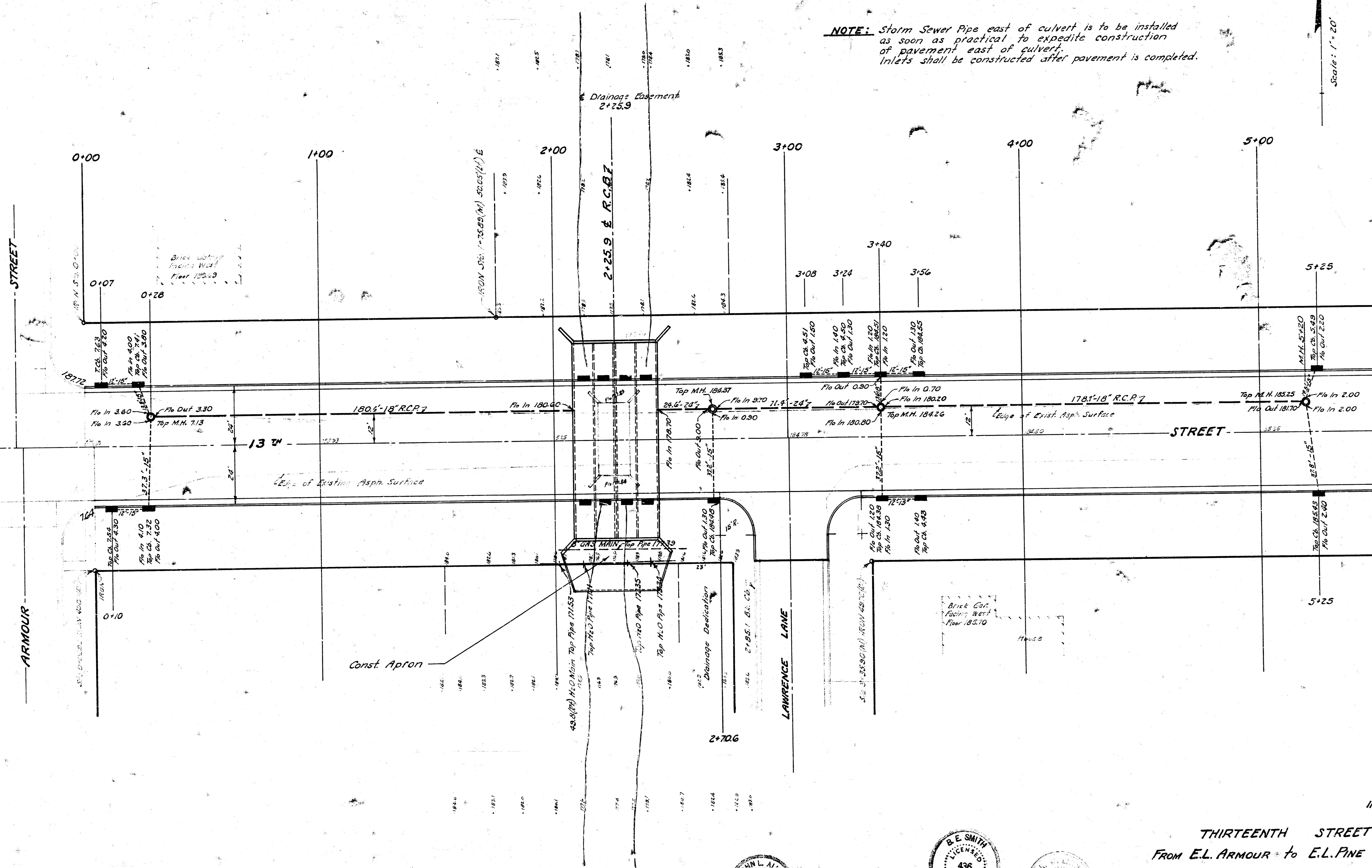


B.M. 18339 Extreme N.E. Corner Stone  
Mon. on N.E. Corner 13<sup>th</sup> & Armour.

B.M. 18444 "X" Cut top East Curb Lawrence  
Lane 11' South of S.L. 13<sup>th</sup> Street.

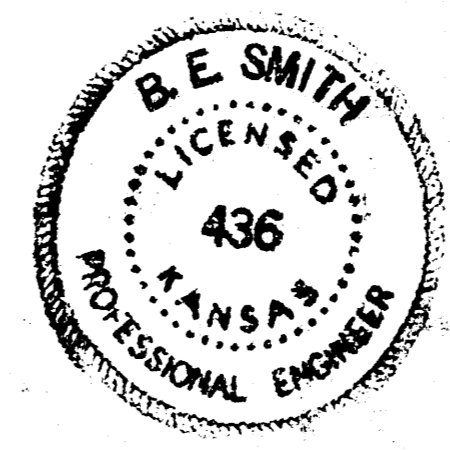
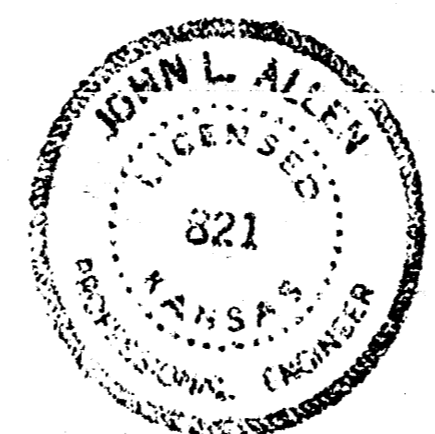
**NOTE:** Storm Sewer Pipe east of culvert is to be installed  
as soon as practical to expedite construction  
of pavement east of culvert.  
Inlets shall be constructed after pavement is completed.

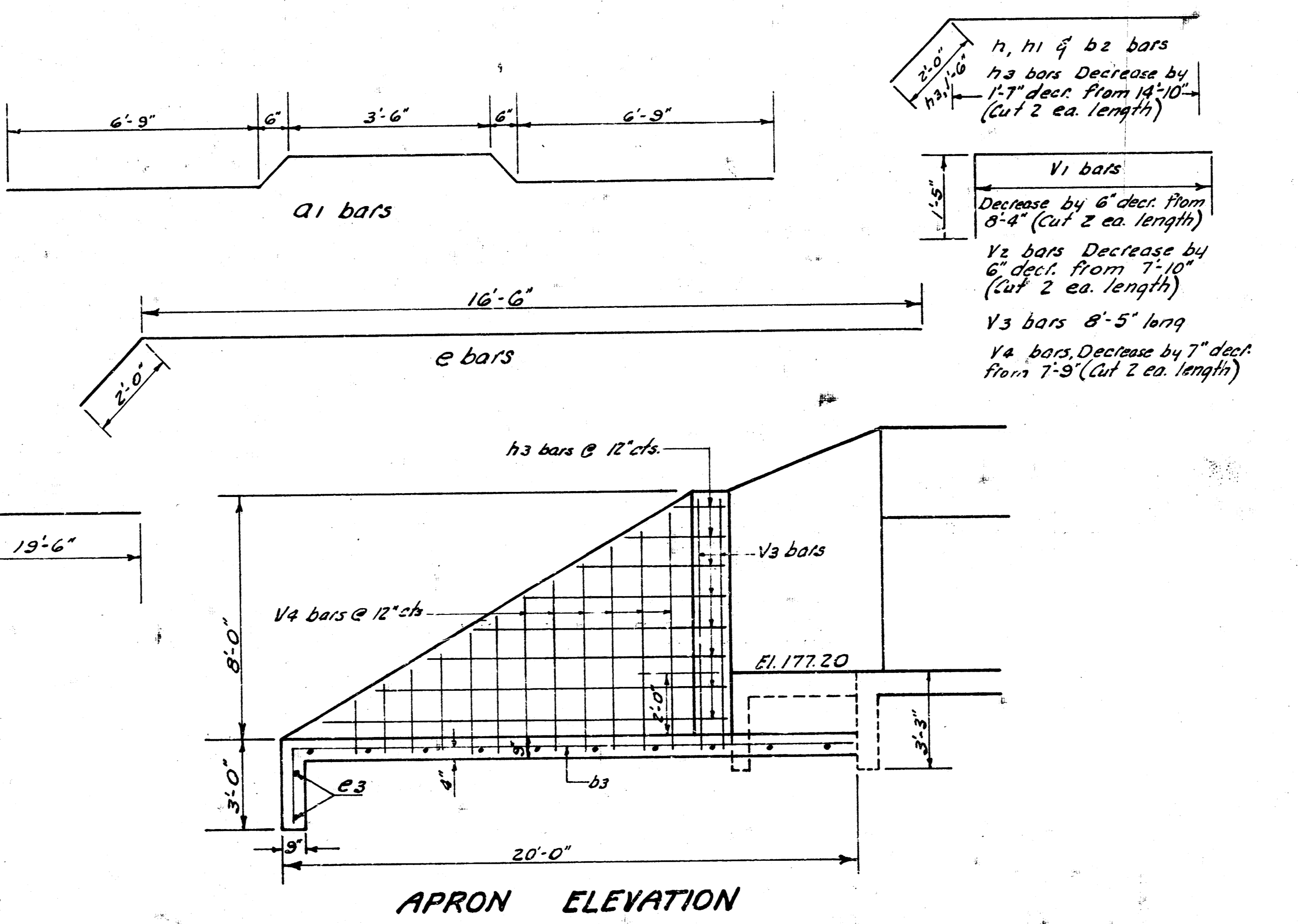
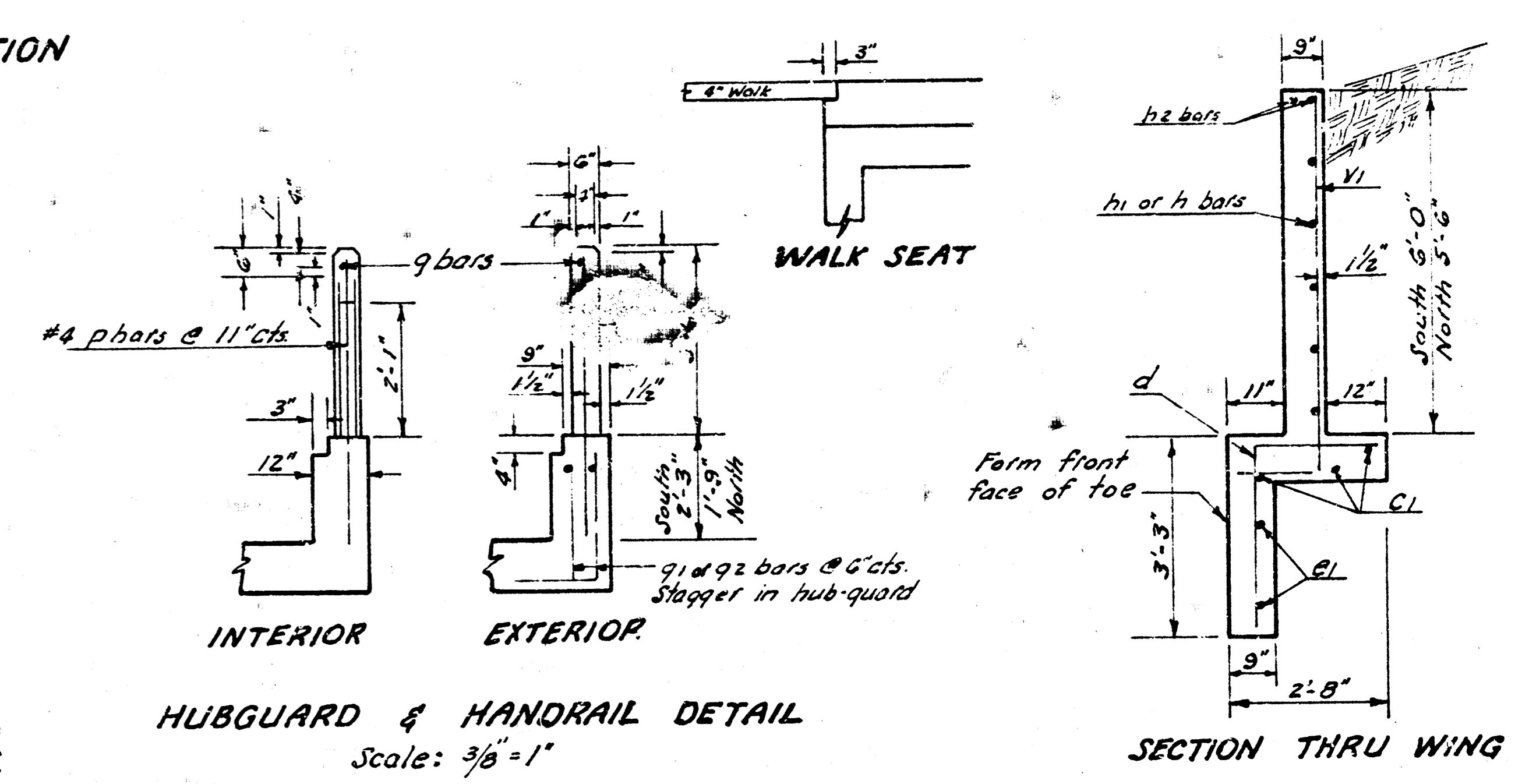
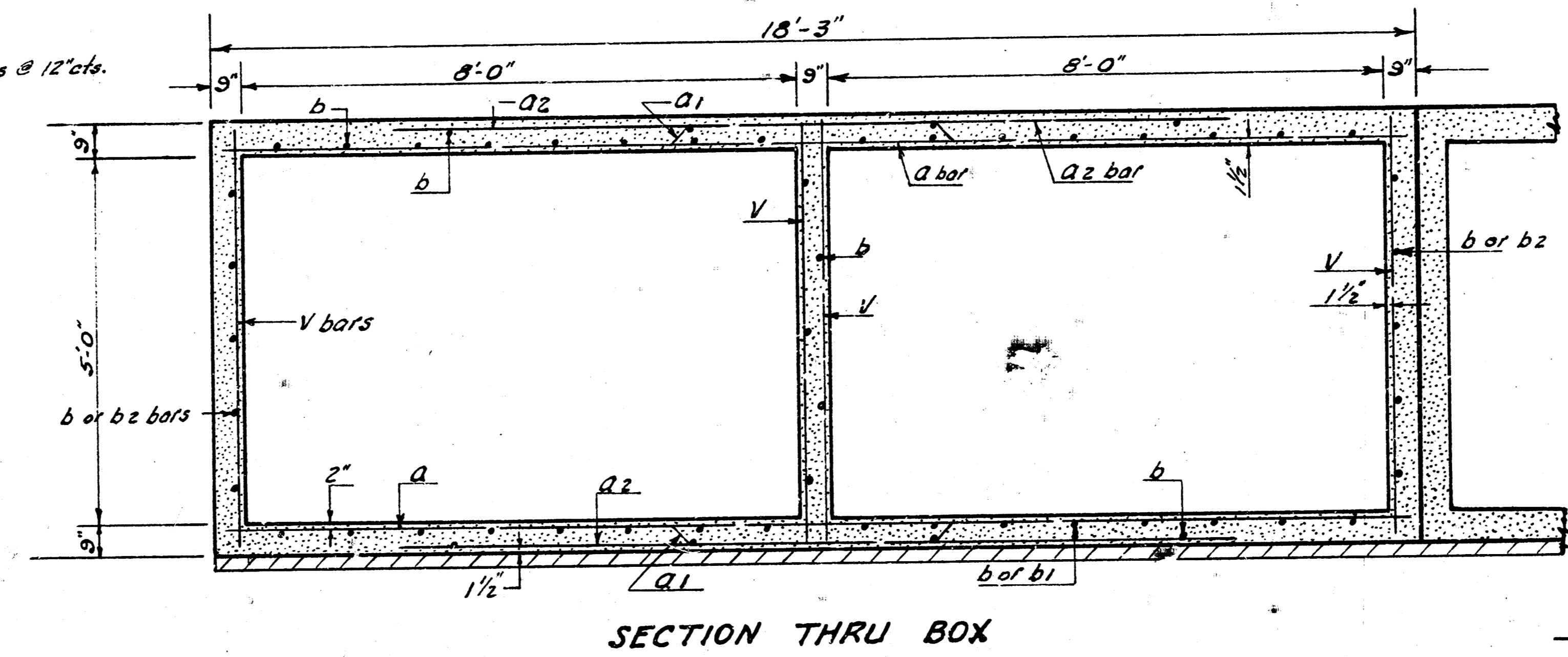
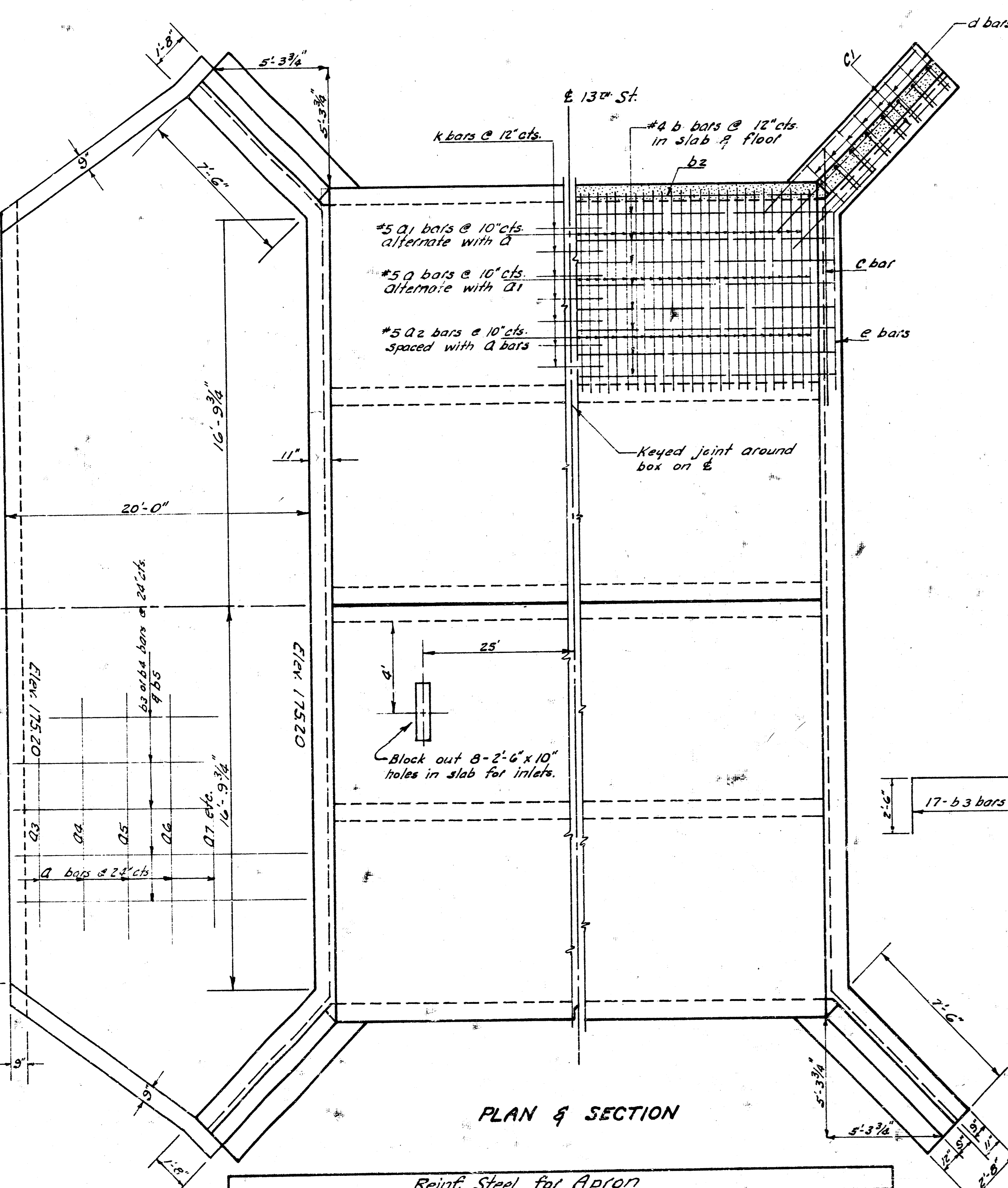
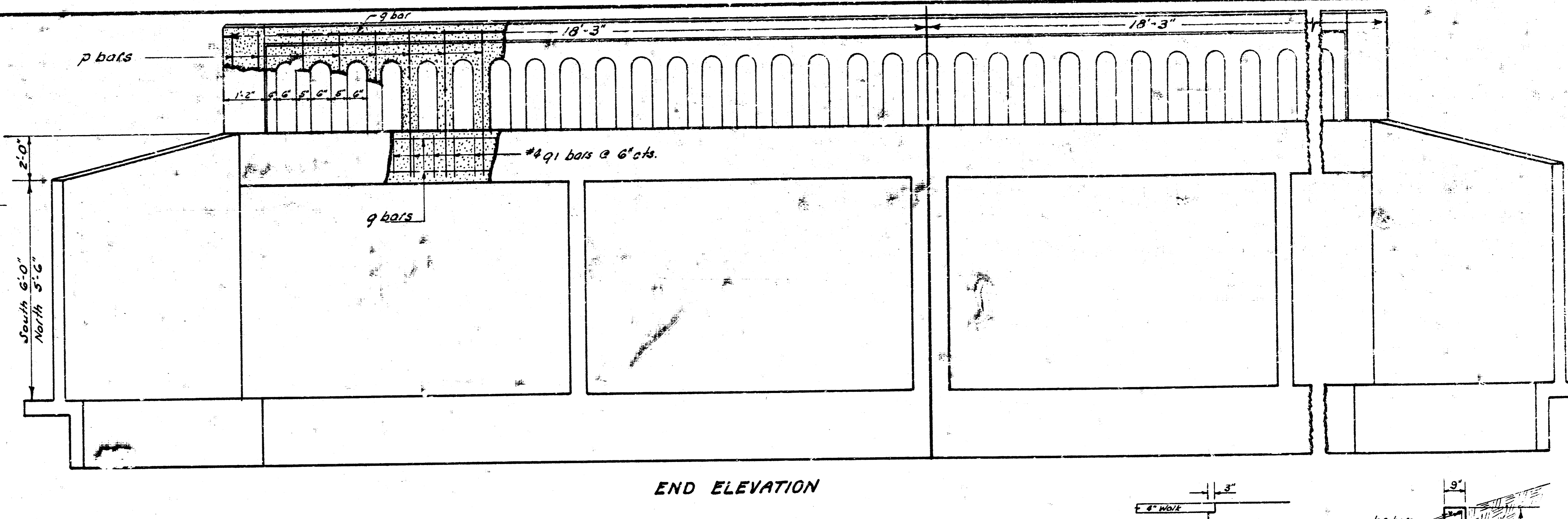
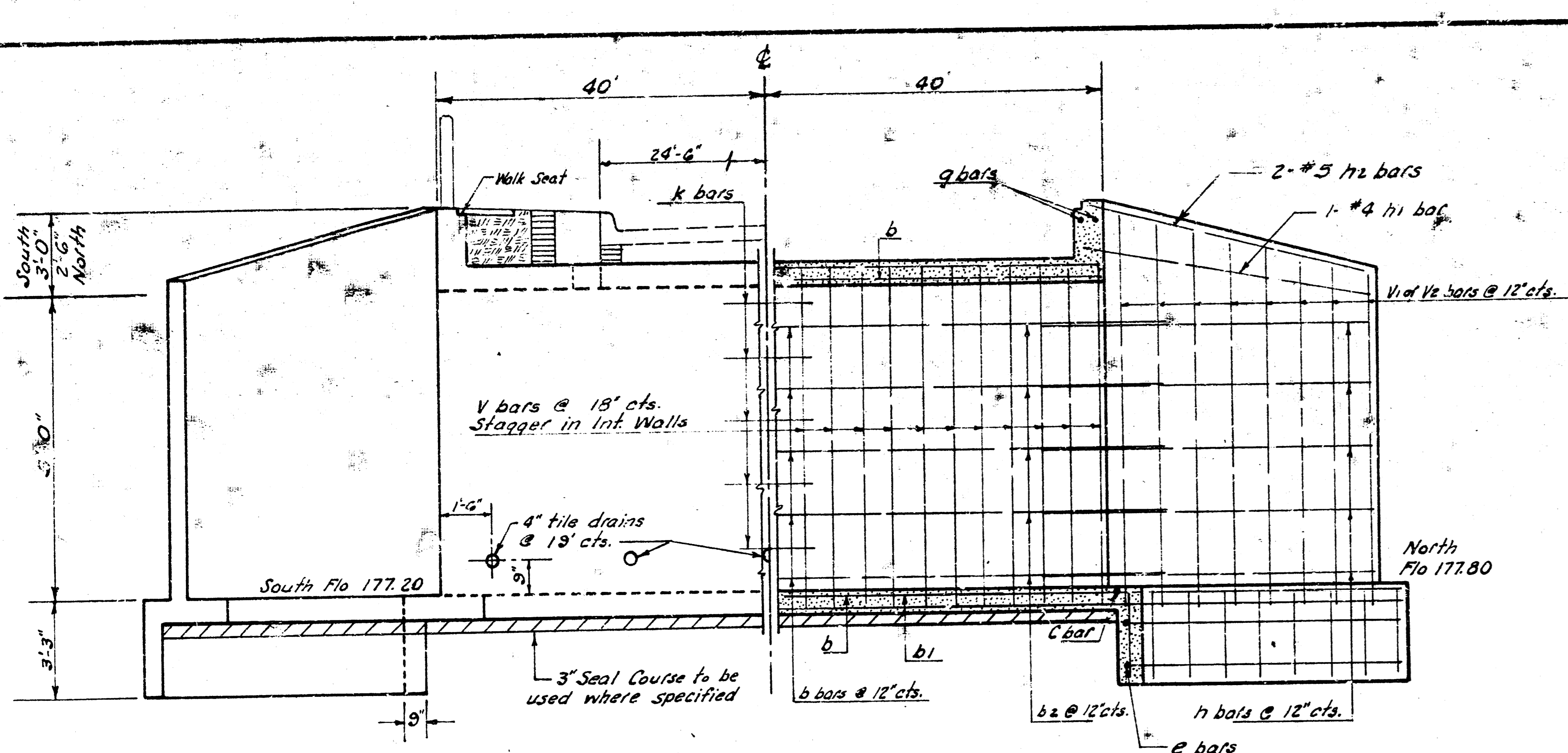
Scale: 1" = 20'



INCIDENTAL DRAINAGE

THIRTEENTH STREET  
FROM E.L. ARMOUR TO E.L. PINE VALLEY 5<sup>TH</sup> ADDN.  
2-DOUBLE 8'x5'x80' R.C.B. & STORM WATER SEWER  
B.E. SMITH CITY ENGINEER CITY OF WICHITA KANSAS  
Date: April 1966 PROJECT NO. C15-21  
Sheet No. 1 of 3





BILL OF MATERIALS		
Item	Quantity	Units
Class A-AE Concrete	214	Cu. Yds.
Reinf. Steel	29,420	Lbs.
Concrete Handrail	73	Lin. Ft.
Hand Excavation	7	Cu. Yds.
Concrete Culvert Removed	1	Each
2' x 5' Inlets	21	"
Brick Manholes	4	"
Lump Sum Items		
Common Excavation	510	Cu. Yds.
Compacted Fill	110	Cu. Yds.
Class A Concrete (Seal Course)	30	Cu. Yds.
15" Reinf. Conc. Pipe	260	Lin. Ft.
18" " " "	360	"
24" " " "	100	"
Unit Bid Items		

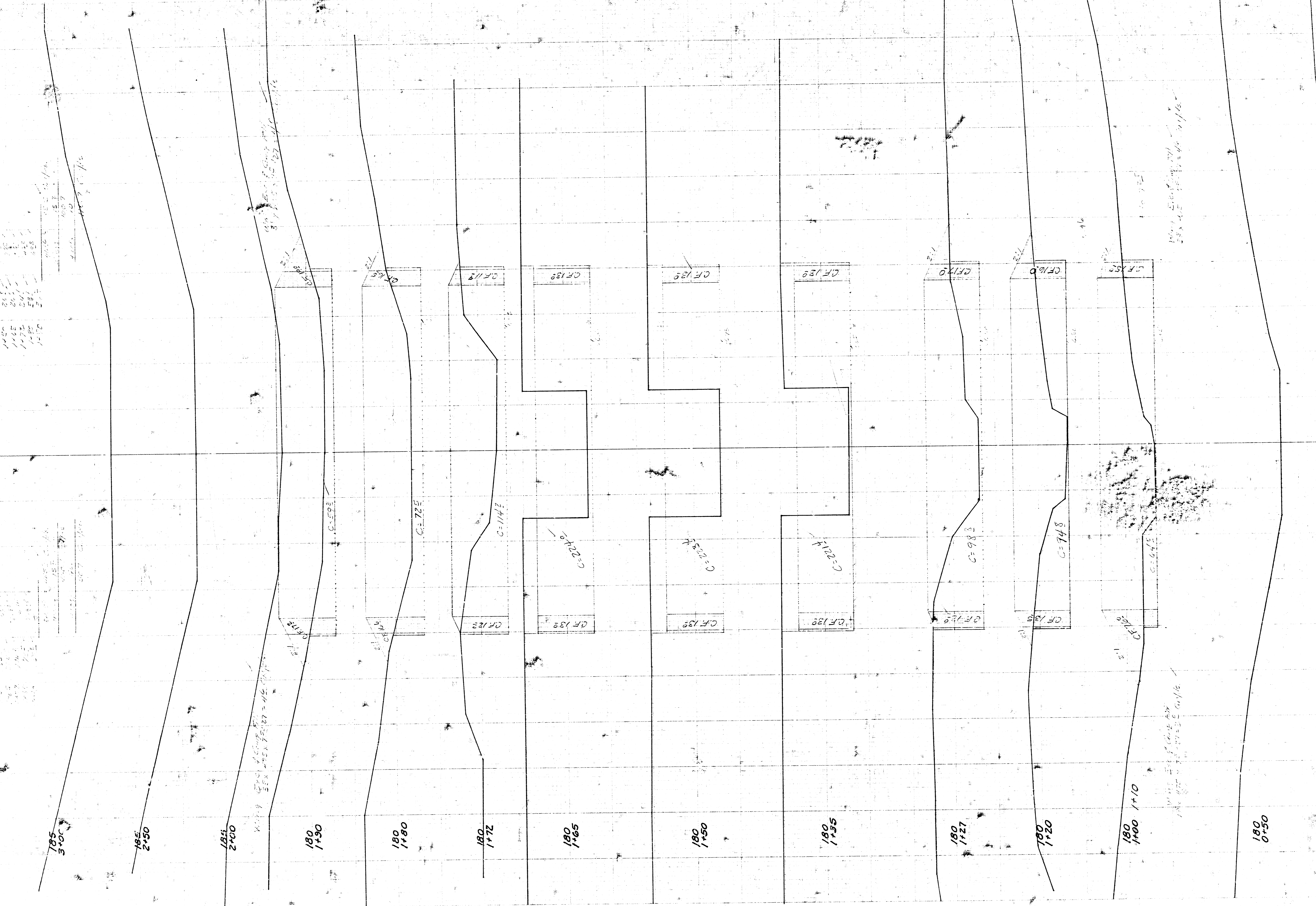
**GENERAL NOTES**  
 Class A-AE concrete to be used in the structure. Class D concrete is to be used in the handrail & posts. Seal Course consisting of Class A concrete to be constructed only when specified by the Engineer. No reinforcing steel shall be placed until the Seal Course has gained sufficient strength to permit working upon without injury. Bevel all exposed edges with a 3/4" triangular molding. Course aggregate to be deposited behind each weep hole to occupy a space extending 15" in all directions from the weep hole. This is a no pay item incidental to the project. Compact backfill to the top of the culvert. Backfill and excavation to extend two feet beyond sides of box and wingwalls.

Reinf. Steel for Apron																	
Bar	a3	a4	a5	a6	a7	a8	a9	a10	a11	a12	b3	b4	b5	V3	V4	h3	e3
No.	1	1	1	1	1	1	1	1	1	1	17	2	2	4	26	16	2
Size	#4	#4	#4	#4	#4	#4	#4	#4	#4	#4	#4	#4	#4	#4	#4	#4	#4
Length	36'-9"	38'-0"	38'-3"	40'-4"	41'-5"	43'-0"	44'-3"	43'-0"	39'-0"	35'-0"	22'-0"	18'-0"	10'-0"	9'-10"	*	*	34'-0"

Reinf. Steel Schedule																						
Bar	a	a1	a2	b	b1	b2	c	c1	d	e	e1	q	q1	q2	h	h1	h2	V	V1	V2	k	P
No.	388	384	388	226	64	20	4	12	32	8	8	12	72	72	20	4	8	33	16	16	92	80
Size	#5	#5	#5	#4	#4	#4	#4	#4	#4	#4	#4	#5	#4	#4	#4	#4	#5	#4	#4	#4	#4	#4
Length	18'-0"	18'-5"	12'-0"	27'-3"	30'-10"	29'-7"	19'-2"	10'-9"	5'-0"	18'-6"	7'-9"	18'-0"	4'-6"	4'-0"	10'-0"	8'-2"	8'-5"	6'-3"	*	*	3'-7"	4'-6"

\*See Bending Diagram

**REINF. CONC. BOX CULVERT**  
 2-DOUBLE 8'x5'x80'  
 13<sup>TH</sup> STREET Project No. C15-21  
 Sheet No. 2 of 3



185+00	185+00
184+50	184+50
184+00	184+00
183+50	183+50
183+00	183+00
182+50	182+50
182+00	182+00
181+50	181+50
181+00	181+00
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183+00  
182+50  
182+00  
181+50  
181+00  
180+50  
180+00

180  
0+00 A Point 150 S. of 13th St.  
Sta. 2+25.9

2- Double 8' X 5' X 80' R.C.B.  
13th Street from E.L. Armouli Lane  
to E.L. Pine Valley 5th Addr.

C 15-21