STORM SEWER PLANS FOR
37TH. STREET NORTH
From 340' E. of Hillside to 340' W. of Oliver
S.W.S. NO. 405
PROJECT NO. 468 · 82047

CITY OF WICHITA, KANSAS

MICHAEL E. LINDEBAK, CITY ENGINEER

INDEX NO. 750133

NOVEMBER, 1990

GENERAL NOTES

1. THE TOPS OF INLET AND MANHOLE AS NOTED ON THE PLANS MAY VARY SO AS TO MEET PROPOSED TOP OF CURB ELEVATIONS OR PAVEMENT ELEVATIONS. THE FIELD ENGINEER SHALL LOCATE INLETS AND MANHOLES WITH REFERENCE TO PROPOSED PAVING PLANS OF THE PERTINENT STREETS.

2. 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.

3. TREES TO BE REMOVED ARE MARKED. ALL TREES WHICH IN THE OPINION OF THE FIELD ENGINEER CAN BE SAVED, SHALL BE SAVED.

4. ALL CONCRETE SHALL BE STANDARD PAVING MIX UNLESS OTHERWISE NOTED.

5. 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.

6. THE CHANNEL AND ALL AREAS DISTURBED BY EXCAVATION OF THE CHANNEL SHALL BE SEEDED, FERTILIZED AND MULCHED ACCORDING TO CITY OF WICHITA SPECIFICATIONS.

NOTE: NOTIFY THE FOLLOWING COMPANIES PRIOR TO ANY EXCAVATION:

BELL TELEPHONE COMPANY	571-2115
CABLEVISION	262-0661
KP&L GAS SERVICE COMPANY	263-7511
KANSAS GAS & ELECTRIC	264-1141
KANSAS ONE-CALL	1-800-344-7233
CITY OF WICHITA WATER DEPT.	268-4908
CITY OF WICHITA SEWER MAINT.	268-4908
WICHITA PUBLIC SCHOOL	833-4357

7. INLETS AT STA 12+14.8 AND STA 13+00.2 ALONG S.W.S. LINE 3, AND STORM SEWER LINE BETWEEN STA 12+14.8 AND 15+47.2 ALONG S.W.S. LINE 3, SHOULD NOT BE CONSTRUCTED UNTIL KOCH INDUSTRIES UNDERGROUND TUNNEL IS COMPLETED IN AREA OF 37TH STREET NORTH AND PROPERLY BACKFILLED.

8. SOUTHWESTERN BELL TELEPHONE COMPANY WILL WORK WITH THE STORM SEWER CONTRACTOR TO UNCOVER AND ADJUST THEIR CABLES AT ANY POINTS OF CONFLICT DURING STORM SEWER CONSTRUCTION.

9. THE CONTRACTOR SHALL USE FLOWABLE FILL IN PLACE OF COMPACTED PIPE BEDDING MATERIAL TYPE 3 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).

10. MULTIMEDIA CABLEVISION WILL WORK WITH THE STORM SEWER CONTRACTOR TO UNCOVER AND ADJUST THEIR CABLES AT ANY POINTS OF CONFLICT DURING STORM SEWER CONSTRUCTION.

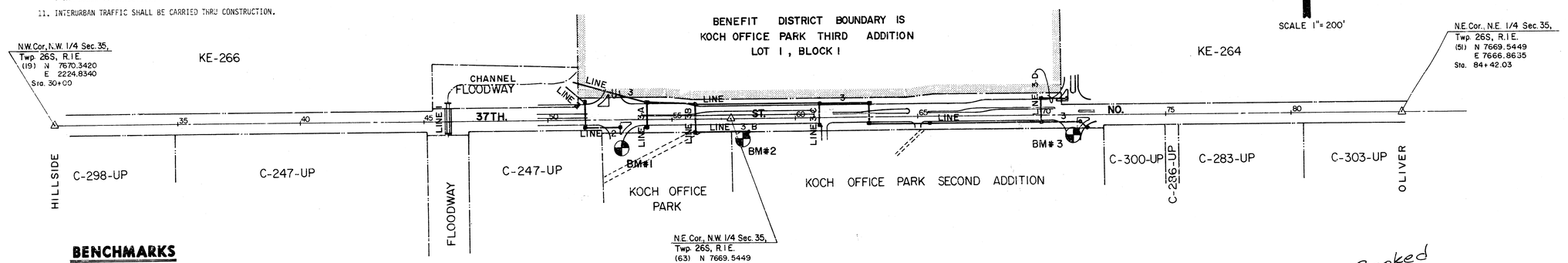
11. INTERURBAN TRAFFIC SHALL BE CARRIED THRU CONSTRUCTION.

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LEGEND

- MB MAILBOX
- TR TELEPHONE RISER
- TP TELEPHONE POLE
- HLP HIGH LINE POLE
- DEADMAN
- UGT UNDERGROUND TELEPHONE CABLE
- TREE
- TS TREE STUMP
- PINE or CEDAR TREE
- GM GAS METER
- WV WATER VALVE
- WM WATER METER
- Exist. STM STORM or SANITARY SEWER
- SIGN
- FH FIRE HYDRANT
- WATER FAUCET
- 18" RCP / 24" RCP / 8" PIPE / 18" CMP DRIVE DRAINAGE PIPE
- PIPE (Showing Flow Direction)
- TV UNDERGROUND TV CABLE
- YL YARD LIGHT
- LP LIGHT POLE
- STEEL POSTS
- E ELECTRIC LINE
- MANHOLE
- WPS WICHITA PUBLIC SCHOOL UNDERGROUND CABLE
- G GAS LINE
- Water WATER LINE
- RIGHT OF WAY(R/W) or PROPERTY LINE
- DITCH
- FENCE
- SECTION LINE
- CENTER LINE
- SECTION CORNER



BENCHMARKS

BM #1 - CHISELLED SQUARE ON TOP OF CURB, SOUTH END OF EAST RETURN ALONG SOUTH SIDE OF 37TH STREET NORTH AT WEST ENTRANCE TO KOCH INDUSTRIES.
ELEVATION = 177.00

BM #2 - CITY OF WICHITA DISK, 50 FEET SOUTH AND 52 FEET EAST OF 1/4 SECTION CORNER ALONG 37TH STREET NORTH.
ELEVATION = 175.62

(IF THIS BENCH MARK IS DISTURBED BY WORK ON LINE 3B, IT MUST BE RESET AND RECORDED.)

BM #3 - CHISELLED SQUARE ON TOP OF CURB, NORTH END OF MEDIAN ISLAND AT EAST ENTRANCE TO KOCH ALONG 37TH STREET NORTH.
ELEVATION = 195.72

Booked 12-24-91 MCG

37TH. STREET NORTH IMPROVEMENTS	Design JNJ
STORM SEWER PLAN	Drawn by DLM
	Checked by
	Date OCT. 1990
	Job no

MID-KANSAS ENGINEERING CONSULTANTS PA
3500 NORTH ROCK ROAD
BUILDING #800
WICHITA, KANSAS 67226
636-5566

Sheet 1 of 19

MKEC PROJ. NO. 90-28-113-D

37TH. STREET NORTH
SW.S. NO. 405 LINE I-CHANNEL
PROJ. NO. 468-82047

N

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

Sta. 1+00.0, Line 1
Const. Top of Std. Type 1A Curb Inlet
On Top of 2 - 5' x 4' RCB
W = 4'-4", L = 11'-4"
Inlet Top = 177.36
Street Sta. 45+96.32 (37th St. No.)
47.87 Ft. Lt. (SL To Front Ext. Wall)
(Block Out 2' x 4' Opening In Top Of
Each 5' x 4' RCB For Inlet)

Rework Exist. Rip-Rap
As Necessary To Install RCB
& Rework Channel
(Cost Subsidiary To Project)

Line 1
Street Sta. 45+96.32 (37th St. No.)
Construct 2 - 5' x 4' x 102' RCB (Precast)(C-789)
With End Sections & Grouted Rip-Rap
Toewalls W = 2'-0", D = 4'-0", L = 20'-0"

37TH.
STREET
NORTH

Remove Existing
3 - 54" x 84' RCP

Existing
Rework Exist. Rip-Rap
As Necessary To Install RCB
And Improve Channel
(Cost Subsidiary To Project)

Existing Floodway

Sta. 0+23.1, Line 1
Const. Top Of Std. Type 1A Curb Inlet
On Top Of 2 - 5' x 4' RCB
W = 4'-4", L = 11'-4"
Inlet Top = 177.36
Street Sta. 45+96.32 (37th St. No.)
24.77 Ft. Rt. (SL To Front Ext. Wall)
(Block Out 2' x 4' Opening In Top Of
Each 5' x 4' RCB For Inlet)

Sta. 2+33.8, Line 1
Channel PC.

Sta. 2+38.8, Line 1
Channel PT.

Sta. 6+90, Line 1
Channel PC.

Sta. 7+00, Line 1
Channel PT.

Sta. 0+00, Line 1 & Channel
Floodway & Section Line

Sta. 0+11, Line 1 & Channel
Begin 2 5'x4' RCB (Precast)
With End Section & Grouted
R/R Apron, W = 2'-0", D = 4'-0", L = 20'-0"

Sta. 0+23.1, Line 1 & Channel
Const. Std. Type 1A Curb Inlet
On Top Of 2 - 5'x4' RCB
W = 4'-4", L = 11'-4"
Inlet Top = 177.36

Sta. 1+13, Line 1 & Channel
End 2 5'x4' RCB (Precast)
With End Sections & Grouted
R/R Apron, W = 2'-0", D = 4'-0", L = 20'-0"

Sta. 1+46, Line 1 & Channel PC.

Sta. 1+00, Line 1 & Channel
Const. Std. Type 1A Curb Inlet
On Top Of 2 - 5'x4' RCB
W = 4'-4", L = 11'-4"
Inlet Top = 177.36

2-Section Line

Exist. Ground

Existing Channel

Caution Underground Utilities

Design 100-Year Water Surface Elevation (HEC-2 Run Q=384 CFS & 388 CFS)

108.0 L.F. 2-5'x4' RCB (Precast) @ 0.20% (C-789)

487.0 L.F. Reshape Channel Bottom To Proposed Flowline With 4:1 Side Slope @ 0.15%

Exist. 2-54" RCP
Invert = 165.10

Exist. 2-54" RCP
Invert = 165.00

2-5'x4' RCB (C-789)

2-5'x4' RCB (C-789)

E.Out = 168.49

E.Out = 168.40

E = 169.57

E = 169.73

E = 169.73

E = 169.88

E = 169.03

E = 169.18

E = 169.39

ELEVATIONS IN FEET (WICHITA DATUM)

180
175
170
165
160

0
1
2
3
4
5
6

PLAN LINE I & CHANNEL

PROFILE LINE I & CHANNEL

Channel X-Section @ Sta. 4+00 (Typ.)
(Disturb as Little Of Existing Channel Side Slopes As Possible)

Exist. Channel X-Section

Prop. Reshaped Channel

10' Bottom Width (Typ.)

4 : 1

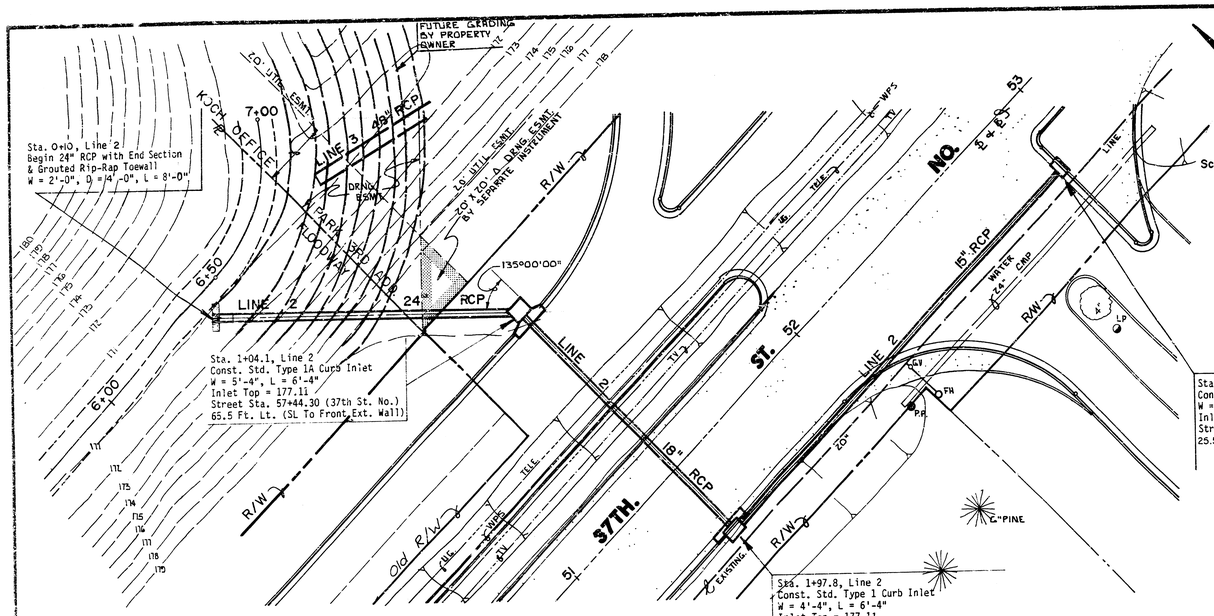
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2
19

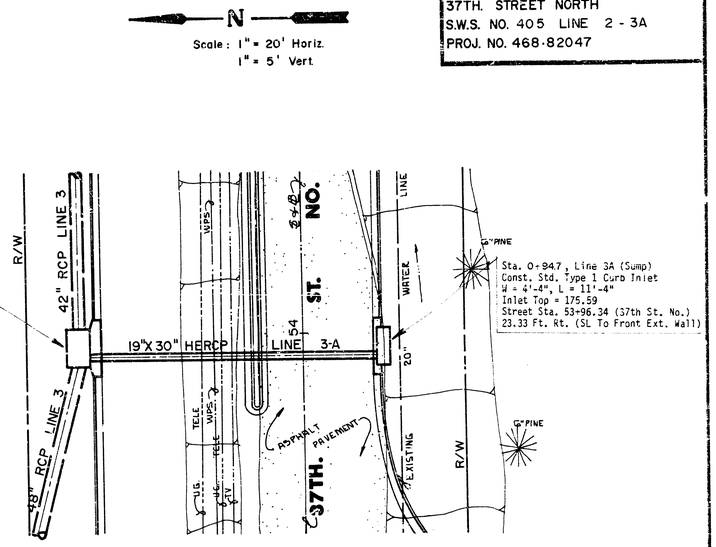
MKEC

MKEC Proj. No. 90-28-113-D

37TH. STREET NORTH
S.W.S. NO. 405 LINE 2 - 3A
PROJ. NO. 468-82047

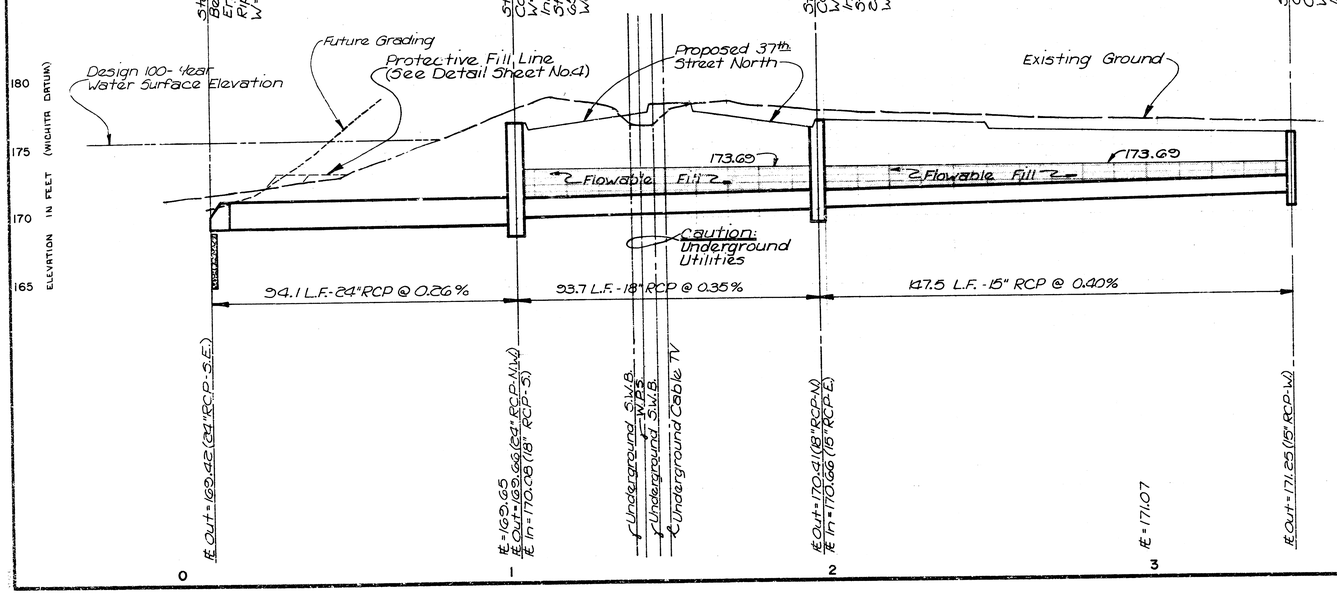


PLAN LINE 2

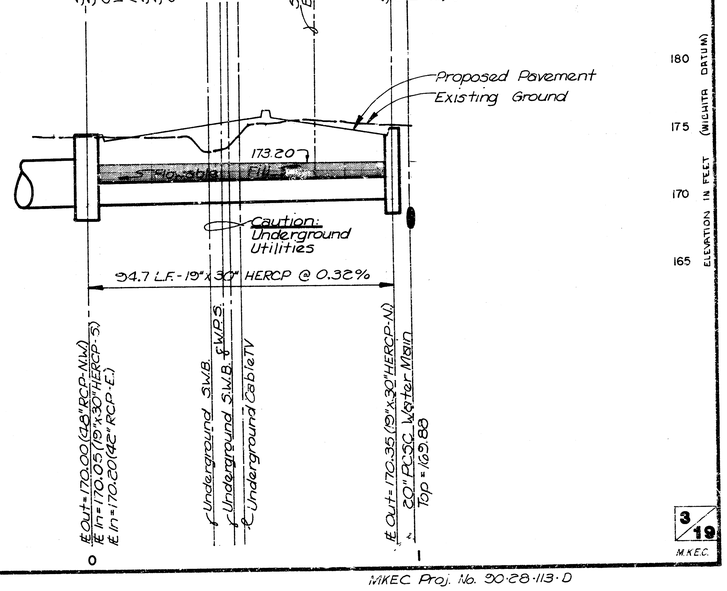


PLAN LINE 3-A

PROFILE LINE 2



PROFILE LINE 3-A

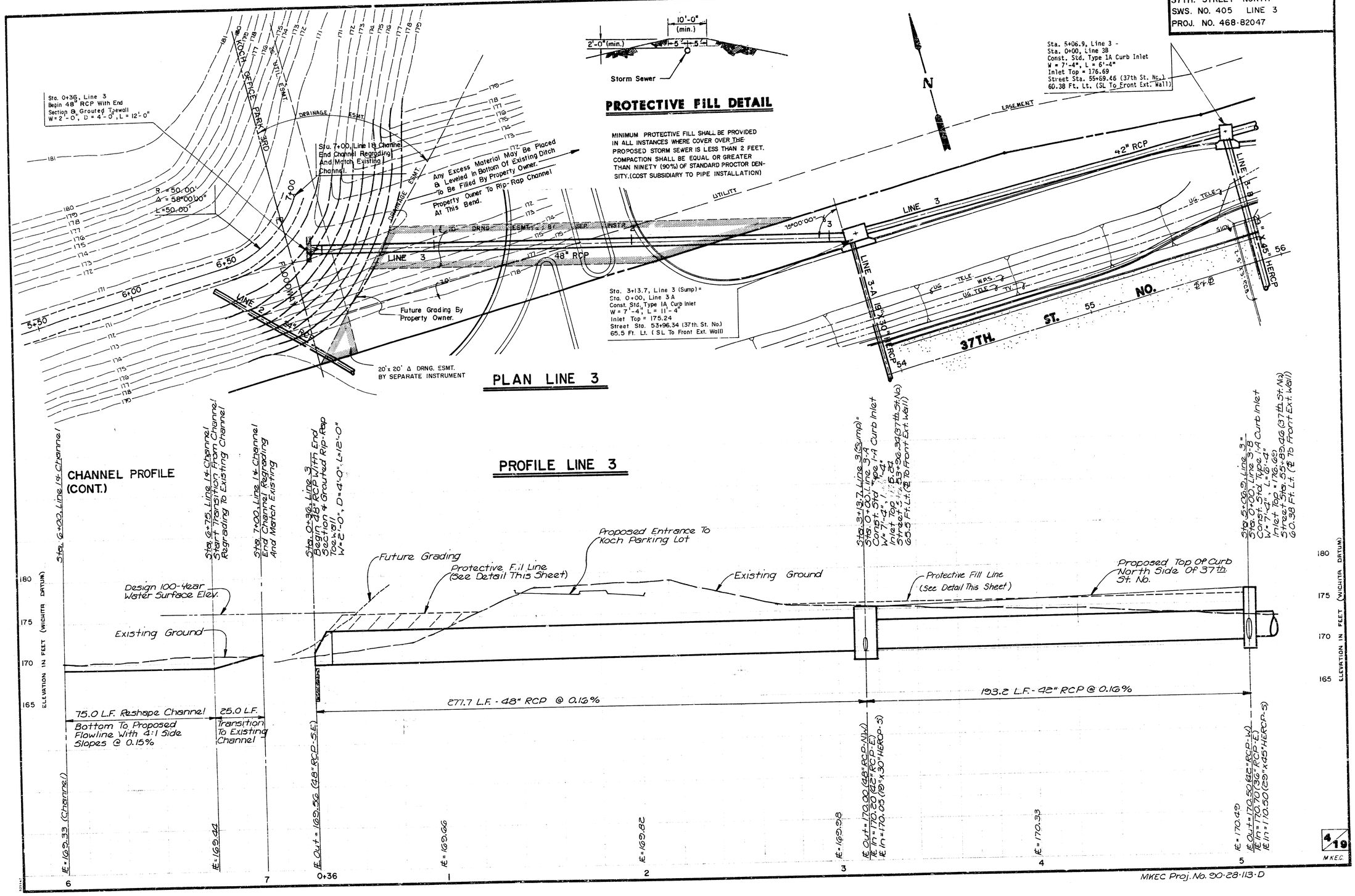


3/19

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37TH. STREET NORTH
SWS. NO. 405 LINE 3
PROJ. NO. 468-82047



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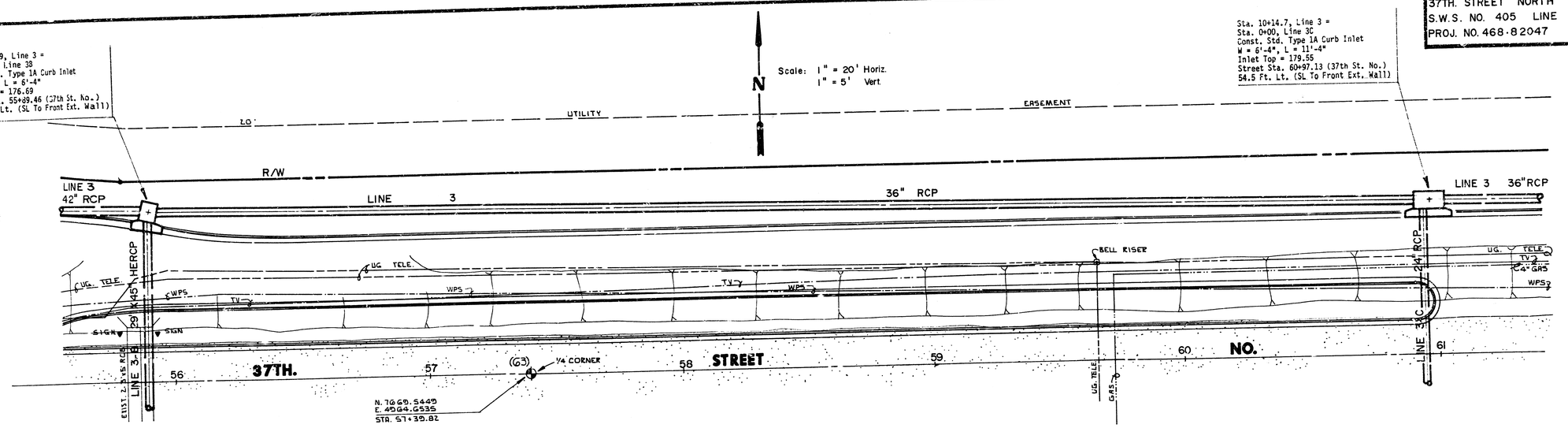
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37TH. STREET NORTH
S.W.S. NO. 405 LINE 3
PROJ. NO. 468-82047

Sta. 5+06.9, Line 3 =
Sta. 0+00, Line 3B
Const. Std. Type 1A Curb Inlet
W = 7'-4", L = 6'-4"
Inlet Top = 176.69
Street Sta. 55+89.46 (37th St. No.)
60.38 Ft. Lt. (SL To Front Ext. Wall)

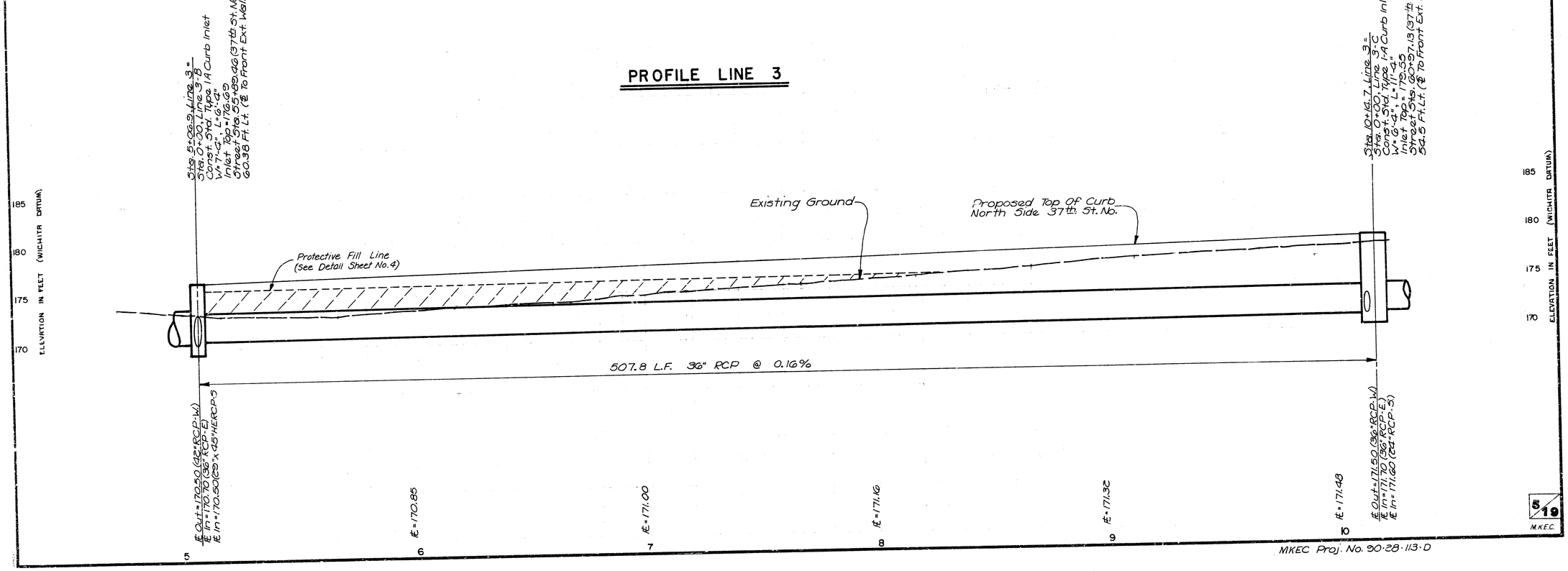
Sta. 10+14.7, Line 3 =
Sta. 0+00, Line 3C
Const. Std. Type 1A Curb Inlet
W = 6'-4", L = 11'-4"
Inlet Top = 179.55
Street Sta. 60+97.13 (37th St. No.)
54.5 Ft. Lt. (SL To Front Ext. Wall)

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



PLAN LINE 3

PROFILE LINE 3



MKEC Proj. No. 90-28-113-0

37TH. STREET NORTH
S.W.S. NO. 405 LINE 3
PROJ. NO. 468-82047

Sta. 10+14.7, Line 3 =
Sta. 0+00, Line 3C
Const. Std. Type 1A Curb Inlet
W = 6'-4", L = 11'-4"
Inlet Top = 179.55
Street Sta. 60+97.13 (37th St. No.)
54.5 Ft. Lt. (SL To Front Ext. Wall)

Sta. 12+14.8, Line 3
Const. Std. Type 1A Curb Inlet
W = 6'-4", L = 11'-4"
Inlet Top = 182.94
Street Sta. 63+00 (37th St. No.)
54.50 Ft. Lt..(SL To Front Ext. Wall)

Sta. 13+00.2 , Line 3
Const. Std. Type 1 Curb Inlet
W = 4'-4" , L= 11'-4"
Inlet Top = 182.60
Street Sta. 63+00 (37th. St. No.)
23.33 Ft. Rt. (S.L. To Front Ext. Wall)

Sta. 15+47.2, Line 3
Const. Std. Type 1 Curb Inlet
W = 4'-4", L = 6'-4"
Inlet Top = 186.27
Street Sta. 65+46.99 (37th St. No.)
23.33 Ft. Rt. (SL To Front Ext. Wall)

N

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

PLAN LINE 3

PROFILE LINE 3

Sta. 10+14.7, Line 3 =
Sta. 0+00, Line 3C
Const. Std. Type 1A Curb Inlet
W = 6'-4", L = 11'-4"
Inlet Top = 179.55
Street Sta. 60+97.13 (37th Street No.)
54.5 Ft. Lt. (@ To Front Ext. Wall)
℄ Out = 171.50 (36" RCP-W.)
℄ In = 171.70 (36" RCP-E.)
℄ In = 171.60 (24" RCP-S.)

℄ = 171.87

Sta. 12+14.8, Line 3
Const. Std. Type 1A Curb Inlet
W = 6'-4", L = 11'-4"
Inlet Top = 182.94
Street Sta. 63+00 (37th St. No.)
54.50 Ft. Lt. (@ To Front Ext. Wall)
℄ Out = 172.10 (36" RCP-W.)
℄ In = 172.20 (36" RCP-S.)

℄ = 172.07

Caution:
Underground
Utilities

Section Line &
Base Line

Sta. 13+00.2, Line 3
Const. Std. Type 1 Curb Inlet
W = 4'-4", L = 11'-4"
Inlet Top = 182.60
Street Sta. 63+00 (37th St. No.)
23.33 Ft. Rt. (@ To Front Ext. Wall)
Stub Out 24" RCP @ 1.00%
With Temporary Plug
℄ Out = 172.40 (36" RCP-W.)
℄ In = 172.45 (24" RCP-E.)
℄ In = 173.40 (24" RCP-S.)

℄ = 178.48

Sta. 15+47.2, Line 3
Const. Std. Type 1 Curb Inlet
W = 4'-4", L = 6'-4"
Inlet Top = 186.27
Street Sta. 65+46.99 (37th St. No.)
23.33 Ft. Rt. (@ To Front Ext. Wall)
℄ Out = 180.00 (24" RCP-W.)
℄ In = 180.70 (24" RCP-E.)

℄ = 179.51

Proposed Top Of Curb
North Side 37th. Street No.

Existing Ground

179.18

Flowable Fill

Existing 20" PCSC Water Main
(Laying South Of Prop. 24" RCP)

Proposed Top Of Curb
South Side 37th. Street North

Existing Ground

Caution:
Underground Utility

Tunnel Top = 176.43

Tunnel (By Others)
Finish Floor = 165.10

200.1 L.F. - 36" RCP @ 0.20%

85.4 L.F. - 36" RCP @ 0.23%

247.0 L.F. - 24" RCP @ 1.03%

ELEVATION IN FEET (WICHITA DATUM)

190
185
180
175
170

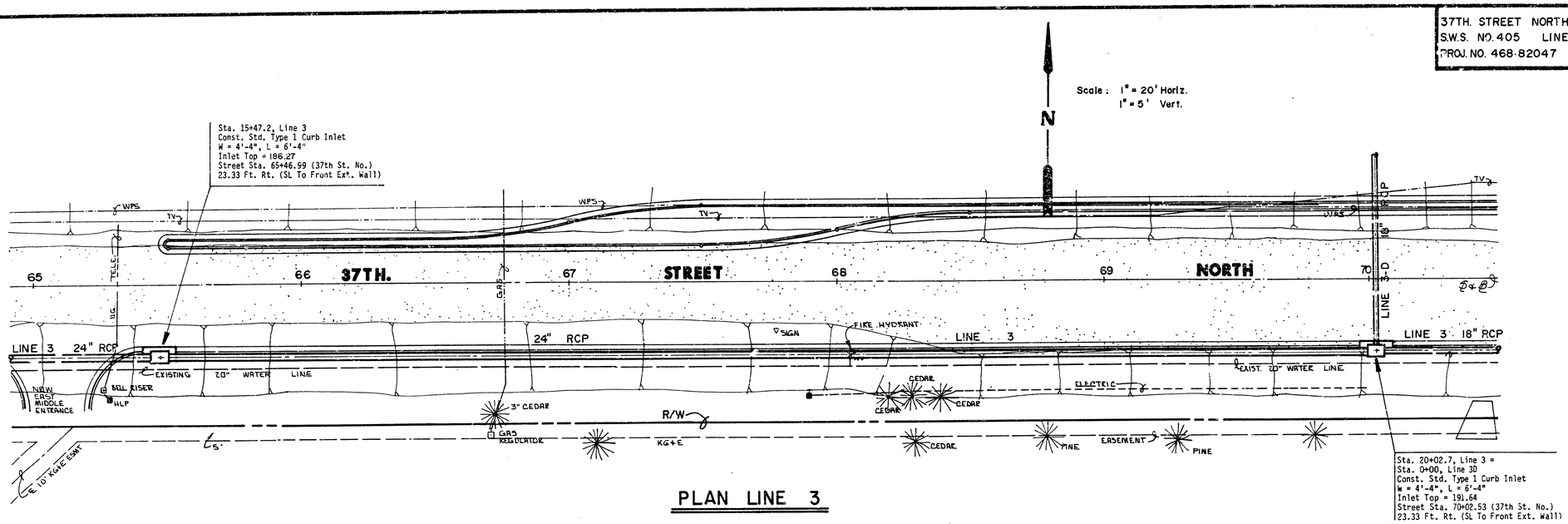
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6/19
MKEC

MKEC Proj. No. 90-28-113-D

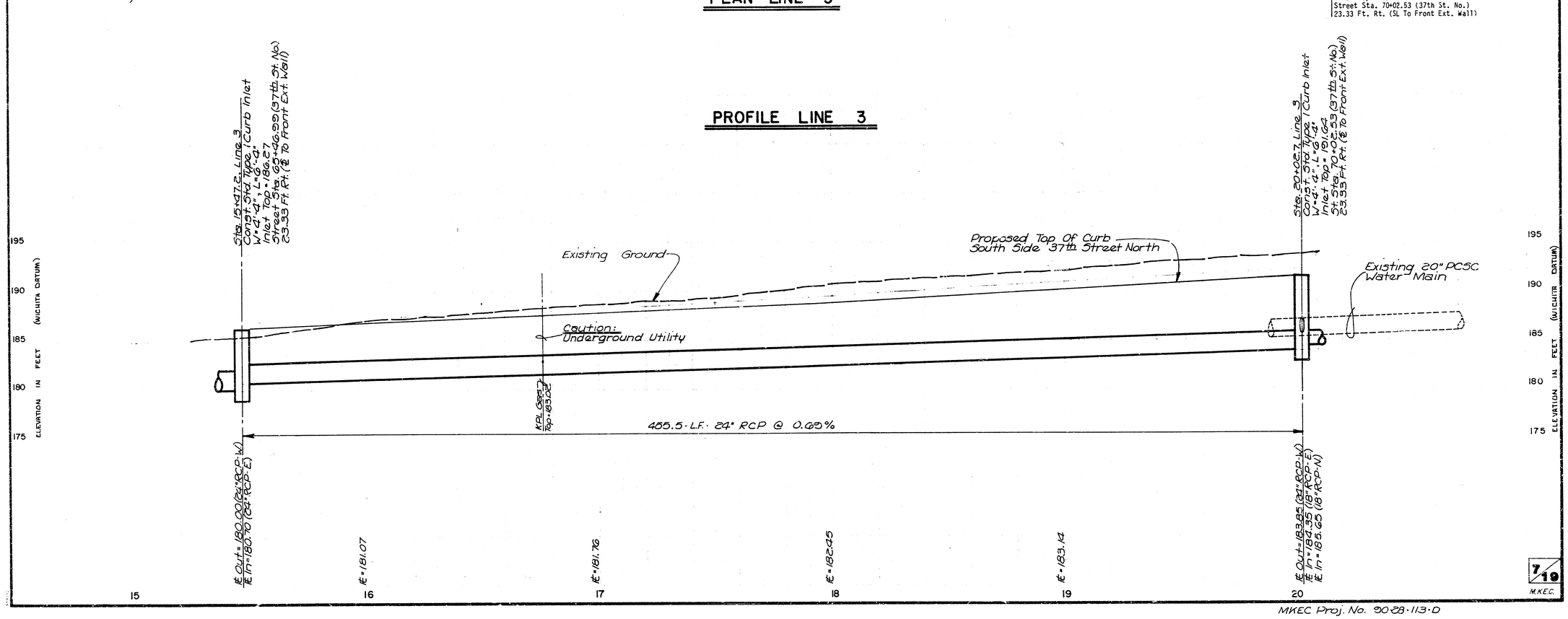
37TH. STREET NORTH
S.W.S. NO. 405 LINE 3
PROJ. NO. 468-82047

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



PLAN LINE 3

PROFILE LINE 3



7/19

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MKEC Proj. No. 9028-113-0

37TH. STREET NORTH
SW.S. NO.405 LINE 3 - 3-D
PROJ. NO. 468-82047

Sta. 0+93.2, Line 3D
Const. Std. Type 1A Curb Inlet
W = 4'-4", L = 6'-4"
Inlet Top = 191.64
Street Sta. 70+02.53 (37th St. No.)
65.50 Ft. Lt. (℄ To Front Ext. Wall)

Sta. 0+00, Line 3D =
Sta. 20+02.7, Line 3
Const. Std. Type 1 Curb Inlet
W = 4'-4", L = 6'-4"
Inlet Top = 191.64
Street Sta. 70+02.53 (37th St. No.)
23.33 Ft. Rt. (SL To Front Ext. Wall)

Sta. 1+95.7, Line 3-D
Const. Special Mountable Curb Inlet
W = 2'-10", L = 6'-2"
Inlet Top = 192.61
Street Sta. 71+04.96 (37th. St. No.)
64.00 Ft. Lt. (℄ to ℄ Inlet)

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

PLAN LINE 3-D

PROFILE LINE 3-D

Sta. 0+00, Line 3-D
Sta. 20+02.7, Line 3
Const. Std. Type 1 Curb Inlet
W = 4'-4", L = 6'-4"
Inlet Top = 191.64
Street Sta. 70+02.53 (37th St. No.)
23.33 Ft. Rt. (℄ To Front Ext. Wall)

Sta. 0+93.2, Line 3-D
Const. Std. Type 1A Curb Inlet
W = 4'-4", L = 6'-4"
Inlet Top = 191.64
Street Sta. 70+02.53 (37th St. No.)
65.50 Ft. Lt. (℄ To Front Ext. Wall)

Sta. 1+95.7, Line 3-D
Const. Special Mountable Curb Inlet
W = 2'-10", L = 6'-2"
Inlet Top = 192.61
Street Sta. 71+04.96 (37th St. No.)
64.00 Ft. Lt. (℄ to ℄ Inlet)

Caution: Underground Utilities

Section Line & Base Line

Existing Ground

Proposed Pavement 37th Street No.

Prop. Ground

188.71

190.00

Flowable Fill

93.2 L.F. - 18" RCP @ 0.38%

102.5 L.F. 15" RCP @ 1.71%

℄ Out = 183.85 (24" RCP-W.)
℄ In = 185.65 (18" RCP-N.)
℄ In = 184.35 (15" RCP-E.)

℄ Out = 186.00 (18" RCP-S.)
℄ In = 186.25 (15" RCP-E.)
℄ = 186.37

℄ Out = 186.00 (15" RCP-W.)

ELEVATION IN FEET (WICHITA DATUM)

Sta. 21+61.2, Line 3
Const. Std. Type "B" Manhole
I.D. = 4'-Ft.
Manhole Top = 193.80
Street Sta. 71+61.03 (37th St. No.)
25.50 Ft. Rt. (℄ to ℄ MH)

Sta. 20+02.7, Line 3
Const. Std. Type 1 Curb Inlet
W = 4'-4", L = 6'-4"
Inlet Top = 191.64
Street Sta. 70+02.53 (37th St. No.)
23.33 Ft. Rt. (℄ To Front Ext. Wall)

Sta. 21+97.7, Line 3 (Sump)
Const. Std. Type 1-A Curb Inlet
W = 4'-4", L = 6'-4"
Inlet Top = 194.06
Street Sta. 71+86.73 (37th St. No.)
51.20' Ft. Rt. (℄ To ℄ Inlet)

LINE 3 18" RCP

EXISTING 20" WATER LINE

EXISTING 20" WATER LINE

LINE 3 24" RCP

18" CMP

ELECTRIC

ELECTRIC

KG+E CONC BASE

STEEL GATE

STEEL GATE

SIGN

WATER VAULT

CAUTION: WATER LINE

20'X10' DRNG. ESMT. BY SEPARATE INSTRUMENT

12" WATER

ESMT.

PLAN LINE 3

PROFILE LINE 3

Proposed Pavement 37th Street North

Exist. Ground

Existing 20" PCSC Water Main

190.50

190.64

Flowable Fill

158.5 L.F. - 18" RCP @ 0.35%

36.5 L.F. - 18" RCP @ 0.41%

℄ Out = 183.85 (24" RCP-W.)
℄ In = 184.35 (18" RCP-E.)
℄ In = 185.65 (18" RCP-N.)

℄ = 184.69

℄ Out = 184.90 (18" RCP-W.)
℄ In = 185.00 (18" RCP-SE.)

℄ In = 185.15 (18" RCP-NW.)

ELEVATION IN FEET (WICHITA DATUM)

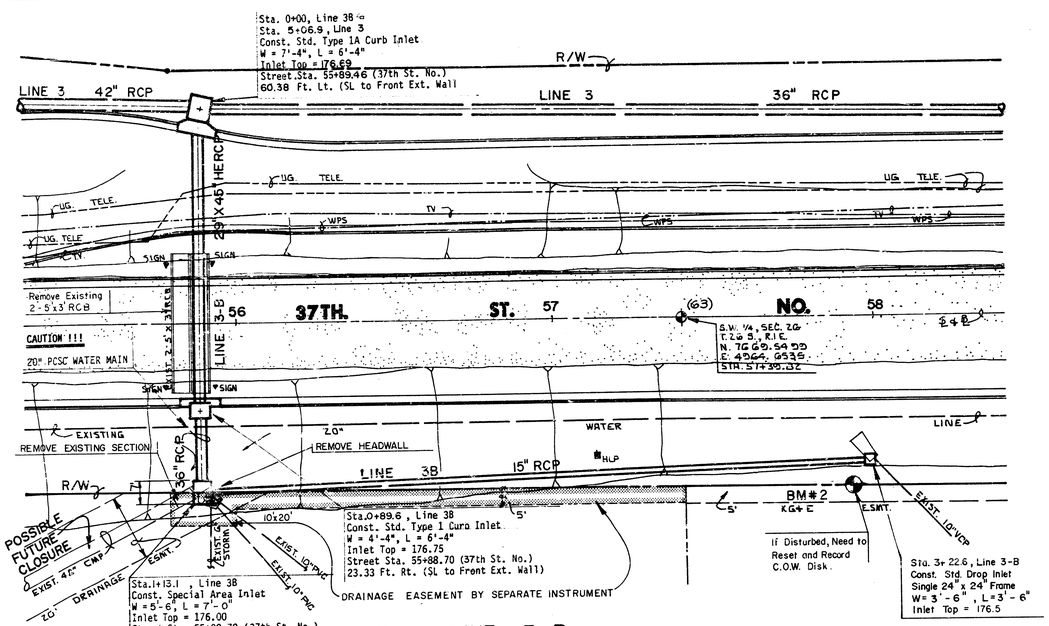
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8 19

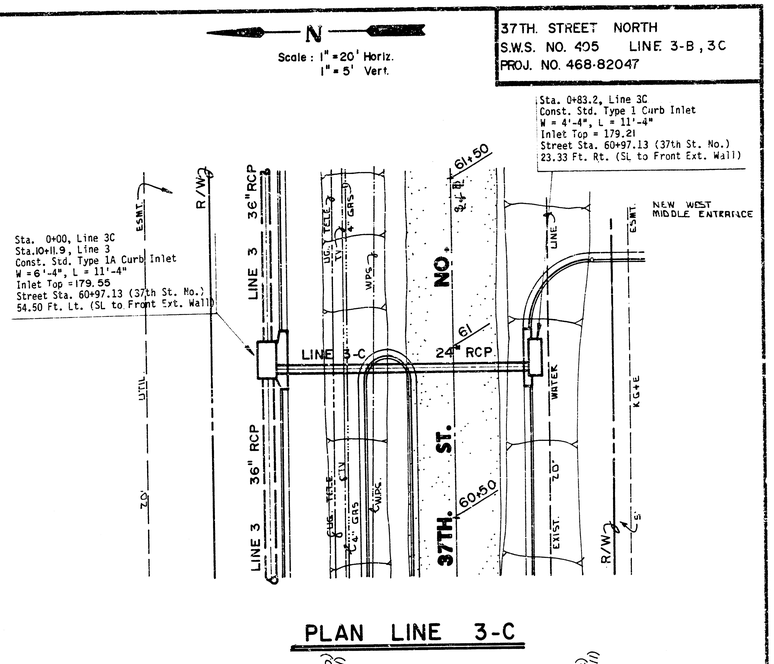
M.K.E.C.

M.K.E.C. Proj. No. 90-28-113-D

37TH. STREET NORTH
S.W.S. NO. 405 LINE 3-B, 3C
PROJ. NO. 468-82047

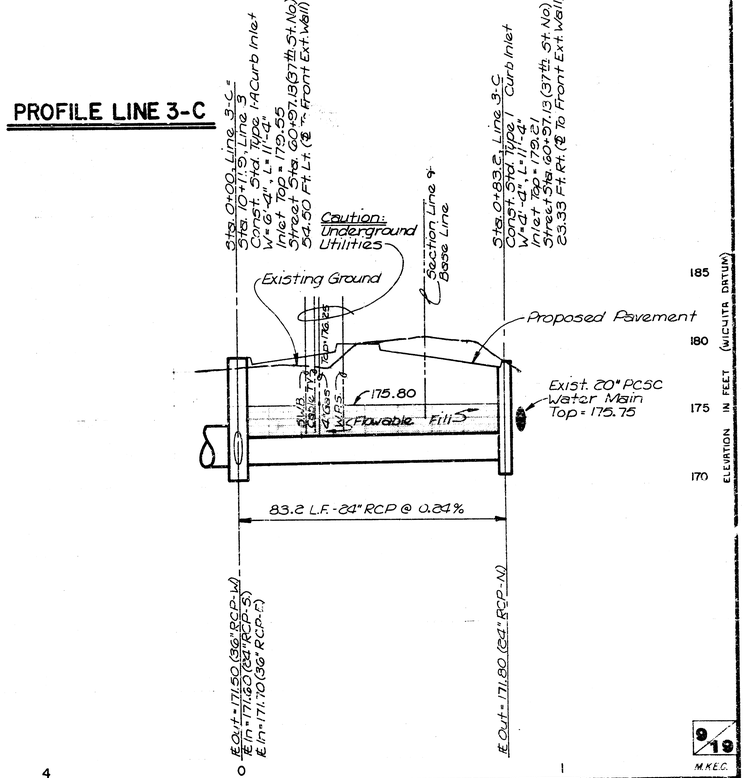


PLAN LINE 3-B



PLAN LINE 3-C

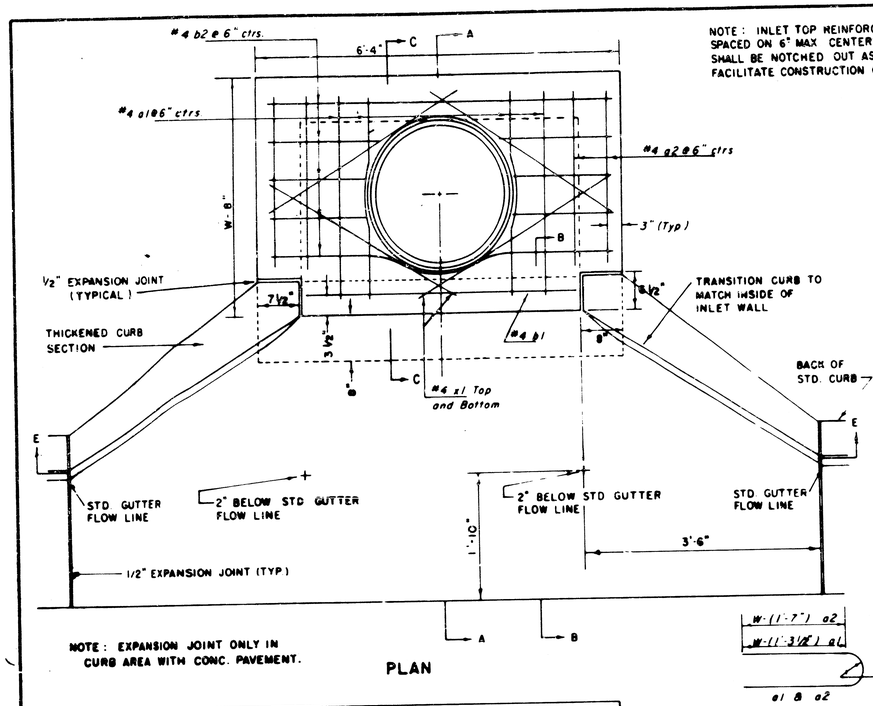
PROFILE LINE 3-B



9/19

MKEC

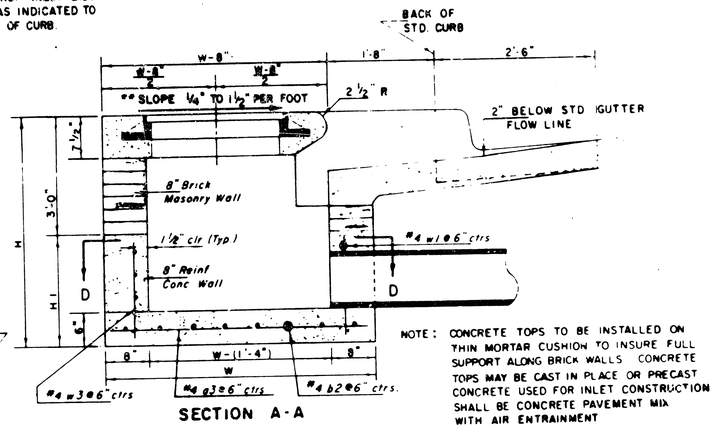
MKEC Proj. No. 90-28-113-D



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

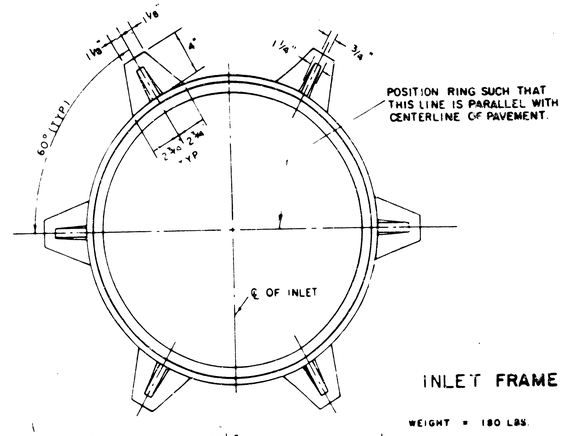
PLAN

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



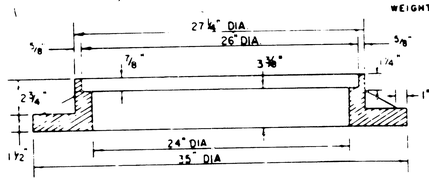
SECTION A-A

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



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.

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.

PRECAST SLAB AND FLOOR REINFORCING

		W=4'-4"		W=5'-4"		W=6'-4"		W=7'-4"		W=8'-4"	
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"
z1	#4	8	3'-10"	8	4'-2"	8	4'-6"	8	4'-10"	8	5'-2"

WALL REINFORCING

		W=4'-4"		W=5'-4"		W=6'-4"		W=7'-4"		W=8'-4"	
Mark	Size	No.	Length	No.	Length	No.	Length	No.	Length	No.	Length
w1	#4	⑦	6'-1"	⑦	6'-1"	⑦	6'-1"	⑦	6'-1"	⑦	6'-1"
w2	#4	⑦	4'-1"	⑦	5'-1"	⑦	6'-1"	⑦	7'-1"	⑦	8'-1"
w3	#4	32	②	36	②	40	②	44	②	48	②

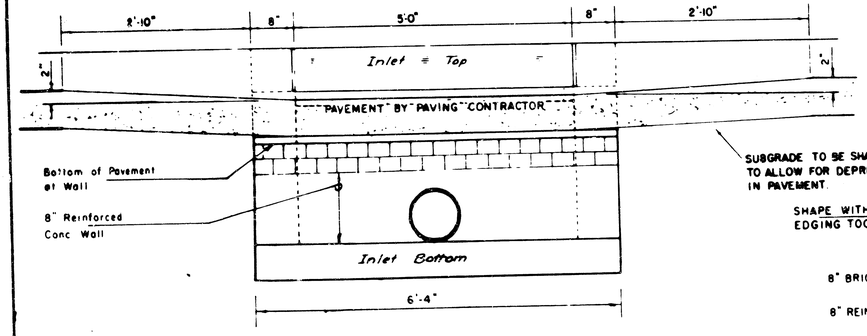
* Field bend or cut Reinforcing as required for clearance

⑦ 4(H1-12"), (H1-12") Round down to nearest 0.5'

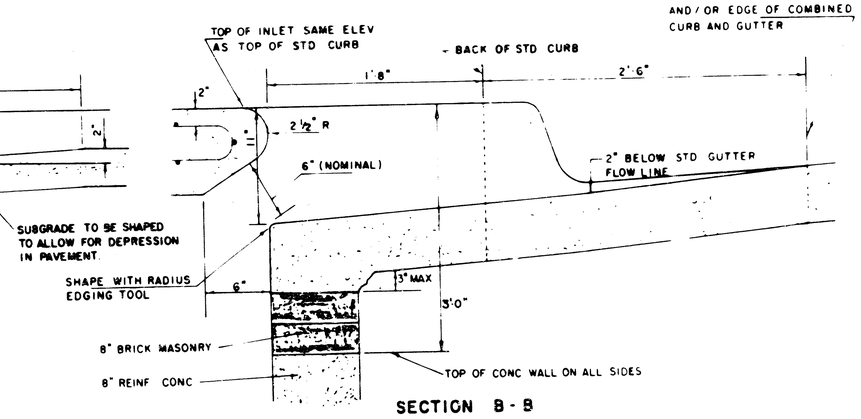
② H1-3"

BENDING DIAGRAM

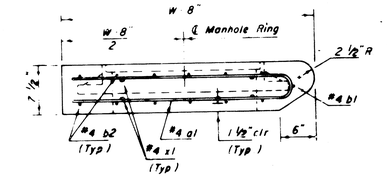
STANDARD CURB INLET PRECAST TOPS			
W	PRE-CAST TOP SIZE	PIPE SIZE	CU YD CONC.
4'-4"	3'8" x 6'4" x 7 1/2"	21" & SMALLER	0.38 ±
5'-4"	4'8" x 6'4" x 7 1/2"	24" & 30"	0.51 ±
6'-4"	5'8" x 6'4" x 7 1/2"	36" & 42"	0.64 ±
7'-4"	6'8" x 6'4" x 7 1/2"	48" & 54"	0.77 ±
8'-4"	7'8" x 6'4" x 7 1/2"	60" & 66"	0.90 ±



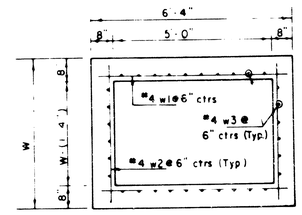
SECTION E - E



SECTION B - B



SECTION C-C



SECTION D-D

~~REVISED 11-30-1988~~

~~REVISED 12-31-1984~~

Revised 2-16-1989

DETAIL STANDARD TYPE IA CURB INLET

CITY OF WICHITA, KANSAS

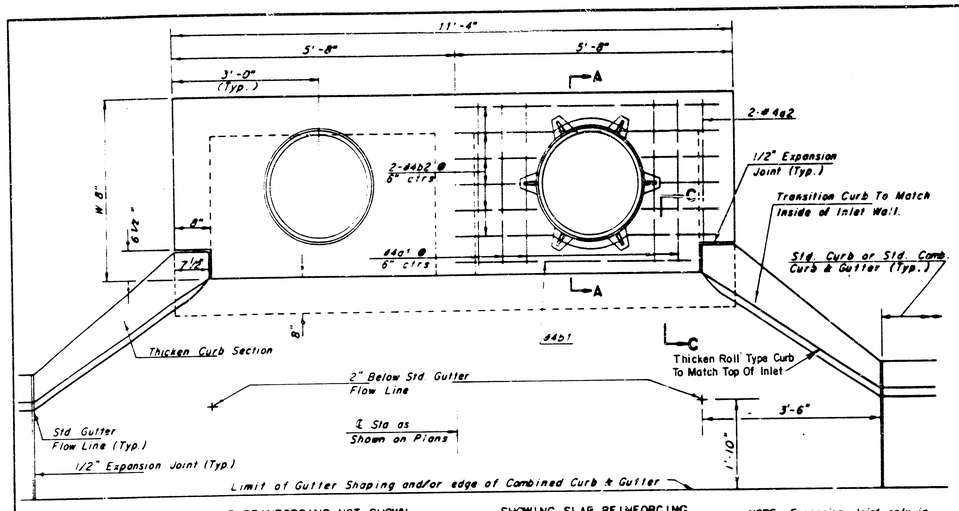
INLET OPENING = 6" x 5'-0"

JUNE 1984

10/19

MKEC PROJ. NO 50-28-113-D

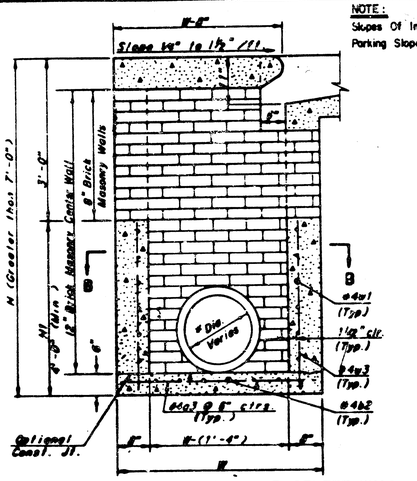
PROJECT NO.	SHEET NO.	TOTAL SHEETS



SLAB REINFORCING NOT SHOWN — SHOWING SLAB REINFORCING

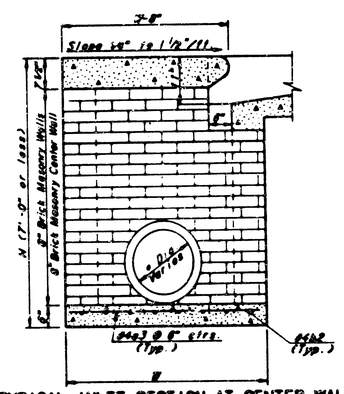
PLAN

NOTE Expansion Joint only in Curb Area with Conc. Pavement.



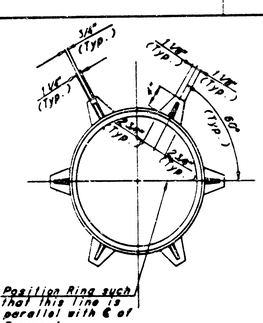
TYPICAL INLET SECTION AT CENTER WALL
(REINFORCED CONCRETE WALLS)

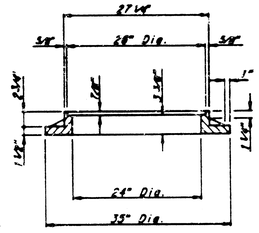
NOTE:
Slopes Of Inlet Tops To Match Sidewalk Or Parking Slopes Within Limits Indicated.



TYPICAL INLET SECTION AT CENTER WALL
(MASONRY WALLS)

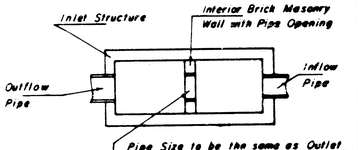
- A center wall opening shall be provided by means of a section of reinforced concrete pipe. See Case I and Case II Below.



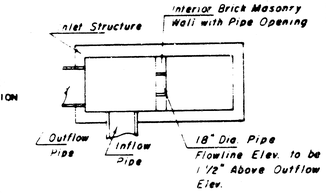


CAST IRON INLET RING
Wt.=180 lbs.

See City of Wichita Standard Manhole Frame and Cover Detail Sheet for Cover Details to be used with Inlet Frame.

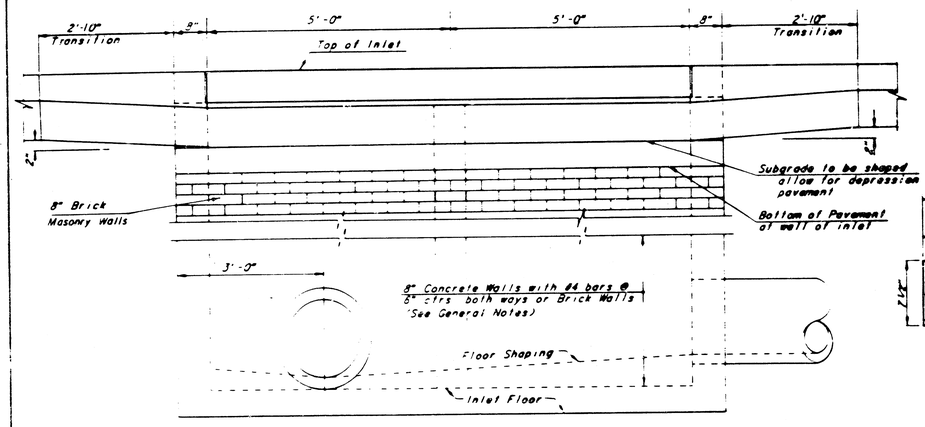


CASE I

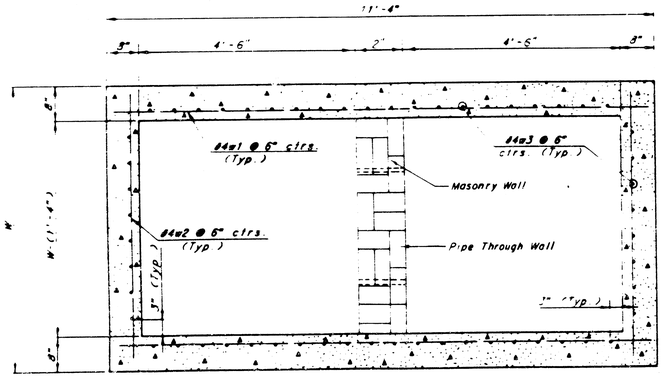


CASE II

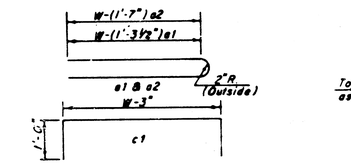
NOTE Center Wall Pipe Size shall be as Specified in Inlet Construction Note on the Plan/Profile Sheets for those Cases not shown here.



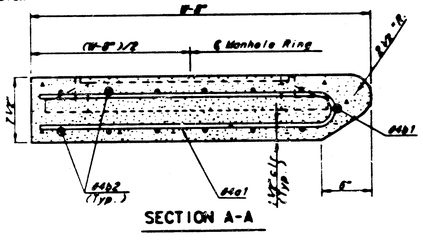
ELEVATION



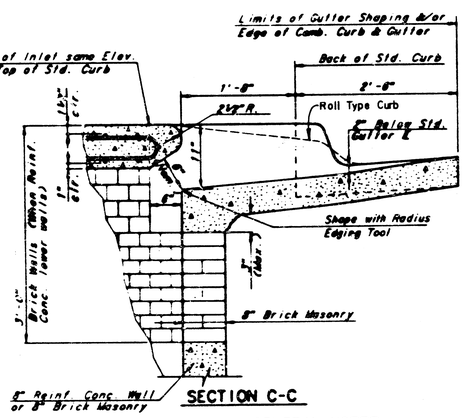
SECTION B-B



BENDING DIAGRAMS



SECTION A-A



SECTION C-C

SLAB AND FLOOR REINFORCING

		W=4'-4"		W=5'-4"		W=6'-4"		W=7'-4"		W=8'-4"	
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	6'-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"

WALL REINFORCING

		W=4'-4"		W=5'-4"		W=6'-4"		W=7'-4"		W=8'-4"	
MARK	SIZE	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH
c1	#6	4	6'-1"	4	7'-1"	4	8'-1"	4	9'-1"	4	10'-1"
w1	#4	①	11'-1"	①	11'-1"	①	11'-1"	①	11'-1"	①	11'-1"
w2	#4	②	4'-1"	③	5'-1"	③	6'-1"	③	7'-1"	③	8'-1"
w3	C4	②	④	②	④	②	④	②	④	②	④

* Field bend or cut Reinforcing as required for clearance
① 4(H1-6")÷4 (H1-6") Rounded down to nearest 0.5'
② 40÷4(W - 16") ③ H1-(9")

GENERAL NOTES

1. 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 8'-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
2. 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.
3. 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.
4. INLET TOP REINFORCING SHALL BE SPACED ON 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.
5. 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"	5'-8" x 11'-4" x 7 1/2"	21" & SMALLER	0.83 ±
5'-4"	6'-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 ±

REVISED 12-5-88 ~~REVISED 12-21-84~~

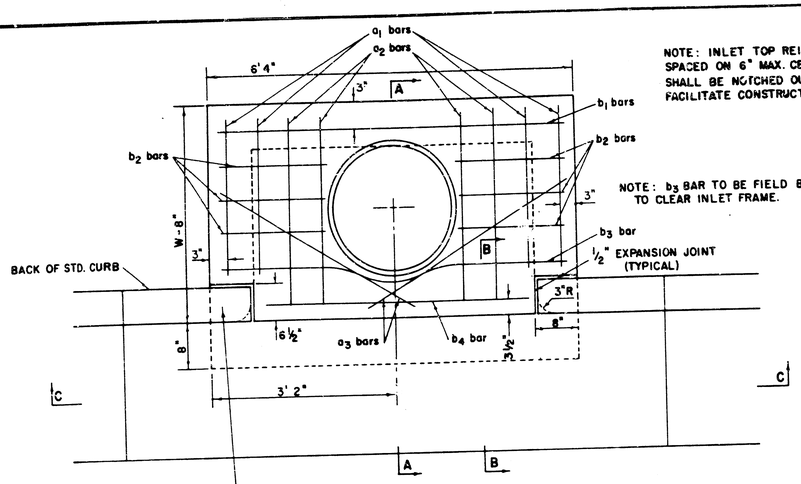
STANDARD TYPE 1A CURB INLET

INLET OPENING = 6" x 10'-0"

MKEC PROJ. NO. 90-28-113-D

WICHITA, KANSAS

Designed by	B.C.P., K.S., MKEC	Checked by	MKEC	SHEET NO. 11
Drawn by	J.G.P.	Date Nov., 1984	Job No.	TOTAL SHEETS 19

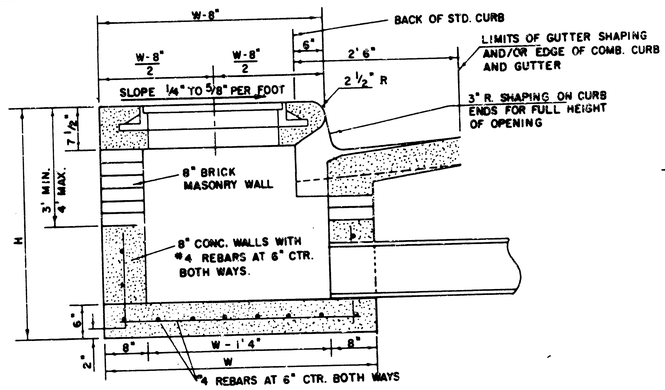


PLAN

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

NOTE: b_3 BAR TO BE FIELD BENT TO CLEAR INLET FRAME.

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.

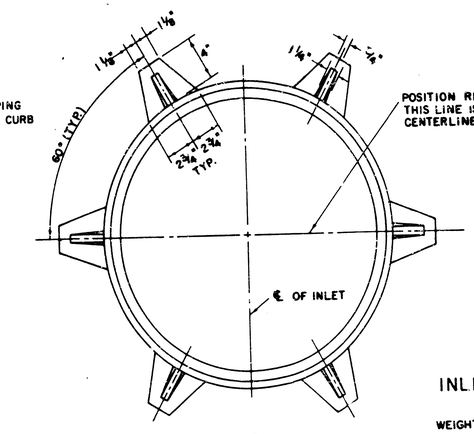


SECTION A-A

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.

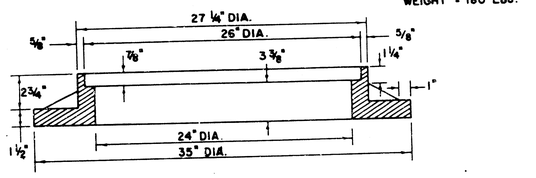
INLET INVERT SHALL BE SHAPED WITH 6 SACK SAND MIX CONCRETE TO CREATE FLOW CHANNELS AND TO INCREASE HYDRAULIC EFFICIENCY SUCH THAT THE INLET WILL BE SELF CLEANING BETWEEN ALL INLET AND/OR OUTLET PIPES.

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



INLET FRAME

WEIGHT = 180 LBS.



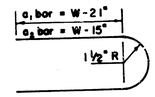
SEE CITY OF WICHITA STANDARD MANHOLE FRAME AND COVER DETAIL SHEET FOR COVER DETAILS TO BE USED WITH INLET FRAME.

STEEL SCHEDULE

BAR	a_1	a_2	a_3	b_1 W=4'4"	b_1 W=5'4"	b_1 W=6'4"	b_1 W=7'4"	b_1 W=8'4"	b_2	b_3	b_4	WT. LBS.
NUMBER	4	4	2	1	3	5	7	9	6	1	1	
SIZE	#4	#4	#4	#6	#4	#4	#4	#4	#4	#4	#6	
LENGTH W = 4'4"	5'7"	6'7"	4'0"	6'1"	–	–	–	–	1'9"	6'2"	4'8"	60±
LENGTH W = 5'4"	7'7"	8'7"	5'0"	–	6'1"	–	–	–	1'9"	6'2"	4'8"	81±
LENGTH W = 6'4"	9'7"	10'7"	6'0"	–	–	6'1"	–	–	1'9"	6'2"	4'8"	101±
LENGTH W = 7'4"	11'7"	12'7"	7'0"	–	–	–	6'1"	–	1'9"	6'2"	4'8"	121±
LENGTH W = 8'4"	13'7"	14'7"	8'0"	–	–	–	–	6'1"	1'9"	6'2"	4'8"	141±

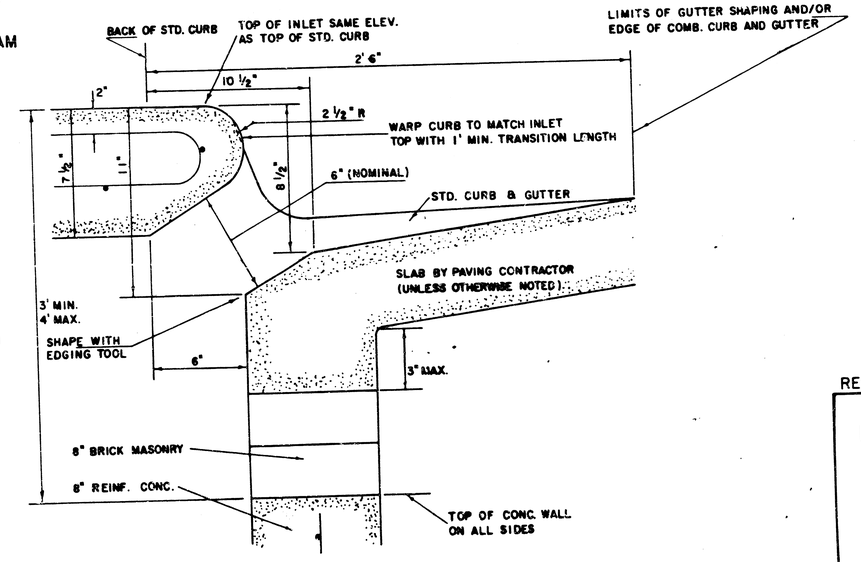
NOTE: a_3 BARS TO BE PLACED APPROX. 2" BELOW TOP OF INLET COVER.

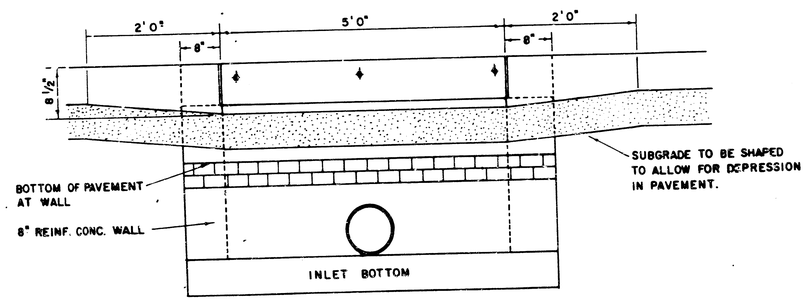
STANDARD CURB INLET PRECAST TOPS			
W	PRE-CAST TOP SIZE	PIPE SIZE	CU. YD. CONC.
4' 4"	3'8" 6'4" 7 1/2"	21" & SMALLER	0.38±
5' 4"	4'8" 6'4" 7 1/2"	24" & 30"	0.51±
6' 4"	5'8" 6'4" 7 1/2"	36" & 42"	0.64±
7' 4"	6'8" 6'4" 7 1/2"	48" & 54"	0.77±
8' 4"	7'8" 6'4" 7 1/2"	60" & 66"	0.90±



BENDING DIAGRAM

SECTION B-B





SECTION C-C

REVISED 12-21-1984

DETAIL STANDARD TYPE I CURB INLET

CITY OF WICHITA, KANSAS

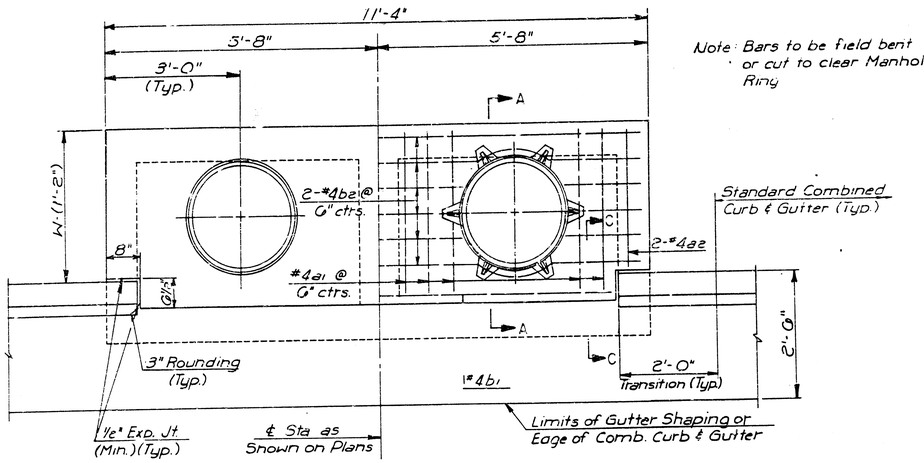
INLET OPENING = 6" × 5'0"

JUNE 1984

12/19

M.K.E.C. PROJ. NO. 80-28-113-D

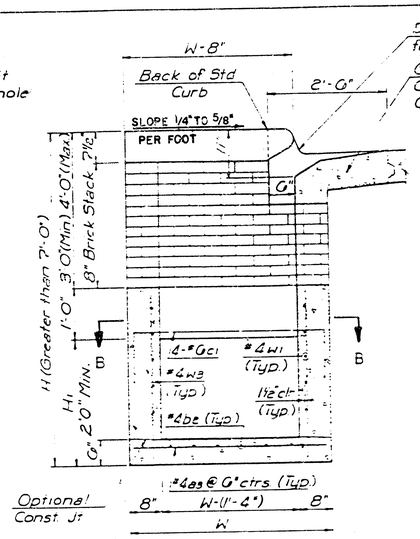
	SHEET NO	TOTAL SHEETS



SLAB REINFORCING NOT SHOWN SHOWING SLAB REINFORCING

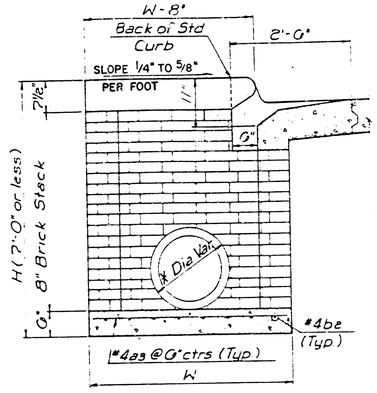
PLAN

Note: Bars to be field bent or cut to clear Manhole Ring



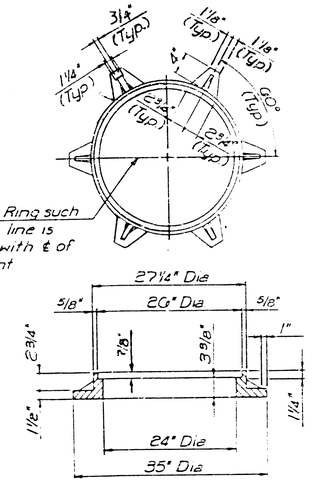
TYPICAL INLET SECTION AT CENTER WALL

(Reinforced Concrete Walls)



TYPICAL INLET SECTION AT CENTER WALL

(Masonry Walls)



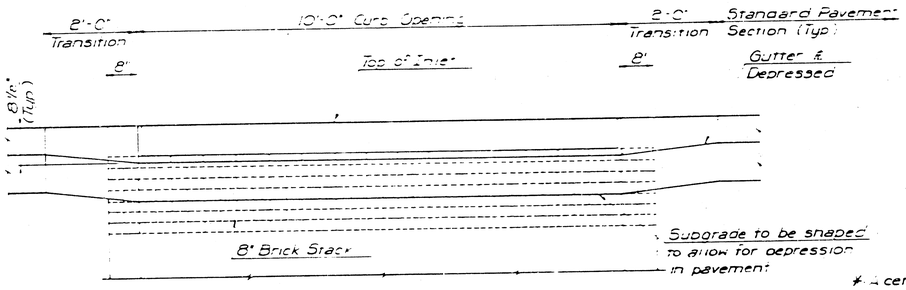
INLET FRAME (Weight = 180 LBS.)

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

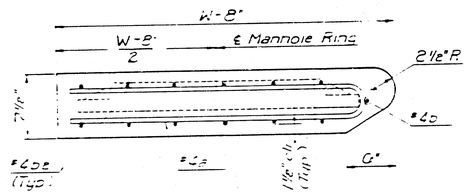
GENERAL NOTES

Concrete shall be C.O.W Standard Paving Mix All exposed edges shall be finished with an edging tool. Reinforcing Bars shall be field bent or cut to clear sides All bars are #4 bars at 6" Spacing and shall have a minimum clearance of 1½" unless otherwise noted. Floors of inlet shall be shaped with 8 Sack Sand Mix Concrete to increase hydraulic efficiency such that the inlet will be self cleaning between all inlet and/or outfall pipels, The Contractor will be required to construct 8" Brick Masonry Walls between the concrete inlet base and top on this inlet when H = 7'-0" or less and W = 6'-4" or less

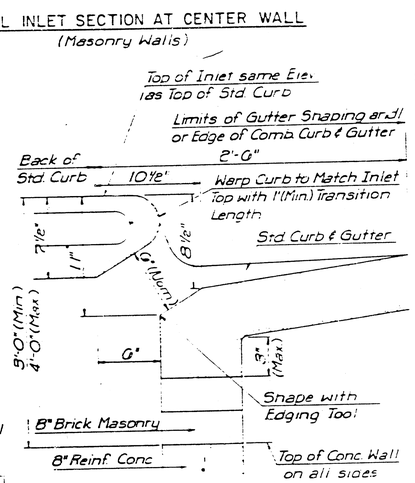
THE ENDS OF ALL PIPES INSTALLED IN INLETS SHALL BE CUT OFF FLUSH WITH THE INSIDE FACE OF THE INLET WALL.



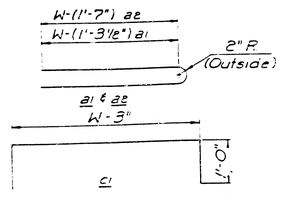
ELEVATION



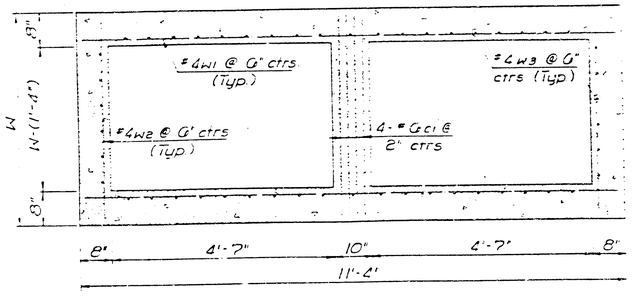
SECTION A-A



SECTION C-C



BENDING DIAGRAMS



SECTION B-B

*: A center wall opening shall be provided by means of a section of reinforced concrete pipe. The minimum diameter used shall be that of the outlet pipe

Note Concrete top to be installed on thin mortar cushion to insure full support along walls

SLAB AND FLOOR REINFORCING

		W=4'-4"		W=5'-4"		W=6'-4"		W=7'-4"		W=8'-4"	
Mark	Size	No	Length	No	Length	No	Length	No	Length	No	Length
a1	#4	13	6'-7½"	13	8'-7½"	13	10'-7½"	13	12'-7½"	13	14'-7½"
a2	#4	2	6'-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	0'-8"	1	0'-8"	1	0'-8"	1	0'-8"	1	0'-8"
*b2	#4	18	11'-1"	24	11'-1"	30	11'-1"	36	11'-1"	42	11'-1"

WALL REINFORCING

		W=4'-4"		W=5'-4"		W=6'-4"		W=7'-4"		W=8'-4"	
Mark	Size	No	Length	No	Length	No	Length	No	Length	No	Length
c1	#6	4	6'-1"	4	7'-1"	4	8'-1"	4	9'-1"	4	10'-1"
w1	#4	1	11'-1"	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"	1	8'-1"
w3	#4	2	13	2	13	2	13	2	13	2	13

*: Field bend or cut Reinforcing as required for clearance

①4(H1-6") ②40+4(W-1) ③H1-(D")

REVISED 12-21-1984

DETAIL STANDARD TYPE I CURB INLET

INLET OPENING = 6" x 10'-0"

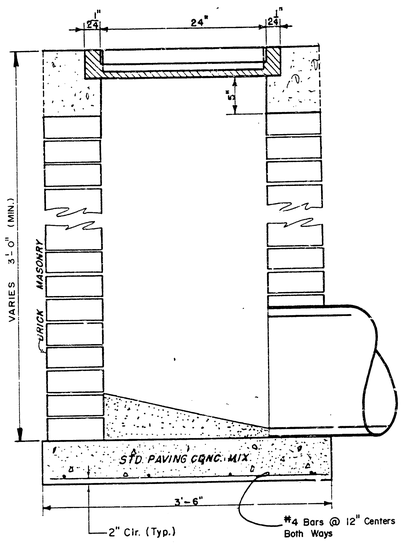
CITY OF WICHITA

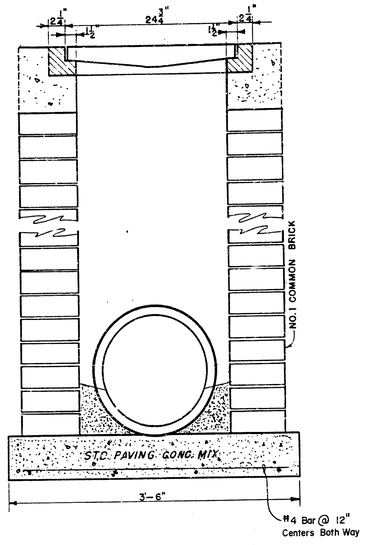
M.E. LINDEBAK, CITY ENGINEER

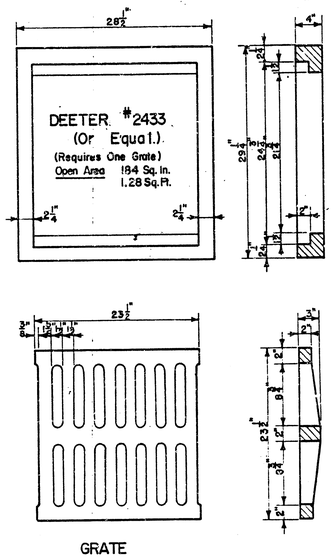
OCTOBER 1984 **13**

19

MKEC PROJ. NO. 80-78-113-D



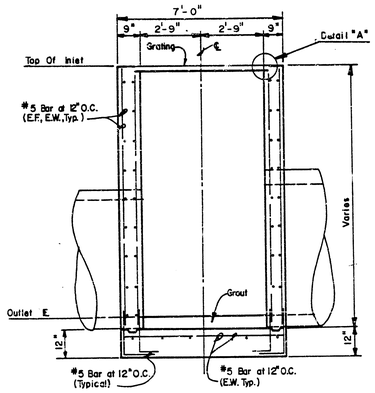


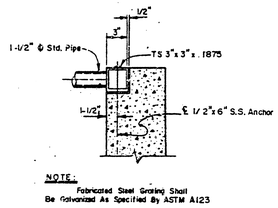


NOTE: GRATES SHALL BE IMPRINTED ON THE TOP SURFACE WITH "CITY OF WICHITA" USING LETTERS AT LEAST 1" IN HEIGHT. OTHER MARKING METHODS MAY BE USED ONLY IF APPROVED BY THE ENGINEER.

STANDARD DROP INLET

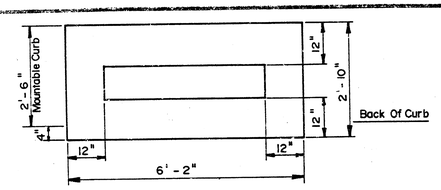
24" x 24" FRAME & GRATE DETAIL





NOTE:
Fabricated Steel Grating Shall Be Galvanized As Specified By ASTM A123

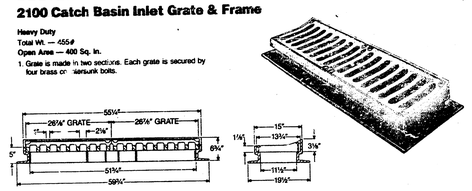
DETAIL "A"

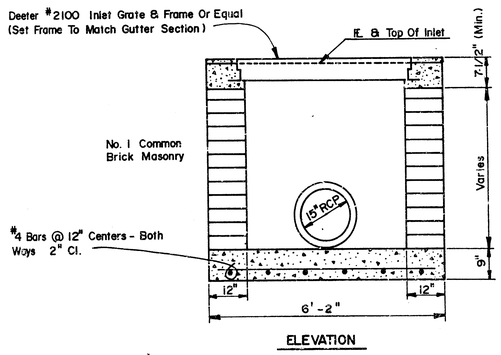


PLAN

DEETER
2100 Catch Basin Inlet Grate & Frame

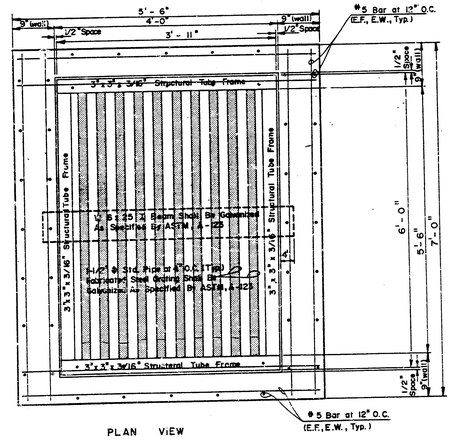
Heavy Duty
Total Wt. — 455#
Open Area — 400 Sq. In.
1. Grate is made in two sections. Each grate is secured by four brass countersunk bolts.



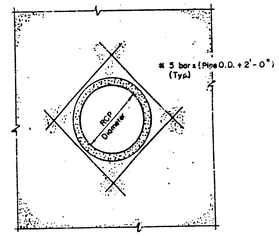


ELEVATION

SPECIAL MOUNTABLE CURB INLET



PLAN VIEW



TYPICAL REINFORCING AT PIPE

NOTE: Cut Reinforcing As Required To Clear RCP

SPECIAL REINFORCED CONCRETE AREA INLET

SPECIAL MOUNTABLE CURB INLET
SPECIAL AREA INLET
STANDARD DROP INLET
DETAILS

Drawn by: JNJ
Checked by: DLM
Date: 31 Oct., 90
Job No.

MID-KANSAS ENGINEERING CONSULTANTS PA
3500 NORTH ROCK ROAD
BUILDING #800
WICHITA, KANSAS 67226
636-5566

Sheet 14 of 19

MKEC Proj. No. 90-28-113-D

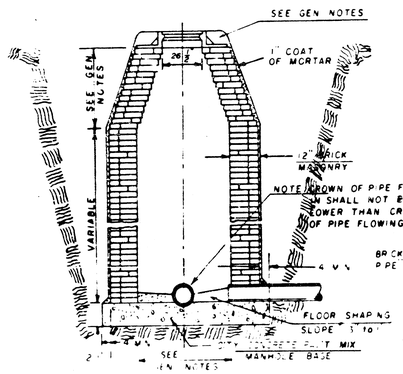
REVISED MAY 196
REVISED JAN. 1982

SEWER APPURTENANCES DETAILS

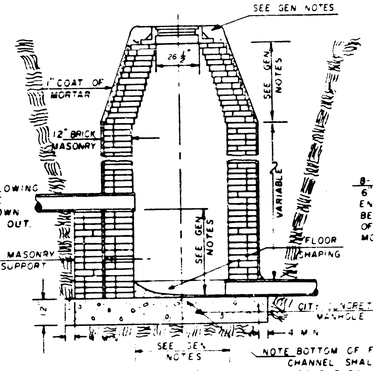
ADOPTED AS STANDARD DESIGN BY

City of Wichita, Kansas

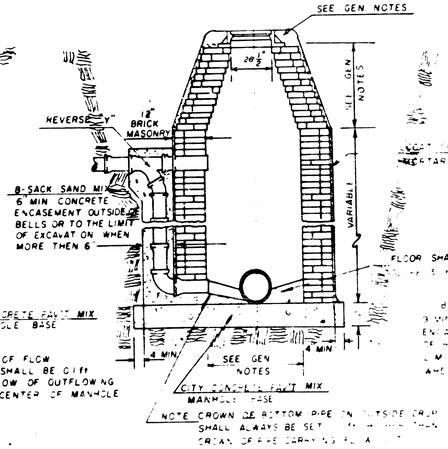
TYPE "B" MANHOLE



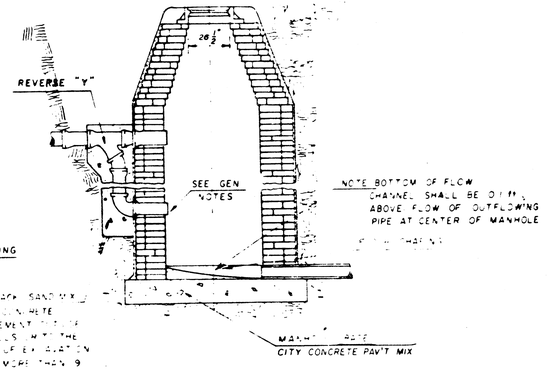
TYPE "B" INSIDE DROP MANHOLE



TYPE "B" OUTSIDE DROP MANHOLE



DETAIL OF OUTSIDE DROP CONSTRUCTED ON EXISTING MANHOLE



GENERAL NOTES

1. MORTAR USED IN MASONRY CONSTRUCTION SHALL CONTAIN 8 SACKS OF CEMENT PER CUBIC YARD. CONCRETE USED IN MANHOLE BASES SHALL CONFORM TO THE REQUIREMENTS OF CONCRETE FOR CONCRETE PAVEMENT CONSTRUCTION AS SPECIFIED IN THE CITY STANDARD PAVING SPECIFICATIONS USING CITY CONCRETE PAVEMENT MIX WITHOUT AIR ENTRAINING ADMIXTURE. MORTAR SHALL BE PLACED AROUND THE MANHOLE RING AS SHOWN ON THE DRAWINGS WHEN MANHOLES ARE CONSTRUCTED IN UNPAVED AREAS. TYPE "B" MANHOLES CAN BE USED ON SEWERS HAVING DEPTHS GREATER THAN 16' OR WHEN THE MANHOLE IS LOCATED IN PUBLIC STREET PAVEMENT. MANHOLES CONSTRUCTED WHERE PIPE SIZES ARE SMALLER THAN 24" SHALL HAVE AN INSIDE DIAMETER OF 4'. MANHOLES CONSTRUCTED WHERE PIPE SIZES ARE 24" OR LARGER SHALL HAVE AN INSIDE DIAMETER OF 5'. THE HEIGHT OF THE CORBELS ON 4' DIAMETER MANHOLES SHALL BE 4'. MANHOLES HAVING A DIAMETER OF 5' SHALL HAVE CORBELS 6' IN HEIGHT. COMPLETED MANHOLE SHALL BE WITHOUT LEAKS AND WATER TIGHT.

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

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

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

5. PIPES INSTALLED WITHIN THE EXCAVATION MADE FOR THE MANHOLE SHALL BE CRADLED WITH CONCRETE TO THE LIMITS OF THE MANHOLE EXCAVATION. WHEN CLAY PIPE IS USED, THE CRADLE SHALL EXTEND TO THE FIRST JOINT OUTSIDE THE MANHOLE. THE CRADLE SHALL BE 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.

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

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

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

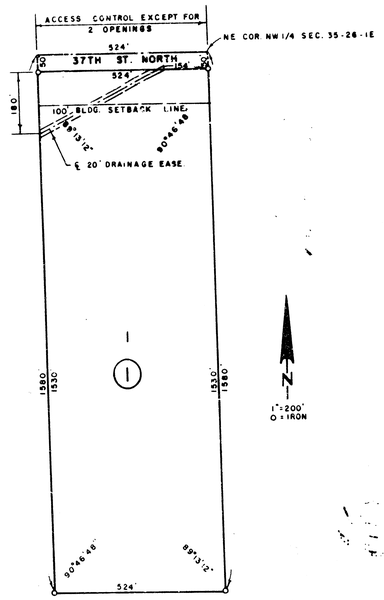
M.E.C. PROJ. NO. 00-28-113-D

L-3 24

L 3-24

KOCH OFFICE PARK

AN ADDITION TO SEDGWICK COUNTY, KANSAS



State of Kansas, County of Sedgwick, ss.

I, Lowell D. High, Land Surveyor in said State and County do hereby certify that I have surveyed and platted "KOCH OFFICE PARK", an Addition to Sedgwick County, Kansas and that the accompanying plat is a true and correct exhibit of said survey described as follows: The north 1360 feet of the east 324 feet of the NW 1/4 of Section 35, T26S, R1E of the 6th P.M., Sedgwick County, Kansas.

Lowell D. High, Land Surveyor
Lowell D. High 10-27-80

LOWELL D. HIGH REGISTERED LS-685 KANSAS LAND SURVEYOR

Know all men by these presents that Koch Industries, Inc. by Sterling V. Varner, President, has caused the land described in the Land Surveyor's certificate to be platted into a Lot, a block and a street to be known as "KOCH OFFICE PARK", an Addition to Sedgwick County, Kansas.

The street is hereby dedicated to and for the use of the public.

The drainage easement as indicated on the plat is hereby granted for drainage purposes.

All abutter's rights of access to or from 37th St. North over and across the north line of Lot 1, Block 1 are hereby granted to the appropriate governing body, provided, however, the Lot 1, Block 1, shall have access to 37th St. North at two locations, such locations to be designated by the appropriate governing body.

Koch Industries, Inc.

ATTEST: _____, President
Sterling V. Varner

KOCH INDUSTRIES, INC. KANSAS SEAL CORPORATION

GAIL FLETCHER, Assistant Secretary

State of Kansas, County of Sedgwick, ss.

The foregoing instrument was acknowledged before me this 27th day of October, 1980 by Sterling V. Varner, President of Koch Industries, Inc., a Kansas corporation, on behalf of the corporation.

Debra D. Friend, Notary Public
DEBRA D FRIEND

My Commission expires: October 12, 1983

DEBRA D. FRIEND STATE NOTARY PUBLIC Sedgwick County, Kansas My Appt. Exp. Oct. 12, 1983

This plat approved and all dedications shown hereon accepted by the Board of County Commissioners of Sedgwick County, Kansas, this 14th day of November, 19 80.

_____, Chairman
Everett Patrick

_____, Commissioner
Tra Scott

ATTEST: _____, Commissioner
Donald E. Gragg

Dorothy K. White, County Clerk
Dorothy K. White By Deputy Michael T. Sawyer, Deputy
MICHAEL T. SAWYER

#515149

Entered on transfer record this 14th day of November, 19 80.

Dorothy K. White, County Clerk
Dorothy K. White By Deputy Michael T. Sawyer, Deputy
MICHAEL T. SAWYER

State of Kansas, County of Sedgwick, ss.

This is to certify that this instrument was filed for record in the Register of Deeds Office, at 10:30 o'clock A m., on the 14TH day of NOVEMBER, 19 80.

Bette F. McCart, Register of Deeds
Bette F. McCart

Pat Kettler, Deputy
Pat Kettler

20.00

This plat of "KOCH OFFICE PARK", an Addition to Sedgwick County, Kansas has been submitted to and approved by the Wichita-Sedgwick County Metropolitan Area Planning Commission, Wichita, Kansas.

Dated this 23rd day of OCTOBER, 19 80.

Wichita-Sedgwick County Metropolitan Area Planning Commission

_____, Vice-Chairman
James L. Gardner, II

_____, Secretary
Robert A. Lakin

This plat approved and all dedications shown hereon accepted by the Board of City Commissioners of the City of Wichita, Kansas, this 14TH day of NOV., 19 80.

_____, Mayor
Robert G. Knight

_____, City Clerk
Donald C. Gisick

MXEC PROJ. NO. 80-28-113-D

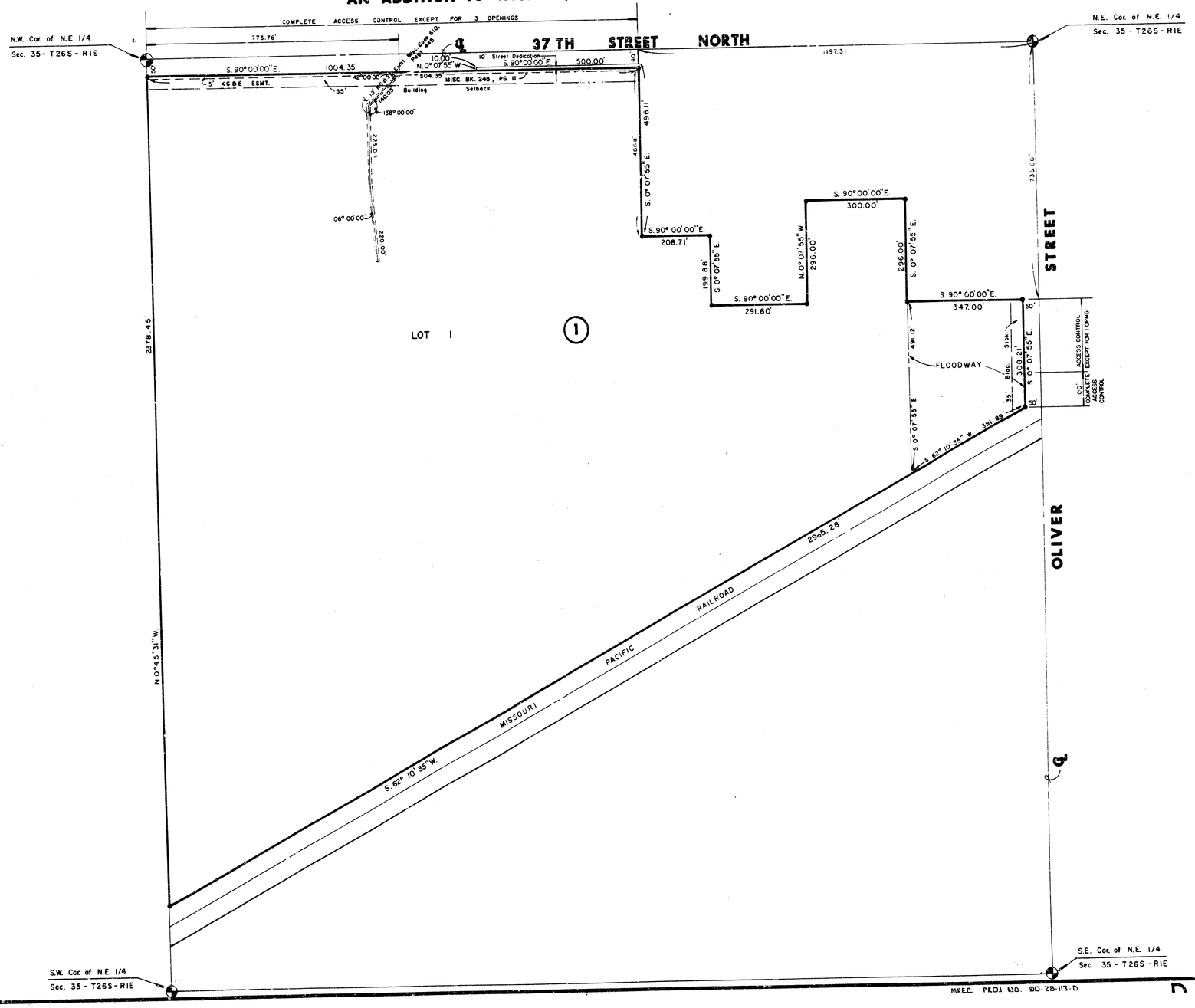
L-3 24

D 5-27 A

FINAL PLAT FOR

KOCH OFFICE PARK SECOND ADDITION

AN ADDITION TO WICHITA, SEDGWICK COUNTY, KANSAS



Scale: 1" = 150'

MKEC PROJECT NO. 120-28-113-D

17/19

D 5-27 A

D 5-27 B

FINAL PLAT FOR

KOCH OFFICE PARK SECOND ADDITION

AN ADDITION TO WICHITA, SEDGWICK COUNTY, KANSAS

I, Kenneth H. Bengtson, Civil Engineer and Land Surveyor in Kansas, do hereby certify that I have been in responsible charge of surveying and platting of "KOCH OFFICE PARK SECOND ADDITION", an addition to Wichita, Sedgwick County, Kansas, into a Lot, a Block, and a Street, the same being accurately set forth in the accompanying plat and described herein:

A tract of land lying in the Northeast Quarter, Section 35, Township 26 South, Range 1 East of the 6th P.M., Sedgwick County, Kansas, more particularly described as follows:

Beginning at a point lying 50.00 feet South of the Northwest corner of and on the west line of said Northeast Quarter; thence S 90° 00' 00" E, 1004.35 feet parallel with the North line of said Northeast Quarter; thence N 00° 07' 55" W, 10.00 feet to a point lying 40.00 South of the North line of said Northeast Quarter; thence S 90° 00' 00" E, 500.00 feet to a point lying 1197.31 feet West and 40.00 feet South of the Northeast corner of said Northeast Quarter; thence S 00° 07' 55" E, 496.11 feet parallel with the East line of said Northeast Quarter; thence S 90° 00' 00" E, 208.71 feet to a point lying 988.6 feet West and 536.11 feet South of the Northeast corner of said Northeast Quarter; thence S 00° 07' 55" E, 199.88 feet; thence S 90° 00' 00" E, 291.60 feet; thence N 00° 07' 55" W, 296.00 feet; thence S 90° 00' 00" E, 300.00 feet; thence S 00° 07' 55" E, 296.00 feet; thence S 90° 00' 00" E, 347.00 feet to a point lying 736.00 feet South and 50.00 feet West of the Northeast corner of said Northeast Quarter; thence S 00° 07' 55" E, 308.21 feet parallel and 50.00 feet West of the East line of said Northeast Quarter to a point on the North right-of-way line of Missouri Pacific Railroad Company; thence S 62° 10' 35" W, 2965.28 feet along the North right-of-way line to a point on the West line of said Northeast Quarter; thence N 00° 45' 31" W, 2378.45 feet along said West line to the point of beginning.

The Water Easement found on Misc. Book 595, Page 386 and the Sewer Easement found on Misc. Book 601, Page 552 are hereby vacated by virtue of K.S.A. 12-512 (b).

I hereby certify that the details of this plat are correct to the best of my knowledge and belief this 5th day of January, 1988.

Kenneth H. Bengtson
Kenneth H. Bengtson, P.E., L.S. #922
Mid-Kansas Engineering Consultants, P.A.
3500 N. Rock Road, Building #800
Wichita, KS 67226

Know all men by these presents that we the undersigned property owners of the land as above set forth in the Land Surveyor's and Civil Engineer's Certificate, have caused the same to be surveyed and platted into a Lot, Block, and street the same to be known as "KOCH OFFICE PARK SECOND ADDITION", an addition to Wichita, Sedgwick County, Kansas. The street is hereby dedicated to and for the use of the public. The floodway shall be the responsibility of the owners until such time as the governing body exercising jurisdiction elects to assume the responsibility for the maintenance and improvement of the drainage, provided further, that no structure shall be constructed on or within said floodway, nor shall any fill, change of grade, creation of channel or other work be carried on without the permission of the City Engineer. All abutters rights of access to or from Oliver over and across the East line of Lot 1, Block 1, KOCH OFFICE PARK SECOND ADDITION, are hereby granted to the City of Wichita, provided however that Lot 1 shall have one opening to Oliver, North of a point lying 100.00 feet from the North line of MOPAC Railroad. All abutters rights of access to or from 37th Street North over and across the North line of Lot 1, Block 1, KOCH OFFICE PARK SECOND ADDITION, are hereby granted to the City of Wichita, provided however that Lot 1 shall have three openings to 37th Street North. All openings shall be determined by the City Engineer.

KOCH INDUSTRIES, INC.

C.J. Nelson
C.J. Nelson
Company Treasurer

STATE OF KANSAS)
) SS:
SEDGWICK COUNTY)

Be it remembered that on this 5th day of January, 1988, before me a Notary Public in and for said State and County, came C.J. Nelson, Company Treasurer of Koch Industries, Inc., to me personally known to be the same person who executed the foregoing instrument of writing and duly acknowledged the execution of the same. In testimony whereof I have hereunto set my hand and affixed my notarial seal the day and year above written.

Marcia S. McGee, Notary Public
Marcia S. McGee
My Appointment Expires: 4/21/88

20.00

CITY OF WICHITA

Robert G. Knight
Mayor

STATE OF KANSAS)
) SS:
SEDGWICK COUNTY)

Be it remembered that on this ___ day of ___, 1988, before me a Notary Public in and for said State and County, came Robert G. Knight, Mayor for the City of Wichita, Kansas, to me personally known to be the same person who executed the foregoing instrument of writing and duly acknowledged the execution of the same. In testimony whereof I have hereunto set my hand and affixed my notarial seal the day and year above written.

Notary Public
Cheryl Holloway
My Appointment Expires: ___

CITY OF KECHI

Naomi Fultz
Mayor

STATE OF KANSAS)
) SS:
SEDGWICK COUNTY)

Be it remembered that on this 14 day of JANUARY, 1988, before me a Notary Public in and for said State and County, came Naomi Fultz, Mayor for the City of Kechi, Kansas, to me personally known to be the same person who executed the foregoing instrument of writing and duly acknowledged the execution of the same. In testimony whereof I have hereunto set my hand and affixed my notarial seal the day and year above written.

Iris Clubb, Notary Public
Iris Clubb
My Appointment Expires: NOV 14 1990

NOV 19 1991

#930972

This plat of "KOCH OFFICE PARK SECOND ADDITION" has been submitted to and approved by the Wichita-Sedgwick County Metropolitan Area Planning Commission, Wichita, Kansas.

Dated this 21st day of December, 1987.

WICHITA-SEDGWICK COUNTY METROPOLITAN AREA PLANNING COMMISSION

Ezekiel Parsons, Chairman

Marvin S. Krout, Secretary

This plat approved and all dedications shown hereon, if any, accepted by the City Council of the City of Wichita, Kansas, this 5th day of JAN, 1988.

Robert G. Knight, Mayor

Dale E. Rea, Deputy City Clerk

Entered on transfer record this 12 day of Feb., 1988.

Don Wright, County Clerk

STATE OF KANSAS)
) SS:
SEDGWICK COUNTY)

This is to certify that this instrument was filed for record in the Register of Deeds office this 12TH day of FEBRUARY, 1988. AT 11:00 A.M.

Pat Kettler, Register of Deeds

Ed Resa, Deputy

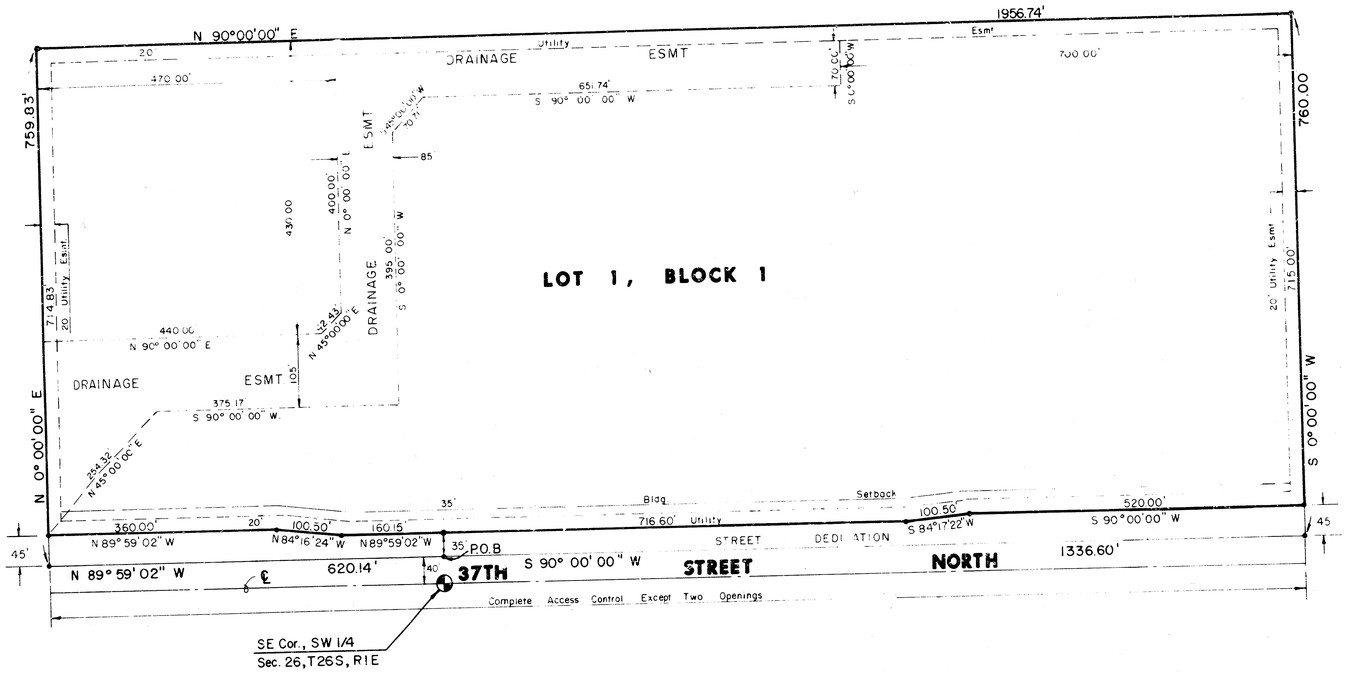
MKEC PROJ. NO. 90-28-115-D

18/19

FINAL PLAT OF

KOCH OFFICE PARK THIRD ADDITION

AN ADDITION TO WICHITA, SEDGWICK COUNTY, KANSAS



Scale 1" = 100'

This plat of "KOCH OFFICE PARK THIRD ADDITION" has been submitted to and approved by the Wichita-Sedgwick County Metropolitan Area Planning Commission, Wichita, Kansas.

Dated this 7th day of December, 1989.

WICHITA-SEDGWICK COUNTY METROPOLITAN AREA PLANNING COMMISSION

Wayne L. Brinegar, Chairman

Marvin S. Krout, Secretary

This plat approved and all dedications shown hereon, if any, accepted by the City Council of the City of Wichita, Kansas, this ___ day of _____, 1990.

Bob Knight, Mayor

John Moir, City Clerk

Entered on transfer record this ___ day of _____, 1990.

Don Wright, County Clerk

STATE OF KANSAS)
) SS:
SEDGWICK COUNTY)

This is to certify that this instrument was filed for record in the Register of Deeds office this ___ day of _____, 1990.

Pat Kettler, Register of Deeds

Ed Resa, Deputy

I, Kenneth H. Bengtson, a Civil Engineer and Registered Land Surveyor in Kansas, do hereby certify that I have been in responsible charge of surveying and platting of "KOCH OFFICE PARK THIRD ADDITION" an addition to Wichita, Sedgwick County, Kansas, into a Lot, a Block, and a Street, the same being accurately set forth in the accompanying plat and described herein:

Commencing at the Southeast corner of the Southwest Quarter of Section 26, Township 26 South, Range 1 East of the 6th P.M. Sedgwick County, Kansas; thence N 00° 12' 08" E, 40.00 feet to the point of beginning; thence N 89° 59' 02" W, 620.14 feet; thence N 00° 00' 00" E, 759.83 feet; thence N 90° 00' 00" E, 1956.74 feet; thence S 00° 00' 00" W, 760.00 feet; thence S 90° 00' 00" W, 1336.60 feet to the point of beginning.

The Floodway Reserve Agreement, recorded on Film 452, Page 165, is hereby vacated and replatted by Virtue of K.S.A. 12-512(b).

I hereby certify that the details of this plat are correct to the best of my knowledge and belief this 12 day of February, 1990.

Kenneth H. Bengtson, P.E., R.L.S. #922
Mid-Kansas Engineering Consultants, P.A.
3500 N. Rock Road, Building #800
Wichita, KS 67226

Know all men by these presents that we the undersigned property owners of the land as above set forth in the Land Surveyor's and Civil Engineer's Certificate, have caused the same to be surveyed and platted into a lot, a block, and a street, the same to be known as "KOCH OFFICE PARK THIRD ADDITION", an addition to Wichita, Sedgwick County, Kansas. The street is hereby dedicated to and for the use of the public. Easements for the construction and maintenance of drainage and public utilities as indicated on the accompanying plat are hereby granted to the City of Wichita. The drainage easement shall be the responsibility of the owners of Lot 1, Block 1 for the maintenance and improvements of the drainage, provided further, that no structure shall be constructed on or within said drainage easement, nor shall any fill, change of grade, creation of channel or other work be carried on without the permission of the City Engineer. All abutters, rights of access to or from 37th Street North, over and across the South line of Lot 1, Block 1, are hereby granted to the City of Wichita, provided however, that Lot 1, Block 1, shall have access to 37th Street North at two locations to be determined by the City Engineer.

KOCH INDUSTRIES, INC.

BY: _____
C.J. Nelson, Company Treasurer

STATE OF KANSAS)
) ss:
SEDGWICK COUNTY)

BE IT REMEMBERED, that on this 12th day of February, 1990, before me, a Notary Public in and for the County and State aforesaid, came C.J. Nelson, Company Treasurer of Koch Industries, Inc., to me personally known to be the same persons who executed the foregoing instrument of writing and duly acknowledged the execution of the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal, the day and year last above written.

Marcia S. McGee
Notary Public Marcia S. McGee

My Appointment Expires: 4'21'92

MKEC PROJ. NO. 90-28.115-B

19
19