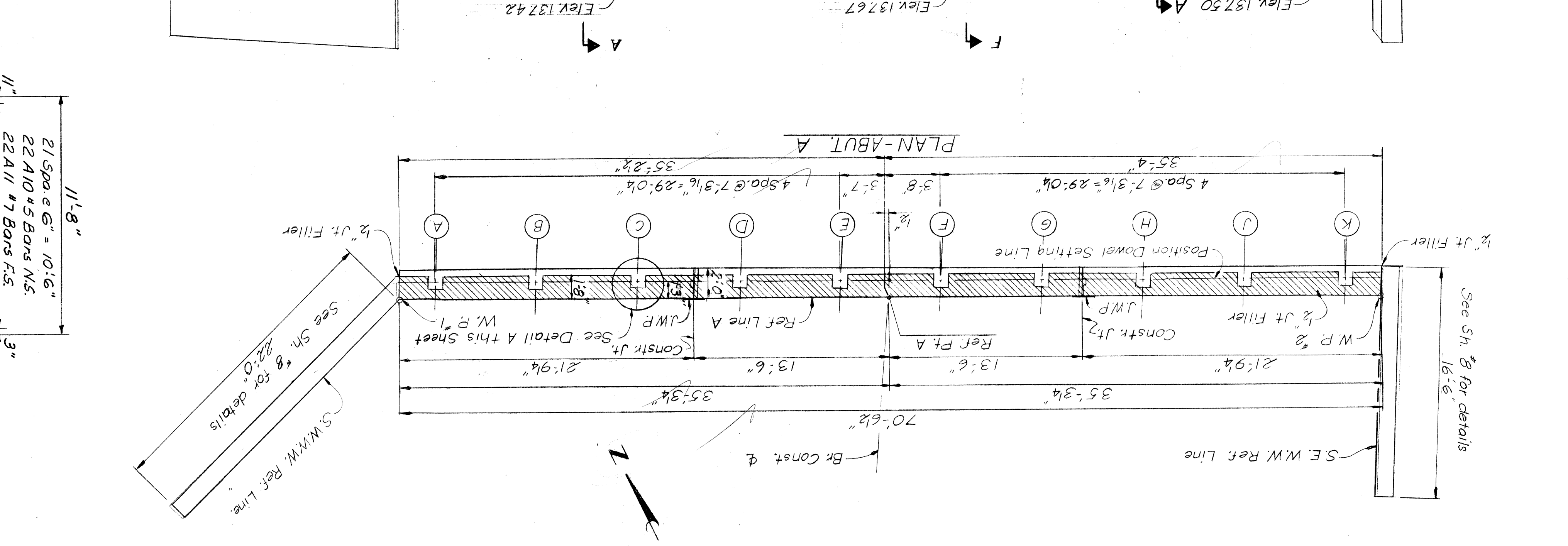
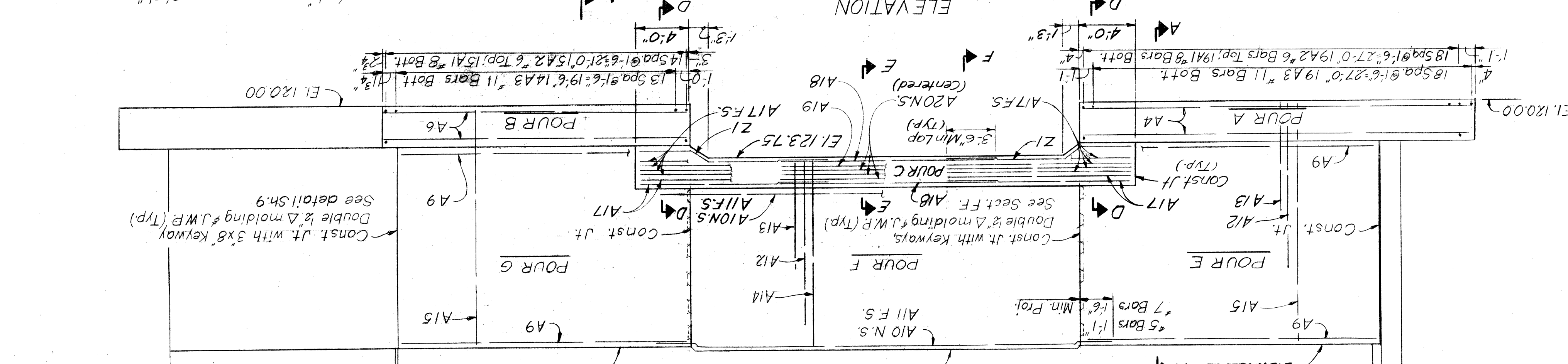
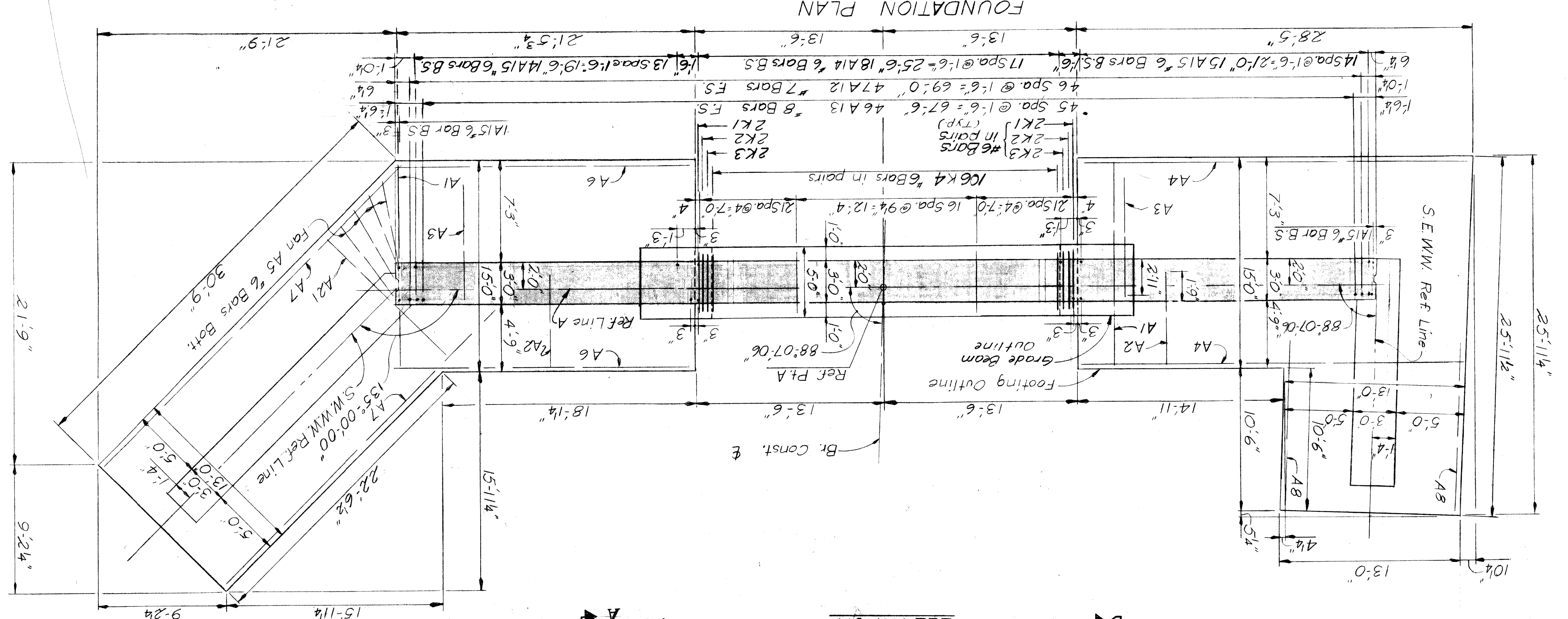
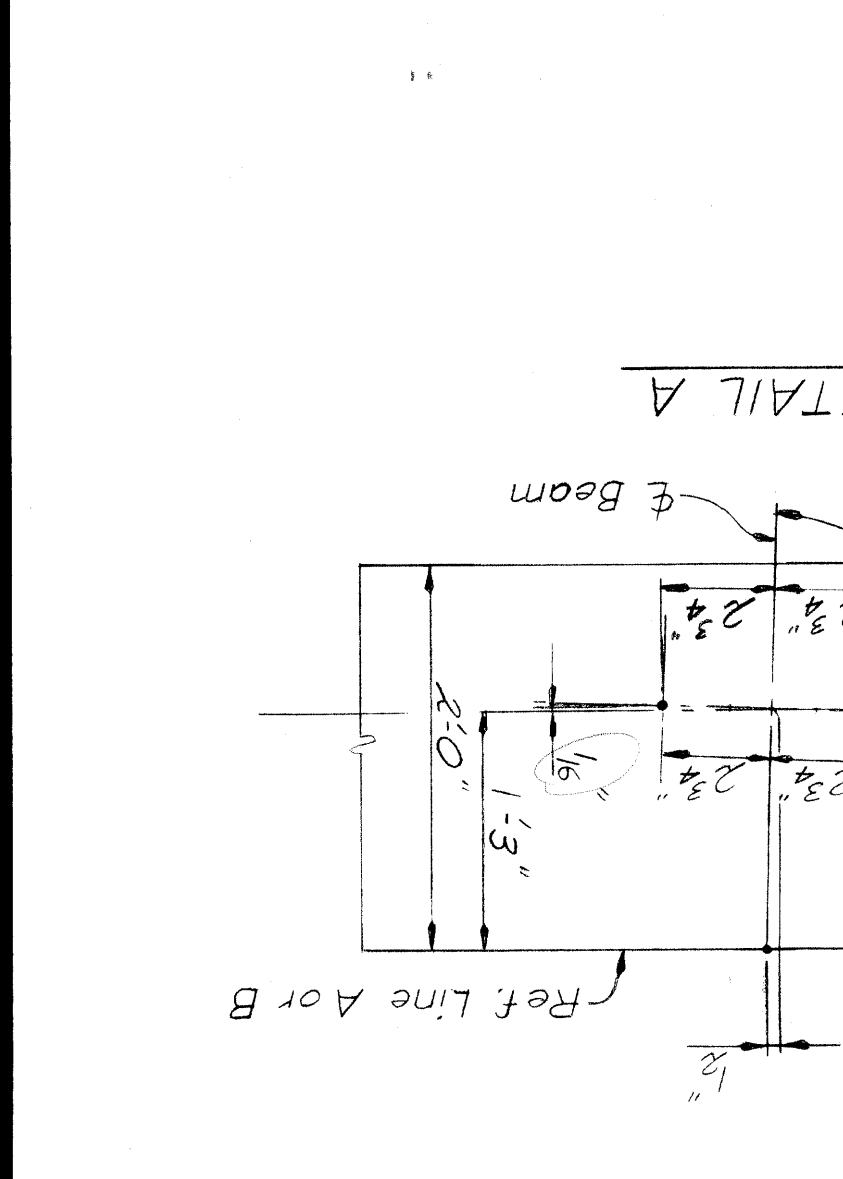
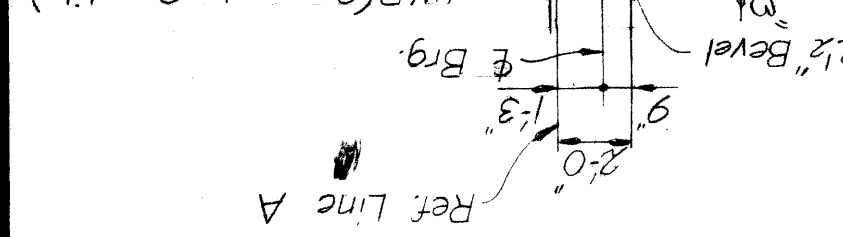
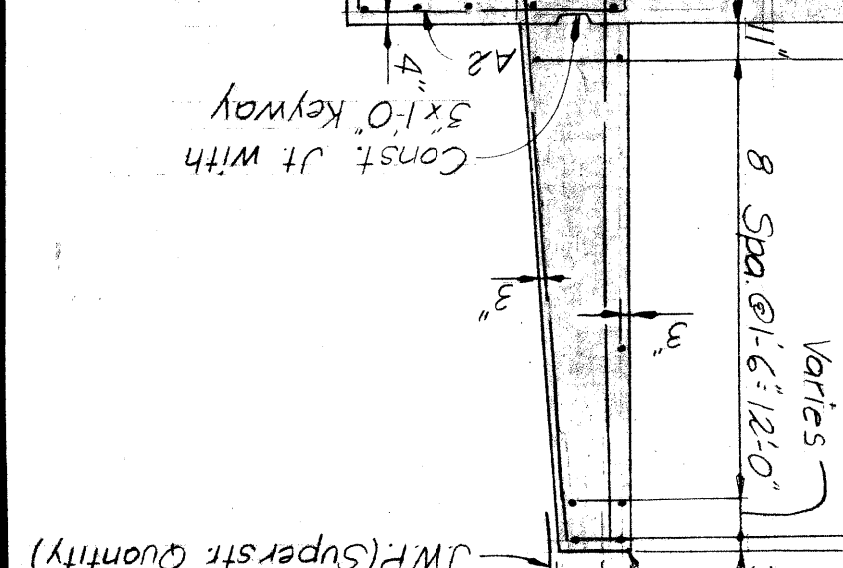
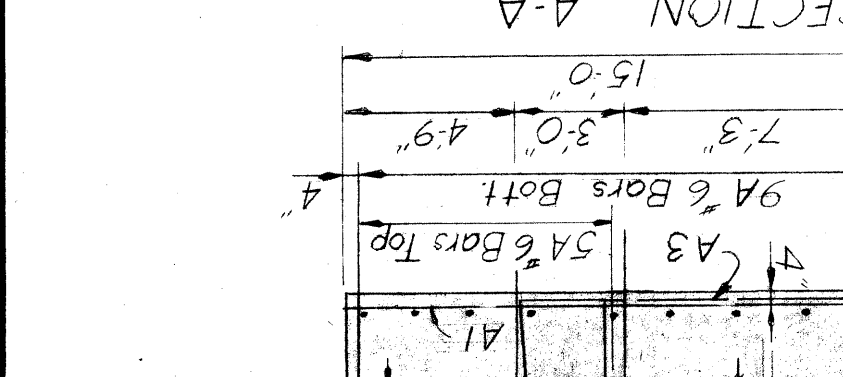
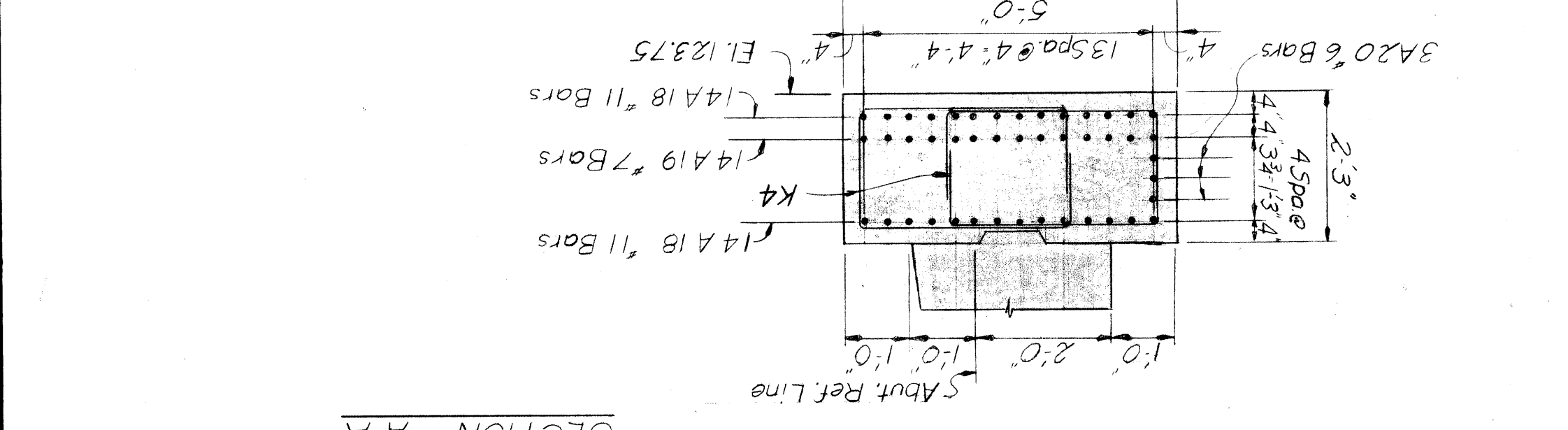






Work Sheets 6-9 together

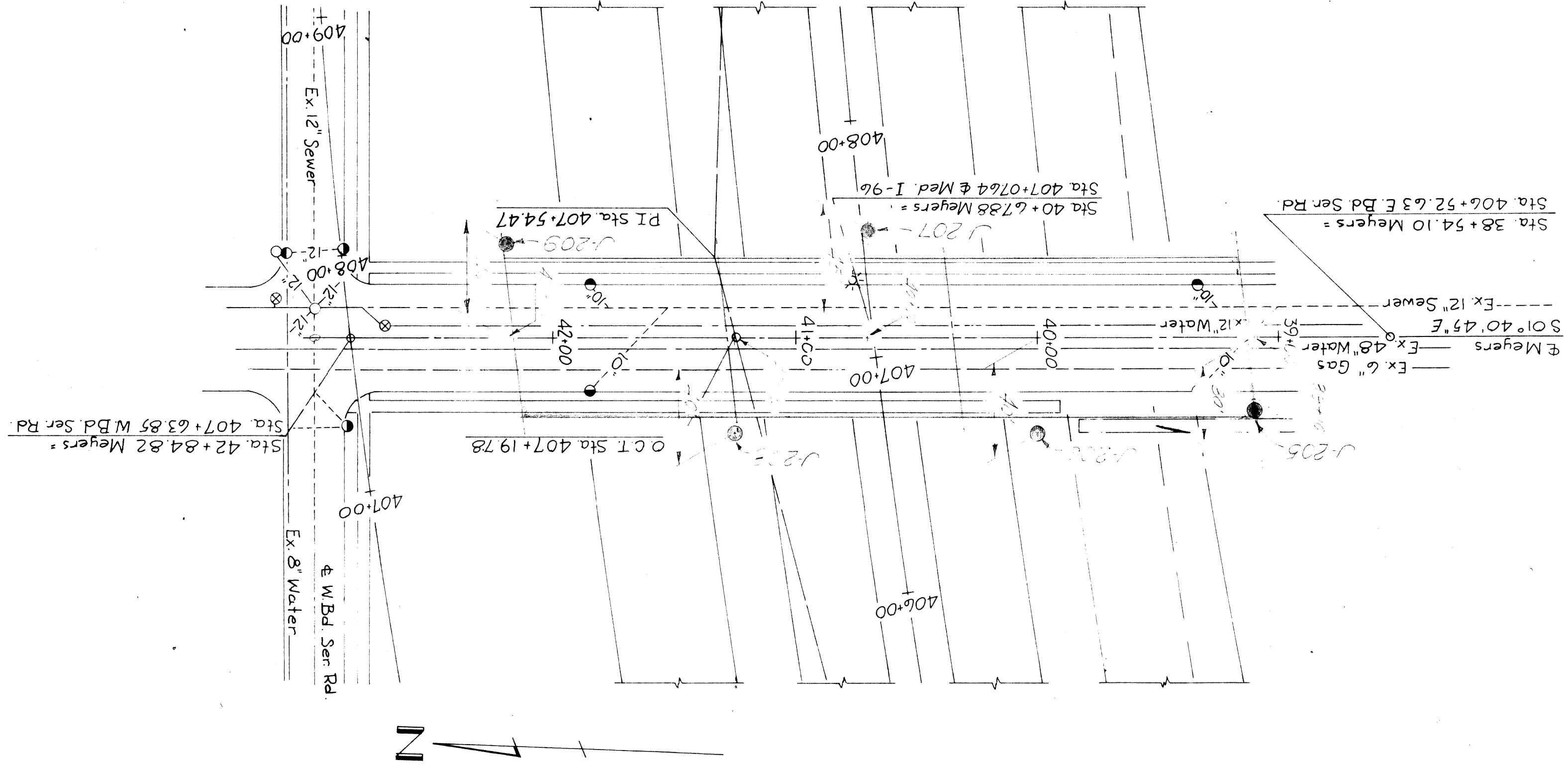


CURVE DATA

Δ	= 167.48 02' Rt
D	= 1' 00.00"
R	= 5729.58'
T	= 846.10'
L	= 1680.06'
E	= 62.14'
PC	= 399+08.37
PI	= 407+54.47
PT	= 415+88.43
No Super	

BENCH MARK DATA

B.M. #39  
 EL. 16707  
 Arrow on Fire Hydrant on the  
 NE Corner of Meyers & Davison.  
 15.5' Lt of Sta. 290+43 (Davison)



Scale 1"=40'

Required Soil Borings

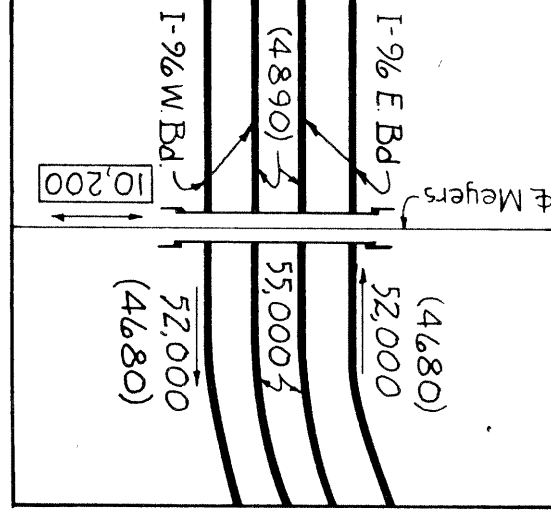
Approx. Elevation	Boring Number
205	144.0
206	141.0
207	141.0
208	141.0
209	144.0

PROFILE

VERT SCALE - 1" = 10'

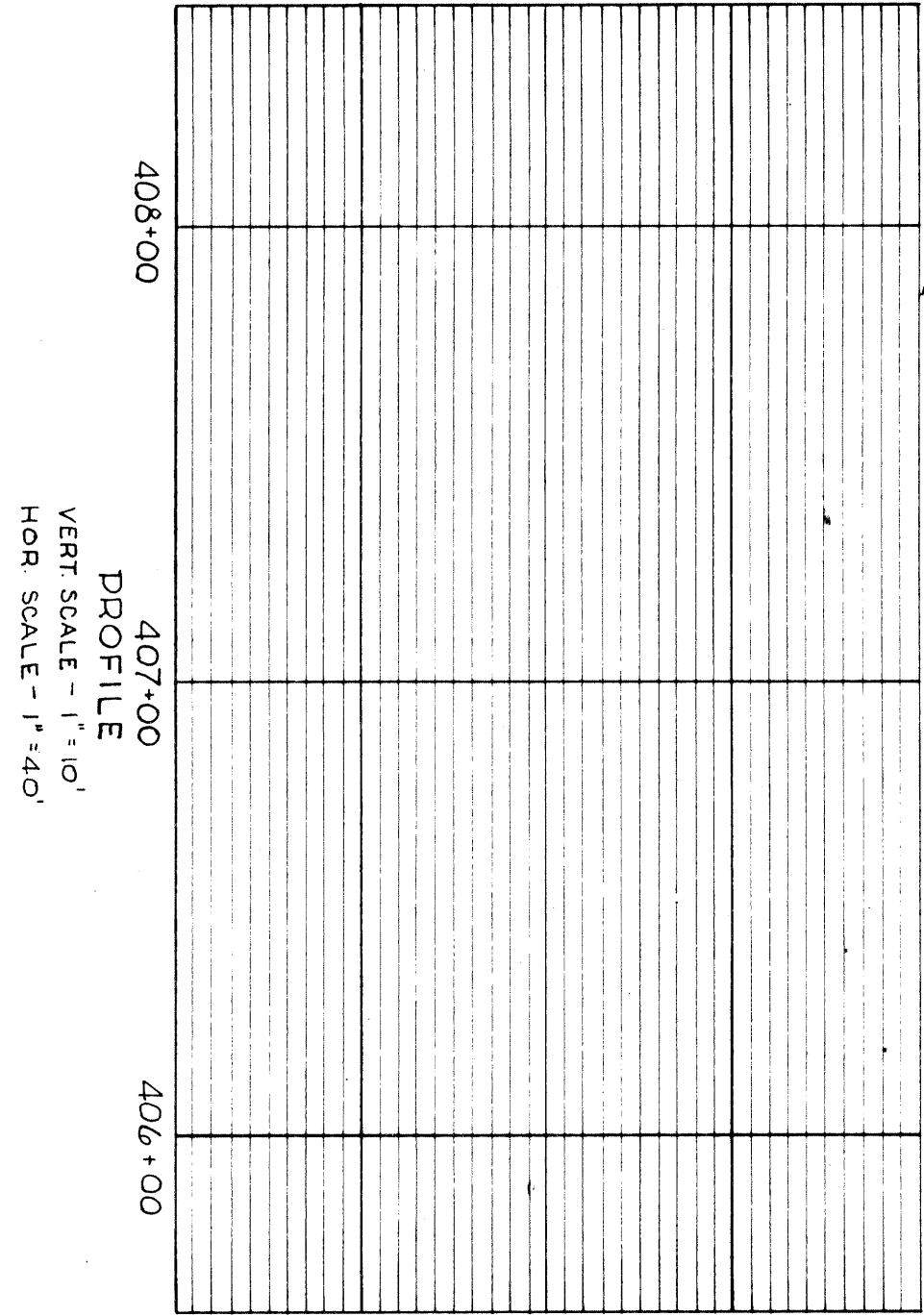
HOR SCALE - 1" = 40'

Station	Profile	Profile	Profile	Profile	Profile
39+00					
40+00					
42+00					
43+00					



1990 Est. Avg. Daily Traffic (1990 Est. Design Hour Vol.)

1965 Avg. Daily Traffic



MICHIGAN STATE HIGHWAY DEPARTMENT

1-96 UNDER MEYERS RD. IN THE CITY OF DETROIT.

GENERAL PLAN OF SITE

APPROVED DESIGN SUPERVISING ENGINEER

APPROVED ASST. ENGINEER OF DESIGN

SIT of 82123

Request for Borings

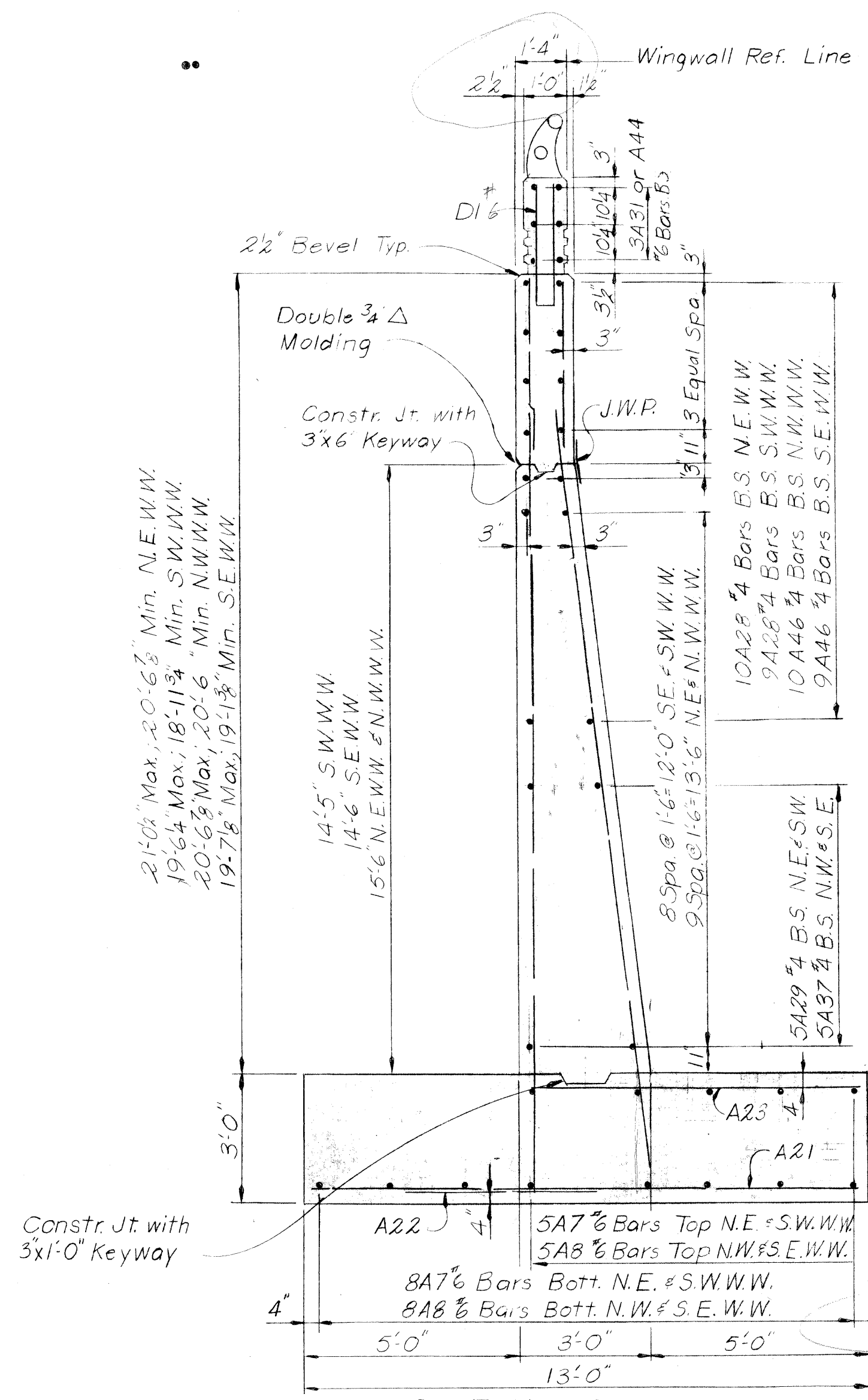
CITY OF DETROIT

DEPARTMENT OF PUBLIC WORKS

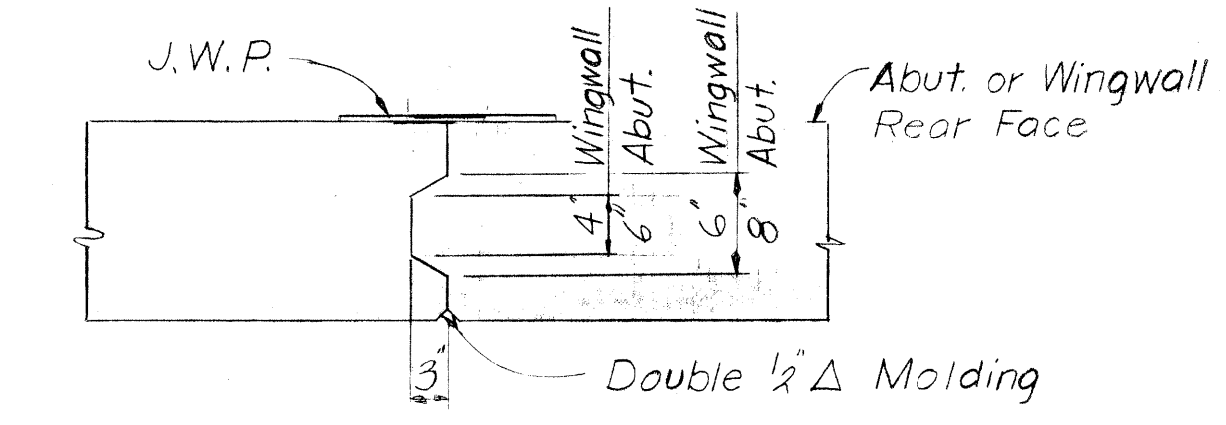
ENGINEERS

STREETS, ALLEYS, SIDEWALKS AND EXPRESSWAYS



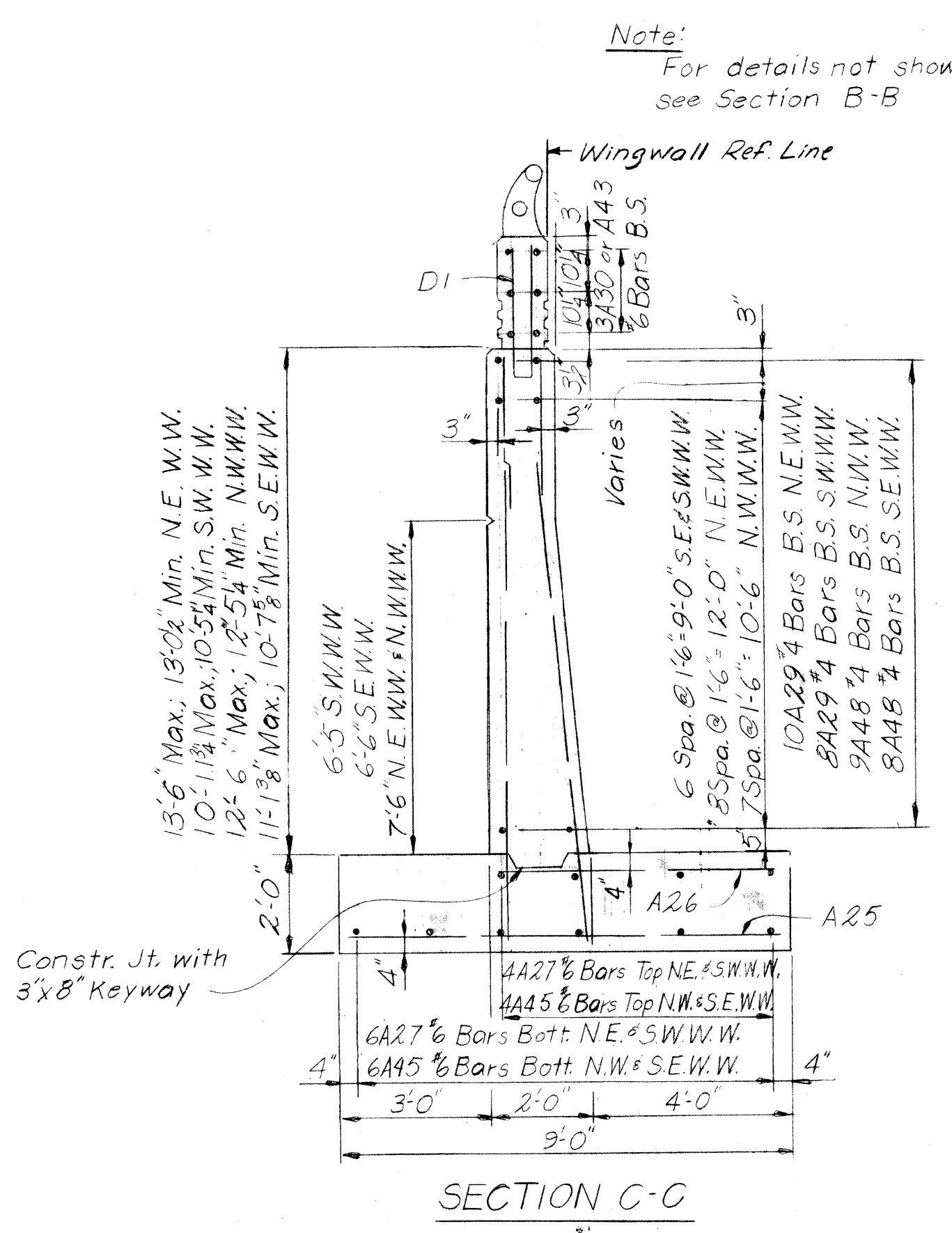


SECTION B-B



VERT. CONST. JOINT DETAILS

Note:  
Stop all keyways 1'-0" below top of Wingwalls.

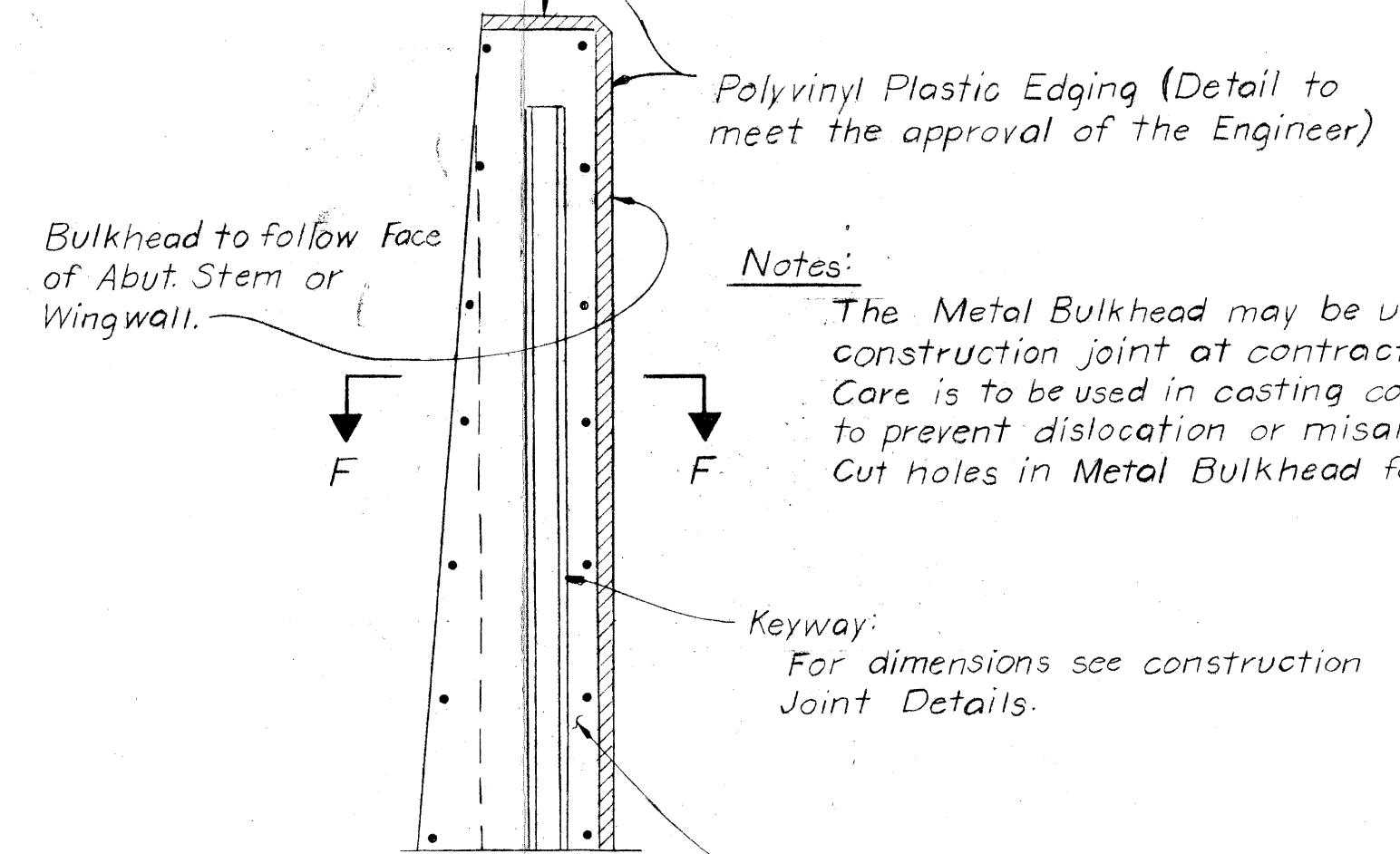


SECTION C-C

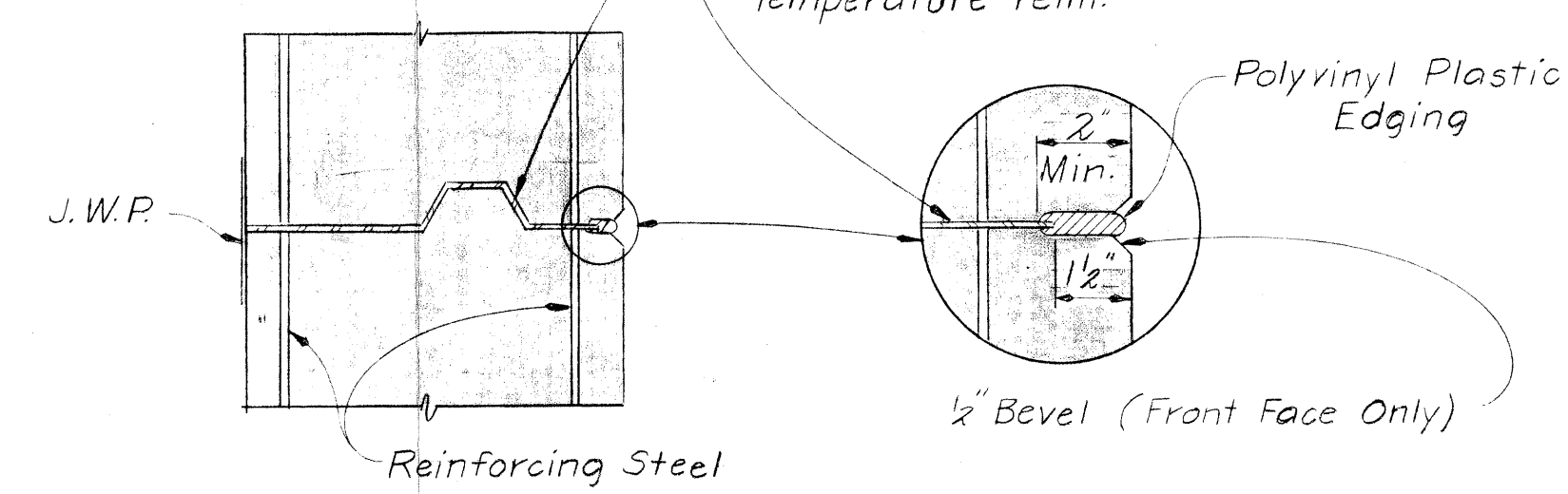
Note:  
For details not shown see Section B-B

Item	Unit	Amount		
		Abut A	Abut. B	Total
Unclassified Excavation	Cu.Yds.	721	837	1558
Steel Sheet Piling (L.I.P.)	Sq.Ft.	384	384	768
Clear Protective Coating for Substructure Concrete	Sq.Yds.	107	115	222
Low Temp. Protection - Substr. Conc.	Cu.Yds.	343	358	701
1/2" Joint Filler	Sq.Ft.	126	126	252
Joint Waterproofing	Sq.Ft.	170	180	350
Bridge Railing - Solid Parapet Type	Lin.Ft.	77	77	154
Foundation Drains*	Lin.Ft.	164	164	328

\* Foundation Drains shall be perforated pipe, sloped 1/8% min., continuous over the length of the Abutment and Wingwall Footings, and placed as shown on the General Plan of Structure.



SECTION AT CONST. JT.



SECTION F-F

ALTERNATE - METAL BULKHEAD FOR CONSTRUCTION JOINTS

CONCRETE QUANTITIES (Cu. Yds.)					
Pour	Location	Abutment A		Abutment B	
		A(6A)	A(6AA)	A(6A)	A(6AA)
✓ A	Footings	62.5	-	62.5	-
✓ B	Footings	71.5	-	71.5	-
✓ C	Grade Beam	15.9	-	15.9	-
✓ D	Footings (S.W. & N.E.W.W.)	18.7	-	18.7	-
✓ D	Footings (S.E. & N.W.W.W.)	15.0	-	15.0	-
✓ E	Abut. Wall	-	28.0	-	30.0
✓ F	Abut. Wall	-	29.2	-	31.7
✓ G	Abut. Wall	-	27.7	-	29.9
✓ H	Wingwall (S.W. & N.E.)	-	25.5	-	27.4
✓ H	Wingwall (S.E. & N.W.)	-	16.3	-	17.4
✓ J	Wingwall (S.W. & N.E.)	-	5.3	-	5.8
✓ J	Wingwall (S.E. & N.W.)	-	3.9	-	4.1
✓ K	Wingwall (S.W. & N.E.)	-	13.4	-	16.6
✓ K	Wingwall (S.E. & N.W.)	-	10.2	-	11.7
Total		183.6	159.5	183.6	174.6
Grade A(6A) Concrete - Substructure		367.2 Cu. Yds.			
Grade A(6AA) Concrete - Substructure		334.1 Cu. Yds.			

Parapet Concrete = 12.8 Cu. Yds. Grade A(6AA)  
Part of Bridge Railing - Solid Parapet Type, and not a pay item.

GENERAL NOTES:

- J.W.P. denotes Joint Waterproofing; N.S. denotes Near Side; F.S. denotes Far Side; B.S. denotes Both Sides.
- Position Dowels shall be set accurately to a template and are to be furnished with Structural Steel.
- Footings concrete quantities are computed on the basis of an outline 3/4" outside of the footing where the concrete is poured against Steel Sheet Piling Left in Place. No additional allowance will be made in concrete or excavation quantities regardless of the steel sheet piling used.
- Steel sheet piling left in place shall be of the continuous interlock type, either new or used, in good condition, weighing not less than 22 pounds per square foot of wall, and shall be furnished with suitable connecting and corner pieces. Lade analysis and mill reports are not required for steel used in Sheet Piling.
- Steel Sheet Piling Left in place shall be driven to its final Penetration before adjacent concrete is poured.
- If it is necessary to lower the top of sheeting after the concrete has been poured, the excess shall be removed by cutting.
- Adjust the spacing of the reinforcing steel as required to permit placing of foundation drains.
- Maximum average foundation pressure D.L. only = 2,900 P.S.F.
- Maximum foundation pressure D.L. + L.L. = 4,000 P.S.F.
- For Bevel and Molding Details see Std. Sh. R16.
- Bridge Railing is to be aluminum tubular railing on solid concrete parapet.
- For Railing Details (except as noted) See Std. Sh. R16.
- The bridge seat and front face of each abutment above top of footing or grade beam between wingwall returns shall be given an application of Clear Protective Coating for Substructure Concrete.

PLANS PREPARED BY  
CITY OF DETROIT  
DEPARTMENT OF PUBLIC WORKS  
CITY ENGINEERS OFFICE  
BUREAU OF HIGHWAYS AND EXPRESSWAYS

Work Sheets 6-9 together

**MICHIGAN DEPARTMENT OF STATE HIGHWAYS**

JOY ROAD OVER JEFFRIES FREEWAY  
IN DETROIT

**ABUTMENT DETAILS**

CITY OF DETROIT

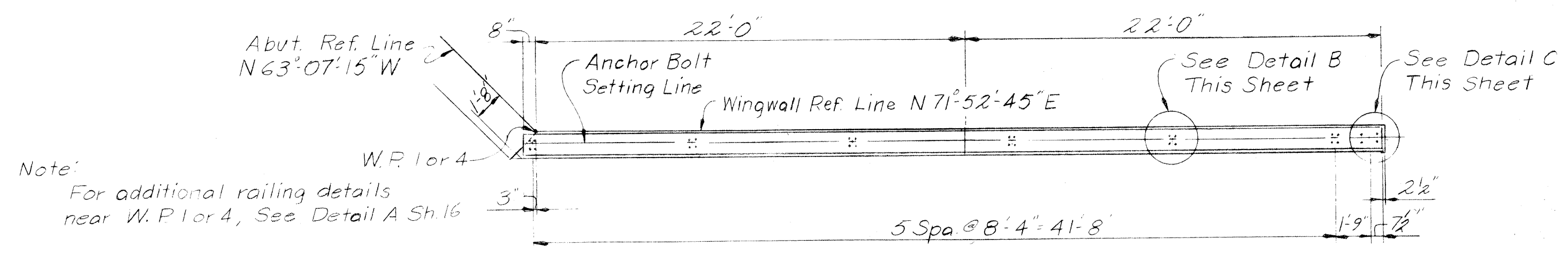
NO.	DESCRIPTION	DATE	BY

REVISIONS

APPROVED \_\_\_\_\_  
STRUCTURAL ENGINEER

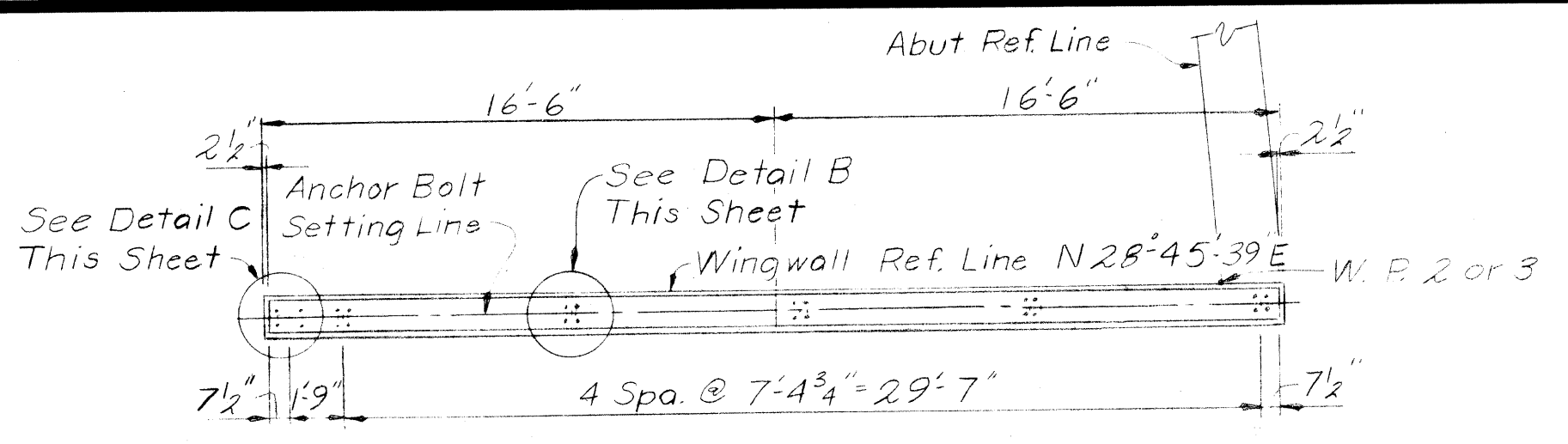
JOB No.  
PW 990141

SQUAD BOSS  
DRAWN BY K.V.H. 9-68  
TRACED BY L.G. 9-68  
CHECKED BY Z.H.K. 12-68  
SHEET 9 OF 21  
S33 of 82123I

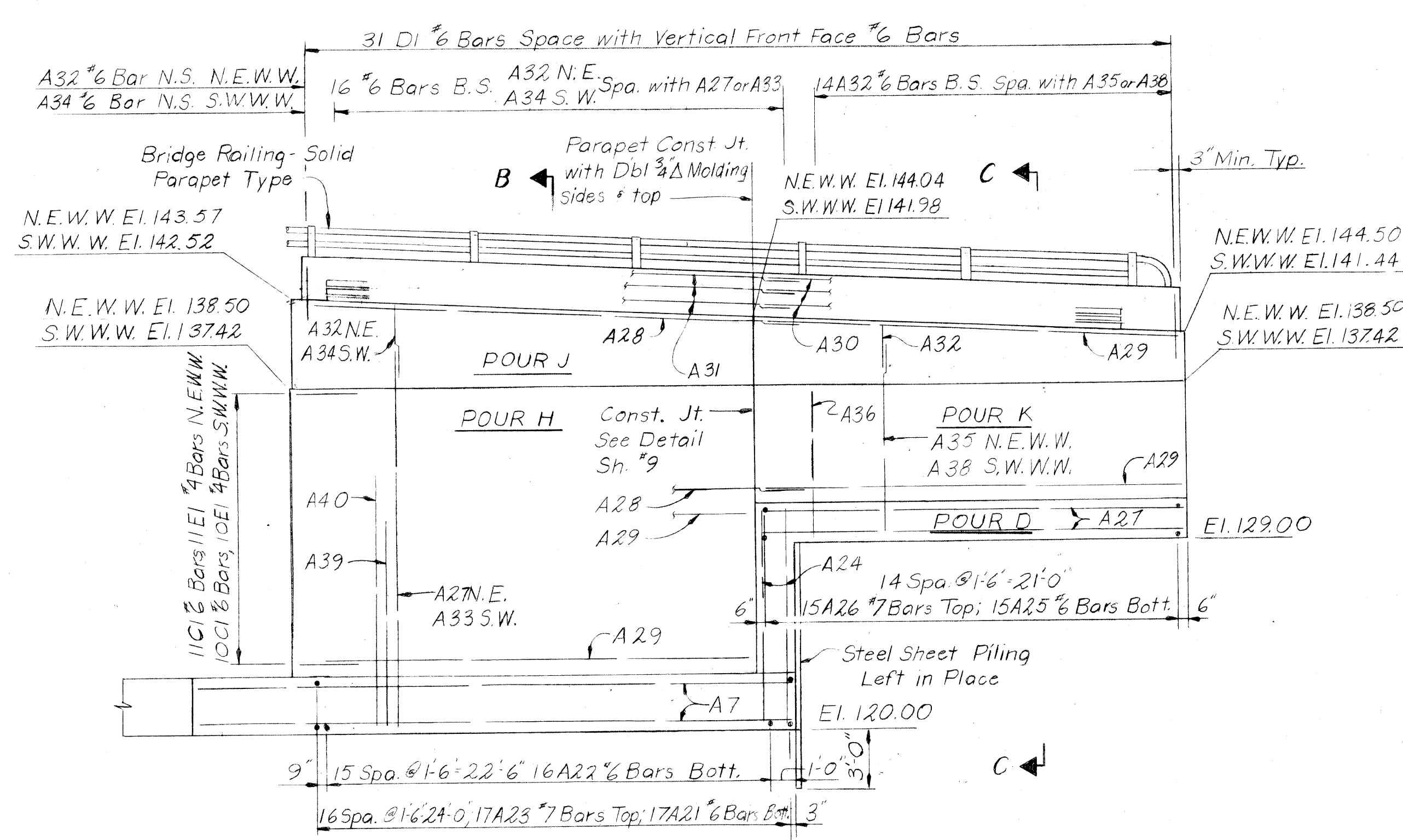


PLAN  
(N.E.W.W. & S.W.W.W.)

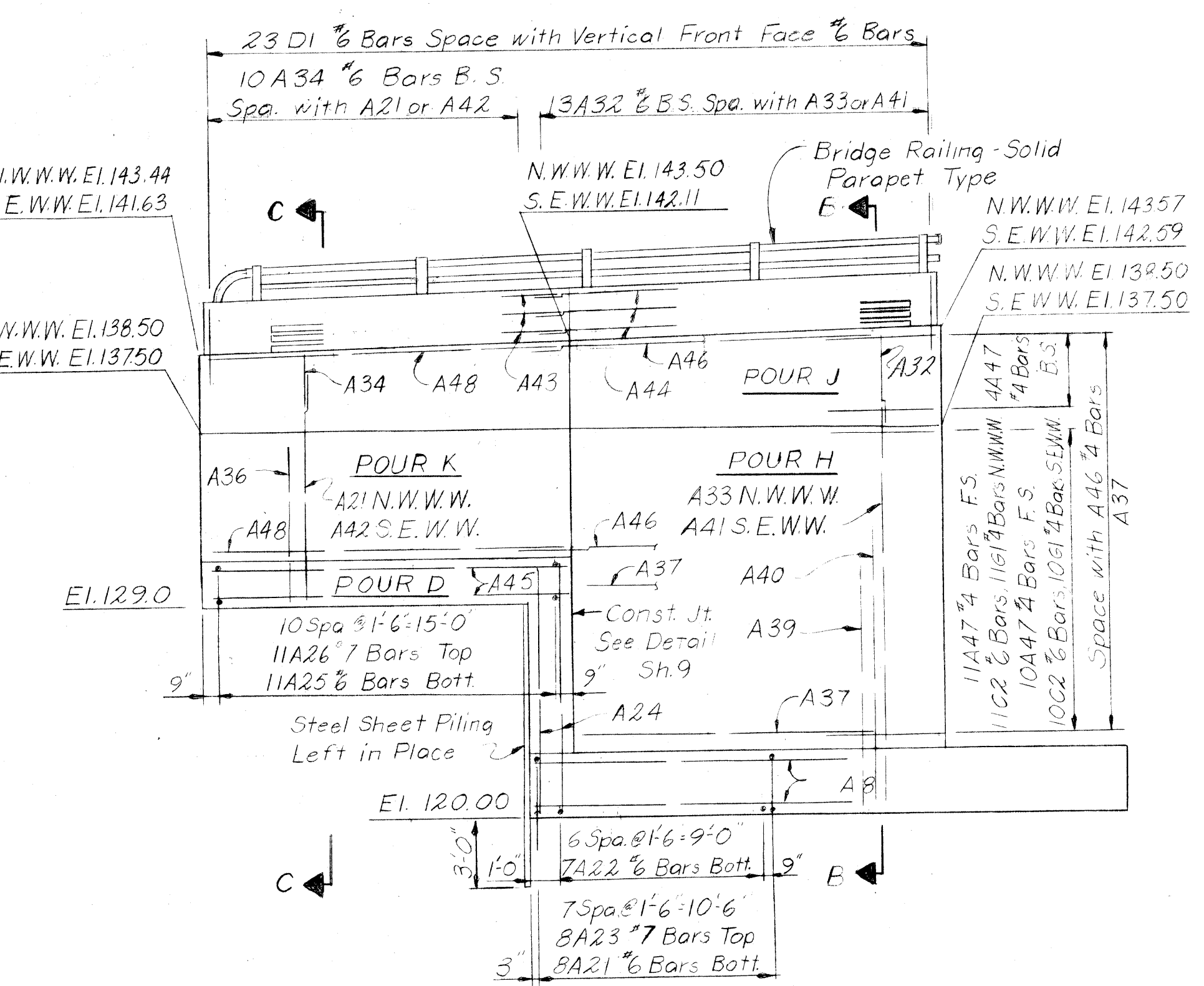
Note:  
For additional railing details  
near W.P. 1 or 4, See Detail A Sh. 16



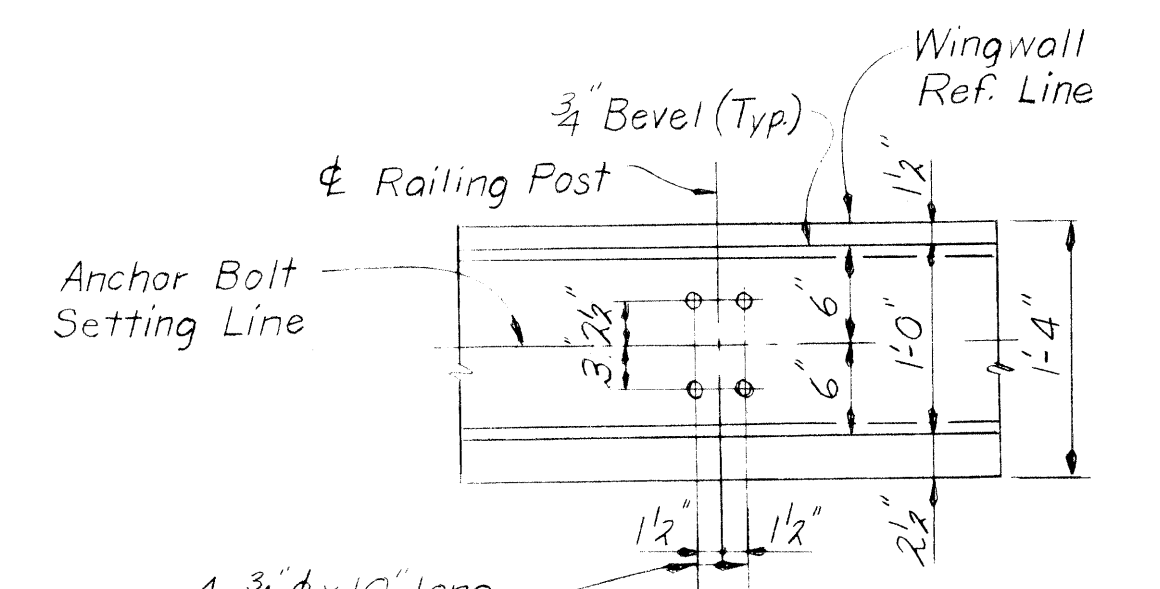
PLAN  
(N.W.W.W. & S.E.W.W.)



ELEVATION  
(N.E.W.W. & S.W.W.W.)

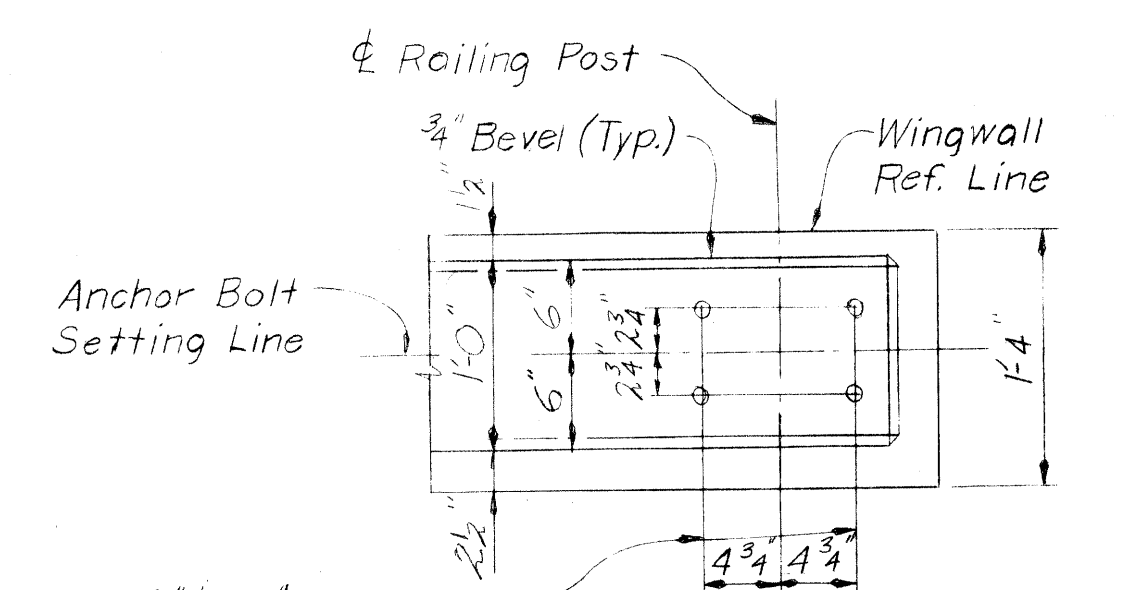


ELEVATION  
(N.W.W.W. & S.E.W.W.)



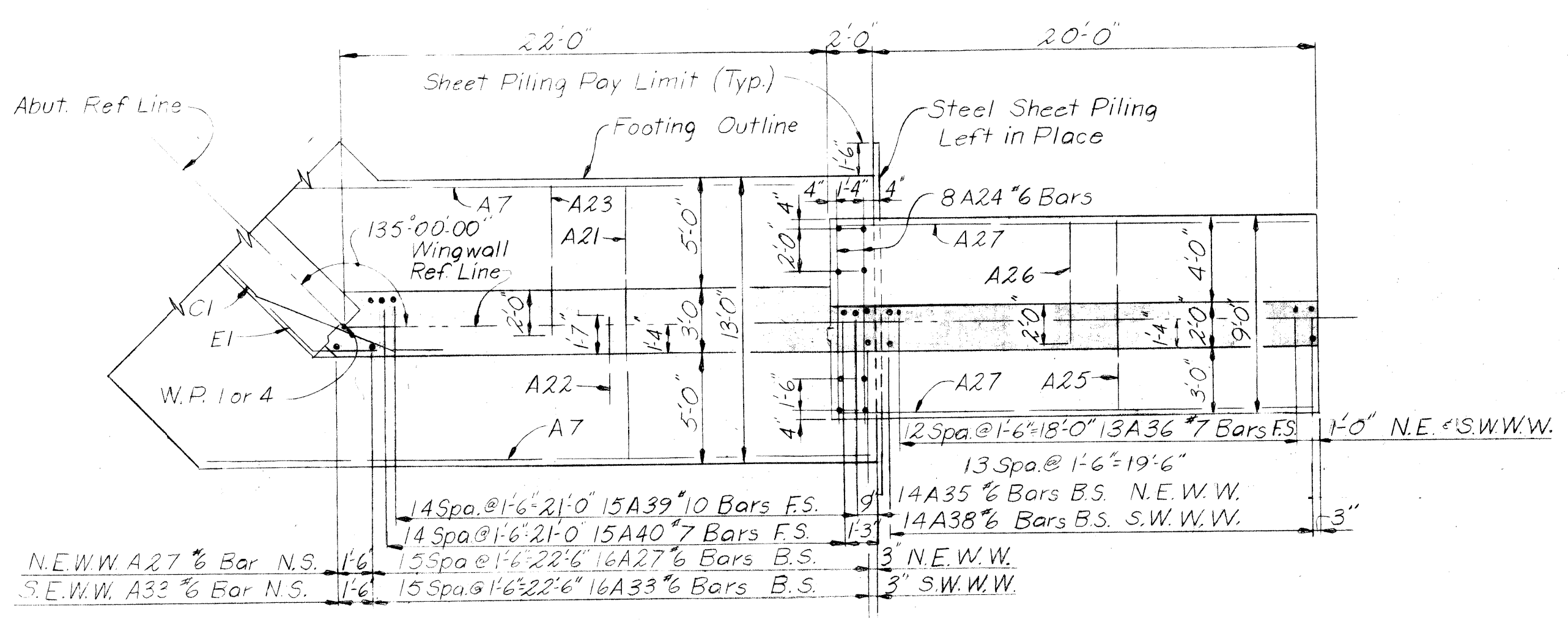
4-3/4" x 10" long  
Anchor Bolts  
(1/2" Proj. Typ.)

DETAIL B

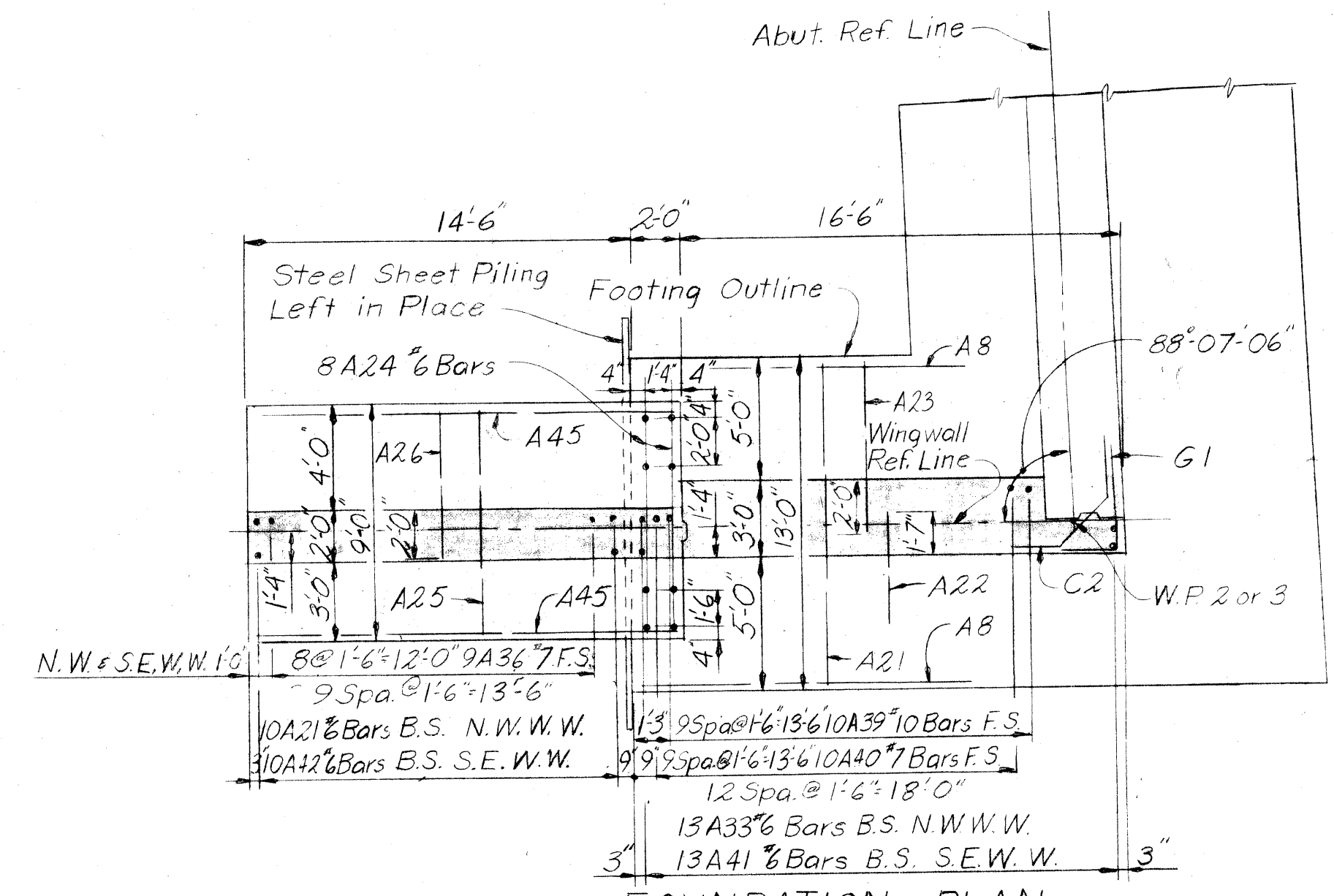


4-3/4" x 10" long  
Anchor Bolts  
(1/2" Proj. Typ.)

DETAIL C



FOUNDATION PLAN  
(N.E.W.W. & S.W.W.W.)



FOUNDATION PLAN  
(N.W.W.W. & S.E.W.W.)

Work Sheets 6-9 together  
PLANS PREPARED BY  
CITY OF DETROIT  
DEPARTMENT OF PUBLIC WORKS  
CITY ENGINEERS OFFICE  
BUREAU OF HIGHWAYS AND EXPRESSWAYS  
JOB No. PW 990141

**MICHIGAN DEPARTMENT OF STATE HIGHWAYS**  
JOY ROAD OVER JEFFRIES FREEWAY  
IN DETROIT  
**WINGWALL DETAILS**

REVISIONS			
NO.	DESCRIPTION	DATE	BY

SQUAD BOSS	CITY OF DETROIT
DRAWN BY	K.V.W. 9-68
TRACED BY	E.G. 9-68
CHECKED BY	E.H.K. 12-68
SHEET	9 OF 21

S33 of 82123T







BAR	DIMENSIONS							SIZE	LENGTH	NO. REQ'D	TOTAL WT.
	a	b	c	d	e	f	g				
A1								#8	14'-6"	68	2623
A2								#6	6'-3"	68	638
A3								#11	7'-9"	66	2718
A4								#6	27'-9"	28	1167
A5								#6	7'-0"	8	84
A6								#6	21'-0"	28	883
A7								#6	30'-3"	26	1181
A8								#6	12'-0"	26	469
A9								#4	21'-3"	84	1192
A10								#5	29'-3"	47	1434
A11								#7	30'-0"	47	2882
A12								#7	11'-9"	94	2258
A13								#8	7'-9"	92	1904
A14								#6	13'-6"	36	730
A15								#6	17'-0"	62	1583
A16								#6	18'-0"	62	1676
A17								#11	13'-0"	128	8841
A18								#11	15'-6"	56	4612
A19								#7	15'-6"	28	887
A20								#6	15'-6"	6	140
A21								#6	12'-6"	70	1314
A22								#6	4'-0"	46	276
A23								#7	6'-9"	50	690
A24								#6	10'-6"	32	505
A25								#6	8'-6"	52	664
A26								#7	5'-9"	52	611
A27								#6	21'-6"	53	1712
A28								#4	23'-9"	38	577
A29								#4	21'-6"	56	804
A30								#6	21'-3"	12	383
A31								#6	24'-0"	12	433
A32								#6	4'-6"	14	953
A33								#6	20'-6"	59	1817
A34								#6	3'-6"	73	384
A35								#6	12'-9"	28	536
A36								#7	7'-9"	44	697
A37								#4	13'-0"	20	174
A38								#6	10'-0"	28	421
A39								#10	11'-0"	50	2367
A10								#7	15'-9"	50	1610
A41								#6	20'-0"	26	781
A42								#6	11'-0"	20	330
A43								#6	15'-9"	12	284
A44								#6	17'-6"	12	315
A45								#6	16'-0"	20	481
A46								#4	14'-0"	38	368
A47								#4	4'-0"	37	97
A48								#4	16'-0"	34	363
A49								#6	14'-6"	50	784
C1	1'-1 1/2"	6'-3"	1'-1 1/8"	5 3/8"	1'-3"	5 3/8"	1'-3"	#6	8'-9"	21	276
C2	10 1/2"	3'-0"	10 1/2"	10 3/8"	1'-3"	10 3/8"	1'-3"	#6	5'-6"	21	173
D1	2'-6 3/8"	6 1/4"						#6	5'-6"	54	446
E1	3'-0"	1'-0 3/4"	1'-0 3/4"	1'-6"				#4	4'-6"	21	63
G1	11"	4'-12"	1'-6"	5 3/8"	1'-6"			#4	6'-6"	21	91
K1	3'-2 3/8"	2'-0 1/2"	1'-6"	2'-4 1/2"				#6	12'-3"	8	147
K2	3'-2 3/8"	1'-11 3/8"	1'-6"	2'-2 3/8"				#6	12'-0"	8	144
K3	3'-2 3/8"	1'-8"	1'-6"	1'-11 3/8"				#6	11'-6"	8	138
K4	3'-2 3/8"	1'-6 3/8"	1'-6"	1'-9 3/8"				#6	11'-3"	212	3582
Z1	3'-9"	1'-3"	8'-0 1/2"	1'-5 1/2"	9"			#11	13'-3"	56	3942

ABUTMENT TOTAL=67647 Lbs

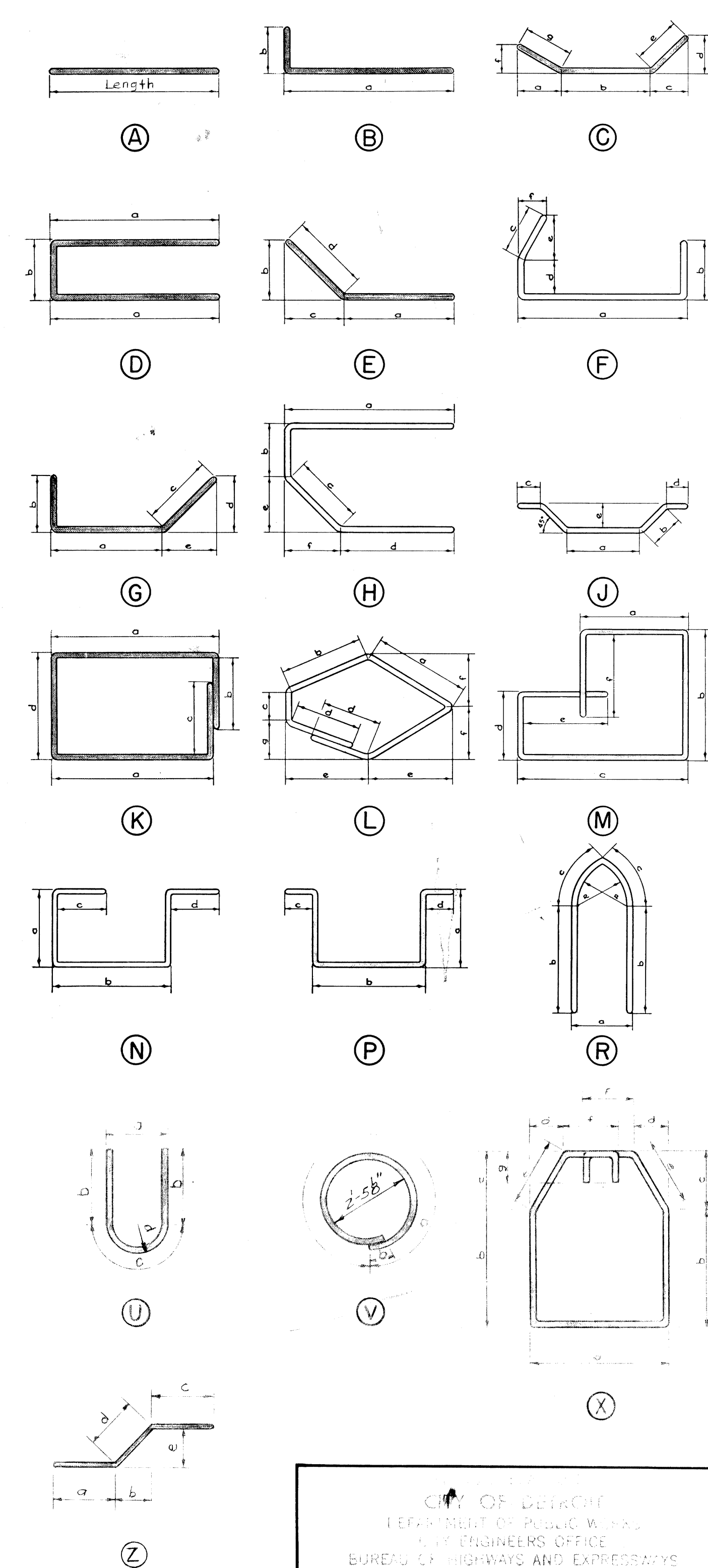
BAR	DIMENSIONS							SIZE	LENGTH	NO. REQ'D	TOTAL WT.
	a	b	c	d	e	f	g				
A101								#6	17'-9"	28	746
A102								#9	11'-0"	48	1795
A103								#6	10'-0"	24	360
A104								#9	8'-3"	48	1346
A105								#7	10'-0"	16	940
A106								#6	3'-0"	4	18
A107								#11	30'-3"	24	3921
A108								#11	31'-8"	12	2208
A109								#11	18'-3"	24	2327
A110								#6	30'-0"	8	360
A111								#6	31'-3"	4	188
A112								#10	35'-9"	32	4923
A113								#9	26'-6"	16	1442
A114								#9	21'-0"	8	571
A115								#6	34'-9"	4	259
A116								#5	28'-6"	3	89
I101	8'-3 3/8"	2'-8 3/8"						#5	19'-3"	22	442
D102	2'-7"	2'-11 1/4"						#5	8'-0"	16	134
D103	1'-6"	2'-10"						#4	5'-9"	20	77
K101	5'-0 5/8"	2'-0"	2'-0 3/8"	2'-8 5/8"				#5	16'-9"	21	367
K102	3'-0 3/8"	1'-7"	1'-7 3/8"	1'-10 3/8"				#5	11'-0"	156	1730
U101	2'-9"	1'-7"	4'-4"	1'-4 1/2"				#5	7'-6"	8	63
V10	7'-11"	10"						#4	8'-9"	32	187
X101	4'-4 5/8"	2'-9 3/8"	2'-3"	1'-4 1/2"	2'-7 5/8"	1'-14"	6"	#5	18'-6"	43	830

PIER TOTAL=25135 Lbs

BAR	DIMENSIONS							SIZE	LENGTH	NO. REQ'D	TOTAL WT.
	a	b	c	d	e	f	g				
A201								#6	37'-6"	546	30753
A202								#6	34'-0"	546	27883
A203								#4	30'-0"	258	5300
A204								#5	31'-0"	254	7566
A205								#6	8'-0"	51	673
A206								#6	28'-6"	30	1284
A207								#6	32'-6"	6	293
A208								#6	31'-0"	8	838
A209								#4	29'-3"	258	4869
A210								#5	32'-0"	234	6956
A211								#6	18'-0"	6	162
A212								#6	31'-0"	12	577
A213								#4	10'-0"	8	53
A214								#4	24'-0"	50	802
A215								#4	15'-0"	10	100
A216								#4	18'-6"	4	49
A217								#4	9'-6"	2	13
B201	10'-9 1/2"	9"						#4	11'-6"	278	2126
D201	6 3/8"	1'-2 1/4"						#4	2'-3"	278	418
D202	3'-0 3/8"	6 3/8"						#6	6'-6"	278	2714
D203	5 3/8"	1-4 3/8"						#4	2'-3"	278	418
K201	3'-4"	1'-0 3/8"	1'-0 3/8"	1'-3 1/2"				#4	10'-0"	22	187
M201	10 1/4"	3'-4"	1'-3 1/2"	2'-5"	9"	1'-5 3/8"		#4	10'-0"	64	428
M202	10 1/4"	3'-4"	1'-3 1/2"	1'-3"	9"	2'-1 3/8"		#4	9'-6"	6	38
P201	1'-7 1/2"	2'-4 1/2"	1'-4 1/2"	1'-1 1/4"				#4	8'-3"	158	761
P202	11 5/8"	3'-7"	1'-0 3/8"	1'-0 3/8"				#4	7'-9"	2	10

SUPERSTRUCTURE TOTAL=55281 Lbs

BAR BENDING DIAGRAM



CITY OF DETROIT  
DEPARTMENT OF PUBLIC WORKS  
CITY ENGINEERS OFFICE  
BUREAU OF HIGHWAYS AND EXPRESSWAYS  
APPROVED: \_\_\_\_\_  
STRUCTURAL ENGINEER  
JOB NO. \_\_\_\_\_  
DATE: \_\_\_\_\_

**MICHIGAN DEPARTMENT OF STATE HIGHWAYS**  
JOY ROAD OVER JEFFRIES FREEWAY  
IN DETROIT  
**STEEL REINFORCEMENT DETAILS**

REVISIONS

NO.	DESCRIPTION	DATE	BY

SQUAD BOSS  
DRAWN BY: J. J. K. 1-69  
CHECKED BY: J. J. K.  
SHEET 81 OF 21  
333 of 821231

Note:-  
All right angle bends in Reinforcing Steel to be made about a pin of the minimum diameter allowed by the Standard Specifications.  
All bar numbers shown on this sheet are to be prefixed S33  
Tolerances in cutting and bending bars are as established in Manual of Standard Practice of the Concrete Reinforcing Steel Institute and Detailing Manual of the American Conc. Institute.  
Grand Total Steel Reinforcement 138061 lbs.