

STREET IMPROVEMENTS FOR BRUSH CREEK ADDITION

35TH ST. NORTH: From the E.L. Rushwood to the E.L. Lot 31, Blk. 3
35TH ST. COURT: From the N.L. 35th St. N. Cir. to and Including Cal-De-Sac

Project No.

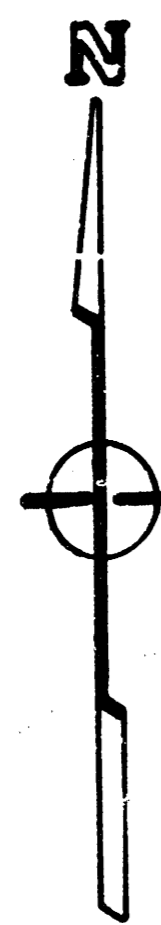
472-76-245-81412-000-000-001 INDEX # 602193

CITY OF WICHITA, KANSAS

Michael E. Lindebak City Engineer

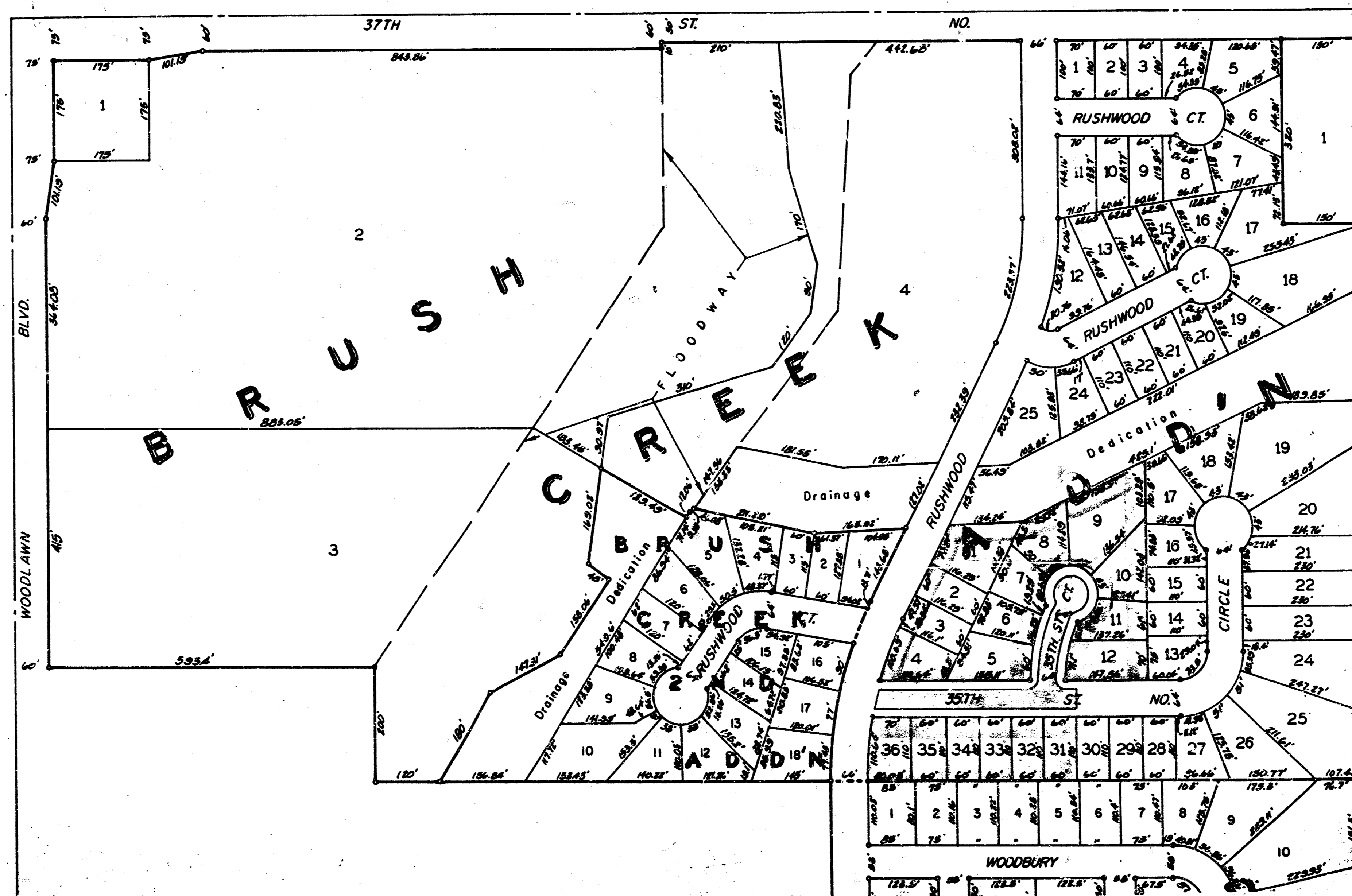
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- 1 TITLE SHEET
- 2 35' PAVEMENT DETAIL
- 3 35TH STREET NORTH CIRCLE
- 4 35TH STREET COURT
- 5 INCIDENTAL DRAINAGE
- 6 TYPE 1-A INLET DETAIL
- 7-8 EARTHWORK CROSS SECTIONS



BENCH MARKS

- BENCH MARK #1: Square Cut In Back of Walk at Station 0+42, 35th St. North, 32 Feet Left. Elevation= 175.98 City Datum
- BENCH MARK #2: Square Cut In Back of Walk at Station 0+27, 35th St. North, 32 Feet Right. Elevation= 175.94 City Datum



GENERAL NOTES

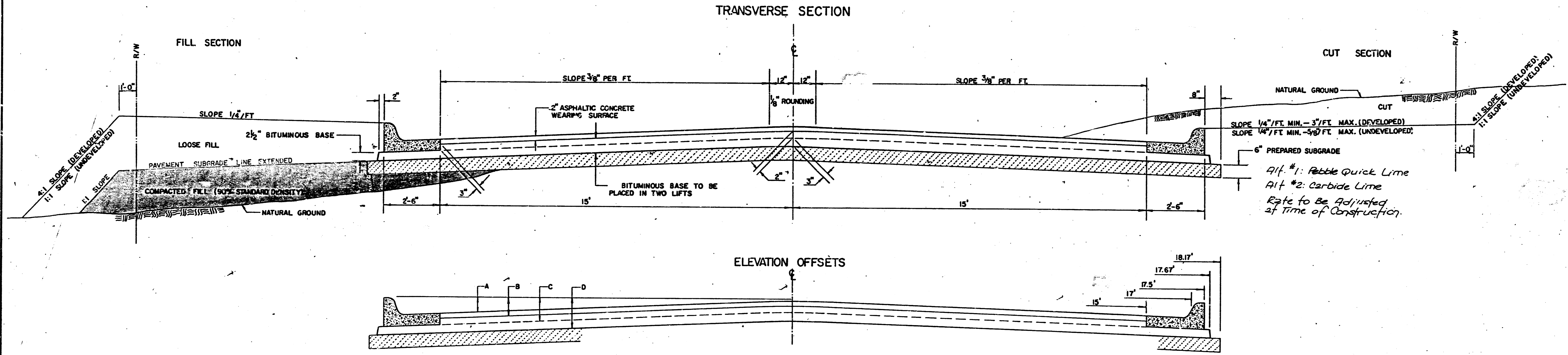
1. Utility service lines, poles, valve boxes, meters, and etcetera are to be adjusted as necessary by others prior to construction unless the plans specifically call for their adjustment by the Contractor or unless the plans specifically identify a utility to be adjusted by its owner during construction. Existing utilities and their location, as shown on the plans, represent the best information obtainable for design. The contractor will be required to work around existing utilities within the right-of-way which do not conflict with proposed construction.
2. No more than 4 drives 16 feet in width, or equivalent combinations thereof, are to be constructed with this project.
3. The Contractor shall be responsible for preserving property irons. The Contractor will be required to re-establish any property irons which are damaged or destroyed by his construction operations. Such irons shall be re-established by a licensed land surveyor in accordance with state laws.

BENEFIT DISTRICT



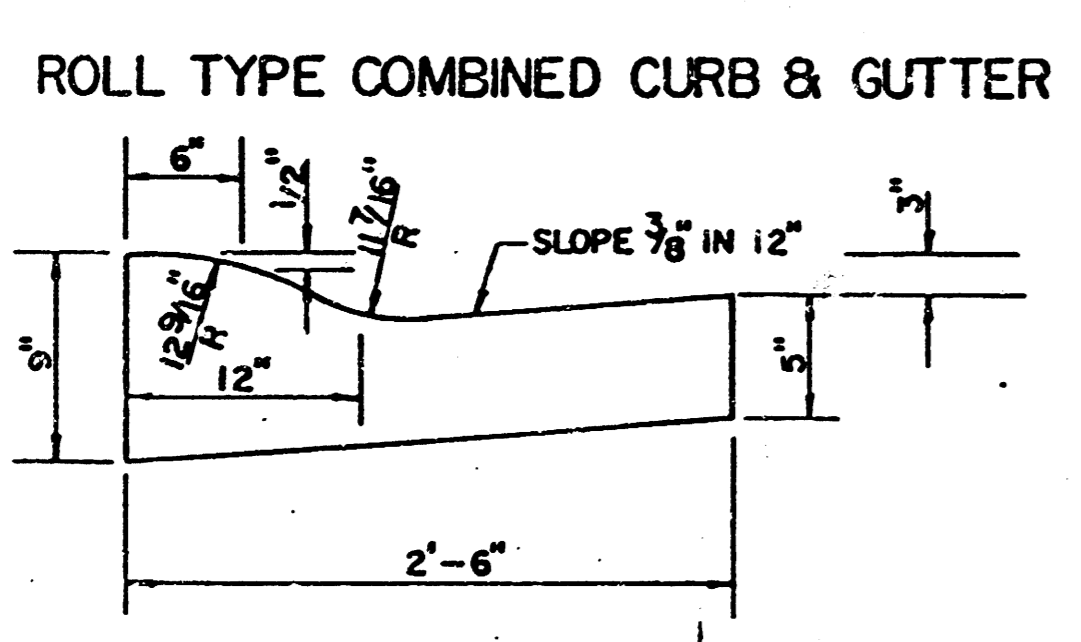
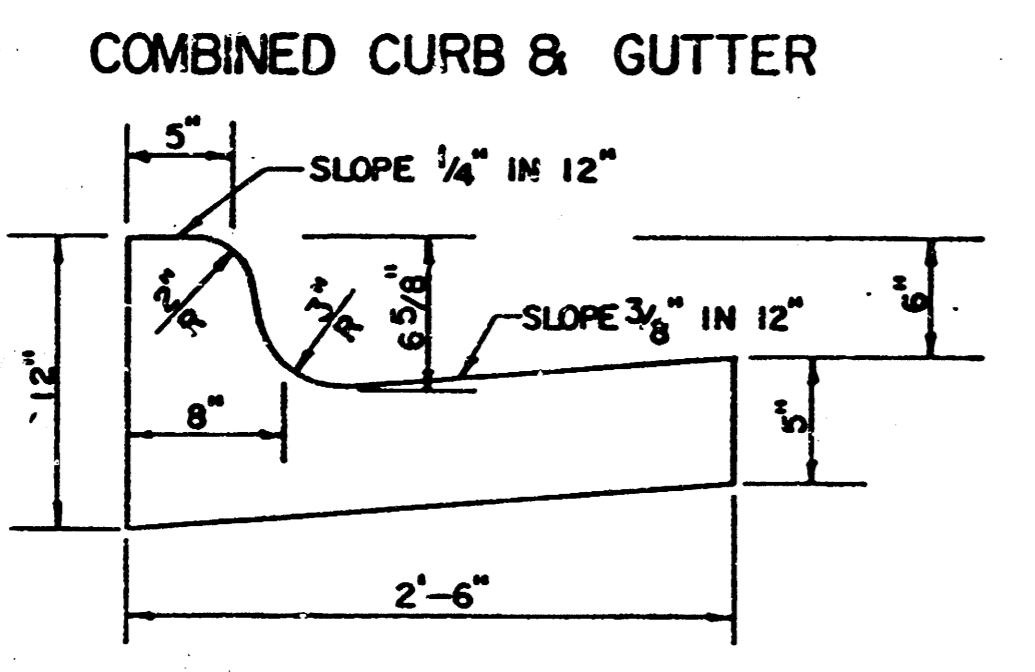
Nov 10, 1988
BAUGHMAN COMPANY P. A.
 SURVEYING & ENGINEERING
 316/262-7271 • 315 ELLIS • WICHITA, KANSAS 67211

TYPICAL 35' PAVEMENT DETAILS



Alt #1: Pebble Quick Lime
Alt #2: Carbide Lime
Rate to be adjusted at time of construction.

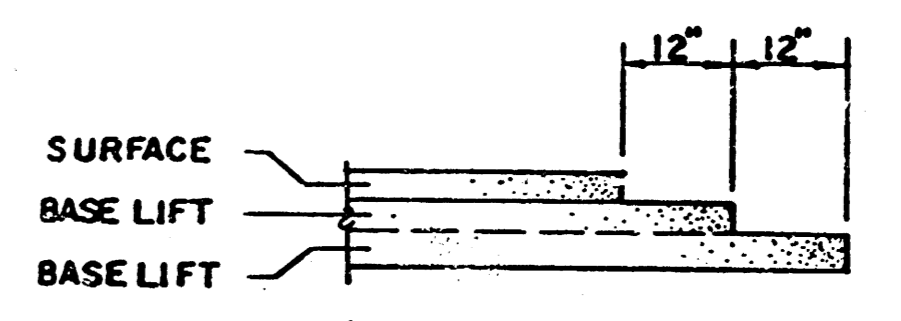
	DISTANCE FROM CENTERLINE (LT. & RT.)													
	0'	2'	4'	6'	8.5'	10'	12'	14'	15'	17'	17.5'	17.67'	18.17'	
A: TOP OF CURBS TO TOP OF SURFACE LIFT	0.04	0.08	0.14	0.21	0.29	0.33	0.39	0.46	0.49	—	—	—	—	
B: TOP OF CURBS TO TOP OF UPPER BASE LIFT	0.21	0.25	0.31	0.37	0.45	0.50	0.56	0.62	0.65	—	—	—	—	
C: TOP OF CURBS TO TOP OF LOWER BASE LIFT	0.37	0.43	0.50	0.57	0.67	0.72	0.79	0.87	0.90	0.98	1.00	1.00	—	
D: TOP OF CURBS TO TOP OF SUBGRADE	0.62	0.67	0.74	0.81	0.90	0.95	1.02	1.08	1.12	1.19	1.21	1.21	1.23	



GENERAL NOTES

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

TRANSVERSE CONSTRUCTION JOINTS

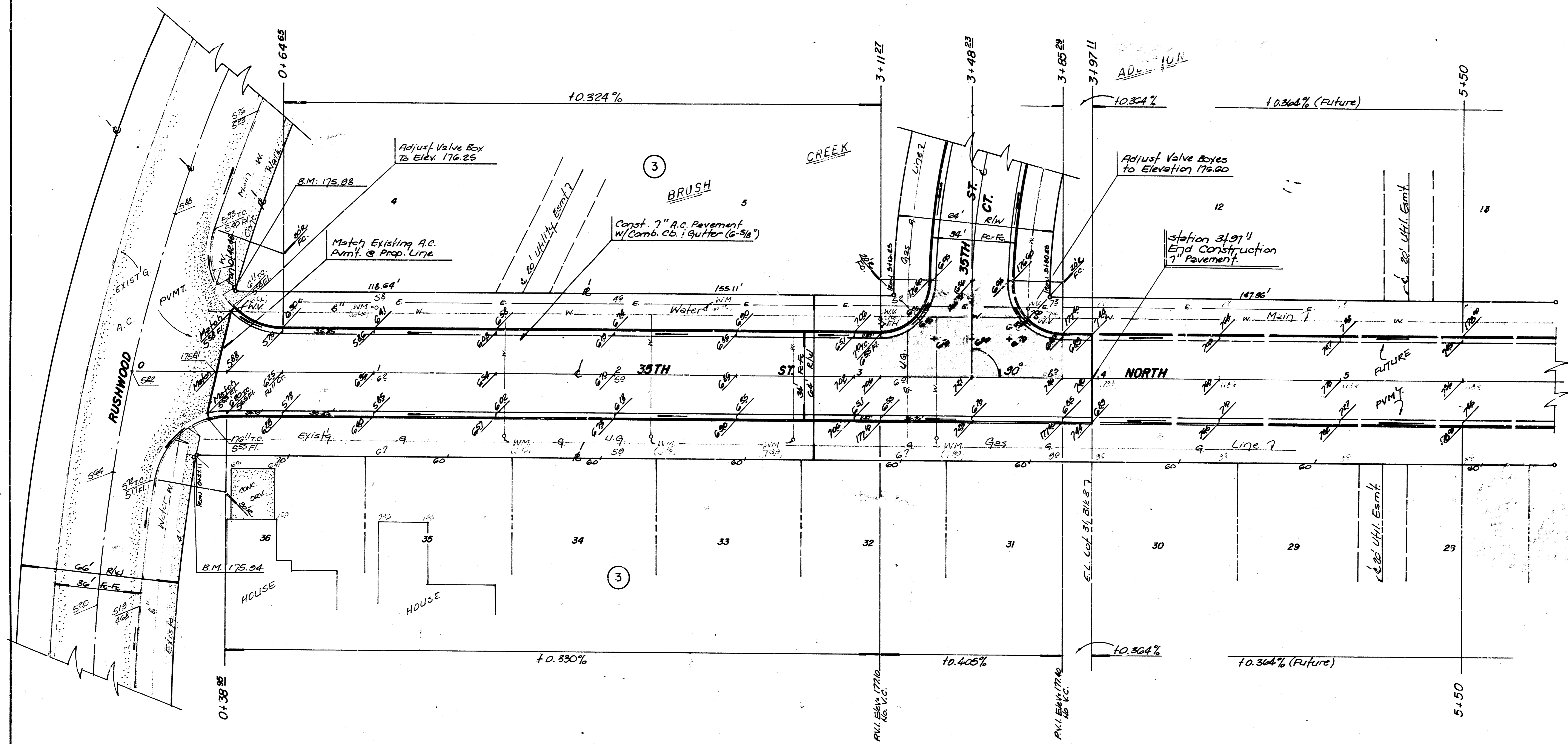
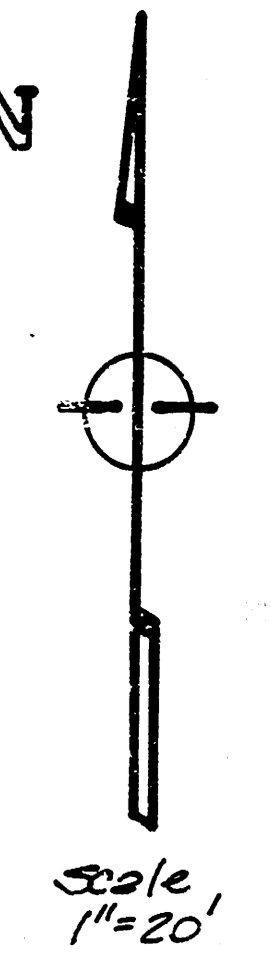


TRANSVERSE CONSTRUCTION JOINTS SHALL BE CONSTRUCTED IN FLEXIBLE BASE PAVEMENTS AT LOCATIONS WHERE PAVEMENT JOINTS EXISTING FLEXIBLE BASE PAVEMENT AS SHOWN BY THE DETAIL. ALL COSTS ASSOCIATED WITH THE CONSTRUCTION OF THE TRANSVERSE JOINT SHALL BE INCLUDED IN THE BID PRICE FOR SQUARE YARDS 7" ASPHALTIC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

7 INCH RESIDENTIAL ASPHALTIC CONCRETE PAVEMENT WITH 5 INCH BITUMINOUS BASE
CITY OF WICHITA, KANSAS 2
PROJECT NUMBER
472-76-245-81412-000-000-001 8

BENCH MARK #1: Square Cut In Back of Walk at Station
0+42, 35th St. North, 32 Feet Left.
Elevation= 175.98 City Datum

BENCH MARK #2: Square Cut In Back of Walk at Station
0+27, 35th St. North, 32 Feet Right.
Elevation= 175.94 City Datum



Earthwork Summary

Excavation= 330.6 c.y.	Compacted Fill= 88.1 c.y.
+10% 33.1 c.y.	+10% 8.8 c.y.
Total 363.7 c.y.	Total 96.9 c.y.
Borrow= 589.6 c.y.	Subgrade Manipulation= 2494 sq.

INTERSECTION QUANTITIES

—	S.Y.	Concrete Pavement
2215	S.Y.	7" Asphalt Conc. Pavement (5" Bituminous Base)
186	S.Y.	3 1/2" Bituminous Base
622	L.F.	Combined Curb & Gutter
—	L.F.	Integral Curb
—	S.F.	4" Wheelchair Ramp
—	S.F.	4" Walk
—	C.Y.	Excavation
—	C.Y.	Compacted Fill
—	Lbs.	Reinforcing Steel
248	S.Y.	Manipulation
—	—	Tons Lime or Cement
—	S.Y. V.G.	Concrete & Asphalt Concrete Base

35TH STREET NORTH

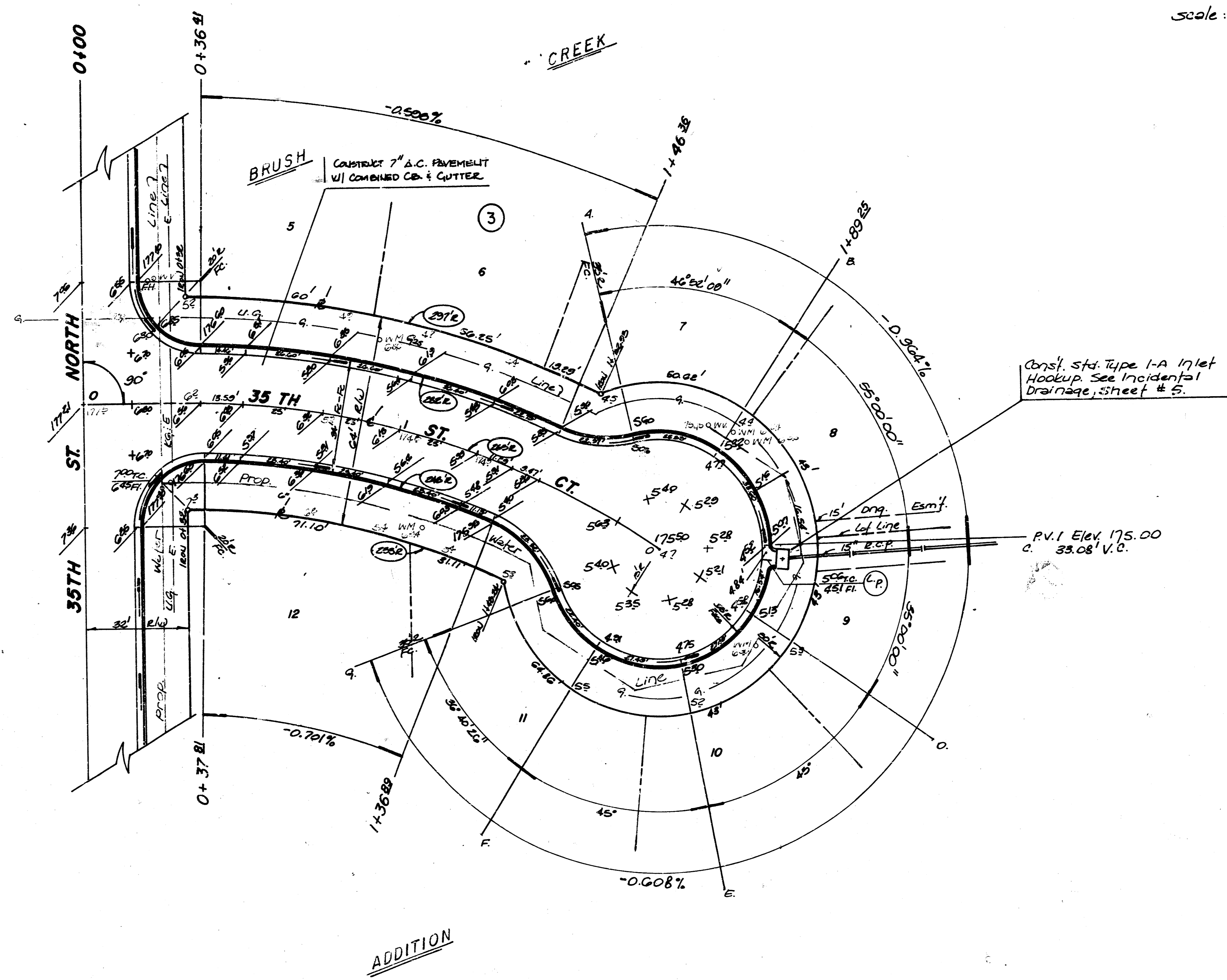
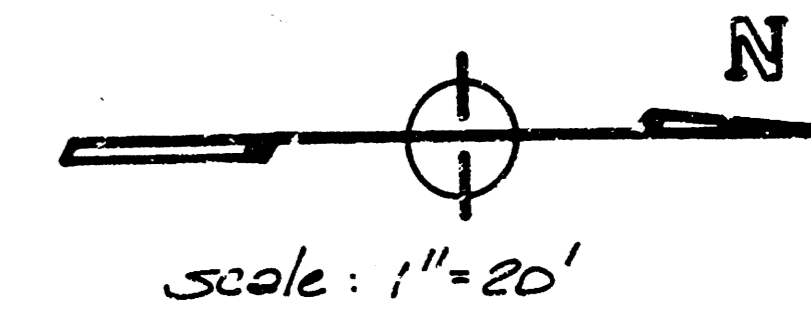
BAUGHMAN COMPANY P. A.
SURVEYING & ENGINEERING
316/262-7271 • 315 ELLIS • WICHITA, KANSAS 67211

PROJECT NUMBER
472-76-245-81412-000-000-001

DESIGN NBW	DRAWN CB	APPROVED NBW	DATE 11/10/88	SCALE Noted	SHEET 3	OF 3
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BENCH MARK #1: Square Cut In Back of Walk at Station
0+42.35th St. North, 32 Feet Left.
Elevation= 175.98 City Datum

BENCH MARK #2: Square Cut In Back of Walk at Station
0+27.35th St. North, 32 Feet Right.
Elevation= 175.94 City Datum



CURVE DATA BASED ON $R=205'$ $\Delta=34^{\circ}00'00''$
 $T=211.02'$ $LC=154.26'$ $ARC=157.25'$

STATION	ARC	CHORD LENGTHS		DEF. Δ	TOTAL DEF. Δ
		CH. LT. FO.	CH. RT. FO.		
0+36.81	4.41	4.85		0°26'36"	0°26'36"
0+37.81	1.40		9.26	0°05'05"	0°31'41"
0+45	15.10	13.34	11.04	1°13'04"	1°44'45"
0+47.5	2.5	27.55	22.63	2°42'10"	4°26'55"
1+00	2.5	27.55	22.63	2°42'10"	7°09'05"
+25	2.5	27.55	22.63	2°42'10"	10°05'15"
1+36.80	11.80		10.77	1°17'07"	11°22'22"
1+46.56	9.47	23.37		1°01'26"	12°21'48"
1+55.25 PT	42.80	46.80	47.54	4°36'12"	17°00'00"

DEFLECTION AT PT. = 0.48648 MINUTES.

35TH STREET COURT			
BAUGHMAN COMPANY P. A. SURVEYING & ENGINEERING 318/282-7271 • 315 ELLIS • WICHITA, KANSAS 67211			
PROJECT NUMBER 472-76-245-81412-000-000-001			
DESIGN NBW	DRAWN CB	APPROVED NBW	DATE 11/10/88
			SCALE Noted
			SHEET 4 OF 8

BRNCH MARK #1: Square Out In Back of Walk at Station 0+42, 35th St. North, 32 Feet Left. Elevation= 176.98 City Datum

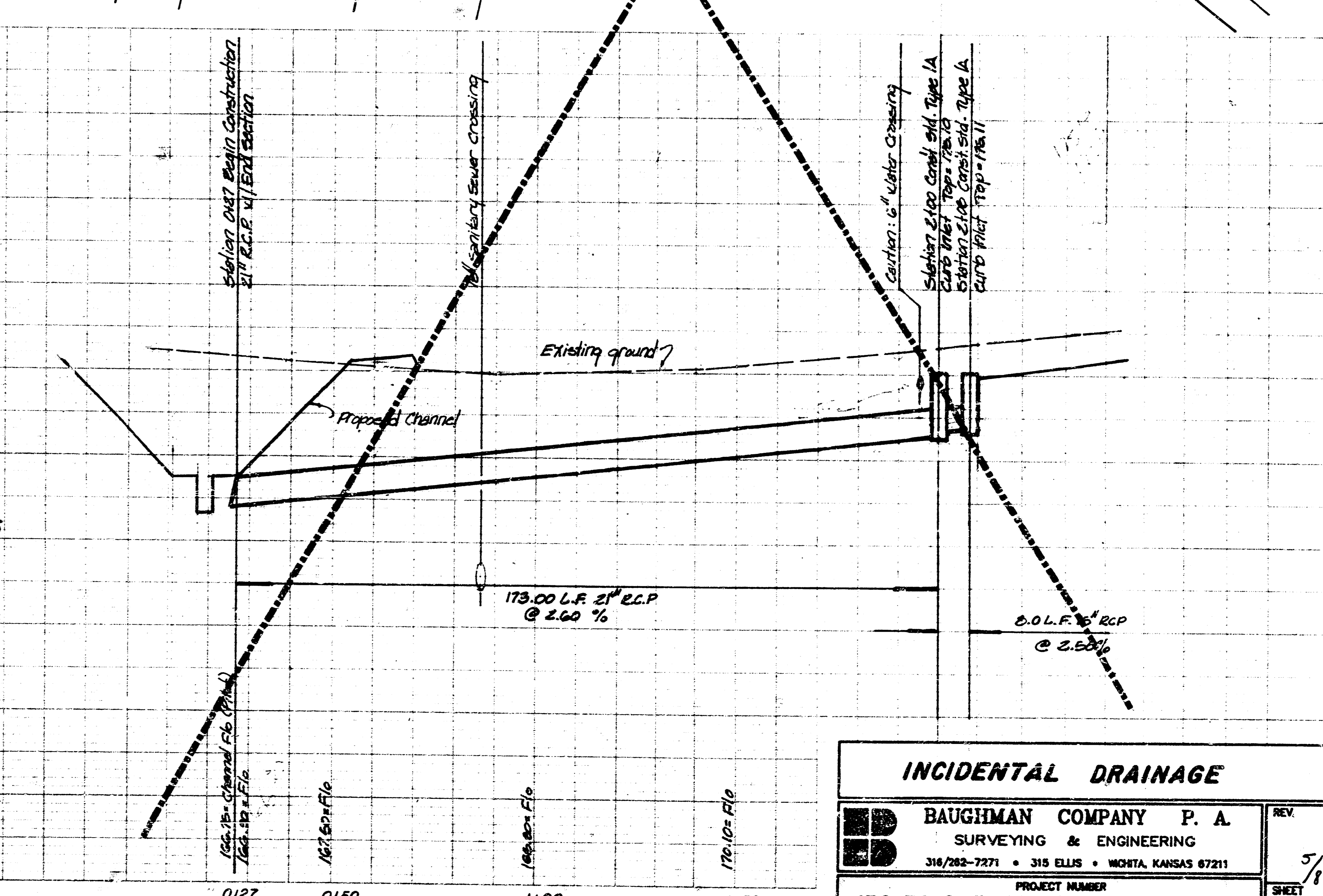
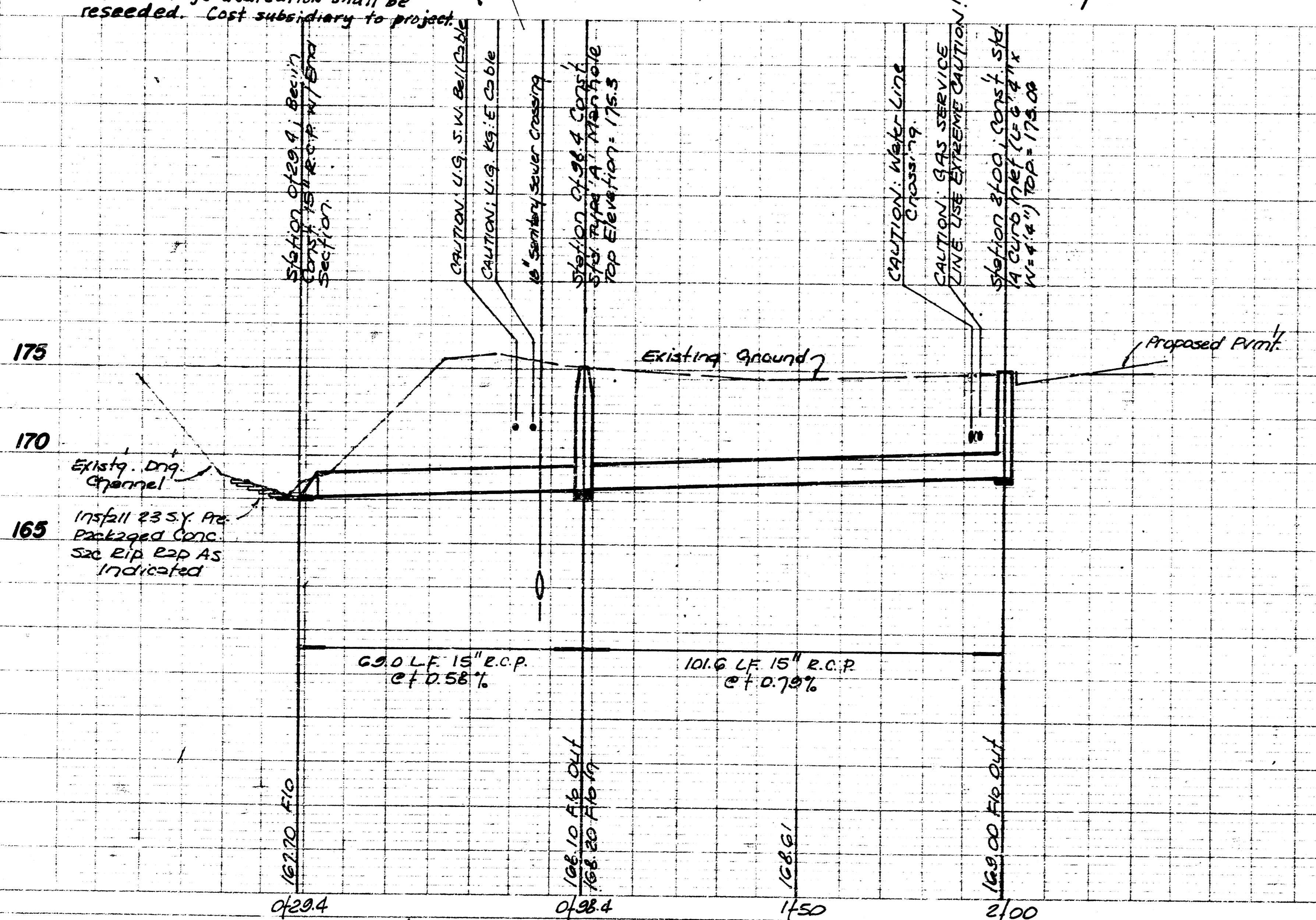
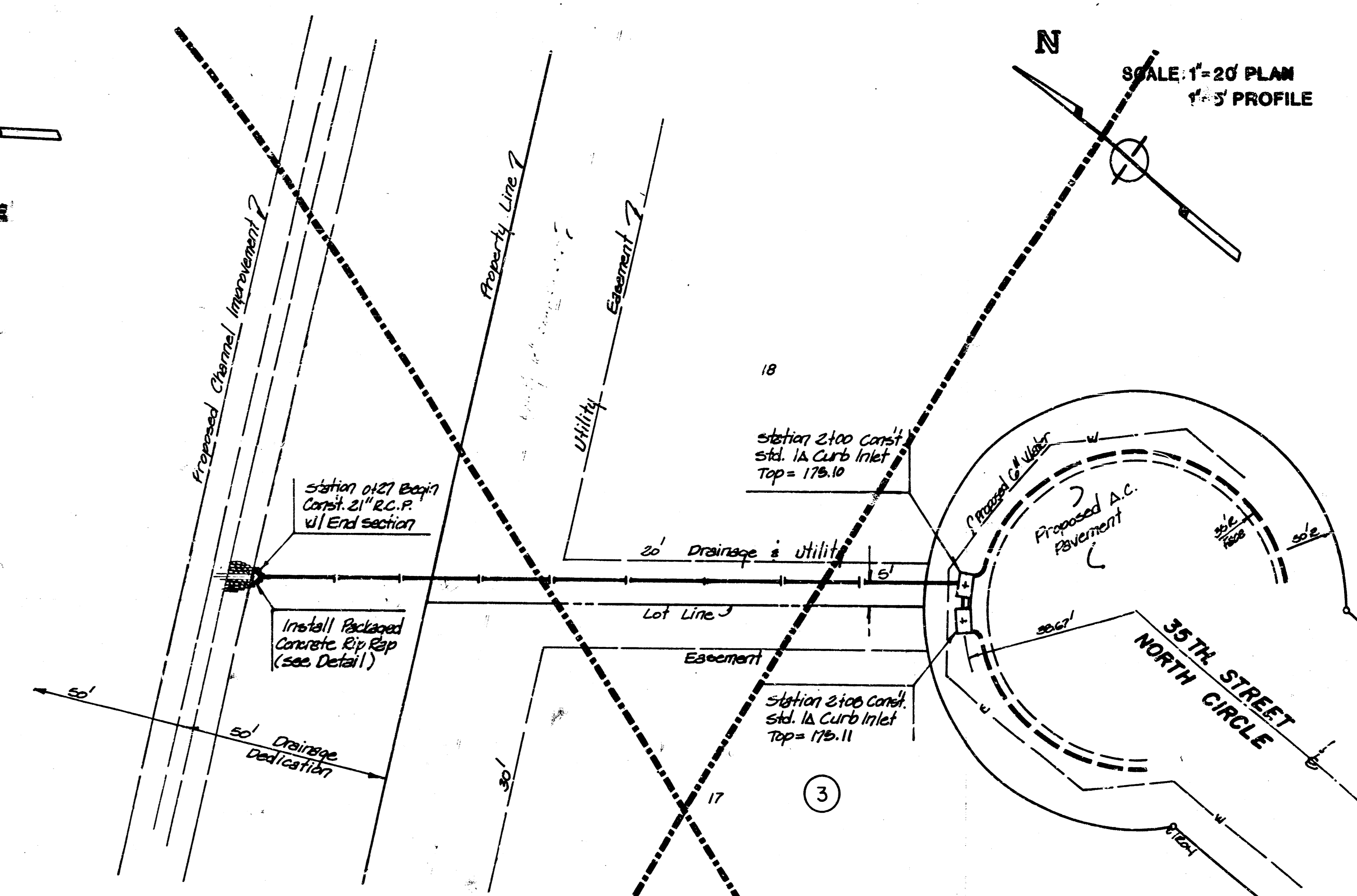
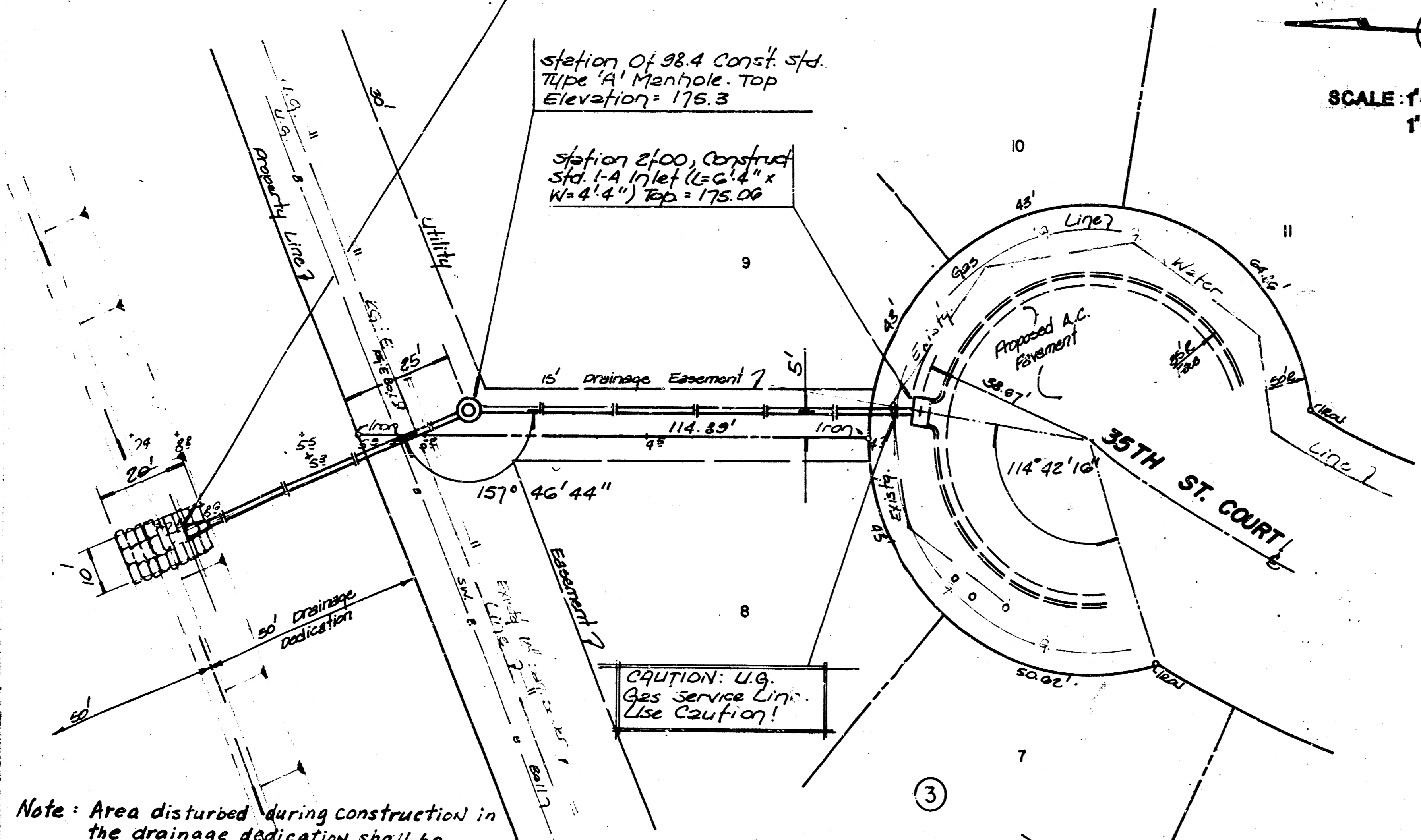
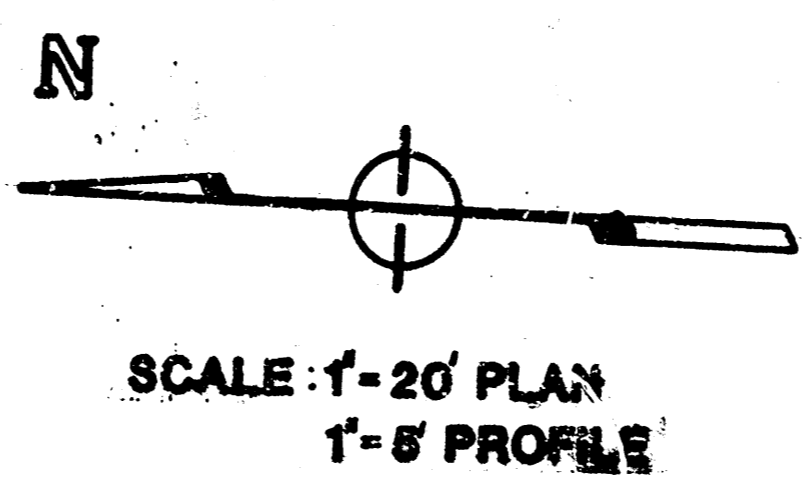
BRNCH MARK #2: Square Out In Back of Walk at Station 0+27, 35th St. North, 32 Feet Right. Elevation= 176.94 City Datum

Station of 29.4, Begin Const. 15" R.C.P. w/ End Section. Install 23 S.Y. Packaged Conc. Rip-Rap.

Station of 98.4 Const. Std. Type 'A' Manhole. Top Elevation= 175.3

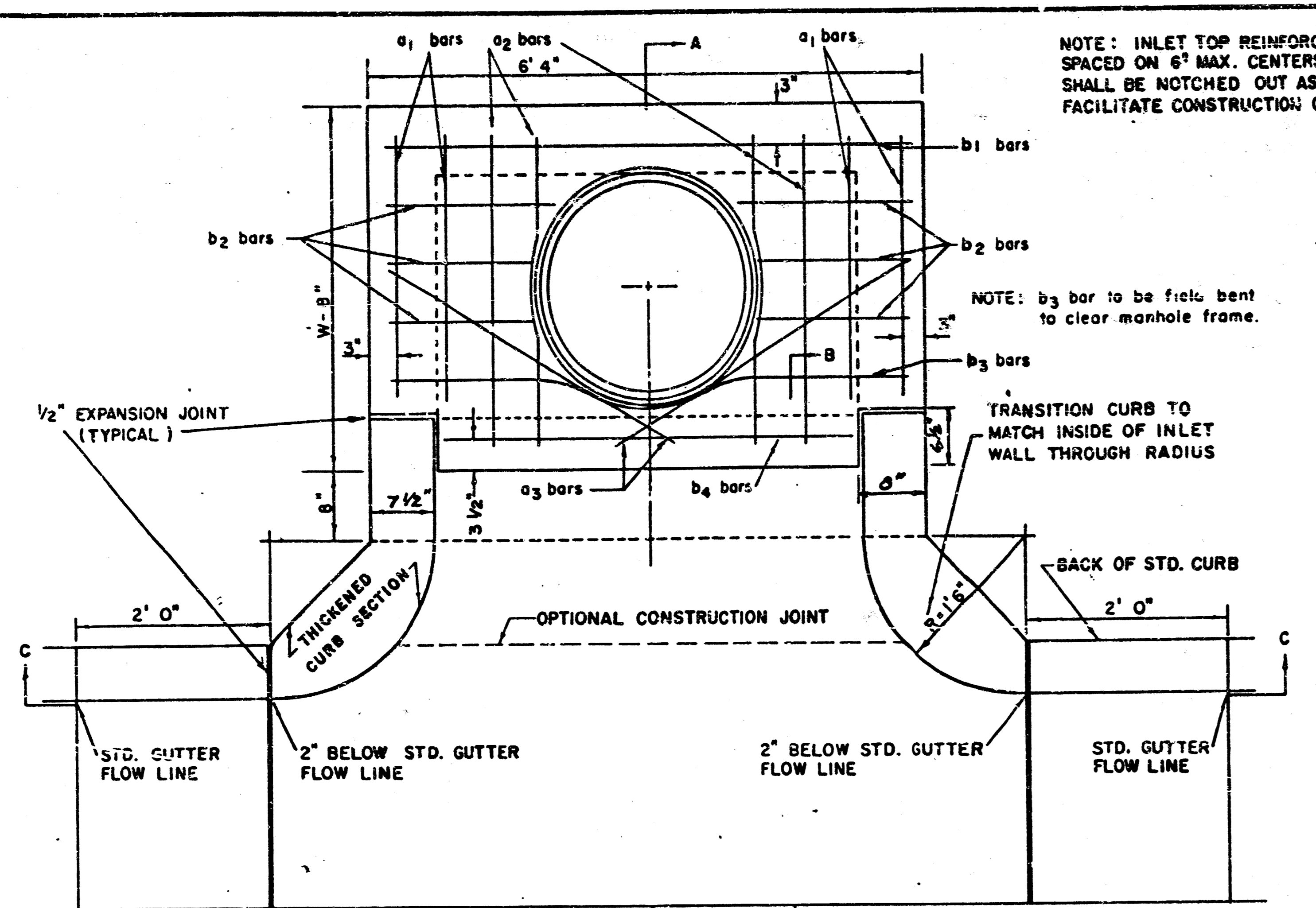
Station 2+00, Construct Std. 1-A Inlet (56" x W=4'4") Top= 175.00

CAUTION: U.G. Gas Service Line. Use Caution!



INCIDENTAL DRAINAGE	
BAUGHMAN COMPANY P. A. SURVEYING & ENGINEERING 316/282-7271 • 315 ELLIS • WORTH, KANSAS 67211	
PROJECT NUMBER 472-76-245-81412-000-001	
DESIGN C.B.	APPROVED N.B.W.
DATE 11/10/88	SCALE Noted
REV 5/8	SHEET 5 OF 8

PLATE 1-SINGLE PLAN AND PROFILE FULL LINE
 11/10/88



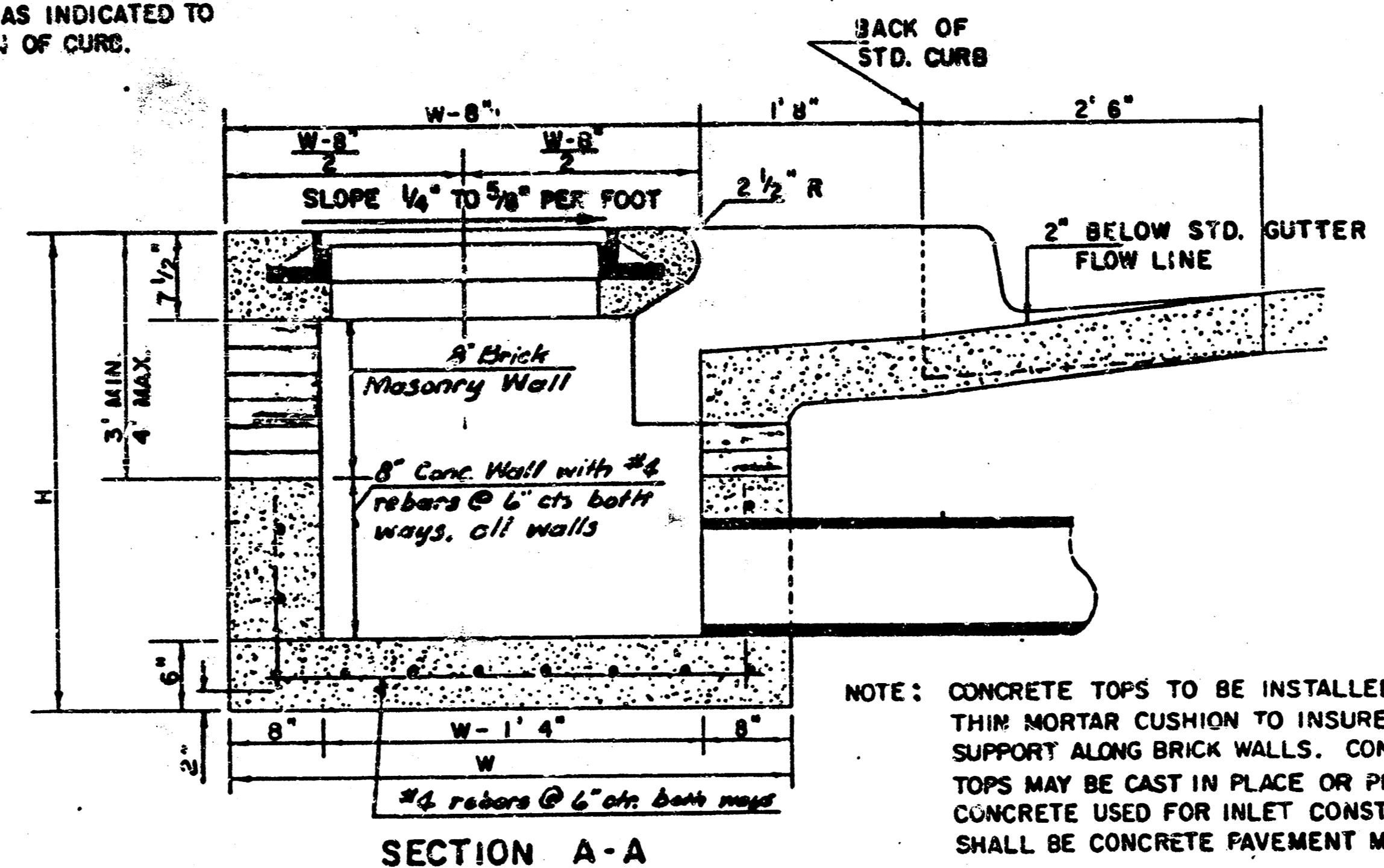
NOTE: EXPANSION JOINT ONLY IN CURB AREA WITH CONC. PAVEMENT.

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.

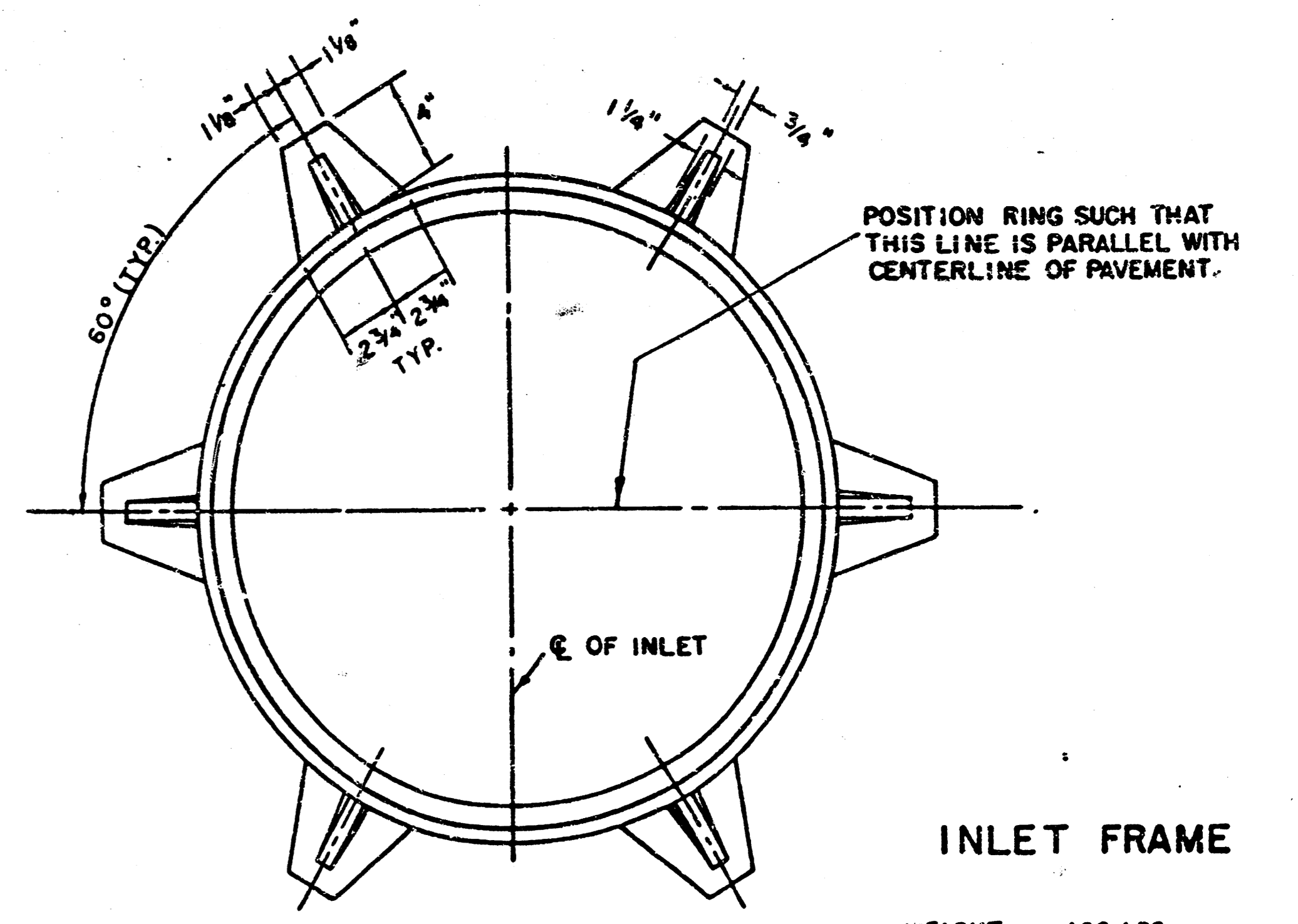
NOTE: b3 bar to be field bent to clear manhole frame.

TRANSITION CURB TO MATCH INSIDE OF INLET WALL THROUGH RADIUS



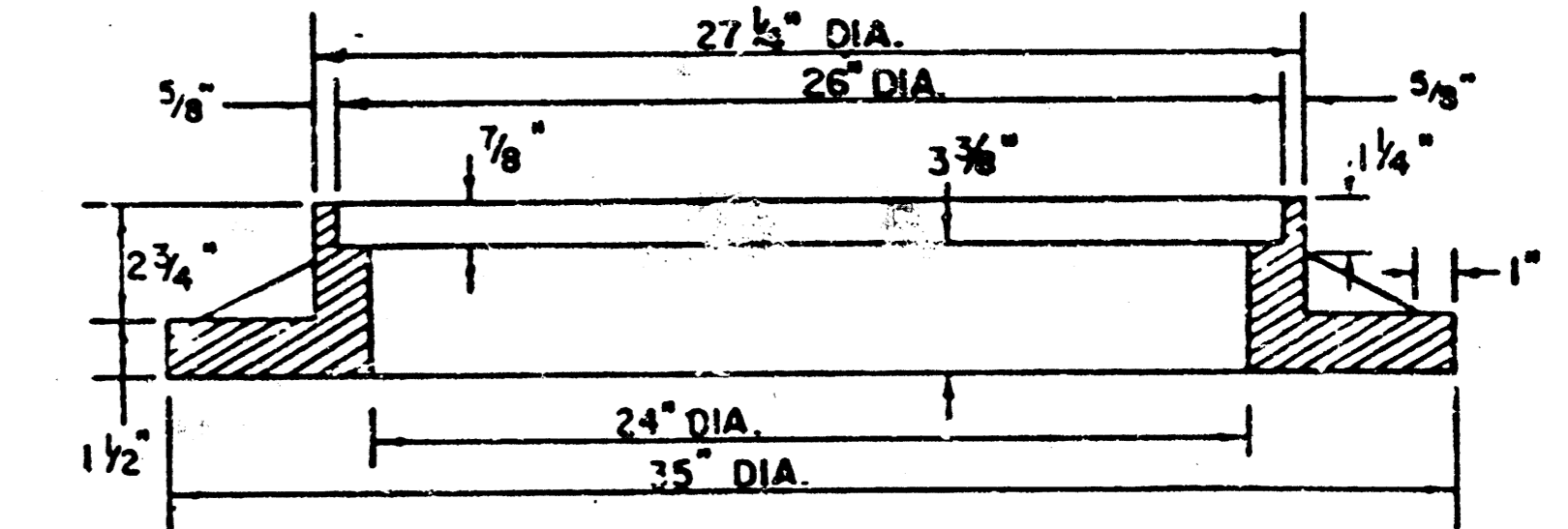
SECTION A-A

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.



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.

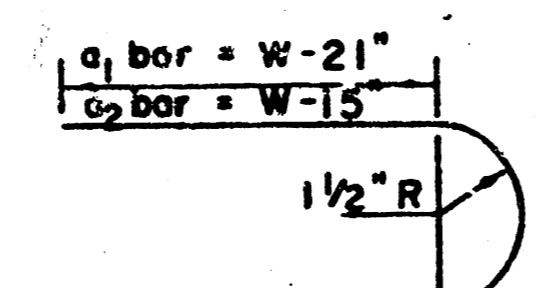
NOTE: CONTRACTOR SHALL HAVE THE OPTION OF CONSTRUCTING 6" THICK MASONRY WALLS BETWEEN THE CONCRETE INLET BASE AND TOP ON THIS INLET WHEN W = 6' 4" AND H = 7' 0" OR LESS.

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.

BENDING DIAGRAM

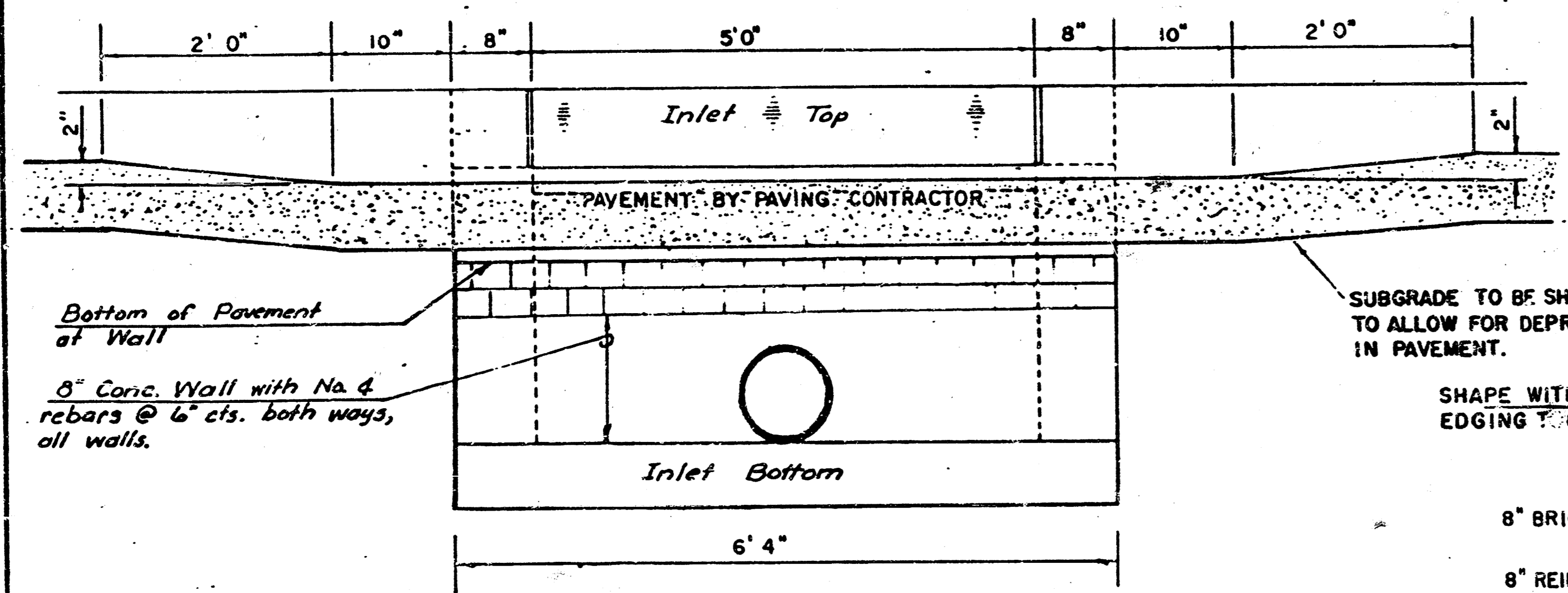


STEEL SCHEDULE

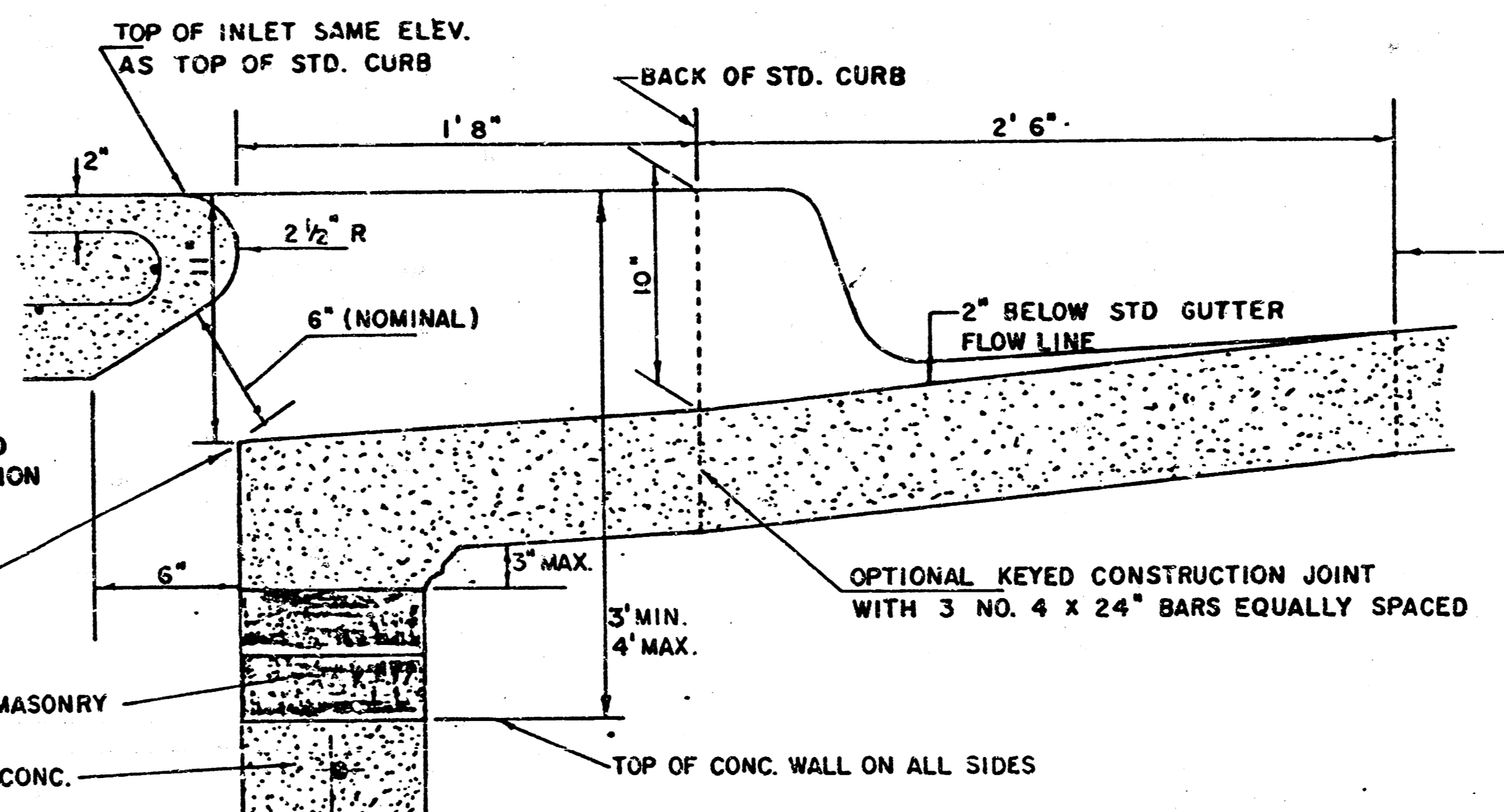
BAR NUMBER	a1	a2	a3	b1	b2	b3	b4	WT. LBS.
4	4	2	1	3	5	7	9	6
SIZE	"4	"4	"4	"4	"4	"4	"4	"6
LENGTH	W-4'4"	5'7"	6'7"	4'0"	6'1"	-	-	1'9"
	W-5'4"	7'7"	8'7"	5'0"	6'1"	-	-	1'9"
	W-6'4"	9'7"	10'7"	6'0"	6'1"	-	-	1'9"
	W-7'4"	11'7"	12'7"	7'0"	6'1"	-	-	1'9"
	W-8'4"	13'7"	14'7"	8'0"	6'1"	1'9"	6'2"	4'8"
								141±

* NOTE: a3 BARS TO BE PLACED APPROX. 2" BELOW TOP OF INLET COVER

W	PRE-CAST TOP SIZE	CU. YD. CONC.
4' 4"	5'8" x 6'4" x 7 1/2"	21" @ SMALLER 0.38±
5' 4"	6'8" 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 C-C

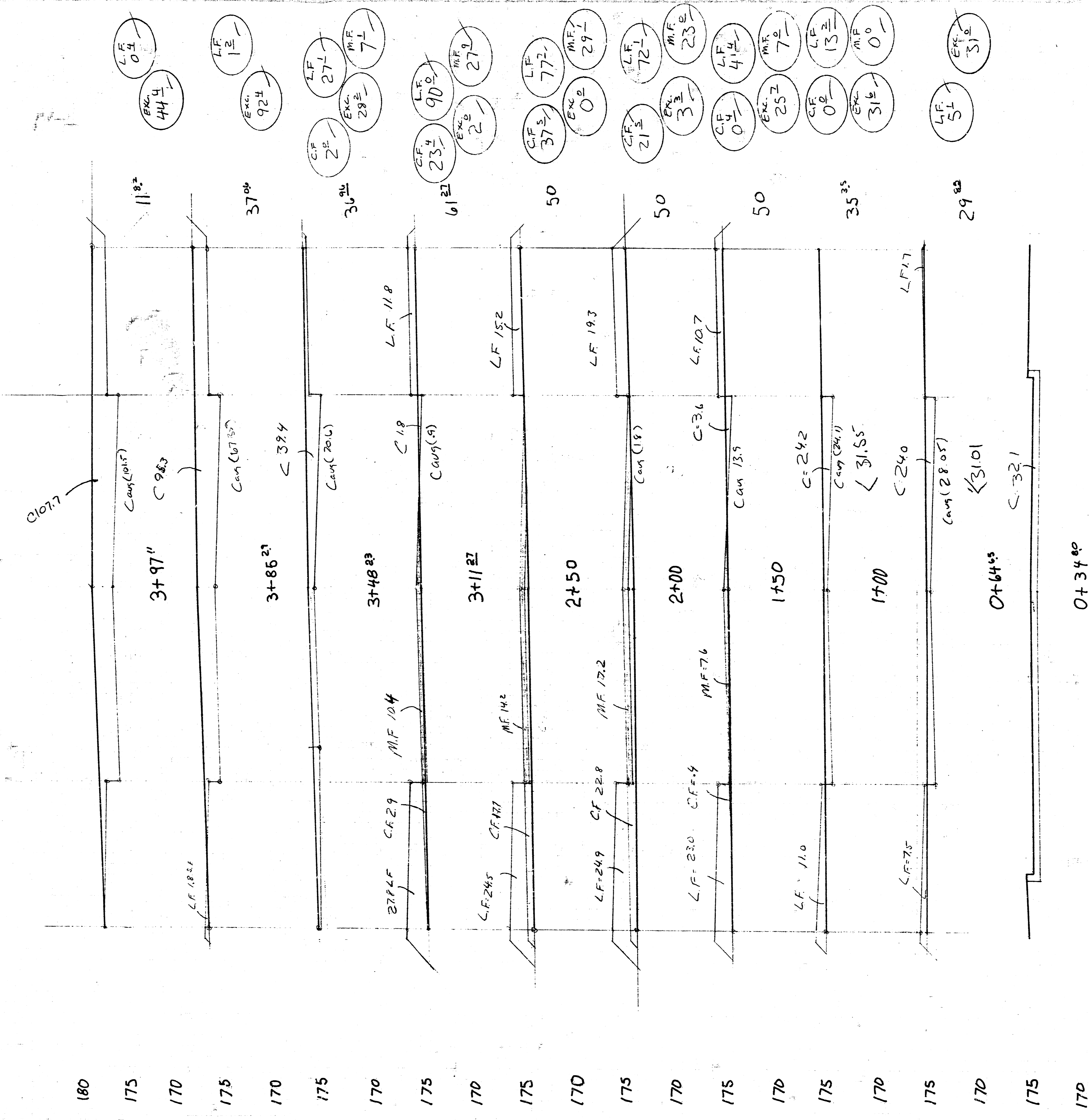


SECTION B-B

LIMITS OF GUTTER SHAPING AND/OR EDGE OF COMB. CURB AND GUTTER

REVISED 12-21-1984

DETAIL STANDARD TYPE IA CURB INLET
CITY OF WICHITA, KANSAS
INLET OPENING = 6" x 5' 0"
472-76-241-31432-000-001 6/8
JUNE 1984



$$\text{BELOW} = 1.1 [(112(88.1 + 132.6) + 955.6)] - 0.8(530.6)$$

$$= 589.6 \text{ cu'}$$

Earthwork Grand Totals:

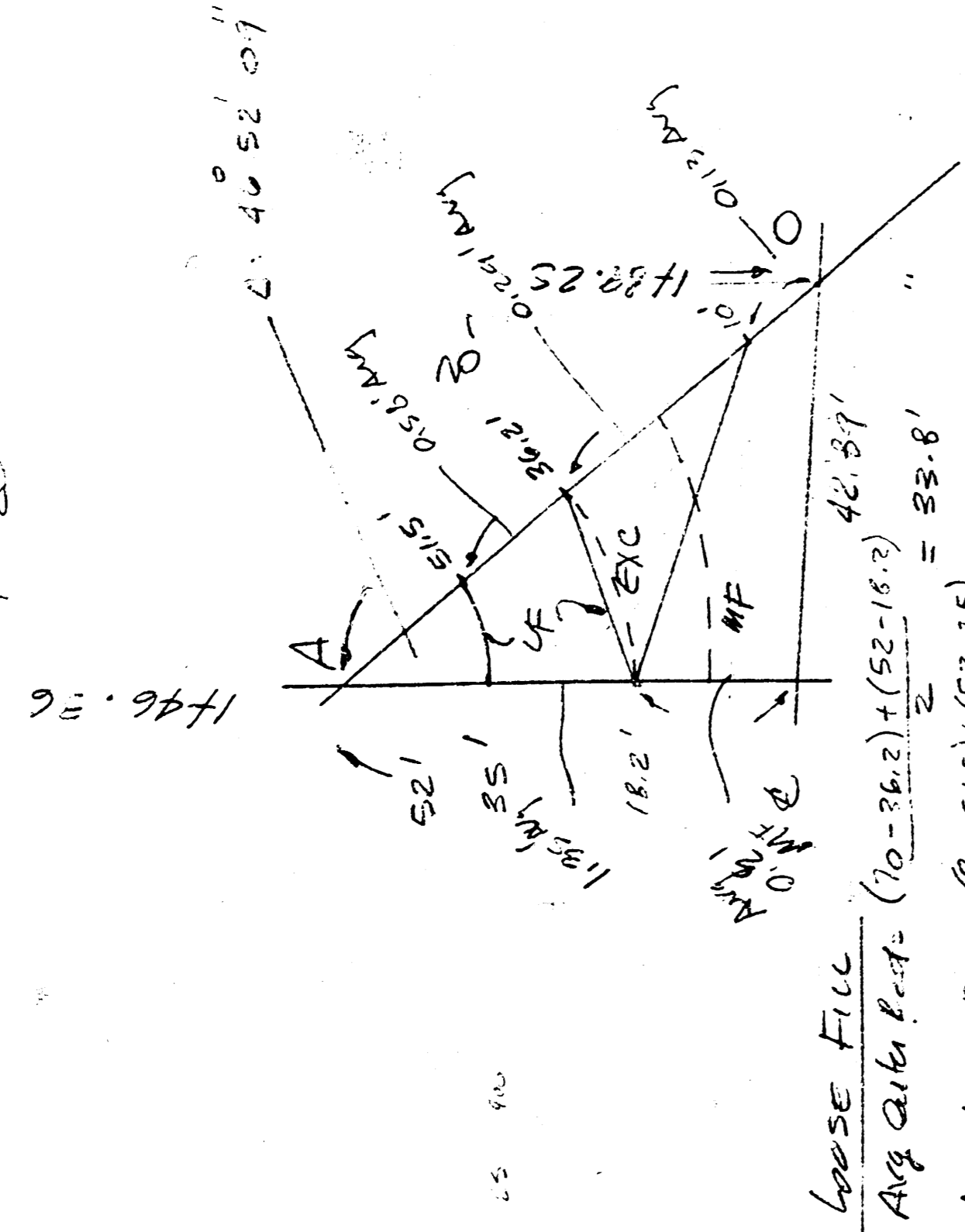
Excavation	330.6	C.K.
Loose fill	535.6	C.K.
Unpacked fill	132.6	C.K.
Compacted fill	88.1	C.K.

Page totals

Exc.	258.6	C.K.
L.F.	328.2	C.K.
M.F.	94.1	C.K.
C.F.	84.8	C.K.

30 20 10 0 10 20 30

TEMPERATURE ASSUMED
1" = 20'



Loose Fill

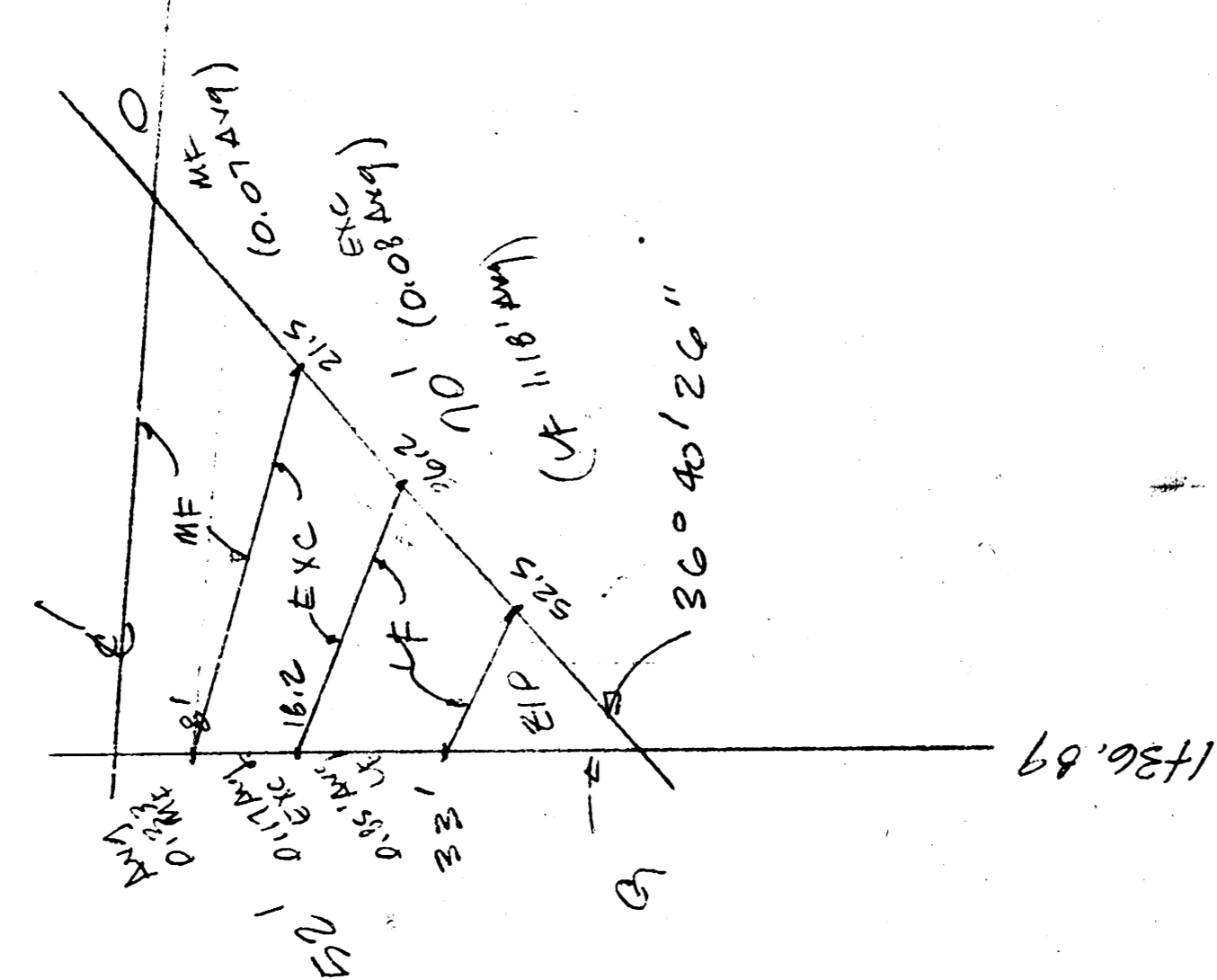
Avg. Gravel = $(10 \cdot 36.2) + (52 \cdot 16.2) = 93.8'$

Avg. Inert Part = $(70 \cdot 51.5) + (22 \cdot 55) = 17.75'$

LF = $(32.8 \cdot 17.75) \pi \frac{46.09 + 18.2}{2} = 334.2 \text{ ft}^2$

EXC (DIGITIZED AREA) = 277.4 ft^2

MF (DIGITIZED AREA) = 511.2 ft^2



ALL DIGITIZED

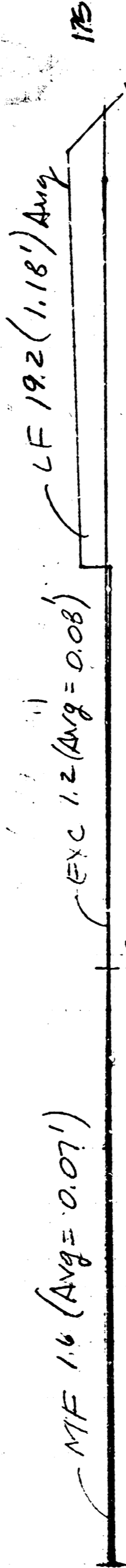
LF 291.5 ft^2 = $(111.1 + 0.856) / 27 = 11.0 \text{ cy}$

MF 501.6 ft^2 = $(102.1 + 0.33) / 27 = 4.2 \text{ cy}$

EXC 875.4 ft^2 = $(102.1 + 0.33) / 27 = 1.7 \text{ cy}$

LF 22.8
EXC 3.2

MF 7.3



MF 16 (Avg = 0.07)

EXC 1.2 (Avg = 0.08)

LF 192 (1.18) Avg

CF = $\frac{1}{2} [(52.5 + 21.5) \cdot 15.6] \pi \frac{52.5 + 21.5}{2} = 454.3 \text{ ft}^2$

MF 3.1 (Avg = 0.16)

EXC 1.8 (Avg = 0.11)

LF 190 (1.20) Avg

LF = $52.2 \cdot 36.2 \cdot \pi \frac{45}{360} = 547.2 \text{ ft}^2$

MF 7.7 (Avg = 0.08)

EXC 6.3 (Avg = 0.22)

LF 14.7 (Avg = 0.73)

LF = $\frac{1}{2} [52.2 \cdot 36.2 \cdot \pi \frac{45}{360}] = 273.6 \text{ ft}^2$

MF 1.3 (Avg = 0.14)

EXC 15.6 (Avg = 0.57)

LF 3.1 (Avg = 0.20)

LF = $\frac{1}{2} [51.5 \cdot 36.2 \cdot \pi \frac{45}{360}] = 263.5 \text{ ft}^2$

MF 1.1 (Avg = 0.15)

EXC 14.5 (Avg = 0.51)

LF 1.1 (Avg = 0.15)

LF = $\frac{1}{2} [51.5 \cdot 36.2 \cdot \pi \frac{46.2 \cdot 0.7}{360}] = 274.4 \text{ ft}^2$

MF 1.3 (Avg = 0.13)

EXC 7.0 (Avg = 0.29)

LF 8.0 (Avg L.F. = 38)

MF = $\frac{(21.5 \cdot 52.5) \pi \frac{52.5 + 21.5}{2}}{360} = 137.8 \text{ ft}^2$

EXC = $(36.2 \cdot 17.75) \pi \frac{46.09 + 18.2}{2} = 281.0 \text{ ft}^2$

MF = $\frac{(21.5 \cdot 52.5) \pi \frac{52.5 + 21.5}{2}}{360} = 137.8 \text{ ft}^2$

EXC = $(36.2 \cdot 17.75) \pi \frac{46.09 + 18.2}{2} = 281.0 \text{ ft}^2$

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MF = $\frac{(21.5 \cdot 52.5) \pi \frac{52.5 + 21.5}{2}}{360} = 137.8 \text{ ft}^2$

EXC = $(36.2 \cdot 17.75) \pi \frac{46.09 + 18.2}{2} = 281.0 \text{ ft}^2$

MF = $\frac{(21.5 \cdot 52.5) \pi \frac{52.5 + 21.5}{2}}{360} = 137.8 \text{ ft}^2$

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LF 20.0
EXC 1.0

MF 21.6
EXC 26.7

LF 4.7
EXC 7.2

LF 1.0
EXC 8.0

LF 1.2
EXC 12.0

LF 2.9
EXC 7.5

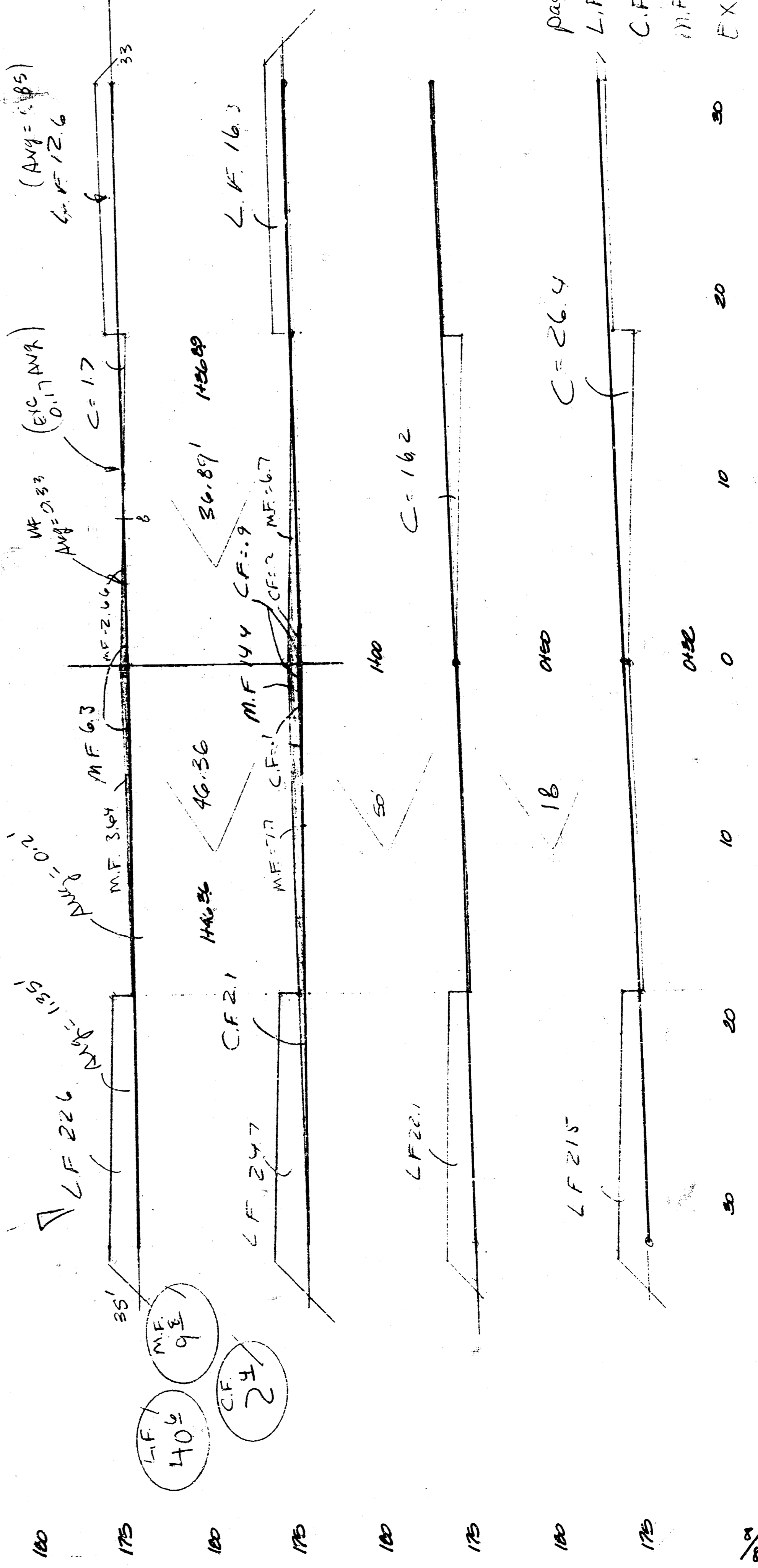
LF 19.7
EXC 1.5

MF 6.4
EXC 0.1

MF 13.3
EXC 15.2

LF 58.4
EXC 14.2

LF 14.5
EXC 14.2



Page totals
L.F. = 207.4 C.Y.
C.F. = 3.3 C.Y.
M.F. = 38.5 C.Y.
EXC. = 72.0 C.Y.

SOOTH. ST. CAVIET

Earthwork Sections
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