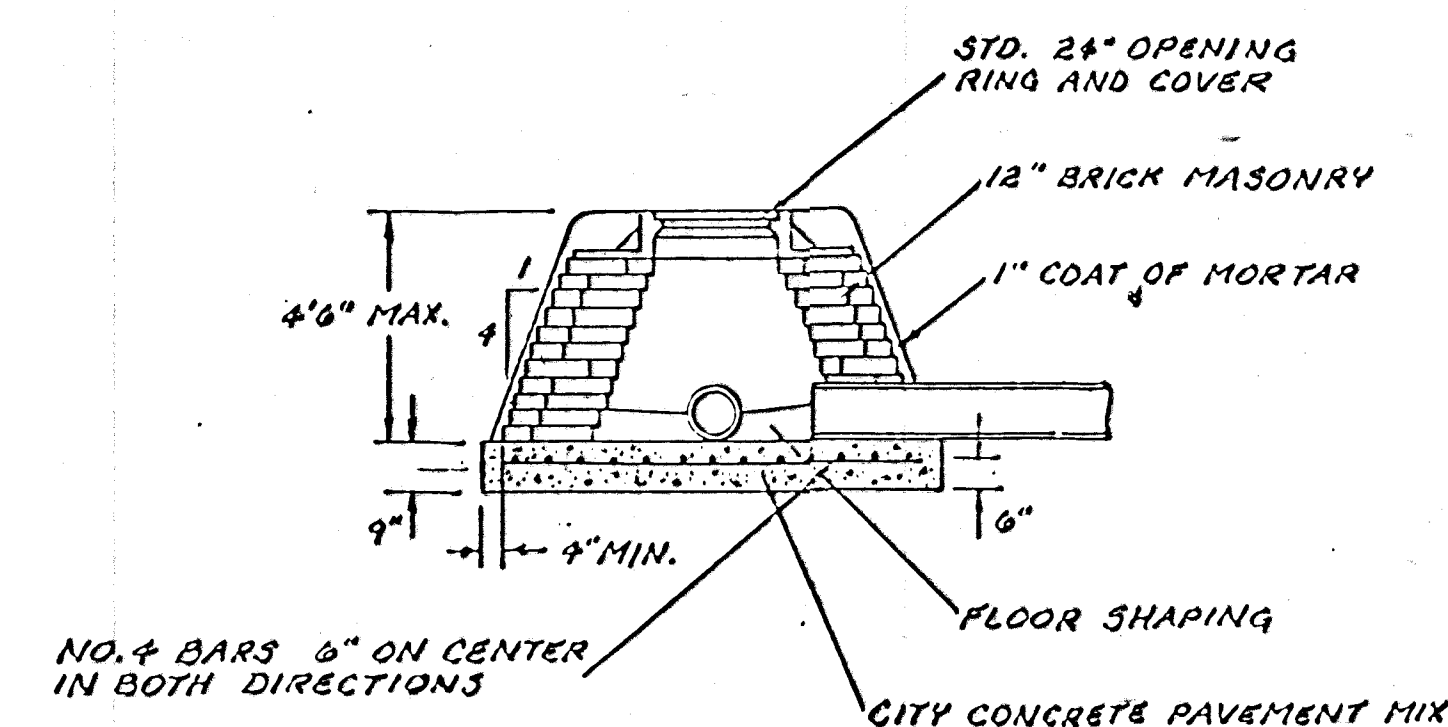


SPECIAL SHALLOW TYPE 'A' MANHOLE



SECTION A-A

FLAT CONCRETE SLAB DETAILS



SPECIAL SHALLOW TYPE 'B' MANHOLE

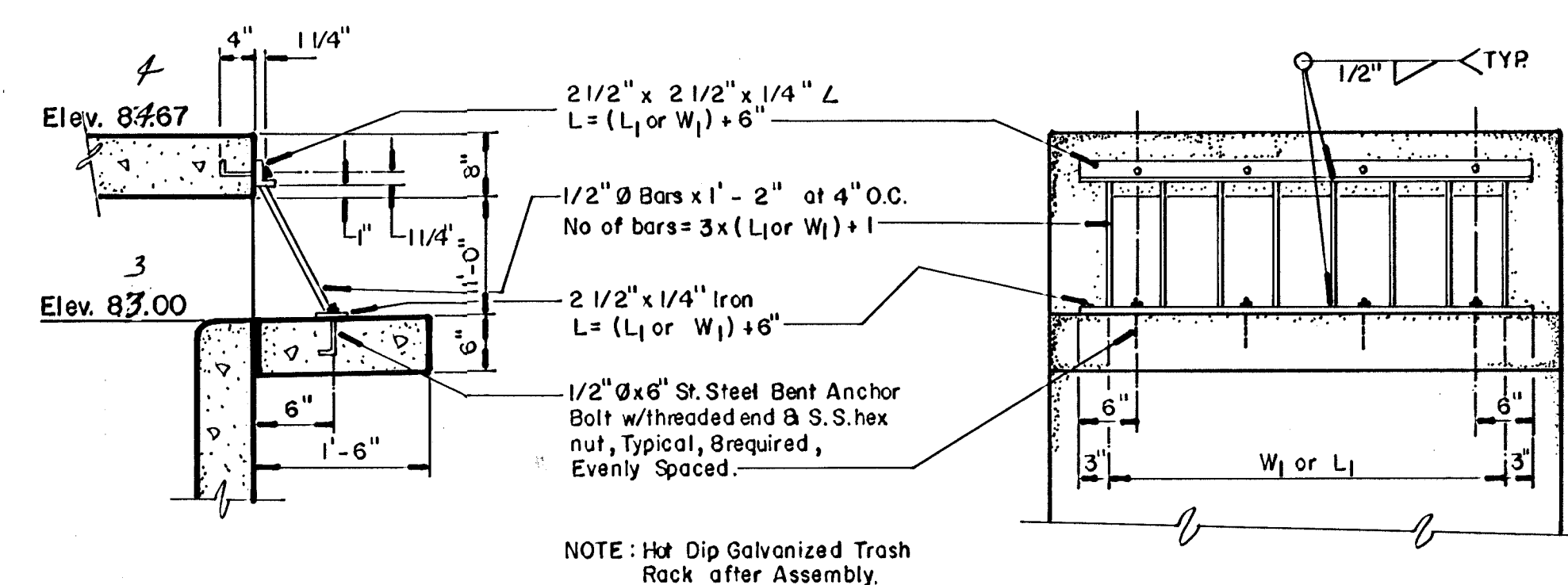
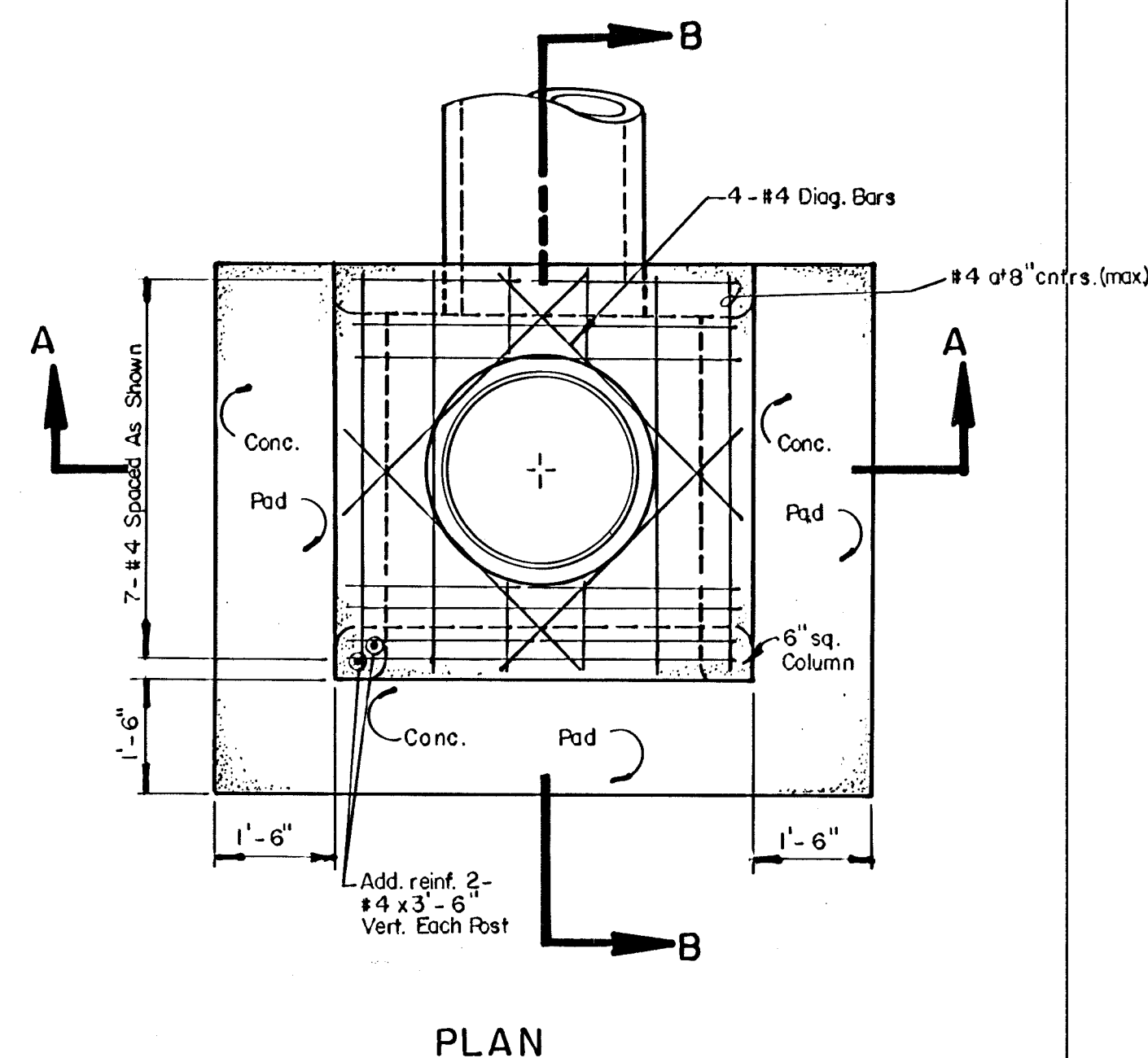
GENERAL NOTES

- 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 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 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 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.
- 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 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.
- 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'

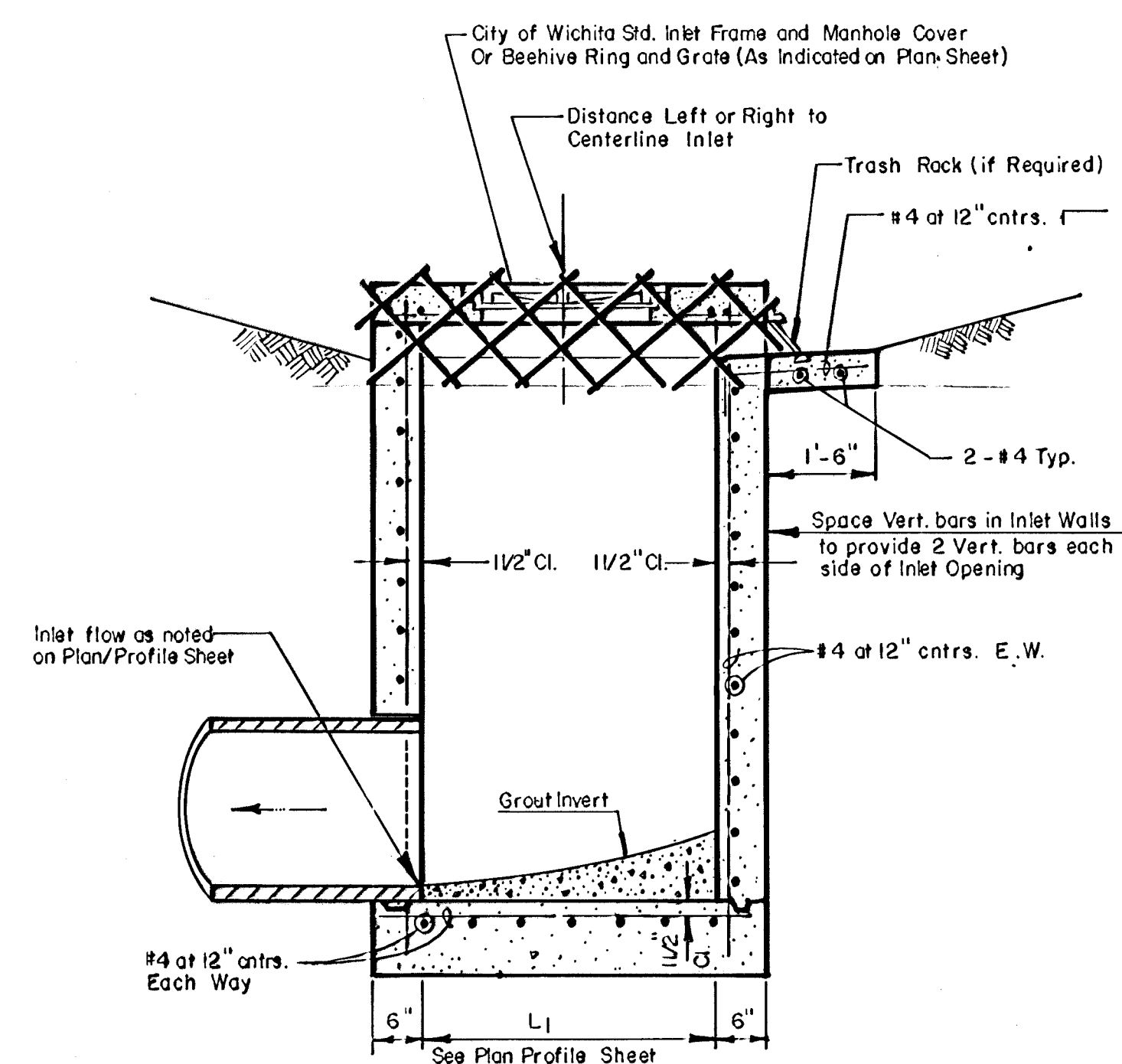
SECTION B-B

DITCH INLET TYPE I-A

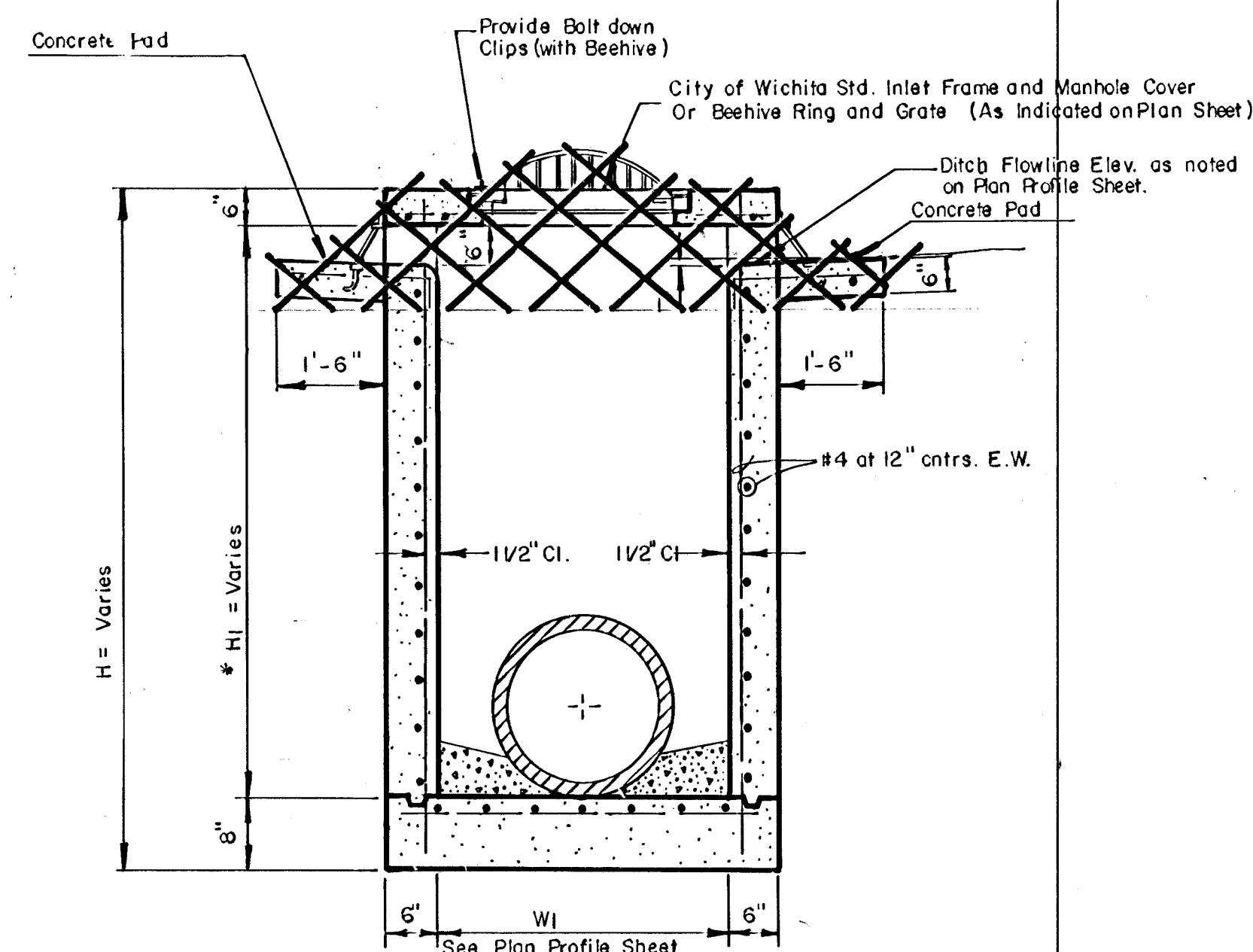


TRASH RACK DETAIL

FOR USE WITH TYPE I-A DITCH INLET
(NO SCALE)



SECTION B-B



SECTION A-A

* Where H_1 is greater than 6'-0" use 8" walls.

~~DITCH INLET TYPE 1~~



SOUTH SENeca

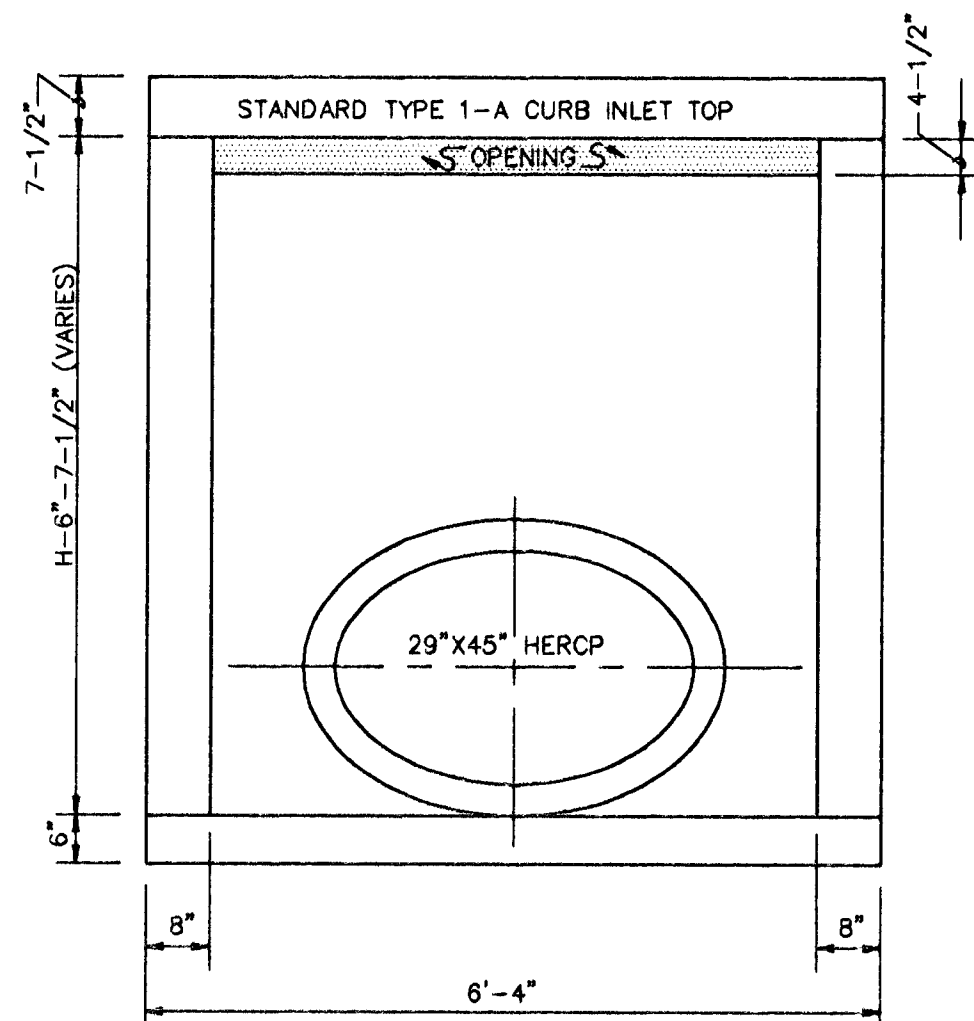
STD. DITCH INLET
TYPE I / I-A

MID-KANSAS ENGINEERING CONSULTANTS PA
3500 NORTH ROCK ROAD
BUILDING #800
WICHITA, KANSAS 67226

636-5566

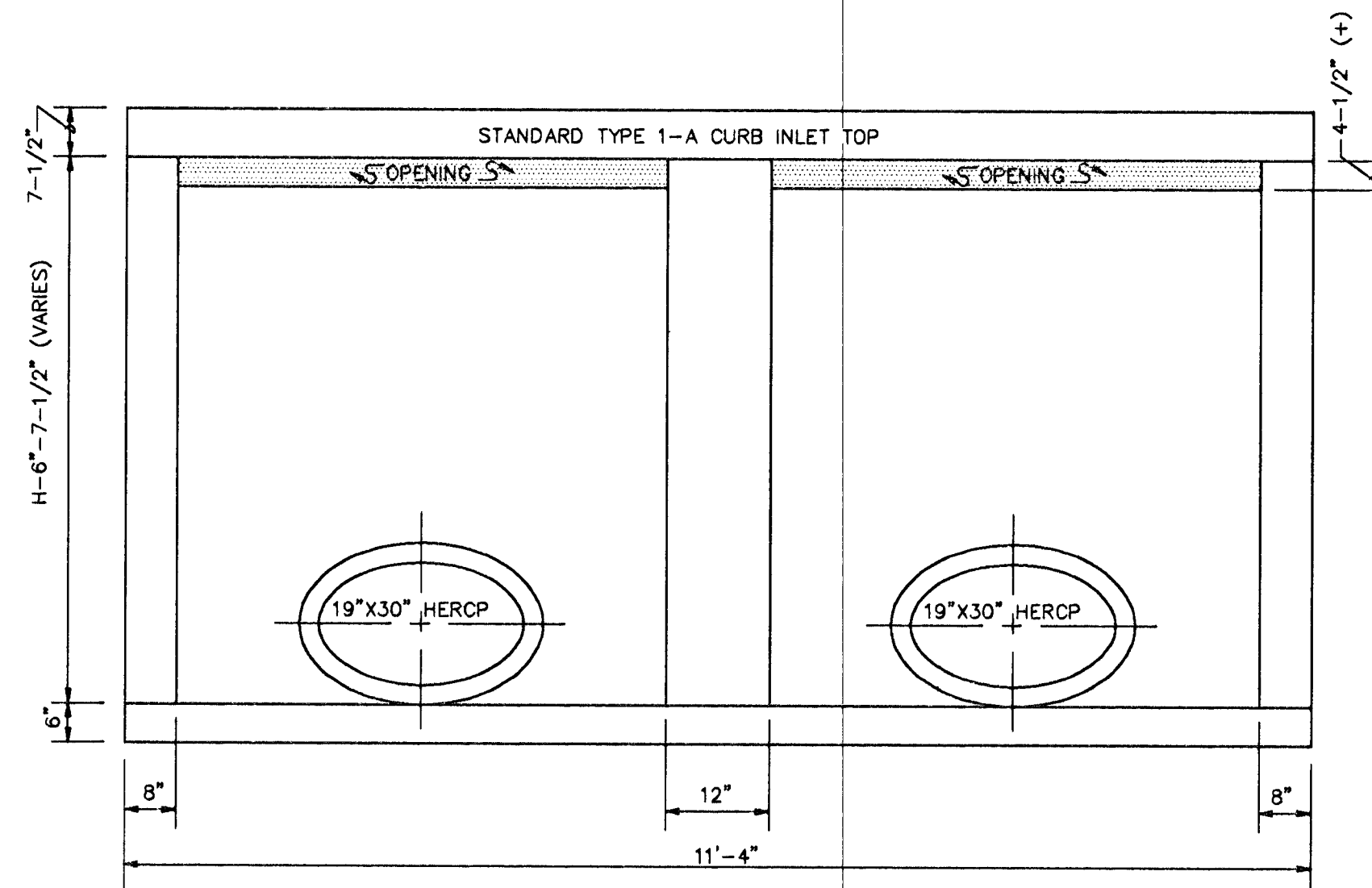
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Checked by
Date
Job no.

Sheet
16
of **18**



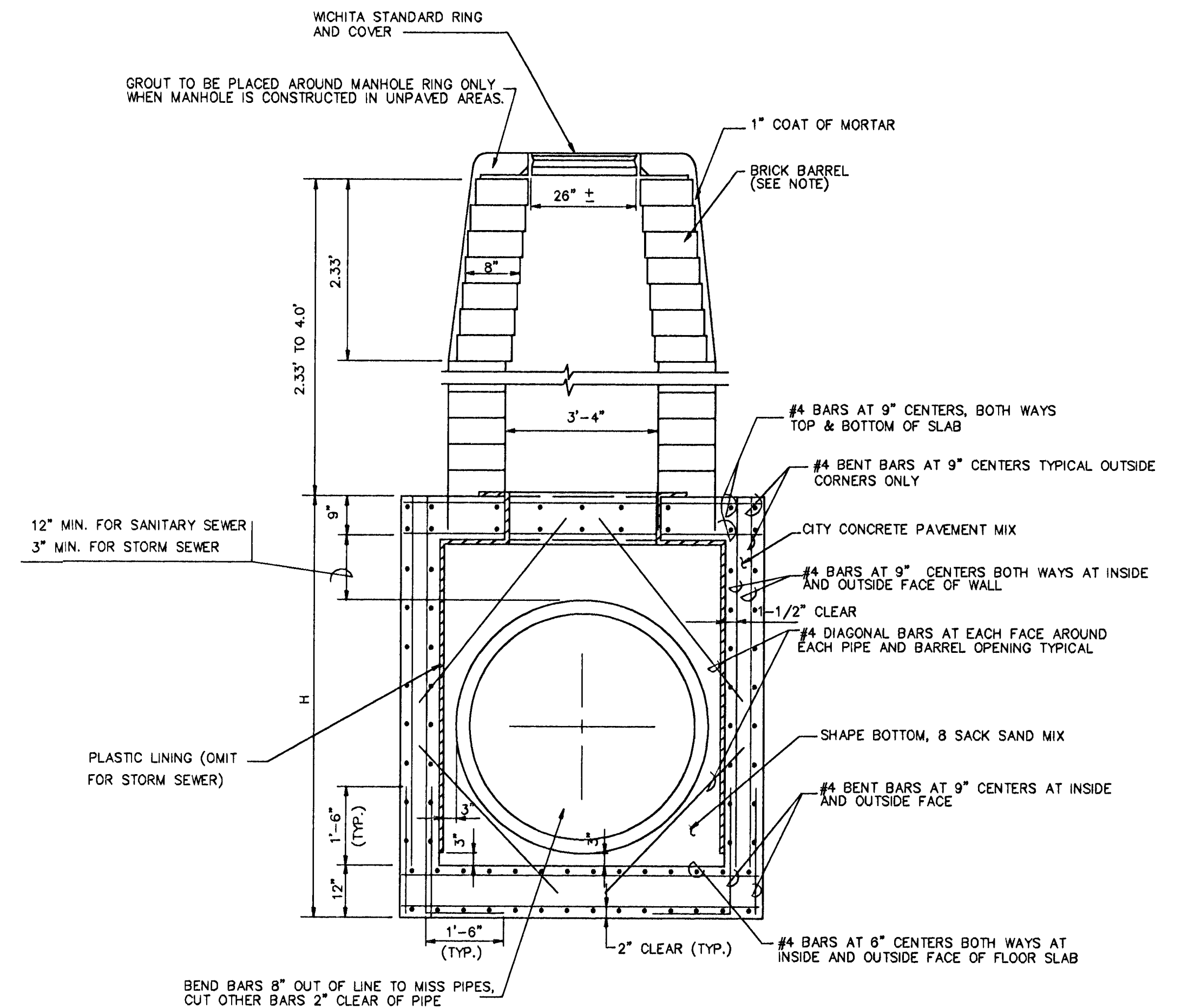
BACK OF STANDARD TYPE 1-A CURB INLET

ALONG 44TH. STREET SOUTH
 STA. 4+49.6 STA. 4+83.0 (CHARLES)
 STA. 7+29.6 STA. 7+63.0 (GLEN)
 STA. 10+09.6 STA. 10+43.0 (VINE)
 STA. 13+06.3 STA. 13+39.7 (MILLWOOD)



BACK OF STANDARD TYPE 1-A CURB INLET

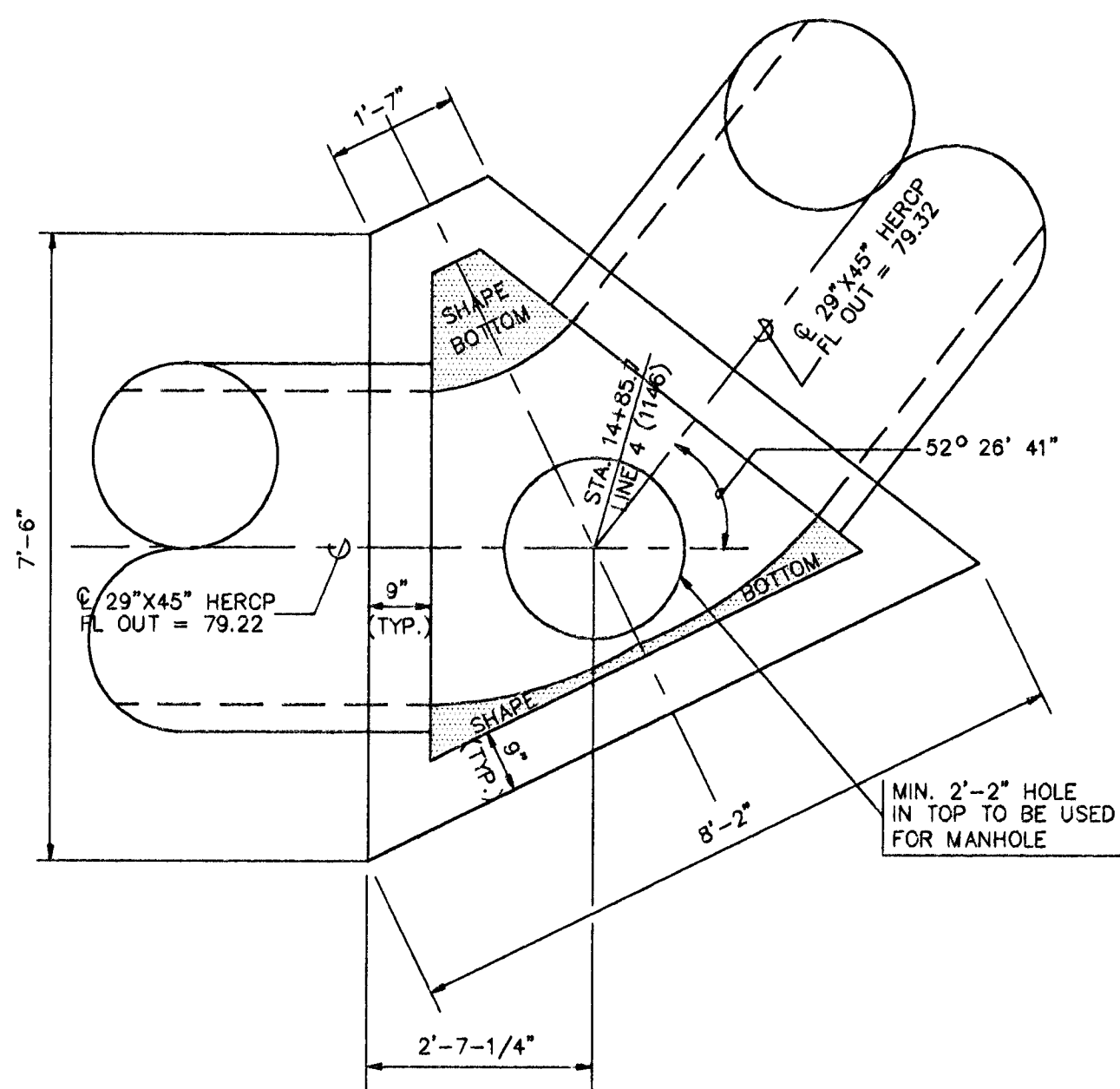
ALONG 45TH. STREET SOUTH
 ALONG 46TH. STREET SOUTH
 STA. 1+67.3 STA. 2+01.5, LINE 3B
 STA. 1+71.2 STA. 2+05.4, LINE 3C



REINFORCED CONCRETE MANHOLE

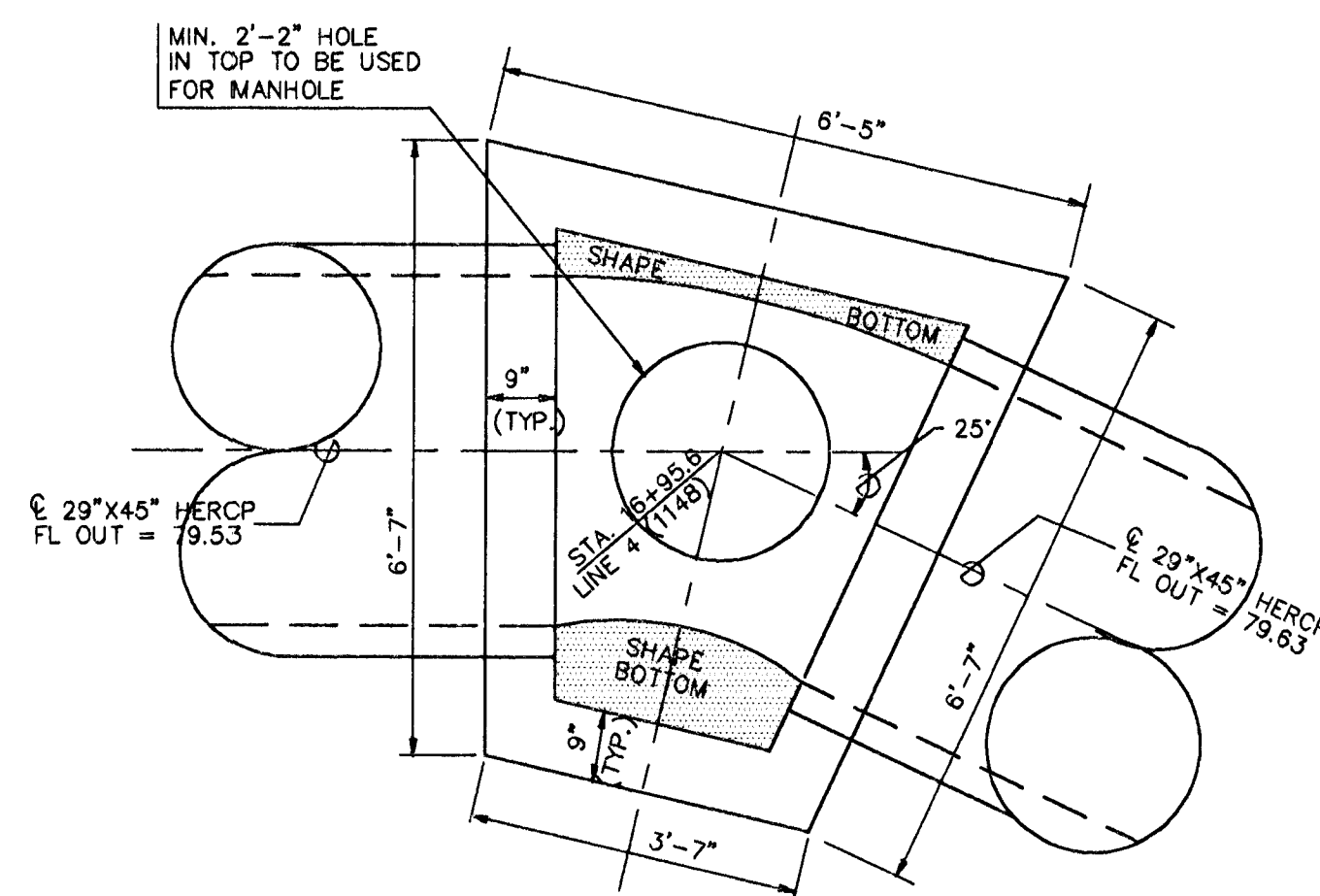
DEPTH OF STACK: 2.33' TO 4.0'

NOTE:
 BRICK BARRELS LESS THAN 18' DEEP SHALL HAVE 1" WALLS EXCEPT WHEN LOCATED WITHIN PUBLIC STREET OR ALLEY PAVEMENT THEN THE WALL SHALL BE 12". BRICK BARRELS MORE THAN 18' 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 FEET IN HEIGHT. COMPLETED MANHOLE SHALL BE WITHOUT LEAKS AND WATERTIGHT.



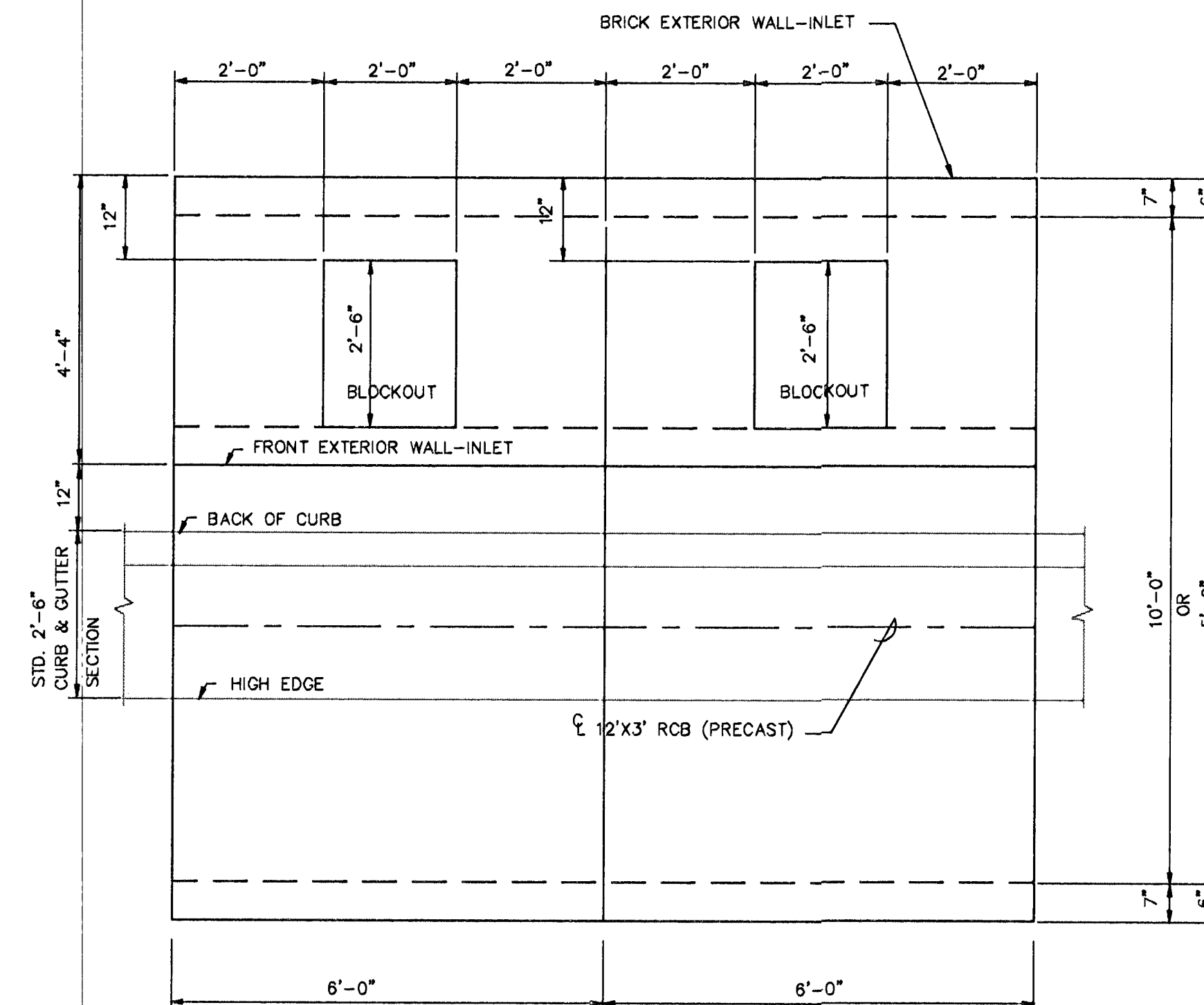
REINFORCED CONCRETE MANHOLE

PLAN
 STA. 14+85.7, LINE 4
 W = 7'-6", L = 8'-2"



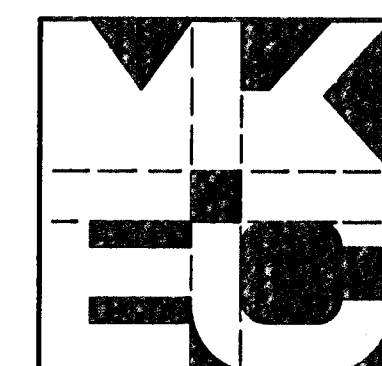
REINFORCED CONCRETE MANHOLE

PLAN
 STA. 16+95.6, LINE 4
 W = 6'-7", L = 6'-5"



TYPICAL INLET BLOCKOUT PATTERN

ALONG CLARENCE



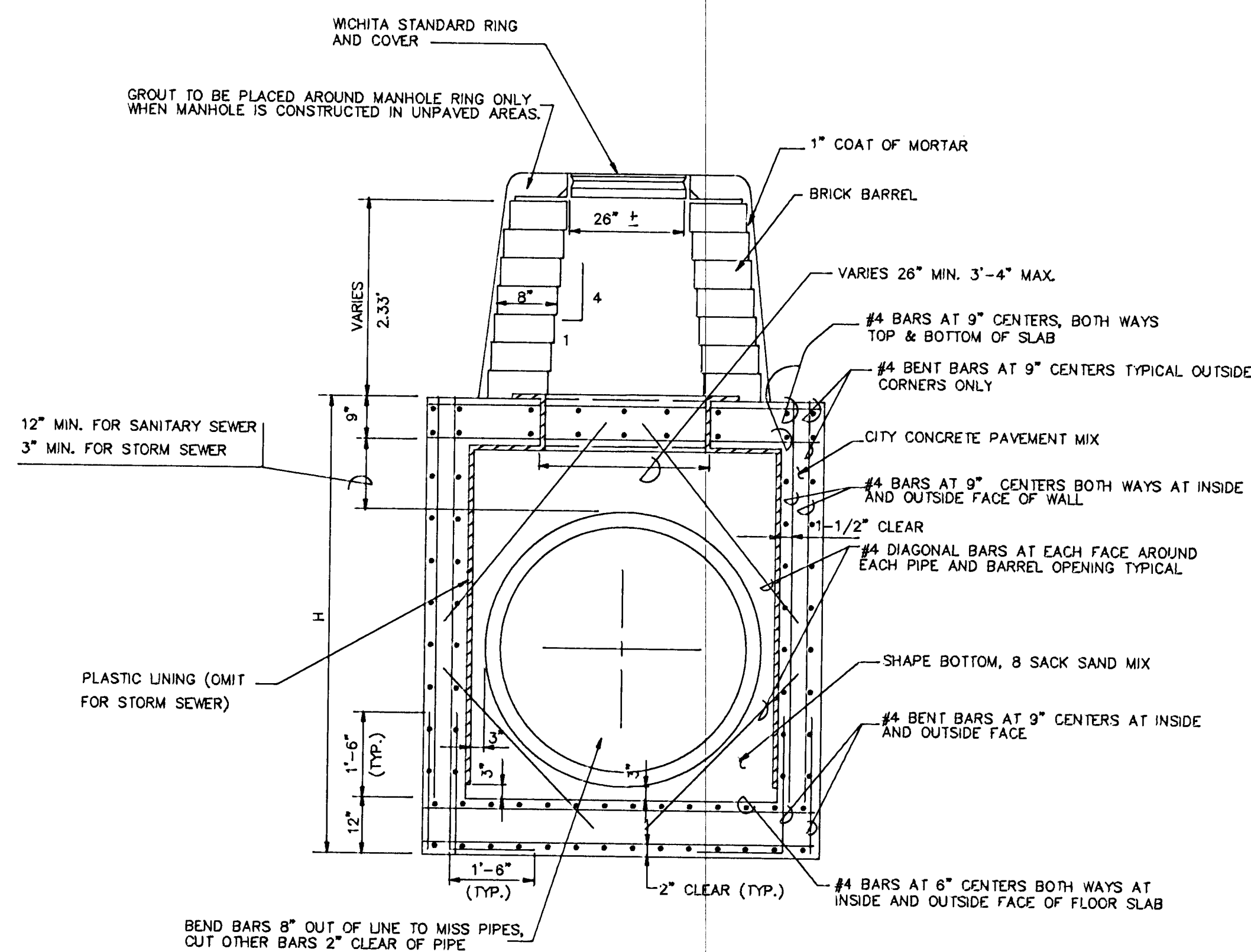
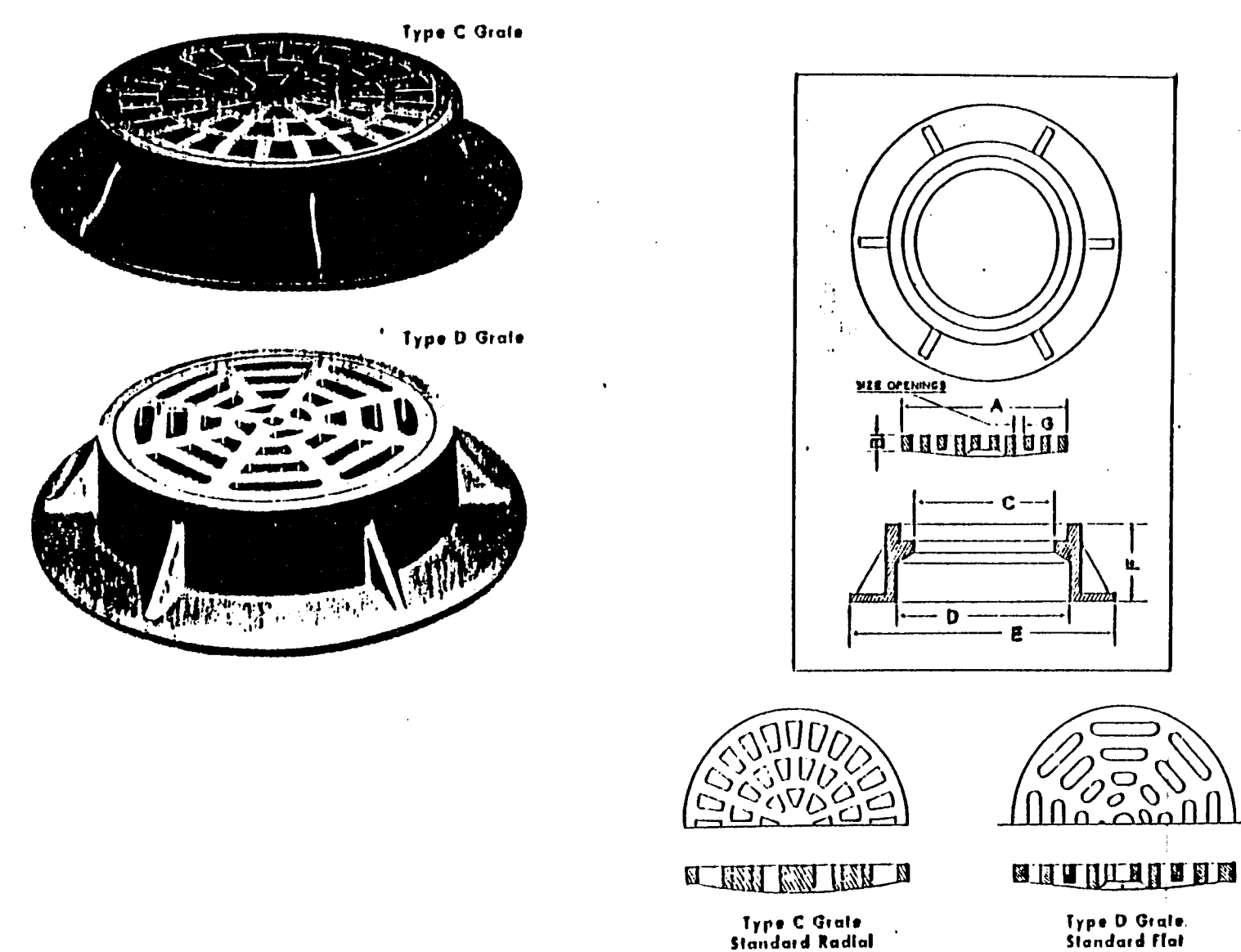
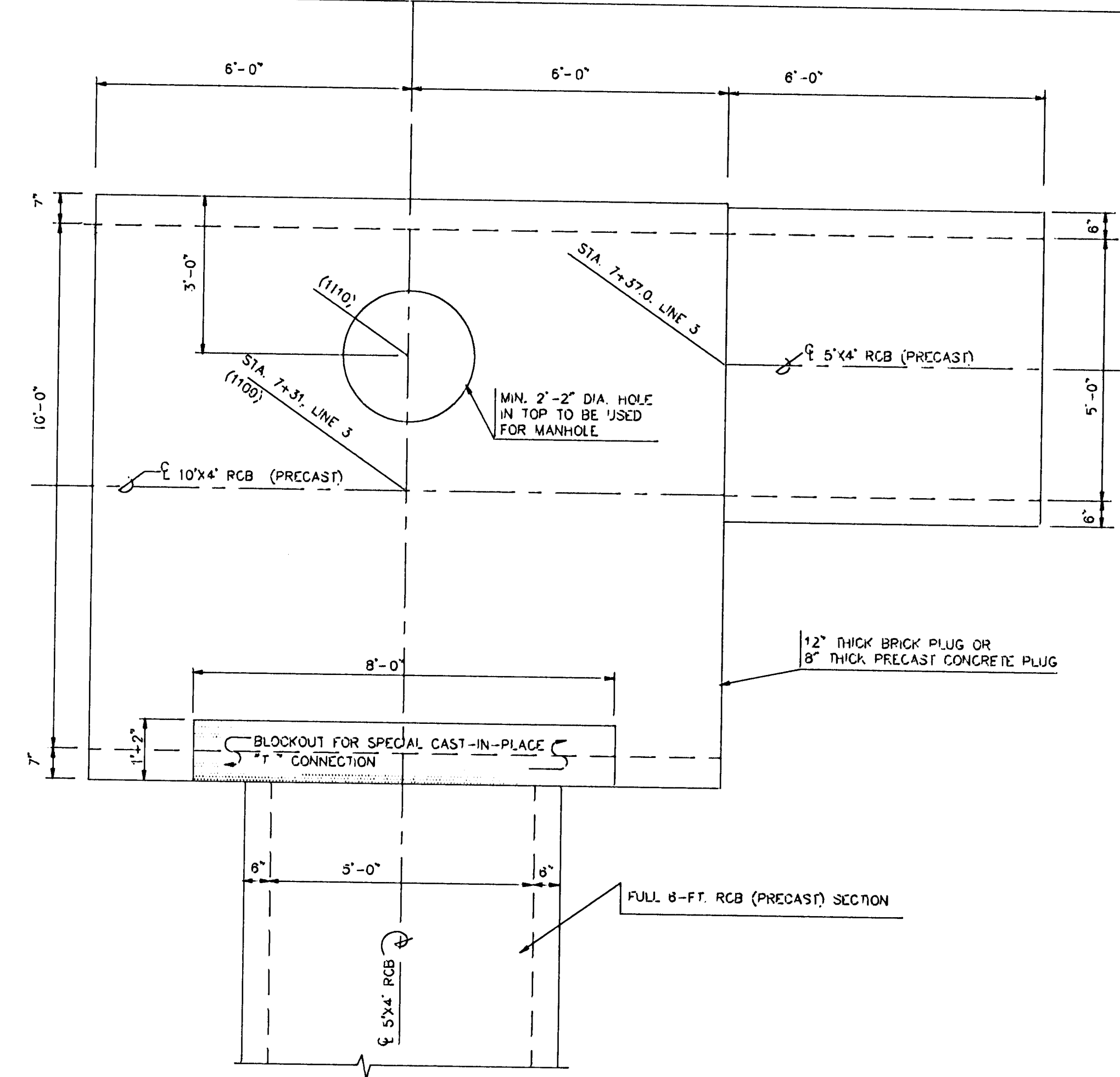
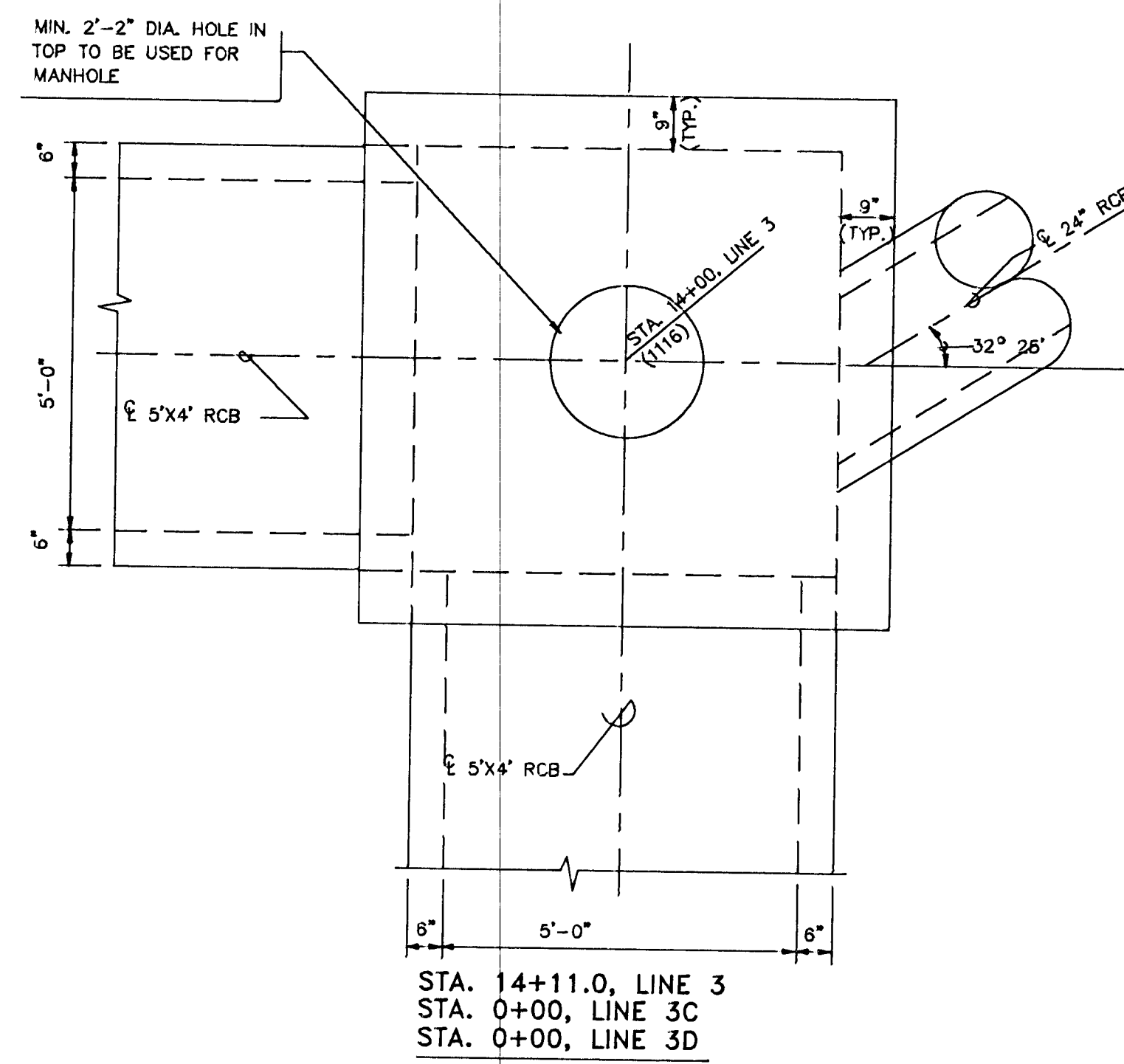
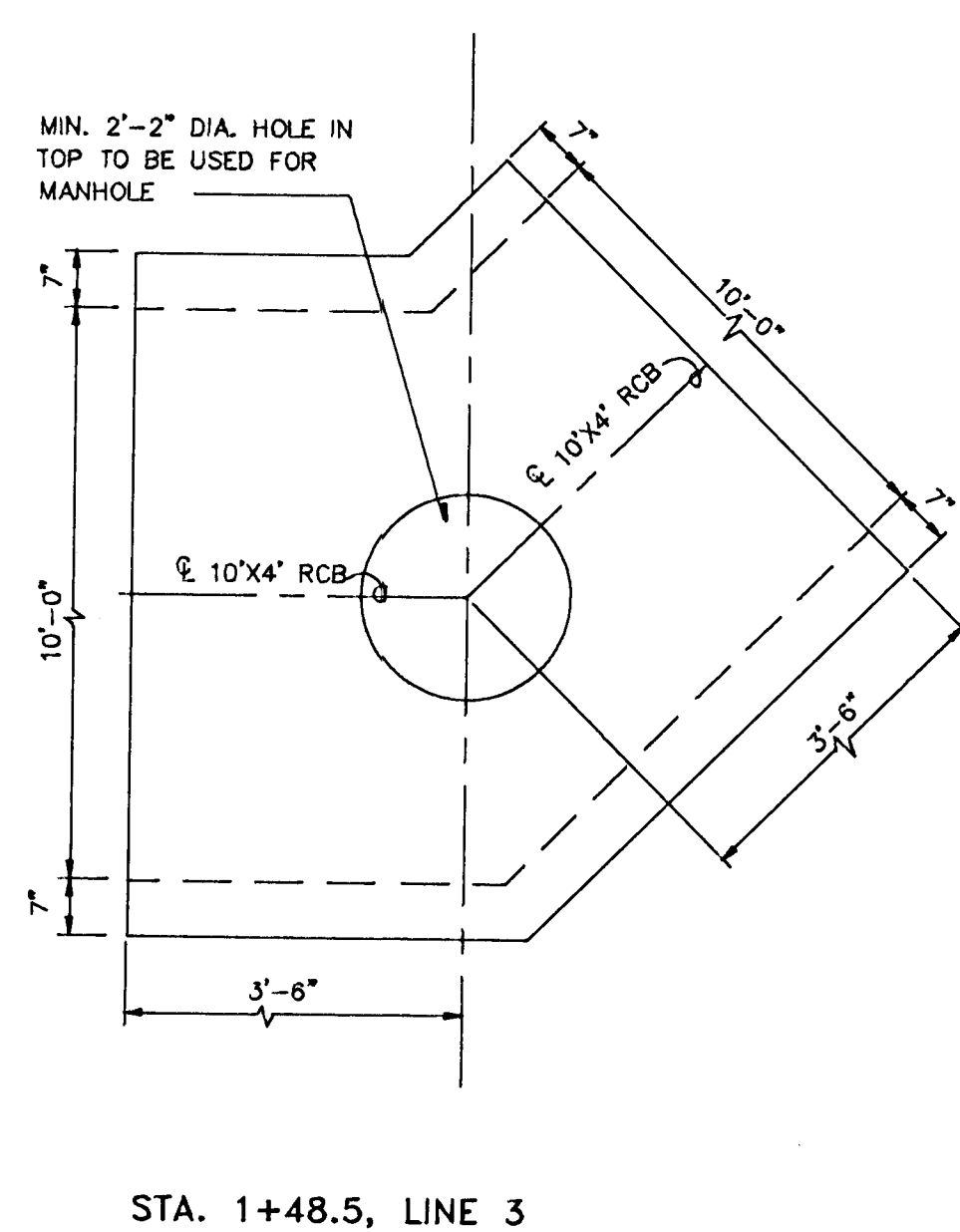
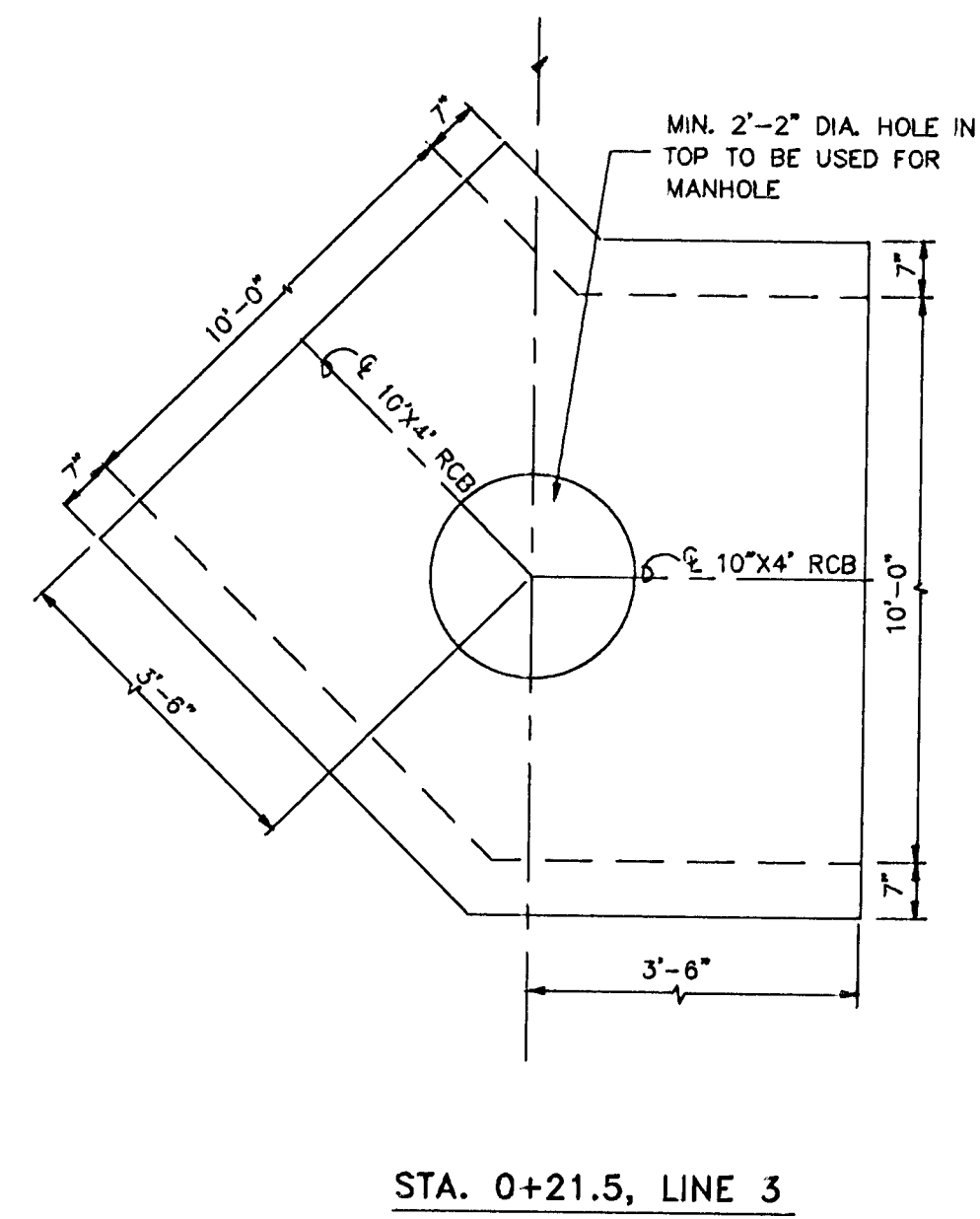
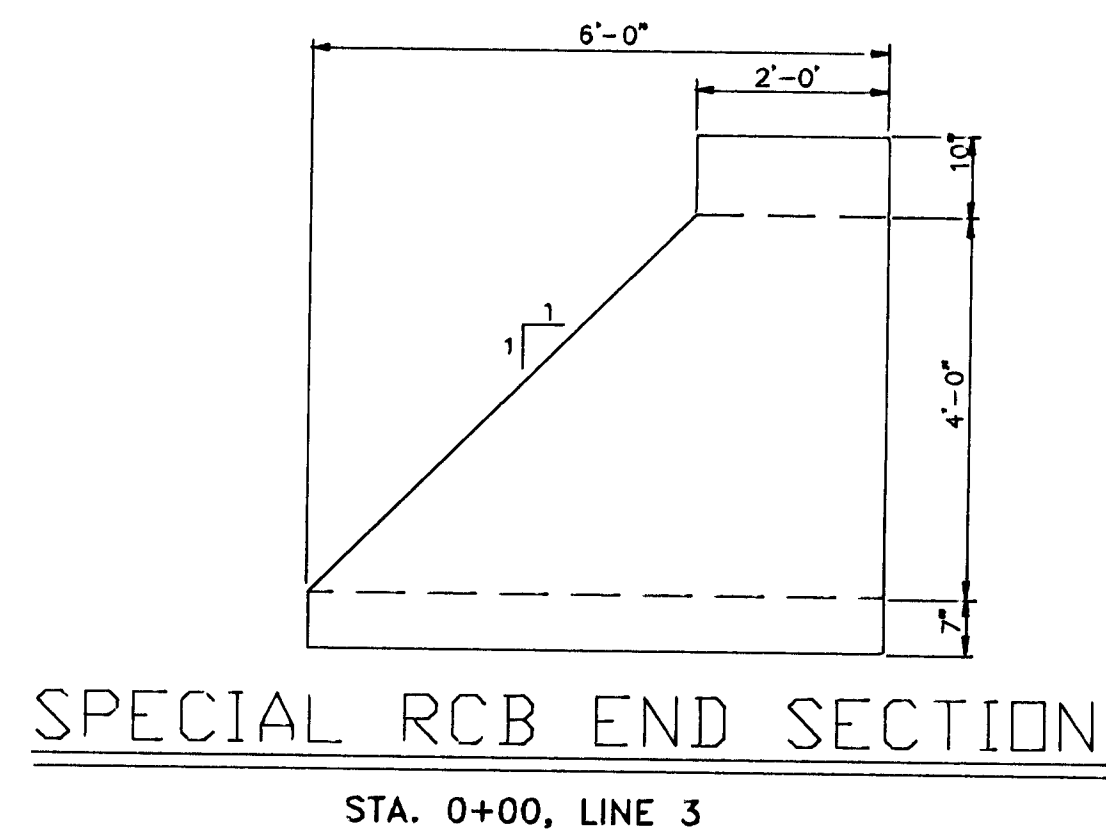
SOUTH SENECA

SPECIAL DETAILS

MID-KANSAS ENGINEERING CONSULTANTS INC.
 3500 NORTH ROCK ROAD
 BUILDING #800
 WICHITA, KANSAS 67226 (316) 636-5566

Design
 JUNJ
 Drawn by
 DLM
 Checked by
 Date
 AUG., 1992
 Job no.

Sheet
 17
 or 18



	SOUTH SENECA		Design JNU
	SPECIAL DETAILS		Drawn by DLM
			Checked by
			Date AUG 1992
MID-KANSAS ENGINEERING CONSULTANTS INC. 3500 NORTH ROCK ROAD BUILDING #800 WICHITA, KANSAS 67226		(316) 636-5566	Sheet 17A or 18

