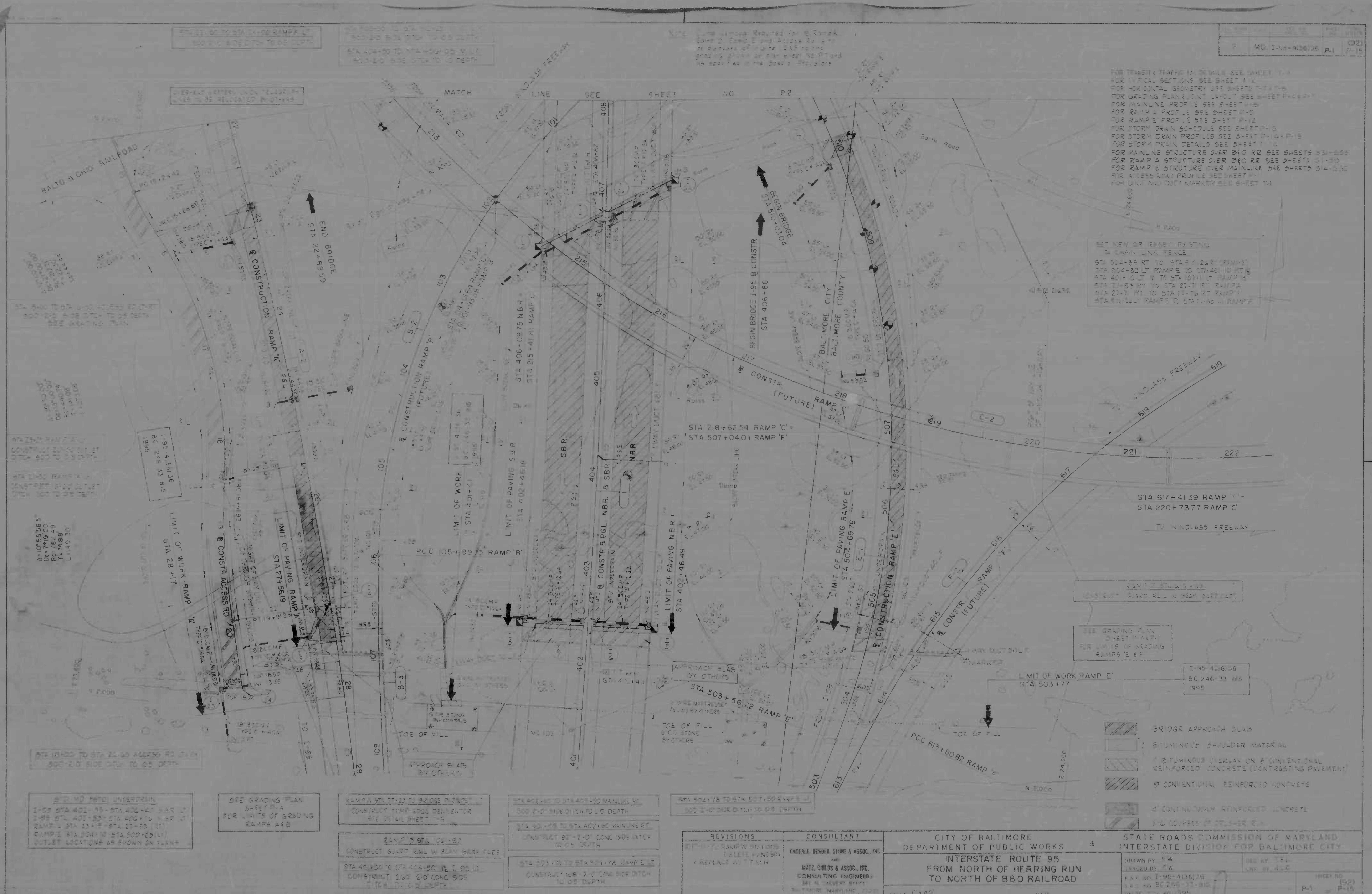
Missing

T-15


2 | MD. I-95-4(36)36 | P-1 | (92) P-15
FOR TYPICAL SECTIONS SEE SHEET T-2
FOR MAINLINE STRUCTURE OVER B&O RR SEE SHEETS
FOR RAMP A STRUCTURE OVER B&O RR SEE SHEETS
FOR RAMP E STRUTURE OVER MAINLINE SEE SHEETS
MATCH LINE SEE SHEET NO P2
BALTO & OHIO RAILROAD
END BRIDGE STA 22+89.59
℄ CONSTRUCTION RAMP "A"
℄ CONSTRUCTION RAMP 'B' (FUTURE)
BEGIN BRIDGE STA 510+03.04
BEGIN BRIDGE I-95 ℄ CONSTR STA 406+86
BALTIMORE CITY
BALTIMORE COUNTY
Earth Road
℄ CONSTR (FUTURE) RAMP C
STA 218+62.54 RAMP 'C' = STA 507+04.01 RAMP 'E'
STA 406+09.75 NBR = STA 215+41.41 RAMP C
SBR
NBR
LIMIT OF WORK STA 401+61
LIMIT OF PAVING SBR STA 402+46.19
LIMIT OF PAVING NBR STA 402+46.49
PCC 105+89.75 RAMP 'B'
℄ CONSTR ℄ PGL NBR ℄ SBR
LIMIT OF PAVING RAMP 'E' STA 504+69.76
℄ CONSTRUCTION RAMP 'E'
℄ CONSTR (FUTURE) RAMP 'F'
STA 617+41.39 RAMP 'F' = STA 220+73.77 RAMP 'C'
TO WINDLASS FREEWAY
LIMIT OF WORK-RAMP 'A' STA 28+17
LIMIT OF PAVING RAMP 'A' STA 27+56.19
℄ CONSTR ACCESS RD
I-95-4(36)36 BC 246-33-815 1995
Δ=10°55'56.5" Dc=7°19'20" Rc=782.49 T=74.88 L=149.30
APPROACH SLAB BY OTHERS
TOE OF FILL
STA 503+56.72 RAMP 'E'
LIMIT OF WORK RAMP 'E' STA 503+77
PCC 613+80.82 RAMP 'E'
SEE GRADING PLAN SHEET P-4 FOR LIMITS OF GRADING RAMPS A & B
BRIDGE APPROACH SLAB
BITUMINOUS SHOULDER MATERIAL
BITUMINOUS OVERLAY ON 8" CONVENTIONAL REINFORCED CONCRETE (CONTRASTING PAVEMENT)
9" CONVENTIONAL REINFORCED CONCRETE
8" CONTINUOUSLY REINFORCED CONCRETE
REVISIONS
CONSULTANT
KNOERLE, BENDER, STONE & ASSOC., INC.
AND
MATZ, CHILDS & ASSOC., INC.
CONSULTING ENGINEERS
CITY OF BALTIMORE
DEPARTMENT OF PUBLIC WORKS
&
STATE ROADS COMMISSION OF MARYLAND
INTERSTATE DIVISION FOR BALTIMORE CITY
INTERSTATE ROUTE 95
FROM NORTH OF HERRING RUN
TO NORTH OF B&O RAILROAD
SCALE: 1" = 40'
DATE
DRAWN BY F.W.
TRACED BY F.W.
F.A.P. NO. I-95-4(36)36
S.R.C. NO. BC 246-33-815
BALTO. CITY NO. 1995
SHEET NO. P-1 (92) P-15

2	MD	I-95-4(36)136	P-10	(92) P-15

LIMIT OF PAVING
STA 201+98
202+09.57

LIMIT OF EMBANKMENT
STA 201+98
89.57

LIMIT OF WORK
STA 201+22
21

I-95-4(36)136
BC 246-33-815
1995

STA 43+25 MORAVIA RD ℄ SURV 8 RT =
PC 199+1900 RAMP 'C'

RAMP 'C' P.C. 199+19.00 TO STA. 207+00

PT 205+27.43 21' RT. =
RC 15+29.49 RAMP 'A'

LIMIT OF PAVING
STA 208+50

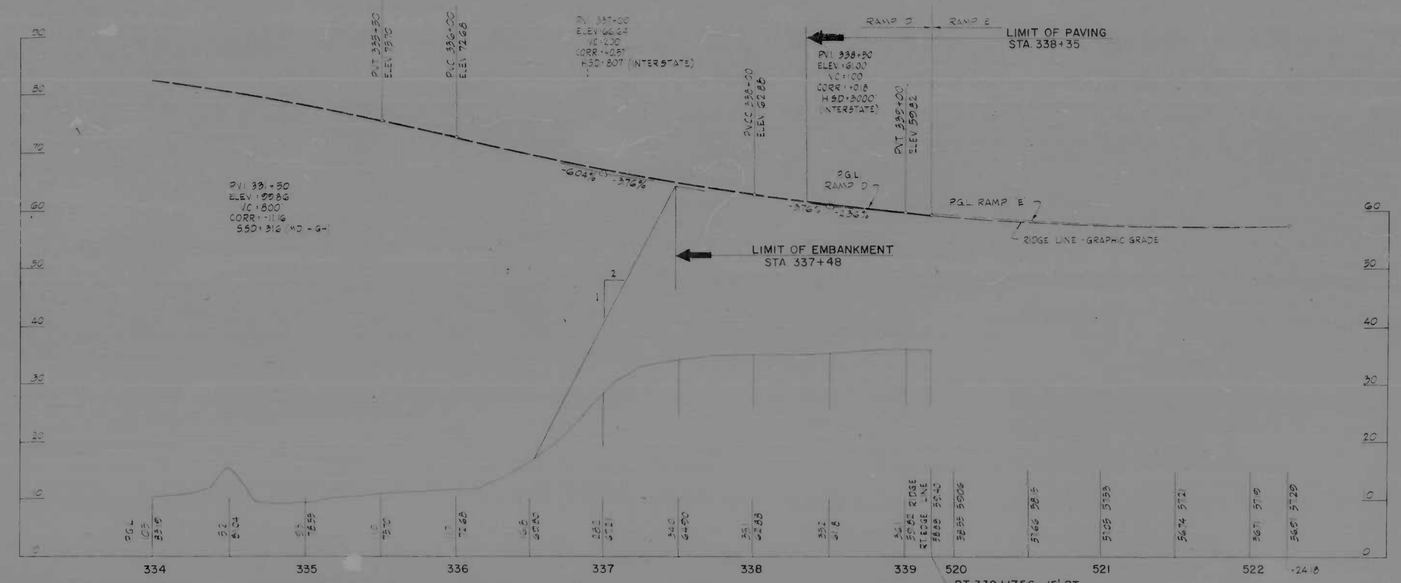
LIMIT OF EMBANKMENT
STA 210+42

RAMP 'C' STA. 207+00 TO STA 213+00

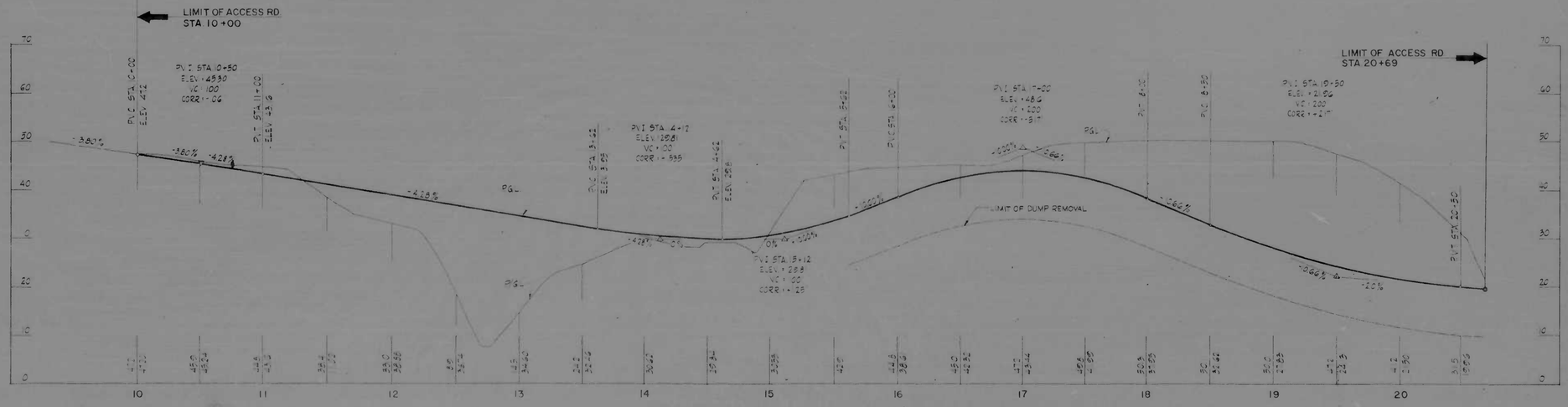
REVISIONS	CONSULTANT	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS & STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY	
SHEET 2, RAMP C PROFILE	KIDDE, BENDER, STONE & ASSOC., INC. and MATZ, CHILDS & ASSOC., INC. CONSULTING ENGINEERS 341 N. CALVERT STREET BALTIMORE, MARYLAND 21202	INTERSTATE ROUTE 95 FROM NORTH OF HERRING RUN TO NORTH OF B&O RAILROAD	DRAWN BY F.W. DES. BY T.E.L. TRACED BY F.W. CHK. BY J.L.C. F.A.P. NO. I-95-4(36)136 B.R.C. NO. BC 246-33-815 BALTO. CITY NO. 1995 SCALE Horiz. 1" = 40' Vert. 1" = 10' DATE SHEET NO. P-10 (92) P-15

5 P22

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	MD.	I-95-4(36)36	P-11	(92) P-15



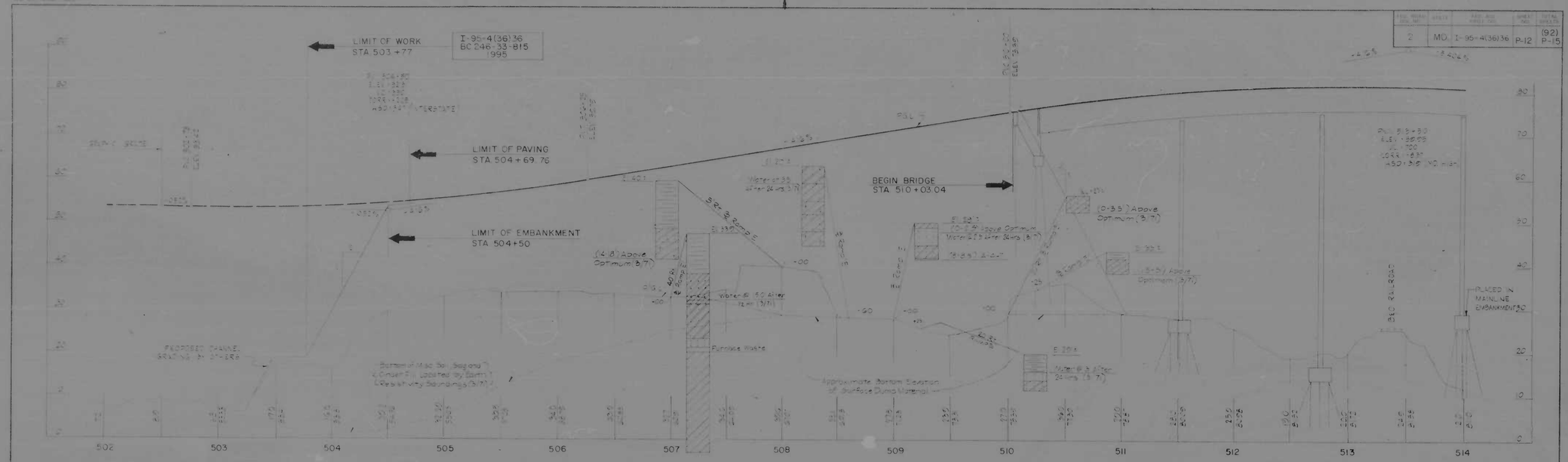
RAMP 'D' STA. 334+00 TO STA. 339+17.56



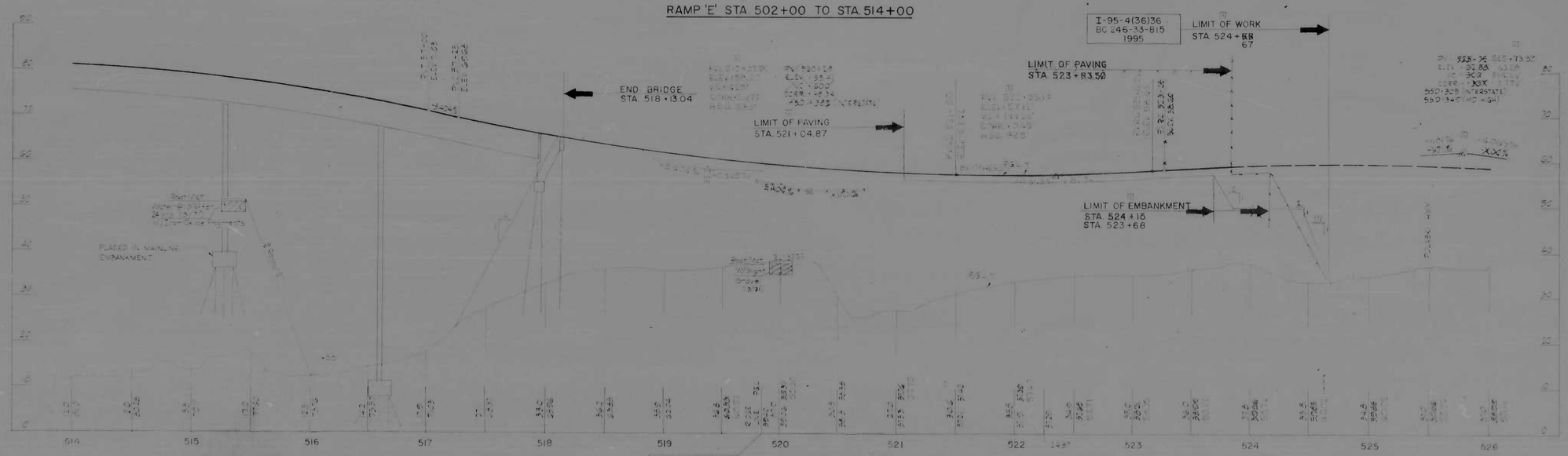
ACCESS ROAD RELOCATED STA. 10+00 TO STA. 20+69

REVISIONS	CONSULTANT	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS	&	STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY
	KNOERLE, RENDER, STONE & ASSOC., INC AND MATZ, RIMLIN & ASSOC., INC. CONSULTING ENGINEERS 341 N. CALVERT STREET BALTIMORE, MARYLAND	INTERSTATE ROUTE 95 FROM NORTH OF HERRING RUN TO NORTH OF B&O RAILROAD		DRAWN BY F.W. DES. BY T.E.L. TRACED BY F.W. CHK. BY J.L.C.
		SCALE Horiz. 1" = 40' Vert. 1" = 10' DATE		F.A.P. NO. I-95-4(36)36 S.R.C. NO. BC 246-33-815 BALTO. CITY NO. 1995 SHEET NO. (92) P-11 OF P-15

2	MD. I-95-4(36)36	P-12	(92) P-15



RAMP 'E' STA 502+00 TO STA 514+00



POT 519+84.87 15' RT =
PT 339+17.56 RAMP 'D'

RAMP 'E' STA 514+00 TO STA 526+00

REVISIONS	CONSULTANT	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS & STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY	
	KNOERLL, WENDER, STONE & ASSOC., INC. AND MATZ, CHILDS & ASSOC., INC. CONSULTING ENGINEERS 341 N. CALVERT STREET BALTIMORE, MARYLAND 21202	INTERSTATE ROUTE 95 FROM NORTH OF HERRING RUN TO NORTH OF B&O RAILROAD	DRAWN BY F.W. TRACED BY F.W. DES. BY T.E.L. CHK. BY J.L.C.
		SCALE Horiz 1"=40' Vert 1"=10' DATE	F.A.P. NO. I-95-4(36)36 B.R.C. NO. BC 246-33-815 BALTO. CITY NO. 1995 SHEET NO. P-12 OF (92) P-15

SHEET NUMBER	SHEETS	FED. ROAD PROJ. NO.	SHEET NO.	SHEETS IN SET
2	MD.	I-95-4(36)36	P-13	(92) P-15

STORM DRAIN SCHEDULE

INLET SCHEDULE

NO.	TYPE	LOCATION	CROSS SLOPE %	TOP	INV. OUT	REMARKS
1	STD. S	MAINLINE 687+43.50	060	54.80	49.34	
2	STD. S	MAINLINE 687+43.50	060	55.64	48.74	
3	STD. S	MAINLINE 687+40.43	060	52.04	48.38	
4	STD. S	MAINLINE 687+40.72	028	54.21	48.70	
5	STD. S	MAINLINE 688+02.58	028	52.15	48.10	
6	STD. S	MAINLINE 688+02.58	060	51.15	48.10	
7	STD. S	MAINLINE 687+02.58	028	51.42	48.10	
8	STD. S	MAINLINE 687+02.58	060	51.60	48.10	
9	STD. S	RAMP A 27 RT 17+50	060	70.10	66.60	
10	STD. S	RAMP A 27 RT 20+45	060	68.10	58.60	
11	STD. S	RAMP A 27 RT 23+25	060	54.08	50.58	
12	STD. S	RAMP A 27 RT 25+00	060	+85	44.60	
13	STD. S	RAMP A 27 RT 25+00	024	48.80	44.05	
14	STD. S	RAMP A 27 RT 27+75	024	43.82	39.86	
15	STD. S	RAMP A 27 RT 27+50	060	46.12	38.18	
16	STD. S	RAMP C 48 RT 207+85	060	64.64	60.83	(1)
17	STD. S	RAMP E 27 RT 808+75	060	73.06	70.6	
18	STD. S	RAMP E 27 RT 807+50	060	66.30	62.80	
19	STD. S	RAMP E 27 RT 806+75	060	64.87	60.87	
20	STD. S	RAMP E 27 RT 806+10	024	57.70	51.81	VOLUME BOOST (2) OTHERS
21	STD. S	RAMP E 48 RT 804+10	060	56.00	52.58	VOLUME BOOST BY OTHERS
22	STD. S	RAMP D 38 RT 338+50	060	50.08	36.58	
23	SPECIAL TYPE K	RAMP D 73 LT 209+00		45.00	41.75	
24	STD. S	MAINLINE 687+40.82	060	53.97	50.00	
24A	STD. S	MAINLINE 687+40.72	028	55.28	51.28	
25	SPECIAL TYPE K	ACCESS ROAD STA 20+05		19.50	15.25	
26	SPECIAL TYPE K	ACCESS ROAD STA 10+65		16.34	12.10	

STORM DRAIN MANHOLE SCHEDULE

NO.	TYPE	LOCATION	COORDINATES NORTH	COORDINATES EAST	REMARKS
	STD. DROP M.H.	RAMP C 73 LT 208+33	307.22	21453.90	

SHEET NO P-1

P-1 & CONSTR VBC & SBC STA 400+43.50 TO 407+43.50 RT & LT
130 - 24" B.C.C.M.P. TYPE II W/ 2 GAUGE
36 - 24" B.C.C.M.P. TYPE C W/ 14 GAUGE
4 - STD 'S' INLET - DOUBLE GRATE
4B EXTRA DEPTH
1 - STD END SECTION FOR 24" C.M.P.

P-2 & CONSTR VBC & SBC STA 402+55 RT & LT
20 - 24" B.C.C.M.P. TYPE II W/ 12 GAUGE
40 - 24" B.C.C.M.P. TYPE C W/ 14 GAUGE
1 - STD 'S' INLET - DOUBLE GRATE
1B EXTRA DEPTH
1 - STD END SECTION FOR 24" C.M.P.
2 - 30°00' ELBOWS FOR 24" C.M.P.

P-3 & CONSTR RAMP A STA 23+25 RT
44 - 18" B.C.C.M.P. TYPE II W/ 12 GAUGE
1 - STD 'S' INLET - DOUBLE GRATE
1B EXTRA DEPTH
1 - STD END SECTION FOR 18" C.M.P.
1 - 30°00' ELBOW FOR 18" C.M.P.

P-4 & CONSTR RAMP A STA 25+00 RT & LT
20 - 18" B.C.C.M.P. TYPE II W/ 12 GAUGE
20 - 18" B.C.C.M.P. TYPE C W/ 14 GAUGE
2 - STD 'S' INLETS - DOUBLE GRATE
1B EXTRA DEPTH
1 - STD END SECTION FOR 18" C.M.P.
1 - 30°00' ELBOWS FOR 18" C.M.P.

P-5 & CONSTR RAMP A STA 27+45 RT TO STA 27+80 RT
44 - 18" B.C.C.M.P. TYPE II W/ 12 GAUGE
44 - 18" B.C.C.M.P. TYPE C W/ 14 GAUGE
2 - STD 'S' INLETS - DOUBLE GRATE
1B EXTRA DEPTH
1 - STD END SECTION FOR 18" C.M.P.
2 - 30°00' ELBOWS FOR 18" C.M.P.

P-6 & CONSTR RAMP E STA 807+75 LT
80 - 18" B.C.C.M.P. TYPE II W/ 12 GAUGE
1 - STD 'S' INLET - DOUBLE GRATE
2B EXTRA DEPTH
1 - STD END SECTION FOR 18" C.M.P.
2 - 30°00' ELBOWS FOR 18" C.M.P.

P-7 & CONSTR RAMP E STA 807+75 LT
80 - 18" B.C.C.M.P. TYPE II W/ 12 GAUGE
1 - STD 'S' INLET - DOUBLE GRATE
2B EXTRA DEPTH
1 - STD END SECTION FOR 18" C.M.P.
2 - 30°00' ELBOWS FOR 18" C.M.P.

P-8 & CONSTR RAMP E STA 807+80 LT
80 - 18" B.C.C.M.P. TYPE C W/ 14 GAUGE
1 - STD 'S' INLET - DOUBLE GRATE
2B EXTRA DEPTH
1 - STD END SECTION FOR 18" C.M.P.
2 - 30°00' ELBOWS FOR 18" C.M.P.

P-9 & CONSTR RAMP E STA 804 - 75 LT
40 - 18" B.C.C.M.P. TYPE C W/ 14 GAUGE
1 - STD 'S' INLET - DOUBLE GRATE
2B EXTRA DEPTH
1 - STD END SECTION FOR 18" C.M.P.

P-10 & CONSTR ACCESS ROAD STA 20+05 LT & RT
2 - SPECIAL TYPE 'K' INLET 2B EXTRA DEPTH
80 - 18" B.C.C.M.P. TYPE C W/ 14 GA

SHEET NO. P-2

P-11 & CONSTR RAMP A STA 17+40 RT
68 - 18" B.C.C.M.P. TYPE C W/ 14 GAUGE
1 - STD 'S' INLET - DOUBLE GRATE
2B EXTRA DEPTH
1 - STD END SECTION FOR 18" C.M.P.
2 - 30°00' ELBOWS FOR 18" C.M.P.

P-12 & CONSTR RAMP A STA 20+45 RT
92 - 18" B.C.C.M.P. TYPE C W/ 14 GAUGE
1 - STD 'S' INLET - DOUBLE GRATE
2B EXTRA DEPTH
1 - STD END SECTION FOR 18" C.M.P.
2 - 30°00' ELBOWS FOR 18" C.M.P.

& CONSTR VBC & SBC STA 402+55
326 LF RCC PIPE CLASS II
1 - STD TYPE C ENDWALL FOR 30" PIPE

SHEET NO. P-3

P-13 & CONSTR VBC & SBC STA 414+50 LT & RT
ADJUST EXISTING INLETS TO FINAL ALIGNMENT & GRADE

P-14 & CONSTR RAMP C STA 202+88.10 RT
60 - 18" B.C.C.M.P. TYPE C W/ 14 GAUGE
1 - STD 'S' INLET - DOUBLE GRATE
2B EXTRA DEPTH
1 - STD END SECTION FOR 18" C.M.P.
RADIUS - ELBOWS FOR 18" C.M.P.

P-15 & CONSTR RAMP E STA 821+80 TO STA 807+75 LT
48 - 18" B.C.C.M.P. TYPE II W/ 12 GAUGE
40 - 18" B.C.C.M.P. TYPE C W/ 14 GAUGE
2 - STD 'S' INLETS - DOUBLE GRATE FRAME GRATE SLOTTED ON 2B EXTRA DEPTH
1 - STD END SECTION FOR 18" C.M.P.

P-16 & CONSTR RAMP D STA 338+50 RT
80 - 18" B.C.C.M.P. TYPE C W/ 14 GAUGE
1 - STD 'S' INLET - DOUBLE GRATE
2B EXTRA DEPTH
1 - STD END SECTION FOR 18" C.M.P.
2 - 30°00' ELBOWS FOR 18" C.M.P.

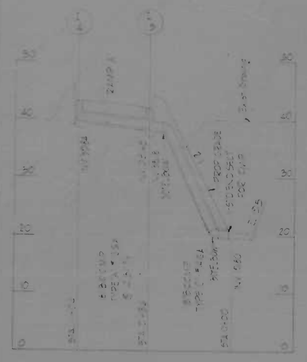
& CONSTR RAMP A STA 18+40
168 LF R.C.C. PIPE CLASS II
1 - STD D202.01 - 30" (OVER 6' EXTRA DEPTH REQ'D)
1 - STD TYPE C ENDWALL FOR 30" PIPE

P-18 & CONSTR RAMP C STA 205+10 LT
1 - SPECIAL TYPE 'K' INLET 2B EXTRA DEPTH
28 - 18" B.C.C.M.P. TYPE C W/ 14 GAUGE

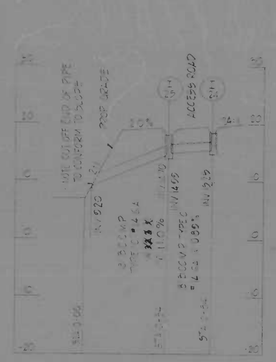
LEGEND
STD 'S' STANDARD TYPE 'S' INLET - DOUBLE GRATE

REVISIONS	CONSULTANT	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS & STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY	
1 MINOR CHANGES	ENDERLE, BENDER, STONE & ASSOC., INC. AND MATZ, CHILDS & ASSOC., INC. CONSULTING ENGINEERS 341 N. CALVERT STREET BALTIMORE, MARYLAND 21202	INTERSTATE ROUTE 95 FROM NORTH OF HERRING RUN TO NORTH OF B&O RAILROAD	DRAWN BY F.W. DES. BY P.W.Z. TRACED BY F.W. CHK. BY R.W.C. F.A.P. NO. I-95-4(136)136 SHEET NO. (92) P-13 OF P-15 SRC. NO. BC 246-33-815 BALTO. CITY NO. 1995
	SCALE	DATE	

2	MD I-95-4(36)36	P-14	(92) P-15



I-14 TO I-15



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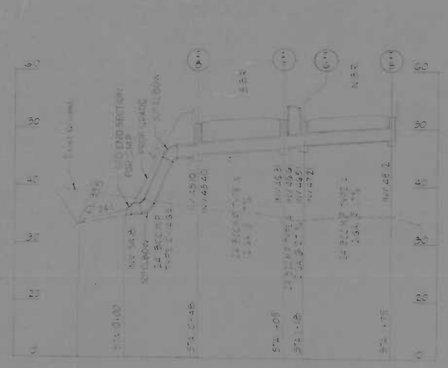
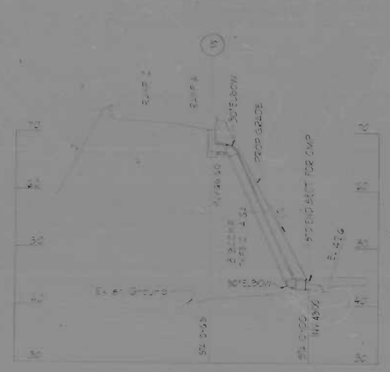
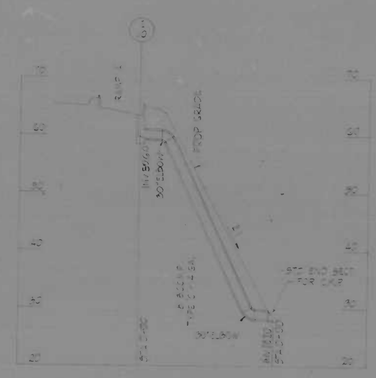


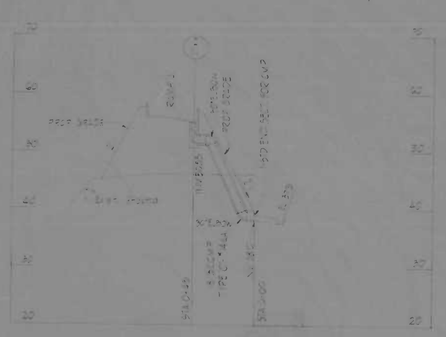
I-5 TO I-8



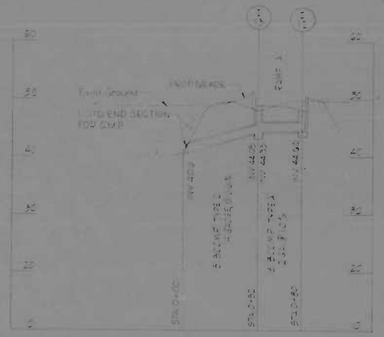
I-9



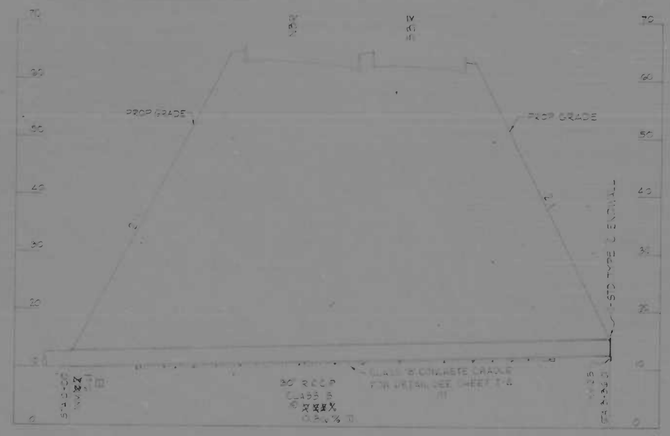
I-10

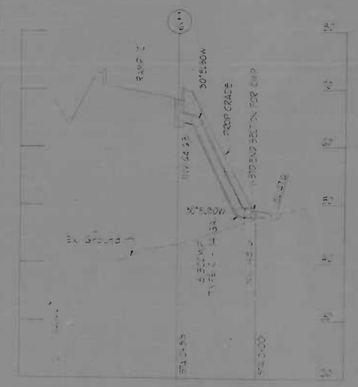


I-11



I-12 TO I-13

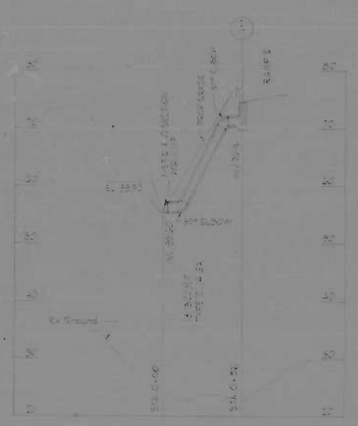




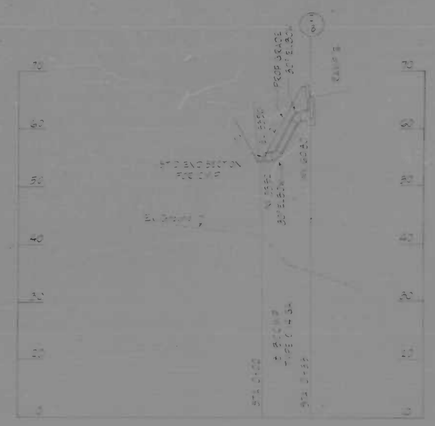
I-16

REVISIONS	CONSULTANT	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS &	STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY
1 - 7-11-75 LONG GRADE 2-14-75	KNOERLE, BENDER, STONE & ASSOC., INC. AND MATZ, CHILDS & ASSOC., INC. CONSULTING ENGINEERS 841 N. CALVERT STREET BALTIMORE, MARYLAND 21202	INTERSTATE ROUTE 95 FROM NORTH OF HERRING RUN TO NORTH OF B&O RAILROAD	DRAWN BY F.W. DES. BY P.Z. TRACED BY F.W. CHK. BY J.L.C.
		SCALE Horiz 1"=40' Vert 1"=10' DATE	F.A.P. NO. I-95-4(36)36 SHEET NO. (92) P-14 P-15
			S.P.C. NO. BC 246-33-815
			BALTO. CITY NO. 1995

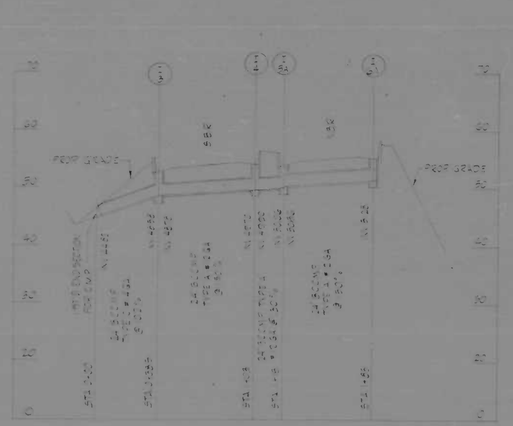
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	MD.	I-95-4(36)36	P-15	(92) F-15



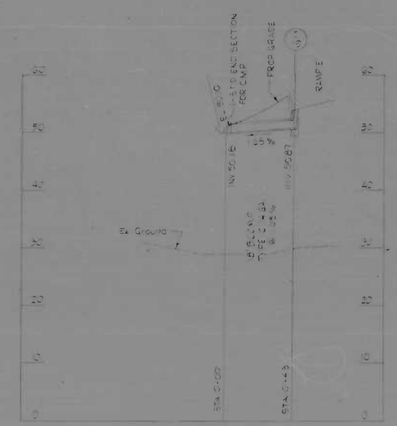
I-17



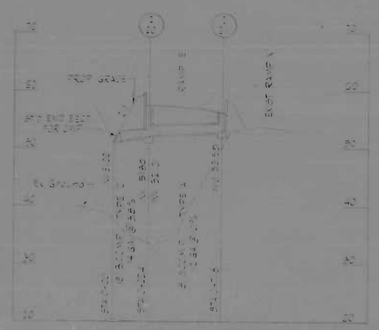
I-18



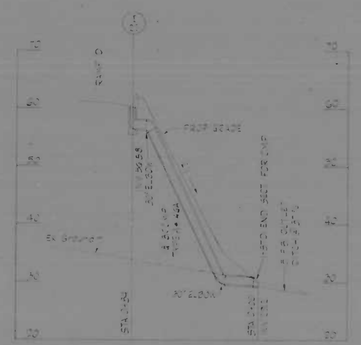
I-3, I-4, I-5A, I-6A



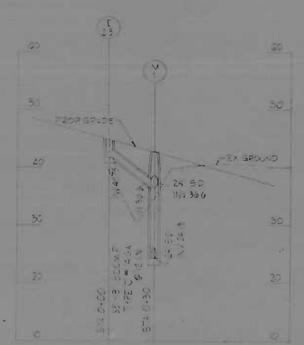
I-19



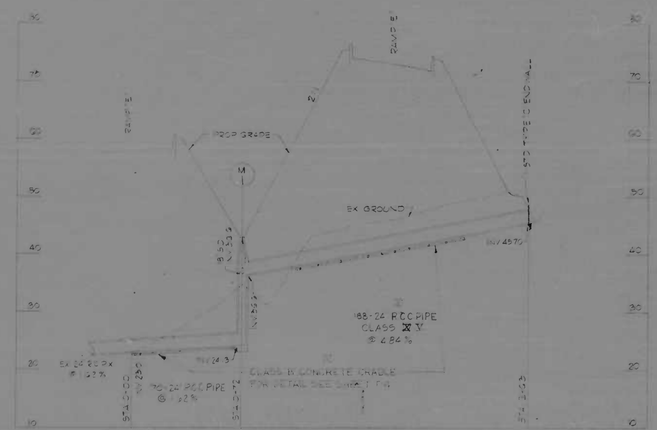
I-20 TO I-21



I-22



M-1 & I-23



M-1

REVISIONS	CONSULTANT	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS &	STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY	
10 FT. TO CONC. CRADLE	KNOERLE, BENNER, STONE & ASSOC., INC. AND MATZ, CHILDS & ASSOC., INC. CONSULTING ENGINEERS 341 N. CALVERT STREET BALTIMORE, MARYLAND 21202	INTERSTATE ROUTE 95 FROM NORTH OF HERRING RUN TO NORTH OF B&O RAILROAD	DRAWN BY F.W. TRACED BY F.W.	DES. BY F.Z. CHK. BY J.L.C.
		SCALE: Horiz. 1"=40' Vert. 1"=10' DATE:	F.A.P. NO. I-95-4(36)36 S.R.C. NO. BC-246-33-R15 BALTO. CITY NO. 1995	SHEET NO. (92) P-15 of F-15

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	MD	I-95-4(36)36	P-1A	(92) P-1S

MATCH LINE SEE SHEET NO P-2A

N 2600 E 23630

PC 15+21.42

PRC 15+68.86

STA 22+89.59 END BRIDGE

℄ OF CONSTRUCTION RAMP A

STA 23+35 ET RT ℄ CONSTR RAMP A

PRC 18+41.98

PCC 105+89.75

℄ CONSTR ACCESS ROAD

LIMIT OF PAVING STA 27+50.19

N 2000 E 23600

℄ CONSTRUCTION RAMP B (FUTURE)

STA 214+01.64 RAMP C
STA 101+93.38 RAMP B

H.B. BY OTHERS

M.H. BY OTHERS

STA 406+09.79 NBR & SBR
STA 215+41.76 RAMP C

STA 405+10 I-95 SBR

STA 403+80 I-95 SBR

LIMIT OF PAVING S.B.R STA 402+46.18

H.B. BY OTHERS

M.H. BY OTHERS

℄ CONSTRUCTION N.B.R & S.B.R

STA 406+10 ℄ CONSTR I-95

℄ CONSTRUCTION N.B.R

LIMIT OF PAVING N.B.R STA 402+46.49

H.B. BY OTHERS

BEGIN BRIDGE STA 406+18.6

STA 405+60 I-95 NBR

STA 404+50 I-95 NBR

STA 404+05 I-95 NBR

℄ CONSTR RAMP C (FUTURE)

STA 510+03.04 BEGIN BRIDGE

BALTIMORE CITY
BALTIMORE COUNTY

STA 506+00 28 FT LT ℄ CONSTR RAMP E

LIMIT OF PAVING STA 501+69.76

℄ CONSTRUCTION RAMP E

STA 503+56.72

PCC 613+80.82

℄ CONSTRUCTION RAMP F (FUTURE)

N 2000 E 24600

STA 617+41.39 RAMP F =
STA 220+13.77 RAMP C

REFERENCES
FOR DETAILS SEE SHEET NO P-3B

LIGHTING STANDARD
STA 23+35 RAMP 'A'

LIGHTING STANDARD
STA 404+10 I-95

LIGHTING STANDARD
STA 508+00 RAMP 'E'

SIGN
STA 404+50 I-95

DETAILS - FOUNDATION CONDUIT ENTRANCES
NOT TO SCALE

LEGEND

- FOUNDATION FOR HIGH MAST LIGHTING STANDARD
- FOUNDATION FOR CANTILEVER SIGN
- FOUNDATIONS FOR OVERHEAD SIGN BRIDGE
- GALV. STEEL CONDUIT
- DUCT MARKER
- TRANSIT AND TRAFFIC 36 FIBRE DUCT
- H.B. TRANSIT AND TRAFFIC HAND BOX
- M.H. TRANSIT AND TRAFFIC MANHOLE
- EXISTING INLETS AND DRAINS

REVISIONS	CONSULTANT	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS & STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY	
ADDITION TO PLAN SHEETS 3/28/72	KNOERLL, BENDER, STONE & ASSOC., INC. AND MATZ, CHILDS & ASSOC., INC. CONSULTING ENGINEERS 341 N. CALVERT STREET BALTIMORE, MARYLAND 21202	INTERSTATE ROUTE 95 FROM NORTH OF HERRING RUN TO NORTH OF B&O RAILROAD	DRAWN BY JVJ TRACED BY JVJ DES. BY K.H. CHK. BY JLC
		SCALE 1"=40' DATE	F.A.P. NO. I-95-4(36)36 S.R.C. NO. BC 246-33-815 BALTO. CITY NO. 1995 SHEET NO. (92) P-1A OF P-1S

CONTRACT NO. 4

2	MD I-95-4(36)36	P-2	(92) P-15	

MATCH LINE SEE SHEET NO. P-3

MATCH LINE SEE SHEET NO. P-1

STA 4+00 B&O RAILROAD SPUR ℄
STA 4+40 & 7.08 ℄
CONSTRUCT 2.0' DIA. RCP & SIDE DITCH
SEE GRADING PLAN

BM #934 ELEV. 25.84
Chiseled square on top of concrete headwall of 24" RCP under Ramp 'C'

BM #934.2 ELEV. 28.84
Chiseled square on top of concrete headwall of 24" RCP under Ramp 'C'

BM #934.4 ELEV. 21.48
Orange marker in conc. headwall on N side of 84" RR culvert Approx. 1' from Morning Eastern Boundary

STA 2+30 RAMP C LT
TO STA 4+21.92 ℄ SPUR
CONSTRUCT 1.9' DIA. CONC
INVERT DITCH TO 0.5' DEPTH

STA 2+30 RAMP C RT
TO STA 4+21.92 ℄ SPUR
CONSTRUCT 1.9' DIA. CONC
INVERT DITCH TO 0.5' DEPTH

RAMP E STA 8+13 - SOUTH STA 8+18.06
CONSTRUCT TEMP. EDGE DELINEATOR
SEE DETAIL SHEET T-13

RAMP E STA 8+04.04
CONSTRUCT SLOPE RAIL W. BEAM
BARRIER-STD PLATE NO. 300.01

STA 11+30 TO STA 11+80 RAMP A
CONSTRUCT TEMPORARY EDGE DELINEATOR
SEE DETAIL SHEET T-13

STA 11+30 RAMP A RT
5'-3.0" PLACED RIPRAP

STA 1+00 TO 4+00 RAMP A RT
2.0' BOT SIDE DITCH TO 1.0' DEPTH

STA 2+30 RAMP A RT
20'-3.0" PLACED RIPRAP

STA 4+30 TO 4+00 B&O RAILROAD SPUR ℄
2.0' BOT SIDE DITCH TO 1.0' DEPTH

(1) FOR TRANSIT & TRAFFIC MI DETAILS SEE SHEET T-4
FOR TYPICAL SECTIONS SEE SHEET T-12
FOR HORIZONTAL GEOMETRY SEE SHEET T-7 & T-8
FOR GRADING PLAN & JOINT LAYOUT SEE SHEET P-3
FOR MAINLINE PROFILE SEE SHEET P-8
FOR RAMP A PROFILE SEE SHEET P-11
FOR RAMP C PROFILE SEE SHEET P-11
FOR RAMP E PROFILE SEE SHEET P-11
FOR STORM DRAIN SCHEDULE SEE SHEET P-13
FOR STORM DRAIN PROFILES SEE SHEET P-14 & P-15
FOR STORM DRAIN DETAILS SEE SHEET P-15
FOR MAINLINE STRUCTURE OVER B&O RR SEE SHEETS S-31 - S-33
FOR RAMP A STRUCTURE OVER B&O R R SEE SHEETS S-1 - S-10
FOR RAMP E STRUCTURE OVER MAINLINE SEE SHEETS S-14 - S-30
FOR ACCESS RD PROFILE SEE SHEET P-11
FOR DUCT AND DUCT MARKER SEE SHEET T-14

STA 1+30 TO STA 2+30 RAMP 'A' RT
30.0' E.O. SIDE DITCH TO 0.5' DEPTH

ACCESS ROAD CROSSING
@ B & O RAILROAD TO BE
CONSTRUCTED BY OTHERS

SEE GRADING PLAN SHEET P-3
FOR LIMITS OF GRADING PLANES A & C

STD MD 380.01 HDZ DRAIN
I-95 STA 411+68 (STA 414+00 NBR (LT.)
D&B STA 411+68 (STA 414+00 SBR (LT.)
RAMP E STA 7+00 (STA 20+31 RT.)

OUTLET LOCATIONS AS SHOWN ON PLANS

OVERHEAD WESTERN UNION TELEGRAPH LINES TO BE RELOCATED BY OTHERS

REMOVE EXISTING
6' CHAIN LINK FENCE
STA 413+30 TO STA 416+68 SBR (LT)
STA 413+30 SBR (LT) TO STA 413+02 NBR (RT)

STA 510+41 TO STA 511+30 RAMP 'E' RT
CONSTRUCT 100'-2.0' CONC SIDE DITCH
TO 0.5' DEPTH

SET NEW
6' CHAIN LINK FENCE
STA 207+00 RAMP C RT TO STA 2+26 RAMP C RT
STA 2+73.5 RT TO STA 413+02 NBR RT
STA 2+26 RAMP A RT TO STA 411+78 (65' RT)

STA 511+30 TO STA 511+76 RAMP 'E' RT
10' x 20'-0" PLACED RIPRAP

- BRIDGE APPROACH SLAB
- BITUMINOUS SHOULDER MATERIAL
- 1½" BITUMINOUS OVERLAY ON 8" CONVENTIONAL REINFORCED CONCRETE (CONTRASTING PAVEMENT)
- 9" CONVENTIONAL REINFORCED CONCRETE
- 8" CONTINUOUSLY REINFORCED CONCRETE
- 2-6" COURSES OF CRUSHER RUN

REVISIONS	CONSULTANT	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS & STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY	
(1) NO. 7 INSTALLATION AT I-95 CONC. GRADE. DELETE EMERGENCY ACCESS RD AT STA. 411+00. DELETE HAND HOLE & REPLACE W/ 1 MH.	KNUDSEN, BENDER, STONE & ASSOC., INC. AND WATZ, CIVILOS & ASSOC., INC. CONSULTING ENGINEERS 341 N. CALVERT STREET BALTIMORE, MARYLAND 21202	INTERSTATE ROUTE 95 FROM NORTH OF HERRING RUN TO NORTH OF B&O RAILROAD	DRAWN BY: F.W. DES. BY: T.E.L. TRACED BY: F.W. CHK. BY: V.L.C.
		SCALE 1" = 40' DATE	F.A.P. NO. I-95-4(36)36 P.R.C. NO. BC 246-33-815 BALTO. CITY NO. 1995 SHEET NO. P-2 OF P-15

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	MD.	I-95-4(36)36	P-2A	(92) P-15

REFERENCES:
FOR LEGEND SEE SHEET NO. P-1A
FOR DETAILS SEE SHEET NO. P-3B

LIGHTING STANDARD
STA 18+35 RAMP 'A'

LIGHTING STANDARD
STA 409+10 I-95

LIGHTING STANDARD
STA 413+20 I-95

DETAILS - FOUNDATION CONDUIT ENTRANCES

NOT TO SCALE

REVISIONS	CONSULTANT	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS &	STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY
1 ADDITION TO PLAN SHEETS P-2B,7,8	KNOBERLE, BENDER, STONE & ASSOC., INC. AND MATZ, CHILDS & ASSOC., INC. CONSULTING ENGINEERS 341 N. CALVERT STREET BALTIMORE, MARYLAND 21202	INTERSTATE ROUTE 95 FROM NORTH OF HERRING RUN TO NORTH OF B & O RAILROAD	DRAWN BY J.V.J. TRACED BY J.V.J. DES. BY K.H. CHK. BY J.L.C.
2 REVISIONS TO PLANS		SCALE 1"=40' DATE	F.A.P. NO. I-95-4(36)36 S.R.C. NO. BC 246-33-815 BALTO. CITY NO. 1995 SHEET NO. (92) P-2A OF P-1B

CONTRACT NO. 4

2	MD I-95-4(36)36 P-3	(92) P-15	

MATCH LINE SEE RIGHT

PT 43+24.00 ℄ CONSTR MORAVIA RD. A
8' RIGHT
PC 99+19.00 RAMP C

PT 43+25.00 ℄ CONSTR MORAVIA RD. A
8' LEFT PT 526 FROM RAMP E

STA 200+00 RAMP C RT
REMOVE & SALVAGE EXIST LIGHTING STRUCTURE

HIGHWAY

PULASKI

℄ CONSTRUCTION MORAVIA ROAD

S 58°39'43" E

LIMIT OF WORK RAMP E
STA 524+67

℄ CONSTR RAMP E N 56°39'23" W

LIMIT OF WORK RAMP C
STA 201+22

℄ CONSTRUCTION RAMP C

EXIST RAMP B

PT 510+64.87 RAMP B
15' RT PT 331+17.50 RAMP D

LIMIT OF PAVING & BARRIER CURB
RAMP D STA 338+35

NO FREE

SEE SHEET

MATCH LINE SEE LEFT

PT 205+27.43 RAMP C 21' RT
PC 15+29.49 RAMP A

℄ CONSTRUCTION RAMP A

STA 524+67 RAMP E RT
REMOVE & SALVAGE EXIST GUARD RAIL

STA 522+00 RAMP E RT
INSTALL FLARED ℄ RAMP

RAMP E
STA 520+00 TO STA 533+00 RT
REMOVE EXISTING GUARD RAIL

RAMP D
STA 520+00 TO STA 520+00 RT
CONSTRUCT BARRIER CURB (LEFT SIDE OF EXISTING RAMP D AS INDICATED)

STA 202+75 RAMP C RT TO STA 7+00 RAMP A RT
CONSTRUCT TEMPORARY DELINEATOR
SEE DETAIL SHEET T-5

EXIST RAMP B
APPROXIMATE LIMITS OF NEW GUARD RAIL TO BE REM'D

STA 202+00 TO STA 202+42 RAMP D RT
2'-0" SIDE DITCH W/ ℄

STA 8+29.49 TO STA 17+00 RAMP A RT
2'-0" SIDE DITCH W/ ℄

FOR DUCT AND DUCT MARKERS SEE SHEET T-4

FOR TYPICAL SECTIONS SEE SHEET T-2
FOR HORIZONTAL GEOMETRY SEE SHEETS T-7, T-8
FOR GRADING PLANS JOINT LAYOUT SEE SHEET P-11
FOR MAINLINE PROFILE SEE SHEET P-8
FOR RAMP A PROFILE SEE SHEET P-17
FOR RAMP C PROFILE SEE SHEET P-10
FOR RAMP E PROFILE SEE SHEET P-12
FOR STORM DRAIN SCHEDULE SEE SHEET P-13
FOR STORM DRAIN PROFILES SEE SHEET P-14 & P-15
FOR STORM DRAIN DETAILS SEE SHEET T-11
FOR MAINLINE STRUCTURE INTERIOR SEE SHEETS S-31-S-43

STA 9+41.50 RAMP D RT (?)
CONSTRUCT STANDARD UNDERDRAIN OUTLET AND PLUG AS DIRECTED BY THE ENGINEER IN THE FIELD

BRIDGE APPROACH SLAB

BITUMINOUS SHOULDER MATERIAL

(BITUMINOUS OVERLAY ON B CONVENTIONAL REINFORCED CONCRETE (CONTRASTING PAVEMENT)

B CONVENTIONAL REINFORCED CONCRETE

B CONTINUOUSLY REINFORCED CONCRETE

SET NEW
℄ CHAIN LINK FENCE
STA 15+20.42 TO STA 7+60
RAMP A RT
STA 201+58 TO STA 205+13.43
RAMP C RT

RAMP D STA 338+00 TO STA 334+35
CONSTRUCT TEMP EDGE DELINEATOR
SEE DETAIL SHEET T-5

STA 332+32 RAMP D
TO STA 3+82.33 RAMP A
SEE SHEET T-5

TEMPORARY EDGE DELINEATOR

STA 8+29.49 RAMP A RT TO STA 8+41.50 RAMP D RT
REMOVE APPROX 300 SF OF EXIST PAVING

STA VARIOUS LOCATIONS
INSTALL 4 EA OF TYPE 'A' INLET AT
INSTALL 4 EA OF TYPE 'B' INLET AT
RAMP D STA 202+00 TO STA 202+00 RT
RAMP D STA 334+35 TO STA 330+00 RT
RAMP E STA 521+84.41 TO STA 520+00 RT
OUTLET LOCATIONS AS SHOWN ON PLANS

STA 44+90 RAMP H RT TO STA 44+90 RAMP G RT
REMOVE APPROX 300 SF OF EXIST PAVING

LIMIT OF WORK
STA 44+90
NBR & SBR

LIMIT OF WORK
RAMP H
STA 49+92.31

SBR

NBR

℄ CONSTR SBR

℄ CONSTR NBR

℄ CONSTR RAMP H

N 04°33'27" W

Pavement Slope

Inv 49.54

Inv 48.84

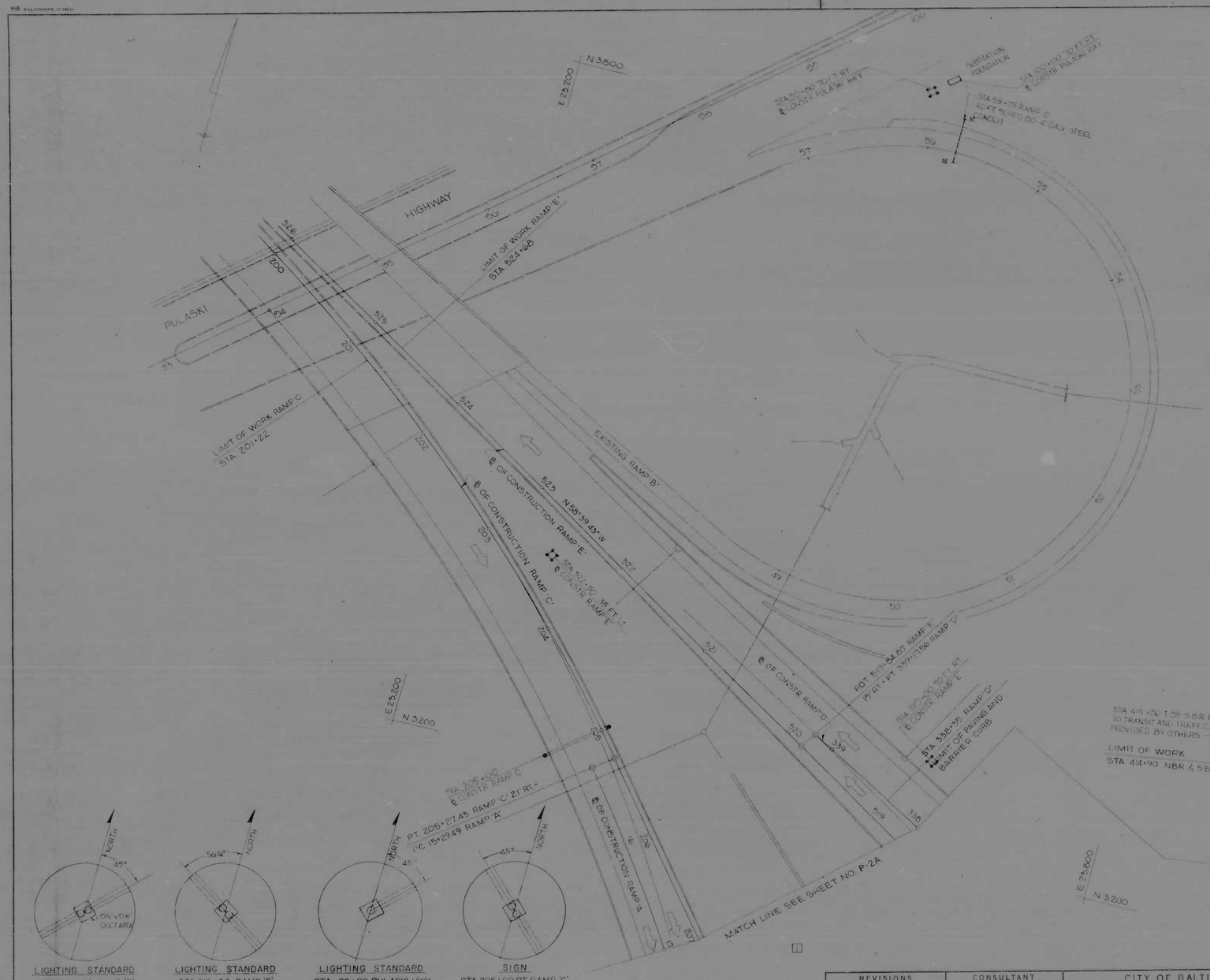
Inv 48.74

8"CMP

24" RCP

REVISIONS	CONSULTANT	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS &	STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY
1) 10-17-90 RAMPS C & RAMP E LIMIT OF PAVING RAMP E SHOULDER SIZE CHANGE	KNOFFLE, BERGER, STONE & ASSOC., INC. AND MATZ, CHILDS & ASSOC., INC. CONSULTING ENGINEERS 341 N. CALVERT STREET BALTIMORE, MARYLAND	INTERSTATE ROUTE 95 FROM NORTH OF HERRING RUN TO NORTH OF B&O RAILROAD	DRAWN BY F.W. TRACED BY F.W. DES. BY T.E.L. CHK. BY H.L.C. F.A.P. NO. I-95-4(36)36 S.R.C. NO. BC-246-33-815 BALTO. CITY NO. 1995 SHEET NO. P-3 OF P-15 (92)
		SCALE 1" = 40' DATE	

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	MD.	I-95-4(36)36	P-3A	(92) P-15



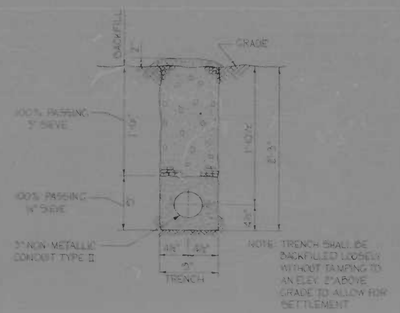
DETAILS - FOUNDATION CONDUIT ENTRANCES

NOT TO SCALE

REVISIONS	CONSULTANT	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS & STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY	
1 ADDITION TO PLAN SHEETS 2/28/75	KNOERLE, BENDER, STORR & ASSOC., INC. AND MATZ, CHILES & ASSOC., INC. CONSULTING ENGINEERS 341 N. CALVERT STREET BALTIMORE, MARYLAND 21202	INTERSTATE ROUTE 95 FROM NORTH OF HERRING RUN TO NORTH OF B&O RAILROAD	DRAWN BY J.V.J. DES BY K.H. TRACED BY J.V.J. CHK BY J.C. FAP NO. I-95-4(36)36 SHEET NO. (92) SRC NO. BC 246-33-815 P-3A of P-15
		SCALE 1"=40' DATE	BALTO CITY NO. 1995

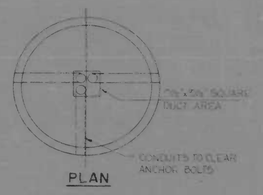
CONTRACT NO. 4

REVISION NO.	SHEET NO.	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	MD. I-95-4(36)36	P-38	(92) P-15	

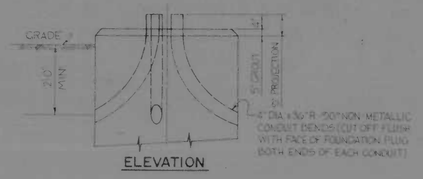


TRANSIT & TRAFFIC DUCT

NO SCALE



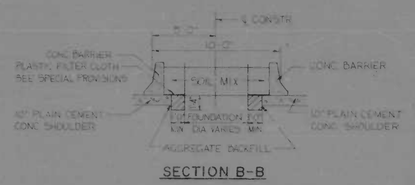
PLAN



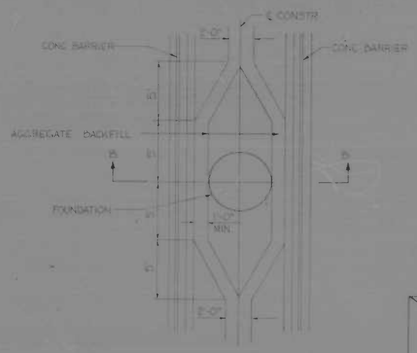
ELEVATION

THREE WAY DUCT ENTRANCE IN LIGHTING AND SIGNING FOUNDATIONS

NO SCALE

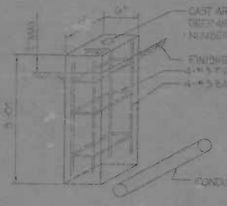


SECTION B-B



MEDIAN UNDERDRAIN TREATMENT FOR HIGH MAST LIGHTING & DTT MANHOLES

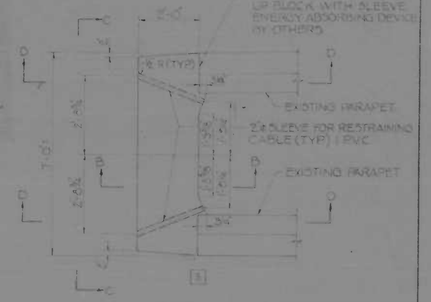
NO SCALE



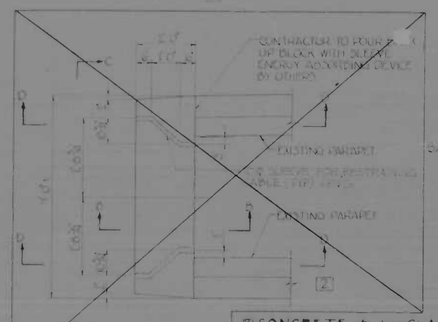
CONCRETE DUCT MARKER

NO SCALE

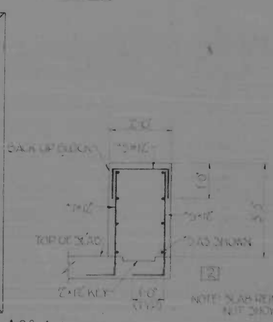
NOTE: ONE DUCT MARKER IS REQUIRED AT EACH END OF EACH CONDUIT (NOT REQUIRED ON TRANSIT & TRAFFIC SYSTEM)



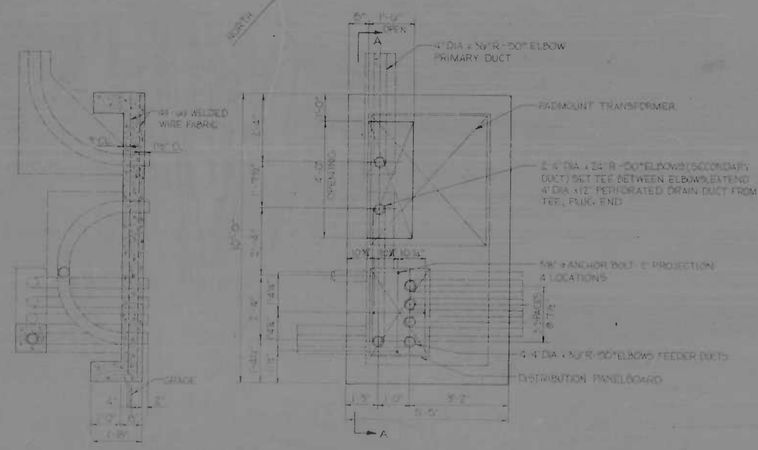
PLAN



PLAN



SECTION B-B

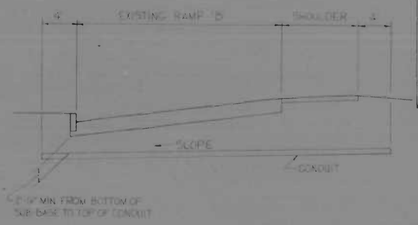


SECTION A-A

PLAN

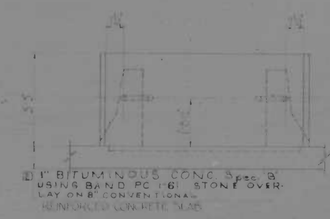
SUBSTATION FOUNDATION

NO SCALE

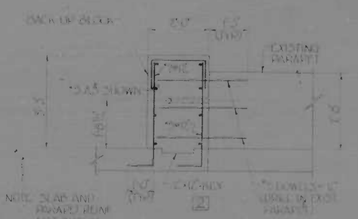


CONDUIT UNDER EXISTING RAMP 'B' STA 55+75

NO SCALE



VIEW C-C



SECTION D-D

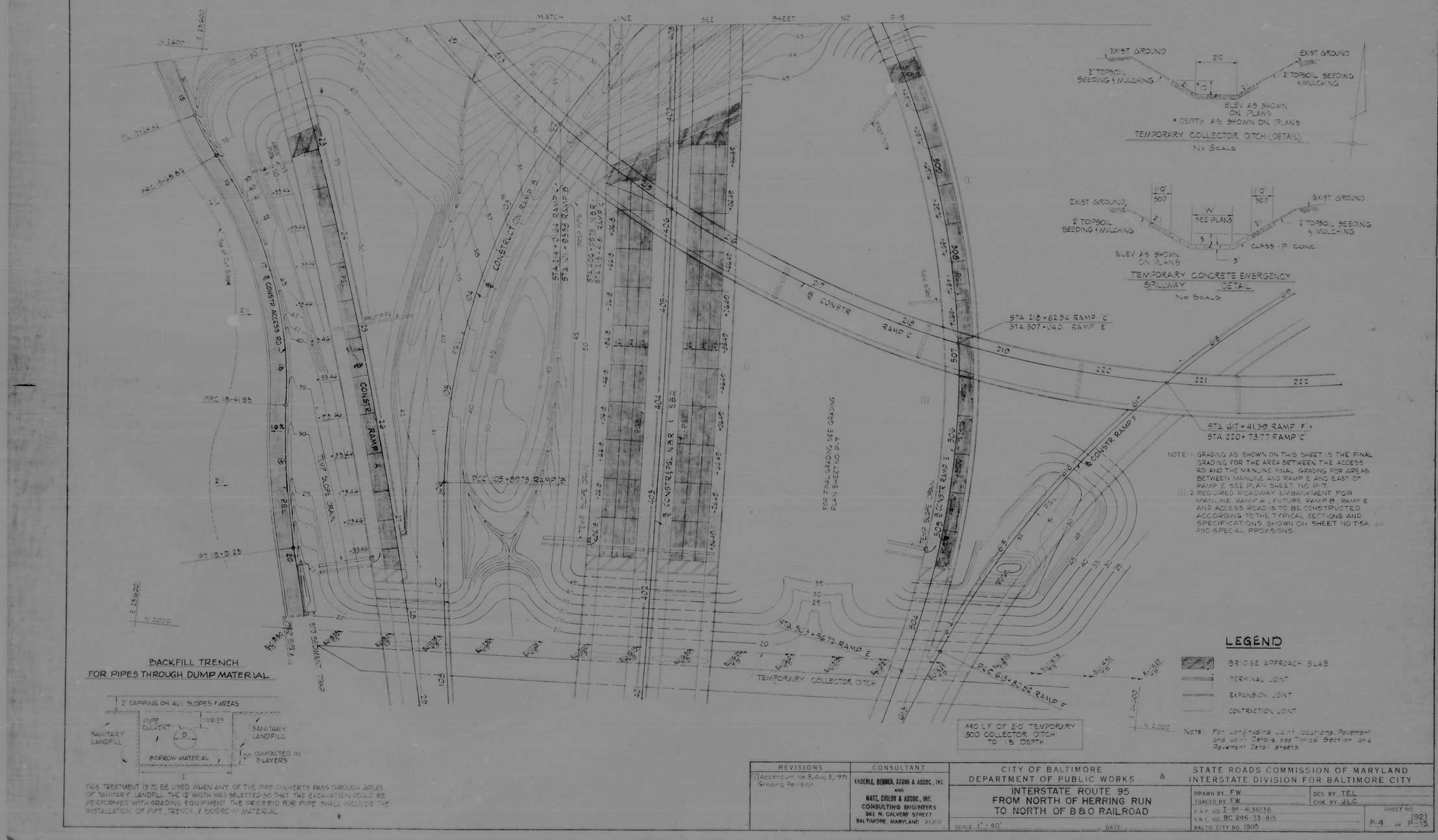
BACK UP BLOCK DETAIL

SCALE: 1/2"=1'-0"

REVISIONS	CONSULTANT	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS &	STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY
ADDITION TO PLANS SHEETS 2/28/73	KIMBERLY, BENDER, STONE & ASSOC., INC. AND MAZZ, CHIBBS & ASSOC., INC. CONSULTING ENGINEERS 593 N. CHARLES STREET BALTIMORE, MARYLAND 21201	INTERSTATE ROUTE 95 FROM NORTH OF HERRING RUN TO NORTH OF B & O RAILROAD	DRAWN BY J.W.S. TRACED BY J.W.S. DES. BY K.H. CHK. BY J.L.C.
1 REVISION TO PLANS 5/16/73		SCALE AS SHOWN DATE	F.A.P. NO. I-95-4(36)36 S.R.C. NO. BC 236-33-813 BALTO. CITY NO. 1995 SHEET NO. (92) P-38 OF P-15
2 ADD TO REVISION TO SLEEVE IN BACK UP BLOCK			

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	MD.	I-95-4(36)36	P-4	(92) P-15

MATCH LINE SEE SHEET NO P-5



EXIST GROUND — 2' TOPSOIL SEEDING & MULCHING — 20 — D — 2 — 2 — EXIST GROUND — 2' TOPSOIL SEEDING & MULCHING

ELEV AS SHOWN ON PLANS

* DEPTH AS SHOWN ON PLANS

TEMPORARY COLLECTOR DITCH (DETAIL)

No Scale

TEMPORARY CONCRETE EMERGENCY SPILLWAY DETAIL

No Scale

NOTE 1. GRADING AS SHOWN ON THIS SHEET IS THE FINAL GRADING FOR THE AREA BETWEEN THE ACCESS RD AND THE MAINLINE FINAL GRADING FOR AREAS BETWEEN MAINLINE AND RAMP E AND EAST OF RAMP E. SEE PLAN SHEET NO P-7.

2. REQUIRED ROADWAY EMBANKMENT FOR MAINLINE, RAMP A, FUTURE RAMP B, RAMP E AND ACCESS ROAD IS TO BE CONSTRUCTED ACCORDING TO THE TYPICAL SECTIONS AND SPECIFICATIONS SHOWN ON SHEET NO T-5A AND SPECIAL PROVISIONS.

LEGEND

- BRIDGE APPROACH SLAB
- TERMINAL JOINT
- EXPANSION JOINT
- CONTRACTION JOINT

Note: For Longitudinal Joint Locations, Pavement and Joint Details, see Typical Section and Pavement Detail sheets.

BACKFILL TRENCH FOR PIPES THROUGH DUMP MATERIAL

THIS TREATMENT IS TO BE USED WHEN ANY OF THE PIPE CULVERTS PASS THROUGH AREAS OF SANITARY LANDFILL. THE 12' WIDTH WAS SELECTED SO THAT THE EXCAVATION COULD BE PERFORMED WITH GRADING EQUIPMENT. THE PRICE BID FOR PIPE SHALL INCLUDE THE INSTALLATION OF PIPE, TRENCH & BORROW MATERIAL.

REVISIONS	CONSULTANT	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS	&	STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY
(1) Addendum No 3, Aug 3, 1971 Grading Revision	KNOERLE, BENDER, STONE & ASSOC., INC. AND MATZ, CHILDS & ASSOC., INC. CONSULTING ENGINEERS 341 N. CALVERT STREET BALTIMORE, MARYLAND 21202	INTERSTATE ROUTE 95 FROM NORTH OF HERRING RUN TO NORTH OF B&O RAILROAD		DRAWN BY F.W. TRACED BY F.W. DES. BY T.E.L. CHK. BY J.L.C.
		SCALE 1" = 40' DATE		F.A.P. NO. I-95-4(36)36 S.R.C. NO. BC 246-33-815 BALTO. CITY NO. 1935 SHEET NO. P-4 OF (92) P-15

U.S. ROUTE NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	MD	I-95-4(36)36	P-4A	(92) P-15

GRADING PLAN
FOR
BOTTOM OF DUMP MATERIAL

REVISIONS	CONSULTANT	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS & STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY	
1 Addendum No 3 Aug 31 '67 New Grading Sheet Added	KIDDLE, BENDER, STONE & ASSOC., INC. and MATZ, CHILDS & ASSOC., INC. CONSULTING ENGINEERS 341 N. CALVERT STREET BALTIMORE, MARYLAND 21202	INTERSTATE ROUTE 95 FROM NORTH OF HERRING RUN TO NORTH OF B&O RAILROAD	DRAWN BY JVJ DES BY TEL TRACED BY J.V.J. CHK BY JLC F.A.P. NO. I-95-4(36)36 S.R.C. NO. BC 246-33-815 BALTO. CITY NO. 1995
		SCALE 1"=40' DATE	SHEET NO. (92) P-4A OF P-15

SHT. NO.	PROJ.	SHEET	CONTR. NO.	FED. AID PROJ. NO.	NO.
2	MD.	I-95-4136038	P-5		192 P-3

CONSTRUCT 18'-0 CONCRETE EMERGENCY SPILLWAY @ 12.5% 7+03 SEE PLAN FOR LOCATION

STA 1+30 TO STA 3+10 Rt 1640 RAILROAD SPUR
CONSTRUCT TEMPORARY 2:0 SIDE COLLECTOR DITCH TO D.I.C

NOTE FOR PROFILE AND DETAIL OF RISER PIPE AND DISCHARGE PIPE SEE SHEET P-3 OF 7-9

SEDIMENT TREATMENT BASIN #2

MATCH LINE SEE SHEET NO P-1

MATCH LINE SEE SHEET NO P-4

NOTE:
[1] DELETE GRADING PLAN BETWEEN RAMPS C&E AND B&O R.R. FOR REVISED GRADING SEE SHEET P-6A

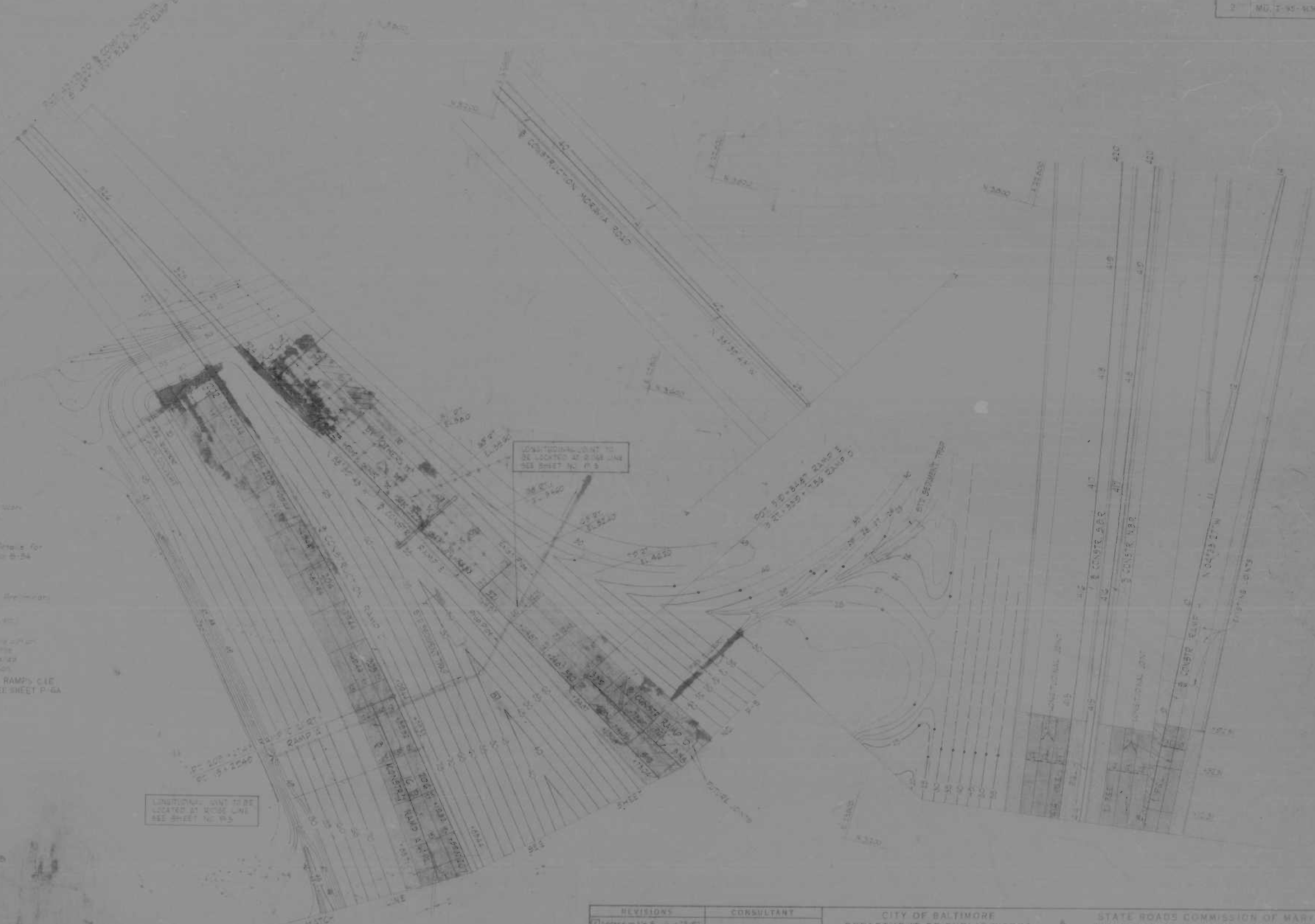
LEGEND

- BRIDGE APPROACH SLAB
- TERMINAL JOINT
- EXPANSION JOINT
- CONTRACTION JOINT

Note: For Longitudinal Joint locations, Pavement and Joint Details, see Typical Sections and Pavement Detail sheets.

REVISIONS	CONSULTANT	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS	STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY
[1] 8-6-72 GRADING BETWEEN RAMPS C&E AND B&O R.R.	RAMELL, GENDER, STONE & ASSOC., INC. and HAZZ, CURTIS & ASSOC., INC. CONSULTING ENGINEERS 241 N. CALVERT STREET BALTIMORE, MARYLAND 21202	INTERSTATE ROUTE 95 FROM NORTH OF HERRING RUN TO NORTH OF B&O RAILROAD	DRAWN BY: F.W. DES. BY: T.P.A. TRACED BY: F.W. CHK. BY: J.L.C. F.A.P. NO. I-95-4136038 SHEET NO. P-5 OF P-9 B.R.C. NO. BO 240-33-816 BALTO. CITY NO. 1995 SCALE: 1" = 40' DATE

2	MD.	I-95-4(36)36	P-S	1921 P-15



[1]

For Limits of Paving Embankment & Ldsc. for Ramps C&E see plan sheets No. P-5, P-11 & P-12

For Typical Preliminary Embankment Details for Moravia Rd. structures see sheet No. B-54

NOTE:

Detail and notes shown for Typical Preliminary Embankment are applicable except:

1. [illegible]
2. [illegible]

[1] 3. DELETE GRADING PLAN BETWEEN RAMPS C & E. FOR REVISED GRADING PLANS SEE SHEET P-6A

LEGEND

- BRIDGE APPROACH SLAB
- TERMINAL JOINT
- EXPANSION JOINT
- CONTRACTION JOINT

REVISIONS	CONSULTANT
[1] Addendum No. E Aug 23 '61. 10-4-61 RAMP C & RAMP E LIMIT OF PAVING GRADING BETWEEN RAMPS C & E	GREINER, BENDER, STONE & ASSOC., INC. and MATZ, CHILDS & ASSOC., INC. CONSULTING ENGINEERS 343 N. CALVERT STREET BALTIMORE, MARYLAND 21202

CITY OF BALTIMORE
DEPARTMENT OF PUBLIC WORKS
&
STATE ROADS COMMISSION OF MARYLAND
INTERSTATE DIVISION FOR BALTIMORE CITY

INTERSTATE ROUTE 95 FROM NORTH OF HERRING RUN TO NORTH OF B & O RAILROAD

SCALE 1" = 40'
DATE

DRAWN BY E.W.
TRACED BY E.W.
DES. BY T.E.L.
CHK. BY H.L.G.
F.A.P. NO. I-95-4(36)36
S.R.C. NO. BC 246-33-815
BALTO. CITY NO. 1989

SHEET NO. 1921 P-15 OF 246

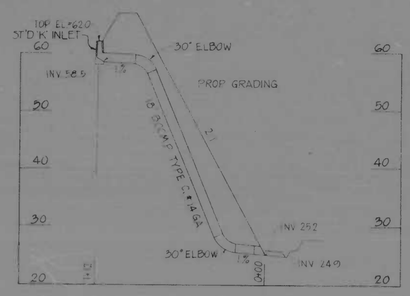
FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	MD.	I-95-4(36)36	P-6A	(92) P-15

DUMP DISPOSAL SITE NO. 3

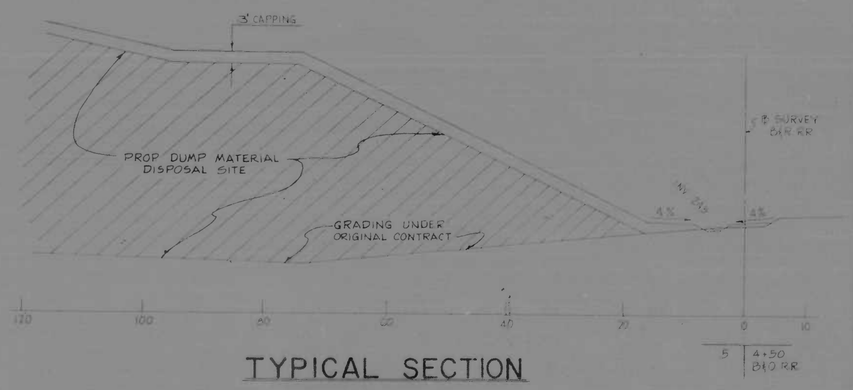
GRADING PLAN

1. STA 518+50 TO STA 520+75 RAMP E LT CONSTRUCT 2' SIDE DITCH 50D TO 05' DEPTH THE CONTRACTOR SHALL GRADE THE DITCH TO MEET THE GRATE OF THE EXIST INLET
2. STA 520+50 RAMP E LT RAISE EXIST MH 110 TO ELEV 550
3. STA 205+50 TO STA 210+25 RAMP C LT CONSTR 2' SIDE DITCH 50D TO 05' DEPTH
4. STA 3+50 TO STA 6+00 B&O RR LT CONSTR 2' SIDE DITCH - PAVE TO 1' DEPTH
5. STA 210+25 RAMP C LT TO STA 3+60 ℄ SURVEY B&O RAILROAD
   - 100-18" BCCMP TYPE C #14GA
   - 1 STANDARD TYPE K INLET
   - 05' EXTRA DEPTH
   - 1 STANDARD END SECTION FOR 18"CMP
   - #12 CONCRETE OUTLET DITCH

NOTE CONTOURS SHOWN ARE MAX ELEVATIONS, HOWEVER CONTRACTOR MAY GRADE TO LOWER ELEVATIONS.



PIPE PROFILE

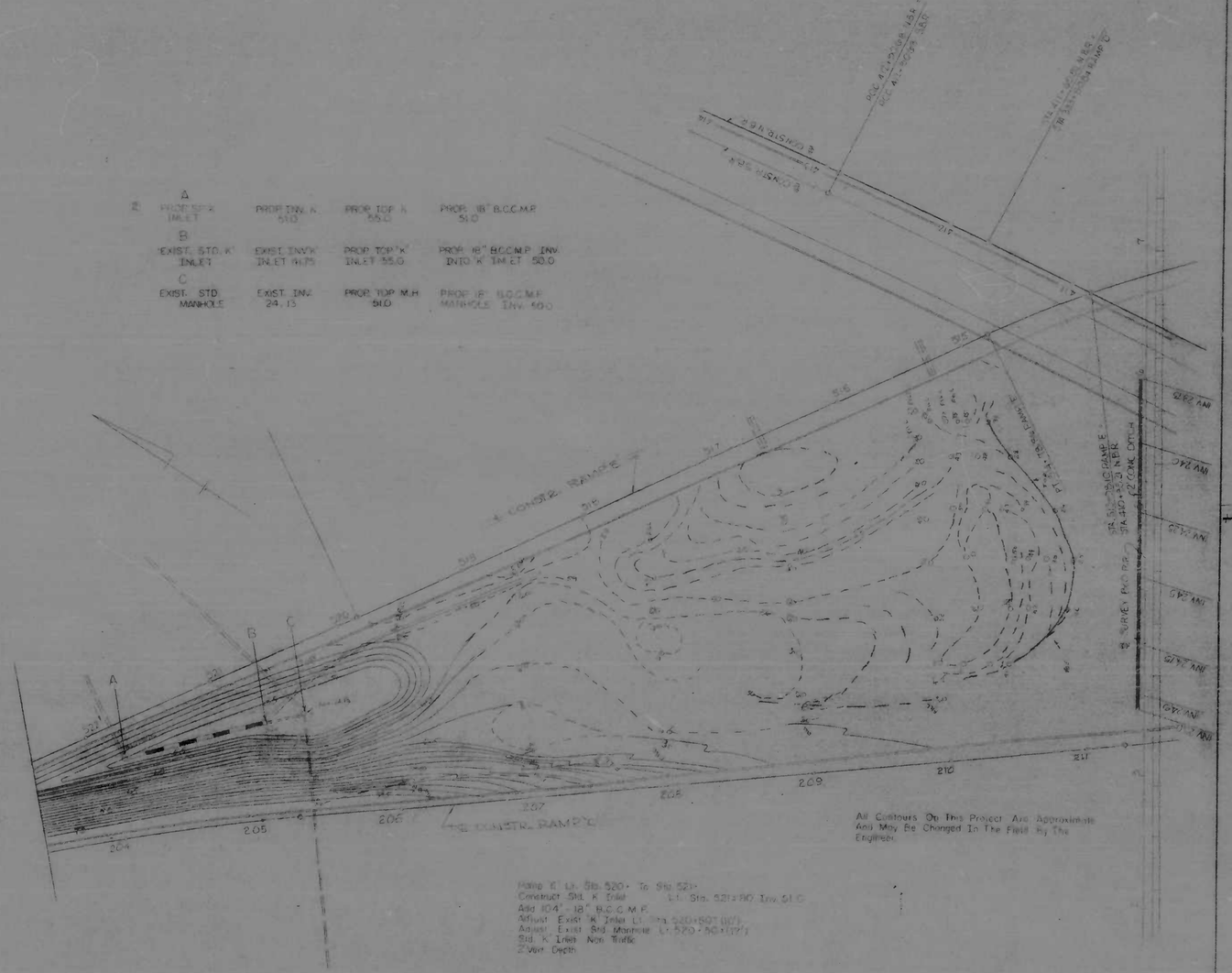


TYPICAL SECTION

REVISIONS	CONSULTANT	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS &	STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY
(1) ADDITION OF NEW PLAN SHEET P-6A FOR REVISED GRADING BETWEEN RAMPS C-E AND B&O R.R. 10-16-72	KINDERLE, BENDER, STONE & ASSOC., INC. AND MATZ, CHILDS & ASSOC., INC. CONSULTING ENGINEERS 341 N. CALVERT STREET BALTIMORE, MARYLAND 21202	INTERSTATE ROUTE 95 FROM NORTH OF HERRING RUN TO NORTH OF B&O RAILROAD	DRAWN BY J.W.S. DES. BY K.H. TRACED BY J.W.S. CHK. BY J.L.C.
		SCALE 1" = 40' DATE	F.A.P. NO. I-95-4(36)36 SHEET NO. (92) P-6A to P-15
			S.R.C. NO. BC 246 33 815
			BALTO. CITY NO. 1995

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	MD.	I-83-4(53)36E	P-23	

	A			
E	PROP. SPEC. INLET	PROP. INV. A 51.0	PROP. TOP A 55.0	PROP. 18" B.C.C.M.P. 51.0
	B			
	EXIST. STD. K INLET	EXIST. INV'K' INLET 49.75	PROP. TOP 'K' INLET 55.0	PROP. 18" B.C.C.M.P. INV. INTO 'K' INLET 50.0
	C			
	EXIST. STD. MANHOLE	EXIST. INV. 24.13	PROP. TOP M.H. 51.0	PROP. 18" B.C.C.M.P. MANHOLE INV. 50.0



All Contours On This Project Are Approximate And May Be Changed In The Field By The Engineer.

Hang 'E' Ln. Sta. 520+ To Sta. 521+
Construct Std. 'K' Inlet Ln. Sta. 521+80 Inv. 51.0
Add 104'-18" B.C.C.M.P.
Adjust Exist. 'K' Inlet Ln. Sta. 520+60 (R)
Adjust Exist. Std. Manhole Ln. 520+50 (R)
Std. 'K' Inlet Non Traffic
2' Min. Depth

REVISIONS	CONSULTANT	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS &	STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY
RED LINE REVISION (2) ADDITION TO EXIST. CONT. 11/27/72			DRAWN BY: C.F.J. CHK. BY: V.T. TRACED BY: D.C.W. CHK. BY: F.A.P. NO. I-83-4(53)36E SHEET NO. S.R.C. NO. 36-216-141-3615 BALTO. CITY NO. 1895 P-23
		SCALE DATE	

5P27

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	MD.	I-95-4(36)36	P-7	(92) P-15

℄ CONSTR I-95

STA 404+00.75 I-95
STA 215+21.01 RAMP 'C'

STA 410+98.10 RAMP 'E'
STA 410+85.21 I-95

STA 411+69.52 I-95
STA 333+60.84 RAMP 'D'

SEE GRADING PLAN P-4

STA 98+51.02 RAMP 'B'
STA 511+86.89 RAMP 'E'

DUMP DISPOSAL SITE # 2

PC 503+56.72
RAMP 'E'

℄ CONST RAMP 'E'

PC 503+80.82
RAMP 'F'

℄ CONSTR RAMP 'F'

TO BE GRADED AND FILLED WITH ORDINARY BORROW

TEMPORARY COLLECTOR DITCH
FOR DETAIL SEE SHEET P-4

DUMP DISPOSAL SITE # 3

STA 617+41.30 RAMP 'E'
STA 220+73.77 RAMP 'C'

℄ CONSTR RAMP 'C'

DUMP DISPOSAL SITE # 1

STA 330+04.58 RAMP 'D'
STA 36+43.47 RAMP 'B'

PC 327+24.05
RAMP 'D'

PC 04+00.70
RAMP 'B'

℄ CONSTR RAMP 'D'

℄ CONSTR RAMP 'B'

PC 617+45.05
RAMP 'F'

TOP OF SEDIMENT BASIN # 1

MATCH LINE N.A. THIS SHEET

340' - 2' TEMPORARY SOD
COLLECTOR DITCH d=1.5'

NOTE GRADING AS SHOWN ON THIS PLAN SHEET SHOWES THE DUMP DISPOSAL SITES WHICH WILL BE BUILT AS SANITARY LANDFILL AS SPECIFIED IN THE SPECIAL PROVISIONS. FOR ROADWAY EMBANKMENT REQUIRED SEE PLAN SHEET T-5A

N 3200
E 24,200

℄ CONST RAMP 'C'

SEDIMENT TREATMENT BASIN # 1

TOE OF SANITARY LANDFILL

TOP OF PROPOSED SEDIMENT BASIN

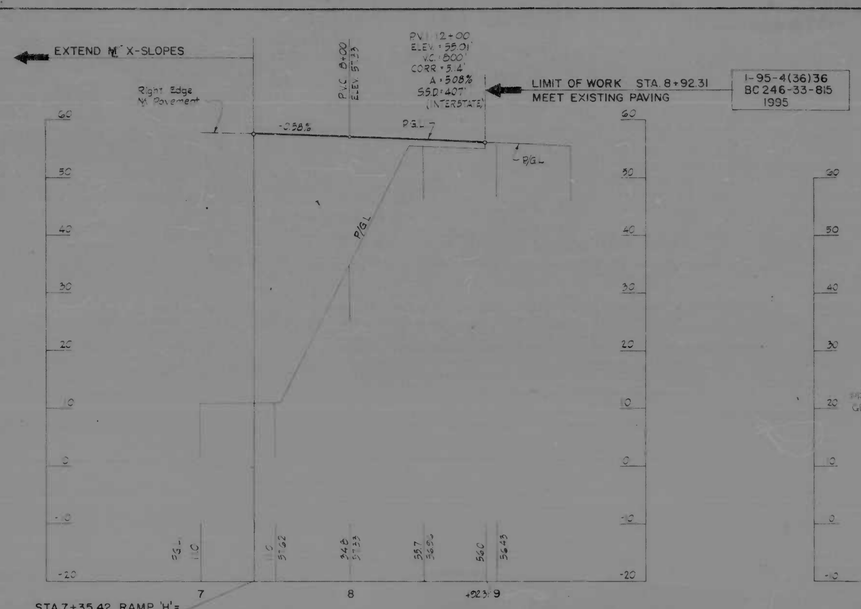
MATCH LINE A-A SHEET P-5

20'x20' PLACED CLASS I MEDIUM RIP RAP

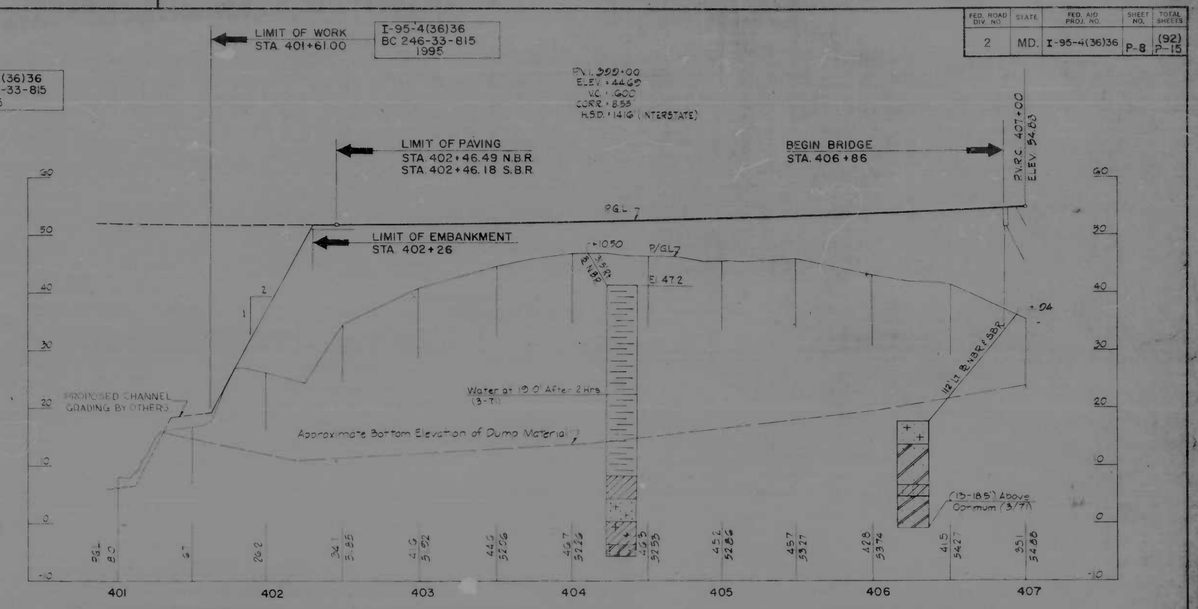
NOTE FOR PROFILE AND DETAIL OF RISER PIPE AND DISCHARGE PIPE SEE SHEET T-6 OF T-5. CONCRETE 20 EMERGENCY SPILLWAY TO d=1.5' AND AT 20% SLOPE.

REVISIONS	CONSULTANT	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS & STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY	
1 Addendum No.3, Aug 3, 1971 Grading Revision	KNOERLE, BENDER, STONE & ASSOC., INC. AND MATZ, COLBY & ASSOC., INC. CONSULTING ENGINEERS 341 N CALVERT STREET BALTIMORE, MARYLAND 21202	INTERSTATE ROUTE 95 FROM NORTH OF HERRING RUN TO NORTH OF B&O RAILROAD	DRAWN BY D.M. DES BY K.H. TRACED BY D.M. CHK BY J.L.C.
		SCALE 1" = 40' DATE	F.A.P. NO. I-95-4(36)36 S.R.C. NO. BC 241-33-815 BALTO. CITY NO. 1395 SHEET NO. P-7 of (92) P-15

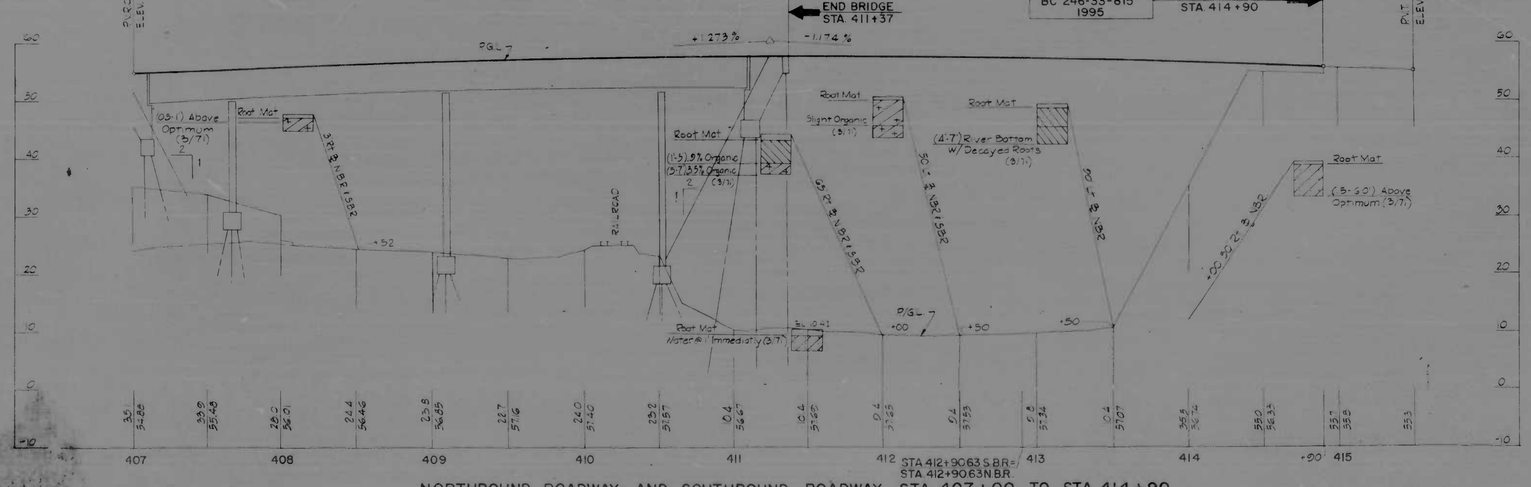
FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	MD.	I-95-4(36)36	P-8	(92) P-15



RAMP 'H' STA. 7+35.42 TO STA. 8+92.31



NORTHBOUND ROADWAY AND SOUTHBOUND ROADWAY STA. 392+00 TO STA. 407+00



NORTHBOUND ROADWAY AND SOUTHBOUND ROADWAY STA. 407+00 TO STA. 414+90

REVISIONS	CONSULTANT
	KNOERLE, BENDER, STONE & ASSOC., INC. AND MATZ, COLES & ASSOC., INC. CONSULTING ENGINEERS 341 N. CALVERT STREET BALTIMORE, MARYLAND 21202

CITY OF BALTIMORE
DEPARTMENT OF PUBLIC WORKS
&
STATE ROADS COMMISSION OF MARYLAND
INTERSTATE DIVISION FOR BALTIMORE CITY

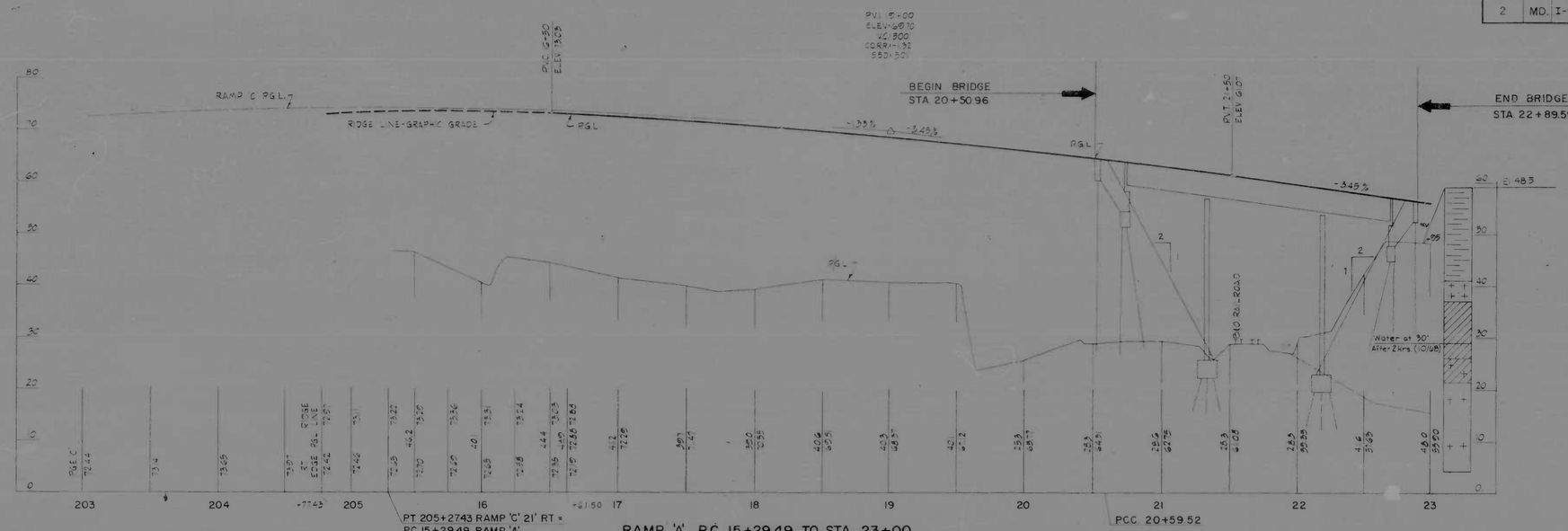
INTERSTATE ROUTE 95
FROM NORTH OF HERRING RUN
TO NORTH OF B&O RAILROAD

SCALE: Horiz. 1"=40' Vert. 1"=10' DATE:

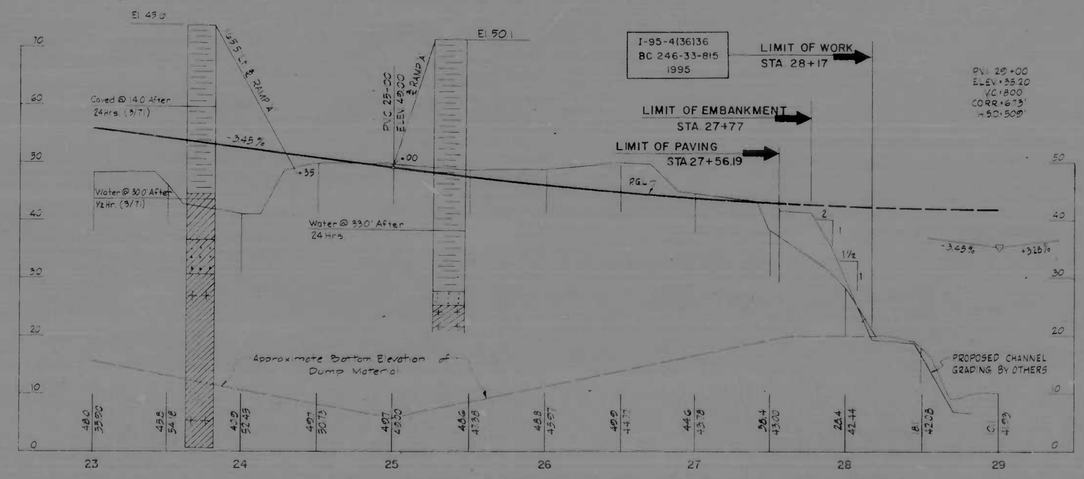
DRAWN BY F.W. DES. BY T.E.L.
TRACED BY F.W. CHK. BY J.L.C.
I.A.P. NO. I-95-4(36)36
S.R.C. NO. BC 246-33-815
BALTO. CITY NO. 1995

SHEET NO (92) P-8 OF P-15

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	MD.	I-95-4(36)136	P-9	(92) P-15



RAMP 'A' P.C. 15+29.49 TO STA. 23+00



RAMP 'A' STA. 23+00 TO STA. 29+00

REVISIONS	CONSULTANT	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS & STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY	
	KNOERLE, BENDER, STONE & ASSOC., INC. AND HATZ, CHRIST & ASSOC., INC. CONSULTING ENGINEERS 341 N. CALVERT STREET BALTIMORE, MARYLAND 21202	INTERSTATE ROUTE 95 FROM NORTH OF HERRING RUN TO NORTH OF B&O RAILROAD	DRAWN BY F.W. DES. BY T.E.U. TRACED BY F.W. CHK. BY J.L.C. F.A.P. NO. I-95-4(36)136 S.R.C. NO. BC 246-33-815 BALTO. CITY NO. 1995 SHEET NO. (92) P-9 OF P-15

SCALE: Horiz. 1" = 40' Vert. 1" = 10' DATE

SP20

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	MD.	I-95-4(36)36	Q-1	(92) Q-7

EARTHWORK SUMMARY

STATION FROM	STATION TO	CUT	EMBANKMENT	SELECT BORROW	TOPSOIL CUT	TOPSOIL FILL	UNSUITABLE MATERIAL CUT	UNSUITABLE MATERIAL FILL	CLASS 3	CUT ADJUSTED	CUT DENSIFIED	DUMP ** REMOVAL	REMARKS
MAINLINE													
401+6	407+25		113.86	2204					1230			144,700	CLASS 3 EXC FOR I-95 STRUCT. & ROOT MAT
411+06	414+50	741	2843				332	885		409	1305		
RAMP A													
22+90	28+17		48060	6376					90			93,700	CLASS 3 EXC FOR RAMP A STRUCT
RAMP A/C													
201+22	210+50	330	104099			88	330	2057		0	0		& TOPSOIL & ROOTMAT
RAMP B													
97+00	101+50	38	38868	175						58	39		
101+50	107+90		2004	4342								81,600	* BRC QUANTITY
RAMP C													
201+22	210+50		42780						29				* BRC QUANTITY
RAMP E													
503+77	510+00		66370						540			33,500	CLASS 3 EXC FOR RAMP E STRUCT
RAMP E													
518+304	524+68	67	30448			566	67	743		0	0		& TOPSOIL & ROOTMAT
RAMP D													
518+304	524+68		9208						28				* BRC QUANTITY
RAMP F													
613+81	616+00		9418										* BRC QUANTITY
B&O RR													
1+00	6+50	358	41420							358	337	11,500	
ACCESS ROAD													
10+00	14+50	370	12113				220	407		150	141		
14+50	20+68	500	3126	170						500	470		
BORROW FOR I-95 CELL CAPPING			46,000										
BORROW FOR 2 LANDFILL CAPPINS			54,000										
SEDIMENT TREATMENT BASINS		11,382	2,559							11,382	10,699		
TOTAL		14,813	787,847	24,271		654	958	3,962	1,930	13,897	13,027	363,000	

* DENOTES STATE ROADS COMMISSION PARTICIPATION. ALL S.F. 94 UNLESS OTHERWISE NOTED

** THE DUMP REMOVAL QUANTITY SHOWN IS FOR INFORMATIONAL PURPOSES ONLY

CLASS 2 EXCAVATION

FROM DRAINAGE SHEET:	
TOTAL CLASS 2 EXCAVATION	2825 CU YDS
MINUS: ROOT MAT REMOVED IN CUT RAMP A/C	330 CU YDS
ROOT MAT REMOVED IN CUT RAMP E	67 CU YDS
TOTAL CLASS 2 EXCAVATION	2428 CU YDS
LOSS DUE TO HANDLING AND DENSIFICATION (10%)	243 CU YDS
TOTAL CLASS 2 EXCAVATION AVAILABLE FOR EMBANKMENT	2275 CU YDS

CLASS 3 EXCAVATION

FROM GRADING TABLE:	
TOTAL CLASS 3 EXCAVATION	1930 CU YDS
LOSS DUE TO HANDLING AND DENSIFICATION (10%)	193 CU YDS
TOTAL CLASS 3 EXCAVATION AVAILABLE FOR EMBANKMENT	1737 CU YDS

TOPSOIL ANALYSIS

2" TOPSOIL REQUIRED (161,000 ÷ 18)	8950 CU YDS
TOPSOIL AVAILABLE:	
TOPSOIL REMOVED UNDER FILL	654 CU YDS
LESS 10% SHRINKAGE	65 CU YDS
TOTAL TOPSOIL AVAILABLE	589 CU YDS
APPARENT ADDITIONAL TOPSOIL REQUIRED	8361 CU YDS
TOPSOIL FURNISHED AND PLACED 2" DEPTH (8361 x 18)	150498 SQ YDS
PROPOSAL QUANTITIES	
PLACING SALVAGED TOPSOIL-2" DEPTH (589 x 18)	10600 SQ YDS
TOPSOIL FURNISHED & PLACED - 2" DEPTH	139,000 SQ YDS

EARTHWORK ANALYSIS

CLASS I EXCAVATION

CUT	14813 CU YDS.
PLUS: TOPSOIL REMOVED UNDER FILL	654 CU YDS.
ROOT MAT REMOVED UNDER FILL	5962 CU YDS.
TOTAL CLASS I EXCAVATION	21,481 CU YDS.

EXCAVATION AVAILABLE FOR EMBANKMENT

TOTAL CLASS I EXCAVATION	21,481 CU YDS.
MINUS: TOPSOIL REMOVED UNDER FILL	654 CU YDS.
ROOTMAT REMOVED UNDER FILL	5962 CU YDS.
ROOTMAT REMOVED IN CUT	958 CU YDS.
CUT ADJUSTED	13857 CU YDS.
CUT DENSIFIED (94)	13027 CU YDS.
PLUS: CLASS 2 EXCAVATION	2278 CU YDS.
CLASS 3 EXCAVATION	1737 CU YDS.
TOTAL EXCAVATION AVAILABLE FOR EMBANKMENT	17,039 CU YDS.

EMBANKMENT REQUIRED

EMBANKMENT	787,847 CU YDS.
PLUS: TOPSOIL REMOVED UNDER FILL	654 CU YDS.
ROOT MAT REMOVED UNDER FILL	5962 CU YDS.
TOTAL EMBANKMENT REQUIRED	794,463 CU YDS.
EXCAVATION AVAILABLE FOR EMBANKMENT	17,039 CU YDS.
BORROW REQUIRED	777,424 CU YDS.
BORROW DENSIFIED (10%)	77,742 CU YDS.
TOTAL BORROW REQUIRED	855,166 CU YDS.

PROPOSAL QUANTITIES

CLASS I EXCAVATION	21,500 CU YDS.
CLASS IA EXCAVATION	3,500 CU YDS.
CLASS 2 EXCAVATION	2,600 CU YDS.
DUMP REMOVAL	JUMP SUM
CONTINGENT DUMP REMOVAL	75,000 CU YDS.
BORROW EXCAVATION	855,000 CU YDS.
CONTINGENT BORROW EXCAVATION	85,000 CU YDS.
SELECT BORROW EXCAVATION	24,500 CU YDS.
CONTINGENT SELECT BORROW EXCAVATION	3,000 CU YDS.

LANDSCAPING QUANTITIES

LOCATION	2" TOPSOIL, SEEDING & MULCHING
402+00 TO 406+50 (M)	8087 SQ YDS.
411+06 TO 414+50 (M)	11,467 SQ YDS.
22+90 TO 28+17 RAMP A	3,959 SQ. YDS.
201+22 TO 210+50 RAMP A/C	18,267 SQ YDS.
97+00 TO 107+50 RAMP B	16683 SQ YDS.
503+00 TO 510+00 RAMP E	41,740 SQ YDS.
518+304 TO 524+00 RAMP E/D	4,322 SQ. YDS.
1+00 TO 8+50 B&O RAILROAD	13,308 SQ. YDS.
10+00 TO 14+50 ACCESS ROAD	4,233 SQ YDS.
14+50 TO 20+68 ACCESS ROAD	3,411 SQ YDS.
AREA WEST OF RAMP A AND SOUTH OF B&O RR	19,022 SQ YDS.
TOTAL	146,68 SQ YDS.
PLUS 10%	14,67 SQ YDS.
TOTAL TOPSOIL SEEDING & MULCHING	60,785 SQ YDS.
PROPOSAL QUANTITY	61,000 SQ YDS.

REVISIONS	CONSULTANT	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS & STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY	
1 Addendum No 4 Aug 1987 Earthwork Summary & Analysis Revision	KNOERLE, BENDER, STONE & ASSOC., INC. AND MATZ, CHILDS & ASSOC., INC. CONSULTING ENGINEERS 341 N. CALVERT STREET BALTIMORE, MARYLAND 21202	INTERSTATE ROUTE 95 FROM NORTH OF HERRING RUN TO NORTH OF B&O RAILROAD	DRAWN BY F.W. DES. BY K.H. TRACED BY F.W. CHK. BY K.H. F.A.P. NO. I-95-4(36)36 S.R.C. NO. BC 246-33-815 BALTO. CITY NO. 1995 SHEET NO. (92) Q-1 OF Q-7
		SCALE: None DATE	

SUMMARY OF QUANTITIES

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	MD.	I-95-4(36)136	Q-2	(92) Q-7

STATION	GRADING	DRAINAGE																									REMARKS
	CLASS 2 EXCAVATION	24" RC PIPE CLASS S	30" RC PIPE CLASS S	18" BCCM PIPE TYPE 'A' NO 12 GA	24" BCCM PIPE TYPE A NO 12 GA	18" BCCM PIPE TYPE 'C' NO 14 GA	24" BCCM PIPE TYPE 'C' NO 14 GA	30° ELBOW FOR 18" BCCM PIPE TYPE 'C' NO.14 GA	30° ELBOW FOR 24" BCCM PIPE TYPE 'C' NO.14 GA	STD TYPE 'C' ENDWALL FOR 18" CM PIPE	STD METAL END SECTION FOR 18" C.M. PIPE	STD TYPE 'C' ENDWALL FOR 24" PIPE	STD TYPE 'C' ENDWALL FOR 30" PIPE	SPECIAL TYPE 'K' INLET NON-TRAFFIC AREAS MIN DEPTH	SPECIAL TYPE 'K' INLET NON-TRAFFIC AREAS VERT DEPTH	STD TYPE 'S' INLET DOUBLE GRATE TANDEM MIN DEPTH	STD TYPE 'S' INLET DOUBLE GRATE TANDEM VERT DEPTH	ADJUST EXIST INLET							
	CY	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	EA.	EA.	EA.	EA.	EA.	EA.	EA.	L.F.	EA.	L.F.	EA.							
PLAN SHEET P1																											
MAINLINE																											
402+53 LT & RT.					20		40		2		1						4	7.5									
406+43 TO 407+ LT&RT					30		34				1						4	4.5									
RAMP A																											
23+23 RT						42		2										0.5									
25+00 LT & RT				26		50				1							2	9									
27+5 LT & 27+50 RT				46		54		2									2	1.5									
RAMP E																											
509+75 LT						30		2		1								0.5									
507+30 LT						30		2		1								0.5									
504+75 LT						40				1								0.5									
ACCESS ROAD																											
20+63 LT & RT						80								2	0.8												
PLAN SHEET P2																											
MAINLINE																											
412+25 LT.		336																									
RAMP A																											
17+50 RT						68		2		1							1	0.5									
20+45 RT						92		2		1							1	0.5									
PLAN SHEET P3																											
MAINLINE																											
414+50 LT. & RT.																			2								
RAMP 1																											
13+40		258										1															
RAMP C																											
202+00 RT						52		2		1							1	0.5									
205+09 LT						28								1													
205+25 TO 210+50	628																										
RAMP D																											
338+50						86		2		1							1	0.5									
RAMP E																											
521+80?2 LT & RT.				48		20				1							2	2.5									
518+13 TO 524+68	451																										
B & O RR																											
0+00 TO 4+50	72																										
TEMP COLLECTOR DITCH	774					106																					INCLUDES SPILLWAY PIPES AT SEDIMENT TREATMENT BASINS
TOTAL	2,925	258	336	120	250	800	74	16	2	11	2			3	0.8	22	220	2									
IDENTIFICATION NO.	203	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320									

REVISIONS	CONSULTANT	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS & STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY	
	KNOERLE, BENNER, STONE & ASSOC., INC. AND MATZ, CHILDS & ASSOC., INC. CONSULTING ENGINEERS 341 N. CALVERT STREET BALTIMORE, MARYLAND 21202	INTERSTATE ROUTE 95 FROM NORTH OF HERRING RUN TO NORTH OF B&O RAILROAD	DRAWN BY F.W. DES. BY T.E.L. TRACED BY F.W. CHK. BY J.L.C.
		SCALE None DATE	F.A.P. NO. I-95-4(36)136 S.R.C. NO. BC.246-33-015 BALTO. CITY NO. 1995 SHEET NO. (92) Q-2 OF Q-7

SUMMARY OF QUANTITIES

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	MD.	I-95-4(36)136	Q-3	(92) Q-7

DRAINAGE

STATION	DROP MANHOLE 30" COVER MIN. DEPTH	DROP MANHOLE VERTICAL DEPTH	CLASS P-1 CONCRETE FOR MISC STRUCTURES	CLASS B CONCRETE FOR MISC STRUCTURES	ORDINARY BRICK MASONRY FOR MISC STRUCTURES	6" PERFORATED CIRCULAR LONGITUDINAL UNDERDRAIN	6" PERFORATED CIRCULAR PIPE UNDERDRAIN	8" PERFORATED CIRCULAR PIPE UNDERDRAIN	6" CIRCULAR PIPE UNDERDRAIN OUTLETS	8" CIRCULAR PIPE UNDERDRAIN OUTLETS	AGGREGATE BACKFILL FOR UNDERDRAIN	5" CONCRETE GUTTER	CLASS I MEDIUM RIPRAP	TEMPORARY SLOPE DRAINS	REMARKS
PLAN SHEET P-1	EA	LF	CY	CY	CY	LF	LF	LF	LF	LF	CY	SY	SY	LF	
MAINLINE															
401+50 TO 402+60 RT												37			
401+98 TO 404+30 LT			1									113		42	TEMP SLOPE DRAIN @ 402+50 (LT) AS SHOWN ON P-4
402+58 TO 406+40						385			15						I-95 (SBR) LT
402+88 TO 406+76						41			3						I-95 (NBR) LT
RAMP A															
23+13 TO 23+00 RT						68			8						
23+00 TO 27+80 RT						244			20					80	TEMP SLOPE DRAIN @ 27+50 (RT) AS SHOWN ON P-4
RAMP E															
303+76 TO 304+78 LT												48		88	
304+75 TO 307+30 LT						274			16						TEMP SLOPE DRAIN @ 304+88 (LT) AS SHOWN ON P-4
307+50 TO 309+75 LT						216			6						
PLAN SHEET P-2															
MAINLINE															
411+68 TO 414+00						235								100	I-95 (NBR) LT TEMP SLOPE DRAIN @413+30(LT) AS SHOWN ON P-3
411+30 TO 414+00				33		270									I-95 (SBR) LT CLASS B CONC. FOR GRADE AS SHOWN ON PLANS
RAMP A															
17+50 RT													3		
20+45 RT													7	74	TEMP SLOPE DRAIN @ 20+80 (RT) AS SHOWN ON P-3
13+29 TO 17+50 RT						236			6						
17+50 TO 20+45 RT						295			16						
RAMP C															
207+00 TO 208+50 LT												67		96	TEMP SLOPE DRAIN @ 208+40 (LT) AS SHOWN ON P-3
208+50 RAMP C LT TO 412+94 A LT												78			
RAMP E															
310+41 TO 311+30 RT												44			
311+30 TO 311+61 RT													22		
PLAN SHEET P-3															
MAINLINE															
414+00 TO 414+80						80			6						
414+00 TO 414+80						80			16						I-95 (NBR) LT
RAMP A															I-95 (SBR) LT.
5+40 LT	1	587													
RAMP C															
201+50 TO 201+00 RT						510			16				3		
205+78 TO 207+00 LT												54			
RAMP D															
338+50												93			
338+35 TO 339+17						80			16						
RAMP E															
319+68 TO 321+00 RT												73			
319+68 RAMP E RT TO 416+80 N LT												107			
319+84 TO 322+95 RT						307			32						
TEMPORARY EMERGENCY SPILLWAY												212	44		SEDIMENT TREATMENT BASINS
TOTAL	1	587		33		3821			228			528	88	400	
IDENTIFICATION NO.	321	322	323	324	325	326	327	328	329	330	331	332	333	334	

REVISIONS	CONSULTANT	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS & STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY
	KNOERLE, RENGER, STONE & ASSOC., INC. AND MATZ, CHRIS & ASSOC., INC. CONSULTING ENGINEERS 341 N. CALVERT STREET BALTIMORE, MARYLAND 21202	INTERSTATE ROUTE 95 FROM NORTH OF HERRING RUN TO NORTH OF B&O RAILROAD
		SCALE DATE
		DRAWN BY F.W. TRACED BY F.W. DES. BY T.E.L. CHK. BY J.L.C.
		F.A.P. NO. I-95-4(36)36 S.R.C. NO. BC 246-33-815 BALTO. CITY NO. 995
		SHEET NO. (92) Q-3 OF Q-7

SP 18

SUMMARY OF QUANTITIES

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	MD.	I-95-4(36)136	Q-4	(92) Q-?

STATION	PAVEMENT: 3" Sub-Base Using Crusher Run (SY)	4" Sub-Base Using Crusher Run (SY)	6" Sub-Base Using Crusher Run (SY)	Calcium Chloride For 3" Dense Graded Stabilized Aggregate (SY)	Calcium Chloride For 4" Dense Graded Stabilized Aggregate (SY)	Calcium Chloride For Variable Dense Graded Stabilized Aggregate (SY)	Bituminous Material For Prime Coat (GAL)	Bituminous Concrete Spec. B Using Base PC-1-A/Stone (TON)	8" Conventional Reinforced Cement Concrete Pavement (SY)	9" Conventional Reinforced Cement Concrete Pavement (SY)	8" Continuous Reinforced Cement Concrete Pavement (SY)	Terminal Joint (LF)	SHOULDERS: 8" Stabilized Shoulder Dense Graded Stabilized Aggregate (SY)	4" Stabilized Shoulder Dense Graded Stabilized Aggregate (SY)	Variable Depth Stabilized Shoulder Dense Graded Shoulder Aggregate (SY)	Bituminous Concrete Shoulder Spec. B Base PC-1 6½" Stone 10" Plain Cement (TON)	Concrete Shoulder (SY)	Concrete Barrier (LF)	Guard Rail W-Beam (LF)	Guard Rail W-Beam Barricade (LF)	Guard Rail W-Beam Anchorage at Structures (EA)	Remove Existing Guard Rail (LF)	6' Chain Link Fence (LF)	Terminal Post For 6' Chain Link Fence (EA)	Remove Existing Fence (LF)	Temporary Edge Delineator (LF)	REMARKS
PLAN SHEET P-1																												
MAINLINE																												
402+46 TO 406+00			181		520	767	767		276																			
402+46 TO 408+00			1647		840	701	701		252				1715				980	767	767		155	302	020				340	4			NBR (FENCE NBR & RAMP E)
APPROACH SLABS			360										1558				840	701	701		140	357	861				438	2			SBR (FENCE SBR & RAMP E)
RAMP 'A'																															NBR & SBR
22+00 TO 27+55.19			785		459	334	334		138				787				459	334	334		77	467	893				607	7		38	FENCE RAMP A RT.
A/B GORE AREA			35					2		35																					
APPROACH SLAB			83																												
ACCESS ROAD																															
STA 14+03 TO 20+69			2169																												
RAMP 'E'																															
504+67.76 TO 510+30			912		340	416	416		162				883				540	416	416		90	568	1068		40		530	7			FENCE RAMP E LT.
APPROACH SLAB			80																												
PLAN SHEET P-2																															
MAINLINE																															
408+00 TO 414+00	1261	1261	6726		752	641	641		238				640	1209		72	702	641	641		131	336	820				880	3	473		NBR & SBR
APPROACH SLABS			411																												
RAMP 'A'																															
17+00 TO 22+00			588		351	270	270		105				552				351	270	270		88	285	570				400			106	(FENCE RAMP A RT.)
A/C GORE AREA			6					0		16																					
APPROACH SLAB			80																												
ACCESS ROAD																															
10+00 TO 14+65			1646																												
RAMP 'C'																								353							
207+00 TO 208+30			439										439									120	181		33						
RAMP 'E'																															
511+50 TO 513+70			64		40	36	36		12				30				40	36	36		7	18	64							55	
D/E GORE AREA			31					2		31																					
APPROACH SLAB			80																												
RAMP 'H'																															
RAMP 'H' TAPER			449		220	196	196		66				417				220	196	196		37	92	227								
H/K GORE AREA			5							5																					
PLAN SHEET P-3																															
MAINLINE																															
414+00 TO 414+50	750	750			282	228	228		89					720			282	228	228		48	120	270						1025		NBR & SBR INCL. 25' FENCE OVER EAST RAMP D
RAMP 'C'																															
201+58 TO 207+00			2166		533	410	410		160				2086				533	410	410		88	564	1012				575	5		423	INCL RAMP A 13+25.49 TO 17+00
A/C GORE AREA										4																					
RAMP 'E'																															
518+70 TO 523+835			2175		475	326	326		143				2003				475	326	326		70	486	908		40	30		310			35	INCL RAMP D 338+35 TO 335+1756
E/D GORE AREA								2		40																					
E/EX B GORE AREA			135					7		135																					
RAMP 'H'																						100	226								INCL QUANTITIES ON EX RAMP 'B'
7+05 TO 8+02.51			297		103	92	92		31				231				103	92	92		17	44	58								
H/K GORE			69					4		65																					
TOTAL	2011	2011	17287		5535	4437	4437	26	668	476	11,383	1920	72				5535	4437	4437		925	3547	8108		313	140	1	370	3068	30	1,300	658	
IDENTIFICATION NO.	501	502	503		504	505	506	508		511	512	513	515				601	602	603		604	605	606		607	608	609	610	611	612	613	614	

REVISIONS	CONSULTANT	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS & STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY
	KOERLE, BERGER, STONE & ASSOC., INC. AND HATZ, KIRKPS & ASSOC., INC. CONSULTING ENGINEERS 341 N. CALVERT STREET BALTIMORE, MARYLAND 21202	INTERSTATE ROUTE 95 FROM NORTH OF HERRING RUN TO NORTH OF B&O RAILROAD
		SCALE: DATE:
		DRAWN BY F.W. TRACED BY F.W. DES. BY T.E.L. CHK. BY J.L.C.
		F.A.P. NO. I-95-4(36)36 S.R.C. NO. BC248-33-815 BALTO. CITY NO. 1995
		SHEET NO. (92) Q-4 OF Q-?

SUMMARY OF QUANTITIES

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	MD.	I-95-4(36)36	Q-5	(92) Q-7

STATION	UTILITIES						REMARKS
	HAND BOX FOR TRAFFIC DEVICES	ONE WAY DUCT	5" EXTRA HEAVY GALVANIZED STEEL PIPE & FITTINGS	DUCT MARKERS	REMOVE & SALVAGE EXISTING LIGHTING STANDARD		
PLAN SHEET P-1	EA	L.F.	L.F.	EA.	EA		
MAINLINE							
402+50 RT & LT	3	140					
404+25		68		2			
406+47 (70' LT)	1						
406+80 RT.		80					
406+80 LT		80					
406+80 ℄	1						
407+20 (70' RT)	1						
RAMP 'E'							
504+90 RT & LT		40		2			
RAMP 'F'							
614+87 RT & LT		50		2			
PLAN SHEET P-2							
MAINLINE							
411+08 (70' LT)	1						
411+40 ℄	1						
411+40 LT		80					
411+40 RT.		50					
411+79 (80' RT)	1						
413+40 (LT)		68		2			
PLAN SHEET P-3							
RAMP 'C'							
203+30 (RT & LT)		62		2			
RAMP 'E'							
520+05 (70 RT)							
522+50 (RT & LT)		62	44	2			
TOTAL	9	822	44	12	1		
IDENTIFICATION NO.	801	802	803	804	805		

REVISIONS	CONSULTANT	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS & STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY	
	KNOERLE, MENDER, STONE & ASSOC., INC. AND MATZ, GIBBS & ASSOC., INC. CONSULTING ENGINEERS 343 N. CHARLES STREET BALTIMORE, MARYLAND 21202	INTERSTATE ROUTE 95 FROM NORTH OF HERRING RUN TO NORTH OF B&O RAILROAD	DRAWN BY F.W. DES. BY T.E.L. TRACED BY F.W. CHK. BY J.L.C. F.A.P. NO. I-95-4(36)36 S.R.C. NO. BC.246-33-815 BALTO. CITY NO. 1995 SCALE NONE DATE SHEET NO. (92) Q-5 OF Q-7

5P22

SUMMARY OF QUANTITIES

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	MD.	I-95-4(36)136	Q-6	(92) Q-7

IDENT NO.	PAY ITEMS	UNIT	BALTO. CITY QUANT.	S.R.C. QUANT.	CONT. QUANT.	PROP. QUANT.	FINAL QUANT.
	PRELIMINARY ITEMS						
101	CLEARING & GRUBBING	LS	LUMP SUM			LUMP SUM	
102	ENGINEER'S FACILITY - FO-3	LS	LUMP SUM			LUMP SUM	
103	MAINTENANCE OF TRAFFIC	LS	LUMP SUM			LUMP SUM	
104	CONSTRUCTION STAKEOUT	LS	LUMP SUM			LUMP SUM	
105	MOBILIZATION	LS	LUMP SUM			LUMP SUM	
106	ON THE JOB TRAINING	HR	3,000			3,000	
	GRADING ITEMS						
201	CLASS 1 EXCAVATION	CY	21,481			21,500	
202	CLASS 1-A EXCAVATION	CY			3500	3500	
203	CLASS 2 EXCAVATION	CY	2,528			2,600	
204	BORROW EXCAVATION	CY	756,000	100000		856,000	
205	CONTINGENT BORROW EXCAVATION	CY			85000	85,000	
206	SELECT BORROW EXCAVATION	CY	20,100	4,400		24,500	
207	CONTINGENT SELECT BORROW	CY			3,000	3,000	
208	TEST PIT EXCAVATION	CY			10	10	
209	DUMP REMOVAL	LS	LUMP SUM (80%)	LUMP SUM (20%)		LUMP SUM	
210	CONTINGENT DUMP REMOVAL	CY			75,000	75,000	
	DRAINAGE ITEMS						
301	CLASS 3 EXCAVATION FOR INCIDENTAL CONSTRUCTION	CY			50	50	
302	SELECTED BACKFILL USING NO 6 AGGREGATE	CY			1500	1500	
303	SELECTED BACKFILL USING SR-6	CY			1500	1500	
304	24" RCP PIPE CLASS 5	LF	258			258	
305	30" RCP PIPE CLASS 5	LF	336			336	
306	18" BCCM PIPE, TYPE A, # 12 GA	LF	20			20	
307	24" BCCM PIPE, TYPE A, # 12 GA	LF	250			250	
308	18" BCCM PIPE TYPE C # 14 GA	LF	800			800	
309	24" BCCM PIPE TYPE C # 14 GA	LF	74			74	
310	30° ELBOW FOR 18" BCCM PIPE, TYPE C, 14 GA	EA	6			6	
311	30° ELBOW FOR 24" BCCM PIPE TYPE C 14 GA	EA	2			2	
312	STD METAL END SECTION FOR 18" CM PIPE	EA	11			11	
313	STD METAL END SECTION FOR 24" CM PIPE	EA	2			2	
314	STD TYPE C ENDWALL FOR 24" PIPE	EA	1			1	
315	STD TYPE C ENDWALL FOR 30" PIPE	EA	1			1	
316	SPECIAL TYPE K INLET NON-TRAFFIC AREAS, MIN. DEPTH	EA	3			3	
317	SPECIAL TYPE K INLET NON-TRAFFIC AREAS, VERT. DEPTH	EA	08			1	
318	STD TYPE S INLET, DOUBLE GRATE TANDEM, MIN. DEPTH	EA	22			22	
319	STD TYPE S INLET, DOUBLE GRATE TANDEM, VERT. DEPTH	LF	22			22	
320	ADJUST EXISTING INLET	EA	2			2	
321	DROP MANHOLE, 30" COVER, MIN. DEPTH	EA	1			1	
322	DROP MANHOLE, VERTICAL DEPTH	LF	1.87			6	
323	CLASS P-1 CONCRETE FOR MISC. STRUCTURES	CY			23	23	
324	CLASS B CONCRETE FOR MISC. STRUCTURES	CY	55			55	
325	ORDINARY BRICK MASONRY FOR MISC. STRUCTURES	CY			5	5	
326	6" PERFORATED CIRCULAR PIPE LONGITUDINAL UNDERDRAIN	LF	3821			3850	
327	6" PERFORATED CIRCULAR PIPE UNDERDRAIN	LF			400	400	
328	8" PERFORATED CIRCULAR PIPE UNDERDRAIN	LF			400	400	
329	6" CIRCULAR PIPE UNDERDRAIN OUTLETS	LF	228			250	
330	8" CIRCULAR PIPE UNDERDRAIN OUTLETS	LF			30	150	
331	AGGREGATE BACKFILL FOR UNDERDRAINS	CY			50	50	
332	3' CONCRETE GUTTER	SY	828			830	
333	CLASS 1 MEDIUM RIPRAP	SY	83			90	
334	TEMPORARY SLOPE DRAINS	LF	400			400	

IDENT NO.	PAY ITEMS	UNIT	BALTO. CITY QUANT.	S.R.C. QUANT.	CONT. QUANT.	PROP. QUANT.	FINAL QUANT.
	STRUCTURE ITEMS						
401	CLASS 3 EXCAVATION FOR STRUCTURES	CY	880	30		1030	
402	SUB-FOUNDATION	LF	30			50	
403	14" DIAMETER CAST-IN-PLACE CONCRETE PILES FURNISHED AND DRIVEN	LF	4,80	3440		17620	
404	14" DIAMETER CAST-IN-PLACE CONCRETE TEST PILES FURNISHED AND DRIVEN	LF	700	120		820	
405	14" DIAMETER CAST-IN-PLACE CONCRETE PILE SPLICES	EA	530	40		570	
406	CLASS C CONCRETE SUB-FOUNDATION	CY	25			25	
407	FOOTING CONCRETE - RAMP A	CY	170			170	
408	FOOTING CONCRETE - RAMP C	CY		85		85	
409	FOOTING CONCRETE - RAMP D	CY		85		85	
410	FOOTING CONCRETE - RAMP E	CY	340			340	
411	FOOTING CONCRETE - I-95, B&O RR	CY	690			690	
412	SUB-STRUCTURE CONCRETE FOR ABUTMENT - RAMP A	LS	LUMP SUM			LUMP SUM	
413	SUB-STRUCTURE CONCRETE FOR ABUTMENT - RAMP E	LS	LUMP SUM			LUMP SUM	
414	SUB-STRUCTURE CONCRETE FOR ABUTMENT - I-95, B&O RR	LS	LUMP SUM			LUMP SUM	
415	SUB-STRUCTURE CONCRETE FOR PIERS - RAMP A	LS	LUMP SUM			LUMP SUM	
416	SUB-STRUCTURE CONCRETE FOR PIERS - RAMP E	LS	LUMP SUM			LUMP SUM	
417	SUB-STRUCTURE CONCRETE FOR PIERS I-95, B&O RR	LS	LUMP SUM			LUMP SUM	
418	CLASS B CONCRETE RAMPS C & D	CY		38		38	
419	SUPERSTRUCTURE CONCRETE FOR ABUTMENT - RAMP A	LS	LUMP SUM			LUMP SUM	
420	SUPERSTRUCTURE CONCRETE FOR ABUTMENT - RAMP E	LS	LUMP SUM			LUMP SUM	
421	SUPERSTRUCTURE CONCRETE FOR ABUTMENT - I-95 B&O	LS	LUMP SUM			LUMP SUM	
422	SUPERSTRUCTURE CONCRETE FOR BRIDGE - RAMP A	LS	LUMP SUM			LUMP SUM	
423	SUPERSTRUCTURE CONCRETE FOR BRIDGE - RAMP E	LS	LUMP SUM			LUMP SUM	
424	SUPERSTRUCTURE CONCRETE FOR BRIDGE - I-95, B&O	LS	LUMP SUM			LUMP SUM	
425	CONTINGENT CONCRETE FOR BRIDGES	CY			25	25	
426	FABRICATED STRUCTURAL STEEL (A 588) FOR BRIDGE	LS	LUMP SUM			LUMP SUM	
427	FABRICATED STRUCTURAL STEEL (A 588) FOR BRIDGE	LS	LUMP SUM			LUMP SUM	
428	FABRICATED STRUCTURAL STEEL (A-588) FOR BRIDGE	LS	LUMP SUM			LUMP SUM	
429	4" CONCRETE SLOPE PROTECTION	SY	2,310			2,310	
430	APPROACH SLAB CONCRETE RAMP A	SY	165			165	
431	APPROACH SLAB CONCRETE - RAMP E	SY	60			60	
432	APPROACH SLAB CONCRETE - I-95, B&O R R	SY	775			775	
433	ELECTRICAL CONDUIT SYSTEM FOR STRUCTURE	LS	LUMP SUM			LUMP SUM	

REVISIONS	CONSULTANT	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS & STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY	
☐ Addendum No 4 Aug 9, 85 Grading Items Revision	KNOFFLE, BENDER, STONE & ASSOC., INC. AND WATZ, CHILDS & ASSOC., INC. CONSULTING ENGINEERS 341 N. CALVERT STREET BALTIMORE, MARYLAND 21202	INTERSTATE ROUTE 95 FROM NORTH OF HERRING RUN TO NORTH OF B&O RAILROAD SCALE: DATE:	DRAWN BY F.W. DES. BY T.E.L. TRACED BY F.W. CHK. BY J.J.C. F.A.P. NO. I-95-4(36)136 S.R.C. NO. BC 246-33-815 BALTO. CITY NO. 1995 SHEET NO 1921 Q-6 OF Q-7

SUMMARY OF QUANTITIES

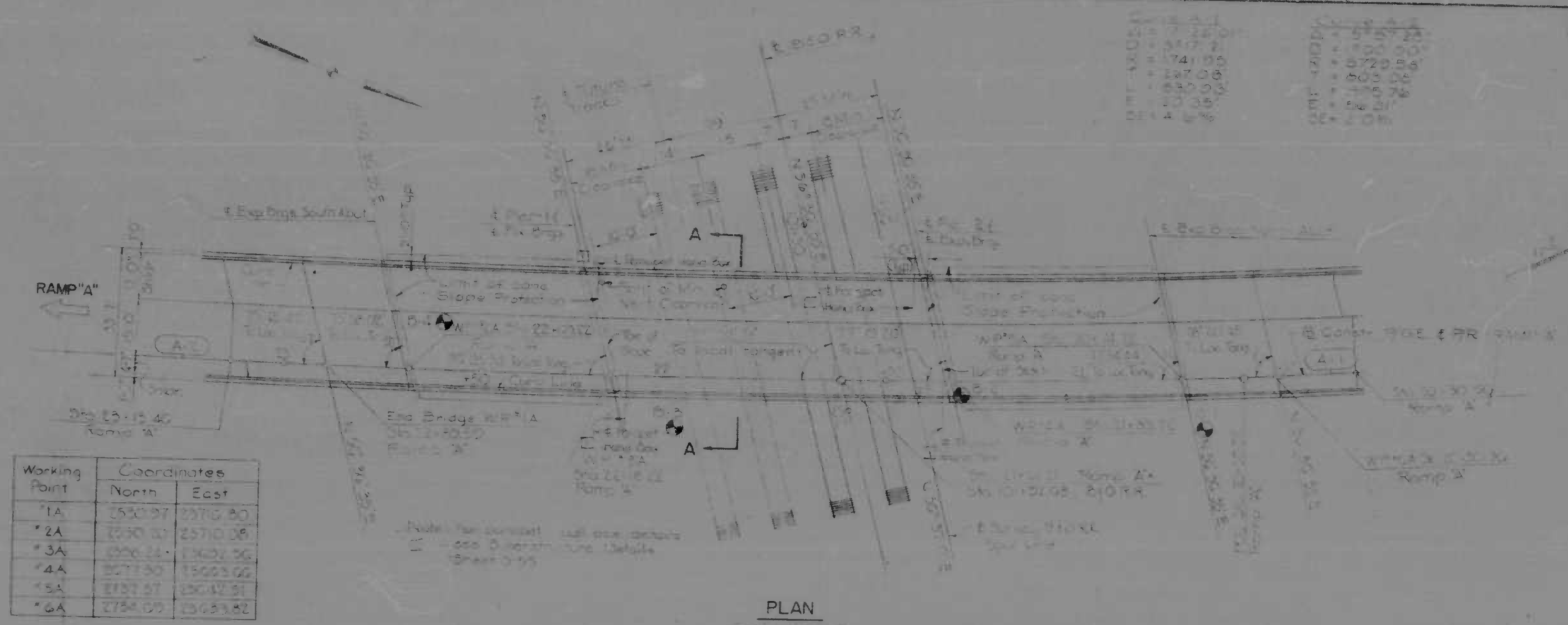
IDENT.NO.	PAY ITEMS	UNIT	BALTO.CITY QUANT.	S.R.C. QUANT.	CONT. QUANT.	PROP. QUANT.	FINAL QUANT.
	PAVING ITEMS						
501	3" SUB BASE USING CRUSHER RUN	SY	20			2020	
502	4" SUB BASE USING CRUSHER RUN	SY	20			2020	
503	6" SUB BASE USING CRUSHER RUN	SY	1728			7300	
504	CALCIUM CHLORIDE FOR 3" DGSA	SY	5555			5560	
505	CALCIUM CHLORIDE FOR 4" DGSA	SY	4437			4440	
506	CALCIUM CHLORIDE FOR VARIABLE DEPTH DGSA	SY	4437			4440	
507	CRUSHER RUN AGGREGATE FOR MAINTENANCE OF TRAFFIC	TON			50	50	
508	BITUMINOUS MATERIAL FOR PRIME COAT	GAL	1668			670	
509	BITUMINOUS CONC. SPEC. B USING BAND PC-1-161 STONE	TON	26			30	
510	BITUMINOUS CONC. SPEC. B FOR MAINT. OF TRAFFIC STONE SLAG	TON			25	25	
511	8" REINFORCED CEMENT CONCRETE PAVEMENT CLASS P	SY	476			480	
512	9" REINFORCED CEMENT CONCRETE PAVEMENT CLASS P	SY	1383			1400	
513	8" CONTINUOUS REINFORCED CEMENT CONCRETE PAVEMENT CLASS P	SY	1020			1030	
514	CALCIUM CHLORIDE	TON			10	10	
515	TERMINAL JOINT	LF	72			73	
	SHOULDER ITEMS						
601	3" STABILIZED SHOULDER DGSA	SY	3555			3560	
602	4" STABILIZED SHOULDER DGSA	SY	4437			4440	
603	VARIABLE DEPTH STABILIZED SHOULDER DGSA	SY	4437			4440	
604	BIT. CONC. SHOULDER SPEC. 'B' BAND PC-1-161 STONE	TON	925			930	
605	10" PLAIN CEMENT CONCRETE SHOULDER	SY	3947			3950	
606	CONC. BARRIER CLASS A-1 CONC	LF	8108			8110	
607	GUARD RAIL W-BEAM	LF	375			375	
608	GUARD RAIL W-BEAM BARRICADE	LF	40			140	
609	GUARD RAIL W-BEAM ANCHORAGE @ STRUCTURES	EA	1			1	
610	REMOVE EXISTING GUARD RAIL	LF	370			370	
611	6' CHAIN LINK FENCE	LF	3965			4000	
612	TERMINAL POSTS FOR 6' CHAIN LINK FENCE	EA	30			30	
613	REMOVE EXISTING FENCE	LF	300			1500	
614	TEMPORARY EDGE DELINEATOR	LF	659			700	
	LANDSCAPING ITEMS						
701	PLACING SALV. TOPSOIL 2" DEPTH	SY	10,600			10,600	
702	TOPSOIL FURNISHED & PLACED 2" DEPTH	SY	150,408			151,000	
703	TEMPORARY SEEDING	SY	4,000			4,000	
704	SEEDING AND MULCHING	SY	139,861			140,000	
705	SEEDING AND MULCHING FLAT AREAS	SY	20,524			21,000	
706	SOLID SODDING	SY	3,180			3,200	
707	SOIL MIX	CY	555			560	

IDENT.NO.	PAY ITEMS	UNIT	BALTO.CITY QUANT.	S.R.C. QUANT.	CONT. QUANT.	PROP. QUANT.	FINAL QUANT.
	UTILITY ITEMS						
801	HAND BOXES FOR TRAFFIC DEVICES	EA	9			9	
802	ONE WAY DUCT	LF	822			830	
803	3" EXTRA HEAVY GALVANIZED STEEL PIPE & FITTING	LF	44			45	
804	DUCT MARKERS	EA	2			12	
805	REMOVE & SALVAGE EXISTING LIGHTING STANDARD	EA				1	
806	CLASS 'C' CONCRETE FOR UTILITIES	CY			25	25	

REVISIONS	CONSULTANT	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS	STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY
	KNOERLE, BENDER, STONE & ASSOC., INC. AND MATZ, CHILES & ASSOC., INC. CONSULTING ENGINEERS 341 N. CALVERT STREET BALTIMORE, MARYLAND 21202	INTERSTATE ROUTE 95 FROM NORTH OF HERRING RUN TO NORTH OF B&O RAILROAD SCALE: DATE:	DRAWN BY: F.W. DES. BY: W.E.L. TRACED BY: F.W. CHK. BY: J.L.C. F.A.P. NO. I-95-4(36)36 S.R.C. NO. BC 246-33-618 BALTO. CITY NO. 1995 SHEET NO. (92)

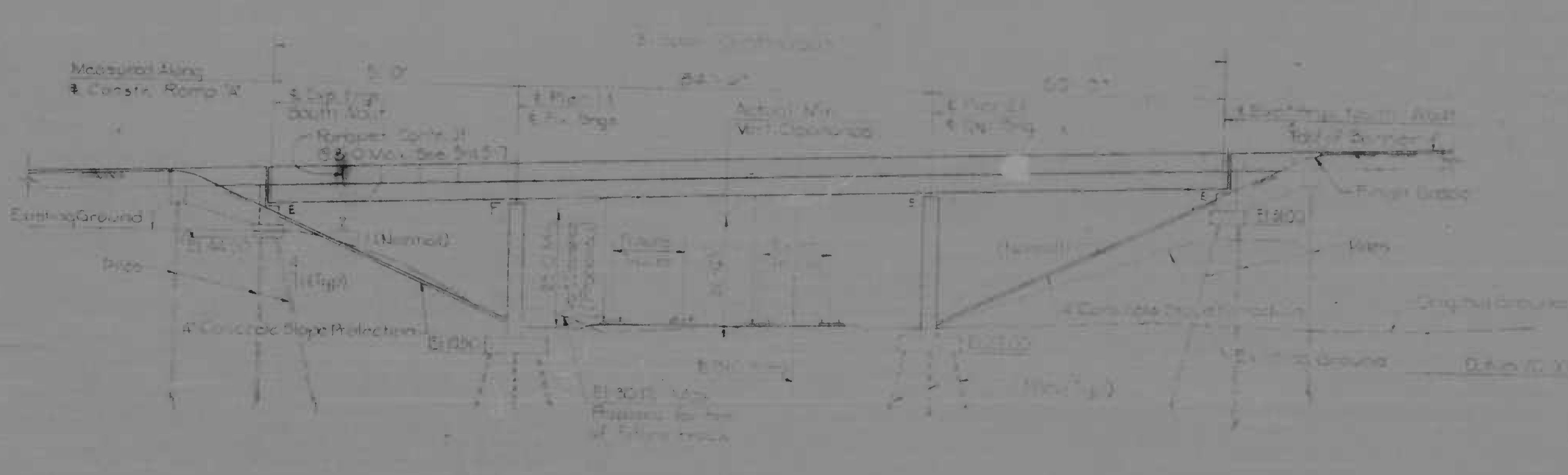
FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	MD.	I-95-4(36)36	S-1	(92) S-55

* Algebraic Difference in Cross Slopes of Shoulder and Paving to be Constant 4.4%, Except where S.E. = 4.0% on Paving Left Shoulder Slope is Continuation of Paving Cross Slope.



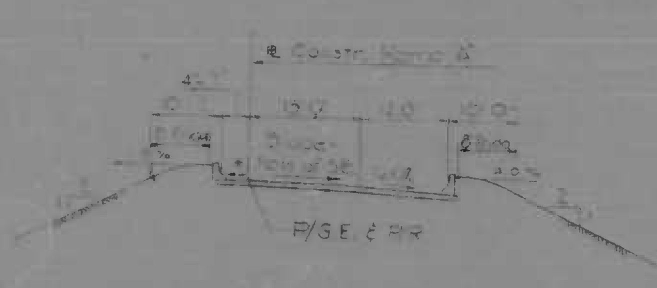
Working Point	Coordinates	
	North	East
*1A	2550.97	25710.80
*2A	2590.00	25710.08
*3A	2606.24	25622.56
*4A	2577.80	25603.66
*5A	2737.57	25642.31
*6A	2754.09	25653.82

PLAN



ELEVATION

TYPICAL APPROACH SECTION
STA. 20+40.00



LOCATION PLAN

BORING NO. 1
Sta. 2+24 70' Lt
B&O RR Spur Line

BORING NO. 2
Sta. 2+02 11' Lt
B&O RR Spur Line

BORING NO. 3
Sta. 1+95 60' Rt
B&O RR Spur Line

BORING NO. 4
Sta. 1+56 111' Rt. B&O RR Spur Line

Brown Silt Sand & Miscellaneous Fill

Vari-Colored Clay

Brown Sandy Clay

Brown Clay

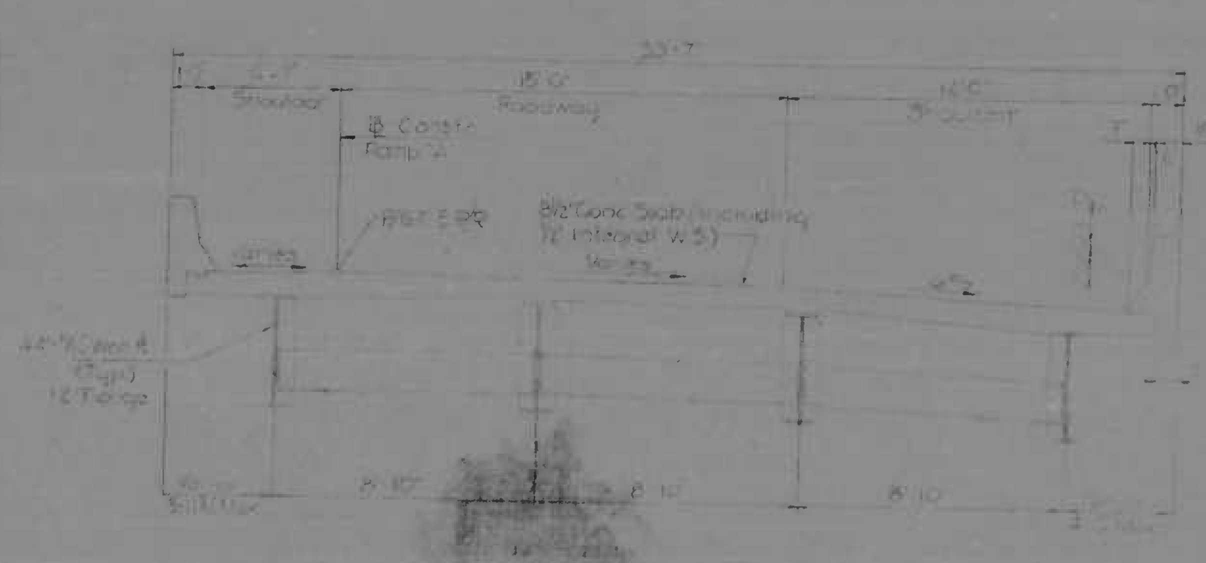
Boring Notes
1. Test Borings Made in April 1970
2. C = Number of Blows Required to Drive the Casing One Foot, Using a 300 Lb. Weight Falling 30 In.
3. S = Number of Blows Required to Drive a 2" O.D. Sampling Spoon One Foot using a 140 lb. Weight Falling 30 Inches

REFERENCES — SHEET NO.
North & South Abutments
Approach Slab Details
Pier
Framing Plan
Typical Deck Section
Superstructure Elevations
Bearing Details
Expansion Joint Details
Substructure Details
Superstructure Details

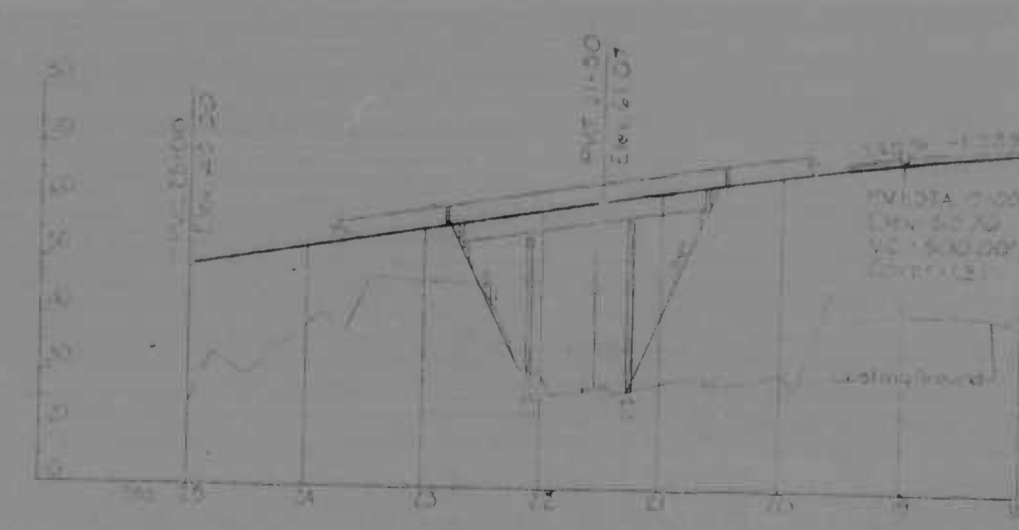
LEGEND:
Indicates Borings
W.P. Indicates Working Point

GENERAL NOTES

1. SPECIFICATIONS: S.R.C. Specifications and Errata to Specifications dated March 1968 and Special Provisions for materials and construction. AASHO Standard Specifications for Highway Bridges dated 1969, and 1970 Interim Specs. for Design. For reinforced concrete design fs = 20,000 psi except that the concrete in bridge deck slabs supported by steel beams has an fc = 1050 psi.
2. LOADING: [illegible]
3. CONCRETE: Class A Concrete shall have a minimum compressive strength of 3,000 psi at 28 Days. See Special Provisions.
4. CHAMFER: All exposed corners of concrete shall be chamfered [illegible]
5. REINFORCING STEEL: Reinforcing Steel shall conform to ASTM Designation A615 Grade 40. All splices shall be lapped a minimum of 24 bar diameters unless otherwise noted. Minimum cover for any bar shall be 2" unless otherwise noted.
6. STRUCTURAL STEEL: Structural Steel shall be A.S.T.M. Designation A 36.
7. [illegible]
8. One coat of pure epoxy coating shall be applied to all pier caps & pedestals, abutment seats & pedestals and abutment backwalls.



SECTION A-A



PROFILE RAMP-"A"

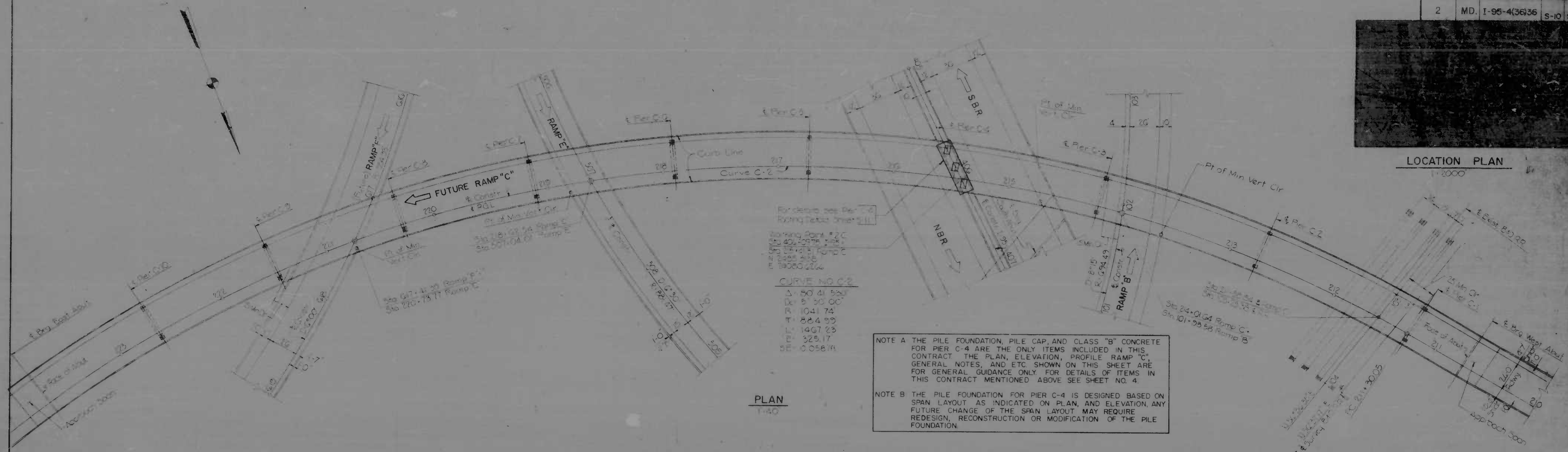
REVISIONS	CONSULTANT	
	KNOERLE, BENDER, STONE & ASSOC., INC. and KATZ, [illegible] & ASSOC., INC. CONSULTING ENGINEERS 541 N. CALVERT STREET BALTIMORE, MARYLAND 21	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS & STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY

I-95 WINDLASS-MORAVIA INTERCHANGE
RAMP "A" OVER B & O R.R.
GENERAL PLAN AND ELEVATION

SCALE: As Shown DATE:

DRAWN BY	J.R.W.	DES. BY	H.J.H.
TRACED BY	J.R.W.	CHK. BY	F.F.M.
F.A.P. NO.	I-95-4(36)36	SHEET NO.	(92)
S.R.C. NO.	BC 246-33-815	S-1	OF S-55
BALTO. CITY NO.	1995		

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	MD.	I-95-4(36)36	S-10	(92) S-55



LOCATION PLAN

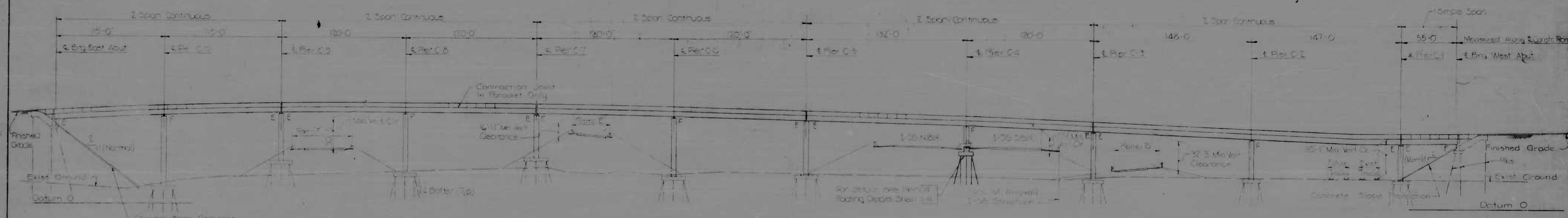
1"=2000'

NOTE A THE PILE FOUNDATION, PILE CAP, AND CLASS "B" CONCRETE FOR PIER C-4 ARE THE ONLY ITEMS INCLUDED IN THIS CONTRACT. THE PLAN, ELEVATION, PROFILE RAMP "C", GENERAL NOTES, AND ETC. SHOWN ON THIS SHEET ARE FOR GENERAL GUIDANCE ONLY. FOR DETAILS OF ITEMS IN THIS CONTRACT MENTIONED ABOVE SEE SHEET NO. 4.

NOTE B THE PILE FOUNDATION FOR PIER C-4 IS DESIGNED BASED ON SPAN LAYOUT AS INDICATED ON PLAN, AND ELEVATION, ANY FUTURE CHANGE OF THE SPAN LAYOUT MAY REQUIRE REDESIGN, RECONSTRUCTION OR MODIFICATION OF THE PILE FOUNDATION.

PLAN

1"=40'



ELEVATION

1"=40'

PROFILE RAMP "C"

Horz. 1"=200'
Vert. 1"=30'

REFERENCES	SHEET NO.
Pier C-4 Footing Details	11
Transverse Sections and Profiles	[illegible]
Substructure Details	[illegible]

GENERAL NOTES

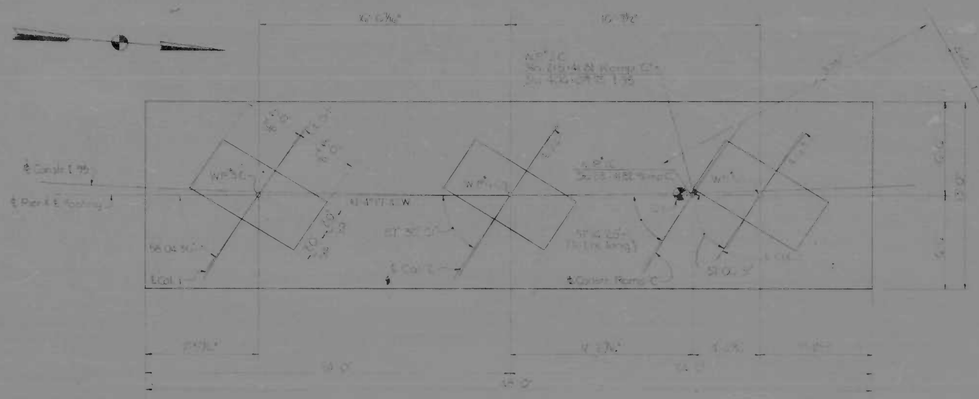
1. SPECIFICATIONS: Maryland SRC Specifications and Errata to specifications dated March 1968 and special provisions for materials and construction. A.A.S.H.O. Standard Specifications for Highway Bridges dated 1965 and 1970 interim specifications for design. For reinforced concrete design, f_c 1200 psi except that the concrete in bridge deck slabs supported by steel beams has an f_c = 1050 psi.
2. LOADING: H S 20-44 or 2-24,000 lb axles spaced 4' apart, whichever governs, with provisions for a Future 2" Wearing Surface.
3. CONCRETE: Class A-1 Concrete shall have a minimum compressive strength of 3000 psi at 28 Days.
4. CHAMFER: All exposed edges of concrete shall be chamfered ¾ x ¾ with milled chamfer strips, except where indicated by the following notation on the plans "Do Not Chamfer".
5. REINFORCING STEEL: Reinforcing Steel shall conform to A.S.T.M. Designation A-615 Grade 40. All splices shall be lapped a minimum of 24 bar diameters unless otherwise noted. Minimum cover for any bar shall be 2" unless otherwise noted.
6. STRUCTURAL STEEL: Structural Steel shall be A.S.T.M. designation A 588.
7. FOUNDATION: Recommendations are given on foundation sheet.
8. One coat of pure epoxy coating shall be applied to all pier caps, pedestals, abutment seats, and abutment backwalls.

REVISIONS	CONSULTANT	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS & STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY
	KNOERLE, BENDER, STONE & ASSOC., INC. AND MATZ, CHILDS & ASSOC., INC. CONSULTING ENGINEERS 341 N. CALVERT STREET, BALTIMORE, MARYLAND 21202	I-95 WINDLASS MORAVIA INTERCHANGE RAMP "C" OVER RAMP "B" I-95 AND B & O R.R. GENERAL PLAN AND ELEVATION

SCALE: As Shown DATE: June 10, 1971

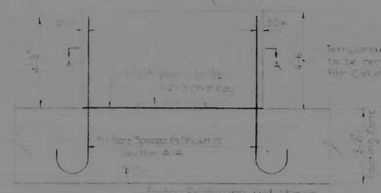
DRAWN BY: M.S.F. DES. BY: J.J.M.
TRACED BY: M.S.F. CHK. BY: F.F.M.
F.A.P. NO. I-95-4(36)36
S.R.C. NO. BC 246-33-815
BALTO. CITY NO. 1995
SHEET NO. (92) S-10 OF S-55

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	MD.	I-95-4(36)36	S-11	(92) S-55



PLAN

SECTION A-A



TYPICAL COLUMN SECTION

BORING NO. C-1

STA 4+44 379' RT ℄ SURVEY B&O R.R.

Notes:
1. 24" Borehole made in Jan. (5,197)
2. C-1 Number of Blows required to drive a 3½" I.D. Sampling Spoon one foot using a 300 lb weight falling 30 inches.
3. C-1 Number of Blows required to drive a 2" O.D. Sampling Spoon one foot using a 140 lb weight falling 30 inches.

ELEVATION

SECTION B-B

FOOTING PLAN

PIER AND POINT	COORDINATES N	E
W PT.	548,909.9	548,930.554
NW PT.	548,913.6	548,914.022
NE PT.	548,919.6	548,911.978
W PT.	548,915.9	548,931.446
E PT.	548,909.9	548,934.000

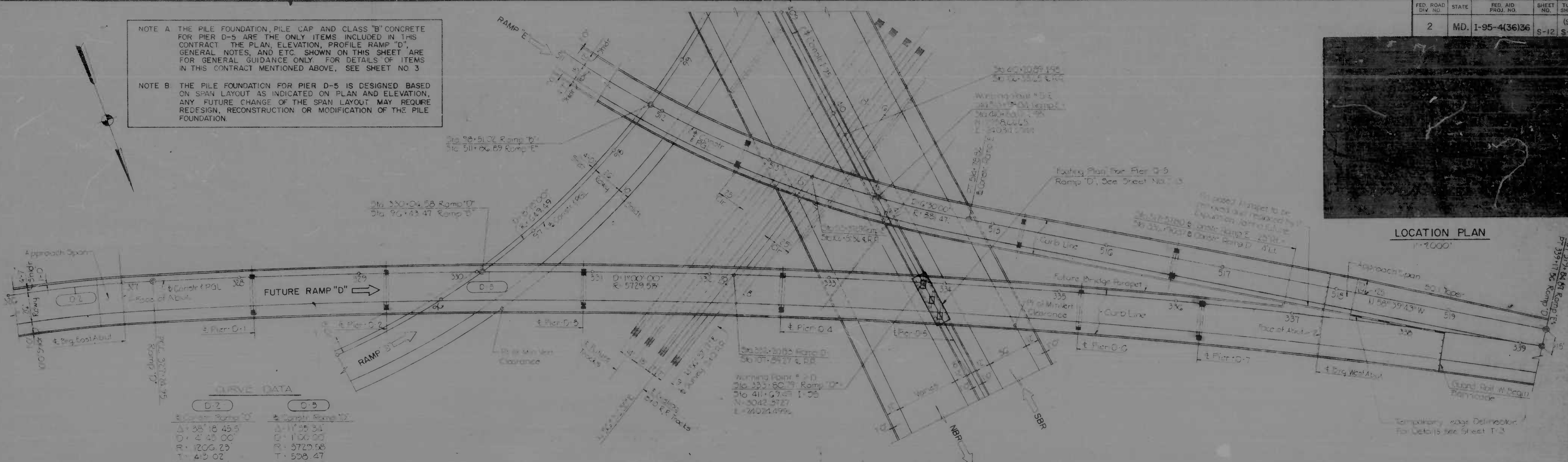
SPECIFICATIONS	SHT. NO.
Portland Cement Concrete (Class A)	490
Reinforcement Bars	544

REVISIONS	CONSULTANT	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS &	STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY
	KROERLE, BEXPER, STONE & ASSOC., INC. AND MATZ, CHILDS & ASSOC., INC. CONSULTING ENGINEERS 341 N. CALVERT STREET BALTIMORE, MARYLAND 21202	I-95 WINDLASS MORAVIA INTERCHANGE RAMP "C" OVER RAMPS "B" "E", "F", I-95, AND B & O R.R. PIER C-4 FOOTING DETAILS	DRAWN BY J.R.W. DES. BY A.E. TRACED BY J.R.W. CHK. BY P.F.M.
		SCALE As Shown DATE	F.A.P. NO. I-95-4(36)36 S.R.C. NO. BC 236-33-815 BALTO. CITY NO. 1795 SHEET NO. (92) S-11 OF S-55

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	MD.	I-95-4(36)36	S-12	(92) S-55

NOTE A. THE PILE FOUNDATION, PILE CAP AND CLASS "B" CONCRETE FOR PIER D-5 ARE THE ONLY ITEMS INCLUDED IN THIS CONTRACT. THE PLAN, ELEVATION, PROFILE RAMP "D", GENERAL NOTES, AND ETC. SHOWN ON THIS SHEET ARE FOR GENERAL GUIDANCE ONLY. FOR DETAILS OF ITEMS IN THIS CONTRACT MENTIONED ABOVE, SEE SHEET NO. 3

NOTE B. THE PILE FOUNDATION FOR PIER D-5 IS DESIGNED BASED ON SPAN LAYOUT AS INDICATED ON PLAN AND ELEVATION, ANY FUTURE CHANGE OF THE SPAN LAYOUT MAY REQUIRE REDESIGN, RECONSTRUCTION OR MODIFICATION OF THE PILE FOUNDATION.



CURVE DATA

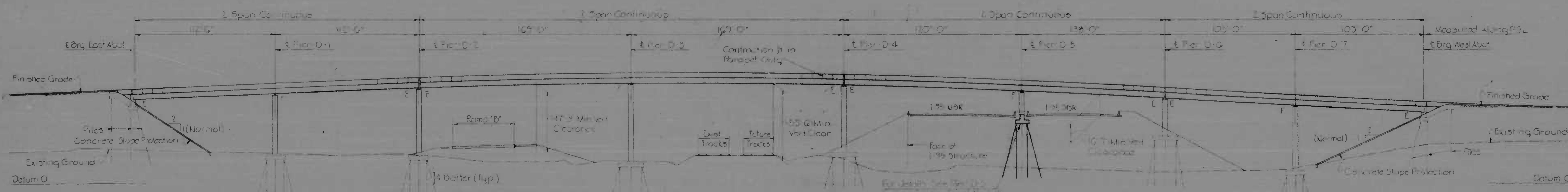
D-2	D-5
℄ Constr. Ramp "D"	℄ Constr. Ramp "D"
Δ = 38°18'45.5"	Δ = 11°55'34"
D = 4°45'00"	D = 1°00'00"
R = 1206.23'	R = 5729.58'
T = 419.02'	T = 598.47'
L = 806.58'	L = 1192.61'
E = 70.71'	E = 31.17'
SE = 0.055'/ft.	SE = 0.020'/ft.

PLAN

1"=40'

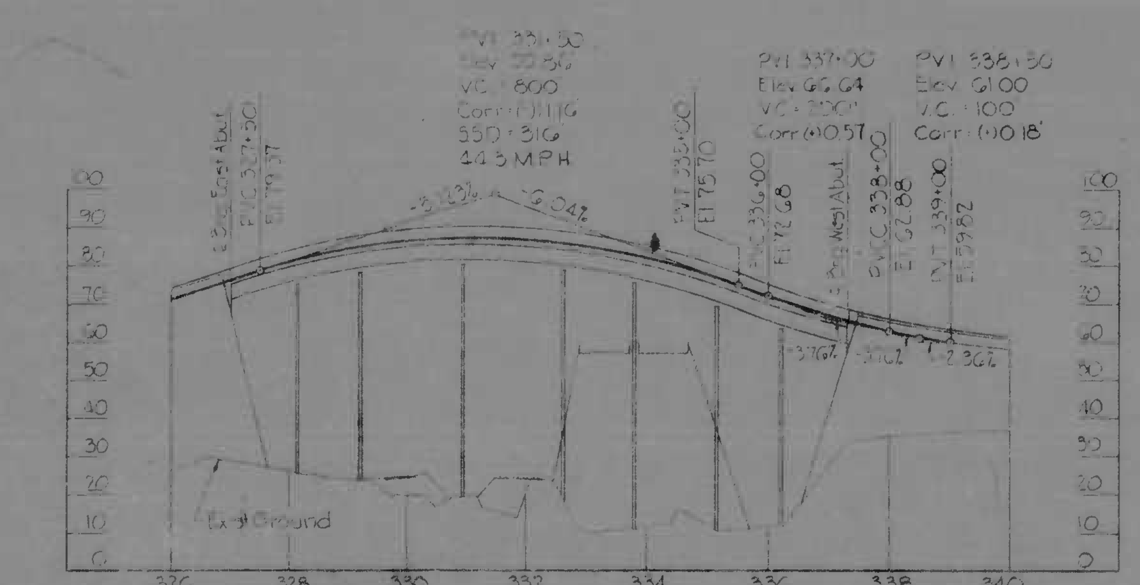
LOCATION PLAN

1"=2000'



ELEVATION

1"=40'



PROFILE RAMP "D"

GENERAL NOTES

1. SPECIFICATIONS: Maryland SRC Specifications and Errata to specifications dated March 1968 and special provisions provisions for materials and construction. AASHO Standard Specifications for Highway Bridges dated 1969 and 1970 interim specifications for design. For reinforced concrete design f'c 1200 psi except that the concrete in bridge deck slabs supported by steel beams has an fc=1050 psi
2. LOADING: HS 20-44 or 2-24,000 lb axles spaced 4' apart whichever governs; with provisions for a future 2" Wearing Surface.
3. CONCRETE: Class "A-1" Concrete shall have a minimum compressive strength of 3,000 psi at 28 Days.
4. CHAMFER: All exposed edges of concrete shall be chamfered 3/4" x 3/4" with milled chamfer strips except where indicated by the following notation on the plans; "Do Not Chamfer".
5. REINFORCING STEEL: Reinforcing steel shall conform to ASTM Designation A 615 Grade 40. All splices shall be lapped a minimum of 24 bar diameters unless otherwise noted. Minimum cover for any bar shall be 2" unless otherwise noted.
6. STRUCTURAL STEEL: Structural steel shall be ASTM designation A 588.
7. FOUNDATION: Recommendations are given on foundation sheet.
8. One coat of pure epoxy coating shall be applied to all pier caps & pedestals, abutment seats, and abutment backwalls.

REFERENCES	SHEET NO.
Pier D-5 Footing Details	[illegible]
Superstructure Sections & Profiles	[illegible]
Substructure Details	[illegible]

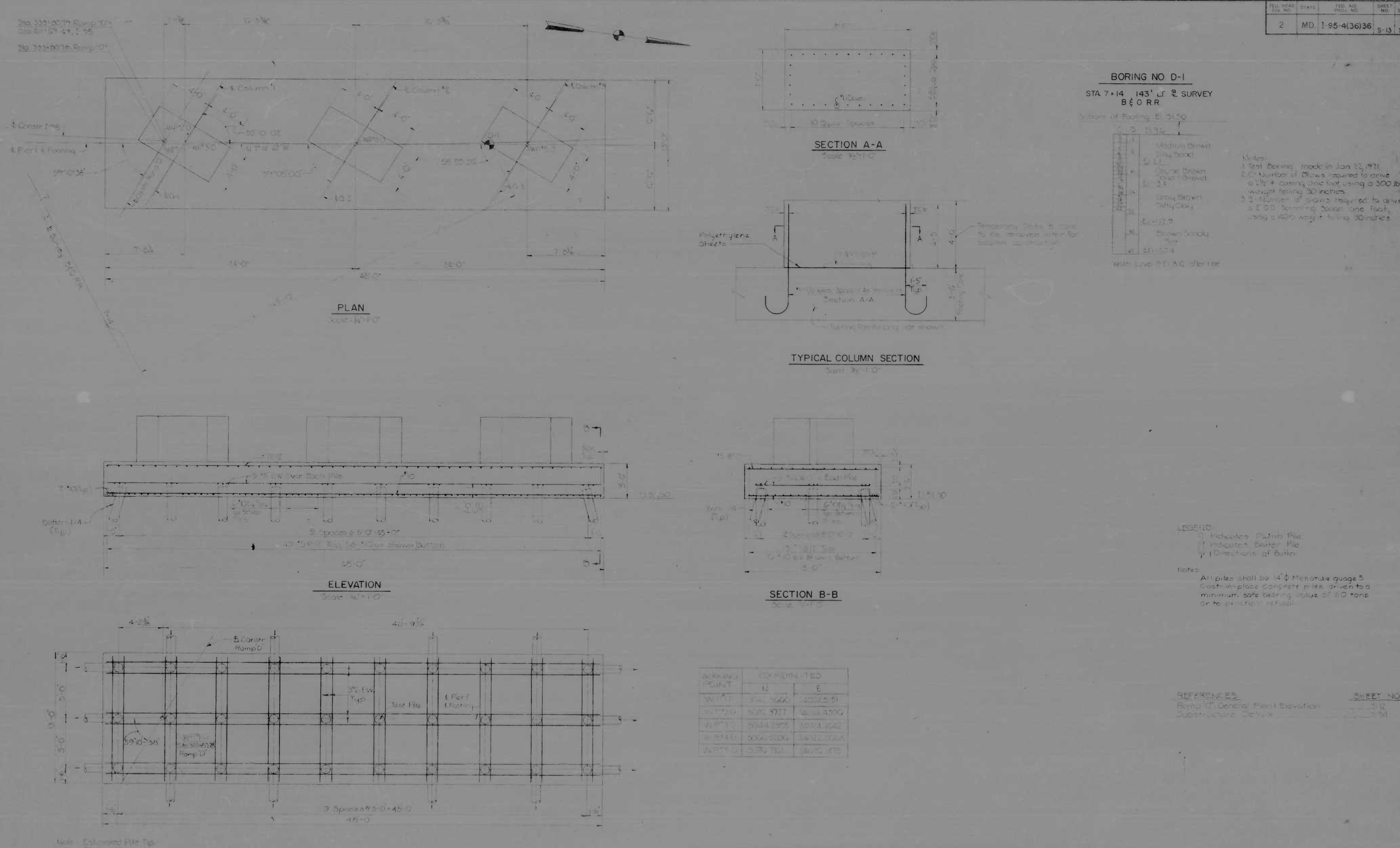
REVISIONS	CONSULTANT	
	KNOERLE, BENDER, STONE & ASSOC., INC. AND MATZ, CHILDS & ASSOC., INC. CONSULTING ENGINEERS 341 N. CALVERT STREET BALTIMORE, MARYLAND 21202	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS & STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY

I-95 WINDLASS MORAVIA INTERCHANGE
RAMP "D" OVER RAMP "B", I-95 AND B & O RR
GENERAL PLAN AND ELEVATION

SCALE: As Shown — DATE: [illegible]

DRAWN BY: J.R.W. — DES. BY: J.J.M.
TRACED BY: J.R.W. — CHK. BY: F.F.M.
F.A.P. NO.: I-95-4(36)36
S.R.C. NO.: BC 246-33-815
BALTO. CITY NO.: 1995
SHEET NO. S-12 (92) OF S-55

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	MD.	I-95-4(36)36	S-13	(92) S-55



Notes:
All piles shall be 14" ⌀ Monotube guage 5 Cast-in-place concrete piles driven to a minimum safe bearing value of 40 tons or to practical refusal.

REVISIONS	CONSULTANT
	KNOERLE, BENDER, STONE & ASSOC., INC. AND MATZ, CHILDS & ASSOC., INC. CONSULTING ENGINEERS 341 N. CALVERT STREET BALTIMORE, MARYLAND 21202

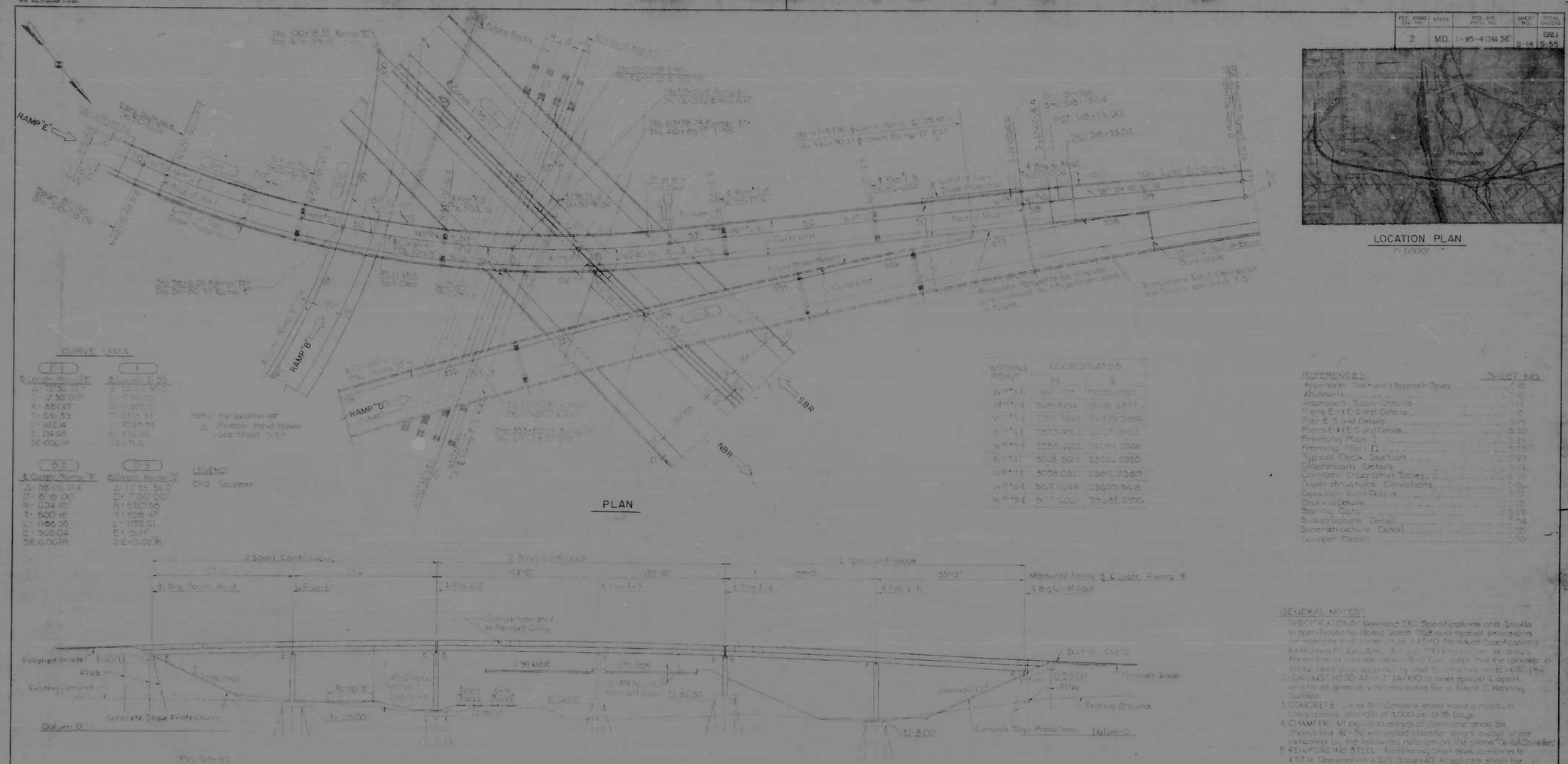
CITY OF BALTIMORE
DEPARTMENT OF PUBLIC WORKS
&
STATE ROADS COMMISSION OF MARYLAND
INTERSTATE DIVISION FOR BALTIMORE CITY

I-95 WINDLASS MORAVIA INTERCHANGE
RAMP "D" OVER RAMP "B", I-95 AND B&O R.R.
PIER D-5 FOOTING DETAILS

SCALE: As Shown
DATE:

DRAWN BY: J.R.W.
TRACED BY: J.R.W.
DES. BY: C.Y.T.
CHK. BY: F.F.M.
F.A.P. NO. I-95-4(36)36
S.R.C. NO. BC 246-33-815
BALTO. CITY NO. 1995
SHEET NO. (92) S-13 OF S-55

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	MD.	I-95-4(36)36	S-14	(92) S-55



PLAN

LOCATION PLAN

CURVE DATA

E-1	T
Δ=105°00'00"	Δ=104°59'30"
D=12°30'00"	D=11°27'33"
R=458.37'	R=500.00'
T=631.53'	T=654.34'
L=1122.16'	L=1098.55'
L=214.56'	R=572.96'
SE=0.06'/ft	SE=0.06'/ft

E-2	E-3
Δ=38°05'04"	Δ=11°39'54.0"
D=6°15'00"	D=1°00'00"
R=924.45'	R=5729.58'
T=500.14'	T=606.47'
L=1166.55'	L=1192.61'
E=363.04'	E=314.17'
SE=0.03'/ft	SE=0.02'/ft

Insert for location of J. Phillips Hand Rail (see Sheet S-13)

LEGEND
SHS Sculpner

WORKING POINT	COORDINATES N	E
WP "E"	560,000.0000	1,000,000.0000
WP "E"	559,911.4154	999,978.0473
WP "E"	559,705.7165	999,929.2884
WP "E"	559,707.9021	999,917.9122
WP "E"	559,662.2023	999,904.0966
WP "E"	559,658.6611	999,886.8950
WP "E"	559,658.0837	999,883.9389
WP "E"	559,657.7045	999,882.9446
WP "E"	559,657.6001	999,882.8950

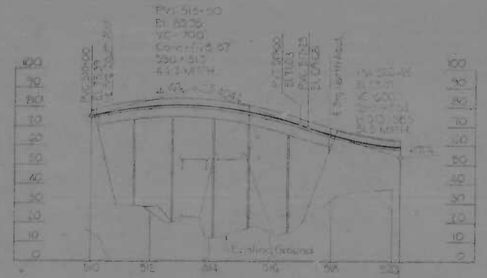
REFERENCES	SHEET NO.
Approach Cantilever Approach Span	S-10
Abutments	S-11
Approach Span Details	S-12
Piers E-1 & E-2 and Details	S-13
Piers E-3 and Details	S-14
Piers E-4 & E-5 and Details	S-15
Framing Plan I	S-16
Framing Plan II	S-17
Typical Deck Section	S-18
Dimension Details	S-19
Corridor Diagram & Tables	S-20
Superstructure Elevations	S-21
Expansion Joint Details	S-22
Drainage Details	S-23
Boring Data	S-24
Substructure Details	S-25
Superstructure Details	S-26
Coupler Details	S-27

GENERAL NOTES

SPECIFICATIONS: Maryland SRC Specifications and Errata to specifications dated March 1968 and special provisions for materials and design shall conform to AASHO Standard Specifications for Highway Bridges, dated 1969 and 1970 Interim Specifications. For design of structures see design & type, size & location of piles (Est. 40 Ton).

1. LOADING: H S 20-44 + 1 1/2 (MS 18 + 1 1/2) (MOD) unless specified & apart, which are of general use with provisions for a future 4 inch wearing surface.
2. CONCRETE: Class "A" Concrete shall have a minimum compressive strength of 3,000 psi at 28 Days.
3. CHAMFER: All exposed corners of concrete shall be chamfered 3/4" x 3/4" unless otherwise shown or noted on the plans (Typical).
4. REINFORCING STEEL: Reinforcing steel shall conform to ASTM Designation A 615 Grade 40. All splices shall be lapped a minimum of 24 Bar Diameters unless otherwise noted. Minimum cover for any bar shall be 2" unless otherwise noted.
5. STRUCTURAL STEEL: Structural Steel shall be ASTM Designation A 588.
6. FOUNDATION: Recommendations are based on investigation by consultants.
7. One Foot of plant growth, loose rock, fallen trees or other deleterious material shall be removed from the Right-of-Way, and disposed of as directed by the Engineer.

ELEVATION

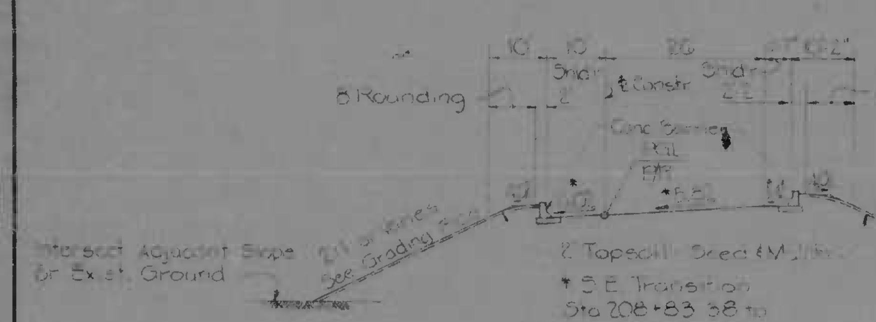


PROFILE RAMP-"E"

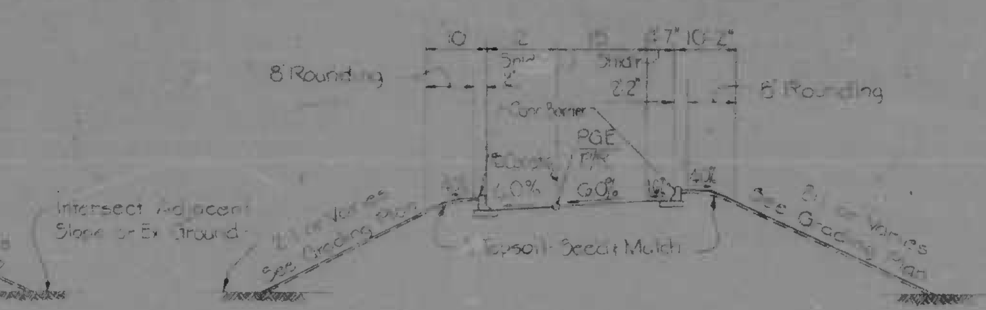
REVISIONS	CONSULTANT	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS &	STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY
	KINGERE, BERGER, STONE & ASSOC., INC. AND MATZ, CHILDS & ASSOC., INC. CONSULTING ENGINEERS 341 N. CALVERT STREET BALTIMORE, MARYLAND 21202	I-95 WINDLASS MORAVIA INTERCHANGE RAMP "E" OVER RAMP "B", I-95 AND B&O R.R. GENERAL PLAN AND ELEVATION	DRAWN BY J. R. W. DES. BY J. J. M. TRACED BY J. R. W. CHK. BY F. F. M. F.A.P. NO. I-95-4(36)36 S.R.C. NO. BC 246-33-815 BALTO. CITY NO. 1995 SCALE As Shown DATE SHEET NO. (92) S-14 of S-55

K-E BALTIMORE 170153

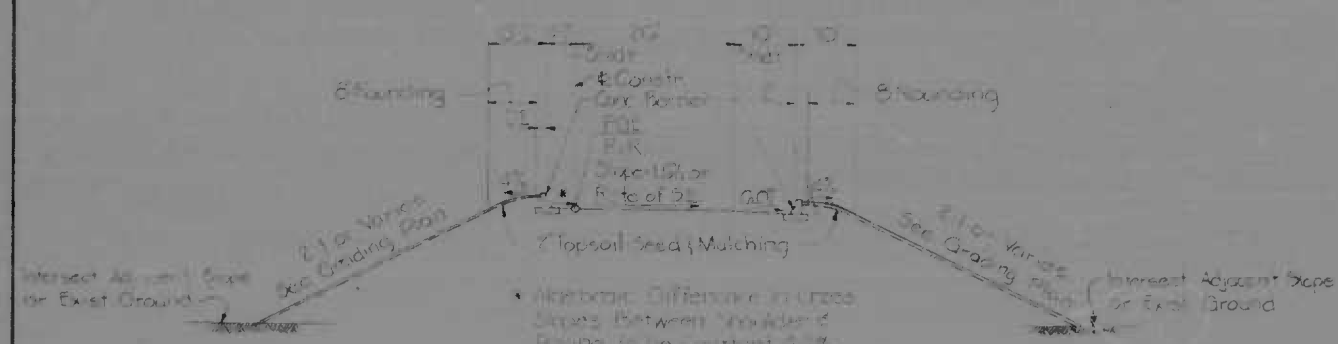
FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	MD.	I-95-4(36)36	S-15	(92) S-55



APPROACH SECTION-RAMP "C"
STA 212+53.38 TO STA 224+73.95

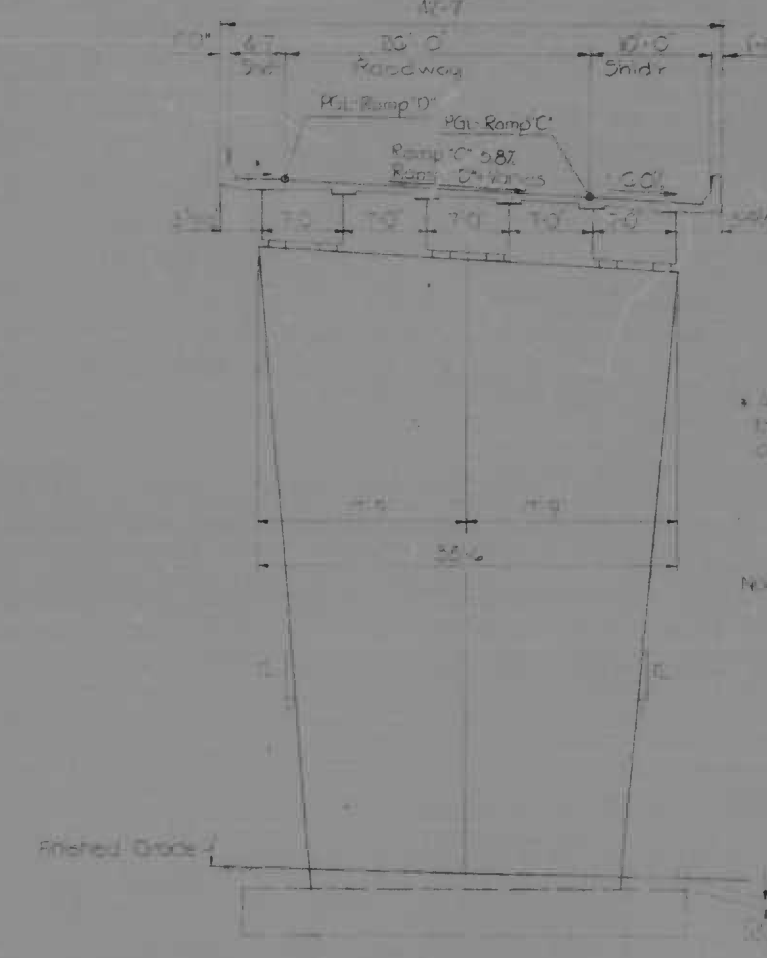


APPROACH SECTION-RAMP "E"

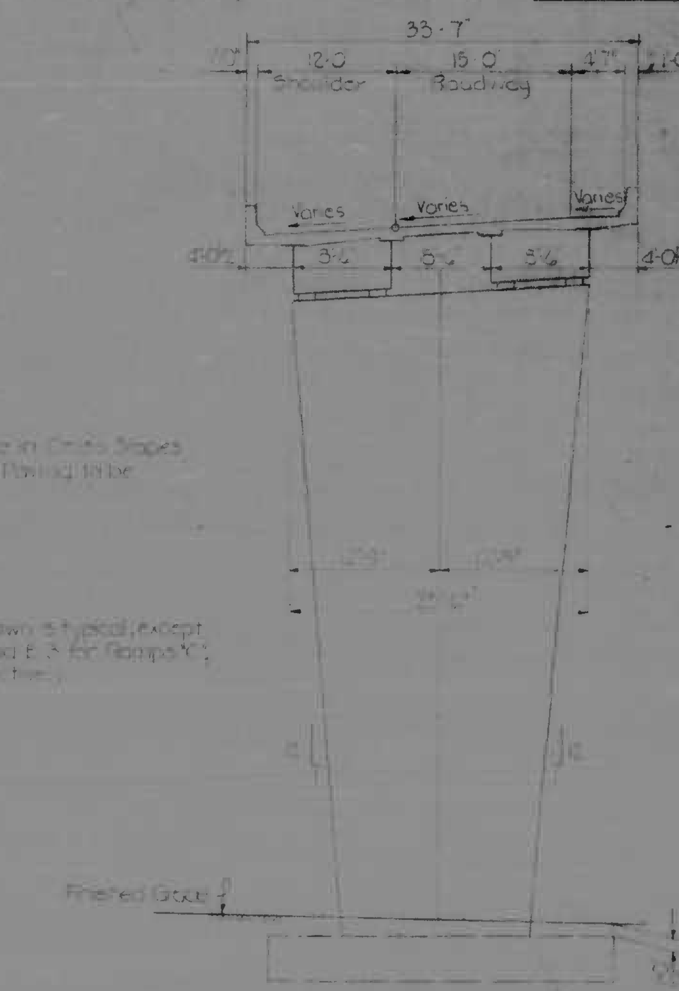


APPROACH SECTION-RAMP "D"
STA. 315+84.67 AHEAD

PROFILE - RAMP "F"

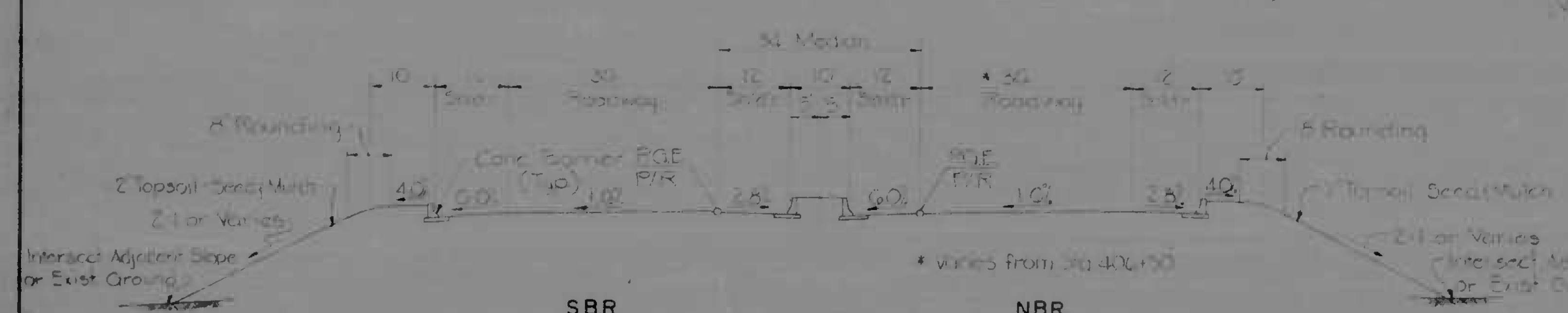


RAMPS "C" & "D"

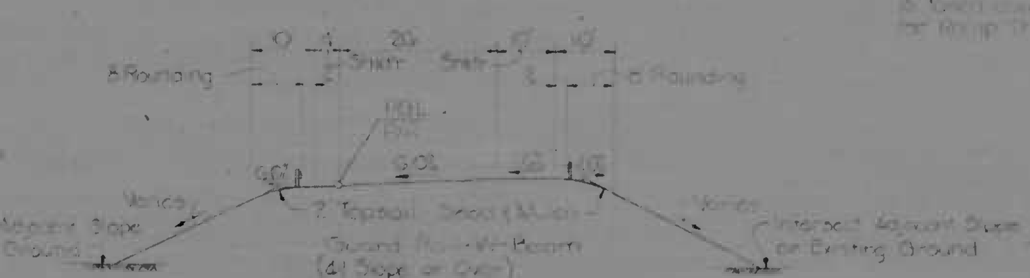


RAMP "E"

TRANSVERSE SECTIONS
1"=10'

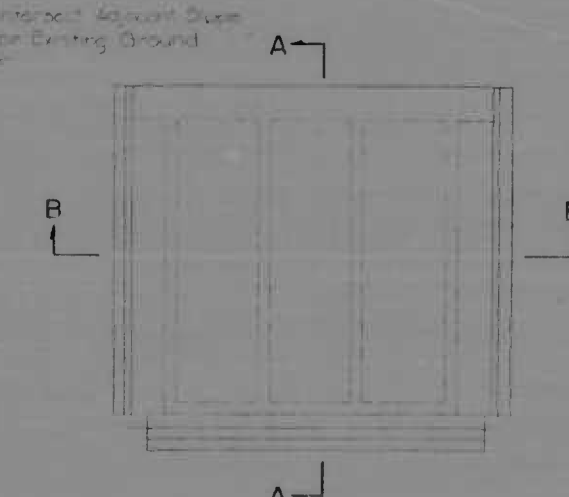


APPROACH SECTION - INTERSTATE ROUTE 95

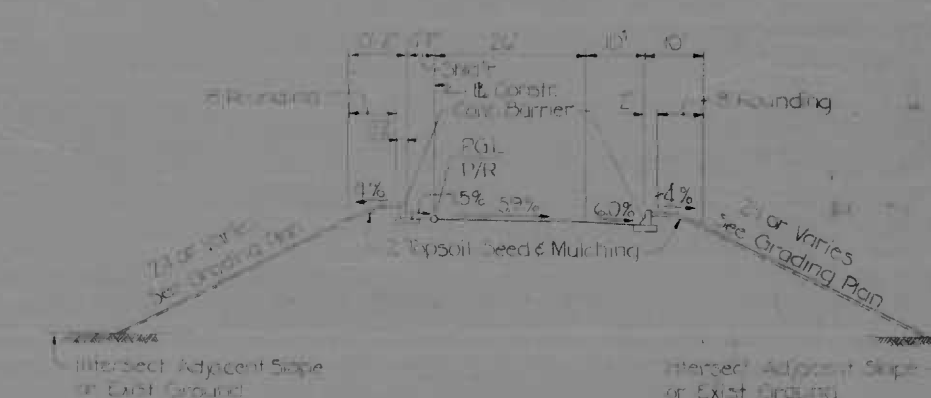


APPROACH SECTION RAMP "B"
STA 94+66.61 TO STA 105+39.75

NOTE	SECTIONS, DETAILS, PROFILES AND ETC SHOWN ON THIS SHEET APPLY TO I-95 OVER B&O RR AND RAMP "E" PRIMARILY. THEY MAY BE USED FOR GENERAL GUIDANCE ONLY ON RAMPS "C" AND "D". THE ONLY ITEMS INCLUDED IN THIS CONTRACT FOR RAMPS "C" AND "D" ARE PILE FOUNDATIONS, PILE CAPS AND CLASS "B" CONCRETE FOR PIERS "C-4" AND "D-5". ALSO SEE NOTE B ON SHEETS NO. 1 AND NO 2

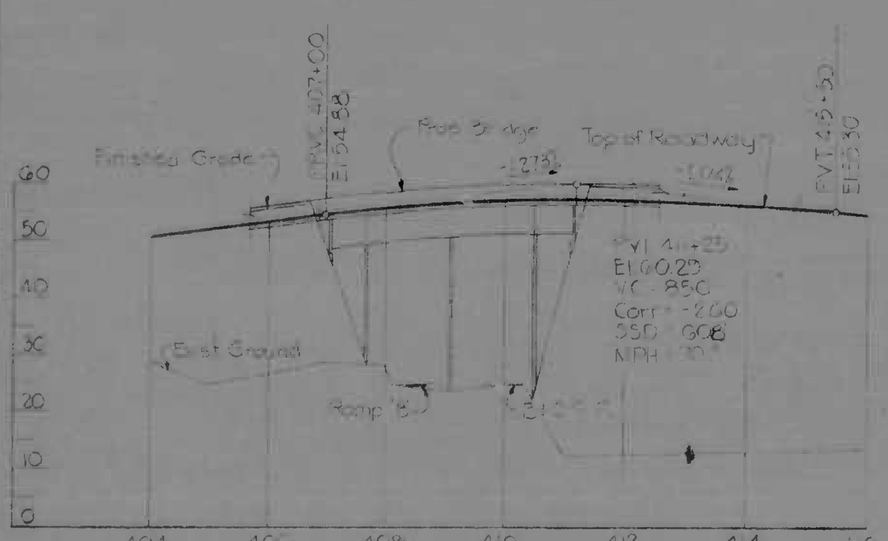


PLAN

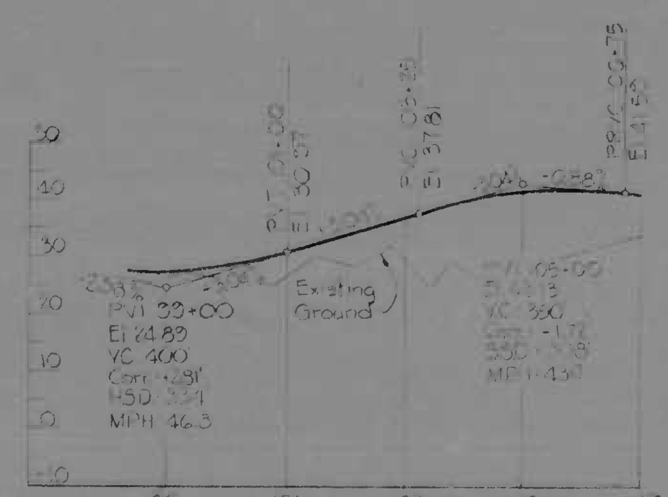


APPROACH SECTION - RAMP "F"
STA. 614+42.82 TO STA. 620+73.39

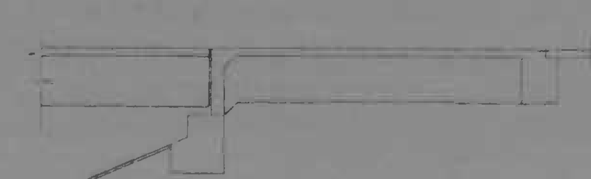
Note: Approach Span shown applies to Ramp "E", I-95 Over B&O R.R. similar



PROFILE INTERSTATE ROUTE 95
Hor 1"=200'



PROFILE RAMP "B"
Hor 1"=200
Vert 1"=20'



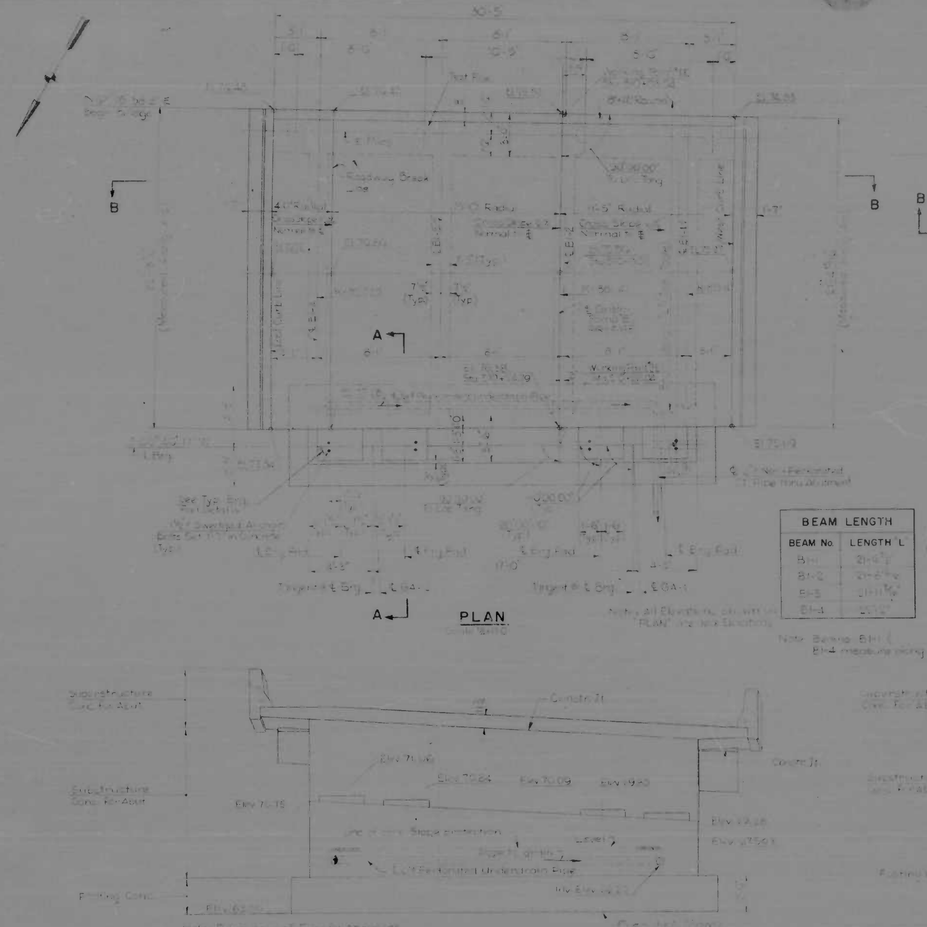
SECTION A-A

SECTION B-B

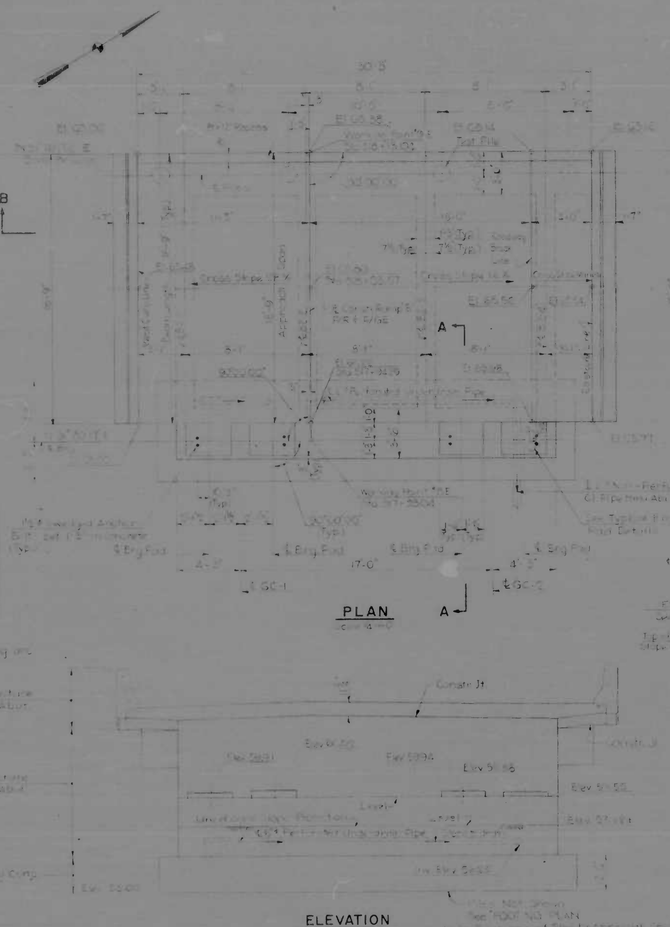
TYPICAL APPROACH SPAN

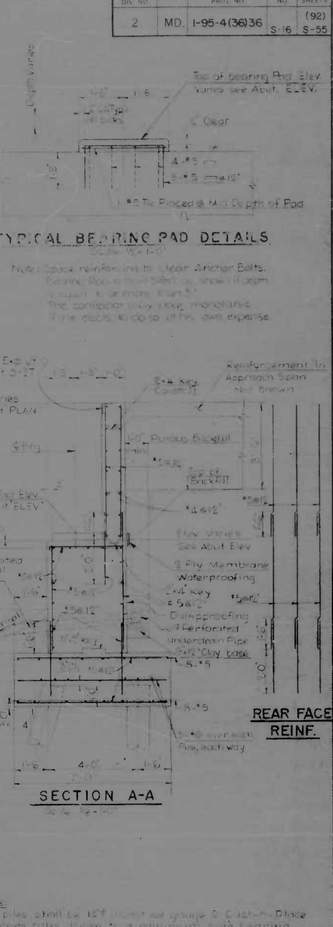
REVISIONS	CONSULTANT		
	KNOERLE, BENDER, STONE & ASSOC., INC. AND KATZ, CHILDS & ASSOC., INC. CONSULTING ENGINEERS 341 N. CALVERT STREET BALTIMORE, MARYLAND 21202	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS &	STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY
		I-95 WINDLASS MORAVIA INTERCHANGE APPROACH SECTIONS & PROFILES TRANSVERSE SECTIONS & APPROACH SPAN	DRAWN BY M.S.F. DES. BY J.J.M. TRACED BY M.S.F. CHK. BY F.F.M.
		SCALE: As Shown DATE	F.A.P. NO. I 95-4(36)36 S.R.C. NO. BC 246-33-815 BALTO. CITY NO. 1995 — SHEET NO. (92) S-15 OF S-55

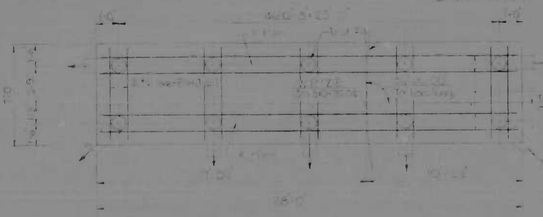
STD. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET No.	TOTAL SHEETS
2	MD.	I-95-4(36)36	S-16	(92) S-55

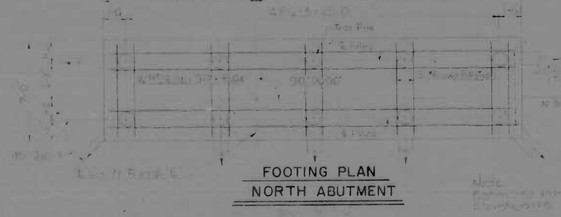


BEAM LENGTH	
BEAM No.	LENGTH 'L'
B-1	31'-0"
B-2	29'-6"
B-3	28'-0"
B-4	26'-6"







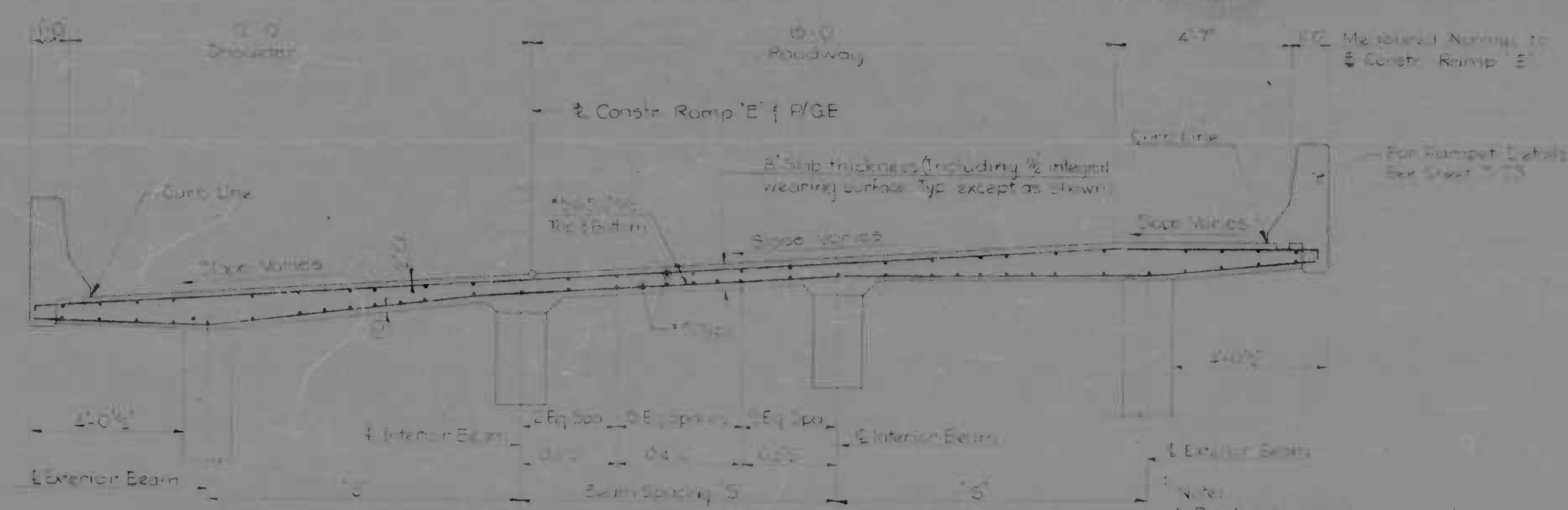


Note:
All piles shall be 12" square pre-cast Cast-In-Place concrete piles driven to a minimum bore bearing value of 80 tons or to practical refusal.

REFERENCES	SHEET NO.
General Plan & Elevation	S-1
Expansion Joint Detail	S-7
Approach Span Details	S-8
Superstructure Details	S-9
Section B-B	S-10
Concrete Pile Details	S-14

REVISIONS	CONSULTANT	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS & STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY	
	KNOERLE, BENDER, STONE & ASSOC., INC. AND MATZ, CHILDS & ASSOC., INC. CONSULTING ENGINEERS 141 N. CALVERT STREET BALTIMORE, MARYLAND 21202	I-95 WINDLASS MORAVIA INTERCHANGE RAMP "E" OVER RAMP "B", I-95 AND B & O R.R. ABUTMENTS	DRAWN BY M.S.F. DES. BY J.R. & W.J.W. TRACED BY M.S.F. CHK. BY F.P.M.
		SCALE As shown DATE	F.A.P. NO. I-95-4(36)36 S.R.C. NO. BC 246-33-815 BALTO. CITY NO. 1995 SHEET NO. (92) S-16 OF S-55

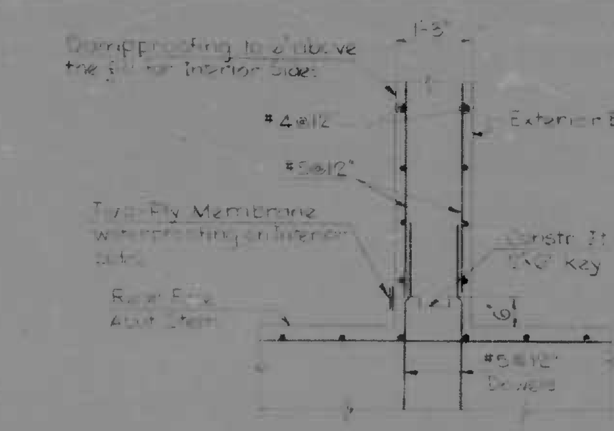
FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	MD.	I-95-4(36)36	S-17	(92) S-55



SECTION B-B

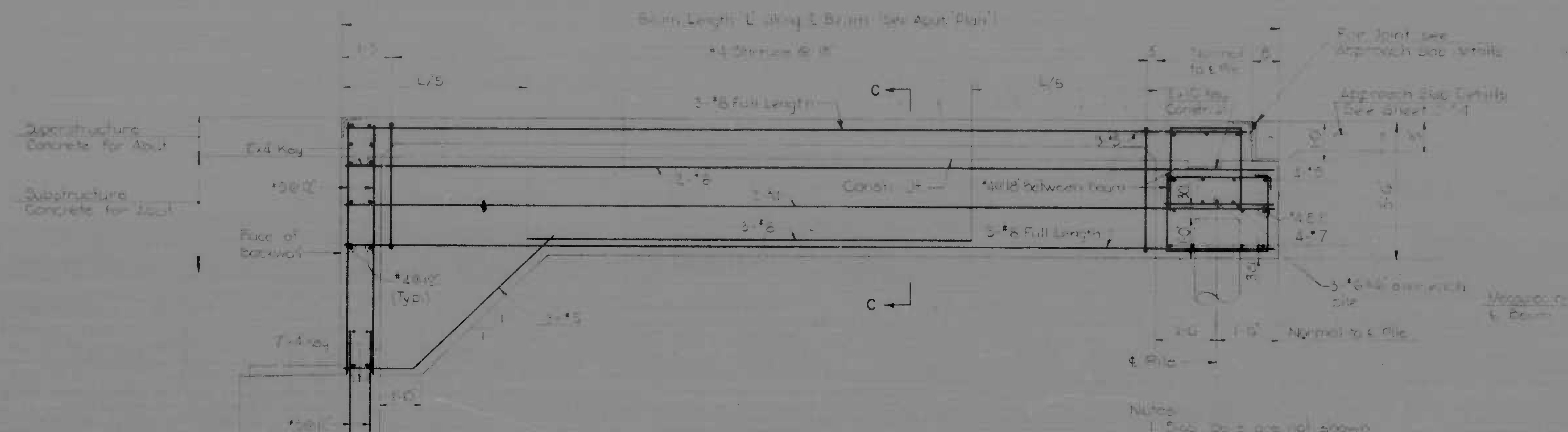
Scale: ⅛"=1'-0"

Notes:
1. Reinforcing steel in parapet & beams not shown.
2. For Beam Spacing "S" see Abut. PLAN.



SECTION E-E

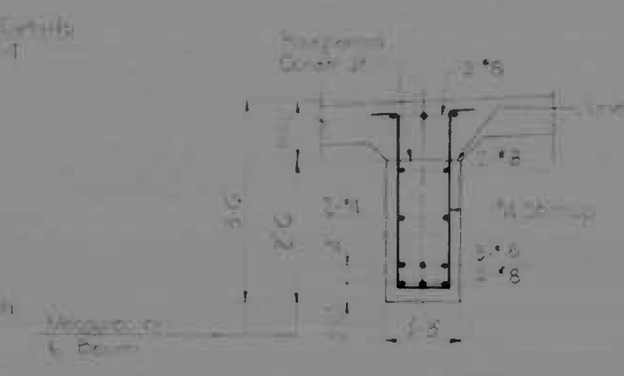
Scale: ½"=1'-0"



TYPICAL ELEVATION OF INTERIOR BEAM

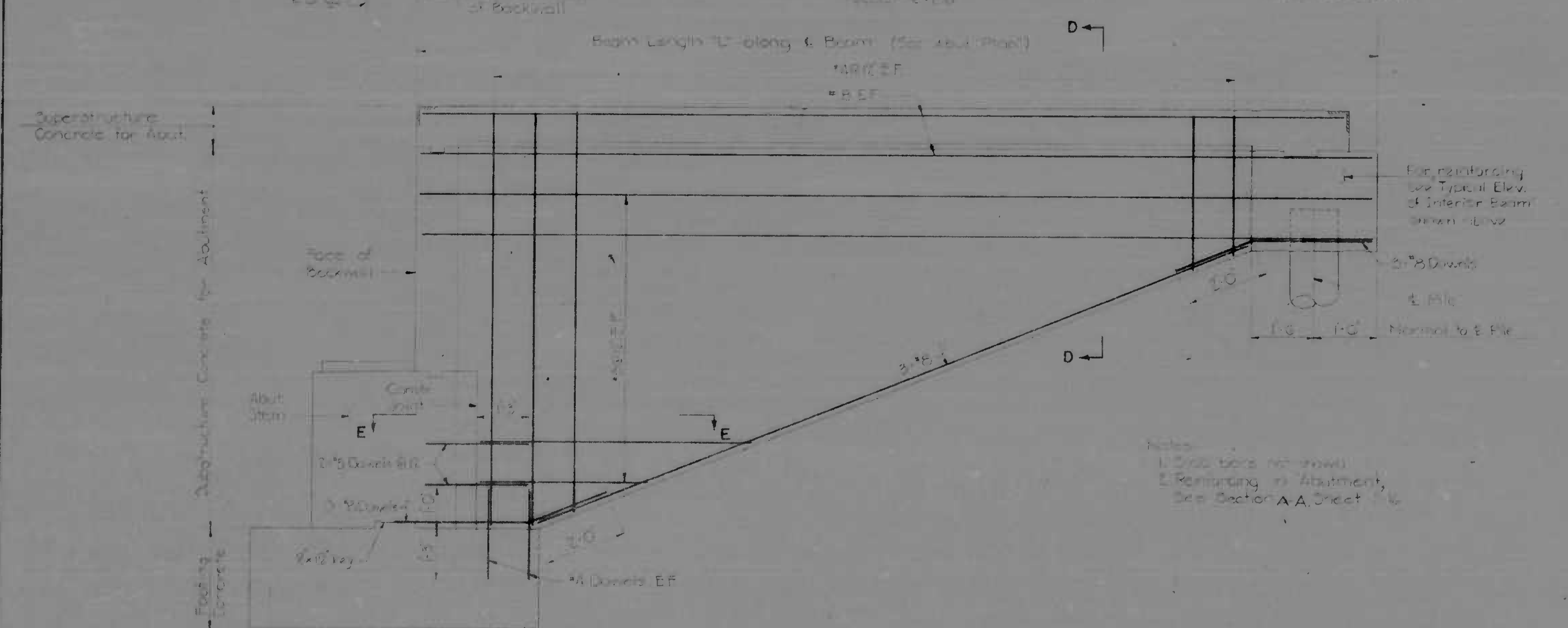
Scale: ⅜"=1'-0"

Notes:
1. Slab bars are not shown.
2. All horizontal dimensions are shown along ℄ Beam, except as shown.



SECTION C-C

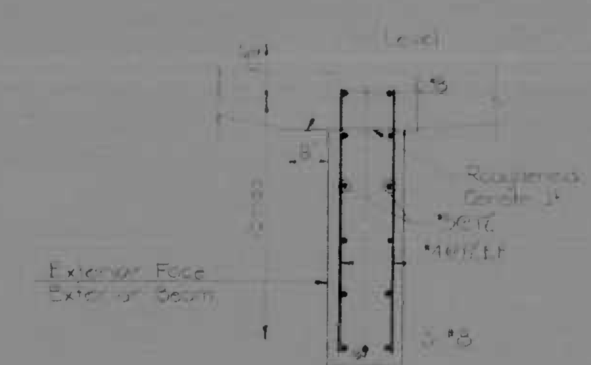
Scale: ½"=1'-0"



Notes:
1. Slab bars not shown.
2. Reinforcing in Abutment, See Section A-A Sheet S-16

TYPICAL ELEVATION OF EXTERIOR BEAM

Scale: ½"=1'-0"



SECTION D-D

Scale: ½"=1'-0"

Notes:
1. All piles shall be 12" min. tube gauge 5 Cast-in-Place Concrete piles driven to a minimum safe bearing value of 30 Tons or to practical refusal.
2. Place transverse slab bar normal to Base Line Ramp "E" and longitudinal slab bars as shown.

REFERENCES	SHEET No.
Abutment	S-16
Substructure Details	S-54

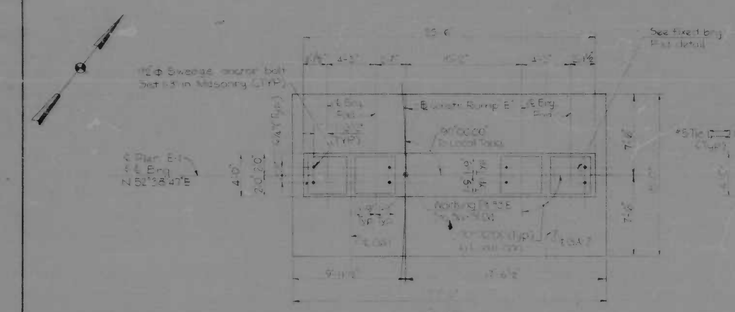
REVISIONS	CONSULTANT	
	KNOERLE, BENDER, STONE & ASSOC., INC. AND MATZ, CHILDS & ASSOC., INC. CONSULTING ENGINEERS 343 N. CALVERT STREET BALTIMORE MARYLAND 21202	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS & STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY

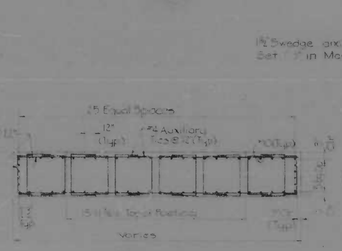
I-95 WINDLASS MORAVIA INTERCHANGE
RAMP "E" OVER RAMP "B", I-95 AND B&ORR.
APPROACH SPAN DETAILS

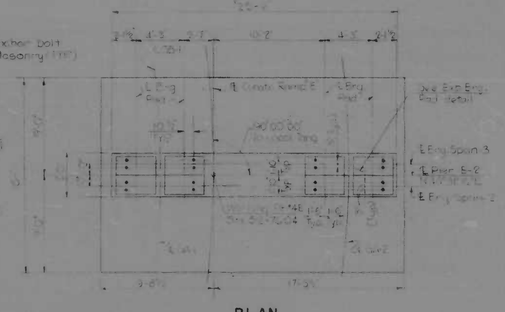
SCALE: As Shown DATE

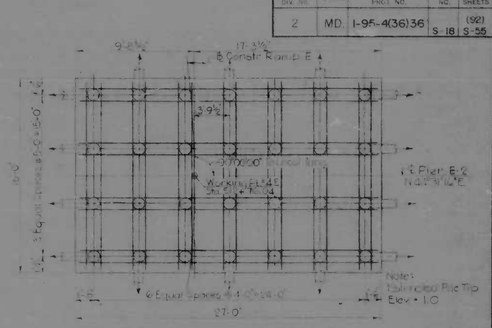
DRAWN BY M.S.F. DES. BY J.R.
TRACED BY M.S.F. CHK. BY F.F.M.
F.A.P. NO. I-95-4(36)36
S.R.C. NO. BC 246-33-815
BALTO. CITY NO. 1995
SHEET NO. (92) S-17 OF S-55

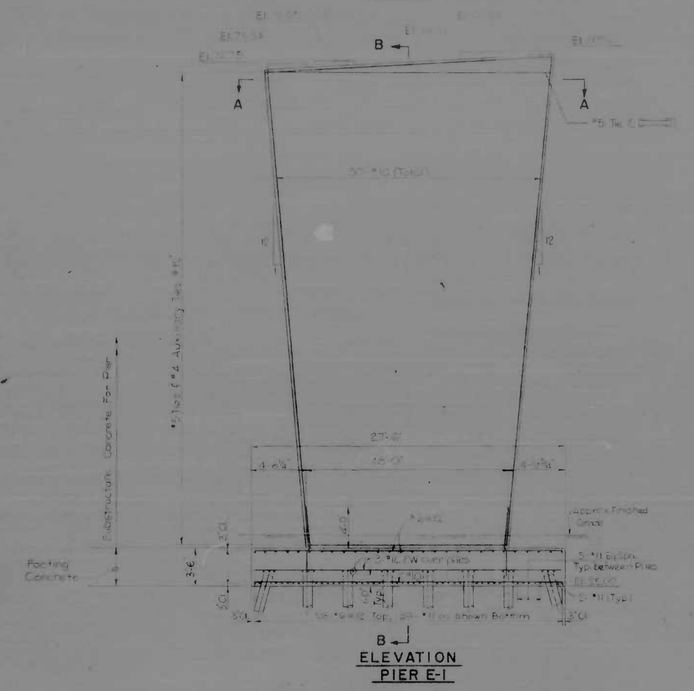
FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	MD.	I-95-4(36)36	S-18	(92) S-55

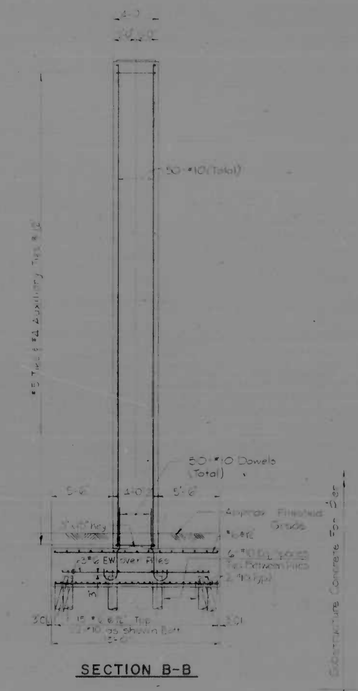


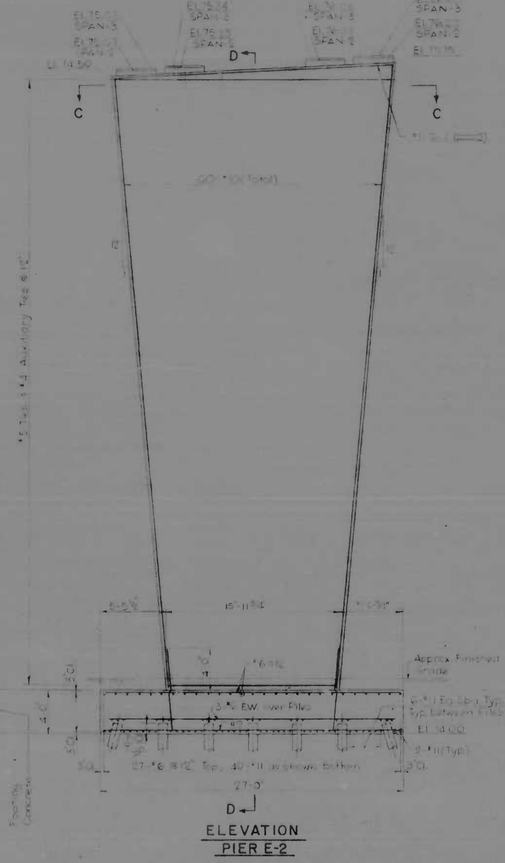


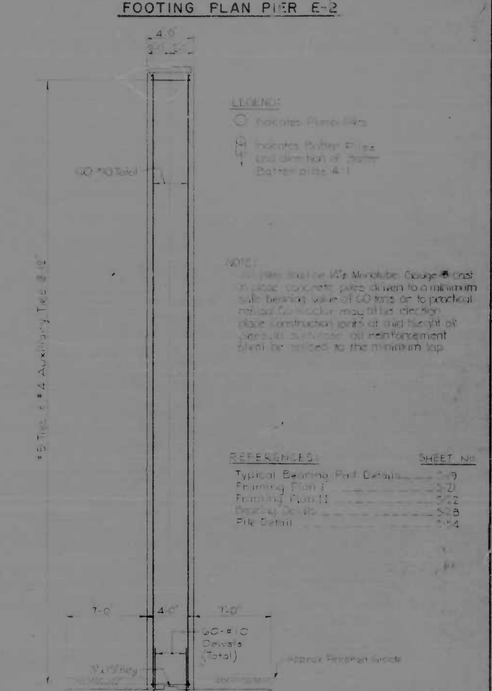


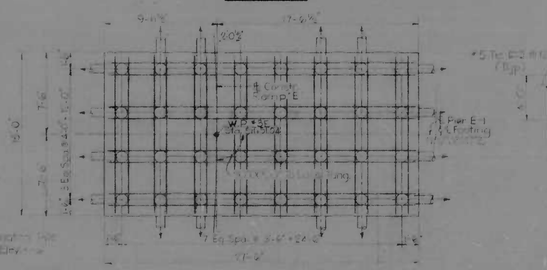


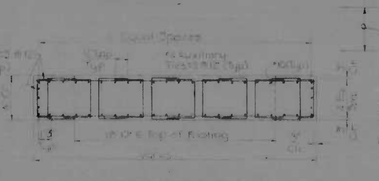






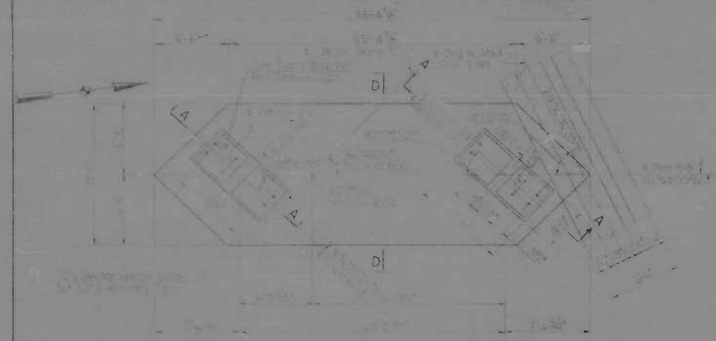




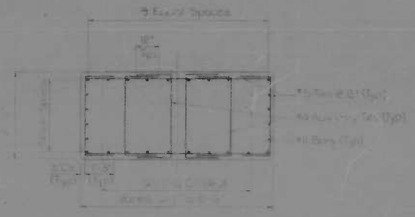


REVISIONS	CONSULTANT	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS & STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY	
	KNOERLE, BENDER, STONE & ASSOC., INC. AND HATZ, CHILDS & ASSOC., INC. CONSULTING ENGINEERS 341 N. CALVERT STREET BALTIMORE, MARYLAND 21202	I-95 WINDLASS MORAVIA INTERCHANGE RAMP "E" OVER RAMP "B" I-95, AND B&O R.R. PIERS E-1 & E-2 AND DETAILS	DRAWN BY R.V.P. DES. BY CYT & KSJ TRACED BY R.V.P. CHK. BY F.F.M.
		SCALE 3/16"=1'-0" DATE	F.A.P. NO. I-95-4(36)36 SHEET NO. (92) S-18 OF S-55 SRC NO. BC 246-33-815 BALTO. CITY NO. 1995

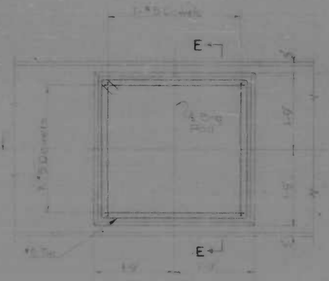
FED. ROAD SEQ. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	MD.	I-95-4(36)136	(92)	
			5-19	5-55



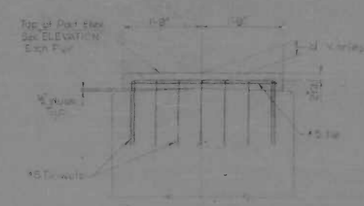
PLAN



SECTION B-B

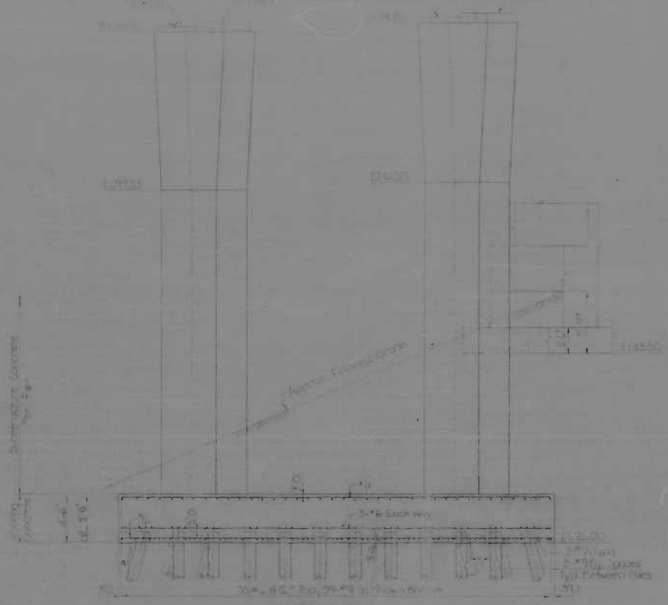


PLAN

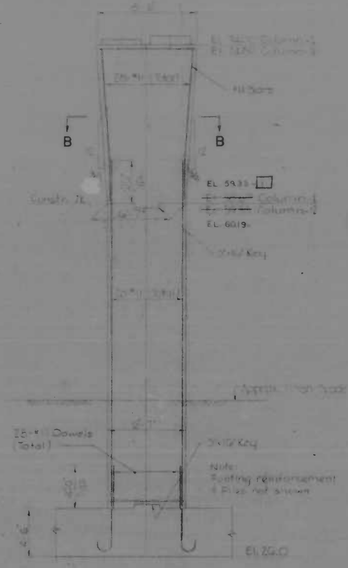


SECTION E-E

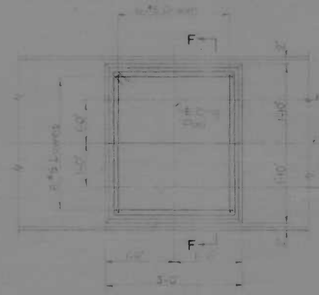
FIXED



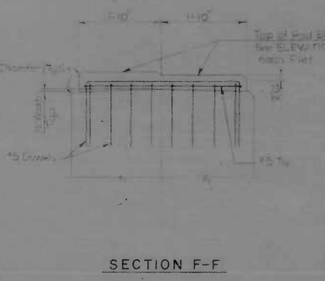
ELEVATION



SECTION A-A



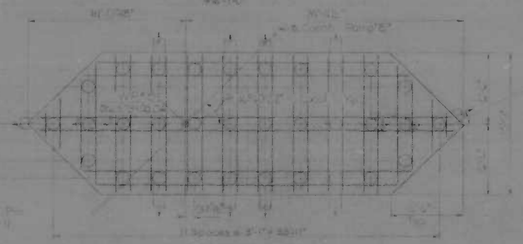
PLAN



SECTION F-F

EXPANSION

BEARING PAD DETAILS

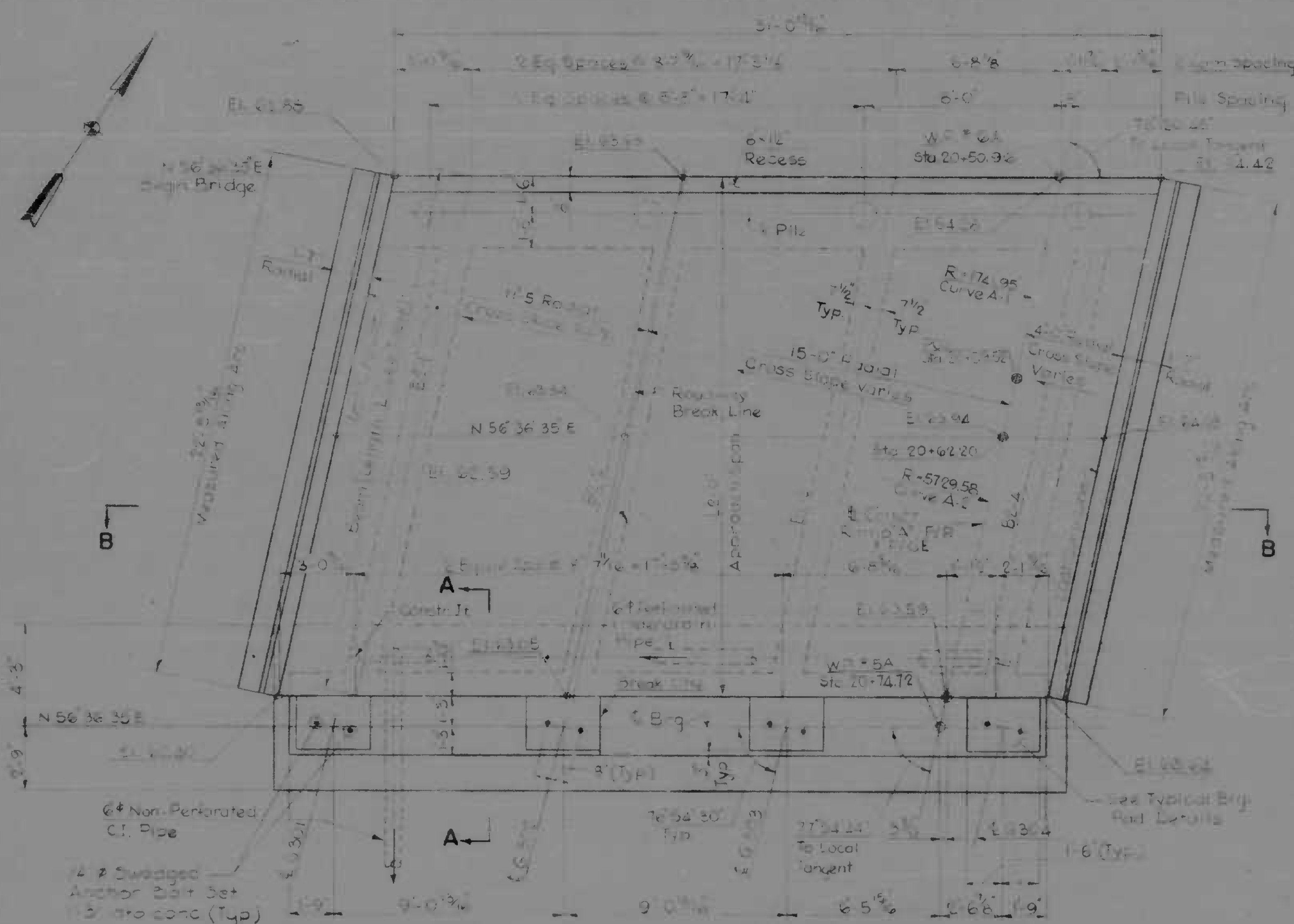


FOOTING PLAN

SECTION D-D

REVISIONS	CONSULTANT	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS	&	STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY
D - REVISED EL. 2-1-72	KNOWLES, BERGER, STONE & ASSOC., INC. AND MATZ, CHILDS & ASSOC., INC. CONSULTING ENGINEERS 341 N. CALVERT STREET BALTIMORE, MARYLAND 21202	I-95 WINDLASS MORAVIA INTERCHANGE RAMP E OVER RAMP B, I-95 AND B&ORR PIER E-3 & DETAILS		DRAWN BY R.V.P. DES. BY A.E. TRACED BY R.V.P. CHK. BY F.F.M.
		SCALE As Shown DATE		I.M.P. NO. I-95 4(36)136 S.R.C. NO. BC 246-33-015 BALTO. CITY NO. 0395 SHEET NO. (92) 5-19 5-55

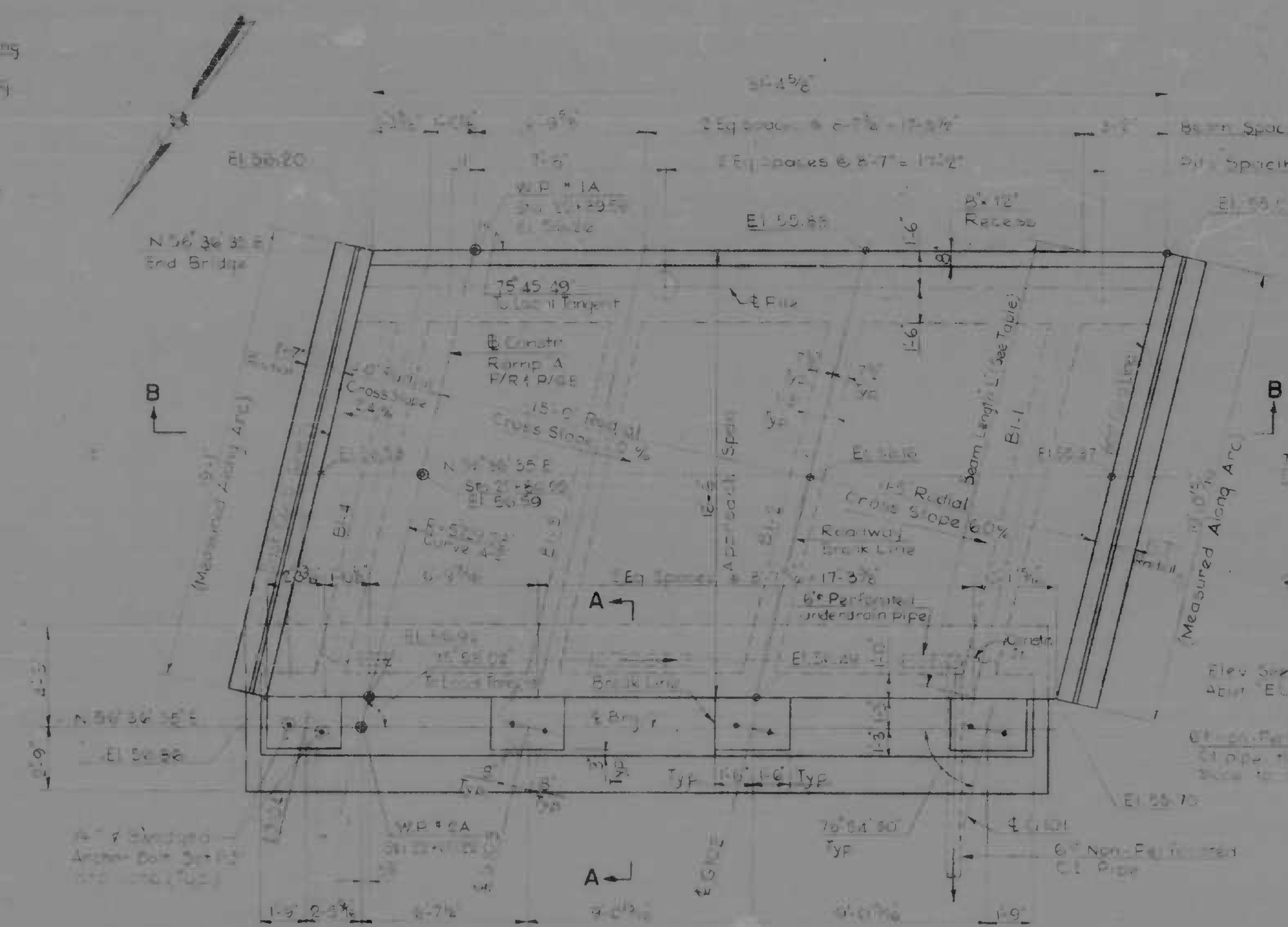
FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	MD.	I-95-4(36)36	S-2	(92) S-55



PLAN

1/2" = 1'-0"

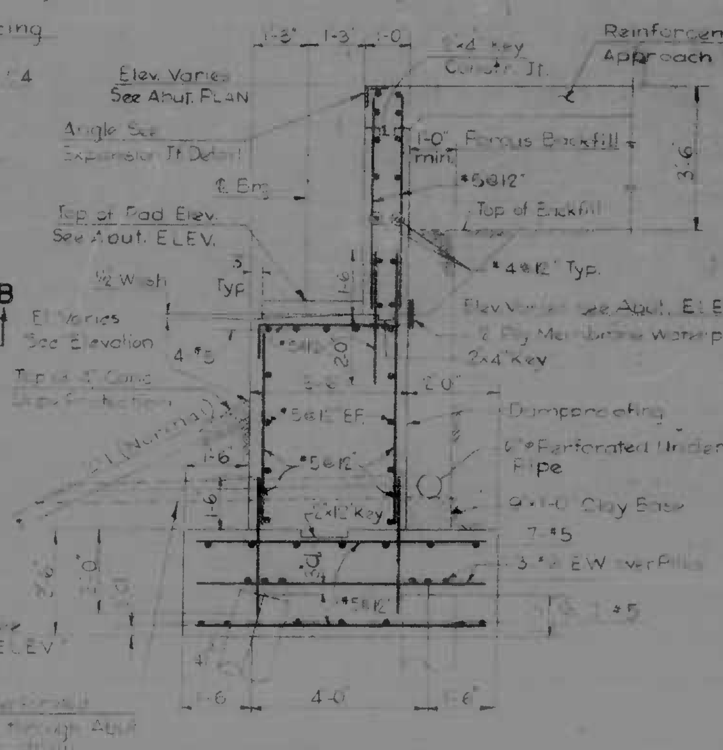
Notes: All elevations shown on "PLAN" are deck elevations. For Section B-B See Sheet S-3



PLAN

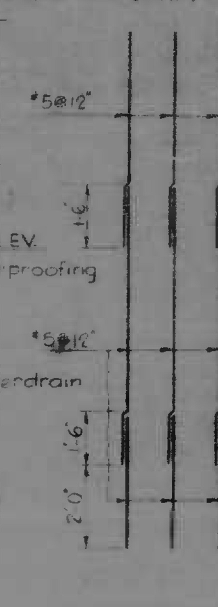
1/2" = 1'-0"

Notes: All elevations shown on "PLAN" are deck elevations. For Section B-B, see Sheet S-3



SECTION A-A

3/8" = 1'-0"

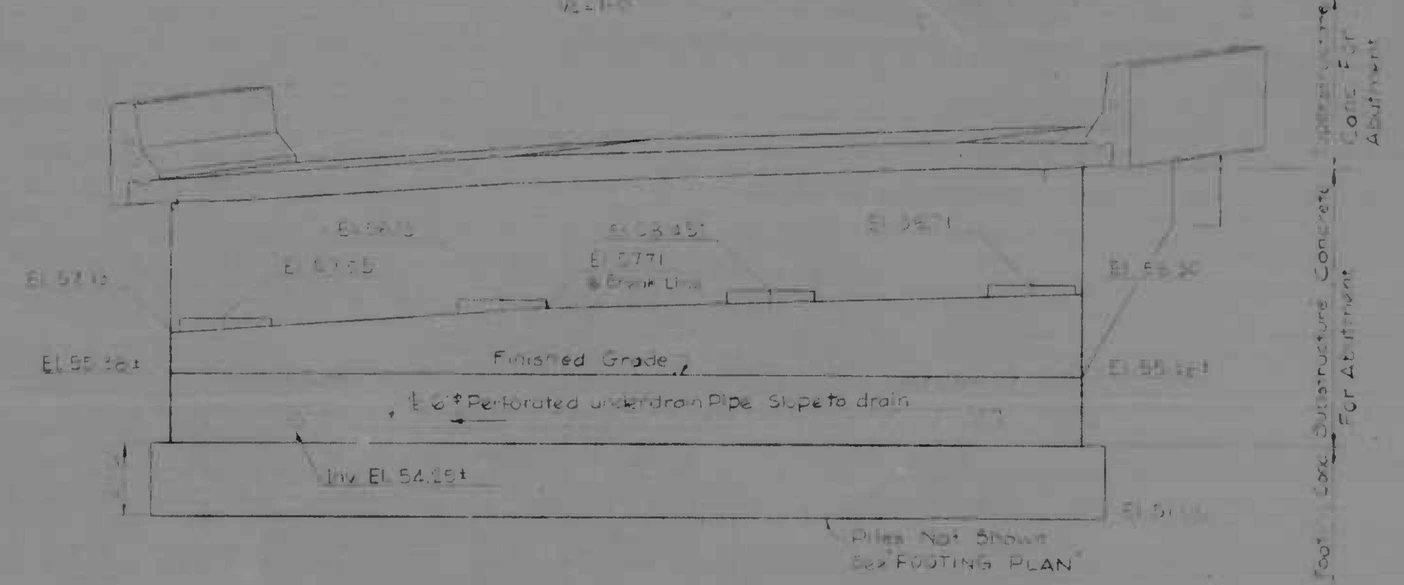


REAR FACE REINF.

BEAM No.	LENGTH L
B1-1	19'-1"
B1-2	19'-1"
B1-3	19'-0 15/16"
B1-4	19'-0 15/16"
B2-1	22'-5 7/8"
B2-2	22'-5 7/8"
B2-3	22'-5 3/4"
B2-4	22'-5 3/4"

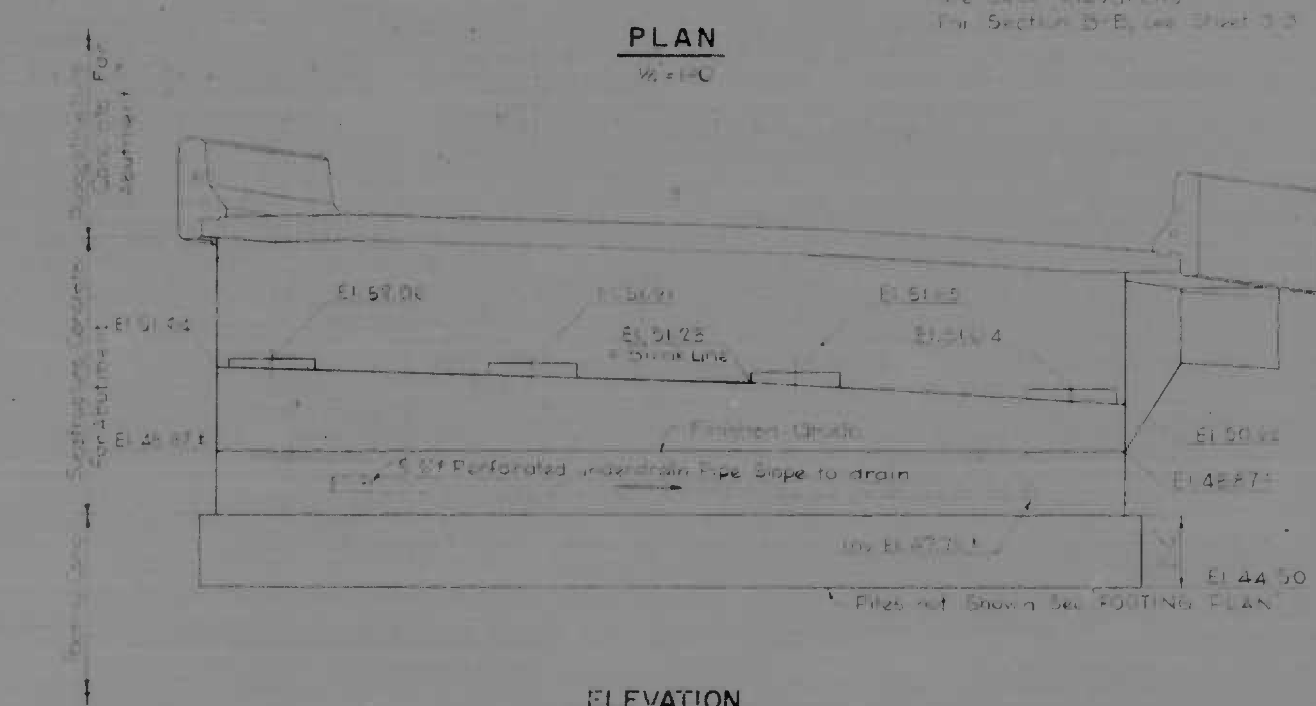
Table title: **BEAM LENGTHS**

Note:
All Piles shall be 16" Monotube Gauge 5 ... driven to a minimum safe bearing value of 60 tons ...



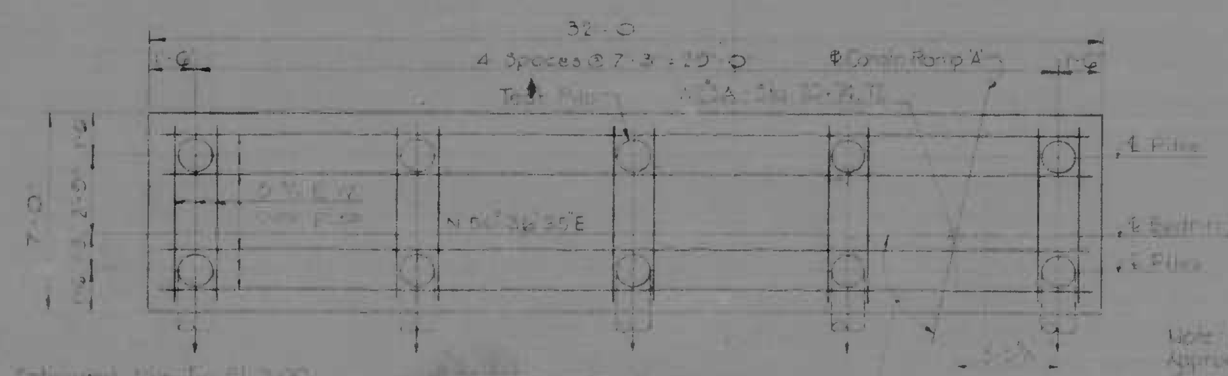
ELEVATION

1/2" = 1'-0"



ELEVATION

1/2" = 1'-0"

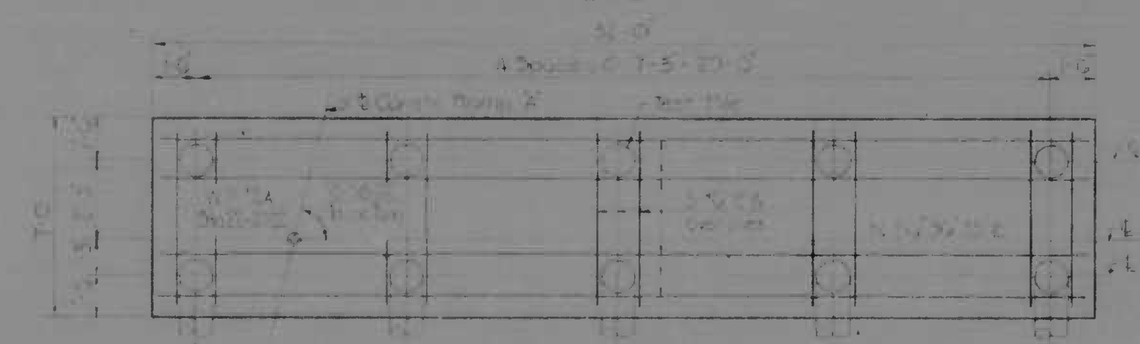


FOOTING PLAN

NORTH ABUTMENT

Note: Rear row of Piles for Approach Span not shown. See "Plan" Above

LEGEND
Indicates Plumb Piles
Indicates Batter Piles and direction of batter



FOOTING PLAN

SOUTH ABUTMENT

REFERENCE — SHEET No.
- General Plan & Elevation — S-1
- Typical Bearing Pad Details — S-3
- Approach Span Details — S-3
- Expansion Joint Details — S-8
- Substructure Details — S-54
- Superstructure Details — S-55
- Section B-B — S-3

REVISIONS	CONSULTANT
	KNOERLE, BENDER, STONE & ASSOC., INC. AND GATZ, CHILDS & ASSOC., INC. CONSULTING ENGINEERS 341 N. CALVERT STREET BALTIMORE, MARYLAND 21202

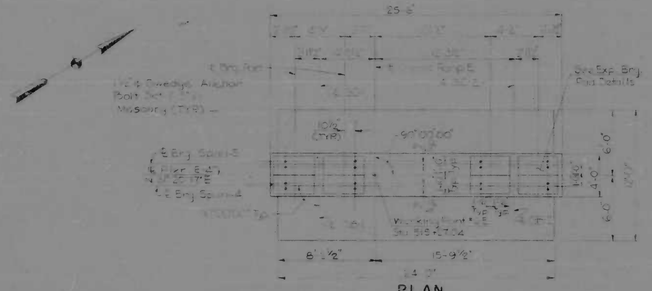
CITY OF BALTIMORE
DEPARTMENT OF PUBLIC WORKS
&
STATE ROADS COMMISSION OF MARYLAND
INTERSTATE DIVISION FOR BALTIMORE CITY

I-95-WINDLASS-MORAVIA INTERCHANGE
RAMP "A" OVER B & O R.R.
NORTH & SOUTH ABUTMENTS

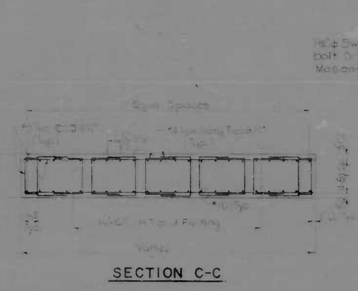
SCALE: As Shown DATE:

DRAWN BY P.D. & R.V.P. DES. BY W.J.W.
TRACED BY P.D. & R.V.P. CHK. BY F.F.M.
F.A.P. NO. I-95-4(36)36
S.R.C. NO. B.C. 246-33-815
BALTO. CITY NO. 1995
SHEET NO. S-2 OF (92) S-55

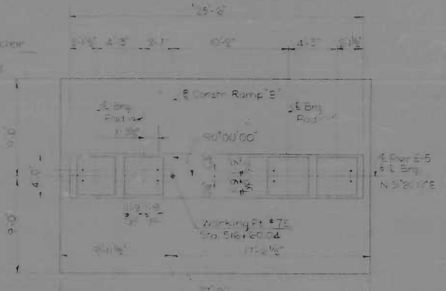
FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	MD.	I-95-4(36)36	S-20	(92) S-55



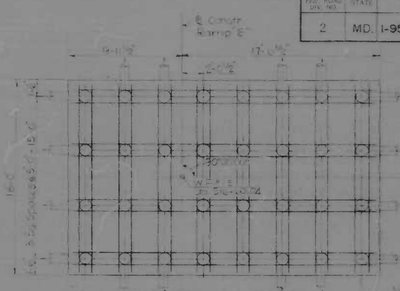
PLAN



SECTION C-C

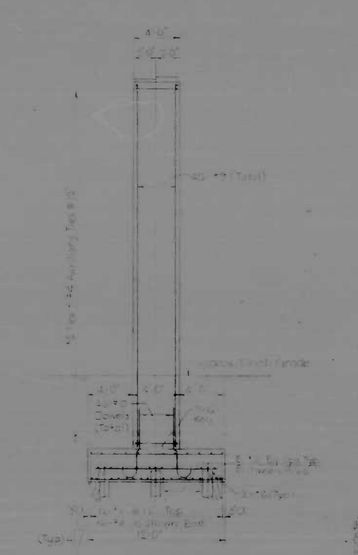


PLAN

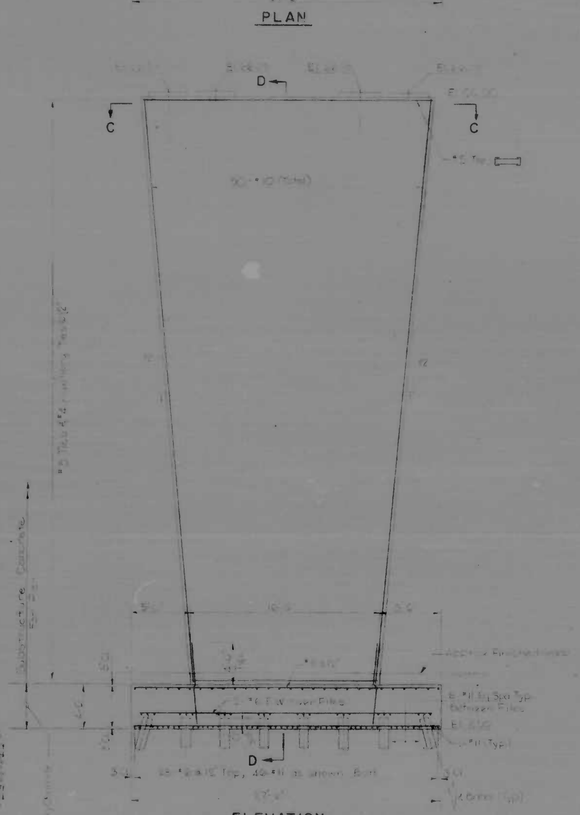


FOOTING PLAN PIER E-5

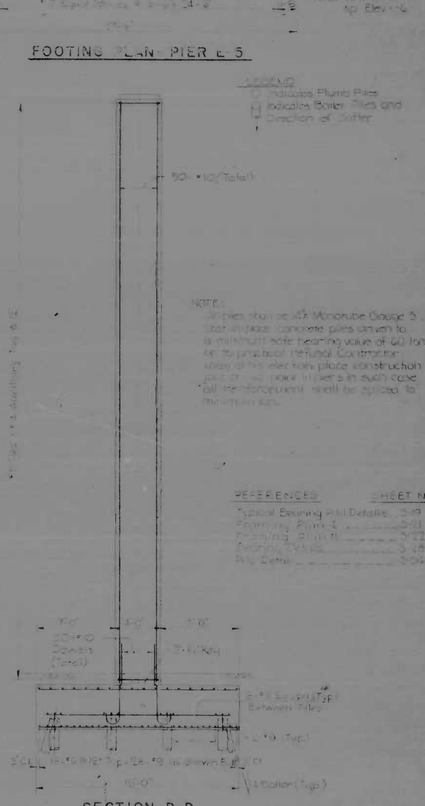
ELEVATION
PIER E-4



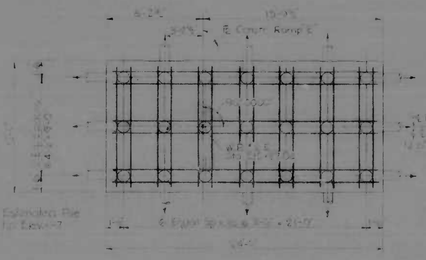
SECTION B-B



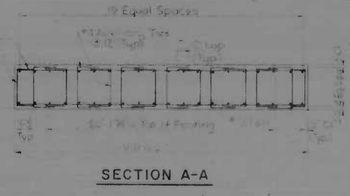
ELEVATION
PIER E-5



SECTION D-D



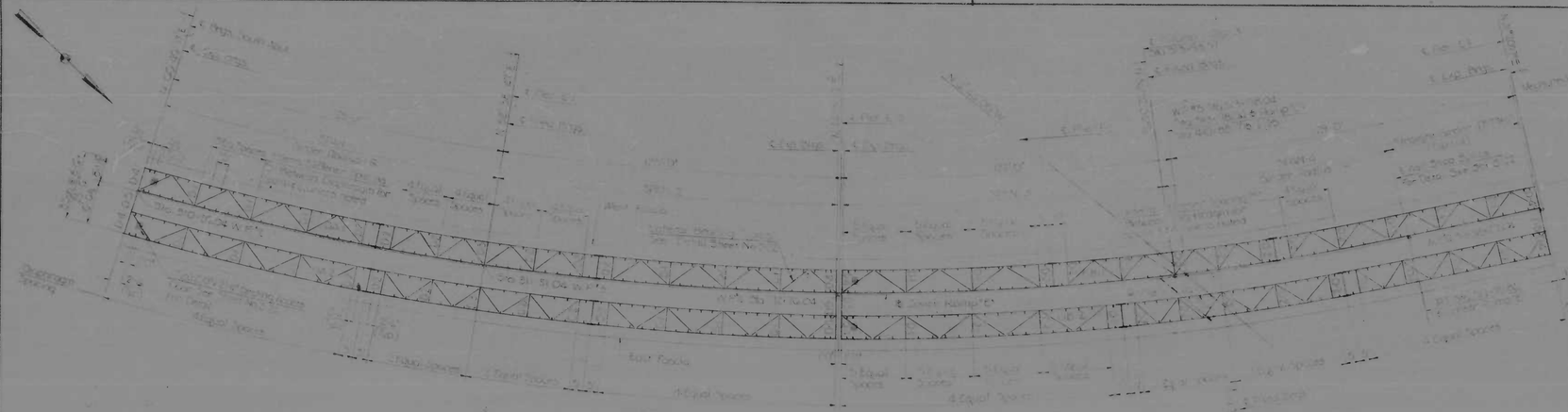
FOOTING PLAN- PIER E-4



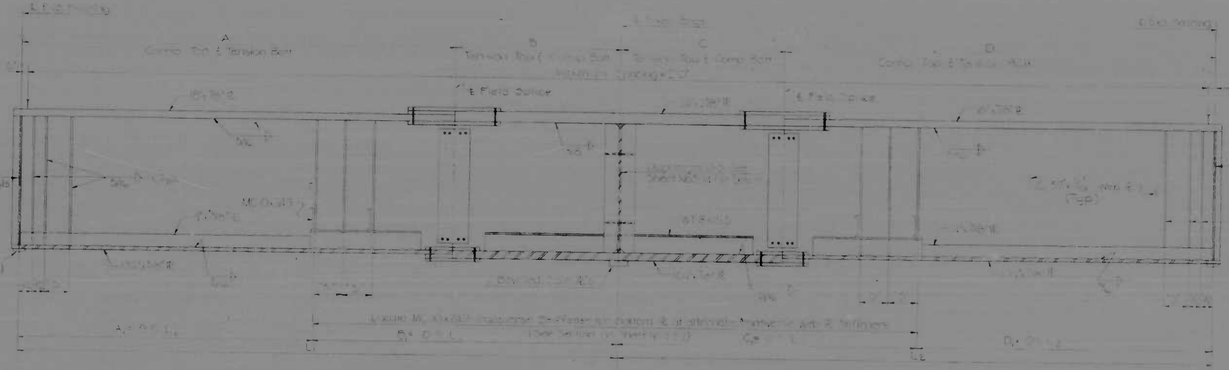
SECTION A-A

REVISIONS	CONSULTANT	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS & STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY		
	KNOERLE, BERGER, STONE & ASSOC., INC. AND MATZ, CHILDS & ASSOC., INC. CONSULTING ENGINEERS 341 N. CALVERT STREET BALTIMORE, MARYLAND 21202	I-95 WINDLASS MORAVIA INTERCHANGE RAMP "E" OVER RAMP "B", I-95 AND B&O R R PIERS E-4 & E-5 AND DETAILS	DRAWN BY R.V.P TRACED BY R.V.P DES. BY K.S.J. & C.Y.T. CHK. BY F.F.M.	
		SCALE 3/16" = 1'-0" DATE	F.A.P. NO. I-95-4(36)36 S.R.C. NO. BC 246 33-815 BALTO. CITY NO. 1995	SHEET NO. (92) S-20 OF S-55

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	MD	I-95 4(36)36	S-21	(92) S-55



FRAMING PLAN



TYPICAL LONGITUDINAL SECTION OF GIRDER

TABLE OF DIMENSIONS

Description	L1	L2	A	B	C	D	R
G-A-1	Left Web						
	Right Web						
G-A-2	Left Web						
	Right Web						
G-B-1	Left Web						
	Right Web						
G-B-2	Left Web						
	Right Web						
G-C-1	Left Web	132'-0"	132'-0"	41'-0"	41'-0"	41'-0"	32'-0"
	Right Web	132'-0"	132'-0"	41'-0"	41'-0"	41'-0"	32'-0"
G-C-2	Left Web	132'-0"	132'-0"	41'-0"	41'-0"	41'-0"	32'-0"
	Right Web	132'-0"	132'-0"	41'-0"	41'-0"	41'-0"	32'-0"

* Shoe Numbers Shown By Left Number Pier

NOTES:
All girders are assumed unbraced and therefore, there shall be no temporary intermediate supports while concrete is being placed.
All structural steel shall conform to ASTM Designation
All anchor bolts shall not be hot dipped galvanized.
All bearings and the end of girders shall be painted.

REFERENCES	SHEET NO.
General Plan & Elevation	S-01
Framing Plan - Span	S-21
Framing Plan - Pier	S-22
Framing Plan - Abutment	S-23
Framing Plan Details	S-24
Framing Plan Details	S-25
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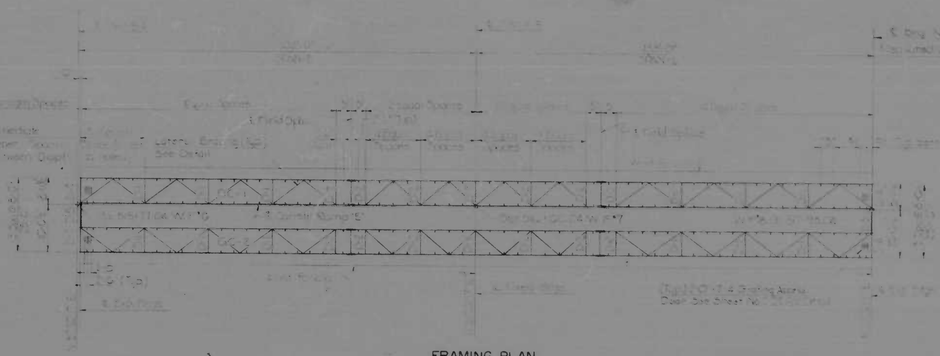
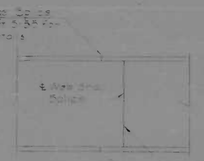
REVISIONS	CONSULTANT	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS &	STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY
	KNOERLE, DENBER, STONE & ASSOC., INC. AND MATZ, CHILDS & ASSOC., INC. CONSULTING ENGINEERS 341 N. CALVERT STREET BALTIMORE, MARYLAND 21202	I-95 WINDLASS MORAVIA INTERCHANGE RAMP "E" OVER RAMP "B", I-95 AND B&O R.R. FRAMING PLAN - I	DRAWN BY J.R.W. DES. BY C.D.P. TRACED BY J.R.W. CHK. BY F.P.M.
		SCALE As Shown DATE	F.A.P. NO. I-95-4(36)36 S.P.C. NO. BC 246-33-815 BALTO. CITY NO. 1995

SHEET NO. (92) S-21 OF S-55

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	MD.	I-95-4(36)36	S-22	(92) S-55

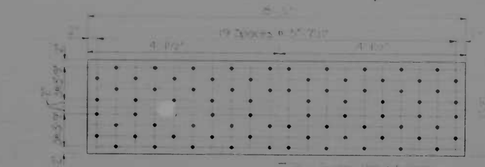


FRAMING PLAN

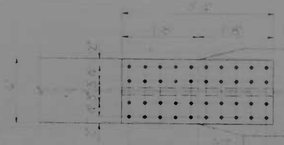


WELDED SHOP SPLICE

Note: For symbol and AWS joint designation refer to AWS D1.1 2010 and D1.5 2010. Fillet weld sizes shown are for single pass welding. If shielded metal arc welding is used refer to AWS D1.1 for alternate requirements.



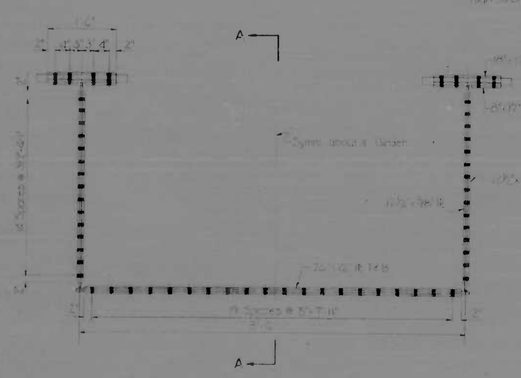
BOTTOM PLATE



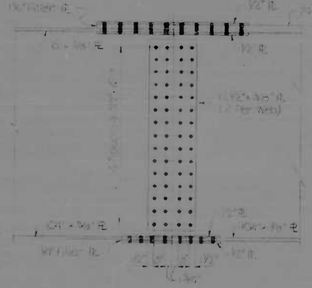
TOP PLATE

Note: All rivets and holes made with 7/8" high strength bolts.

Transverse Stiffener for Bottom Flange
Fillet all remaining joints 5/16" U.N.O. See Sheet No. S-21



TRANSVERSE SECTION THRU SPLICE



SECTION A-A

TYPICAL FIELD SPLICE DETAILS

HALF SECTION THRU LENGTHS (A1) & (D1)

HALF SECTION THRU LENGTHS (B1) (C1)

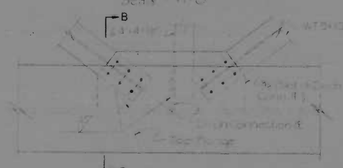
LATERAL BRACING

LATERAL BRACING CORNER DETAIL

Note:
For Length A, B, C, D
See Sheet No. S-21

Note: Use 7/8" High Strength Bolts for lateral bracing connections.

SECTION B B

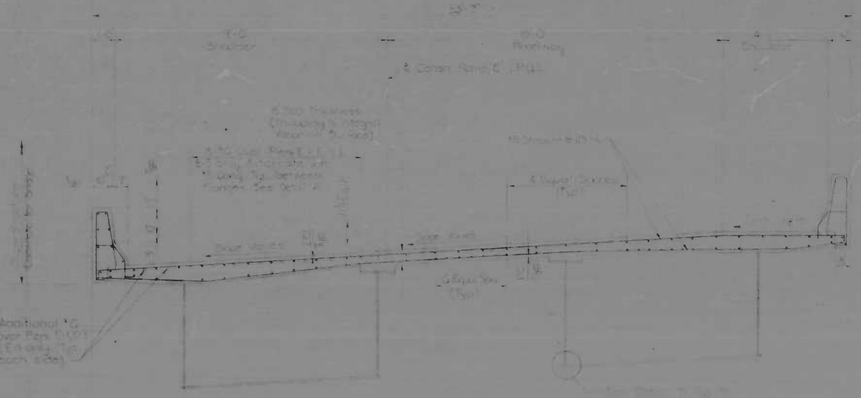


LATERAL BRACING AT DIAPHRAGM D_1 & D_2

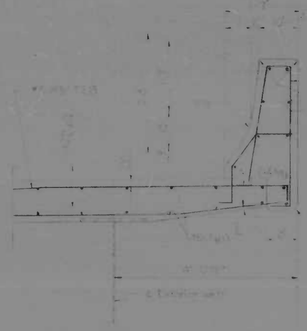
REFERENCES	SHEET NO.
General Plan & Elevation	S-21
Framing Plan I	S-22
Typical Deck Section	S-23
Deck Joint Details	S-24
Expansion Joint Det.	S-25
Bearing Details	S-26
Superstructure Det.	S-27
Steel Corbel Det.	S-28

REVISIONS	CONSULTANT	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS &	STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY
	KNOERLE, BENDER, STONE & ASSOC., INC. AND MATZ, CHILDS & ASSOC., INC. CONSULTING ENGINEERS 341 N. CALVERT STREET BALTIMORE, MARYLAND 21202	I-95 WINDLASS MORAVIA INTERCHANGE RAMP "E" OVER RAMP "B", I-95 AND B & O R.R. FRAMING PLAN - II	DRAWN BY J.R.W. TRACED BY J.R.W. DES. BY C.D.P. CHK. BY F.F.M.
		SCALE: As Shown DATE	F.A.P. NO. I-95-4(36)36 S.R.C. NO. BC248-33-BR BALTO. CITY NO. 1995 SHEET NO. (92) S-22 OF S-55

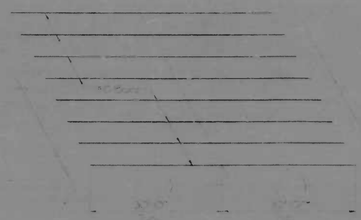
FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	MD.	I 95-4(36)36	S-23	(92) S-55



TYPICAL DECK SECTION

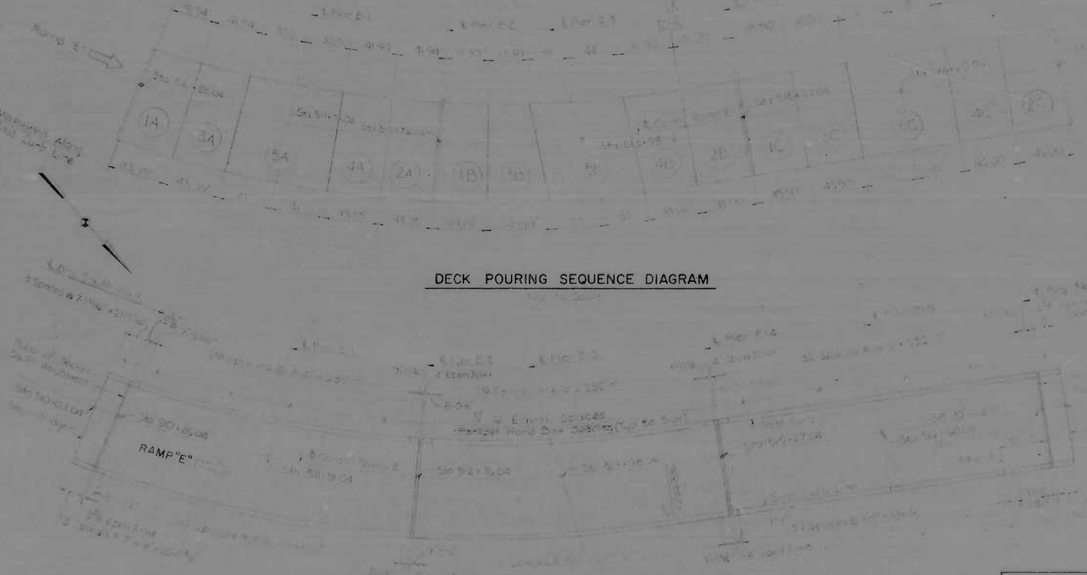


PARAPET DETAIL



DETAIL "A"

DETAIL "B"

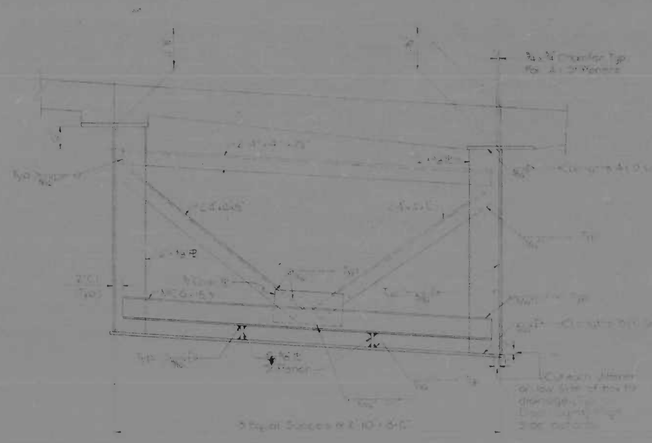


DECK POURING SEQUENCE DIAGRAM

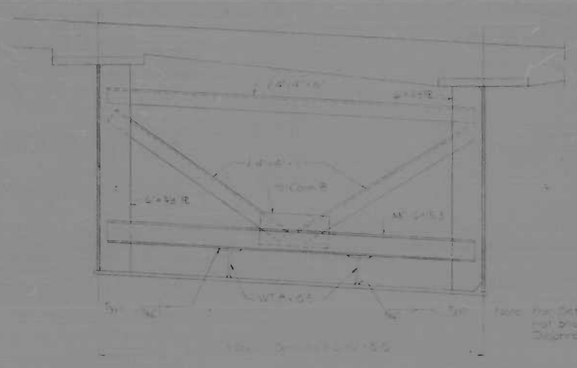
PARAPET CONTRACTION JOINT SPACING

REVISIONS	CONSULTANT	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS &	STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY
	KNOERLE, HENDON, STONE & ASSOC., INC. AND HATZ, CHILDS & ASSOC., INC. CONSULTING ENGINEERS 341 N. CALVERT STREET BALTIMORE, MARYLAND 21202	I-95 WINDLASS MORAVIA INTERCHANGE RAMP "E" OVER RAMP "B", I-95 AND B&ORR TYPICAL DECK SECTION	DRAWN BY M.S.F. DES. BY C.D.P. TRACED BY M.S.F. CHK. BY F.F.M.
		SCALE As Shown DATE	F.A.P. NO. I-95-4(36)36 SHEET NO. (92) S-23 OF S-55 S.R.C. NO. BC 246-33-815 BALTO. CITY NO. 1995

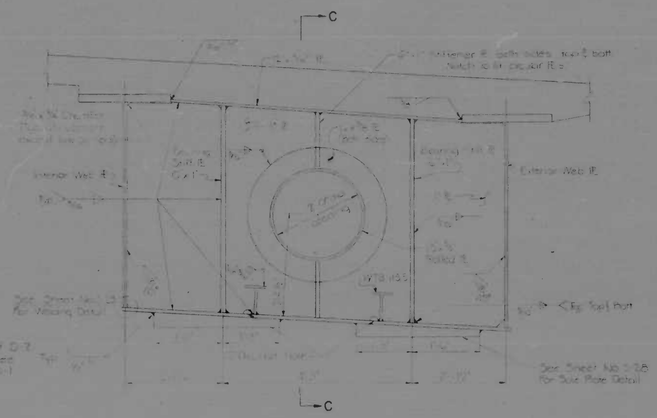
FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	MD.	I-95-4(36)36	S-24	(92) S-55



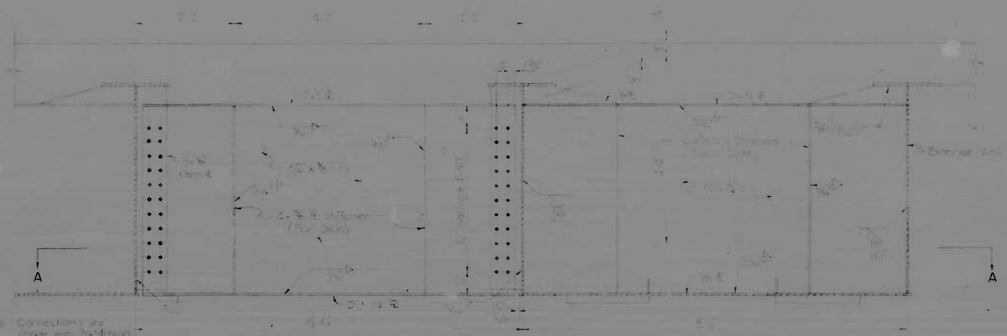
DIAPHRAGM D-1



DIAPHRAGM D-2



DIAPHRAGM D-3

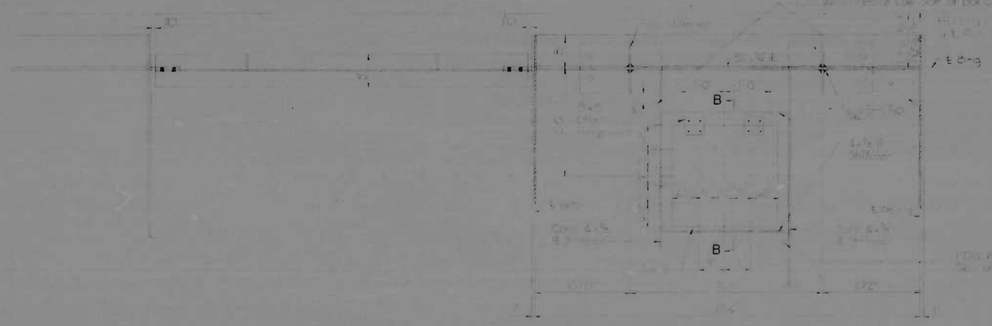


DIAPHRAGM D-5

DIAPHRAGM D-4

SECTION B-B

SECTION C-C

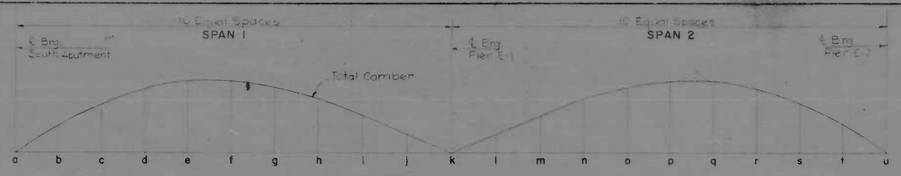


SECTION A-A

LADDER SUPPORT DETAIL

REVISIONS	CONSULTANT	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS & STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY		
	KNOERLE, SEMDER, STONE & ASSOC., INC. AND MATZ, CHILDS & ASSOC., INC. CONSULTING ENGINEERS 341 N. CALVERT STREET BALTIMORE, MARYLAND 21202	I-95 WINDLASS MORAVIA INTERCHANGE RAMP "E" OVER RAMP "B", I-95, AND B & O R.R. DIAPHRAGM DETAILS	DRAWN BY F.W. & M.S.F. TRACED BY F.W. & M.S.F.	DES. BY C.D.P. CHK. BY F.F.M.
		SCALE As Shown DATE	F.A.P. NO. I-95-4(36)36 S.R.C. NO. BC 246-33-815 BALTO. CITY NO. 1995	SHEET NO. (92) S-24 OF S-55

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	MD.	I-95-4(36)36	S-25	(92) S-55

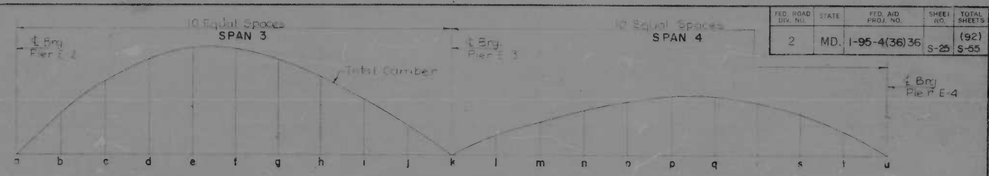


CAMBER DIAGRAM

No Scale Horiz.
3"=1'-0" Vert

CAMBER TABLE

DESCRIPTION	℄ BRG S ABUT	SPAN 1										℄ BRG PIER E-1	SPAN 2									℄ BRG PIER E-2
POINT	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u
STRINGER NO	GA-1																					
△ STEEL	0	1/8	1/4	3/8	5/8	3/4	5/8	3/4	1/2	1/16	0	1/16	1/8	3/16	5/16	3/8	7/16	3/8	5/16	1/8	0
△ CONCRETE	0	1/2	1 1/16	1 1/16	1 1/16	1 1/16	7/8	5/8	5/16	1/16	0	1/16	5/16	5/8	1/2	1 1/16	1 1/16	1 1/16	3/4	1/2	0
△ S.D.L.	0	1/2	1/4	3/8	3/8	3/8	5/16	1/4	1/8	1/16	0	1/16	1/8	1/4	5/16	3/8	3/8	5/16	1/4	1/8	0
△ GEOMETRIC	0	1 1/8	2 1/16	2 1/16	3 1/16	3 1/16	2 1/16	1 1/16	1/2	1/16	0	1/16	1/2	1 1/16	1 1/16	1 1/16	1 1/16	1 1/16	1 1/16	1/2	0
TOTAL CAMBER	0	1 1/8	3 1/16	4 1/2	5	5	4 1/16	3 1/4	2 3/16	1 1/16	0	1/16	1/2	1 1/16	1 1/16	1 1/16	1 1/16	1 1/16	1 1/16	1/2	0
STRINGER NO	GA-2																					
△ STEEL	0	3/16	3/8	1/2	1/2	1/2	3/8	1/4	1/8	1/16	0	1/16	1/8	1/4	3/8	1/2	1/2	1/2	3/8	3/16	0
△ CONCRETE	0	3/16	1	1 1/16	1 1/16	1 1/16	3/4	3/8	1/16	1/16	0	1/16	1/8	1/4	3/8	1/2	1 1/16	1 1/16	1	3/16	0
△ S.D.L.	0	3/16	3/8	1/2	1/2	1/2	7/16	3/16	1/16	1/16	0	1/16	1/8	1/4	1/2	1/2	7/16	3/8	1/4	1/8	0
△ GEOMETRIC	0	1 1/8	2 1/16	2 1/16	3 1/16	3 1/16	2 1/16	1 1/16	1/2	1/16	0	1/16	1/2	1 1/16	1 1/16	1 1/16	1 1/16	1 1/16	1 1/16	1/2	0
TOTAL CAMBER	0	1 1/16	3 1/16	4	5	5 1/16	4 1/16	3	2 1/16	1 1/16	0	1/16	1/2	1 1/16	1 1/16	1 1/16	1 1/16	1 1/16	1 1/16	1/2	0

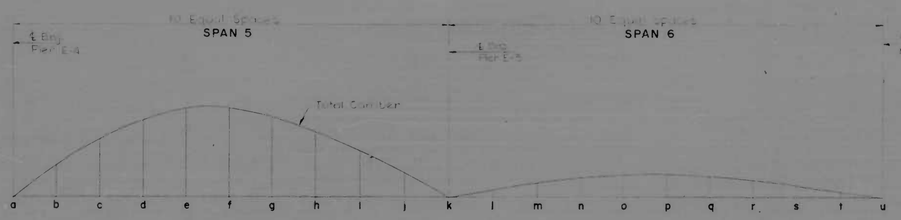


CAMBER DIAGRAM

No Scale Horiz.
3"=1'-0" Vert

CAMBER TABLE

DESCRIPTION	℄ BRG PIER E-2	SPAN 3										℄ BRG PIER E-3	SPAN 4									℄ BRG PIER E-4
POINT	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u
STRINGER NO	GB-1																					
△ STEEL	0	1/2	5/16	1/2	1/2	5/8	5/8	1/2	1/16	0	0	1/16	3/16	5/16	7/16	1/2	5/8	1/2	7/16	3/16	0
△ CONCRETE	0	1/2	5/8	1	1	1	1	1/2	1/16	0	0	1/16	1/2	1	1 1/16	1 1/16	1 1/16	1 1/16	1	1/2	0
△ S.D.L.	0	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/16	0	0	1/16	3/8	1/2	9/16	1/2	1/2	1/2	3/8	1/8	0
△ GEOMETRIC	0	1	1 1/16	1 1/16	1 1/16	1 1/16	1 1/16	1 1/16	1/2	0	0	1/2	1 1/16	1 1/16	1 1/16	1 1/16	1 1/16	1 1/16	1 1/16	1/2	0
TOTAL CAMBER	0	1	1 1/16	1 1/16	1 1/16	1 1/16	1 1/16	1 1/16	1/2	0	0	1/2	1 1/16	1 1/16	1 1/16	1 1/16	1 1/16	1 1/16	1 1/16	1/2	0
STRINGER NO	GB 2																					
△ STEEL	0	1/2	5/16	1/2	5/8	3/4	5/8	3/4	1/2	1/16	0	1/16	3/16	5/16	7/16	1/2	5/8	1/2	7/16	3/16	0
△ CONCRETE	0	1/2	5/8	1	1	1	1	1/2	1/16	0	0	1/16	1/2	1	1 1/16	1 1/16	1 1/16	1 1/16	1	1/2	0
△ S.D.L.	0	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/16	0	0	1/16	3/8	1/2	9/16	1/2	1/2	1/2	3/8	1/8	0
△ GEOMETRIC	0	1	1 1/16	1 1/16	1 1/16	1 1/16	1 1/16	1 1/16	1/2	0	0	1/2	1 1/16	1 1/16	1 1/16	1 1/16	1 1/16	1 1/16	1 1/16	1/2	0
TOTAL CAMBER	0	1	1 1/16	1 1/16	1 1/16	1 1/16	1 1/16	1 1/16	1/2	0	0	1/2	1 1/16	1 1/16	1 1/16	1 1/16	1 1/16	1 1/16	1 1/16	1/2	0



CAMBER DIAGRAM

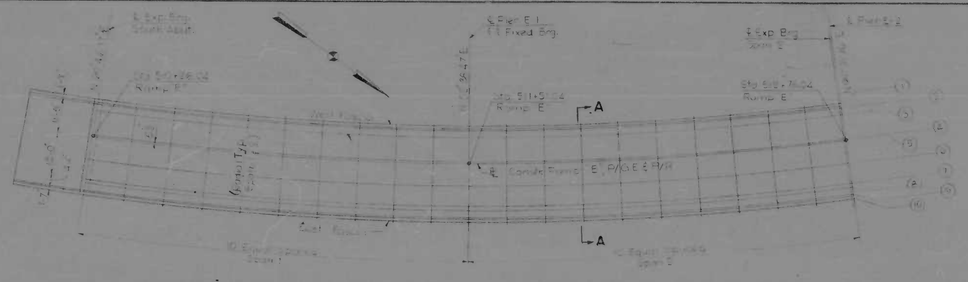
No Scale Horiz.
3"=1'-0" Vert

CAMBER TABLE

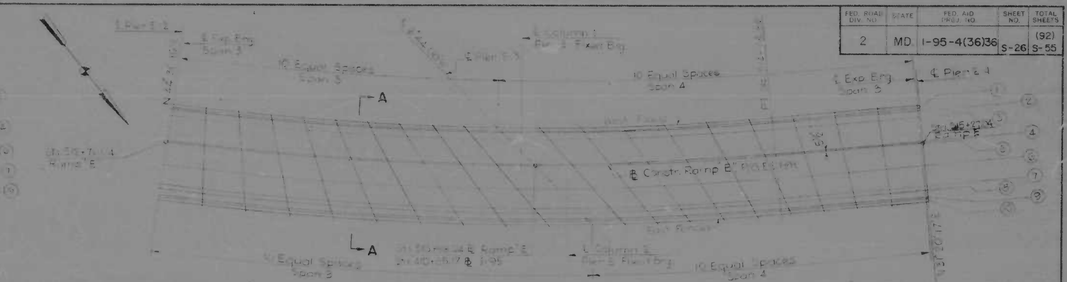
DESCRIPTION	℄ BRG PIER E-4	SPAN 5										℄ BRG PIER E-5	SPAN 6									℄ BRG N ABUT
POINT	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u
STRINGER NO	GC-1																					
△ STEEL	0	1/4	1/2	3/4	7/8	1	7/8	3/4	1/2	1/16	0	1/16	1/8	3/16	5/16	3/8	7/16	3/8	5/16	1/8	0
△ CONCRETE	0	1/2	1 1/16	1 1/16	1 1/16	1 1/16	7/8	5/8	5/16	1/16	0	1/16	5/16	5/8	1/2	1 1/16	1 1/16	1 1/16	3/4	1/2	0
△ S D L	0	1/2	1/4	3/8	3/8	3/8	5/16	1/4	1/8	1/16	0	1/16	1/8	1/4	5/16	3/8	3/8	5/16	1/4	1/8	0
△ GEOMETRIC	0	1 1/8	2 1/16	2 1/16	3 1/16	3 1/16	2 1/16	1 1/16	1/2	1/16	0	1/16	1/2	1 1/16	1 1/16	1 1/16	1 1/16	1 1/16	1 1/16	1/2	0
TOTAL CAMBER	0	1 1/8	3 1/16	4	5	5 1/16	4 1/16	3	2 1/16	1 1/16	0	1/16	1/2	1 1/16	1 1/16	1 1/16	1 1/16	1 1/16	1 1/16	1/2	0
STRINGER NO	GC-2																					
△ STEEL	0	1/4	1/2	3/4	7/8	1	7/8	3/4	1/2	1/16	0	1/16	1/8	3/16	5/16	3/8	7/16	3/8	5/16	1/8	0
△ CONCRETE	0	1/2	1 1/16	1 1/16	1 1/16	1 1/16	7/8	5/8	5/16	1/16	0	1/16	5/16	5/8	1/2	1 1/16	1 1/16	1 1/16	3/4	1/2	0
△ S D L	0	1/2	1/4	3/8	3/8	3/8	5/16	1/4	1/8	1/16	0	1/16	1/8	1/4	5/16	3/8	3/8	5/16	1/4	1/8	0
△ GEOMETRIC	0	1 1/8	2 1/16	2 1/16	3 1/16	3 1/16	2 1/16	1 1/16	1/2	1/16	0	1/16	1/2	1 1/16	1 1/16	1 1/16	1 1/16	1 1/16	1 1/16	1/2	0
TOTAL CAMBER	0	1 1/8	3 1/16	4	5	5 1/16	4 1/16	3	2 1/16	1 1/16	0	1/16	1/2	1 1/16	1 1/16	1 1/16	1 1/16	1 1/16	1 1/16	1/2	0

REVISIONS	CONSULTANT	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS &	STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY
	KNOEBLE, BENCER, STONE & ASSOC., INC. AND MATZ, COLLINS & ASSOC., INC. CONSULTING ENGINEERS 341 N. CALVERT STREET BALTIMORE, MARYLAND 21202	I-95-WINDLASS-MORAVIA INTERCHANGE RAMP "E" OVER RAMP "B", I-95 AND B&O R.R. CAMBER DIAGRAMS AND TABLES	DRAWN BY RVP DES. BY CDP TRACED BY RVP CHK. BY FFM F.A.P. NO. I-95-4(36)36 S.R.C. NO. BC 246-33-815 BALTO. CITY NO. 1995 SHEET NO (92) S-25 OF S-55
		SCALE DATE	

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	MD.	I-95-4(36)36	S-26	(92) S-55



SPAN 1 & SPAN 2 - KEY PLAN



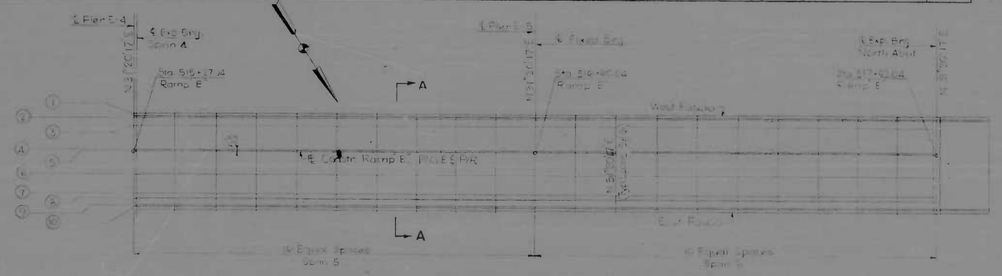
SPAN 3 & SPAN 4 - KEY PLAN

SUPERSTRUCTURE ELEVATION TABLE

DESCRIPTION		℄ BRG. S ABUT	SPAN 1									℄ BRG. PIER E-1	SPAN 2									℄ BRG. PIER E-2
STATION		510+ 00.04	510+ 50.54	511+ 01.04	511+ 51.54	512+ 02.04	512+ 52.54	513+ 03.04	513+ 53.54	514+ 04.04	514+ 54.54	515+ 05.04	515+ 55.44	516+ 05.84	516+ 56.24	517+ 06.64	517+ 57.04	518+ 07.44	518+ 57.84	519+ 08.24	519+ 58.64	520+ 09.04
1	WEST KEY LINE	75.49	76.15	76.80	77.35	77.45	77.80	76.16	76.49	75.81	74.10	73.37	73.62	73.85	74.10	74.36	74.61	74.86	75.12	75.37	75.62	75.88
2	WEST CURB LINE	76.14	76.51	76.85	77.07	77.47	77.82	76.21	76.56	75.86	73.16	72.43	72.68	73.91	73.41	73.66	73.91	74.16	74.42	74.67	74.92	75.18
3	GIRDER GA-1L	75.59	76.35	76.90	77.20	77.65	78.00	76.36	76.70	76.01	74.30	73.58	73.83	74.05	74.30	74.56	74.81	75.06	75.32	75.57	75.82	76.08
4	GIRDER GA-1R	76.40	76.86	77.21	77.73	78.18	78.51	76.87	77.21	76.51	74.81	74.09	74.34	74.57	74.81	75.07	75.32	75.57	75.83	76.08	76.33	76.59
5	P/GE, P/R & CONSTR	76.42	76.89	77.24	77.76	78.21	78.54	76.90	77.23	76.54	74.84	74.12	74.37	74.60	74.84	75.10	75.35	75.60	75.86	76.11	76.36	76.62
6	GIRDER GA-2L	76.91	77.37	77.85	78.24	78.24	79.06	77.36	77.72	77.03	75.32	74.60	74.85	75.08	75.32	75.58	75.83	76.08	76.34	76.59	76.84	77.10
7	EDGE OF SHOULDER	77.33	77.79	78.24	78.34	78.70	79.44	77.80	78.15	77.45	75.74	75.02	75.27	75.50	75.74	76.00	76.25	76.50	76.76	77.01	77.26	77.52
8	GIRDER GA-2R	77.35	77.82	78.26	78.45	78.78	79.42	77.82	78.16	77.47	75.77	75.04	75.29	75.52	75.77	76.02	76.28	76.53	76.78	77.03	77.28	77.54
9	EAST CURB LINE	77.89	77.86	78.20	78.72	79.12	79.50	77.86	78.20	77.50	75.81	75.08	75.33	75.56	75.81	76.06	76.32	76.57	76.82	77.07	77.32	77.58
10	EAST KEY LINE	77.41	77.87	78.21	78.74	79.14	79.52	77.87	78.21	77.52	75.82	75.09	75.34	75.57	75.82	76.07	76.33	76.58	76.83	77.08	77.33	77.59

SUPERSTRUCTURE ELEVATION TABLE

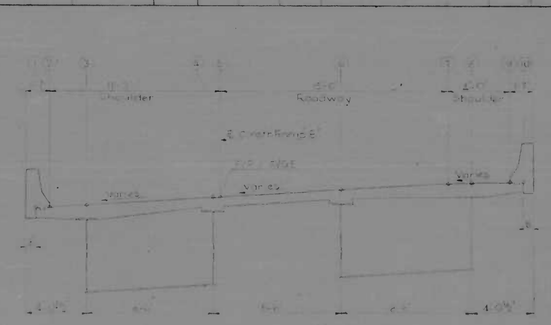
DESCRIPTION		℄ BRG. PIER E-2	SPAN 3									℄ BRG. PIER E-3	SPAN 4									℄ BRG. PIER E-4
STATION		513+ 77.04	514+ 89.14	515+ 01.24	515+ 13.34	515+ 25.46	515+ 37.54	515+ 49.64	516+ 01.74	516+ 13.84	516+ 25.94	516+ 38.04	516+ 50.04	517+ 62.04	517+ 74.04	518+ 86.04	518+ 98.04	519+ 10.04	519+ 22.04	519+ 34.04	519+ 46.04	519+ 58.04
1	WEST KEY LINE	80.83	80.96	80.98	80.96	80.97	80.93	80.83	80.82	80.74	80.64	80.58	80.56	80.16	79.91	79.69	79.41	79.11	78.78	78.42	78.04	77.63
2	WEST CURB LINE	80.99	81.02	81.04	81.04	81.02	81.00	80.94	80.87	80.79	80.69	80.57	81.40	80.21	79.98	79.73	79.46	79.16	78.83	78.47	78.09	77.66
3	GIRDER GB-1L	81.13	81.17	81.18	81.18	81.16	81.13	81.08	81.01	5091	8081	80.99	80.86	81.32	80.10	79.83	79.52	79.22	78.91	78.61	78.21	77.83
4	GIRDER GB-1R	81.24	81.26	81.29	81.29	81.27	81.23	81.16	81.07	81.27	81.15	81.10	80.93	80.73	80.51	80.27	80.00	79.72	79.41	79.07	78.72	78.34
5	P/GE, P/R & CONSTR	81.27	81.31	81.32	81.32	81.29	81.25	81.18	81.50	81.39	81.27	81.22	80.95	80.75	80.53	80.29	80.03	79.74	79.43	79.10	78.75	78.37
6	GIRDER GB-2L	81.30	81.39	81.40	81.40	81.37	81.31	81.24	81.14	81.31	81.19	81.14	81.51	81.33	81.11	80.86	80.59	80.30	79.99	79.67	79.32	78.95
7	EDGE OF SHOULDER	81.57	81.61	81.62	81.62	81.59	81.54	81.46	81.36	81.53	81.41	81.36	81.84	81.65	81.40	81.12	80.83	80.53	80.20	79.86	79.50	79.12
8	GIRDER GB-2R	81.60	81.63	81.65	81.64	81.61	81.53	81.45	81.35	81.49	81.35	81.30	81.64	81.48	81.21	80.93	80.64	80.34	80.01	79.67	79.31	78.93
9	EAST CURB LINE	81.64	81.67	81.68	81.67	81.63	81.57	81.48	81.38	81.51	81.38	81.33	81.85	81.68	81.41	81.13	80.84	80.54	80.22	79.89	79.54	79.17
10	EAST KEY LINE	81.85	81.89	81.89	81.89	81.85	81.79	81.69	81.59	81.72	81.59	81.53	81.94	81.89	81.64	81.39	81.13	80.84	80.54	80.23	79.90	79.55	79.18	78.80



SPAN 5 & SPAN 6 - KEY PLAN

SUPERSTRUCTURE ELEVATION TABLE

DESCRIPTION		℄ BRG. PIER E-4	SPAN 5									℄ BRG. PIER E-5	SPAN 6									℄ BRG. N ABUT.
STATION		515+ 28.04	515+ 41.24	515+ 54.44	515+ 67.64	515+ 80.84	515+ 94.04	516+ 07.24	516+ 20.44	516+ 33.64	516+ 46.84	516+ 60.04	516+ 73.24	516+ 86.44	516+ 99.64	517+ 12.84	517+ 26.04	517+ 39.24	517+ 52.44	517+ 65.64	517+ 78.84	517+ 92.04
1	WEST KEY LINE	77.57	77.15	76.74	76.34	75.91	75.49	74.97	74.45	73.91	73.35	72.74	72.08	71.40	70.69	69.97	69.25	68.50	67.86	67.20	66.54	65.93
2	WEST CURB LINE	77.62	77.21	76.80	76.39	75.95	75.50	75.00	74.48	73.94	73.38	72.77	72.11	71.42	70.76	70.06	69.35	68.57	67.86	67.22	66.58	65.99
3	GIRDER GC-1L	77.77	77.36	76.94	76.52	76.07	75.60	75.10	74.57	74.05	73.45	72.84	72.18	71.49	70.79	70.07	69.35	68.64	67.96	67.33	66.66	66.08
4	GIRDER GC-1R	78.08	77.67	77.43	76.97	76.48	75.97	75.44	74.89	74.31	73.70	73.07	72.42	71.75	71.03	70.31	69.59	68.86	68.20	67.53	66.89	66.27
5	P/GE, P/R & CONSTR	78.31	77.89	77.45	76.99	76.51	75.99	75.46	74.90	74.32	73.72	73.09	72.43	71.75	71.04	70.32	69.60	68.89	68.21	67.54	66.90	66.28
6	GIRDER GC-2L	78.49	78.04	77.58	77.08	76.54	75.99	75.43	74.84	74.23	73.60	72.96	72.30	71.62	70.91	70.19	69.47	68.76	68.08	67.42	66.77	66.15
7	EDGE OF SHOULDER	78.96	78.17	77.73	77.18	76.67	75.99	75.47	74.79	74.16	73.50	72.85	72.19	71.51	70.80	70.06	69.34	68.65	67.97	67.30	66.66	66.04
8	GIRDER GC-2R	79.08	78.19	77.68	77.14	76.68	75.99	75.40	74.78	74.14	73.48	72.82	72.16	71.48	70.77	70.06	69.34	68.64	67.96	67.30	66.68	66.08
9	EAST CURB LINE	78.71	78.25	77.71	77.16	76.69	75.99	75.39	74.76	74.11	73.44	72.78	72.12	71.44	70.74	70.02	69.30	68.61	67.95	67.29	66.65	66.08
10	EAST KEY LINE	78.73	78.24	77.72	77.17	76.69	75.99	75.38	74.76	74.10	73.43	72.77	72.11	71.43	70.72	70.00	69.29	68.61	67.94	67.29	66.66	66.08

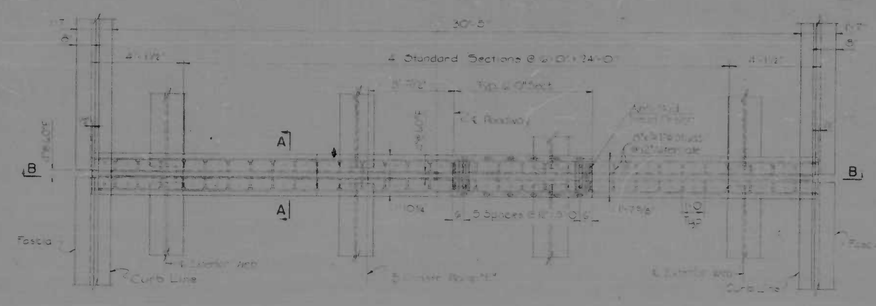


SECTION A-A

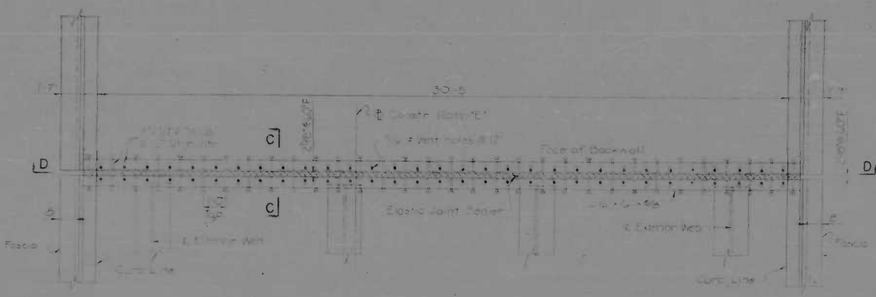
REFERENCES	SHEET NO.
General Plan & Elevation	S-26
Framing Plan I	S-27
Framing Plan II	S-28
Typical Deck Section	S-29

REVISIONS	CONSULTANT	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS & STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY	
	KNOERLE, BENDER, STONE & ASSOC. AND MATZ, CHILOS & ASSOC., INC. CONSULTING ENGINEERS 341 N. CALVERT STREET BALTIMORE, MARYLAND 21202	I-95-WINDLASS-MORAVIA INTERCHANGE RAMP "E" OVER RAMP "B", I-95 AND B&O R.R. SUPERSTRUCTURE ELEVATIONS	DRAWN BY R.V.P. TRACED BY R.V.P. DES. BY W.J.W. CHK. BY F.F.M. F.A.P. NO. I-95-4(36)36 S.H.C. NO. BC 246-33-815 BALTO. CITY NO. 1995 SHEET NO. (92) S-26 OF S-55
		SCALE: As Shown DATE:	

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	MD	I-95-4(36)36		(92)
			S-27	S-55



PLAN



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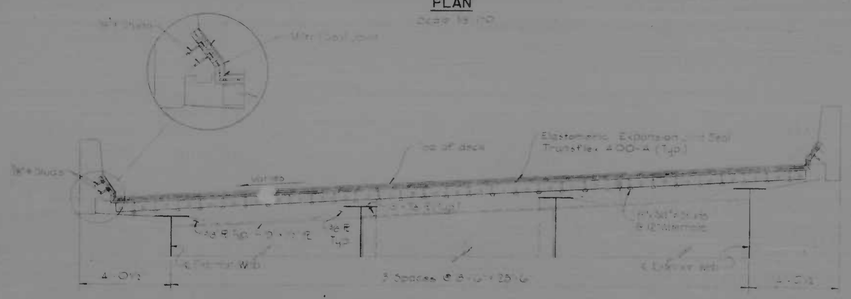
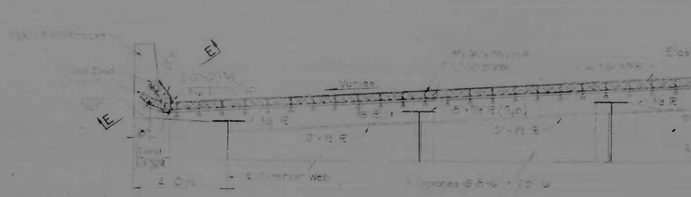
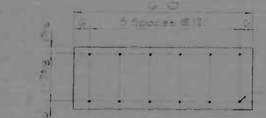


SECTION B-B

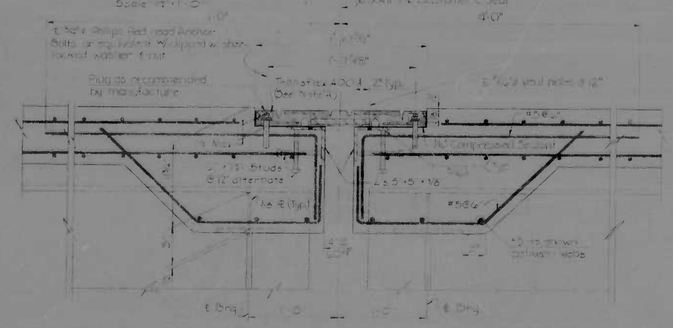


SECTION D-D

PREFORMED COMPRESSION SEAL EXPANSION DAM AT ABUTMENTS

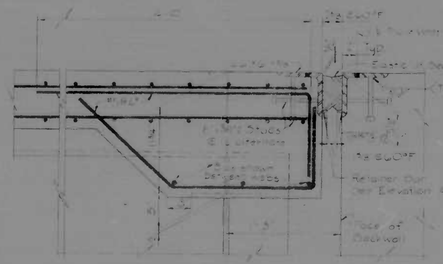


PLYWOOD TEMPLATE

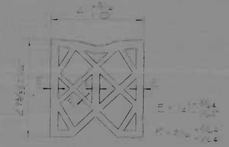


SECTION A-A

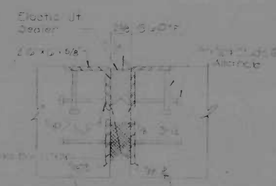
STEEL REINFORCED ELASTOMERIC EXPANSION DAM AT PIERS



SECTION C-C



ELASTIC JOINT SEALER



SECTION E-E

NOTE A

The expansion joint shall be set anchored bonded and sealed as recommended by the manufacturer and as set forth in the Special Provisions. Anchors shall be same expansion type.

Locate holes with plywood template for 4½ Phillips Red Head Anchor Bolts. Drill holes 10" ± deep.

Holes shall not be drilled nor anchor bolts set until the concrete is at least 7 days old.

Each section of expansion joint shall be installed starting at the roadway

Tighten anchor bolts to 85 foot pounds

Retighten to 85 foot pounds 30 ± miles after initial tightening

Clean anchor bolt cavity and seal with sealant

Fill cavity with sealant to depth of ⅞ and push plug down to snap lock. Scrape off all excess sealant.

Manufacturer shall be consulted on installation and availability of service sections.

NOTE B

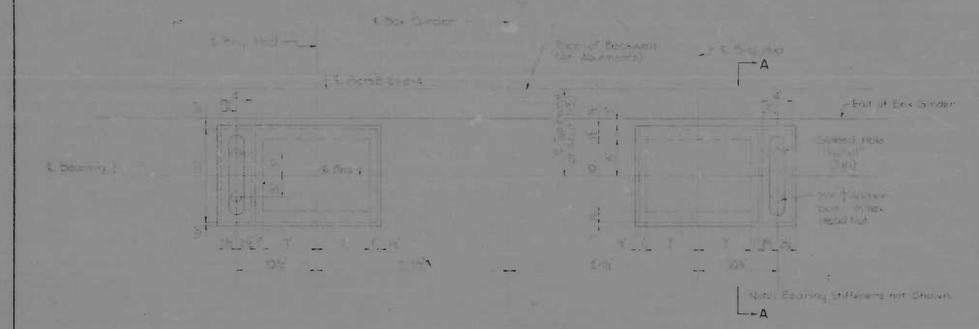
Steel bar, dowels and retainer bars in Expansion Joints shall be ASTM Designation A-36

REFERENCES — SHEET NO.

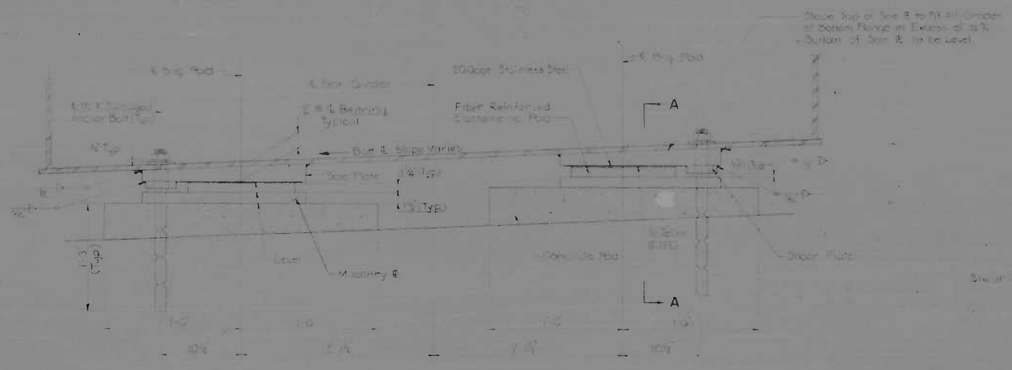
Railway Bridges
Highway Bridges
Foundations
Abutments

REVISIONS	CONSULTANT	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS &	STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY
	KNOERLE, BENDER, STEINE & ASSOC., INC. AND MATZ, CHILDS & ASSOC., INC. CONSULTING ENGINEERS 141 N. CALVERT STREET BALTIMORE, MARYLAND 21202	I-95 WINDLASS MORAVIA INTERCHANGE RAMP F OVER RAMP B I-95 AND B&O RR EXPANSION JOINT DETAILS	DRAWN BY P.D. DES. BY C.D.P. TRACED BY P.D. CHK. BY F.F.M. F.A.P. NO. I-95-4(36)36 SRC NO. BC 236-33-815 BALTO. CITY NO. 1995
		SCALE As shown DATE	SHEET NO. (92) S-27 OF S-55

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	MD.	I-95-4(36)36	S-28	(92) S-55

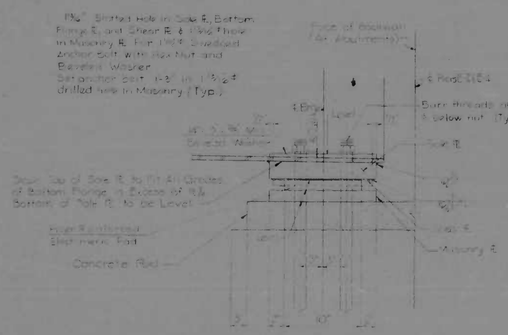


PLAN

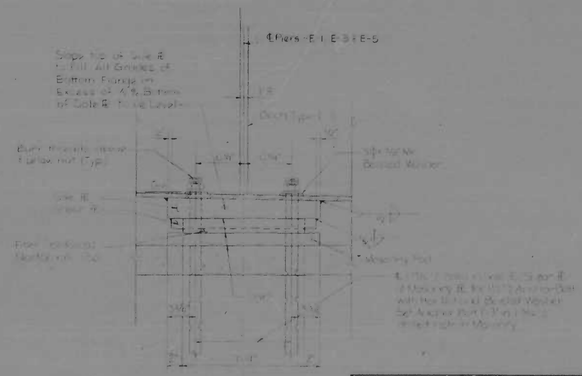


ELEVATION

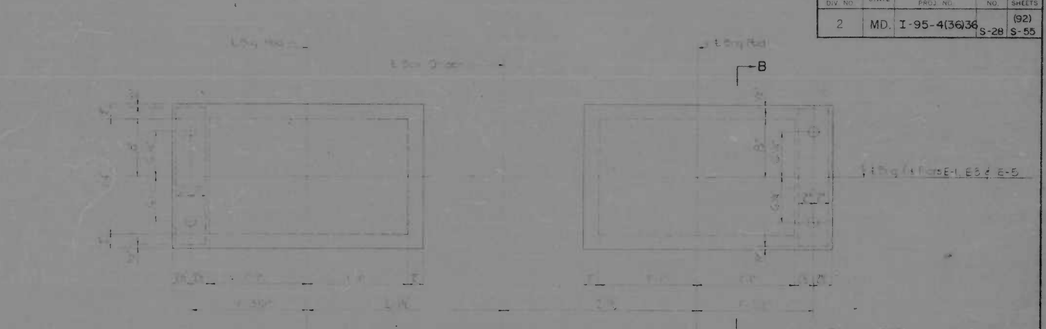
EXPANSION BEARING



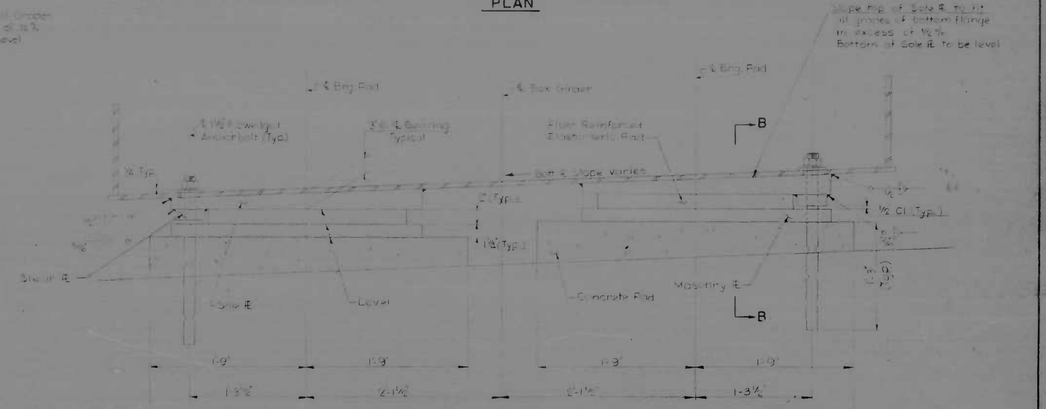
SECTION A-A



SECTION B-B



PLAN



ELEVATION

FIXED BEARING

REFERENCES	SHEET NO
Abutments	S-12
Piers E-1 & E-2 and Details	S-16
Pier E-3 and Details	S-19
Piers E-4 & E-5 and Details	S-20
Framing Plan I	S-21
Framing Plan II	S-22
Diaphragm Details	S-24

Notes:

1. All steel used in bearings shall conform to ASTM Designation A-588.
2. All anchor bolts, hex nuts & washers shall be hot dipped galvanized.
3. Epoxy resin grout to be applied on full contact area between the following
   - Fiber reinforced elastomeric Pad & Masonry Plate
   - Fiber reinforced elastomeric Pad & Teflon Plate
   - Sole Plate & Stainless Steel Plate
   - Masonry Plate & concrete Pad
4. Epoxy resin Patching compound shall be used if air temperature is between 35°F and 70°F.
5. Fill all bolts and holes around another bolts with non hardening Caulking Compound or Plastic Joint Sealer.

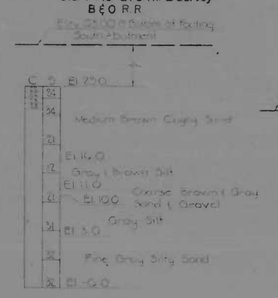
REVISIONS	CONSULTANT	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS & STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY
	KHOERLE, BENDER, STONE & ASSOC. AND MATZ, EMKES & ASSOC., INC. CONSULTING ENGINEERS 341 N. CALVERT STREET BALTIMORE, MARYLAND 21202	I-95 WINDLASS MORAVIA INTERCHANGE RAMP "E" OVER RAMP "B", I-95 AND B&O R R BEARING DETAILS SCALE As Shown DATE

DRAWN BY M.S.F.	DES. BY C.D.P.		
TRACED BY M.S.F.	CHK. BY F.F.M.		
F.A.P. NO. I-95-4(36)36		SHEET NO. (92) S-28 of S-55	
S.R.C. NO. BC 246-33-815			
BALTO. CITY NO. 1995			

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	MD.	I-95-4-(36)36	S-29	(92) S-55

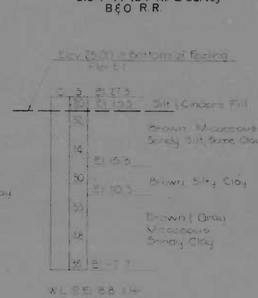
BORING NO. E-1

Sta. 7+19 273 Rt. ℄ Survey
B℄O R.R.



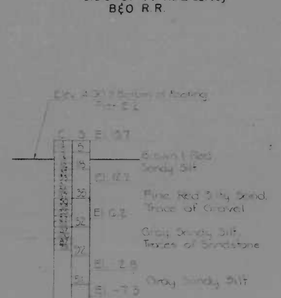
BORING NO. E-2

Sta. 7+14 184' Rt. ℄ Survey
B℄O R.R.



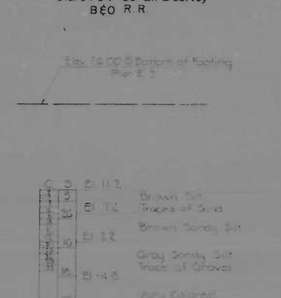
BORING NO. E-3

Sta. 6+97 77' Rt. ℄ Survey
B℄O R.R.



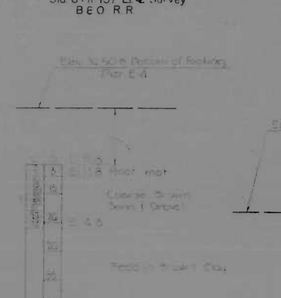
BORING NO. E-4

Sta. 6+64 39' Lt. ℄ Survey
B℄O R.R.



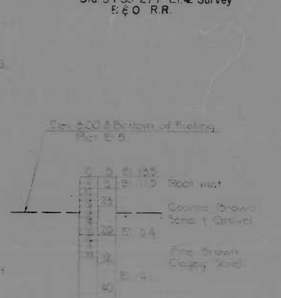
BORING NO. E-5

Sta. 6+11 157' Lt. ℄ Survey
B℄O R.R.



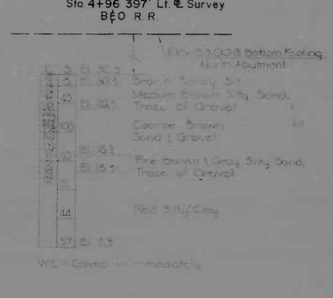
BORING NO. E-6

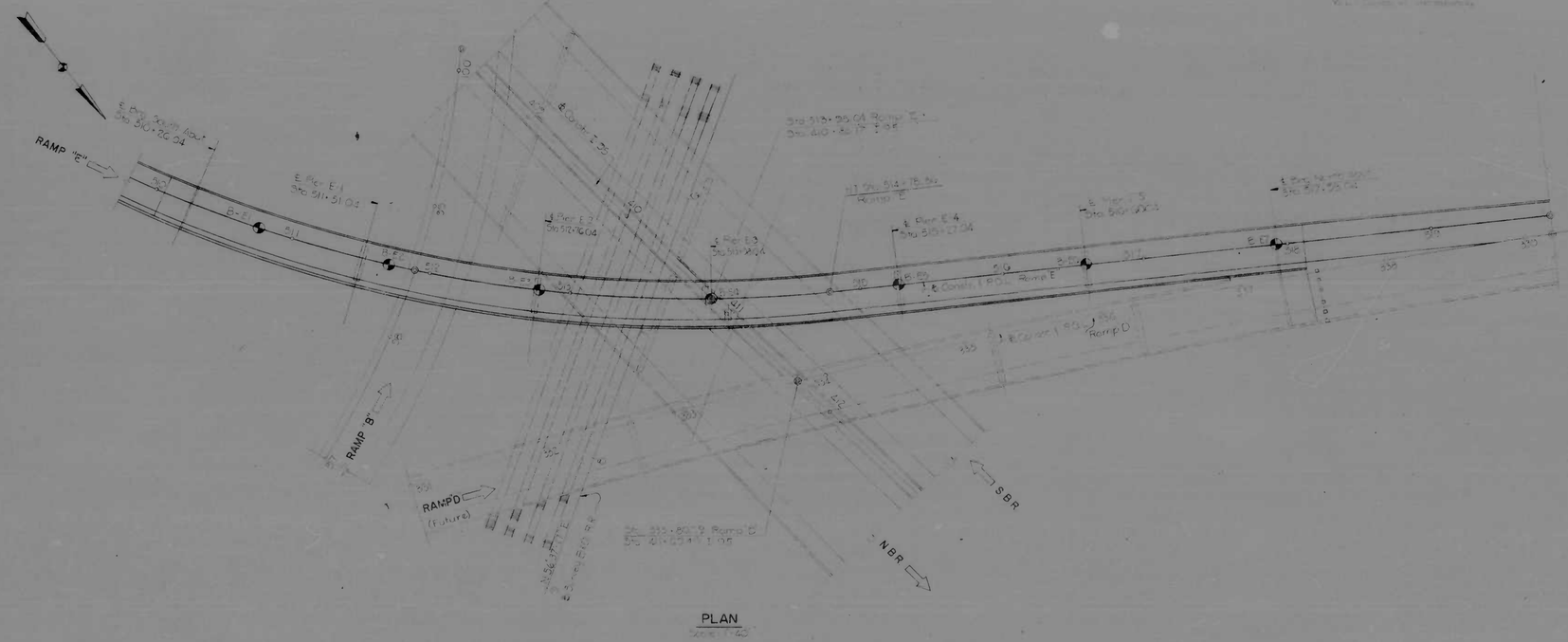
Sta. 5+53 277' Lt. ℄ Survey
B℄O R.R.



BORING NO. E-7

Sta. 4+96 397' Lt. ℄ Survey
B℄O R.R.

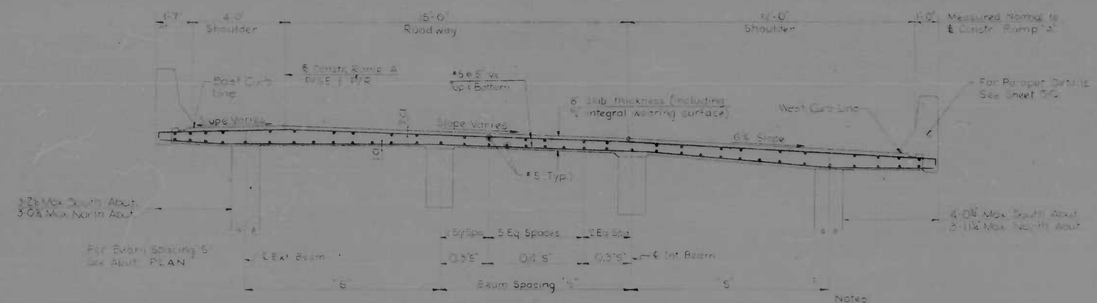




Notes:
1. Test Borings made in Jan. 1971
2. "N" Number of blows required to drive a 2" dia. casing one foot using 300 lbs weight falling 30 inches
(If No casing, blows are shown a hollow stem auger was used)
3. "S" Number of blows required to drive a 2" O.D. sampling spoon one foot using a 140 lbs weight falling 30 inches

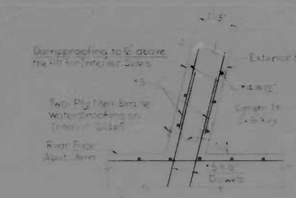
REVISIONS	CONSULTANT	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS &	STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY
	KNOERLE, BENDER, STONE & ASSOC., INC. AND MATZ, FOWLER & ASSOC., INC. CONSULTING ENGINEERS 341 N. CALVERT STREET BALTIMORE, MARYLAND 21202	I-95 WINDLASS MORAVIA INTERCHANGE RAMP "E" OVER RAMP "B", I-95 AND B℄O R.R. BORING DATA	DRAWN BY: M.S.F. DES. BY: C.D.P. TRACED BY: M.S.F. CHK. BY: F.F.M.
		SCALE: As Shown DATE:	F.A.P. NO. I-95-4(36)36 S.R.C. NO. BC 296-33-815 BALTO. CITY NO. 1995 SHEET NO. (92) S-29 of S-55

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	MD.	I-95-4(36)36	S-3	(92) S-55

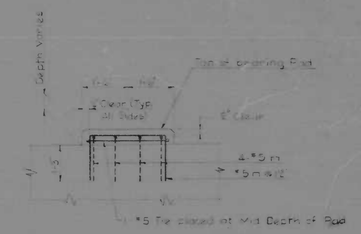


SECTION B-B
Scale: ¼"=1'-0"

Notes:
1. Reinforcing steel in parapet & Beams not shown.
2. Dimensions for overhangs are measured normal to ℄ Constr. Ramp 'A'.

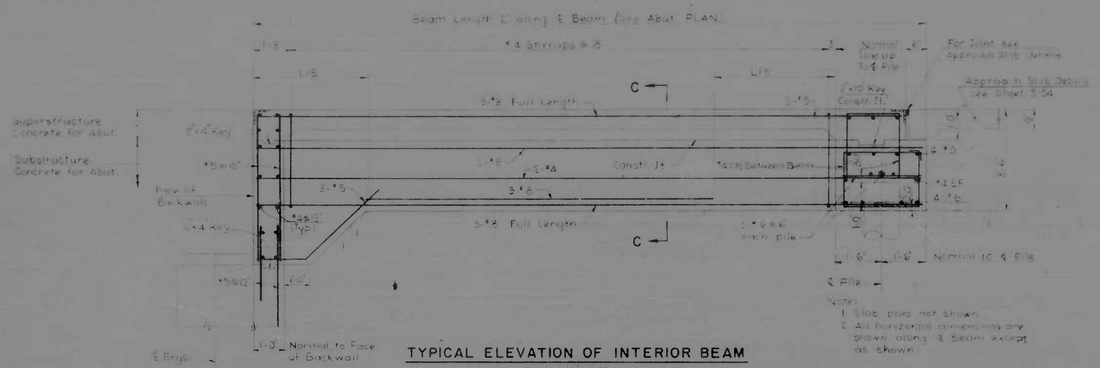


SECTION E-E
Scale: ¼"=1'-0"



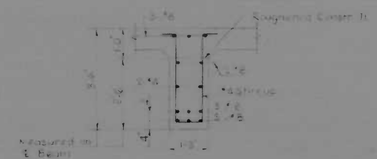
TYPICAL BEARING PAD DETAIL
Scale: ½"=1'-0"

Note: Space reinforcing to clear anchor bolts. Typical Bearing Pad Detail to have Sheet # or # more in depth.
The Contractor may pour monolithic if he elects to do so at his own expense.

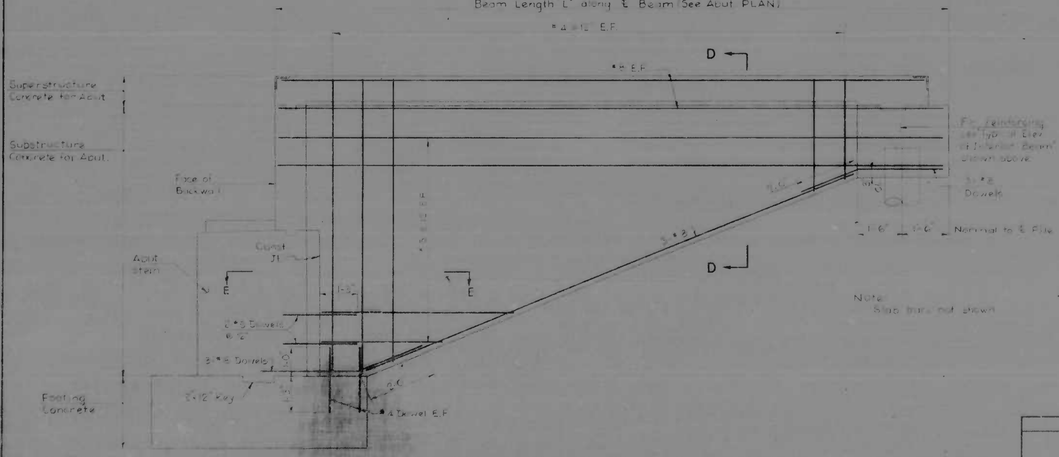


TYPICAL ELEVATION OF INTERIOR BEAM
Scale: ½"=1'-0"

Notes:
1. Slab ends not shown.
2. All horizontal dimensions are shown along ℄ Beam except as shown.



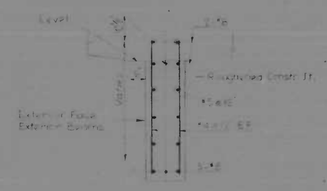
SECTION C-C
Scale: ½"=1'-0"



Note:
Reinforcing in Abutment see Section A-E Sheet S-3

TYPICAL ELEVATION OF EXTERIOR BEAM
Scale: ½"=1'-0"

Note:
Slab ends not shown

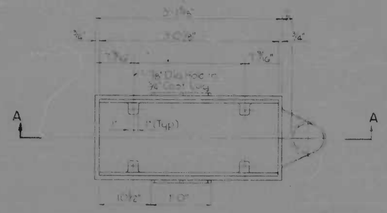


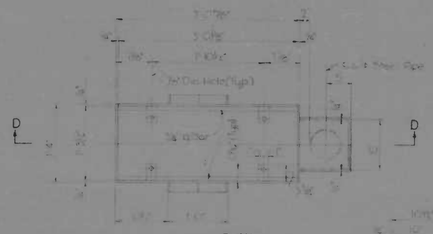
SECTION D-D
Scale: ½"=1'-0"

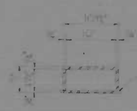
REFERENCES	SHEET NO.
North & South Abutment	S-3
Approach Slab Details	S-54

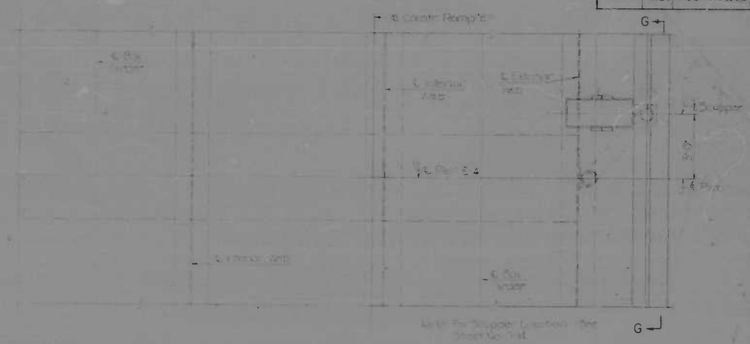
REVISIONS	CONSULTANT	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS &	STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY	
	KHOERLE, BENDER, STONE & ASSOC., INC. AND MATZ, FINLEY & ASSOC., INC. CONSULTING ENGINEERS 341 N. CALVERT STREET BALTIMORE, MARYLAND 21202	I-95-WINDLASS-MORAVIA INTERCHANGE RAMP "A" OVER B & O R.R. APPROACH SPAN DETAILS	DRAWN BY R.V.P. TRACED BY R.V.P.	DES. BY W.J.W. CHK. BY F.F.M.
		SCALE: As Shown DATE	F.A.P. NO. I-95-4(36)36 S.R.C. NO. BC 246 33-815 BALTO. CITY NO. 1995	SHEET NO. (92) S-3 OF S-55

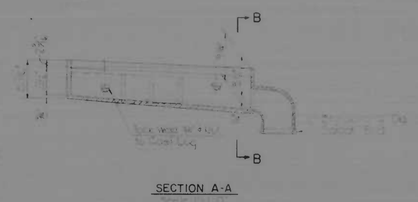
FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	MD.	I-95-4(36)36	S-30	(92) S-55

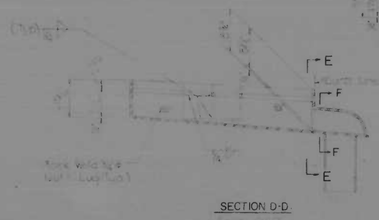


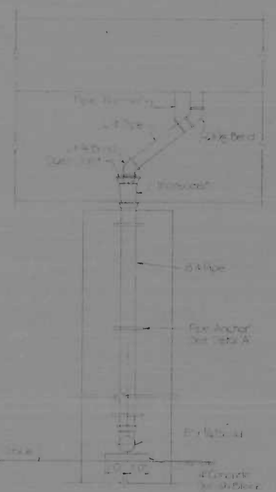


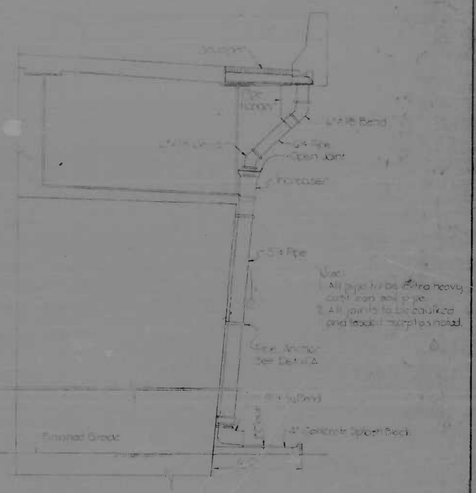


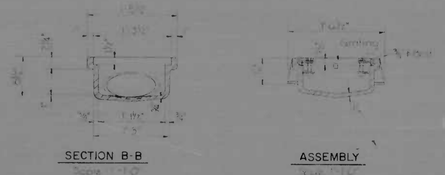




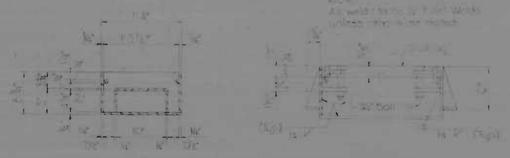




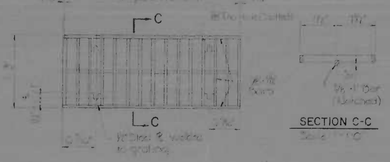




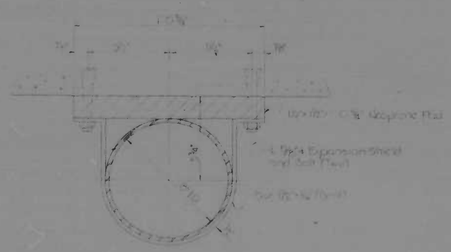
SCUPPER DETAILS - CAST IRON



ALTERNATE SCUPPER - FABRICATED STEEL



SCUPPER GRATE DETAILS



SCUPPER GRATE NOTES

Material: Gratings to be structural steel as per ASTM serial designation A 36, galvanized as per ASTM Designation A 123.
Grating Units: Units shall be welded type, grating (ASTM A 569).
Welding: Scupper grating to be Fillet Welded or Electric Pressure Welded.
Assembly: The frames and gratings to have the bearing surfaces finished, so that gratings shall fit the frames without wedging and shall be interchangeable.

SCUPPER NOTES

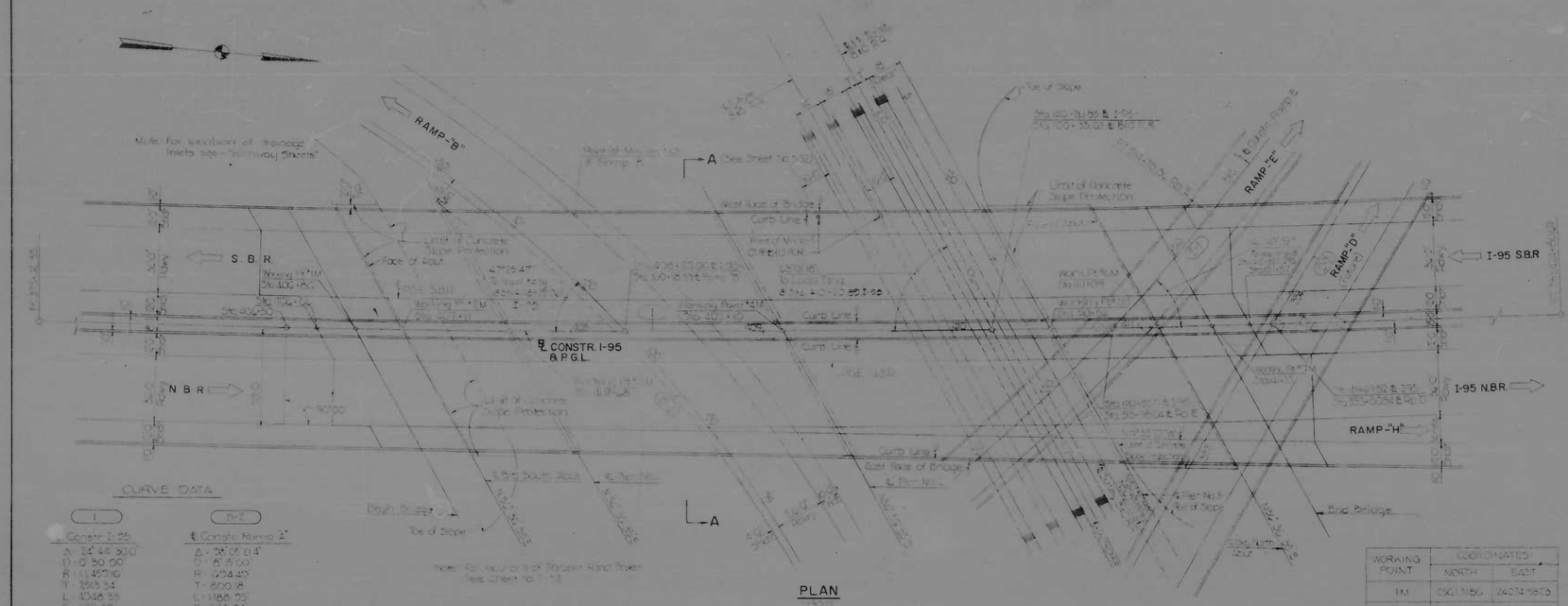
1. Cast Iron Scuppers to be gray cast iron as per ASTM serial designation A48 class No 30B.
2. Scuppers Steel Scuppers to be Fabricated of structural steel ASTM steel designation A 36.
3. All scupper steel shall be hot dipped galvanized.

REFERENCE — SHEET NO.
General Plan — S-4

REVISIONS	CONSULTANT	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS &	STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY
	KNOBLE, BENDER, STONE & ASSOC. AND MATZ, CHILDS & ASSOC., INC. CONSULTING ENGINEERS 341 N. CALVERT STREET BALTIMORE, MARYLAND 21	I-95 WINDLASS-MORAVIA INTERCHANGE RAMP "E" OVER RAMP "B", I-95 AND B&O R.R. SCUPPER DETAILS	DRAWN BY J.R.W. DES. BY M.S.C. TRACED BY J.R.W. CHK. BY F.F.M. F.A.P. NO. I-95-4(36)36 S.R.C. NO. BC 246-33-815 BALTO. CITY NO. 1995 SHEET NO. (92) S-30 OF S-55
		SCALE As Shown DATE	

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	MD.	I-95-4(36)136	S-31	S-55

LOCATION PLAN

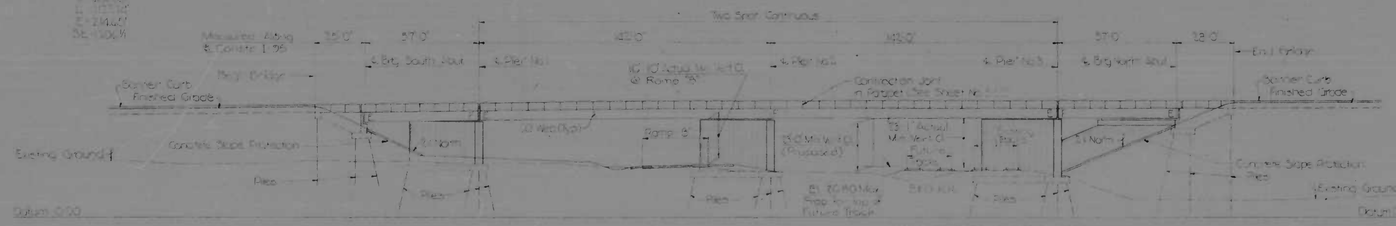


CURVE DATA

℄ Constr. Ramp B	℄ Constr. Ramp E
Δ = 24° 48' 30.0"	Δ = 25° 05' 01.4"
D = 0° 30' 00"	D = 1° 15' 11.00"
R = 11,459.16'	R = 1,604.42'
T = 2,818.34'	T = 800.18'
L = 4,968.38'	L = 1,188.09'
E = 270.38'	E = 349.04'
SE = R.C.	SE = 0.06%

℄ Constr. Ramp D	℄ Constr. Ramp E
Δ = 19°45'34.0"	Δ = 72°56'22.1"
D = 1°00'00"	D = 6°30'00"
R = 5,729.58'	R = 880.47'
T = 1,024.47'	L = 1,121.53'
L = 1,977.61'	E = 177.55'
E = 91.17'	E = 214.40'
SE = 0.00%	SE = 0.00%

WORING POINT	COORDINATES	
	NORTH	EAST
1M	2501.9150	240749830
2M	2566.4390	240774.4504
3M	2640.0135	240773177
4M	2754.5582	240859.0017
5M	2825.7255	240938.6354
6M	2861.3590	240961.8754
7M	3010.7280	240778.5007



ELEVATION

GENERAL NOTES

1. SPECIFICATIONS: Specifications and Similar to specifications dated March 1968 and Special Provisions for Materials and Construction A.A.S.H.O. Standard Specifications for Highway Bridges dated 1969 and its 1970 Interim Specification for design for Reinforced Concrete Design, for 3000 psi, except that the concrete in bridge deck slabs supported by steel beams has an f'c = 4,000 psi.
2. LOADING: H 20-44 or Tr 36000 # axle spaced four feet apart which shall govern with provisions for a future 2" wearing surface.
3. CONCRETE: Class 'A' Concrete shall have a minimum compressive strength of 3000 psi at 28 Days. See Special Provisions.
4. CHAMFER: All exposed corners of concrete shall be chamfered 3/4" by 45° with rolled chamfer strips except where indicated by the following notation on the plans: "Do not Chamfer".
5. REINFORCING STEEL: Reinforcing steel shall conform to ASTM Designation A-615 Grade 60. All splices shall be lapped a minimum of 24 bar diameters unless otherwise noted. Min. Cover for any bar shall be 2" unless otherwise noted.
6. STRUCTURAL STEEL: Structural Steel shall be ASTM Designation A-588. See Special Provisions.
7. FOUNDATION: Recommendations are given on individual foundations.
8. One coat bituminous coating shall be applied to all pier cap, caps & pedestals, abutment seats & pedestals and abutment backwalls.

REFERENCES	SHEET NO.
Section and Details	S-32
South Abutment - S.B.R.	S-33
South Abutment - N.B.R.	S-34
North Abutment - S.B.R.	S-35
North Abutment - N.B.R.	S-36
Approach Slab Details	S-37
Pier No. 1 - S.B.R.	S-38
Pier No.1 - N.B.R.	S-39
Pier No.2 - S.B.R.	S-40
Pier No.2 - N.B.R.	S-41
Pier No.3 - S.B.R.	S-42
Pier No.3 - N.B.R.	S-43
Framing Plan and Girder Elevation	S-44
Typical Deck Sections - S.B.R.	S-45
Typical Deck Sections - N.B.R.	S-46
Camber Tables and Diagrams - S.B.R.	S-47
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S.B.R. Superstructure Elevation	S-49
N.B.R. Superstructure Elevation	S-50
Railing Details	S-51
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Railing Data	S-53
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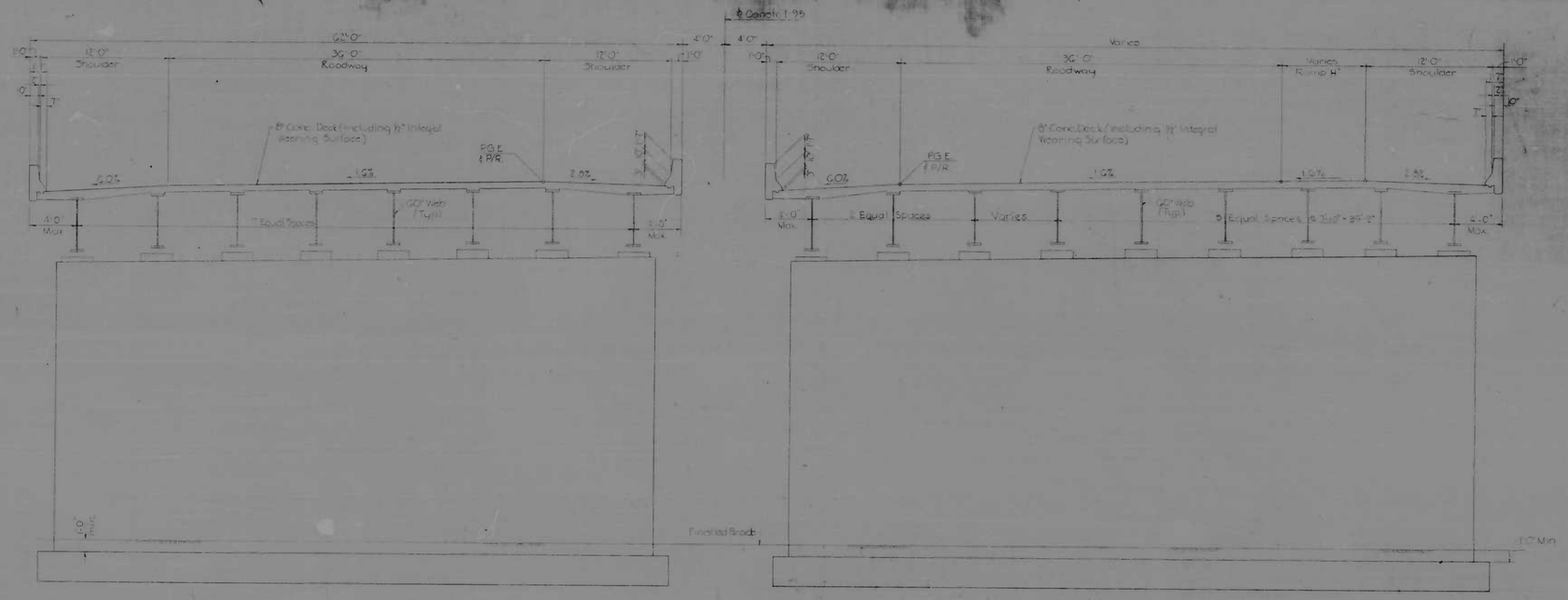
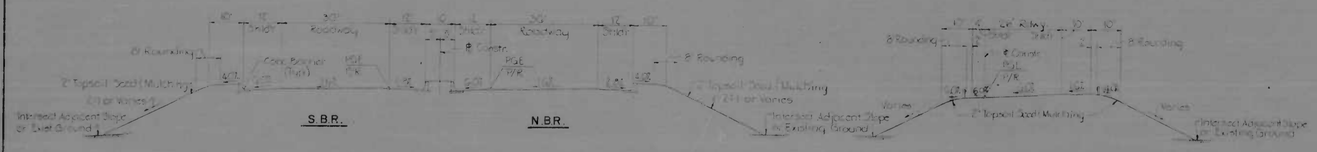
REVISIONS	CONSULTANT	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS & STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY	
	KNOERLE, BEHOER, STONE & ASSOC., INC. AND MATZ, CHILDS & ASSOC., INC. CONSULTING ENGINEERS 341 N. CALVERT STREET BALTIMORE, MARYLAND 21202	I-95 WINDLASS-MORAVIA INTERCHANGE I-95 OVER RAMP "B" & B&O R.R. GENERAL PLAN AND ELEVATION	DRAWN BY L.M.W. & J.R.H. TRACED BY L.M.W. & J.R.H. DES. BY M.S.C. CHK. BY F.F.M.
		SCALE As Shown DATE	F.A.P. NO. I-95-4(36)136 S.R.C. NO. BC 246 33 815 BALTO. CITY NO. 1995 SHEET NO. (92) S-31 OF S-55

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	
2	MD.	I-95-4(36)36	S-22



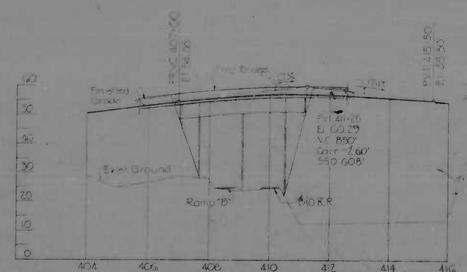
SECTION A-A
Scale: 3/16"=1'-0"

Notes:
1. For pier girder spacing, see Sheets No. 15 and 16.
2. Piers are supported on piles.

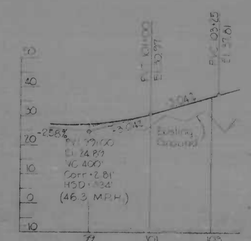


APPROACH SECTION - INTERSTATE ROUTE 95
STA. 406+50.00
Scale: 1"=20'-0"

TYPICAL SECTION RAMP "B"
STA. 94+66.61 TO STA. 105+39.75
Scale: 1"=20'-0"



PROFILE INTERSTATE ROUTE 95
Hor. 1"=100'
Vert. 1"=20'

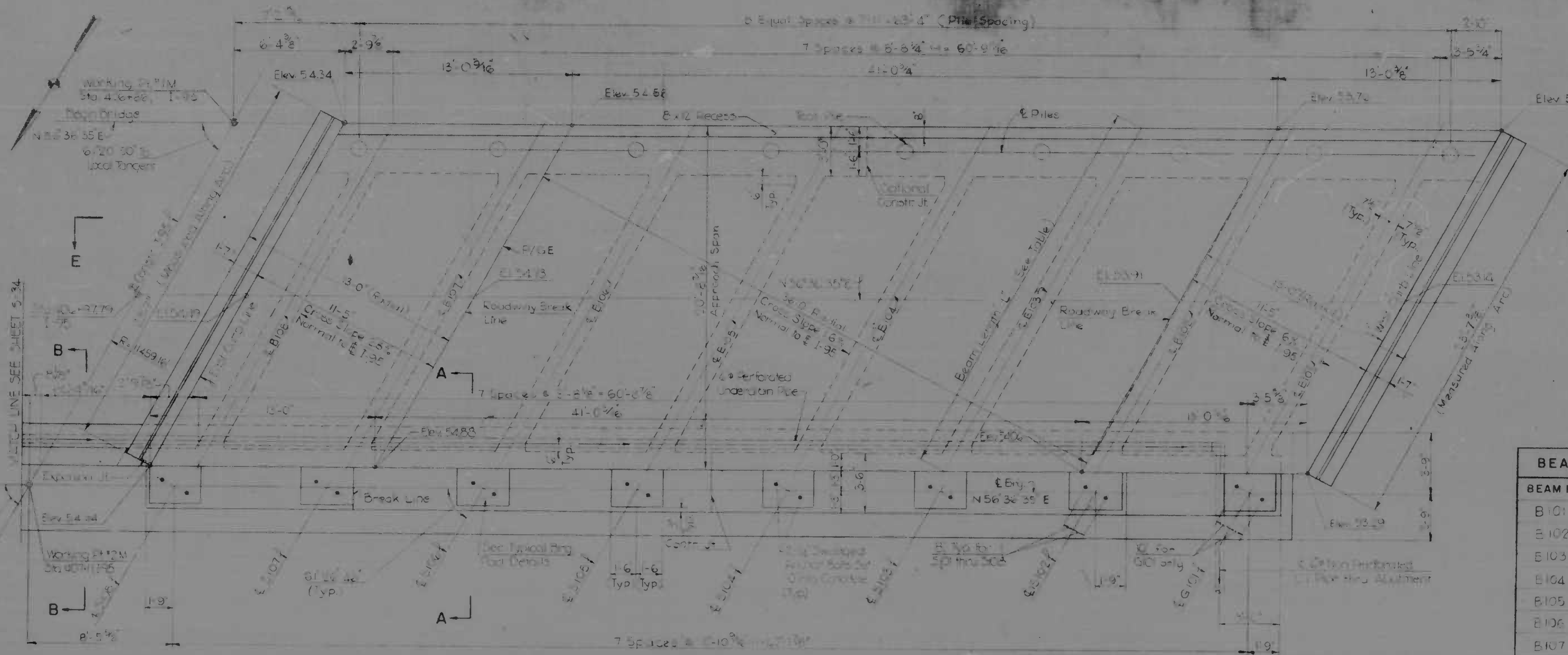


PROFILE RAMP "B"
Hor. 1"=100'
Vert. 1"=20'

REFERENCE	SHEET NO.
Section A-A	S-31
Typical Deck Sections S.B.R.	S-45
Typical Deck Sections N.B.R.	S-46
Profile Ramp 'B'	S-14
Typical Section Ramp 'B'	S-15

REVISIONS	CONSULTANT	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS & STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY	
	[illegible] AND KATZ GIBBS & ASSOC., INC. CONSULTING ENGINEERS 341 N. CALVERT STREET BALTIMORE, MARYLAND 21202	I-95 WINDLASS MORAVIA INTERCHANGE I-95 OVER RAMP "B" & B&O R.R. SECTIONS AND DETAILS	DRAWN BY J.R.W. DES. BY M.S.C. TRACED BY J.R.W. CHK. BY F.F.M. F.A.P. NO. I-95-4(36)36 SHEET NO. (92) S.R.C. NO. BC246-35-815 BALTO. CITY NO. 1995 S-32 OF S-55
		SCALE: As Shown DATE: July 10, 1971	

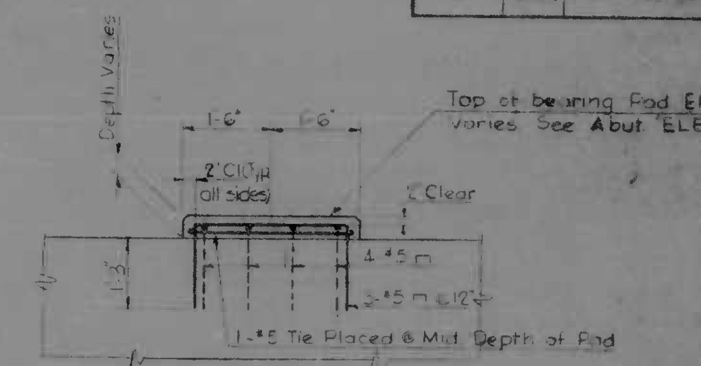
FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.
2	MD.	I-95-4(36)36	S-33



Note: All Elevations Shown on "PLAN" are deck Elevations.

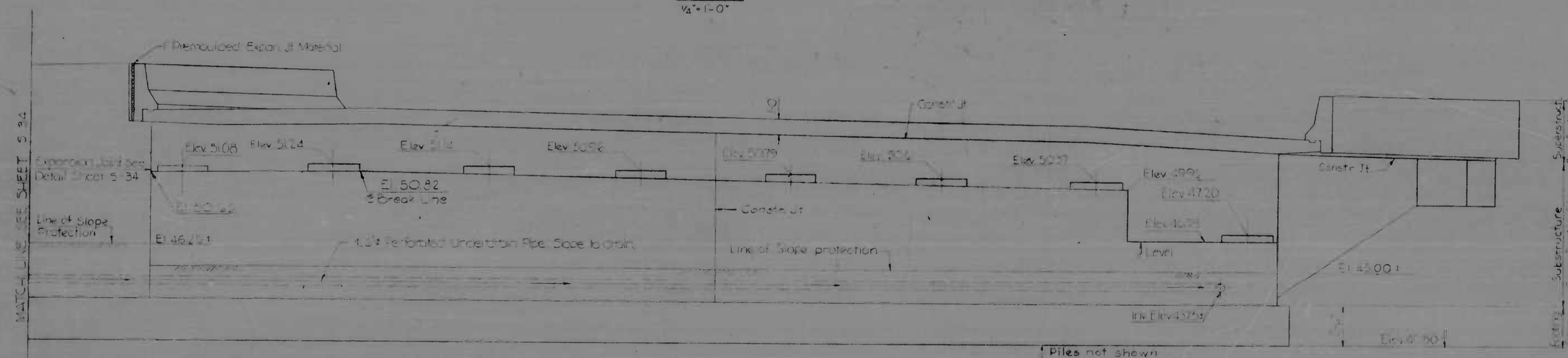
PLAN
¼" = 1'-0"

BEAM LENGTH	
BEAM No.	LENGTH L
B101	23'-7⅜"
B102	23'-7 5/16"
B103	23'-7¼"
B104	23'-7 3/16"
B105	23'-7⅛"
B106	23'-7⅛"
B107	23'-7 1/16"
B108	23'-7"



TYPICAL BEARING PAD DETAIL
½" = 1'-0"

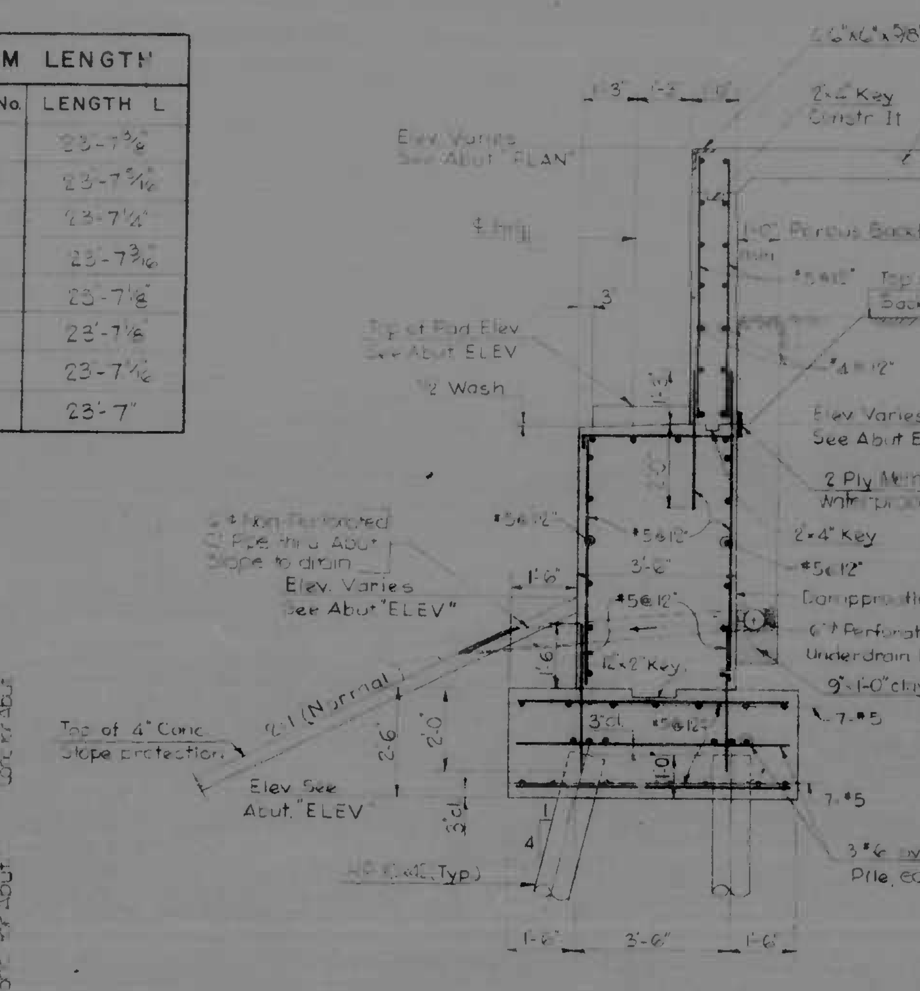
Note:
1. Space reinforcing to clear Anchor bolts. Typical Bearing Pad detail to have steel if 5" or more in depth.
2. Contractor may pour the pads monolithic with the substructure if he elects to do so.

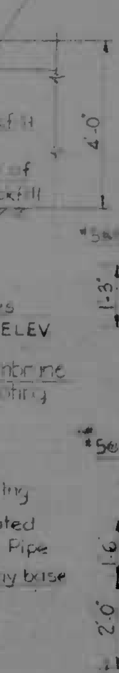


Piles not shown
See "FOOTING PLAN" below

Note: Rear row Piles of Approach Span not shown. See "PLAN" above.

ELEVATION
¼" = 1'-0"





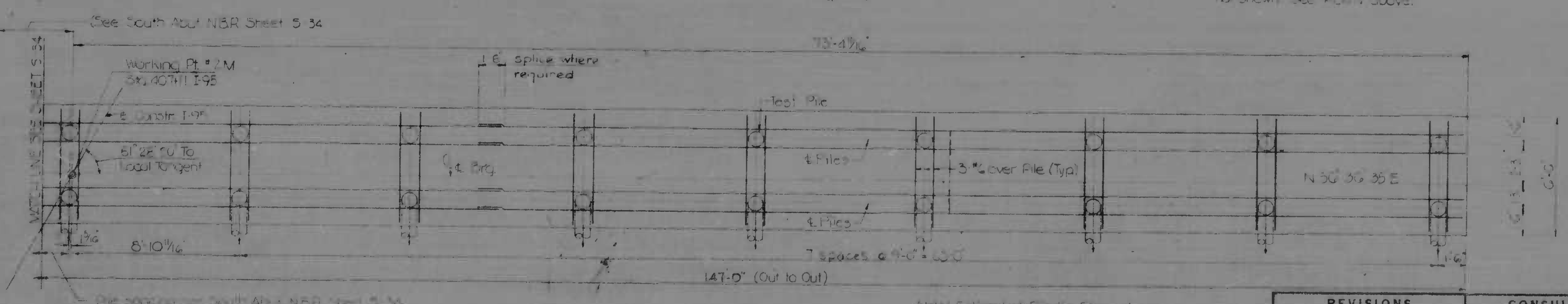
REAR FACE REINF.

SECTION A-A
⅜" = 1'-0"

Note:
All Piles shall be 14" ⌀ Monotube Gauge 5 cast-in-place Concrete Piles driven to a minimum safe bearing value of 60 tons or to practical refusal.

REFERENCES:

	SHEET NO.
South Abutment - N.B.R.	S-34
Expansion Joint for Backwall	S-34
Contraction Joint Detail	S-36
Approach Span Details	S-37
Section E-E	S-37
Substructure Details	S-54
Section B-B	S-34



Note: Estimated Pile tip Elev. = -4

FOOTING PLAN
¼" = 1'-0"

LEGEND
○ Indicates Plumb Pile
○ Indicates Batter Pile & Direction of Batter

REVISIONS	CONSULTANT
	KNOERLE, BENDER, STONE & ASSOC., INC. AND MATZ, CHILDS & ASSOC., INC. CONSULTING ENGINEERS 341 N. CALVERT STREET BALTIMORE, MARYLAND 21202

CITY OF BALTIMORE
DEPARTMENT OF PUBLIC WORKS
&
STATE ROADS COMMISSION OF MARYLAND
INTERSTATE DIVISION FOR BALTIMORE CITY

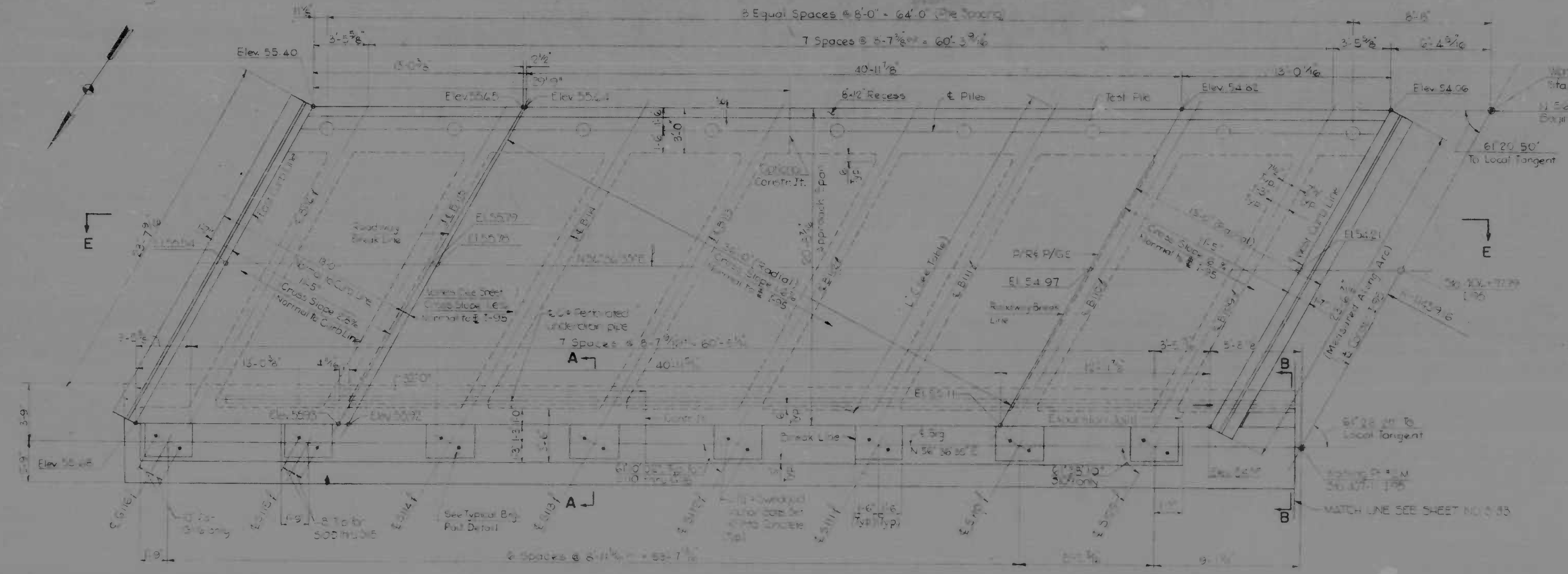
I-95-WINDLASS-MORAVIA INTERCHANGE
I-95 OVER RAMP "B" & B&O R.R.
SOUTH ABUTMENT - S.B.R.

SCALE: As Shown DATE: June 10, 1971

DRAWN BY R.V.P. DES. BY I.H.
TRACED BY R.V.P. CHK. BY F.F.M.
F.A.P. NO. I-95-4(36)36
S.R.C. NO. BC 246-33-815
BALTO. CITY NO. 1995

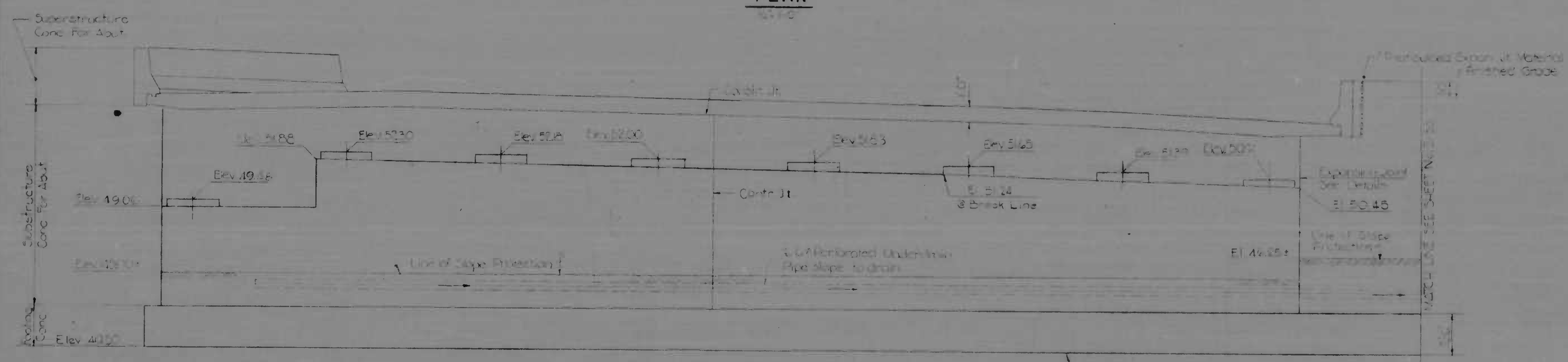
SHEET NO. (92) S-33 of S-55

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	MD.	I-95-4(36)36	S-34	(92) S-55



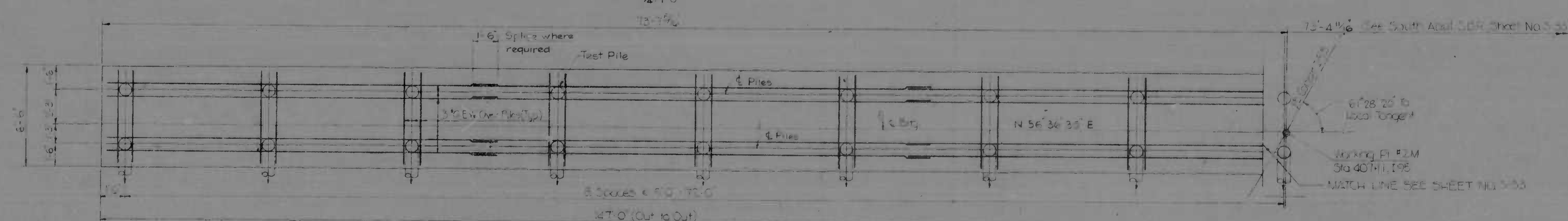
PLAN

1/8" = 1'-0"



ELEVATION

1/4" = 1'-0"



FOOTING PLAN

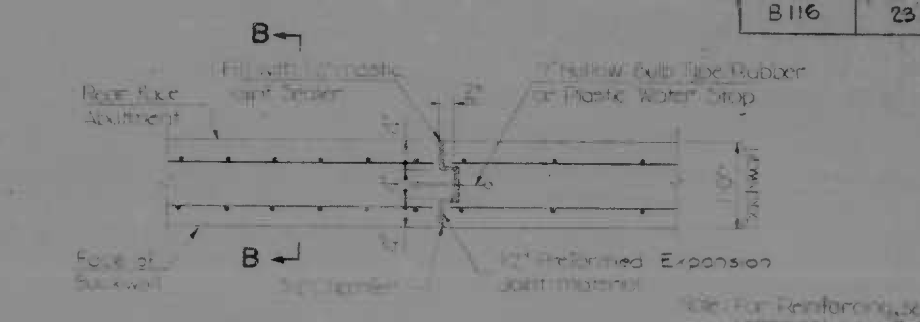
1/4" = 1'-0"

Note: Estimated tip Elev. -4

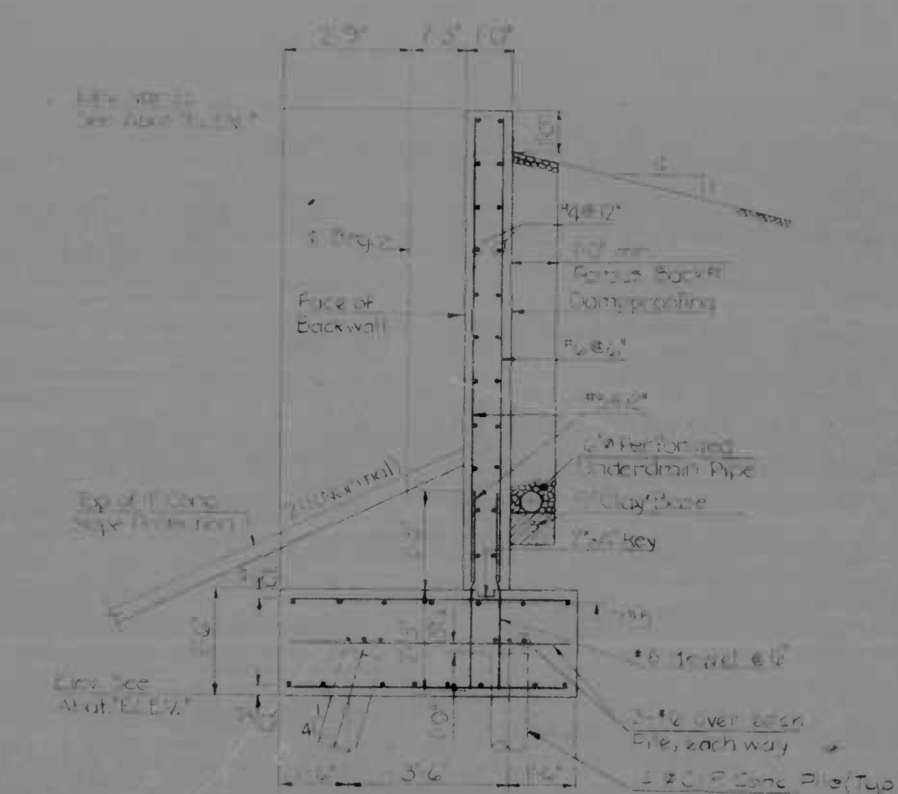
LEGEND

- ○ Indicates Plumb Pile
- ⊖ Indicates Batter Pile | Direction of Batter

BEAM LENGTH	
BEAM No.	LENGTH L
B109	23'-6 7/8"
B110	23'-7"
B111	23'-7 1/16"
B112	23'-7 3/16"
B113	23'-7 1/4"
B114	23'-7 3/8"
B115	23'-7 1/2"
B116	23'-7 9/16"



EXPANSION JOINT FOR BACKWALL



SECTION B-B

Scale: 3/8" = 1'-0"

NOTE:

All Piles shall be 14" ⌀ Monotube Gauge 5 cast-in-place Concrete Piles driven to a minimum safe bearing value of 60 tons or to practical refusal.

REFERENCE	SHEET No.
South Abutment - SBR	S-33
Approach Span Details	S-37
Section E-E	S-37
Substructure Details	S-54
Contraction Joint Detail	S-36
Section A-A	S-39

REVISIONS	CONSULTANT
	[illegible], STONE & ASSOC., INC. AND KATZ, [illegible] & ASSOC., INC. CONSULTING ENGINEERS 341 N. CALVERT STREET BALTIMORE, MARYLAND 21202

CITY OF BALTIMORE
DEPARTMENT OF PUBLIC WORKS
&
STATE ROADS COMMISSION OF MARYLAND
INTERSTATE DIVISION FOR BALTIMORE CITY

I-95-WINDLASS-MORAVIA INTERCHANGE
I-95 OVER RAMP "B" & B&O R.R.
SOUTH ABUTMENT N.B.R.

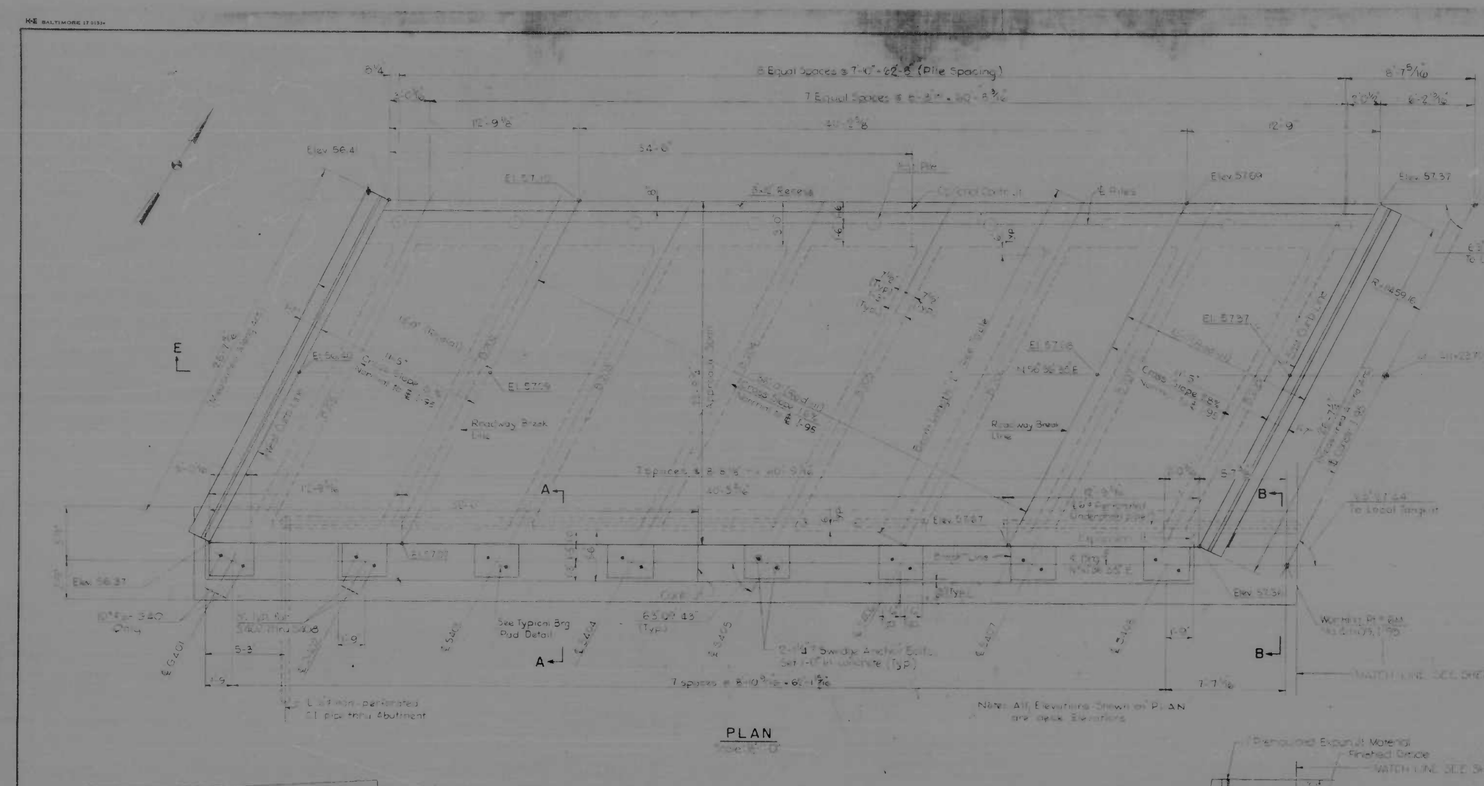
SCALE: As Shown DATE: June 10, 1971

DRAWN BY R.V.P. DES. BY I.H.
TRACED BY R.V.P. CHK. BY F.F.M.
F.A.P. NO. I-95-4(36)36
S.R.C. NO. BC 246-33-815
BALTO. CITY NO. 1995

SHEET NO. (92) S-34 OF S-55

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	MD.	I-95-4(36)36	S-35	(92) S-55

BEAM LENGTH	
BEAM No.	LENGTH L
B 201	26'-7 9/16"
B 202	26'-7 3/8"
B 203	26'-7 3/16"
B 204	26'-7 1/2"
B 205	26'-7 5/16"
B 206	26'-7 1/8"
B 207	26'-7 3/16"
B 208	26'-7 1/4"



PLAN

RAMP "E"- PIER E-3 FOOTING

ELEVATION

FOOTING PLAN

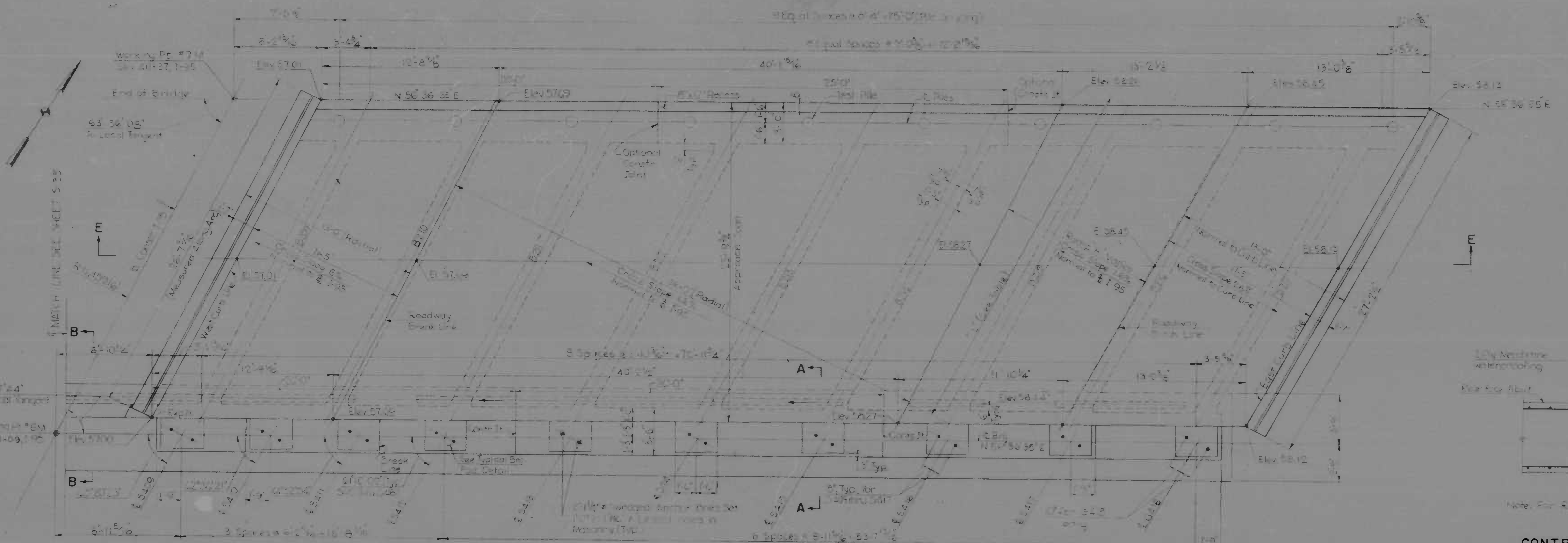
NOTE:
All Piles shall be 14 # Monotube Gauge 5 cast-in-place Concrete Piles driven to a minimum safe bearing value of 20 tons or to practical refusal.

REFERENCES	SHEET NO.
Contraction Joint Detail	S-36
Expansion Joint for Backwall	S-34
North Abutment N.B.R.	S-30
Approach Slab Details	S-37
Section C-C	S-31
Superstructure Details	S-34
Section A-A	S-35
Section B-B	S-34
Pier E-3 Footing	S-0

LEGEND
- ⊙ Indicates Plumb Pile
- ⊙ Indicates Batter Pile and directions of Batter

REVISIONS	CONSULTANT	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS & STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY	
	KNOCKLE, BENDER, STONE & ASSOC., INC. AND MATZ, CHILDS & ASSOC., INC. CONSULTING ENGINEERS 341 N. CALVERT STREET BALTIMORE, MARYLAND 21202	I-95-WINDLASS-MORAVIA INTERCHANGE I-95 OVER RAMP "B" & B&O R.R. NORTH ABUTMENT S.B.R.	DRAWN BY R.V.P. & J.R.H. DES. BY I.H. TRACED BY R.V.P. & J.R.H. CHK. BY F.F.M. F.A.P. NO. I-95-4(36)36 S.R.C. NO. BC 246-33-815 BALTO. CITY NO. 1995 SCALE: As Shown DATE: April 9, 1971 SHEET NO. (92) S-35 of S-55

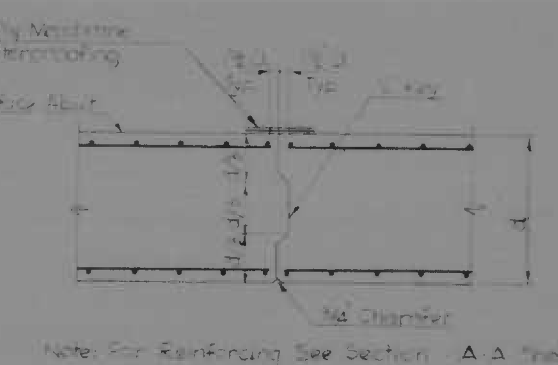
FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	MD.	I-95-4(36)36	S-36	(92) S-55



PLAN

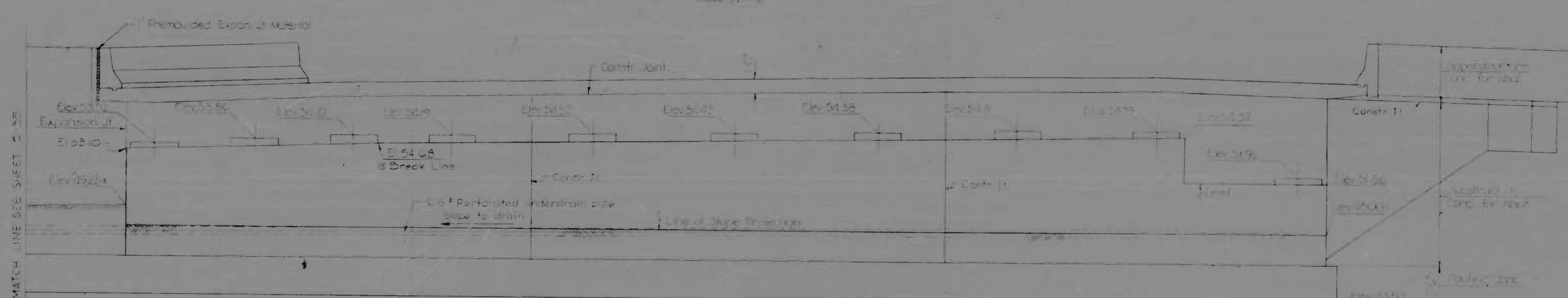
Scale 1/8"=1'-0"

BEAM LENGTH	
BEAM No.	LENGTH L
B209	26'-7 5/16"
B210	26'-8"
B211	26'-8 7/8"
B212	26'-9 3/4"
B213	26'-10 5/8"
B214	26'-11 1/2"
B215	27'-0 7/16"
B216	27'-1 5/16"
B217	27'-2 1/4"



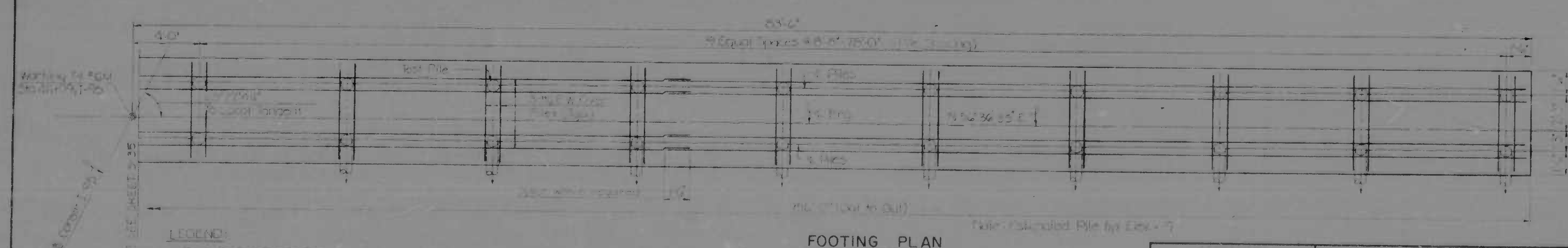
CONTRACTION JOINT DETAIL

Not to Scale



ELEVATION

Scale 1/4"=1'-0"



FOOTING PLAN

Scale 1/4"=1'-0"

LEGEND:
- ○ Indicates Plumb Pile
- ⊡ Indicates Batter Pile and direction of pile

NOTE:
All Piles shall be 14" Monotube Gauge 5 cast-in-place Concrete Piles driven to a minimum safe bearing value of 90 tons or to practical refusal.

REFERENCES	SHEET NO.
Expansion ...	S-34
North Abutment - S.B.R.	S-35
Section A-A	S-33
Approach Span Details	S-37
Section E-E	S-37
Substructure Details	S-54
Section B-B	S-54

REVISIONS	CONSULTANT
	KNOERLE, BENDER, STONE & ASSOC., INC. AND MATZ, CHILDS & ASSOC., INC. CONSULTING ENGINEERS 341 N. CALVERT STREET BALTIMORE, MARYLAND 21202

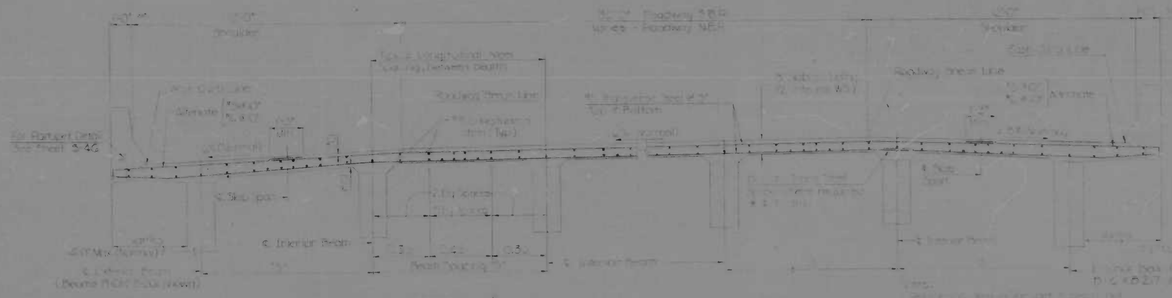
CITY OF BALTIMORE
DEPARTMENT OF PUBLIC WORKS & STATE ROADS COMMISSION OF MARYLAND
INTERSTATE DIVISION FOR BALTIMORE CITY

I-95-WINDLASS-MORAVIA INTERCHANGE
I-95 OVER RAMP "B" & B&O R.R.
NORTH ABUTMENT - N.B.R.

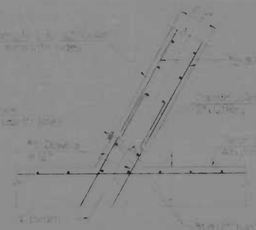
SCALE: As Shown DATE: June 10, 1971

DRAWN BY R.V.P. DES. BY I.H.
TRACED BY R.V.P. CHK. BY F.F.M.
F.A.P. NO. I-95-4(36)36
S.R.C. NO. BC 246-33-815
BALTO. CITY NO. 1995
SHEET NO. (92) S-36 OF S-55

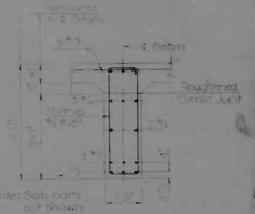
FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	MD	I-95 4(36)36		(92)
			S-37	S-55



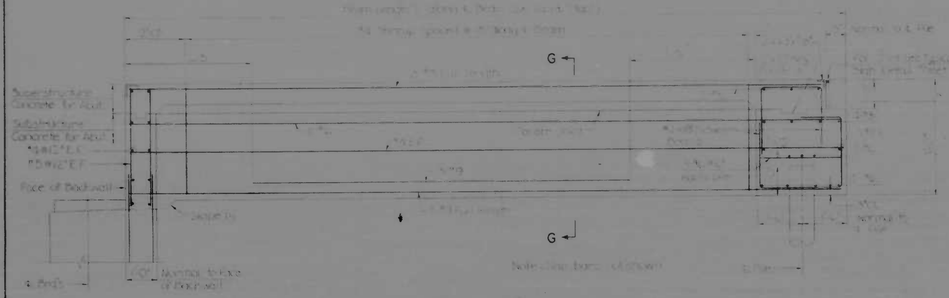
SECTION E-E



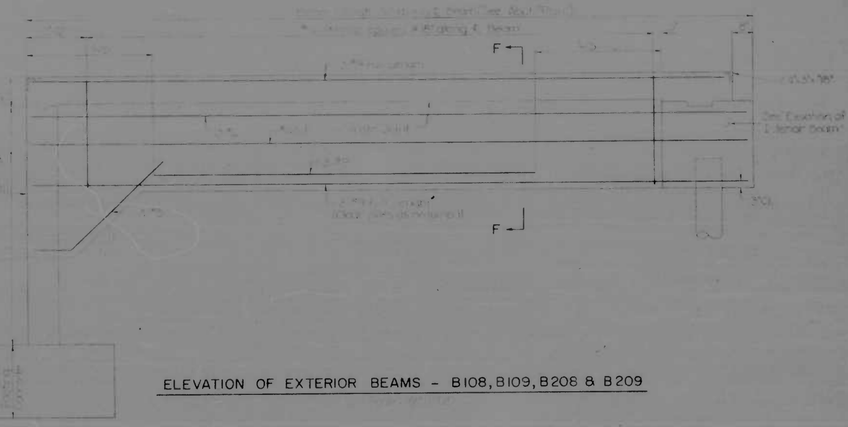
SECTION D-D



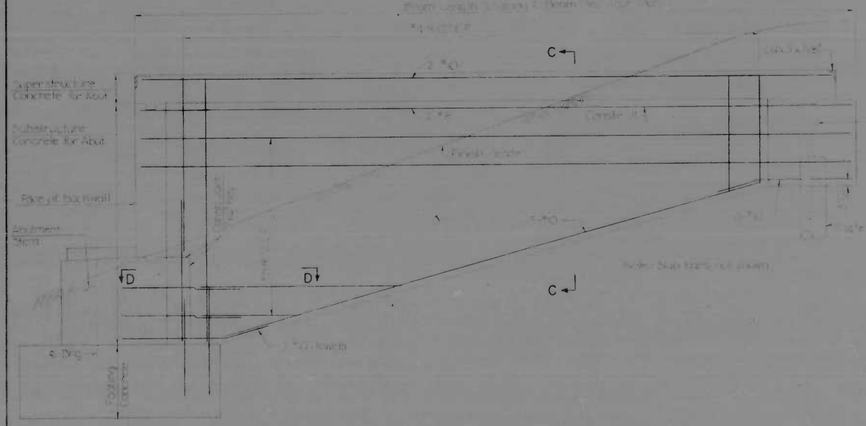
SECTION G-G



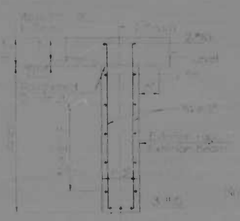
ELEVATION OF INTERIOR BEAM



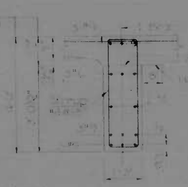
ELEVATION OF EXTERIOR BEAMS - B108, B109, B208 & B209



ELEVATION OF EXTERIOR BEAMS - B101, B116, B201, & B217



SECTION C-C



SECTION F-F

REVISIONS	CONSULTANT	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS &	STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY	
	KNOERLE, BENDER, STONE & ASSOC., INC. AND MATZ, CHILDS & ASSOC., INC. CONSULTING ENGINEERS 341 N. CALVERT STREET BALTIMORE, MARYLAND 21202	I-95-WINDLASS-MORAVIA INTERCHANGE I-95 OVER RAMP "B" & B&O R.R APPROACH SPAN DETAILS	DRAWN BY J.R.H. TRACED BY J.R.H.	DES. BY M.S.C. CHK. BY F.F.M.
		SCALE As Shown DATE	F.A.P. NO. I-95-4(36)36 S.R.C. NO. BC 246-33-915 BALTO. CITY NO. 1095	SHEET NO. (92) S-37 of S-55

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	MD.	I-95-4(36)36	S-38	92 S-55

PLAN

SECTION A-A

SECTION B-B

ELEVATION

DETAIL "A"

SECTION C-C

SECTION F-F

FOOTING PLAN

LEGEND
- Indicates Plumb Pile
- Indicates Batter Pile and Direction of Batter

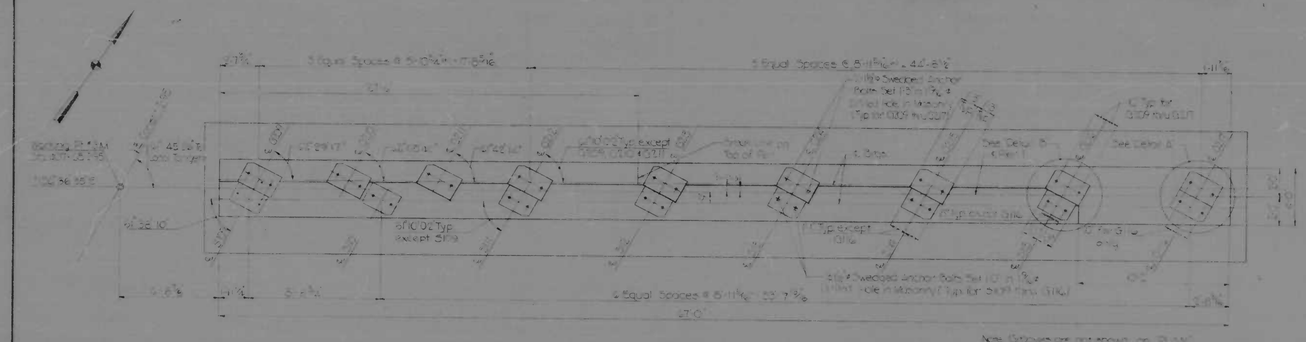
Notes: Reinforcing shown is for Bearing Pads dia. mark in depth.
2. Anchor bolts are not shown in Section F-F.
3. Contractor may pour the pads monolithic with substructure if he elects to do so.

NOTICE: All piles shall be driven to a Minimum Gauge & Last-in-place Complete Piles driven to a minimum safe bearing value of 60 tons or to practical refusal.

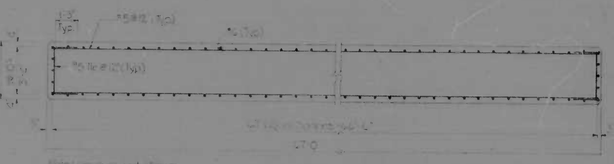
REFERENCE	SHEET NO.
Location Plan	S-39
Framing Plan	S-44
Girder Detail	S-41

REVISIONS	CONSULTANT	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS & STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY	
	KNOCHEL, BRUNER, STONE & ASSOC., INC. AND KATZ, SHILDS & ASSOC., INC. CONSULTING ENGINEERS 341 N. CALVERT STREET BALTIMORE, MARYLAND 21202	I-95-WINDLASS-MORAVIA INTERCHANGE I-95 OVER RAMP "B" & B&O R.R PIER NO. 1 S.B.R.	DRAWN BY L.M.W. DES BY C.Y.T. TRACED BY L.M.W. CHK BY F.F.M. F.A.P. NO. I-95-4(36)36 SHEET NO. (92) S-38 OF S-55 S.R.C. NO. BC 246-33-815 BALTO. CITY NO. 1995
		SCALE: As Shown DATE: June 15, 1971	

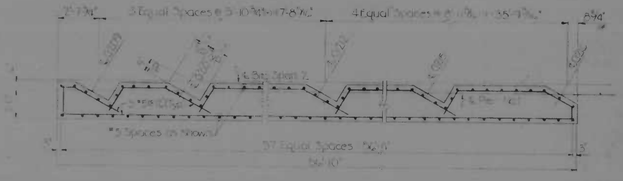
FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	
2	MD	I-95-4(36)36	S-38	(92) S-55



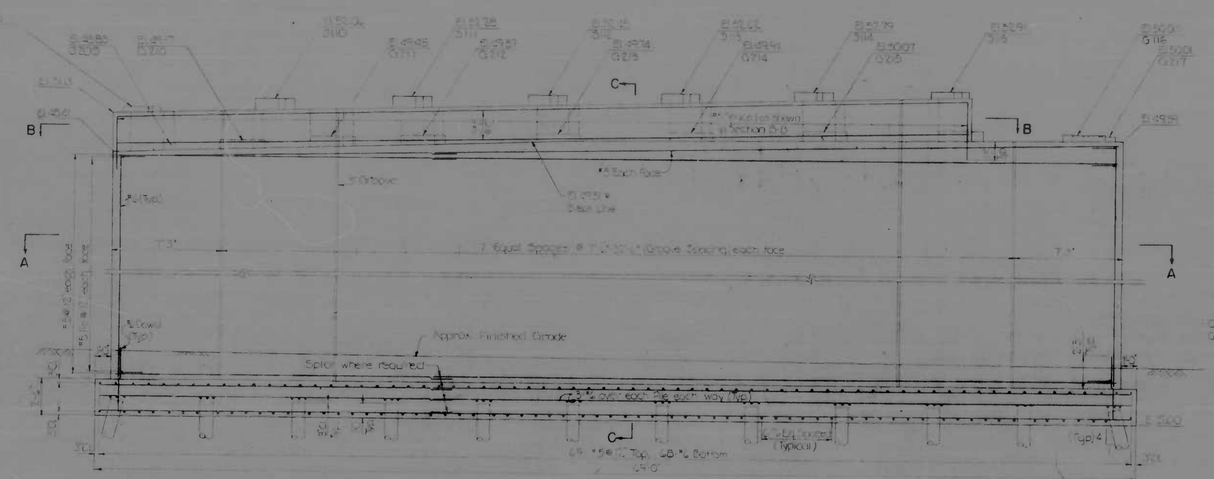
PLAN
Scale 1/4"=1'-0"



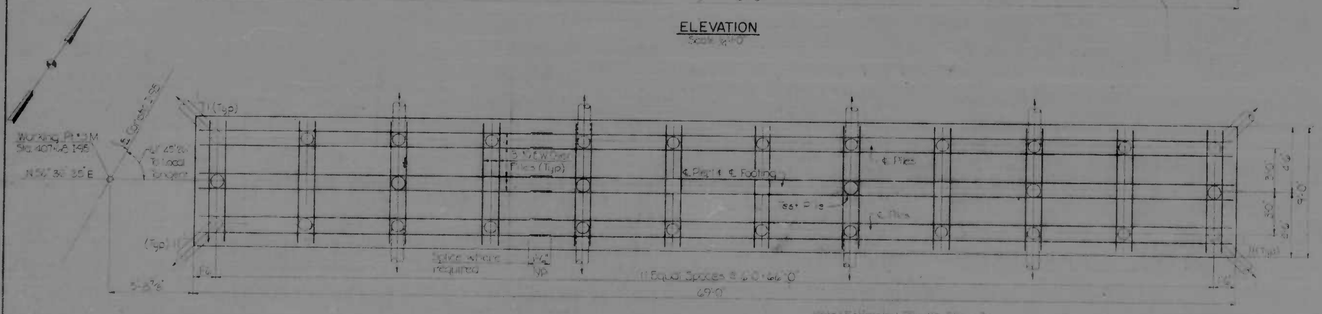
SECTION A-A
Scale 1/2"=1'-0"



SECTION B-B
Scale 1/2"=1'-0"

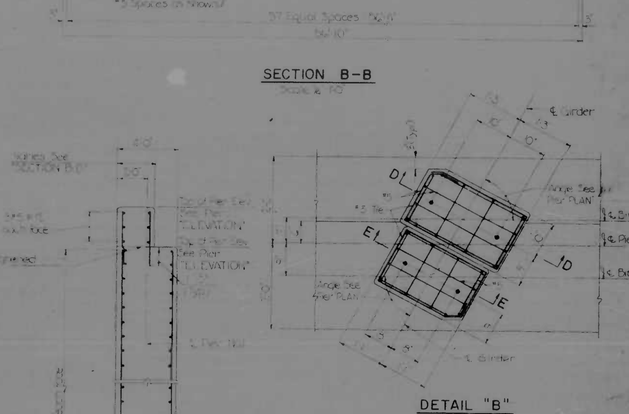


ELEVATION
Scale 1/4"=1'-0"



FOOTING PLAN
Scale 1/4"=1'-0"

LEGEND
○ Indicates Plumb Pile
○ Indicates Batter Pile and Direction of Batter



DETAIL "B"
Scale 1/2"=1'-0"

SECTION C-C
Scale 1/2"=1'-0"

SECTION D-D SHOWN
SECTION E-E SIMILAR
Scale 1/2"=1'-0"

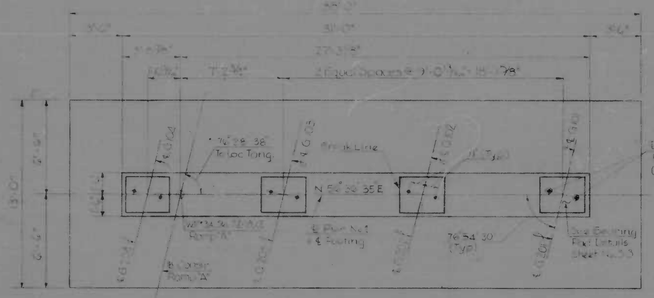
Notes
1. Reinforcing shown is for Bearing Pads 4 or more in depth.
2. Anchor bolts are not shown in Section D-D.
3. Contractor may pour the pads monolithic if he elects to do so.

INDEX OF SHEETS	SHEET NO.
Detail "A"	S-38
Footing Plan	S-39
Groove Detail	S-41

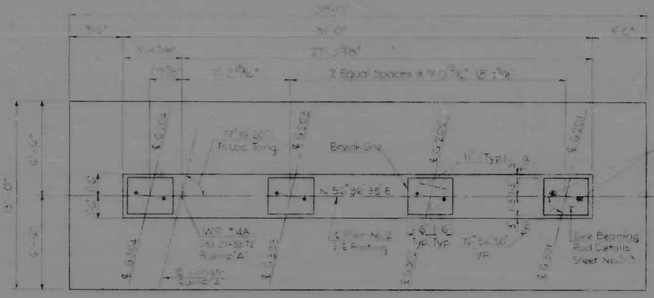
NOTES:
All pile shall be Mid-Atlantic Gauge 5 point-in-place Concrete Piles (refer to a minimum axial bearing value of 60 tons or as practical method).

REVISIONS	CONSULTANT	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS &	STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY
	KNOBLE, BISHOP, STONE & ASSOC., INC. AND MATZ, CHILDS & ASSOC., INC. CONSULTING ENGINEERS 341 N. CALVERT STREET BALTIMORE, MARYLAND 21202	I-95-WINDLASS-MORAVIA INTERCHANGE I-95 OVER RAMP "B" & B&O R.R. PIER NO 1 N&BR.	DRAWN BY L.M.W. DES. BY K.S.J. TRACED BY L.M.W. CHK. BY F.F.M.
		SCALE: As Shown DATE: MAY 13, 1971	F.A.P. NO. I-95-4(36)36 S.P.C. NO. BC 246-33-815 BALTO. CITY NO. 1995 SHEET NO. (92) S-39 OF S-55

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	MD.	I-95-4(36)36	S-4	(32) S-55

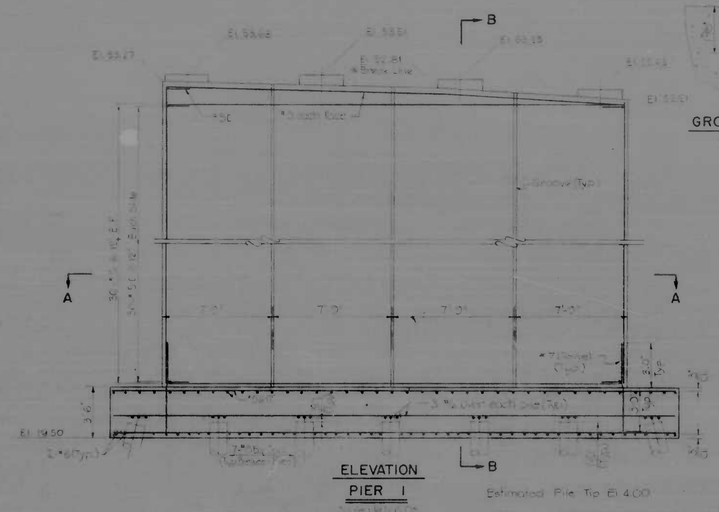


PLAN

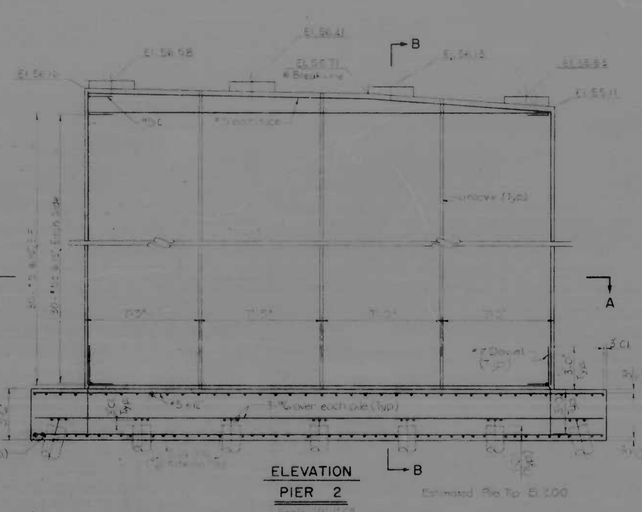


PLAN

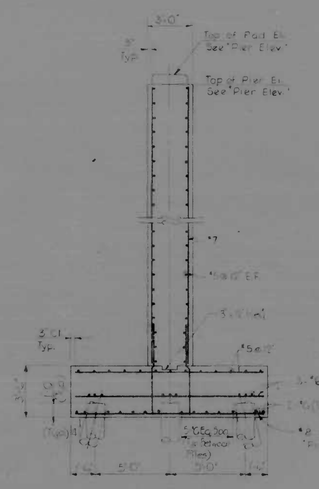
GROOVE DETAIL



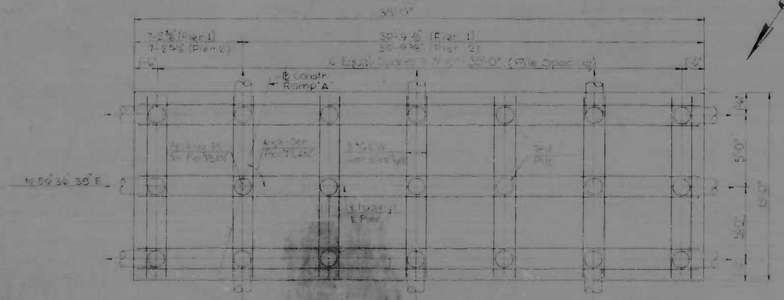
ELEVATION
PIER 1



ELEVATION
PIER 2



SECTION B-B



FOOTING PLAN — PIER 1 & 2

LEGEND
○ Indicates Plumb Pile
⊙ Indicates Batter Pile and direction of Batter

SECTION A-A

Note
All Piles shall be of a Monotube, Image 3 cast-in-place Concrete Pile, complete with a driven point, capable of developing a minimum of 50 tons or its greatest resistance.

REFERENCE — SHEET No.
Typical Brg. Pad Details — 53
Framing Plan — 55

REVISIONS	CONSULTANT	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS &	STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY
	KNOERLE, BENDER, STONE & ASSOC., INC. AND MATZ, CONLON & ASSOC., INC. CONSULTING ENGINEERS 341 N. CALVERT STREET BALTIMORE, MARYLAND 21202	I-95-WINDLASS-MORAVIA INTERCHANGE RAMP A OVER B&O R.R. PIER Nos. 1 & 2	DRAWN BY E.W. DES. BY W.J.W. TRACED BY E.W. CHK. BY F.F.M.
		SCALE: As Shown DATE	F.A.P. NO. I-95-4(36)36 S.R.C. NO. BC 246-33-815 BALTO. CITY NO. 1995 SHEET NO. (92) S-4 of S-55

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	MD.	95-4(36)36	S-40	92

PLAN

SECTION A-A

DETAIL "A"

DETAIL "C"

ELEVATION

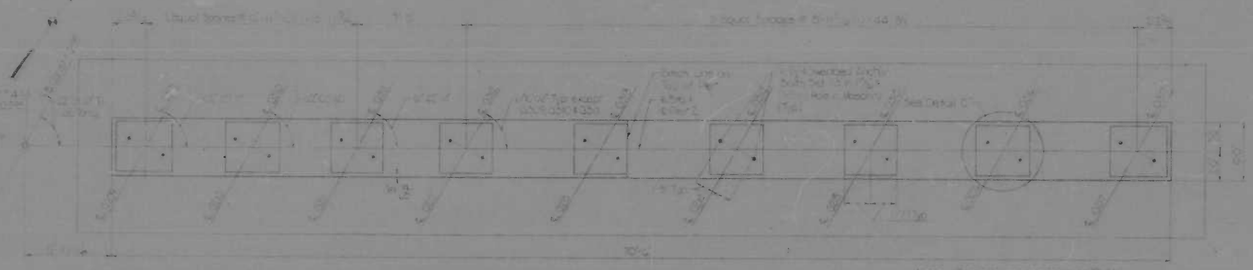
SECTION B-B

SECTION G-G

FOOTING PLAN

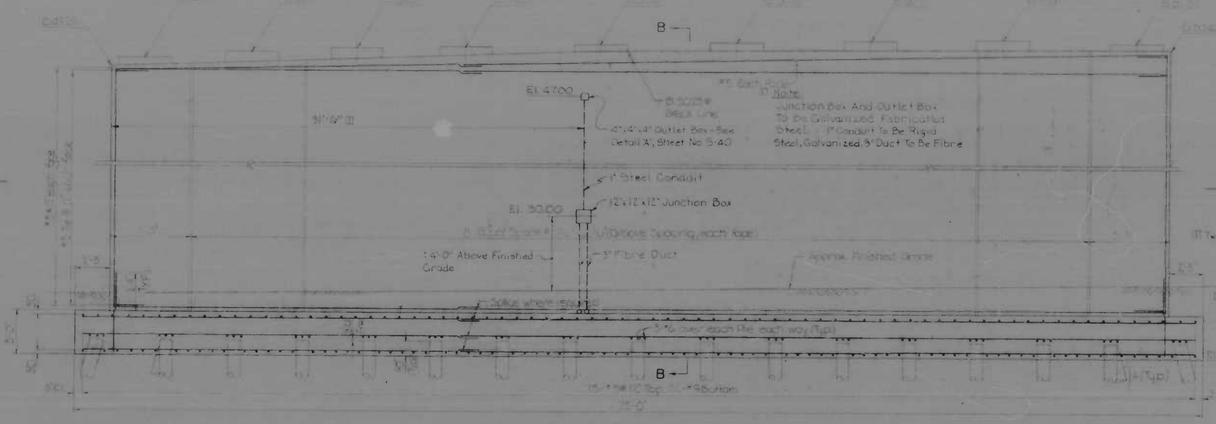
REVISIONS	CONSULTANT	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS & STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY
1 8/22/72 - Conduit Installation in Pier	ANDERLE, BENDER, STONE & ASSOC., INC. AND MAST, CROSS & ASSOC., INC. CONSULTING ENGINEERS 341 N. CALVERT STREET BALTIMORE, MARYLAND 21202	I-95 WINDLASS-MORAVIA INTERCHANGE I-95 OVER RAMP 'B' & B&O R.R. PIER NO 2 S B R SCALE: As Shown DATE:
		DRAWN BY M.W. DES. BY L.J. TRACED BY L.J. CHK. BY F.F.M. F.A.P. NO. I-95-4(36)36 SHEET NO. 92 S.R.C. NO. B.C. I-95-03-BIE S-40 OF S-55 BALTO. CITY NO. 1995

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	MD.	I 95-4(36)36	S-41	(92) S-55

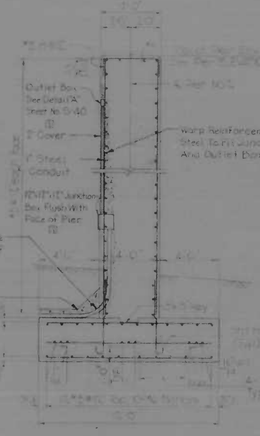


PLAN

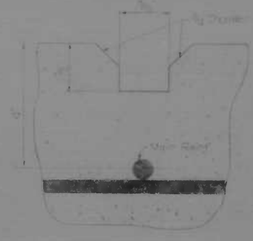
SECTION A-A



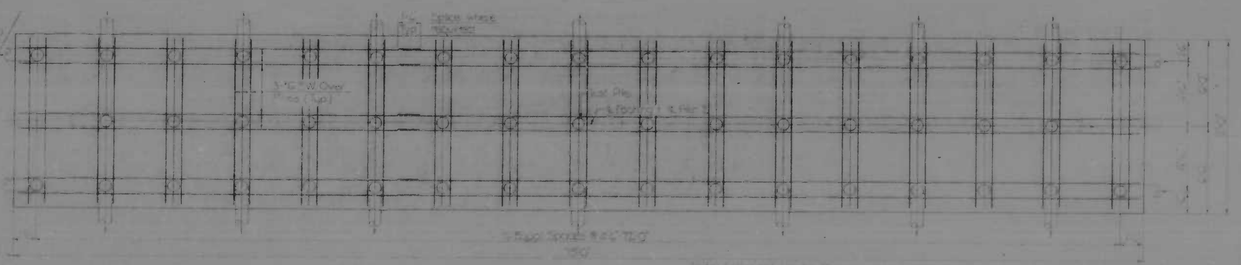
ELEVATION



SECTION B-B



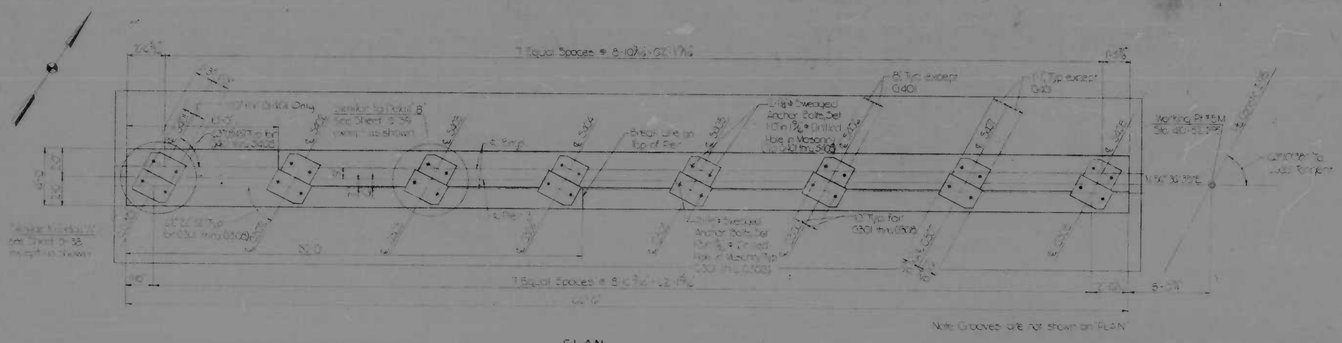
GROOVE DETAIL



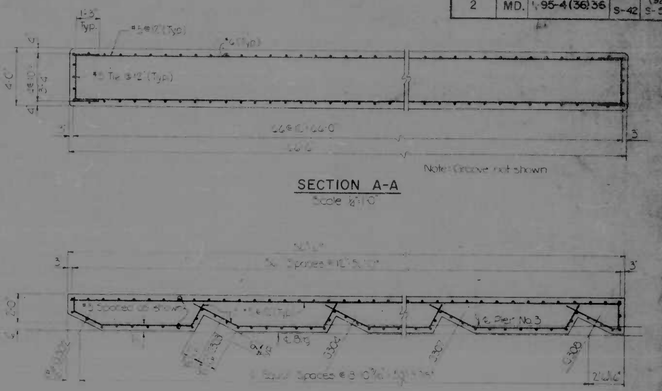
FOOTING PLAN

REVISIONS	CONSULTANT	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS & STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY	
1) 6-22-72 - Conduit Installation in Pier	ANDERLE, BENDER, STONE & ASSOC., INC. and KATZ, EHLDS & ASSOC., INC. CONSULTING ENGINEERS 520 N. CALVERT STREET BALTIMORE, MARYLAND 21202	I-95-WINDLASS-MORAVIA INTERCHANGE I 95 OVER RAMP 'B' & B&O RR PIER NO 2 NBR	DRAWN BY L.N.V. DES. BY TRACED BY CHK. BY F.F.M. F.A.P. NO. I-95-4(36)36 S.R.C. NO. BC-218-33-BR BALTO. CITY NO. 1985 SHEET NO. (92) S-41 to S-55
		SCALE DATE	

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	MD.	I-95-4(36)36	S-42	(92) S-55

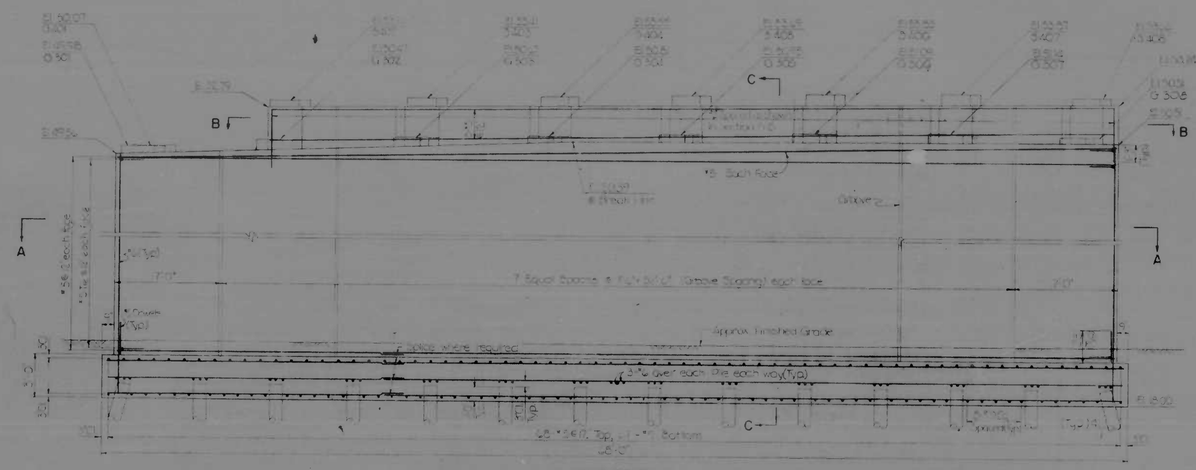


PLAN

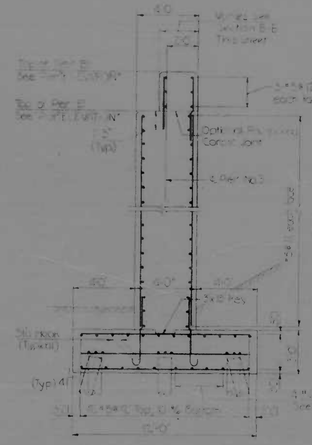


SECTION A-A

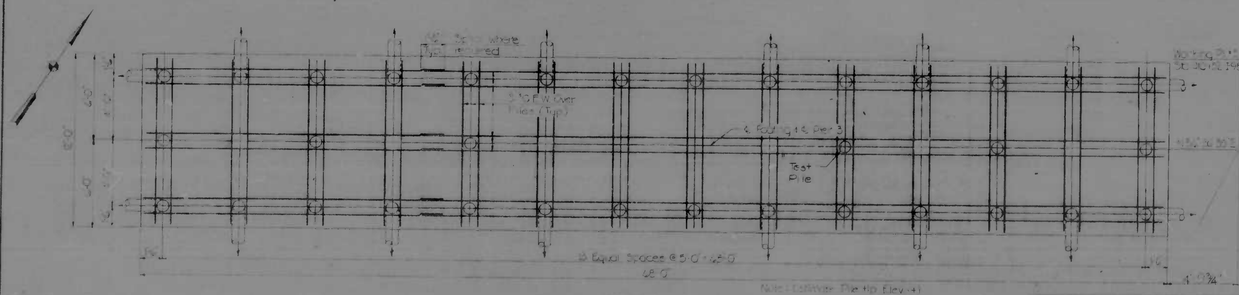
SECTION B-B



ELEVATION



SECTION C-C



FOOTING PLAN

LEGEND
○ Indicates Plumb Pile
Indicates Batter Pile and Direction of Batter

NOTES:
All piles shall be of a Manufacture Design & cast-in-place Concrete Piles driven to a minimum safe bearing value of 60 tons or to practical refusal

REFERENCES	SHEET NO.
Detail 'A'	S-36
Detail 'B'	S-37
Framing Plan	S-44
Sprinkler Detail	S-61

REVISIONS	CONSULTANT
	KNOPPLE, BEHNKEN, STONE & ASSOC., INC. AND MATZ, GILLER & ASSOC., INC. CONSULTING ENGINEERS 541 N. CALVERT STREET BALTIMORE, MARYLAND 21202

CITY OF BALTIMORE
DEPARTMENT OF PUBLIC WORKS
&
STATE ROADS COMMISSION OF MARYLAND
INTERSTATE DIVISION FOR BALTIMORE CITY

I-95 WINDLASS-MORAVIA INTERCHANGE
I-95 OVER RAMP "B" & B&O R R
PIER NO 3 S BR.

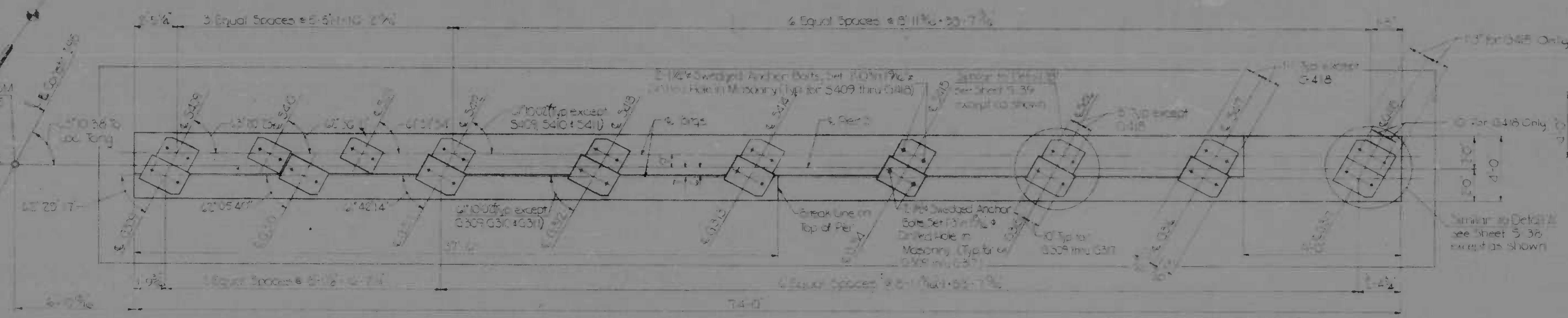
SCALE: As Shown DATE: MAY 13, 1971

DRAWN BY: L.M.W. DES. BY: C.Y.T.
TRACED BY: L.M.W. CHK. BY: F.F.M.

F.A.P. NO. I-95-4(36)36
S.R.C. NO. BC-346-33-813
BALTO. CITY NO. 1995

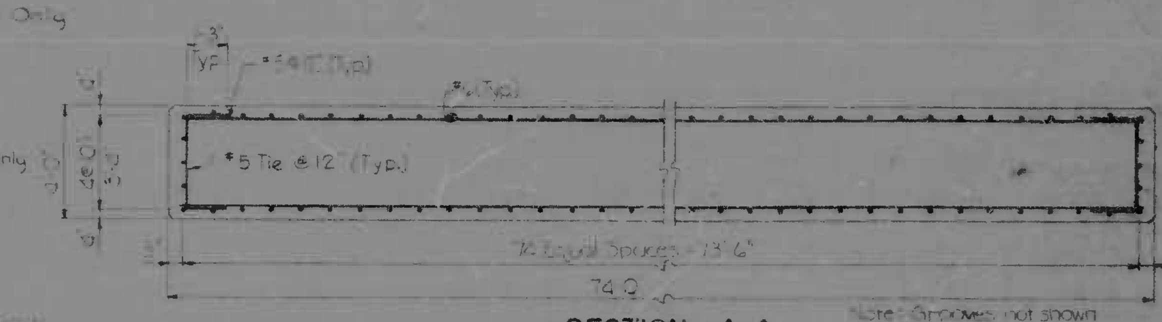
SHEET NO. (92) S-42 OF S-55

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	MD.	I-95-4(36)36	S-43	(92) S-55



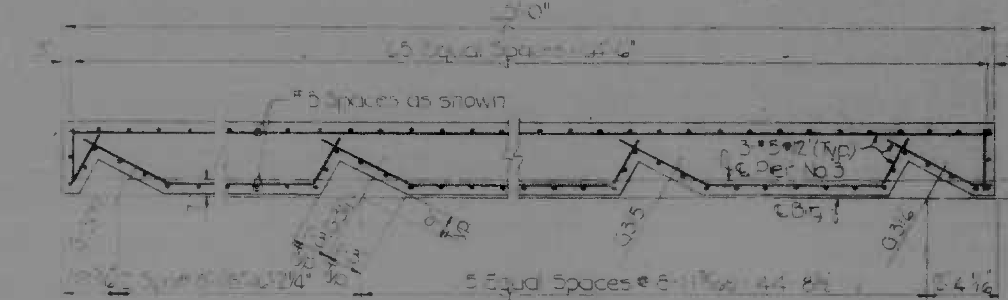
PLAN

Scale 1/8" = 1'-0"



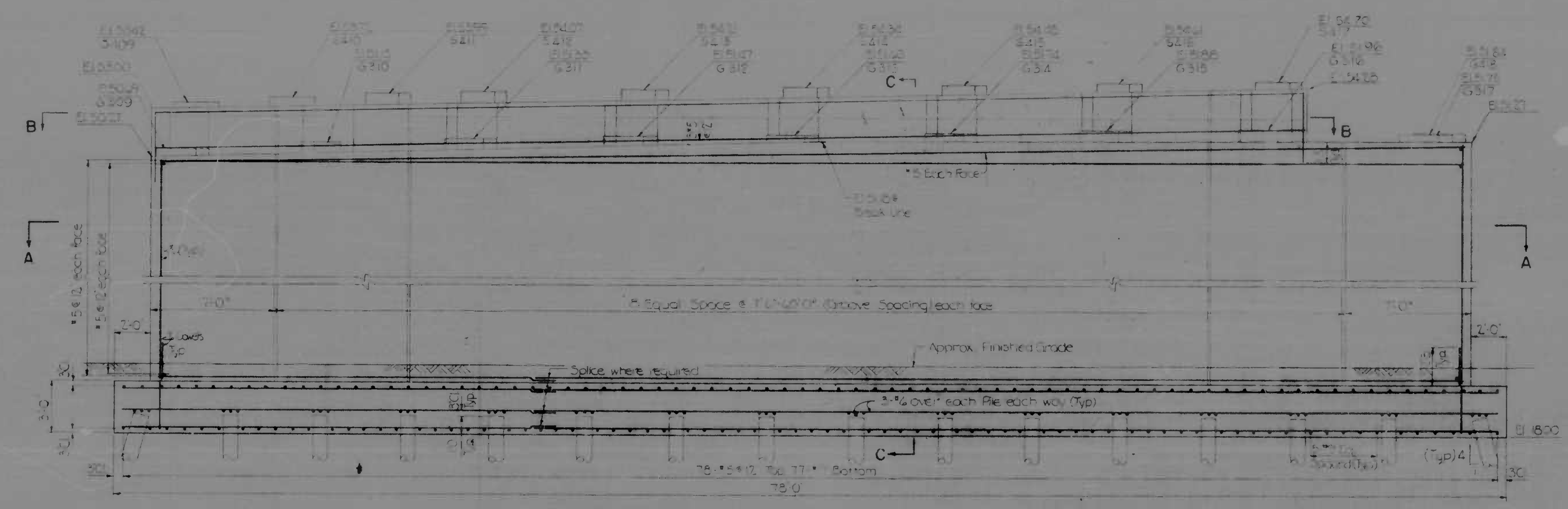
SECTION A-A

Scale 1/4" = 1'-0"



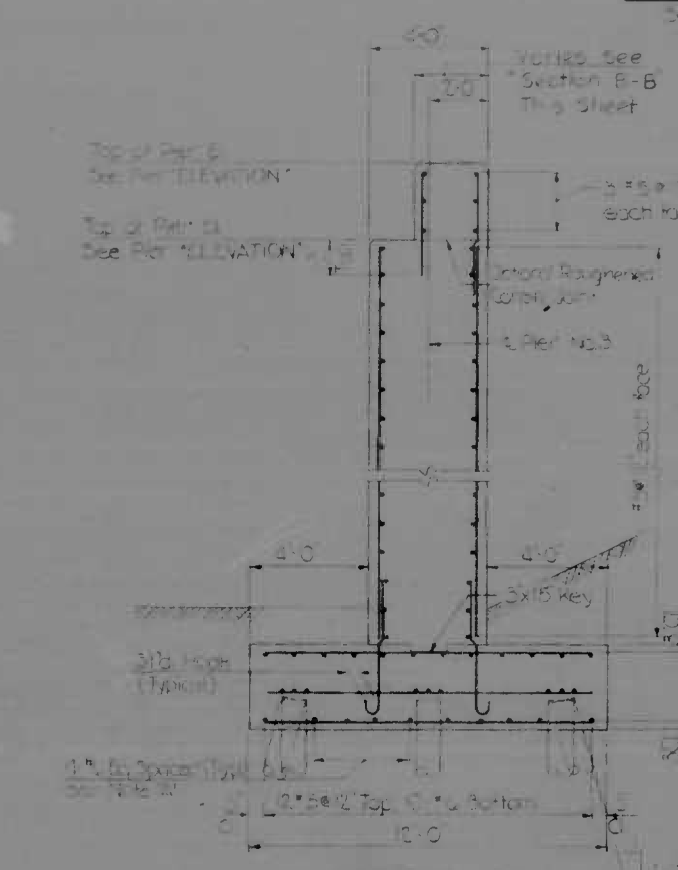
SECTION B-B

Scale 1/4" = 1'-0"



ELEVATION

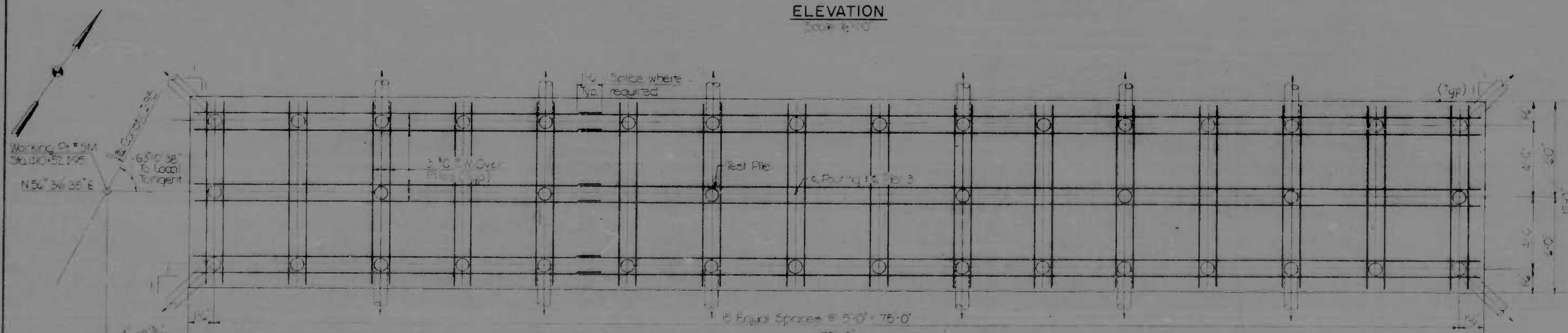
Scale 1/8" = 1'-0"



SECTION C-C

Scale 1/4" = 1'-0"

Note #: Place these bottom reinforcings to clear exterior piles as required



FOOTING PLAN

Scale 1/8" = 1'-0"

Note: Estimate Pile tip Elev.

NOTE:

All Piles shall be 14" Monotube Gauge 5 cast-in-place Concrete Piles driven to a minimum safe bearing value of 120 tons or to practical refusal.

REFERENCES	SHEET NO.
Detail "A"	S-38
Detail "B"	S-39
Framing Plan	S-44
Groove Detail	S-41

LEGEND

Indicates Plumb Pile

Indicates Batter Pile and Direction of Batter

REVISIONS	CONSULTANT
	KNOERLE, BENDER, STONE & ASSOC., INC. AND MATZ, CHILDS & ASSOC., INC. CONSULTING ENGINEERS 341 N. CALVERT STREET BALTIMORE, MARYLAND 21202

CITY OF BALTIMORE
DEPARTMENT OF PUBLIC WORKS
&
STATE ROADS COMMISSION OF MARYLAND
INTERSTATE DIVISION FOR BALTIMORE CITY

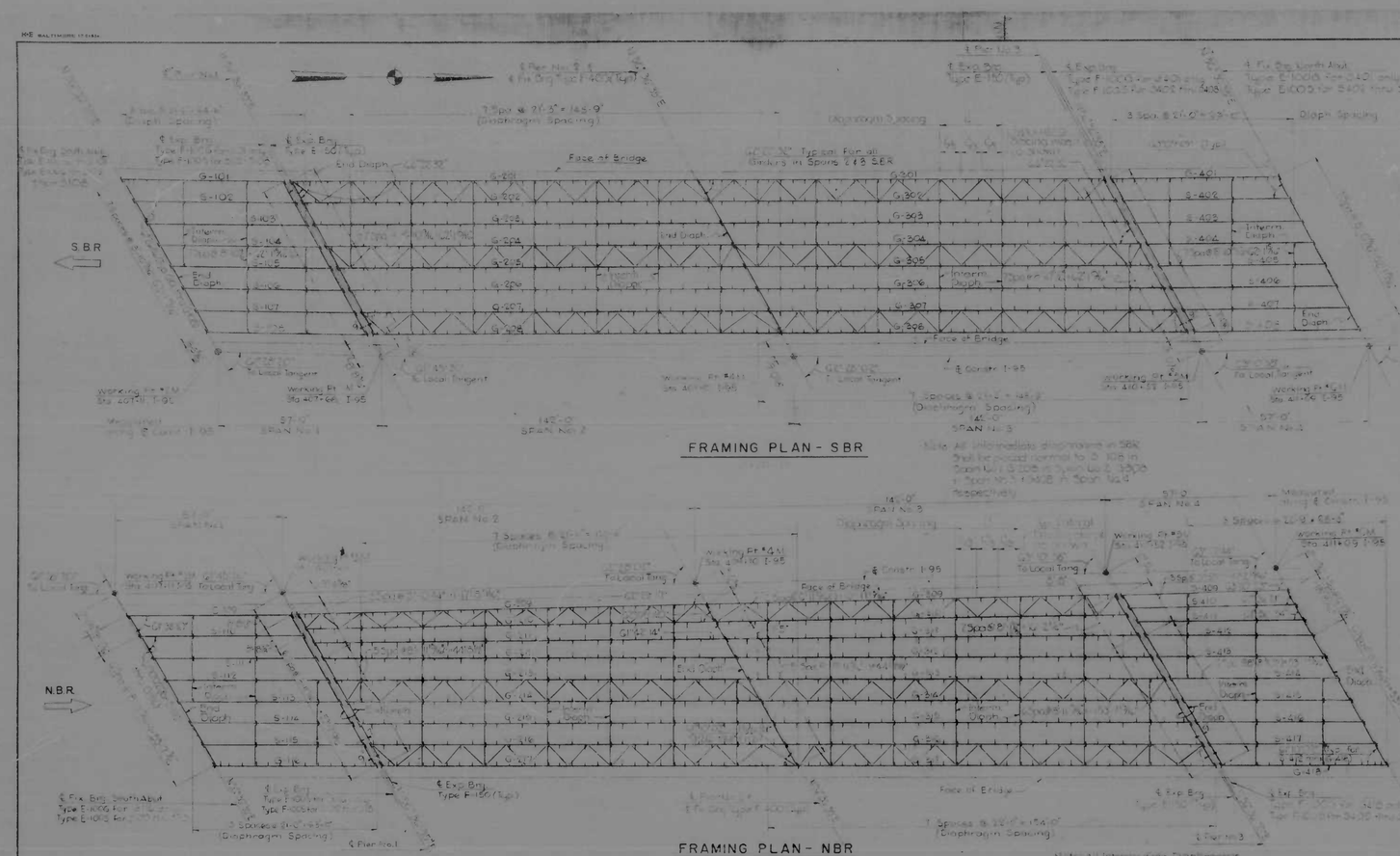
I-95-WINDLASS-MORAVIA INTERCHANGE
I-95 OVER RAMP "B" & B&O R.R.
PIER NO. 3 N.B.R.

SCALE: As Shown DATE: June 10, 1971

DRAWN BY L.M.W. DES. BY K.S.J.
TRACED BY L.M.W. CHK. BY E.F.M.
F.A.P. NO. I-95-4(36)36
S.R.C. NO. BC 246-33-815
BALTO. CITY NO. 1995

SHEET NO. S-43 OF (92) S-55

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	MD.	I-95-4(36)36	S-44	(92) S-55



FRAMING PLAN - SBR

FRAMING PLAN - NBR

TYPICAL GIRDER ELEVATION - SPANS 2 & 3

Note: For dimensions of SPAN LENGTH "L" See Table this Sheet.

Note all intermediate diaphragms in SBR shall be placed normal to G-101 in Span No. 1, G-201 in Span No. 2, G-301 in Span No. 3 & G-401 in Span No. 4 respectively.

Note all intermediate diaphragms in NBR shall be placed normal to G-116, G-217, G-317 & G-418 for Spans must be parallel.

Fixed Brg. Typ. in Span No. 4 is G-208 for G-408 thru G-401 & G-208 for G-408 thru G-401

Notes:
All plates and designed components are therefore there shall be no temporary intermediate supports while structure is being placed.
All structural steel shall conform to ASTM Designation A-588.
All members & fills shall be hot dipped galvanized.
All intermediate stiffeners and connection plates shall be placed right against the tension flange and top welded to the same flange.
All painting difficulties shall be milled to bear against flanges to ensure full bearing unless welds are removed. Where fillers are in the form of plates, they shall be welded to the girder web plate to close spaces.
All bolted connections shall be galvanized.
All bearing surfaces of all plates shall be finished to a smooth surface free from burrs, slivers, laminations, tears or defects which would interfere with the proper seating and hearing of the adjacent surfaces.

SPAN LENGTH "L"			
	SPAN No.	GIRDER	L
WEST	1	G-101 THRU G-108	56'-2 7/8"
	2	G-201 THRU G-208	141'-10"
	3	G-301 THRU G-308	141'-10"
	4	G-401 THRU G-408	56'-2 7/8"
EAST	1	G-109	56'-2 7/8"
		G-110 THRU G-116	56'-4 5/8"
	2	G-209	142'-0 3/8"
		G-210	141'-4 5/8"
		G-211	141'-10 5/8"
		G-212 THRU G-217	142'-1 1/4"
	3	G-309	141'-9 1/4"
		G-310	142'-3 5/8"
		G-311	142'-9 1/2"
		G-312 THRU G-317	143'-4 7/8"
	4	G-409	56'-1 3/8"
		G-410	56'-3 1/8"
		G-411	56'-10 3/8"
		G-412 THRU G-418	57'-2 1/2"

"FRAMING PLAN"

TYPICAL INTERIOR STRINGER ELEVATION-SPANS 1 & 4

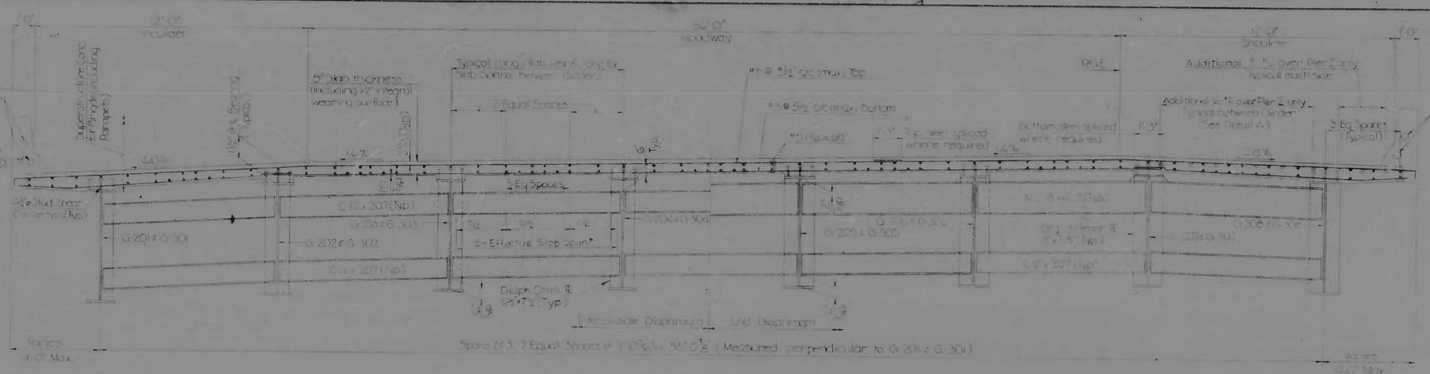
TYPICAL EXTERIOR GIRDER ELEVATION-SPANS 1 & 4

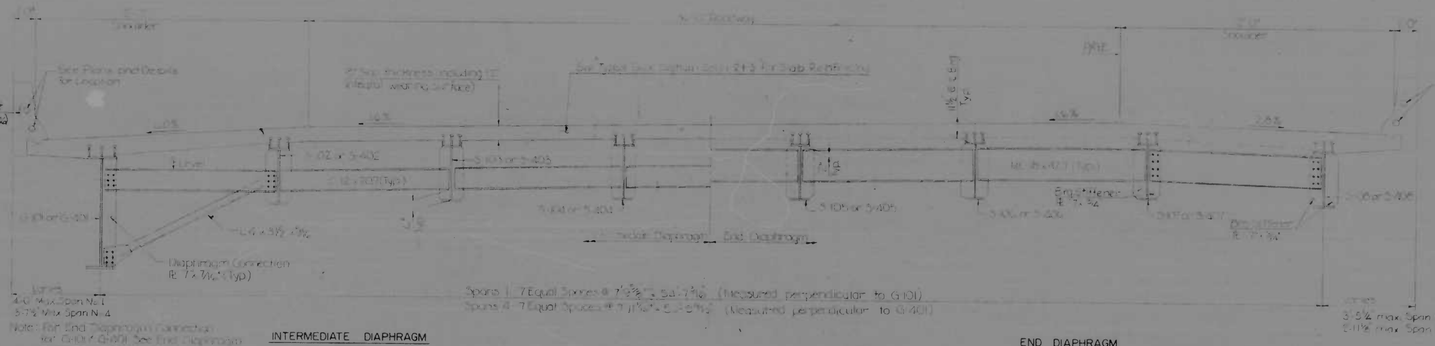
G-101, G-116, G-401, G-418

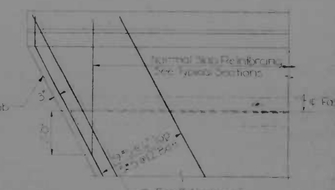
REFERENCES	SHEET NO.
GENERAL PLAN & ELEVATION	S-31
TYPICAL DIAPHRAGM CONN. DETAILS	S-40
CAMBER DIAGRAMS & TABLES-SBR	S-47
CAMBER DIAGRAMS & TABLES-NBR	S-48
SUPERSTRUCTURE ELEVATION SBR	S-49
SUPERSTRUCTURE ELEVATION NBR	S-50
BEARING DETAILS	S-51
SUPERSTRUCTURE DETAILS	S-52
TYPICAL FIELD SPLICE DETAILS	S-53
GIRDER DETAILS	S-54
GIRDER DETAILS	S-55

REVISIONS	CONSULTANT	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS & STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY	
	KNOERLE, VENDER, STONE & ASSOC., INC. AND MATZ, CHILDS & ASSOC., INC. CONSULTING ENGINEERS 341 N. CALVERT STREET BALTIMORE, MARYLAND 21202	I-95-WINDLASS-MORAVIA INTERCHANGE I-95 OVER RAMP "B" & B&O R.R. FRAMING PLANS AND GIRDER ELEVATIONS	DRAWN BY R.V.P. TRACED BY R.V.P. DES. BY M.S.C. CHK. BY F.F.M.
		SCALE As shown DATE MAY 10 1971	F.A.P. NO. I-95-4(36)36 S.R.C. NO. BC 246-33-815 BALTO. CITY NO. 1995 SHEET NO. (92) S-44 to S-55

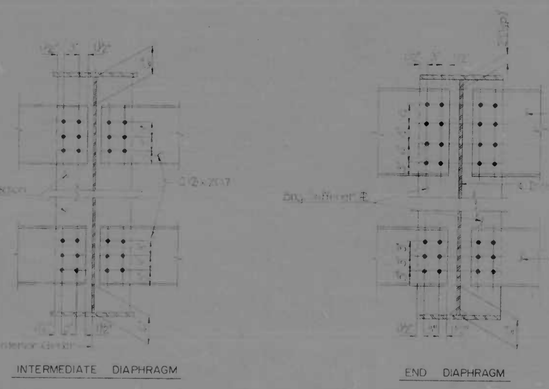
FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	MD.	I-95-4(36)36	S-45	(92) S-55



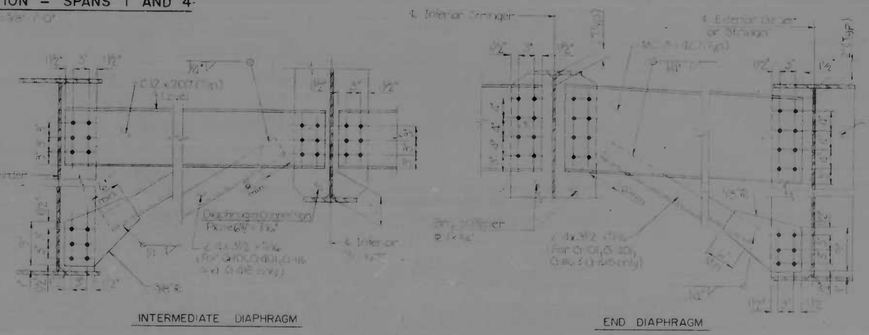




SLAB REINFORCING AT ACUTE CORNER
Scale: 3/8"=1'-0"



TYPICAL DIAPHRAGM CONNECTION DETAILS - SPAN 2 AND 3



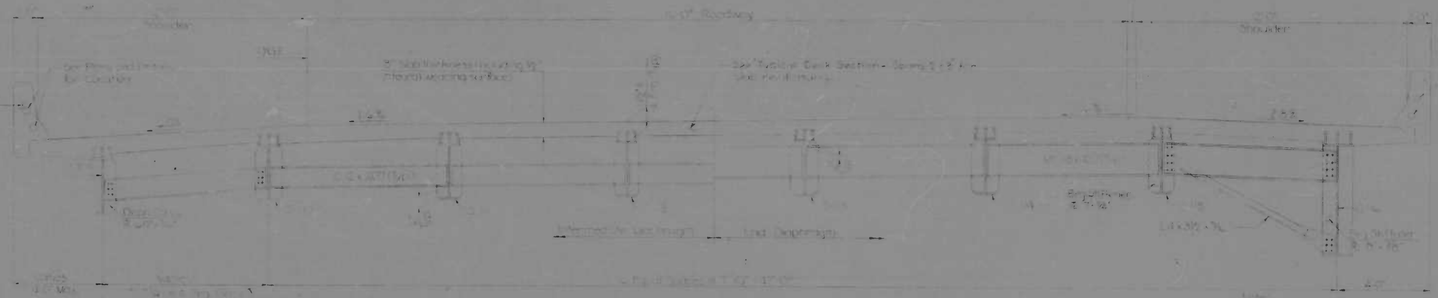
TYPICAL DIAPHRAGM CONNECTION DETAILS - SPAN 1 AND 4

Notes:
1. All horizontal dimensions on Typical Deck Sections are measured normal to ℄ Girders (℄ Brgs. except girder spacings.
2. 7/8 ø H.S. Bolts shall be used for all diaphragm connections.
3. Transverse reinforcing shall be placed normal to ℄ Girders.

REFERENCES	SHEET No.
Framing Plan	S-44
Superstructure Details	S-46
Deck Pouring Sequence	S-47
Typical Fascia Detail	S-49

REVISIONS	CONSULTANT	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS & STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY	
	KINDERLE, BENDER, STONE & ASSOC., INC. AND MATZ, DIMLOG & ASSOC., INC. CONSULTING ENGINEERS 341 N. CALVERT STREET BALTIMORE, MARYLAND 21202	I-95 WINDLASS-MORAVIA INTERCHANGE I-95 OVER RAMP "B" & B&O R.R. TYPICAL DECK SECTIONS- S B R	DRAWN BY J.R.H. DES. BY M.S.C. TRACED BY J.R.H. CHK. BY F.F.M. F.A.P. NO. I-95-4(36)36 S.R.C. NO. BC-246-33-815 BALTO. CITY NO. 1995 SCALE: As Shown DATE: MAY 15 1971 SHEET NO. (92) S-45 OF S-55

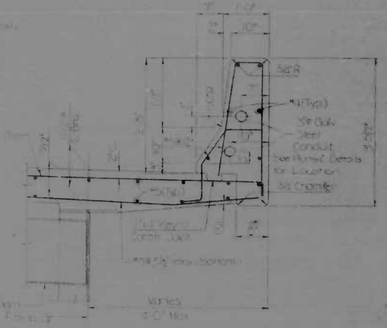
FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	MD.	I-95-4(36)36	S-46	(92) S-55



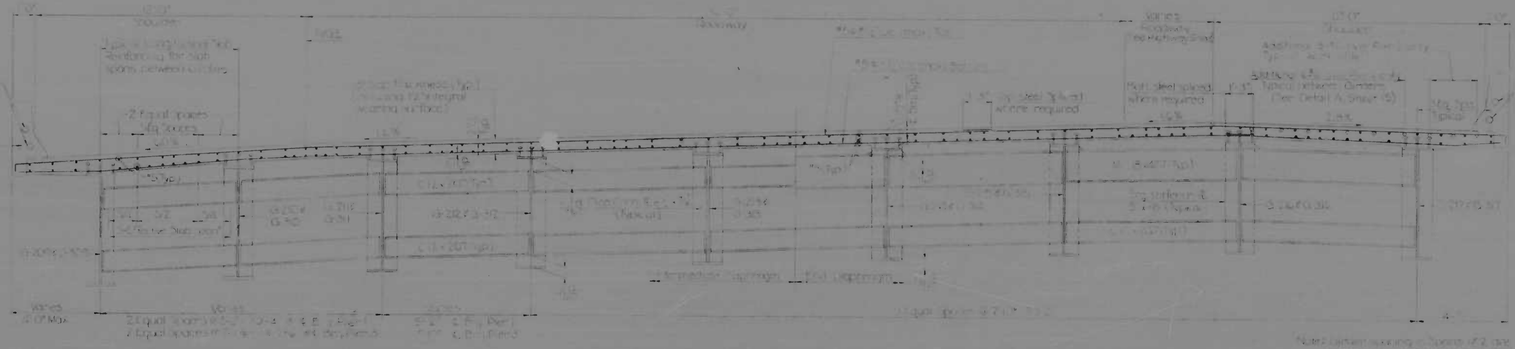
INTERMEDIATE DIAPHRAGM

END DIAPHRAGM

TYPICAL DECK SECTION – SPAN 1



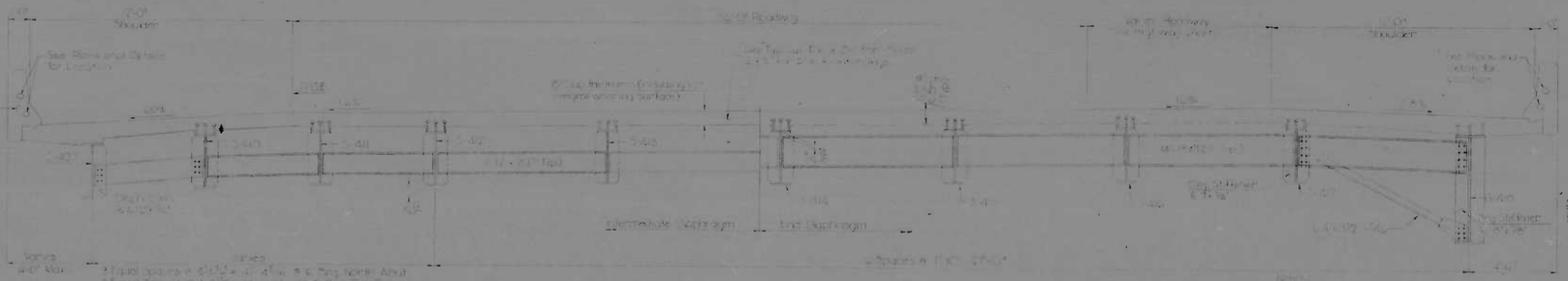
TYPICAL PARAPET DETAIL



INTERMEDIATE DIAPHRAGM

END DIAPHRAGM

TYPICAL DECK SECTION – SPANS 2 AND 3



INTERMEDIATE DIAPHRAGM

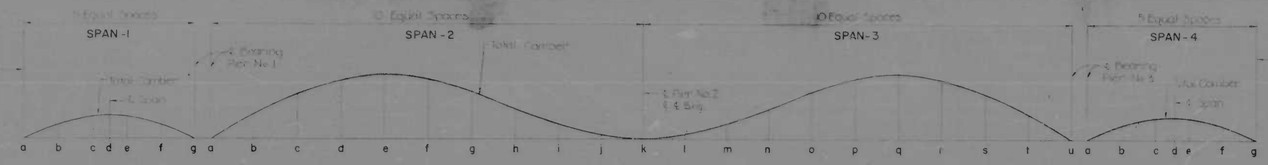
END DIAPHRAGM

TYPICAL DECK SECTION – SPAN 4

REFERENCES	SHEET No.
Framing Plan	S-44
Detail A	S-45
Superstructure Details	S-47
Deck Pouring Sequence	S-47
Typical Deck Section Details	S-48

REVISIONS	CONSULTANT	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS & STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY	
	KNOERLE, BEMBER, STONE & ASSOC. INC. AND MATZ, CHILDS & ASSOC., INC. CONSULTING ENGINEERS 341 N. CALVERT STREET BALTIMORE, MARYLAND 21202	I-95-WINDLASS-MORAVIA INTERCHANGE I-95 OVER RAMP 'B' & B&O R R TYPICAL DECK SECTIONS - N B R	DRAWN BY J.R.H. DES BY M.S.C. TRACED BY J.R.H. CHK BY F.F.M. F.A.P. NO. I-95-4(36)36 O.P.C. NO. BC 246 33-815 BALTO. CITY NO. 1595 SHEET NO. (92) S-46 OF S-55
	SCALE As Shown DATE		

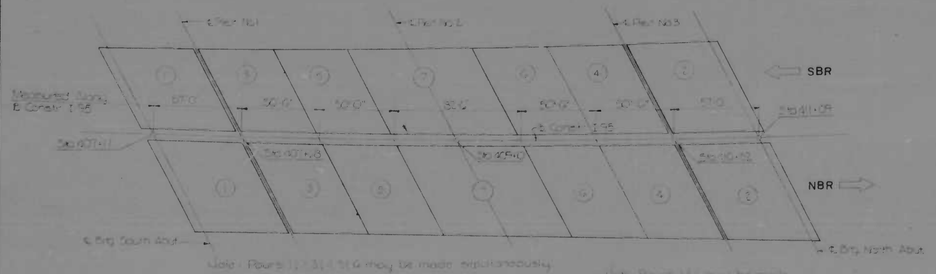
FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	MD.	I-95-4(36)36	S-47	(92) S-55



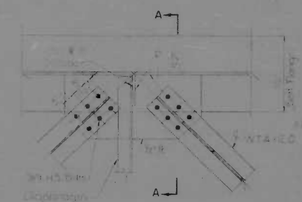
CAMBER DIAGRAM

CAMBER TABLE - S.B.R.

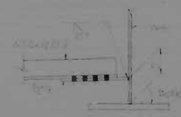
DESCRIPTION	℄ BRG. S. ABUT.	SPAN - 1					℄ BRG. PIER 1	℄ BRG. PIER	SPAN - 2									℄ PIER M2	SPAN - 3										℄ BRG. PIER 3	℄ BRG. PIER 3	SPAN - 4						℄ BRG. N. ABUT.
POINT	a	b	c	d	e	f	g	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	a	b	c	d	e	f	g
STRINGER NO.	G-101							G-201											G-301										G-401						
△ STEEL																																			
△ CONCRETE																																			
△ S.D.L.																																			
△ VERT CURVE																																			
TOTAL CAMBER																																			
STRINGER NO.	S-102							G-202											G-302										S-402						
△ STEEL																																			
△ CONCRETE																																			
△ S.D.L.																																			
△ VERT CURVE																																			
TOTAL CAMBER																																			
STRINGER NO.	S-103 THRU S-106							G-203 THRU G-206											G-303 THRU G-306										S-403 THRU S-406						
△ STEEL																																			
△ CONCRETE																																			
△ S.D.L.																																			
△ VERT CURVE																																			
TOTAL CAMBER																																			
STRINGER NO.	S-107							G-207											G-307										S-407						
△ STEEL																																			
△ CONCRETE																																			
△ SDL																																			
△ VERT CURVE																																			
TOTAL CAMBER																																			
STRINGER NO.	G-108							G-208											G-308										G-408						
△ STEEL																																			
△ CONCRETE																																			
△ S.D.L.																																			
△ VERT CURVE																																			
TOTAL CAMBER																																			



DECK POURING SEQUENCES
NOT TO SCALE



PLAN

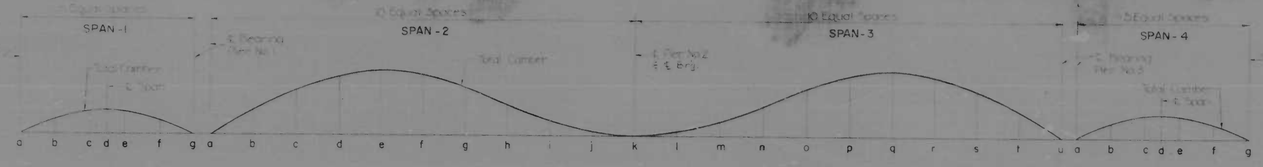


SECTION A-A

LATERAL BRACING DETAILS

REVISIONS	CONSULTANT	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS & STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY
	KNOERLE, BENDER, STONE & ASSOC., INC. AND MATZ, CHILDS & ASSOC., INC. CONSULTING ENGINEERS 341 N. CALVERT STREET BALTIMORE, MARYLAND 21202	I-95-WINDLASS-MORAVIA INTERCHANGE I-95 OVER RAMP "B" & B&O RR CAMBER DIAGRAMS AND TABLES - S.B.R. SCALE: As Shown DATE:
		DRAWN BY: J.R.H. TRACED BY: J.R.H. DES. BY: M.S.C. CHK. BY: F.F.M. F.A.P. NO.: I-95-4(36)36 S.R.C. NO.: 82-246-33-815 BALTO. CITY NO.: 1995 SHEET NO. (92) S-47 OF S-55

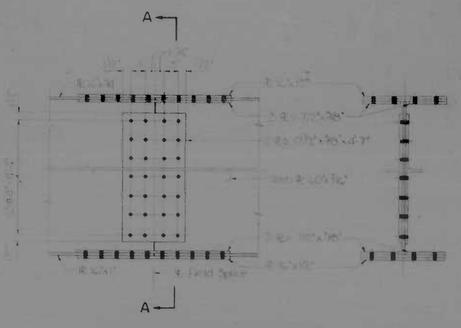
FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	MD.	I-95-4(36)36	S-48	(92) S-55



CAMBER DIAGRAM

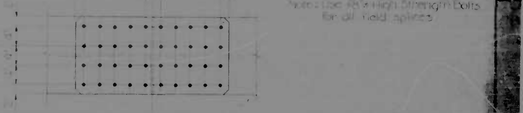
CAMBER TABLE - N.B.R

DESCRIPTION	℄ BRG. S. ABUT	SPAN - 1					℄ BRG. PIER 1	℄ BRG. PIER 1	SPAN - 2								℄ PIER NO.2	SPAN - 3								℄ BRG. PIER 3	℄ BRG. PIER 3	SPAN - 4					℄ BRG. N. ABUT
POINT	a	b	c	d	e	f	g	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	a	b	c	d	e	f	g
STRINGER NO	G-109							G-209											G-309										G-409						
△ STEEL																																			
△ CONCRETE																																			
△ S.D.L.																																			
△ VERT. CURVE																																			
TOTAL CAMBER																																			
STRINGER NO	S-110							G-210											G-310										S-410						
△ STEEL																																			
△ CONCRETE																																			
△ S.D.L.																																			
△ VERT CURVE																																			
TOTAL CAMBER																																			
STRINGER NO	S-111							G-211											G-311										S-411						
△ STEEL	0						0																												
△ CONCRETE	0						0																												
△ S.D.L.	0						0																												
△ VERT CURVE	0						0																												
TOTAL CAMBER	0						0																												
STRINGER NO	S-112							G-212											G-312										S-412						
△ STEEL	0						0																												
△ CONCRETE	0						0																												
△ SDL	0						0																												
△ VERT CURVE	0						0																												
TOTAL CAMBER	0						0																												
STRINGER NO	S-113 THRU S-114							G-213 THRU G-215											G-313 THRU G-315										S-413 THRU S-416						
△ STEEL	0						0																												
△ CONCRETE	0						0																												
△ SDL	0						0																												
△ VERT CURVE	0						0																												
TOTAL CAMBER	0						0																												
STRINGER NO	S-115							G-216											G-316										S-417						
△ STEEL	0						0																												
△ CONCRETE	0						0																												
△ SDL	0						0																												
△ VERT CURVE	0						0																												
TOTAL CAMBER	0						0																												
STRINGER NO	G-116							G-217											G-317										G-418						
△ STEEL	0						0																												
△ CONCRETE	0						0																												
△ SDL	0						0																												
△ VERT CURVE	0						0																												
TOTAL CAMBER	0						0																												



ELEVATION

SECTION A-A



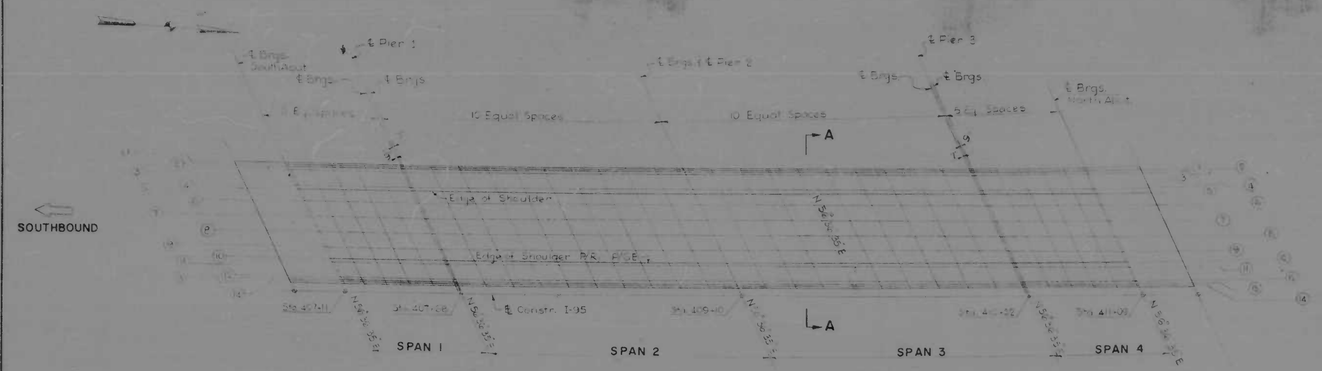
PLAN

TYPICAL FIELD SPLICE DETAILS

REFERENCE PLANS — SHEET NO. S-44

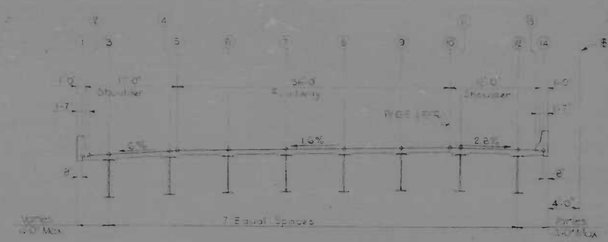
REVISIONS	CONSULTANT	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS &	STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY
	KNOERLE, BENDER, STONE & ASSOC., INC. AND MATZ, CURLIS & ASSOC., INC. CONSULTING ENGINEERS 341 N. CALVERT STREET BALTIMORE, MARYLAND 21202	95-WINDLASS-MORAVIA INTERCHANGE I-95 OVER RAMP "B" & B&O RR CAMBER DIAGRAMS AND TABLES- N.B.R	DRAWN BY J.R.H. DES. BY M.S.C. TRACED BY J.R.H. CHK. BY F.F.M. F.A.P. NO. I-95-4(36)36 SHEET NO. (92) S.R.C. NO. BC 246-33-815 S-48 OF S-55 BALTO. CITY NO. 1995
		SCALE As Shown DATE	

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	MD.	I-95-4(36)36	S-49	92 S-55



S.B.R. SUPERSTRUCTURE ELEVATIONS-KEY PLAN

Scale 1"= 50'-0"



SECTION A-A
TYP. THRU S.B.R.

Scale 1/4"-1'-0"

REFERENCES — SHEET NO.

- General Plan S-31
- Framing Plan S-44
- Typical Deck Section-S.B.R. S-45
- Typical Deck Section-N.B.R. S-46

DESCRIPTION		℄ BRG S. ABUT	SPAN 1				℄ BRG PIER 1
STATION *		407+ 01.74	407+ 16.99	407+ 24.25	407+ 35.50	407+ 42.75	407+ 58.00
1	WEST KEY LINE	53.25	53.89	53.54	53.88	53.82	53.95
2	WEST CURB LINE	53.81	53.45	53.60	53.74	53.86	54.02
3	GIRDER G-101	53.47	53.61	53.76	53.90	54.01	54.16
4	STRINGER S-102	53.99	54.14	54.28	54.42	54.56	54.69
5	EDGE OF SHOULDER	54.06	54.22	54.36	54.50	54.64	54.77
6	STRINGER S-103	54.23	54.37	54.51	54.65	54.79	54.92
7	STRINGER S-104	54.41	54.55	54.69	54.83	54.96	55.09
8	STRINGER S-105	54.58	54.73	54.87	55.00	55.14	55.27
9	STRINGER S-106	54.76	54.91	55.04	55.18	55.31	55.44
10	P/GE & P/R	54.90	55.04	55.18	55.31	55.44	55.57
11	STRINGER S-107	54.86	55.01	55.14	55.27	55.40	55.53
12	GIRDER G-108	54.70	54.84	54.97	55.11	55.23	55.36
13	FAST CURB LINE	54.66	54.80	54.93	55.07	55.19	55.32
14	EAST KEY LINE	54.64	54.78	54.91	55.05	55.17	55.30

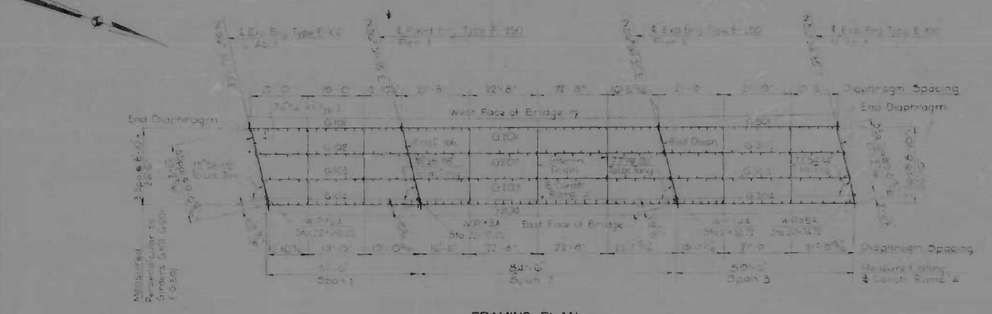
DESCRIPTION		℄ BRG PIER 1	SPAN 2								℄ PIER 2 & ℄ BRG	SPAN 3								℄ BRG PIER 3
STATION *		407+ 59.52	407+ 73.68	407+ 87.84	408+ 02.00	408+ 16.16	408+ 30.32	408+ 44.48	408+ 58.64	408+ 72.80	408+ 86.96	409+ 01.12	409+ 15.28	409+ 29.45	409+ 43.61	409+ 57.77	409+ 71.93	409+ 86.09	410+ 00.25	410+ 14.41	410+ 28.57	410+ 42.73
1	WEST KEY LINE	53.97	54.14	54.30	54.45	54.60	54.74	54.87	55.00	55.13	55.24	55.34	55.42	55.46	55.46	55.45	55.43	55.41	55.38	55.34	55.30	55.26
2	WEST CURB LINE	54.13	54.30	54.46	54.61	54.76	54.90	55.03	55.16	55.28	55.39	55.49	55.57	55.62	55.62	55.61	55.59	55.57	55.54	55.50	55.46	55.42
3	GIRDERS G-201/G-301	54.19	54.35	54.49	54.64	54.77	54.91	55.03	55.16	55.28	55.39	55.50	55.61	55.71	55.80	55.89	55.96	56.03	56.08	56.13	56.17	56.21
4	GIRDERS G-202/G-302	54.71	54.88	55.01	55.15	55.09	55.42	55.54	55.67	55.78	55.90	56.00	56.11	56.21	56.30	56.39	56.46	56.52	56.56	56.60	56.63	56.66
5	EDGE OF SHOULDER	54.79	54.95	55.11	55.26	55.40	55.54	55.67	55.80	55.92	56.04	56.15	56.25	56.35	56.44	56.52	56.60	56.65	56.70	56.75	56.81	56.87	56.92
6	GIRDERS G-203/G-303	54.94	55.09	55.25	55.39	55.53	55.67	55.80	55.92	56.04	56.15	56.26	56.36	56.46	56.55	56.64	56.72	56.79	56.86	56.92	56.98	57.03
7	GIRDERS G-204/G-304	55.11	55.27	55.42	55.56	55.70	55.83	55.96	56.08	56.20	56.31	56.41	56.52	56.61	56.70	56.78	56.86	56.94	57.00	57.07	57.12	57.17
8	GIRDERS G-205/G-305	55.28	55.44	55.58	55.73	55.86	56.00	56.12	56.24	56.36	56.47	56.57	56.67	56.76	56.85	56.93	57.01	57.08	57.15	57.21	57.26	57.31
9	GIRDERS G-206/G-306	55.46	55.61	55.75	55.89	56.03	56.16	56.28	56.40	56.52	56.62	56.73	56.82	56.91	57.00	57.08	57.16	57.23	57.29	57.35	57.40	57.45
10	P/GE & P/R	55.56	55.74	55.80	56.03	56.16	56.29	56.42	56.54	56.65	56.76	56.86	56.95	57.04	57.13	57.20	57.28	57.34	57.40	57.46	57.51	57.55
11	GIRDERS G-207/G-307	55.53	55.70	55.85	56.00	56.13	56.27	56.38	56.51	56.62	56.73	56.83	56.92	57.01	57.10	57.17	57.24	57.30	57.36	57.41	57.46	57.50
12	GIRDERS G-208/G-308	55.33	55.53	55.67	55.82	55.96	56.08	56.21	56.32	56.43	56.54	56.64	56.73	56.82	56.90	56.97	57.04	57.10	57.16	57.21	57.25	57.28
13	FAST CURB LINE	55.25	55.45	55.63	55.77	55.90	56.03	56.15	56.27	56.38	56.48	56.58	56.67	56.76	56.84	56.92	56.99	57.05	57.11	57.16	57.21	57.25
14	EAST KEY LINE	55.21	55.40	55.61	55.75	55.88	56.01	56.13	56.24	56.35	56.46	56.56	56.65	56.74	56.82	56.89	56.96	57.03	57.08	57.14	57.18	57.22

DESCRIPTION		℄ BRG PIER 3	SPAN 4				℄ BRG N. ABUT
STATION *		410+ 44.23	410+ 55.48	410+ 66.74	410+ 77.99	410+ 89.24	411+ 00.50
1	WEST KEY LINE	56.16	56.20	56.23	56.27	56.29	56.32
2	WEST CURB LINE	56.27	56.26	56.29	56.32	56.34	56.37
3	GIRDER G-401	56.35	56.38	56.42	56.45	56.47	56.50
4	STRINGER S-402	56.83	56.87	56.90	56.93	56.96	56.98
5	EDGE OF SHOULDER	56.92	56.96	56.99	57.02	57.05	57.07
6	STRINGER S-403	57.04	57.07	57.10	57.13	57.16	57.18
7	STRINGER S-404	57.18	57.21	57.24	57.27	57.29	57.31
8	STRINGER S-405	57.32	57.35	57.38	57.40	57.42	57.44
9	STRINGER S-406	57.46	57.49	57.51	57.54	57.56	57.58
10	P/GE & P/R	57.56	57.59	57.61	57.63	57.65	57.67
11	STRINGER S-407	57.50	57.53	57.55	57.58	57.59	57.61
12	GIRDER G-408	57.29	57.32	57.34	57.36	57.38	57.39
13	EAST CURB LINE	57.25	57.28	57.30	57.33	57.34	57.36
14	EAST KEY LINE	57.23	57.26	57.28	57.30	57.32	57.33

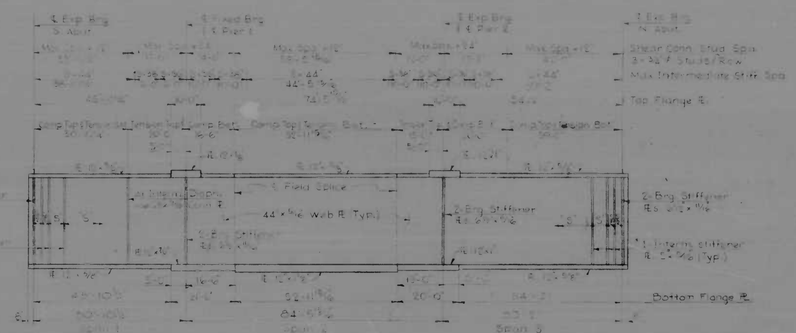
* Note:
Stations are given For Line 101 P/GE & P/R

REVISIONS	CONSULTANT	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS & STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY	
	KNOERLE, BEHDER, STONE & ASSOC., INC. AND MATZ, CHILDS & ASSOC., INC. CONSULTING ENGINEERS 341 N. CALVERT STREET BALTIMORE, MARYLAND 21202	I-95-WINDLASS-MORAVIA INTERCHANGE I-95 OVER RAMP "B" & S&O P.R. S B R SUPERSTRUCTURE ELEVATIONS	DRAWN BY R.V.P. DES. BY M.S.C. TRACED BY R.V.P. CHK. BY F.F.M. F.A.P. NO. I-95-4(36)36 S.R.C. NO. BC 246-33-815 BALTO. CITY NO. 1995 SHEET NO. (92) S-49 OF S-55
		SCALE As Shown DATE JUNE 10, 1971	

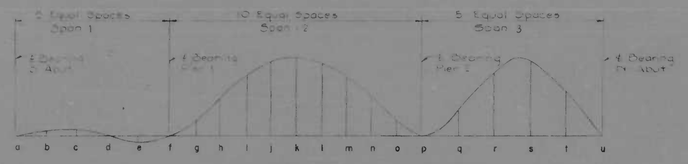
FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	MD.	I-95-4(36)36	S-5	(92) S-55



FRAMING PLAN
Scale 1" = 20'-0"



TYPICAL GIRDER ELEVATION
Not to Scale



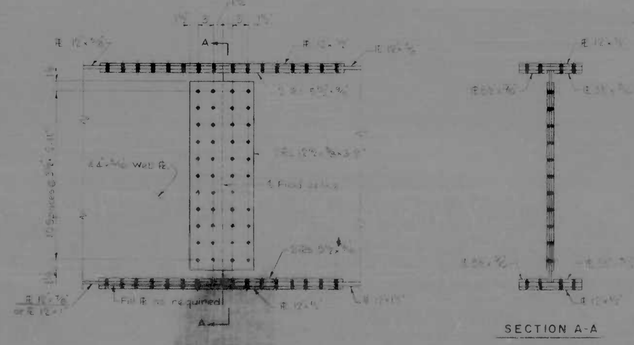
CAMBER DIAGRAM

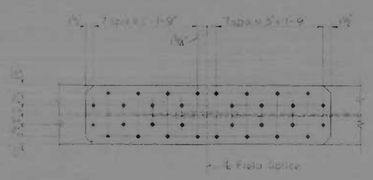
CAMBER TABLE

DESCRIPTION	℄ BRG. S. ABUT.	SPAN 1				℄ BRG. PIER 1	SPAN 2									℄ BRG. PIER 2	SPAN 3				℄ BRG. N. ABUT.
POINT	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u
STRINGER NO.		G-101					G-201										G-301				
△ STEEL	0	0	0	0	0	0	1/16	1/8	1/8	1/8	1/8	1/8	1/8	1/8	0	0	0	1/16	1/8	0	0
△ CONCRETE	0	1/16	1/16	1/16	0	0	5/16	7/16	1/2	9/16	5/8	11/16	11/16	11/16	0	0	0	1/16	1/2	0	0
△ S.D.L.	0	0	0	0	0	0	1/16	1/8	1/4	3/8	7/16	1/2	1/2	1/2	0	0	0	1/16	1/2	0	0
△ GEOMETRIC	0	0	0	0	0	0	1/16	1/8	1/8	1/8	1/8	1/8	1/8	1/8	0	0	0	1/16	1/8	0	0
TOTAL CAMBER	0	1/16	0	1/16	0	0	1/16	1/8	1/8	1/8	1/8	1/8	1/8	1/8	0	0	0	1/16	1/8	0	0
STRINGER NO.		G-102					G-202										G-302				
△ STEEL	0	0	0	0	0	0	1/16	1/8	1/8	1/8	1/8	1/8	1/8	1/8	0	0	0	1/16	1/8	0	0
△ CONCRETE	0	1/16	1/16	0	1/16	0	5/16	7/16	1/2	9/16	5/8	11/16	11/16	11/16	0	0	0	1/16	1/2	0	0
△ S.D.L.	0	0	0	0	0	0	1/16	1/8	1/4	3/8	7/16	1/2	1/2	1/2	0	0	0	1/16	1/2	0	0
△ GEOMETRIC	0	0	0	0	0	0	1/16	1/8	1/8	1/8	1/8	1/8	1/8	1/8	0	0	0	1/16	1/8	0	0
TOTAL CAMBER	0	1/16	1/16	0	1/16	0	1/16	1/8	1/8	1/8	1/8	1/8	1/8	1/8	0	0	0	1/16	1/8	0	0
STRINGER NO.		G-103					G-203										G-303				
△ STEEL	0	0	0	0	0	0	0	1/16	1/8	1/8	1/8	1/8	1/8	1/8	0	0	0	1/16	1/8	0	0
△ CONCRETE	0	1/16	1/16	0	1/16	0	5/16	1/2	5/8	3/4	7/8	1	1/16	1/16	0	0	0	1/16	1/2	0	0
△ S.D.L.	0	0	0	0	0	0	1/16	3/16	1/4	5/16	3/8	7/16	1/2	1/2	0	0	0	1/16	1/2	0	0
△ GEOMETRIC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1/16	1/2	0	0
TOTAL CAMBER	0	1/16	1/16	0	1/16	0	3/16	1/2	3/4	15/16	1	1 1/16	1 1/16	1 1/16	0	0	0	1/16	1/2	0	0
STRINGER NO.		G-104					G-204										G-304				
△ STEEL	0	0	0	0	0	0	0	1/16	1/8	1/8	1/8	1/8	1/8	1/8	0	0	0	0	0	0	0
△ CONCRETE	0	1/16	1/16	0	1/16	0	5/16	1/2	3/4	7/8	1	1 1/16	1 1/16	1 1/16	0	0	0	1/16	1/2	0	0
△ S.D.L.	0	0	0	0	0	0	1/16	1/8	1/4	3/8	7/16	1/2	1/2	1/2	0	0	0	1/16	1/2	0	0
△ GEOMETRIC	0	0	0	0	0	0	1/16	1/8	1/8	1/8	1/8	1/8	1/8	1/8	0	0	0	1/16	1/8	0	0
TOTAL CAMBER	0	1/16	1/16	0	1/16	0	1/16	1/16	1/16	1/16	1/16	1/16	1/16	1/16	0	0	0	0	1/2	1/16	0

Notes:
All girders are designed composite and therefore there shall be no temporary intermediate supports while concrete is being placed.
All structural steel shall conform to ASTM Designation A-588.
All anchor bolts shall be hot dipped galvanized.
All intermediate stiffeners and or connection plates shall be placed tight against the tension flange and fillet welded to compression flange.
All bearing stiffeners shall be milled to bear against tension flange and be continuously welded to compression flange.
All stiffeners at the end of girders shall be vertical.
All dimensions given are horizontal dimensions.
All bearing stiffeners shall be placed along ℄ Brg's except those on exterior face of exterior girders shall be placed normal to girders.
All field bolts shall be 7/8 ϕ high strength bolts.

REFERENCES — SHEET NO.
General Plan & Elevation
Diaphragm Details
Superstructure Elevation
Bearing Details
Superstructure Details



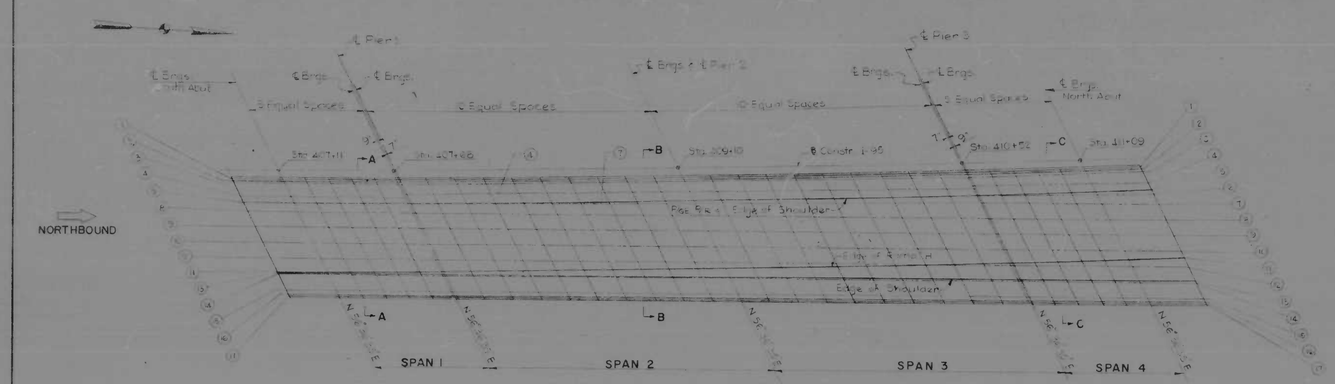


PLAN-TOP & BOTTOM

TYPICAL FIELD SPLICE DETAILS

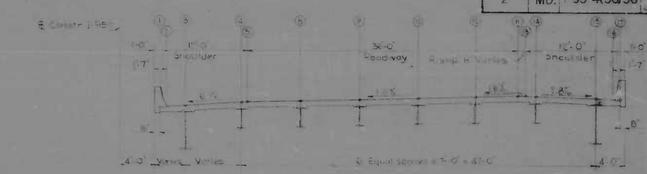
REVISIONS	CONSULTANT	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS	&	STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY
	KNOERLE, BENDER, STONE & ASSOC., INC. AND MATZ, CHILES & ASSOC., INC. CONSULTING ENGINEERS 241 N. CALVERT STREET BALTIMORE, MARYL. NO. 21202	I-95-WINDLASS-MORAVIA INTERCHANGE RAMP "A" OVER B & O R.R. FRAMING PLAN		DRAWN BY R.V.P. DES. BY J.R. TRACED BY R.V.P. CHK. BY F.F.M. F.A.P. NO. I-95-4(36)36 SHEET NO. (92) S.R.C. NO. BR-246-33-815 BALTO. CITY NO. 1995 S-5 OF S-55
		SCALE: As Shown DATE:		

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	MD.	I-95-4(36)36	S-50	(92) S-55

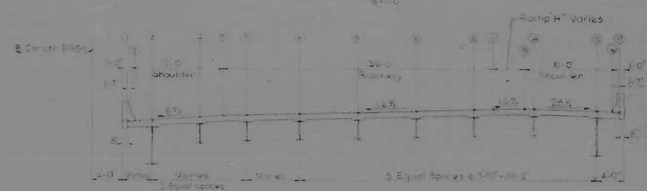


NBR SUPERSTRUCTURE ELEVATIONS - KEY PLAN

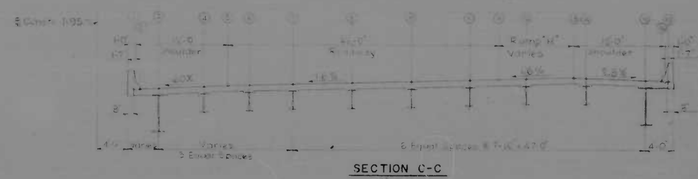
Scale: 1" = 50'-0"



SECTION A-A



SECTION B-B



SECTION C-C

DESCRIPTION		℄ BRG ABUT	SPAN 1					℄ BRG PIER 1
STATION *		407+ 00.93	407+ 31.45	407+ 46.24	407+ 58.35	407+ 69.06	407+ 76.27	409+ 17.78
1	WEST KEY LINE	54.31	54.45	54.58	54.71	54.83	54.90	54.97
2	WEST CURB LINE	54.37	54.51	54.64	54.77	54.89	55.02	55.09
3	GIRDER G-109	54.03	54.67	54.80	54.93	55.05	55.18	55.25
4	STRINGER S-110	55.01	55.15	55.29	55.42	55.55	55.66	55.73
5	EDGE OF SHOULDER P/GE & P/R	55.13	55.27	55.40	55.54	55.66	55.77	55.84
8	STRINGER S-111	55.47	55.60	55.73	55.86	55.98	56.09	56.16
9	STRINGER S-112	55.84	55.98	56.11	56.23	56.36	56.48	56.55
10	STRINGER S-113	56.02	56.16	56.29	56.41	56.53	56.65	56.72
12	STRINGER S-114	56.19	56.33	56.46	56.58	56.70	56.82	56.89
11	EDGE OF RAMP "H"	55.94	56.07	56.19	56.31	56.43	56.54	56.61
13	EDGE OF SHOULDER	55.96	56.08	56.20	56.32	56.44	56.56	56.63
14	STRINGER S-115	55.92	56.05	56.18	56.30	56.42	56.53	56.60
15	GIRDER G-116	55.70	55.86	56.00	56.12	56.24	56.36	56.43
16	EAST CURB LINE	54.70	55.83	55.95	56.07	56.19	56.30	56.37
17	EAST KEY LINE	53.68	55.81	55.93	56.05	56.17	56.28	56.35

DESCRIPTION		℄ BRG PIER 1	SPAN 2								℄ PIER 2
STATION *		409+ 17.78	409+ 41.88	409+ 65.98	409+ 80.10	409+ 94.21	409+ 98.31	409+ 99.42	410+ 76.52	410+ 91.63	409+ 04.74	409+ 18.85
1	WEST KEY LINE	54.97	55.15	55.34	55.40	55.52	55.60	55.77	55.80	56.00	56.10	56.19
2	WEST CURB LINE	55.03	55.18	55.32	55.40	55.50	55.71	55.83	55.95	56.05	56.16	56.25
3	GIRDERS G-209/G-309	55.19	55.33	55.46	55.59	55.71	55.83	55.94	56.06	56.16	56.26	56.35
4	GIRDERS G-210/G-310	55.53	55.67	55.81	55.95	56.07	56.20	56.32	56.43	56.54	56.64	56.74
5	EDGE OF SHOULDER P/GE & P/R	55.78	55.93	56.07	56.20	56.33	56.45	56.57	56.68	56.78	56.88	56.98
7	GIRDERS G-211 & G-311	55.61	55.76	56.10	56.23	56.36	56.49	56.61	56.72	56.83	56.93	57.03
8	GIRDERS G-212 & G-312	55.92	56.07	56.21	56.35	56.48	56.61	56.73	56.84	56.95	57.05	57.15
9	GIRDERS G-213 & G-313	56.00	56.14	56.28	56.42	56.55	56.67	56.79	57.00	57.11	57.21	57.30
10	GIRDERS G-214 & G-314	56.26	56.41	56.55	56.68	56.81	56.93	57.05	57.16	57.26	57.36	57.46
12	GIRDERS G-215 & G-315	56.43	56.57	56.71	56.84	56.97	57.09	57.20	57.31	57.42	57.52	57.61
11	EDGE OF RAMP "H"	56.35	56.49	56.63	56.75	57.07	57.18	57.29	57.39	57.49	57.58	57.67
13	EDGE OF SHOULDER	56.52	56.72	56.85	56.98	57.11	57.23	57.34	57.45	57.55	57.65	57.74
14	GIRDERS G-216 & G-316	56.55	56.69	56.83	56.96	57.08	57.20	57.31	57.42	57.52	57.62	57.71
15	GIRDERS G-217 & G-317	56.37	56.51	56.64	56.77	56.90	57.01	57.12	57.23	57.33	57.42	57.51
16	EAST CURB LINE	56.32	56.46	56.59	56.72	56.84	56.96	57.07	57.17	57.27	57.37	57.45
17	EAST KEY LINE	56.30	56.43	56.57	56.69	56.82	56.93	57.04	57.15	57.25	57.34	57.43

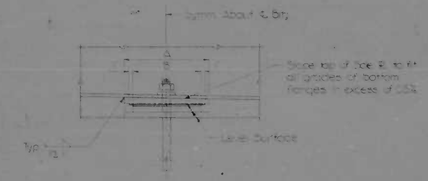
DESCRIPTION		SPAN 3									℄ BRG PIER 3
STATION *		409+ 32.96	409+ 47.06	409+ 61.17	409+ 75.28	409+ 89.39	410+ 03.50	410+ 17.60	410+ 31.71	410+ 45.82	410+ 59.93
1	WEST KEY LINE	56.29	56.37	56.45	56.52	56.59	56.65	56.71	56.76	56.80	56.84
2	WEST CURB LINE	56.34	56.43	56.51	56.56	56.62	56.67	56.72	56.76	56.80	56.83
3	GIRDERS G-209/G-309	56.44	56.53	56.61	56.68	56.74	56.80	56.84	56.88	56.91	56.94
4	GIRDERS G-210/G-310	56.84	56.93	57.02	57.10	57.18	57.25	57.31	57.36	57.41	57.44
5	EDGE OF SHOULDER P/GE & P/R	57.06	57.15	57.22	57.29	57.36	57.42	57.47	57.52	57.56	57.60
7	GIRDERS G-211 & G-311	57.13	57.23	57.32	57.39	57.45	57.49	57.55	57.60	57.65	57.69
8	GIRDERS G-212 & G-312	57.24	57.33	57.41	57.49	57.56	57.62	57.68	57.74	57.78	57.83
9	GIRDERS G-213 & G-313	57.40	57.49	57.56	57.64	57.70	57.77	57.82	57.88	57.92	57.96
10	GIRDERS G-214 & G-314	57.55	57.65	57.71	57.78	57.85	57.91	57.97	58.02	58.06	58.10
12	GIRDERS G-215 & G-315	57.70	57.78	57.85	57.93	57.99	58.05	58.11	58.15	58.20	58.23
11	EDGE OF RAMP "H"	57.75	57.82	57.89	57.95	58.01	58.06	58.11	58.15	58.18	58.21
13	EDGE OF SHOULDER	57.81	57.90	57.98	58.05	58.11	58.17	58.22	58.27	58.31	58.35
14	GIRDERS G-216 & G-316	57.79	57.88	57.95	58.01	58.06	58.14	58.19	58.24	58.28	58.32
15	GIRDERS G-217 & G-317	57.60	57.66	57.75	57.82	57.88	57.94	57.99	58.03	58.07	58.11
16	EAST CURB LINE	57.54	57.60	57.68	57.75	57.82	57.87	57.93	57.97	58.01	58.04
17	EAST KEY LINE	57.52	57.59	57.67	57.73	57.79	57.85	57.90	57.95	57.99	58.02

DESCRIPTION		℄ BRG PIER 3	SPAN 4				℄ BRG ABUT
STATION *		410+ 61.42	410+ 72.63	410+ 83.84	410+ 95.05	411+ 06.26	411+ 17.48
1	WEST KEY LINE	56.85	56.87	56.89	56.91	56.93	56.94
2	WEST CURB LINE	56.90	56.92	56.95	56.97	56.98	57.00
3	GIRDER G-409	57.05	57.07	57.10	57.11	57.13	57.14
4	STRINGER S-410	57.35	57.38	57.41	57.43	57.46	57.48
5	EDGE OF SHOULDER P/GE & P/R	57.60	57.62	57.65	57.66	57.68	57.69
6	STRINGER S-411	57.61	57.64	57.67	57.69	57.71	57.72
7	STRINGER S-412	57.69	57.73	57.75	57.76	57.80	57.81
8	STRINGER S-413	57.83	57.86	57.89	57.91	57.93	57.94
9	STRINGER S-414	57.97	58.00	58.03	58.04	58.06	58.07
10	STRINGER S-415	58.10	58.13	58.16	58.17	58.19	58.20
11	EDGE OF RAMP "H"	58.21	58.23	58.25	58.26	58.27	58.27
12	STRINGER S-416	58.24	58.26	58.29	58.30	58.32	58.33
13	EDGE OF SHOULDER	58.35	58.36	58.40	58.42	58.43	58.44
14	STRINGER S-417	58.32	58.35	58.37	58.38	58.40	58.41
15	GIRDER G-418	58.11	58.13	58.15	58.17	58.12	58.19
16	EAST CURB LINE	58.05	58.07	58.08	58.10	58.12	58.12
17	EAST KEY LINE	58.02	58.04	58.06	58.08	58.09	58.10

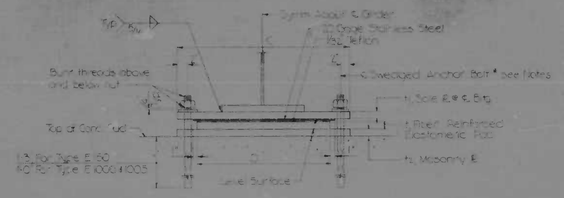
Notes:
* Stations are given for Line 5 - Edge of Shoulder, P/GE & P/R

REVISIONS	CONSULTANT	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS & STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY	
	KNOERLE, BENDER, STONE & ASSOC., INC. AND MATZ, CHILDS & ASSOC., INC. CONSULTING ENGINEERS 341 N. CALVERT STREET BALTIMORE, MARYLAND 21202	I-95-WINDLASS-MORAVIA INTERCHANGE I 95 OVER RAMP "B" & B&O R.R. N.B.R. SUPERSTRUCTURE ELEVATIONS	DRAWN BY R.V.P. DES. BY M.S.C. TRACED BY R.V.P. CHK. BY F.F.M.
		SCALE: As Shown DATE: June 10, 1971	F.A.P. NO. I-95-4(36)36 S.R.C. NO. BC 246-33-815 BALTO. CITY NO. 1995 SHEET NO. (92) S-50 OF S-55

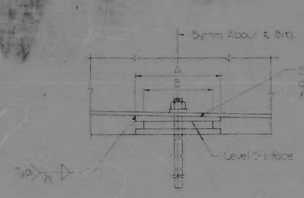
FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	MD.	I-95-4(36)36	S-51	(92) S-55



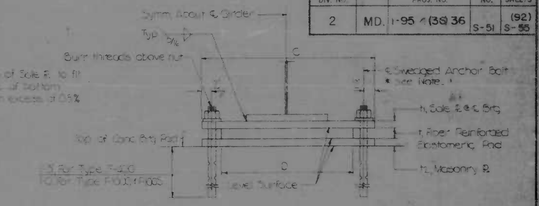
ELEVATION



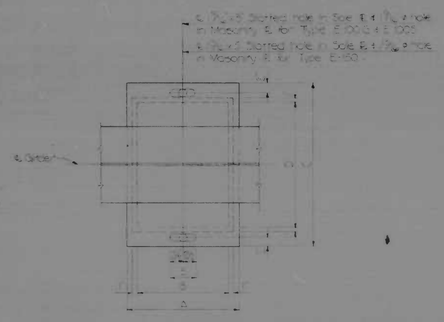
FRONT VIEW



ELEVATION



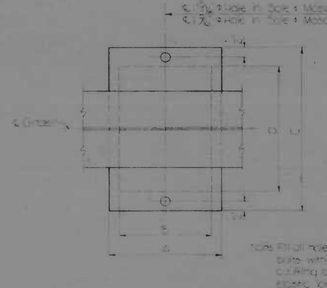
FRONT VIEW



PLAN

TYPE	DIMENSION						
	A	B	C	D	E	t_1	t_2
E-150	12	8	24	16	1'-0"	¾"	1¼"
E-100G	12	8	24	12	1"	1"	1"
E-100S	12	8	20	12	1"	1"	1"

* Notes:
1. For Bearing Type E-150 use 1½"ø Swedged Anchor Bolt with 5"x5"x⅜" washer & hexagon nut. Set the bolt 1'-9" in 1¾"ø x 2"min. drilled hole in Masonry.
2. For Bearing Type E-100G & E-100S use 1¼"ø Swedged Anchor Bolt with 4"x4"x¼" washer & hexagon nut. Set the bolt 1'-0" in 1½"ø x 2"drilled hole in Masonry.



PLAN

Note: Fill all holes around pinion bolts with non-hardening caulking compound or elastic joint filler

TYPE	DIMENSION						
	A	B	C	D	E	t_1	t_2
F-400	12	8	24	16	1"	¾"	1¼"
F-100G	12	8	24	12	1"	1"	1"
F-100S	12	8	20	12	1"	1"	1"

* Notes: 1. For Bearing Type F-400 use 1½"ø Swedged Anchor Bolt with 3½"x3½" washer & hex nut. Set the bolt 1'-3" in 1¾"ø drilled hole in Masonry.

2. For Bearing Type F-100G & F-100S use 1¼"ø Swedged Anchor Bolt with 3"x3"x¼" washer & hex nut. Set the bolt 1'-0" in 1½"ø drilled hole in Masonry.

EXPANSION BEARING – TYPE E-150, E-100G & E-100S

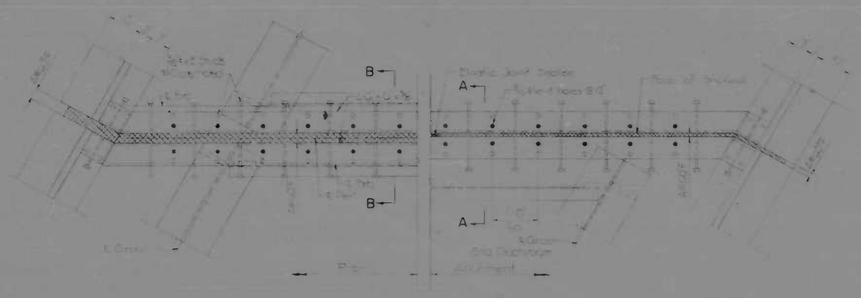
FIX BEARING – TYPE F-400, F-100G & F-100S

NOTES:
1. All Steel used in bearings shall conform to A.S.T.M. Designation A-588.
2. All Anchor Bolts, Hex nuts & washers shall be hot dipped galvanized.
3. Epoxy Resin shall be applied on full contact area between the following:
   - Fiber reinforced elastomeric pad and Masonry Plate.
   - Fiber reinforced elastomeric pad and Teflon Plate.
   - Sole Plate and Stainless Steel Plate.
   - Masonry Plinth (Concrete Pad).
4. Epoxy Resin Polishing Compound shall be used if air temperature is between 50°F and 70°F.

REFERENCE	SHEET NO.
Framing Plan	S-12

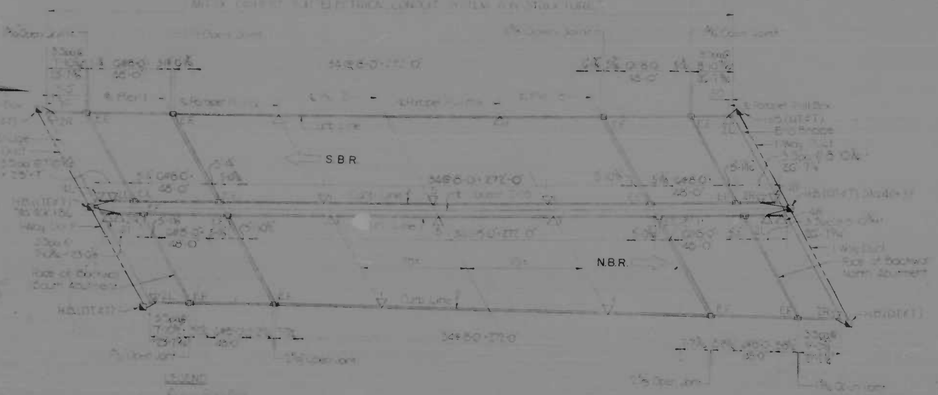
REVISIONS	CONSULTANT	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS & STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY
	KNOERLE, BENDER, STOPIK & ASSOC., INC. AND KATZ, CHILDS & ASSOC., INC. CONSULTING ENGINEERS 341 N. CALVERT STREET BALTIMORE, MARYLAND 21202	I-95-WINDLASS MORAVIA INTERCHANGE I-95 OVER RAMP "B" & B&O RR BEARING DETAILS
		SCALE: No Scale DATE: June 10, 1971
		DRAWN BY M.S.F. DES. BY M.S.C. TRACED BY M.S.F. CHK. BY F.F.M.
		F.A.P. NO. I-95-4(36)36 S.R.C. NO. BC 246-33-815 BALTO. CITY NO. 1994
		SHEET NO. (92) S-51 OF S-55

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	MD.	I-95-4(36)36	S-52	(92) S-55



PLAN

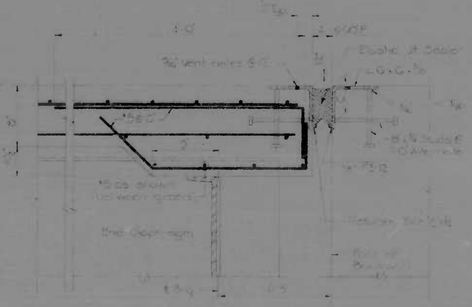
ELEVATION



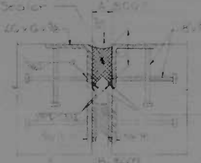
PARAPET CONTRACTION JOINT SPACING

EXPANSION JOINT DETAILS

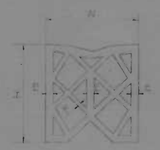
LOCATION	SEALER SIZE				DIMENSION		
	W	-	E	F	A	B	C
Back	2"	Elastic	2"	3"	3"	3"	3"
Abutment	2"	Elastic	2"	3"	3"	3"	3"



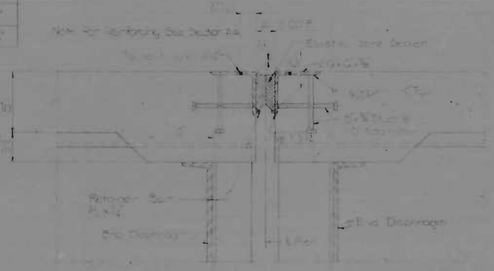
SECTION A-A



SECTION C-C



ELASTIC JOINT SEALER

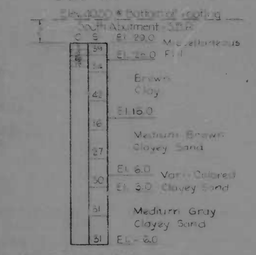


SECTION B-B

REVISIONS	CONSULTANT	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS & STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY	
	KHOURI, BENDER, STONE & ASSOC., INC. AND MATZ, CHILDS & ASSOC., INC. CONSULTING ENGINEERS 341 N. CALVERT STREET BALTIMORE, MARYLAND 21202	I-95 WINDLASS MORAVIA INTERCHANGE I-95 OVER RAMP "B" & B&O R.R. EXPANSION JOINT DETAILS	DRAWN BY M.S.F. DES. BY M.S.C. TRACED BY M.S.F. CHK. BY F.F.M. F.A.P. NO. I-95-4(36)36 S.R.E. NO. BC 246-33-815 BALTO. CITY NO. 1995 SHEET NO. (92) S-52 OF S-55
		SCALE As Shown DATE	

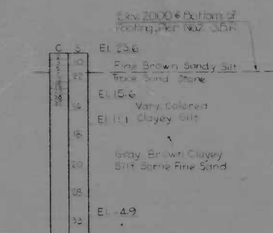
FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	MD.	I-95-4(36)136	S-53	(92) S-55

BORING No. 1
Sta 4+49 302 Rt. ℄ SURVEY
B&O R.R.



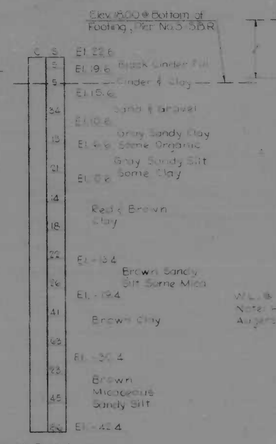
W.L. @ El. 24.5 24 Hrs.

BORING No. 3
Sta. 5+32 120 Rt. ℄ SURVEY
B&O R.R.



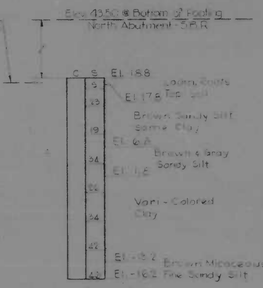
W.L. @ El. 1.6 1 Hr (Caved in)

BORING No. 4
Sta 6+29 10' Lt. ℄ SURVEY
B&O R.R.



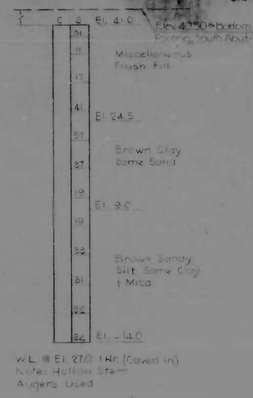
W.L. @ El. -8.4 1 Hr.
W.L. @ El. 15.6 24 Hrs.
Note: Hollow Stem Augers Used

BORING No. 5
Sta. 6+12 63' Lt. ℄ SURVEY
B&O R.R.



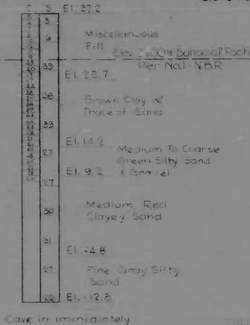
W.L. @ El. 13.3 24 Hrs.
Note: Hollow Stem Augers Used

BORING No. 6
Sta 5+26 302 Rt. ℄ SURVEY



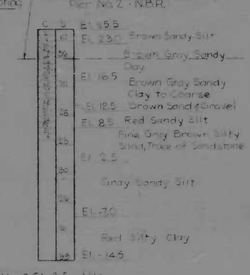
W.L. @ El. 27.0 1 Hr. (Caved in)
Note: Hollow Stem Augers Used

BORING No. 7
Sta. 5+90 256 Rt. ℄ SURVEY
B&O R.R.



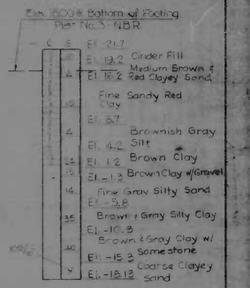
W.L. Cave in immediately

BORING No 8
Sta 6+09 120' Rt. ℄ SURVEY
B&O R.R.



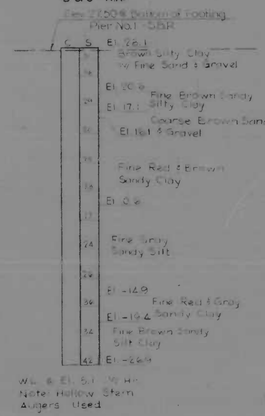
W.L. @ El. 8.5 1 Hr

BORING No 9
Sta 7+15 4' Lt. ℄ SURVEY
B&O R.R.



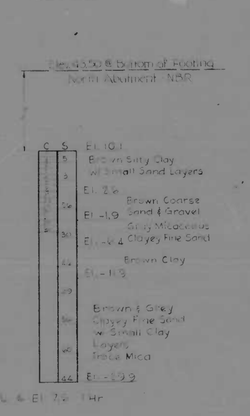
W.L. Cave in Immediately

BORING No B-4
Sta. 5+47 226' Rt. ℄ SURVEY
B&O R.R.



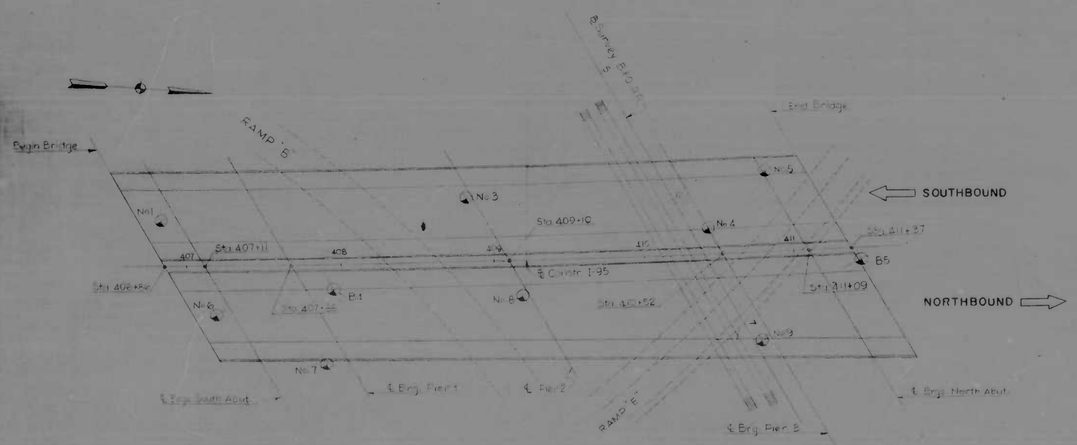
W.L. @ El. 5.1 16 Hr.
Note: Hollow Stem Augers Used

BORING No. B-5
Sta. 6+98 88' Lt. ℄ SURVEY
B&O R.R.



W.L. @ El. 7.6 1 Hr

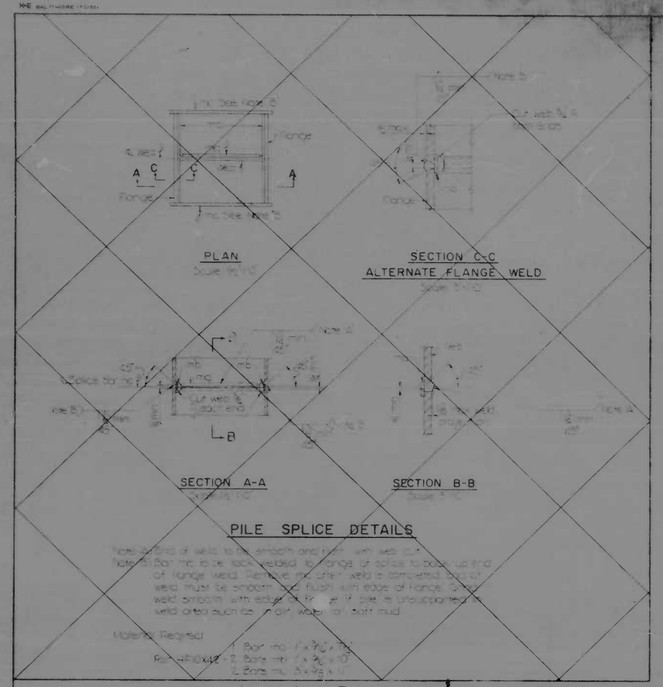
NOTES:
1. Test Borings made in Jan. 1971 except Nos. B-4 & Nos. B5 made in October 1972.
2. C = Number of blows required to drive a 2½" dia casing 12" foot using a 300 lb. weight falling 30 inches. If no casing blows are shown, a Hollow Stem auger was used.
3. S = Number of blows required to drive a 2" O.D. Sampling Spoon one foot, using a 140 lbs. weight falling 30 inches.



BORING LOCATION PLAN
1" = 40'-0"

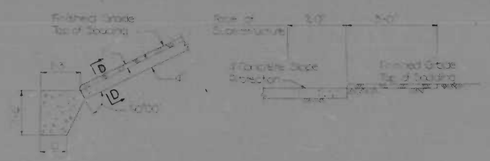
REVISIONS	CONSULTANT	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS &	STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY
	KNOERLE, BENDER, STONE & ASSOC., INC. AND MATZ, CHILDS & ASSOC., INC. CONSULTING ENGINEERS 341 N. CALVERT STREET BALTIMORE, MARYLAND 21202	I-95-WINDLASS-MORAVIA INTERCHANGE I-95 OVER RAMP "B" & B&O R.R. BORING DATA	DRAWN BY R.V.P. DES. BY M.S.C. TRACED BY R.V.P. CHK. BY F.F.M. F.A.P. NO. I-95-4(36)136 S.R.C. NO. BC-246-33-815 BALTO. CITY NO. 1995 SHEET NO. (92) S-53 OF S-55
		SCALE: As Shown DATE: JUNE 5, 1973	

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	MD.	I-95-4(36)36	S-54 S-55	(92)

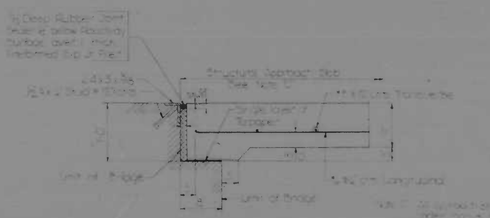


PILE SPLICE DETAILS

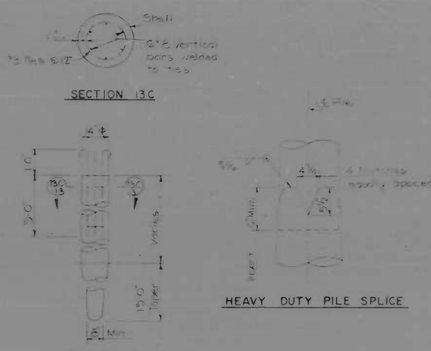
NOT IN CONTRACT



SLOPE PROTECTION DETAILS

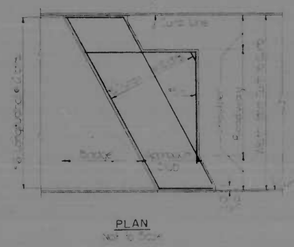


ELEVATION



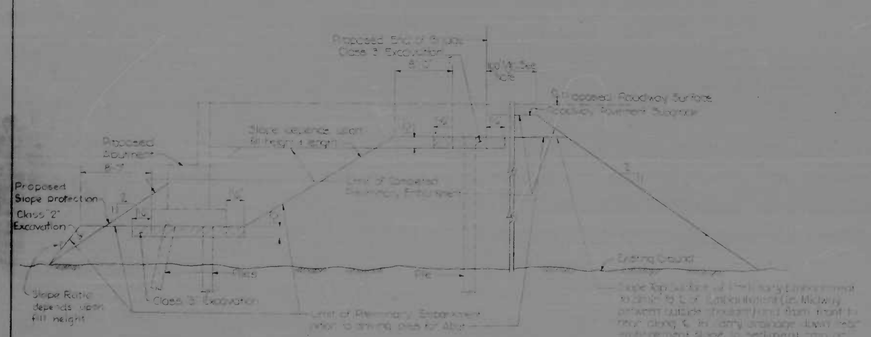
C.I.P. CONCRETE PILE DETAILS

NOTES



PLAN

TYPICAL APPROACH SLAB DETAILS



AT ABUTMENTS

PRELIMINARY EMBANKMENT DETAILS

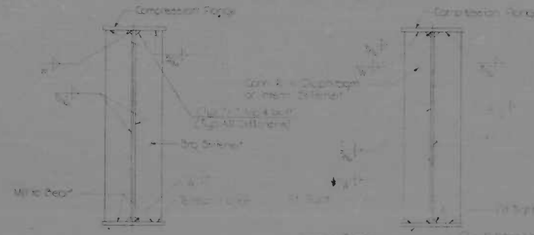
REVISIONS	CONSULTANT	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS & STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY		
	KNOERLE, BENDER, STONE & ASSOC., INC and MATZ, CHILDS & ASSOC., INC. CONSULTING ENGINEERS 341 N. CALVERT STREET BALTIMORE, MARYLAND 21202	I-95-WINDLASS-MORAVIA INTERCHANGE SUBSTRUCTURE DETAILS SCALE: As shown DATE: JUNE 1971	DRAWN BY: L.M.W. TRACED BY: L.M.W. DES. BY: M.S.C. CHK. BY: F.F.M. F.A.P. NO. I-95-4(36)36 S.R.C. NO. BC 246-33-815 BALTO. CITY NO. 1995	SHEET NO. (92) S-54 or S-55

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	MD.	I-95-4(36)36	S-55	(92) S-55

SIZE W OF CONTINUOUS FILLET WELD	
PLATE E THICKNESS	MINIMUM SIZE W
To & Under	¼
Over ¾ to 1½	⅜
Over 1½	½

STRUCTURE	T(in)
Ramp A Over B&O R.R.	7½
I-95 Over B&O R.R.	7
Ramp E Over Ramp A & I-95 and B&O R.R.	7

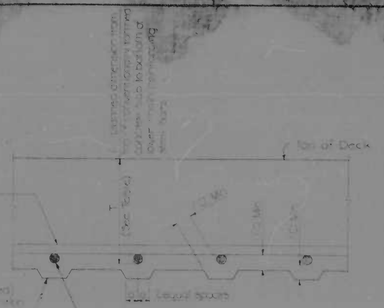
Note: Size W of continuous fillet weld is required for flange and web connections.



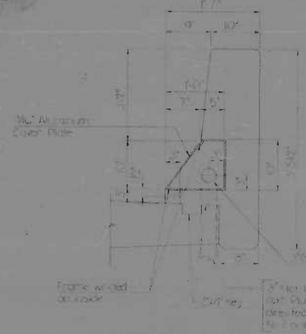
BEARING STIFFENER

INTERMEDIATE STIFFENER

WELD DETAIL

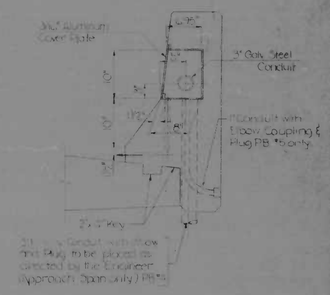


STEEL FORMS TO REMAIN IN PLACE



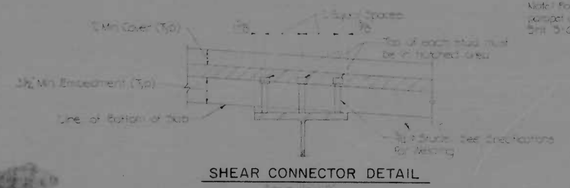
SECTION A-A

Scale: 1½"=1'-0"
(Thru 4 Parapets)

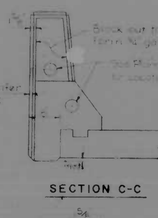


SECTION B-B

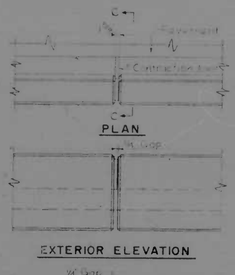
Scale: 1"=1'-0"
(Thru Median Parapets only)



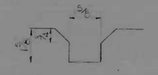
SHEAR CONNECTOR DETAIL



SECTION C-C



EXTERIOR ELEVATION

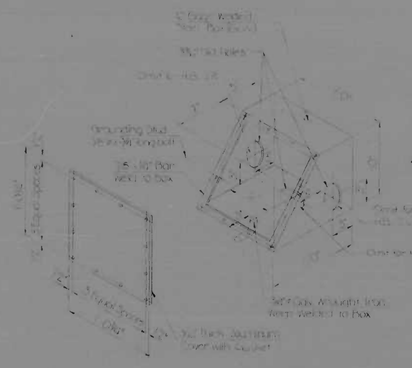


JOINT DETAIL

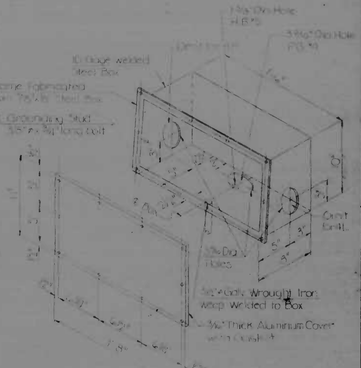
INTERIOR ELEVATION

PARAPET JOINT DETAILS

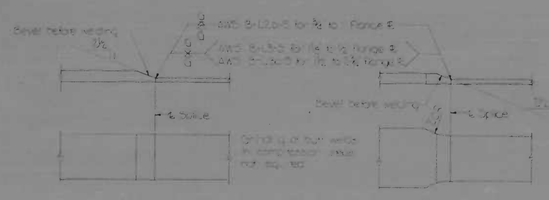
Not to Scale



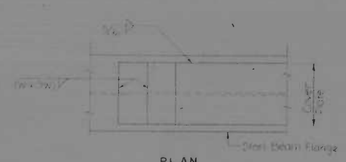
TYPICAL PULL BOX DETAILS FOR TRANSIT AND TRAFFIC



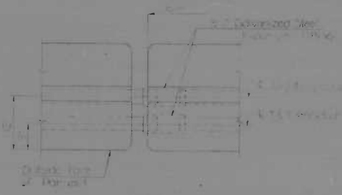
TYPICAL PULL BOX DETAILS FOR LIGHTING

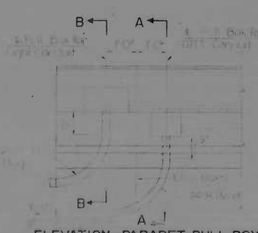


FLANGE SPLICE DETAILS



DETAIL OF EXPANSION FITTINGS AT JOINTS





ELEVATION - PARAPET PULL BOX

Notes:

Minor deviation from box dimensions will be allowed if construction designs so require. But only after approval by the Interstate Division for Baltimore City.

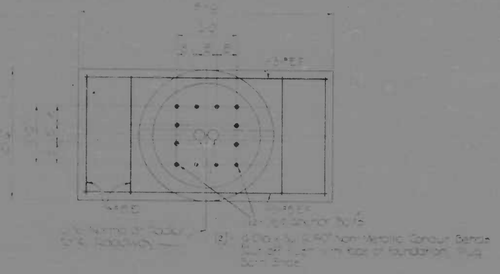
The box cover is to be of aluminum alloy with pebble or shot finish. The face of the cover must be flush with the face of concrete. A ¼" rubber gasket is to be fitted between the cover and box flanges. Drill and tap holes in box flanges and fasten cover to box with ½" dia. stainless steel countersunk Phillips flathead screws.

Pull box shall be hot dipped galvanized after fabrication.

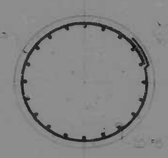
All box dimensions are inside dimensions.

COVER PLATE DETAILS

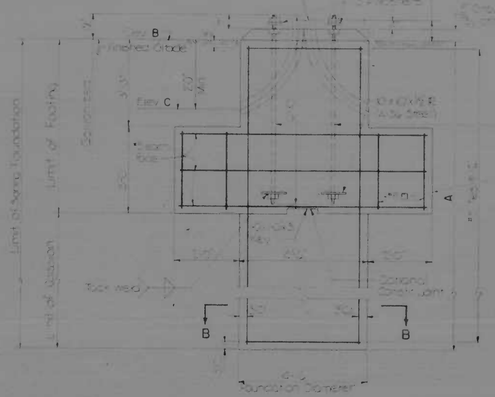
REVISIONS	CONSULTANT	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS & STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY	
	KNOERLE, BENDER, STONE & ASSOC., INC. AND MATZ, CHILDS & ASSOC., INC. CONSULTING ENGINEERS 343 N. CALVERT STREET BALTIMORE, MARYLAND 21202	I-95 WINDLASS-MORAVIA INTERCHANGE SUPERSTRUCTURE DETAILS	DRAWN BY J.R.H. TRACED BY J.R.H. DES. BY M.S.C. CHK. BY F.E.M.
		SCALE As shown DATE	F.A.P. NO. I-95-4(36)36 S.R.C. NO. BC 246 33-86 BALTO. CITY NO. 1995 SHEET NO. (92) S-55 OF S-55



ANCHOR BOLT LOCATION

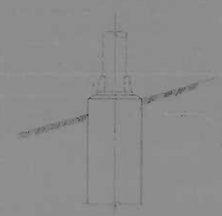


SECTION B-B



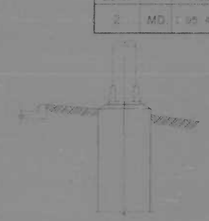
SIGN FOUNDATION

SIGNING FOUNDATION							
LOCATION		FOOTING AND ANCHOR BOLT DATA			TYPE OF STRUCTURE	BORING NO	ELEVATION-'C' ℄ CONDUIT EXIT
STATION	OFFSET TO ℄ FOUNDATION	A	ELEV 'B'	CASE			
1104+90	297.5' Rt. ℄ Inside Rdwy. L-95	12'-0"	54.91	VII	Cantilever	A-4	72.91
205+00	67.5' Lt. ℄ Inside Rdwy. L	20'-0"	16.35	III	Bridge	A-5	73.85
205+00	54.25' Rt. ℄ Inside Rdwy. L	20'-0"	73.79	III	Bridge	A-5	71.79



CASE I

CASE II



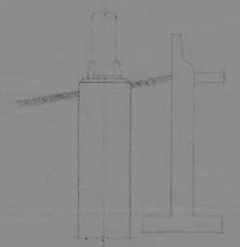
CASE III

CASE IV

CASE V

CASE VI

CASE VII



CASE VIII

CASE IX

GENERAL NOTES

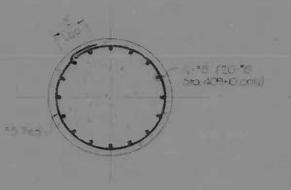
1. DESIGN WIND 85 PSF.
2. CONCRETE: Class 'A' Concrete shall have a minimum compressive strength of 3000 PSI at 28 days for Reinforced Concrete design in accordance with the Special Provisions.
3. CHAMFER: All exposed corners of concrete shall be chamfered 3/4" with rubbed chamfer strips.
4. REINFORCING STEEL: Reinforcing Bars shall conform to ASTM designation A615 Grade 60 as noted. Shall be coated in accordance with Section 711 of the Specifications unless otherwise noted. Minimum cover for any bar shall be 3" unless otherwise noted.
5. Anchor bolts 1 1/2" ø and including 1 1/4" ø shall conform to the requirements of ASTM designation A 325. Anchor bolts greater than 1 1/4" ø shall conform to the requirements of ASTM designation A 449.
6. Minimum design foundation bearing pressure equals 5000 PSF.
7. EXISTING UTILITIES: Existing conduits, pipes, mains, overhead lines, service connections etc. which may affect the work of this contract have been shown on the plans from records only. However the accuracy and completeness of this information is not guaranteed. It shall be the responsibility of the contractor to locate and protect all existing facilities which might be affected by the work of his operations.
8. HORIZONTAL ALIGNMENT: Position of overhead signs so that the face is normal to right angles to normal edge of roadway, for right angles, offset right angles to the tangent of the curve at the sign location for a horizontal curve.

REFERENCES	SHEET NO.
Boring Logs	3 of 3
Conduit Entrances	91A thru 91A

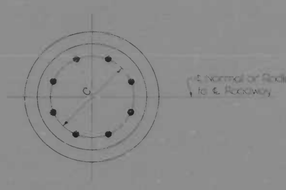
REVISIONS	CONSULTANT	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS &	STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY
	KNOERLE, BENDER, STOKE & ASSOC. INC. AND MAST CUNDS & ASSOC. INC. CONSULTING ENGINEERS 341 N. CALVERT STREET BALTIMORE, MARYLAND 21202	INTERSTATE ROUTE 95 FROM NORTH OF HERRING RUN TO NORTH OF B & O RAILROAD SIGNING FOUNDATION DETAILS	DRAWN BY L.M.W. DES. BY N.C.E. CHECKED BY L.M.W. SUP. BY D.M.P. F.A.P. NO. I 95-4(36)36 SHEET NO. S.H. NO. BC 24A-13-RR (82) BALTO. CITY NO. 1995 S-85A of S-89
		SCALE AS SHOWN DATE	

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	MD.	I-95-4(36)136	S-55B	(92) S-56

ANCHOR BOLT LOCATION
Scale: 1/2"=1'-0"

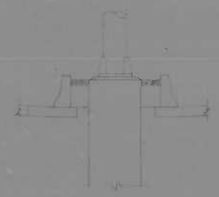


SECTION A-A
Scale: 1"=1'-0"

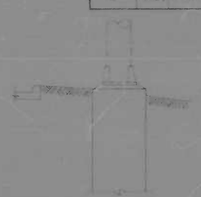


ANCHOR BOLT LOCATION
AT STA 409+10 ONLY
Scale: 1/2"=1'-0"

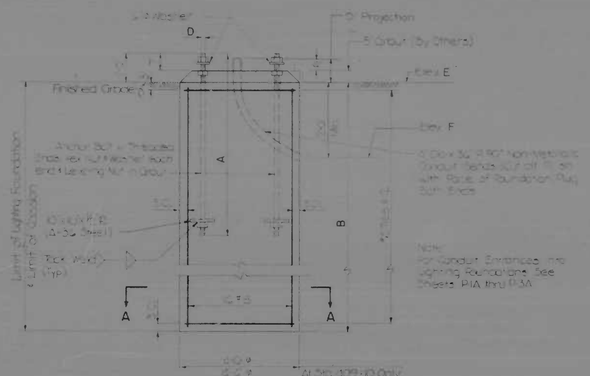
CASE I



CASE II

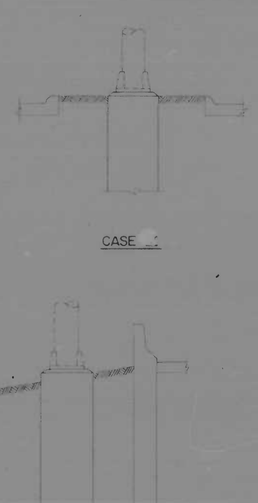


CASE III

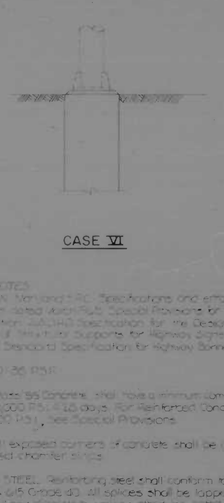


LIGHT POLE FOUNDATION
Scale: 1/2"=1'-0"

CASE IV

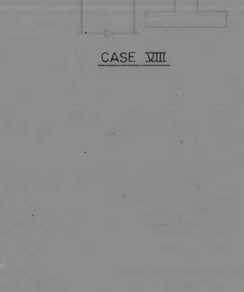


CASE V



CASE VI

CASE VII



CASE VIII

CASE IX

LIGHT POLE FOUNDATION DATA											
POLE HEIGHT	LOCATION		FOOTING AND ANCHOR BOLT DATA					BORING NO.	ELEVATION 'E' TOP OF FOUNDATION	ELEVATION 'F' ℄ CONDUIT EXIT
	STATION	OFFSET TO ℄ FOUNDATION	A	B	C	D	CASE			
110	503+10	21'-0" ℄ Lorain Ramp E	9'-0"	34'-0"	30'-0"	2'-0"	VII	B-1	25.44	31.94
110	406+10	℄ Conrail L.P.B.	9'-0"	22'-0"	30'-0"	2'-0"	II	B-1A	54.01	9.51
110	23+30	50'-0" ℄ Conrail Ramp A	9'-0"	34'-0"	30'-0"	2'-0"	VII	B-1A-1	30.10	30.50
130 (N.B.)	409+10	℄ Conrail L.P.B.	9'-0"	24'-0"	34"	0'-0"	VIII	B	24.95	27.45
110	413+80	℄ Conrail L.P.B. (S.B.)	9'-0"	27'-0"	30'-0"	2'-0"	II	B-2	39.01	36.45
100	28+30	30'-0" ℄ Conrail Ramp A	8'-0"	30'-0"	25"	2'-3"	VII	A-3	17.20	27.70
100	5+90	30'-0" ℄ Conrail Ramp E	8'-0"	30'-0"	25"	2'-3"	VII	A-4	19.50	29.00
100	522+50	30'-0" ℄ Conrail Ramp F	8'-0"	30'-0"	25"	2'-3"	VII	A-6	6.30	24.80
110	98+80	30'-0" ℄ Conrail Pulaski Hwy.	9'-0"	28'-0"	30'-0"	2'-0"	II	A-7	28.40	25.90

GENERAL NOTES:

1. SPECIFICATION: Maryland S.R.C. Specifications and efforts to "Specifications dated 1969 Sub Special Provisions for Materials and Construction" AASHTO Specification for the Design & Construction of Structural Supports for Highway Signs, Luminaires and AASHTO Standard Specification for Highway Bridges 1969.

2. DESIGN WIND: 30 PSF.

3. CONCRETE: Class 'B' Concrete shall have a minimum compressive strength of 3000 P.S.I. at 28 days. For Reinforced Concrete Design f'c = 3000 P.S.I., See Special Provisions.

4. CHAMFER: All exposed corners of concrete shall be chamfered 3/4" with milled chamfer strips.

5. REINFORCING STEEL: Reinforcing steel shall conform to A.S.T.M. Designation A 615 Grade 60. All splices shall be lapped a minimum of 30 bar diameters unless otherwise noted. Minimum cover for any bar shall be 3" unless otherwise noted.

6. Anchor bolts up to and including 1 1/4" ø shall conform to the requirements of A.S.T.M. designation A307. Anchor bolts greater than 1 1/4" ø shall conform to the requirements of A.S.T.M. designation A 449.

7. Minimum design foundation bearing pressure equals 3000 PSF.

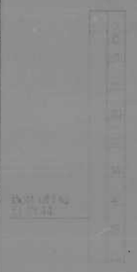
8. Existing utilities (lighting conduits, pipes, mains, overhead lines, underground conduits, etc.) which may affect the work at the Project have been shown on the plans from records. It is however, the Engineer's duty not to warrant or guarantee the accuracy or completeness of this information. It shall be the responsibility of the Contractor to locate and protect all existing facilities which might be affected by this work or his operations.

REFERENCES	SHEET NO.
Boring Logs	S-55A
Conduit Entrances	P1A thru P3A

REVISIONS	CONSULTANT	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS &	STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY
1 ADDITION TO PLAN SHEETS 2/28/73	KNOERLE, BEHNER, STOKE & ASSOC., INC. AND MATZ, CHILOS & ASSOC., INC. CONSULTING ENGINEERS 543 N. CALVERT STREET BALTIMORE, MARYLAND 21202	INTERSTATE ROUTE 95 FROM NORTH OF HERRING RUN TO NORTH OF B & O RAILROAD LIGHTING FOUNDATION DETAILS	DRAWN BY L.M.W. DES. BY B.C.C. TRACED BY L.M.W. CHK. BY D.M.P.
2 REVISED 4/19/73		SCALE AS SHOWN DATE	F.A.P. NO. I-95-4(36)136 S.R.C. NO. BC 246-33-815 BALTO. CITY NO. 1995
			SHEET NO. (80) S-55B of S-56

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	MD.	I-95-4(136)6	B-556	192 B-55

BORING NO. 4-1
Sta. 508+00 25' Lt. ℄ Constr. Ramp 'E'



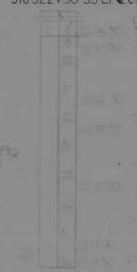
BORING NO. 4-2
Sta. 413+20 ℄ Constr. I-95 NBR

BORING NO. 4-3
Sta. 18+35 35' Rt. ℄ Constr. Ramp 'A'

BORING NO. 4-4
Sta. 519+00 70' Rt. ℄ Constr. Ramp 'E'

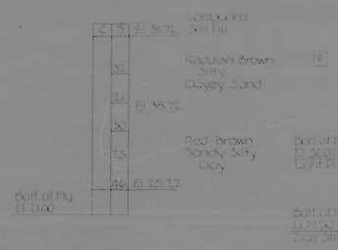
BORING NO. 4-5
Sta. 205+00 52.25' Rt. ℄ Constr. Ramp 'E' 'C'

BORING NO. 4-6
Sta. 522+50 35' Lt. ℄ Constr. Ramp 'E'

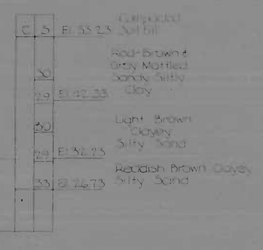


BORING NO. 4-7
Sta. 99+80 70' Rt. ℄ Constr. Pulaski Hwy.

BORING NO. A-1
Sta. 23+35 35' Rt. ℄ Constr. Ramp 'A'



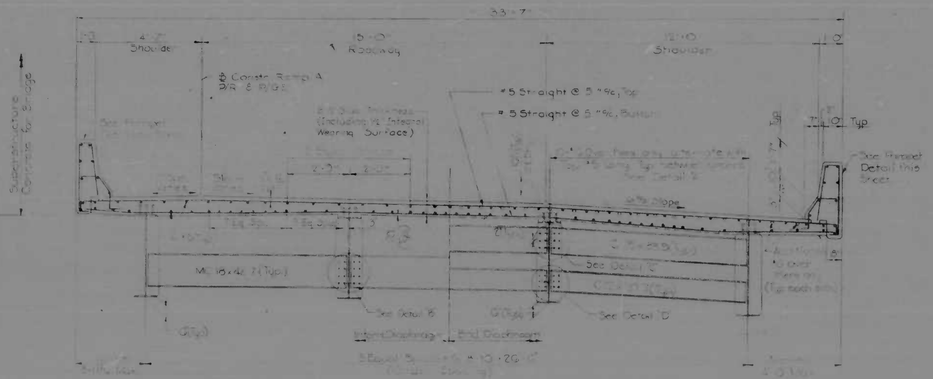
BORING NO. A-2
Sta. 404+10 ℄ Constr. I-95



BORING NO. 8
Sta. 6+09 120 Rt. ℄ Survey B&O R.R.
(Sta. 409+19 24' Rt. ℄ Constr. Ramp A') I-95

REVISIONS	CONSULTANT	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS & STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY		
1 ADDITION TO PLAN SHEETS (1 SHEET)	KNOFFLE, BENDER, STONE & ASSOC., INC. AND MATZ, CHILDS & ASSOC., INC. CONSULTING ENGINEERS 341 N. CALVERT STREET BALTIMORE, MARYLAND, 21202	INTERSTATE ROUTE 95 FROM NORTH OF HERRING RUN TO NORTH OF B & O RAILROAD BORING DATA	DRAWN BY: M.S.F. TRACED BY: M.S.F.	DES. BY: R.C.C. CHK. BY: D.M.P.
2 REVISED 4/5/73			F.A.P. NO. I-95-4(136)6	SHEET NO. 192
			S.P.C. NO. BC 246-33-815	B-556 of B-55
		SCALE: AS SHOWN DATE:	BALTO. CITY NO. 1998	

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	MD.	I-95-4(36)36	S-6	(92) S-55



INTERMEDIATE DIAPHRAGM

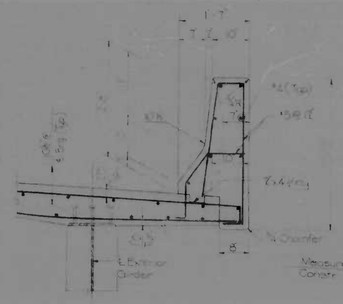
END DIAPHRAGM

TYPICAL DECK SECTION

SPAN 1 THRU 3

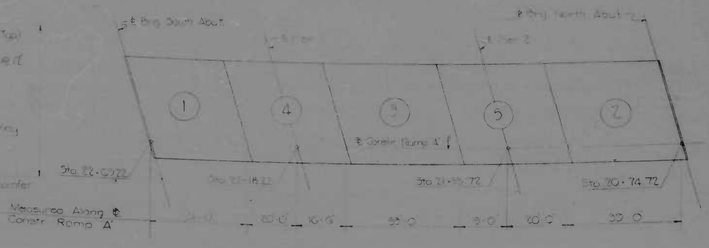
Scale: 3/8"=1'-0"

Note: All horizontal dimensions are measured normal to ℄ Constr. Ramp A except girder spacings are measured perpendicular to Girders 101, 201 and 301.



PARAPET DETAIL

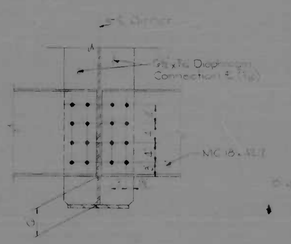
Scale 3/4"=1'-0"



DECK POURING SEQUENCE DIAGRAM

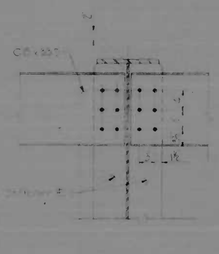
Not to Scale

Note:
Pours ① & ④ and ③ may be made simultaneously and after 48 hrs., pours ⑤ and ② may be made simultaneously.



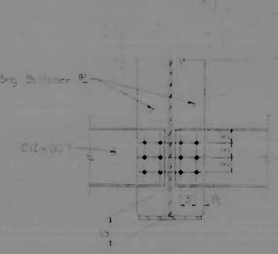
DETAIL "B"

Scale 1"=1'-0"



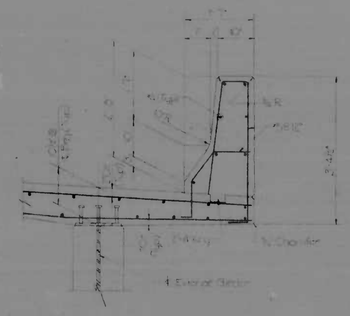
DETAIL "C"

Scale 1"=1'-0"



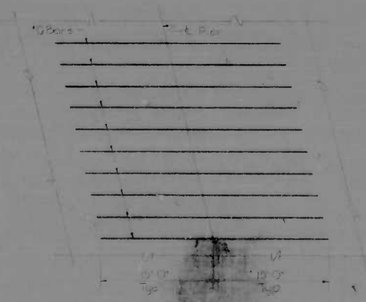
DETAIL "D"

Scale 1"=1'-0"



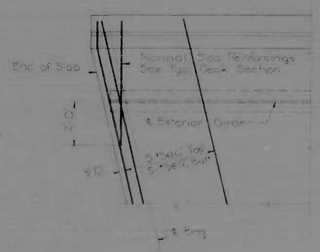
ALTERNATE PARAPET DETAIL

Scale 3/4"=1'-0"



DETAIL "A"

Not to Scale



SLAB REINFORCING AT ACUTE CORNER

Scale 1"=1'-0"

NOTES:
Additional Reinforcement shall be placed as shown on Details "A" between normal Longitudinal Top Reinforcement.
Transverse Slab Reinforcements shall be placed normal to Beams.
All Field Bolts shall be 7/8"ϕ high strength bolts.

REFERENCES:

	SHEET NO.
Cross Slope	S-1
Framing Plan	S-5
Shear Connector Details	S-55
Lighting Conduit Detail	S-55

REVISIONS	CONSULTANT	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS & STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY
	KNOERLE, BENCZE, STONE & ASSOC., INC. AND MATZ CIPPS & ASSOC., INC. CONSULTING ENGINEERS 345 N. CALVERT STREET BALTIMORE, MARYLAND 21202	I-95-WINDLASS-MORAVIA INTERCHANGE RAMP A OVER B&O R R TYPICAL DECK SECTION

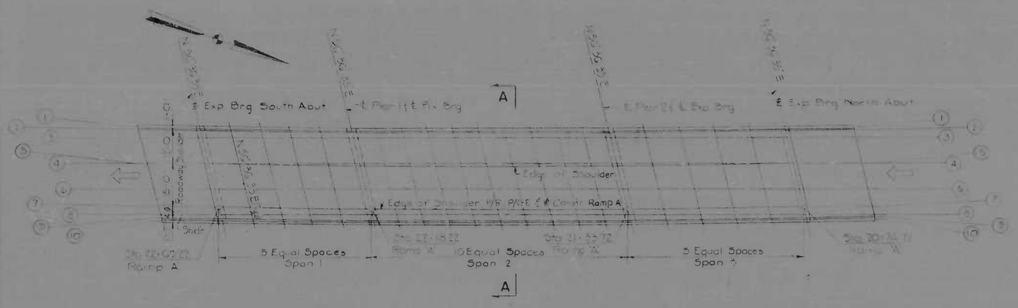
DRAWN BY M.S.F. DES. BY W.J.W. TRACED BY M.S.F. CHK. BY F.F.M.

SCALE: AS SHOWN DATE: DEC. 1971

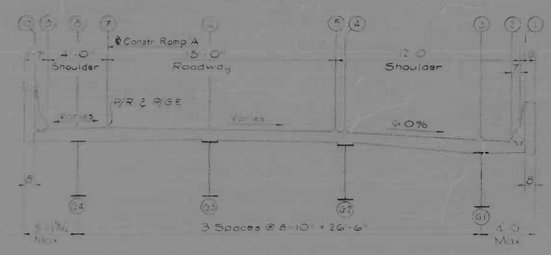
F.A.P. NO. I-95-4(36)36 S.R.C. NO. BC 246-33-815 BALTO. CITY NO. 1995

SHEET NO. (92) S-6 OF S-55

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	MD.	I-95-4(36)36	S-7	(92) S-55



SUPERSTRUCTURE ELEVATIONS – KEY PLAN
Scale 1" = 20'-0"

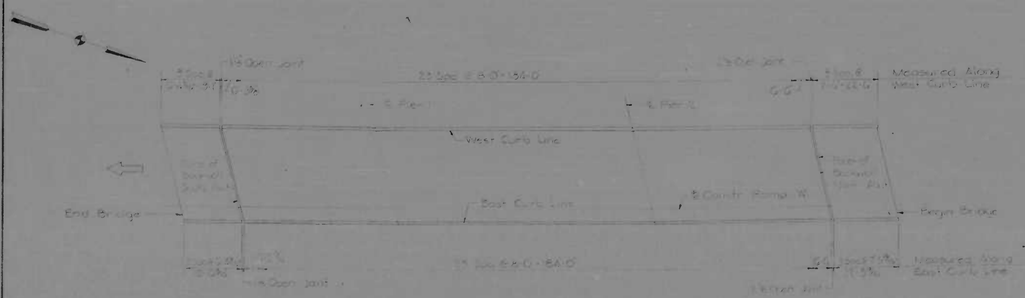


SECTION A-A
Scale 1" = 5'-0"

SUPERSTRUCTURE ELEVATION TABLE

	DESCRIPTION	℄ BRG S ABUT	SPAN 1				℄ PIER 1	SPAN 2								℄ PIER 2	SPAN 3				℄ BRG N ABUT
	STATION																				
1	WEST KEY LINE	56.68	56.94	57.39	57.76	57.90	57.95	57.78	58.04	58.33	58.68	58.92	59.21	59.30	59.40	59.20	60.38	60.78	61.18	61.57	61.82	62.20
2	WEST CURB LINE	56.78	56.90	57.40	57.61	57.80	57.95	57.91	58.10	58.40	58.69	58.98	59.27	59.37	59.46	59.15	60.44	60.84	61.24	61.62	61.86	62.06
3	GIRDER G1	56.91	56.86	57.40	57.68	57.85	57.96	57.92	58.11	58.50	58.80	59.08	59.38	59.47	59.57	59.25	60.50	60.90	61.30	61.70	62.00	62.16
4	GIRDER G2	56.92	56.96	57.40	57.68	57.85	58.24	58.43	58.83	59.11	59.40	59.68	59.98	60.07	60.17	59.87	60.80	61.20	61.60	61.96	62.24	62.41
5	EDGE OF SHOULDER	56.93	56.89	57.34	57.60	57.84	58.30	58.49	58.85	59.17	59.47	59.76	60.06	60.14	60.24	60.03	61.22	61.62	62.01	62.38	62.70	62.91
6	GIRDER G3	56.78	57.16	57.47	57.82	58.17	58.32	58.61	59.10	59.40	59.68	59.96	60.27	60.36	60.46	60.15	61.44	61.84	62.23	62.61	62.87	63.02
7	P/GE, P/R & ℄ CONSTR	56.50	57.31	57.67	58.02	58.31	58.73	59.01	59.30	59.60	59.90	60.19	60.49	60.58	60.70	60.38	61.64	62.03	62.41	62.80	63.18	63.35
8	GIRDER G4	56.29	57.28	57.63	57.99	58.34	58.52	58.92	59.22	59.52	59.82	60.12	60.43	60.52	60.64	60.33	61.60	62.00	62.38	62.78	63.18	63.38
9	EAST CURB LINE	56.20	57.22	57.60	57.96	58.31	58.60	58.98	59.28	59.58	59.88	60.18	60.49	60.58	60.70	60.39	61.67	62.06	62.45	62.84	63.18	63.40
10	EAST KEY LINE	56.20	57.24	57.60	57.94	58.27	58.64	58.94	59.23	59.52	59.81	60.10	60.40	60.48	60.60	60.27	61.56	61.96	62.35	62.75	63.18	63.41

Note Stations are Shown For Line 7 ℄ Constr Ramp A P/R & PGE



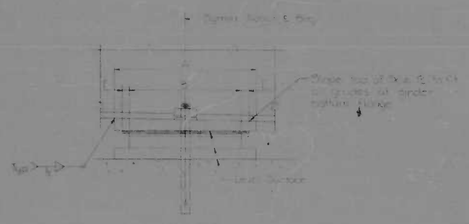
PARAPET CONTRACTION JOINT SPACING
Scale 1" = 20'-0"

Note
Elevations shown are final top of deck elevations

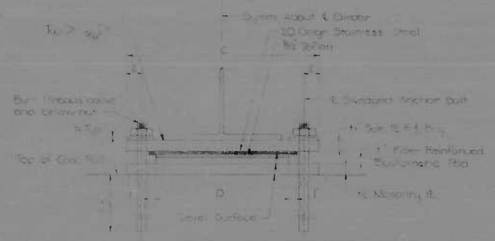
REFERENCES — SHEET NO.
Framing Plan — S-5
Cross Slope — S-6
Parapet Contraction Joint Details — S-10

REVISIONS	CONSULTANT	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS &	STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY
	KNOERLE, BENDER, STONE & ASSOC., INC. AND MATZ, CHILDS & ASSOC., INC. CONSULTING ENGINEERS 341 N. CALVERT STREET BALTIMORE, MARYLAND 21202	I-95-WINDLASS-MORAVIA INTERCHANGE RAMP "A" OVER B & O R.R. SUPERSTRUCTURE ELEVATIONS	DRAWN BY P.D. TRACED BY P.D. DES. BY W.J.W. CHK. BY F.F.M. F.A.P. NO. I-95-4(36)36 S.R.C. NO. BC 246-33-815 BALTO. CITY NO. 1995 SHEET NO. (92) S-7 or S-55
		SCALE: As shown DATE	

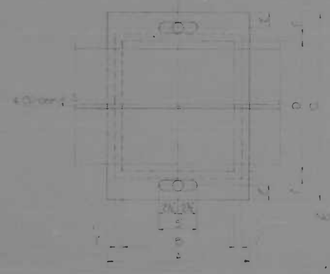
FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	MD.	I-95-4(36)36	S-8	(92) S-55



ELEVATION



FRONT VIEW

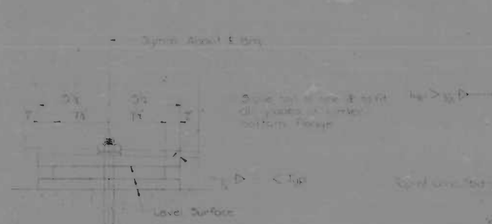


PLAN

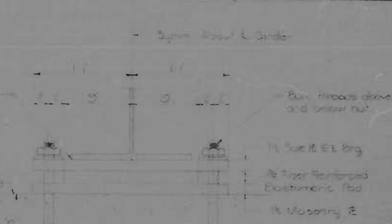
TYPE	DIMENSION						
	A	B	C	D	T	T1	
E-100	12	10	12	14	1"	1"	
E-250	17	15	17	19	1"	1"	

EXPANSION BEARING — TYPE E-100 & E-250

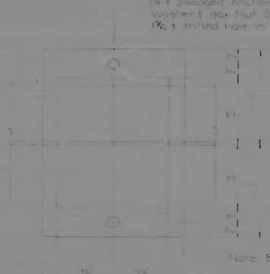
Not to Scale



ELEVATION



FRONT VIEW



PLAN

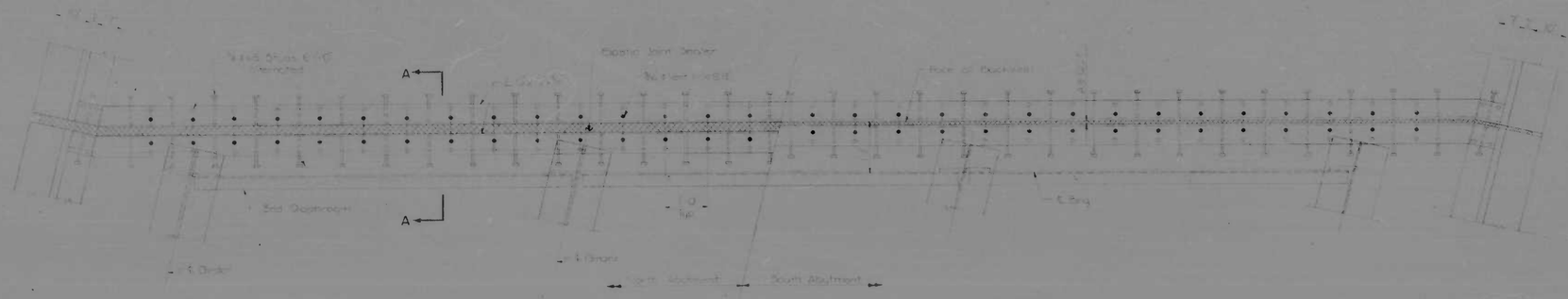
FIX BEARING — TYPE F-250

Not to Scale

Notes:
1. All steel used in bearings shall conform to A.S.T.M. Designation A-588.
2. All Anchor Bolts, Hex. Nuts & Washers shall be hot dipped galvanized.
3. Epoxy Resin shall be applied on full contact areas between the following:
   - Fiber reinforced elastomeric pad and Masonry Plate.
   - Fiber reinforced elastomeric pad and Teflon Plate.
   - Sole Plate and Stainless Steel Plate.
   - Masonry & and Concrete Pad.
4. Epoxy Resin Patching Compound shall be used if air temperature is between 30°F and 10°F.
5. Bearing Type E-100 shall be used at abutments.
   Bearing Type E-150 shall be used at Pier 1.
   Bearing Type E-250 shall be used at Pier 2.

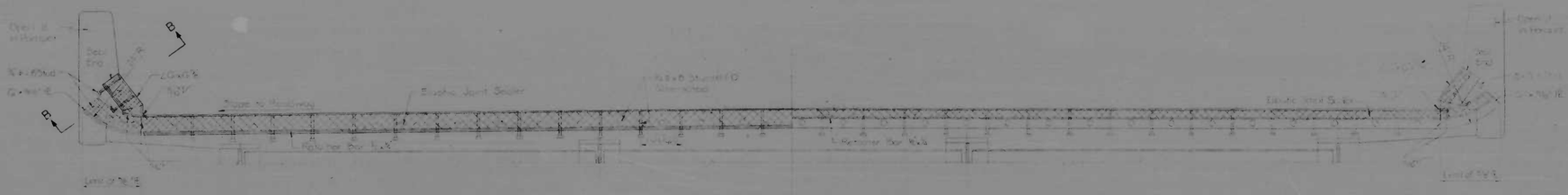
REVISIONS	CONSULTANT	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS & STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY		
	KNOBEL, BENDER, STONE & ASSOC., INC. AND MATZ, COLLOS & ASSOC., INC. CONSULTING ENGINEERS 341 N. CALVERT STREET BALTIMORE, MARYLAND 21202	I-95 WINDLASS-MORAVIA INTERCHANGE RAMP A OVER B&ORR BEARING DETAILS	DRAWN BY M.S.F. TRACED BY M.S.F.	DES. BY M.S.C. CHK. BY F.F.M.
		SCALE As shown DATE	F.A.P. NO. I-95 4(36)36 S.R.C. NO. BC 246-33-815 BALTO. CITY NO. 1985	SHEET NO. (92) S-8 of S-55

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	MD	I-95-4(36)36	S-9	(92) S-55



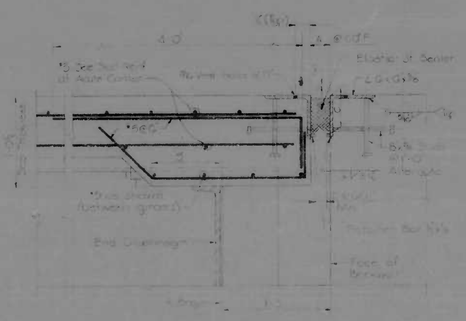
NORTH ABUTMENT — SOUTH ABUTMENT

PLAN

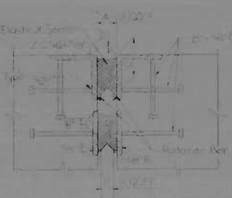


NORTH ABUTMENT — SOUTH ABUTMENT

ELEVATION



SECTION A-A



SECTION B-B

ELASTIC JOINT SEALER

LOCATION	SEALER SIZE				DIMENSION		
	W	N	E	F	A	B	C
North Abut							
South Abut							

Notes:
All steel work on girder and pier ends bars in Expansion Joints shall be ASTM Designation A 36.
Other configurations for the expansion joint may be used if approved by the Engineer.

REVISIONS	CONSULTANT
	KNOERLE, BENDER, STONE & ASSOC., INC. AND MATZ, CHILDS & ASSOC., INC. CONSULTING ENGINEERS 341 N. CALVERT STREET BALTIMORE, MARYLAND 21202

CITY OF BALTIMORE
DEPARTMENT OF PUBLIC WORKS
&
STATE ROADS COMMISSION OF MARYLAND
INTERSTATE DIVISION FOR BALTIMORE CITY

I-95 WINDLASS MORAVIA INTERCHANGE
RAMP "A" OVER B&O R.R.
EXPANSION JOINT DETAILS

SCALE As shown DATE

DRAWN BY M.S.F. DES BY M.S.C.
TRACED BY M.S.F. CHK BY F.F.M.
F.A.P. NO. I-95-4(36)36
S.R.C. NO. BC 246-33-815
BALTO. CITY NO. 1995
SHEET NO. (92) S-9 OF S-55

SP 22

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	MD.	I-95-4(36)36	T-10	(92) T-15

SUPERELEVATION DATA

S.B.R.

FULL SUPERELEVATION = 0.016 %

STATION	36' LT.	24' LT.	12' LT.	PGL & P/R	REMARKS
412 + 00.00	59.80	59.39	57.18	57.38	BEGIN TRANSITION
413 + 00	59.73	59.33	57.13	57.34	
413 + 25	59.51	59.15	56.98	57.21	C = .00010 %/FT
413 + 40.84	59.37	59.02	56.88	57.13	END TRANSITION

FULL SUPERELEVATION = 0.021 %

RAMP A

FULL SUPERELEVATION = 0.046 %

STATION	DIST. RT. EDGE TO RIDGE	RIDGE ELEV.	CORRECTION	RT. EDGE PAVE. ELEV.	REMARKS
15 + 28.40	12.36	73.22	0.87	72.35	
+ 50	12.71	73.39	0.89	72.50	
+ 75	13.27	73.56	0.91	72.75	
16 + 00	13.77	73.31	0.93	72.38	
+ 25	14.27	73.24	0.96	72.28	
+ 50	14.77	73.03	0.98	72.05	
+ 81.50	15.00	72.88	0.90	72.10	

FULL SUPERELEVATION = 0.046 %

STATION	PGL & P/R	15' RT.	REMARKS
20 + 28.80	04.91	04.22	BEGIN TRANSITION
+ 50	04.31	03.73	
+ 59.52	04.02	03.49	PCC
+ 75	03.84	03.06	
21 + 00	02.75	02.43	C = .00035 %/FT
+ 04.00	02.02	02.32	END TRANSITION

FULL SUPERELEVATION = 0.020 %

RAMP C

FULL SUPERELEVATION = 0.046 %

STATION	PGL & P/R	RIDGE ELEV.	REMARKS
204 + 77.43	74.07	72.97	BEGIN TRANSITION
205 + 00	74.11	73.11	
+ 25	74.11	73.24	
+ 27.43	74.11	73.26	P.T.
+ 50	74.06	73.32	C = .00020 %/FT
+ 75	73.97	73.38	
206 + 00	73.82	73.31	
+ 25	73.64	73.24	
+ 27.43	73.61	73.23	END TRANSITION

NORMAL SECTION

RAMP E

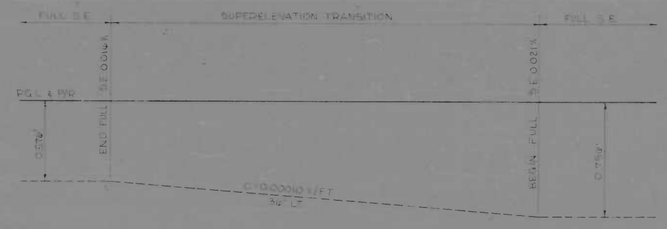
FULL SUPERELEVATION = 0.060 %

STATION	PGL & P/R	15 RT.	REMARKS
514 + 21.72	80.78	81.68	BEGIN TRANSITION
+ 25	80.78	81.61	
+ 50	80.78	81.03	C = .00035 %/FT
+ 75	79.74	80.32	
+ 78.86	79.94	80.24	P.T.
515 + 00	79.11	79.80	
+ 25	78.40	78.78	C = .00035 %/FT
+ 50	77.90	77.85	
+ 75	76.73	76.80	
+ 03.15	76.03	76.03	LEVEL SECTION
512 + 00	75.72	75.73	
+ 25	74.70	74.57	C = .00027 %/FT
+ 50	73.57	73.84	
+ 58.41	73.45	73.21	END TRANSITION

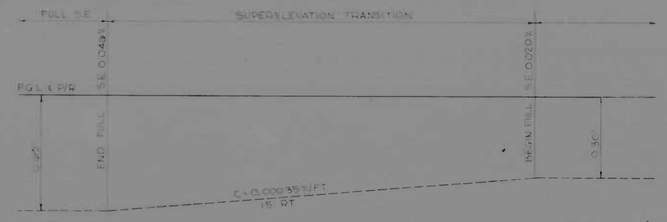
NORMAL SECTION

STATION	PGL & P/R	OFFSET PGL TO RIDGE	RIDGE ELEV.	RT. EDGE PAVE. ELEV.	REMARKS
519 + 84.87	59.04	15.00	59.40	58.88	
520 + 00	58.38	14.81	58.06	58.56	
+ 25	58.81	14.50	58.58	58.08	
+ 50	58.38	14.19	58.13	57.69	
+ 75	58.03	13.87	57.81	57.53	
521 + 00	57.73	13.59	57.53	57.06	
+ 25	57.55	13.23	57.34	56.87	
+ 50	57.42	12.94	57.21	56.74	
+ 75	57.37	12.62	57.17	56.70	
+ 84.18	57.37	12.51	57.17	56.73	BEGIN TRANSITION
522 + 00	57.30	12.31	57.19	56.75	C = .00010 %/FT
+ 24.18	57.48	12.01	57.29	56.91	END TRANSITION
+ 24.87	57.48	12.00	57.29	56.91	END OF TAPER

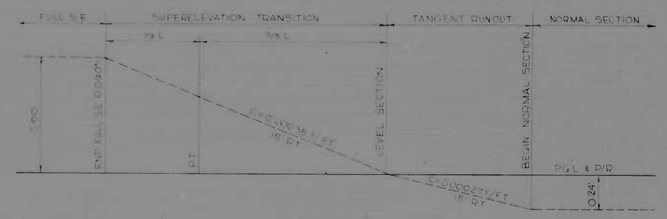
NORMAL SECTION



S.B.R.
METHOD OF SUPERELEVATION TRANSITION
CURVE TO LEFT FROM e = .016% TO e = .021 %



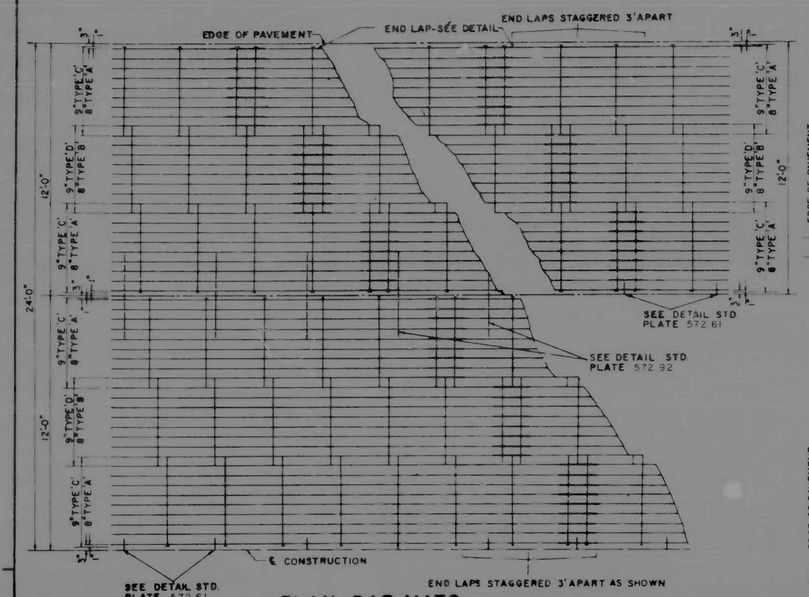
RAMP A
METHOD OF SUPERELEVATION TRANSITION
CURVE TO RIGHT FROM e = .046% TO e = .020 %



RAMP E
METHOD OF SUPERELEVATION TRANSITION
CURVE TO LEFT FROM e = .060% TO NORMAL SECTION

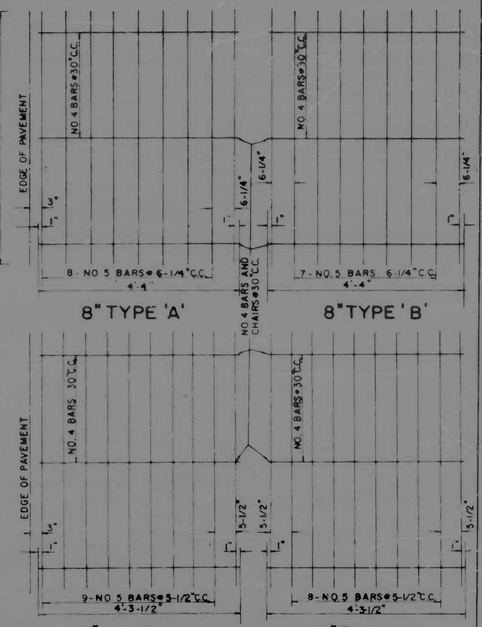
REVISIONS	CONSULTANT	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS &	STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY
	ENDERLE, BENDER, STONE & ASSOC., INC. AND WATZ, CHILDS & ASSOC., INC. CONSULTING ENGINEERS 341 N. CALVERT STREET BALTIMORE, MARYLAND 21202	INTERSTATE ROUTE 95 FROM NORTH OF HERRING RUN TO NORTH OF B & O RAILROAD	DRAWN BY J.W.S. DES. BY T.E.L. TRACED BY J.W.S. CHK. BY J.L.C.
		SCALE: No Scale DATE	F.A.P. NO. I-95-4(36)36 S.R.C. NO. BC 246-33-815 BALTO. CITY NO. 1995 SHEET NO. (92) T-10 OF T-15

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	MD	I-95-4(36)36	T-11	(92) T-15



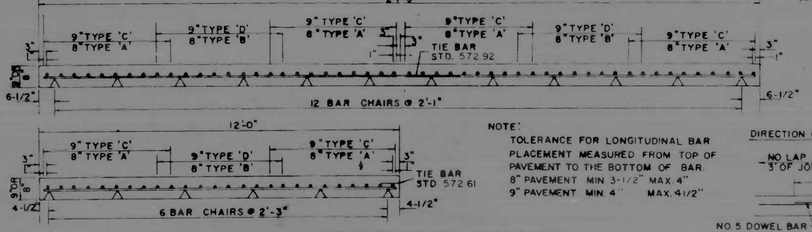
PLAN - BAR MATS

SCALE 3/8"=1'-0"
LENGTH OPTIONAL 35' MINIMUM



BAR MAT DETAILS

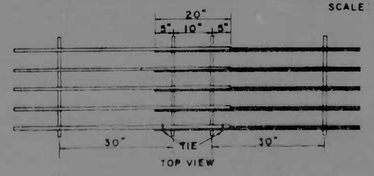
SCALE 3/4"=1'-0"



TRANSVERSE SECTION

SCALE 1/2"=1'-0"

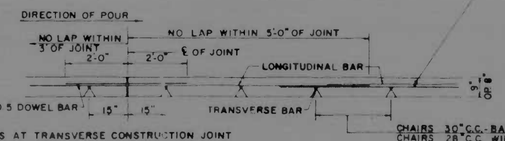
NOTE:
TOLERANCE FOR LONGITUDINAL BAR PLACEMENT MEASURED FROM TOP OF PAVEMENT TO THE BOTTOM OF BAR.
8" PAVEMENT MIN 3-1/2" MAX 4"
9" PAVEMENT MIN 4" MAX 4 1/2"



END LAP DETAIL

SCALE 3/4"=1'-0"

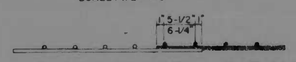
NOTE:
DEFORMED STEEL BARS FOR LONGITUDINAL AND TRANSVERSE BAR MATS AND LOOSE BARS SHALL MEET THE REQUIREMENTS OF A.A.S.H.O. DESIGNATION M-185 FOR NO.5 BARS AND A.A.S.H.O. DESIGNATION M-31 FOR NO.4 BARS.
MATS TO BE SECURELY FASTENED TO PREVENT SEPARATION DURING CONCRETE PLACEMENT MINIMUM 6 TIES EACH MAT.



DOWELS AT TRANSVERSE CONSTRUCTION JOINT
NO.5 DOWEL BAR TO BE PLACED MIDWAY BETWEEN LONGITUDINAL BAR AND THEN SPACED ON 11" AND 12 1/2"C.C. FOR BAR & BAR MATS, ON 12"C.C. FOR WIRE FABRIC.

BULKHEAD JOINT AND LAP DETAIL.

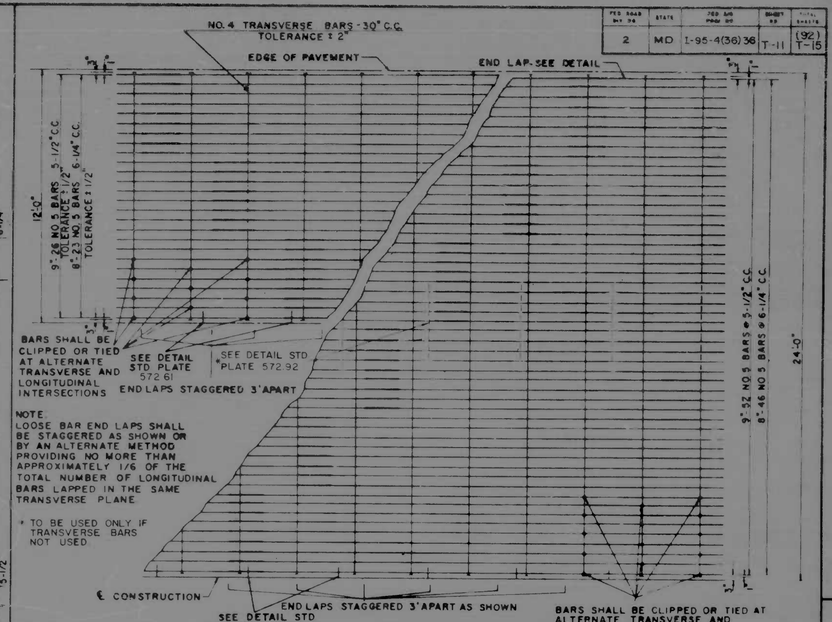
REINFORCEMENT ON CHAIRS
SCALE 1/2"=1'-0"



EDGE LAP DETAIL-BAR MATS

NOT TO SCALE

NOTE: BULKHEAD JOINT SHALL BE REQUIRED AT ALL CONSTRUCTION JOINTS.

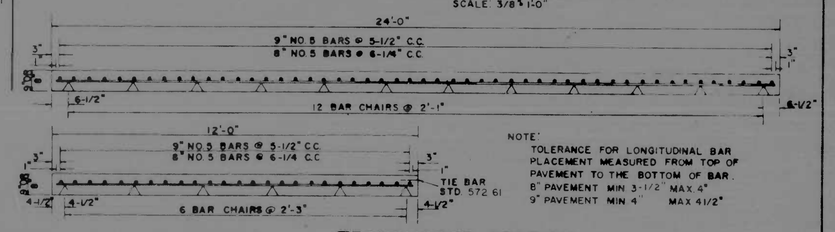


NOTE:
LOOSE BAR END LAPS SHALL BE STAGGERED AS SHOWN OR BY AN ALTERNATE METHOD PROVIDING NO MORE THAN APPROXIMATELY 1/6 OF THE TOTAL NUMBER OF LONGITUDINAL BARS LAPPED IN THE SAME TRANSVERSE PLANE.

* TO BE USED ONLY IF TRANSVERSE BARS NOT USED.

PLAN - LOOSE BARS

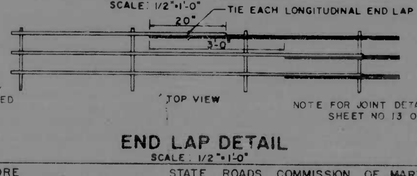
SCALE 3/8"=1'-0"



NOTE:
TOLERANCE FOR LONGITUDINAL BAR PLACEMENT MEASURED FROM TOP OF PAVEMENT TO THE BOTTOM OF BAR.
8" PAVEMENT MIN 3-1/2" MAX 4"
9" PAVEMENT MIN 4" MAX 4 1/2"

TRANSVERSE SECTION

SCALE 1/2"=1'-0"



NOTE FOR JOINT DETAILS SEE SHEET NO 13 OF 81

END LAP DETAIL

SCALE 1/2"=1'-0"

NOTE: THIS PLAN SHEET IS A STANDARD SHEET AND ONLY THOSE PORTIONS WHICH PERTAIN TO LOOSE BARS SHALL BE USED FOR THIS CONTRACT.
THE CONTRACTOR MUST SUBMIT THE METHOD FOR SUPPORTING THE BARS TO BE APPROVED BY THE ENGINEER BEFORE ANY WORK IS PERFORMED UNDER THIS ITEM.
LONGITUDINAL TIEBARS WILL BE REQUIRED.

CONTINUOUSLY REINFORCED CONCRETE PAV'T

BAR STEEL REINFORCEMENT

CITY OF BALTIMORE
DEPARTMENT OF PUBLIC WORKS

INTERSTATE ROUTE 95
FROM NORTH OF LEXINGTON
TO NORTH OF B&O RAILROAD

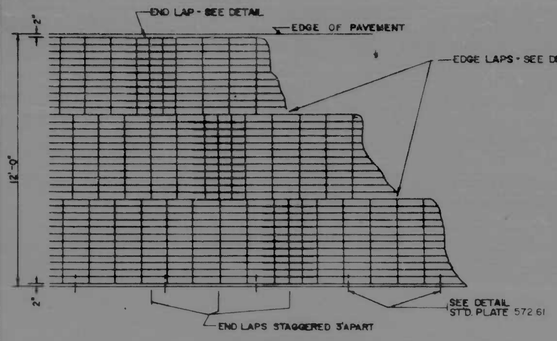
SCALE AS SHOWN DATE

STATE ROADS COMMISSION OF MARYLAND
INTERSTATE DIVISION FOR BALTIMORE

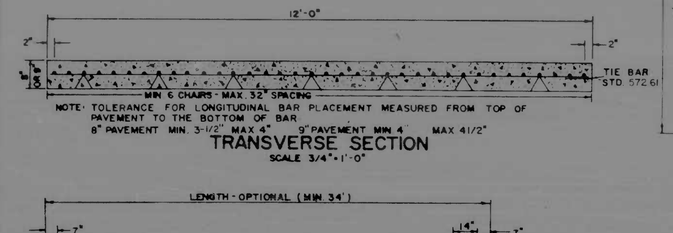
DRAWN BY S.R.C. DES. BY S.R.C.
TRACED BY S.R.C. CHK BY S.R.C.
E.A.P. NO. I-95-4(36)36
S.R.C. NO. BC 246-33-815
BALTO. CITY NO. 1995

SHEET NO. (92) T-11 OF T-15

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	MD.	I-95-4(36)36	T-12	(92) T-15

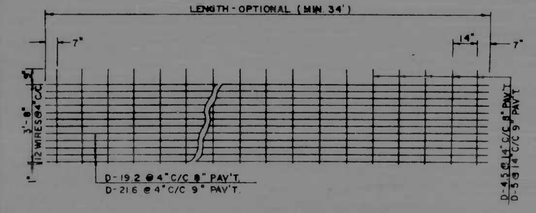


PLAN
SCALE 3/8" = 1'-0"



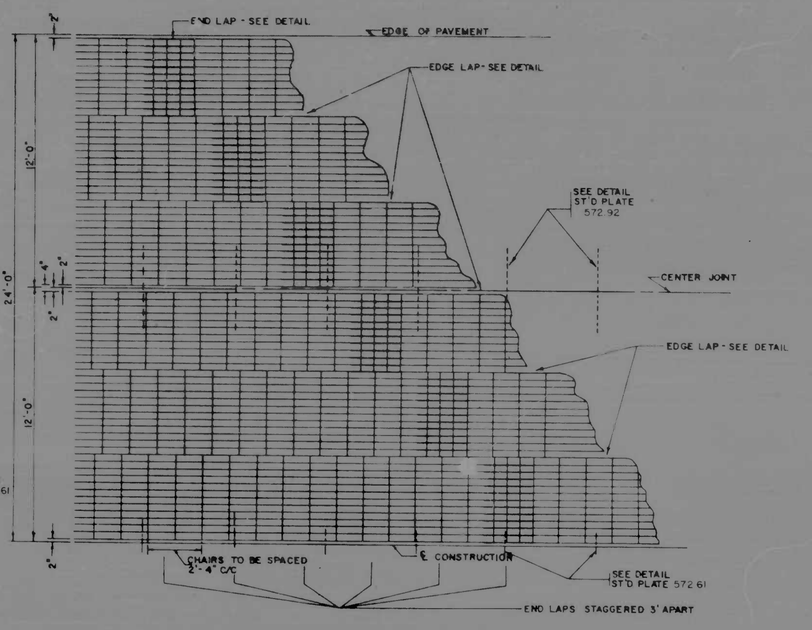
NOTE: TOLERANCE FOR LONGITUDINAL BAR PLACEMENT MEASURED FROM TOP OF PAVEMENT TO THE BOTTOM OF BAR
8" PAVEMENT MIN. 3-1/2" MAX 4" 9" PAVEMENT MIN 4" MAX 4 1/2"

TRANSVERSE SECTION
SCALE 3/4" = 1'-0"

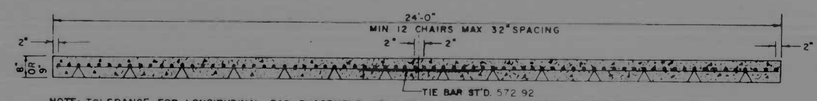


NOTE: WELDED DEFORMED STEEL WIRE FABRIC FOR LONGITUDINAL AND TRANSVERSE WIRES, SHALL MEET THE REQUIREMENTS OF A.S.T.M. DESIGNATION A-497 FOR WELDED DEFORMED STEEL WIRE FABRIC FOR CONCRETE REINFORCEMENT.

TYPICAL FABRIC SHEET
SCALE 3/8" = 1'-0"



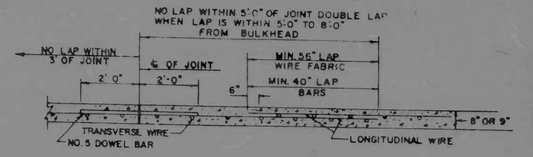
PLAN
SCALE 3/8" = 1'-0"



NOTE: TOLERANCE FOR LONGITUDINAL BAR PLACEMENT MEASURED FROM TOP OF PAVEMENT TO THE BOTTOM OF BAR.
8" PAVEMENT MIN 3-1/2" MAX 4" 9" PAVEMENT MIN 4" MAX 4 1/2"

TRANSVERSE SECTION
SCALE 1/2" = 1'-0"

NOTE: THE SHEET OF WELDED DEFORMED STEEL WIRE FABRIC WHEN PREPLACED SHALL BE SUPPORTED IN POSTION BY CHAIR SUPPORTS OF ANY TYPE SATISFACTORY AND CAPABLE OF PROVIDING ADEQUATE SUPPORT, AND THE CONCRETE PLACED THROUGH THE OPENINGS. SHEETS OF WELDED DEFORMED STEEL WIRE FABRIC MAY BE PLACED WITH THE TRANSVERSE WIRES UP OR DOWN.



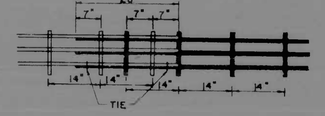
DOWELS AT TRANSVERSE CONSTRUCTION JOINTS
NO 5 DOWEL BAR TO BE PLACED MIDWAY BETWEEN LONGITUDINAL BAR AND THEN SPACED ON 12" C/C FOR WIRE FABRIC, ON 11" AND 12-1/2" C.C FOR BAR AND BAR MATS

BULKHEAD JOINT AND LAP DETAIL
REINFORCEMENT- BY MECHANICAL MEANS
SCALE 1/2" = 1'-0"

WHEN THE OPTION OF PLACING REINFORCEMENT BY MECHANICAL MEANS IS USED THE BAR OR WIRE FABRIC MATS SHALL BE DOUBLE LAPPED AS SHOWN ABOVE.

WHEN THE OPTION OF PLACING REINFORCEMENT ON CHAIRS OR CHAIR BARS IS USED THE BAR OR WIRE FABRIC MATS SHALL BE LAPPED AS SHOWN ON SHEET NO. OF

EDGE LAP DETAIL
SCALE 1/2" = 1'-0"



NOTE: MATS TO BE SECURELY FASTENED TO PREVENT SEPARATION DURING CONCRETE PLACEMENT, MINIMUM 6 TIES EACH MAT.

END LAP DETAIL
SCALE 3/4" = 1'-0"

NOTE: FOR JOINT DETAILS SEE SHEET NO T-13 OF T-15

NOTE: THIS PLAN SHEET IS A STANDARD SHEET AND ONLY THOSE PORTIONS WHICH PERTAIN TO LOOSE BARS, SHALL BE USED FOR THIS CONTRACT.

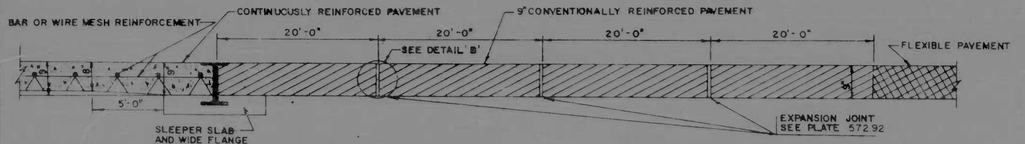
THE CONTRACTOR MUST SUBMIT THE METHOD FOR SUPPORTING THE BARS TO BE APPROVED BY THE ENGINEER BEFORE ANY WORK IS PERFORED UNDER THIS ITEM.

LONGITUDINAL TIE BARS WILL BE REQUIRED.

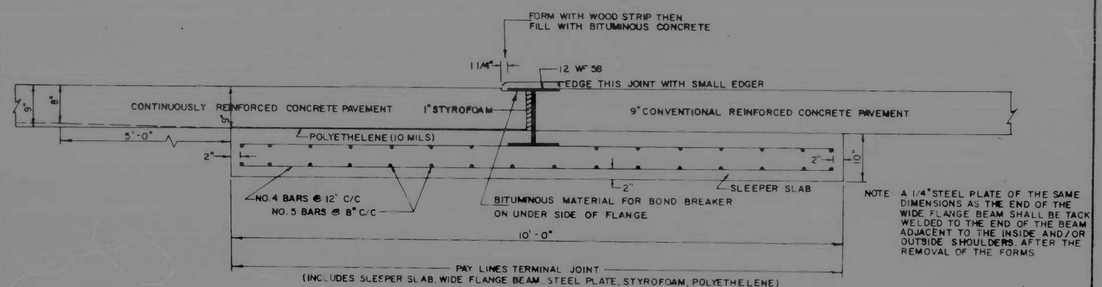
CONTINUOUSLY REINFORCED CONCRETE PAVEMENT

WELDED DEFORMED STEEL WIRE FABRIC REINFORCEMENT

CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS	STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE
INTERSTATE ROUTE 95 FROM NORTH OF HERRING RUN TO NORTH OF B&C RAILROAD	DRAWN BY S.R.C. DES. BY S.R.C. TRACED BY S.R.C. CHK BY S.R.C.
SCALE AS SHOWN DATE	F.A.P. NO. I-95-4(36)36 S.R.C. NO. BC 246-33-115 BALTO. CITY NO. 1995
	SHEET NO. (92) T-12 OF T-15

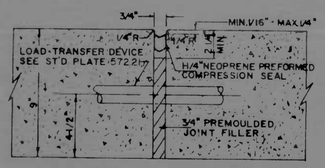


TERMINAL JOINT LAYOUT
NOT TO SCALE

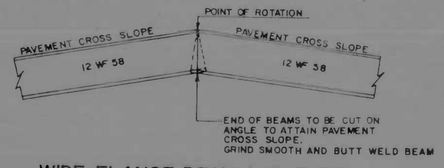


NOTE A 1/4" STEEL PLATE OF THE SAME DIMENSIONS AS THE END OF THE WIDE FLANGE BEAM SHALL BE TACK WELDED TO THE END OF THE BEAM ADJACENT TO THE INSIDE AND/OR OUTSIDE SHOULDERS AFTER THE REMOVAL OF THE FORMS.

DETAIL 'A'
SLEEPER SLAB AND WIDE FLANGE TERMINAL JOINT
SCALE: 1" = 1'-0"



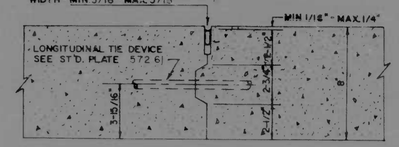
EXPANSION JOINT DETAIL 'B'
SCALE 3" = 1'-0"



WIDE FLANGE BEAM ANGLE TIE
NOT TO SCALE

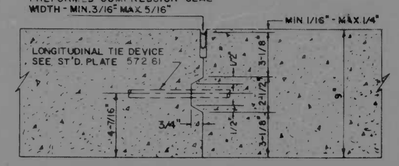
TERMINAL JOINT
BAR MATS, BARS, WIRE FABRIC

SAWED JOINT
DEPTH - MIN. 1 1/4" TO PERMIT INSTALLATION OF 7/16" NEOPRENE PREFORMED COMPRESSION SEAL
WIDTH - MIN 3/16" - MAX 5/16"



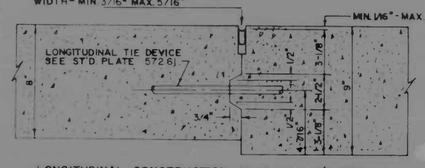
LONGITUDINAL CONSTRUCTION JOINT FOR 12' WIDTH PAVING WITH 8" CONTINUOUSLY REINFORCED CONCRETE PAVEMENT.

SAWED JOINT
DEPTH - MIN 1 1/4" TO PERMIT INSTALLATION OF 7/16" NEOPRENE PREFORMED COMPRESSION SEAL
WIDTH - MIN. 3/16" MAX. 5/16"



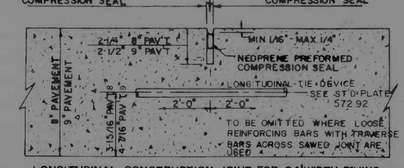
LONGITUDINAL CONSTRUCTION JOINT FOR 12' WIDTH PAVING WITH 9" CONTINUOUSLY REINFORCED CONCRETE PAVEMENT

SAWED JOINT
DEPTH - MIN 1 1/4" TO PERMIT INSTALLATION OF 7/16" NEOPRENE PREFORMED COMPRESSION SEAL
WIDTH - MIN 3/16" MAX. 5/16"



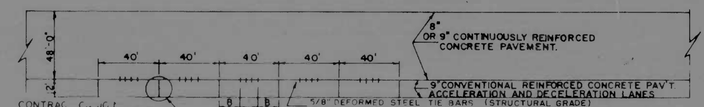
LONGITUDINAL CONSTRUCTION JOINT FOR 24' WIDTH PAVING WITH 8" AND 9" CONTINUOUSLY REINFORCED CONCRETE PAVEMENT

SAWED JOINT" DUMMY JOINT TOOLED JOINT
WIDTH - MIN 3/16" MAX. 5/16" 7/16" NEOPRENE PREFORMED COMPRESSION SEAL
WIDTH - 3/8" 13/16" NEOPRENE PREFORMED COMPRESSION SEAL



LONGITUDINAL CONSTRUCTION JOINT FOR 24' WIDTH PAVING WITH 8" OR 9" CONTINUOUSLY REINFORCED CONCRETE PAVEMENT. AND/OR 9" CONVENTIONAL REINFORCED CONCRETE PAVEMENT. SAW JOINT IN 72 HOURS

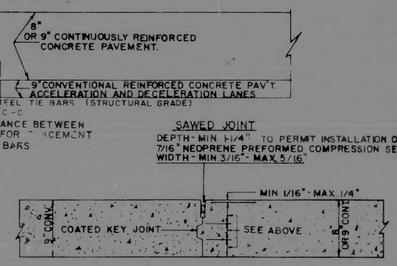
DETAILS OF LONGITUDINAL CONSTRUCTION JOINTS
SCALE 3" = 1'-0"



NOTE: FOR LOCATION THROUGHOUT PROJECT SEE PLANS

PLAN
SCALE 1" = 40'

SAWED JOINT
DEPTH - MIN. 1 1/4" TO PERMIT INSTALLATION OF 7/16" NEOPRENE PREFORMED COMPRESSION SEAL
WIDTH - MIN 3/16" - MAX 5/16"



LONGITUDINAL KEY JOINT ('B' DISTANCE)
SCALE 1 1/2" = 1'-0"

NOTE 'B' DISTANCE
COAT KEY JOINT WITH BITUMINOUS MATERIAL AS DIRECTED IN APPROXIMATE 2/3 DISTANCE BETWEEN CONTRACTION JOINTS NO TIE BARS WILL BE PLACED WITHIN THIS DISTANCE

9" CONVENTIONAL REINFORCED CONCRETE PAVEMENT
ADJACENT TO 8" OR 9" CONTINUOUSLY REINFORCED CONCRETE PAVEMENT

CONTINUOUSLY REINFORCED CONCRETE PAVEMENT JOINT DETAILS

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	MD.	I-95-4(36)36	T-13	(92) T-15

CITY OF BALTIMORE
DEPARTMENT OF PUBLIC WORKS

STATE ROADS COMMISSION OF MARYLAND
INTERSTATE DIVISION FOR BALTIMORE

INTERSTATE ROUTE 95
FROM NORTH OF HERRING RUN
TO NORTH OF B&O RAILROAD

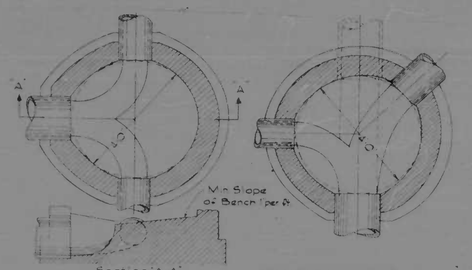
DRAWN BY S.R.C. | DES. BY S.R.C.
TRACED BY S.R.C. | CHK. BY S.R.C.

SCALE AS SHOWN DATE

F.A.P. NO. I-95-4(36)36
S.R.C. NO. BC 246-33-815
BALTO. CITY NO. 1995

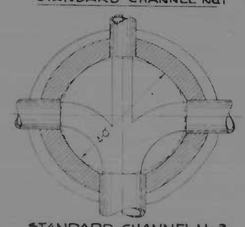
SHEET NO. (92) T-13 OF T-15

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	MD.	I-95-4(36)36	T-14	(92) T-15

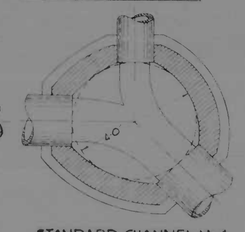


STANDARD CHANNEL No.1

STANDARD CHANNEL No.2

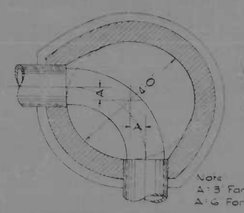


STANDARD CHANNEL No.3



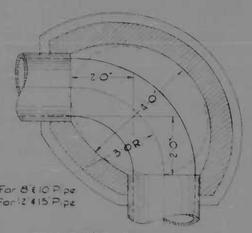
STANDARD CHANNEL No.4

Scale 1/2"=1'0"

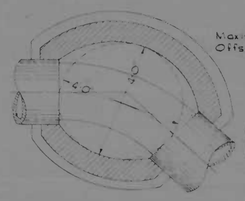


STANDARD CHANNEL No.5
(For 8", 10", 12" & 15" Pipe)

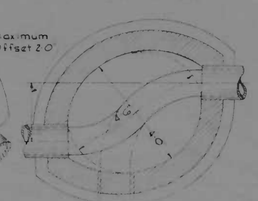
Note
A=8 For 8" & 10" Pipe
A=6 For 12" & 15" Pipe



STANDARD CHANNEL No.6
(For 18", 21" & 24" Pipe)



STANDARD CHANNEL No.7

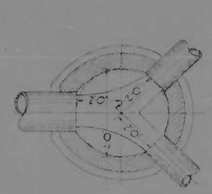


STANDARD CHANNEL No.8

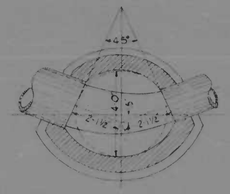
Scale 1/2"=1'0"

Bench Height Above Outgoing Pipe Invert to be Equal to Diameter of Outgoing Pipe

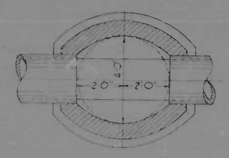
TYPICAL MANHOLE CHANNELS



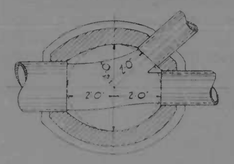
STANDARD CHANNEL No.9



STANDARD CHANNEL No.10



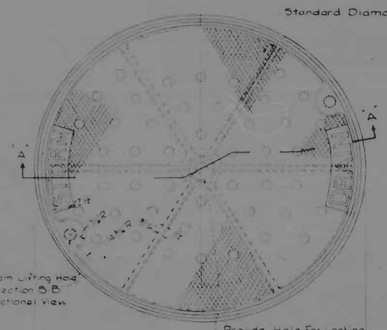
STANDARD CHANNEL No.11



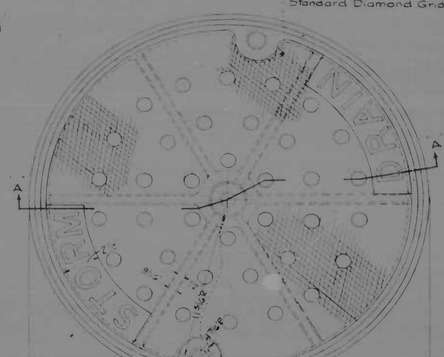
STANDARD CHANNEL No.12

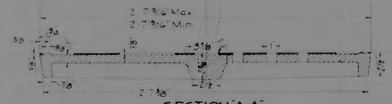
Scale 3/8"=1'0"

Standard Diamond Grid



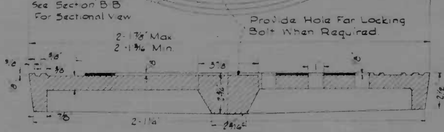
Standard Diamond Grid





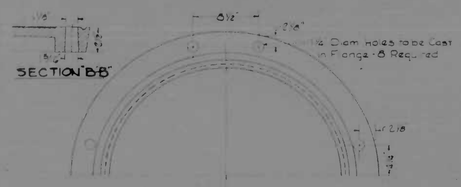
SECTION A-A
No Scale

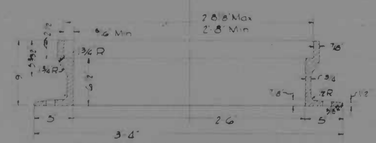
1⅛ Standard Flat Face Gothic No 3 Letters 1⅛ Deep



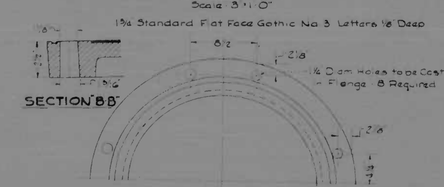
SECTION A-A
Scale 3"=1'0"

1¾ Standard Flat Face Gothic No 3 Letters 1⅛ Deep

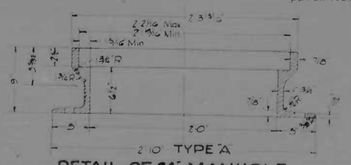




DETAIL OF 30" MANHOLE FRAME & COVER
Scale 1½"=1'0"



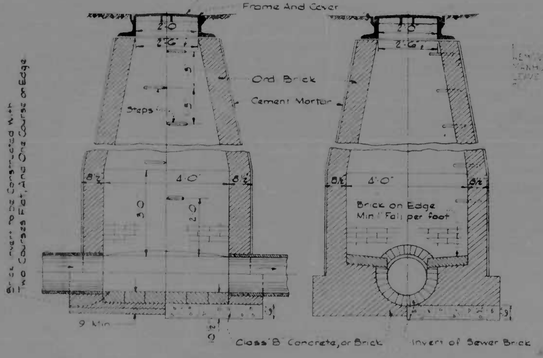
Approx Weight 250#

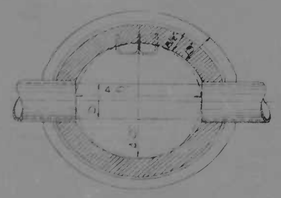


2'0 TYPE 'A'
DETAIL OF 24" MANHOLE FRAME & COVER
Scale 1½"=1'0"

Perforated Covers to be Placed on All Storm Water Manholes (24 Type 'A' Cover)

30" Frame And Cover on All Sewers And Drains of 36" Diam And Over





NOTE
If Conc Slab is Used, place ½" Conc Bars 12" cc Bothways 2" Clear From Top When Required by Engineer

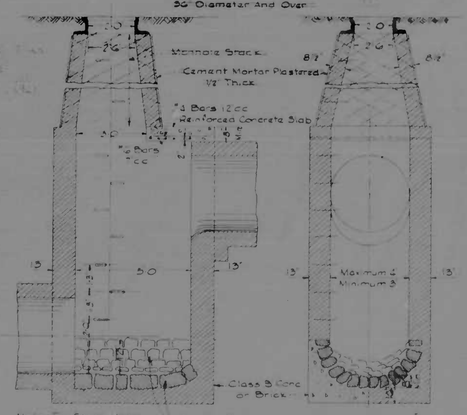
MANHOLE WALL THICKNESS
8" To Depth of 12'0
12" Below Depth of 12'0

Bench Height Above Outgoing Pipe must to be Equal to Diameter of Outgoing Pipe

STANDARD MANHOLE

Scale 1"=1'0"

30" Frame And Covers on All Sewers And Drains of 36" Diameter And Over



Note For Storm Water Drains Only

MANHOLE WALL THICKNESS (STACK)
8" To Depth of 12'0
12" Below Depth of 12'0

STANDARD STORM DRAIN DROP MANHOLE

Scale 3/8"=1'0"

REVISIONS	CONSULTANT	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS	&	STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY
	KNOERLE, BENDER, STONE & ASSOC., INC. AND MATZ, CHILDS & ASSOC., INC. CONSULTING ENGINEERS 341 N. CALVERT STREET BALTIMORE, MARYLAND 21202	INTERSTATE ROUTE 95 FROM NORTH OF HERRING RUN TO NORTH OF B & O RAILROAD		DRAWN BY M.F.H. TRACED BY M.F.H. DES. BY D.E.S. CHK. BY W.E.F.
		SCALE As Shown DATE		F.A.P. NO. I-95-4(36)36 S.R.C. NO. B.C.246-13-BR BALTO. CITY NO. 1995 SHEET NO. T-14 OF (92) T-15

FED. ROAD SYS. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	MD.	I-95-4(58)176	T-14A	T-15

CONSTRUCT MODIFIED DROP MANHOLE AT STA. 519+11 LT. SEE STORM DRAIN PROFILE SHEET

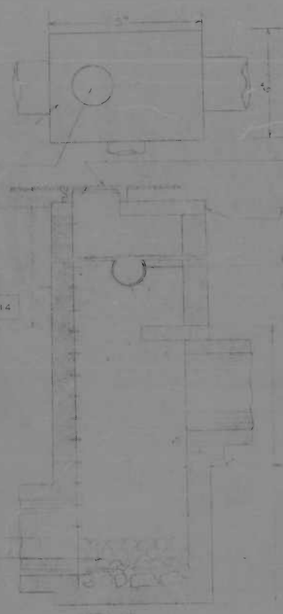
USE EXISTING STD. MANHOLE FRAME AND COVER

PROP. TOP ELEV. 54.0

RAISE EXISTING MANHOLE (5.8ft) TO THE PROP. ELEV. 54.0

THIS SHEET PRECEDES MANHOLE ON SHEET T-14

1



EXISTING MANHOLE

SEE INTERIOR DETAILS OF COVER, STEPS, AND BUBBLE, SEE SHEET T-14 OF T-15 (B2)

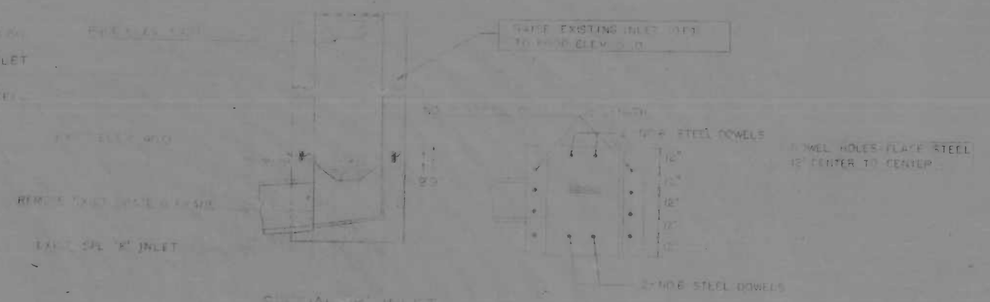
EXISTING SLEEV

MODIFIED DROP MANHOLE
RAMP 'E' STA. 519+11 LT.
LOCATION PLAN SHEET T-6B
NOT TO SCALE

RAMP 'E' STA. 520+1 LT. RAISE EXIST. ON 'A' INLET 10" TO ELEV. 48.80. REMOVE AND SALVAGE EXIST. GRATE, FRAME AND HEAD OF EXIST. INLET

RAISE INLET BARS, HOOD, IN TOP OF EXIST. INLET AND PLACE STEEL DOWELS IN HOLES TO SUPPORT CONSTRUCTION OF PROP. INLET WALLS

1



SPECIAL "A" INLET
(NON-TRAFFIC AREA)
RAMP 'E' STA. 520+1 LT. LOCATION PLAN SHEET T-6B
NOT TO SCALE

REVISIONS	CONSULTANT	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS & STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY	
1 REVISED TO ELIMINATE CONFLICT WITH UTILITIES			DRAWN BY / DES. BY / TRACED BY / CHK. BY / F.A.P. NO. / B.R.C. NO. / BALTO. CITY NO. / SHEET NO. / SCALE / DATE

2	MD. I-95-4(36)136	T-2	(92)	T-1

PAVING DETAIL 'A' 'B'

PAVING DETAIL 'B' 'A'

INTERSTATE ROUTE 95
SUPERELEVATED SECTION
SCALE 1"=10'

TYPICAL SECTION
ACCESS ROAD
STA 14+50 TO STA 20+69
SCALE 1"=10'

TYPICAL SECTION-RAMP 'A'
STA 15+29.49 TO RAMP 'B' MERGE
SCALE 1"=10'

TYPICAL SECTION-RAMP 'E'
RAMP 'D' MERGE TO PULASKI STRUCTURE
SCALE 1"=10'

PAVING DETAIL 'F'

TYPICAL SECTION-RAMP 'C'
STA 199+85.67 TO RAMP 'A' MERGE
SCALE 1"=10'

TYPICAL SECTION
ACCESS ROAD
STA 10+00 TO STA 14+50
SCALE 1"=10'

RAMP GORE TREATMENT
WHEN USING CONTRASTING PAVEMENT

(FUTURE CONSTRUCTION)
TYPICAL SECTION-RAMP 'F'
RAMP 'E' GORE AHEAD
SCALE 1"=10'

TYPICAL SECTION-RAMP 'E'
STA 504+13.86 TO STA 514+21.72
SCALE 1"=10'

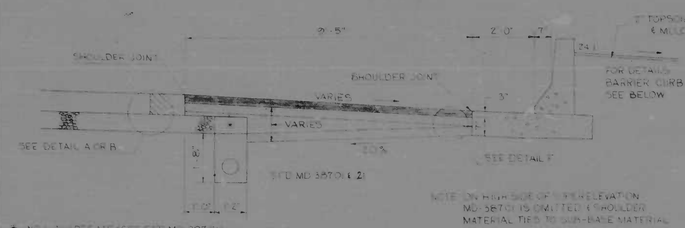
NOTE: FOR JOINT DETAILS OF LONGITUDINAL JOINTS DEPICTED ON THIS SHEET SEE SHEET T-13

TYPICAL PAVING DETAIL 'G'

REVISIONS	CONSULTANT	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS	&	STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY
	KHOERLE, BENGER, STONE & ASSOC., INC. AND MAYS, CHILDS & ASSOC., INC. CONSULTING ENGINEERS 341 N. CALVERT STREET BALTIMORE 2, MARYLAND	INTERSTATE ROUTE 95 FROM NORTH OF HERRING RUN TO NORTH OF B&O RAILROAD		DRAWN BY F.W. DES. BY E.E.L. TRACED BY F.W. CHK. BY R.W.C. F.A.P. NO. I-95-4(36)136 SHEET NO. (92) T-2 of T-15 S.R.C. NO. BC 246-33-815 BALTO. CITY NO. 1995
		SCALE As Shown	DATE	

SP2

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	MD	I-95-4(36)36	T-3	(92) T-15



NOTE: ON HIGH SIDE OF SUPERELEVATION MD 387.01 IS OMITTED & SHOULDER MATERIAL TIED TO SUB-BASE MATERIAL

* NO 2" AGGREGATE (SEE STD MD 387.21) TO BE INCLUDED IN PRICE BID FOR UNDERDRAIN

SHOULDER TREATMENT WITH BARRIER CURB

SCALE 1" = 2'-0"

CONTINGENT UNDERDRAIN PATTERN
SEE SHO STD PLATE MD 387.01 NOT TO SCALE
USING SUB-SURFACE DRAINAGE DITCH SECTION

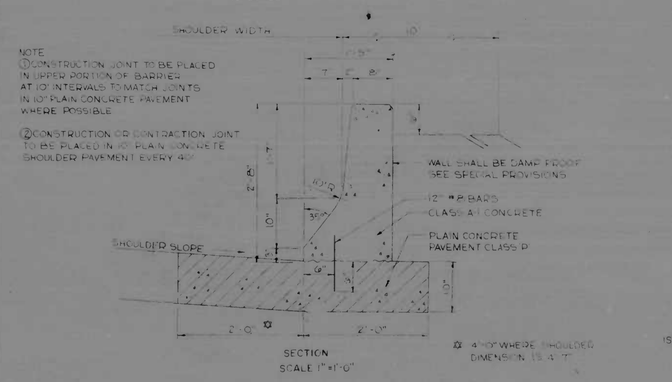
A PERFORATED ROUND UNDERDRAIN LATERALS
B PERFORATED ROUND UNDERDRAIN LATERALS
C OUTLET PIPES AS REQUIRED

① UNDERDRAIN LINE ONE SIDE WITH LATERALS
② UNDERDRAIN LINE BOTH SIDES WITH STAGGERED LATERALS

TO BE CONSTRUCTED IF DIRECTED BY THE ENGINEER FOR CONTROL OF UNDERGROUND SPRING AND SUB-GRADE DRAINAGE PROBLEMS IN WET CUT AREAS, LOCATIONS AND TYPE AS DIRECTED BY THE ENGINEER

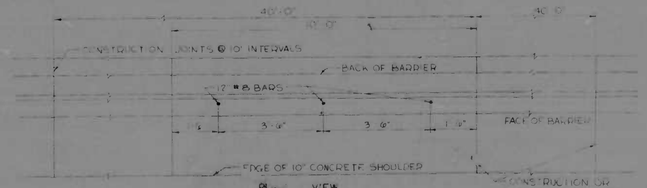
CONTINGENT UNDERDRAIN PATTERN

NO SCALE



SECTION
SCALE 1" = 1'-0"

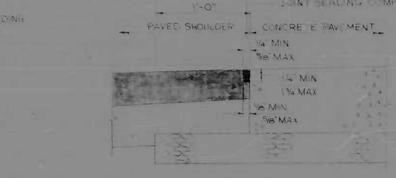
* 4'-10" WHERE SHOULDER DIMENSION IS 4'-7"



PLAN VIEW

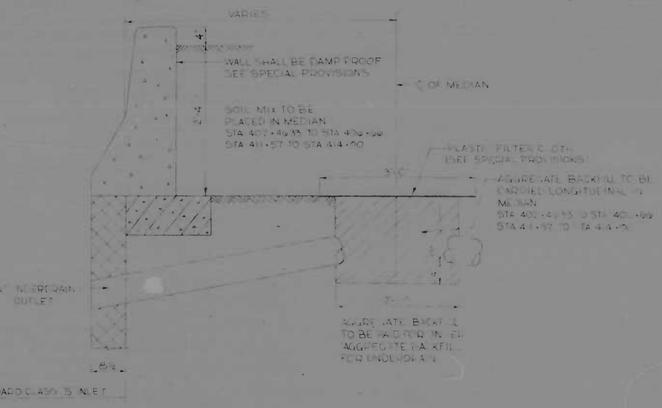
CONCRETE BARRIER

SCALE 1" = 2'-0"



SHOULDER JOINT DETAIL

NO SCALE



MEDIAN TREATMENT AT INLET

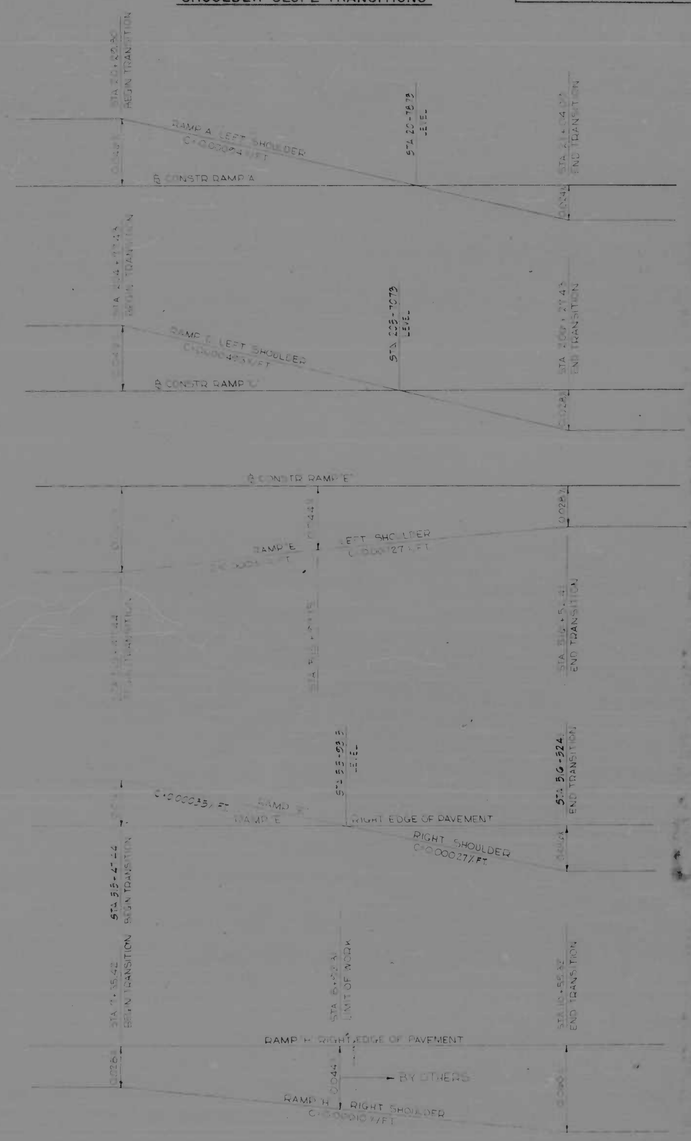
NO SCALE

ISOMETRIC VIEW — SECTION A-A — SECTION B-B

TEMPORARY EDGE DELINEATOR

NO SCALE

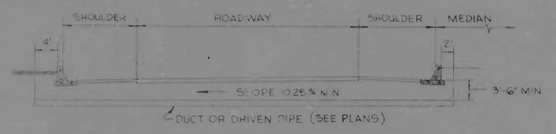
SHOULDER SLOPE TRANSITIONS



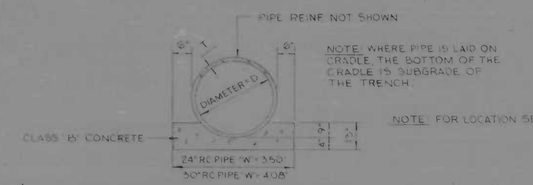
REVISIONS	CONSULTANT	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS & STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY	
	KNOERLE, BENDER, STONE & ASSOC., INC. AND KATZ, CHEIM & ASSOC., INC. CONSULTING ENGINEERS 341 N. CALVERT STREET BALTIMORE, MARYLAND 21	INTERSTATE ROUTE 95 FROM NORTH OF HERRING RUN TO NORTH OF B&O RAILROAD	DRAWN BY J.W.S. DES. BY T.E.L. TRACED BY J.W.S. CHK. BY J.L.C. F.A.P. NO. I-95-4(36)36 S.P.C. NO. BC 246-33-815 BALTO. CITY NO. 1995
		SCALE: As Shown DATE	SHEET NO. (92) T-3 OF T-15

SP. 22

REG. CONT. DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	MD.	I-95-4(36)36	T-4	(92) T-15

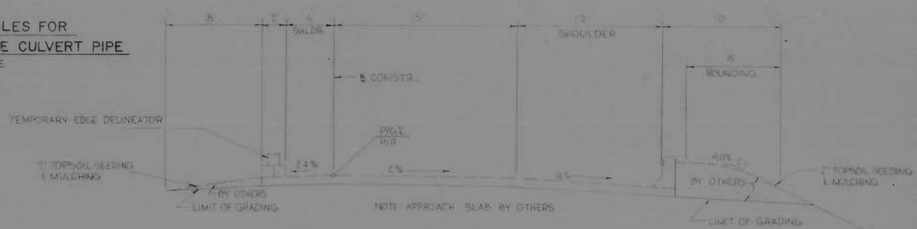


TYPICAL SECTION DUCT CROSSOVER
NO SCALE



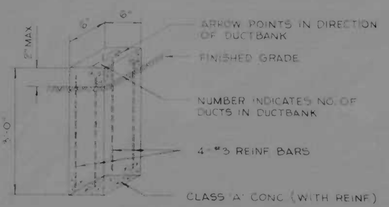
CONCRETE CRADLES FOR
REINFORCED CONCRETE CULVERT PIPE
NO SCALE

SOD DITCH DETAIL
NO SCALE

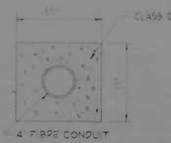


GRADING AT APPROACH SLAB — RAMP 'A'
STA. 27+56.19 TO STA. 27+71.19
NO SCALE

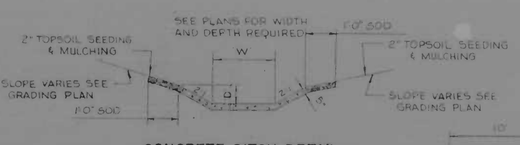
NOTE: SET MARKER FLUSH WITH END AND LEFT SIDE OF DUCTBANK



DUCT MARKER DETAIL
NO SCALE

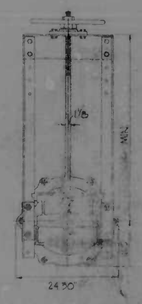


1-WAY DUCTBANK
NO SCALE



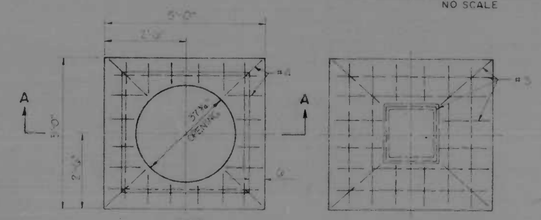
CONCRETE DITCH DETAIL
NO SCALE

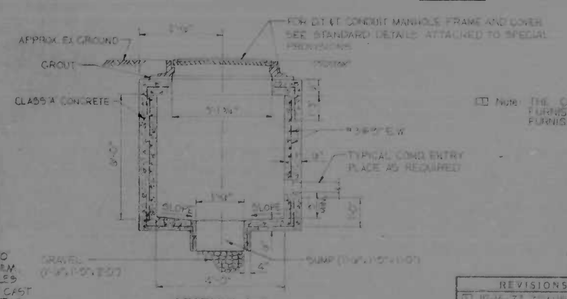
GRADING AT APPROACH SLAB — RAMP 'E'
STA. 504+54.76 TO STA. 504+69.76
NO SCALE



SLUICE GATE
SPOOT BACK DETAIL
NO SCALE

NOTE: SLUICE GATE IS TO BE SELF CONTAINED, INSTALLED TO SUSTAIN A 10' UNHEATED HEAD THE GATE SHOULD HAVE A ROUND OPENING, A RISING STEM, CAST IRON SEATING SURFACE, GALVANIZED STEEL GUIDES AND HEAD ANGLES AND A SPOOT BACK SEAT TO WHICH THE 18" C.M.P. WILL BE ATTACHED. A CAST IRON FRAME SHOULD BE PROVIDED WITH HEAD ANGLE FOR MOUNTING THE LIFTING DEVICE AND THE MINIMUM FRAME HEIGHT TO BE 8'-0". THE GATE IS TO HAVE A CAST IRON 8-32 INCH ALL IRON EYE CAST AT THE CENTER OF THE DOME ON THE SEATING SIDE, WITH HEAVY CAST IRON CROSS BARS CONNECTING TO THE EYE.





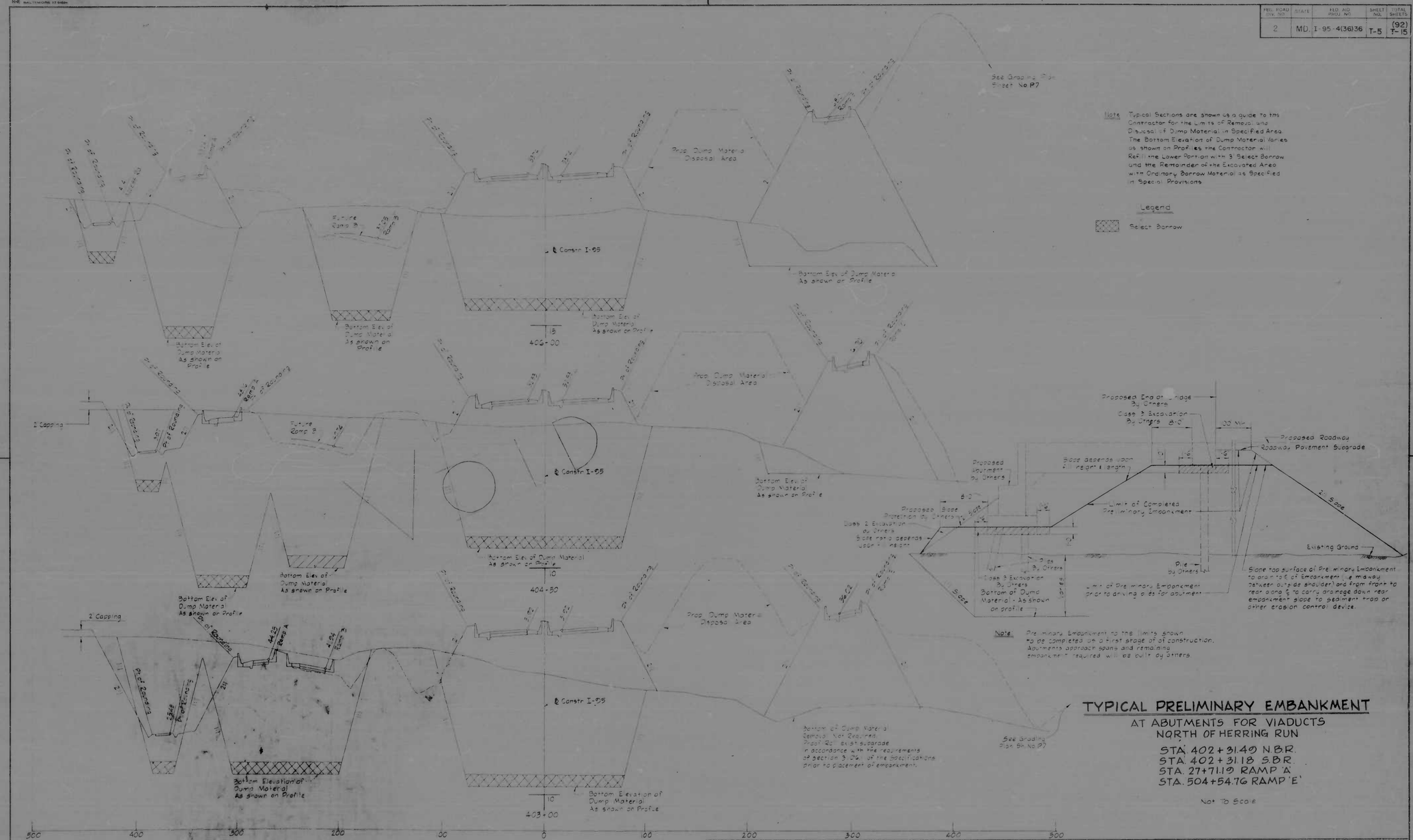
SECTION A-A
4'x4'x6' H.R. TRANSIT & TRAFFIC MANHOLE
NO SCALE

[1] Note: THE CONTRACTOR HAS THE OPTION OF FURNISHING BUILT-IN-PLACE MANHOLE OR FURNISHING PREFABRICATED MANHOLES

FOOTING TREATMENT IN DUMP DISPOSAL SITES
NO SCALE

REVISIONS	CONSULTANT	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS	STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY
[1] 10-16-72, TRANSIT AND TRAFFIC MANHOLE	KINSELLE, BLANDER, STONE & ASSOC., INC. AND MATZ, DIRING & ASSOC., INC. CONSULTING ENGINEERS 341 N. CALVERT STREET BALTIMORE, MARYLAND 21202	INTERSTATE ROUTE 95 FROM NORTH OF HERRING RUN TO NORTH OF B & O RAILROAD	DRAWN BY: A.V.J. DES. BY: A.L. TRACED BY: J.V.J. CHK. BY: J.J.C.
		SCALE: AS SHOWN DATE:	F.A.P. NO. I-95-4(36)36 S.R.C. NO. BC 246-333-815 BALTO. CITY NO. 1595 SHEET NO. (92) T-4 OF T-15

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	MD.	I-95-4(36)36	T-5	(92) T-15



Note Typical Sections are shown as a guide to the Contractor for the Limits of Removal and Disposal of Dump Material in Specified Area. The Bottom Elevation of Dump Material Varies as shown on Profiles. The Contractor will Refill the Lower Portion with a Select Borrow and the Remainder of the Excavated Area with Ordinary Borrow Material as Specified in Special Provisions.

Legend

Select Borrow

TYPICAL DUMP REMOVAL & DISPOSAL

SCALE: HORIZ. 1"=40
VERT. "=10

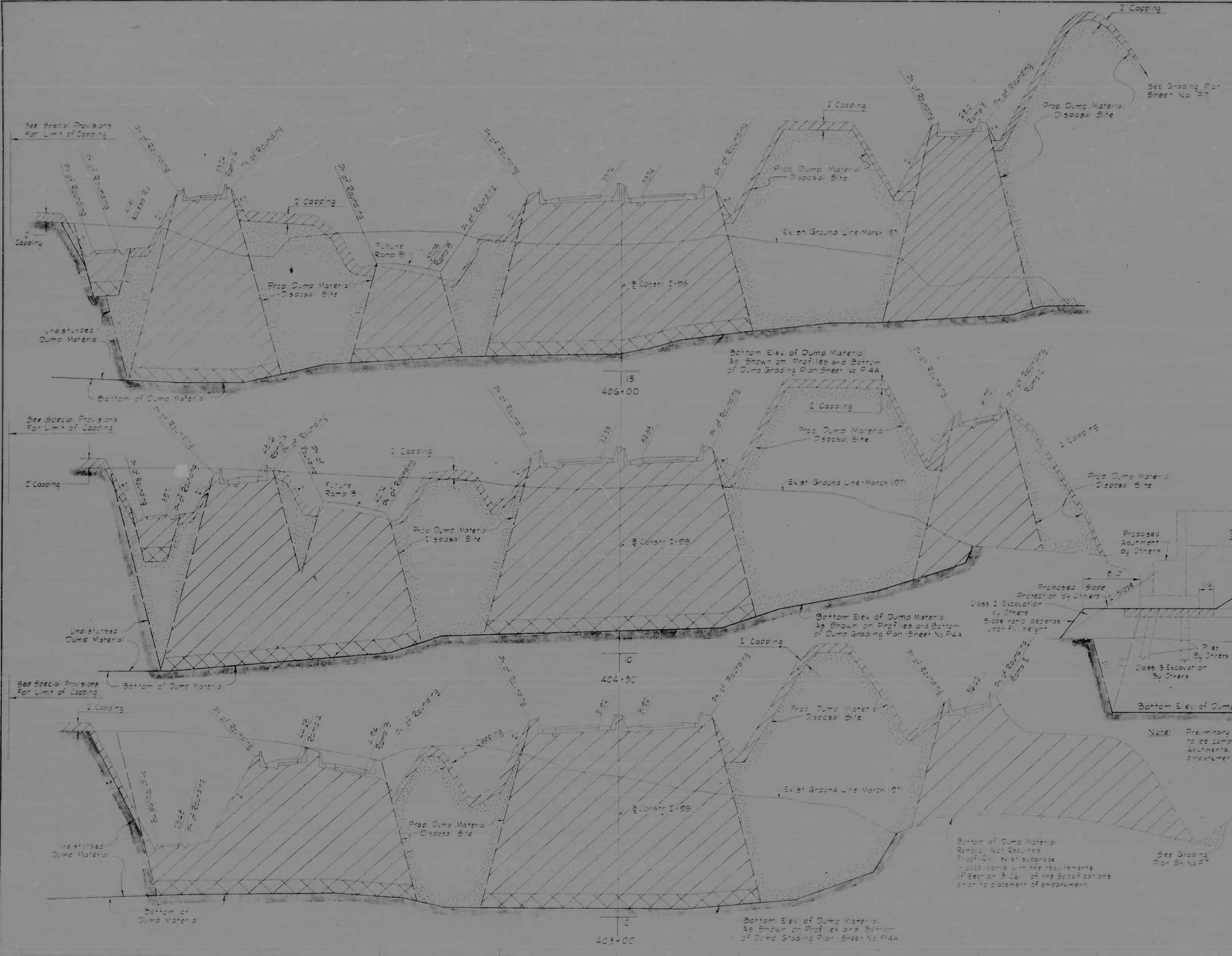
TYPICAL PRELIMINARY EMBANKMENT

AT ABUTMENTS FOR VIADUCTS
NORTH OF HERRING RUN

STA. 402+31.40 N.B.R.
STA. 402+31.18 S.B.R.
STA. 27+71.10 RAMP A
STA. 504+54.76 RAMP 'E'

Not To Scale

REVISIONS	CONSULTANT	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS & STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY	
	KNOERLE, BENDER, STONE & ASSOC. INC AND MATZ, CHILDS & ASSOC., INC. CONSULTING ENGINEERS 341 N. CALVERT STREET BALTIMORE, MARYLAND 21	INTERSTATE ROUTE 95 FROM NORTH OF HERRING RUN TO NORTH OF B&O RAILROAD	DRAWN BY K.H. DES BY K.H. TRACED BY F.W. CHK BY J.L.C.
		SCALE As Shown DATE	F.A.P. NO. I-95-4(36)36 S.R.C. NO. B.C.246-33-615 BALTO. CITY NO. 1995 SHEET NO. (92) T-5 OF T-15



TYPICAL DUMP REMOVAL & DISPOSAL

SCALE: HORIZ. 1:40
VERT. 1:10

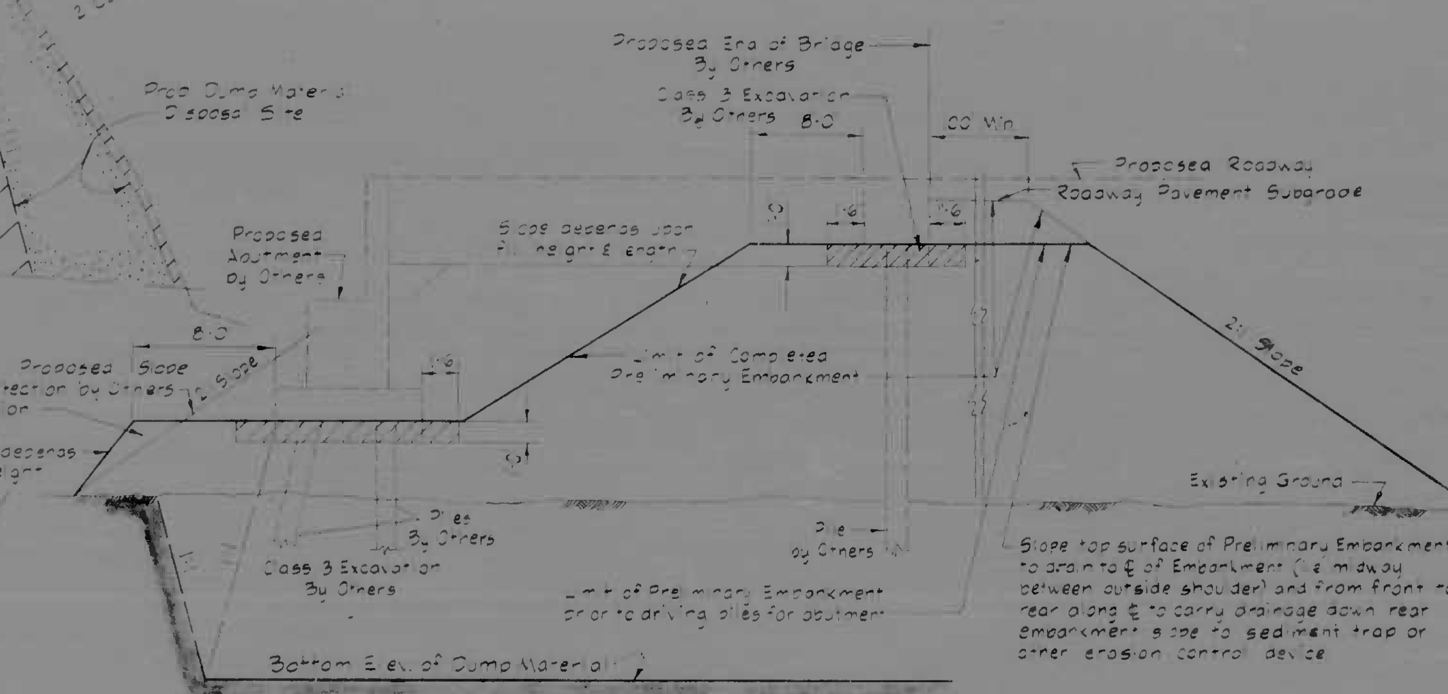
NOTE:

Typical Sections shown as a guide to the Contractor for the limits of removal and disposal of dump material in specified areas. The elevation of the bottom of dump material varies as shown on profiles and grading plan for bottom of dump material (Sheet No. P-4A). The Contractor shall backfill the areas excavated as follows:

1) The lower portion under the Mainline, Ramp A, future Ramp B & the Access Rd. to be backfilled with 3' of Select Borrow Material.
2) The remaining portion of the excavated material under the Mainline, Ramp A, future Ramp B, the Access Rd. and Ramp 'E' to be backfilled with Ordinary Borrow Material up to the top of subgrade line.
3) The proposed dump material disposal sites between the Ramps, Mainline and the Access Rd., including sites 1, 2 & 5 shall be backfilled with Dump Material as a sanitary landfill in accordance with the special provision "Dump Removal".
4) A final 2' Capping with compacted ordinary borrow material shall be placed over all the dump material disposal sites including the undisturbed portions outlined in the special provisions.

LEGEND

- 3' Select Borrow Material
- Ordinary Borrow Material
- Prop. Dump Material Disposal Sites



Note: Preliminary embankment to the limits shown to be completed as a first stage of construction. Abutments, approach spans and remaining embankment required will be built by others.

TYPICAL PRELIMINARY EMBANKMENT

AT ABUTMENTS FOR VIADUCTS
NORTH OF HERRING RUN

STA. 402+31.49 N.B.R.
STA. 402+31.18 S.B.R.
STA. 27+71.19 RAMP 'A'
STA. 504+54.76 RAMP 'E'

Not To Scale

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	MD.	I-95-4(36)36	T-5A	(92) T-15

REVISIONS	CONSULTANT
1 Addendum No. 2 Aug. 3, 71. Delete Sh. No. T-5. Add New Typ. Sh. No. T-5A	

CITY OF BALTIMORE
DEPARTMENT OF PUBLIC WORKS
&
STATE ROADS COMMISSION OF MARYLAND
INTERSTATE DIVISION FOR BALTIMORE CITY

INTERSTATE ROUTE 95
FROM NORTH OF HERRING RUN
TO NORTH OF B.&O. RAILROAD

SCALE: As Shown DATE:

DRAWN BY: K.H. DES. BY: K.H.
TRACED BY: F.W. CHK. BY: J.L.C.
F.A.P. NO. I-95-4(36)36
S.R.C. NO. B.C. 246-33-815
BALTO. CITY NO. 1995
SHEET NO. T-5A (92) T-15

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	MD.	I-95-4(36)136	T-6	(92) T-15

SOIL LEGEND

- DUMP MAT'L.
- A-1, SAND & STONE FRAGMENTS
- A-2, SAND & FINES
- A-2-4, SILTY SAND
- A-2-7, CLAYEY SAND
- A-4, SILT
- A-4-2, SANDY SILT
- A-6, SWAMP MUCK
- A-4-7, CLAYEY SILT
- A-5, SILT WITH MICA AND/OR DECOMPOSED ROCK
- A-7, CLAY
- A-7-2, SANDY CLAY
- A-7-4, SILTY CLAY
- A-6, COLLOIDAL CLAY

PLAN LOCATION OF SOIL BORINGS

PLAN LOCATION OF GOW BORINGS

□ IN-PLACE DRY DENSITY (DEPTH)
____P.C.F. @ ____% MOISTURE (DATE)

PROFILE VERTICAL SCALE 1"=10'

L.L. - LIQUID LIMIT P.I. - PLASTICITY INDEX N.P. - NON PLASTIC
M.D.D. & O.M.C. - MAXIMUM DRY DENSITY AND OPTIMUM MOISTURE CONTENT AS DETERMINED BY A.A.S.H.O. DESIGNATION T-99 METHOD 'C'

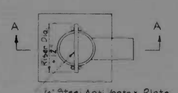
UNLESS OTHERWISE NOTED ON PLANS ALL SOIL SURVEY BORINGS FOR ROADWAY CONSTRUCTION WERE LEFT OPEN FOR 24 HOURS WITH NO EXCESS MOISTURE OR FREE WATER ENCOUNTERED DURING TIME OF SOIL SURVEY (10/68 & 1/69-2/69)
BORING DATA FOR STRUCTURES IS INDICATED ON RESPECTIVE PLAN SHEETS.

ABBREVIATIONS

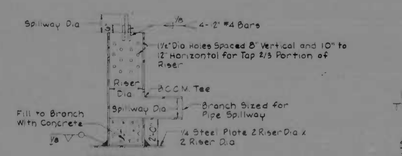
A.T.&T.	American Telephone & Telegraph Co.	Mtl.	Metal
B.C.C.M.P.	Bituminous Coated Corrugated Metal Pipe	N.B.R.	Northbound Roadway
Bit.	Bituminous	P/C	Point of Crown
℄ Constr.	Base Line of Construction	P.C.C.P.	Prestressed Concrete Cylinder Pipe
℄ Survey	Base Line of Survey	P/G.E.	Profile Grade Elevation
Blo.	Block	P.G.L.	Profile Grade Line
B.M.	Bench Mark	P/G.L.	Profile Ground Line
Br.	Brick	P/R.	Point of Rotation
C.I.P.	Cast Iron Pipe	R.C.P.	Reinforced Concrete Pipe
Conc.	Concrete	Ret. St.	Retail Store
C.W.D.	Creosote Wood Duct	Ret. W.	Retaining Wall
C.&P.	Chesapeake & Potomac Telephone Co.	S.	Sign
D.	Storm Drain	San.	Sanitary Sewer Line
Dwg.	Dwelling	S.B.R.	Southbound Roadway
Elev.	Elevation	S.D.	Side Ditch
F.H.	Fire Hydrant	S.D.D.	Surface Drain Ditch
F.M.	Force Main	S.E.	Superelevation
Fr.	Frame	Sh.	Shingle
Gas	Gas Main	S.&M.	Seed and Mulch
Gar.	Garage	S.P.P.	Structural Plate Pipe
G.B.	Gas Box	S.S.D.	Stopping Sight Distance
G.&E.	Gas and Electric Co.	Sta.	Station
G.R.	Guard Rail	Std. Pl.	Standard Plate
G.V.	Gas Valve	Sto.	Stone
H.B.	Hand Box	Sty.	Story
H.S.D.	Headlight Sight Distance	T.	Transformer
H.W.	Headwall	U.D.	Underdrain
Mas.	Masonry	V.C.P.	Vitrified Clay Pipe
M.E.	Mechanical-Electrical	V.C.P.X.	Vitrified Clay Pipe Extra Strength
Mfg.	Manufacturing	W.	Water Main
M.H.	Manhole	W.M.	Water Meter
M.T.D.	Multi-Terra Cotta Duct	W.V.	Water Valve

LEGEND

EXISTING		PROPOSED
B.M. ⊠ △	Bench Mark	
	Horizontal Control Point	
	Roadway, Driveway, Sidewalk	
	Curb Line	
	Hedge	
	Tree	
	Marsh	
	Woods Line	
	Stream	
	Fence (Wood)	
	Fence (Wire)	
	Guard Rail	
	Right of Way Line	
	Baltimore City Limits	
	Ruins or Foundations	
	Retaining Wall	Ret. W.
	Railroad	
20'	Contours	20'
8"W	Water Main	8"W
8"San	Sanitary Sewer Line	8"San
18"D	Storm Drain	8"RCP 12"RCP
4"G	Gas Main	4"Gas
2-6 6 M.T.D.	Underground Conduit	
	Culvert	24"RCP 42"RCP
	End Section	
	Inlet (Curb Type)	
DI	Inlet (Drop or Grate Type)	
	Fire Hydrant	
	Manhole	
W	Valve, Meter - Water	W
G	Valve, Box - Gas	
	Street Light - High Mast	
	Wooden Pole (C.&B.E.C.&P. etc.)	
	Wooden Pole With Light	
U.L.	Underpass Luminaire	U.L.
	Guy Pole	
T.S.	Transit & Traffic Pole - Wood	T.S.
	Transit & Traffic Pole - Metal	T.S.
	Traffic Signal	
	Traffic Control Box	T.C.
	Railroad Crossing Sign	
	Billboard, Sign	
	Transit & Traffic Sensor Element	
N.B.	Mechanical - Electrical Hand Box	
	Slope Limits (Toe of Fill)	
	(Top of Cut)	
	Ditch, Grass (Seed & Mulch)	
	(Sod)	
conc.	Ditch, Paved (Concrete)	
	(Stone filled wire basket)	Rock Filled Wire Basket
	Placed Riprap 18" Thick	
	Building - To Be Removed	
	Utility - To Be Removed	
	Utility - Abandoned - To Be Abandoned	
	Utility Plug	

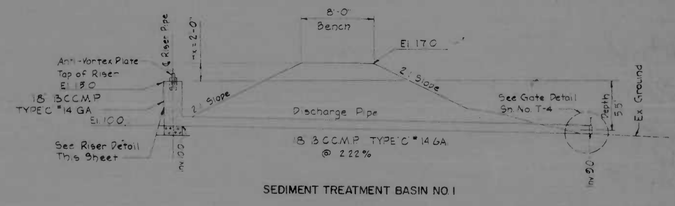


RISER DETAIL
NO SCALE

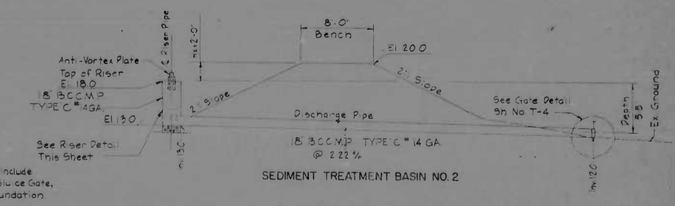


SECTION A-A

NOTE: Price Bid for Pipe Shall Include Pipe, Anti-Vortex Plate, Sluice Gate, Concrete, and Riser Foundation.



SEDIMENT TREATMENT BASIN NO. 1



SEDIMENT TREATMENT BASIN NO. 2

TEMPORARY PIPE & RISER AT SEDIMENT TREATMENT BASINS
NO SCALE

EXPLANATORY NOTES AND REFERENCES

VERTICAL CONTROL
The Location and Elevations of Bench Marks are Shown on The Plans. All Elevations Shown are Based on Baltimore City Datum.

INVERT ELEVATIONS
All Invert Elevations are Approximate and May be Modified to Meet Conditions Encountered During Installation of Underground Facilities.

SIGHT DISTANCE
Stopping Sight Distance For Crest Vertical Curves is Based on a Height of Object = 0.33' and a Height of Eye = 3.0'. Headlight Sight Distance For Sag Vertical Curves is Based on a Height of Headlight = 2.0' and an Upward Divergence of Beam = 1°.

MATERIALS SALVAGED IN CONSTRUCTION
These Materials Shall Become The Property of The Contractor and Shall be Removed From The Site of Construction Except For Those Items Provided For Salvage as shown on the Plans and Special Provisions.

HORIZONTAL CONTROL
The Project is Oriented to Conform With The Baltimore City Grid System.

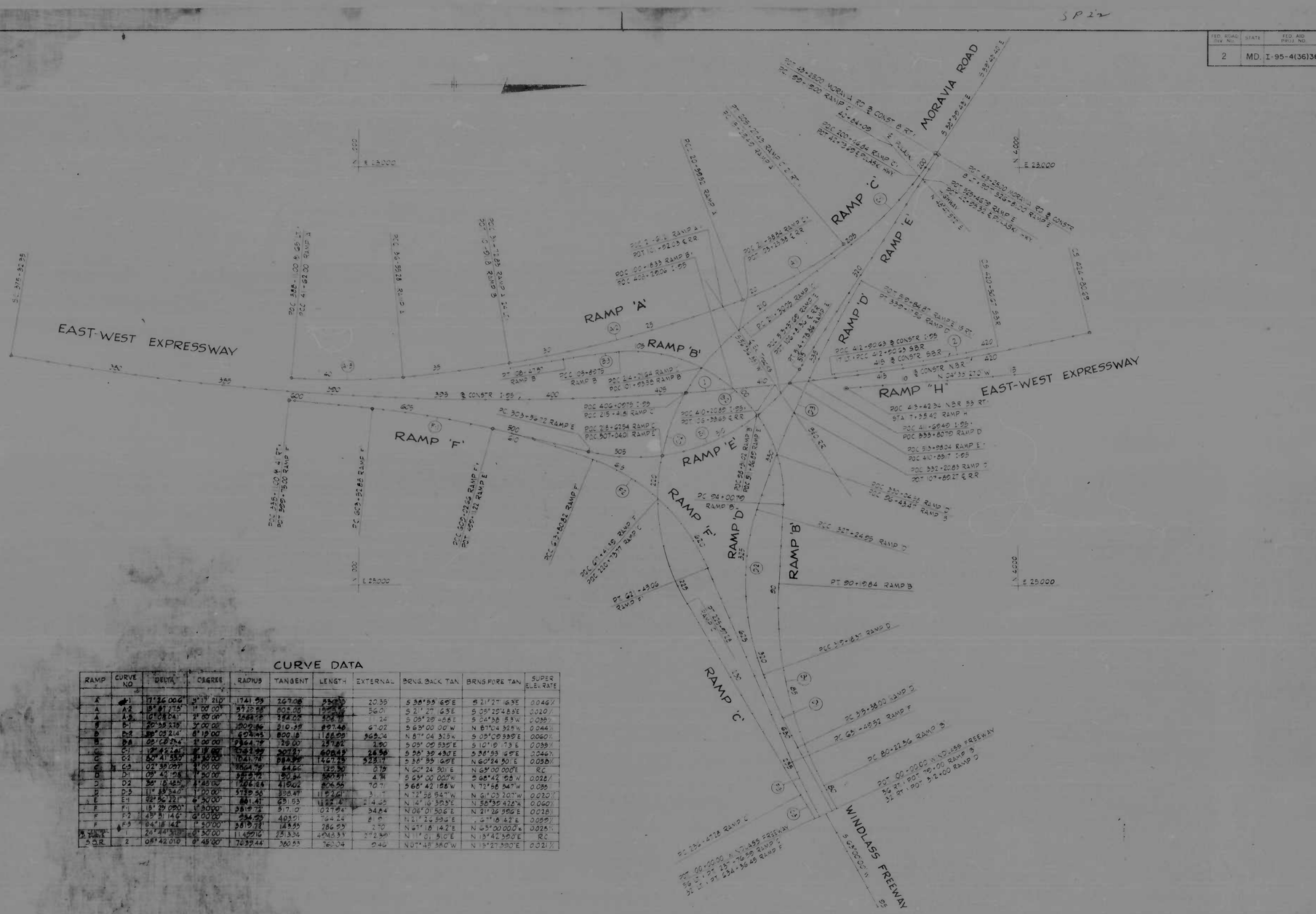
CLEARING AND GRUBBING
Special Attention is Directed to the Fact that no Clearing and Grubbing or Grading May Commence for this Project Until the Clearing Limits are Staked in the Field and Approved by the Engineer. No Clearing Will be Allowed Beyond Construction Limits. Clearing limits are to be staked in the field by the Contractor.

DRAINAGE STRUCTURES
The Locations And Inverts of The Drainage Structures Are Subject to Modification as May be Required by Field Conditions, as Directed by The Engineer.

REVISIONS	CONSULTANT	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS & STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY	
	KINKELE, DEEDER, STONE & ASSOC., INC. AND MATZ, CHILDS & ASSOC., INC. CONSULTING ENGINEERS 341 N. CALVERT STREET BALTIMORE, MARYLAND 21202	INTERSTATE ROUTE 95 FROM NORTH OF HERRING RUN TO NORTH OF B&O RAILROAD	DRAWN BY: J.R.W., P.D.D. DES. BY: J.L.C. TRACED BY: J.R.W. CHK. BY: P.W.C. F.A.P. NO. I-95-4(36)136 S.R.C. NO. BC 246-33-815 BALTO. CITY NO. 1995 SHEET NO. (92) T-6 OF T-15
		SCALE: NONE DATE:	

SP 22

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	MD.	I-95-4(36)36	T-7	(92) T-15



CURVE DATA

RAMP	CURVE NO	DELTA	DEGREE	RADIUS	TANGENT	LENGTH	EXTERNAL	BRNG. BACK TAN	BRNG. FORE TAN	SUPER ELEV. RATE
A	A1	17°36'006"	3°17'210"	1741.93	269.06	535.50	20.35	S 38°55'65"E	S 21°27'63"E	.0046
A	A2	23°51'154"	1°00'00"	5732.58	1214.00	2387.00	56.01	S 21°27'63"E	S 05°25'48"E	.0020
A	A3	10°10'241"	2°00'00"	2864.79	255.78	509.00	11.34	S 05°25'48"E	S 04°38'83"W	.0035
B	B1	20°05'218"	3°00'00"	1909.86	340.49	669.46	15.02	S 63°00'00"W	N 83°04'303"W	.0046
B	B2	38°05'214"	8°15'00"	694.43	800.18	1486.00	965.04	N 83°04'303"W	S 05°08'335"E	.0060
B	B3	05°08'274"	2°00'00"	2864.79	128.00	256.82	2.90	S 05°08'335"E	S 10°18'173"E	.0035
C	C1	17°45'226"	2°15'00"	2547.89	397.27	804.43	26.56	S 36°33'430"E	S 36°33'65"E	.0046
C	C2	60°41'554"	11°30'00"	1241.72	1284.99	1467.43	523.17	S 36°33'65"E	N 60°24'501"E	.0036
C	C3	02°38'057"	1°00'00"	5729.58	64.66	128.30	0.73	N 60°24'501"E	N 63°00'000"E	RC
D	D1	08°42'108"	1°30'00"	3819.72	290.34	580.97	4.94	S 63°00'000"W	S 68°42'63"W	.0028
D	D2	36°16'425"	2°45'00"	2084.66	678.66	1319.02	70.71	S 68°42'63"W	N 72°58'94"W	.0035
D	D3	11°33'540"	1°00'00"	5729.58	338.47	1178.16	3.71	N 72°58'94"W	N 61°05'207"W	.0020
E	E1	61°30'731"	6°30'00"	881.47	651.53	1122.14	234.58	N 14°16'323"E	N 56°35'426"W	.0060
F	F1	18°39'090"	11°30'00"	497.80	81.70	162.04	6.64	N 06°01'506"E	N 21°26'396"E	.0028
F	F2	45°31'146"	6°00'00"	954.93	403.01	758.24	84.00	N 21°26'396"E	N 24°55'27"E	.0059
F	F3	84°18'142"	1°30'00"	3819.72	1435.78	2806.93	270.00	N 24°55'27"E	N 65°00'000"E	.0026
B RAMP	1	24°34'530"	0°30'00"	11459.16	2503.34	4914.33	272.30	N 11°01'510"E	N 13°42'350"E	RC
SBR	2	08°42'010"	0°45'00"	7639.44	580.53	1160.04	5.40	N 07°48'380"W	N 13°27'390"E	.0021

REVISIONS	CONSULTANT	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS &	STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY
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		SCALE: 1" = 200' DATE	F.A.P. NO. I-95-4(36)36 S.R.C. NO. BC 246-33-815 BALTO. CITY NO. 1995
			SHEET NO. (92) T-7 OF T-15

SP 22

FED. ROAD DIV. NO.	STATE PROJ. NO.	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2		MD. I-95-4(36)136	T-8	(92) T-15

COORDINATE TABLE

LOC	CURVE	POINT	STATION	COORDINATES NORTH	COORDINATES EAST	TANGENT BEARING
B & CONSTR I-95 & NBR	#1	BC	372+32.58	577,446	23,902,016	N 11°01'31.0"E
		POC	368+11.00	578,610	24,076,213	
		PI	400+48.70 (CENTRAL CURVE)	580,400	24,382,512	
		POC	406+00.75 POC B3+4.81 C	2,468,584	24,080,027	
		POC	408+29.06 POC 100+ B33 B	2,704.08	24,061,877	
		POC	410+88.71 POC B3+98.04 E	2,988.66T	24,034,604	
		POC	411+80.40 POC 333+80.70 D	3,042,373	24,024,500	N 3°47'39.0"W
		POC	412+70.63	3,102,455	24,008,776	
		POC	413+42.36	3,123,697	24,001,663	
		CS	424+80.00	4,33 1.85	23,987,108	
SBR	#2	POC	412+20.63 N.B.R. (LT.) POC 412+80.63 S.B.R.	3,160.80	23,990,932	N 7°45'38.0"W
		PI	416+70.00 (CENTRAL CURVE)	3,537.03T	23,990,374	
		CS	420+50.37	3,906.92T	23,882.04	N 3°27'39.0" W
NORMA & CONSTR		POT	NP - 28.00 (BREAK POINT)	3,937.221	22,595.121	S 59°43'40.0"E
		POT	413+28.00	3,622.86	22,936.796	S 88°39'43.0"E
I-95 FREEWAY	WND-I-95	POT	100+00.00	3,128.000	26,093.000	S 63°00'00.0"W
PULASKI HWY		POT	40+84.06	3,420.078	22,896.628	
		POT	42+73.96 POC 200+46.84 C	3,544.606	23,050.286	
		POT	42+98.82 POT 329+46.70 E	3,556.217	23,075.560	N 48°47'37.2"E
		POT	43+00.00	3,560.208	23,076.680	
RAMP A	A-1	PC	PT 205+27.43 RAMP C 21 RT + 15+20.40 RAMP A	3203.6	23,371,608	S 38°58.6.0"E
		PI	17+96.57	2855.305	23,350,270	
	A-2	PCC	20+39.52	2,746.734	23,636.966	S 21°27'16.7"E
		POC	21+61.21 POT 101+82.03 E RR	2,65 1.764	23,673.310	
		PI	28+82.60	1,998.30	23,930.705	S 08°29'48.8"E
		POC	31+72.83 24 LT + 110+01.18 B	677.642	23,864.263	
		PCC	36+55.28	1,155.915	24,007.93	
	A-3	PI	39+00.34	947.050	24,031.864	S 04°38.5.5"W
		PCC	41+56.00 + 68 LT POT 338+100.18	693.866	24,011.420	

LOC	CURVE	POINT	STATION	COORDINATES NORTH	COORDINATES EAST	TANGENT BEARING
RAMP B	B-1	POT	100+00.00 WINDLASS FREEWAY 56 RT + POT 70+00 RAMP B	3,140.80	26,087.877	S 63°00'00.0"E
		PC	80+22.36	3,0 9.346	25,958.881	
		PI	83+32.75	2,887.352	25,903.780	N 87°04'32.8"W
		PT	90+19.04	2,813.67T	24,904.200	
	B-2	PC	90+00.00	2,813.06	24,903.60	
		POC	90+43.47 + POC 330+04.88 E	2,858.30	24,874.70	
		POC	100+83.33 POC 408+29.00 I-95	2,704.08	24,061.877	
		PT	102+00.07	2,673.826	23,8 1.468	S 08°29'48.8"E
		POC	101+93.81 POC 2 6+01.84 C	2,560.402	23,902.135	
	B-3	PCC	108+89.75	2,177.000	23,856.800	
		PI	109+14.79	2,048.802	23,849.113	
		POT	108+47.87	1,921.612	23,821.350	S 01°19'13.2"E
		POT	110+91.8 24 RT + POC A-70.88 RAMP A	1,681.742	23,764.874	
	B-2	POC	98+5.02 POC B1+98.88 E	2,814.786	24,874.68	
RAMP C	C-1	POT	43+28.00 & CONSTR MORAVIA RD & RT + PC 95+90.00 C	3,613.358	22,032.606	S 38°39'43.0"E
		POC	200+46.84 + POT 42+73.96 & PULASKI HWY	3,544.606	23,050.286	
		PI	202+26.27	3,455.540	23,058.040	
		PT	205+27.43	3,420.078	23,371.608	S 38°58.6.0"E
	C-2	PC	21+30.05	2,743.32	23,760.278	
		POC	21+58.54 + POT 101+82.03 & RR	2,726.33	23,736.66	
		POC	24+08.4 POC 10+83.88 B	2,560.402	23,902.288	
		POC	219+6.81 POC 406+08.18 I-95	2,485.34	24,000.827	
		PCC	218+62.54 POC 80T+04.0 E	2,378.114	24,38 .404	
		P	220+3.04	2,058.486	24,31 .877	
		POC	220+73.77 + POC 6+44.30 F	2,335.616	24,50 .883	
		PT	229+97.28	2,958.404	23,05 .48	N 60°24.30.1"E
	C-3	PC	230+47.28	3,01 .82	23,00 .375	
		PI	237+.64	3,025.74T	22,960.808	
		PT	239+78.85 POT 100+00.00 WINDLASS FREEWAY	3,078.108	22,8 .424	N 2°00'00.0"E
RAMP D	D-1	POT	100+00.00 WINDLASS FREEWAY 32 RT + POT 32+00.00 RAMP D	3,128.80	26,087.872	S 63°00'00.0"W
		PC	315+88.00	3,000.063	25,777.312	
		PI	317+28.36	2,913.680	25,907.715	S 68°02'.0.8"W
		POC	319+18.37	2,844.826	25,842.371	
	D-2	PI	323+37.30	2,692.352	25,830.986	
		POC	327+24.65	2,814.000	24,636.252	
		POC	330+04.58 + POC 96+43.47 B	2,903.321	24,376.101	N 72°58.54.7"W
	D-3	POC	332+20.83 POT 107+89.27 & RR	2,980.148	24,171.980	
		PI	333+23.42	2,990.147	24,067.019	
		POC	332+89.79 + POC 41+69.49 I-95	3,042.373	24,024.500	
		PT	339+17.56 + 13 RT POT 310+84.67 RAMP E	3,270.780	23,843.308	N 6°03'20.7"W

	CURVE	POINT	STATION	COORDINATES NORTH	COORDINATES EAST	TANGENT BEARING
RAMP E	E-1	POC	309+02.66 RAMP F +			
		POT	409+11.22 RAMP E	3,611.96	24,293.922	N 14°16.30.8"E
		PC	503+56.72	4,033.830	24,363.470	
		POC	507+04.01 + POC 218+62.54 C	2,378.114	24,38 .404	
		PI	510+08.25	2,664.948	24,524.73	
		POC	513+86.80 + POC 98+51.02 B	2,913.780	24,87 .63	
		POC	513+37.69 + POT 106+81.36 & RR	2,901.302	24,08 .882	
		POC	513+98.04 + POC 410+89.17 I-95	2,958.66T	24,054.404	
		PT	514+7.86	3,005.802	23,96 .290	
		POT	310+84.67 + 8 LT PT 339+17.56 RAMP D	3,266.960	23,835.804	N 86°30' 42.5"W
		POT	522+24.8 + 36 LT PT RT EDGE D	3,30 .433	23,33 .104	
		POT	528+46.79 POT 42+98.82 PULASKI	3,550.217	23,085.560	
		POT	526+8.00 + 8 LT POT 43+28.00 & CONSTR MORAVIA RD	3,620.010	22,940.927	
RAMP F	F-1	POT	POC 308+11.00 + 95 41 RT + 309+78.00	3,852.08	24,117.078	N 06°01.30.8"E
		PC	603+52.88	06 .084	24,156.770	
		PT	608+.99 A	57 .39	24,21 .06	
		POC	609+02.66 + POT 409+11.22 E	60 .756	24,255.622	N 2°26.39.6"E
		POC	613+80.82	2,056.600	24,400.202	
	F-2	POC	617+41.30 + POC 220+73.77 C	2,350.676	24,50 .883	
		PT	617+64.73	2,432.530	24,547.006	
		PT	62 +43.06	2,588.380	24,620.230	N 67°18.42.2"E
		PC	63 +49.52	2,675.045	25,547.222	
	F-3	P	632+93.05	3,031.326	26,075.640	
		POT	PT 634+36.43 + 32 LT 100+00.00 WINDLASS FREEWAY	3,096.455	26,107.528	N 63°00.00.0"E
RAMP H		POT	POC 403+42.34 N.B.R. 58 RT + T+35.42 RAMP H	3,221.080	24,054.67	N 04°33.27.0"W
		PC	5+1.98	4,055.009	23,987.656	
B & O R.R.		POT	POC 21+61.21 RAMP A + 101+82.03 & RR	2,681.764	23,673.310	N 86°36.33.1"E
		POT	POC 211+58.81 RAMP C + 103+28.38 & RR	2,725.153	23,784.661	
		POT	POC 410+20.89 I-95 + 106+33.65 & RR	2,894.808	24,042.082	
		POT	POC B3+37.60 RAMP E + 106+81.36 & RR	2,921.061	24,081.882	
		POT	POC 332+20.83 RAMP D + 107+89.27 & RR	2,980.448	24,171.980	

REVISIONS	CONSULTANT	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS	& STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY
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		SCALE: None DATE:	F.A.P. NO. I-95-4(36)136 S.R.C. NO. BC 246-33-815 BALTO. CITY NO. 1995 SHEET NO. (92) T-8 OF T-15

MAINLINE
POC STA 411+83.49

RAMP "A"
POC STA 21+61.21

RAMP "C"
PC STA 199+19.00

RAMP "E"
PC STA 503+56.72

RAMP "E"
POT STA 526+81.00

MAINLINE
POC STA 410+85.17

RAMP "A"
POC STA 20+59.52

RAMP "B"
POT STA 110+91.18

RAMP "E"
POT STA 499+11.22

RAMP "E"
POT STA 519+84.87

MAINLINE
POC STA 410+20.89

RAMP "A"
PC STA 15+29.49

RAMP "B"
PT STA 108+47.57

RAMP "D"
PT STA 339+17.56

RAMP "E"
PT STA 514+78.86

MORAVIA RD
POT STA 43+25.00

MAINLINE
POC STA 408+29.06

MAINLINE
PC STA 412+30.63 SBR

RAMP "B"
PCC STA 105+89.75

RAMP "C"
PC STA 211+30.05

RAMP "E"
POC STA 511+86.89

RAMP "H"
POT STA 7+35.42

MAINLINE
POC STA 406+09.75

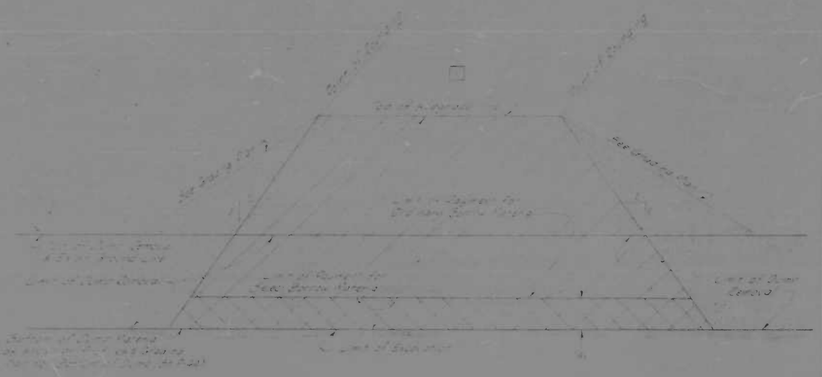
MAINLINE
POC STA 412+90.63 NBR

RAMP "A"
POC STA 31+72.83

RAMP "C"
PT STA 205+27.43

RAMP "E"
POC STA 507+04.01

RAMP "F"
PCC STA 613+80.82



LIMITS OF DUMP REMOVAL

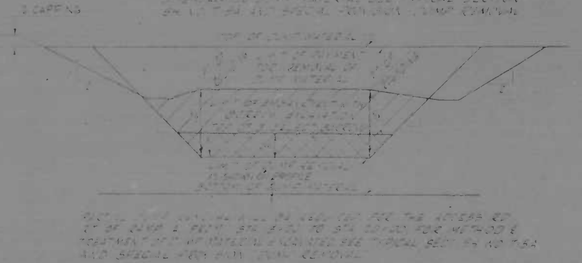
MAINLINE

RAMP A

RAMP B

RAMP E

VOTE



REVISIONS	CONSULTANT	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS	STATE ROADS COMMISSION OF MARYLAND INTERSTATE DIVISION FOR BALTIMORE CITY
2 REVISED MAIN LINE	KAUFFMAN, BENDER, STONE & ASSOC., INC. and KATZ, DAVIES & ASSOC., INC. CONSULTING ENGINEERS 341 N. CALVERT STREET BALTIMORE, MARYLAND 21202	INTERSTATE ROUTE 95 FROM NORTH OF HERRING RUN TO NORTH OF B&O RAILROAD	DRAWN BY CM / DES. BY KH / TRACED BY CM / CHK. BY JES / F.A.P. NO. I-95-4(136)32 / S.R.C. NO. BC 946-11-801 / BALTO. CITY NO. 1995 / SCALE NONE / DATE / SHEET NO. T-9 OF (92) T-15
1 MD I-95-4(136)			T-9 (92) T-15

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	MD.	I-95-4(36)36	T-1	(92) T-15

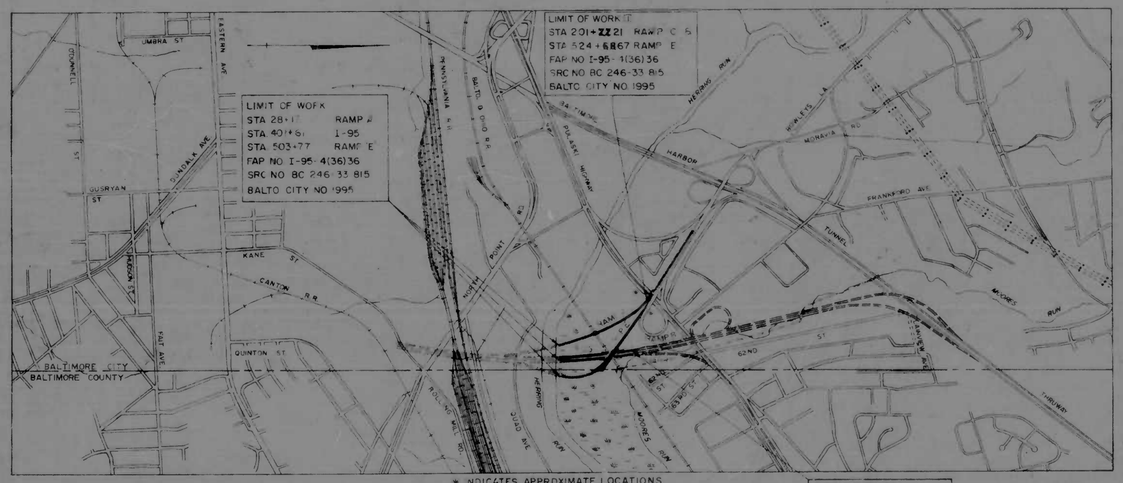
INDEX OF SHEETS

CITY OF BALTIMORE
DEPARTMENT OF PUBLIC WORKS
AND
STATE ROADS COMMISSION OF MARYLAND
INTERSTATE DIVISION FOR BALTIMORE CITY

FEDERAL AID PROJECT NO. I-95-4(36)36
STATE ROADS COMMISSION PROJECT NO. BC 246-33-815
CITY OF BALTIMORE BUREAU OF ENGINEERING,
HIGHWAY ENGINEERING DIVISION CONTRACT NO. 1995

INTERSTATE ROUTE 95

FROM NORTH OF HERRING RUN
TO NORTH OF B & O RAILROAD



* INDICATES APPROXIMATE LOCATIONS OF INFORMATIONAL SIGNS

LOCATION PLAN
SCALE 1"=1000'

DESIGN SPEED I-95 60 MPH
RAMPS 45 MPH

LENGTH OF PROJECT - 0.2517 MI

LIMIT OF WORK
STA 414+90.00 I-95
STA 8+92.31 RAMP 'H'
FAP NO I-95-4(36)36
SRC NO BC 246-33-815
BALTO CITY NO 1995

NOTE:
EFFECTIVE JULY 1, 1971, IN ACCORDANCE WITH THE PROVISIONS OF CHAPTER 526 OF THE ACTS OF THE 1970 GENERAL ASSEMBLY, WHEREVER THE TITLE "STATE ROADS COMMISSION" AND/OR TERM COMMISSION IS USED, IT SHALL BE CONSTRUED TO BE "THE STATE HIGHWAY ADMINISTRATION"

FIELD BOOKS

BOOK NO.	DESCRIPTION
I-95-001	BENCH LEVELS
I-95-002	MAIN TRAVERSE, ANGLES & DISTANCES
I-95-011	TEST HOLE LOCATIONS
I-95-012	TEST HOLE LOCATIONS
I-95-016	TEST HOLE LOC'S, TRAVERSE & X-SECT'S
I-95-017	B&O RR SPUR, TRAVERSE
I-95-018	TEST HOLE LOCATIONS, X-SECTIONS
I-95-021	CONTROL REFERENCES

TRAFFIC DATA

INTERSTATE 95 S PULASKI HWY.	
1970 ADT	42,400
1990 ADT	84,500
1990 DHV	6,760
1990 D	60%
1990 % TRUCKS ADT	13
1990 % TRUCKS DHV	7
RAMP A	
1990 DHV	1,180
RAMP E	
990 DHV	1,180

	MAX. CURVATURE	MAX. GRADE
MAINLINE	Dc=0°45'00"	1.273%
RAMPS	Dc=6°30'00"	5.694%

RIGHT OF WAY LINES SHOWN ON THESE PLANS DO NOT INCLUDE EASEMENT. THEY ARE FOR ASSISTANCE IN INTERPRETING THE PLANS. THESE LINES DO NOT REPRESENT THE OFFICIAL PROPERTY ACQUISITION LINES. FOR OFFICIAL FEE RIGHT OF WAY AND EASEMENT INFORMATION, SEE THE APPROPRIATE RIGHT OF WAY PLAT OR PLATS.

[1] ADDENDUM NO 3, AUG 3, 1971
DELETE SHEET NO T-5, ADD NEW TYPICAL SHEET NO T-5A AND NEW GRADING PLAN SHT NO P-4A

CITY OF BALTIMORE
APPROVED
DAVID A GEARFOSS
SEDIMENTATION & EROSION CONTROL REPRESENTATIVE

REVISIONS
[1] 7/71 LIMITS OF WORK
[2] ADDITION NEW PLAN SHEETS P-4A, TYPICAL T-4A & T-5A
[3] ADDITION TO PLAN SHEETS P-1A & 1B, S-55A to S-55C 2/14/73

CHECKED BY:	INITIALS	DATE
BUREAU OF ENGINEERING		
WATER DIVISION	[illegible]	6-2-71
WASTE WATER DIVISION	[illegible]	6-2-71
HIGHWAY ENGINEERING DIVISION	[illegible]	6-3-71
SURVEY AND RECORDS DIVISION	[illegible]	6-2-71
BUREAU OF UTILITY OPERATIONS		
LIGHTING SECTION HIGHWAY MAINTENANCE DIV.	[illegible]	6-2-71
CONDUIT SECTION HIGHWAY MAINTENANCE DIV.	[illegible]	6-2-71
DEPARTMENT OF TRANSIT AND TRAFFIC	J.W.E.	6-1-71

CITY OF BALTIMORE
DEPARTMENT OF PUBLIC WORKS

APPROVAL RECOMMENDED
HEAD, BUREAU OF ENGINEERING

APPROVED
DIRECTOR OF PUBLIC WORKS

PREPARED BY
KNOERLE, BENDER, STONE & ASSOCIATES, INC.
AND
MATZ, CHILDS & ASSOCIATES, INC.
CONSULTING ENGINEERS
BALTIMORE, MARYLAND
THOMAS [illegible]
DATE

BALTIMORE AND OHIO RAILROAD COMPANY

REVIEWED AND APPROVED
BY [illegible] 6-1-71
DATE

STATE ROADS COMMISSION OF MARYLAND

REVIEWED AND APPROVAL RECOMMENDED
CHIEF, BUREAU OF ENGINEERING

APPROVAL RECOMMENDED
CHIEF, INTERSTATE DIVISION FOR BALTIMORE CITY

APPROVAL RECOMMENDED
[illegible] 6-7-71
DEPUTY CHIEF ENGINEER DEVELOPMENT

APPROVED
CHIEF ENGINEER

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED
DIVISION ENGINEER DATE