FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-71-4(26)225	

I-71-4(26)225

1
293

MEDINA COUNTY
MED-42-21.94

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
MED-42-21.94
MEDINA COUNTY
BRUNSWICK HILLS TOWNSHIP & CITY OF BRUNSWICK

CONVENTIONAL SIGNS

- COUNTY LINE
- TOWNSHIP LINE
- SECTION LINE
- CORPORATION LINE
- CENTER LINE
- FENCE LINE
- POWER POLES
- TELEPHONE POLES
- GUARD RAIL - EXISTING
- GUARD RAIL - PROPOSED
- SOD DITCHES
- PAVED DITCHES
- SEED & MULCH DITCHES
- DUMPED ROCK
- JUTE MATTING
- RIGHT OF WAY WITH LIMITED ACCESS — LA
- RIGHT OF WAY WITHOUT LIMITED ACCESS — R/W
- EXISTING RIGHT-OF-WAY

INDEX OF SHEETS

Revised Sheets Nos. 3, 27, 28, 29, 129, 130, 131, 247 and 248.
R.E.C. 11-27-62

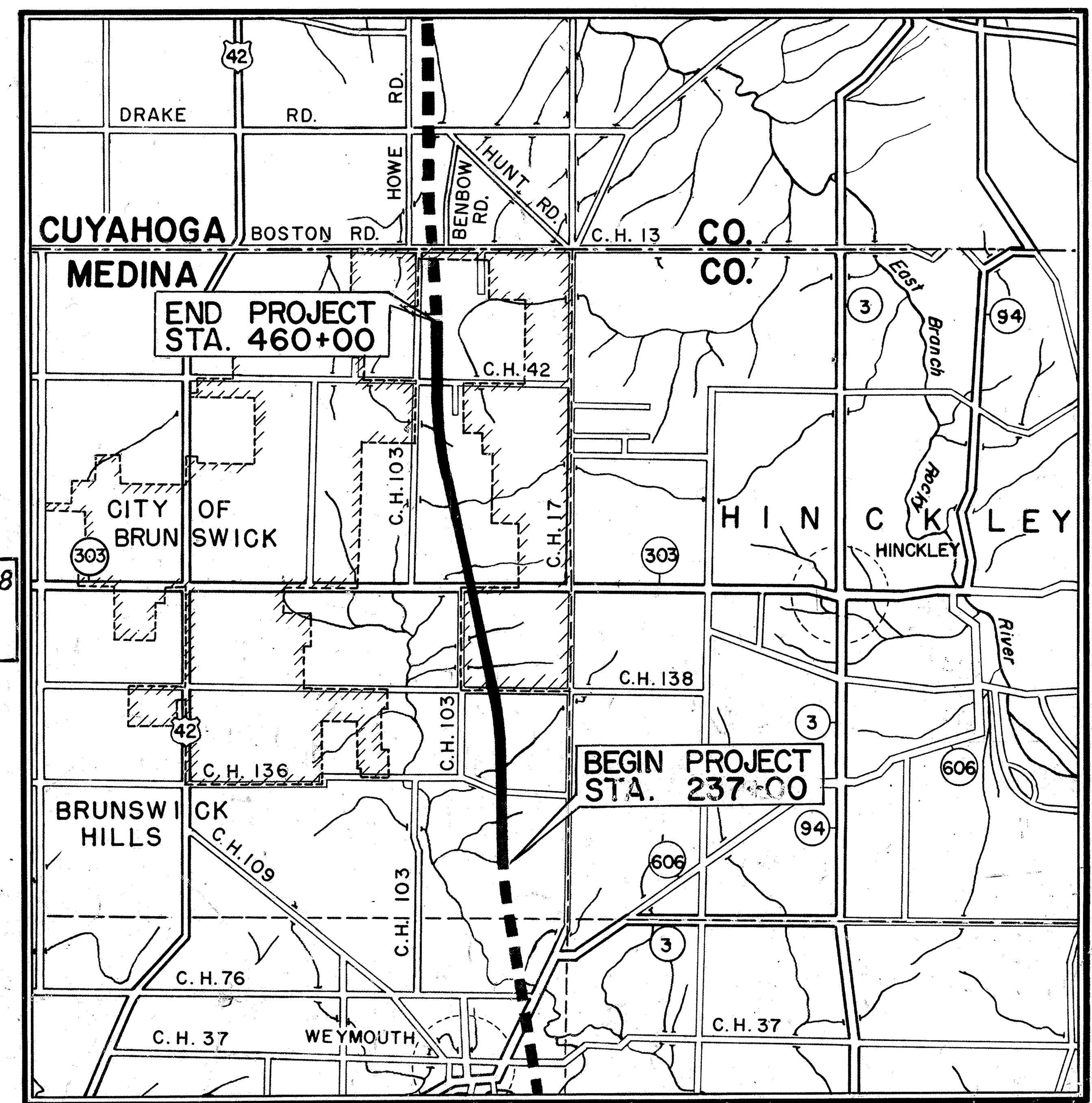
LINE DATA

Begin Project Sta. 237+00
End Project Sta. 460+00
No Deductions
Net Length of Project — 22,300.00 Lin. Ft. or 4.223 Mi.

Add for Approaches:

South Approach	Sta. 235+68 to Sta. 237+00	132.00	Lin. Ft.
C. H. 136	Sta. 45+25 to Sta. 56+20	1,095.00	Lin. Ft.
C. H. 138	Sta. 40+50 to Sta. 54+00	1,350.00	Lin. Ft.
S. R. 303	Sta. 34+54.68 to Sta. 65+30	3,075.32	Lin. Ft.
C. H. 42	Sta. 39+07 to Sta. 59+76	2,069.00	Lin. Ft.
North Approach	Sta. 460+00 to Sta. 461+25	125.00	Lin. Ft.

Total Length of Work — 30,146.32 Lin. Ft. or 5.709 Mi.



DELIVERY POINT - MEDINA
B. & O. RR
OR A.C. & Y. RR

LOCATION MAP

0 1 2 3
SCALE IN MILES

AVERAGE HAUL - 10.8 MILES

PORTION TO BE IMPROVED
STATE HIGHWAYS
OTHER ROADS
OTHER CONTRACTS

SCALES

PLAN	1" = 50'
PROFILE - HORIZONTAL	1" = 50'
PROFILE - VERTICAL	1" = 5'
CROSS SECTIONS	1" = 10'

LIMITED ACCESS

THIS IMPROVEMENT HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY OR FREEWAY BY ACTION OF THE DIRECTOR OF HIGHWAYS IN ACCORDANCE WITH THE PROVISIONS OF SECTION 5511.02, REVISED CODE OF OHIO, AND IS ESPECIALLY DESIGNED FOR THROUGH TRAFFIC.

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO DEPARTMENT OF HIGHWAYS, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

THE RIGHT-OF-WAY NECESSARY FOR THIS IMPROVEMENT WILL BE PROVIDED BY THE STATE OF OHIO.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT PROVISION FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THESE PLANS AND ESTIMATES.

APPROVED: E. L. Solem
DATE 10-3-62 DIVISION DEPUTY DIRECTOR

APPROVED: L. H. Overman
DATE 10-4-62 ENGINEER OF BRIDGES

APPROVED: [signature]
DATE 10-5-62 ENGINEER OF LOCATION & DESIGN

APPROVED: [signature]
DATE 10-5-62 DEPUTY DIRECTOR, DESIGN & CONSTRUCTION

APPROVED: Wm. J. Snow
DATE 10-5-62 DEPUTY DIRECTOR, RIGHT OF WAY

APPROVED: Guy E. Neeper
DATE 10-5-62 DEPUTY DIRECTOR, PLANNING & PROGRAMMING

APPROVED: G. A. Berry
DATE 10-6-62 FIRST ASSISTANT DIRECTOR

APPROVED: E. S. Preston
DATE 10-6-62 DIRECTOR OF HIGHWAYS

PLANS PREPARED BY
J. E. GREINER COMPANY
CONSULTING ENGINEERS - BALTIMORE, MARYLAND

I-8 MH No. 1	1-26-59
I-8 MH No. 1-A	10-2-61
FSB-1-62	4-19-62
CSB-2-56 Sh. 2+3	2-2-59
AR-1-57	4-2-62

STANDARD CONSTRUCTION DRAWINGS

DRAWING NO.	DATE	DRAWING NO.	DATE	DRAWING NO.	DATE	DRAWING NO.	DATE
B-T-70-71	11-15-60	HW-E	11-15-60	I-12	7-1-54	L. J. NO. 1	7-1-55
B-T-71R	3-2-53	I-1	11-15-60	I-14 G	1-22-52	RI-1	7-15-58
DR-1	1-3-55	I-8 C.B. 2-2-A & B	3-2-59	I-15 NO. 1	11-15-60	R.R.A. NO. 1	1-20-58
F-1	9-1-59	T-8 C.B. 2-3 & 2-4	1-26-59	I-15 NO 2-A	8-17-60	R.R.A. NO. 2	1-20-58
		I-8 C.B. NO 3-A	1-26-59	I-21-23	8-1-56	R.R.A. NO. 5	11-3-58
F-3	9-1-59	I-8 C.B NO. 4	7-1-58	L-1	4-1-50	T-35	1-2-56
FAC I-1	12-27-61	I-8 C.B NO 5	7-1-58	L-2	4-1-50	T J	9-12-60
FAC I-2	12-27-61	T-8 C.B NO 6	1-26-59	L-3	4-1-50	SP-53	6-30-61
G-7 07	6-1-56	I-8 M.H. NO. 2	1-26-59	L-3-A	4-1-50	AS-1-54	7-5-62

SUPPLEMENTAL SPECIFICATIONS

NUMBER	DATE	NUMBER	DATE
B-112	8-21-61	CE-101.04	5-22-56
I-124 Rev.	3-20-61	I-128	7-31-59
I-125 Rev.	6-26-61	I-129	Rev. 4-5-61
I-127 Rev.	1-15-62	M-107.18	Rev. 4-3-61
L-120 Rev.	1-2-62	M-109.28	Rev. 8-12-59
M-106.6(c)	2-17-59		
M-106.6(d) Rev.	4-1-58		
18 Rev.	6-15-59		

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

APPROVED:

DIVISION ENGINEER DATE

FILE NO. I-71(21)
MED-42-21.94
DATE OF LETTING ________ 19
CONTRACT NO. ________

FED. RD. DIVISION	STATE	PROJECT		
2	OHIO			

2
293

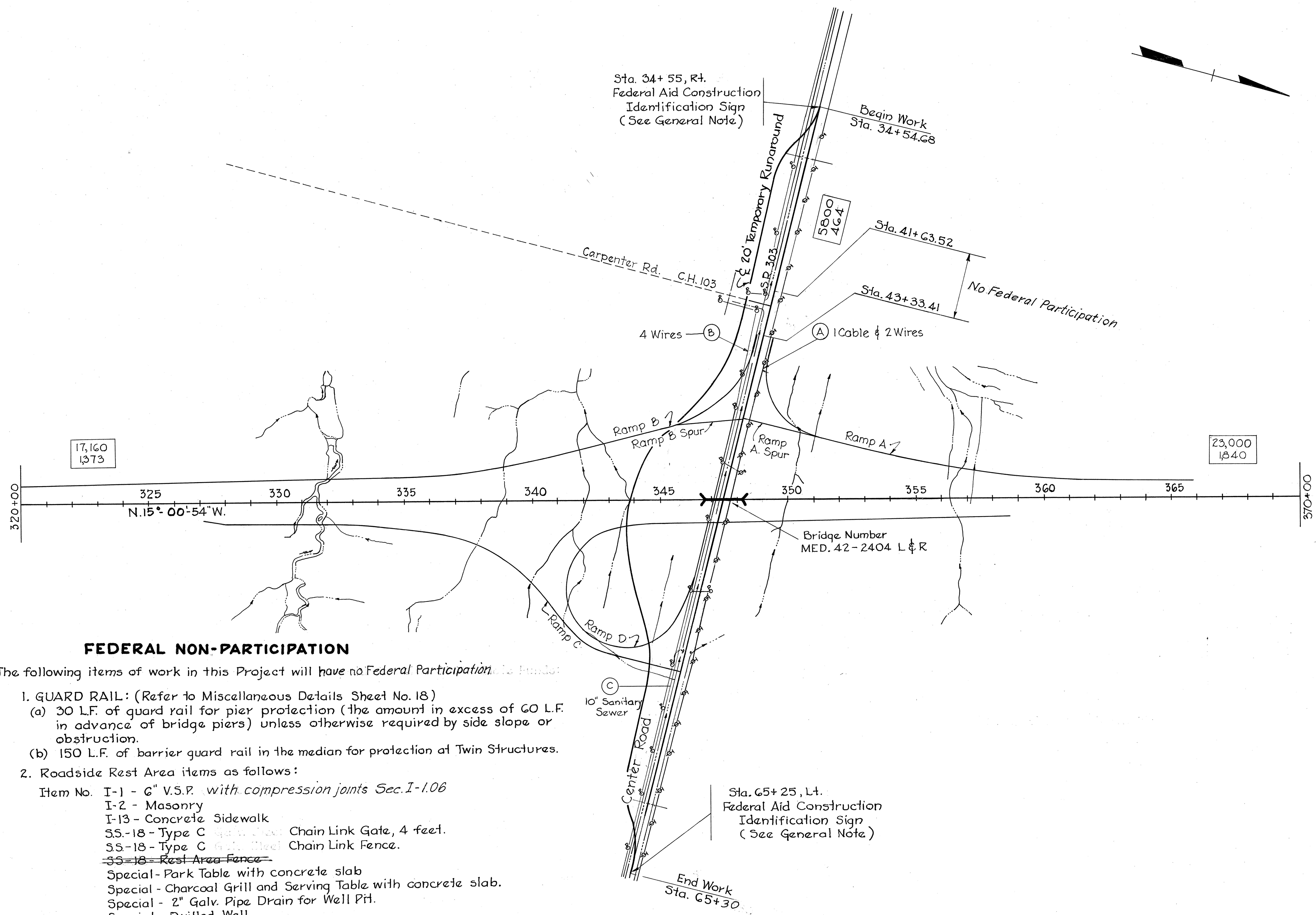
MEDINA COUNTY
MED-42-21.94

Marker will be furnished and erected on the Right by State forces prior to acceptance of this improvement.

SCHEMATIC LAYOUT PLAN

FED. RD. DIVISION	STATE	PROJECT		
2	OHIO			

MEDINA COUNTY
MED-42-21.94



FEDERAL NON-PARTICIPATION

The following items of work in this Project will have no Federal Participation.

1. GUARD RAIL: (Refer to Miscellaneous Details Sheet No. 18)
   (a) 30 L.F. of guard rail for pier protection (the amount in excess of 60 L.F. in advance of bridge piers) unless otherwise required by side slope or obstruction.
   (b) 150 L.F. of barrier guard rail in the median for protection at Twin Structures.
2. Roadside Rest Area items as follows:
   Item No. I-1 - 6" V.S.P. *with compression joints Sec. I-1.06*
   I-2 - Masonry
   I-13 - Concrete Sidewalk
   S.S.-18 - Type C Chain Link Gate, 4 feet.
   S.S.-18 - Type C Chain Link Fence.
   ~~SS-18 - Rest Area Fence~~
   Special - Park Table with concrete slab
   Special - Charcoal Grill and Serving Table with concrete slab.
   Special - 2" Galv. Pipe Drain for Well Pit.
   Special - Drilled Well
   Special - Roadside Toilet and Storage Unit
   Special - Pressure Water System
   Special - Chlorine Contact Tank
   Special - Aerobic Digestion Sewage Treatment Plant
3. All items of construction for S.R. 303 from Sta. 41+63.52 to Sta. 43+33.41

LEGEND

————	Proposed Work
- - - - - -	Existing Road
—·—·—	Barricade & Warning Signs See "GENERAL NOTES" Sheet
ADT(1975) / DDHV	

Utilities
(A) Northern Ohio Telephone Co., Bellevue, Ohio
(B) Ohio Edison Co., 47 N. Main St., Akron 8, Ohio
(C) Medina County

Scale: 1" = 200'

Revised R.E.C. 11-27-62

SCHEMATIC LAYOUT PLAN

SCHEMATIC LAYOUT PLAN

FED. RD. DIVISION	STATE	PROJECT		
2	OHIO			5 / 293

MEDINA COUNTY
MED-42-21.94

SCHEMATIC LAYOUT PLAN

TYPICAL SECTIONS

TYPE T-71

Scale: 1" = 5'

NORMAL CUT SECTION

NORMAL FILL SECTION

LIMITING STATIONS

Sta. 237+00 to 346+25.44 (Begin Approach Slab)
Sta. 348+69.08 (End Approach Slab) to Sta. 460+00

NOTE:
All slopes Typical unless otherwise shown on Cross Sections.
Northbound Lanes shown. Southbound Lanes symmetrical about ℄ Median.

LEGEND

① Item T-71 — 10" Reinforced Portland Cement Concrete Pavement.

② Item I-22 — 6" Subbase, Grading "A" or "B", modified as per General Note.

③ Item B-112 ‡ — Porous Base Course.

④ Item B-21 * — 3" Waterproofed Aggregate Base Course (Type "A" T-35 Material may be used in construction of this course - See note in Proposal).

⑤ Item T-31 — Bituminous Surface Treatment using 0.008 Cu. Yd. № 6 aggregate per Sq. Yd. and 0.25 Gal. bituminous material per Sq. Yd. (See note in Proposal).

⑥ Item I-1 — 6" Pipe, Class I-3.

⑦ Remove subbase for width of Item I-1 trench and replace with Class 3 backfill immediately prior to placing the Item B-112 Porous Base Course. Cost shall be included in price bid per lin. ft. for Item I-1.

⑧ Standard Longitudinal Joint.

⑨ Item L-9 — Seeding and Protecting as per General Note.

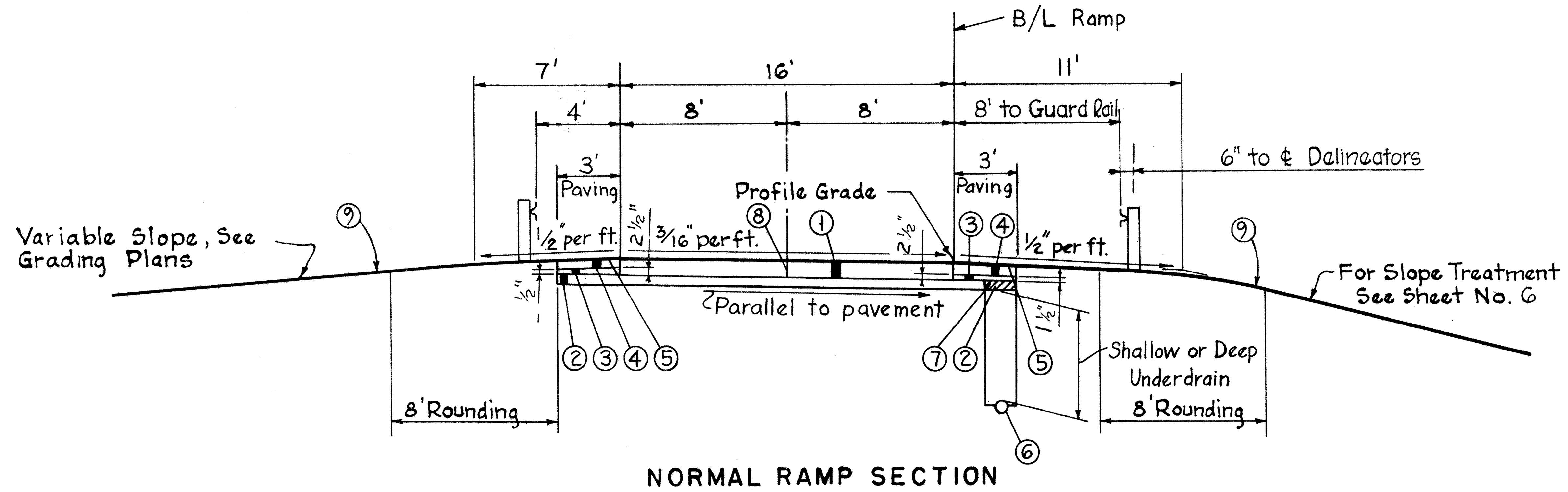
* Thickness shown is design thickness as described in Sec. B-21.01

‡ The dimensions shown for Item B-112 Porous Base Course are based upon a 1/2" depth of Item T-31.

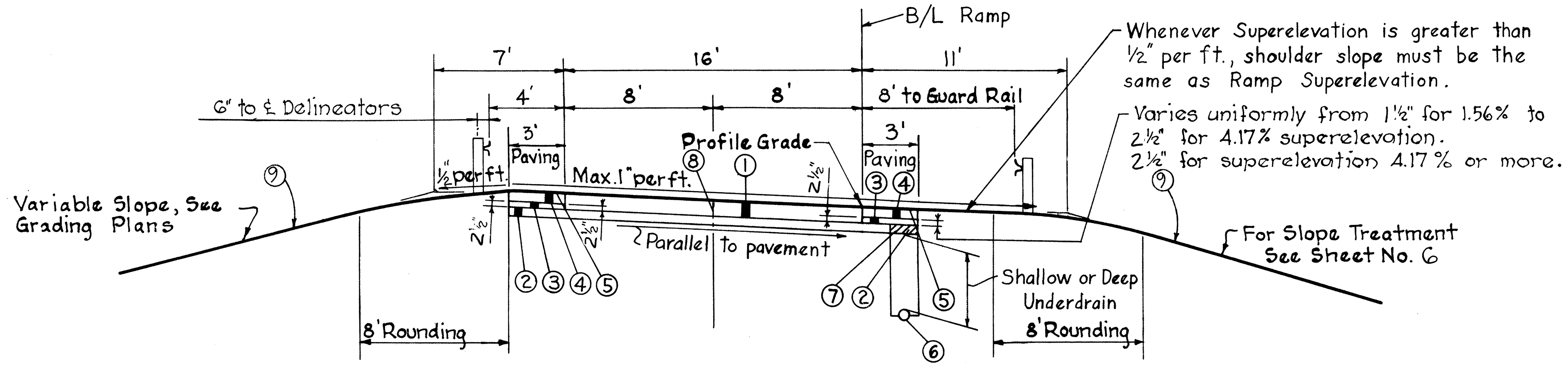
TYPICAL SECTIONS

TYPE T-71

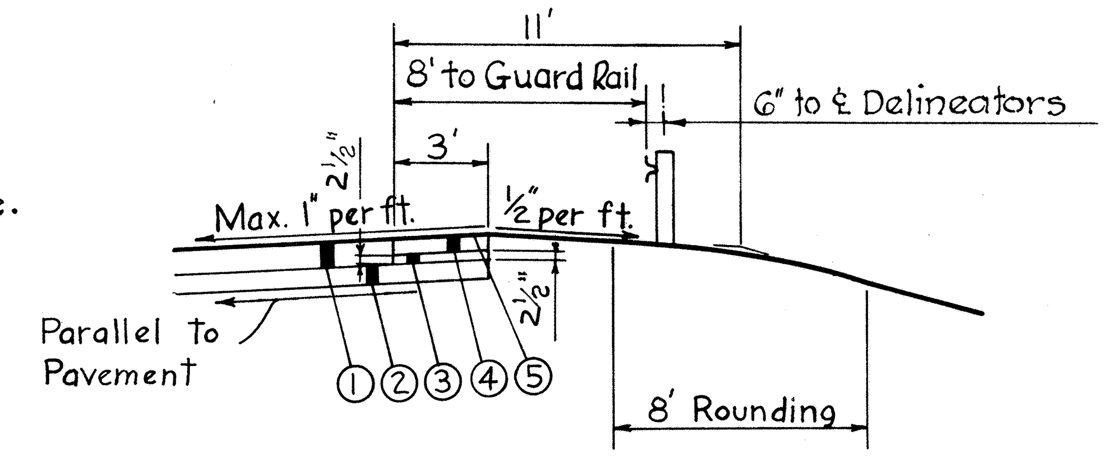
Scale: 1" = 5'



NORMAL RAMP SECTION



SUPERELEVATED RAMP SECTION



RAMP SHOULDER SUPERELEVATED TO LEFT

NOTES:

Sections are shown looking in the direction of increasing stations for Ramps C, NA, NB.

Sections are shown looking in the direction of decreasing stations for Ramps A, A Spur, B, B Spur, D, SA, SB.

LEGEND

① Item T-71 — 9" Reinforced Portland Cement Concrete Pavement.

② Item I-22 — 6" Subbase, Grading "A" or "B", modified as per General Note.

③ Item B-112 ‡ — Porous Base Course.

④ Item B-21 ✱ — 6" Waterproofed Aggregate Base Course (Type "A" T-35 Material may be used in construction of this course - See note in Proposal). Place in two 3" courses.

⑤ Item T-31 — Bituminous Surface Treatment using 0.008 Cu. Yd. № 6 aggregate per Sq. Yd. and 0.25 Gal bituminous material per Sq. Yd. (See note in Proposal).

⑥ Item I-1 — 6" Pipe, Class I-3.

⑦ Remove subbase for width of Item I-1 trench and replace with Class 3 backfill immediately prior to placing the Item B-112 Porous Base Course. Cost shall be included in price bid per lin. ft. for Item I-1.

⑧ Standard Longitudinal Joint.

⑨ Item L-9 — Seeding and Protecting as per General Note.

‡ The dimensions shown for Item B-112 Porous Base Course are based upon a ½" depth of Item T-31.

✱ Thickness shown is design thickness as described in Sec. B-21.01

Rev 10-10-62

TYPICAL SECTIONS
TYPE T-71

MEDINA COUNTY
MED-42-21.94

LEGEND

1. Item T-71 10" Reinforced Portland Cement Concrete Pavement.
2. Item I-22 6" (unless otherwise shown) Subbase, Grading "A" or "B", modified as per General Note.
3. Item B-112+ Porous Base Course
4. Item B-21 * 3" Waterproofed Aggregate Base Course (Type "A" T-35 Material may be used in construction of this course. See note in Proposal).
4a. Item B-21 * 6" Waterproofed Aggregate Base Course (Type "A" T-35 Material may be used in construction of this course. See note in Proposal). Place in two 3" courses.
5. Item T-31 Bituminous Surface Treatment using 0.008 Cu. Yd. № 6 aggregate per Sq. Yd. and 0.25 gal. bituminous material per Sq. Yd. (See note in Proposal).
6. Remove subbase for width of Item I-1 trench and replace with Class 3 backfill immediately prior to placing the Item B-112 Porous Base Course. Cost shall be included in price bid per lin. ft. for Item I-1.
7. Standard Longitudinal Joint.
8. Standard Longitudinal Key Joint without tie bars.
9. Item I-21 4" Portland Cement Concrete Median Pavement, Type 1 Standard.
10. Item I-12 Concrete Curb, Type 6 Standard.
11. Item I-12 Concrete Curb, Type 2A Standard.
12. Item I-12 Special Barrier Curb.
13. Item I-1 6" Pipe, Class I-3.
14. Item L-9 Seeding and Protecting as per General Note.
15. Item T-71 9" Reinforced Portland Cement Concrete Pavement

* Thickness shown is design thickness as described in Sec. B-21.01.

+ The dimensions shown for Item B-112, Porous Base Course, are based upon a 1/2" depth of Item T-31.

NOTE:
For slope treatment of side slopes, see Sheet No. 6.

Rev 10-10-62

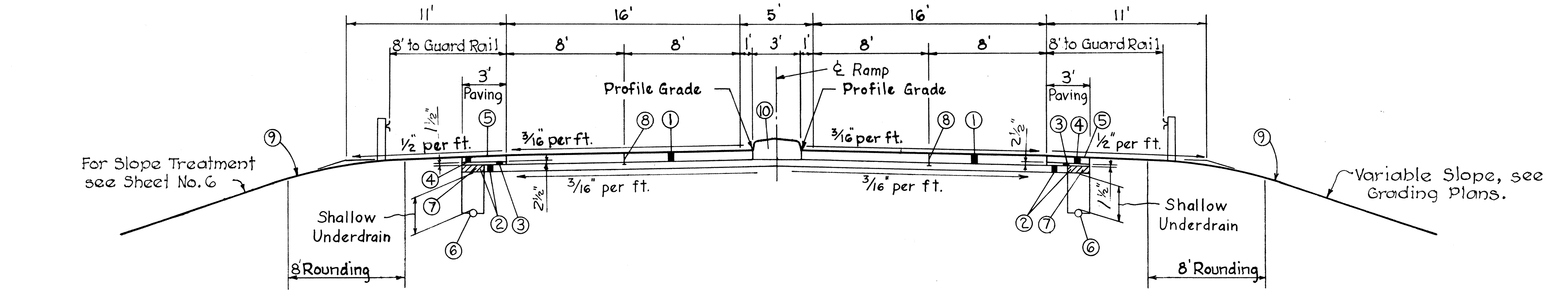
TYPICAL SECTIONS - RAMP TERMINALS

MEDINA COUNTY
MED-42-21.94

TYPICAL SECTIONS

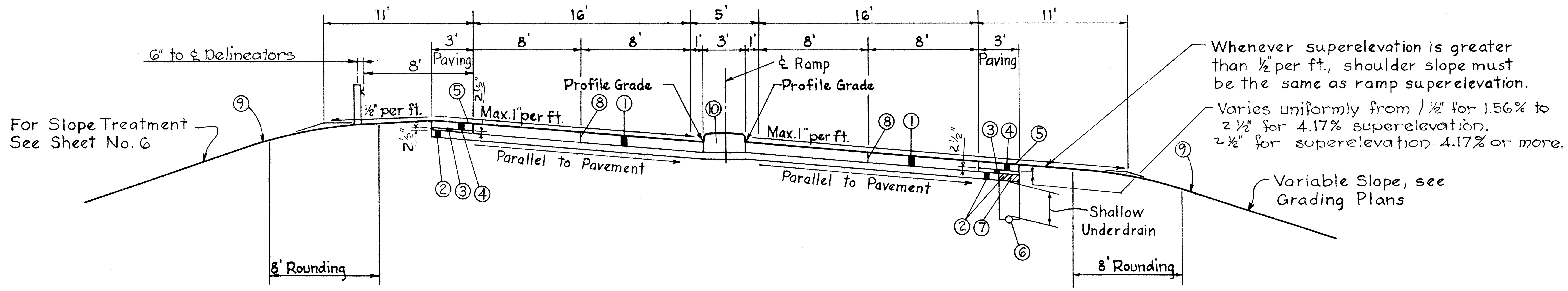
TYPE T-71

Scale: 1" = 5'



NORMAL RAMP SECTION

NOTE:
Sections are shown looking in the direction of decreasing stations.



SUPERELEVATED RAMP SECTION

LEGEND

1. Item T-71 — 9" Reinforced Portland Cement Concrete Pavement.
2. Item I-22 — 6" Subbase, Grading "A" or "B", modified as per General Note.
3. Item B-112 ‡ — Porous Base Course.
4. Item B-21 * — 6" Waterproofed Aggregate Base Course (Type "A" T-35 Material may be used in construction of this course - See note in Proposal). Place in two 3" courses.
5. Item T-31 — Bituminous Surface Treatment using 0.008 Cu. Yd. № 6 aggregate per Sq. Yd. and 0.25 Gal. bituminous material per Sq. Yd. (See note in Proposal).
6. Item I-1 — 6" Pipe, Class I-3.
7. Remove subbase for width of Item I-1 trench and replace with Class 3 backfill immediately prior to placing the Item B-112 Porous Base Course. Cost shall be included in price bid per lin. ft. for Item I-1.
8. Standard Longitudinal Joint.
9. Item L-9 — Seeding and Protecting as per General Note.
10. Item I-21 — Portland Cement Concrete Median, Standard Type 2.

* Thickness shown is design thickness as described in Sec. B-21.01

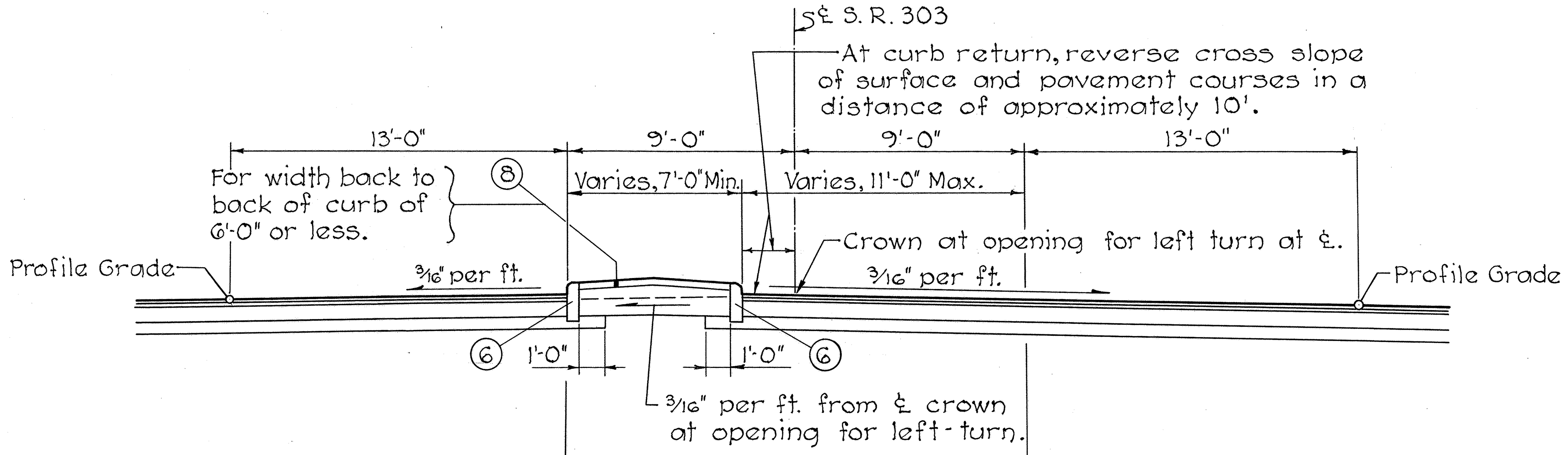
‡ The dimensions shown for Item B-112 Porous Base Course are based upon a 1/2" depth of Item T-31.

Rev 10-10-62

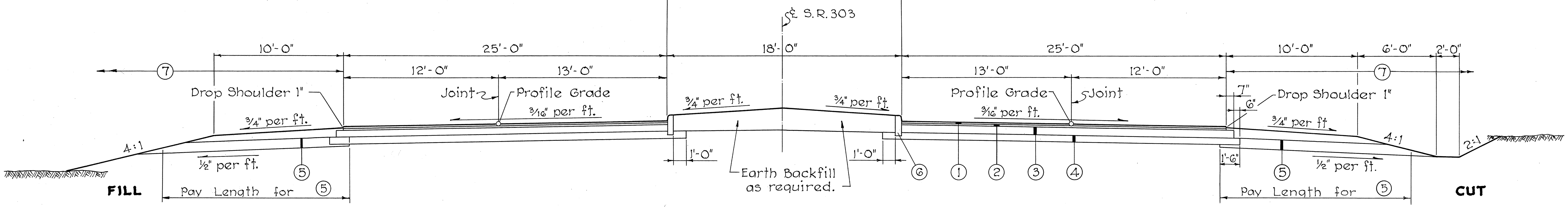
TYPICAL SECTIONS

TYPE T-35 ON B-21

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

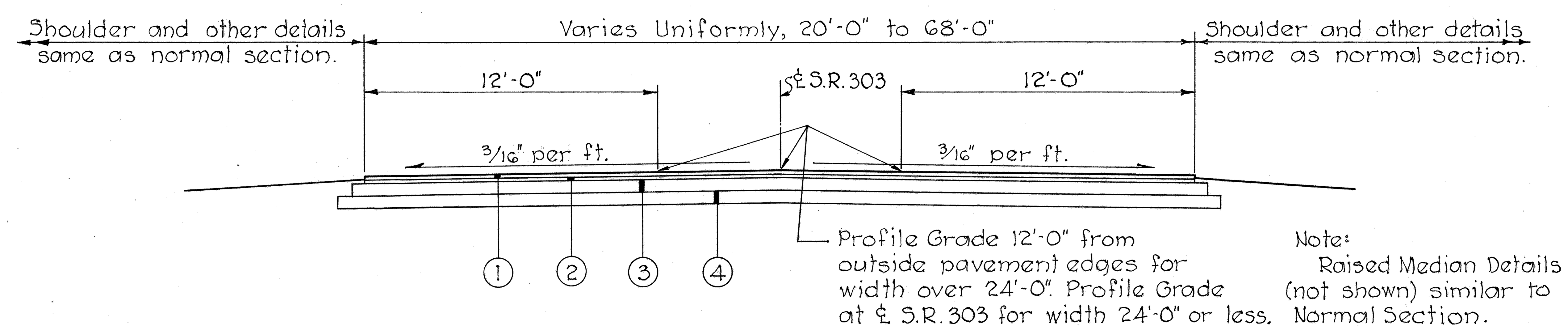


MEDIAN DETAIL
LEFT-TURN LANE



STATE ROUTE 303
NORMAL SECTION

Limiting Stations
Sta. 41+63.52 to Sta. 57+84.43



Note:
Raised Median Details (not shown) similar to Normal Section.

SECTION THRU TAPERS

Limiting Stations
Sta. 35+63.52 to Sta. 41+63.52
Sta. 57+84.43 to Sta. 63+84.43

LEGEND

1 Item T-35 * 1¼" Asphaltic Concrete Surface Course, Type "C" (70-85).
2 Item B-35 ‡ 1¼" Asphaltic Concrete Leveling Course (70-85).
3 Item B-21 7" Waterproofed Aggregate Base Course.
4 Item I-22 6" Subbase, Grading "A" or "B", modified as per General Note.
5 Item I-9 Stone Underdrains, No. 2.
6 Item I-12 Concrete Curb, Type 6 Standard.
7 Item L-9 Seeding and Protecting (See General Notes).
8 Item I-21 4" Portland Cement Concrete Median Pavement, Type 1 Standard.

* Thickness shown is design thickness as described in Sec. T-35.01.
‡ Thickness shown is design thickness as described in Sec. B-35.01.

Note:
Details of Shoulders, Slopes, and Ditches not shown are to conform with Standard Drawing No. RI-1 unless otherwise shown on cross sections.

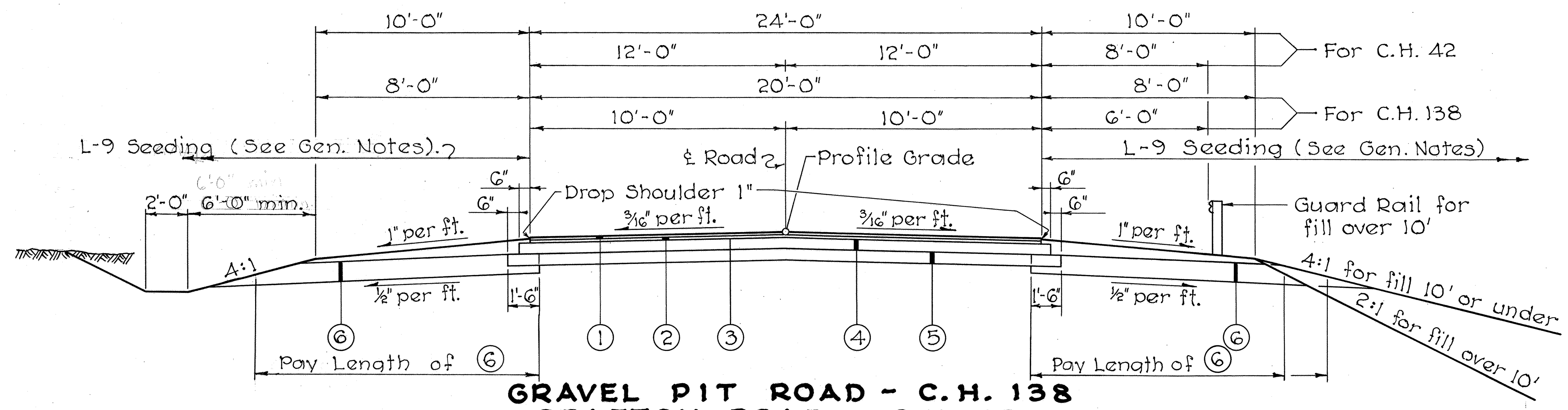
FED. RD. DIVISION	STATE	PROJECT		SHEET
2	OHIO			11 / 293

MEDINA COUNTY
MED - 42 - 21.94

TYPICAL SECTIONS

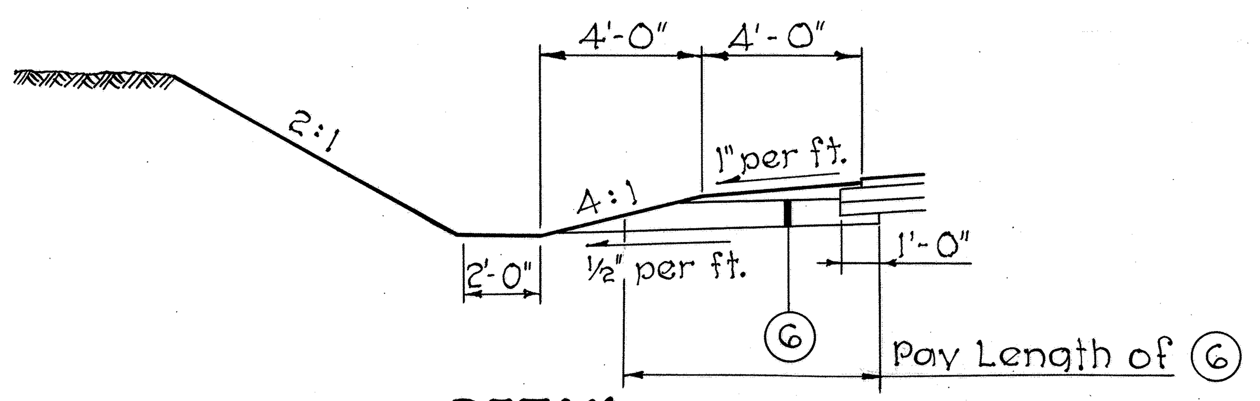
TYPE T-35 ON B-19

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

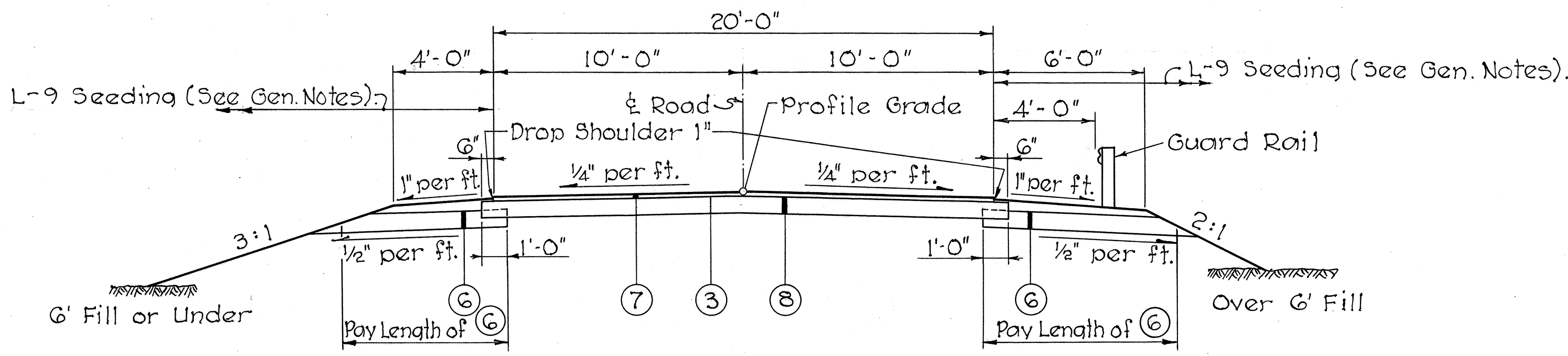


GRAVEL PIT ROAD - C.H. 138
GRAFTON ROAD - C.H. 42

LIMITING STATIONS:
C.H. 138: Sta. 40+75 to Sta. 48+31.29 (Begin Appr. Slab).
Sta. 51+81.29 (End Appr. Slab) to Sta. 53+75.
C.H. 42: Sta. 41+00 to Sta. 48+33.75 (Begin Appr. Slab).
Sta. 51+66.25 (End Appr. Slab) to Sta. 57+20.

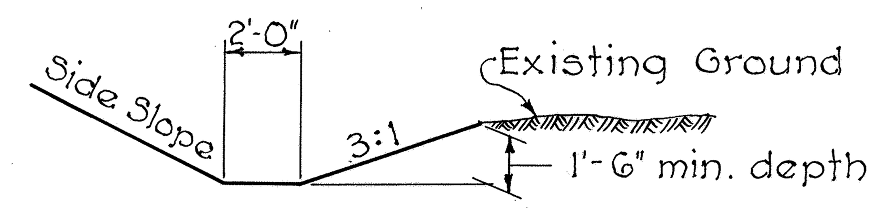


DETAIL
SHOULDER & DITCH
CUT SECTION
FOR C.H. 136



SLEEPY HOLLOW ROAD - C.H. 136

LIMITING STATIONS
Sta. 45+50 to Sta. 48+34.25 (Begin Approach Slab).
Sta. 51+65.75 (End Approach Slab) to Sta. 56+00.



DETAIL
TOE OF FILL DITCH
FOR C.H. 136, C.H. 138, C.H. 42

LEGEND

1. Item T-35 ✻ 1¼" Asphaltic Concrete Surface Course, Type C (70-85).
2. Item B-35 ‡ 1¾" Asphaltic Concrete Leveling Course, (70-85).
3. Item T-30 Bituminous Prime Coat, Sec. M-5.7, RT-2 or RT-3 applied at the rate of 0.40 gal. per S.Y.
4. Item B-19 6" Aggregate Base Course, as per Plan.
5. Item I-22 6" Subbase, Grading "A" or "B", modified as per General Note.
6. Item I-9 Stone Underdrains, No. 2.
7. Item T-35 ✻ 2" Asphaltic Concrete Surface Course, Type C, (Two-1" Courses), (70-85).
8. Item B-19 8" Aggregate Base Course, as per Plan.

✻ Thickness shown is design thickness as described in Sec. T-35.01.
‡ Thickness shown is design thickness as described in Sec. B-35.01.

NOTE:
Details of Shoulders, Slopes and Ditches not shown are to conform with Standard Drawing No. RI-1, unless otherwise shown on cross sections.

TYPICAL DETAILS

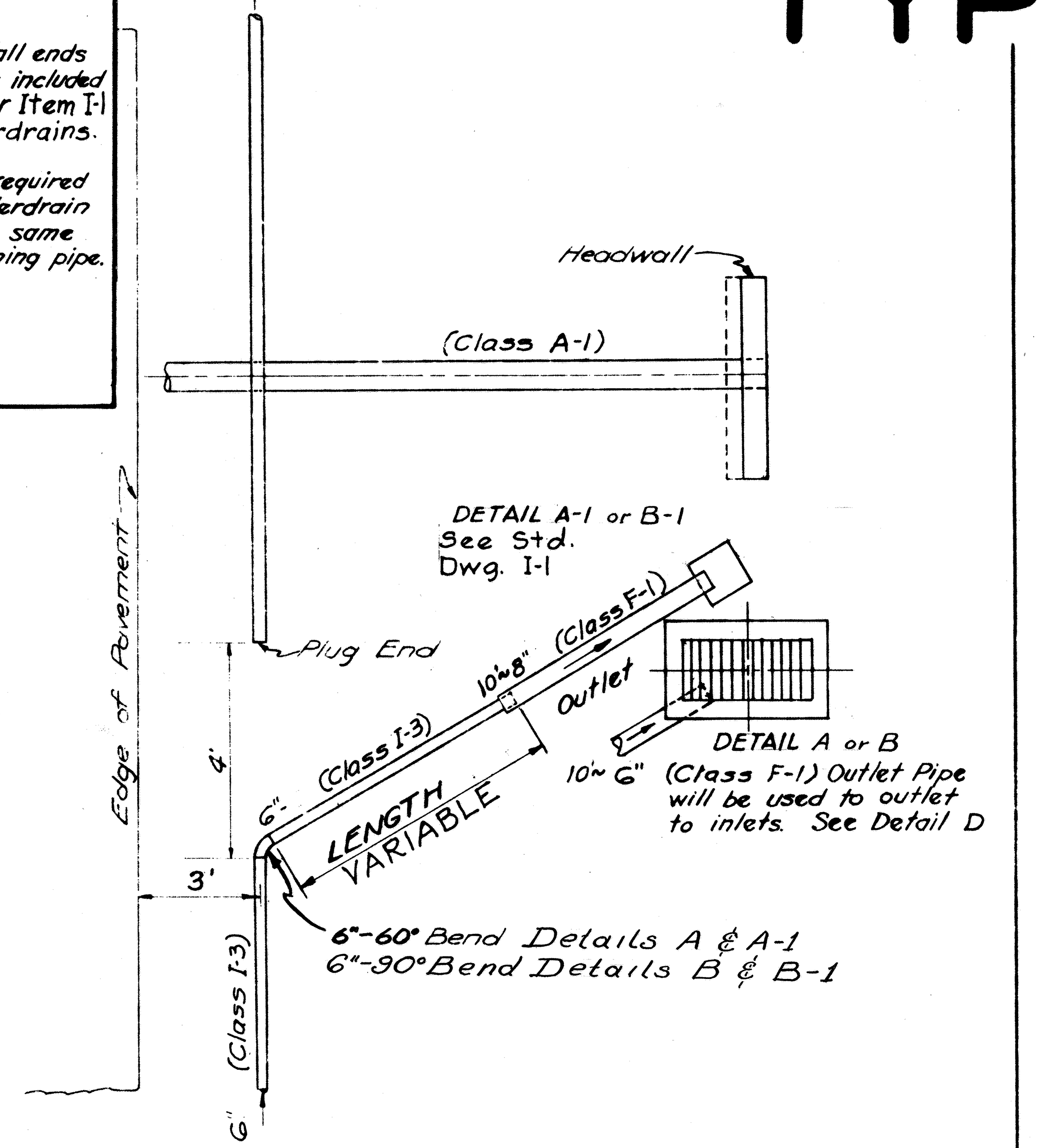
MEDINA COUNTY
MED-42-21.94

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

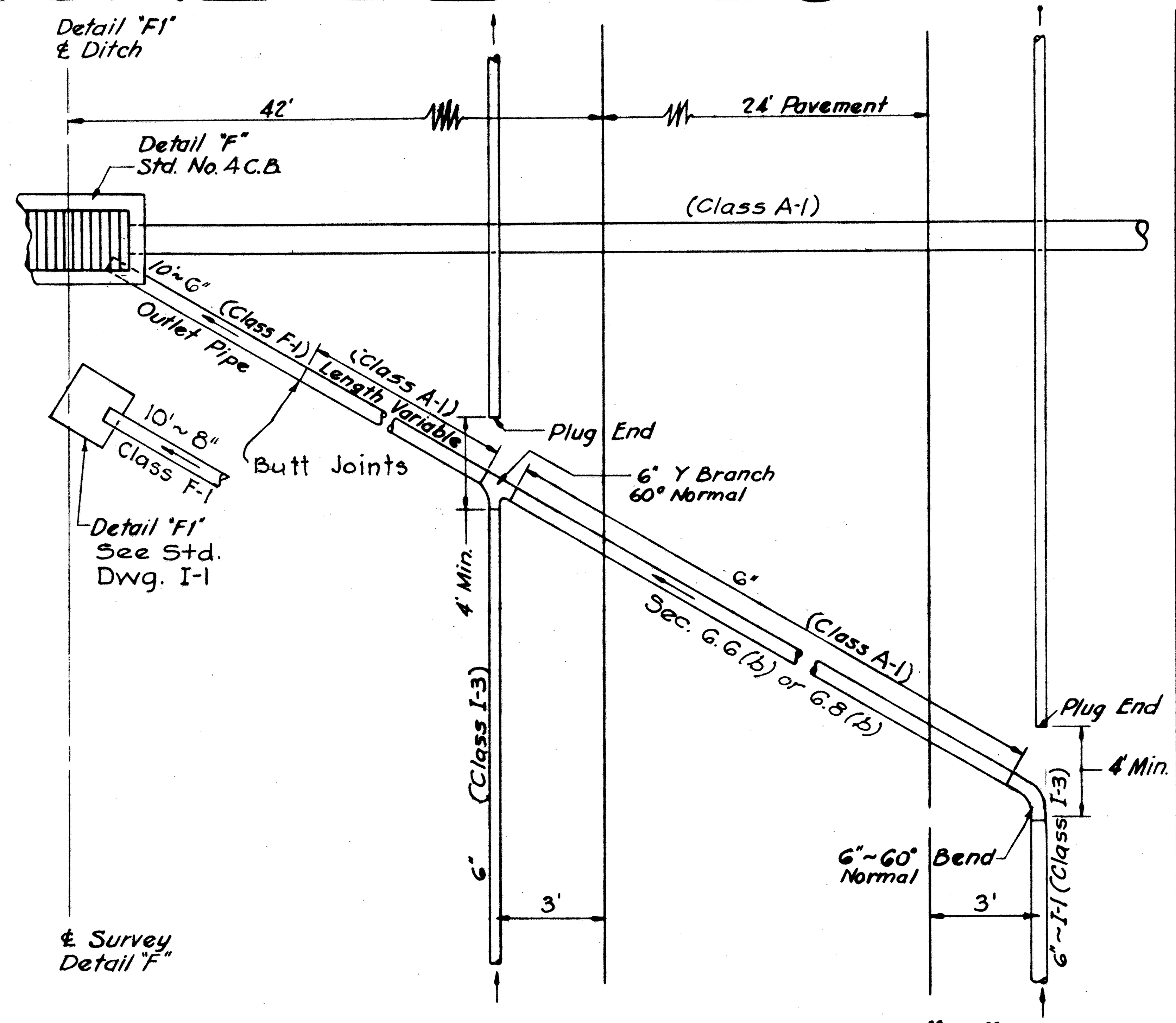
NOTES

The cost of plugging all ends of underdrains shall be included in the unit price bid for Item I-1 (Class I-3) Pipe Underdrains.

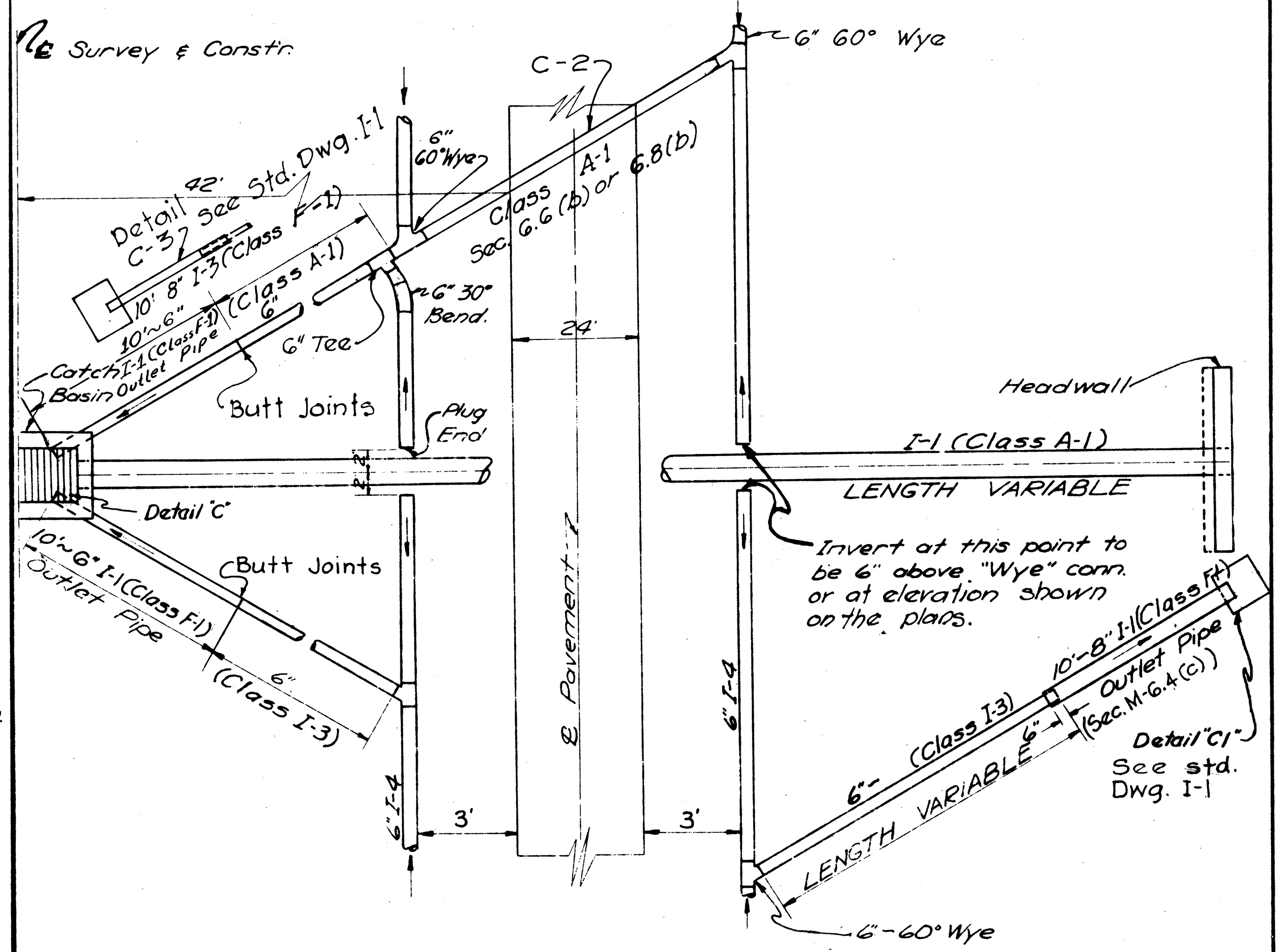
All I-5 Pipe Specials required for Underdrain and Underdrain Outlets shall be of the same quality as the best adjoining pipe.



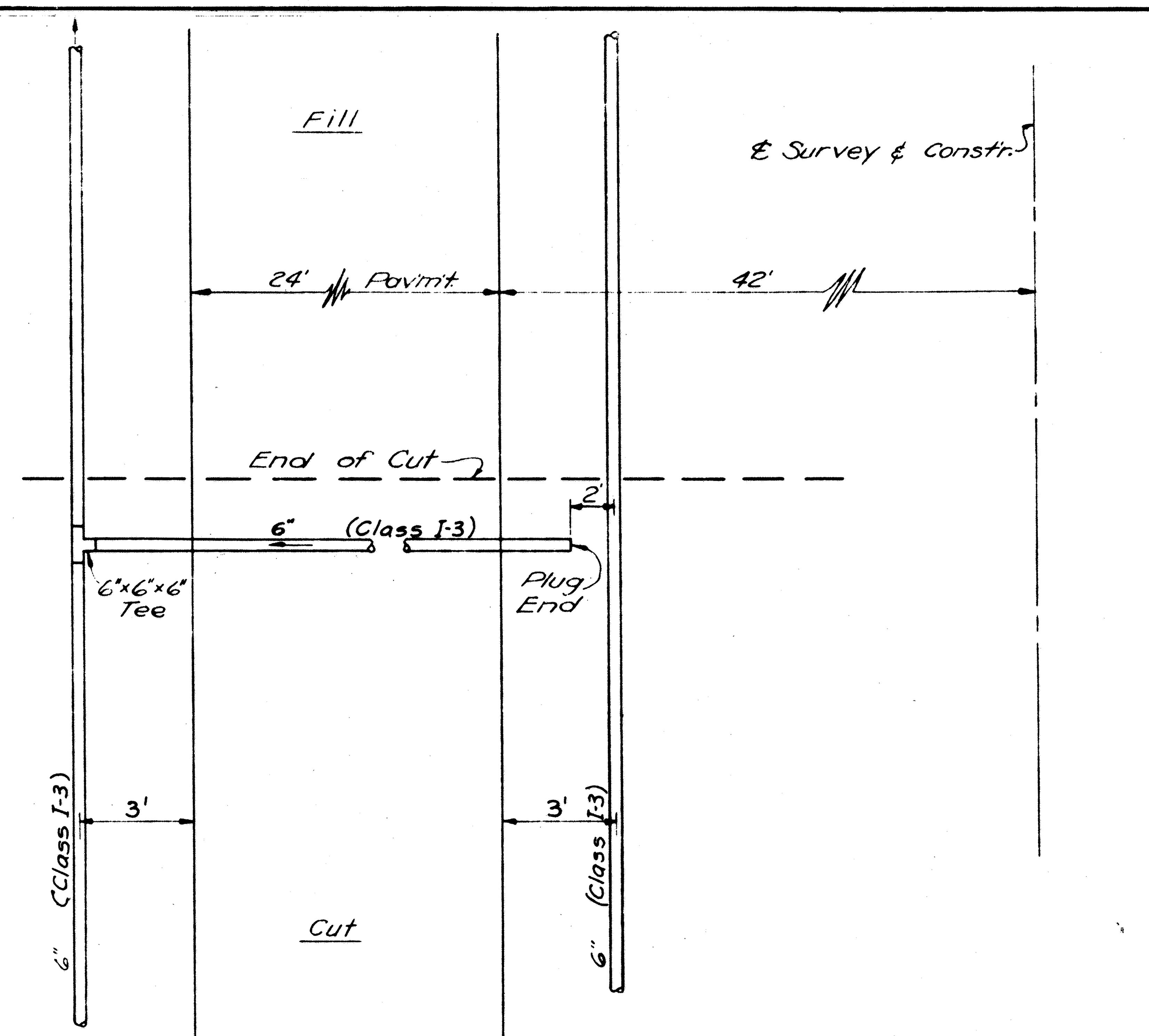
UNDERDRAIN OUTLET DETAIL "A" & "B"



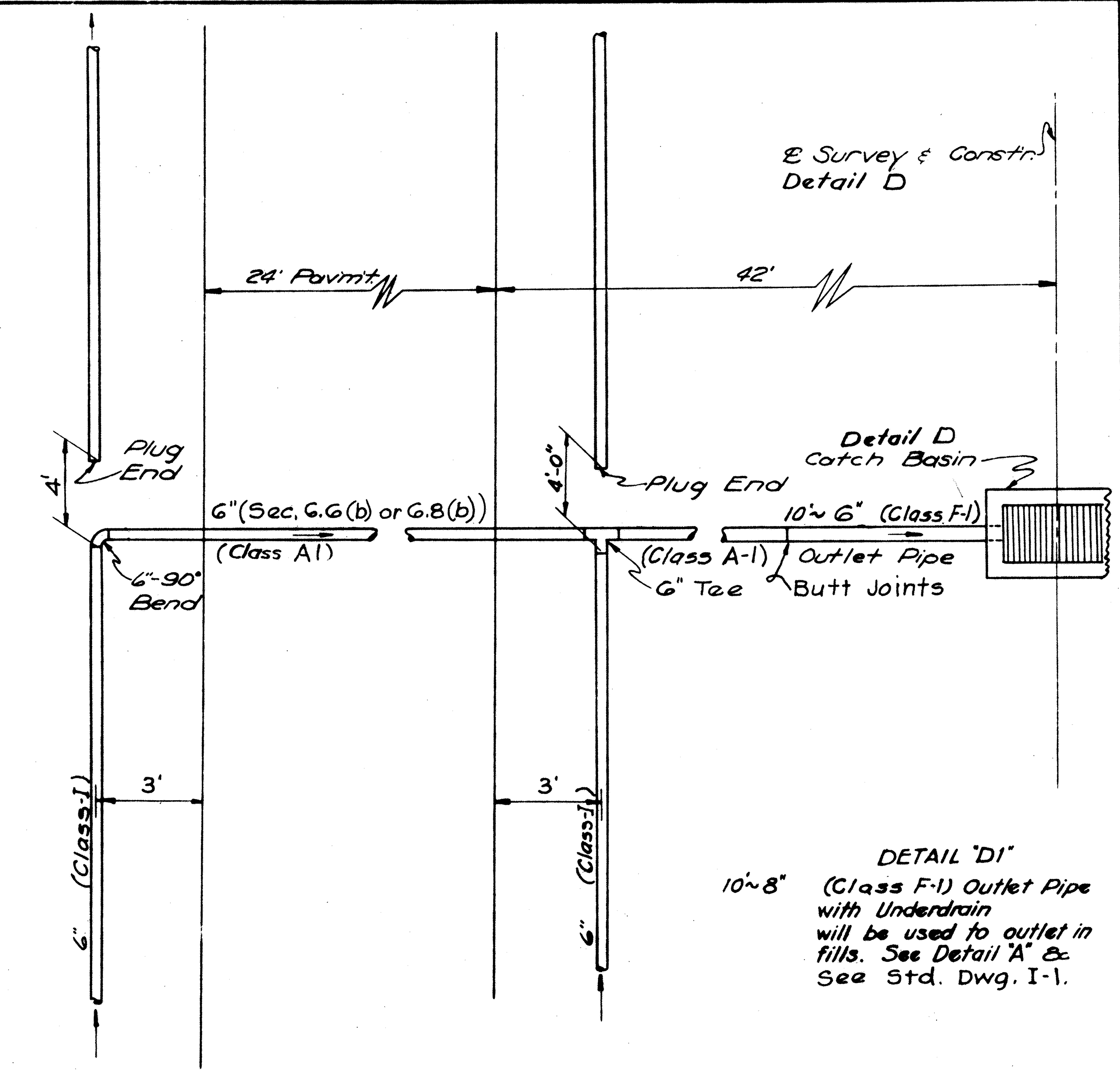
UNDERDRAIN OUTLET DETAIL "F"



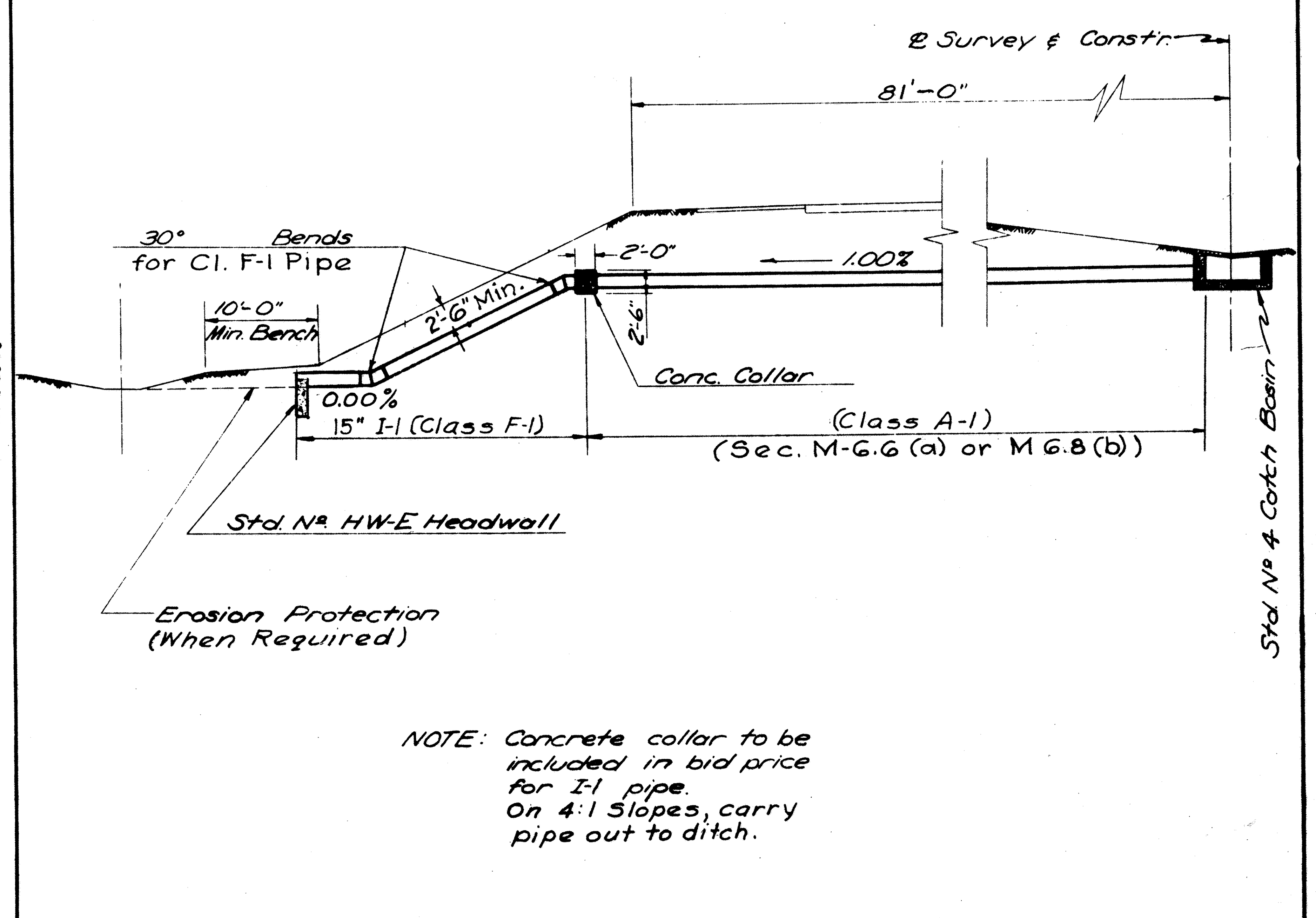
UNDERDRAIN OUTLET DETAIL "C"



DETAIL "E"
UNDERDRAIN INTERCEPTOR IN CUT



UNDERDRAIN OUTLET DETAIL "D"



MEDIAN OUTLET DETAIL IN HIGH FILL

MEDINA COUNTY
MED-42-21.94

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

13
293

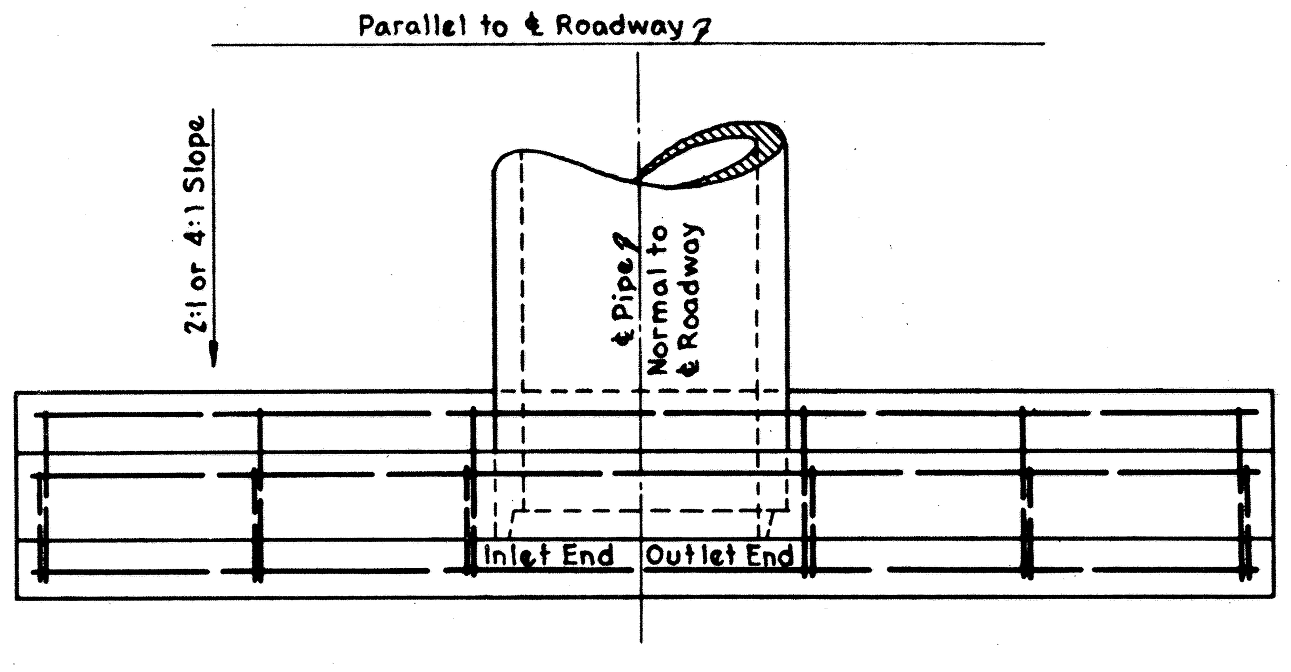
	Ø=0°																
	PIPE DIAM.	L	ℓ1	ℓ2	W	Z	B	b1	b2	b3	H	h1	h2	h3	Conc. C.Y.	Steel Lb.
SLOPE 2:1	15"	3'-4"					1'-9"	6"	9"	6"	2'-1"		9"	1'-3"	1.00	56
	18"	4'-0"					1'-9"	6"	9"	6"	2'-4"		9"	1'-3"	1.25	63
	24"	5'-4"					1'-9"	6"	9"	6"	2'-11"		9"	1'-3"	1.81	86
	30"	6'-7"					2'-0"	6"	1'-0"	6"	3'-6"		9"	1'-3"	3.01	121
	36"	7'-10"					3'-0"	1'-0"	1'-0"	1'-0"	4'-0"		1'-0"	1'-3"	4.69	158
SLOPE 4:1	15"	3'-9"					1'-9"	6"	9"	6"	2'-1"		9"	1'-3"	1.14	59
	18"	4'-5"					1'-9"	6"	9"	6"	2'-4"		9"	1'-3"	1.39	66
	24"	5'-10"					1'-9"	6"	9"	6"	2'-11"		9"	1'-3"	2.00	91
	30"	7'-1"					2'-0"	6"	1'-0"	6"	3'-6"		9"	1'-3"	3.26	126
	36"	8'-4"					3'-0"	1'-0"	1'-0"	1'-0"	4'-0"		1'-0"	1'-3"	5.01	165

	Ø=15°																
	PIPE DIAM.	L	ℓ1	ℓ2	W	Z	B	b1	b2	b3	H	h1	h2	h3	Conc. C.Y.	Steel Lb.
SLOPE 2:1	15"	3'-0"	11"	1'-7"	2'-6"	2'-5"	1'-9"	6"	9"	6"	2'-1"	1'-5"	9"	1'-3"	0.82	48
	18"	3'-6"	1'-1"	1'-10"	3'-0"	2'-10"	1'-9"	6"	9"	6"	2'-4"	1'-7"	9"	1'-3"	1.00	53
	24"	4'-8"	1'-5"	2'-6"	4'-1"	3'-11"	1'-9"	6"	9"	6"	2'-11"	1'-10"	9"	1'-3"	1.45	80
	30"	5'-6"	1'-7"	2'-10"	5'-2"	5'-0"	2'-0"	6"	1'-0"	6"	3'-6"	2'-2"	9"	1'-3"	2.36	97
	36"	6'-8"	1'-10"	3'-4"	6'-3"	6'-0"	3'-0"	1'-0"	1'-0"	1'-0"	4'-0"	2'-6"	1'-0"	1'-3"	3.75	123
SLOPE 4:1	15"	4'-2"	11"	1'-7"	3'-0"	3'-0"	1'-9"	6"	9"	6"	2'-1"	1'-10"	9"	1'-3"	1.09	59
	18"	4'-10"	1'-1"	1'-10"	3'-8"	3'-6"	1'-9"	6"	9"	6"	2'-4"	2'-0"	9"	1'-3"	1.34	67
	24"	6'-6"	1'-5"	2'-6"	4'-8"	4'-6"	1'-9"	6"	9"	6"	2'-11"	2'-6"	9"	1'-3"	1.90	95
	30"	7'-8"	1'-7"	2'-10"	5'-9"	5'-6"	2'-0"	6"	1'-0"	6"	3'-6"	3'-0"	9"	1'-3"	3.07	121
	36"	9'-0"	1'-10"	3'-4"	6'-9"	6'-6"	3'-0"	1'-0"	1'-0"	1'-0"	4'-0"	3'-5"	1'-0"	1'-3"	4.70	152

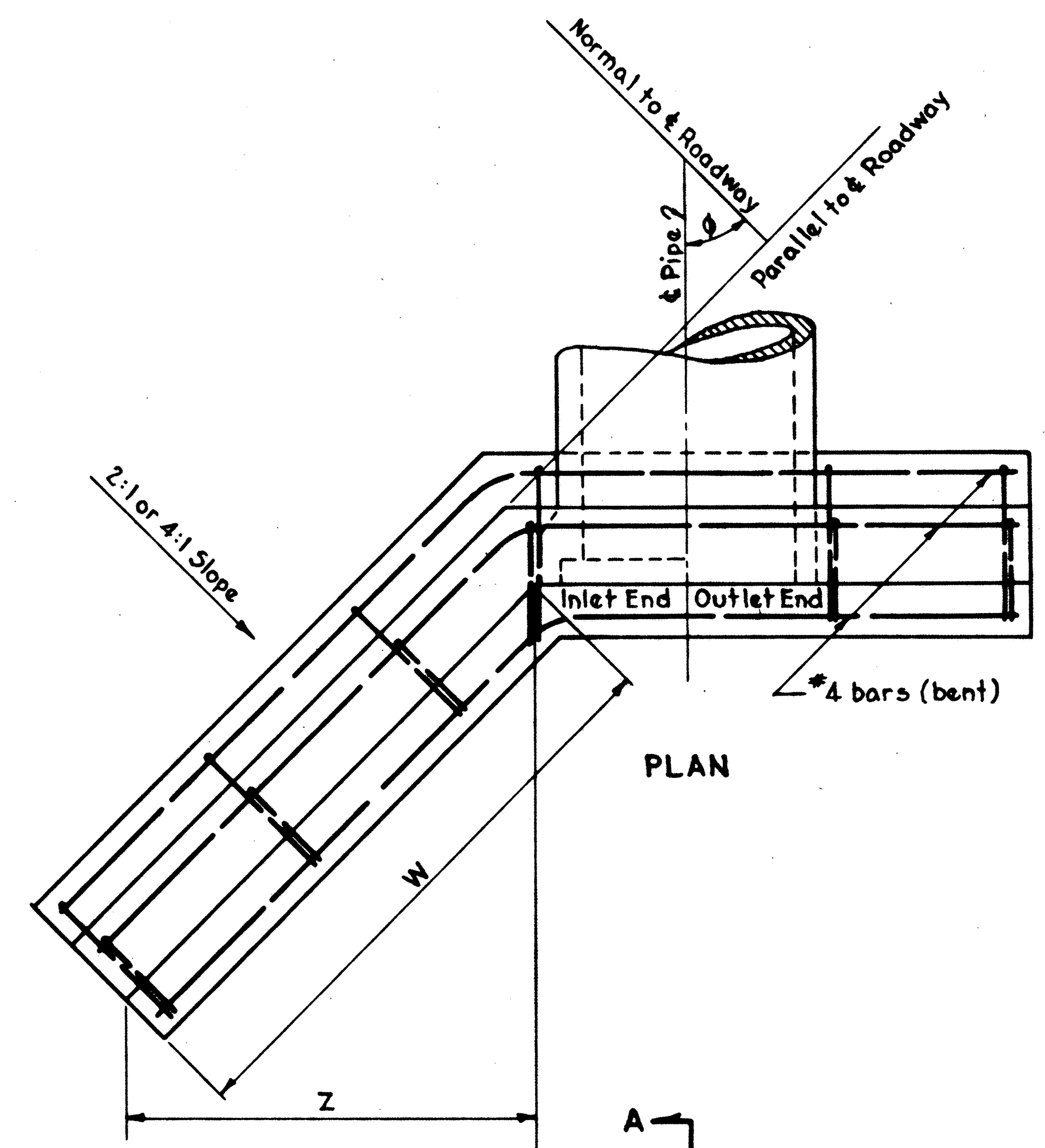
	Ø=30°																
	PIPE DIAM.	L	ℓ1	ℓ2	W	Z	B	b1	b2	b3	H	h1	h2	h3	Conc. C.Y.	Steel Lb.
SLOPE 2:1	15"	3'-0"	11"	1'-7"	2'-9"	2'-5"	1'-9"	6"	9"	6"	2'-1"	1'-5"	9"	1'-3"	0.88	48
	18"				3'-4"										1.07	60
	24"		Same as Ø=15°		4'-6"				Same as Ø=15°						1.54	82
	30"				5'-9"										2.54	100
	36"				6'-11"										4.01	131
SLOPE 4:1	15"	3'-9"			3'-6"							1'-7"			1.12	59
	18"	4'-4"			4'-0"							1'-10"			1.32	72
	24"	5'-10"	Same as Ø=15°		5'-3"			Same as Ø=15°				2'-2"	Same as Ø=15°		1.89	101
	30"	6'-11"			6'-6"							2'-8"			3.08	121
	36"	8'-2"			7'-6"							3'-0"			4.68	157

	Ø=45°																
	PIPE DIAM.	L	ℓ1	ℓ2	W	Z	B	b1	b2	b3	H	h1	h2	h3	Conc. C.Y.	Steel Lb.
SLOPE 2:1	15"				3'-5"										1.00	53
	18"				4'-0"										1.20	63
	24"		Same as Ø=15°		5'-6"				Same as Ø=15°						1.75	93
	30"				7'-1"										2.91	112
	36"				8'-6"										4.57	143
SLOPE 4:1	15"	3'-6"			4'-0"							1'-5"			1.17	65
	18"	4'-0"			5'-0"							1'-7"			1.45	74
	24"	5'-5"	Same as Ø=15°		6'-4"			Same as Ø=15°				1'-11"	Same as Ø=15°		2.03	100
	30"	6'-5"			7'-9"							2'-4"			3.29	131
	36"	7'-6"			9'-3"							2'-7"			5.06	164

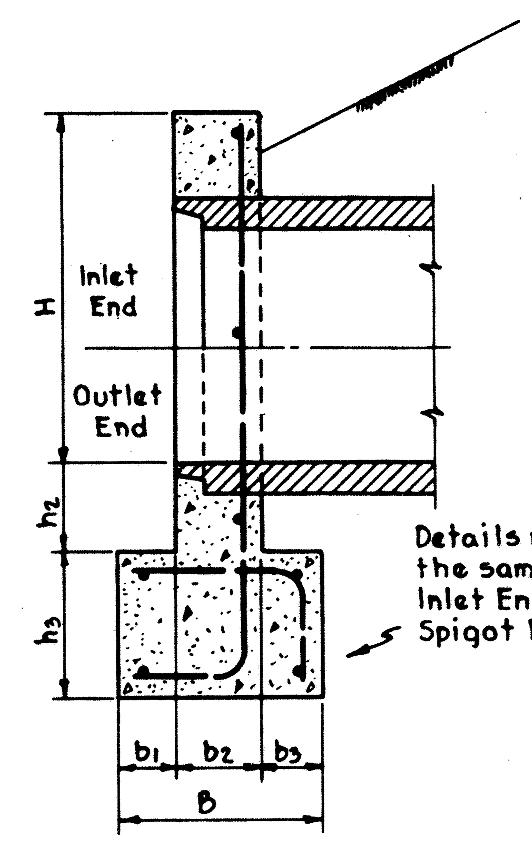
	Ø=60°																
	PIPE DIAM.	L	ℓ1	ℓ2	W	Z	B	b1	b2	b3	H	h1	h2	h3	Conc. C.Y.	Steel Lb.
SLOPE 2:1	15"				4'-10"										1.25	64
	18"				5'-8"										1.50	76
	24"		Same as Ø=15°		7'-10"				Same as Ø=15°						2.20	116
	30"				10'-0"										3.68	139
	36"				12'-0"										5.75	188
SLOPE 4:1	15"	3'-4"			6'-0"							1'-4"			1.48	74
	18"	3'-10"			7'-0"							1'-5"			1.77	93
	24"	5'-1"	Same as Ø=15°		9'-0"			Same as Ø=15°				1'-9"	Same as Ø=15°		2.48	123
	30"	6'-0"			11'-0"							2'-1"			4.04	158
	36"	7'-1"			13'-0"							2'-4"			6.19	200



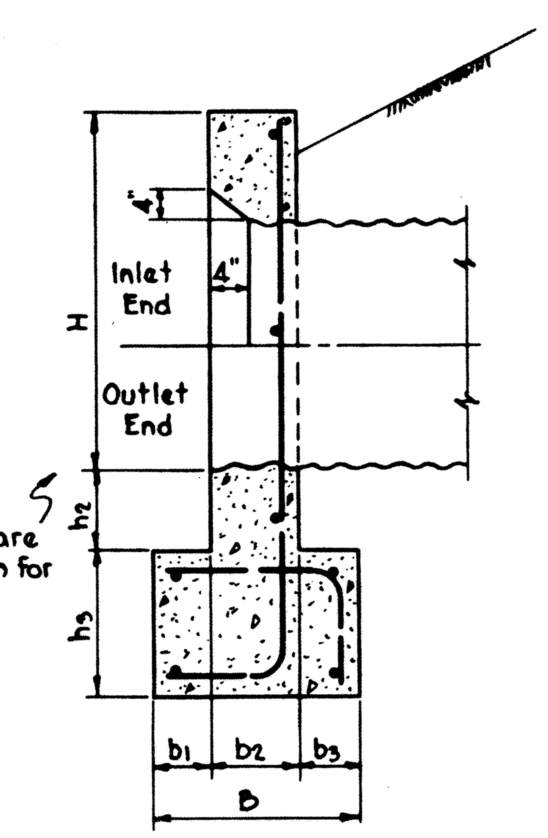
PLAN



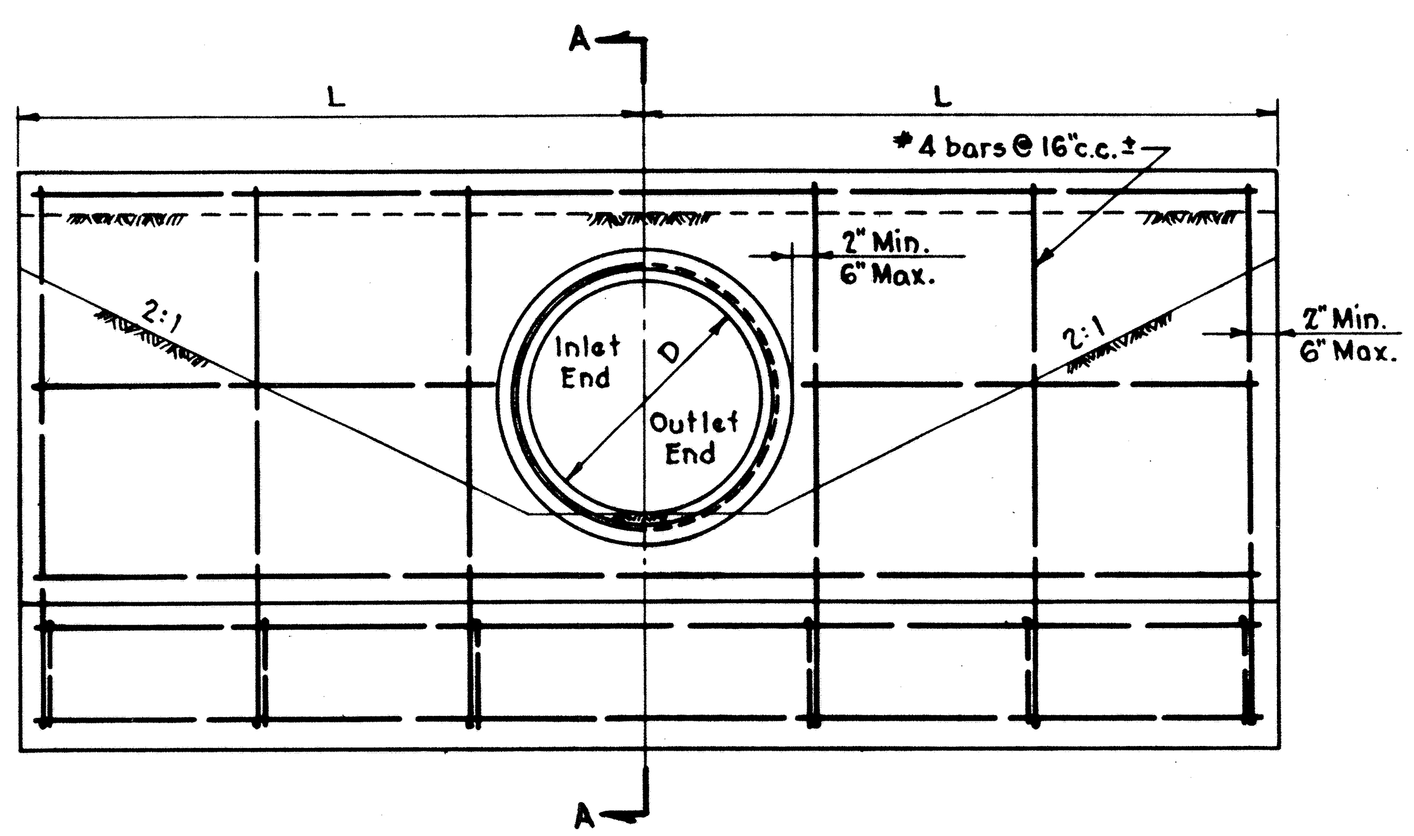
PLAN



TONGUE & GROOVE PIPE

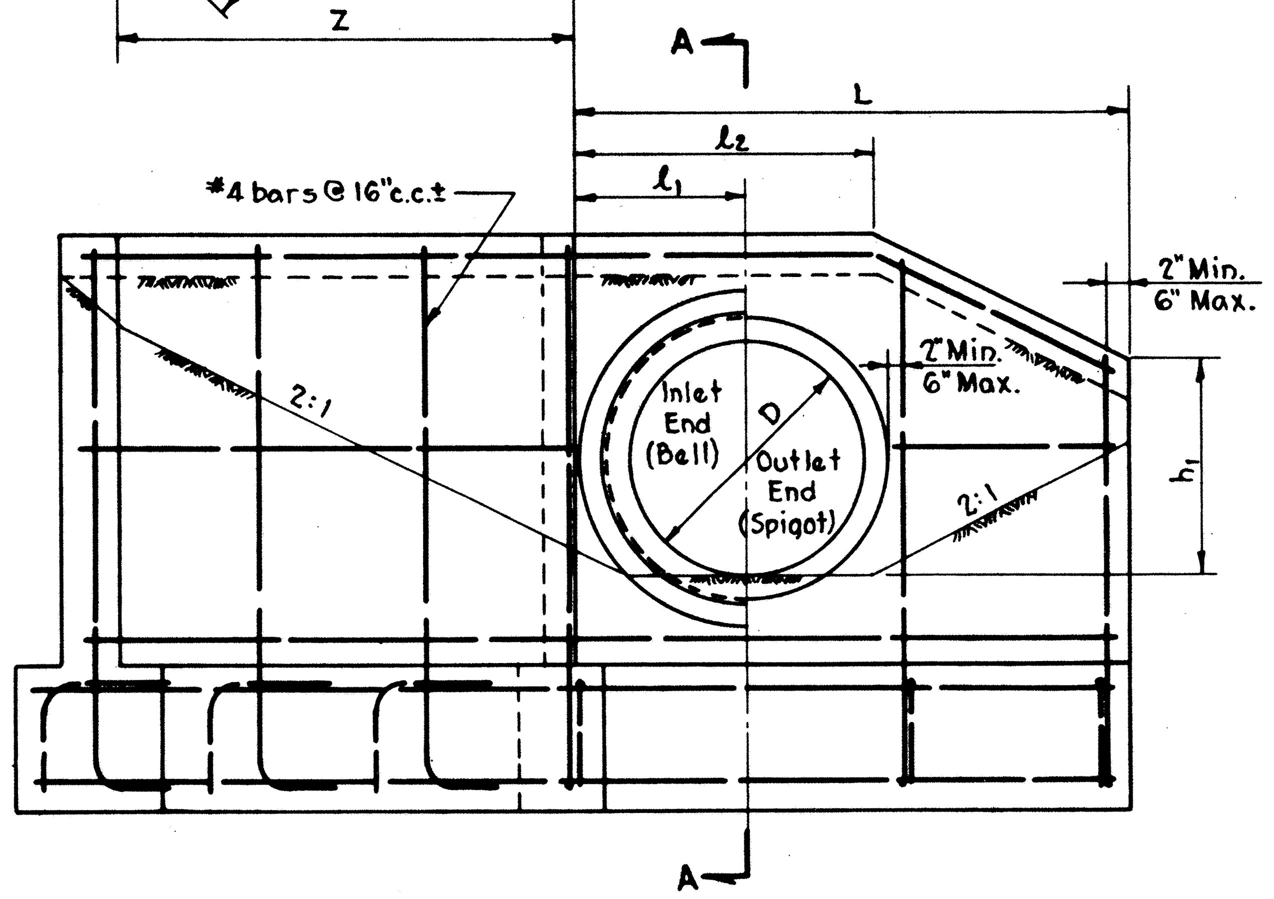


CORRUGATED PIPE



ELEVATION

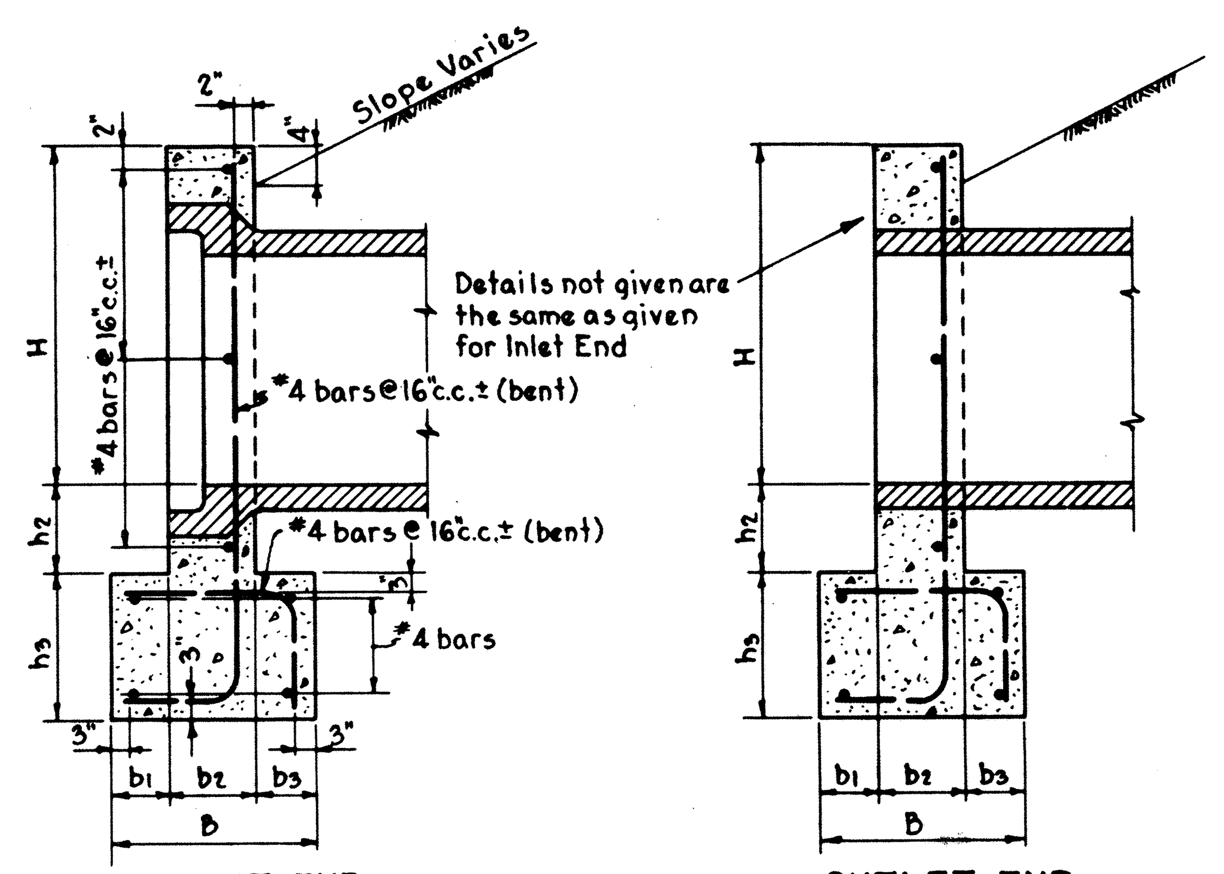
TYPE "A-1" Ø = 0° - 10°



ELEVATION

TYPE "B-1" Ø = 11° & OVER

Scale: None



INLET END

OUTLET END

BELL & SPIGOT PIPE

SECTION A-A

Scale: None

NOTES:

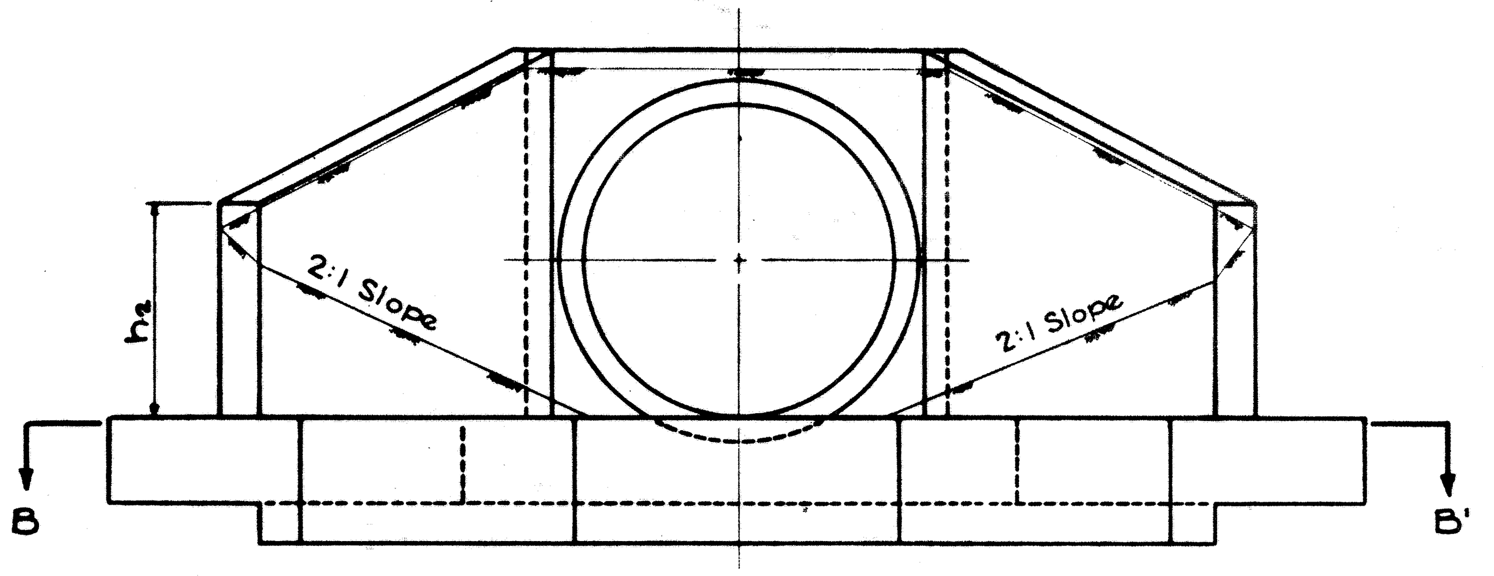
Min. cover for reinforcing bars shall be 3" in footings and 2" elsewhere, or as shown.
Chamfer all corners 3/4".
All concrete shall be Class "C".
Endwalls shall be paid for under the provisions of Item I-2 of the Specifications.
Concrete Quantities in table are payment Quantities.
Steel Quantities are for Information only.

TYPICAL DETAILS ENDWALLS FOR PIPE SIZES 15" TO 36"

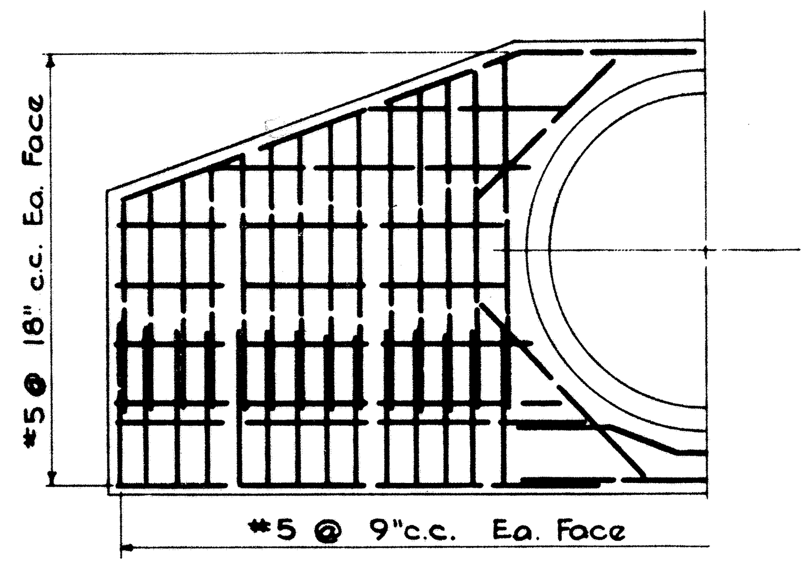
MISCELLANEOUS DETAILS

SLOPE 2:1

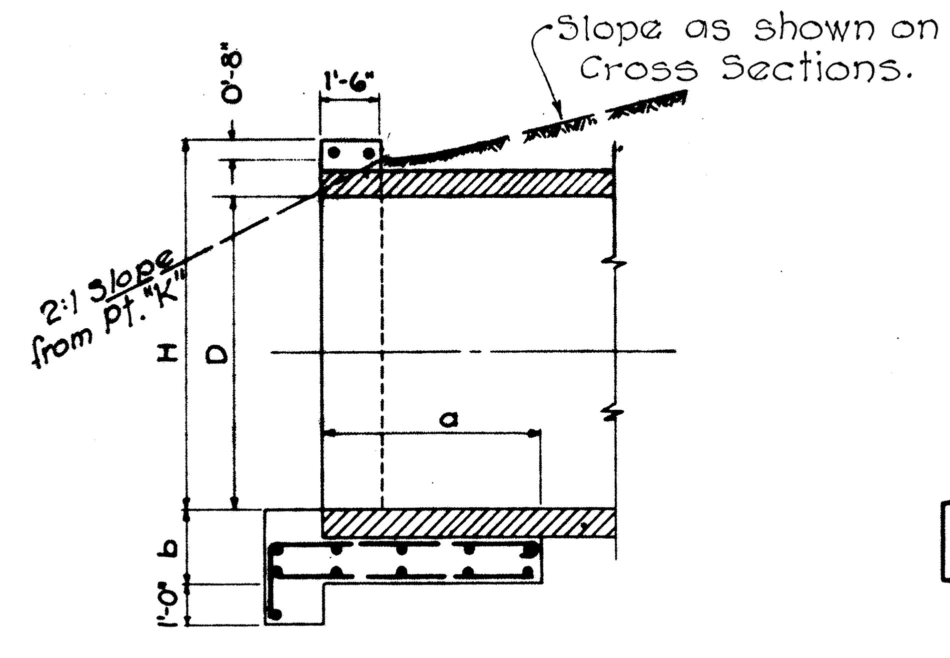
PIPE DIAM. D	H	a	b	c	bar d	ϕ = 0° L2	h2	C.Y.Conc. C.M.P.	C.Y.Conc. R.C.P.	Steel lbs.	ϕ = 15° L1	L2	h1	h2	C.Y.Conc. C.M.P.	C.Y.Conc. R.C.P.	Steel lbs.	ϕ = 30° L1	L2	h1	h2	C.Y.Conc. C.M.P.	C.Y.Conc. R.C.P.	Steel lbs.	ϕ = 45° L1	L2	h1	h2	C.Y.Conc. C.M.P.	C.Y.Conc. R.C.P.	Steel lbs.	PIPE DIAM. D
42"	4'-11"	3'-3"	1'-6"	2'-6"	#5	3'-7"	3'-1"	6.91	6.84	598	8'-9"	4'-6"	3'-8"	3'-2"	7.33	7.26	619	7'-10"	5'-9"	3'-2"	3'-3"	7.54	7.47	633	7'-10"	7'-9"	3'-2"	3'-3"	8.71	8.64	718	42"
48"	5'-5"	3'-6"	1'-6"	2'-9"	#5	4'-4"	3'-4"	8.49	8.23	793	10'-0"	5'-4"	4'-1"	3'-5"	8.93	8.67	776	8'-9"	6'-10"	3'-5"	3'-6"	9.07	8.81	801	8'-9"	9'-2"	3'-5"	3'-7"	10.54	10.28	925	48"
54"	5'-11"	3'-9"	1'-6"	3'-0"	#5	5'-2"	3'-8"	10.33	10.00	1,069	11'-4"	6'-3"	4'-6"	3'-8"	10.82	10.49	1,026	9'-8"	7'-11"	3'-8"	3'-9"	10.79	10.46	1,024	9'-8"	10'-7"	3'-8"	3'-10"	12.55	12.22	1,188	54"
60"	6'-6"	4'-0"	1'-6"	3'-3"	#5	5'-11"	3'-11"	12.24	11.84	1,149	12'-7"	7'-2"	4'-10"	4'-0"	12.86	12.45	1,174	10'-7"	9'-0"	3'-10"	4'-1"	12.68	12.27	1,157	10'-7"	12'-0"	3'-10"	4'-1"	14.76	14.36	1,354	60"
72"	7'-7"	4'-6"	1'-7"	3'-9"	#7	7'-5"	4'-5"	17.27	16.69	1,783	15'-1"	8'-11"	5'-7"	4'-6"	17.71	17.13	1,811	12'-5"	11'-2"	4'-3"	4'-7"	17.26	16.68	1,788	12'-5"	14'-10"	4'-3"	4'-8"	20.17	19.59	2,076	72"
84"	8'-8"	5'-0"	1'-10"	4'-3"	#8	9'-0"	5'-0"	23.64	22.85	2,595	17'-7"	10'-9"	6'-4"	5'-1"	24.73	23.94	2,596	14'-7"	13'-4"	4'-10"	5'-2"	24.12	23.33	2,511	14'-3"	17'-8"	4'-8"	5'-2"	27.82	27.03	2,990	84"
96"	9'-9"	5'-6"	2'-1"	4'-9"	#10	10'-6"	5'-6"	31.69	30.67	4,127	20'-1"	12'-6"	7'-1"	5'-7"	33.14	32.11	4,167	16'-8"	15'-6"	5'-4"	5'-8"	32.37	31.34	4,105	16'-1"	20'-6"	5'-1"	5'-9"	37.14	36.11	4,738	96"



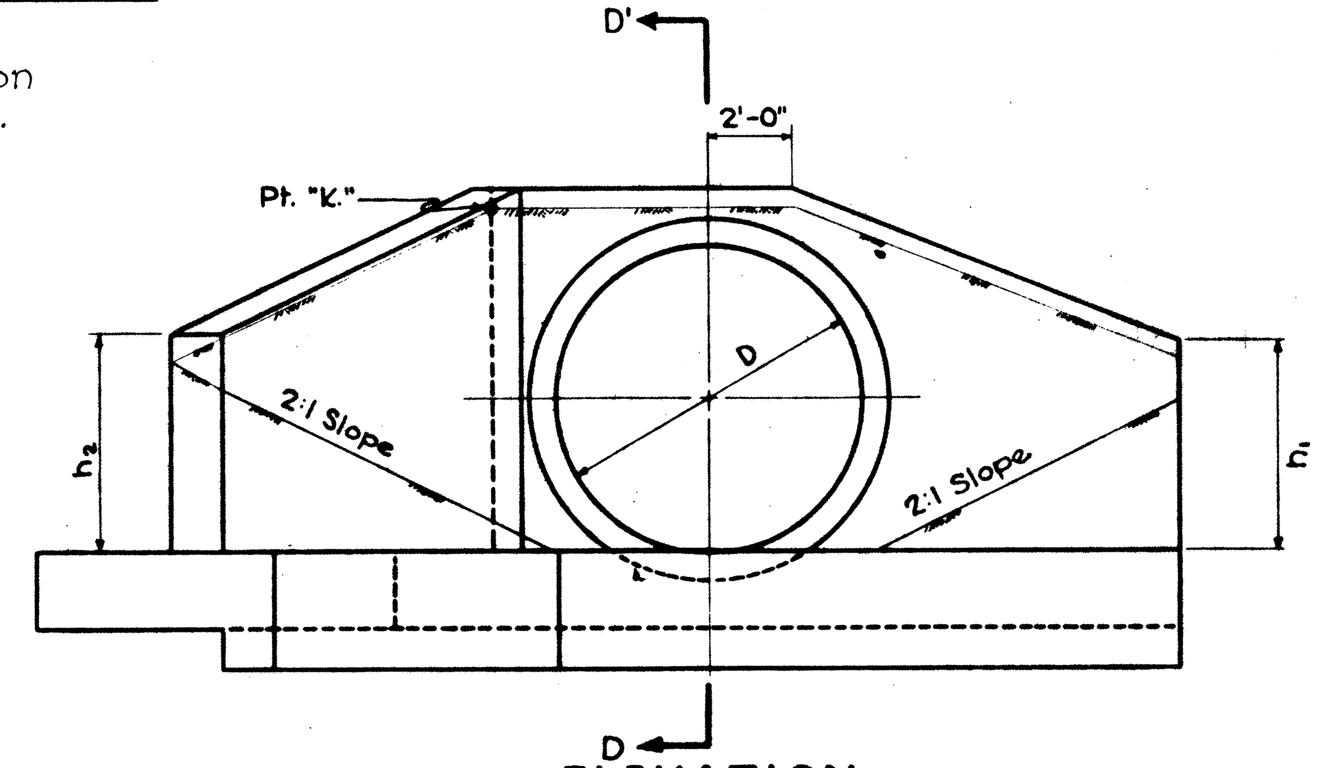
ELEVATION



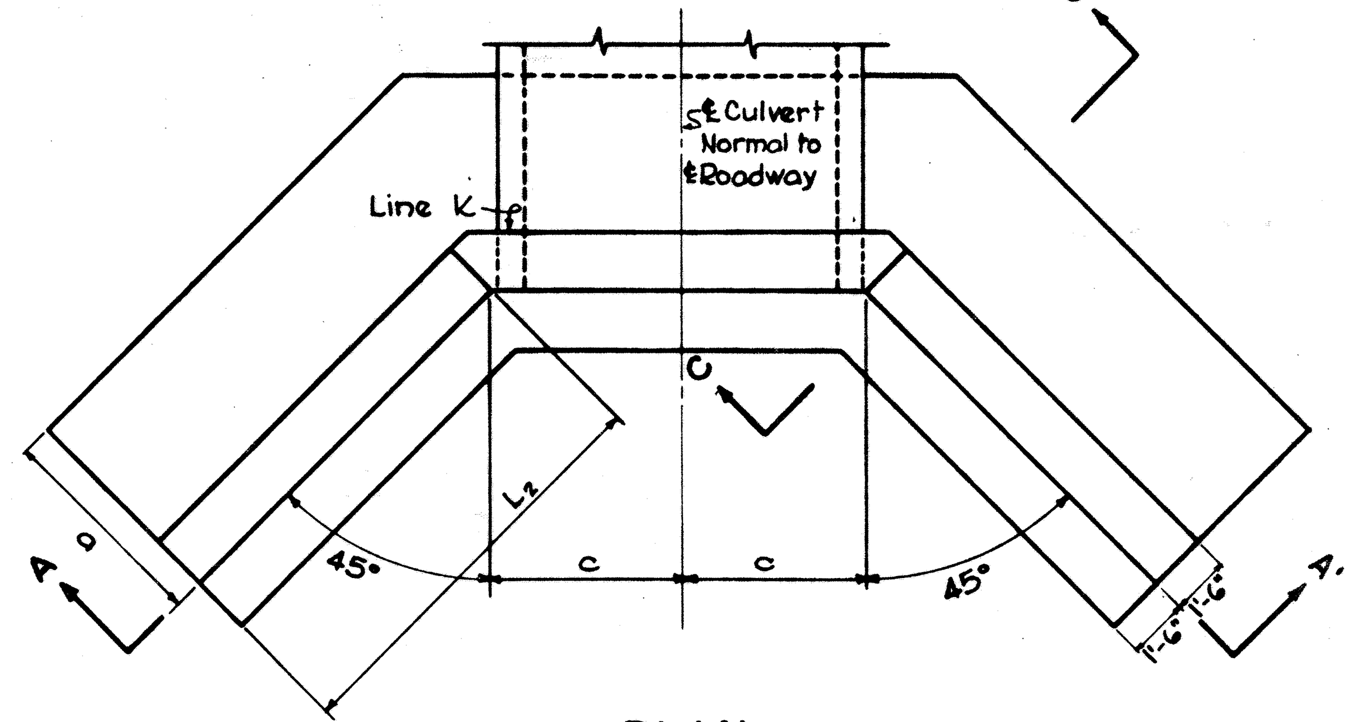
HALF-SECTION A-A'



SECTION D-D'

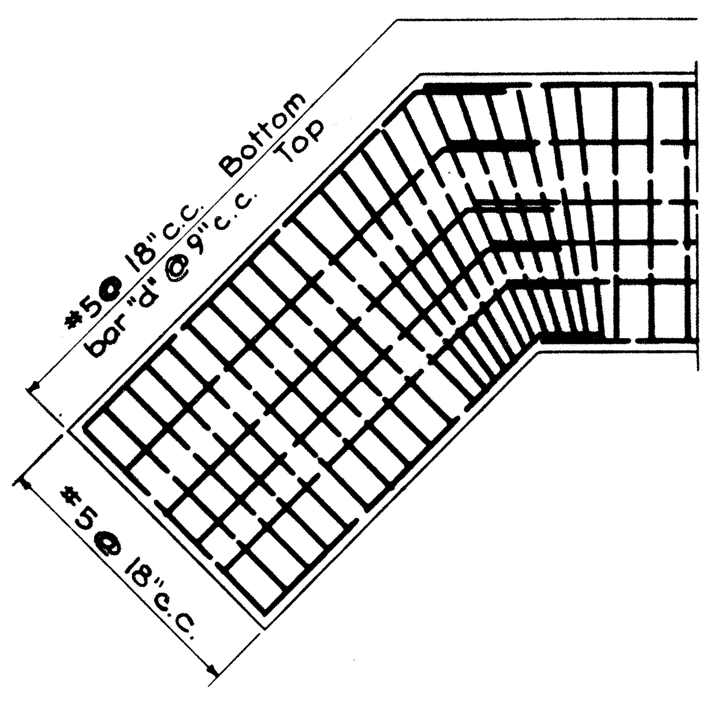


ELEVATION

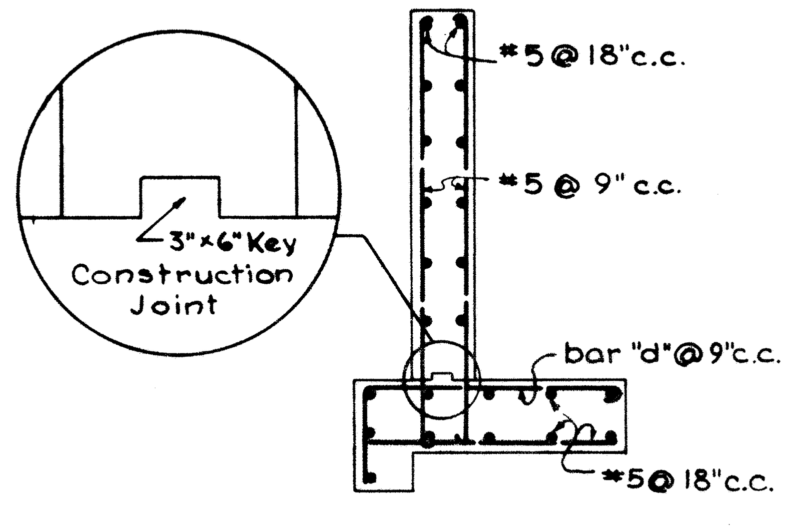


PLAN

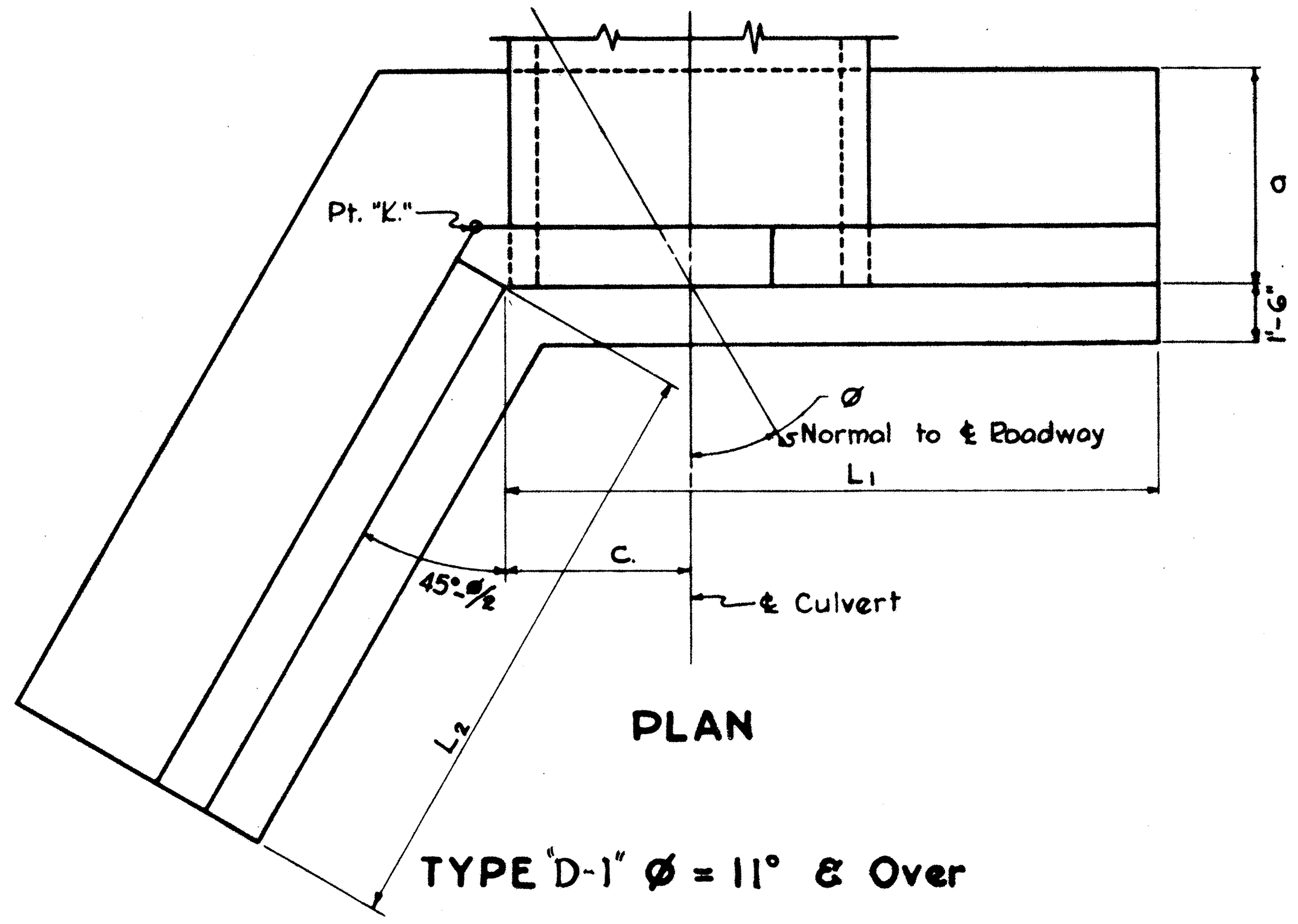
TYPE 'C-1' ϕ = 0° - 10°



HALF-SECTION B-B'



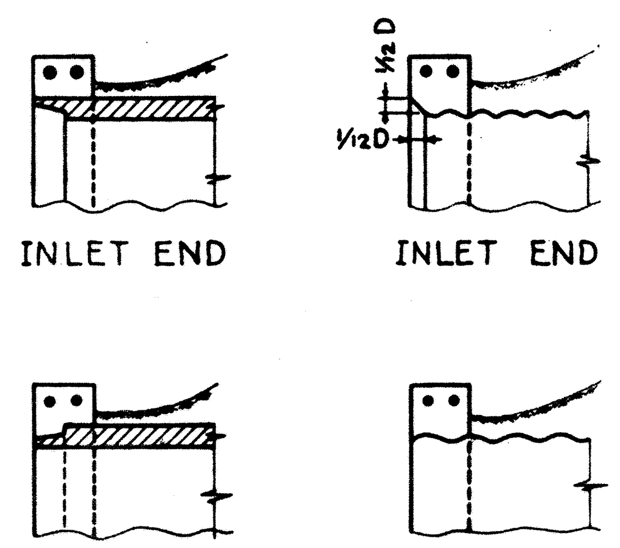
SECTION C-C'



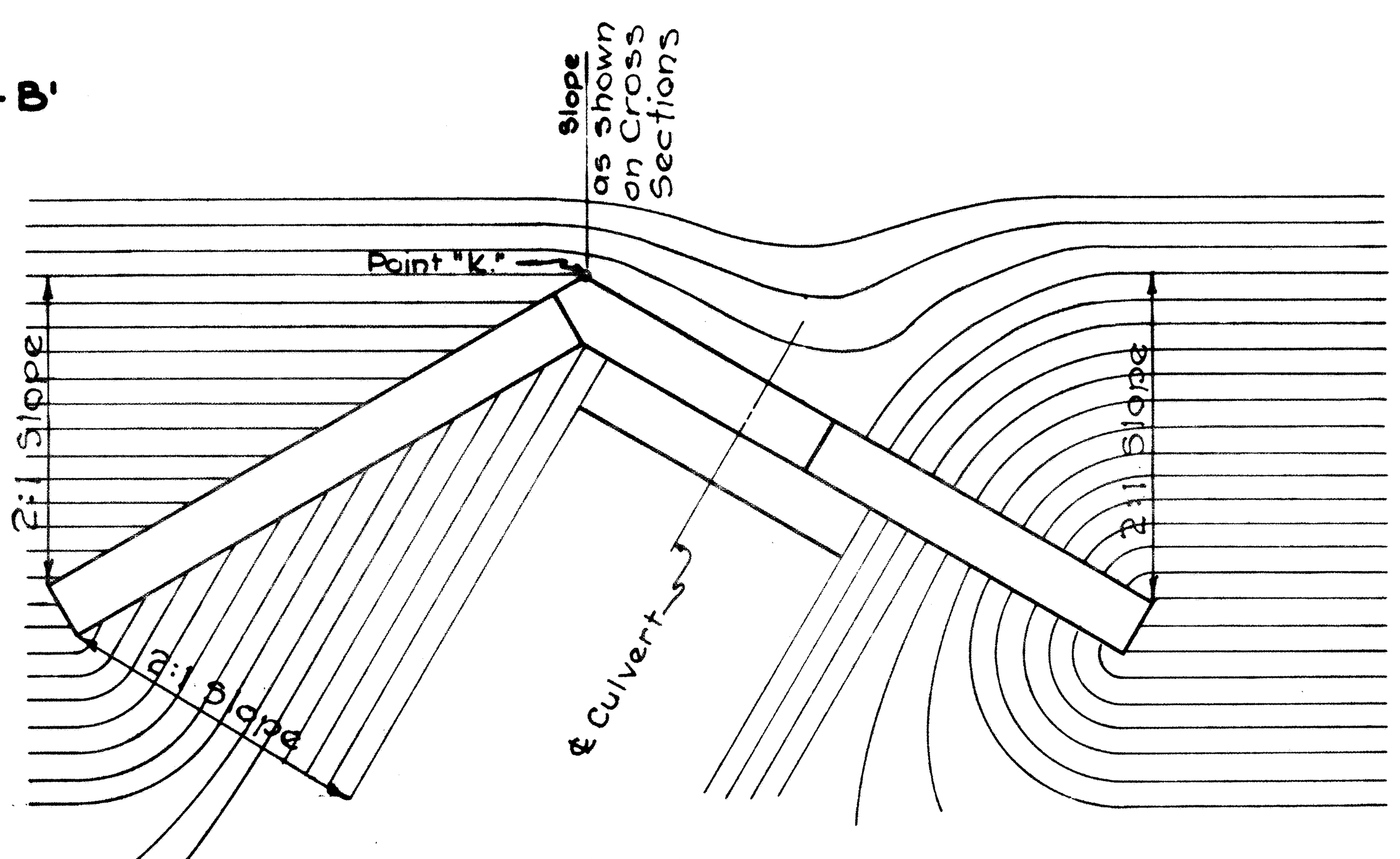
PLAN

TYPE 'D-1' ϕ = 11° & Over

NOTES:
Min. Cover for reinforcing bars shall be 3" in footing and 2" elsewhere, or as shown.
Chamfer all corners 3/4"
All Concrete shall be Class "C"
No deductions are made in Payment Quantities due to the bedding of the Culvert in the heel of the footing.
Pipe Culvert Endwalls for Skew Angles not shown, shall have the same dimensions as shown for the nearest Skew Angle.
Endwalls shall be paid for under the provisions of Item 1-2 of the Specifications.
Concrete Quantities in table are payment Quantities.
Steel Quantities are for information only.



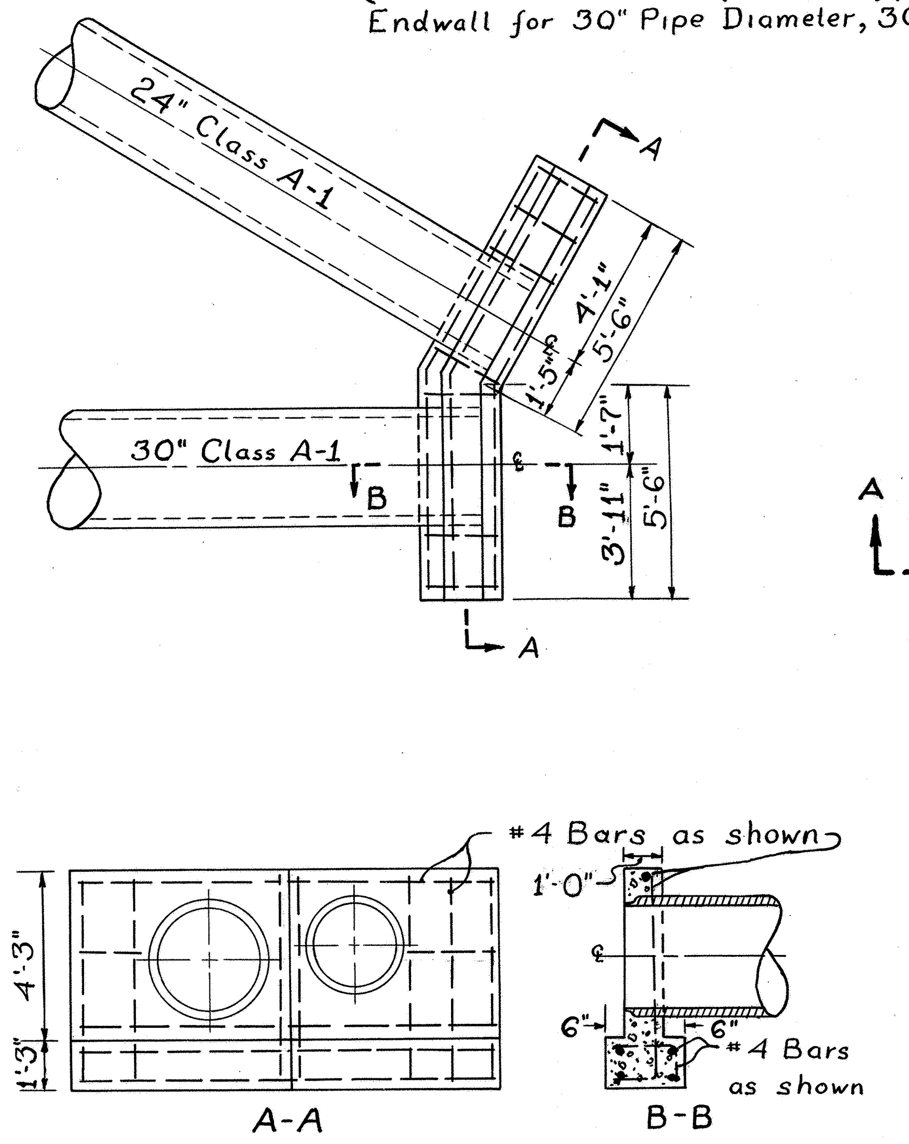
END TREATMENT AT ENDWALL



LOCATION & GRADING PLAN
FOR SKEWED PIPE CULVERT - TYPE D
NOTE:- Location of Endwall to be determined by the intersection of the Embankment Slope at the back of the Endwall at Point "K". The slopes adjacent to the Endwall shall be 2:1.

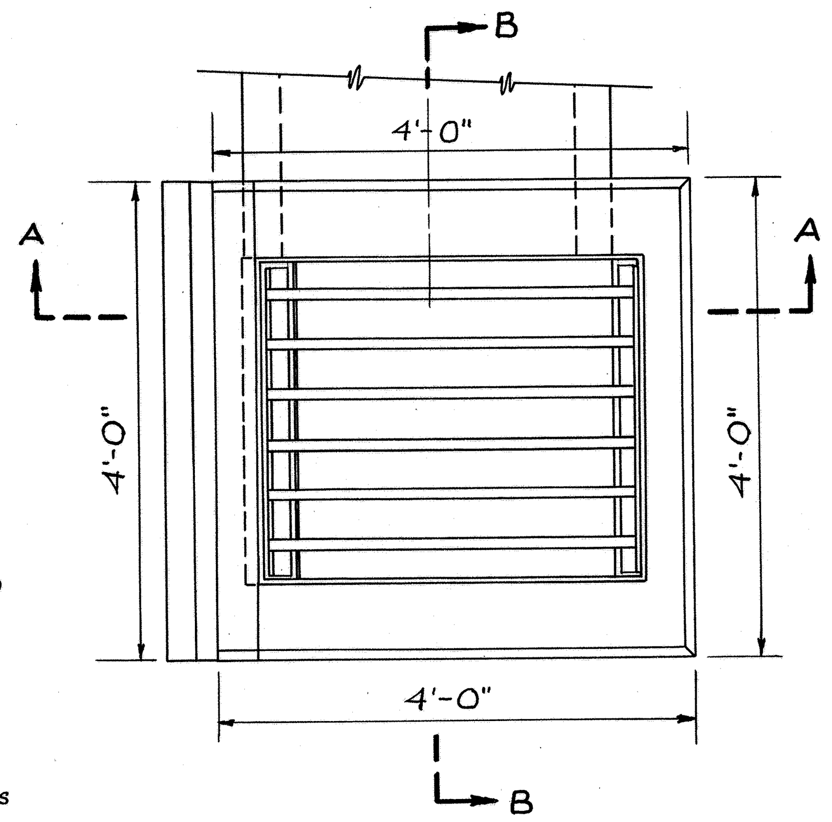
TYPICAL DETAILS
ENDWALLS
FOR PIPE SIZES 42" & OVER -

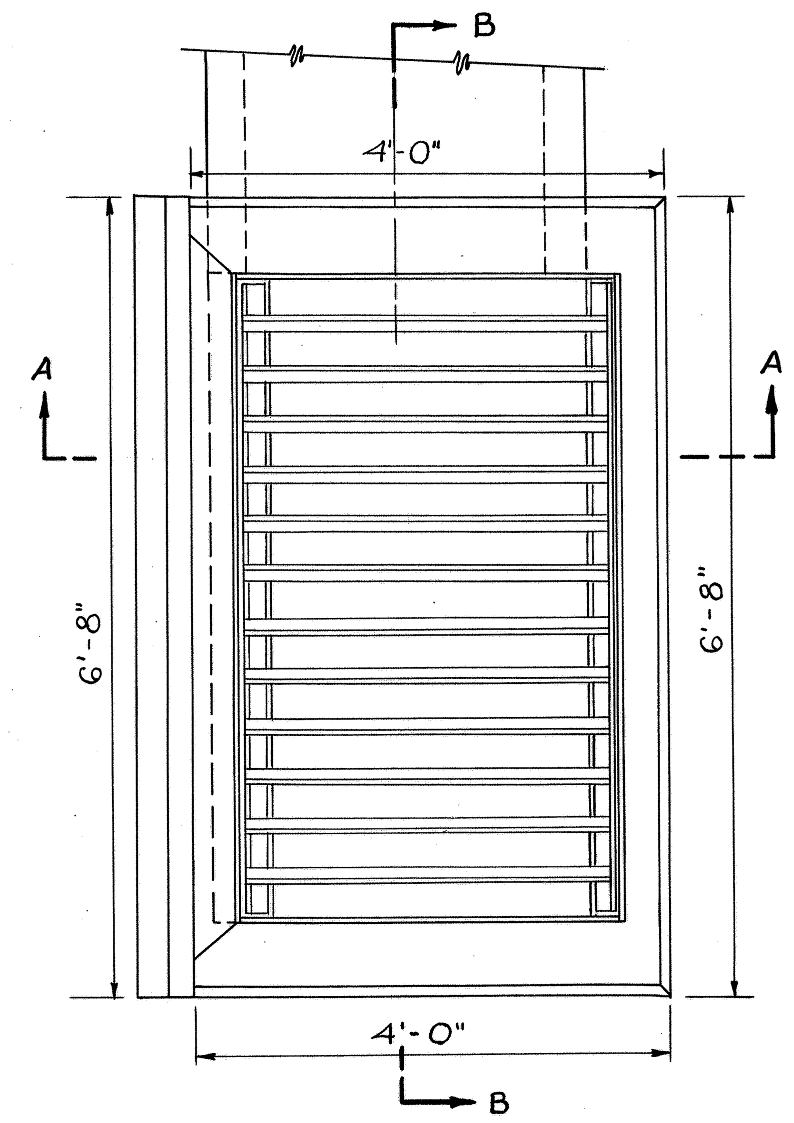
Note:
For Details not shown see Sheet No. 13 (Miscellaneous Details) under Type "B-1" Endwall for 30" Pipe Diameter, 30° skew

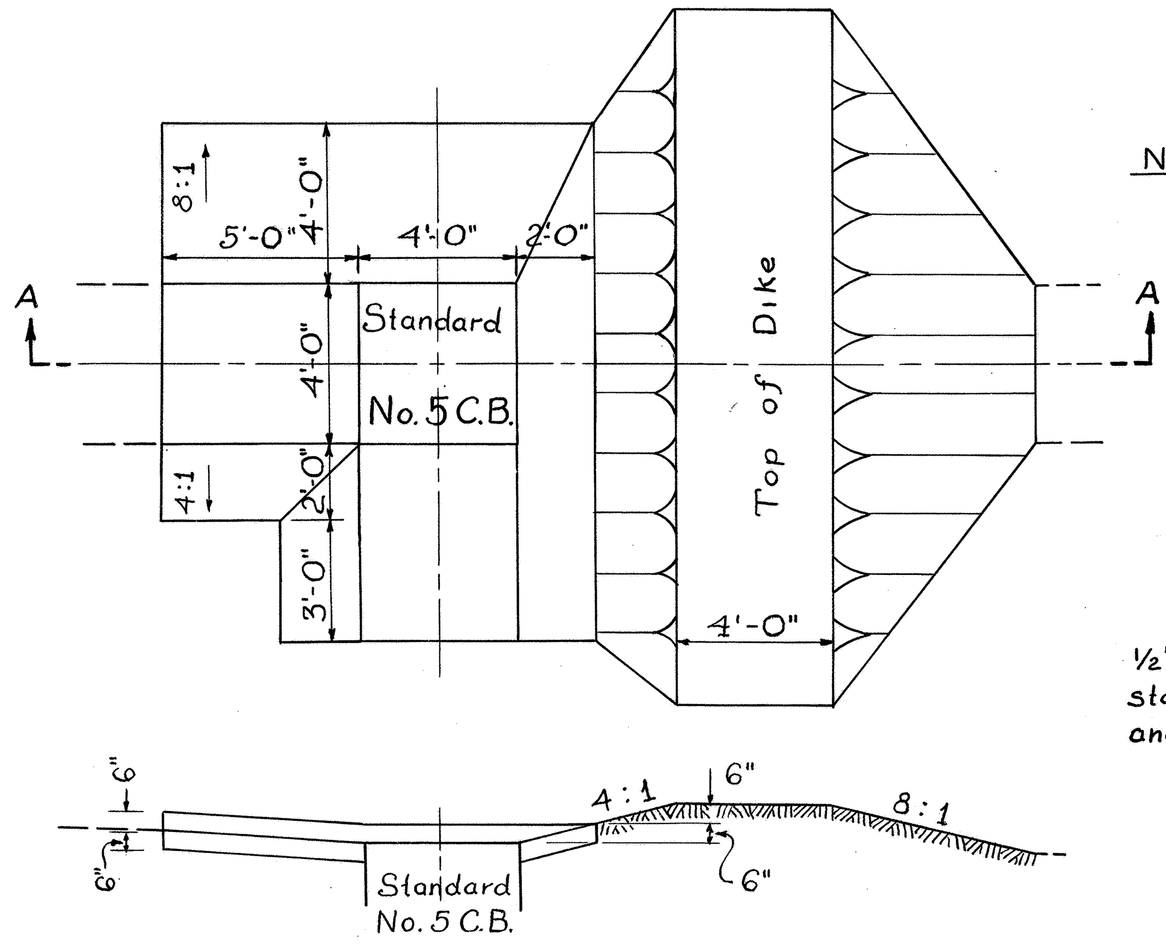


MODIFIED TYPE "B-1" ENDWALL

S.R. 303 Interchange Ramp "C-D"





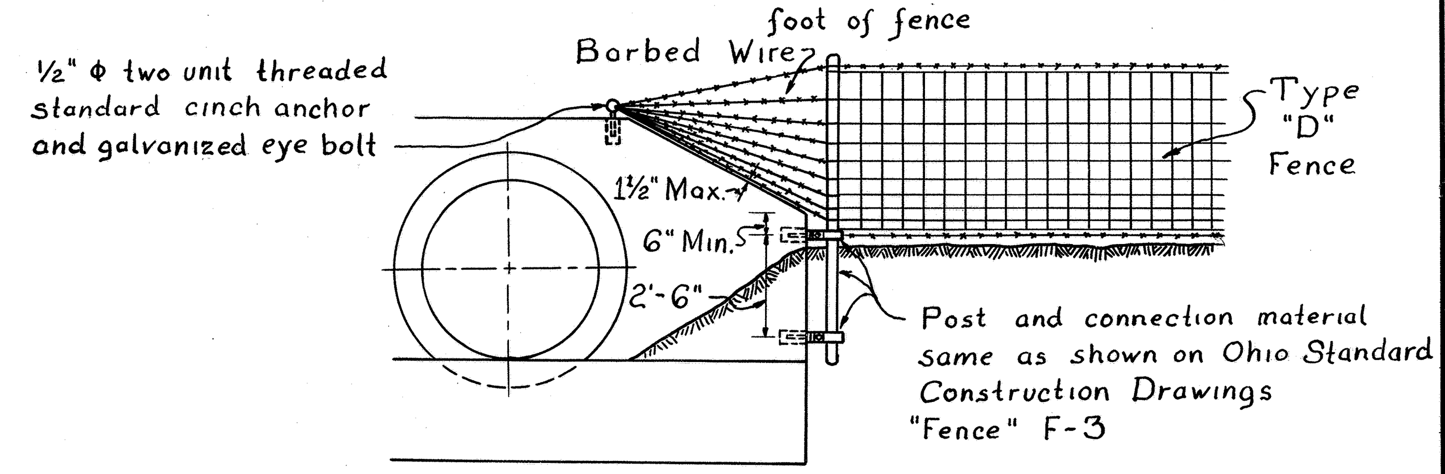


STANDARD NO. 5 CATCH BASIN WITH MODIFIED PAVED GUTTER

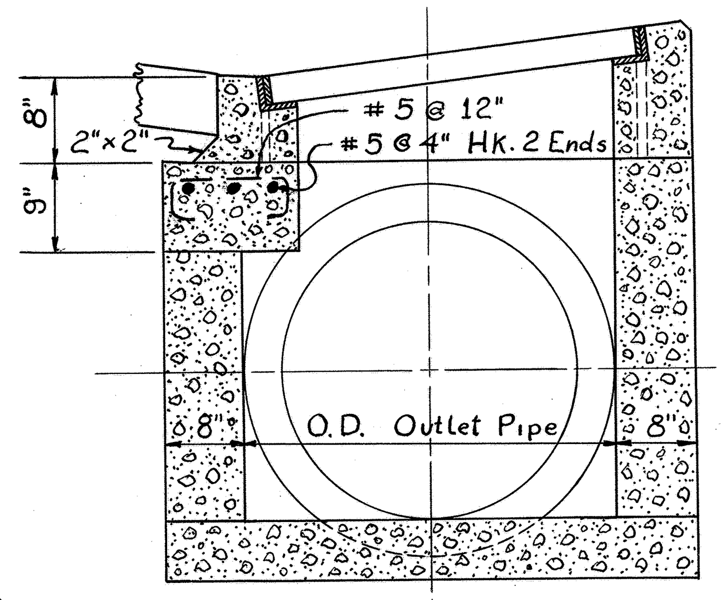
Sta. 423+40

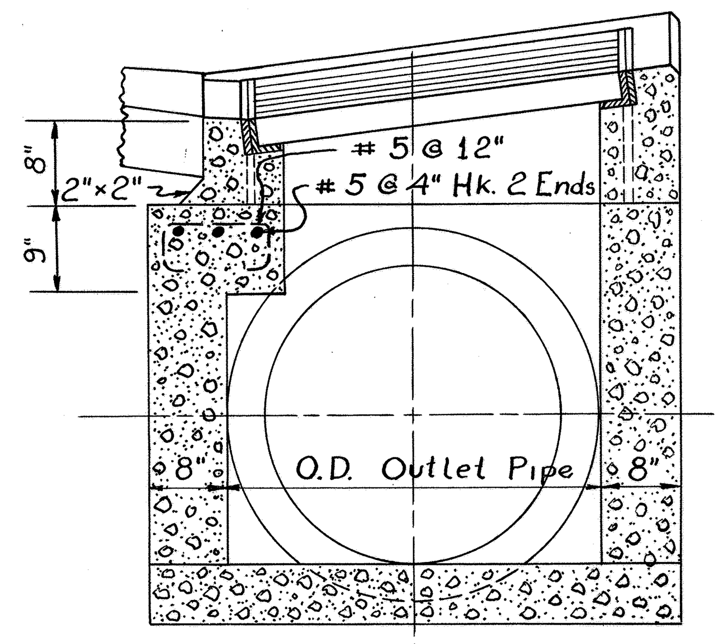
Note:
The cost of paved gutter and down stream dike to be included in the unit price bid for Catch Basin.
For additional details, see Ohio Standard Construction Drawings "Catch Basins" I-8 C.B. No. 5

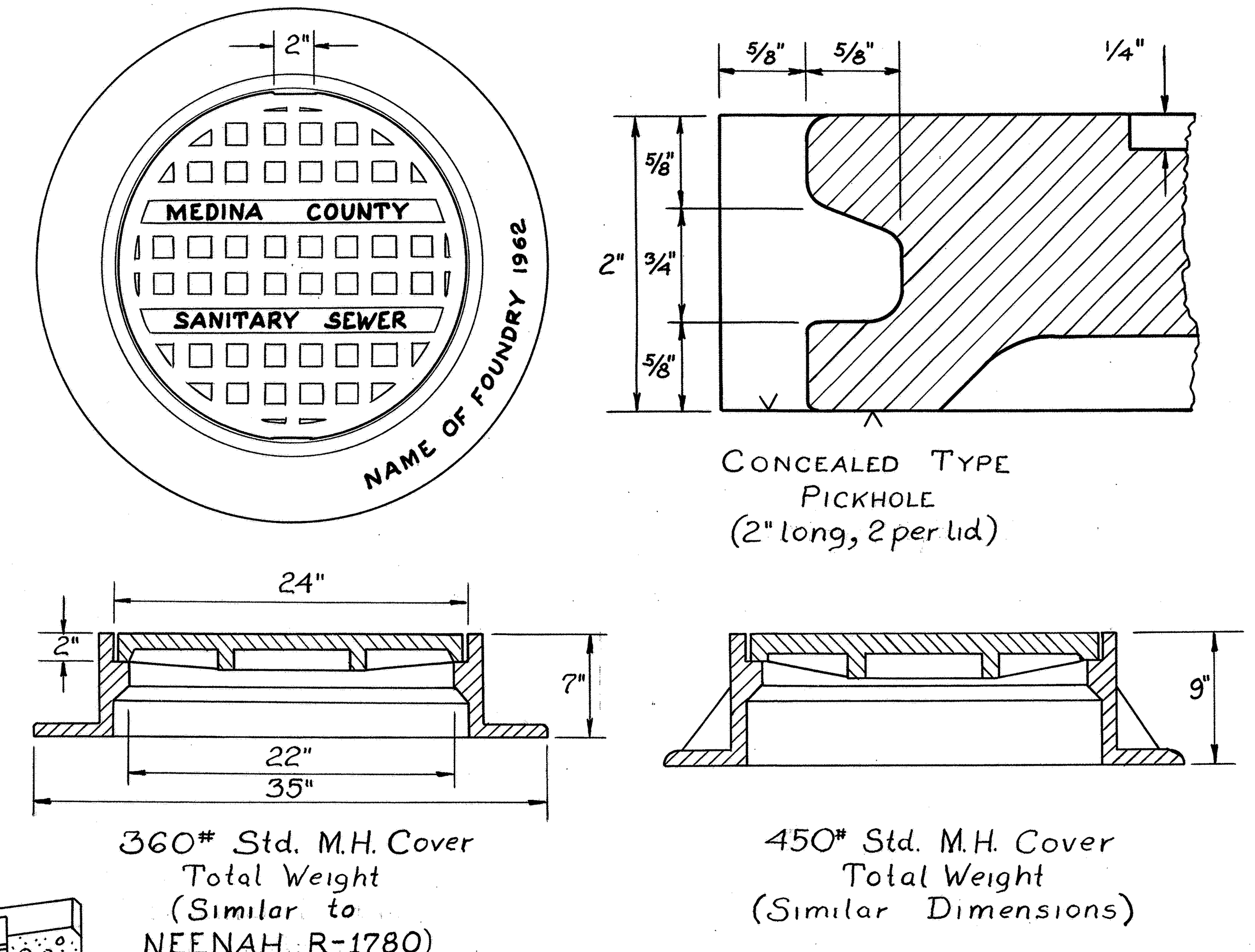
Note:
The cost of furnishing and installing barbed wire, connecting bands, angles, bolts, cinch anchors, etc., shall be included in the unit price bid per linear foot of fence



SPECIAL FENCE DETAIL HEADWALL CONNECTION

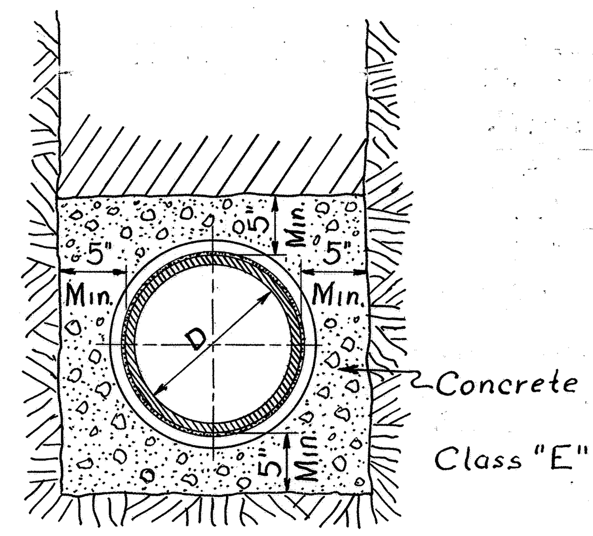




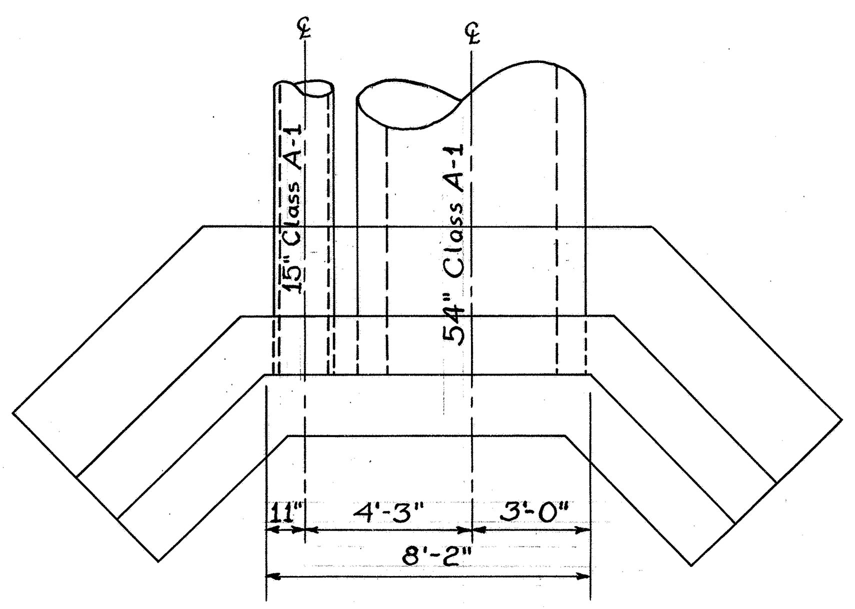


MANHOLE COVER FOR MODIFIED MANHOLES

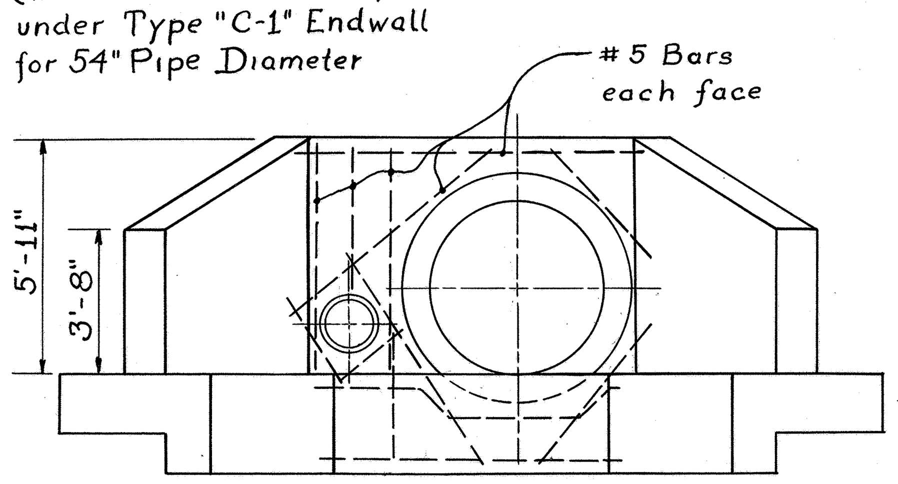
Note:
Rims and covers shall be true to pattern and the finished dimensions shall not vary more than one-sixteenth (1/16") inch from those shown except that the full clearance between the rim and cover shall be maintained. They shall be cleaned of all scale, grease, etc., and thoroughly coated with one coat of tar pitch varnish. The cover shall fit firmly on the rim lug in any position, and if necessary, both rim and cover shall be milled to provide such bearing free from rocker action. The manhole covers shall be set to grades in the field by the Engineer.



CONCRETE ENCASEMENT DETAIL



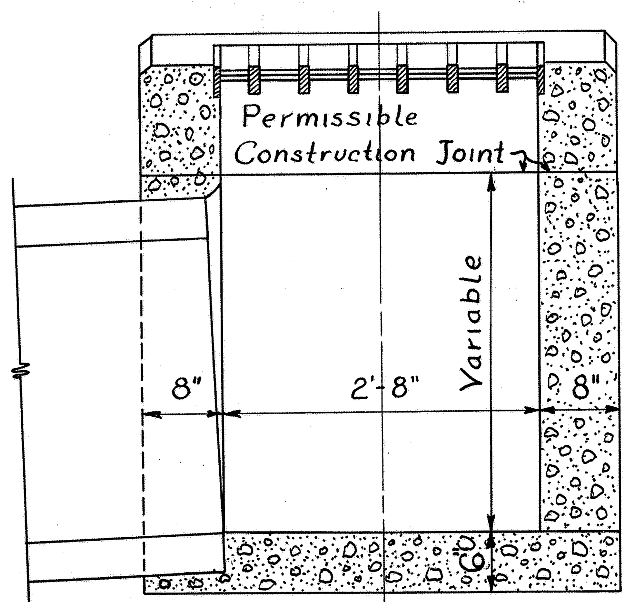
Note:
For Reinforcing and additional Details see Sheet No. 14 (Miscellaneous Details) under Type "C-1" Endwall for 54" Pipe Diameter



MODIFIED TYPE "C-1" ENDWALL

Sta. 332+00

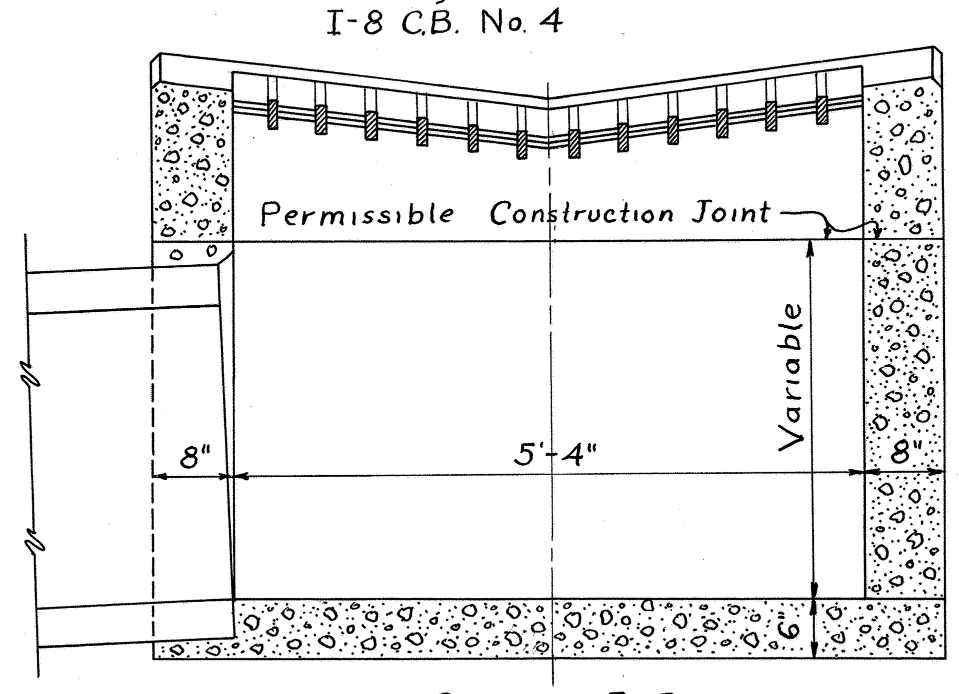
Note:
For additional details, see Ohio Standard Construction Drawings "Catch Basins" I-8 C.B. No. 5



MODIFIED NO. 5 CATCH BASIN

Station: 264+40 295+42 300+00

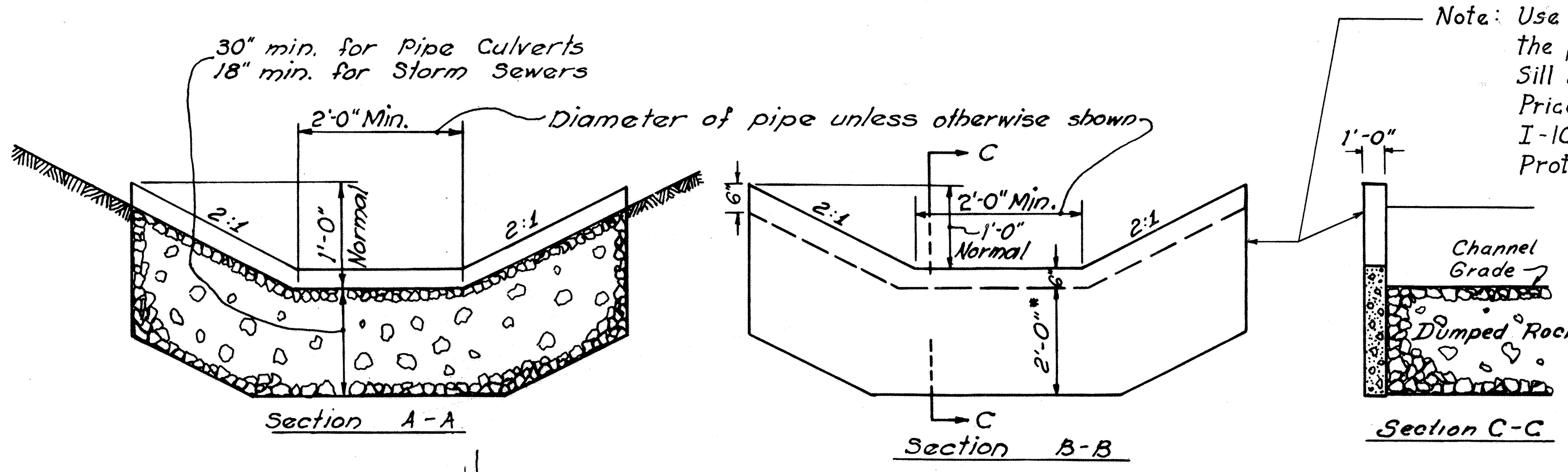
Note:
For additional details, see Ohio Standard Construction Drawings "Catch Basins" I-8 C.B. No. 4

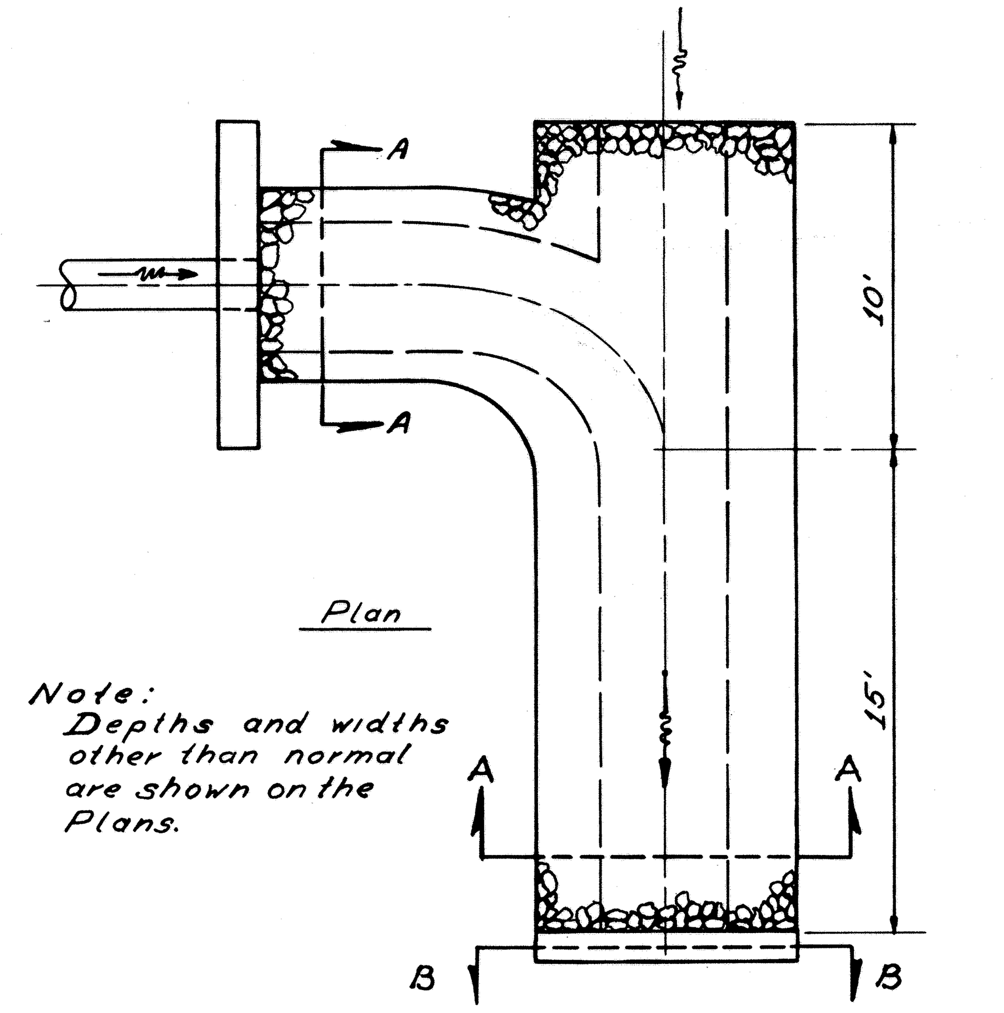


MODIFIED NO. 4 CATCH BASIN

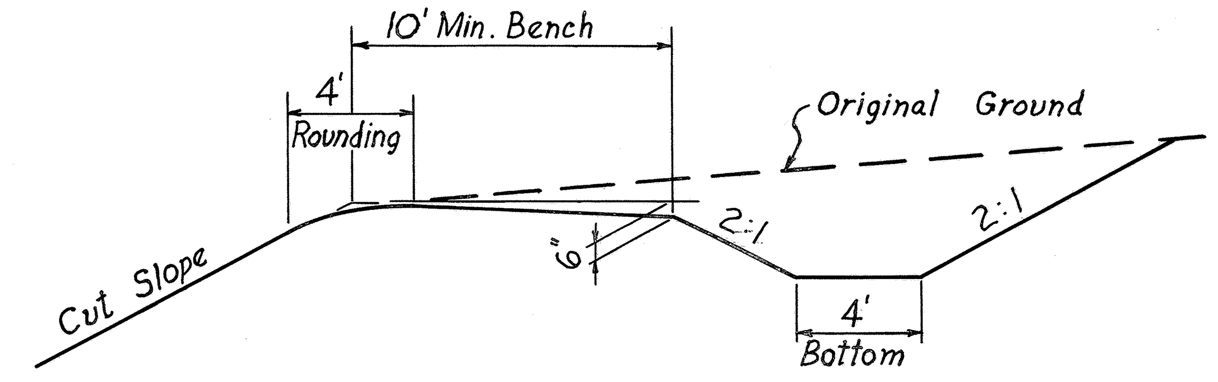
Station: 264+40 281+00 295+42 300+00 485+50

Note: Use End Sill only when shown on the plans. Payment for the End Sill shall be included in the Unit Price per Cu. Yd. bid for Item I-10, Dumped Rock Channel Protection.

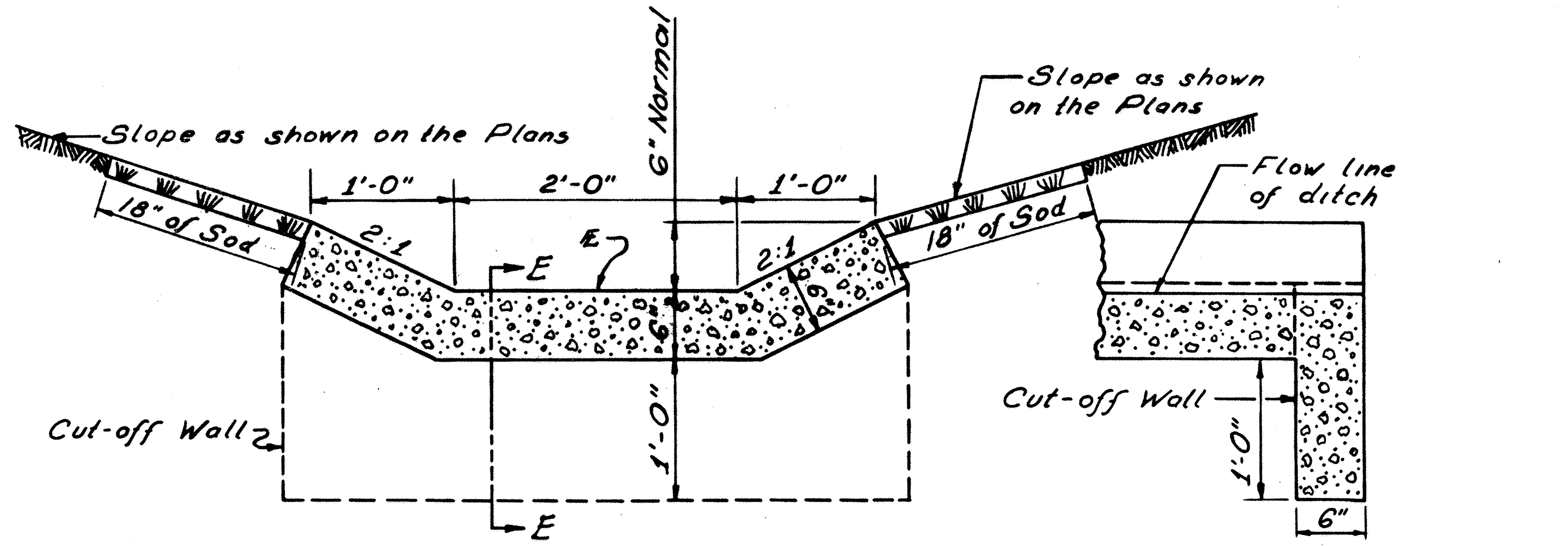




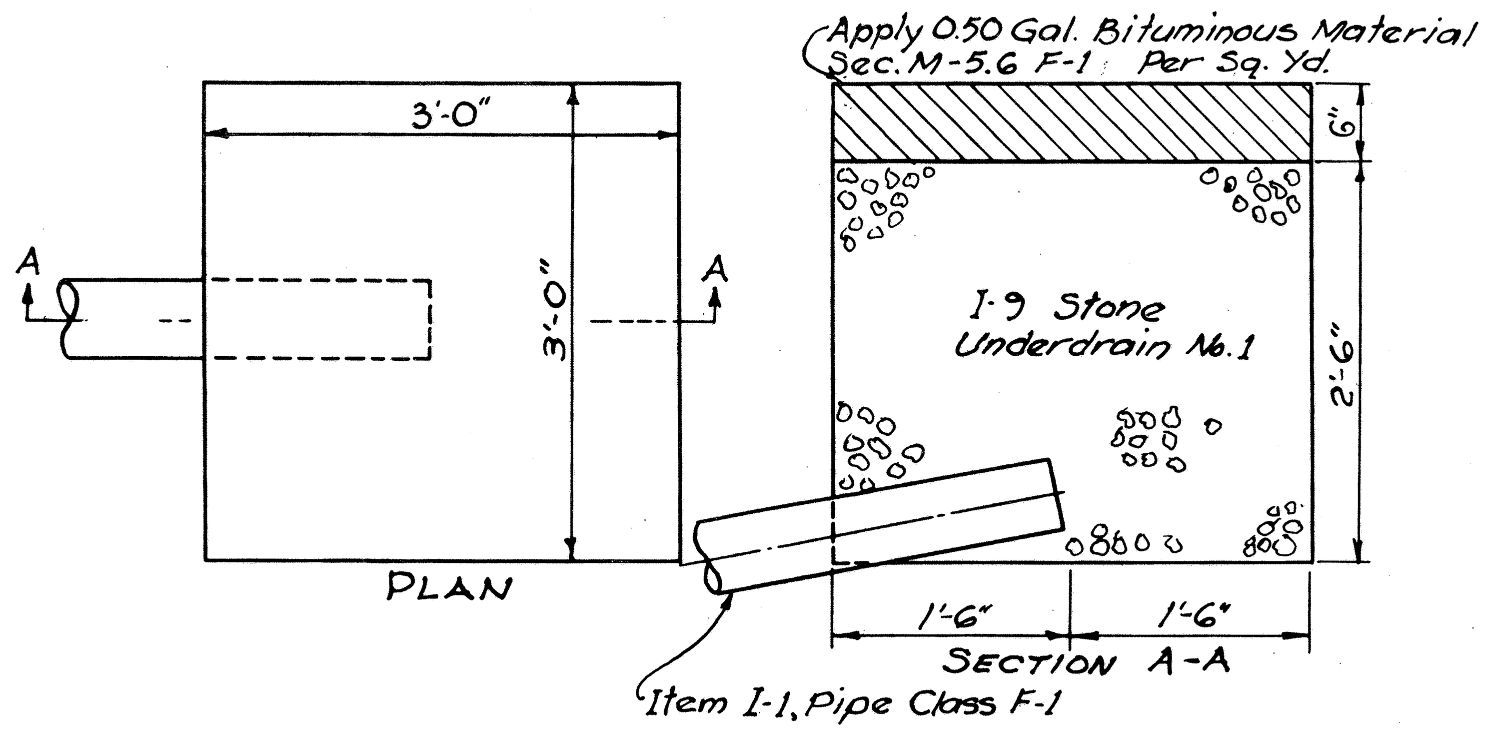
DUMPED ROCK CHANNEL PROTECTION



DITCH AT TOP OF CUT SLOPE

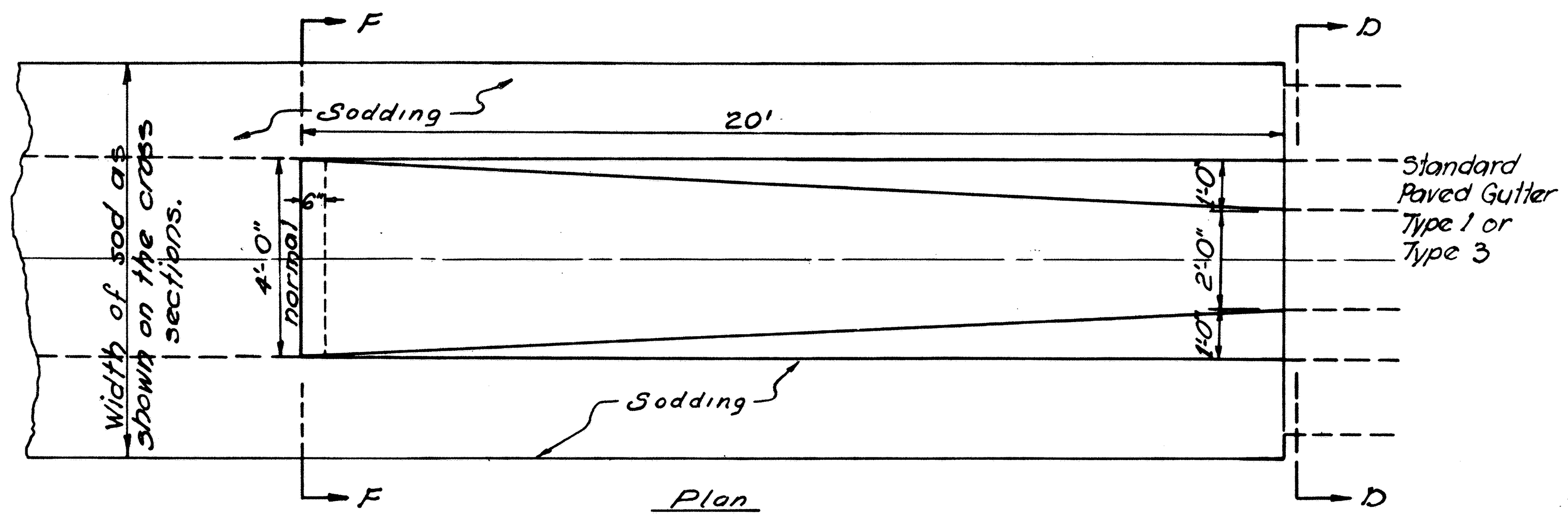


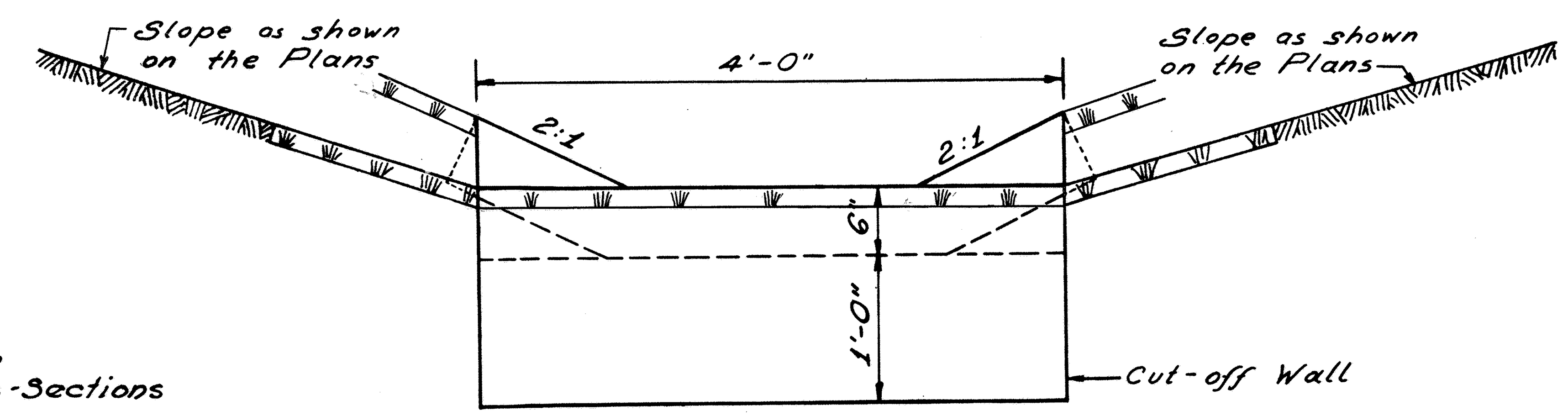
PAVED GUTTER



Note:
No. 34 Aggregate shall be used with a 6" layer of No. 6 Aggregate over the top and sealed with Bituminous Material.
Aggregates, Bituminous Material and necessary Excavation for Spring Drains shall be paid for at the Unit Price Bid Per Lin. Ft. of "Item I-9, Stone Underdrains, No. 1," as per plan. Spring Drains are to be placed at locations designated by the Engineer.
Estimated Quantities of I-9, Stone Underdrains, No. 1, and of 6" I-1 Pipe, Class F-1 are carried in the General Notes (Sheet No. 25) for draining springs. This Item shall be non-performed in the event that none are encountered.
A Spring Drain constitutes 3 lin. ft.

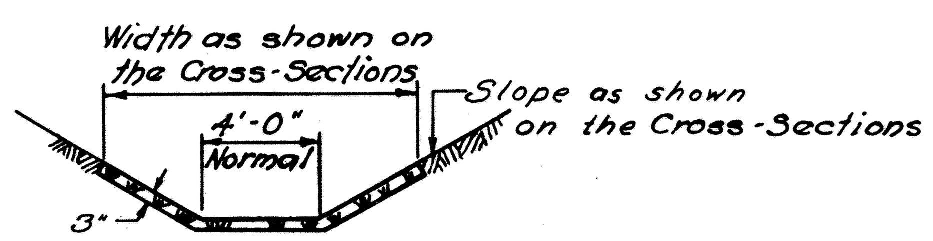
DETAIL SECTION SPRING DRAIN



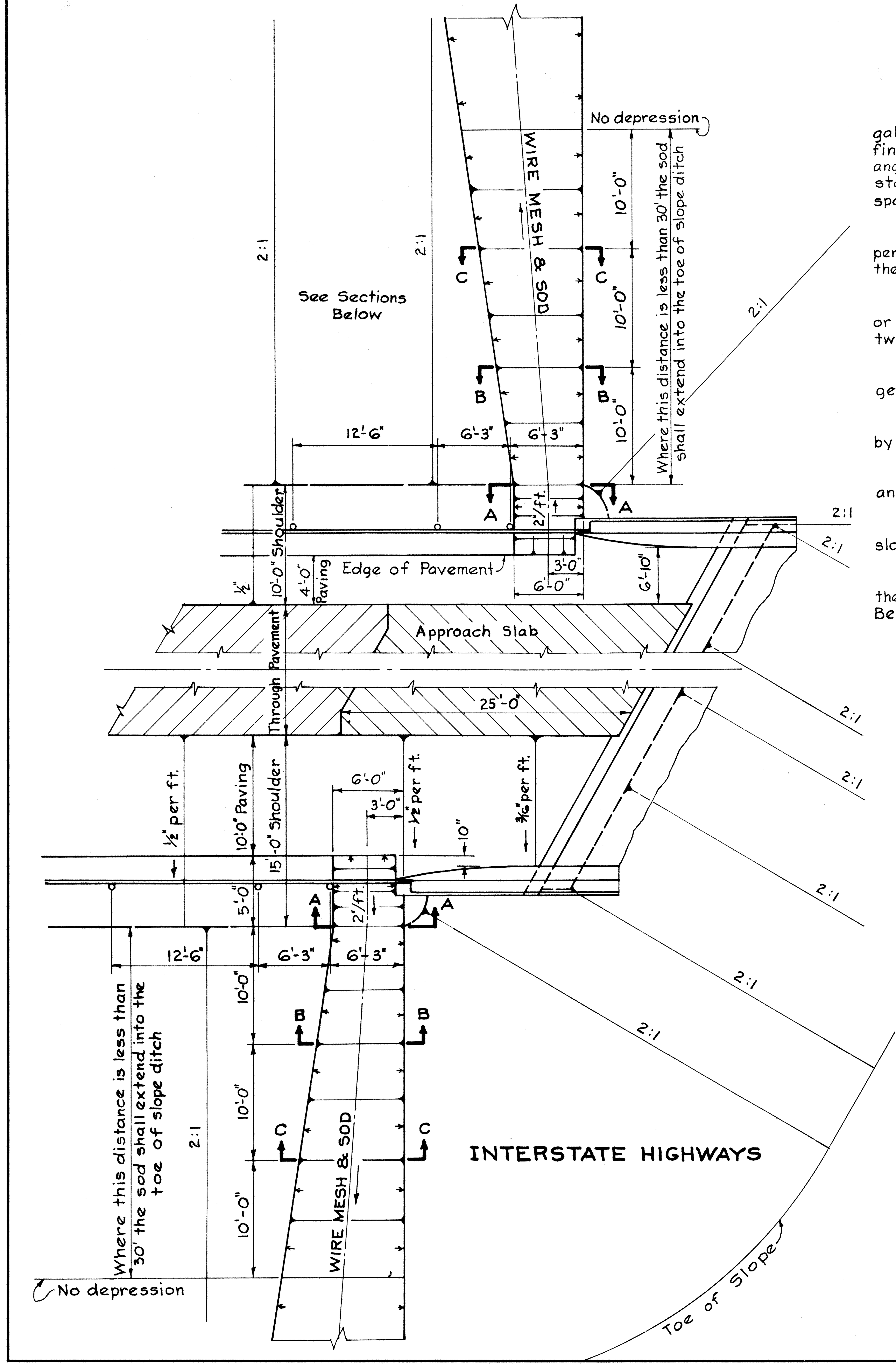


Section F-F

PAVED GUTTER TRANSITION



DITCH SODDING



SPECIAL BERM & SLOPE PROTECTION

Prior to placement of sod in the berm and slope galvanized poultry fence shall be placed on the finished grade in strands which shall be at right angles to the direction of flow. Each strand shall be staked securely on top and bottom with stakes spaced at four foot intervals.

Stakes shall be 1"×1"×8" wood stakes and shall be perpendicular to the ground and flush with the top of the sod.

The fence shall be Straight Line Poultry Fence or equivalent with strand width of four feet, having a two inch mesh and all wires No. 20 Gauge.

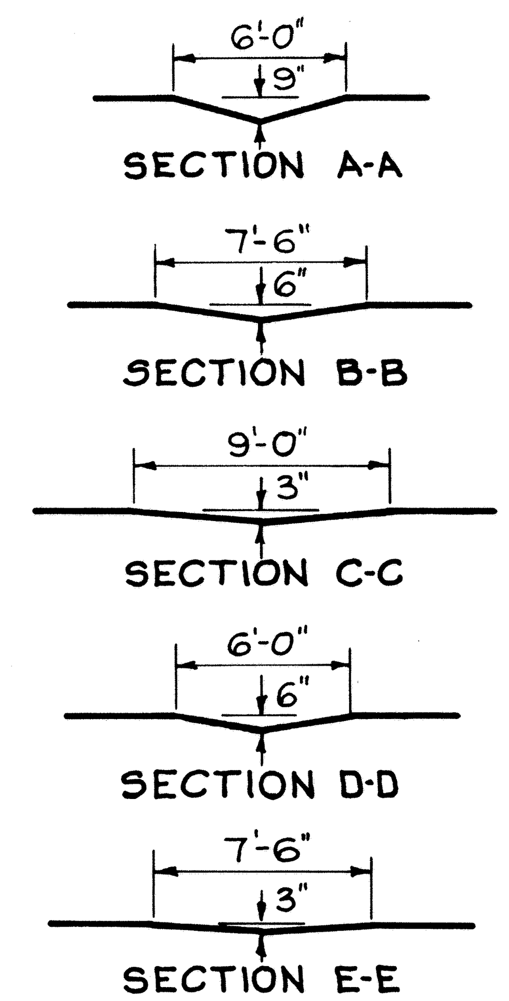
The strands of fencing shall be fastened together at twelve inch intervals by means of hog rings.

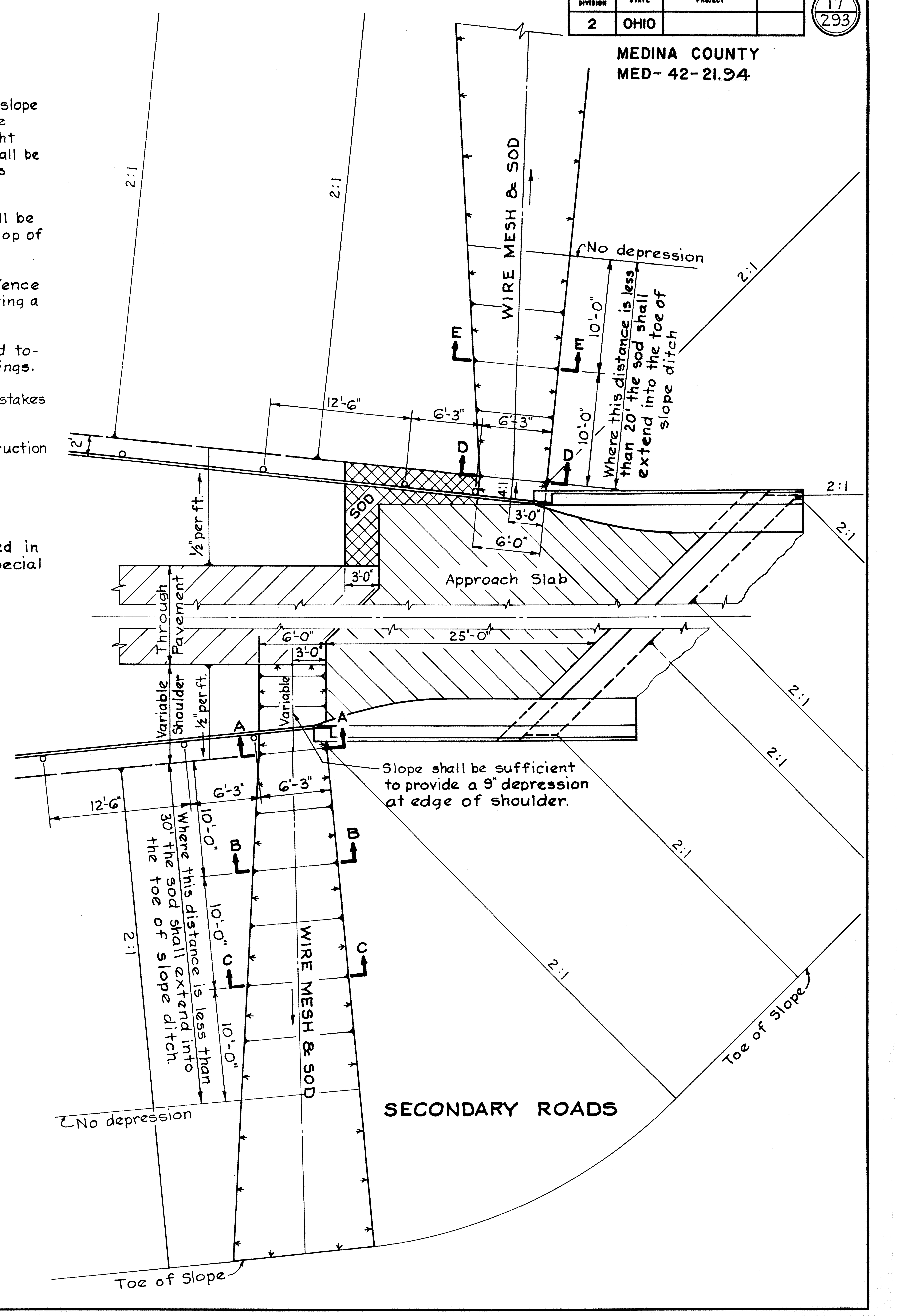
The fence shall be secured to the wood stakes by metal staples.

Sod shall be laid in accordance with Construction and Materials Specifications Section L-10.07.

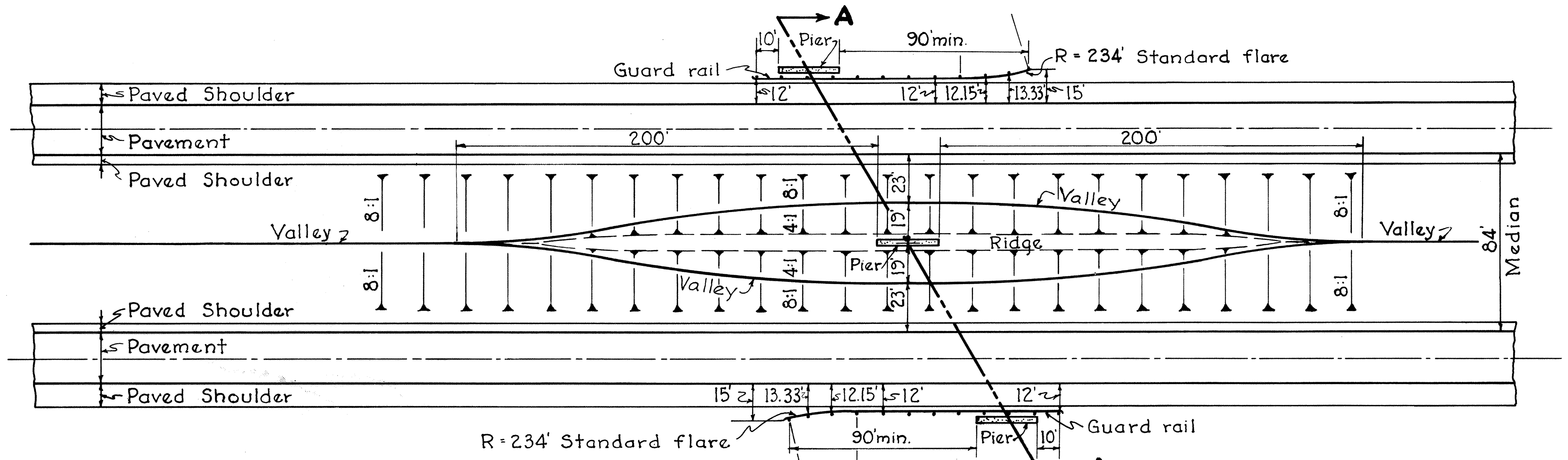
This item is required only where fill slope is steeper than 6 to 1.

Payment for all the above shall be included in the unit price bid for Item L-10 Sodding for Special Berm and Slope Protection.

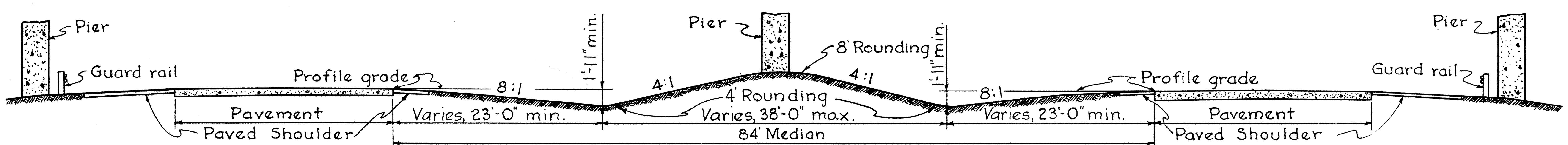




PIER PROTECTION

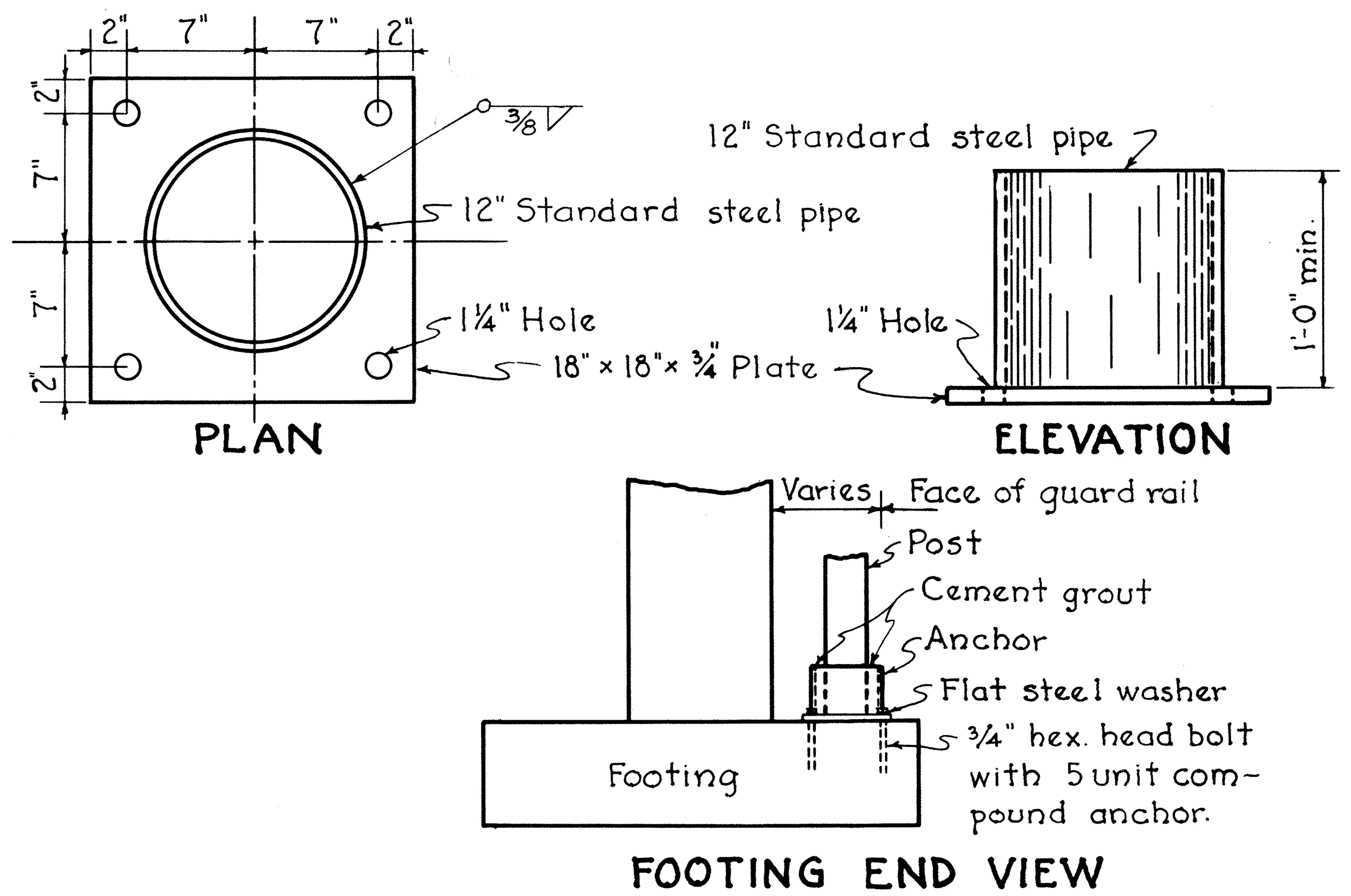


PLAN
Scale: 1" = 40'



SECTION A-A
Scale: 1/8" = 1'-0

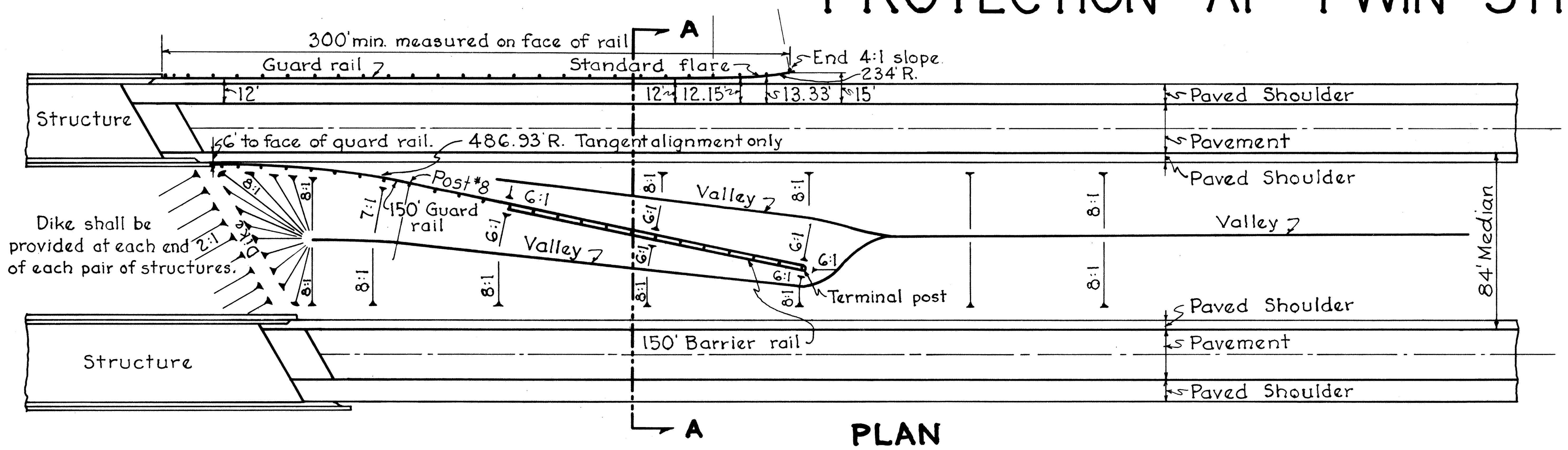
Footing anchor to be used where posts are over footings and less than 3'-0" of earth is provided above the top of footing.



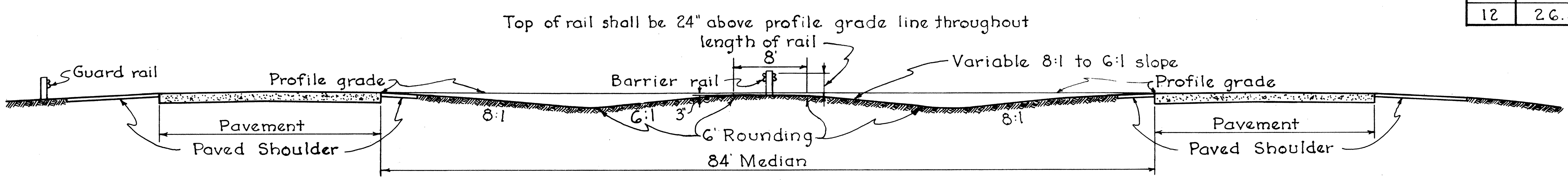
FOOTING ANCHOR

The cost of providing and installing necessary footing anchors shall be included in the unit price bid per linear foot for Item I-15, Guard Rails.

PROTECTION AT TWIN STRUCTURES



PLAN
Scale: 1" = 40'



SECTION A-A
Scale: 1/8" = 1'-0

DISTANCE BETWEEN EDGE OF PAVEMENT AND FACE OF GUARD RAIL

POST	OFFSET	POST	OFFSET
1/2	6.04	13	28.97
1	6.16	14	31.52
2	6.64	15	34.07
3	7.44	16	36.62
4	8.57	17	39.16
5	10.01	18	41.71
6	11.77	19	44.26
7	13.84	20	46.81
8	16.23	21	49.36
9	18.78	22	51.90
10	21.33	23	54.45
11	23.87	24	57.00
12	26.42		

NOTES

GENERAL: Design Details shown on this sheet shall govern the construction of guard rail at structures unless otherwise shown on the plans.

One additional guard rail post shall be provided in the center of the first panel of steel beam deep guard rail next to the bridge parapet. The cost of the additional post shall be included in the unit price bid per linear foot for Item I-15, Guard Rails.

Offsets for guard rail are based upon the use of 6 ft. offset to median parapet and 15 ft. width of outside shoulder. If other shoulder widths are used the offsets shall be adjusted accordingly.

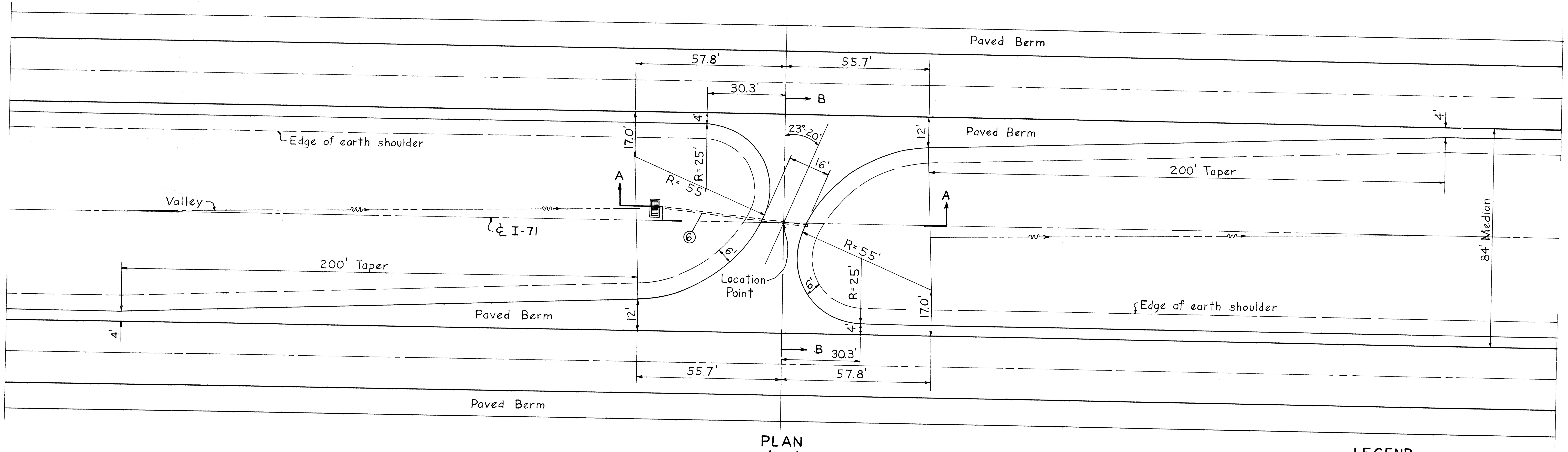
Where proposed guard rail flares are constructed of rail elements which have not been fabricated exactly to fit the curvature shown on the plans, the two end posts of each flared section shall be encased a minimum 4-inch thickness of Class "E" concrete for the full depth of the post below the ground line. Payment for encasement, if required, shall be included in the unit price bid per linear foot for Item I-15, Guard Rails.

STANDARD U-TURN MEDIAN OPENINGS

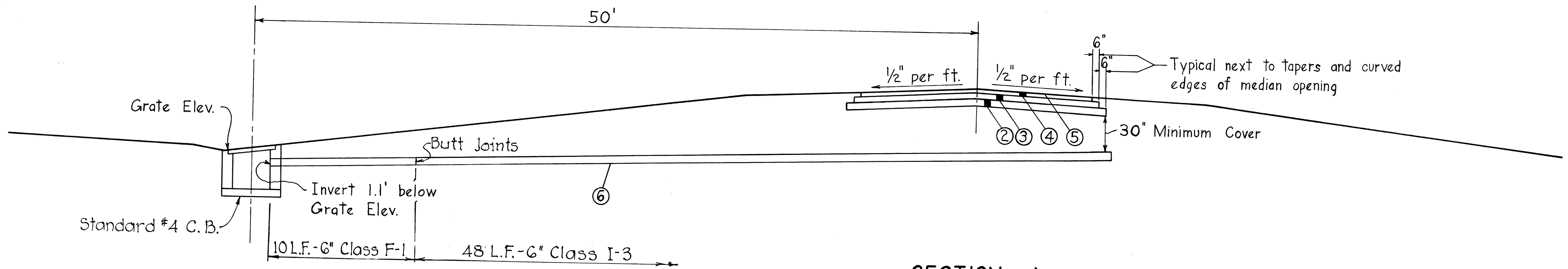
FED. RD. DIVISION	STATE	PROJECT		
2	OHIO			

19
293

MEDINA COUNTY
MED-42-21.94



PLAN
1" = 20'

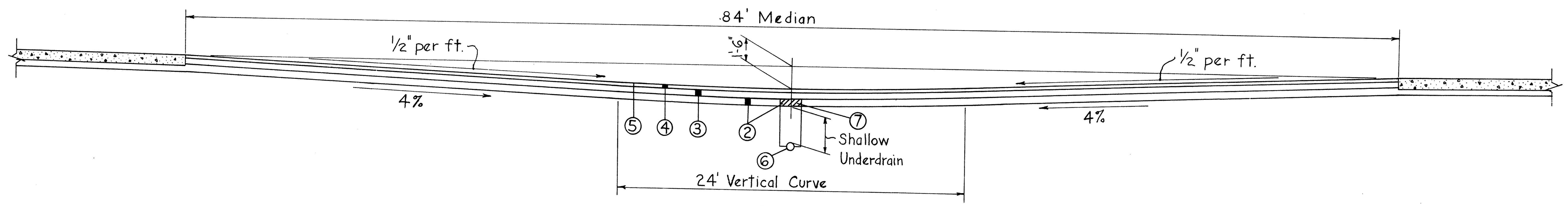


SECTION A
1" = 5'

LEGEND

② Item I-22 — 6" Subbase, Grading "A" or "B", modified as per General Note.
③ Item B-112 — 6½" Porous Base Course.
④ Item B-21 — ✱ 3" Waterproofed Aggregate Base Course (Type "A" T-35 Material may be used in construction of this course – See note in Proposal).
⑤ Item T-31 — Bituminous Surface Treatment using 0.008 Cu. Yd. № 6 aggregate per Sq. Yd. and 0.25 Gal. bituminous material per Sq. Yd. (See note in Proposal).
⑥ Item I-1 — 6" Pipe, Class I-3 and Class F-1 as shown.
⑦ Remove subbase for width of Item I-1 trench and replace with either Class 3 backfill or with porous base material immediately prior to placing the Item B-112 Porous Base Course. Cost shall be included in price bid per lin. ft. for Item I-1.

✱ Thickness shown is design thickness as described in Sec. B-21.01

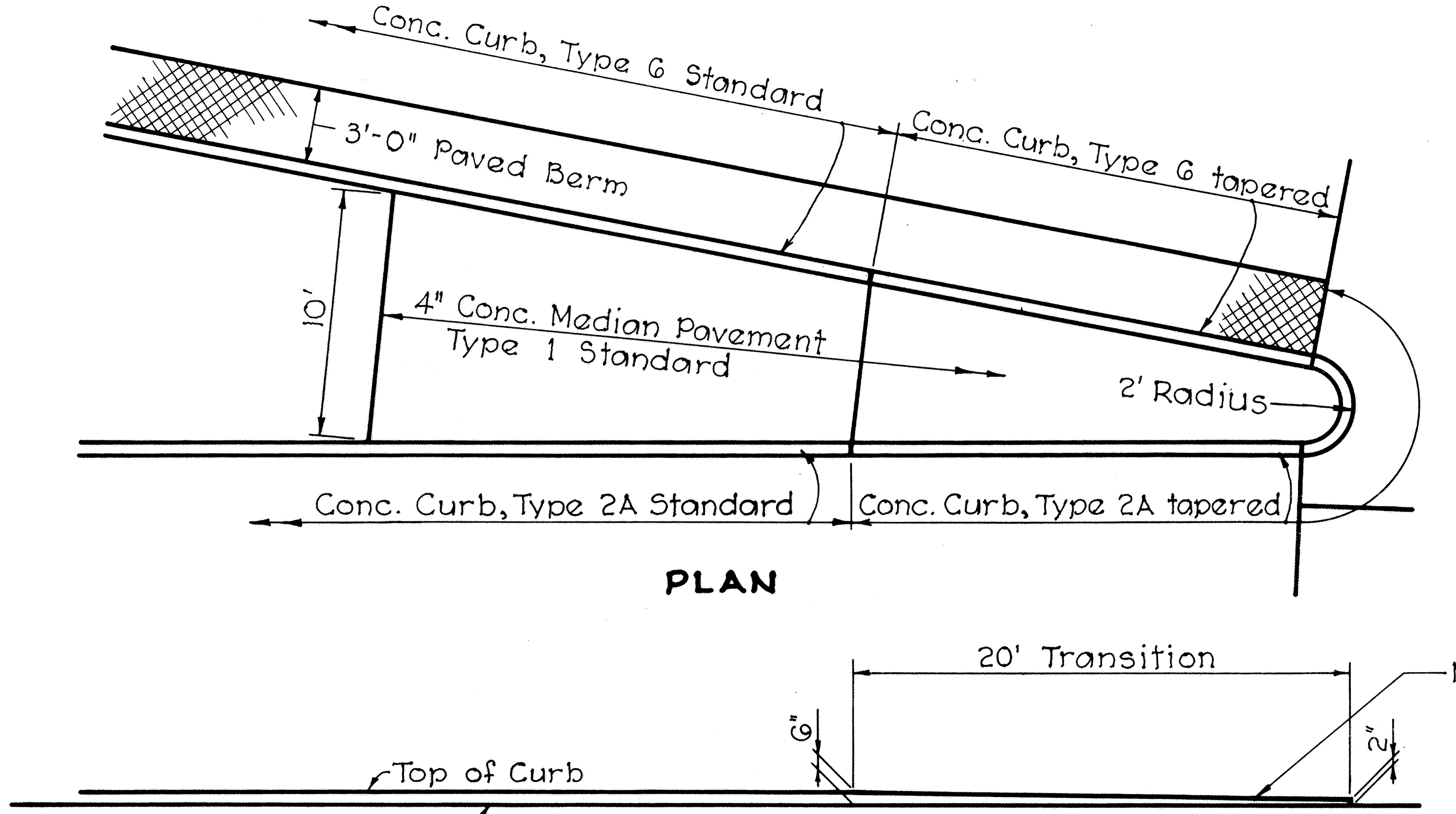


SECTION B
1" = 5'

Quantities req'd. for one U-Turn Median Opening between the normal 4'-0" paved berms for the through roadways:

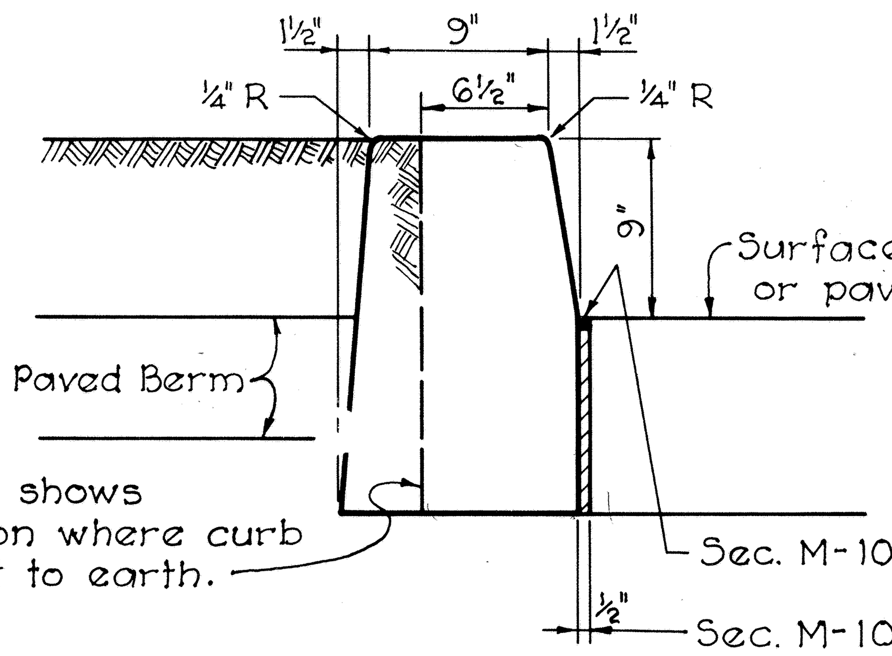
Item I-22	96 C.Y.
Item B-112	98 C.Y.
Item I-1, Class I-3	48 L.F.
Item I-1, Class F-1	10 L.F.
Item T-31 } Item B-21 }	508 S.Y. - carry to Calculation Sheet for conversion to Proposal units.

LOCATION POINTS:
Sta. 309+50
Sta. 378+50



Note: Taper nose curb as shown. Payment for the tapered curbs shall be made at the unit price bid per linear foot for Conc. Curb, Type G Standard or Type 2A Standard.

NOSE DETAIL
Scale: 1" = 5'



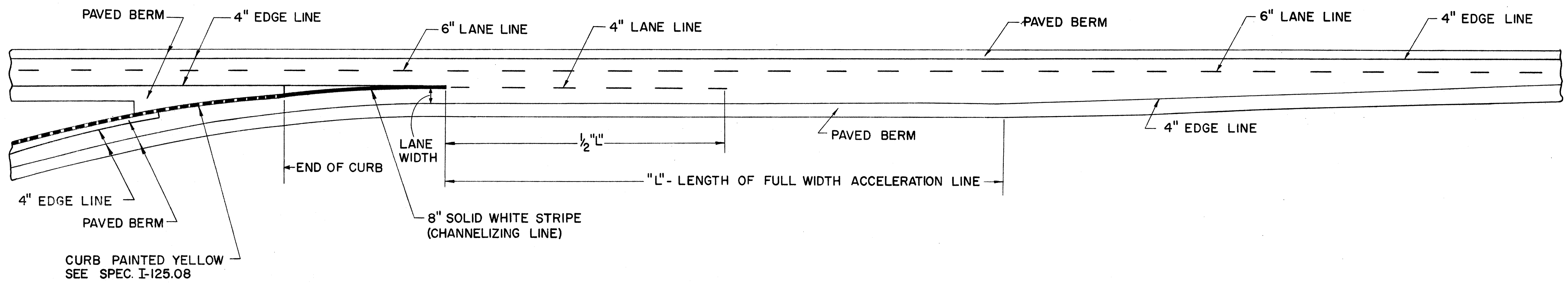
SPECIAL BARRIER CURB DETAIL
Scale: 1½" = 1'-0"

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

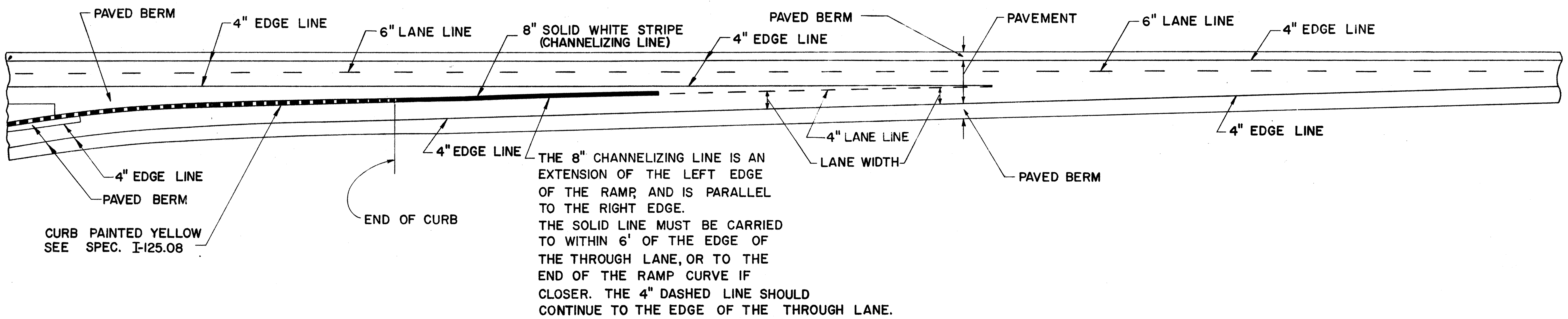
21
293

MEDINA COUNTY
MED-42-21.94

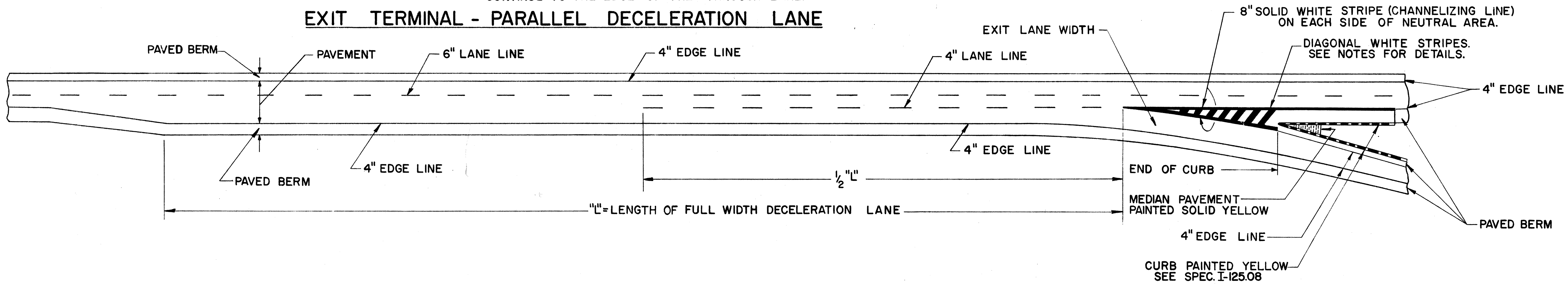
ENTRANCE TERMINAL - PARALLEL ACCELERATION LANE



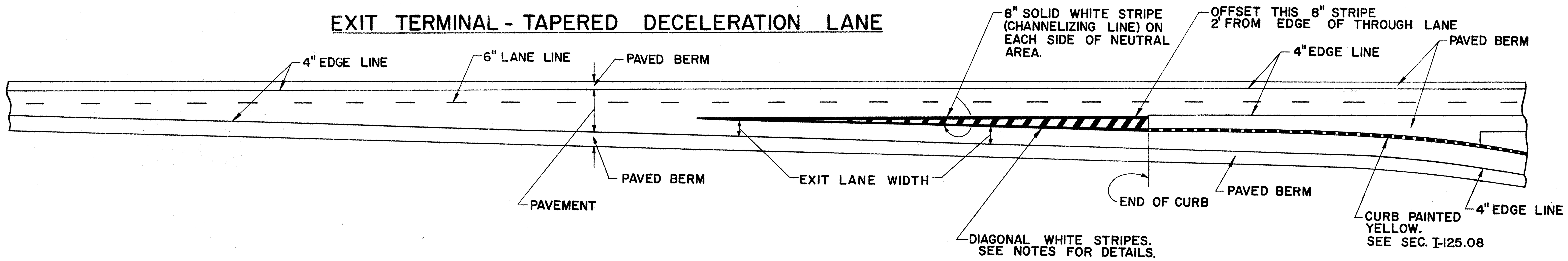
ENTRANCE TERMINAL - TAPERED ACCELERATION LANE



EXIT TERMINAL - PARALLEL DECELERATION LANE



EXIT TERMINAL - TAPERED DECELERATION LANE



NOTES

<u>EDGE LINES</u> SHALL BE PLACED IN THE LOCATIONS AS SHOWN TO CONFORM TO SUPPLEMENTAL SPECIFICATION No. I-125 AND DEFINED IN SECTION I-125.06.

<u>LANE LINES</u> SHALL BE PLACED IN THE LOCATIONS AS SHOWN TO CONFORM TO SUPPLEMENTAL SPECIFICATION No. I-125 AND DEFINED IN SECTION I-125.07.

<u>CHANNELIZING LINES</u> SHALL BE CONTINUOUS WHITE BEADED STRIPES 8" IN WIDTH PLACED IN THE LOCATIONS AS SHOWN TO CONFORM TO SUPPLEMENTAL SPECIFICATION No. I-125 AND DEFINED IN SECTION I-125.07 b.

<u>DIAGONAL STRIPES IN EXIT RAMP MARKINGS</u> SHALL BE 2' WIDE WHITE BEADED STRIPES SET AT A 45° ANGLE TO THE CENTER LINE OF THE THROUGH PAVEMENT AND SLANTED IN THE DIRECTION OF THE FLOW OF TRAFFIC ON SAID PAVEMENT. SPACE BETWEEN THE 2' DIAGONAL STRIPES SHALL BE 6' AS MEASURED PARALLEL TO THE CENTER LINE OF THE THROUGH PAVEMENT. PAINT ON THE DIAGONAL STRIPES SHALL BE APPLIED AT THE RATE OF ONE GALLON TO EACH 100 SQUARE FEET AND GLASS BEADS SHALL BE APPLIED AT THE RATE OF SIX POUNDS PER GALLON OF PAINT. DIAGONAL WHITE STRIPES SHALL BE PLACED BETWEEN THE TWO 8" WHITE CHANNELIZING LINES AT EXIT RAMPS AS SHOWN TO CONFORM TO SUPPLEMENTAL SPECIFICATION No. I-125 AND DEFINED IN SECTION I-125.07 c.

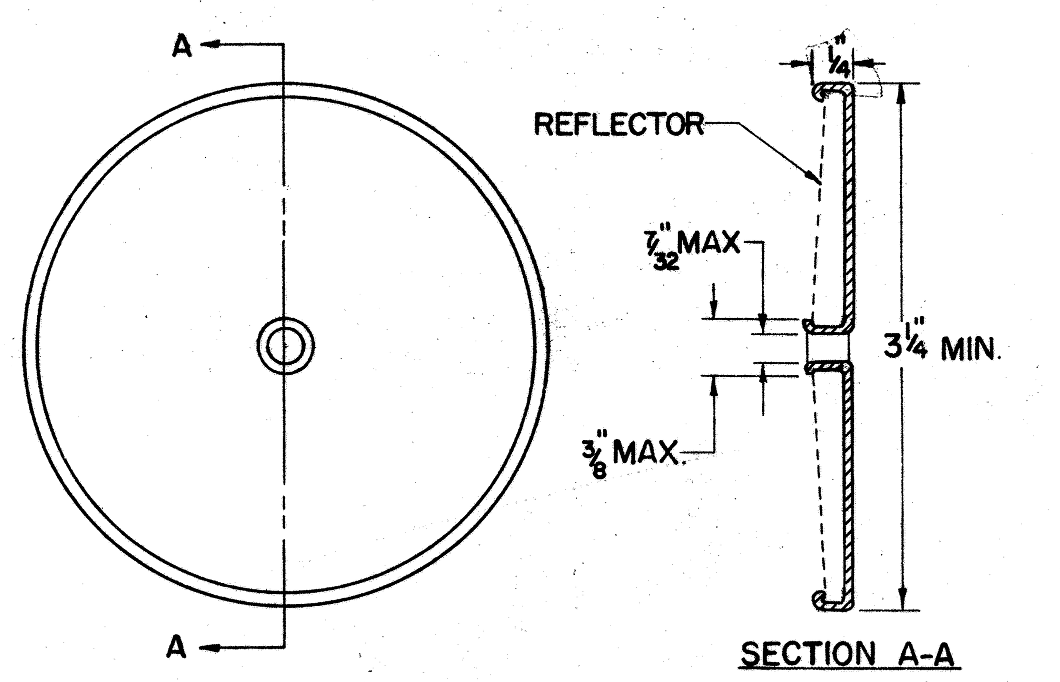
BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

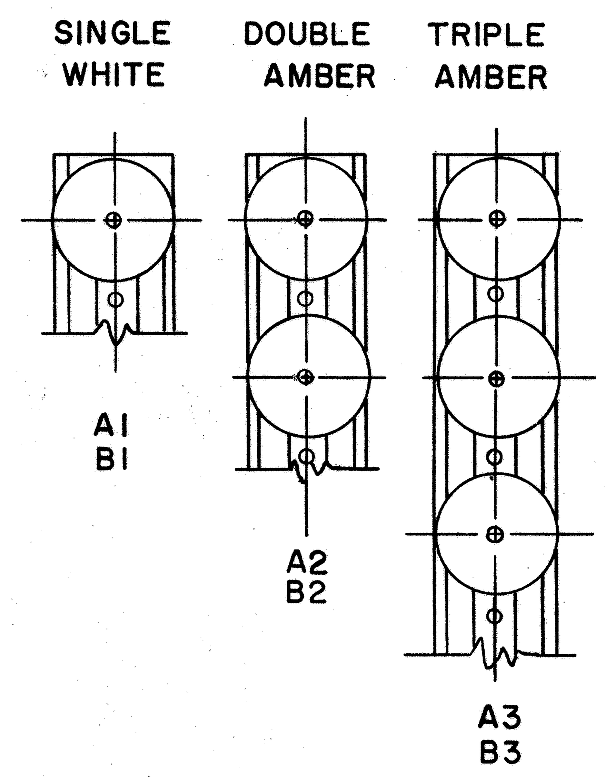
PAVEMENT MARKING	PM-1	DATE 7-17-61 4-6-62

APPROVED Robert E. Lower
ENGINEER OF TRAFFIC

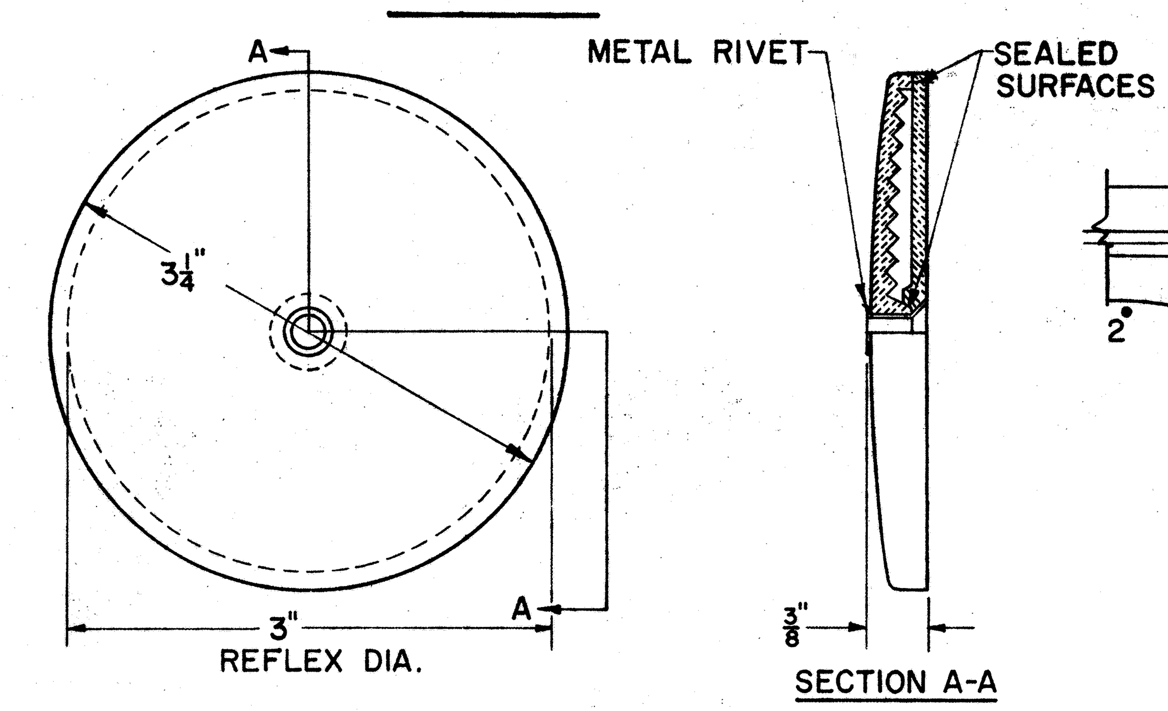
MEDINA COUNTY
MED-42-21.94

TYPE A

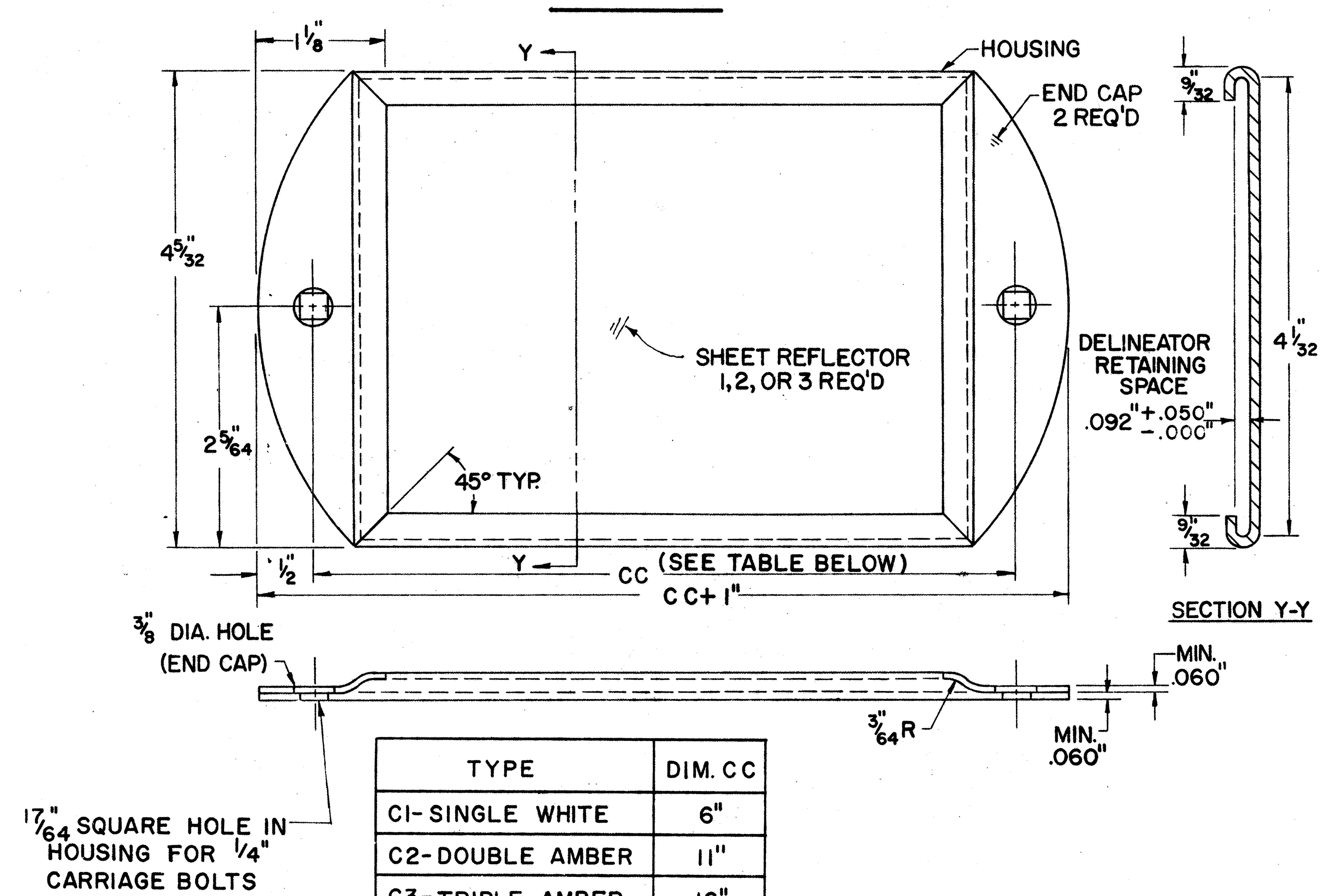




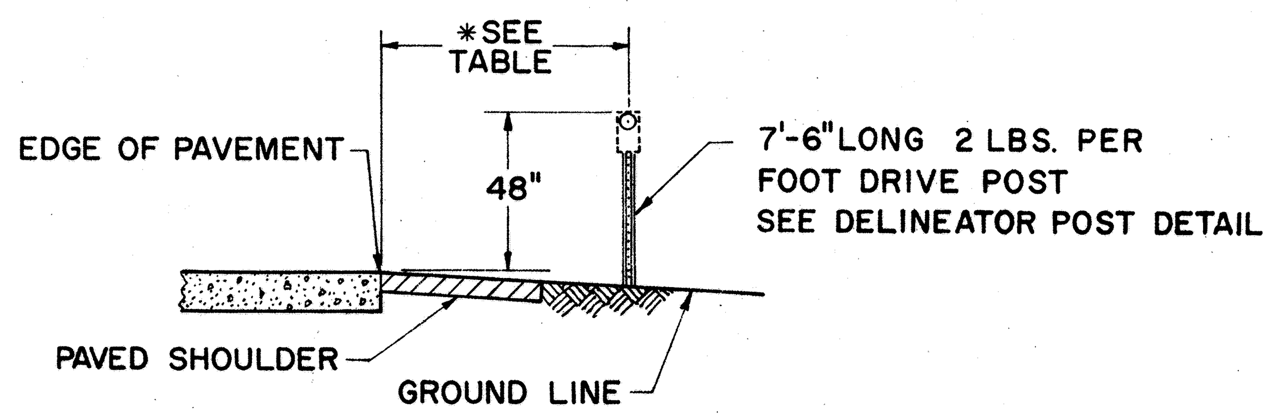
TYPE B



TYPE C



TYPE	DIM. CC
C1- SINGLE WHITE	6"
C2- DOUBLE AMBER	11"
C3- TRIPLE AMBER	16"

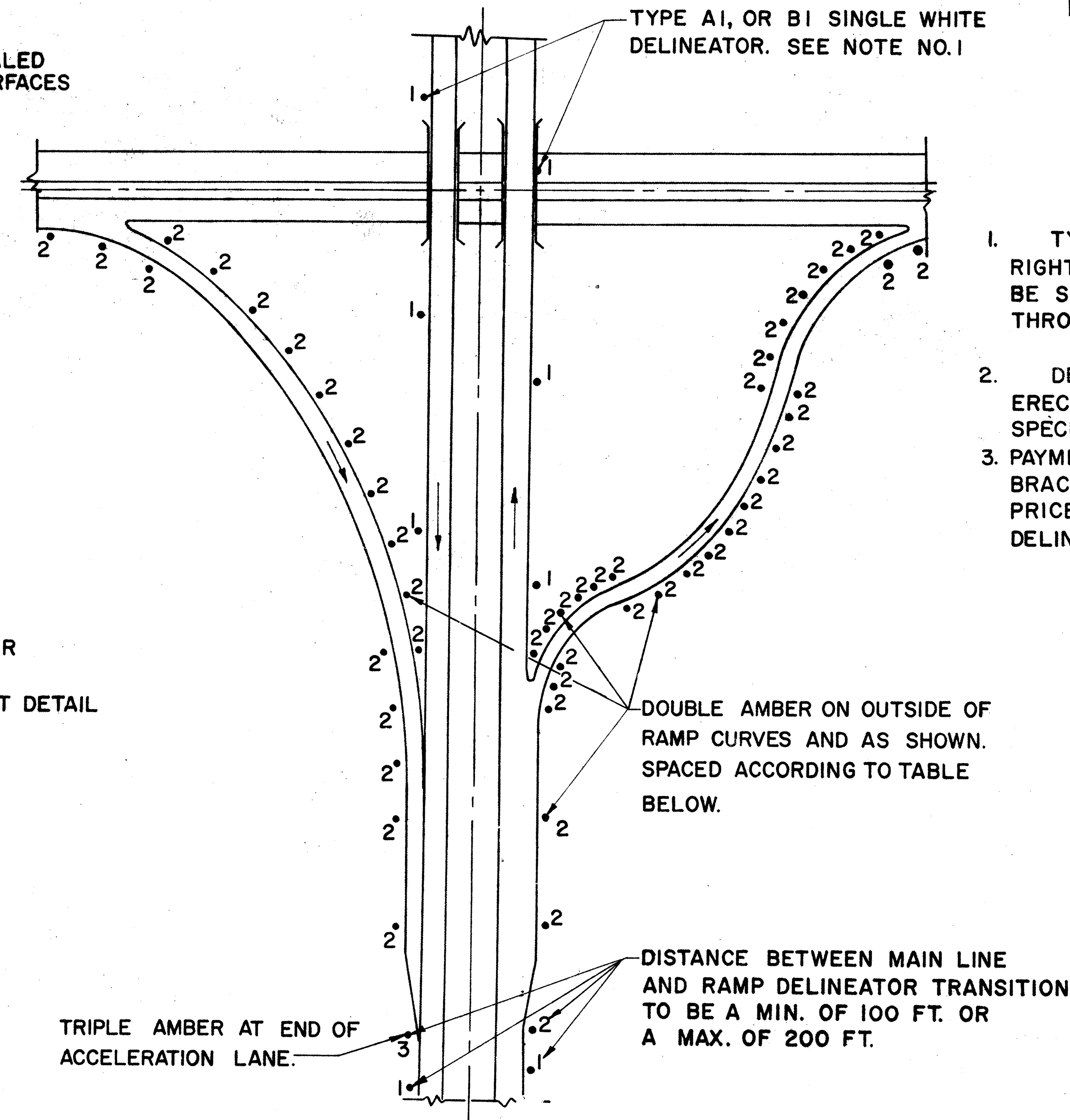


LATERAL PLACEMENT OF DELINEATORS

* TABLE

TYPE DELINEATOR	NO GUARDRAIL	GUARDRAIL
SINGLE WHITE	12'-6"	6" OUTSIDE
DOUBLE AMBER RIGHT SIDE	** 8'-6"	6" OUTSIDE
DOUBLE AMBER LEFT SIDE	4'-6"	6" OUTSIDE
TRIPLE AMBER	12'-6"	6" OUTSIDE

** THIS DIMENSION SHALL VARY ON SPEED CHANGE LANES TO MAINTAIN MINIMUM DISTANCE OF 2'-6" FROM EDGE OF PAVED SHOULDER.



TYPICAL DELINEATOR USE

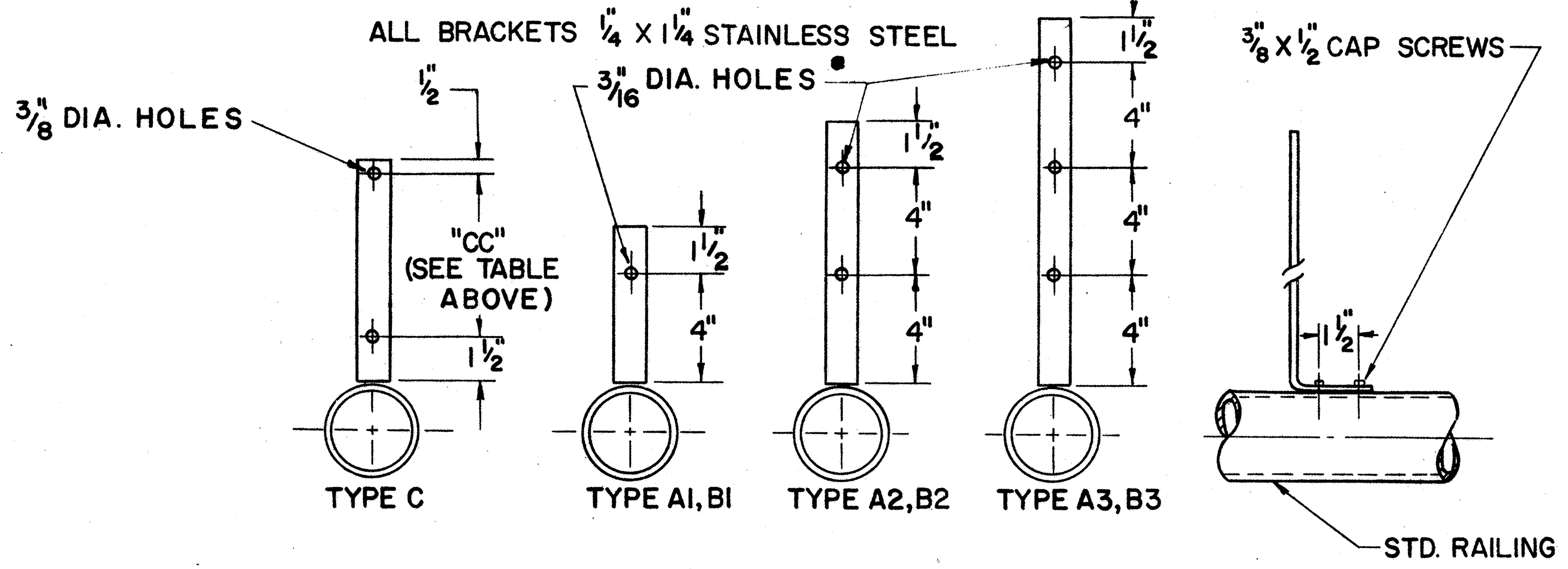
NOTES

1. TYPE A1 OR B1 DELINEATORS ON THE RIGHT OF THE THROUGH ROADWAY ARE TO BE SPACED AT 200 FT. INTERVALS THROUGHOUT, REGARDLESS OF CURVES.
2. DELINEATORS SHALL BE FURNISHED AND ERECTED IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION NO. I-127, (1-15-62).
3. PAYMENT FOR SUPPORTS (DRIVEPOST OR BRACKET) SHALL BE INCLUDED IN THE UNIT PRICE BID PER EACH FOR "ITEM I-127 DELINEATORS".

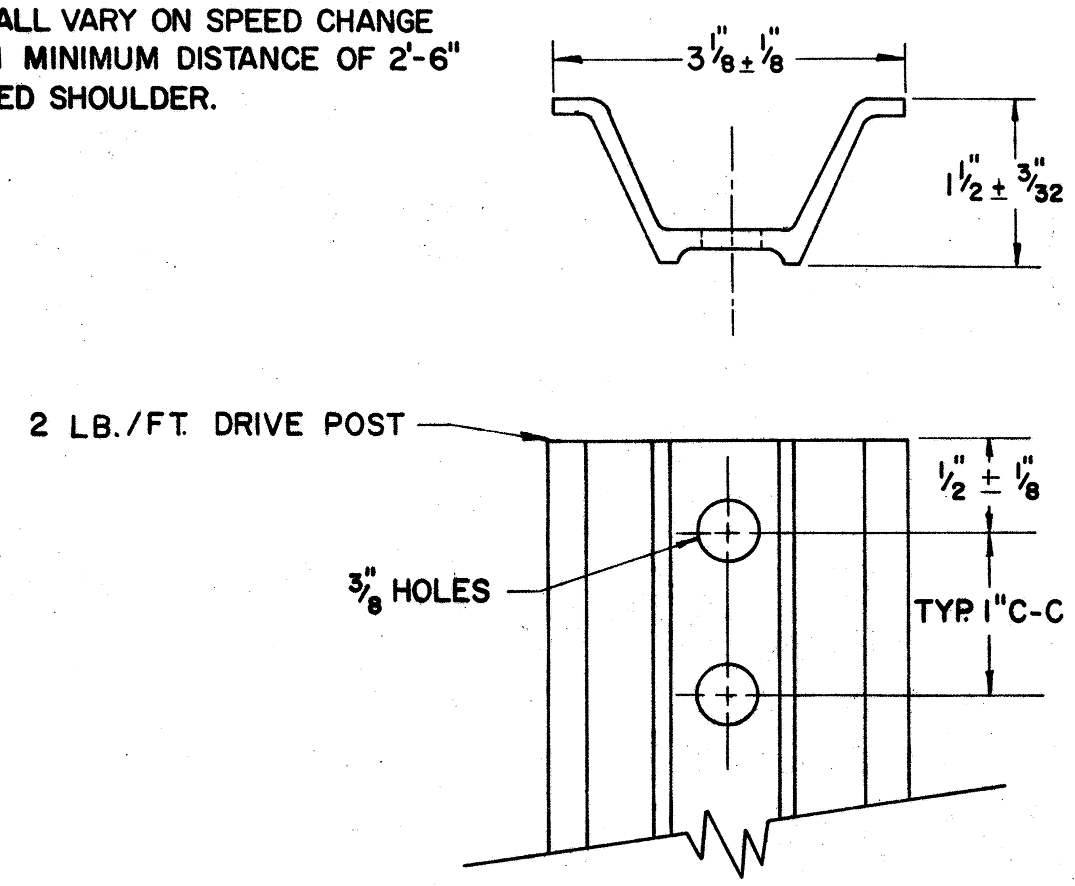
DELINEATOR SPACING ON RAMP HORIZONTAL CURVES

RADII, FT. FROM	TO	SPACING ON CURVE	SPACING 1ST SPACE*
TANGENT	2,276	100'	100'
2,275	1,801	90'	100'
1,800	1,401	80'	100'
1,400	1,001	70'	100'
1,000	751	60'	100'
750	551	50'	80'
550	326	40'	70'
325	——	30'	60'

* FIRST SPACE IN ADVANCE AND BEYOND CURVE.



BRIDGE RAIL BRACKET



DELINEATOR POST

BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

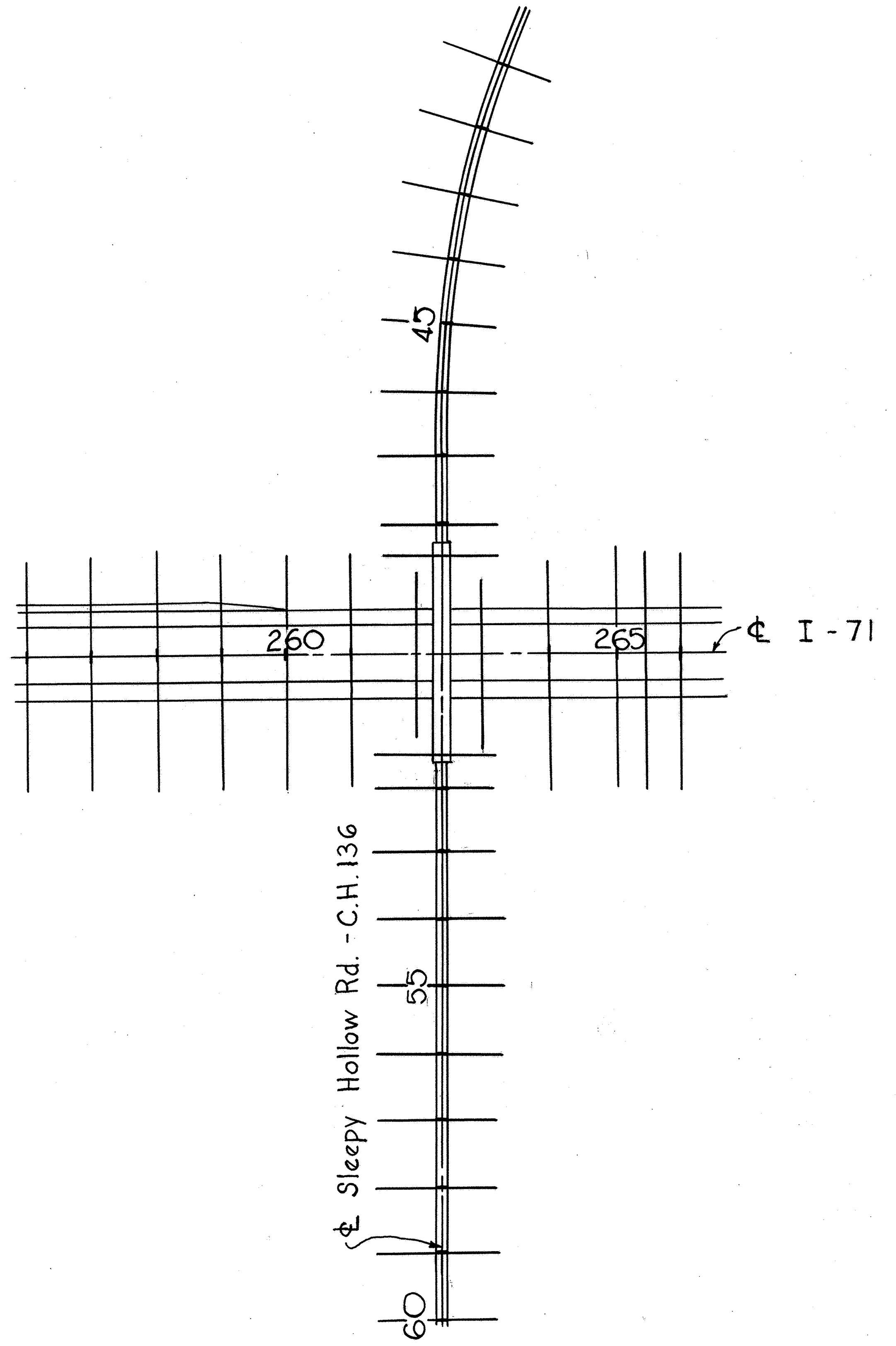
DELINEATOR DETAILS	I-127	DATE 12-27-61 1-15-62 5-14-62 7-25-62

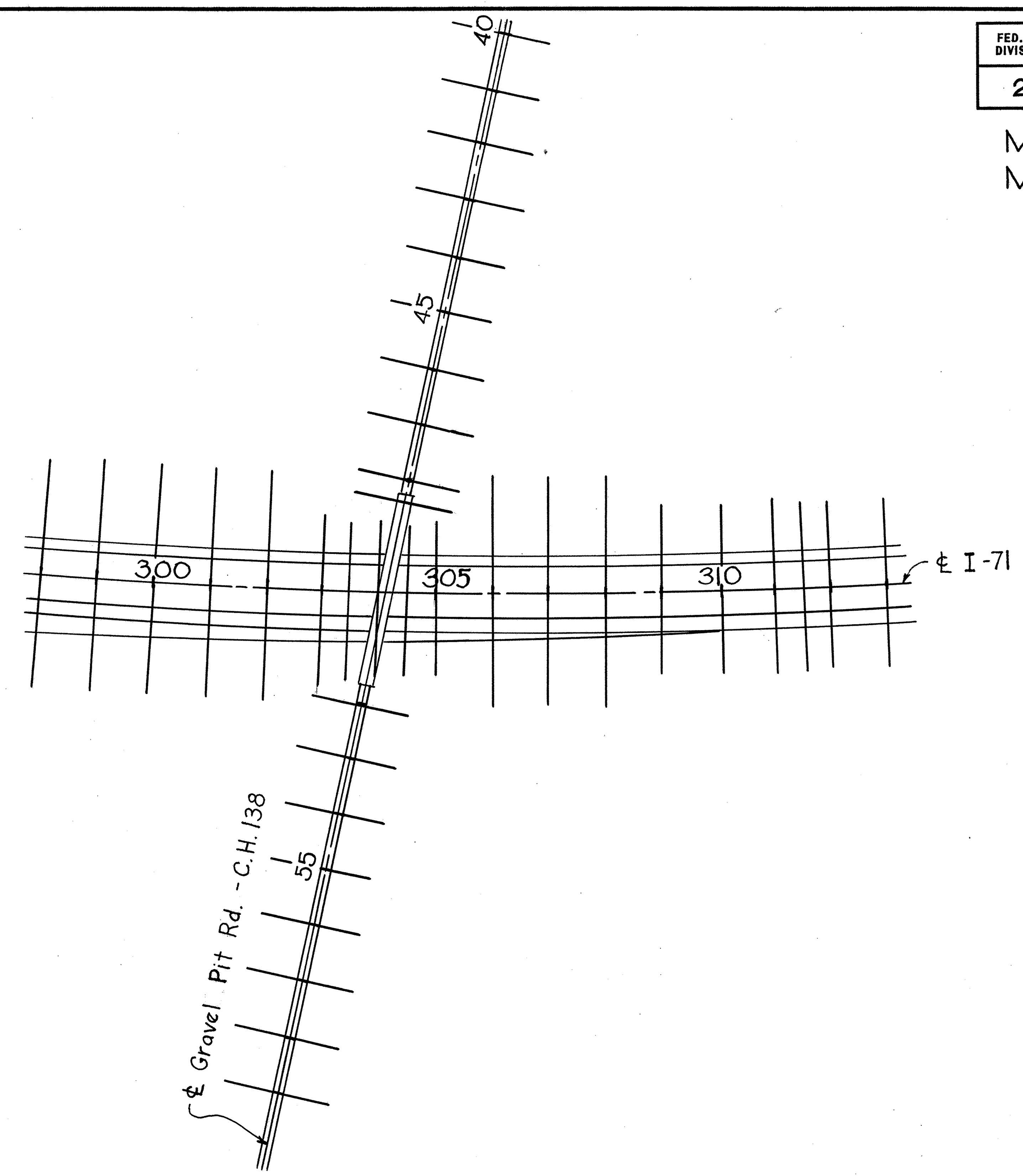
APPROVED Robert E. Conner
ENGINEER OF TRAFFIC

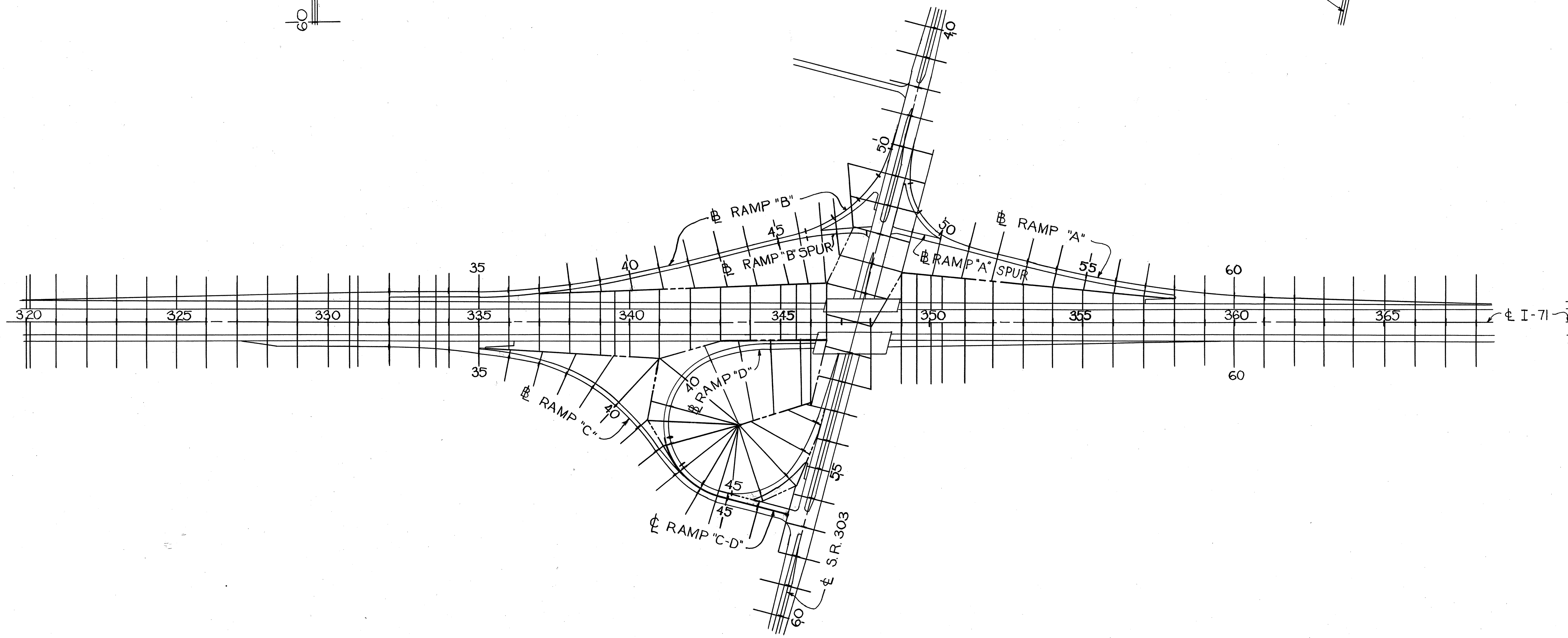
MEDINA COUNTY
MED - 42 - 21.94

CROSS SECTION LAYOUT

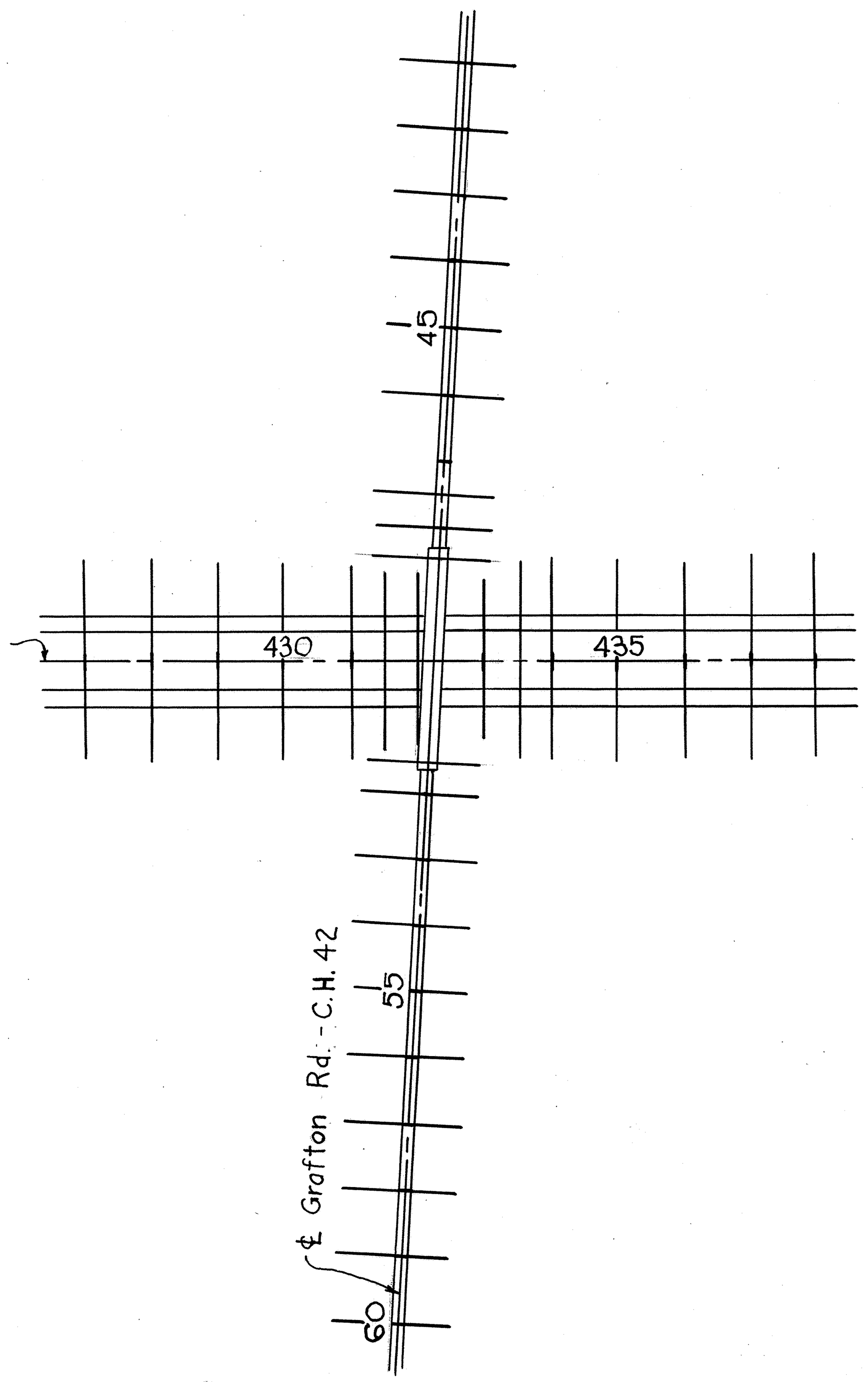
1" = 200'







S.R. 303 INTERCHANGE



GENERAL NOTES

DESIGN SPEED: The geometrics for this project have been planned for a design speed of 70 miles per hour.

ELEVATION DATUM: All elevations are based on U.S.G.S. datum.

FIELD OFFICE: The Contractor shall, in accordance with Section S-0.01(b), provide for the exclusive use of the States employees, a suitable field office having a minimum of 500 sq. ft. of floor space. The Contractor shall have a telephone installed and maintained in this field office during the constution of this project.

The Contractor shall also provide install wiring and outlets suitable for connecting electric lights and office equipment in the field office and provide 110-volt alternating current to the office during the entire period of construction of this project. Sanitary facilities, suitable to the Engineer shall be provided and maintained during the course of construction.

Field office shall be situated so that it can remain during the life of the Contract unless otherwise authorized by the Engineer.

REMOVAL OF TREES AND STUMPS: Trees and stumps shall be removed from right-of-way fence to right-of-way fence along the Interstate Highway unless marked by the Engineer to remain. On the intersecting highways, trees and stumps shall be removed within the construction limits.

The number of trees and stumps shown below to be removed is approximate only and the State of Ohio reserves the right to order the removal of additional trees or stumps if they so desire. Payment for the removal of any additional trees or stumps shall be included in the lump sum bid for Item E-9, Removal of Trees and Stumps.

The number and size of trees and stumps to be removed are estimated below :

Sizes	No. Trees	No. Stumps
12" - 18"	1,900	100
18" - 24"	300	20
24" - 30"	40	5
30" - 36"	10	2
36" - 42"	5	0
42" - 48"	5	0
Over 48"	1	0

CONSTRUCTION LAYOUT STAKES: See note in Proposal describing the work included in this lump sum item.

TEMPORARY CONSTRUCTION: The Contractor's attention is directed to the fact that at the beginning and end of this contract it may be necessary to provide temporary drainage ditches, underdrain outlets and other temporary construction until such items on adjacent contracts are constructed. Payment for the above will be made under the respective bid items.

REMOVAL OF EXISTING HOUSE DRAINS: The removal of all existing house connections, which includes sanitary, yard, roof, basement or other similar pipe drains within the roadway construction limits shall be classified and paid for as Item E-1, Roadway Excavation, unless otherwise itemized for payment in the plans.

NON-RIGID PAVEMENT REMOVAL: Removal and disposal of existing non-rigid pavement, unless otherwise indicated on these plans, shall be measured and paid for as Item E-1, Roadway Excavation.

SCARIFICATION OF EXISTING FLEXIBLE PAVEMENT: Within the limits of construction where the existing flexible pavement will have less than six (6) inches of fill placed upon it, the pavement shall be thoroughly scarified for its full depth, mixed with sufficient soil and properly recompacted to insure the elimination of any planes of separation between it and the embankment placed thereon. Payment for scarification as described above shall be included in the unit price bid for Item E-1, Roadway Excavation.

PIPE REMOVAL: The Contractor shall remove all existing pipes, pipe culverts, storm sewers and other sewer and drainage pipes located within the limits of excavation. The cost of removal shall be included in the unit price bid for Item E-1, Roadway Excavation, unless otherwise shown on the Plans.

SALVAGED MATERIAL: All material shown on the plans which is to be removed and stored, shall be stored on the right-of-way for removal by the respective owner.

EXISTING WATER WELLS: Dug wells encountered within the work limits shall be filled with rock or granular material. Drilled well casing shall be removed to an elevation approximately three feet below finished grade and covered with a pre-cast concrete slab or a large rock. Prior to construction of embankment, the Contractor shall remove any masonry surrounding a well, within three feet of finished grade. Pumps and other appurtenances shall become the property of the Contractor and shall be disposed of by him. The cost of filling or capping of wells shall be included in the unit price bid per cubic yard of Item E-1, Roadway Excavation.

R/W MONUMENTS, FEDERAL PROJECT MARKERS AND SECTION MARKERS: Existing R/W Monuments, Federal Project Markers and Section Markers that will be removed by Construction shall be protected by the Contractor as per Section G-7.09 until they can be witnessed, referenced and reset by the Contractor.

LOCATION AND SIZE OF PIPES: The location, type, depth and size of all existing pipes are shown as near exact as the available information will permit. The State will not be responsible for any variations found during construction.

CONNECTIONS TO EXISTING PIPE: At places where the plans provide for proposed drainage pipe to be connected to existing pipes, it shall be the responsibility of the Contractor to locate the existing pipe both as to line and grade before he starts to lay the proposed pipe. The cost of this operation shall be included in the unit price bid for the pertinent Pipe Item.

UNDERGROUND UTILITIES: The locations of the underground utilities shown on the plans have been obtained by diligent field checks and searches of available records. It is believed that they are essentially correct but the State of Ohio makes no guarantees as to their accuracy or completeness.

UTILITIES: At least 48 hours before breaking ground, the Contractor shall notify all Public Service Corporations having wire, poles, pipe, conduits, manholes or other structures that may be affected by this operation including all structures which are affected and not shown on these plans. Any and all work required for public or private utilities will be done by and at the expense of their respective owners, unless otherwise noted on these plans.

REPLACEMENT: The Contractor shall replace, at his own expense, any item not specifically listed for removal that is damaged or destroyed by his operations.

EXPANSION AND CONTRACTION JOINTS: Although specific locations of certain expansion and contraction joints have been detailed on this plan, no waiver of the specifications is intended and the maximum distance between contraction joints and the location of expansion joints in all cases shall be in accordance with Standard Drawing T. J.

PLUGGING PIPE: The upstream ends of all pipe or tile lines intercepted by earthwork operations and, where indicated, the ends of pipe lines to be abandoned in place shall be effectively blocked and covered. Broken pieces and portions of pipe or tile shall be removed until a whole length is encountered which shall be blocked with concrete, flat stone or brick laid in mortar, or a precast clay or concrete stopper. Payment for the above work shall be included in the unit price bid for Item E-1, Roadway Excavation.

ITEM I-9 STONE UNDERDRAINS, NO. 2: Stone Underdrains shall be placed at fifty-foot intervals on each side of normal crowned sections and at twenty-five foot intervals on the low side only of superelevated sections, except where Item I-1, Class I-3 Underdrains have been provided.

PART WIDTH CONSTRUCTION: Because of the necessity of building portions of this project under traffic and constructing the pavement part at a time, extreme care shall be taken, to prevent the construction of a butt joint on centerline in the B-21 and I-22 courses. This shall be accomplished by building the B-21 and I-22 courses, placed with the first portion of the pavement built, at least eighteen inches to this edge of the above courses. When the second portion of the pavement is built, at least twelve inches of these projecting courses shall be broken down and thoroughly keyed in with the newly placed corresponding courses in the second portion of the pavement built. Payment for this operation shall be included in the unit prices bid for the pertinent pavement items.

BARRICADES AND WARNING SIGNS: Lights, signs and barricades shall be provided and maintained at each location indicated on the Schematic Layout Plan. Barricades shall meet the requirements for the movable gate detailed on standard construction drawing No. G-7.07. Lights shall meet the requirements of Section G-7.07 of the specifications. Standard road closed signs shall be 40"×24" size. The Contractor shall furnish, erect, maintain and remove barricades, lights and signs, the cost of which shall be included in the lump sum bid for Item G-4.05, Maintaining Traffic.

EXCAVATION FOR ITEM I-18 OR B-19 OR T-70: Excavation for Items I-18 or B-19 or T-70 used on Side Road Approaches, Mail Box Turnouts and Drives has been included in Earthwork Quantities when same as in "Cut". Where side approaches, mail box turnouts, and drives are in "Fill", excavation for Items I-18, B-19 or T-70 shall be made by the Contractor at his own expense if he builds the embankment up to finish grade before placing the Items I-18, B-19 or T-70.

GRADING TOLERANCES: For areas in front of residences, for areas between curb and sidewalk and for other areas specifically indicated below, the seed bed shall be prepared to provide a smooth surface. All stones larger than one inch in diameter shall be removed from the surface of the seed bed. Hand raking will be required in areas inaccessible to machines and hand raking may be required, if directed by the Engineer, in all the aforementioned areas if machines used do not provide results equivalent to results obtained by hand raking. Cost of this additional work shall be included in the unit price bid for Item E-1, Roadway Excavation.

C.H. 136 -	Sta. 45+50	to	48+00	Left
	Sta. 52+09	to	54+73	Left
	Sta. 54+73	to	56+19	left
	Sta. 54+85	to	56+00	Right
S.R. 303 -	Sta. 59+00	to	60+54	Left
	Sta. 60+00	to	62+70	Right
	Sta. 62+70	to	65+63	Right

C.H. 138 -	Sta. 40+11	to	41+22	Left
	Sta. 41+22	to	42+52	Left
	Sta. 42+52	to	43+52	Left
	Sta. 52+74	to	53+74	Left
C.H. 42 -	Sta. 41+00	to	45+00	Left
	Sta. 54+46	to	57+25	Right

GENERAL NOTES

SEALING OF PIPE JOINTS: Where connections are made between rigid and flexible pipe sections or between pipe sections of different kind or type of end fabrication, whether required by the plans, arising from permissible use of optional materials, or encountered in connection to existing facilities, the joint shall be sealed, if sealing is required by the specifications, by means of a Standard I-1 collar.

Payment for sealing as described above shall be included in the unit price bid for the pertinent pipe item.

EROSION CONTROL: Items L-10 Sodding, I-10 Rip-Rap, I-14 Paved Gutter and L-120 Jute Matting are provided in these plans for erosion control. Rock of a stable nature will not be removed in order to place any of these items. The Engineer shall check and nonperform quantities or adjust locations and quantities for these items where indicated by field conditions during construction.

SIDE DITCHES: Elevations for all side ditches other than normal Cut Ditches are shown on cross sections. Excavation quantities for side ditches are included in the cross section measurments for Item E-1, Roadway Excavation.

Notes for treatment of side ditches (paved gutter, sod, etc.) are shown on cross section sheets.

SPECIAL DITCHES: Elevations for all special ditches are shown on cross sections. Excavation quantities for special ditches are included in the cross section measurments for Item E-1, Roadway Excavation.

EROSION CONTROL AT HEADWALLS: An eighteen (18) inch wide strip of sod shall be placed along the back and both ends of each headwall to prevent erosion.

MANHOLES: Manhole frames and covers shall be accurately set to conform to the line and elevations required to fit adjoining surfaces.

ESTIMATED QUANTITIES: Specific locations and usage of estimated quantities set up on this plan to be used "as directed by the Engineer" shall be made a matter of record by incorporation into the final change order governing completion of this project. No such quantities shall be ordered until approved by the Engineer.

CENTERLINE REFERENCE MONUMENTS: Monuments shall be constructed of Class "C" concrete poured in a circular hole eight (8) inches in diameter and forty-four (44) inches in depth. Top of concrete shall be finished at a depth of two (2) inches below ground level and the upper six (6) inch portion of the concrete shall be formed. A one-half (½) inch Brass Rod six (6) inches long shall be embedded in the wet concrete as directed by the Engineer to mark the centerline and station.

FLARING GUARD RAIL AT BRIDGES: Guard Rail on cross roads shall be flared to meet the bridge railing in such a manner that the change in alignment of guard rail shall not exceed 1:20.

EROSION CONTROL AT BRIDGES: Sodded channels shall be provided at ends of bridges where required by the plans in accordance with the details shown elsewhere on the plans. Cost of all work necessary to complete the item shall be included in the unit price bid per square yard for "Item L-10, Sodding for Special Berm and Slope Protection."

ROUNDING OF CORNERS ON CROSS-SECTIONS: The rounded corners, shown on Standard Drawing RI-1 apply to all cross sections unless otherwise shown on the typical sections.

L-9 COMMERCIAL FERTILIZER: All areas to be seeded under Item L-9 or sodded under Item L-10 shall have commercial fertilizer 12-12-12, applied at the rate of 20 pounds per 1,000 sq. feet.

SEEDING AND PROTECTING: Quantities provided for seeding the Interstate Highway, including ramps, and State Route 303 are based upon seeding all soil areas between lines ten (10) feet beyond the limits of grading, or to the right of way, whichever is less. For other roads, seeding quantities are computed between the limits of grading. *

Seed shall be sown at the rate of 3 pounds per 1,000 sq. feet except as otherwise noted in the plans. Seeding formula for all seeded areas shall be in accordance with the following:

75%	Creeping Red Fescue
20%	Kentucky Bluegrass
5%	White Clover

** However, the Interstate portion shall be seeded to the right of way lines. Adjusted quantity for the additional area has been carried to the calculations.*

SEQUENCE OF CONSTRUCTION OPERATIONS: Underdrains shall be installed and backfilled to subgrade elevation, immediately prior to construction of the subbase, except that, where subsurface conditions are such that improvement of an unstable subgrade can be accomplished through the drying action of deep underdrains, the Project Engineer may authorize or require the Contractor to delay the construction of the subbase as necessary.

The subbase shall then be constructed under the concrete pavement area and extended out to cover the porous backfill for the underdrain, pavement shall then be constructed.

After the subbase in the shoulder area is in place and compacted as specified, and immediately prior to placing the porous base course, the material located above and within the underdrain trench shall be removed to the depth necessary to expose clean Class 3 backfill. The trench so excavated shall be backfilled with new Class 3 backfill material.

If, after testing the subbase material for composition in the shoulder area, it is found that removal of contaminated material from the surface is necessary, such material shall be replaced with material meeting the requirements of Item B-112, Porous Base Course at the expense of the Contractor.

Porous base course shall then be constructed and construction of the waterproofed aggregate course shall follow immediately.

CLASS I-3 PIPE (UNDERDRAINS): Minimum cover from subgrade to top of Class I-3 pipe (underdrains) shall be 30 inches for "Shallow Underdrain" and 50 inches for "Deep Underdrain."

The locations of "Shallow" and "Deep" Underdrain are listed in the Estimated Quantity Tabulations, and are indicated by flowline elevations on the plans.

CATCH BASINS: The elevation given on the plans for catch basin grates is the elevation of the low point of the top of grate.

Where catch basins are placed in a sag the notes on the standard drawing regarding placement of grate and frames in sags shall apply.

ITEM I-22 SUBBASE, GRADING "A" OR "B" AS PER PLAN: Material for this item shall meet the requirements of grading "A" or "B" of Sec. I-22.02 except that for either grading, no more than 10% of the material shall pass a No 200 sieve after all operations of placing and compacting have been completed. The I-22 subbase shall be carried under all bridge approach slabs.

ITEM S.S. CE-101.04 COMPACTION USING HEAVY PNEUMATIC-TIRED ROLLER: An estimated quantity for this item has been provided in the General Summary, for use as directed by the Engineer, in proof rolling of all subgrade except for areas where rock or shale is encountered. The pneumatic-tired roller shall be operated at 50-ton gross load for the final proof rolling.

L-120 JUTE MATTING: Jute Matting shall be placed in ditches upstream from all I-8 No 4 and No 5 catch basins in lieu of the sod strips shown on Standard Drawings No I-8 C.B.4 and No I-8 C.B.5 and at other locations as shown in the plans. Unless otherwise noted, the Jute Matting shall be placed in two (2) 48 inch wide strips with a six (6) inch lap. The cost of all work required to complete this item in accordance with Supplemental Specifications No L-120 shall be included in the unit price bid per sq. yard for "Item L-120 Jute Matting."

ITEM B-19 AGGREGATE BASE COURSE: Material for this item shall be closed to Crushed Stone or Slag in the construction of County Highways.

REINFORCED ENDS FOR F-1 PIPE: Reinforced ends shall be provided for all corrugated metal F-1 (except helical) pipes for driveways and underdrain outlets if pipe ends are unprotected by headwalls, catch basins or manholes.

FEDERAL AID CONSTRUCTION IDENTIFICATION SIGNS: The Contractor shall furnish, erect, maintain and subsequently remove Federal Aid construction identification signs at each of the following locations:

1. S.R. 303, Sta. 34+55 Rt.
2. S.R. 303, Sta. 65+25 Rt.

Sign details shall be as specified on Standard Drawing FACI-1, "Code N-43(2)-144," and the signs shall be erected in accordance with Standard Drawing FACI-2. Additional requirements shall be in accordance with notes in the proposal.

ROADWAY DRAINAGE AND PIPE UNDERDRAINS: Estimated quantities of roadway drainage Item I-1, Class I-3 have been provided to outlet any additional field drains or wet spots under fills which may be encountered during construction. The outlet locations, grades and depths required shall be determined by the Engineer during construction, and payment shall be made on final measurement. The size and estimated amounts are listed as follows:

Class A-1 Sec. 6.6 (b) or 6.8 (b)	6"	100 Linear Feet
	8"	300 Linear Feet
	10"	300 Linear Feet
Class F-1	6"	50 Linear Feet
	8"	50 Linear Feet
	10"	50 Linear Feet
Class H-2	6"	400 Linear Feet
	8"	400 Linear Feet
	10"	400 Linear Feet

A record of location and quantity shall be maintained by the Engineer and made part of the final quantities.

DRAINAGE OF SUBBASE MATERIAL: Where the subbase material is drained by I-9 Stone Underdrains, the Contractor shall finish, seed, and mulch the slopes so as not to impede drainage.

GENERAL NOTES

PIPE CONNECTIONS: Longitudinal pipe lines, where connected to pipe culverts, shall be joined to Item I-5, Pipe Specials. The pipe special spur and the initial eight-foot length of longitudinal pipe shall be of the same kind and class of pipe as used in the pipe culvert and shall be joined by means of 6" × 24" concrete collar or metal band. The initial 8 feet of longitudinal pipe shall be manufactured as a single unit, with the exception of rigid pipes 18 inches in diameter and smaller, in which case two 4-foot lengths may be shop joined by means of a reinforced concrete collar strong enough to resist separation of the joint because of backfill loading. Ends of any pipe specials not connected shall be plugged with approved stopper. All additional cost of providing the culvert pipe collars and stopper in the initial section of the longitudinal pipe shall be included in the unit price bid for Item I-5, Pipe Specials.

Where specifically directed by the Engineer or where the ratio of the longitudinal pipe to the culvert is equal to or greater than 1:2, shop-formed holes and an approved concrete collar shall be used in lieu of Item I-5, Pipe Specials.

Although shown on the quantity summary sheet for the Contractor's information, these connections are not a pay item and shall be included in the linear foot cost of pipe.

E-4 BORROW, USING GRANULAR MATERIAL: An estimated quantity of E-4 Borrow, Using Granular Material, has been included in the Plans to be used as directed by the Engineer. This material should be placed in lifts not to exceed 2 feet in thickness and should be carried to an elevation of 1 foot above water level, if water is present. Granular material furnished for this item should be as specified under Sec. E-1.02 of the Construction and Material Specifications, except that not less than 75%, by weight, of the grains or particles should be retained on a No. 200 sieve. Specification requirements relating to scalping are to be waived in areas where this treatment is employed.

TRAFFIC MAINTENANCE:

1. Minimum provisions for the maintenance of traffic on public highways affected by the contract shall be as follows:

(a) C.H. 136 and C.H. 138: The Contractor may close only one of these roads at a time while traffic is being maintained on the other one.

(b) S.R. 303: Two-way traffic shall be maintained at all times on S.R. 303 by use of either the existing pavement, the proposed pavement, or temporary run-arounds which shall be Class B Pavement, Item S-15.

(c) C.H. 42: Two-way traffic shall be maintained at all times by a temporary run-around which shall be Class B Pavement, Item S-15.

2. Local traffic shall be maintained at all times in accordance with the provisions of Section G-4.05 and shall include the maintenance of access to all properties affected by any of the construction operations. Traffic Compacted Surface Course, Item T-10 and Calcium Chloride, Item M-10 shall be applied on temporary roadways, lanes, and/or driveways for the maintenance of local traffic as directed by and in amounts requested by the Engineer. Payment for all of the above, including construction, maintenance, and subsequent removal of temporary roadways, except furnishing and applying Traffic Compacted Surface Course, Item T-10, Calcium Chloride, Item M-10 and Temp. Run Around Roads, Item S-15 is included in the lump sum price bid for "Maintaining Local Traffic". Estimated quantities are as follows:

T-10 - Traffic Compacted Surface Course - 400 Cu. Yds.
M-10 - Calcium Chloride - 8 Tons.

3. In the event that traffic is placed on the completed pavement on S.R. 303 prior to the completion of the S.R. 303 structure, the Contractor shall safeguard the traveling public by providing platforms, nets, and other suitable protection above the traveled lanes. Minimum horizontal clearances of 28 feet and a minimum vertical clearance of 13'-6" shall be maintained at all times during overhead bridge construction at this location.

4. Payment for overhead protection described above and for construction, maintenance, and subsequent removal, wherever required, of temporary roadways not separately itemized under Item S-15, shall be included in the lump sum bid for "Maintaining Traffic."

5. The Contractor shall, in addition to the general provisions of Section G-7.07, on this project perform the following:

(a) Provide, erect, and maintain standard 40" × 24" size "Road Closed" signs, sign supports, and lights at the following locations during periods in which the affected roads are closed to traffic:

(1) C.H. 136: At the intersections of C.H. 17 and C.H. 103 with C.H. 136.
(2) C.H. 138: At the intersections of C.H. 17 and C.H. 103 with C.H. 138.

Lights, barricades, and danger and warning signs shall be provided at locations shown above in accordance with Section G-7.07.

Barricades and gates shall be as detailed on Standard Construction Drawing No. G-7.07.

Sign supports and lights for "Road Closed" signs shall be as detailed in the "Ohio Manual of Uniform Traffic Control Devices."

Payment for providing, erecting, maintaining, and removing barricades, gates, lights, signs, and sign supports shall be included in the lump sum price bid for "Maintaining Traffic".

6. If the Contractor so elects, he may submit alternate methods for the maintenance of traffic provided the intent of the above provisions is followed and no additional inconvenience to the traveling public results therefrom. No alternate plan shall be placed into effect until approval has been granted, in writing, by the Director.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

MEDINA COUNTY
MED - 42 - 21.94

GENERAL SUMMARY

*Item I-15 revised as per Proposal Addendum dated 11-13-62 to conform to the Proposal changes, Page 12.

SHEET NUMBERS — QUANTITIES — TYPE CODE 7221

ITEM	19	24	25	26	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	120	121	124	125	129	130	131	140	141	142	149	185	30	ITEM	Normal Participation	No Fed. Partic.	TOTAL	UNIT	DESCRIPTION
																																															ROADWAY
E-1																																								1,049,564	E-1	1,048,747	817	1,049,564	Cu. Yds.	Roadway Excavation, Method B, as per plan.
E-1																																								265640	E-1	263,752	1,888	265,640	Sq. Yds.	Compacted Subgrade.
E-4																																								41074	E-4			41,074	Cu. Yds.	Borrow.
E-4																																								26,437	E-4			26,437	Cu. Yds.	Borrow using Granular Material as per plan.
E-8																																								3134	E-8			3,134	Sq. Yds.	Removal and Disposal of Existing Pavement.
E-9																																									E-9			Lump	Lump	Removal of Trees and Stumps.
E-10																																									E-10			Lump	Lump	Removal of Frame Work Shed, Parcel 42 WD.
E-10																																									E-10			Lump	Lump	Removal of 1½ Sty. Res & Gar, 2 Barns and 3 sheds, Parcel No. 56WL
E-10																																									E-10			Lump	Lump	Removal of Frame Barn, Frame Shed, Parcel 65 WL.
E-10																																									E-10			Lump	Lump	Removal of 2 Sty. Brick Res., 2-Sheds, 2-Coops, Corn Crib, Parcel 66 WL.
E-10																																									E-10			Lump	Lump	Removal of Frame Res., Frame Shop, Small Storage Bldg., Large Storage Bldg., Parcel 71 WL.
E-10																																									E-10			Lump	Lump	Removal of Frame Barn, Parcel 88
E-10																																									E-10			Lump	Lump	Removal of 1½ Sty. Frame Res., Frame Barn, Parcel 100 WL.
E-10																																									E-10			Lump	Lump	Removal of 2 Sty. Frame Res., Frame Barn, 4-Misc. Sheds, Parcel 107.
E-11																																								5007	E-11			5,007	M. Gals.	Water.
E-12																														32	47	38	106	265	392	17	175	25				E-12			1,097	Lin. Ft.	Pipe Removed, 15" and Under.
E-12																																31	44		38	22	391					E-12			526	Lin. Ft.	Pipe Removed, Over 15".
CE-101.04																																								129	SS CE-101.04	128	1	129	Hours	Compaction using heavy pneumatic tired roller.
																																						1,425				17,380		17,500		
I-8																																								52	I-8			52	Each	Centerline Reference Monuments.
I-13																																						670			I-13		670	670	Sq. Ft.	6" Concrete Sidewalk.
I-13																																						3580			I-13		3,580	3,580	Sq. Ft.	4" Concrete Sidewalk.
I-15					75	75	225	275	875	600		275	250	587.5	825	1175	1470	555	300	625	1500				287.5			700	417	358		575				290	1335		~~425~~	2425		I-15	~~16,380~~	120	*~~16,500~~	Lin. Ft.	Guard Rail Steel Beam, Standard Type (Deep)
I-15																150	150																									I-15		300	300	Lin. Ft.	Guard Rail Steel Beam, Barrier Type (Deep)
I-125																																						1.51	2.71	15.85	I-125			20.07	Miles	4" Edge Lines.
I-125																																						0.06	0.08		I-125			0.14	Miles	4" Lane Lines.
I-125																																								3.17	I-125			3.17	Miles	6" Lane Lines and Centerlines
I-125																																						Lump	Lump		I-125			Lump	Lump	Curb and Island Marking.
I-127																																								182	I-127			182	Each	Delineators, Type A-1, Post Mounted
I-127																																						62	153		I-127			215	Each	Delineators, Type C-2, Post Mounted
L-6																																						201			L-6			201	Unit	Roadside Cleanup.
L-9																																								951,462	L-9	949,507	1,955	951,462	Sq. Yds.	Seeding and Protecting.
L-9																																						24200			L-9			24,200	Sq. Yds.	Rest Area Seeding and Protecting.
L-9																																						2.27		87.48	L-9	89.58	0.17	89.75	Tons	Commercial Fertilizer (12-12-12)
I-127																																						1	2		I-127			3	Each	Delineators, Type C-3, Post Mounted
L-13																																						292			L-13			292	Each	Ligustrum regelianum, 2½ to 3 ft. B.&B. 12 in. min.
L-13																																						84			L-13			84	Each	Cornus amomum, 3 to 4 ft. B.&B. 12 in. min.
L-13																																						183			L-13			183	Each	Viburnum lentago, 3 to 4 ft. B.&B. 12 in. min.
L-13																																						84			L-13			84	Each	Cornus mas, 3 to 4 ft. B.&B. 12 in. min.
L-13																																						225			L-13			225	Each	Rhamnus frangula columnaris, 3 to 4 ft. B.&B. 12 in. min.
L-14																																						20			L-14			20	Each	Crataegus lavallei, 6 to 8 ft. B.&B. 15 in. min.
L-14																																						27			L-14			27	Each	Sophora japonica, 5 to 6 ft. B.&B. 14 in. min.
L-14																																						2			L-14			2	Each	Malus rinki, 6 to 8 ft. B.&B. 15 in. min.
L-14																																						3			L-14			3	Each	Malus Van Eseltine, 6 to 8 ft. B.&B. 15 in. min.
L-14																																						14			L-14			14	Each	Malus snowdrift, 1½" to 1¾", B.&B. 20 in. min., 6 ft. stems.
L-14																																						9			L-14			9	Each	Acer plantanoides, 1½" to 1¾" B.&B. 20 in. min., 6 ft. stems.
L-14																																						31			L-14			31	Each	Crataegus phoenopyrum, 8 to 10 ft. B.&B. 22 in.
L-14																																						9			L-14			9	Each	Liquidamber styraciflua, 1½" to 1¾" B.&B. 20 in. min. 6 ft. stems.
L-17																																						Lump			L-17			Lump	Lump	Pruning Existing Trees.
L-1																																						600			L-1			600	Cu. Yds	Topsoil Stockpiled
L-3																																						5,000			L-3			5,000	Sq. Yds	Placing Stockpiled Topsoil.
S-15				Lump																																					S-15			Lump	Lump	Temporary Run-around Roads using Class B Pavement, as per plan.
T-10				400																																					T-10			400	Cu. Yds.	Traffic Compacted Surface Course for Maintaining Traffic.
M-10				8.00																																					M-10			8	Tons	Calcium Chloride furnished and Applied for Maintaining Traffic
SS-18																																						1865			SS-18			1,865	Lin. Ft.	Rest Area Fence.
SS-18																																						247			SS-18		247	247	Lin. Ft.	Fence, Type C
SS-18																																						2			SS-18		2	2	Each	Fence Gates, Type C, 4'
Special																																						28			Special		28	28	Each	Park Table with concrete slab.
Special																																						10			Special		10	10	Each	Charcoal Grill and Serving Table with concrete slab.
Special																																						2			Special		2	2	Each	Roadside Toilet and Storage Unit.
Special																																						2			Special		2	2	Each	Pressure Water System.
Special																																						2			Special		2	2	Each	Aerobic Digestion Sewage Treatment Plant.
Special																																						2			Special		2	2	Each	Chlorine Contact Tank.
Special																																						195			Special		195	195	Lin. Ft.	2" Gal. Pipe Drain for Well Pit.
I-125																																						0.45	0.54		I-125			0.99	Mile	Channelizing Lines.
I-125																																						Lump	Lump		I-125			Lump	Lump	Diagonal Stripes.
I-125																																						Lump	Lump		I-125			Lump	Lump	Parking Lot Stall Marking.
																																															DRAINAGE
E-3					2266						116		480	57	5			5	190					67							3								3	952		E-3			4,144	Cu. Yd.	Channel Excavation.

Revised R.E.C. 11-27-62

GENERAL SUMMARY

ITEM	SHEET NUMBERS																																										ITEM	QUANTITIES			UNIT	TYPE CODE 7221
	19	24	25	26	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	120	121	124	125	129	130	131	140	141	142	149	185	30	16		Normal Participation	No Fed. Partic.	TOTAL		DESCRIPTION
																																																DRAINAGE (cont.)
I - 1												76																															I - 1		76	76	Lin.Ft.	8" Pipe Class A-1 Sec. M 6.8 (b) encased as per plan, with comp. joints (SAN)
I - 1					207			93	45					204	251			262																									I - 1		1,062	1062	Lin.Ft.	10" Pipe Class A-1 Sec. M 6.8 (b) encased as per plan, with comp. joints (SAN)
I - 1										280																																	I - 1		280	280	Lin.Ft.	12" Pipe Class A-1 Sec. M 6.8 (b) encased as per plan, with comp. joints (SAN)
I - 1																					234																						I - 1		234	234	Lin.Ft.	15" Pipe Class A-1 Sec. M 6.8 (b) encased as per plan, with comp. joints (SAN)
I - 1												356													368																		I - 1		724	724	Lin.Ft.	8" Pipe Class A-1 Sec. M 6.8 (b) with compression joints, Sec. I-1.06 (Sanitary)
I - 1					261		442	335	383					266	287			346																									I - 1		2,320	2320	Lin.Ft.	10" Pipe Class A-1 Sec. M 6.8 (b) with compression joints, Sec. I-1.06 (Sanitary)
I - 1										238																																	I - 1		238	238	Lin.Ft.	12" Pipe Class A-1 Sec. M 6.8 (b) with compression joints, Sec. I-1.06 (Sanitary)
I - 1																					234							370															I - 1		604	604	Lin.Ft.	15" Pipe Class A-1 Sec. M 6.8 (b) with compression joints, Sec. I-1.06 (Sanitary)
I - 1			100					70			140	94							150					210	70																		I - 1			834	Lin.Ft.	6" Pipe Class A-1 Sec. M 6.6 (b) or M 6.8 (b)
I - 1			300																																								I - 1			300	Lin.Ft.	8" Pipe Class A-1 Sec. M 6.6 (b) or M 6.8 (b)
I - 1			300																																								I - 1			300	Lin.Ft.	10" Pipe Class A-1 Sec. M 6.6 (b) or M 6.8 (b)
I - 1					92		14		158		94		8	108	24	74	86	156		114	116				112		116	122												132			I - 1			1,526	Lin.Ft.	15" Pipe Class A-1 Sec. M 6.6 (a) or M 6.8 (b)
I - 1										88																																	I - 1			88	Lin.Ft.	15" Pipe Class A-1 Sec. M 6.6 (b) or M 6.8 (b)
I - 1																114			110																				138	114			I - 1			476	Lin.Ft.	18" Pipe Class A-1 Sec. M 6.6 (a) or M 6.8 (b)
I - 1					78																			204							68									394			I - 1			744	Lin.Ft.	24" Pipe Class A-1 Sec. M 6.6 (a) or M 6.8 (b)
I - 1								210			124	114												116																232			I - 1			796	Lin.Ft.	30" Pipe Class A-1 Sec. M 6.6 (a) or M 6.8 (b)
I - 1									206	138																																	I - 1			344	Lin.Ft.	36" Pipe Class A-1 Sec. M 6.6 (b) or M 6.4 (d)
I - 1																																								76			I - 1			76	Lin.Ft.	36" Pipe Class A-1 Sec. M 6.6 (a) or M 6.8 (b)
I - 1																388																											I - 1			388	Lin.Ft.	36" Pipe Class A-1 Sec. M 6.6 (d) or M 6.4 (d)
I - 1																			200																								I - 1			200	Lin.Ft.	42" Pipe Class A-1 Sec. M 6.6 (a)
I - 1																																				94							I - 1			94	Lin.Ft.	42" Pipe Class A-1 Sec. M 6.6 (b) or M 6.4 (d)
I - 1																																								86			I - 1			86	Lin.Ft.	48" Pipe Class A-1
I - 1																	268																										I - 1			268	Lin.Ft.	48" Pipe Class A-1 Sec. M 6.6 (d) or M 6.4 (d) 8 gage
I - 1													200																														I - 1			200	Lin.Ft.	54" Pipe Class A-1 Sec. M 6.6 (a)
I - 1																		272																									I - 1			272	Lin.Ft.	54" Pipe Class A-1 Sec. M 6.6 (c)
I - 1															292																												I - 1			292	Lin.Ft.	54" Pipe Class A-1 Sec. M 6.6 (d)
I - 1							286																																				I - 1			286	Lin.Ft.	60" Pipe Class A-1 Sec. M 6.6 (a)
I - 1					266																																						I - 1			266	Lin.Ft.	72" Pipe Class A-1 Sec. M 6.6 (a)
I - 1														230																													I - 1			230	Lin.Ft.	72" Pipe Class A-1 Sec. M 6.6 (c) or M 6.4 (g) 10-10 gage
I - 1										314																																	I - 1			314	Lin.Ft.	84" Pipe Class A-1 Sec. M 106.6 (c)
I - 1																					280																						I - 1			280	Lin.Ft.	108" Pipe Class A-1 Sec. M 106.6 (d)
I - 1																												264															I - 1			264	Lin.Ft.	120" Pipe Class A-1 Sec. M 6.6 (b), as per plan.
I - 1												624				350																							64	50			I - 1			1,088	Lin.Ft.	15" Pipe Class E-1
I - 1																								640	90																		I - 1			730	Lin.Ft.	24" Pipe Class E-1
I - 1											258	200																															I - 1			458	Lin.Ft.	30" Pipe Class E-1
I - 1										700	742																																I - 1			1,442	Lin.Ft.	36" Pipe Class E-1
I - 1																																							26				I - 1			26	Lin.Ft.	18" Pipe Class E-1
I - 1	20		50		20		20	20	20	30	20	10	20	20	10	30		30	30	20	20			30	20		20	20			60								70			60	I - 1			670	Lin.Ft.	6" Pipe Class F-1
I - 1			50		20		20	10	20	10			20	20			10	10	40	20	20			10	10		20	20											10	70			I - 1			410	Lin.Ft.	8" Pipe Class F-1
I - 1			50																																								I - 1			50	Lin.Ft.	10" Pipe Class F-1
I - 1									42						64	36	36	38											74	56	40	44			84	108							I - 1			622	Lin.Ft.	15" Pipe Class F-1
I - 1																															48												I - 1			48	Lin.Ft.	24" Pipe Class F-1
I - 1								48			76	68																					82										I - 1			274	Lin.Ft.	30" Pipe Class F-1
I - 1																																			42								I - 1			42	Lin.Ft.	12" Pipe Class F-1
I - 1																																							136				I - 1		136	136	Lin.Ft.	6" Pipe Class H-1 Sec. M - 6.8 (a) with compression joints, Sec. I-1.06 (Sanitary)
I - 1			400																																								I - 1			400	Lin.Ft.	6" Pipe Class H-2
I - 1			400																																								I - 1			400	Lin.Ft.	8" Pipe Class H-2
I - 1			400																																								I - 1			400	Lin.Ft.	10" Pipe Class H-2
I - 1	96				494	4056	3982	4032	4096	4244	3968	3984	4120	4208	3990	3214	3062	4282	3654	3708	4146	4000	4000	4022	3698	4000	4102	2510											4142	4716			I - 1			98,526	Lin.Ft.	6" Pipe Class I-3
I - 2					33.8		24.5	1.0	16.3	47.5		0.5	21.0	35.7	24.0	9.7	16.3	21.2	14.1	0.3	17.9			3.1	1.1		0.3	22.3			0.4					1.5			0.9	35.3			I - 2			348.7	Cu.Yd.	Masonry
I - 5					4	2	5	6	5	6	6	4	6	5		3	1	3	8	4	6			10	3		4	4											8	7			I - 5			110	Each	6" Pipe Special Class I-3
I - 5									2						1		2	2																									I - 5			7	Each	15" Pipe Special Class F-1
I - 5													1																														I - 5			1	Each	54" Pipe Special Class A-1 Sec. M 6.6 (a)
I - 5							1																																				I - 5			1	Each	60" Pipe Special Class A-1 Sec. M 6.6 (a)
I - 8																	1																										I - 8			1	Each	Standard No. 2-2B Catch Basin
I - 8																															1												I - 8			1	Each	Standard No. 2-3 Catch Basin
I - 8																																							5	3			I - 8			8	Each	Standard No. 3-A Catch Basin
I - 8					2		1		1		1	1	1	1		2		1	1	1	1			2	1		1	1												4			I - 8			23	Each	Standard No. 4- Catch Basin
I - 8										1	1													1																1			I - 8			4	Each	Standard No. 5 Catch Basin
I - 8								1		1	1	1																															I - 8			4	Each	Standard No. 4 Catch Basin Modified as per plan.
I - 8								1			1	1																															I - 8			3	Each	Standard No. 5 Catch Basin Modified as per plan.
I - 8																								1																			I - 8			1	Each	Standard No. 5 Catch Basin with Modified Paved Gutter.
I - 8									1						1	1		1																									I - 8			4	Each	Standard No. 6 Catch Basin
I - 8												1																															I - 8			1	Each	Standard No. 1 Manhole
I - 8					1		1	2	1	1				2	1			2			2							2															I - 8		15	15	Each	Standard No. 1 Manhole Modified as per plan (Sanitary)
I - 8												1																															I - 8		1	1	Each	Standard No. 2 Manhole Modified as per plan (Sanitary)
I - 8					1		1		1	1		1			1										2																		I - 8		8	8	Each	Standard No. 2 Manhole (without Drop Pipe) Modified as per plan (San)
I - 8																																	2	4	3								I - 8		9	9	Each	Manholes Adjusted to Grade.

Revised R.E.C. 11-27-62

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

MEDINA COUNTY
MED-42-21.94

GENERAL SUMMARY

‡ *Items revised as per Proposal Addendum dated 11-13-62 to conform to the Proposal changes, Page 12.*

ITEM	SHEET NUMBERS																																										ITEM	QUANTITIES			UNIT	TYPE CODE 7221 DESCRIPTION
	19	24	25	26	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	120	121	124	125	129	130	131	140	141	142	149	185	30	16		Normal Participation	No Fed. Partic.	TOTAL		
																																																DRAINAGE (cont.)
I-9																																										9	I-9			9	Lin.Ft.	Stone Underdrain, No. 1, as per plan
I-9																																									2620		I-9	2,484	136	2,620	Lin.Ft.	Stone Underdrain, No. 2.
I-10					37		29	22	19	116		35		23	17	15	20	28			61		18					34											32	33			I-10			539	Cu.Yd.	Dumped Rock Channel Protection.
I-10					80		39			79			79																														I-10			277	Sq.Yd.	Riprap, 6" Reinforced Concrete Slab, as per plan.
I-14					114						48																																I-14			162	Lin.Ft.	Paved Gutter, Standard Type 1.
I-14																				108	78																						I-14			186	Lin.Ft.	Paved Gutter, Standard Type 3.
L-10					125	510	408	697	21	478	16	422	386	472	465	21	437	509	1055	579	1352		687	325	794	2493	841	1086		67			504		288	239	467		926	3555			L-10			20,225	Sq.Yd.	Sodding.
L-10																	80												52			53					96						L-10			281	Sq.Yd.	Sodding for Special Slope and Berm Protection.
L-120					90	978	560	672	355	317	266	444	445	622		399	311	799	720	266	133		889	791	409	845	711	533															L-120			11,555	Sq.Yd.	Jute Matting.
I-124																													404	12		416											I-124		832	832	Lin.Ft.	12" New Water Main, Class 25 Cast Iron Pipe, Cement Lined
I-124																																	102	202			368						I-124		672	672	Lin.Ft.	16" New Water Main, Class 25 Cast Iron Pipe, Cement Lined
																																																PAVEMENT
B-19																													68	43	32	22			41	57		22			1339		B-19			1624	Cu.Yd.	6" Aggregate Base Course, as per plan
B-20																																																
B-21																																									9972		B-21	9,570	402	9,972	Cu.Yd.	3" Waterproofed Aggregate Base Course.
B-35																																									807		B-35	736	71	807	Cu.Yd.	Asphaltic Concrete Leveling Course (70-85).
B-112																																									10131		B-112			10,131	Cu.Yd.	Porous Base Course.
T-30																																									2856		T-30			2,856	Gal.	Bituminous Prime Coat; Sec. M-5.7, RT-2 or RT-3.
T-31																																									18190		T-31			18,190	Gal.	Bituminous Surface Treatment- Bituminous Material, as per plan.
T-31																																									582		T-31			582	Cu.Yd.	Bituminous Surface Treatment- No. 6 Aggregate.
T-35																													3	6	5	3			7	4		3			824		T-35	784	71	855	Cu.Yd.	Asphaltic Concrete Surface Course, Type C.
T-71																																									128,333		T-71			128,333	Sq.Yd.	10" Reinforced Portland Cement Concrete Pavement.
T-71																																									23,746		T-71			23,746	Sq.Yd.	9" Reinforced Portland Cement Concrete Pavement.
I-7																	377												153			158					186						I-7			874	Sq.Yd.	Reinforced Concrete Approach Slabs. (T= 13")
I-12																																							211	392			I-12			‡ ~~392~~ 603	Lin.Ft.	Concrete Curb, Type 2 A Standard.
I-12																																	1,096	1,818	998				972	271			I-12	4,776	379	‡ ~~271~~ 5155	Lin.Ft.	Concrete Curb, Type 6 Standard.
I-12																																	47	40	47				3,636	1309			I-12	5,079		‡ ~~1,309~~ 5,079	Lin.Ft.	Special Barrier Curb as per plan.
I-21																																							60	82			I-21	102	40	‡ ~~82~~ 142	Sq.Yd.	Portland Cement Concrete Median Pavement, 4" Standard Type 1
I-21																																								400			I-21			400	Lin.Ft.	Concrete Median, Type 2 Standard.
I-22																																									41474		I-22	41,114	360	41,474	Cu.Yd.	Subbase, Grading A or B as per plan.
																																												Lump	Lump	Lump	Lump	Construction Layout stakes

LIGHTING – For Estimated Quantities See Sheet No. 247

STRUCTURES OVER 20' SPAN

For Estimated Quantities

MED-42-22.42 See Sheet No. 220.
MED-42-23.21 See Sheet No. 226.
MED-42-24.04 L.&R. See Sheet No. 232.
MED-42-25.65 See Sheet No. 242.

FORCE ACCOUNT WORK

East Ohio Gas Company – See Sheet No. 284.

Revised R.E.C. 11-27-62

CALCULATIONS

EARTHWORK - CU. YDS.							SEEDING
LINE SHEET FROM	TO	EXCAVATION	EMBANKMENT	EMBANKMENT + 15 %	E-4 BORROW GRANULAR MAT'L.		SQ. YDS.
235+68	238+00	2,198	5,298	6,093	1,445		* 508
238+00	248+00	* 59,556	* 25,845	29,722	6,267		* 351,003
248+00	258+00	43,433	6,446	7,413	1,848		* 23,446
258+00	268+00	73,803	514	591			25,210
268+00	278+00	36,206	30,666	35,266			23,228
278+00	288+00	* 109,975	* 52,956	60,899			* 30,680
288+00	298+00	204,848	0	0			* 29,240
298+00	308+00	144,119	2	2			26,276
308+00	318+00	24,070	3,918	4,506			19,507
318+00	328+00	3,162	34,524	39,703	3,568		19,516
328+00	338+00	3,810	98,601	113,391			21,863
338+00	346+00	0	93,461	107,480			11,216
346+00	356+00	1,377	108,736	125,046			20,351
356+00	366+00	8,480	45,817	52,690	3,892		19,967
366+00	375+00	12,476	9,023	10,376			18,837
375+00	384+00	2,807	47,396	54,505			20,293
384+00	394+00	9,813	112,165	128,990	9,417		27,121
394+00	404+00	110,235	0	0			25,328
404+00	414+00	59,944	525	604			24,450
414+00	425+00	49,059	1,142	1,313			22,850
425+00	434+00	6,129	9,516	10,943			18,657
434+00	444+00	1,473	38,622	44,415			22,428
444+00	454+00	926	28,274	32,515			20,757
454+00	461+25	1,139	36,541	42,022			13,957
C.H. #42		1,074	48,624	55,918			15,154
C.H. #136		516	8,444	9,711			5,511
C.H. #138		1,368	11,746	13,508			8,311
S.R. #303		◇1 34,314	◇2 2,886	3,319			◇3 23,290
303 Interchange		43,254	88,495	101,769			62,507
5% Compaction							
TOTALS		1,049,564	950,183	1,092,710	26,437		951,462

Earthwork Balance:
Roadway Excavation = 1,049,564 Cu. Yds.
E-3 Channel Excavation = + 2,072 " " (50% Available)
1,051,636 Cu. Yds.

1,092,710 - 1,051,636 = 41,074 Cu. Yds. Borrow

◇1 Includes 817 Cu. Yds. 100% State
◇2 Includes 625 Cu. Yds. 100% State
◇3 Includes 1955 Sq. Yds. 100% State
* Includes Quantities from extended sections

SS-18 FENCE TYPE "D"		
SHEET NUMBER	STATION TO STATION	LENGTH LIN. FT.
274	230 + 00 - 245 + 80	1,211
275	245 + 80 - 270 + 00	5,073
276	270 + 00 - 295 + 00	3,383
278	295 + 00 - 320 + 00	5,331
279	320 + 00 - 336 + 00	3,376
280	336 + 00 - 352+00 Left	1,470
281	336 + 00 - 352+00 Right	1,449
282	352 + 00 - 368 + 00	3,450
283	368 + 00 - 395 + 00	5,575
284	395 + 00 - 420 + 00	5,000
285	420 + 00 - 445 + 00	5,062
286	445 + 00 - 470 + 00	3,228
	TOTAL	43,608

Note: Type 'D' Fence will not be part of this contract.

I-127 DELINEATORS			Post Mtd.	Brkt. Mtd.
SIDE	STATION TO STATION	SPACING	TYPE A-1	TYPE A-1
R	237+00 - 267+00 N.B.	200	16	
R	278+00 - 294+00 N.B.	200	9	
R	312+00 - 326+00 N.B.	200	8	
R	337+00 - 343+00 N.B.	200	4	
R	361+00 - 459+00 N.B.	200	50	
L	237+00 S.B.	-	1	
L	238+00 - 250+00 S.B.	200	7	
L	260+00 - 318+00 S.B.	200	30	
L	337+00 - 357+00 S.B.	200	10	1
L	367+00 - 459+00 S.B.	200	47	
	TOTAL		182	1

To Bridge sheet No. 232

I-8 CENTERLINE REFERENCE MONUMENTS	
SHEET NUMBER	QUANTITY
265	30
266	22
TOTAL	52

I-9 STONE UNDERDRAIN NO. 2		
LOCATION	FEDERAL PARTICIPATION LIN. FT.	100% STATE LIN. FT.
C.H. # 42	593	
C.H. # 136	186	
C.H. # 138	400	
S. R. # 303	1305	136
TOTAL	2484	136

E-1 COMPACTED SUBGRADE

Mainline, Rest Areas and Interchange = 241,334 Sq. Yds.
C.H. 136 = 1,836 " "
C.H. 138 = 2,428 " "
S.R. 303 (Participating) = 14,063 " "
C.H. 103 = 228 " "
C.H. 42 = 3,863 " "
Sub-Total = 263,752 Sq. Yds.
S.R. 303 (Non-participating) = 1,888 " "
Total Area = 265,640 Sq. Yds.

T-71 10" REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT

ML Sta. 237 + 00 to Sta. 346 + 25.44 = 10,925.44 Lin. Ft.
ML Sta. 348 + 69.08 to Sta. 460 + 00 = 11,130.92 " "
Total Length = 22,056.36 Lin. Ft.

Area = 2 × 24 × 22,056.36 ÷ 9 = 117,634 Sq. Yds.
Interchange *and rest areas* = *10,699* " "
= " "
Total Area = *128,333* Sq. Yds.

T-71 9" Ramps and Rest Areas Total Area = 23,746 Sq. Yds.

B-21 WATERPROOFED AGGREGATE BASE COURSE

ML - Length = 22,056.36 Lin. Ft.
Volume = 22,056.36 × 4 × 0.25 × 2 ÷ 27 = 1633.80 Cu. Yds.
SBL Sta. 237 + 00 to Sta. 249 + 80 = 1280 Lin. Ft.
Sta. 258 + 77 to Sta. 320 + 00 = 6123 " "
Sta. 337 + 20 to Sta. 357 + 05 = 1985 " "
Sta. 366 + 03 to Sta. 460 + 00 = 9397 " "
Total Length = 18,785 Lin. Ft.

NBL Sta. 237 + 00 to Sta. 269 + 05 = 3205 Lin. Ft.
Sta. 278 + 00 to Sta. 295 + 15 = 1712 " "
Sta. 310 + 80 to Sta. 327 + 20 = 1640 " "
Sta. 336 + 20 to Sta. 343 + 54 = 734 " "
Sta. 359 + 58 to Sta. 460 + 00 = 10042 " "
Total Length = 17,333 Lin. Ft.
Total Length (SBL & NBL) = 36,118 Lin. Ft.
Length = 36,118' - 488' (at struct.) = 35,630 Lin. Ft.
Volume = 35,630 × 10 × 0.25 ÷ 27 = 3299.07 Cu. Yds.
Volume adjacent to appr. slabs, S.R. 303 = 12.00 Cu. Yds.
Sub-Total = 4944.87 Cu. Yds.
Interchange = 1229. " "
Rest Areas (2) = 687. " "
S.R. 303 (Participating) = 2624.3 " "
U-Turn Median - 1016 ÷ 12 = 84.67 " "
Sub-Total = 9569.84 Cu. Yds.
S.R. 303 (Non-participating) = 356.2 " "
C.H. 103 (Non-participating) = 46.2 " "
Total Volume = 9972.24 Cu. Yds.
Use 9972 Cu. Yds.

I-22 SUBBASE; Grading "A" or "B" as per plan.

Length = 22,056.36 Lin. Ft.
Volume = 22,056.36 × 28 × 0.5 × 2 ÷ 27 = 22,873.26 Cu. Yds.
Length = 35,630 Lin. Ft.
Volume = 35,630 × 10 × 0.5 ÷ 27 = 6,598.15 " "
Volume at appr. slabs, S.R. 303 = 46.8 " "
Interchange = 4,311.0 " "
Rest Areas (2) = 3,739.0 " "
S.R. 303 (Participating) = 2,388.3 " "
C.H. 42 = 620.0 " "
C.H. 138 = 346.3 " "
U-Turn = 192.0 " "
Sub-Total = 41,114.81 Cu. Yds.
S.R. 303 (Non-participating) = 318.5 " "
C.H. 103 (Non-participating) = 41.1 " "
Total Volume = 41,474.41 Cu. Yds.
Use 41,474 Cu. Yds.

T-31 BITUMINOUS SURFACE TREATMENT

Area of surface = 4944.87 × 12 = 59,338.44 Sq. Yds. + U-Turns - 1016 = 60,354.44 Sq. Yds.
Bituminous Surface Treatment - Bituminous Material
60,354.44 × 0.25 gals./Sq. Yd. = 15,088 gals.
Interchange = 2,057 "
Rest Areas (2) = 1,044 "
Total Volume = 18,189 gals.
Use 18,190 gals.
Bituminous Surface Treatment - Aggregate
60,354.44 × 0.008 Cu. Yd./Sq. Yd. = 482.84 Cu. Yds.
Interchange = 66. " "
Rest Areas (2) = 33.4 " "
Total Volume = 582.24 Cu. Yds. No. 6 Agg.
Use 582 Cu. Yds. No. 6 Agg.

B-112 POROUS BASE COURSE

Length = 22,056.36 Lin. Ft.
Volume = 22,056.36 × 0.4896 × 4 × 2 ÷ 27 = 3,199.64 Cu. Yds.
Length = 35,630. Lin. Ft.
Volume = 35,630 × 0.4167 × 10 ÷ 27 = 5,498.89 " "
Volume adj. to appr. slabs, S.R. 303 = 17.7 " "
Interchange = 810.0 " "
Rest Areas (2) = 409.0 " "
U-Turn Median 196.0 " "
10,131.23 Cu. Yds.
Use 10,131 Cu. Yds.

T-35 ASPHALTIC CONCRETE SURFACE COURSE - TYPE "C"

C.H. 136 - 718.50 × 20 × 0.1667 ÷ 27 = 89.09 Cu. Yds.
Feathering = 3.20 " "
C.H. 138 - 950 × 20 × 0.1041 ÷ 27 = 73.26 " "
Feathering = 3.20 " "
S.R. 303 (Participating) - 118,988 × 0.1041 ÷ 27 = 458.76 " "
Feathering = 3.60 " "
C.H. 42 - 1,287.50 × 24 × 0.1041 ÷ 27 = 118.96 " "
Feathering = 3.20 " "
Sub-Total = 753.27 Cu. Yds.
S.R. 303 (Non-participating) - 16,211 × 0.1041 ÷ 27 = 62.50 " "
C.H. 103 (Non-participating) - 2,048 × 0.1041 ÷ 27 = 7.90 " "
Feathering = 0.75 " "
Total Volume = 824.42 Cu. Yds., Use 824 Cu. Yds.

B-35 ASPHALTIC CONCRETE LEVELING COURSE

C.H. 138 - 950 × 20 × 0.1458 ÷ 27 = 102.60 Cu. Yds.
Feathering = 1.60 " "
S.R. 303 (Participating) - 118,988 × 0.1041 ÷ 27 = 458.76 " "
Feathering = 1.74 " "
C.H. 42 - 1287.50 × 24 × 0.1485 ÷ 27 = 169.95 " "
Feathering = 1.60 " "
Sub-Total = 736.25 Cu. Yds.
S.R. 303 (Non-participating) - 16,211 × 0.1041 ÷ 27 = 62.50 " "
C.H. 103 (Non-participating) - 2,048 × 0.1041 ÷ 27 = 7.90 " "
Feathering = 0.50 " "
Total Volume = 807.15 Cu. Yds., Use 807 Cu. Yds.

T-30 BITUMINOUS PRIME COAT, applied at rate of 0.40 gal./Sq. Yd.

C.H. 136 - 718.50 × 20 × 0.40 ÷ 9 = 638.64 gals.
C.H. 138 - 950 × 20 × 0.40 ÷ 9 = 844.44 "
C.H. 42 - 1287.50 × 24 × 0.40 ÷ 9 = 1373.33 "
Total Volume = 2856.41 gals.
Use 2856 gals.

B-19 6" AGGREGATE BASE COURSE

C.H. 138 - 950 × 21 × 0.5 ÷ 27 = 369.44 Cu. Yds.
C.H. 42 - 1287.50 × 25 × 0.5 ÷ 27 = 596.11 " "
Total Volume = 965.55 Cu. Yds.
Use 966 Cu. Yds.

B-19 8" AGGREGATE BASE COURSE

C.H. 136 - 718.50 × 21 × *0.67* ÷ 27 = *372.5 Cu.* Yds.
Use *373 Cu.* Yds.
TOTAL B-19 Use 1,339 Cu. Yd.

CE-101.04 Compaction using heavy pneumatic tired roller

Mainline - 22,873.26 × 6 = 137,240 Sq. Yds.
SBL & NBL - 6,598.15 × 6 = 39,589 " "
Mainline - 22,056.36 × 3 ÷ 9 = 7,352 " "
SBL & NBL - 35,630 × 1.5 ÷ 9 = 5,938 " "
Sub-Total = 190,119 Sq. Yds.
Rest Areas - = 24,319 " "
Interchange - = 26,896 " "
Sub-Total = 241,334 Sq. Yds.
S.R. 303 (Participating) = 14,063 " "
Sub-Total = 255,397 Sq. Yds.
S.R. 303 (Non-participating) = * 1,888 " "
Total Area = 257,285 Sq. Yds.
257,285 ÷ 2000 Sq. Yds/Hour = 128.64 Hours
* 100% State = 1,888 ÷ 2000 = 0.94 Hrs. Use 1 Hour
Use 129 Hours

E-8 REMOVAL AND DISPOSAL OF EXISTING PAVEMENT

S.R. 303 - 2820.91 × 10 ÷ 9 = 3,134.34 Sq. Yds.
Use 3,134 Sq. Yds.

E-11 WATER

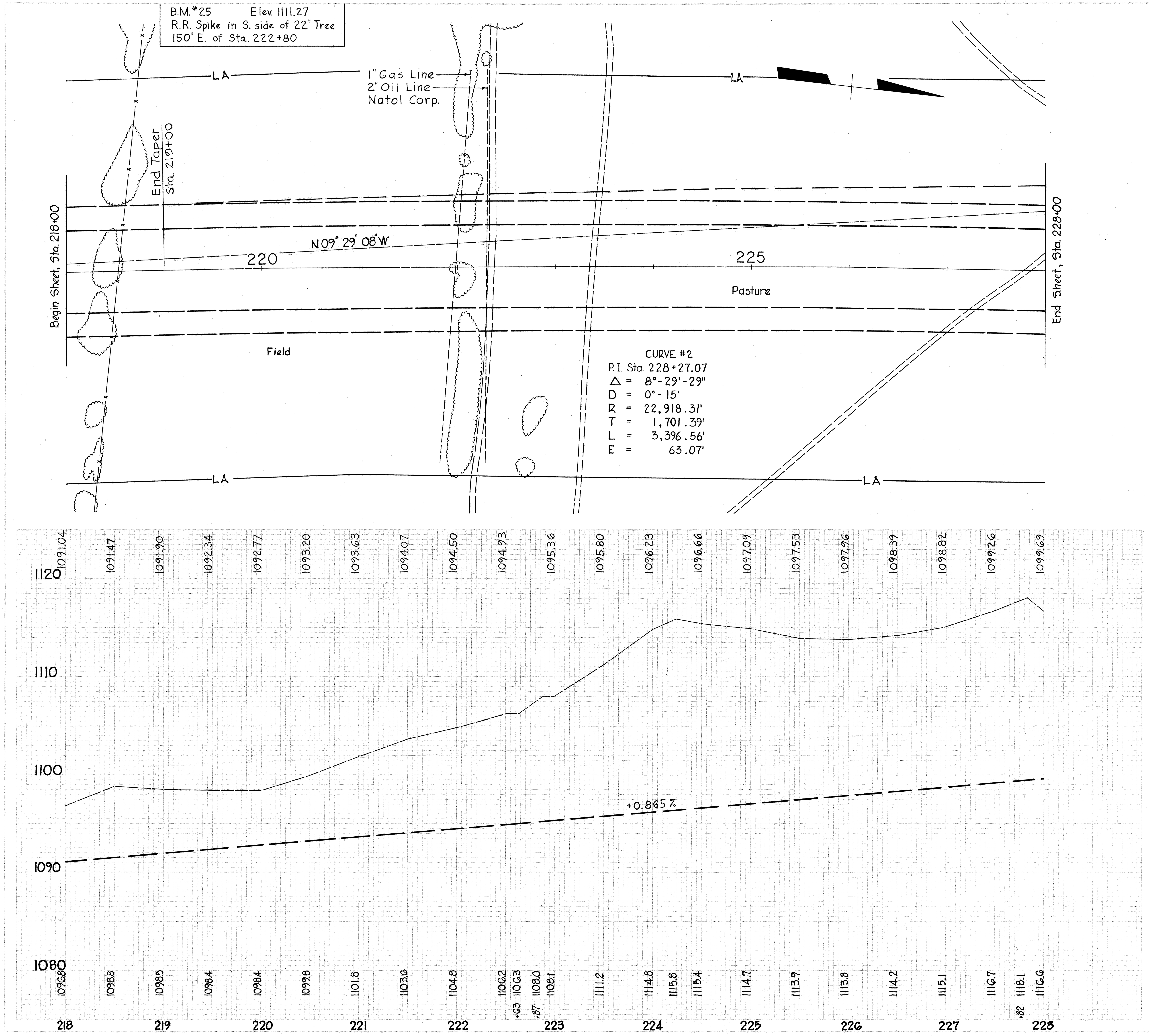
Embankment = 950,183 Cu. Yds.
I - 22 = 41,282
B - 112 = 9,935
1,001,420 Cu. Yds. × 5 gals./Cu. Yd. ÷ 1000 = 5,007.1 M. Gals.
Use 5,007 M. Gals.

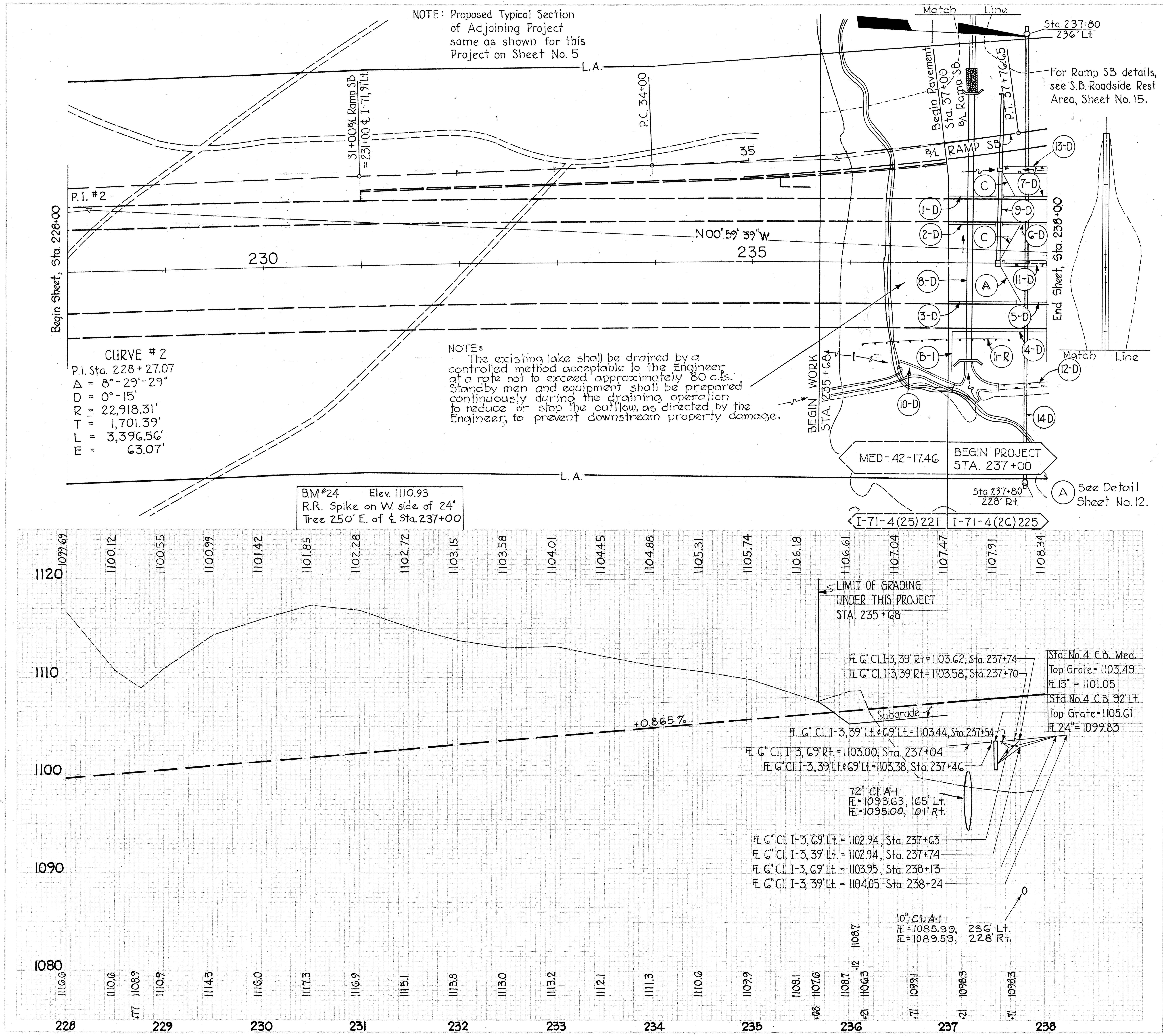
L-9 COMMERCIAL FERTILIZER 12-12-12

(20,506 + 951,462) × 9 × 20 ÷ 1000 ÷ 2000 = *87.48* Tons

I-125 CENTER AND EDGE LINES

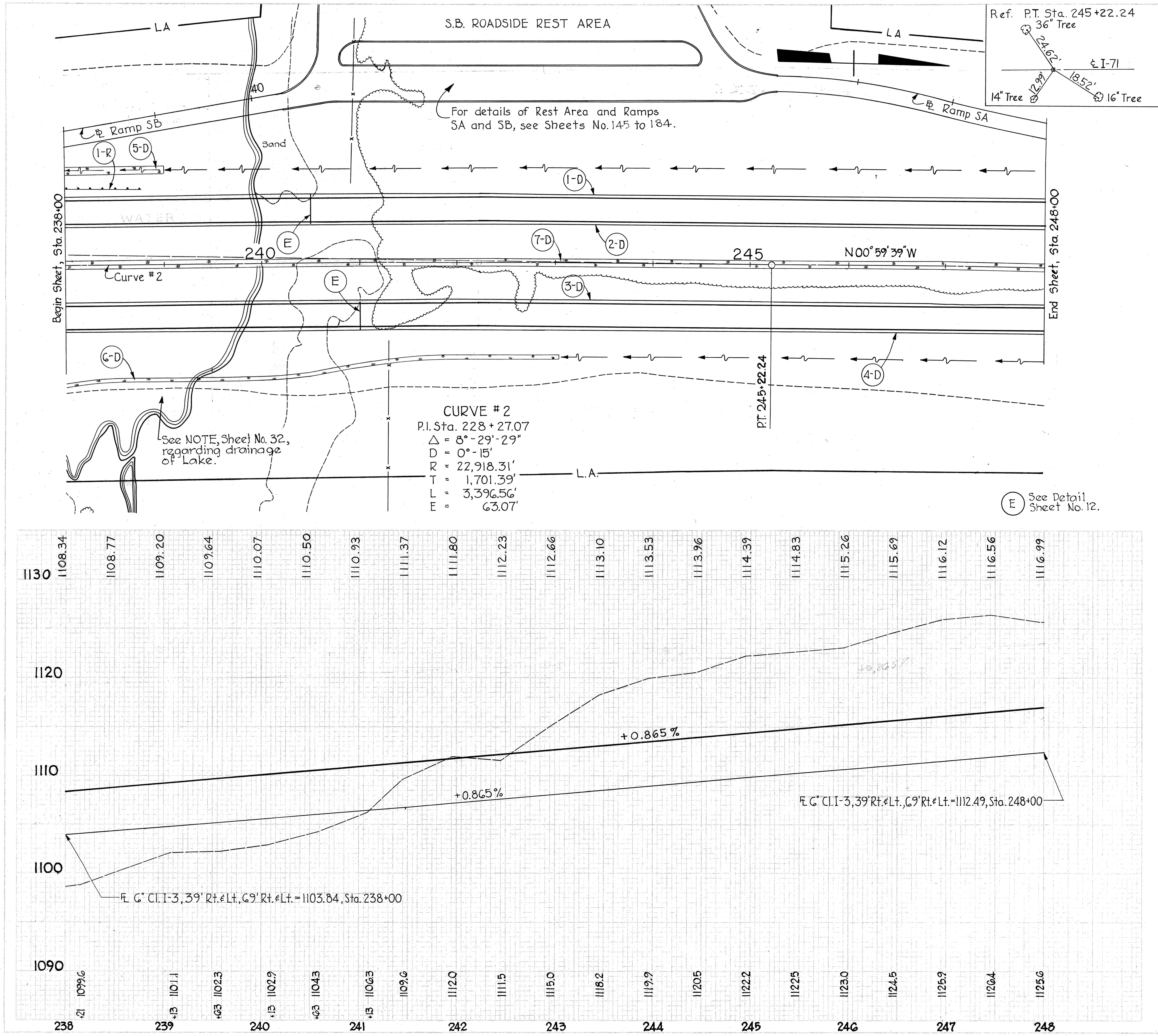
6" Center Lines (22,300 ÷ 40)15 × 2 ÷ 5280 = 3.17 Miles
4" Edge Lines 83,690 ÷ 5280 = 15.85 Miles.


B.M.#25 Elev. 1111.27
R.R. Spike in S. side of 22" Tree
150' E. of Sta. 222+80
L A
1" Gas Line
2" Oil Line
Natol Corp.
End Taper
Sta. 219+00
Begin Sheet, Sta. 218+00
N09° 29' 08" W
220
225
Pasture
Field
End Sheet, Sta. 228+00
CURVE #2
P.I. Sta. 228+27.07
△ = 8°-29'-29"
D = 0°-15'
R = 22,918.31'
T = 1,701.39'
L = 3,396.56'
E = 63.07'
1091.04
1091.47
1091.90
1092.34
1092.77
1093.20
1093.63
1094.07
1094.50
1094.93
1095.36
1095.80
1096.23
1096.66
1097.09
1097.53
1097.96
1098.39
1098.82
1099.26
1099.69
1120
1110
1100
1090
1080
+0.865%
1096.8
1098.8
1098.5
1098.4
1098.4
1099.8
1101.8
1103.6
1104.8
1106.2
1106.3
1108.0
1108.1
1111.2
1114.8
1115.8
1115.4
1114.7
1113.9
1113.8
1114.2
1115.1
1116.7
1118.1
1116.6
+63
+87
+82
218
219
220
221
222
223
224
225
226
227
228



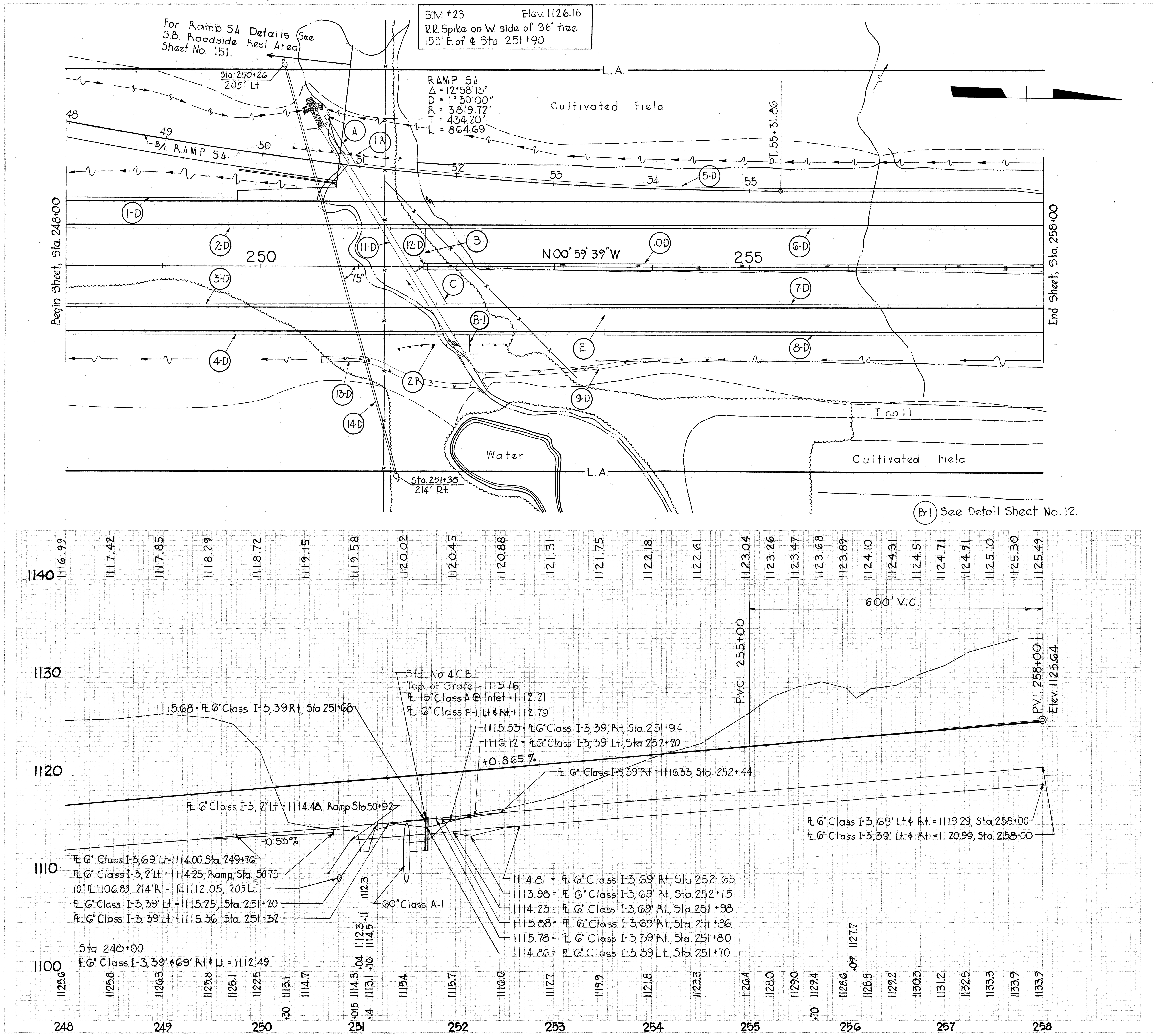
ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	I-1 Class A-1 Pipe Sec. M6.6(a) M6.8(b) 15"	I-1 Class A-1 Pipe Sec. M6.6(a) M6.8(b) 24"	I-1 Class A-1 Pipe Sec. M 6.6(a) 72"	I-1 Sec. M-6.8(b) 10"	I-1 Class I-3 Pipe 6" Shallow	I-1 Class I-3 Pipe 6" Deep	I-1 Class F-1 Pipe 6"	I-1 Class F-1 Pipe 8"	I-2 Masonry Endwall Type "C-1"	I-2 Masonry Endwall "E"	I-5 Pipe Specials 6"-90° Bend	I-5 Pipe Specials 6"-60° 6"-60° Wye	I-5 Pipe Specials 6"-60° Bend		I-8 Std. No. 4 C.B.	I-10 Dumped Rock	I-10 Rip-Rap	I-14 Paved Gutter Type 1	I-15 Guard Rail	L-10 Sodding	L-120 Jute Matting	I-8 Std. No. 1 M.H. Modified	I-8 Std. No. 2 M.H. Modified	I-1 Cl. A-1 Pipe Mod. Sec. M6.8(b) 10"	E-3 Channel Excav.	SEE SHEET NO.
			Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Cu. Yd.	Cu. Yd.	Each	Each	Each		Each	Cu. Yd.	Sq. Yd.	Lin. Ft.	Lin. Ft.	Sq. Yd.	Sq. Yd.	Each	Each	Lin. Ft.	Cu. Yd.	
1-D	237+00 to 237+46	Lt.					46																					
2-D	237+00 to 237+46	Lt.					46																					
3-D	237+00 to 237+70	Rt.					70																					
4-D	237+04 to 238+00	Rt.					126			10			1															
5-D	237+50 to 238+00	Rt.					60		10						1													
6-D	237+50 to 238+00	Lt.					80		10					1														
7-D	237+50 to 238+00	Lt.					66			10				1														
8-D	237+21	–			266						33.38							37	80			24					2266	207
9-D	237+50	Lt.	92	78								0.41					2					3						207
10-D	235+70 to 237+10	Rt.																		145		48						
11-D	237+50 to 238+00	Med.																					45					
12-D	237+50 to 238+00	Rt.																				50						
13-D	237+50 to 238+00	Lt.				261																	45					
14-D	237+80	–																						1	1	207		58
1-R	236+10 to 237+85	Rt.																			75							
TOTAL			92	78	266	261	494	–	20	20	33.38	0.41	1	2	1	–	2	37	80	145	75	125	90	1	1	207	2266	–



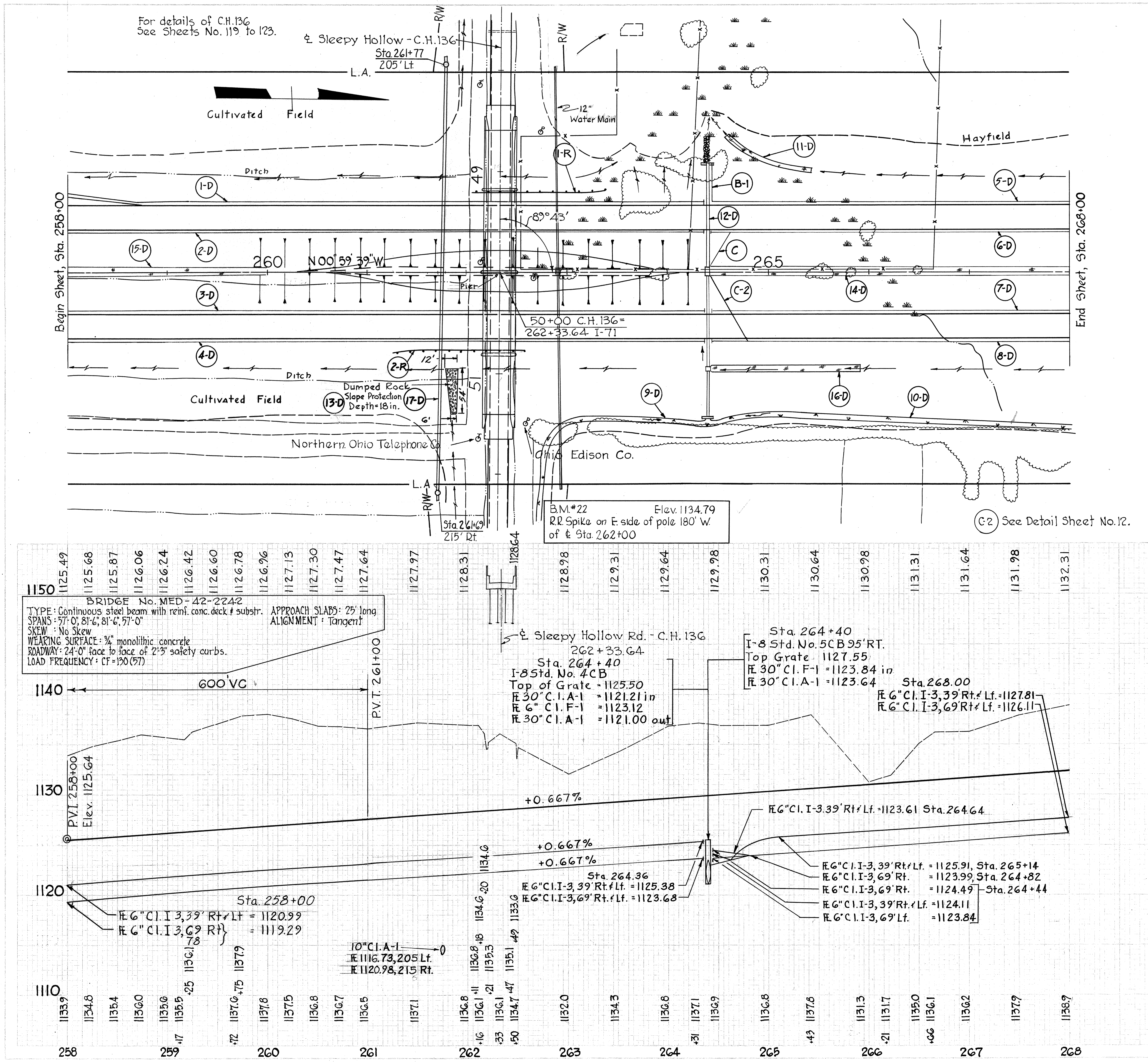
ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	I-1 Class I-3 Pipe 6" Shallow (Lin. Ft.)	I-5 Pipe Specials 6" Tee (Each)	I-15 Guard Rail (Lin. Ft.)	L-10 Sodding (Sq. Yd.)	L-120 Jute Matting (Sq. Yd.)	SEE SHEET NO.
1-D	238+00 to 248+00	Lt.	1028	1				
2-D	238+00 to 248+00	Lt.	1000					
3-D	238+00 to 248+00	Rt.	1000					
4-D	238+00 to 248+00	Rt.	1028	1				
5-D	238+00 to 239+00	Lt.					89	
6-D	238+00 to 243+00	Rt.				510		
7-D	238+00 to 243+00	Med.					889	
1-R	238+00 to 238+75	Lt.			75			
TOTAL			4056	2	75	510	978	



ESTIMATED QUANTITIES

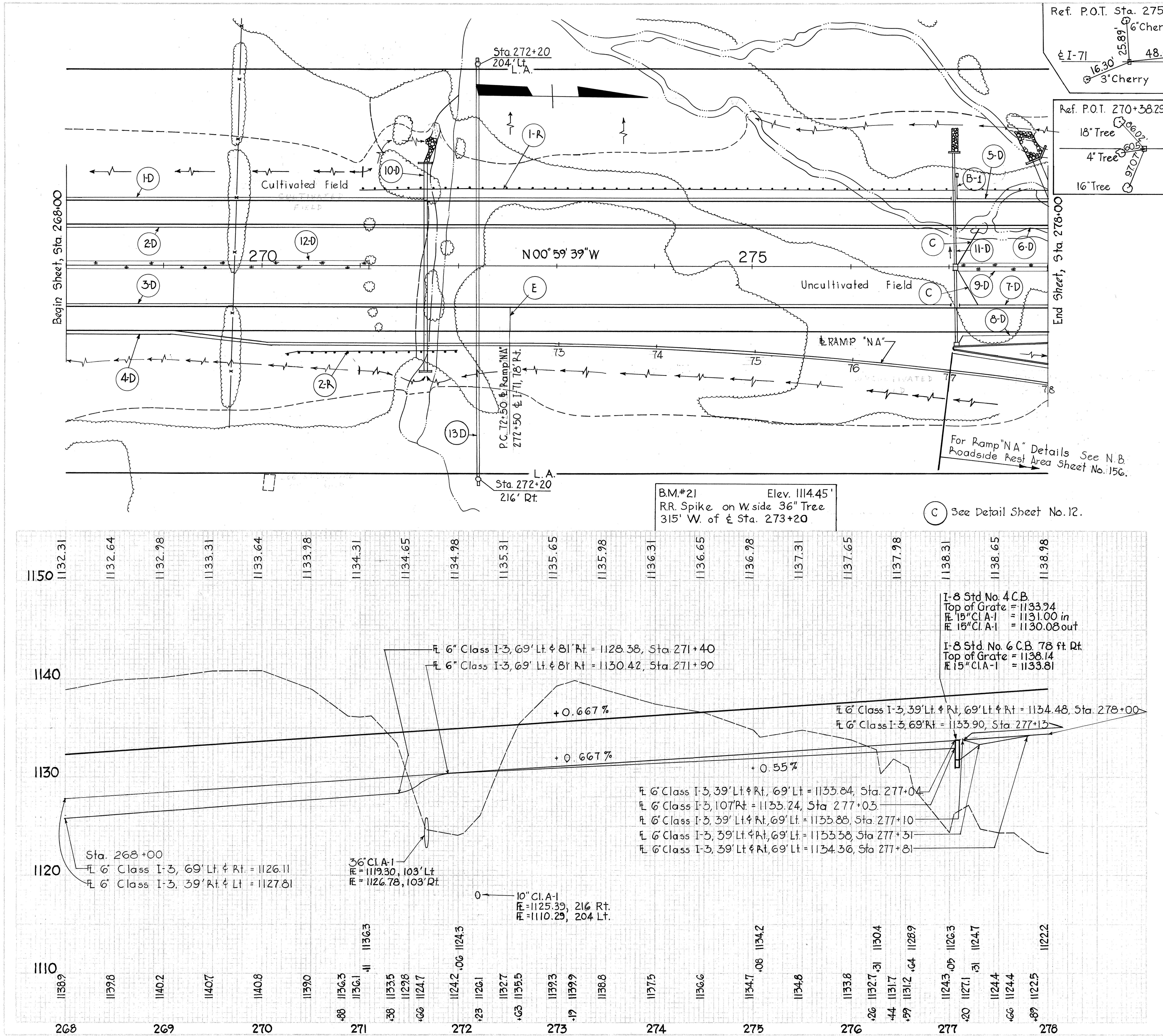
REF. NO.	STATION TO STATION	SIDE	I-1 Class A-1 Pipe Sec. M 6.8(b) 10"	I-1 Class A-1 Pipe Sec. M 6.6(a) M 6.8(b) 15"	I-1 Class A-1 Pipe Sec. M 6.6(a) 60"		I-1 Cl. I-3 Pipe 6" Shallow	I-1 Cl. I-3 Pipe 6" Deep	I-1 Cl. F-1 Pipe 6"	I-1 Cl. F-1 Pipe 8"	I-2 Masonry Endwall Type D-1	I-5 Pipe Specials 15"×60" Tee	I-5 Pipe Specials 6"-60° Bend	I-5 Pipe Specials 6"-60° Wye	I-5 Pipe Specials 6" Tee	I-8 Std. No. 4 C.B.	I-8 Std. No. 1 M.H. Mod.	I-10 Dumped Rock	I-10 Rip Rap	I-15 Guard Rail	L-10 Sodding	L-120 Jute Matting	I-8 Std. No. 2 M.H. Mod.	SEE SHEET NO.
			Lin. Ft.	Lin. Ft.	Lin. Ft.		Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Cu. Yd.	Each	Each	Each	Each	Each	Each	Cu. Yd.	Sq. Yd.	Lin. Ft.	Sq. Yd.	Sq. Yd.		
1-D	248+00 to 249+76	Lt.					176																	
2-D	248+00 to 251+20	Lt.					320																	
3-D	248+00 to 251+68	Rt.					368																	
4-D	248+00 to 251+86	Rt.					386																	
5-D	250+92 to 258+00	Lt.						754		10			1											
6-D	251+32 to 258+00	Lt.					698		10						1									
7-D	251+90 to 258+00	Rt.					654		10					1										
8-D	251+98 to 258+00	Rt.						636		10					2									
9-D	252+30 to 254+60	Rt.																			248			
10-D	251+70 to 258+00	Med.																				560		
11-D	251+50	—			286						24.54	1						29	39		22			208
12-D	251+70	Med.		14												1								208
13-D	250+70 to 252+15	Rt.																			138			
14-D	250+80	—	442														1						1	61
1-R	250+30 to 251+42.5	Lt.																		112.5				
2-R	251+37.5 to 252+50	Rt.																		112.5				
TOTAL			442	14	286	—	2602	1380	20	20	24.54	1	1	1	3	1	1	29	39	225	408	560	1	



(* 30 Lin. Ft. is no Federal Participation)

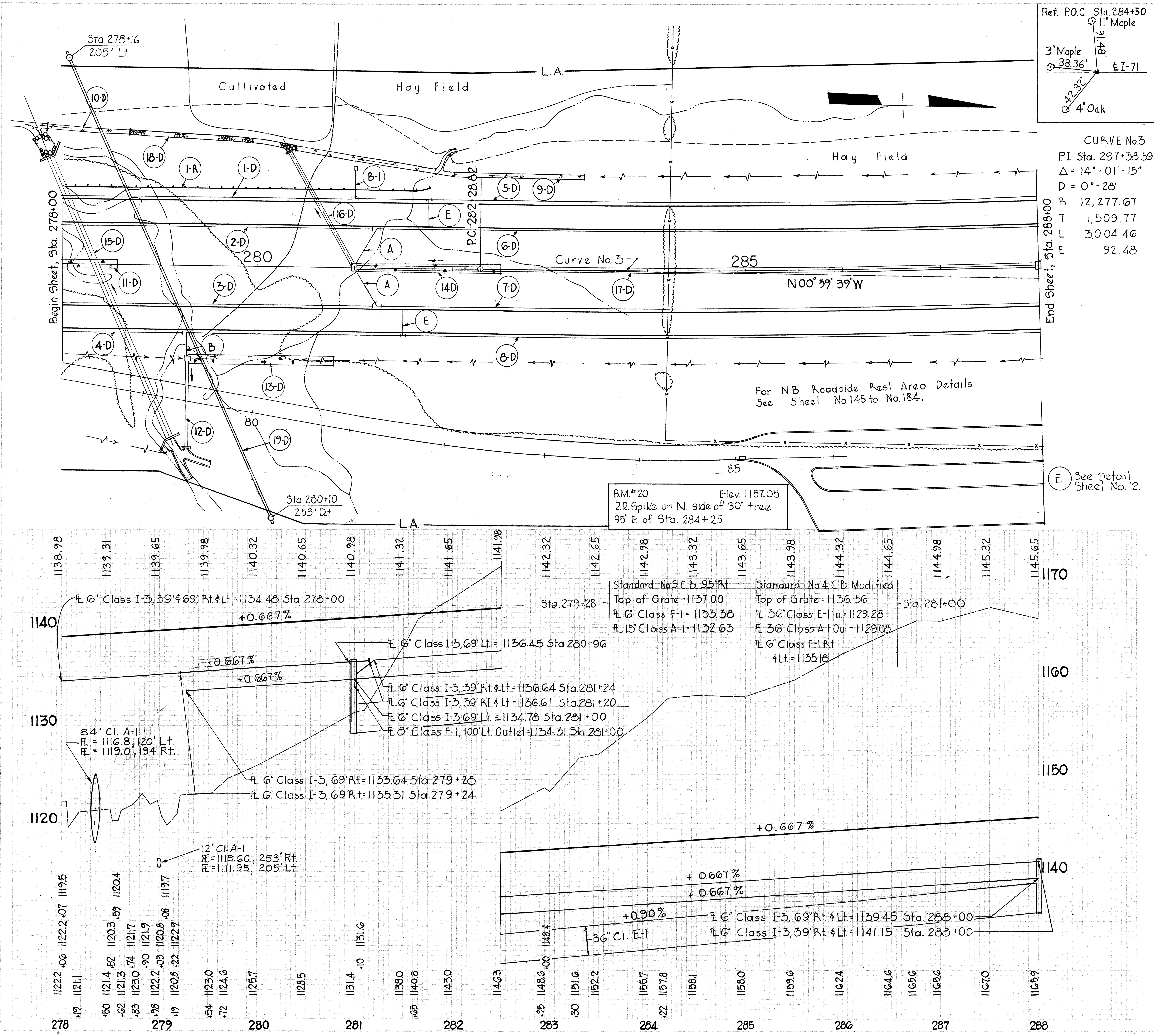
ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	I-1 Class A-1 Pipe Sec. M6.6(b) M6.8(b) 6" (Lin. Ft.)	I-1 Class A-1 Pipe Sec. M6.8(b) 10" (Lin. Ft.)	I-1 Class A-1 Pipe Sec. M6.6(a) M6.8(b) 30" (Lin. Ft.)	I-1 Class A-1 Pipe Mod. Sec. M6.8(b) 10' (Lin. Ft.)	I-1 Class I-3 Pipe 6" Shallow (Lin. Ft.)	I-1 Class I-3 Pipe 6" Deep (Lin. Ft.)	I-1 Class F-1 Pipe 6" (Lin. Ft.)	I-1 Class F-1 Pipe 8" (Lin. Ft.)	I-1 Class F-1 Pipe 30" (Lin. Ft.)	I-2 Masonry Endwall Type "E" (Cu. Yd.)	I-5 Pipe Specials 6"-60° Wye (Each)	I-5 Pipe Specials 6" Tee (Each)	I-5 Pipe Specials 6"-30° Bend (Each)	I-5 Pipe Specials 6"-90° Bend (Each)	I-8 Std. No. 2 M.H. Mod. (Each)	I-8 Std. No. 4 C.B. Mod. (Each)	I-8 Std. No. 5 C.B. Mod. (Each)	I-10 Dumped Rock (Cu. Yd.)	L-10 Sodding (Sq. Yd.)	L-120 Jute Matting (Sq. Yd.)	I-15 Guard Rail (Lin. Ft.)		SEE SHEET NO.
1-D	258+00 to 264+46	Lt.						646																	
2-D	258+00 to 264+46	Lt.					646																		
3-D	258+00 to 264+46	Rt.					646																		
4-D	258+00 to 264+46	Rt.						646																	
5-D	264+54 to 268+00	Lt.						374		10						1									
6-D	264+54 to 268+00	Lt.					382		10				1												
7-D	264+54 to 268+00	Rt.					346																		
8-D	264+54 to 268+00	Rt.	70					346	10				2	1	1										
9-D	263+00 to 264+78	Rt.																			222				
10-D	265+22 to 268+00	Rt.																			320				
11-D	264+85 to 265+20	Lt.																			145				
12-D	264+40	—			210						48	1.02						1	1	13					207
13-D	261+80 to 261+92	Rt.																		9					
14-D	264+50 to 268+00	Med.																				361			
15-D	258+00 to 260+00	Med.																				178			
16-D	264+50 to 266+00	Rt.																				133			
17-D	261+75	—		33.5		93											2								63
1-R	262+02 to 263+40	Lt.																					137.5*		
2-R	261+27 to 262+65	Rt.																					137.5*		
TOTAL			70	335	210	93	2020	2012	20	10	48	1.02	3	1	1	1	2	1	1	22	697	672	275		



ESTIMATED QUANTITIES

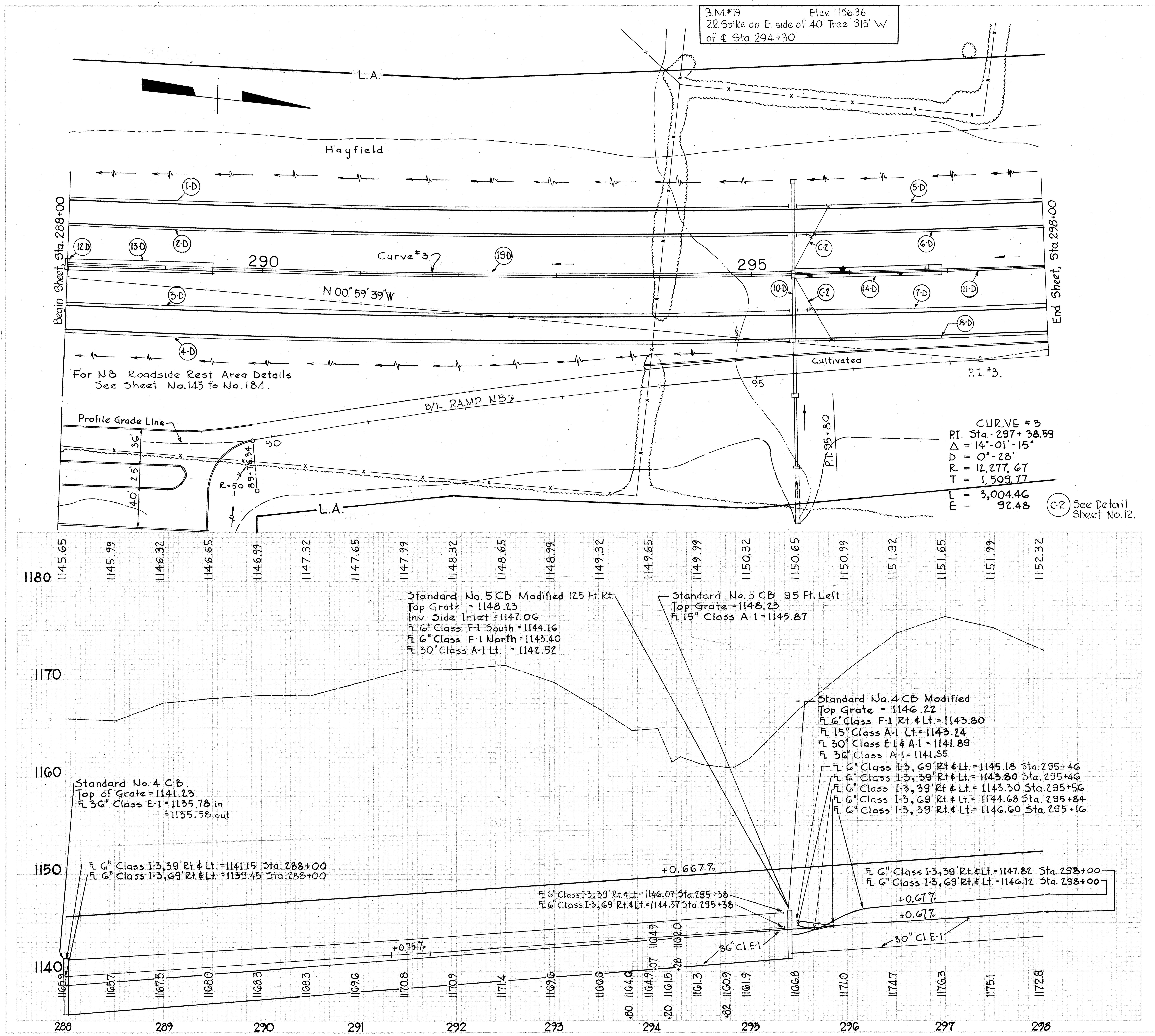
REF. NO.	STATION TO STATION	SIDE	I-1 Class A-1 Pipe Sec. M-6.4(d) M-6.6(b) 36"	I-1 Class A-1 Pipe Sec. M-6.6(a) M-6.8(b) 15"	I-1 Class A-1 Pipe Sec. M-6.8(b) 10"	I-1 Class I-3 Pipe 6" Shallow	I-1 Class I-3 Pipe 6" Deep	I-1 Class F-1 Pipe 6"	I-1 Class F-1 Pipe 8"	I-1 Class F-1 Pipe 15"	I-2 Masonry Endwall Type "A-1"	I-2 Masonry Endwall Type "E"	I-5 Pipe Specials 6"-90° Bend	I-5 Pipe Specials 6"-60° Wye	I-5 Pipe Specials 6"-60° Bend	I-5 Pipe Specials 6" Tee	I-5 Pipe Specials 15"-30° Bend	I-8 Std. No. 4 C.B.	I-8 Std. No. 6 C.B.	I-10 Dumped Rock	I-8 Std. No. 1 M.H. Modified	I-15 Guard Rail	L-10 Sodding	L-120 Jute Matting	I-8 Std. No. 2 M.H. Modified	I-1 Cl. A-1 Pipe Mod. Sec. M-6.8(b) 10"	SEE SHEET NO.
			Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Cu. Yd.	Cu. Yd.	Each	Each	Each	Each	Each	Each	Each	Cu. Yd.	Each	Lin. Ft.	Sq. Yd.	Sq. Yd.	Each	Lin. Ft.	
1-D	268+00 to 277+04	Lt.				564	340																				
2-D	268+00 to 277+04	Lt.				904																					
3-D	268+00 to 277+04	Rt.				904																					
4-D	268+00 to 77+03 Ramp	Rt.				604	340									1											
5-D	277+10 to 278+00	Lt.				102			10				1														
6-D	277+10 to 278+00	Lt.				124		10						1													
7-D	277+10 to 278+00	Rt.				124		10						1													
8-D	277+07 to 278+00	Rt.				90			10						1												
9-D	277+07 to 278+00	Med.																						182			
10-D	271+66	—	206								16.00									14			18				209
11-D	277+07	Lt & Rt.		158						42		0.26					2	1	1	5			3				209
12-D	268+00 to 271+07	Med.																						273			
13-D	272+20	—			383																1				1	45	66
1-R	271+00 to 278+00	Lt.																				700					
2-R	270+25 to 271+07																					175					
TOTAL			206	158	383	3416	680	20	20	42	16.00	0.26	1	2	1	1	2	1	1	19	1	875	21	355	1	45	



ESTIMATED QUANTITIES

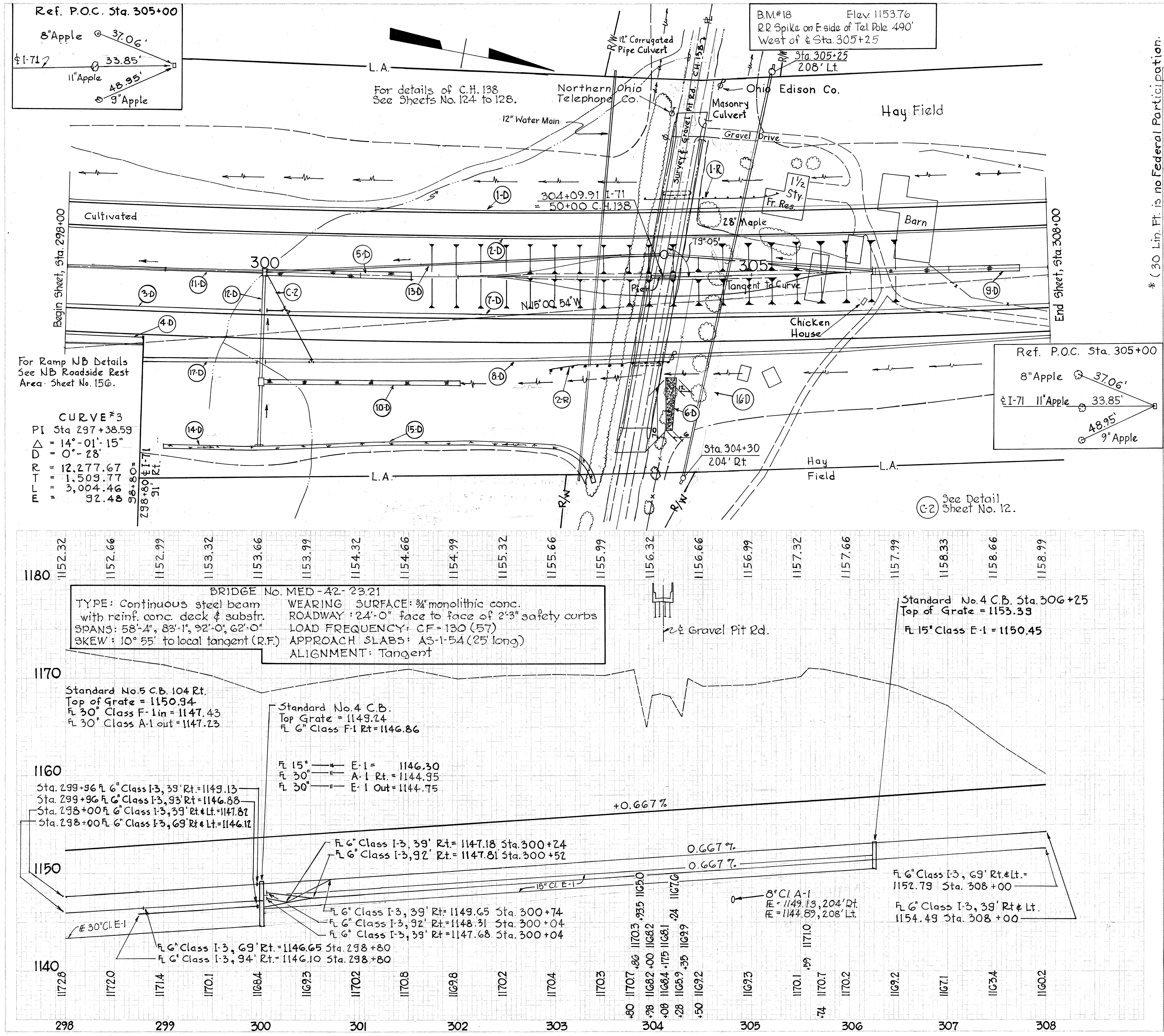
REF. NO.	STATION TO STATION	SIDE	A-1 Class A-1 Pipe MG.6(b) MG.8(b) 15" Lin. Ft.	Sec. M6.4(d) M6.6(b) 36" Lin. Ft.	Sec. M10.6(c) 84" Lin. Ft.	Sec. M-6.8(b) 12" Lin. Ft.	I-1 Cl. I-3 Pipe 6" Shallow Lin. Ft.	Cl. I-3 Pipe 6" Deep Lin. Ft.	Cl. F-1 Pipe 6" Lin. Ft.	Cl. F-1 Pipe 8" Lin. Ft.	Class E-1 Pipe 36" Lin. Ft.	
1-D	278+00 to 280+96	Lt.					296					
2-D	278+00 to 281+20	Lt.					320					
3-D	278+00 to 281+20	Rt.					320					
4-D	278+00 to 279+24	Rt.					124					
5-D	281+00 to 288+00	Lt.						748		10		
6-D	281+24 to 288+00	Lt.					710		10			
7-D	281+24 to 288+00	Rt.					710		10			
8-D	279+28 to 288+00	Rt.						1016	10			
9-D	280+40 to 283+30	Lt.										
10-D	277+85 to 278+70	Lt.										
11-D	278+00 to 278+51	Med.										
12-D	279+28	Rt.	88									
13-D	279+28 to 280+78	Rt.										
14-D	281+00 to 282+50	Med.										
15-D	278+34	–			314							
16-D	281+00	–		138								
17-D	281+00 to 288+00	Med.									700	
18-D	278+70 to 280+40	Lt.										
19-D	279+00					238						
1-R	278+00 to 281+75	Lt.										
TOTAL			88	138	314	238	2480	1764	30	10	700	

REF. NO.	A-1 Cl. A-1 Pipe Mod. Sec. M6.8(b) 12" Lin. Ft.	I-2 Masonry Endwall Type "E" Cu. Yd.	Masonry Endwall Type "D" Cu. Yd.	I-5 Pipe Specials 6"-60° Bend Each	6" Tee Each	6"-30° Bend Each	6"-90° Bend Each	I-8 Std. No.4 C.B. Mod. Each	Std. No.5 C.B. Each	I-10 Rip Rap Sq. Yd.	Dumped Rock Cu. Yd.	I-15 Guard Rail Lin. Ft.	L-10 Sodding Sq. Yd.	L-120 Jute Matting Sq. Yd.	I-8 Std. No.1 M.H. Modified Each	Std. No.2 M.H. Mod. Each	SEE SHEET NO.
1-D																	
2-D																	
3-D																	
4-D																	
5-D					1		1										
6-D				1													
7-D				1													
8-D					1		1										
9-D													290				
10-D													152				
11-D														51			
12-D		0.26							1				3				208
13-D														133			
14-D														133			
15-D			46.66							79	25		30				208
16-D		0.59						1					3				210
17-D																	
18-D											81						
19-D	280														1	1	68
1-R												600					
TOTAL	280	0.85	46.66	2	2		2	1	1	79	116	600	478	317	1	1	



ESTIMATED QUANTITIES

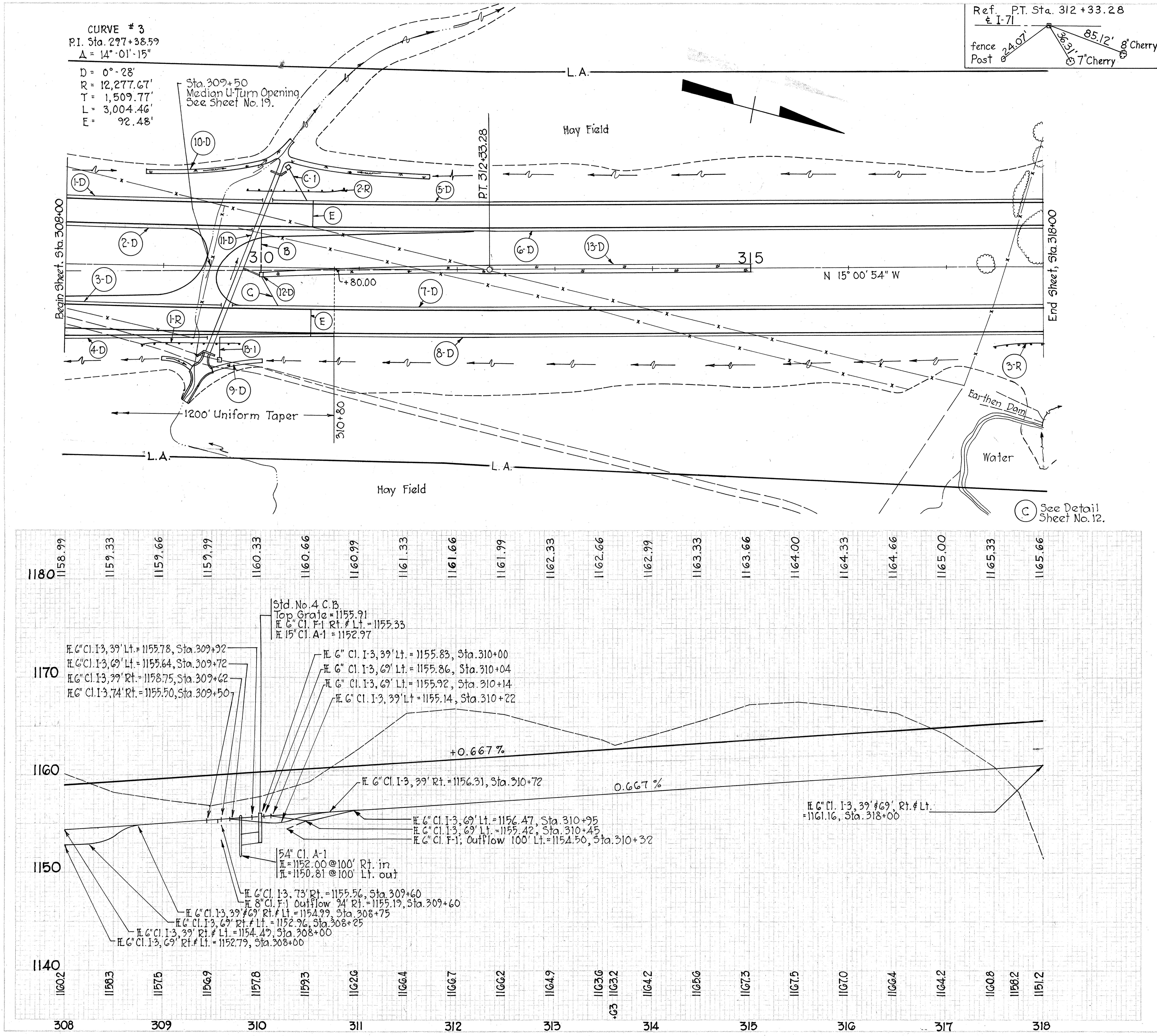
REF. NO.	STATION TO STATION	SIDE	I-1 Class A-1 Pipe Sec. M-6.6(b) M-6.8(b) 6" Lin. Ft.	I-1 Class A-1 Pipe Sec. M-6.6(a) M-6.8(b) 15" Lin. Ft.	I-1 Class A-1 Pipe Sec. M-6.6(a) M-6.8(b) 30" Lin. Ft.		I-1 Class E-1 Pipe 30" Lin. Ft.	I-1 Class E-1 Pipe 36" Lin. Ft.	Class I-3 Pipe 6" Deep Lin. Ft.	Class I-3 Pipe 6" Shallow Lin. Ft.	Class F-1 Pipe 6" Lin. Ft.	Class F-1 Pipe 30" Lin. Ft.	I-5 Pipe Specials 6"-60° Wye Each	I-5 Pipe Specials 6"-30° Bend Each	I-5 Pipe Specials 6" Tee Each	I-8 Std. No.5 C.B. Mod. Each	I-8 Std. No.4 C.B. Mod. Each	I-8 Std. No.5 C.B. Each	I-8 Std. No.4 C.B. Each		L-10 Sodding Sq. Yd.	L-120 Jute Matting Sq. Yd.	E-3 Channel Excav. Cu. Yd.		SEE SHEET NO.
1-D	288+00 to 295+38	Lt.							738																
2.5	288+00 to 295+38	Rt.								738															
3-D	288+00 to 295+38	Rt.								738															
4-D	288+00 to 295+38	Rt.							738																
5-D	295+46 to 298+00	Lt.	70						254		10		1		1										
6-D	295+46 to 298+00	Lt.								254				1											
7-D	295+46 to 298+00	Rt.								254				1											
8-D	295+46 to 298+00	Rt.	70						254		10		1		1										
9-D	288+00 to 295+42	Med.						742																	
10-D	295+42	—		94	124							76				1	1	1			16		116		210
11-D	295+42 to 298+00	Med.					258																		
12-D	288+00	Med.																	1						
13-D	288+00 to 289+50	Med.																				133			
14-D	295+42 to 296+92	Med.																				133			
TOTAL			140	94	124		258	742	1984	1984	20	76	2	2	2	1	1	1	1		16	266	116		



ESTIMATED QUANTITIES

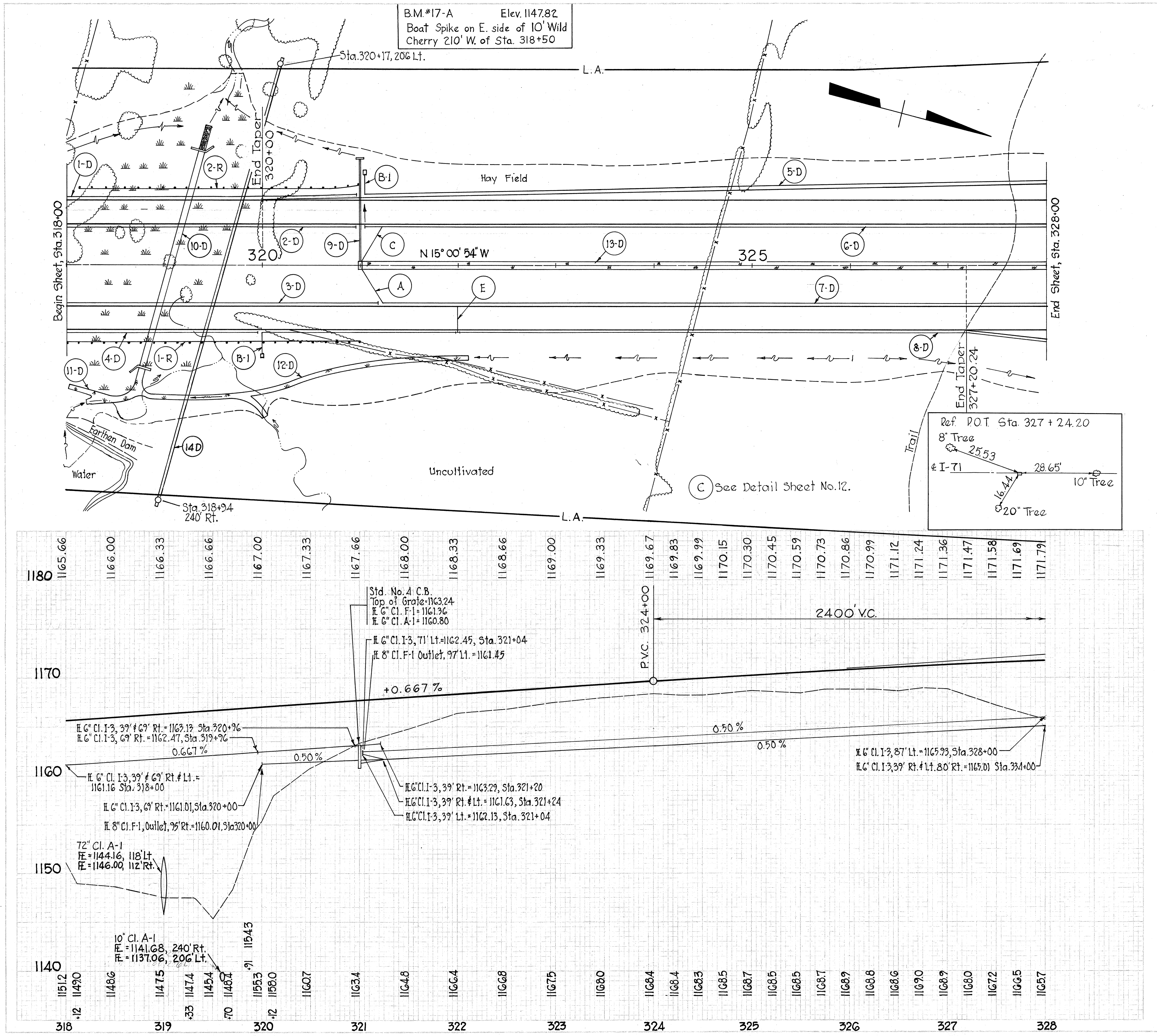
REF NO.	STATION TO STATION	SIDE	I-1 Class A-1 Pipe 6" M6.6(b) M6.8(b)	30" M6.6(a) M6.8(b)	8" M6.8(b)	I-1 Class E-1 Pipe 15"	30"		I-1 Class I-3 Pipe 6" Shallow	6" Deep	I-1 Class F-1 Pipe 6"	30"	I-2 Masonry Type E Endwall	I-5 6" Tee	6" 60° Wye	6" 30° Bend	I-8 Std. No. 1 Manhole	Std. No. 4 C.B.	Std. No. 4 C.B. Mod	Std. No. 5 C.B. Mod.	I-10 Dumped Rock	I-15 Guard Rail	L-10 Sodding	L-120 Jute Matting	I-8 Std No. 2 M.H. Modified	I-1 Cl. A-1 Pipe 8" Mod. Sec. M6.8(b)		SEE SHEET NO.
			Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.		Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Cu. Yd.	Each	Each	Each	Each	Each	Each	Each	Cu. Yd.	Lin. Ft.	Sq. Yd.	Sq. Yd.	Each	Lin. Ft.		
1-D	298+00 to 308+00	Lt.								1000																		
2-D	298+00 to 308+00	Lt.							1000																			
3-D	298+00 to 299+96	Rt.							196																			
4-D	298+00 to 298+80	Rt.								80																		
5-D	300+00 to 301+50	Med.																						133				
6-D	304+10	Rt.																			35							
7-D	300+04 to 308+00	Rt.							796							1												
8-D	300+04 to 308+00	Rt.	94							796	10			1	2													
9-D	306+25 to 307+75	Med.																						133				
10-D	300+02 to 302+00	Rt.																						178				
11-D	298+00 to 300+00	Med.					200																					
12-D	300+00	Rt.		114								68	0.51						1	1			4					74
13-D	300+00 to 306+25	—				624											1	1										
14-D	299+00 to 300+00	Rt.																					88					
15-D	300+00 to 303+40	Rt.																					330					
16-D	304+73	—			356																				2	76		76
17-D	298+80 to 299+96	Rt.								116																		
1-R	304+02 to 305+30	Lt.																				137.5*						
2-R	302+89 to 304+17	Rt.																				137.5*						
TOTAL			94	114	356	624	200	—	1992	1992	10	68	0.51	1	2	1	1	1	1	1	35	275	422	444	2	76		

* (30 Lin. Ft. is no Federal Participation.



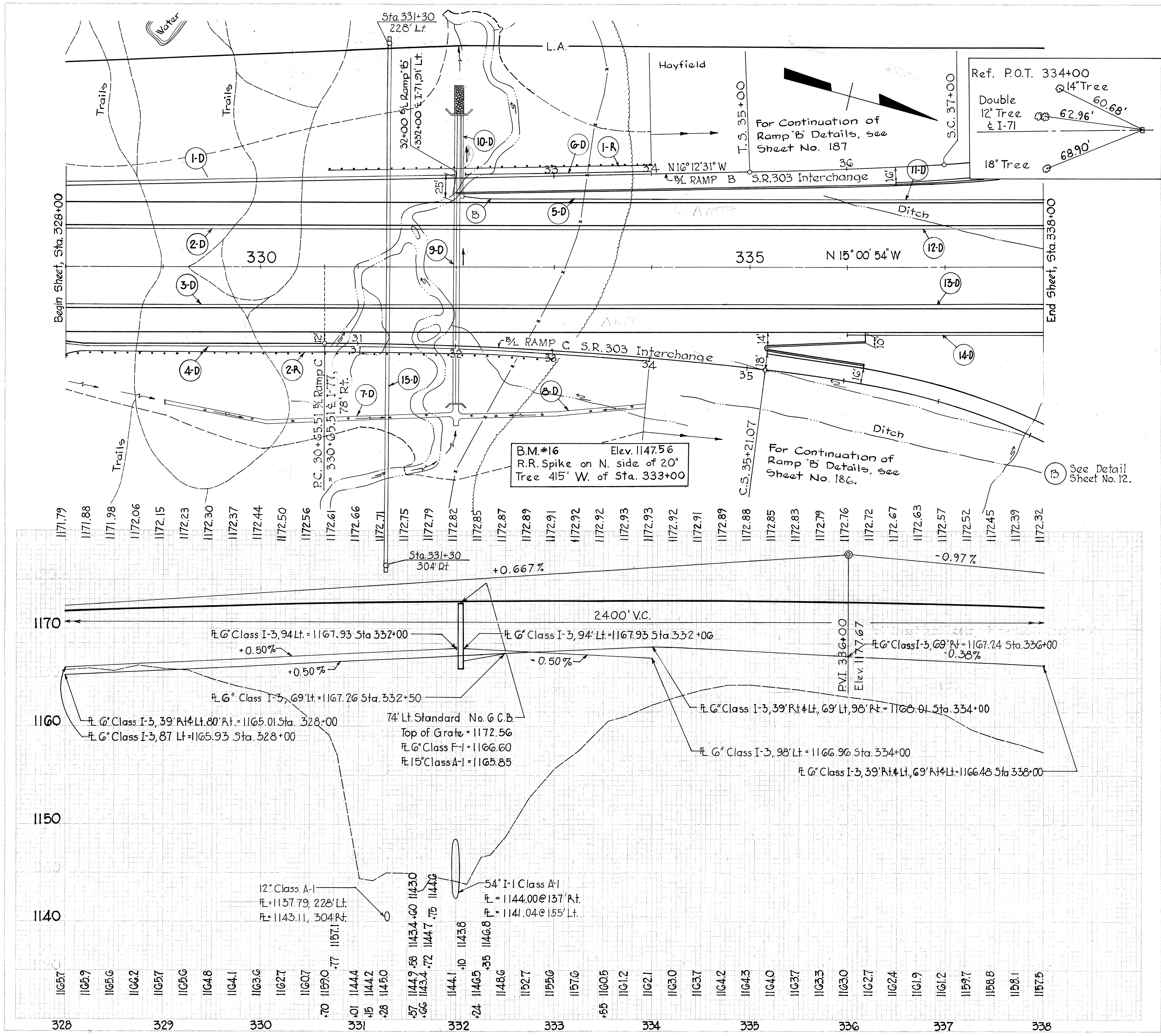
ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	I-1 Class A-1 Pipe Sec. MC.6(a) 54" Lin. Ft.	I-1 Class A-1 Pipe Sec. MC.6(b) 15" Lin. Ft.	I-1 Class I-3 Pipe 6" Shallow Lin. Ft.	I-1 Class I-3 Pipe 6" Deep Lin. Ft.	I-1 Class F-1 Pipe 6" Lin. Ft.	I-1 Class F-1 Pipe 8" Lin. Ft.	I-2 Masonry Endwall Type D-I Cu. Yd.	I-5 Pipe Specials 6"-60° Wye Each	I-5 Pipe Specials 6" Tee Each	I-5 Pipe Specials 6"-90° Bend Each	I-5 Pipe Specials 5/4x5/4x15 Tee Each	I-8 Std. No. 4 C.B. Each	I-10 Riprap Sq. Yd.	I-15 Guard Rail Lin. Ft.	E-3 Channel Excav. Cu. Yd.	L-10 Sodding Sq. Yd.	L-120 Jute Matting Sq. Yd.	SEE SHEET NO.
1-D	308+00 to 310+04	Lt.			179	25														
2-D	308+00 to 309+92	Lt.			192															
3-D	308+00 to 309+62	Rt.			162															
4-D	308+00 to 309+50	Rt.			125	25														
5-D	310+14 to 318+00	Lt.			840			10		1	1									
6-D	310+00 to 318+00	Lt.			830		10					1								
7-D	309+72 to 318+00	Rt.			852		10			1										
8-D	309+60 to 318+00	Rt.			890			10			1	1								
9-D	309+00 to 310+00	Rt.																82		
10-D	308+82 to 311+70	Lt.																284		
11-D	309+81	–	200						20.98				1		79		480	20		211
12-D	309+80 to 310+00	Med.		8										1						
13-D	310+00 to 315+00	Med.																	445	
1-R	308+80 to 309+80	Rt.														100				
2-R	309+85 to 310+85	Lt.														100				
3-R	317+50 to 318+00	Rt.														50				
TOTAL			200	8	4070	50	20	20	20.98	2	2	2	1	1	79	250	480	386	445	



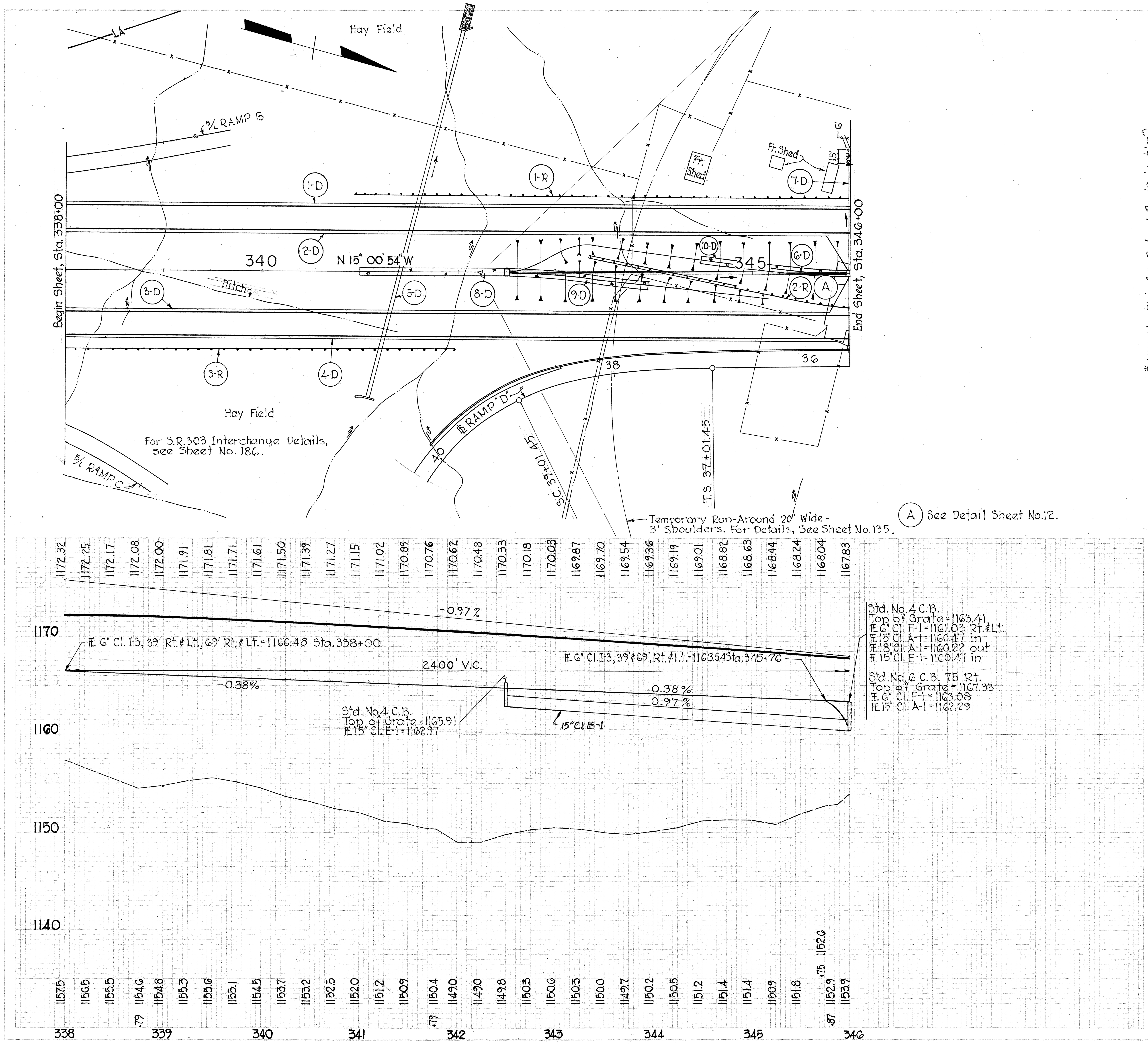
ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	I-1 Class A-1 Pipe Sec. M6.6(c), M6.4(g), 10 ga. 72"	I-1 Class A-1 Pipe Sec. M6.6(a) M6.8(b) 15"	I-1 Class A-1 Pipe Sec. M6.8(b) 10"	I-1 Class I-3 Pipe 6" Shallow	I-1 Class F-1 Pipe 6"	I-1 Class F-1 Pipe 8"	I-2 Masonry Endwall Type "E"	I-2 Masonry Endwall Type "D-1"	I-5 Pipe Specials 6"-60° Bend	I-5 Pipe Specials 6"-90° Bend	I-5 Pipe Specials 6"-60° Wye	I-5 Pipe Specials 6" Tee	I-8 Std. No. 4 C.B.	I-10 Dumped Rock	I-15 Guard Rail	L-10 Sodding	L-120 Jute Matting	I-8 Std. No. 1 M.H. Modified	I-1 Cl. A-1 Pipe Mod. Sec. M6.8(b) 10"	E-3 Channel Excavat.	SEE SHEET NO.
			Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Cu. Yd.	Cu. Yd.	Each	Each	Each	Each	Each	Cu. Yd.	Lin. Ft.	Sq. Yd.	Sq. Yd.	Each	Lin. Ft.	Cu. Yd.	
1-D	318+00 to 320+96	Lt.				296																	
2-D	318+00 to 320+96	Lt.				296																	
3-D	318+00 to 321+20	Rt.				320																	
4-D	318+00 to 319+96	Rt.				196																	
5-D	321+04 to 328+00	Lt.				712		10				1											
6-D	321+04 to 328+00	Lt.				730	10						1										
7-D	321+24 to 328+00	Rt.				710	10				1												
8-D	320+00 to 328+00	Rt.				844		10				1		1									
9-D	321+00	Lt.		108					0.26						1			3					81
10-D	319+07	—	230							35.42						23		26				57	211
11-D	318+00 to 319+87	Rt.																114					
12-D	319+87 to 322+10	Rt.																329					
13-D	321+00 to 328+00	Med.																	622				
14-D	319+60	—			266															2	204		80
1-R	318+00 to 321+00	Rt.															300						
2-R	318+12 to 321+00	Lt.															287.5						
TOTAL			230	108	266	4208	20	20	0.26	35.42	1	2	1	1	1	23	587.5	472	622	2	204	57	



ESTIMATED QUANTITIES

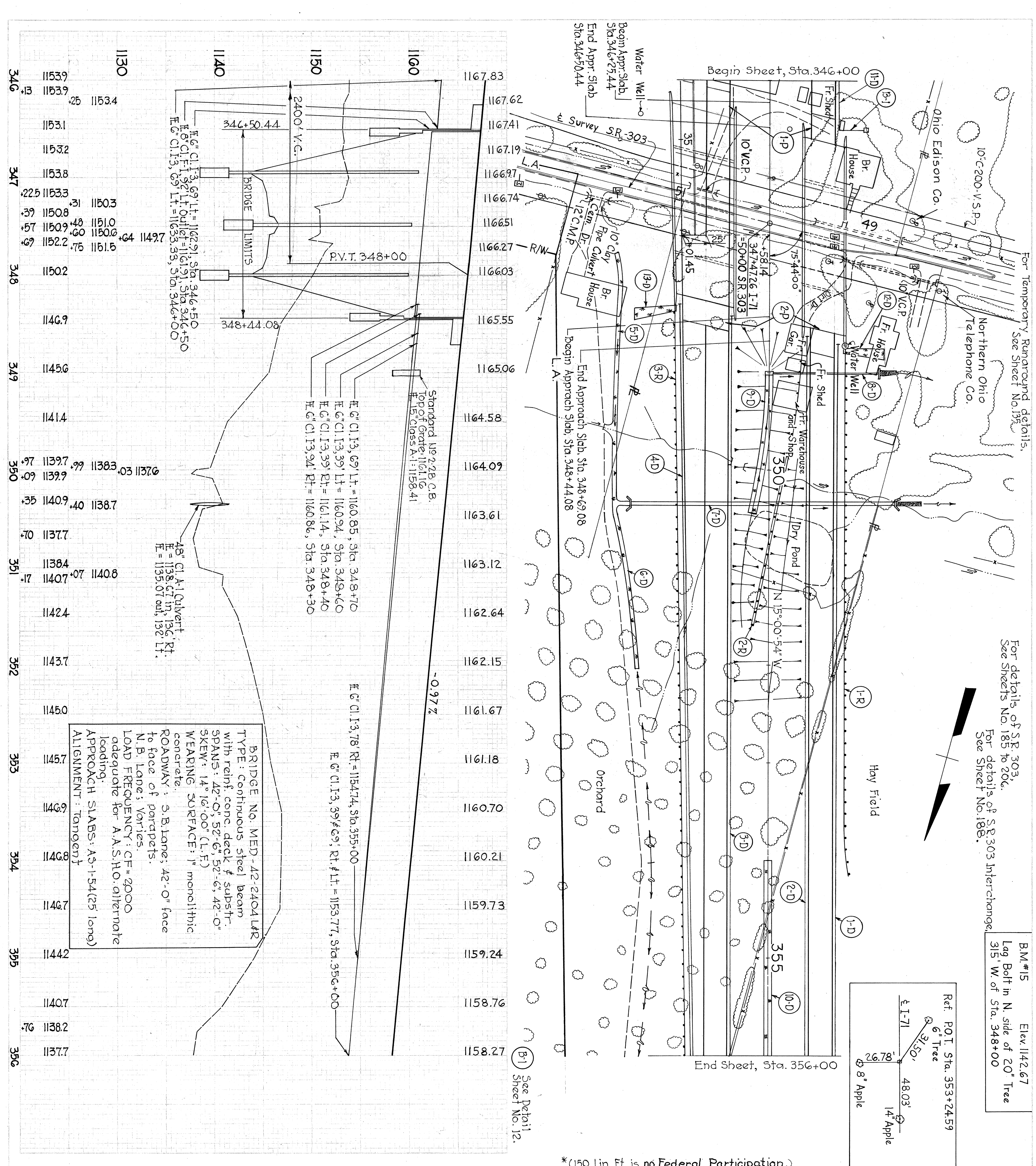
REF. NO.	STATION TO STATION	SIDE	I-1 Class A-1 Pipe Sec M 6.8(b) 10"	I-1 Class A-1 Pipe Sec M 6.6(a) M 6.8(b) 15"	I-1 Class A-1 Pipe Sec M 6.6(d) 54"	I-1 Cl. A-1 Pipe Mod. Sec. M 6.8(b) 10"	I-1 Cl. I-3 P. 6" Shallow	I-1 Class 6"	I-1 F-1 Pipe 15"	I-2 Masonry Endwall Type C-1	I-2 Masonry Endwall Type C1 M.	I-5 P. Spec. 15"-30° Bend	I-8 Std. No. 6 CB	I-8 Std. No. 1 M.H. Mod.	I-10 Dumped Rock	I-15 Guard Rail	E-3 Chan. Excav.	L-10 Sodding	I-8 Std. No. 2 M.H. Mod.	SEE SHEET NO.
			Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Cu. Yd.	Cu. Yd.	Each	Each	Each	Cu. Yd.	Lin. Ft.	Cu. Yd.	Sq. Yd.	Each	
1-D	328+00 to 332+00	Lt.					400													
2-D	328+00 to 334+00	Lt.					600													
3-D	328+00 to 334+00	Rt.					600													
4-D	328+00 to 334+00	Rt.					600													
5-D	332+04 to 334+00	Lt.					196	10												
6-D	332+06 to 334+00	Lt.					194													
7-D	328+85 to 332+00	Rt.																267		
8-D	332+00 to 334+00	Rt.																178		
9-D	332+00	–			292					10.00	14.00				17		5	20		212
10-D	332+04	Lt.		24					64			1	1							212
11-D	334+00 to 338+00	Lt.					400													
12-D	334+00 to 338+00	Lt.					400													
13-D	334+00 to 338+00	Rt.					400													
14-D	336+00 to 338+00	Rt.					200													
15-D	331+30	–	287			251								1					1	82
1-R	330+75 to 334+00	Lt.														325				
2-R	328+00 to 333+00	Rt.														500				
	TOTAL		287	24	292	251	3990	10	64	10.00	14.00	1	1	1	17	825	5	465	1	



* (150 Lin. Ft. is "No Federal Participation")

ESTIMATED QUANTITIES

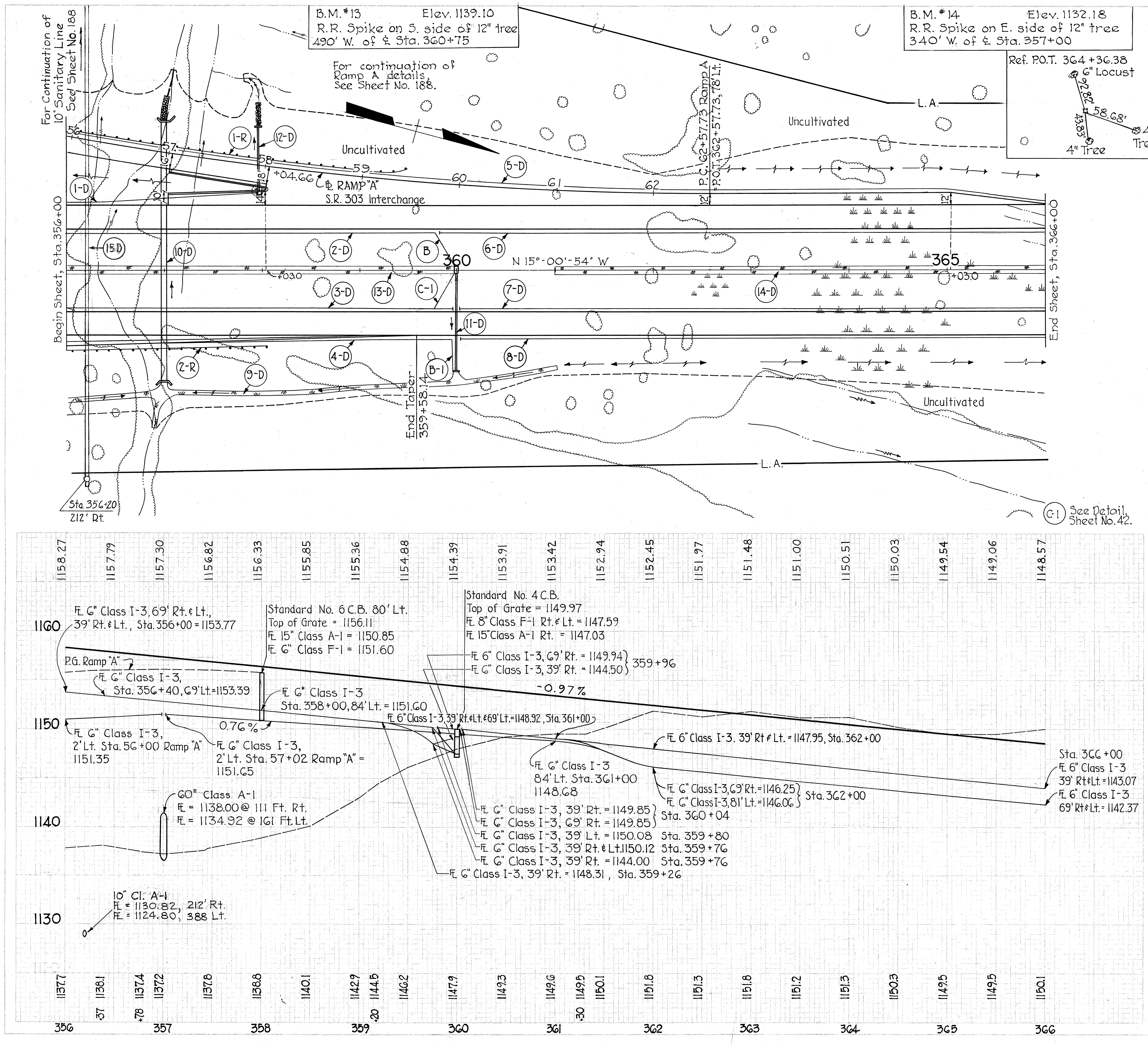
REF. NO.	STATION TO STATION	SIDE	I-1 Class A-1 Pipe Sec. M6.6(a) M6.8(b) 15" Lin. Ft.	I-1 Class A-1 Pipe Sec. M6.6(d) M6.4(d) 36" Lin. Ft.	I-1 Class A-1 Pipe Sec. M6.6(a) M6.8(b) 18" Lin. Ft.	I-1 Class E-1 Pipe 15" Lin. Ft.	I-1 Class F-1 Pipe 6" Lin. Ft.	I-1 Class F-1 Pipe 15" Lin. Ft.	I-1 Class I-3 Pipe 6" Shallow Lin. Ft.	I-2 Masonry Endwall Type "B1" Cu. Yd.	I-2 Masonry Endwall Type "E" Cu. Yd.	I-5 Pipe Specials 6"-60° Bend Each	I-8 Std. No. 4 C.B. Each	I-8 Std. No. 6 C.B. Each	I-10 Dumped Rock Cu. Yd.	I-15 Guard Rail Lin. Ft.	I-15 Barrier Rail Lin. Ft.	L-10 Sodding Sq. Yd.	L-120 Jute Matting Sq. Yd.	SEE SHEET NO.
1-D	338+00 to 346+00	Lt.							800											
2-D	338+00 to 345+76	Lt.					10		810			1								
3-D	338+00 to 345+76	Rt.					10		810			1								
4-D	338+00 to 345+94	Rt.					10		794			1								
5-D	341+42	Med.		388						9.38					10			18		214
6-D	342+50 to 346+00	Med.				350							1							
7-D	346+00	Med.	74		114			36			0.30		1	1	5			3		86
8-D	341+00 to 342+50	Med.																	133	
9-D	342+50 to 344+00	Med.																	133	
10-D	344+50 to 346+00	Med.																	133	
1-R	341+00 to 346+75	Lt.														575				
2-R	343+37.5 to 346+50	Med.														150	150*			
3-R	337+50 to 342+00	Rt.														450				
	TOTAL		74	388	114	350	30	36	3214	9.38	0.30	3	2	1	15	1175	150	21	399	



*(150 Lin. Ft. is no Federal Participation.)

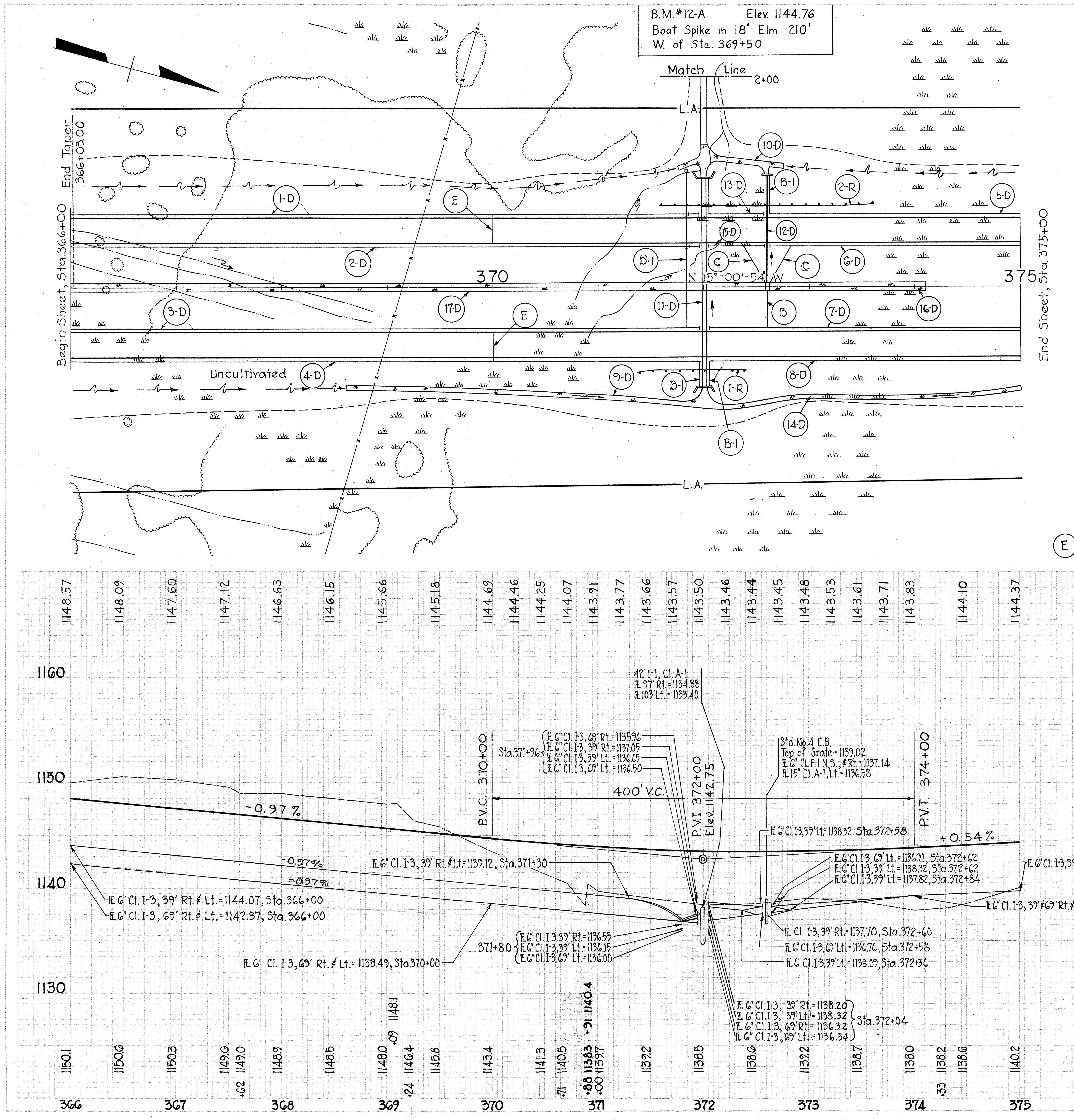
ESTIMATED QUANTITIES

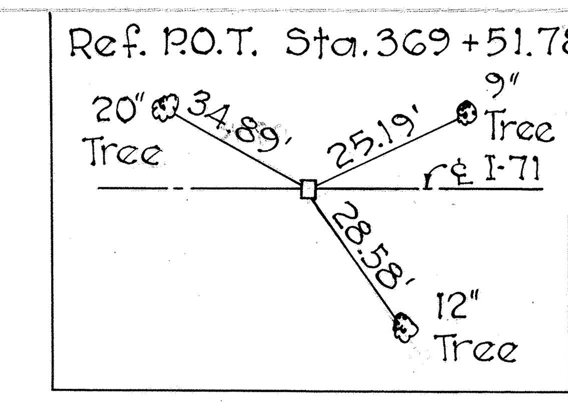
REF. NO.	STATION TO STATION	SIDE	I-1 Class A-1 Pipe Sec. M6.6(a) M6.8(b) 15"	I-1 Class A-1 Pipe Sec. M6.6(d) M6.4(d) 48"		I-1 Class I-3 Pipe 6" Shallow	I-1 Class F-1 Pipe 8"	I-1 Class F-1 Pipe 15"	I-2 Masonry Endwall Type "G1"	I-2 Masonry Endwall Type "E-1"	I-5 Pipe Specials 15"-30° Bend	I-5 Pipe Specials 6"-90° Bend	I-8 Std. No. 2-2B C.B.	I-10 Dumped Rock	I-15 Guard Rail	I-15 Barrier Rail	L-10 Sodding	L-120 Jute Matting	I-10 Sodding for Spec. Berm & Slope Prot.	I-7 t=13" Reinf. Conc. Approach Slab	SEE SHEET NO.
			Lin. Ft.	Lin. Ft.		Lin. Ft.	Lin. Ft.	Lin. Ft.	Cu. Yd.	Cu. Yd.	Each	Each	Each	Cu. Yd.	Lin. Ft.	Lin. Ft.	Sq. Yd.	Sq. Yd.	Sq. Yd.	Sq. Yd.	
1-D	348+70 to 356+00	Lt.				730															
2-D	348+60 to 356+00	Lt				740															
3-D	348+40 to 356+00	Rt.				760															
4-D	348+30 to 356+00	Rt.				770															
5-D	347+80 to 350+35	Rt.															256				
6-D	350+35 to 352+00	Rt.															162				
7-D	350+35	—		268					16.00					15			16				212
8-D	349+00	—	86					36		0.26	2		1	5			3				87
9-D	349+00 to 350+50																	133			
10-D	354+00 to 356+00	Med.																178			
11-D	346+00 to 346+50	Lt.				62	10					1									
12-D	348+80	Lt.																	40		
13-D	348+30	Rt.																	40		
1-R	348+76 to 354+26	Lt.													550						
2-R	348+64 to 351+58	Lt.													150	150*					
3-R	348+30 to 356+00	Rt.													770						
1-P	346+00 to 346+66	—																		177.8	
2-P	348+17 to 348+84	—																		199.1	
TOTAL			86	268		3062	10	36	16.00	0.26	2	1	1	20	1470	150	437	311	80	376.9	

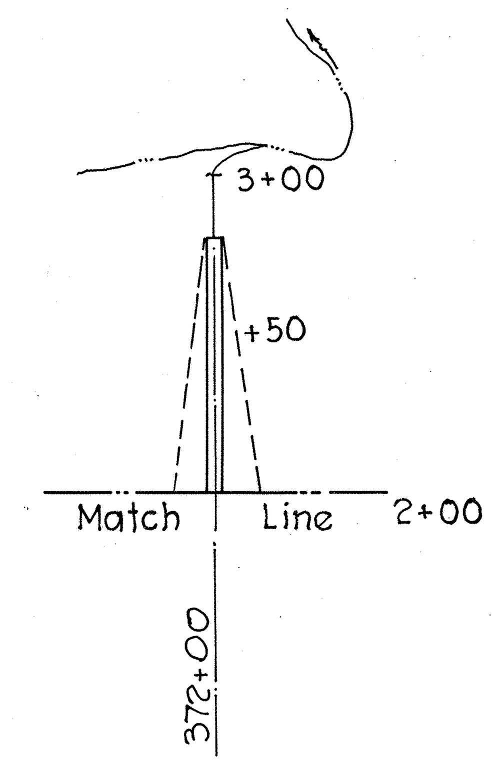


ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	I-1 Class A-1 Pipe Sec. M6.6(d) M6.8(b) 15" Lin.Ft.	I-1 Class A-1 Pipe Sec. M6.6(c) 54" Lin.Ft.	I-1 Class A-1 Pipe Sec. M6.8(b) 10" Lin.Ft.	I-1 Class I-3 Pipe 6" Shallow Lin.Ft.	I-1 Class I-3 Pipe 6" Deep Lin.Ft.	Class F-1 Pipe 6" Lin.Ft.	Class F-1 Pipe 8" Lin.Ft.	Class F-1 Pipe 15" Lin.Ft.	I-2 Masonry Endwall Type "E" Cu.Yd.	I-2 Masonry Endwall Type "C" Cu.Yd.	I-5 Pipe Specials 6"-60° Wye Each	I-5 Pipe Specials 6"-90° Bend Each	I-5 Pipe Specials 6"-60° Bend Each	I-5 Pipe Specials 15"-30° Bend Each	I-8 Std. No. 4 C.B. Each	I-8 Std. No. 6 C.B. Each	I-10 Dumped Rock Cu.Yd.	I-15 Guard Rail Lin.Ft.	E-3 Channel Excav. Cu.Yd.	L-10 Sodding Sq.Yd.	L-120 Jute Matting Sq.Yd.	I-8 Std. No. 1 M.H. Modified Each	I-1 Cl. A-1 Pipe Mod. Sec. M6.8(b) 10" Lin.Ft.	SEE SHEET NO.
1-D	356+00 to 358+00	Lt.				198		10																		
2-D	356+00 to 359+76	Lt.				412		10							1											
3-D	356+00 to 359+96	Rt.				432		10					1													
4-D	356+00 to 359+96	Rt.				420			10					1												
5-D	356+00 to 366+00	Lt.				608	400																			
6-D	359+80 to 366+00	Lt.				620																				
7-D	360+04 to 366+00	Rt.				596																				
8-D	360+04 to 366+00	Rt.				196	400																			
9-D	356+00 to 361+00	Rt.																				485				
10-D	357+00	—		272								20.66							20		5	18				217
11-D	360+00	Rt.	112								0.26						1					3				89
12-D	358+00	Lt.	44							38	0.26					2		1	8			3				89
13-D	356+00 to 360+00	Med.																					355			
14-D	361+00 to 366+00	Med.																					444			
15-D	356+20	—			346																			2	262	88
1-R	356+00 to 359+50	Lt.																		350						
2-R	356+00 to 358+05	Rt.																		205						
TOTAL			156	272	346	3482	800	30	10	38	0.52	20.66	1	1	1	2	1	1	28	555	5	509	799	2	262	



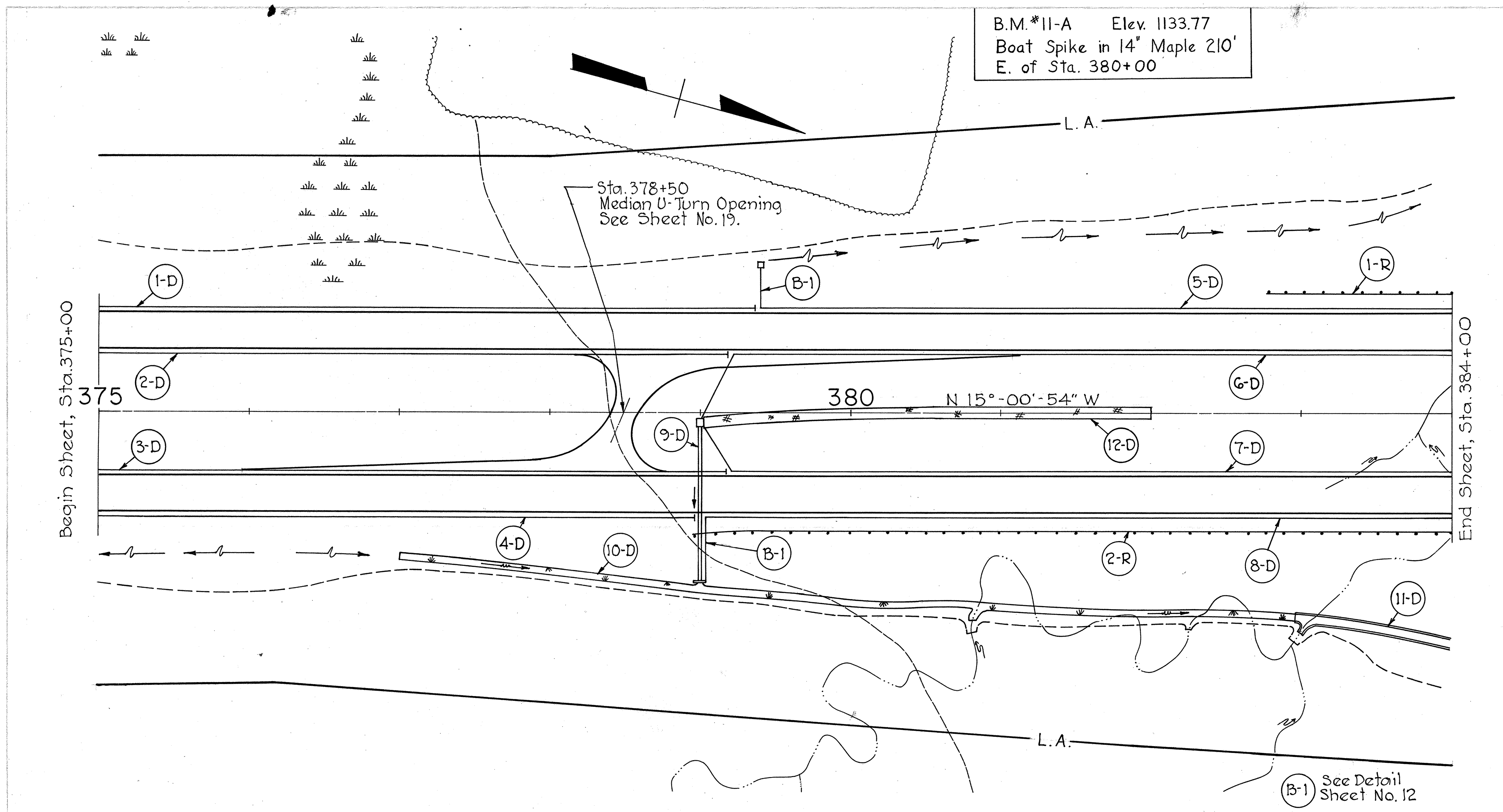


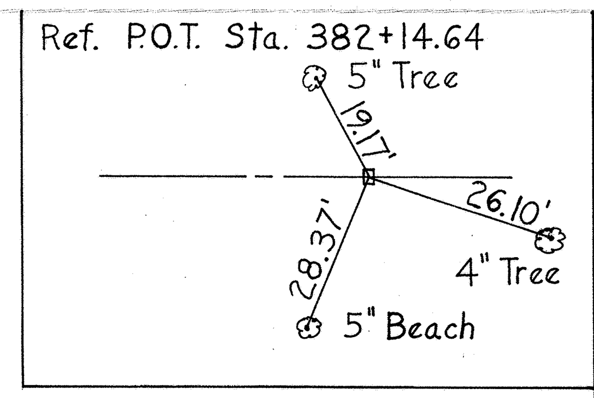


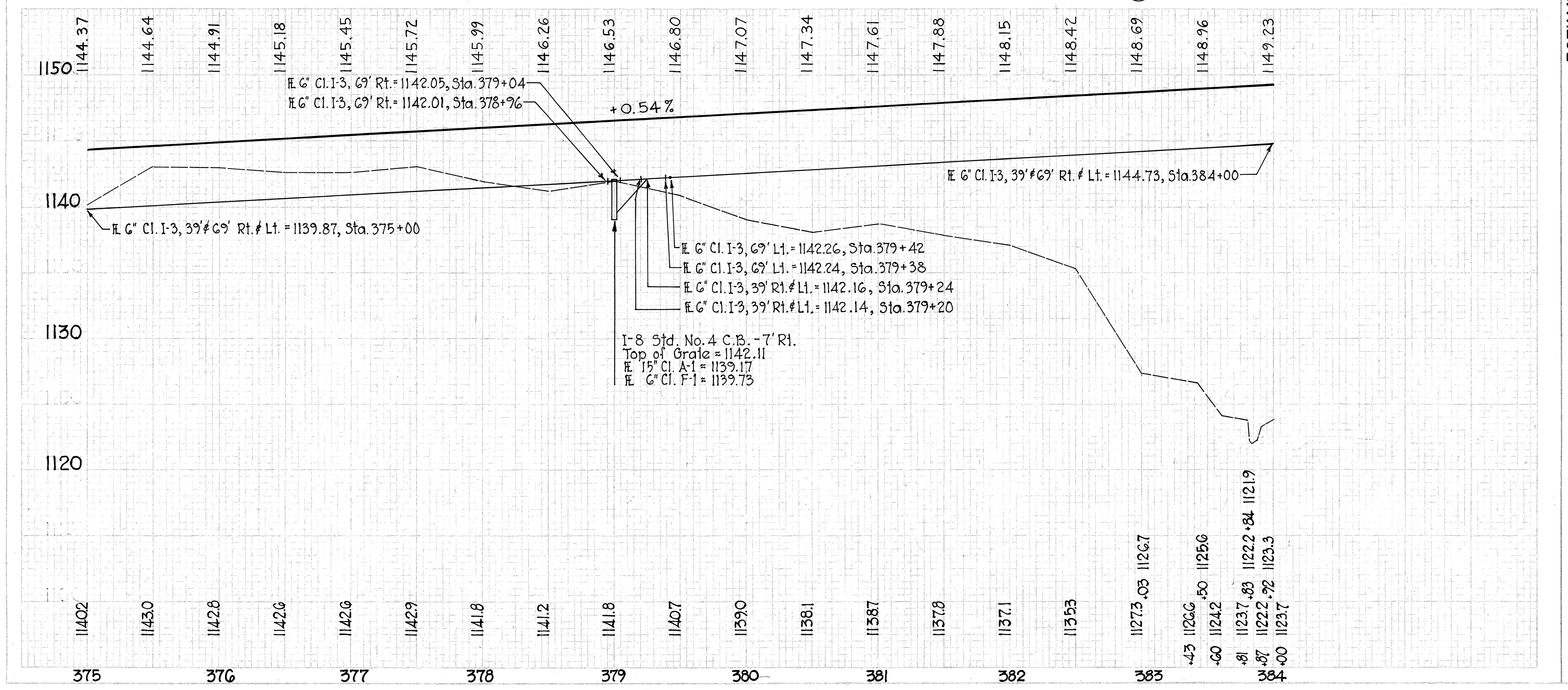
ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	I-1 Pipe Class A-1 Sec. M6.6(b) M6.8(b) 6" Lin. Ft.	I-1 Pipe Class A-1 Sec. M6.6(a) M6.8(b) 18" Lin. Ft.	I-1 Pipe Class A-1 Sec. M6.6(a) 42" Lin. Ft.	I-1 Class I-3 Pipe 6" Shallow Lin. Ft.	I-1 Class I-3 Pipe 6" Deep Lin. Ft.	I-1 Class F-1 6" Lin. Ft.	I-1 Class F-1 8" Lin. Ft.	I-2 Masonry Endwall Type "E" Cu. Yd.	I-2 Masonry Endwall Type "C1" Cu. Yd.	I-5 Pipe Specials 6" Tee Each	I-5 Pipe Specials 6"-60° Wye Each	I-5 Pipe Specials 6" Cross Each	I-5 Pipe Specials 6"-90° Bend Each	I-8 Std. No. 4 C.B. Each	I-15 Guard Rail Lin. Ft.	E-3 Channel Excav. Cu. Yd.	L-10 Sodding Sq. Yd.	L-120 Jute Matting Sq. Yd.	SEE SHEET NO.
1-D	366+00 to 371+96	Lt.					624														
2-D	366+00 to 371+96	Lt.				596															
3-D	366+00 to 371+96	Rt.	150			596						1		2							
4-D	366+00 to 371+96	Rt.					612		10						1						
5-D	372+62 to 375+00	Lt.				266			10												
6-D	372+62 to 375+00	Lt.				274		10					1								
7-D	372+04 to 375+00	Rt.				266		10				1									
8-D	372+04 to 375+00	Rt.				252			10												
9-D	368+60 to 375+00	Rt.																	605		
10-D	371+75 to 372+75	Lt.																	116		
11-D	372+00	—			200						13.82							190	14		217
12-D	372+60	—		110						0.30						1			3		215
13-D	372+04 to 372+58	Lt.				78			10						1						
14-D	368+60 to 375+00	Rt.																	267		
15-D	372+00 to 372+58	Lt.				90		10					1								
16-D	372+60 to 374+10	Med.																			
17-D	366+00 to 372+60	Med.																			
1-R	371+38 to 372+38	Rt.															100			133	
2-R	371+58 to 373+58	Lt.															200			587	
TOTAL			150	110	200	2418	1236	30	40	0.30	13.82	2	2	2	2	1	300	190	1055	720	

B.M.#11-A Elev. 1133.77
Boat Spike in 14" Maple 210' E. of Sta. 380+00



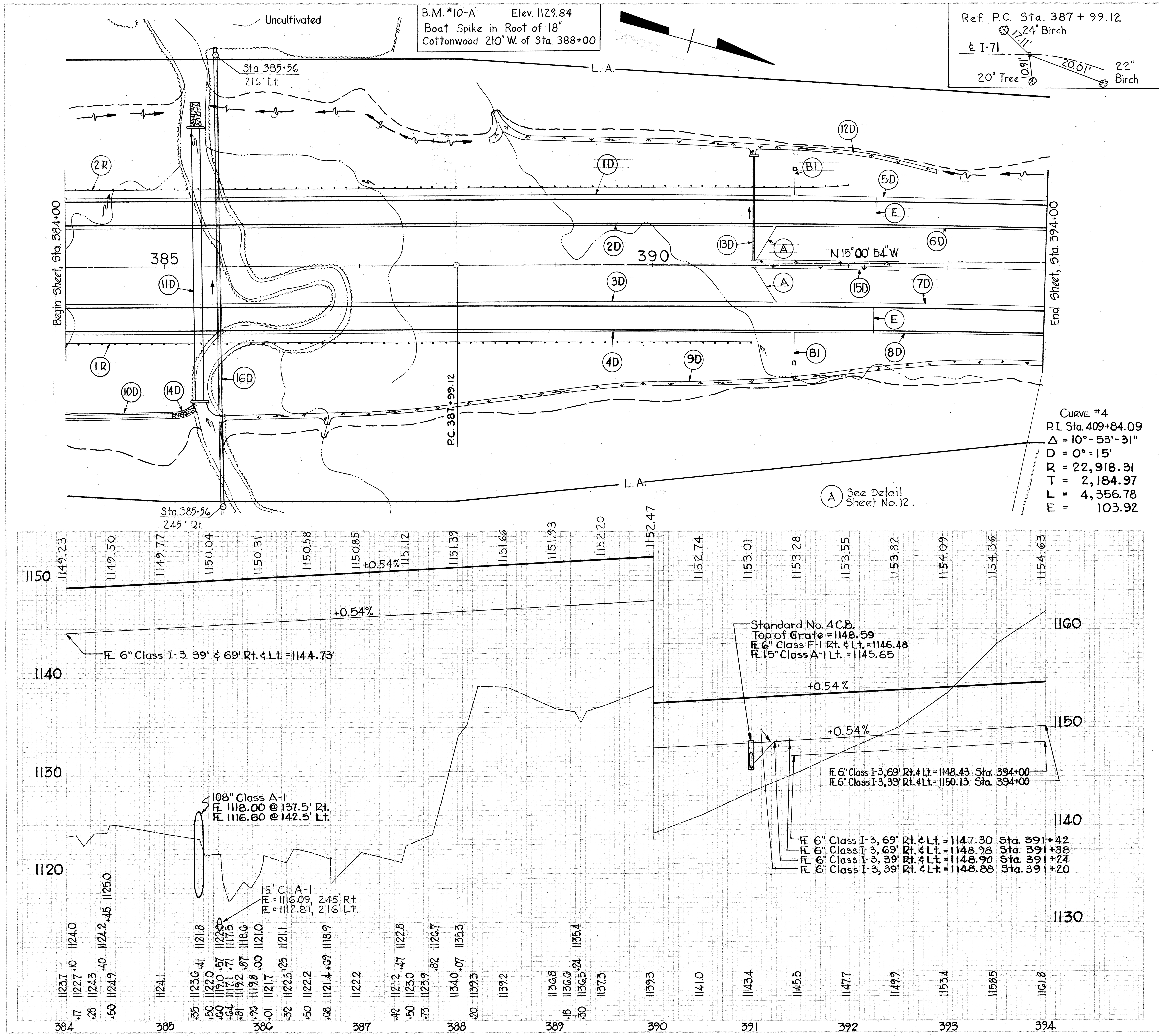




ESTIMATED QUANTITIES

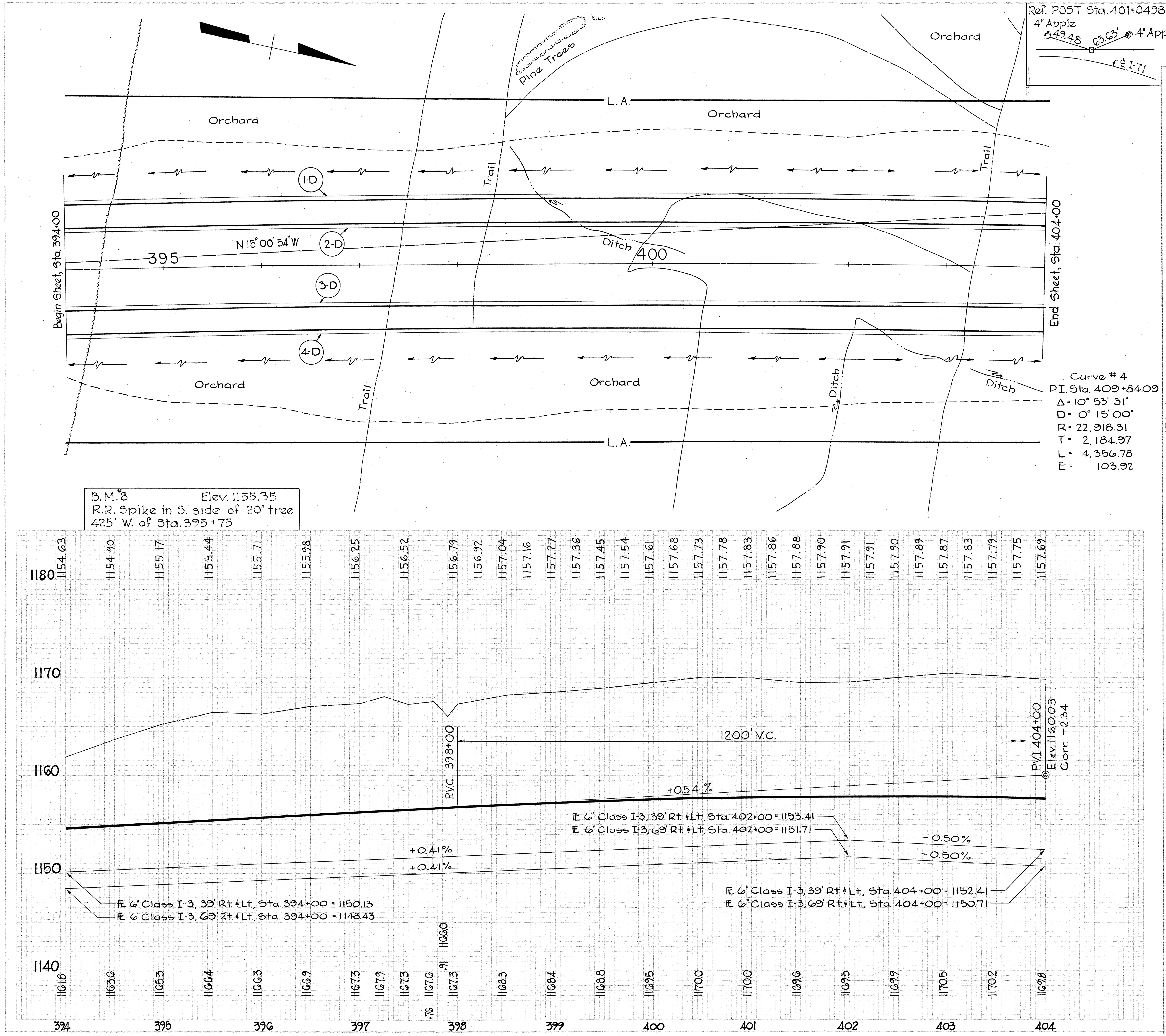
REF. NO.	STATION TO STATION	SIDE	I-1 Class A-1 Pipe Sec. M6.6(a) M6.8(b) 15"	I-1 Class A-1 Pipe	I-1 Class A-1 Pipe	I-1 Class I-3 Pipe 6" Shallow	I-1 Class F-1 Pipe 6"	I-1 Class F-1 Pipe 8"	I-2 Masonry Endwall Type "E"	I-5 Pipe Specials 6"-60° Bend	I-5 Pipe Specials 6"-90° Bend	I-8 Std. No. 4 C.B.	I-14 Paved Gutter Type 3	I-15 Guard Rail	L-10 Sodding	L-120 Jute Matting	SEE SHEET NO.
			Lin. Ft.			Lin. Ft.	Lin. Ft.	Lin. Ft.	Cu. Yd.	Each	Each	Each	Sq. Yd.	Lin. Ft.	Sq. Yd.	Sq. Yd.	
1-D	375+00 to 379+38	Lt.				438											
2-D	375+00 to 379+20	Lt.				420											
3-D	375+00 to 379+20	Rt.				420											
4-D	375+00 to 378+96	Rt.				396											
5-D	379+42 to 384+00	Lt.				486		10			1						
6-D	379+24 to 384+00	Lt.				514	10			1							
7-D	379+24 to 384+00	Rt.				504	10			1							
8-D	379+04 to 384+00	Rt.				530		10			1						
9-D	379+00	Rt.	114						0.26			1			3		14
10-D	377+00 to 382+95	Rt.													540		
11-D	382+95 to 384+00	Rt.											108		36		
12-D	379+00 to 382+00	Med.														266	
1-R	382+75 to 384+00													125			
2-R	378+00 to 384+00													500			
	TOTAL		114			3708	20	20	0.26	2	2	1	108	625	579	266	

Sta. 375+00 to Sta. 384+00



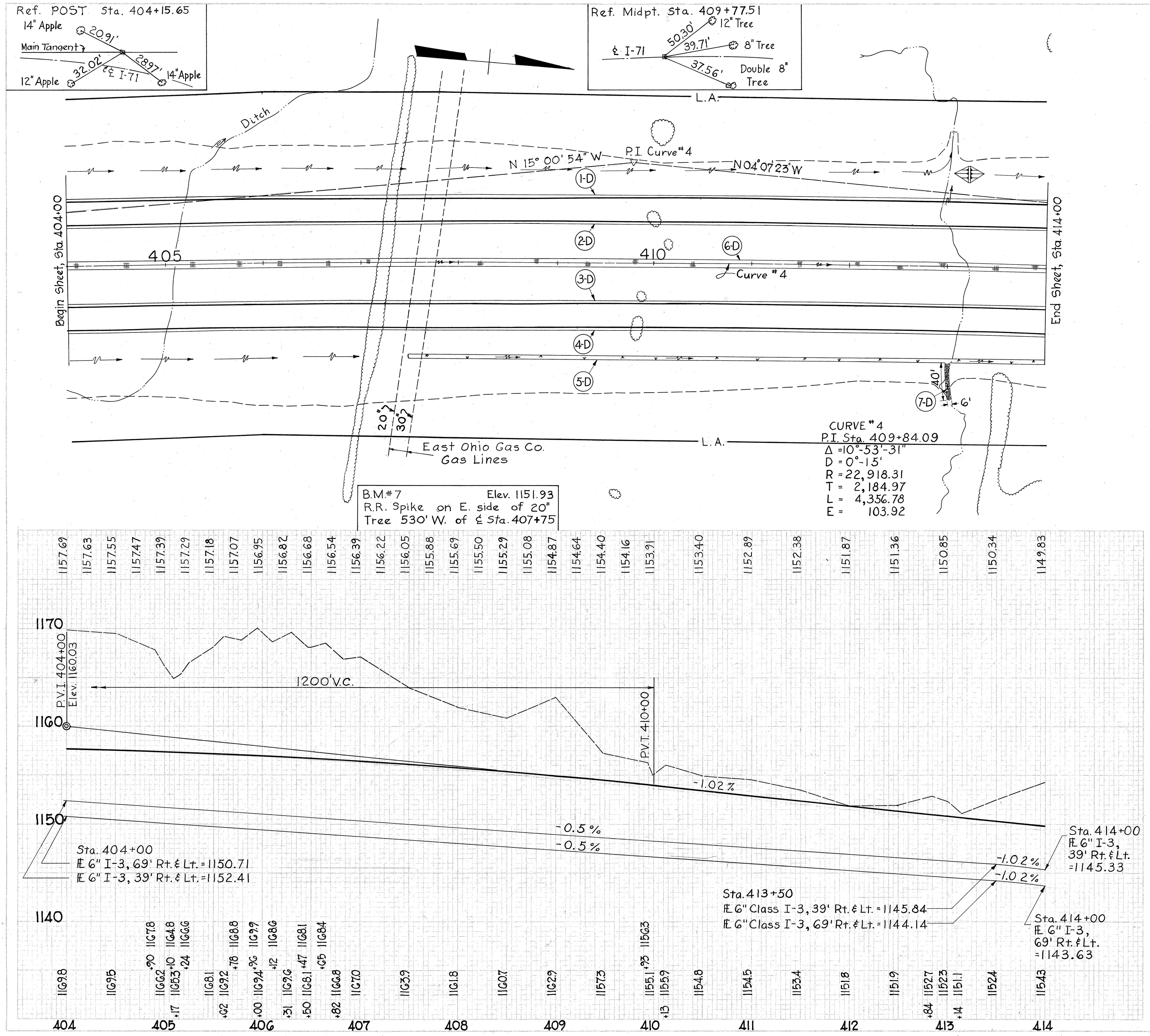
ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	I-1 Class A-1 Pipe Spec. M6.6(a) M6.8(b) 15" Lin.Ft.	I-1 Class A-1 Pipe Spec. M 106-6(d) 108" Lin.Ft.	I-1 Class A-1 Pipe Spec. M6.8(b) 15" Lin.Ft.	I-1 Class I-3 Pipe 6" Shallow Lin.Ft.	I-1 Class I-3 Pipe 8" Deep Lin.Ft.	I-1 Class F-1 Pipe 6" Lin.Ft.	I-1 Class F-1 Pipe 8" Lin.Ft.	I-2 Masonry Endwall Type E Cu.Yd.	I-2 Masonry Endwall Type SR53 Cu.Yd.	I-5 Pipe Specials 6" 60° Bend Each	I-5 Pipe Specials 6" Tee Each	I-5 Pipe Specials 6" 90° Bend Each	I-8 Std. No. 4 C.B. Each	I-10 Dumped Rock Cu.Yd.	I-14 Paved Gutter Type 3 Lin.Ft.	I-15 Guard Rail Lin.Ft.	L-10 Sodding Sq.Yd.	L-120 Jute Matting Sq.Yd.	I-8 Std. No. 1 M.H. Modified Each	I-1 Cl. A-1 Pipe Mod. Sec. M6.8(b) 15" Lin.Ft.	SEE SHEET NO.
1-D	384+00 to 391+38	Lt.				738																	
2-D	384+00 to 391+20	Lt.				720																	
3-D	384+00 to 391+20	Rt.				720																	
4-D	384+00 to 391+38	Rt.				738																	
5-D	391+42 to 394+00	Lt.					300		10				1	1									
6-D	391+24 to 394+00	Lt.				312		10				1											
7-D	391+24 to 394+00	Rt.				312		10				1											
8-D	391+42 to 394+00	Rt.					306		10				1	1									
9-D	385+54 to 394+00	Rt.																	849				
10-D	384+00 to 385+08	Rt.															78		26				
11-D	385+35			280							17.68					44			38				218
12-D	388+33 to 392+87	Lt.																	436				
13-D	391+00		116							0.26					1				3				102
14-D	385+08 to 385+33	Rt.														17							
15-D	391+00 to 392+50	Med.																		133			
16-D	385+56	—			234																2	234	98
1-R	384+00 to 391+00	Rt.																700					
2-R	384+00 to 391+00	Lt.																800					
TOTAL			116	280	234	3,540	606	20	20	0.26	17.68	2	2	2	1	61	78	1500	1352	133	2	234	



ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	SEE SHEET NO.	I-1 Class I-3 Pipe 6" Shallow Lin. Ft.	I-1 Class I-3 Pipe 6" Deep Lin. Ft.
1-D	394+00 to 404+00	Lt.			1000
2-D	394+00 to 404+00	Lt.		1000	
3-D	394+00 to 404+00	Rt.		1000	
4-D	394+00 to 404+00	Rt.			1000
TOTAL				2000	2000



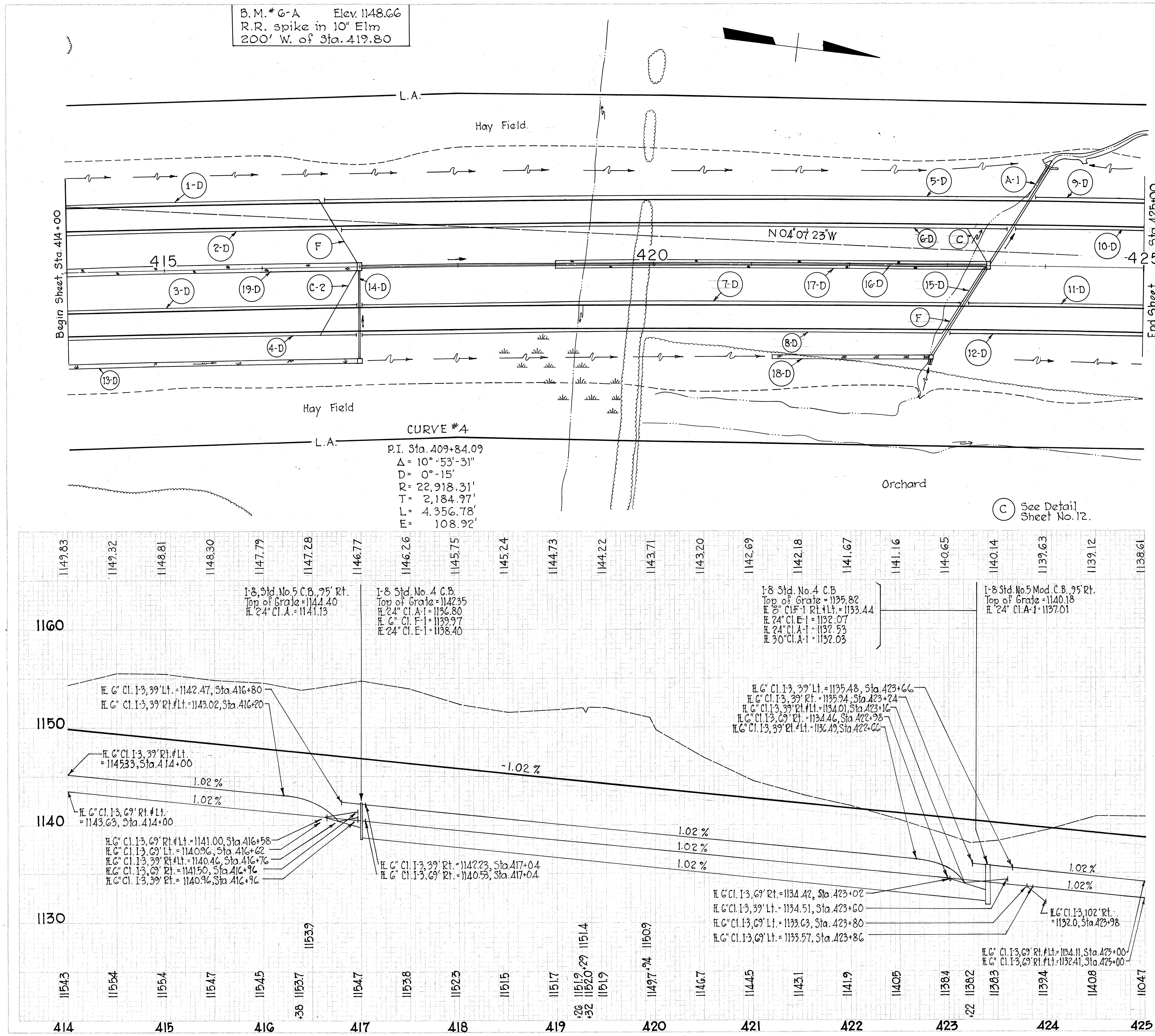
ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	I-1 Class I-3 Pipe 6" Shallow Lin. Ft.	I-1 Class I-3 Pipe 6" Deep Lin. Ft.	L-10 Sodding Sq. Yds.	L-120 Jute Matting Sq. Yds.	I-10 Dumped Rock Channel Protection Cu. Yds.	SEE SHEET NO.
1-D	404+00 to 414+00	Lt.		1000				
2-D	404+00 to 414+00	Lt.	1000					
3-D	404+00 to 414+00	Rt.	1000					
4-D	404+00 to 414+00	Rt.		1000				
5-D	407+50 to 414+00	Rt.			687			
6-D	404+00 to 414+00	Med.				889		
7-D	413+00	Rt.					18	
TOTAL			2000	2000	687	889	18	

Sta. 404+00 to Sta. 414+00

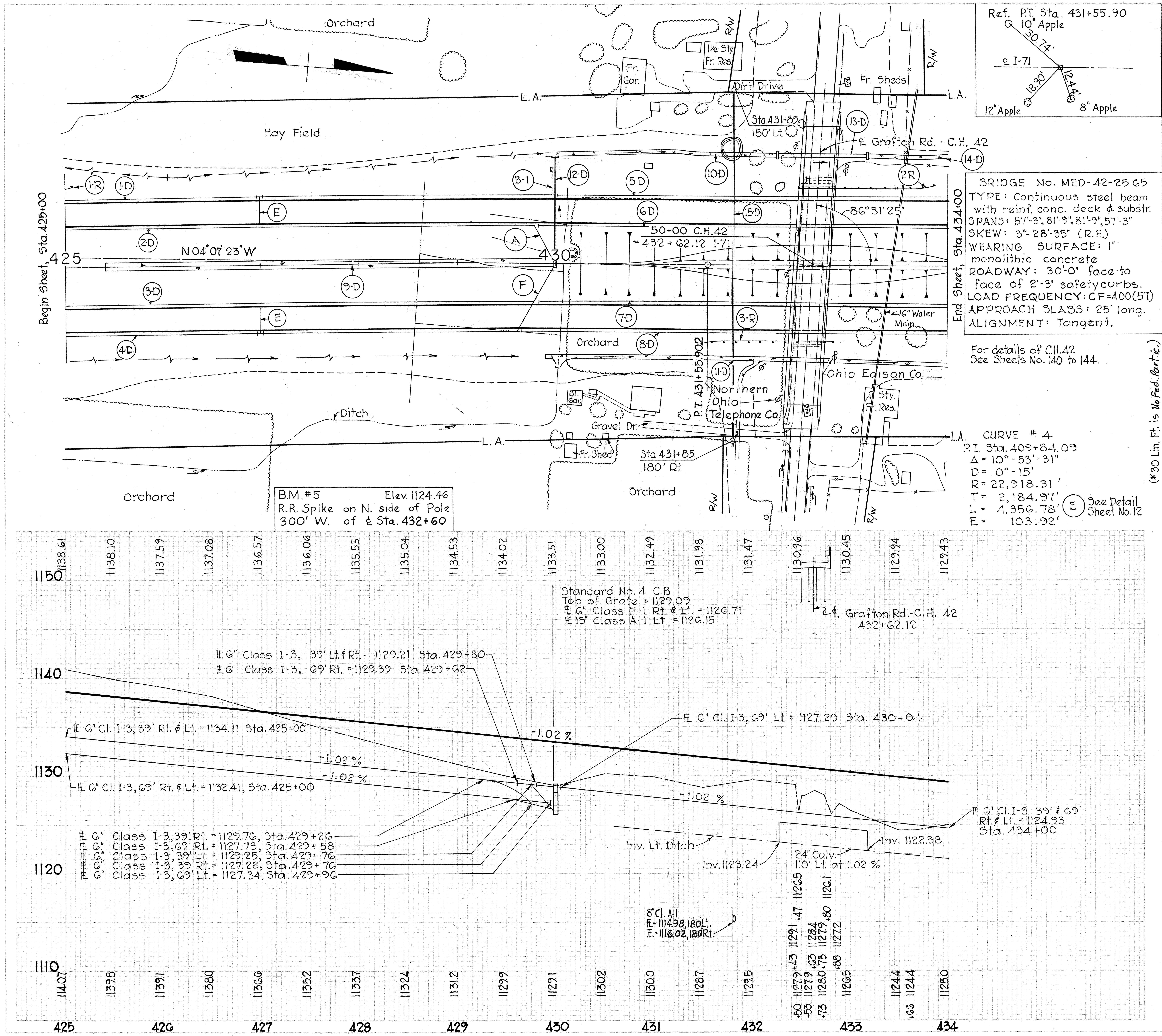
MEDINA COUNTY
MED-42-21.94

FED. AID DIVISION	STATE	PROJECT		
2	OHIO			



ESTIMATED QUANTITIES

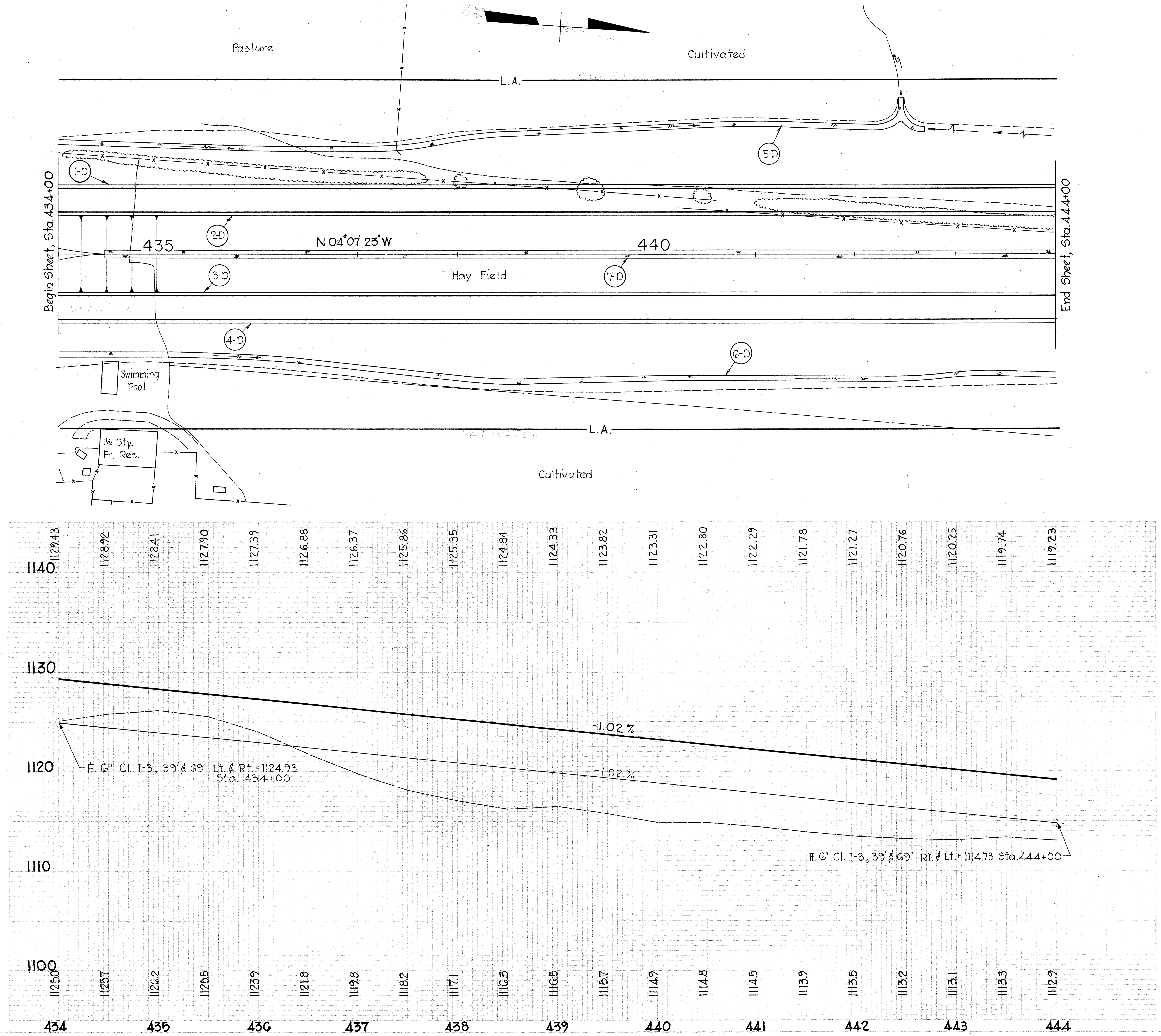
REF. NO.	STATION TO STATION	SIDE	I-1 Class A-1 Pipe Sec. M6.6(a) M6.8(b) 24" Lin.Ft.	I-1 Class A-1 Pipe Sec. M6.6(a) M6.8(b) 30" Lin.Ft.	I-1 Class A-1 Pipe Sec. M6.6(b) M6.8(b) 6" Lin.Ft.	I-1 Class E-1 Pipe 24" Lin.Ft.	I-1 Class F-1 Pipe 6" Lin.Ft.	I-1 Class F-1 Pipe 8" Lin.Ft.	I-1 Class I-3 Pipe 6" Shallow Lin.Ft.	I-1 Class I-3 Pipe 6" Deep Lin.Ft.	I-5 Pipe Specials 6"-60° Bend Each	I-5 Pipe Specials 6" Tee Each	I-5 Pipe Specials 6"-30° Bend Each	I-5 Pipe Specials 6"-60° Wye Each	I-2 Masonry Endwall Type "B-1" Cu.Yds.	I-8 Std. No. 4 C.B. Each	I-8 ‡Std. No. 5 Mod. C.B. Each	I-8 Std. No. 5 C.B. Each	E-3 Channel Excav. Cu.Yd.	L-10 Sodding Sq.Yd.	L-120 Jute Matting Sq.Yd.		SEE SHEET NO.
1-D	414+00 to 414+58	Lt.			70		10			258	1			1								‡ With Modified Paved Gutter.	
2-D	414+00 to 416+76	Lt.							276														
3-D	414+00 to 416+96	Rt.							296														
4-D	414+00 to 416+96	Rt.			70		10			296		1	1	2									
5-D	416+62 to 423+80	Lt.						10		742	1												
6-D	416+80 to 423+16	Lt.							636					1									
7-D	417+04 to 423+16	Rt.							612														
8-D	417+04 to 422+98	Rt.			70		10			594	1			1									
9-D	423+86 to 425+00	Lt.								114													
10-D	423+66 to 425+00	Lt.							124														
11-D	423+24 to 425+00	Rt.							176														
12-D	423+02 to 425+00	Rt.								198													
13-D	414+00 to 417+00	Rt.																		317			
14-D	417+00	—	94													1		1					100
15-D	423+40	—	110	116											3.08	1	1		67	8			215
16-D	417+00 to 423+40	Med.				640																	
17-D	419+00 to 423+40	Med.																			391		
18-D	420+20 to 422+70	Rt.																			133		
19-D	414+00 to 417+00	Med.																			267		
	TOTAL		204	116	210	640	30	10	1820	2202	3	1	1	5	3.08	2	1	1	67	325	791		



ESTIMATED QUANTITIES

(*30 Lin. Ft. is No Fed. Partic.)

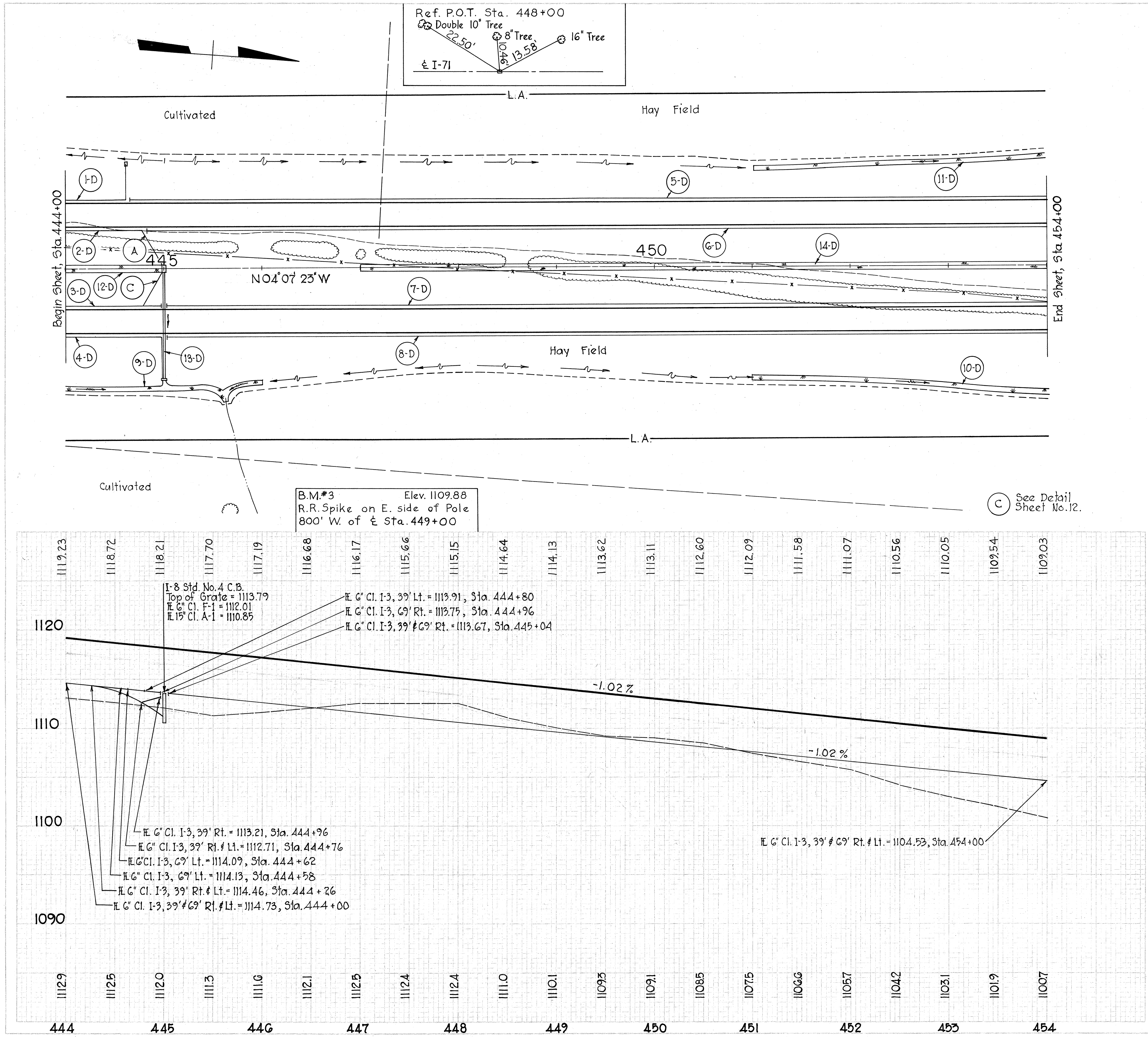
REF. NO.	STATION TO STATION	SIDE	SEE SHEET NO.	I-1 Class A-1 Pipe Sec. M6.6(b) M6.8(b) 6"	I-1 Class A-1 Pipe Sec. M6.6(a) M6.8(b) 15"	I-1 Class A-1 Pipe Sec. M6.8(b) 8"	I-1 Class I-3 Pipe 6" Shallow	I-1 Class I-3 Pipe 6" Deep	I-1 Class F-1 Pipe 6"	I-1 Class F-1 Pipe 8"	I-1 Class E-1 Pipe 24"	I-2 Masonry Endwall Type "E"	I-5 Pipe Specials 6"-60° Wye	I-5 Pipe Specials 6"-60° Bend	I-8 Std. No. 4 C.B.	I-15 Guard Rail	L-10 Sodding	L-120 Jute Matting	I-8 Std. No. 2 M.H. Mod.
				Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Cu. Yd.	Each	Each	Each	Lin. Ft.	Sq. Yd.	Sq. Yd.	Each
1-D	425+00 to 429+96	Lt.						542		10									
2-D	425+00 to 429+76	Lt.					510		10				1	1					
3-D	425+00 to 429+76	Rt.					476												
4-D	425+00 to 429+58	Rt.		70				486	10				1						
5-D	430+04 to 434+00	Lt.					396												
6-D	429+80 to 434+00	Lt.					420												
7-D	429+80 to 434+00	Rt.					420												
8-D	429+62 to 434+00	Rt.					438												
9-D	425+40 to 430+00	Med.																409	
10-D	429+90 to 432+25	Lt.															201		
11-D	429+92 to 434+00	Rt.															508		
12-D	430+00		112		112							0.26			1		3		
13-D	432+25 to 433+15	Lt.									90	0.82					6		
14-D	433+15 to 434+00	Lt.															76		
15-D	431+82	—	112			368													2
1-R	425+00 to 425+07.5	Lt.														12.5			
2-R	432+15 to 434+00	Lt.														137.5*			
3-R	431+42.5 to 432+80	Rt.														137.5*			
TOTAL				70	112	368	2670	1028	20	10	90	1.08	2	1	1	287.5	794	409	2



ESTIMATED QUANTITIES

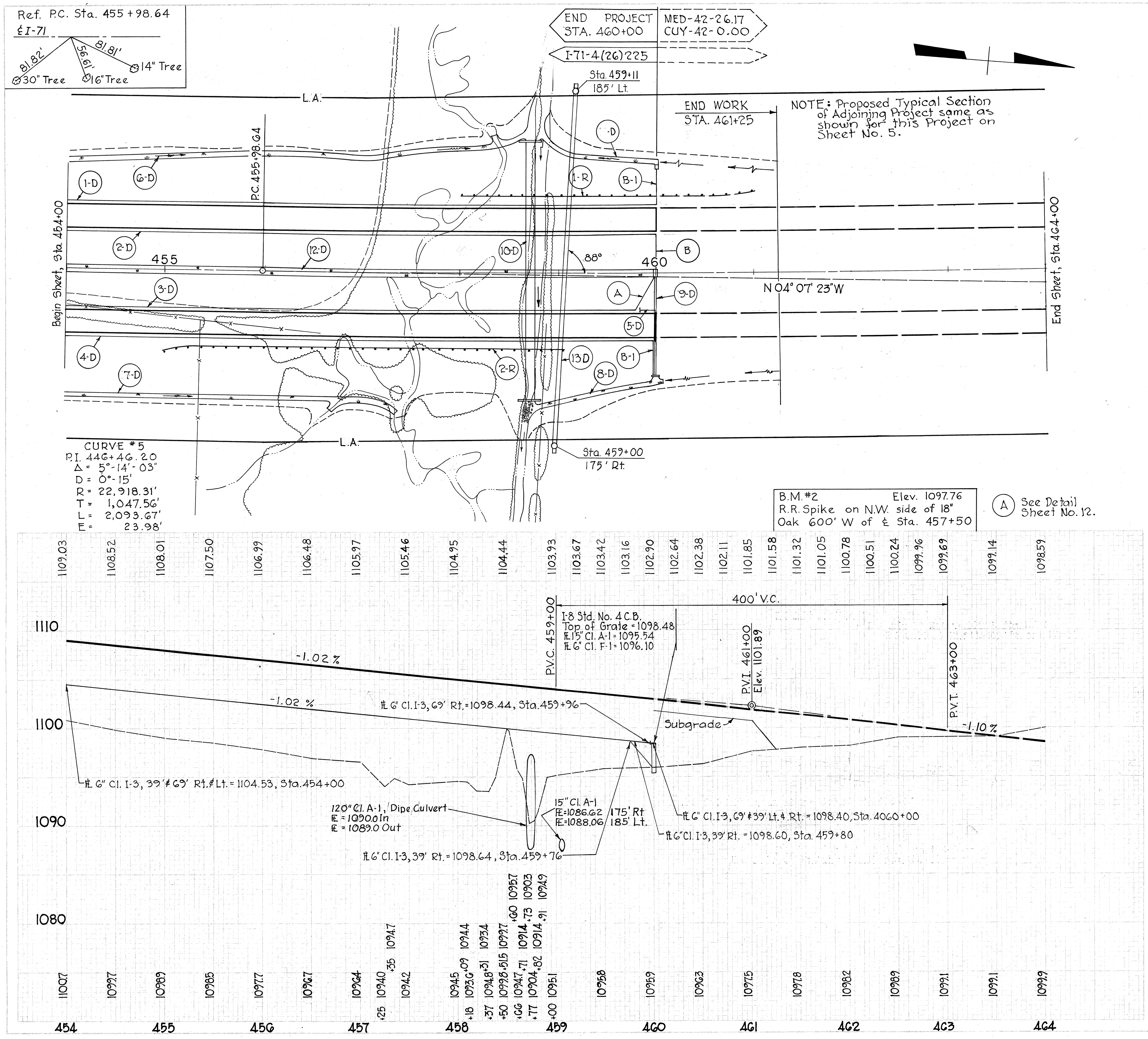
REF. NO.	STATION TO STATION	SIDE	I-1 Class I-3 pipe 6" Shallow	L-10 Sodding	L-120 Jute Matting	SEE SHEET NO.
			Lin. Ft.	Sq. Yds.	Sq. Yds.	
1-D	434+00 to 444+00	Lt.	1000			
2-D	434+00 to 444+00	Lt.	1000			
3-D	434+00 to 444+00	Rt.	1000			
4-D	434+00 to 444+00	Rt.	1000			
5-D	434+00 to 442+78	Lt.		1160		
6-D	434+00 to 444+00	Rt.		1333		
7-D	434+50 to 444+00	Med.			845	
	TOTAL		4000	2493	845	

Sta. 434+00 to Sta. 444+00



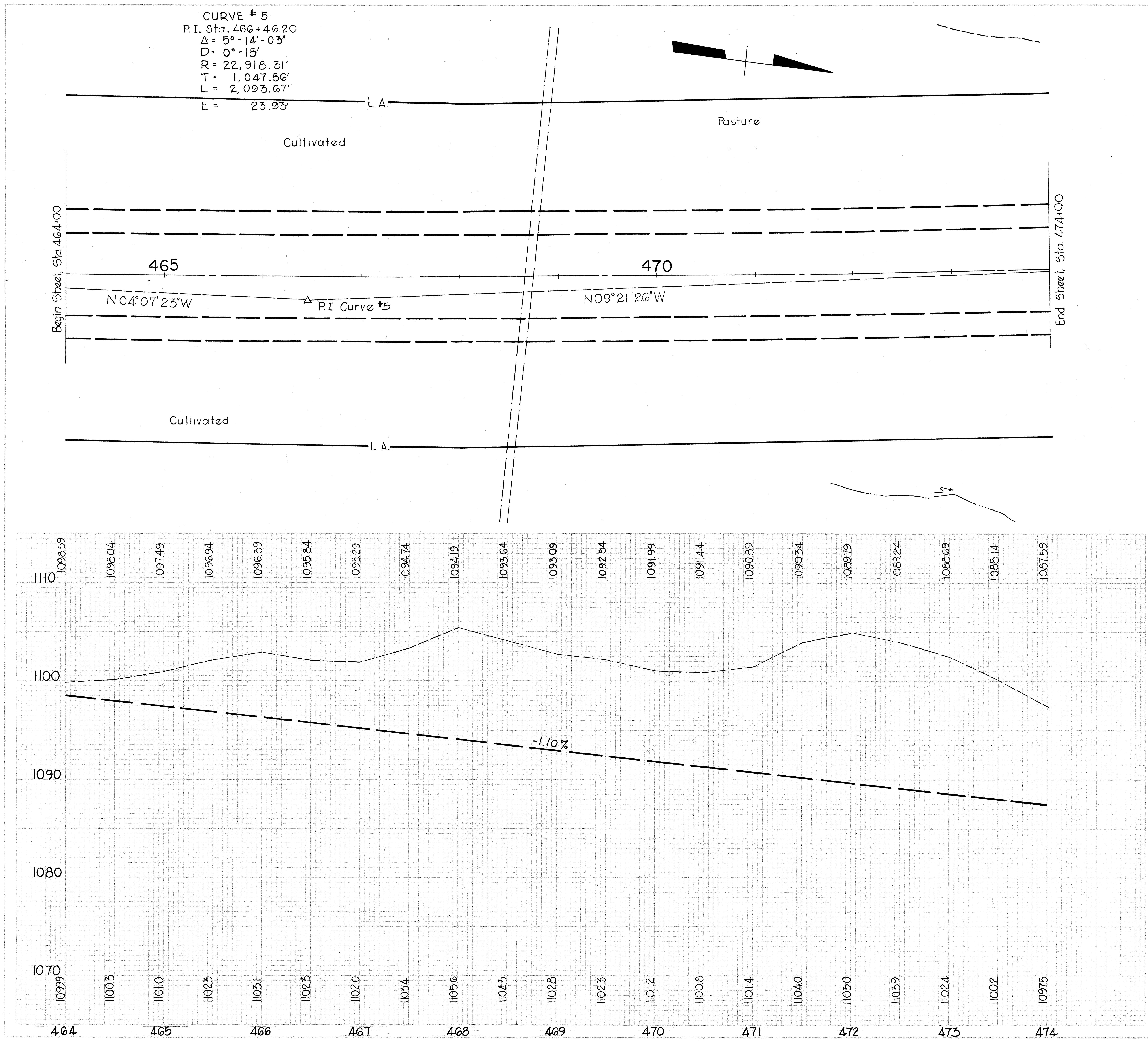
ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	I-1 Class A-1 Pipe Sec. M6.6(a) M6.8(b) 15"	I-1 Class A-1 Pipe	I-1 Class A-1 Pipe	I-1 Class I-3 Pipe 6" Shallow	I-1 Class I-3 Pipe	I-1 Class F-1 Pipe 6"	I-1 Class F-1 Pipe 8"	I-5 Pipe Specials 6"-60° Bend	I-5 Pipe Specials 6"-90° Bend	I-5 Pipe Specials 6"-60° Wye	I-2 Masonry Endwall Type "E"	I-8 Std. No. 4 C.B.	L-10 Sodding	L-120 Jute Matting	SEE SHEET NO.
			Lin.Ft.			Lin.Ft.		Lin.Ft.	Lin.Ft.	Each	Each	Each	Cu.Yd.	Each	Sq.Yd.	Sq.Yd.	
1-D	444+00 to 444+58	Lt.				84			10		1						
2-D	444+00 to 444+76	Lt.				112		10		1							
3-D	444+00 to 444+96	Rt.				130		10				1					
4-D	444+00 to 444+96	Rt.				126			10		1						
5-D	444+62 to 454+00	Lt.				938											
6-D	444+80 to 454+00	Lt.				920											
7-D	445+04 to 454+00	Rt.				896											
8-D	445+04 to 454+00	Rt.				896											
9-D	444+00 to 446+00	Rt.													294		
10-D	451+00 to 454+00	Rt.													272		
11-D	451+00 to 454+00	Lt.													272		
12-D	444+00 to 445+00	Med.														89	
13-D	445+00	—	116										0.26	1	3		
14-D	447+00 to 454+00	Med.														622	115
	TOTAL		116			4102		20	20	1	2	1	0.26	1	841	711	



ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	I-1 Class A-1 Pipe Sec. M6.6(a) M6.8(b) 15" Lin.Ft.	I-1 Class A-1 Pipe Sec. M 6.6(b) 120" Lin.Ft.	I-1 Class A-1 Pipe Sec. M-6.8(b) 15" Lin.Ft.	I-1 Class I-3, Pipe 6" Shallow Lin.Ft.	I-1 Class I-3, Pipe 6" Deep Lin.Ft.	I-1 Class F-1 Pipe 6" Lin.Ft.	I-1 Class F-1 Pipe 8" Lin.Ft.	I-5 Pipe Specials 6"-60° Bend Each	I-5 Pipe Specials 6"-90° Bend Each	I-8 Std. No. 4 C.B. Each	I-10 Dumped Rock Cu.Yd.	I-15 Guard Rail Lin.Ft.	I-2 Masonry Endwall Type "E" Cu.Yd.	I-2 Masonry Endwall SP 53 Cu.Yd.	L-10 Sodding Sq.Yd.	L-120 Jute Matting Sq.Yd.	I-8 Std. No. 1 M.H. Modified	SEE SHEET NO.
1-D	454+00 to 460+00	Lt.				628			10		1									
2-D	454+00 to 460+00	Lt.				628		10			1									
3-D	454+00 to 459+76	Rt.				612		10		1										
4-D	454+00 to 459+96	Rt.				622			10		1									
5-D	459+80 to 460+00	Rt.				20														
6-D	454+00 to 458+65	Lt.															484			
7-D	454+00 to 457+45	Rt.															316			
8-D	458+65 to 459+20	Rt															125			
9-D	460+00	—	122									1			0.26		3			118
10-D	458+73	—		264									34			22.00	38			218
11-D	458+85 to 464+00	Lt.															120			
12-D	454+00 to 460+00	Med.																533		
13-D	459+06	—			370														2	118
1-R	458+00 to 461+00	Lt.												300						
2-R	455+00 to 459+00	Rt.												400						
TOTAL			122	264	370	2510		20	20	1	3	1	34	700	0.26	22.00	1086	533	2	

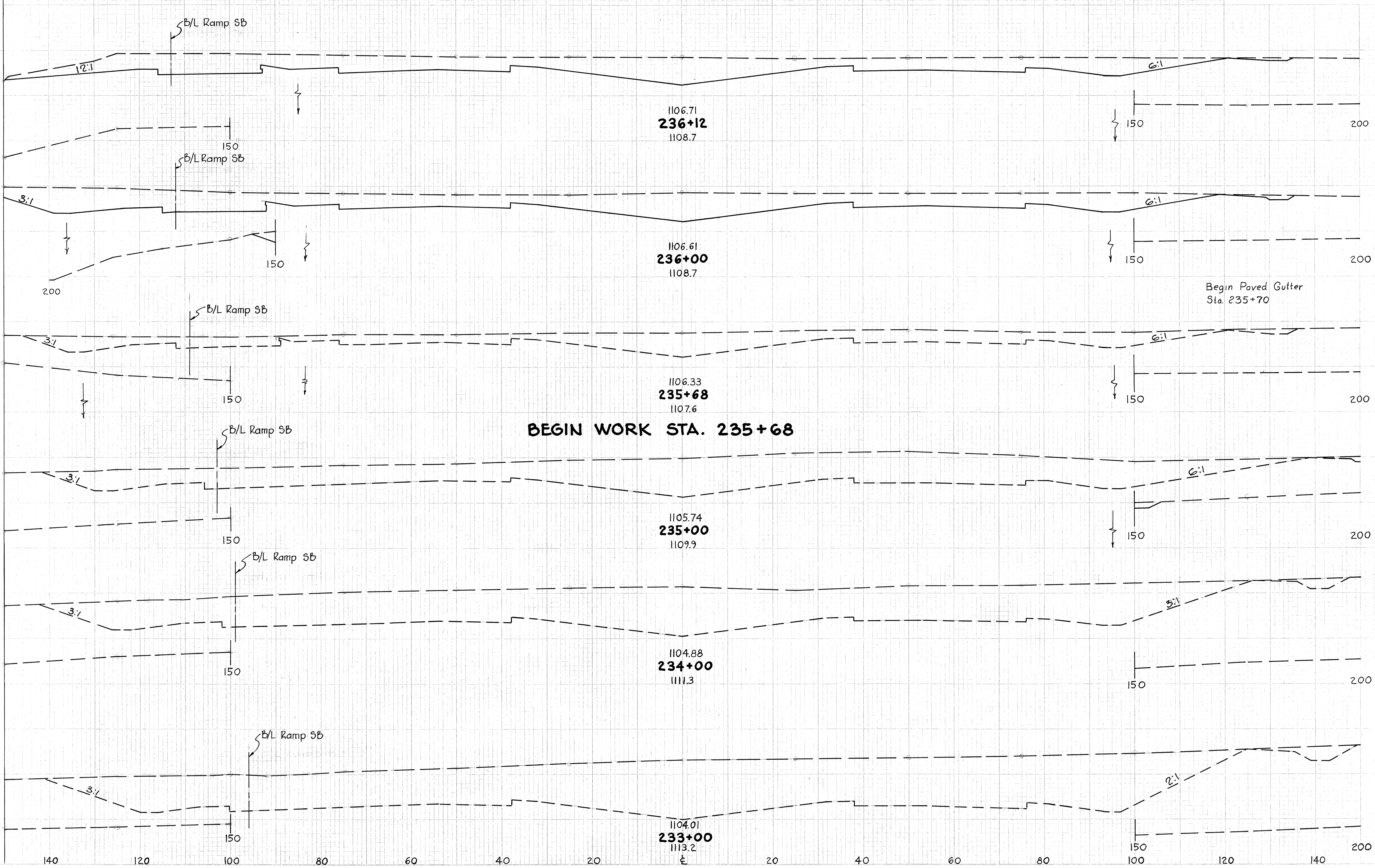

CURVE # 5
P.I. Sta. 466+46.20
Δ = 5°-14'-03"
D = 0°-15'
R = 22,918.31'
T = 1,047.56'
L = 2,093.67'
E = 23.93'
L.A.
Pasture
Cultivated
Begin Sheet, Sta. 464+00
End Sheet, Sta. 474+00
465
470
N04°07'23"W
P.I. Curve #5
N09°21'26"W
Cultivated
L.A.
1098.59
1098.04
1097.49
1096.94
1096.39
1095.84
1095.29
1094.74
1094.19
1093.64
1093.09
1092.54
1091.99
1091.44
1090.89
1090.34
1089.79
1089.24
1088.69
1088.14
1087.59
1110
1100
-1.10%
1090
1080
1070
1099.9
1100.3
1101.0
1102.3
1103.1
1102.3
1102.0
1103.4
1105.6
1104.3
1102.8
1102.3
1101.2
1100.8
1101.4
1104.0
1105.0
1103.9
1102.4
1100.2
1097.5
464
465
466
467
468
469
470
471
472
473
474

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

MEDINA COUNTY
MED-42-21.94

SEEDING	
END WIDTH	SQ. YDS.
0	0
0	0

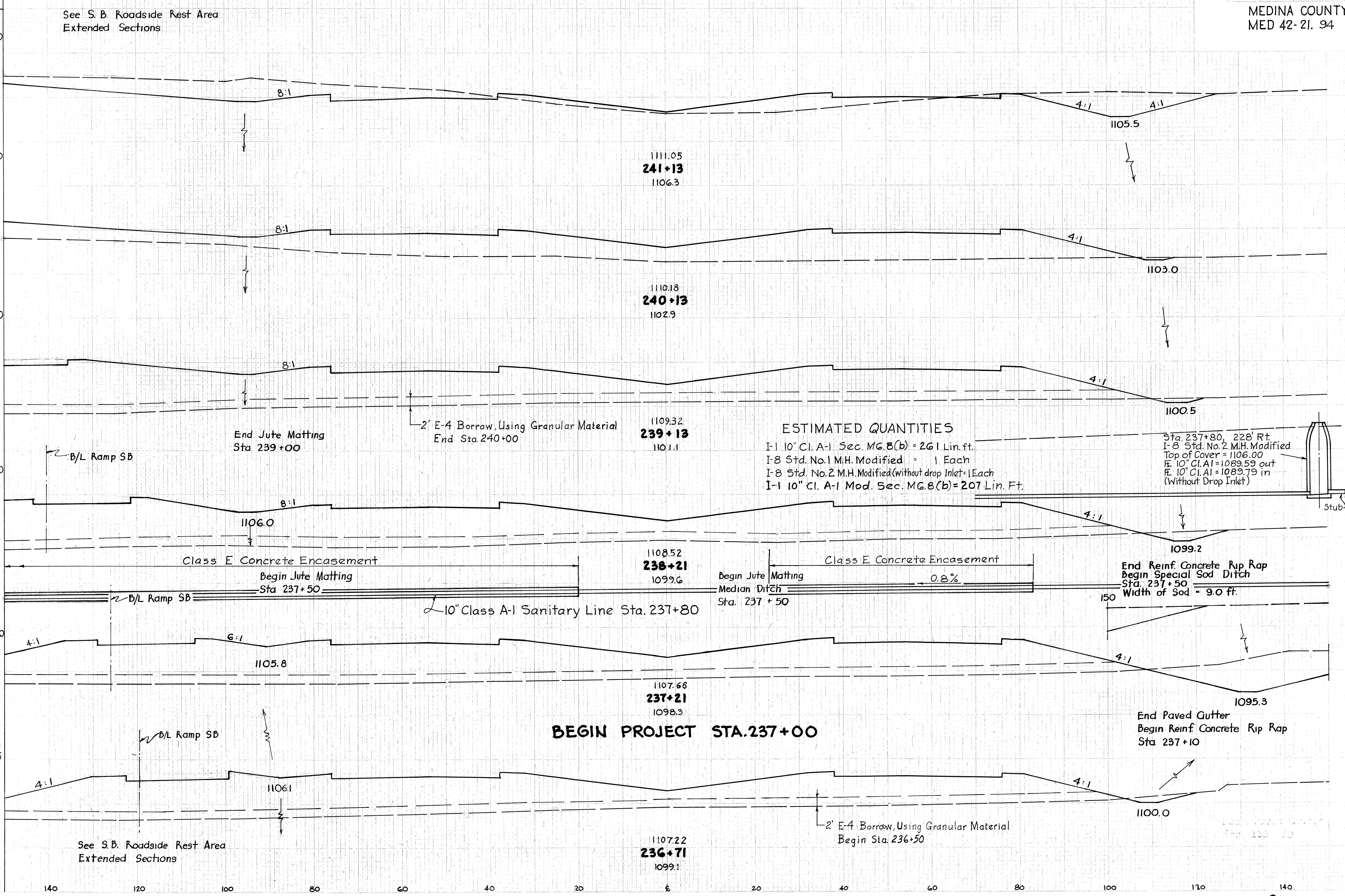
END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
		965	1875
879	0		
		411	0
972	0		
		576	0
0	0		



FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

MEDINA COUNTY
MED 42-21.94

Seeding End Width	Sq. Yds.
	2040
218	
	2440
222	
	2350
201	
	2020
196	
	2440
244	
	285
0	



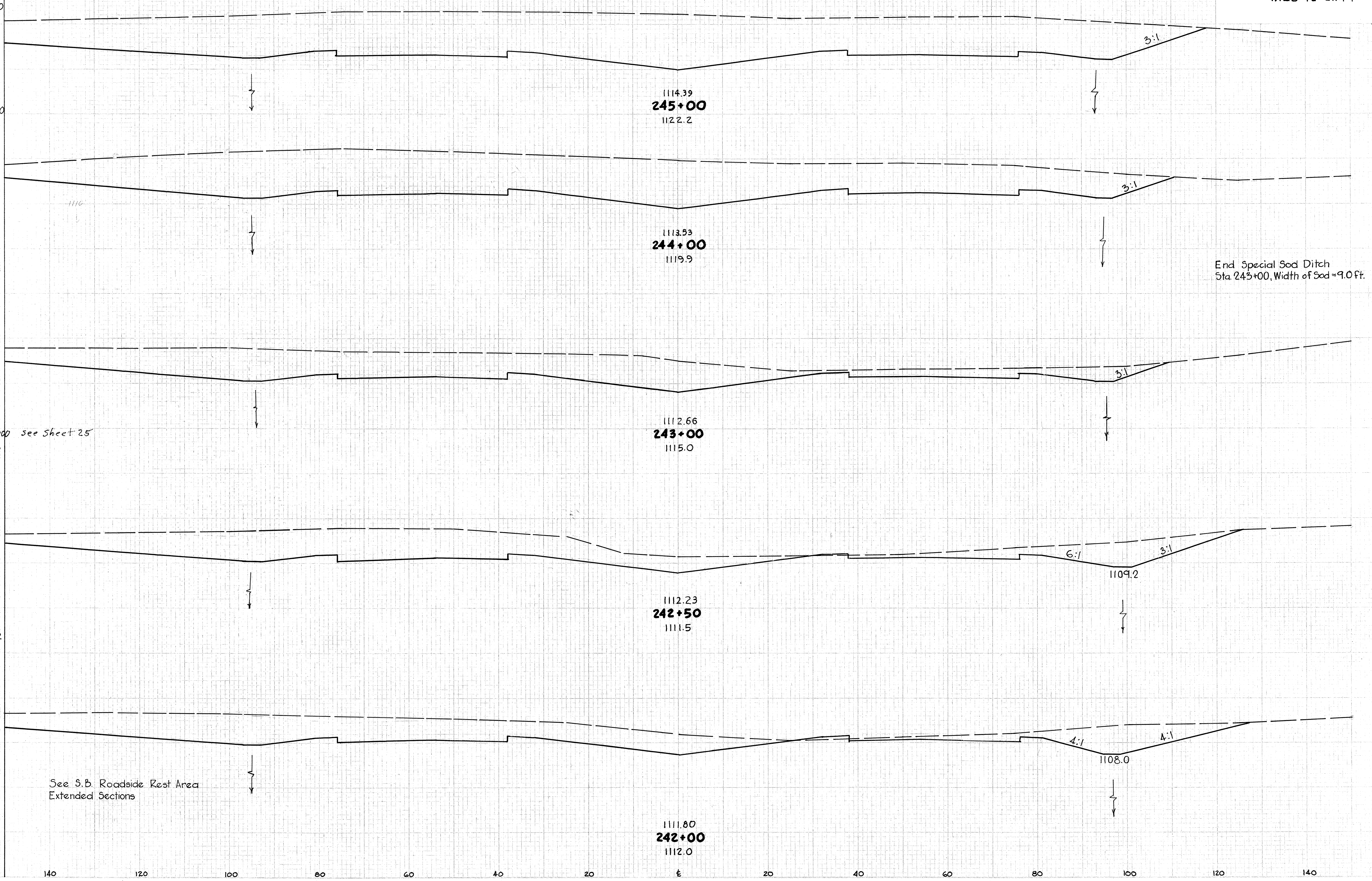
End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
		2294	252
498	144		
		992	2298
37	1096		
		103	5507
18	1877		
		74	6619
25	2008		
		529	7387
261	1981		
		245	3423
4	1716		

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

MEDINA COUNTY
MED-42-21.94

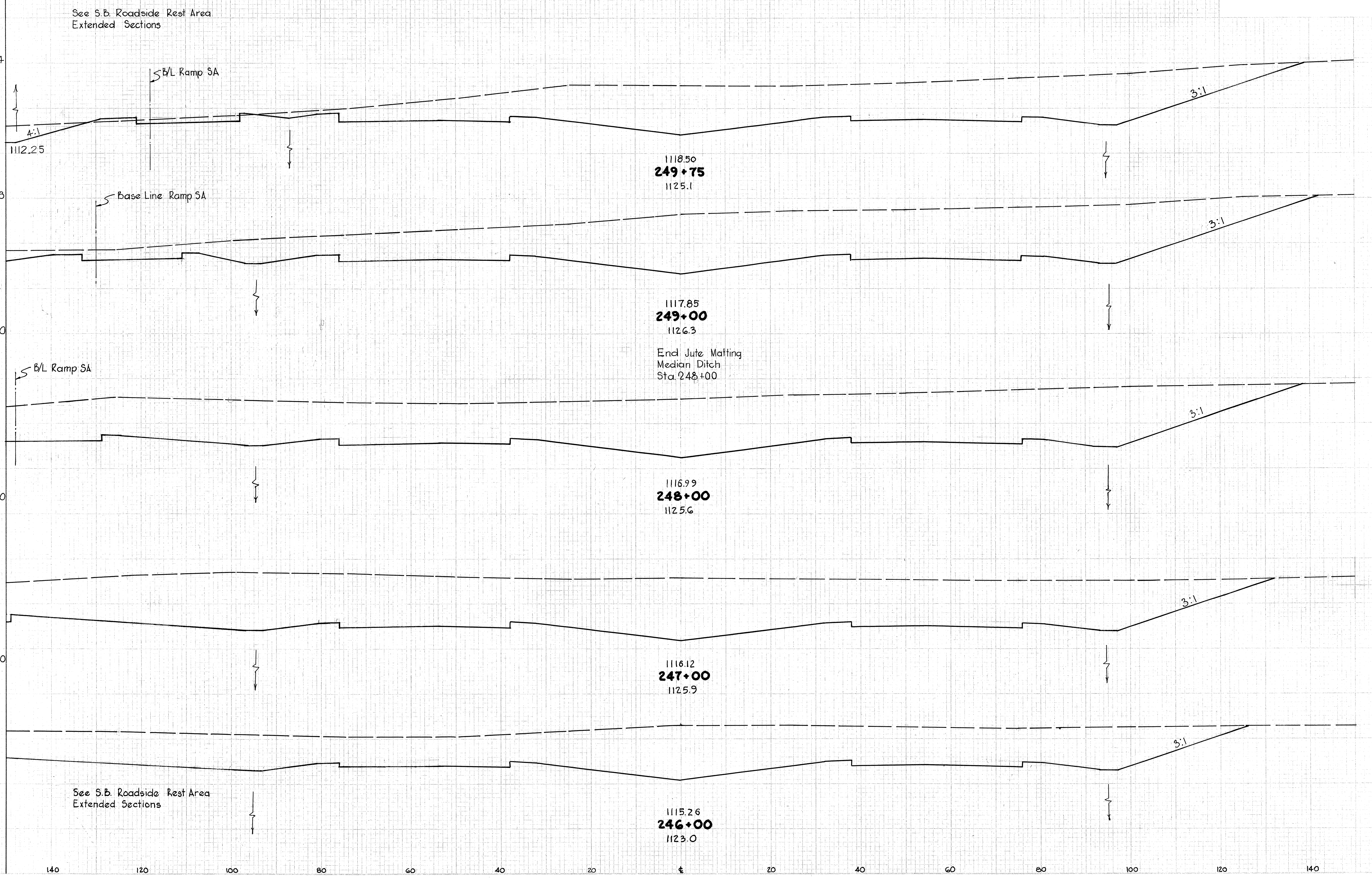
See S.B. Roadside Rest Area Extended Sections

Seeding End Width	Seeding Sq. Yds.
	2350
207	
	2260
200	
	2222
199	
	322,000 See Sheet 25
	1116
204	
	1132
204	



See S.B. Roadside Rest Area Extended Sections

End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
		8234	0
2295	0		
		7866	0
1952	0		
		5648	0
1097	0		
		1976	0
1036	0		
		1817	12
925	12		

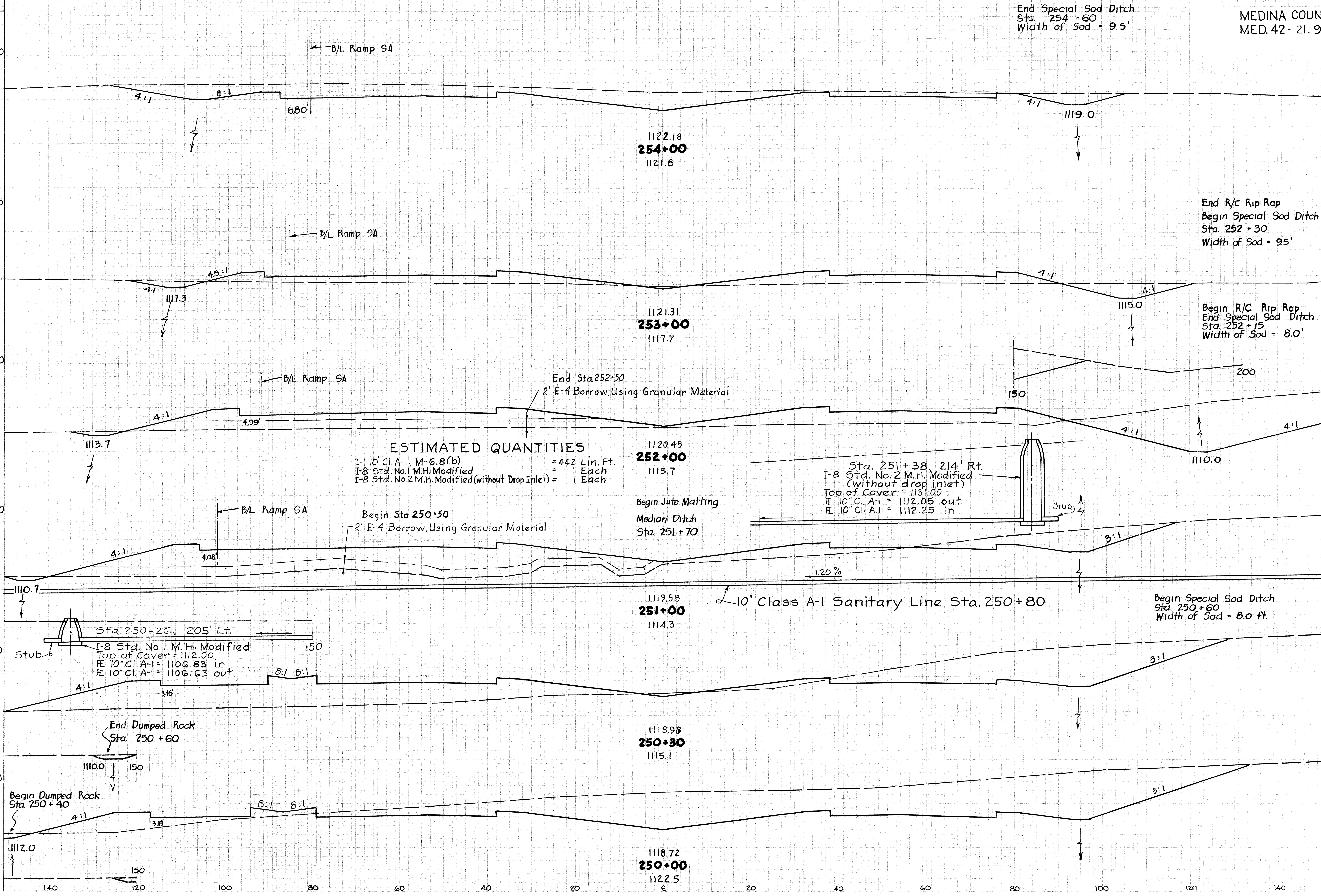


Seeding End Width	Seeding Sq. Yds.
	584
193	
	1683
211	
	2330
208	
	2400
223	
	2440
217	

End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
		1287	69
1640	6		
		5312	8
2184	0		
		9245	0
2807	0		
		10675	0
2957	0		
		9459	0
2151	0		

MEDINA COUNTY
MED. 42-21.94

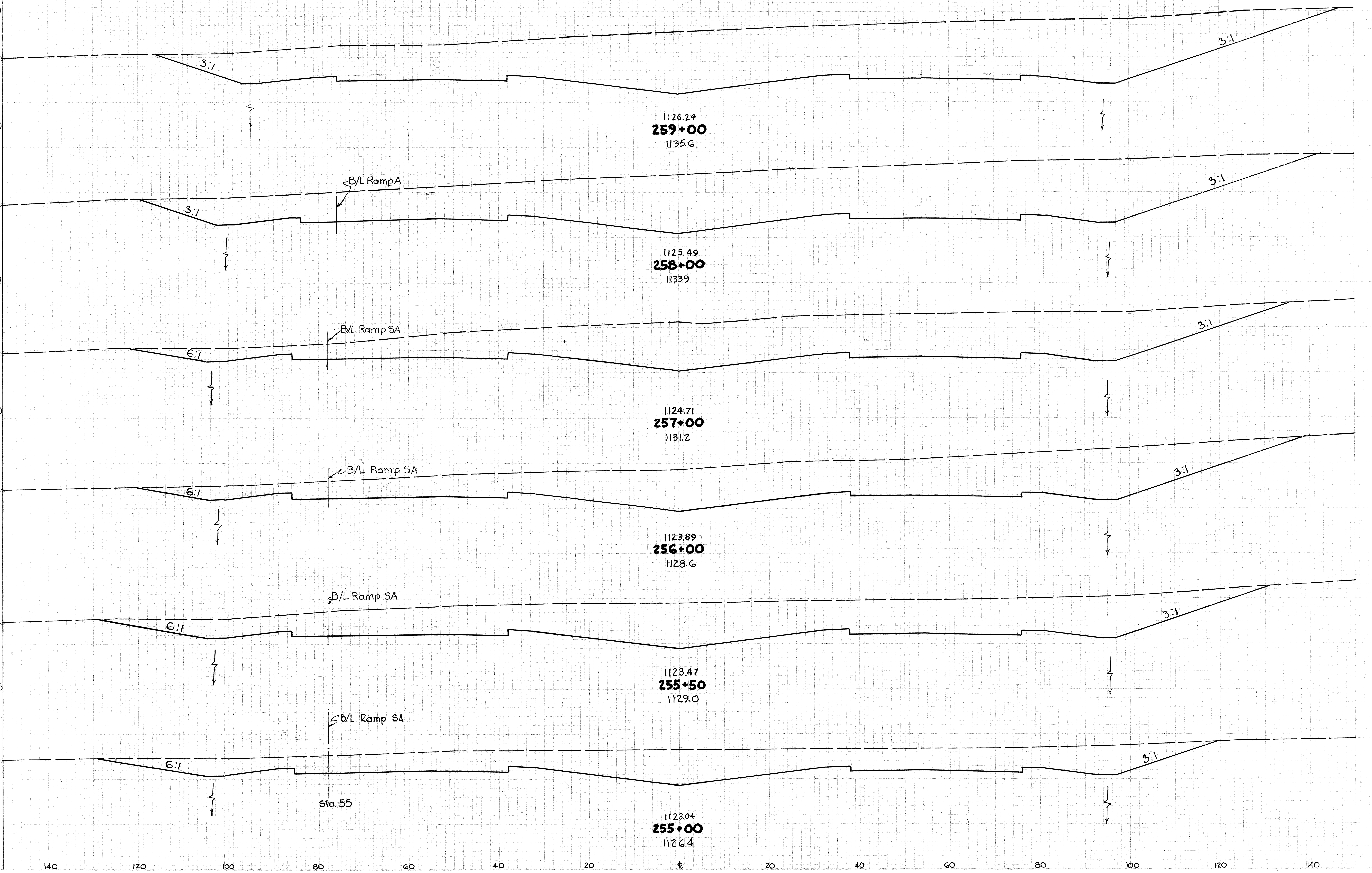
Seeding	
End Width	Sq. Yds.
	2010
172	
	1955
180	
	2320
234	
	2420
201	
	1620
214	
	733
226	



End Area		Cu. Yds.	
Cut	Fill	Cut	Fill
		2953	0
471	0		
		1006	529
73	286		
		1054	1659
496	610		
		1305	2193
208	574		
		1071	1558
618	628		
		976	428
1139	143		

MEDINA COUNTY
MED-42-21.94

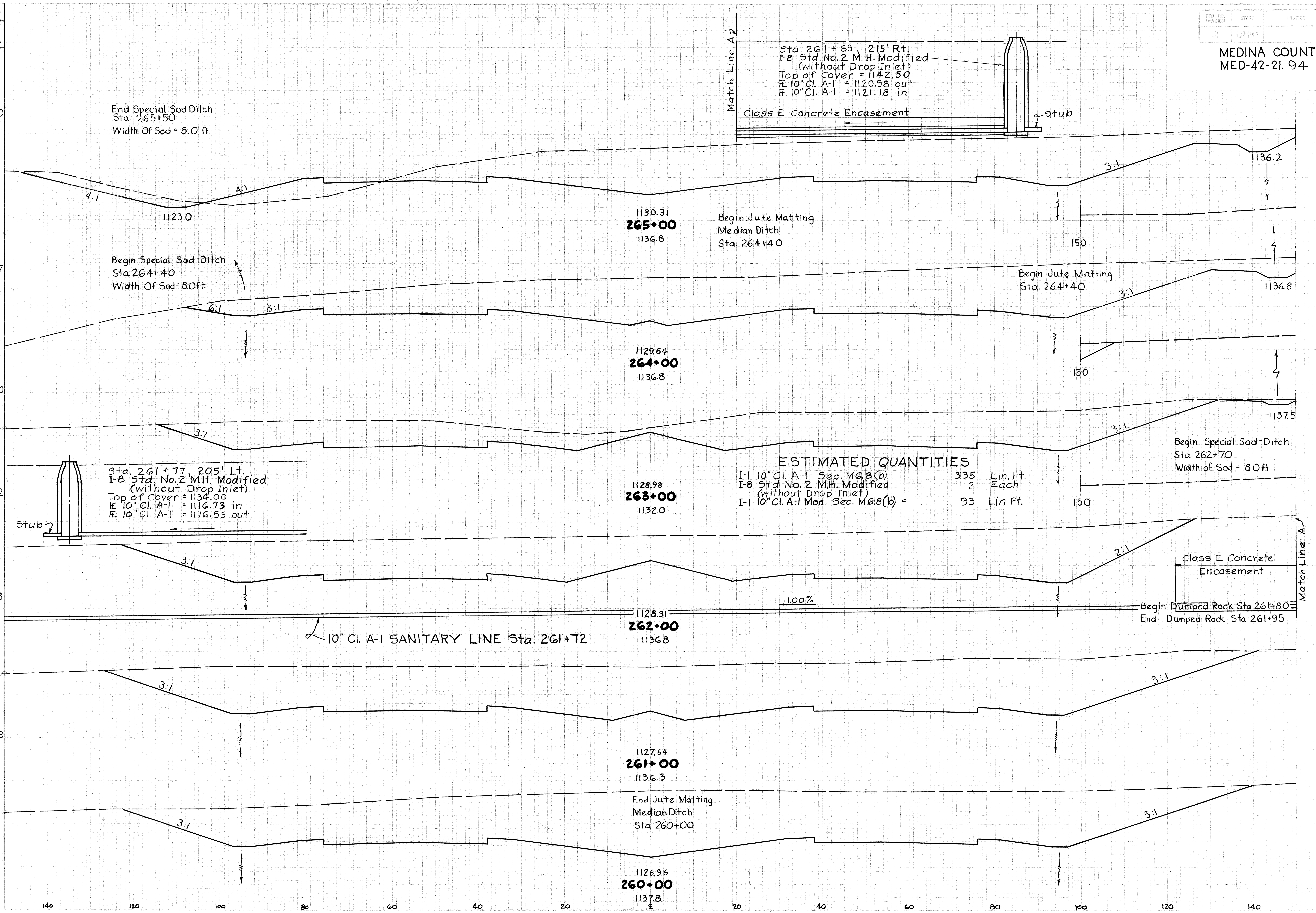
Seeding End Width	Seeding Sq Yds.
	2413
217	
	2350
206	
	2260
201	
	2240
203	
	1130
204	
	1095
189	



End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
		9481	0
2500	0		
		8937	0
2326	0		
		7509	0
1729	0		
		6170	0
1603	0		
		2994	0
1630	0		
		2550	0
1124	0		

Sta. 255+00 to 259+00

MEDINA COUNTY
MED-42-21.94



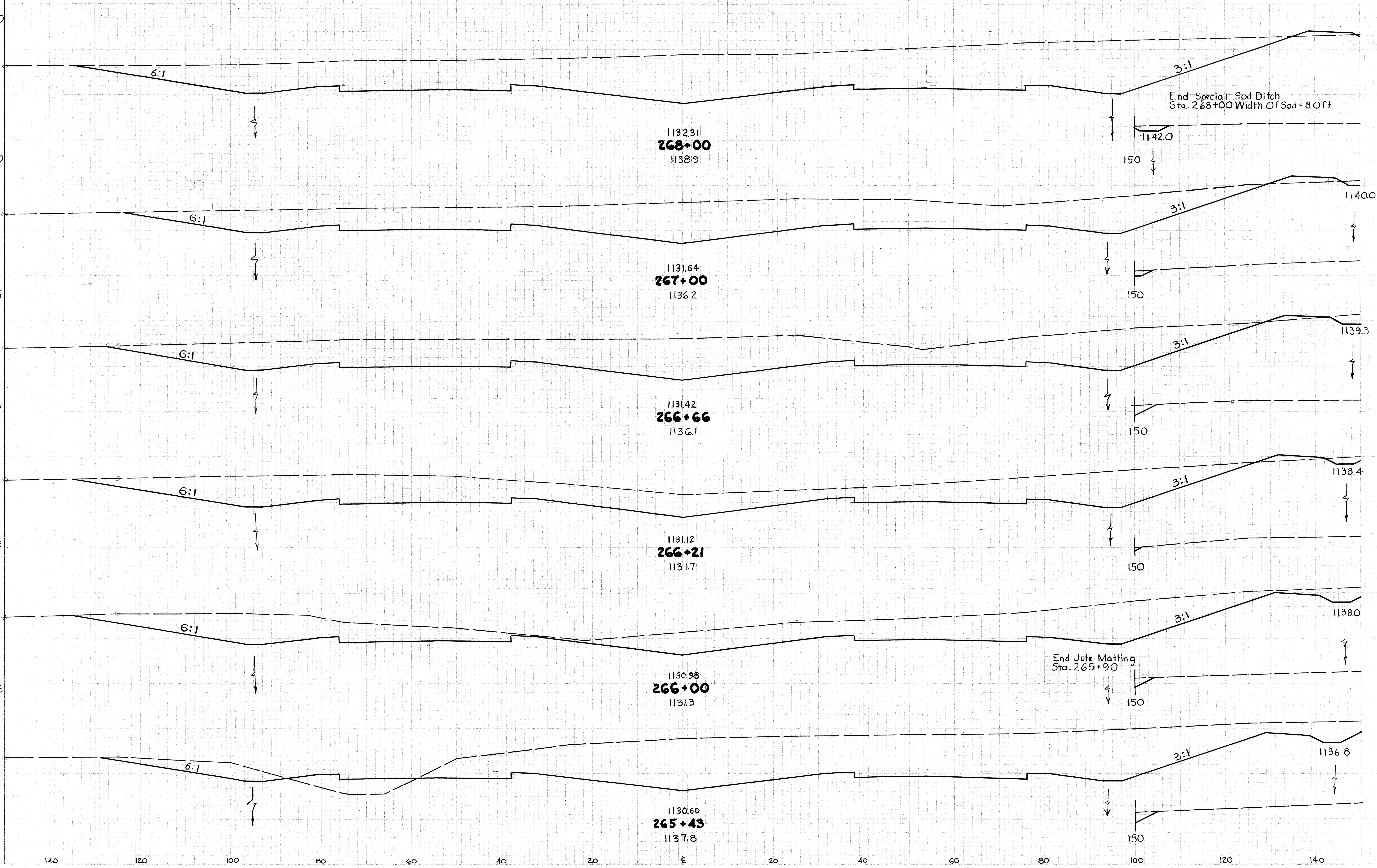
Station	Seeding End Width	Seeding Sq. Yds.
265+00	276	1230
264+00	222	2767
263+00	219	2450
262+00	206	2362
261+00	223	2388
260+00	217	2449

Station	End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
			2859	151
265+00	1899	105		
			7193	195
264+00	1986	0		
			6260	0
263+00	1394	0		
			6601	0
262+00	2170	0		
			8837	0
261+00	2601	0		
			9670	0
260+00	2620	0		

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

MEDINA COUNTY
MED-42-21.94

Seeding End Width	Seeding Sq. Yds.
	2650
247	
	2660
232	
	875
232	
	1177
239	
	563
243	
	1526
238	

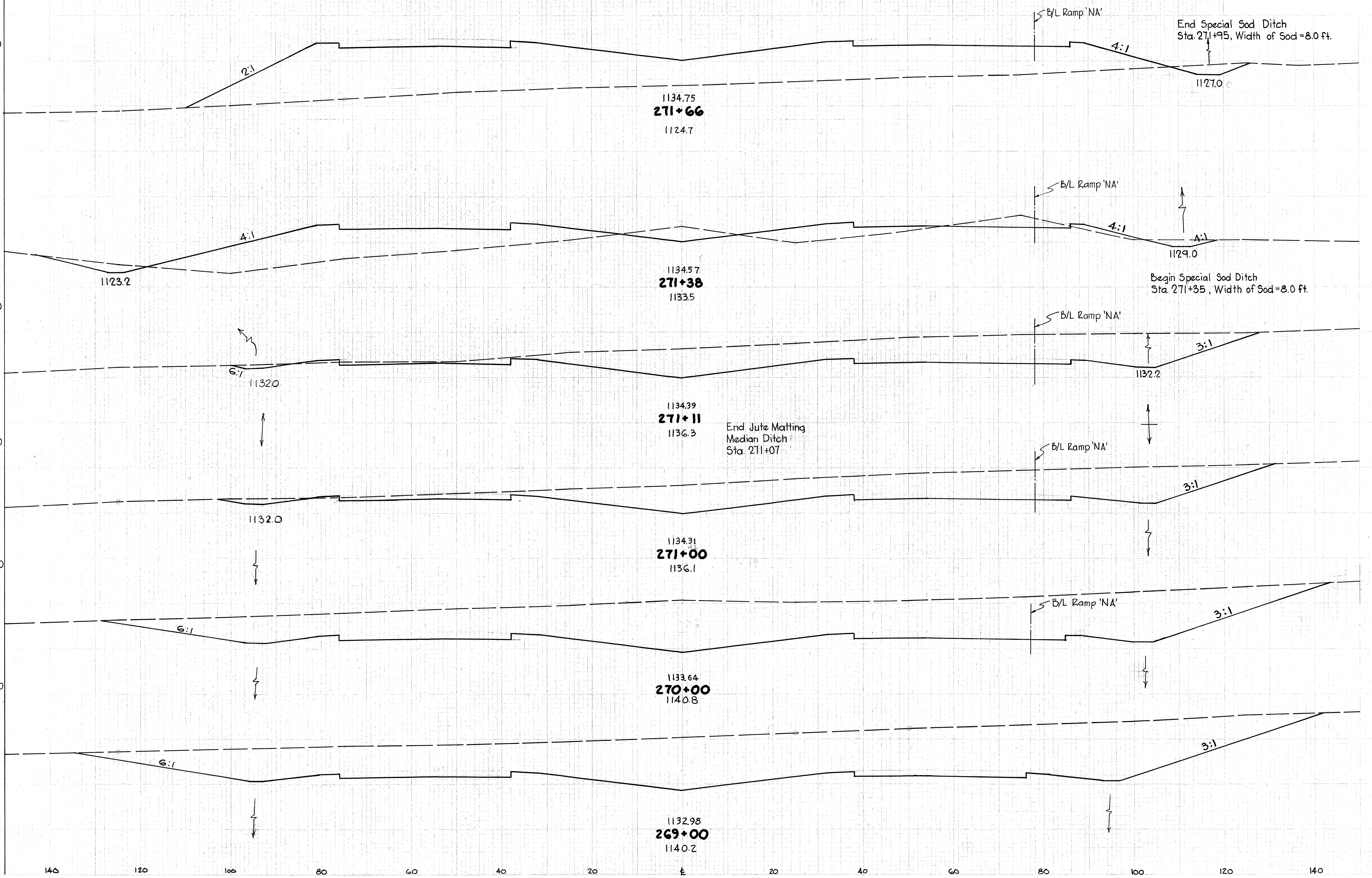


End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
		7744	19
1958	10		
		6122	48
1348	15		
		1735	14
1406	7		
		2208	14
1243	10		
		923	3
1129	0		
		2977	88
1691	84		

Sta. 265+43 to 268+00

MEDINA COUNTY
MED-42-21.94

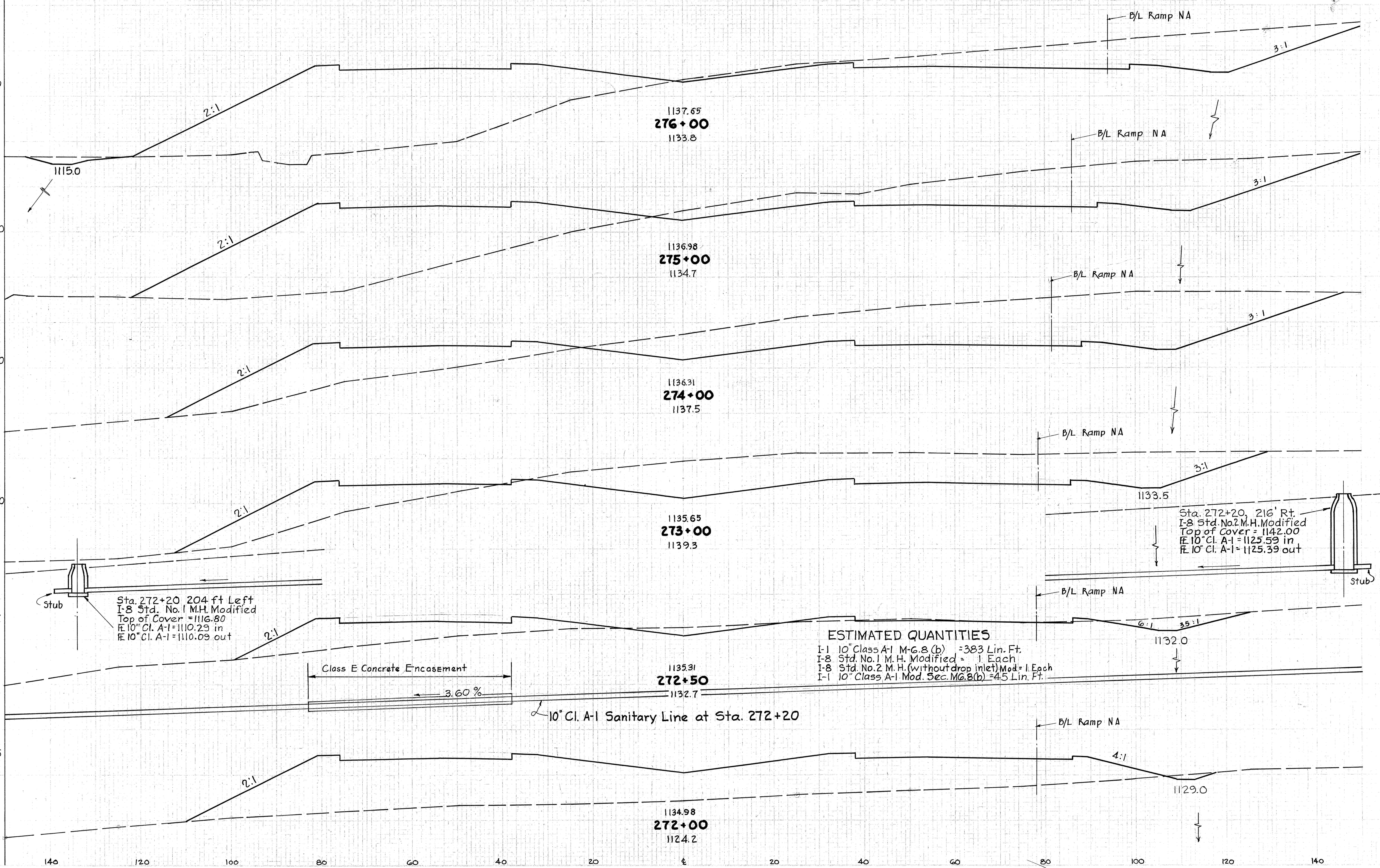
Seeding End Width	Seeding Sq. Yds.
	680
187	
	610
204	
	560
169	
	210
175	
	2170
214	
	2470
230	



End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
		15	2125
16	1700		
		77	1200
132	614		
		487	309
842	4		
		357	1
912	1		
		5222	2
1908	0		
		7651	0
2224	0		

MEDINA COUNTY
MED-42-21.94

Seeding End Width	Seeding Sq. Yds.
	680
233	
	2490
215	
	2330
204	
	2030
162	
	917
168	
	945
172	

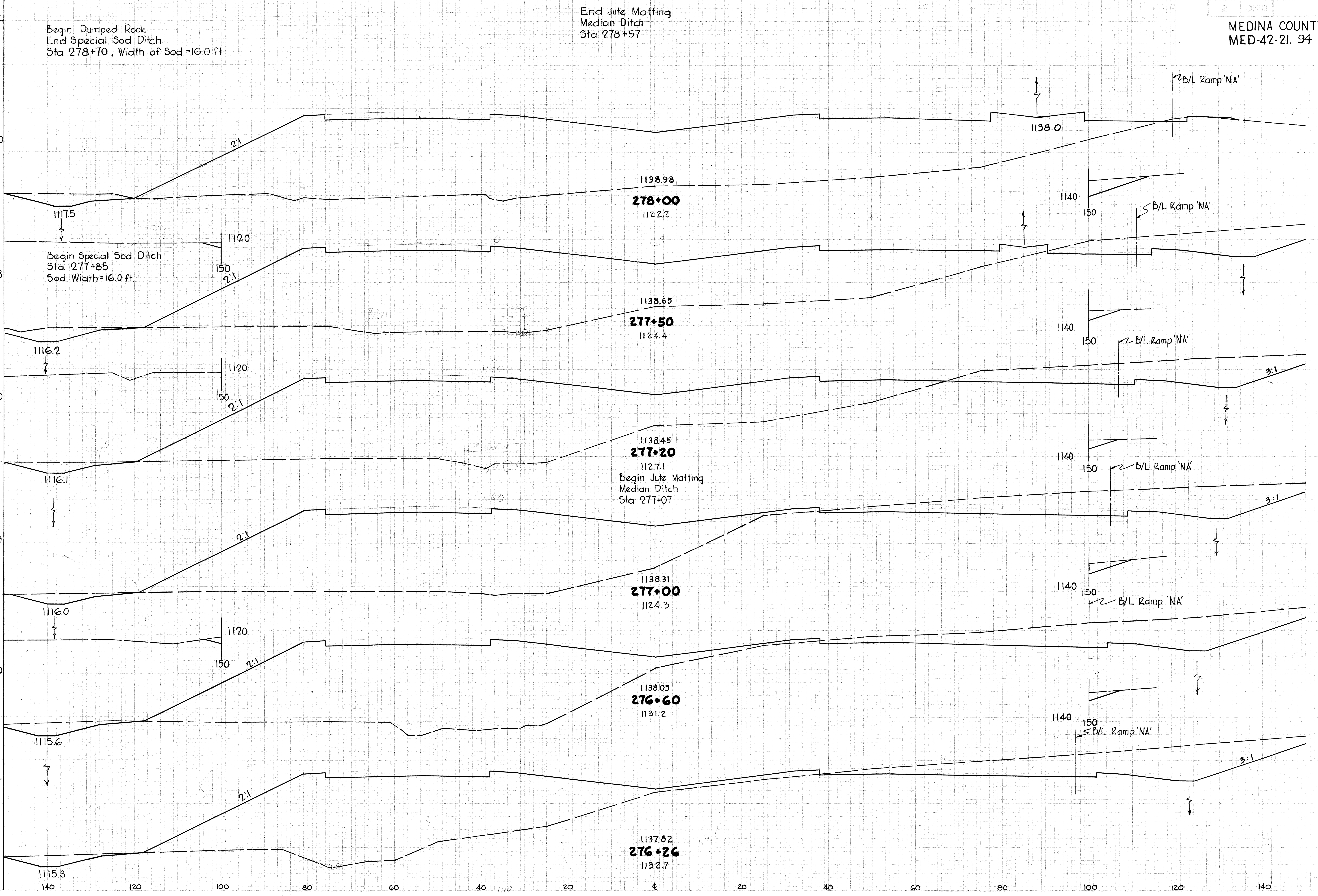


End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
		533	1360
596	1366		
		2683	4780
853	1214		
		3842	3153
1223	488		
		3888	1478
876	310		
		901	564
96	299		
		96	1828
7	1675		

Sta. 272+00 to 276+00

MEDINA COUNTY
MED-42-21.94

Seeding End Width	Sq. Yds.
	2460
211	
	1253
240	
	780
229	
	509
229	
	1040
239	
	904
237	

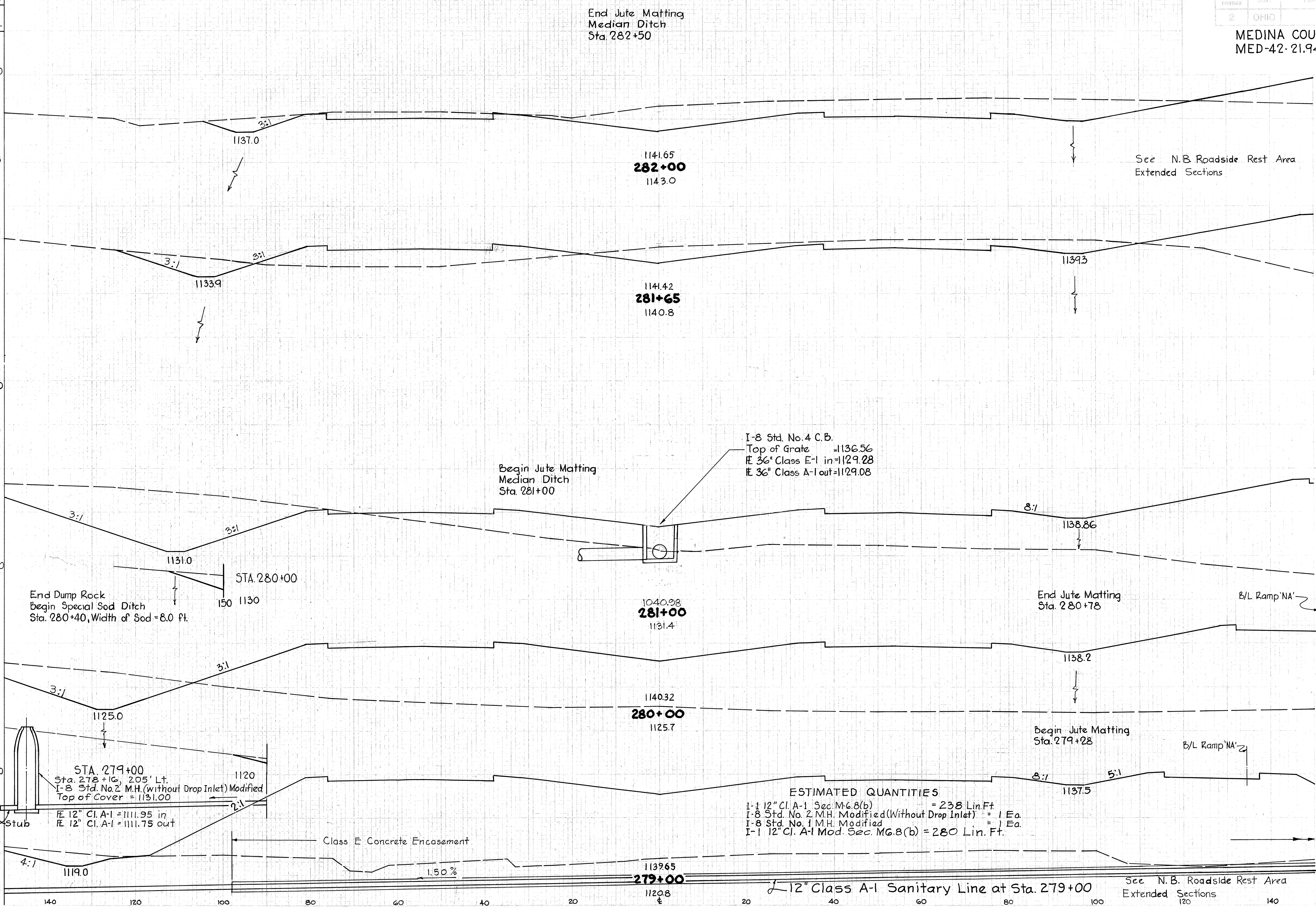


End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
		205	13707
53	3010		
		349	5131
324	2531		
		395	2579
389	2112		
		332	1478
507	1879		
		881	2660
681	1712		
		750	1996
510	1459		

Sta. 276+26 to 278+00

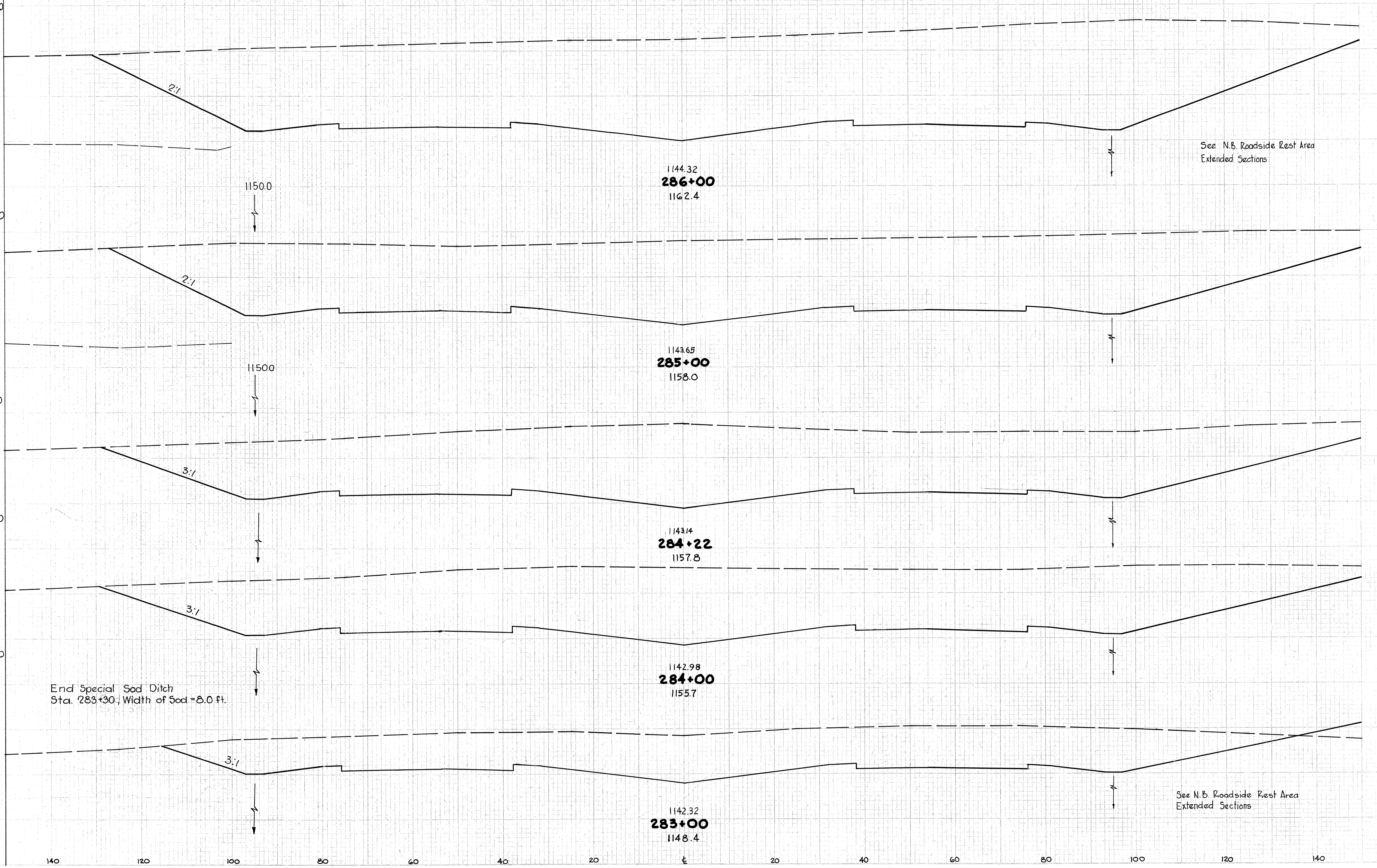
MEDINA COUNTY
MED-42-21.94

SEEDING END WIDTH	SEEDING SQ. YDS.
	2220
193	
	798
215	
	1690
252	
	2800
252	
	2690
232	



END AREA CUT	END AREA FILL	CU. YDS. CUT	CU. YDS. FILL
		4845	206
646	89		
		637	379
337	496		
		1134	2743
605	1783		
		1606	9217
262	3193		
		592	14047
57	4392		

MEDINA COUNTY
MED-42-21.94



Seeding End Width	Seeding Sq. Yds.
	2550
227	
	2450
221	
	1890
221	
	540
221	
	2380
206	

End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
		19199	0
4989	0		
		16495	0
3918	0		
		10676	0
3473	0		
		2778	0
3347	0		
		9846	42
1970	23		

Sta. 283+00 to 286+00

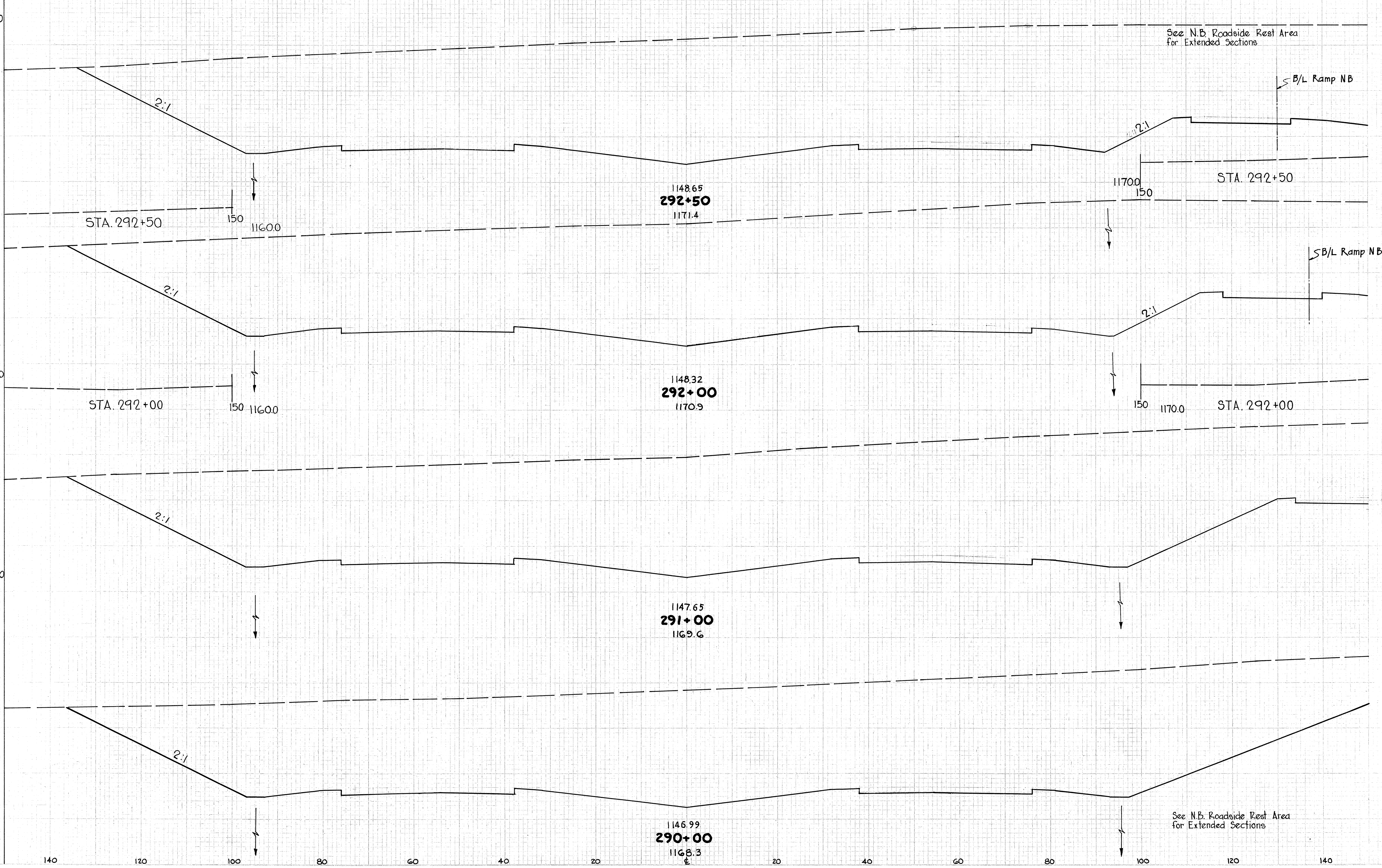
FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

MEDINA COUNTY
MED-42-21.94

Sta. 287+00 to 289+00

MEDINA COUNTY
MED-42-21.94

Seeding End Width	Sq. Yds.
	1170
209	
	1168
211	
	2390
218	
	2440
222	

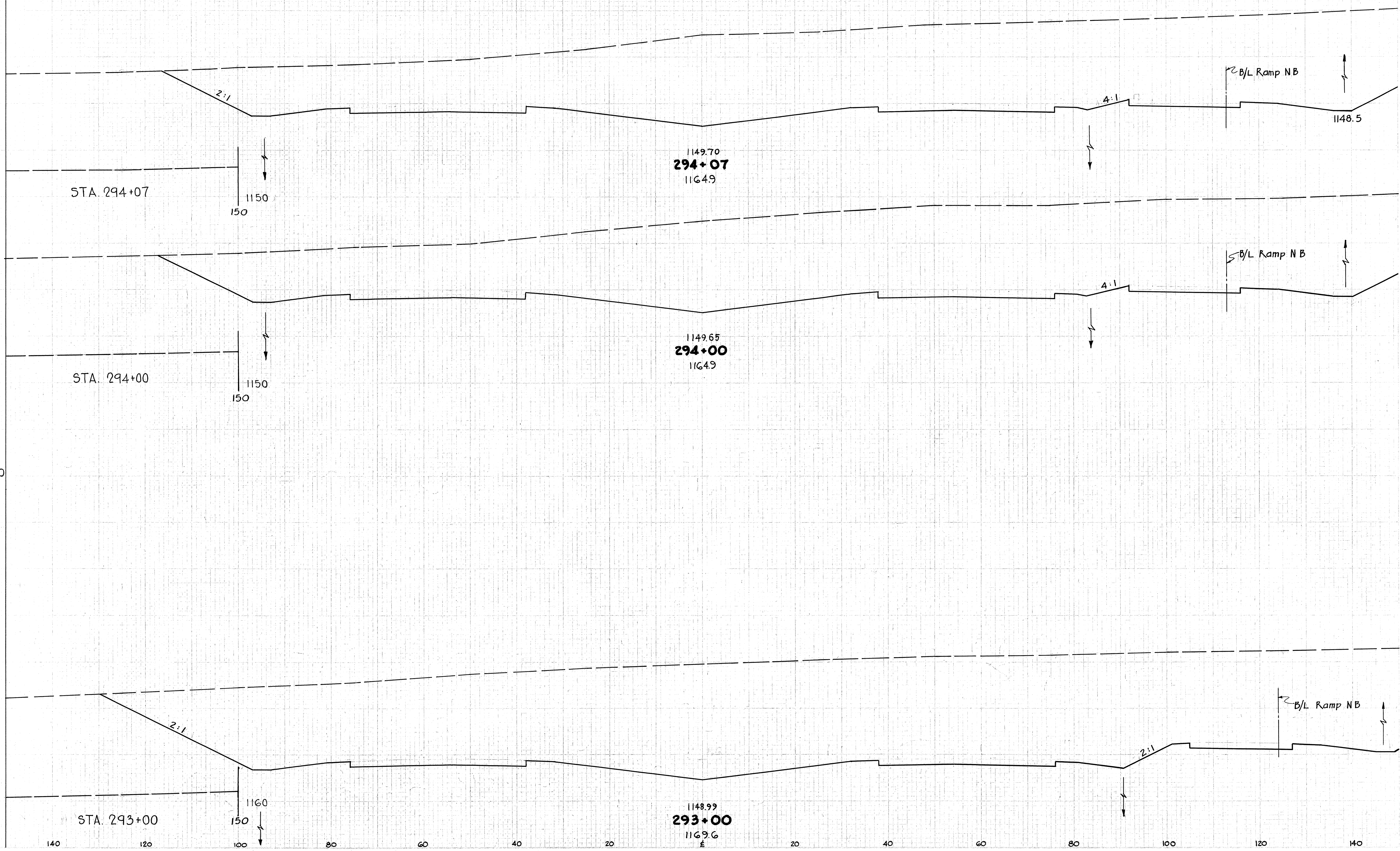


End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
		10975	0
6239	0		
		11706	0
6403	0		
		23407	0
6236	0		
		22539	0
5936	0		

FED. RD. DISTRICT	STATE	PROJECT	
2	OHIO		

MEDINA COUNTY
MED-42-21.94

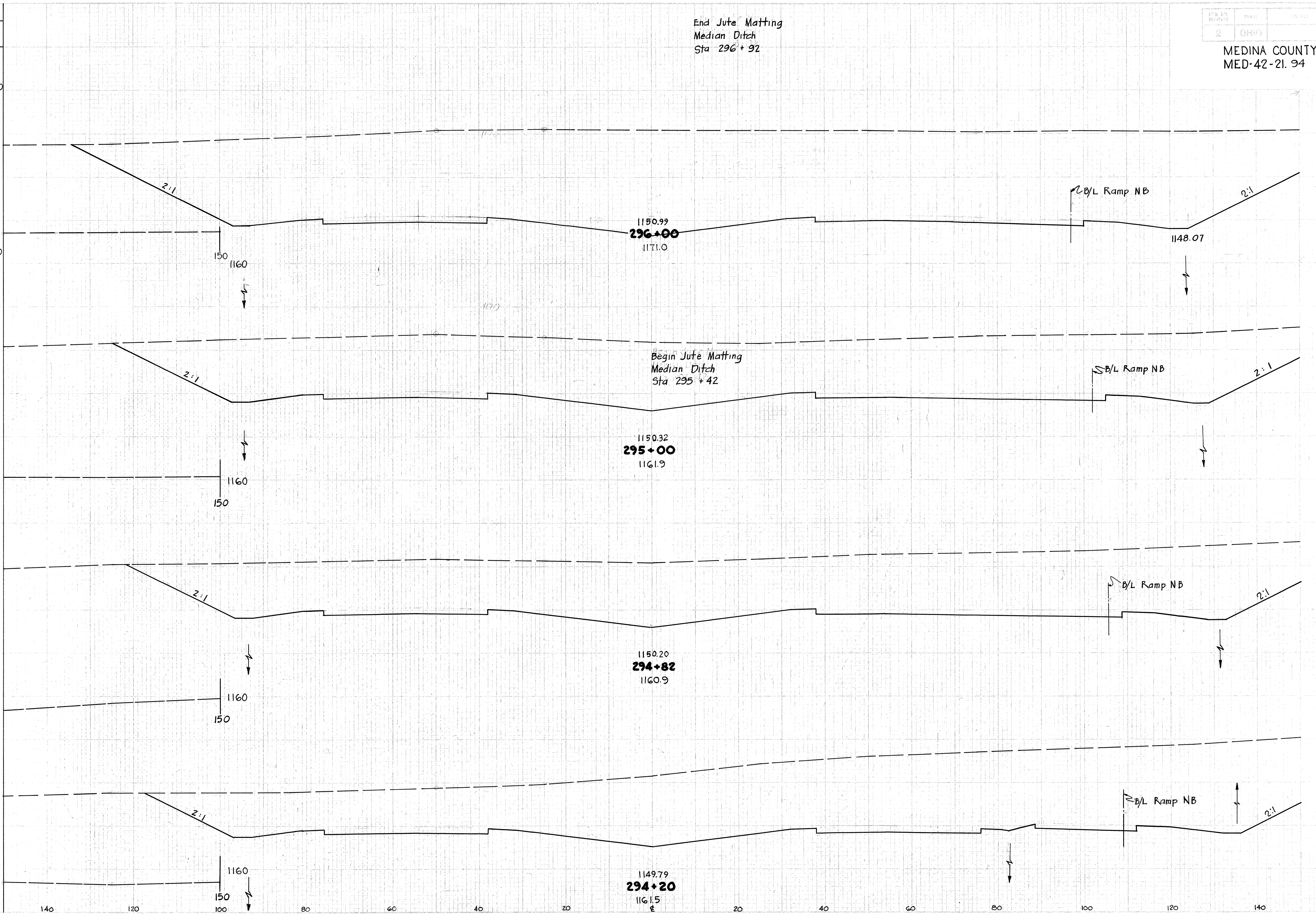
Seeding	
End Width	Sq. Yds.
	271
187	
	149
195	
	2220
204	



End Area		Cu. Yds.	
Cut	Fill	Cut	Fill
		1905	0
4085	0		
		1088	0
4313	0		
		18383	0
5614	0		

MEDINA COUNTY
MED-42-21.94

Seeding End Width	Seeding Sq. Yds.
	2350
206	
	2200
190	
	431
193	
	1315
189	



End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
		22207	0
5476	0		
		16314	0
3657	0		
		2401	0
3548	0		
		8469	0
3829	0		

MEDINA COUNTY
MED-42-21.94

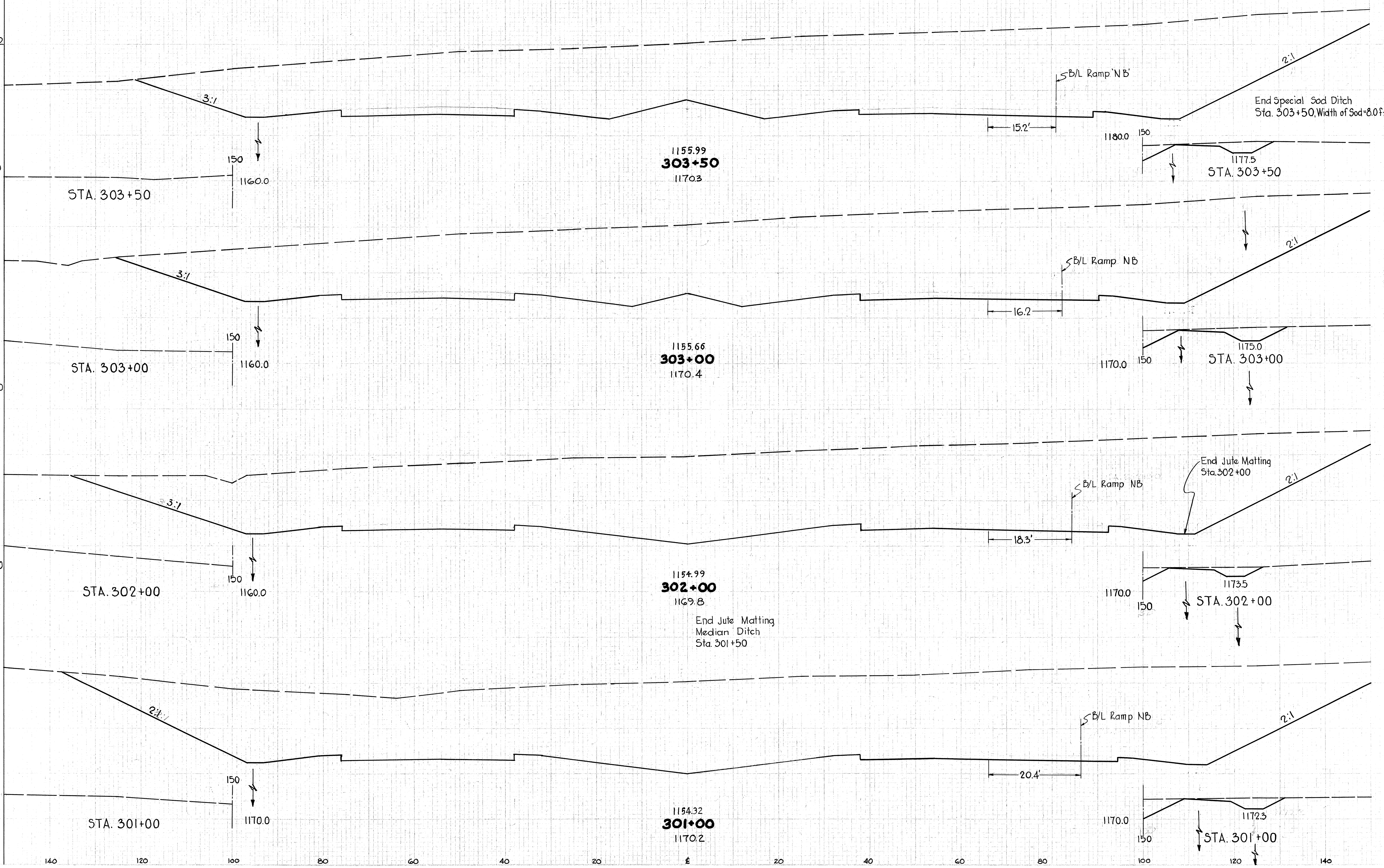
ESTIMATED QUANTITIES

I-1	30" Class A-1 Pipe Sec. M6.6(a) or M6.8(b)	= 114	Lin ft.
I-1	30" Class F-1 Pipe	= 68	Lin ft.
I-2	Masonry Type "E" Endwall	= 0.51	Cu. Yd.
I-8	Standard No. 4 C.B. Mod.	= 1	Ea.
I-8	Standard No. 5 C.B. Mod.	= 1	Ea.
L-10	Sodding	= 4	Sq. yd.

Begin Jute Matting
Median Ditch
Sta. 300+00

MEDINA COUNTY
MED-42-21.94

Seeding End Width	Sq. Yds.
	1242
224	
	1240
221	
	2640
255	
	2880
262	



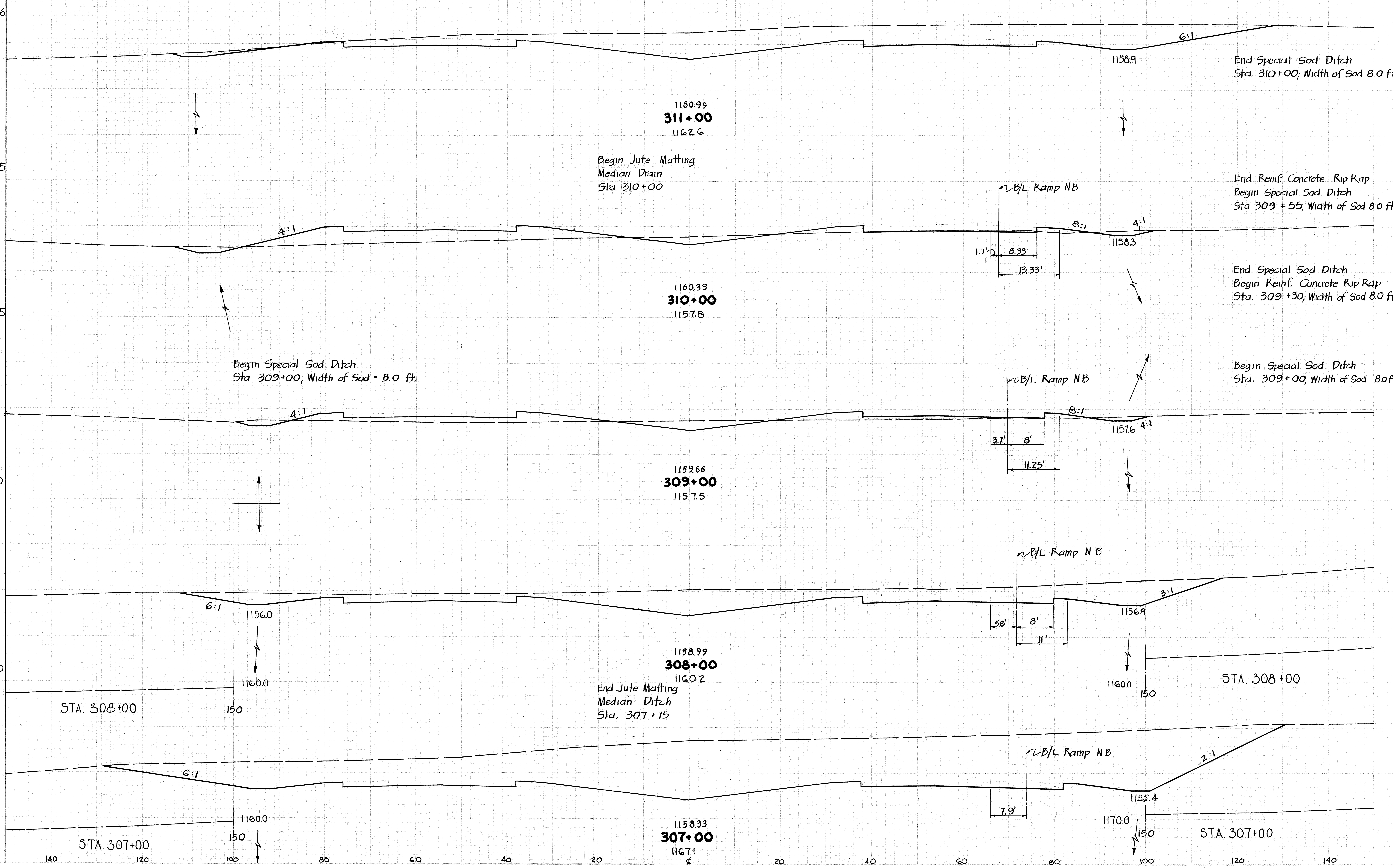
End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
		6616	O
3981	O		
		7313	O
3916	O		
		15086	O
4230	O		
		16385	O
4617	O		

MEDINA COUNTY
MED-42-21.94

Sta. 304+00 to 306+00

MEDINA COUNTY
MED-42-21.94

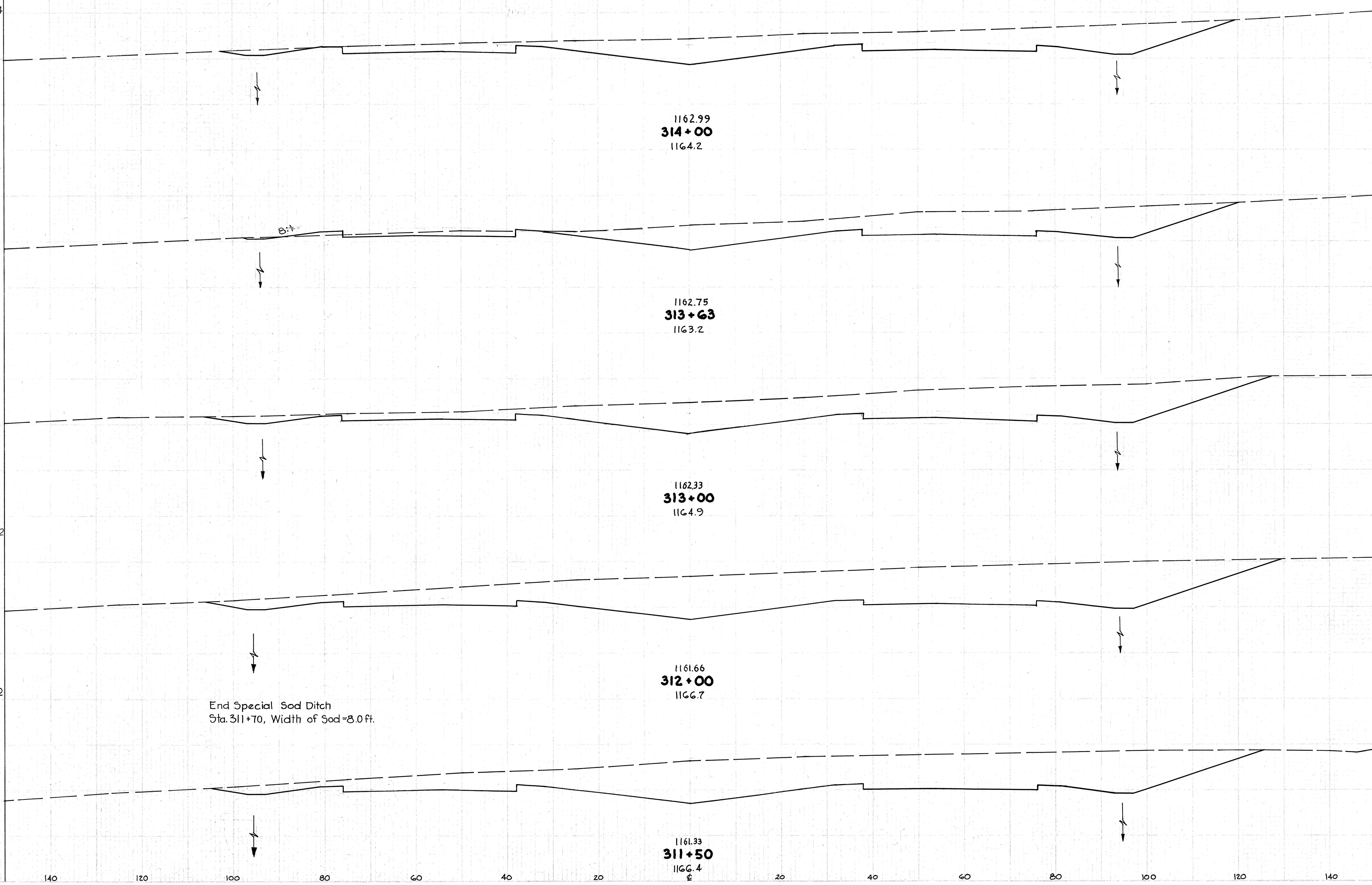
Seeding End Width	Seeding Sq. Yds.
	1046
193	
	1985
165	
	1755
150	
	1810
176	
	2130
208	



End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
		1888	2
728	2		
		1467	388
54	207		
		204	637
56	136		
		1242	252
615	0		
		5162	0
2173	0		

MEDINA COUNTY
MED-42-21.94

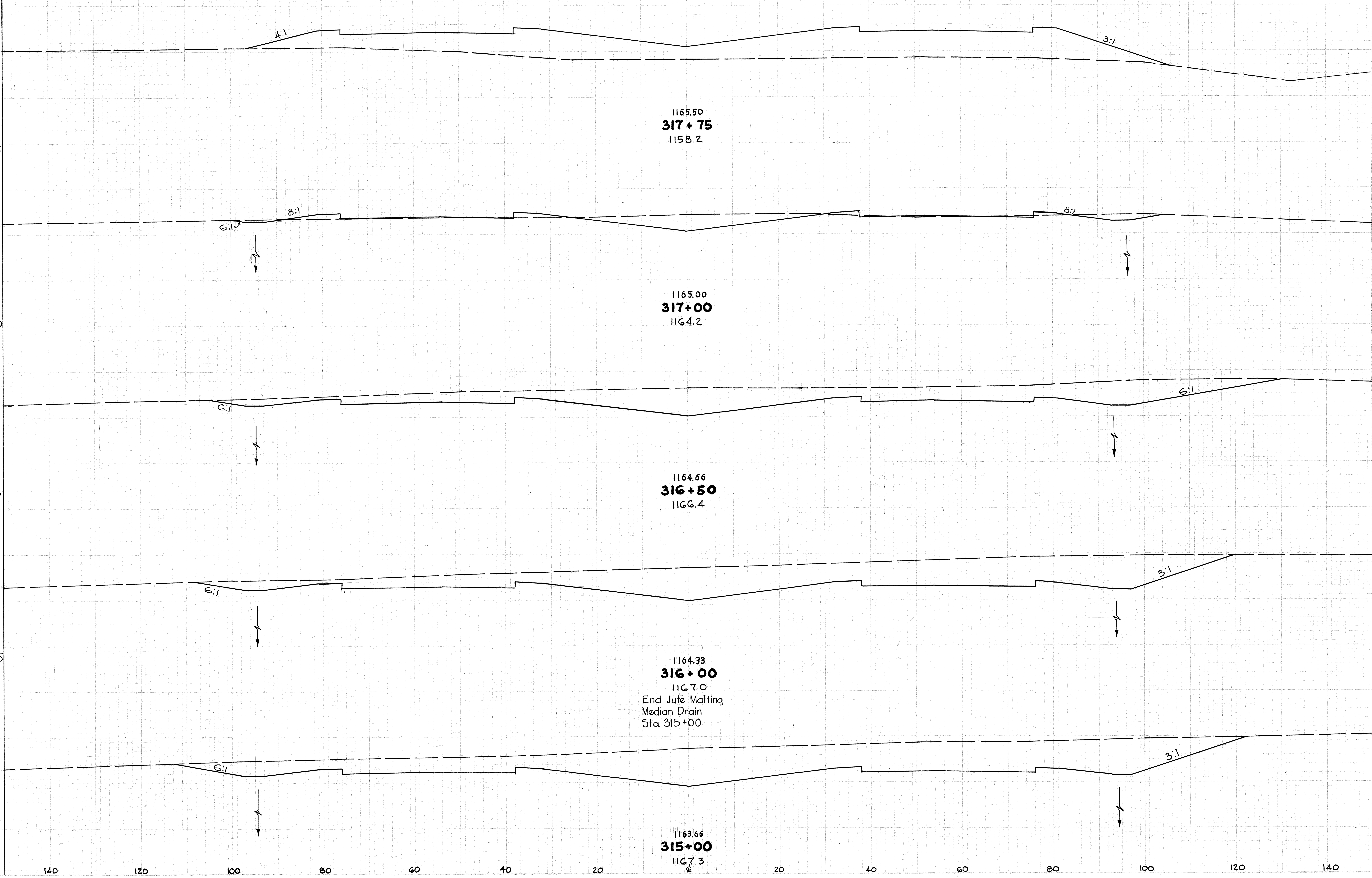
Seeding End Width	Seeding Sq. Yds.
	2004
174	
	732
182	
	1291
186	
	2082
188	
	1032
183	



End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
		3348	0
698	0		
		901	4
616	6		
		1870	7
986	0		
		4447	0
1415	0		
		2516	0
1301	0		

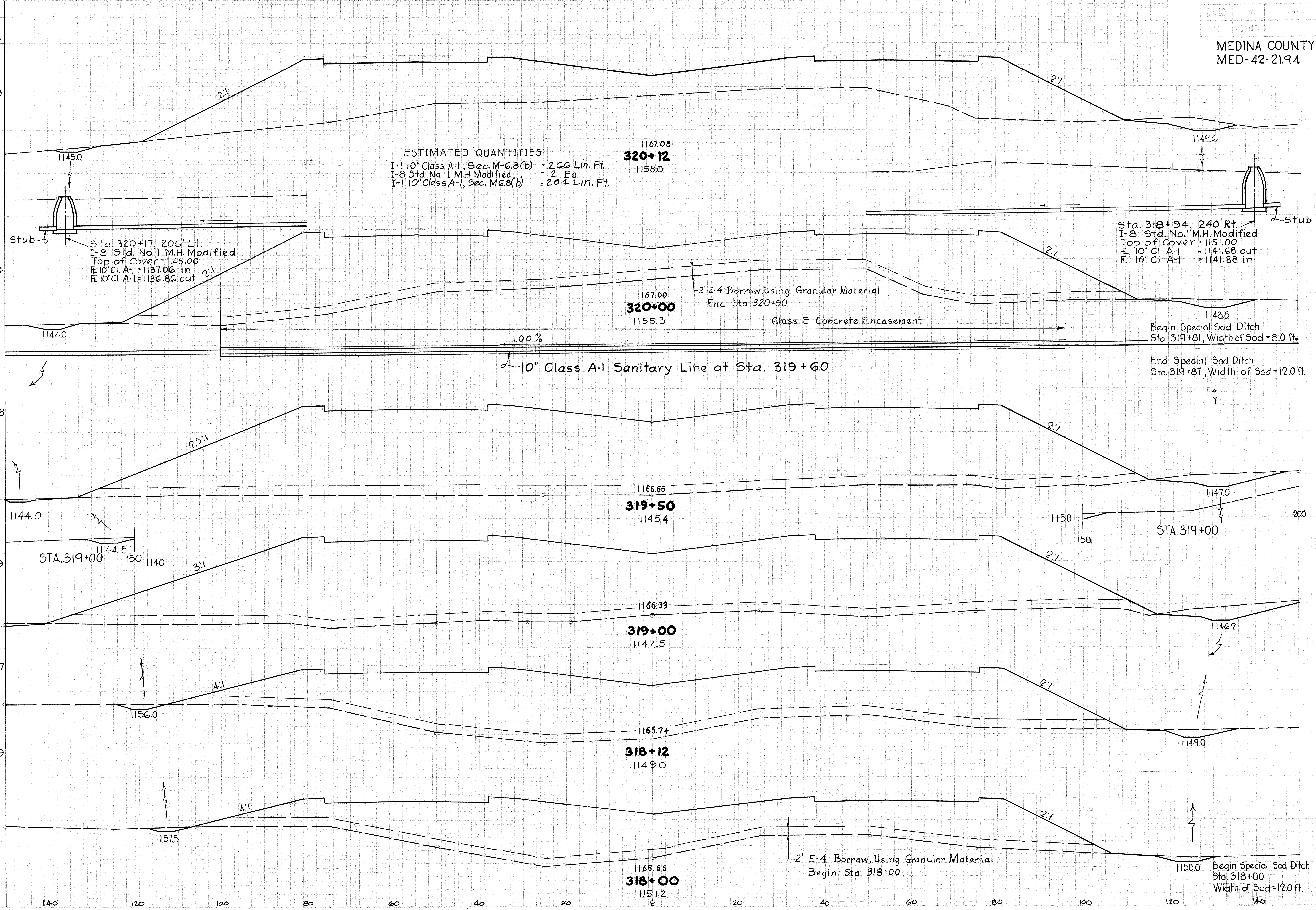
MEDINA COUNTY
MED-42-21.94

Seeding End Width	Sq. Yds.
	497
155	
	1285
153	
	940
185	
	1013
179	
	2035
187	



End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
		9	1290
0	921		
		176	1314
127	25		
		737	23
670	0		
		1483	0
931	0		
		3780	0
1109	0		

MEDINA COUNTY
MED-42-21.94



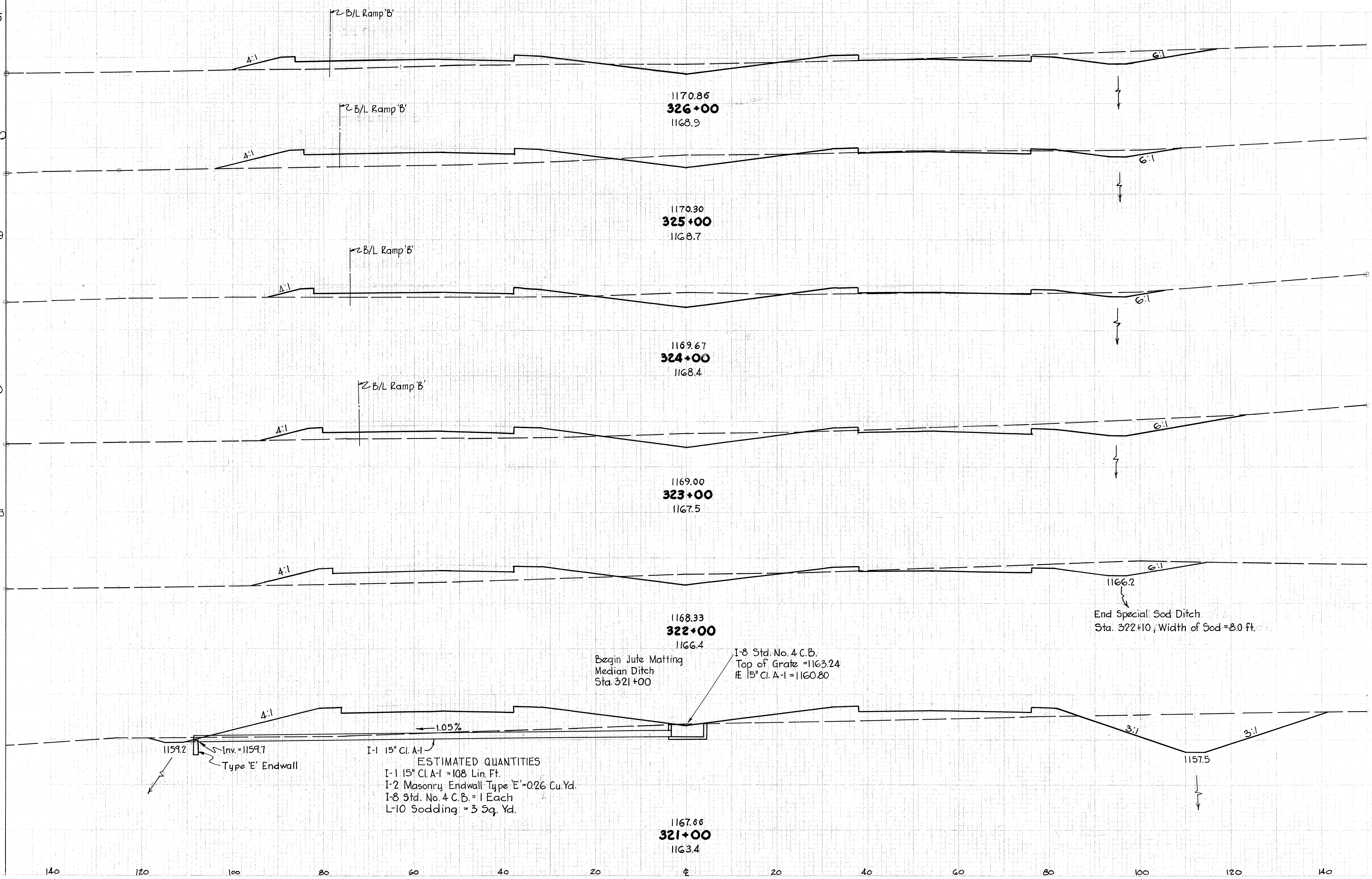
Seeding End Width	Seeding Sq. Yds.
	1709
187	
	274
223	
	1358
265	
	1499
274	
	2397
215	
	279
203	

End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
		18	4040
0	1916		
		7	1006
31	2614		
		96	6069
73	3940		
		137	7144
74	3774		
		177	9926
34	2317		
		12	929
19	1865		

Sta. 318+00 to 320+12

Seeding End Width	Seeding Sq Yds.
	1665
156	
	1720
154	
	1649
143	
	1710
165	
	1803
160	
	1791
163	

End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
		379	474
120	133		
		418	653
105	219		
		337	613
76	112		
		489	418
187	114		
		616	534
145	175		
		290	1365
11	562		



Sta. 321+00 to 326+00

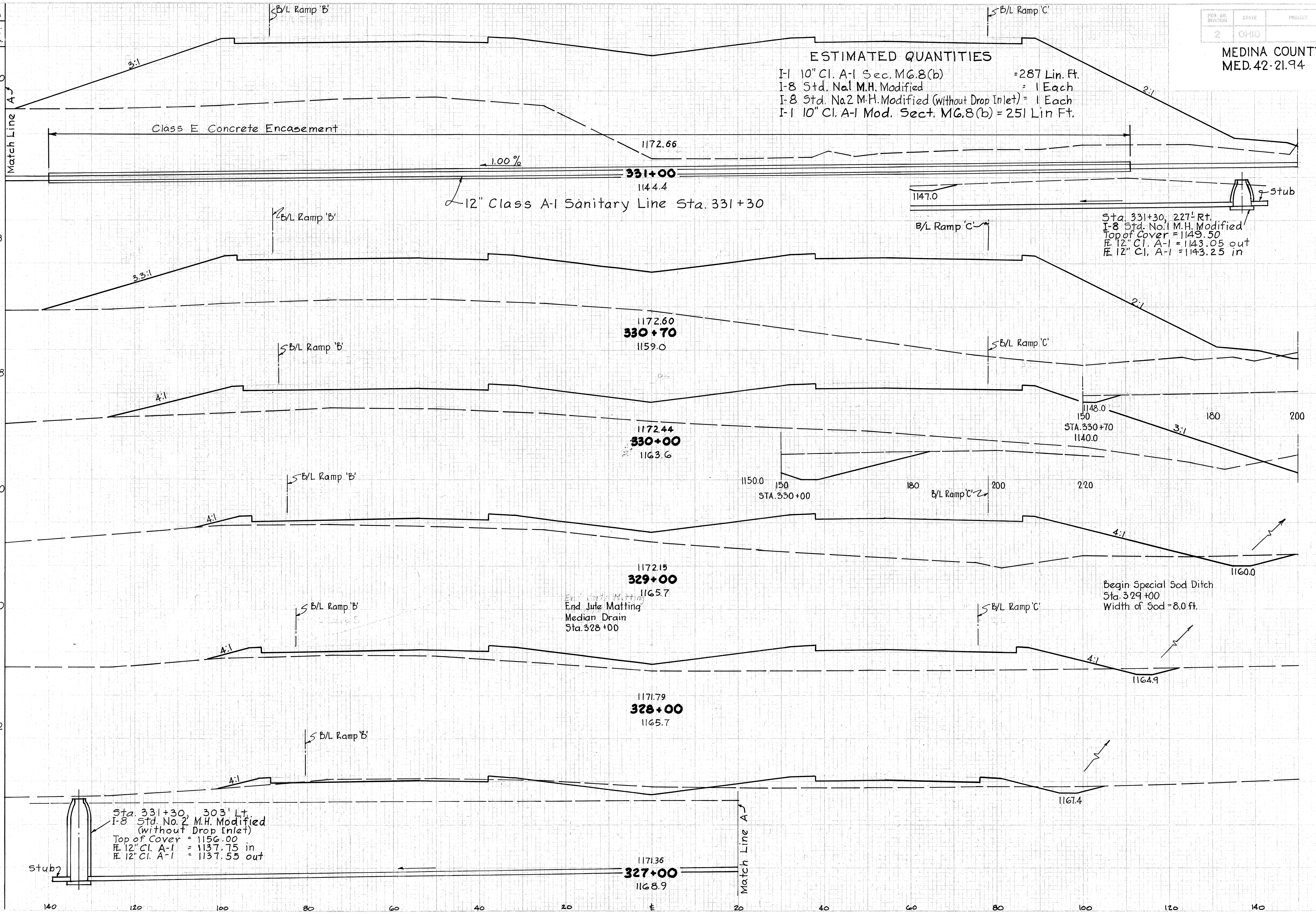
FED. RD. DIVISION 2 | STATE OHIO | PROJECT

MEDINA COUNTY
MED. 42-21.94

ESTIMATED QUANTITIES

I-1 10" Cl. A-1 Sec. M6.8(b) = 287 Lin. Ft.
I-8 Std. No.1 M.H. Modified = 1 Each
I-8 Std. No.2 M.H. Modified (without Drop Inlet) = 1 Each
I-1 10" Cl. A-1 Mod. Sect. M6.8(b) = 251 Lin. Ft.

Seeding End Width	Seeding Sq. Yds.
	3020
237	
	773
227	
	1808
237	
	2320
182	
	1860
153	
	1662
144	

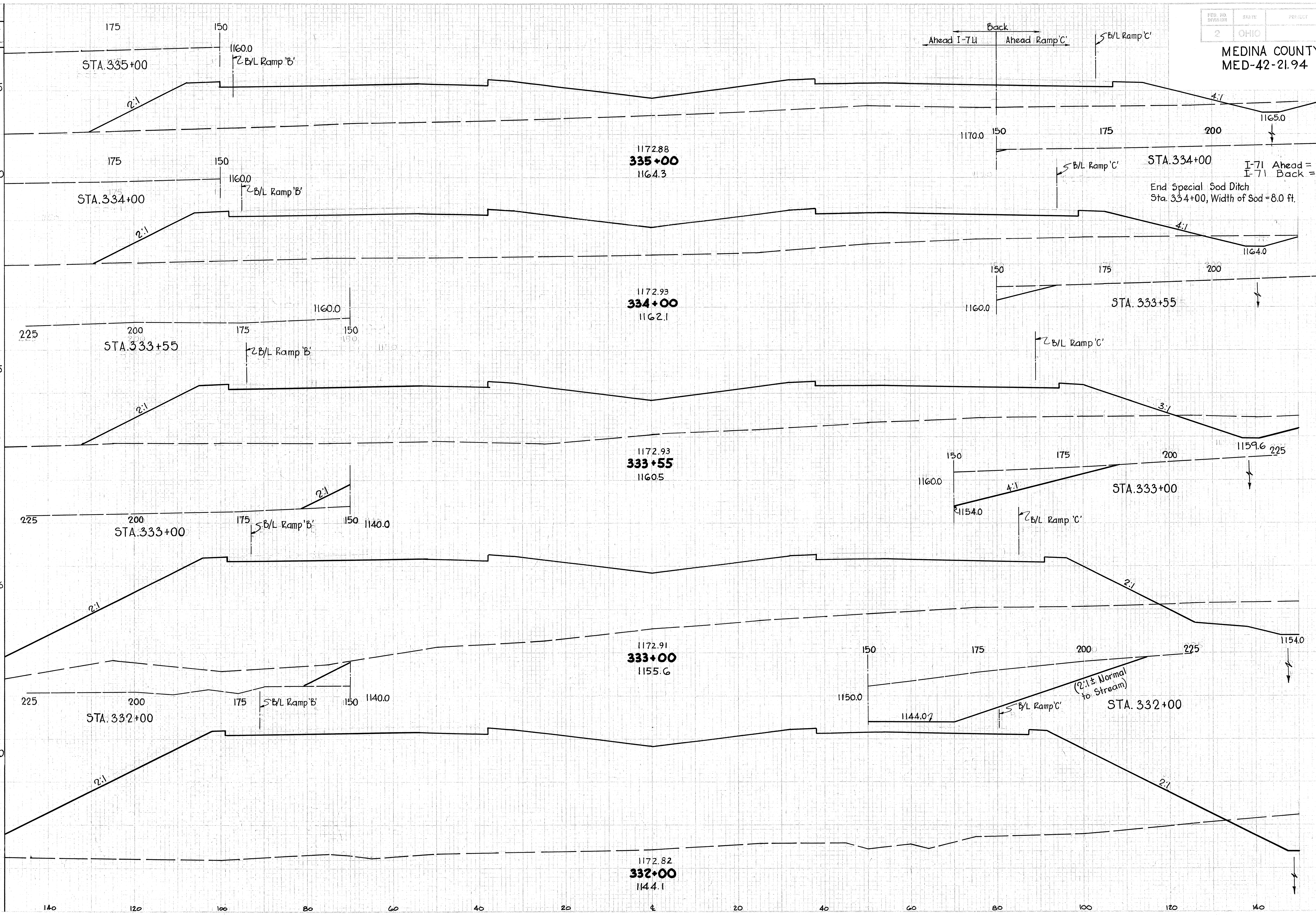


End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
		974	21012
9	4827		
		12	4528
13	3325		
		206	6698
145	1843		
		330	5415
33	1082		
		88	3127
14	607		
		184	1350
84	122		

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

MEDINA COUNTY
MED-42-21.94

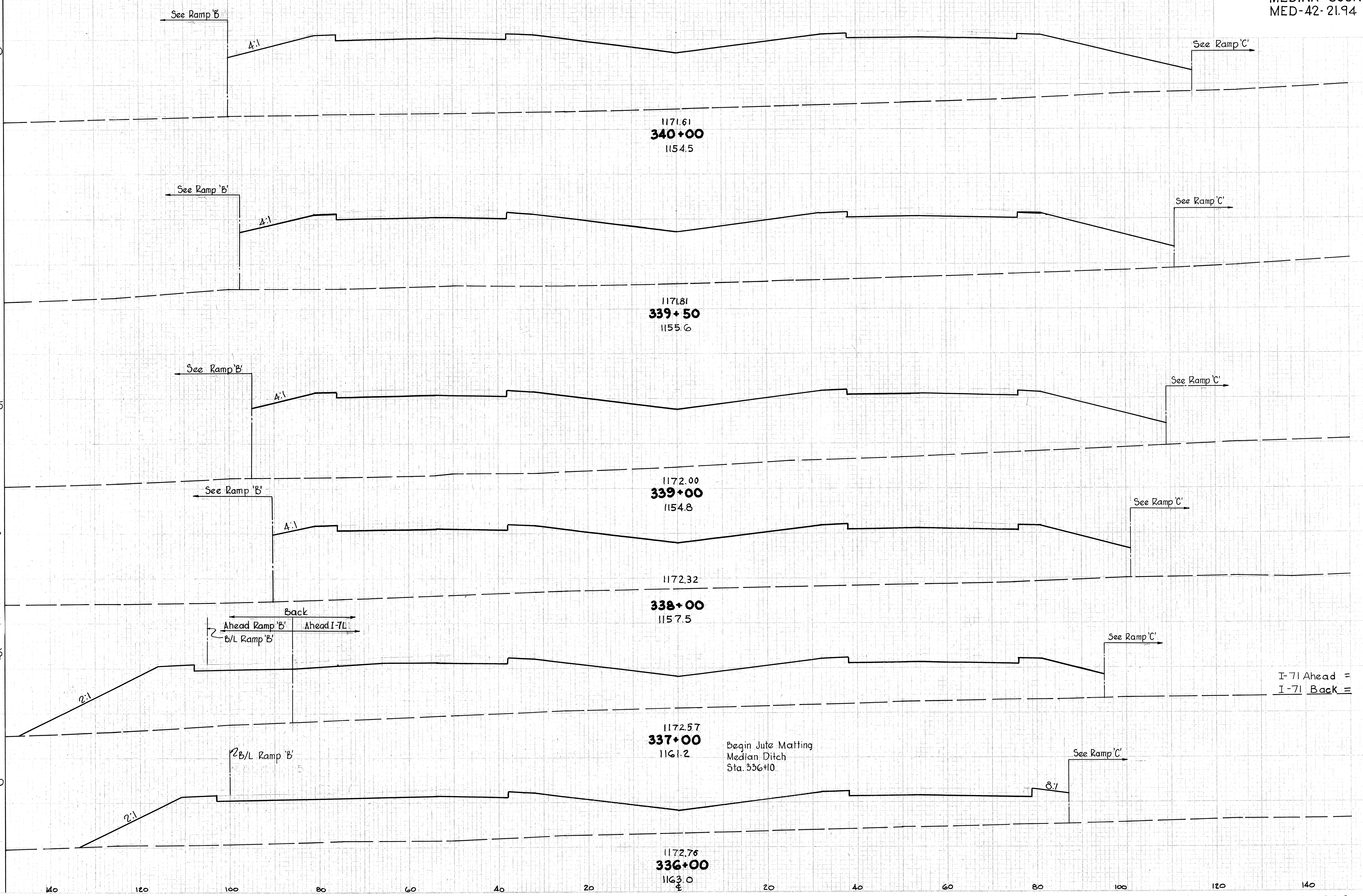
Seeding End Width	Seeding Sq. Yds.
	1255
212	
	2240
191	
	1005
211	
	1486
274	
	3220
306	



	End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
			0	6058
I-71 Ahead =	0	1519		
I-71 Back =	28	1721		
			116	6774
	34	1937		
			125	3621
	115	2408		
			431	6707
	307	4177		
			1527	19808
	517	6519		

MEDINA COUNTY
MED-42-21.94

SEEDING END WIDTH	SQ. YDS.
	1650
143	
	775
136	
	745
132	
	1387
119	
	1256
160	
	1620
132	

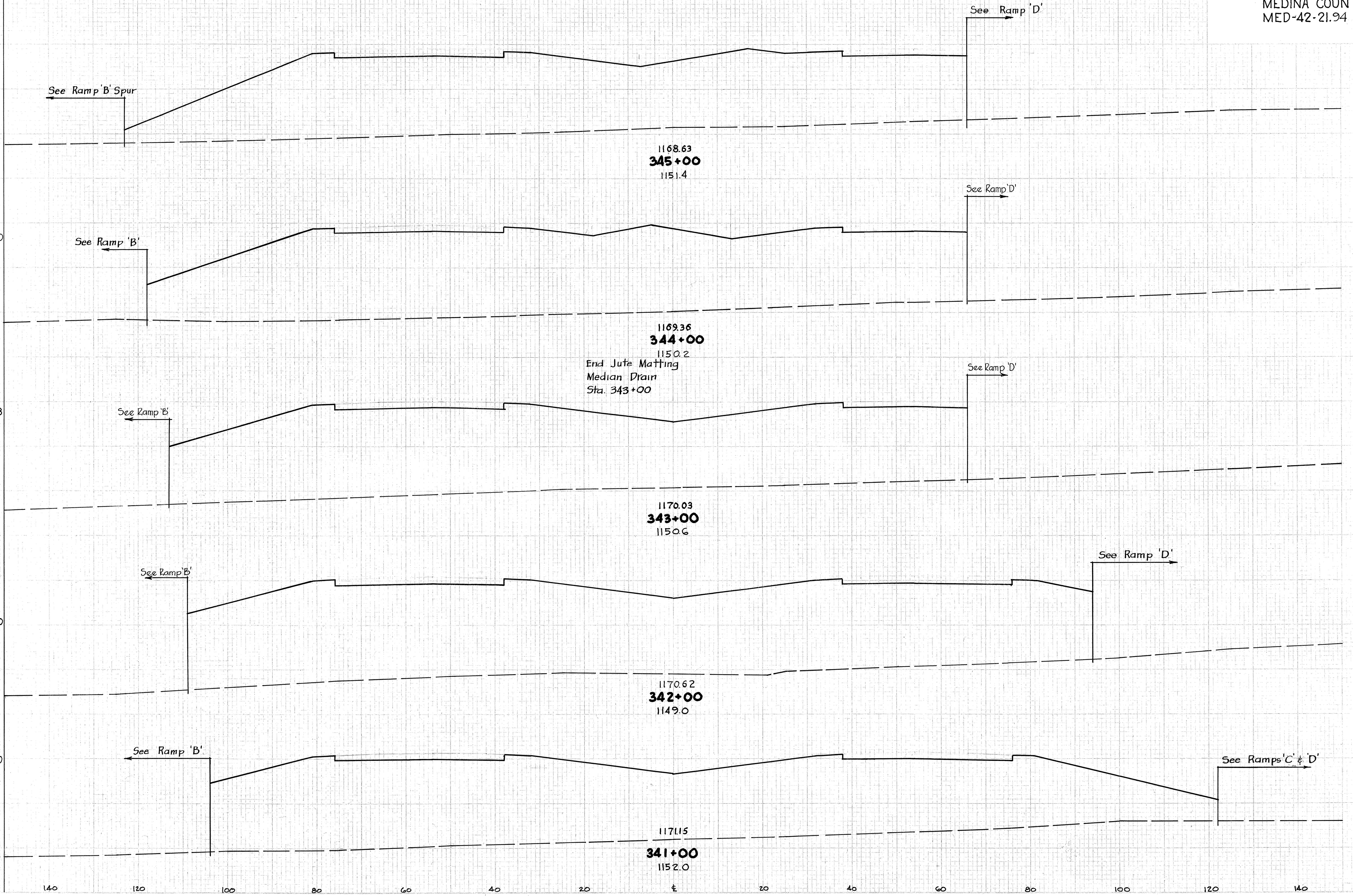


	END AREA CUT	END AREA FILL	CU. YDS. CUT	CU. YDS. FILL
			0	12482
	0	3070		
			0	5450
	0	2815		
			0	5362
	0	2975		
			0	10132
	0	2496		
			0	7870
I-71 Ahead =	0	1757		
I-71 Back =	0	2007		
			0	6969
	0	1756		

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

MEDINA COUNTY
MED-42-21.94

Seeding End Width	Seeding Sq. Yds.
	636
117	
	1270
112	
	1228
109	
	1330
131	
	1580
154	

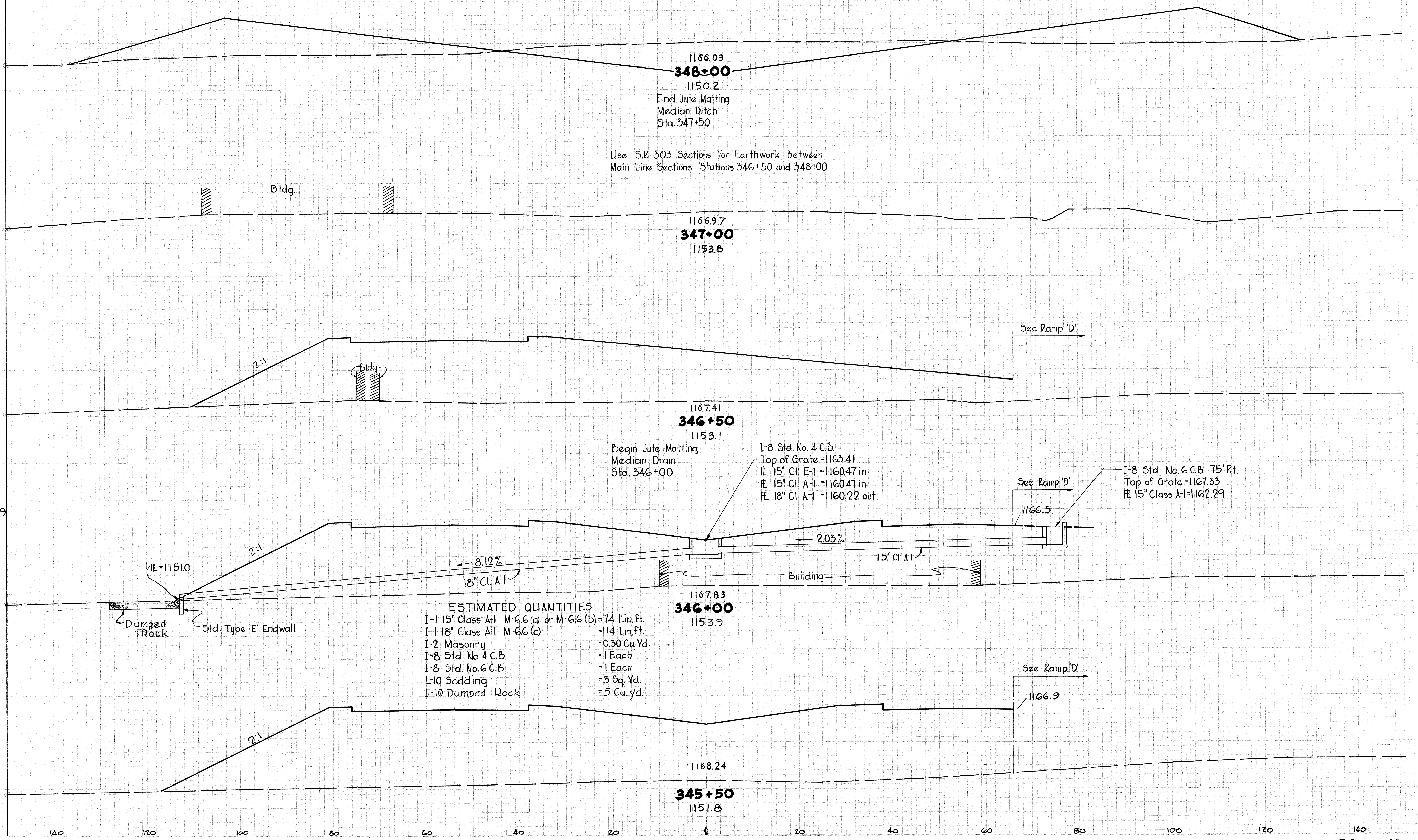


End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
		0	5010
0	2869		
		0	11200
0	3179		
		0	11914
0	3254		
		0	13375
0	3968		
		0	14143
0	3669		

Sta. 341+00 to 345+00

MEDINA COUNTY
MED-42-21.94

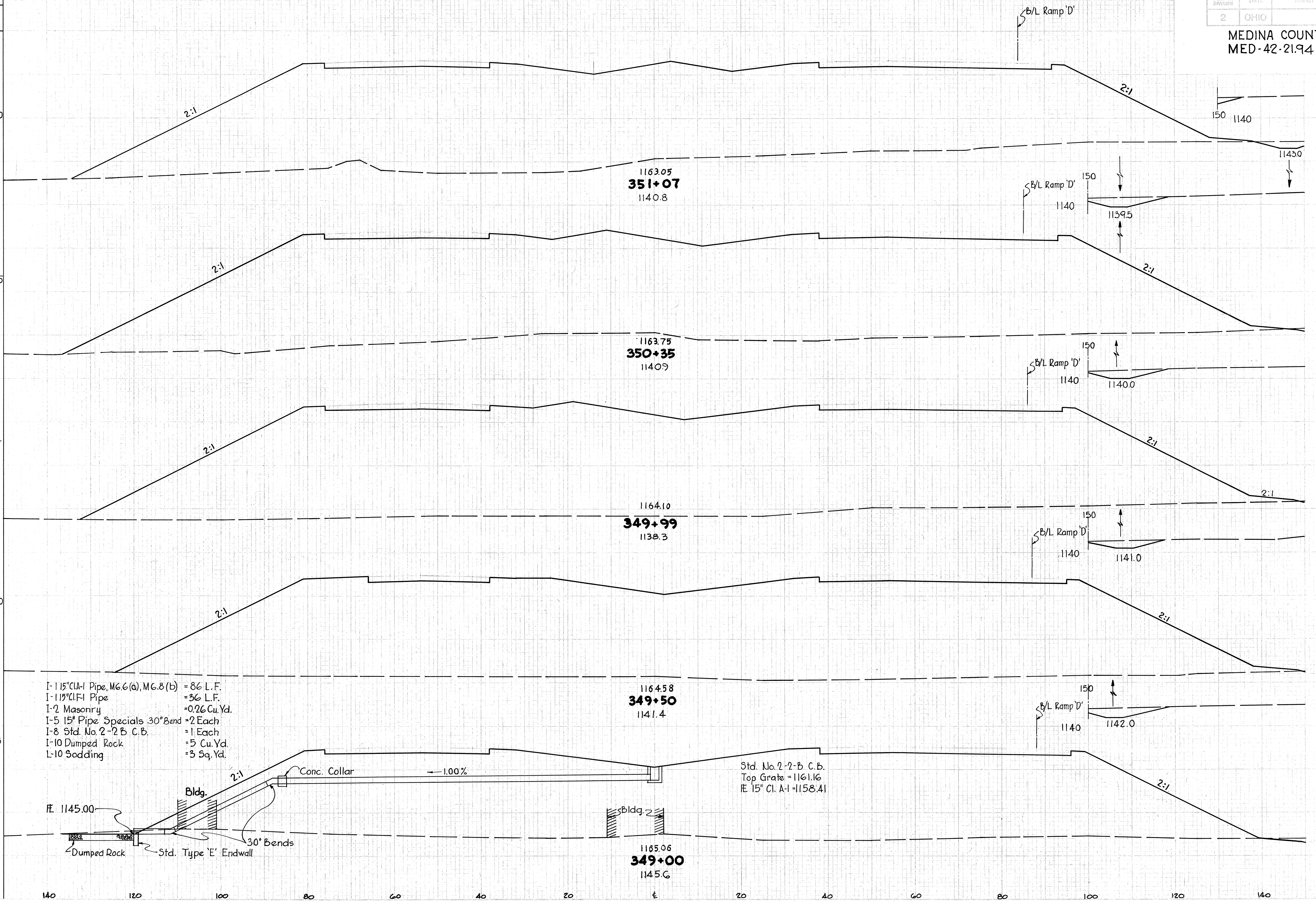
Seeding End Width	Seeding Sq. Yds.
	2960
267	
	0
0	
	0
146	
	709
109	
	615
112	



End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
		725	9028
360	675		
0	1757		
		0	4392
0	2201		
		0	4392
0	2542		

Sta. 345+50 to 348+00

Seeding End Width	Sq. Yds.
	2320
236	
	1975
258	
	1064
274	
	1480
259	
	1463
266	

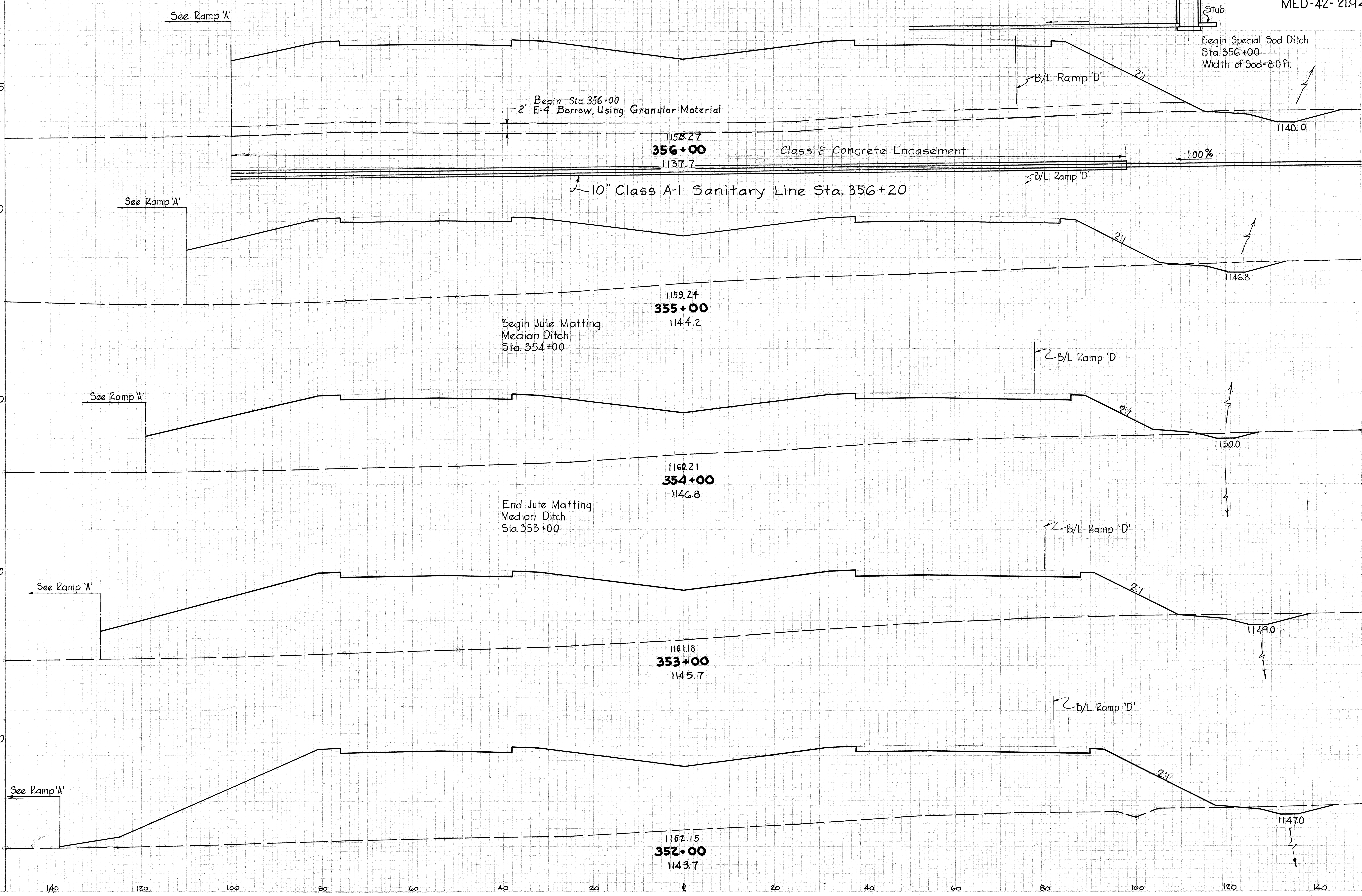


End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
		64	14275
19	4734		
		64	13390
29	5308		
		65	6879
68	5010		
		62	8980
0	4885		
		28	8412
31	4199		

ESTIMATED QUANTITIES

I-1 10" Cl. A-1 Sec. M6.8(b)	=346 Lin. Ft.
I-8 Std. No.1 M.H. Modified	= 2 Each
I-1 10" Cl. A-1 Mod. Sec. M6.8(b)	=262 Lin. Ft.

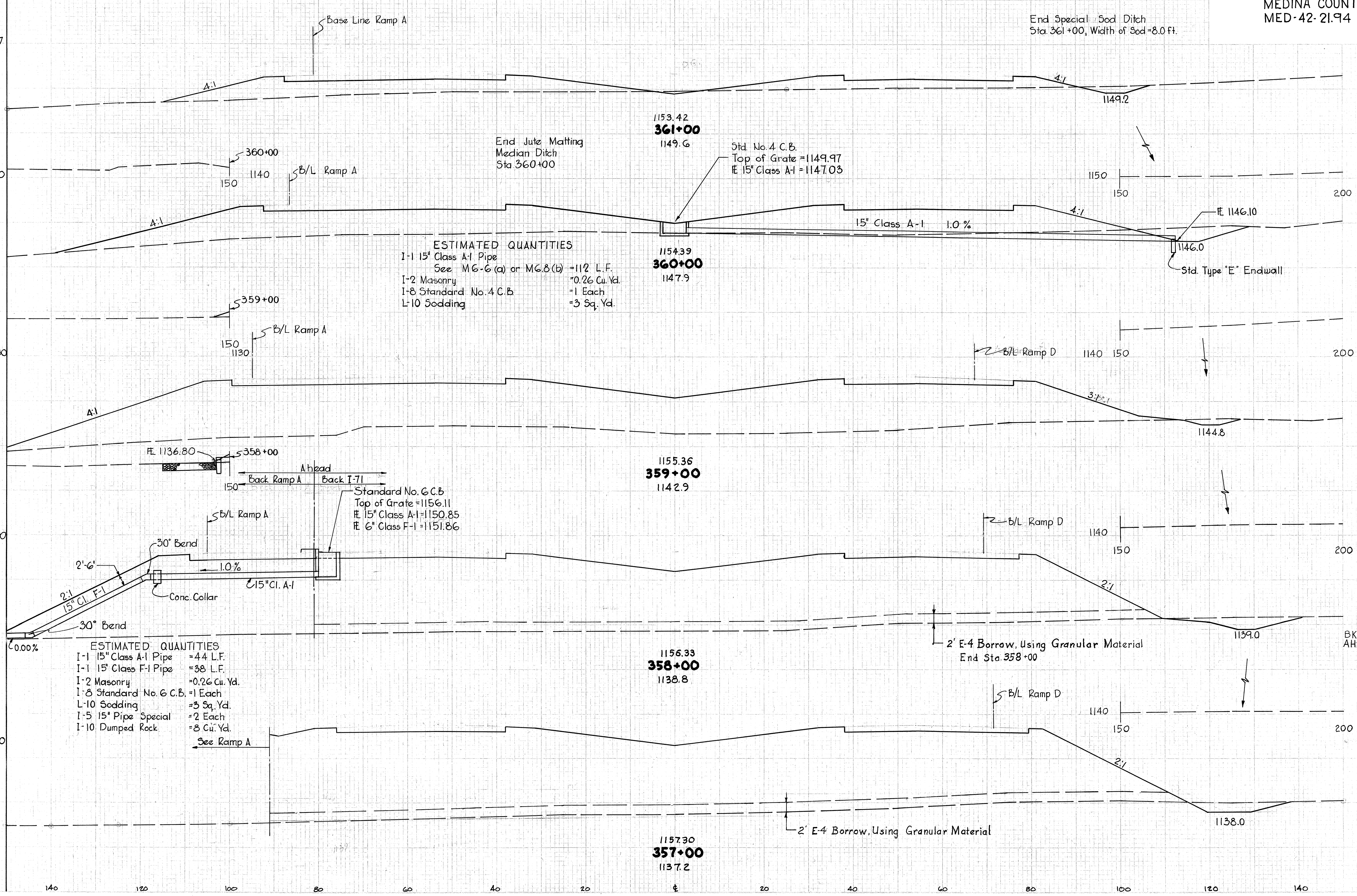
Sta. 356+20, 212' Rt.
I-8 Std. No.1 M.H. Modified
Top of Cover = 1143.50
FL 10" Cl. A-1 = 1130.82 out
FL 10" Cl. A-1 = 1131.02 in



Seeding End Width	Seeding Sq. Yds.
	1965
184	
	2010
178	
	1980
179	
	2100
199	
	2290
213	

End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
		134	13011
39	3611		
		121	11914
26	2822		
		68	9979
11	2566		
		83	10191
34	2937		
		97	12019
18	3554		

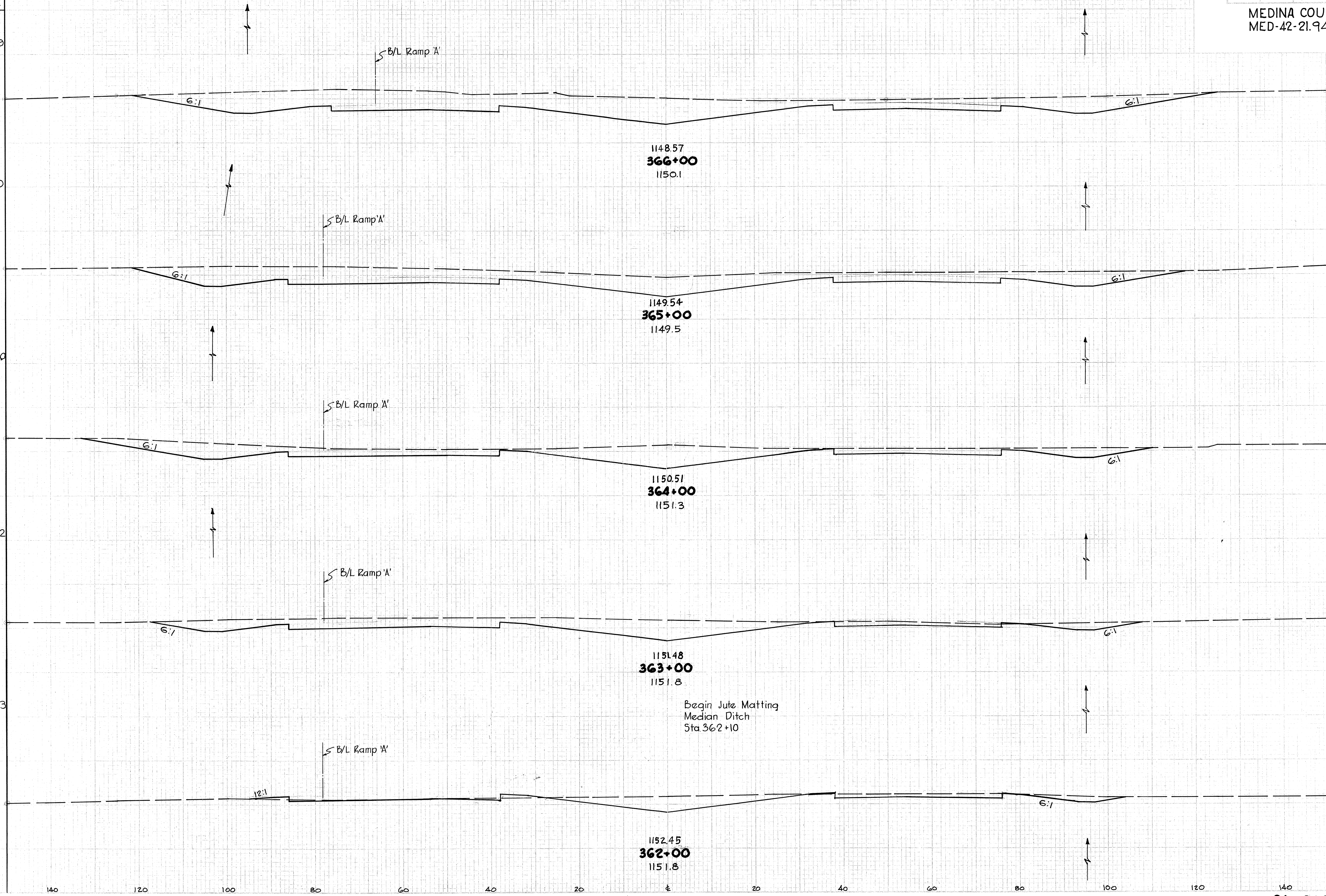
MEDINA COUNTY
MED-42-21.94



Seeding End Width	Seeding Sq. Yds.
	1687
163	
	2010
199	
	2280
212	
	2400
AHD 220 BK. 158	
	1820
170	

	End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
			372	873
	18	463		
			119	2957
	46	1133		
			105	6400
	11	2323		
			98	11147
BK.	41	2746		
AHD.	41	3996		
			138	11401
	33	3416		

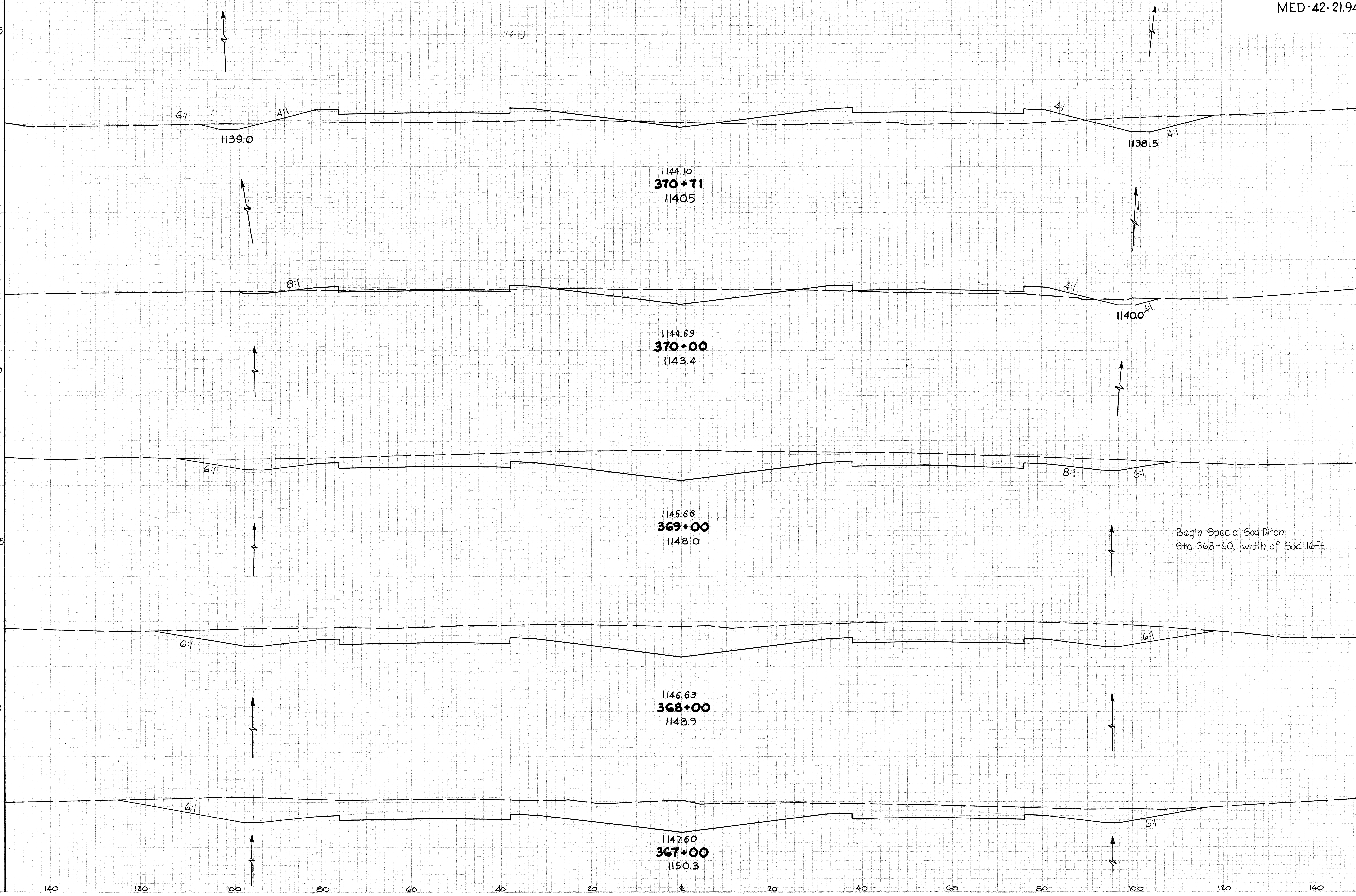
Seeding End Width	Seeding Sq. Yds.
	2209
202	
	2130
181	
	2030
185	
	1942
165	
	1703
140	



End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
		3232	0
884	0		
		2877	0
669	0		
		2051	0
438	0		
		1530	1
388	1		
		1056	16
182	7		

Fed. Rd. Division	State	Project
2	OHIO	

MEDINA COUNTY
MED-42-21.94



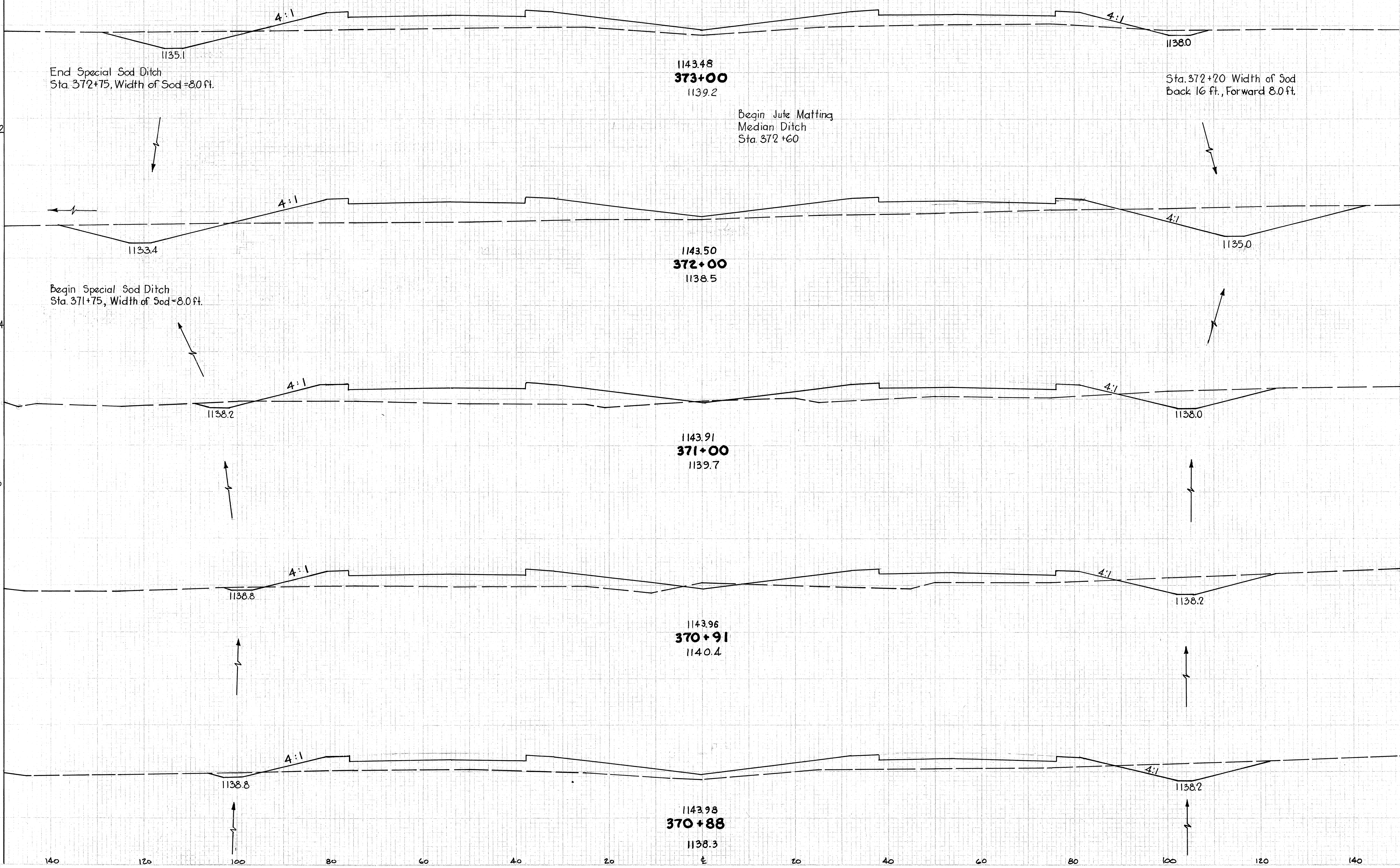
Begin Special Sod Ditch
Sta. 368+60, width of Sod 16ft.

Station	Seeding End Width	Seeding Sq. Yds.	End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
		338			41	252
370+71	178		61	373		
		1317			200	594
370+00	157		91	80		
		1879			1300	147
369+00	182		611	0		
		2045			2778	0
368+00	186		889	0		
		2119			3241	0
367+00	195		861	0		

Sta. 367+00 to 370+71

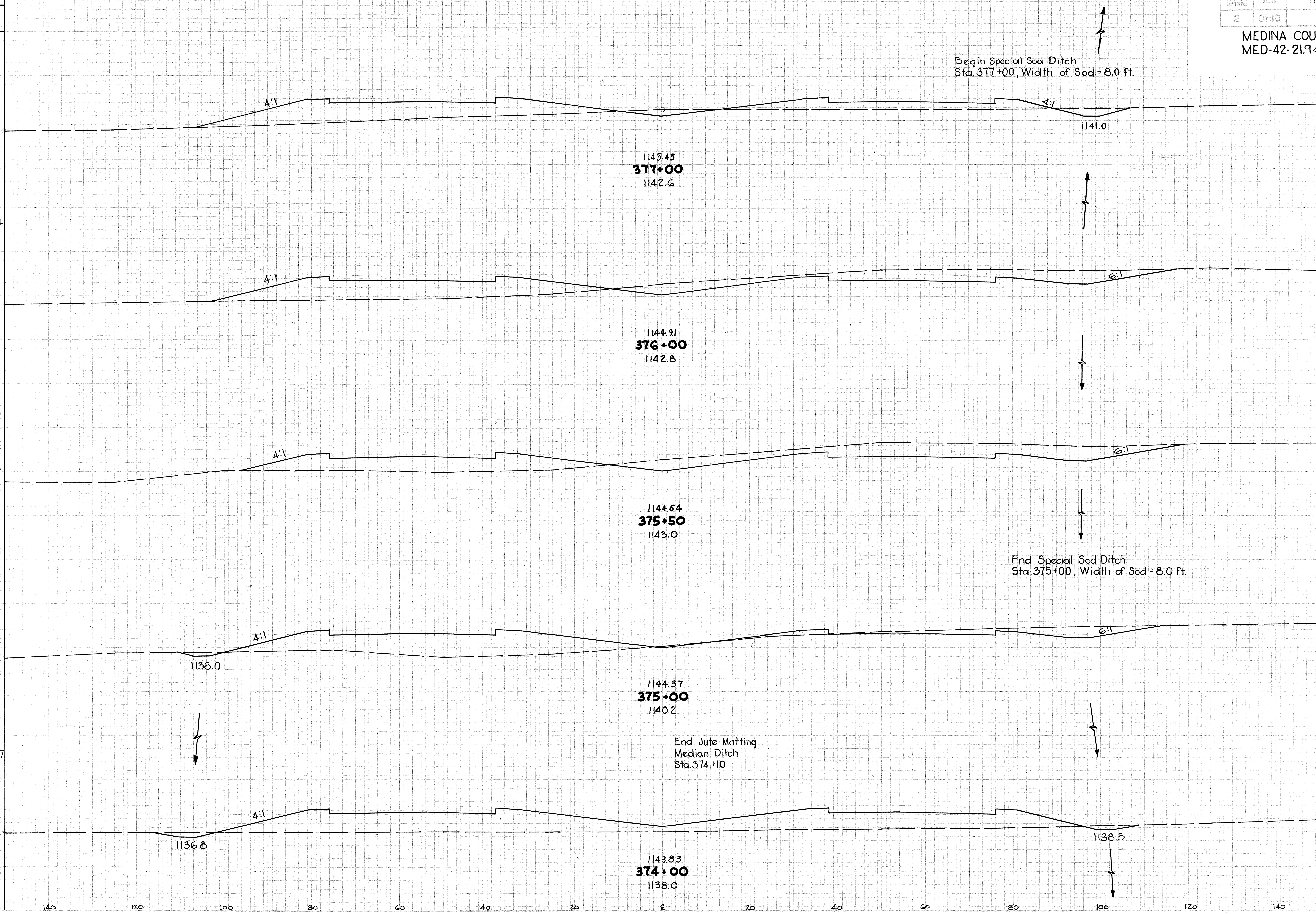
MEDINA COUNTY
MED-42-21.94

Seeding End Width	Seeding Sq. Yds.
	2043
191	
	2362
234	
	2324
183	
	183
183	
	61
181	



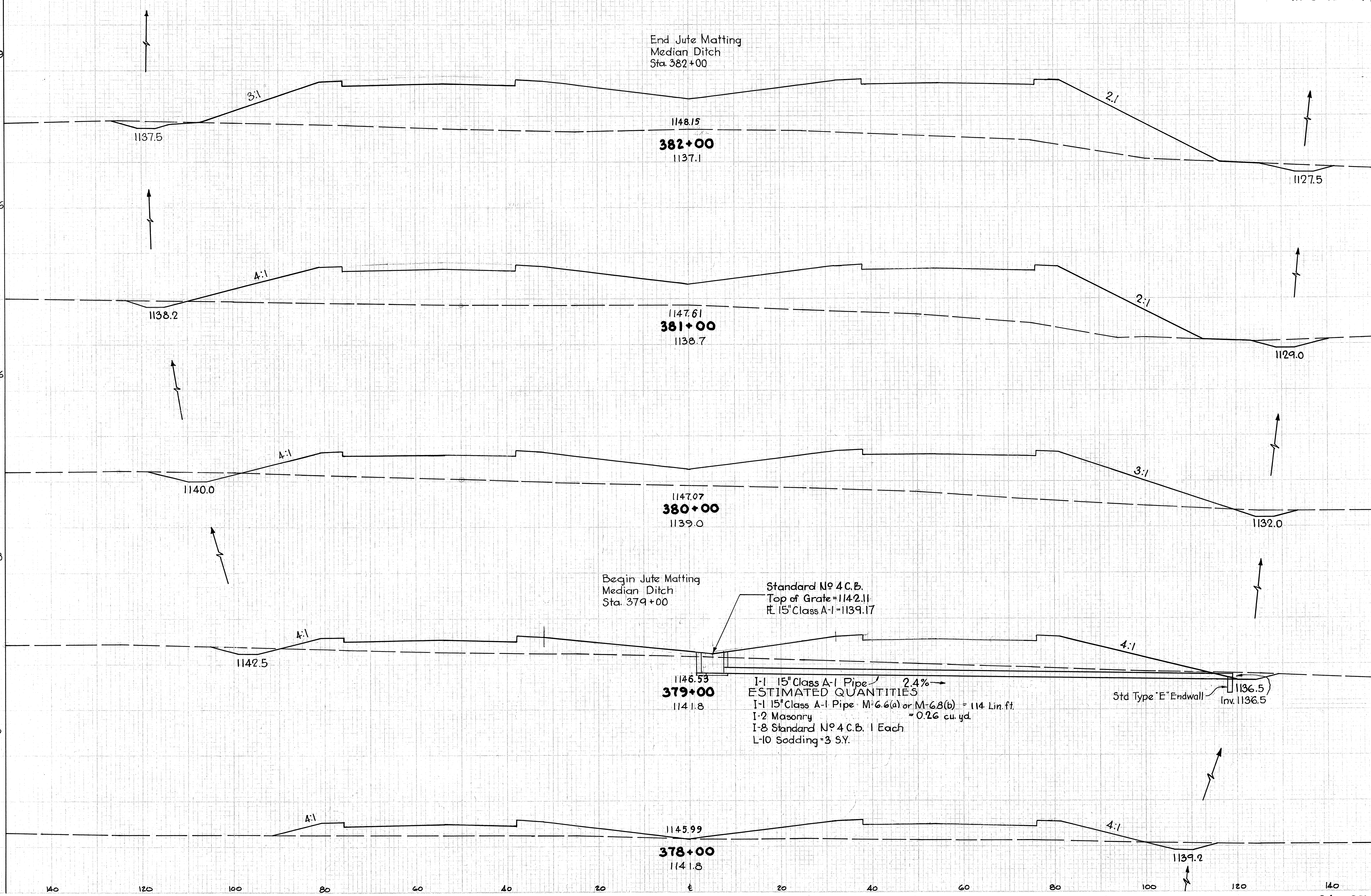
End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
		198	2094
87	393		
		626	1776
251	566		
		618	1897
83	458		
		34	146
12.6	423		
		11	47
72	428		

Seeding End Width	Seeding Sq. Yds.
	1861
176	
	1934
172	
	942
167	
	951
175	
	1957
177	



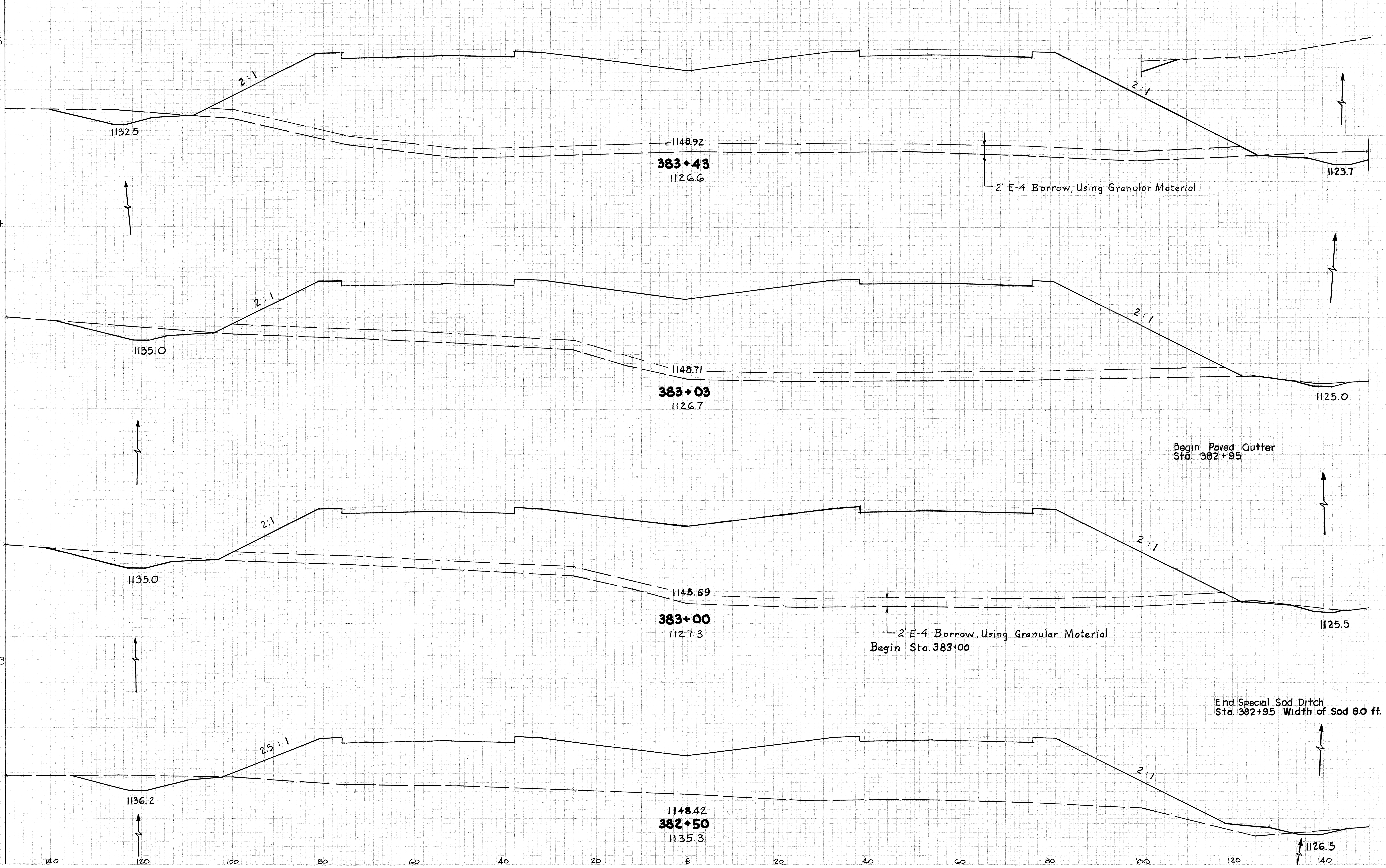
End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
		105	1647
42	446		
		493	1397
224	309		
		488	510
302	242		
		360	576
87	379		
		197	2070
20	738		

Seeding End Width	Seeding Sq. Yds.
	1309
228	
	2506
223	
	2386
206	
	2183
186	
	1916
159	



End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
		85	3985
32	2034		
		133	6912
39	1699		
		142	5577
37	1312		
		121	3695
28	682		
		80	2086
16	444		

Seeding End Width	Seeding Sq. Yds.
	495
260	
	1114
241	
	81
244	
	1353
243	

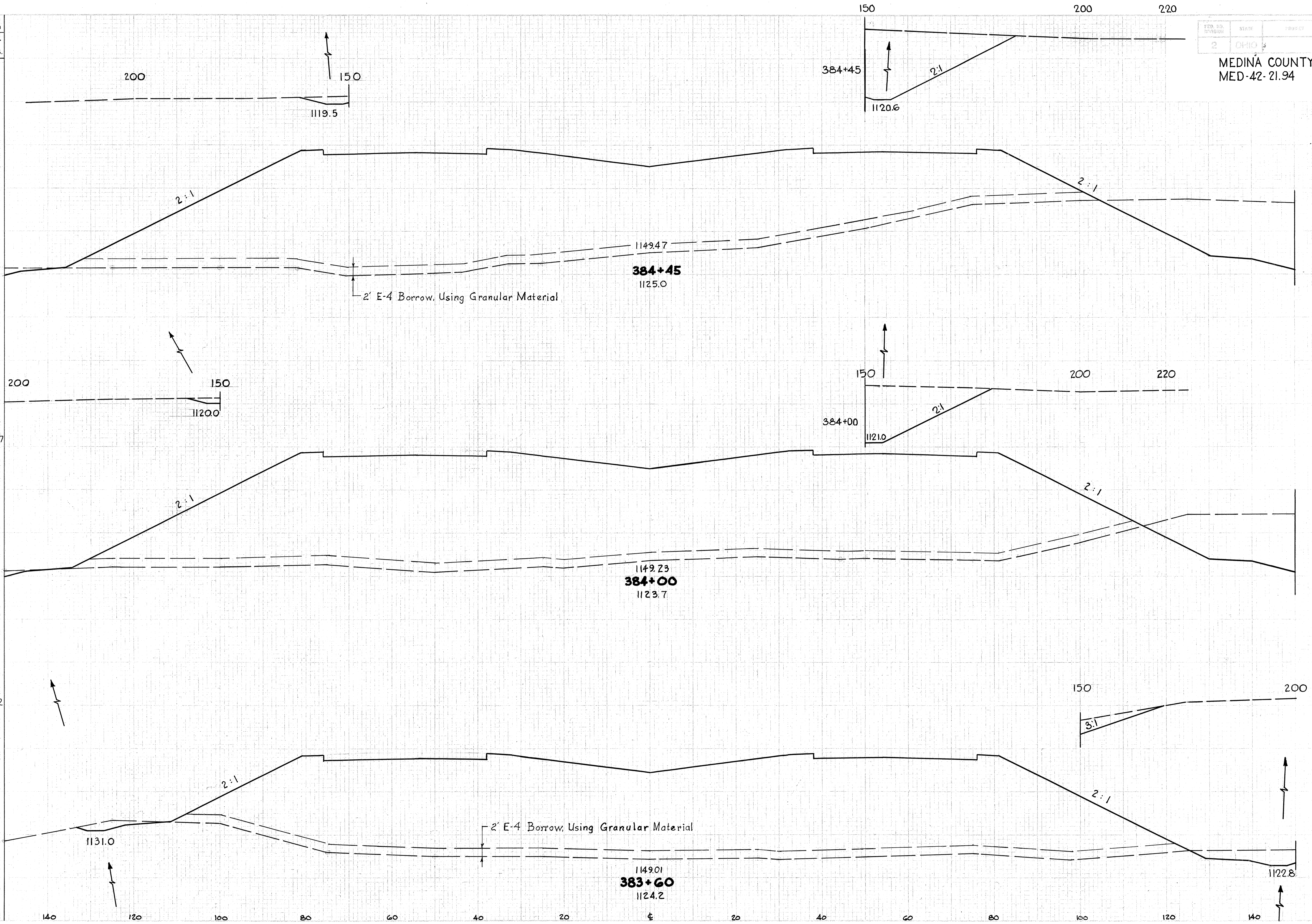


End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
		67	2725
99	4186		
		115	5637
56	3423		
		7	376
75	3338		
		124	5192
59	2270		

Sta. 382+50 to 383+43

MEDINA COUNTY
MED-42-21.94

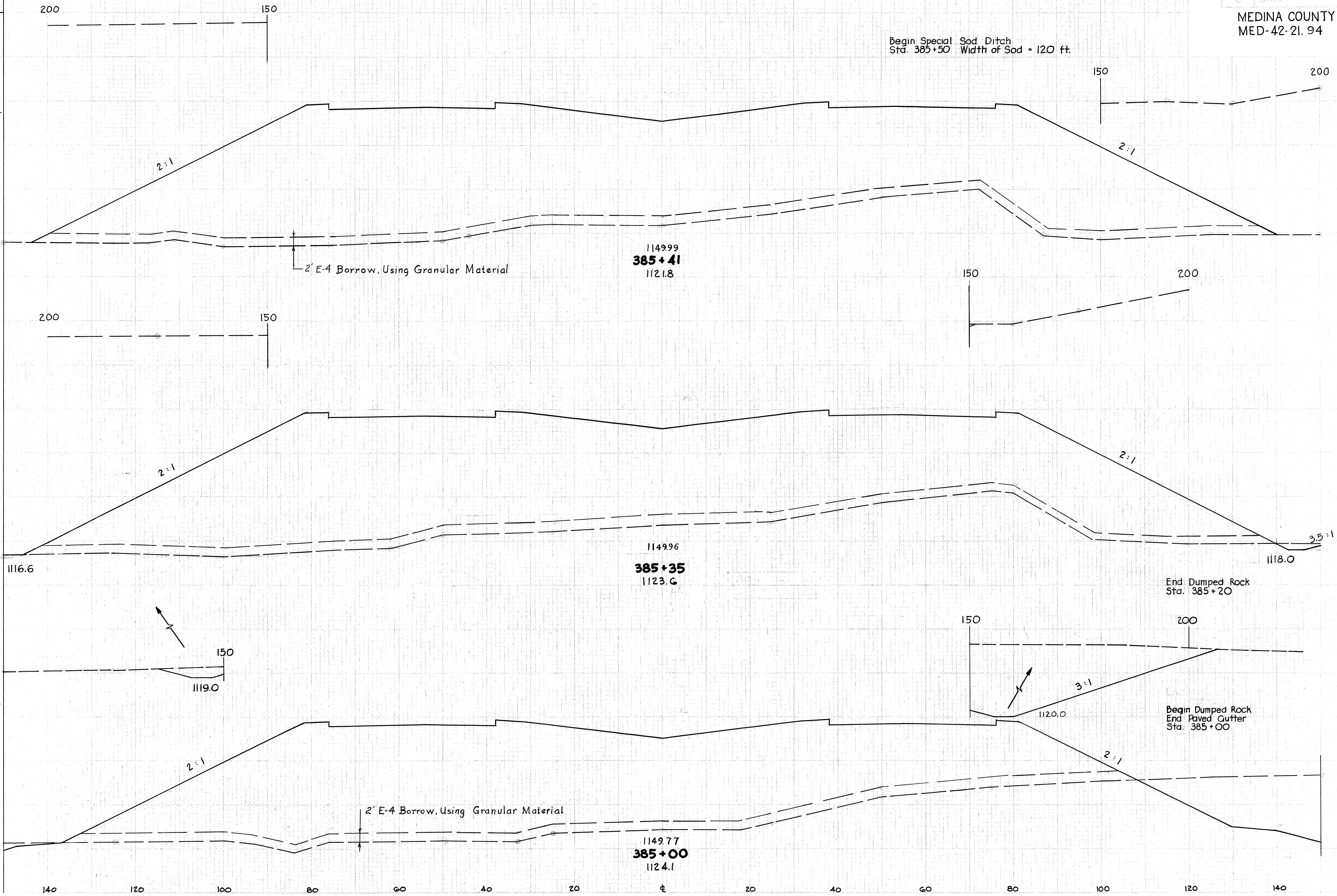
SEEDING END WIDTH	SEEDING SQ. YDS.
	1991
314	
	1547
304	
	1262
264	



END AREA CUT	END AREA FILL	CU. YDS. CUT	CU. YDS. FILL
		1783	9276
785	4502		
		1109	7997
545	5094		
		487	7081
112	4467		

MEDINA COUNTY
MED-42-21.94

Seeding End Width	Seeding Sq. Yds.
	484
249	
	168
255	
	1152
337	

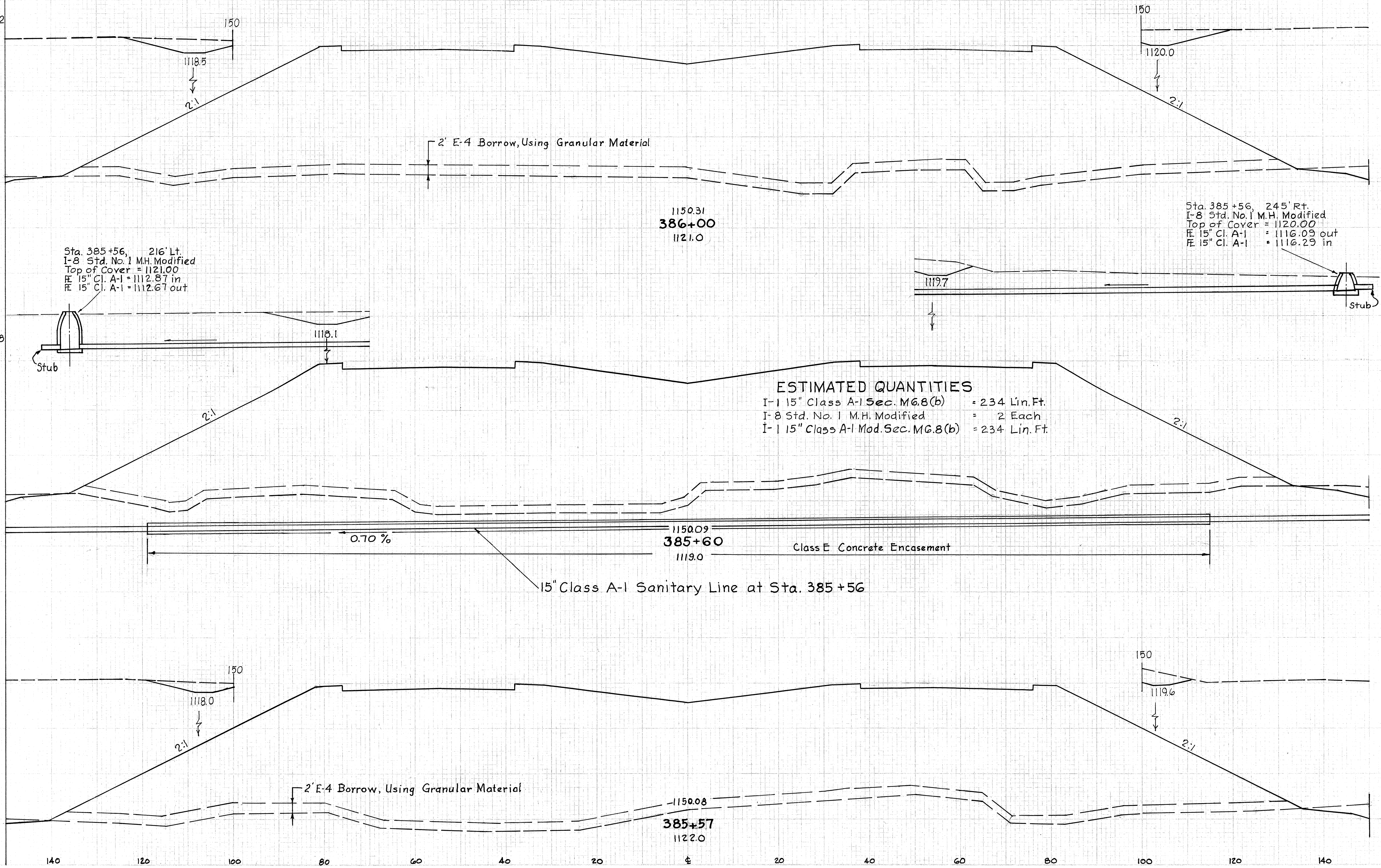


End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
		20	3609
0	6032		
		0	1312
2	5780		
		627	6731
965	4605		

Sta. 385+00 to 385+41

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

MEDINA COUNTY
MED-42-21. 94



ESTIMATED QUANTITIES

I-1 15" Class A-1 Sec. MG.8(b)	=	234 Lin. Ft.
I-8 Std. No. 1 M.H. Modified	=	2 Each
I-1 15" Class A-1 Mod. Sec. MG.8(b)	=	234 Lin. Ft.

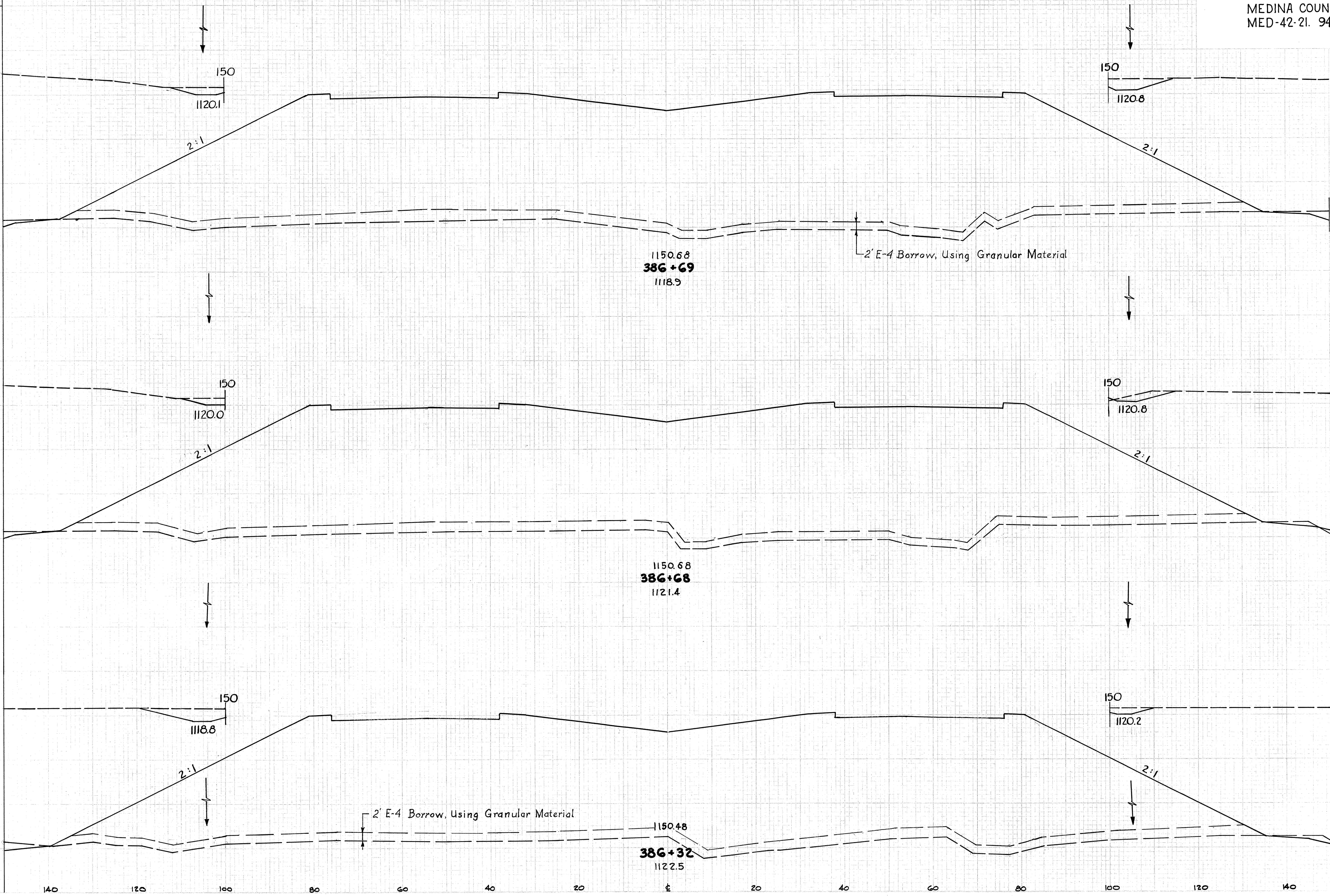
Seeding: End Width	Seeding: Sq. Yds.
	1072
308	
	1348
298	
	98
295	

End Area: Cut	End Area: Fill	Cu. Yds.: Cut	Cu. Yds.: Fill
		99	7291
110	6135		
		151	9123
92	6179		
		9	685
69	6151		

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

MEDINA COUNTY
MED-42-21. 94

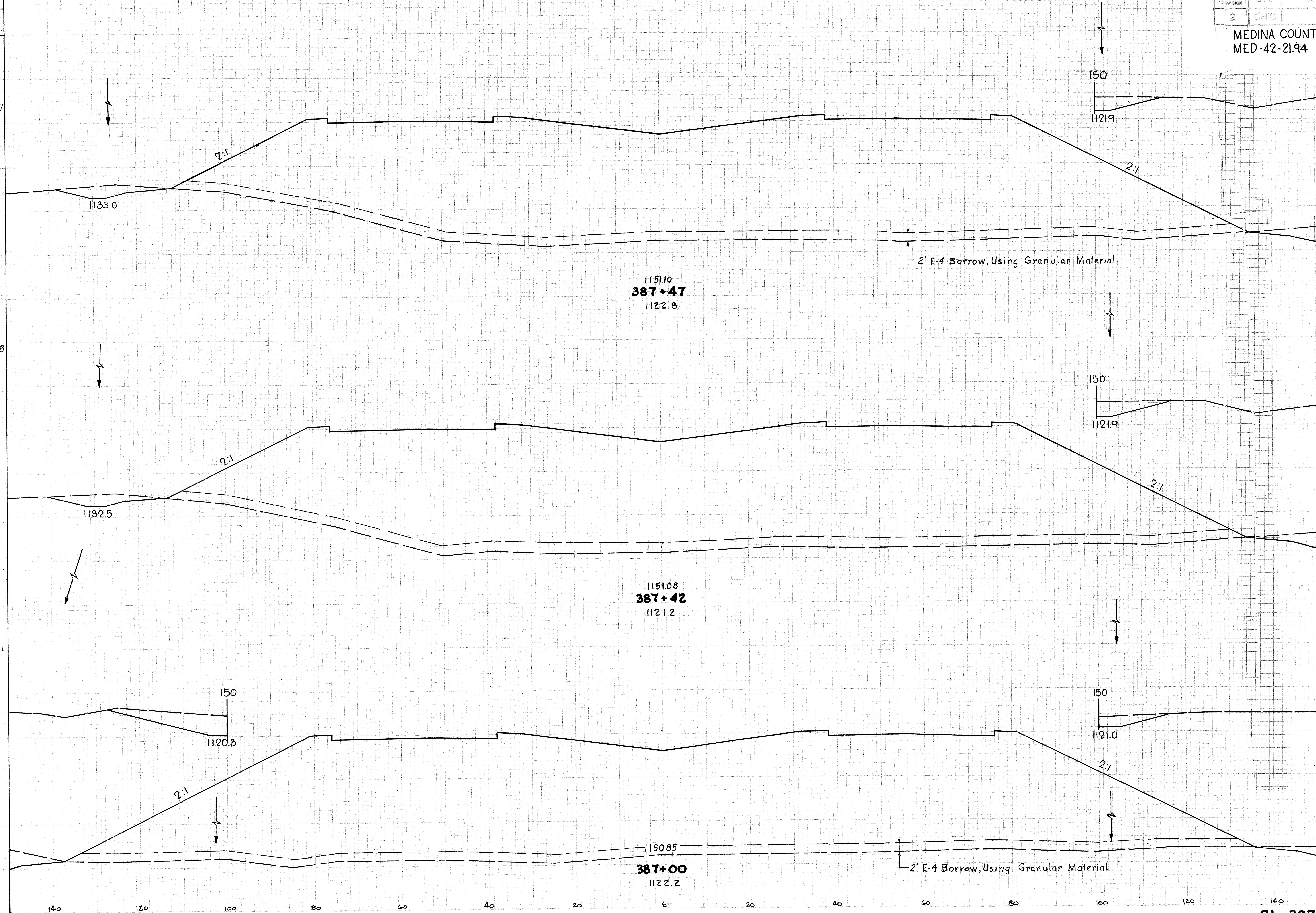
Seeding End Width	Seeding Sq. Yds.
	1036
292	
	32
288	
	1167
294	



End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
		116	7072
62	6305		
		2	232
36	6249		
		61	8278
55	6169		

MEDINA COUNTY
MED-42-21.94

Seeding End Width	Seeding Sq. Yds.
	747
265	
	148
269	
	1351
309	

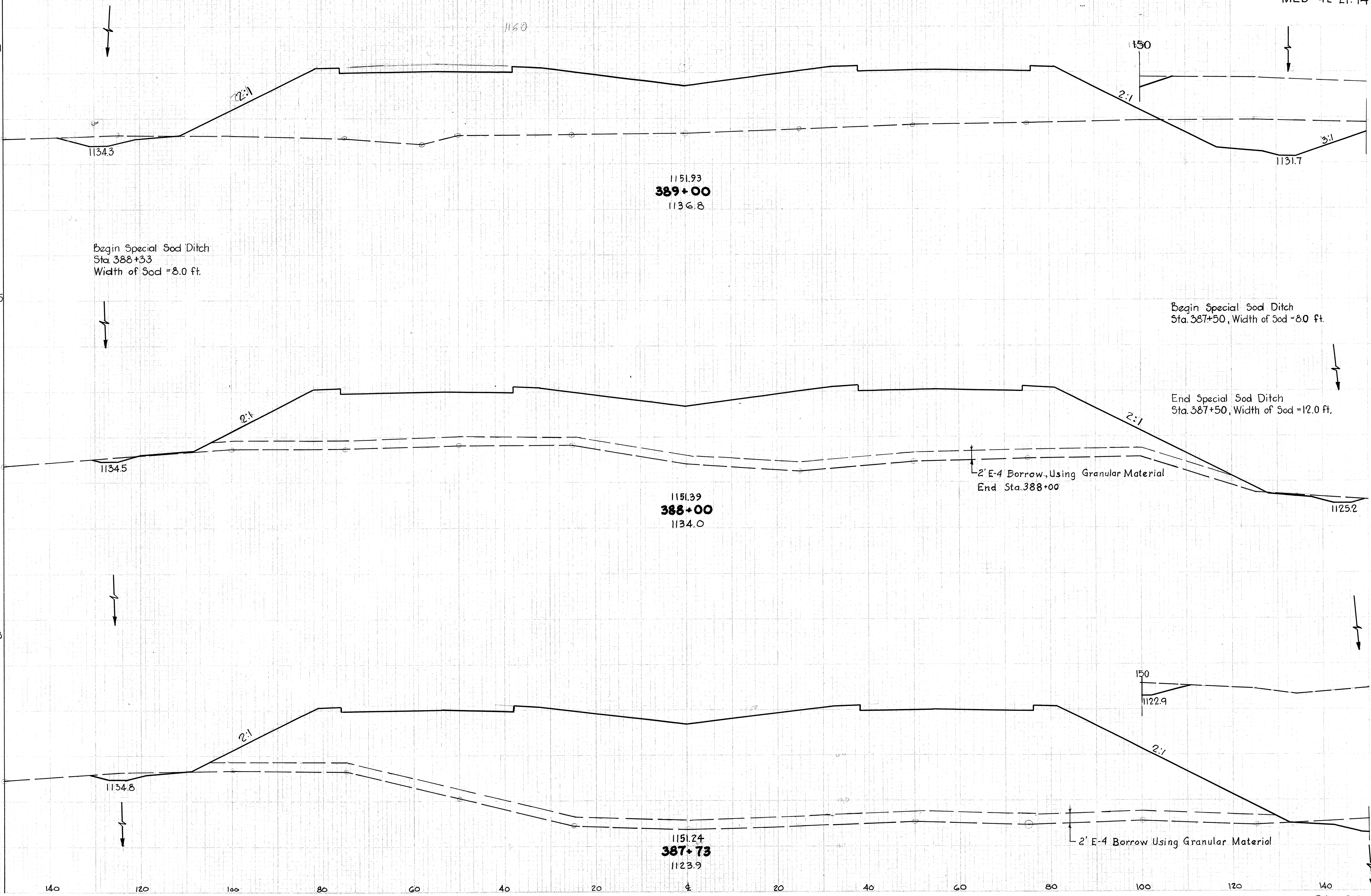


End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
		72	4724
90	5279		
		17	994
91	5465		
		179	8927
140	6013		

Sta. 387+00 to 387+47

MEDINA COUNTY
MED-42-21.94

Seeding End Width	Seeding Sq. Yds.
	2671
254	
	2745
240	
	738
252	



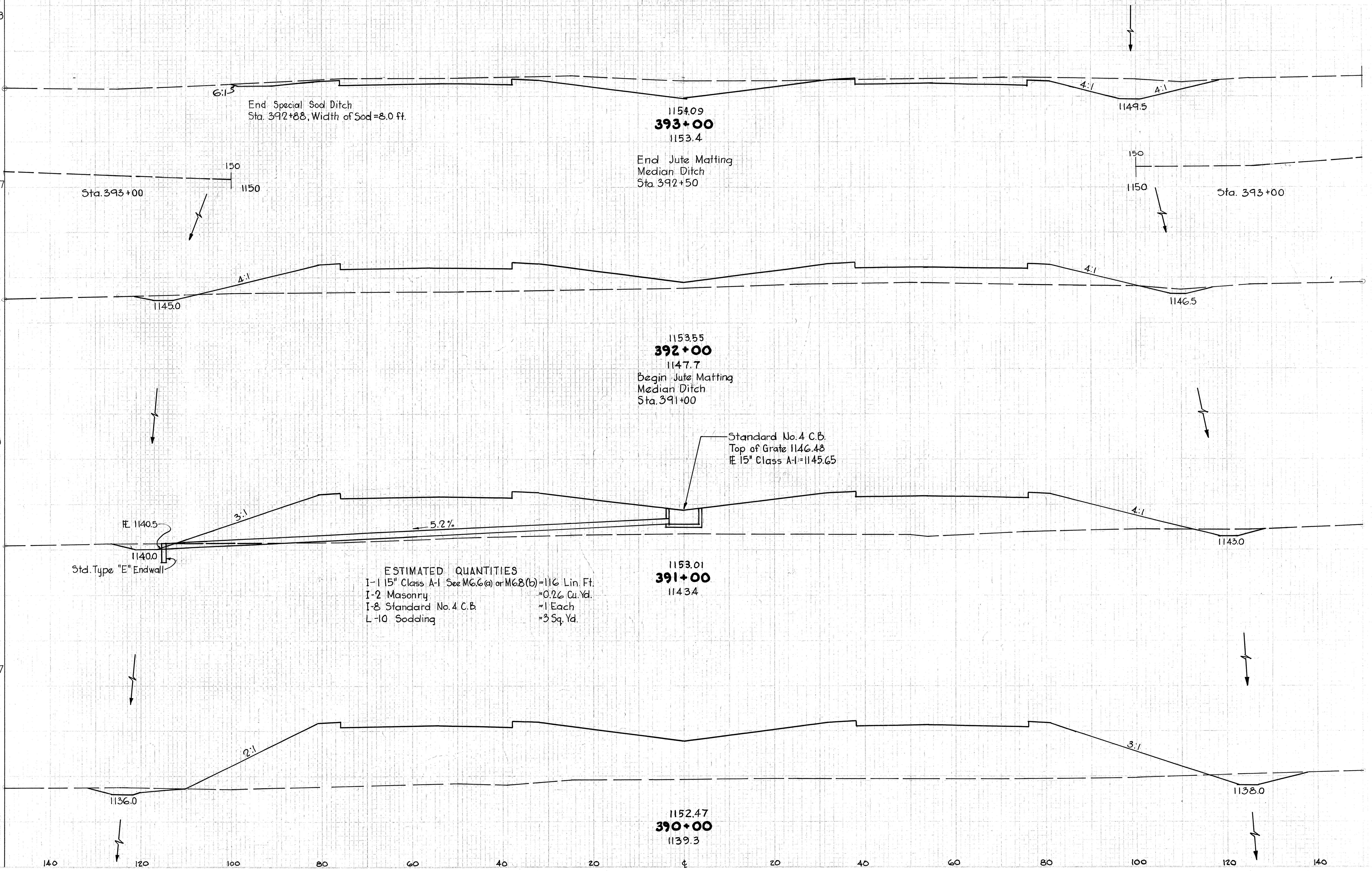
End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
		602	9016
274	2530		
		547	9837
20	2781		
		40	3658
61	4535		

Sta. 387+73 to 389+00

File I-71-(21)

MEDINA COUNTY
MED-42-21. 94

Seeding	
End Width	Sq. Yds.
171	
	1983
	2007
191	
	2219
209	
	2417
226	



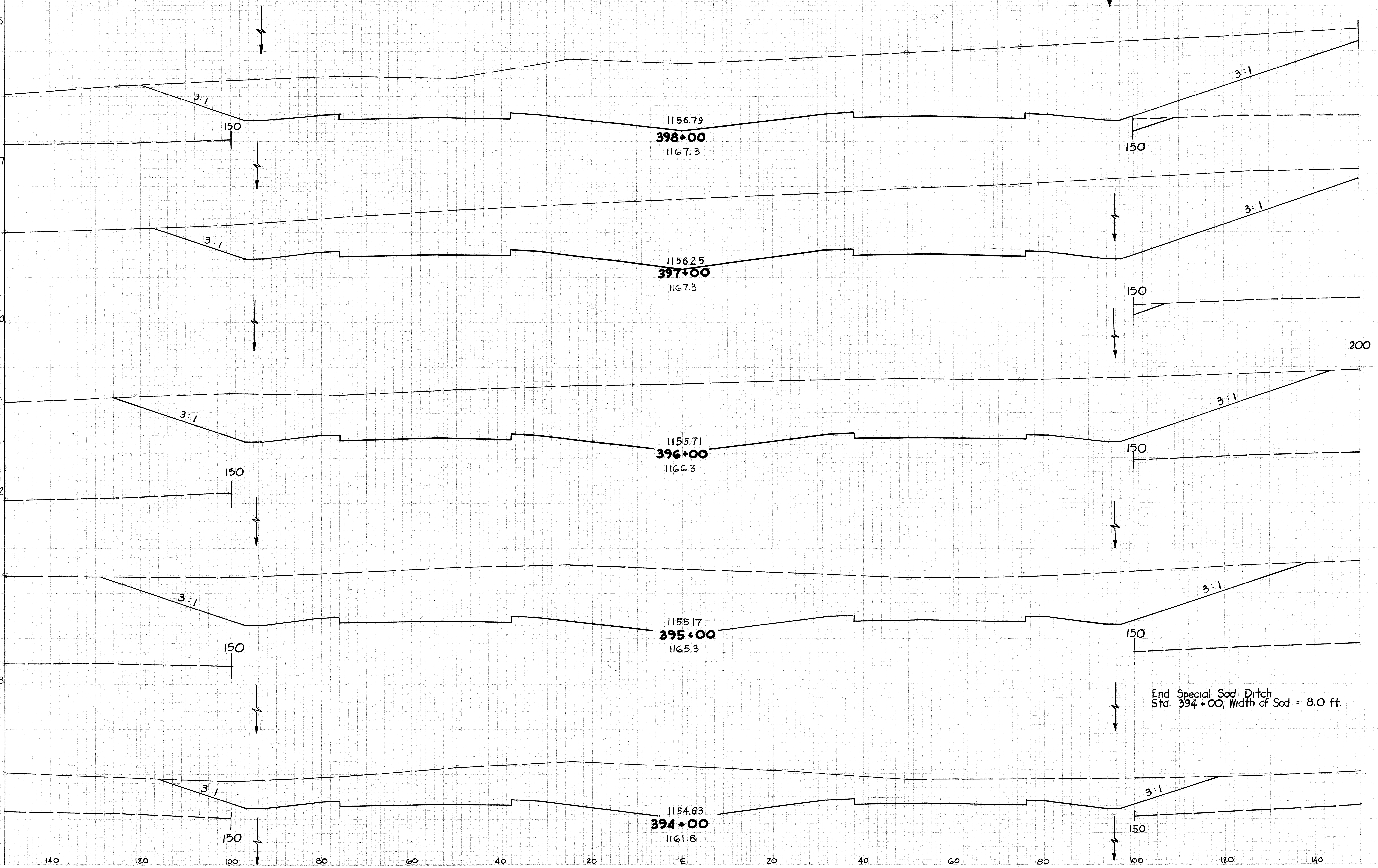
ESTIMATED QUANTITIES

I-1	15" Class A-1 See M6.6(a) or M6.8(b)	=116 Lin. Ft.
I-2	Masonry	=0.26 Cu. Yd.
I-8	Standard No. 4 C.B.	=1 Each
L-10	Sodding	=3 Sq. Yd.

End Area		Cu. Yds.	
Cut	Fill	Cut	Fill
		3515	1
325	1		
		642	1487
21	802		
		84	4535
24	1647		
		138	7380
50	2338		

MEDINA COUNTY
MED-42-21. 94

SEEDING	
END WIDTH	SQ. YDS.
	2625
235	
	2577
229	
	2520
225	
	2482
222	
	2268
186	



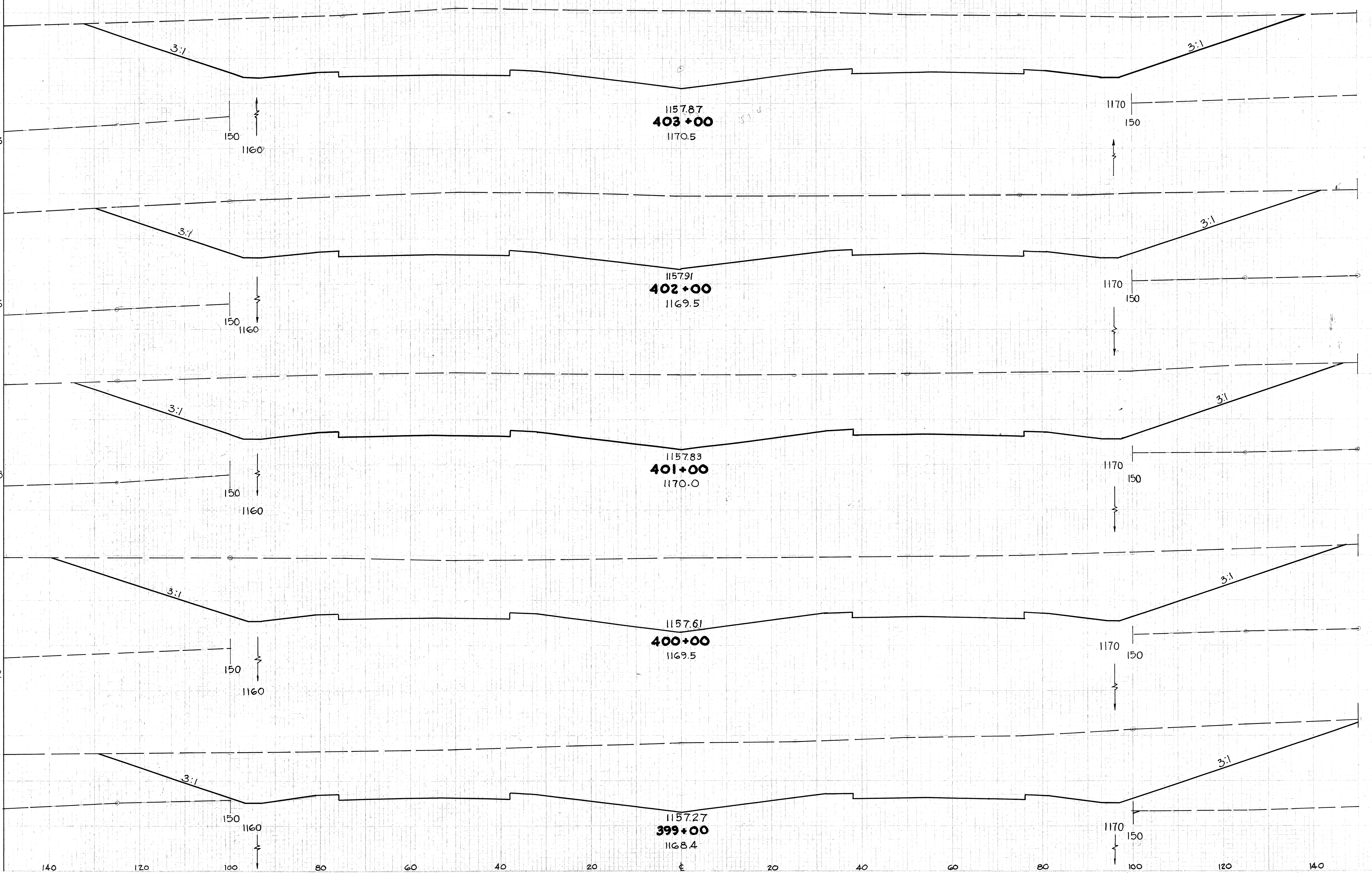
END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
		11361	
3047	0		
		11299	0
3054	0		
		10896	0
2830	0		
		10069	0
2607	0		
		7742	0
1573	0		

Sta. 394+00 to 398+00

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

MEDINA COUNTY
MED-42-21.94

SEEDING END WIDTH	SEEDING SQ. YDS.
	2439
227	
	2516
226	
	2576
237	
	2663
242	
	2662
237	



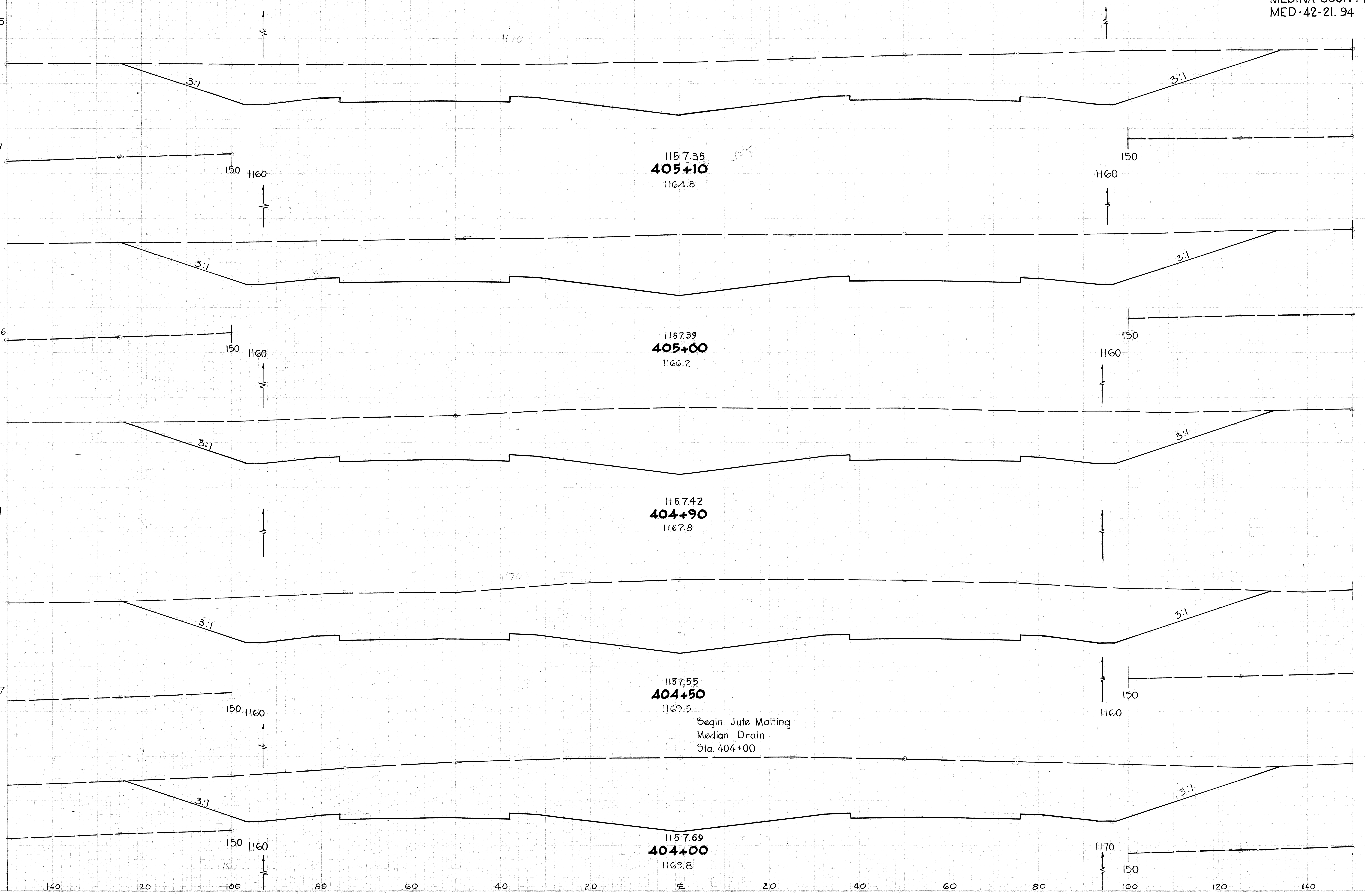
END AREA CUT	END AREA FILL	CU. YDS. CUT	CU. YDS. FILL
		11179	0
3181	0		
		11643	0
3106	0		
		11941	0
3342	0		
		12288	0
3294	0		
		11817	0
3087	0		

Sta. 399+00 to 403+00

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

MEDINA COUNTY
MED-42-21.94

SEEDING	
End Width	Sq. Yds.
	1225
214	
	237
213	
	236
212	
	941
211	
	1177
212	



End Area		Cu. Yds.	
Cut	Fill	Cut	Fill
		4760	0
2215	0		
		842	0
2328	0		
		891	0
2484	0		
		3887	0
2765	0		
		5204	0
2855	0		

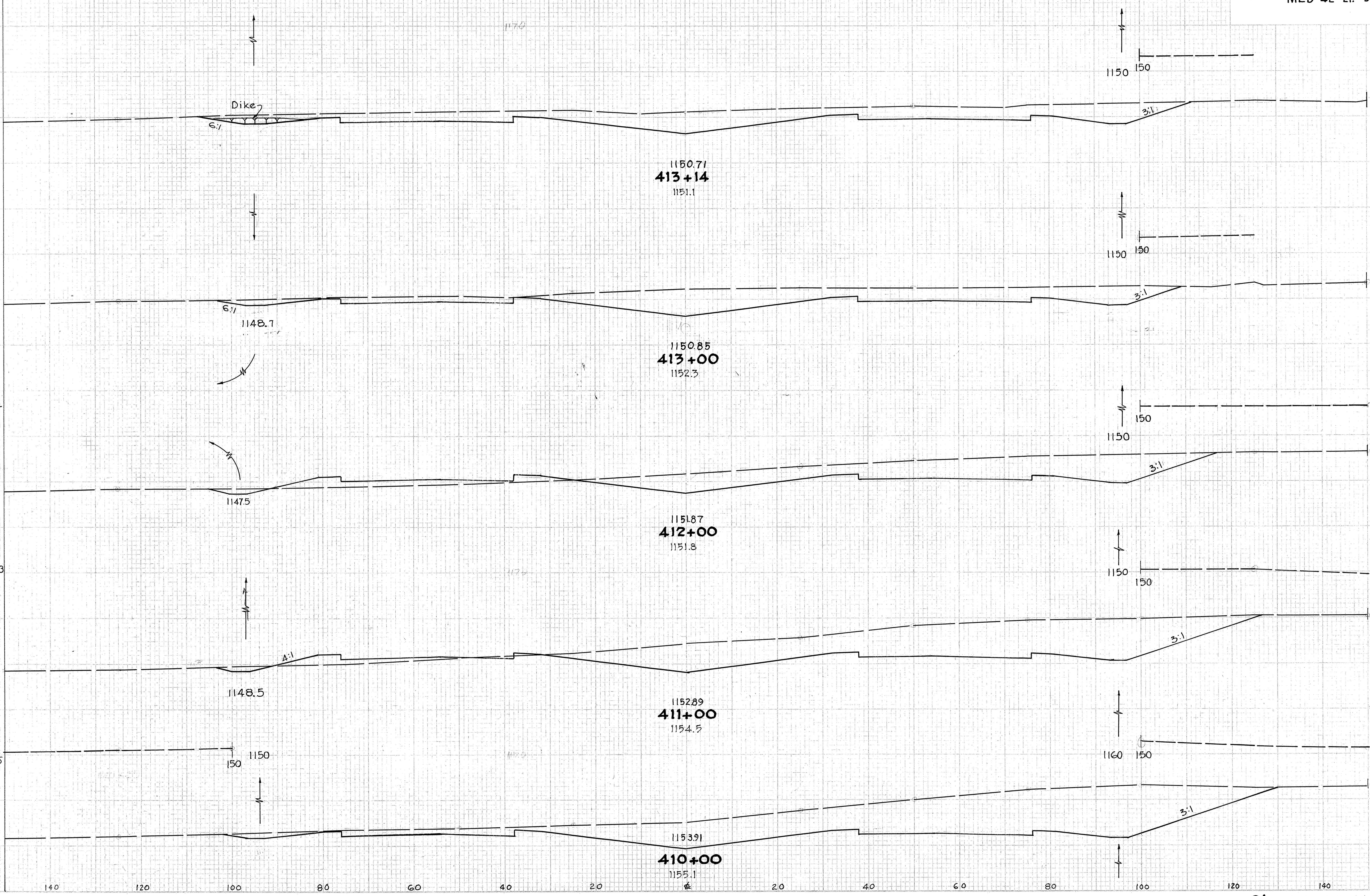
2 OHIO

MEDINA COUNTY
MED-42-21.94

Sta. 405+62 to 406+82

MEDINA COUNTY
MED-42-21.94

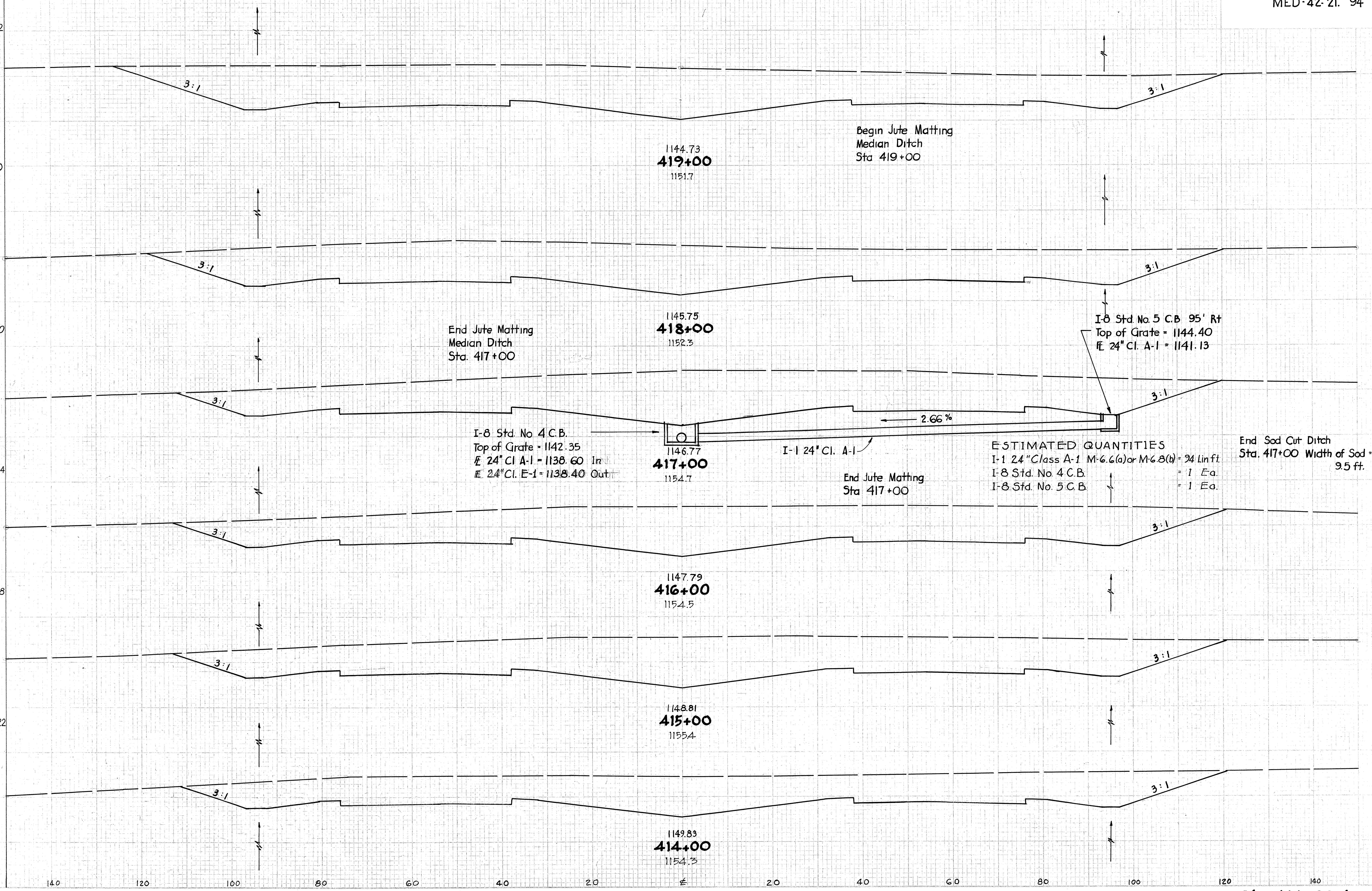
SEEDING	
END WIDTH	SQ. YDS.
	1655
170	
	261
165	
	1884
173	
	3353
430	
	3415
185	



END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
		3024	0
537	0		
		269	1
499	4		
		1871	169
511	87		
		2570	258
881	53		
		3590	97
1062	0		

Sta. 410+00 to 413+14

MEDINA COUNTY
MED-42-21.94

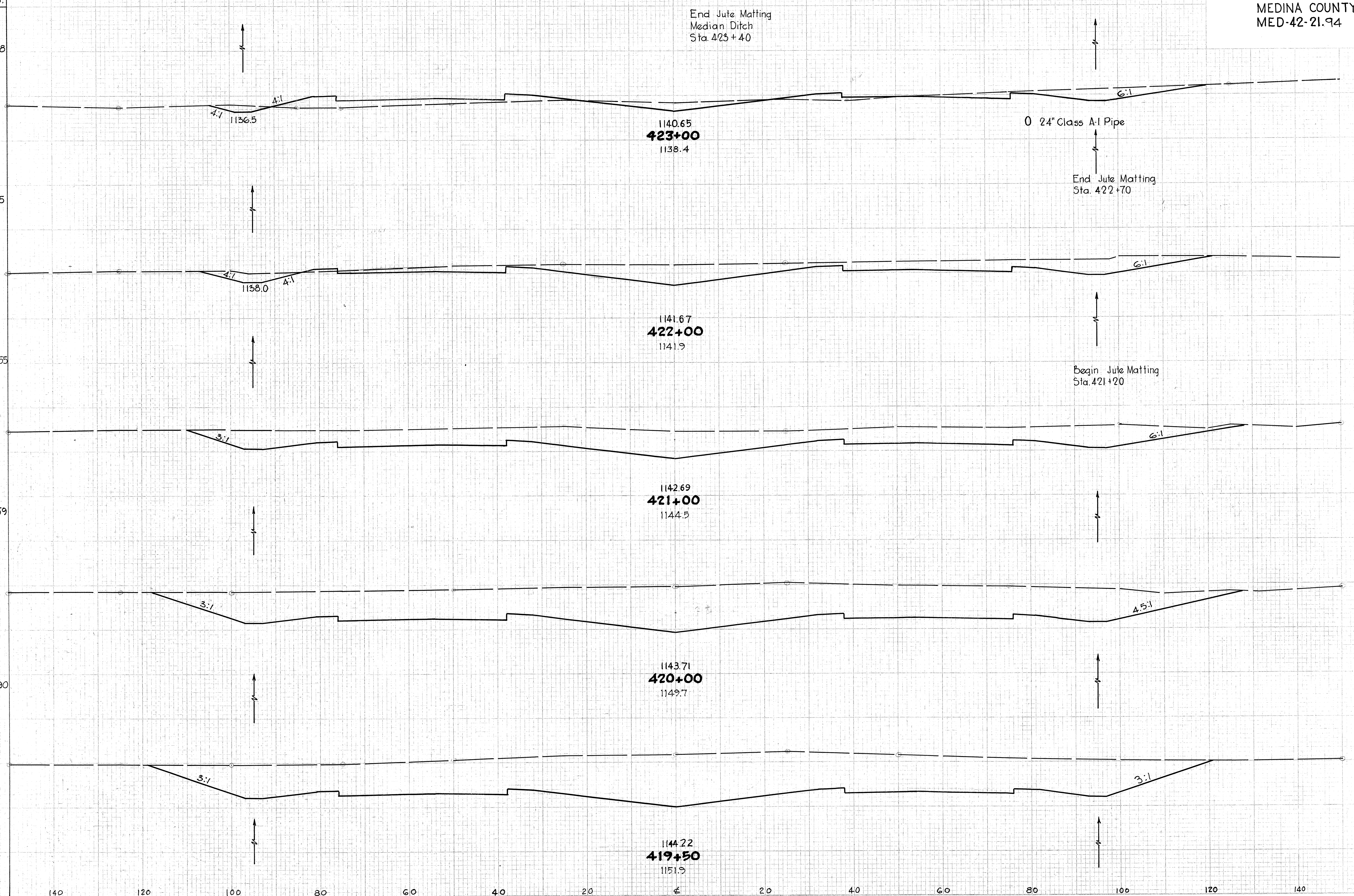


SEEDING END WIDTH	SEEDING SQ. YDS.
	1092
199	
	2170
192	
	2090
185	
	2064
187	
	2078
187	
	2022
177	

END AREA CUT	END AREA FILL	CU. YDS. CUT	CU. YDS. FILL
		3408	0
1841	0		
		6642	0
1745	0		
		6450	0
1737	0		
		6254	0
1640	0		
		6104	0
1656	0		
		5589	0
1362	0		

MEDINA COUNTY
MED-42-21.94

Seeding End Width	Seeding Sq. Yds.
	1988
154	
	1855
179	
	2055
190	
	2159
198	
	1090
194	



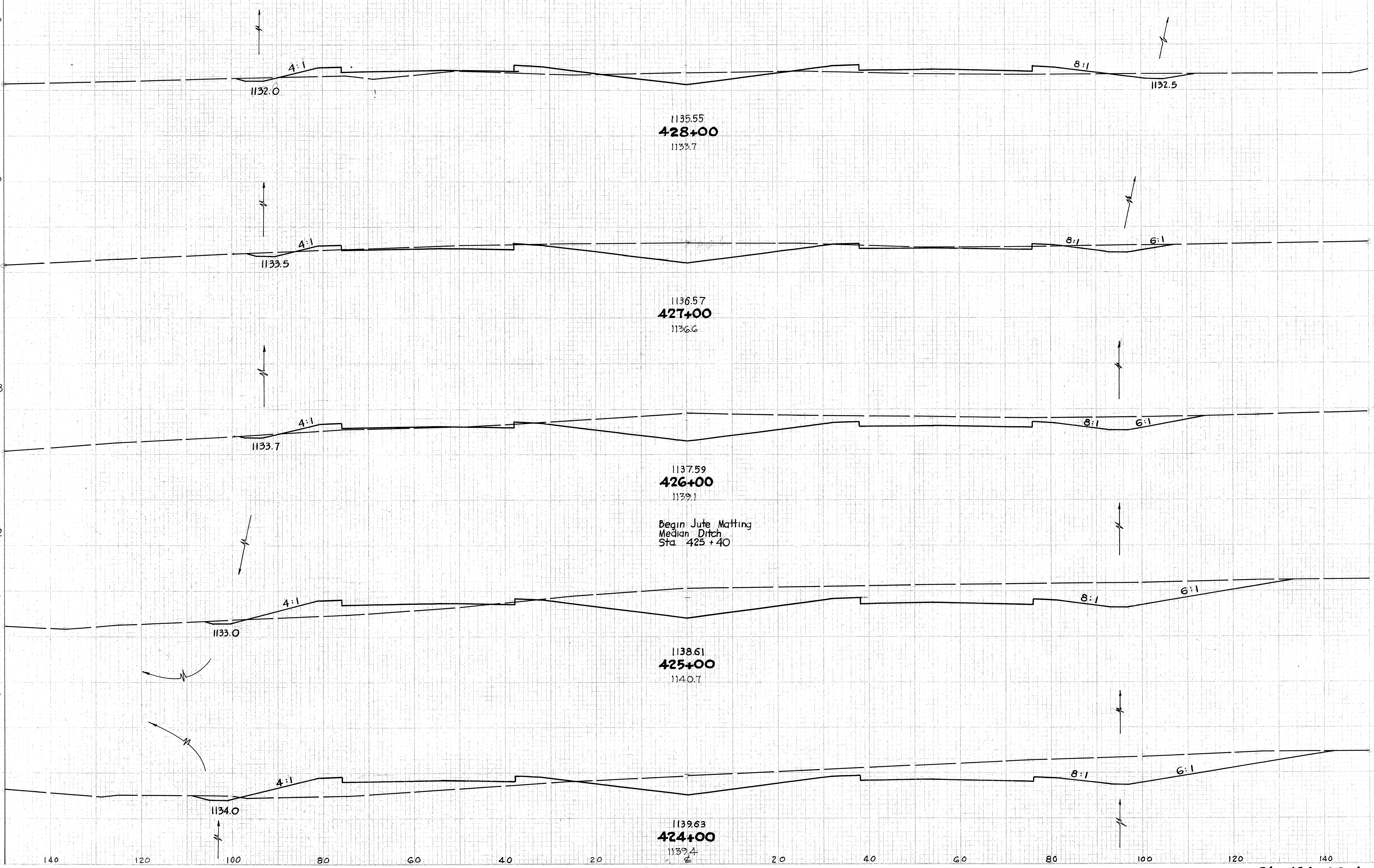
End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
		1221	481
118	99		
		1057	189
452	2		
		2433	5
861	0		
		4562	0
1602	0		
		3186	0
1839	0		

Sta. 419+50 to 423+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

MEDINA COUNTY
MED-42-21. 94

SEEDING	
END WIDTH	SQ. YDS.
	1936
162	
	1765
155	
	1778
165	
	1972
190	
	2187
203	



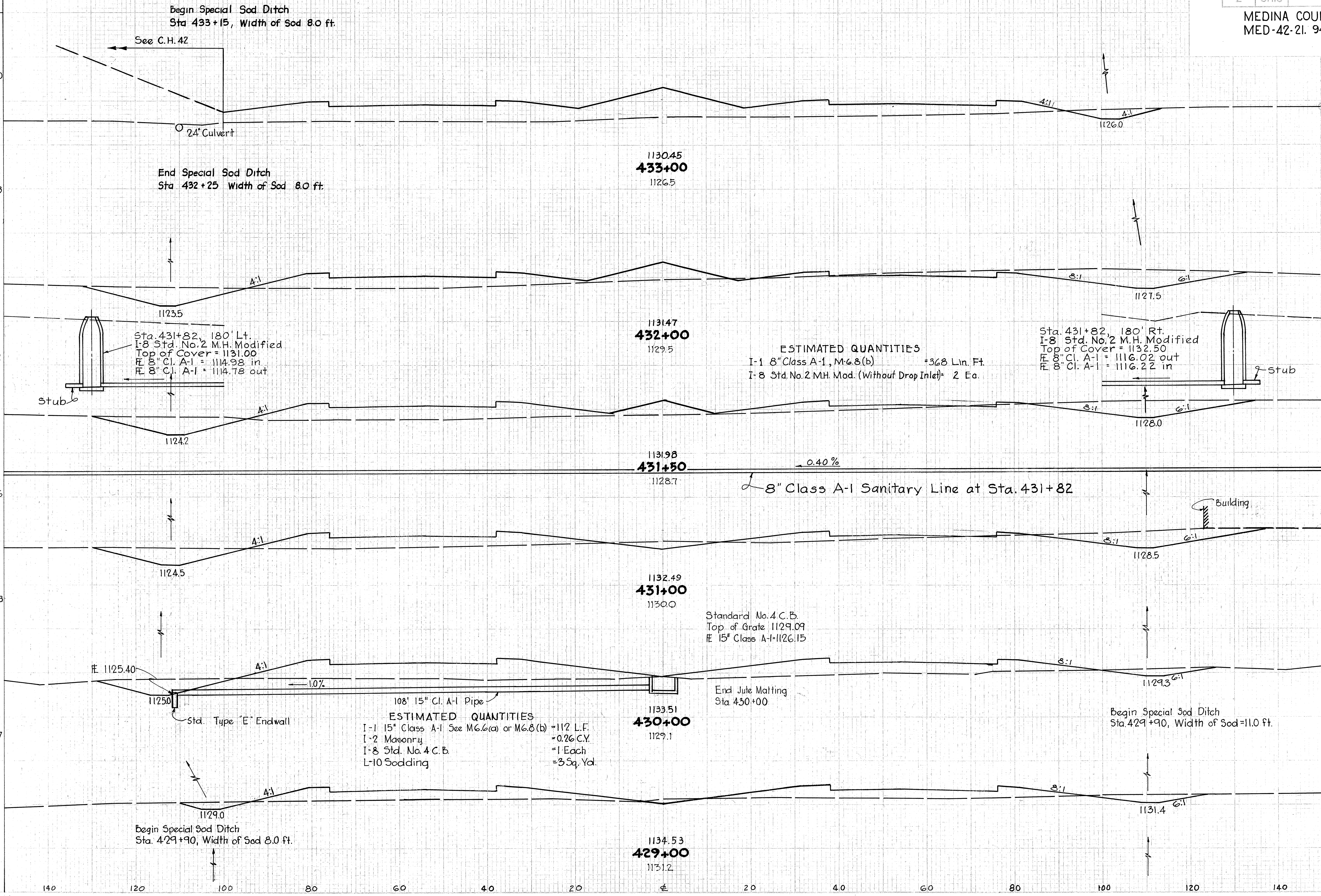
END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
		236	794
75	122		
		524	270
208	24		
		1093	88
382	23		
		1857	213
621	91		
		2153	467
542	161		

Sta. 424+00 to 428+00

MEDINA COUNTY
MED-42-21.94

Seeding

End Width	Sq. Yds.
	1000
169	
	2158
219	
	1222
220	
	1226
221	
	2383
207	
	2187
186	



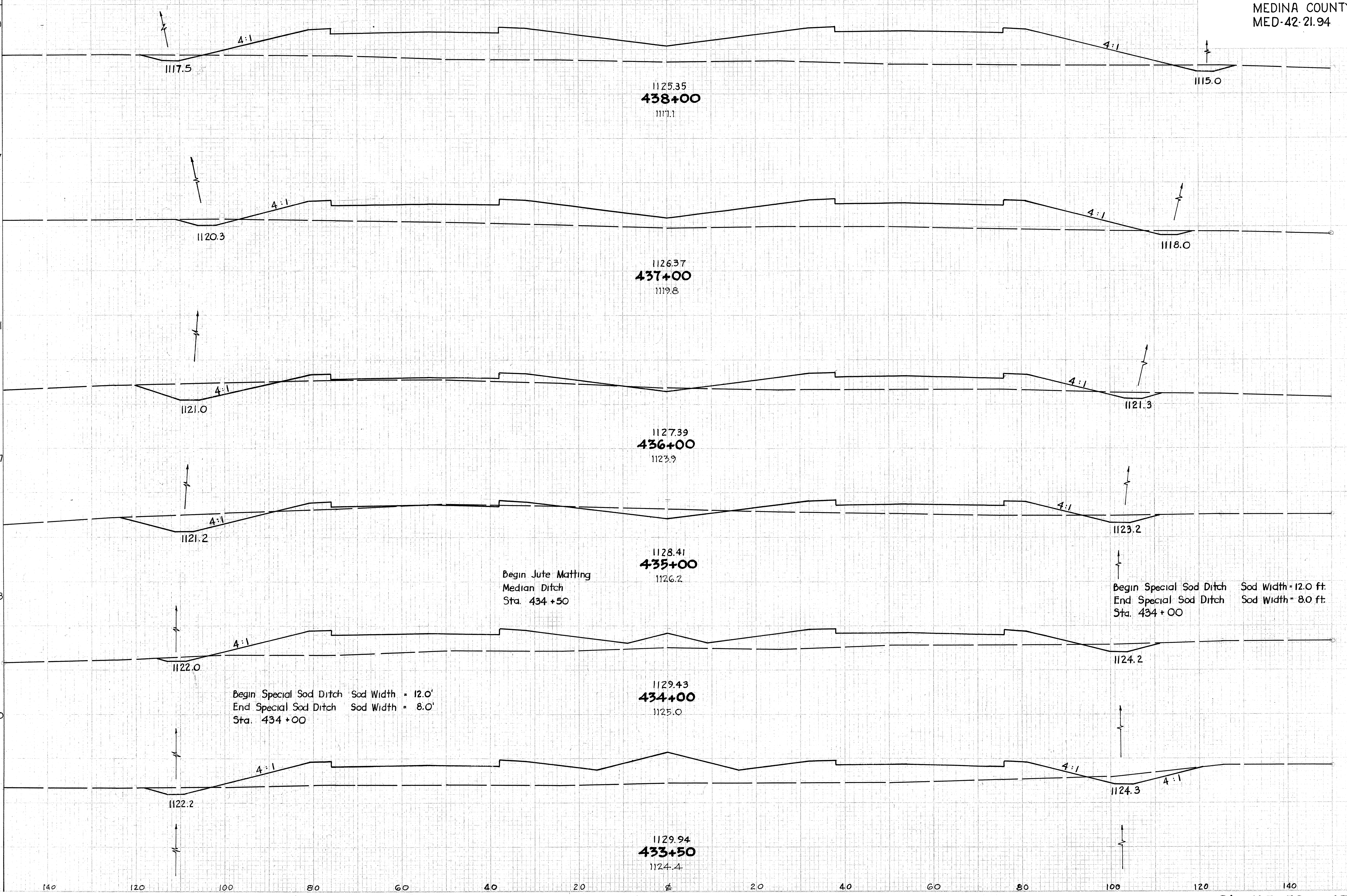
End Area / Cu. Yds.

End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
		61	1358
27	650		
		544	1630
267	230		
		482	503
254	314		
		438	504
219	231		
		571	1345
89	495		
		263	1486
53	307		

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

MEDINA COUNTY
MED-42-21.94

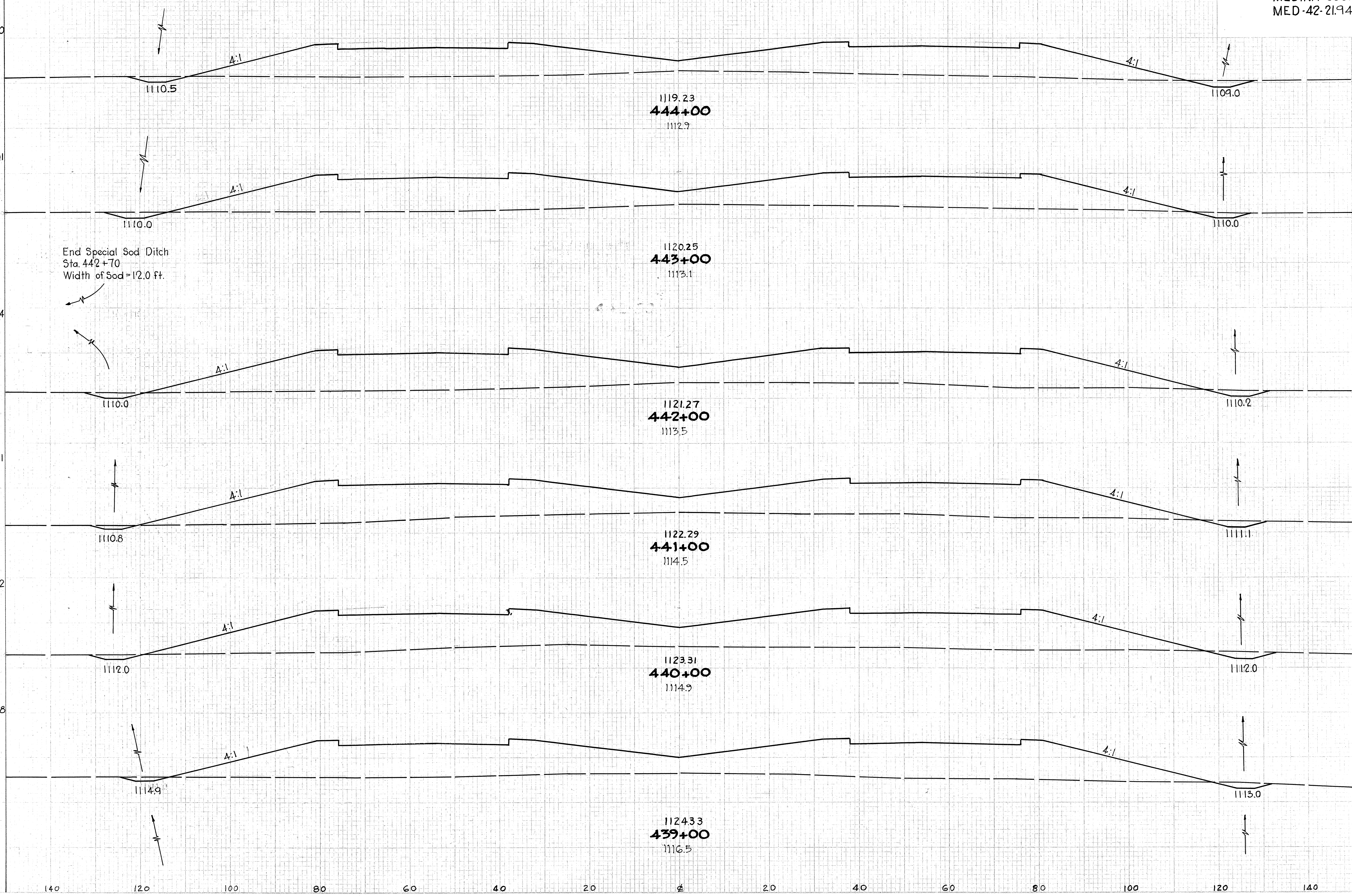
SEEDING END WIDTH	SEEDING SQ. YDS.
	2279
200	
	2127
182	
	2041
185	
	2067
187	
	2038
179	
	1030
191	



END AREA CUT	END AREA FILL	CU. YDS. CUT	CU. YDS. FILL
		69	4856
21	1233		
		82	3794
24	815		
		208	2066
89	300		
		412	890
133	180		
		297	1470
26	614		
		60	1325
38	817		

Sta. 433+50 to 438+00

MEDINA COUNTY
MED-42-21.94

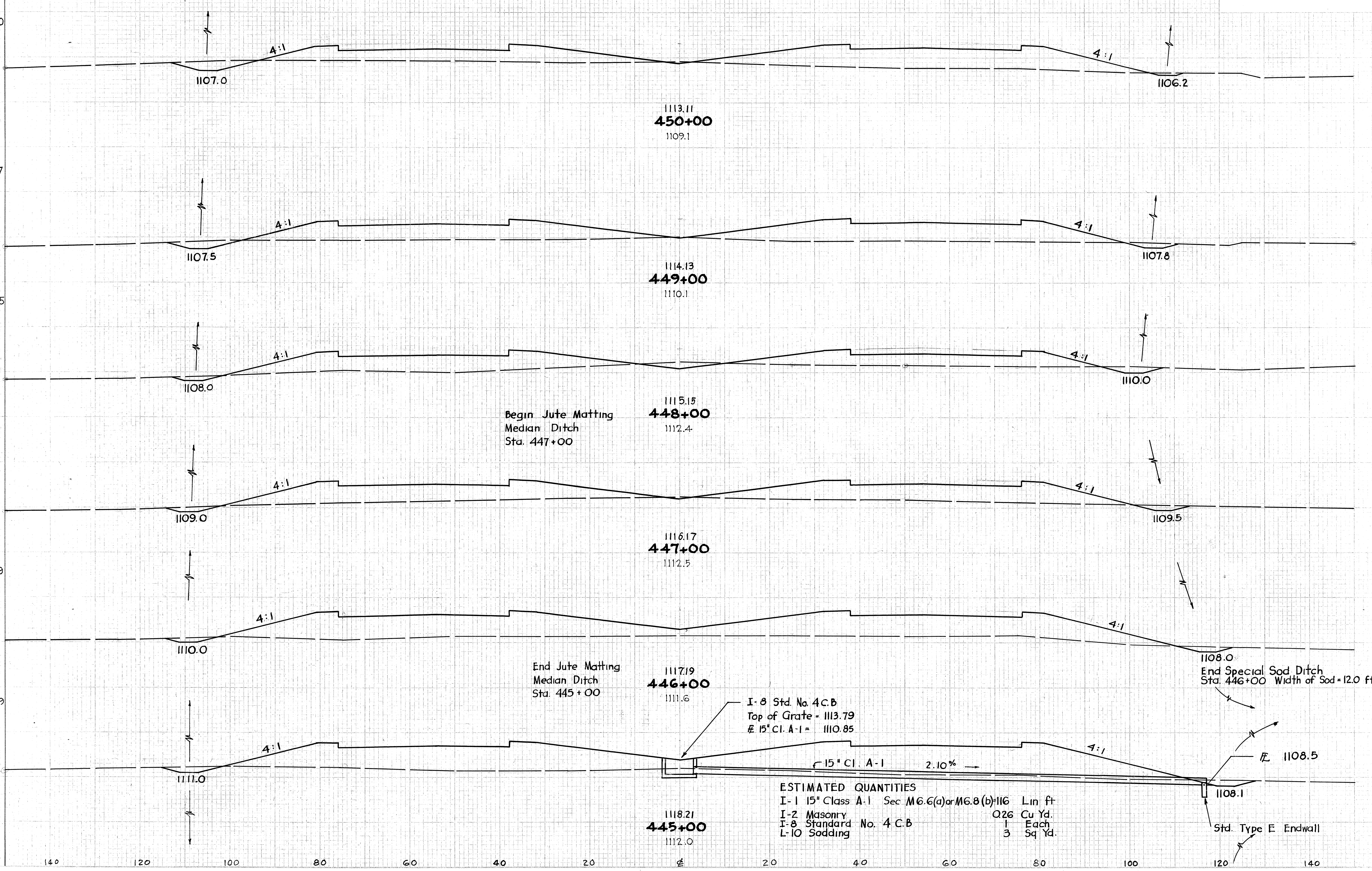


Station	Seeding End Width	Seeding Sq. Yds.
444+00	205	
		2230
443+00	209	
		2301
442+00	218	
		2374
441+00	216	
		2411
440+00	218	
		2412
439+00	210	
		2378

Station	End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
			87	3963
444+00	24	1121		
			84	4431
443+00	21	1272		
			85	5056
442+00	24	1459		
			83	5358
441+00	20	1435		
			80	5393
440+00	23	1478		
			73	5308
439+00	17	1389		

MEDINA COUNTY
MED-42-21.94

Station	Seeding End Width	Seeding Sq. Yds.	End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
		2010			101	2192
450+00	178		28	540		
		1977			98	2026
449+00	178		24	554		
		1955			115	1792
448+00	174		38	413		
		1971			110	1776
447+00	180		22	545		
		2059			73	2596
446+00	190		18	856		
		2149			76	3474
445+00	196		23	1019		



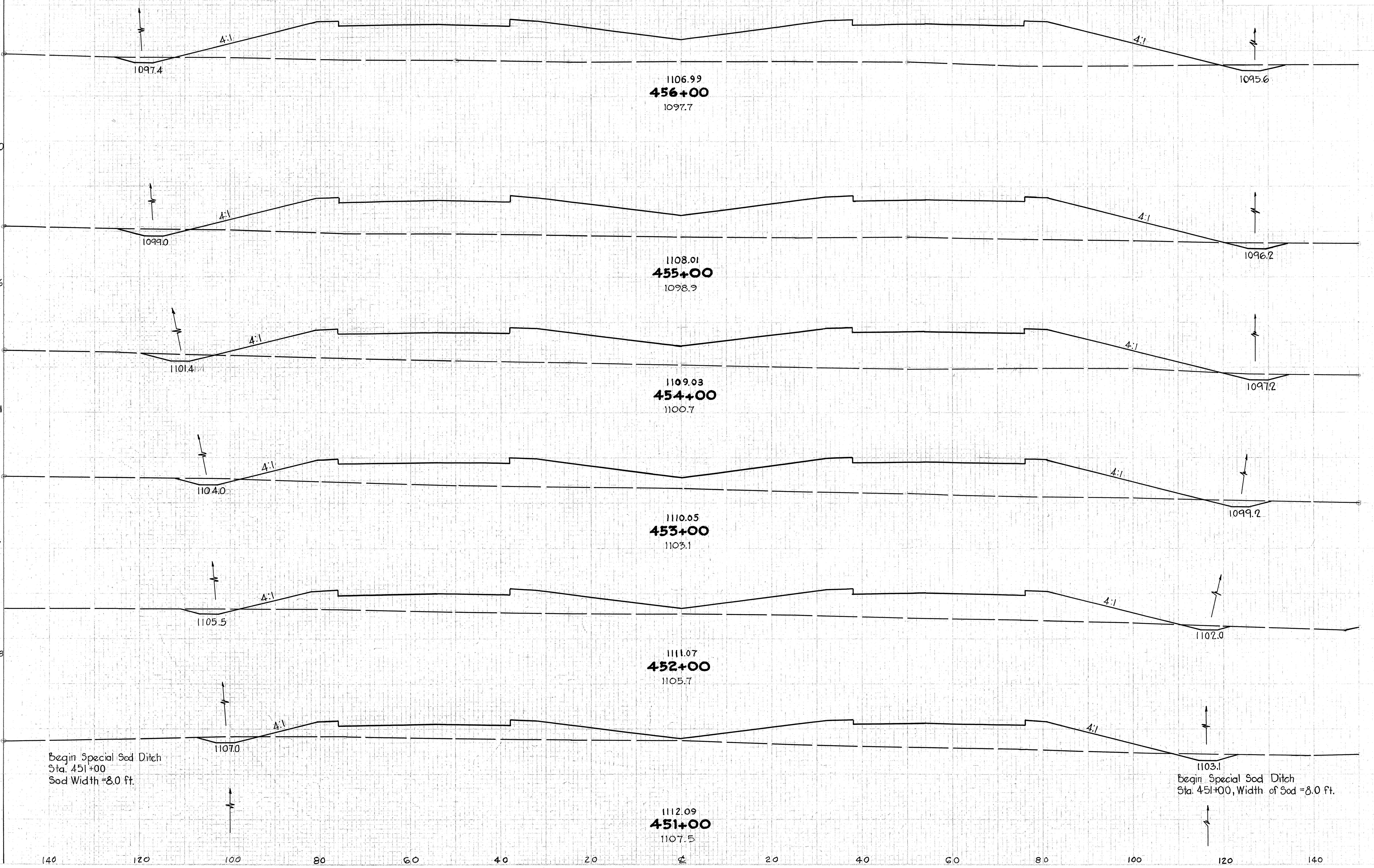
ESTIMATED QUANTITIES

I-1	15" Class A-1 Sec M6.6(a) or M6.8(b)	116	Lin ft
I-2	Masonry	0.26	Cu Yd.
I-8	Standard No. 4 C.B	1	Each
L-10	Sodding	3	Sq Yd.

Sta. 445+00 to 450+00

MEDINA COUNTY
MED-42-21.94

Seeding End Width	Seeding Sq. Yds.
	2361
214	
	2370
213	
	2336
208	
	2241
195	
	2117
185	
	2048
183	

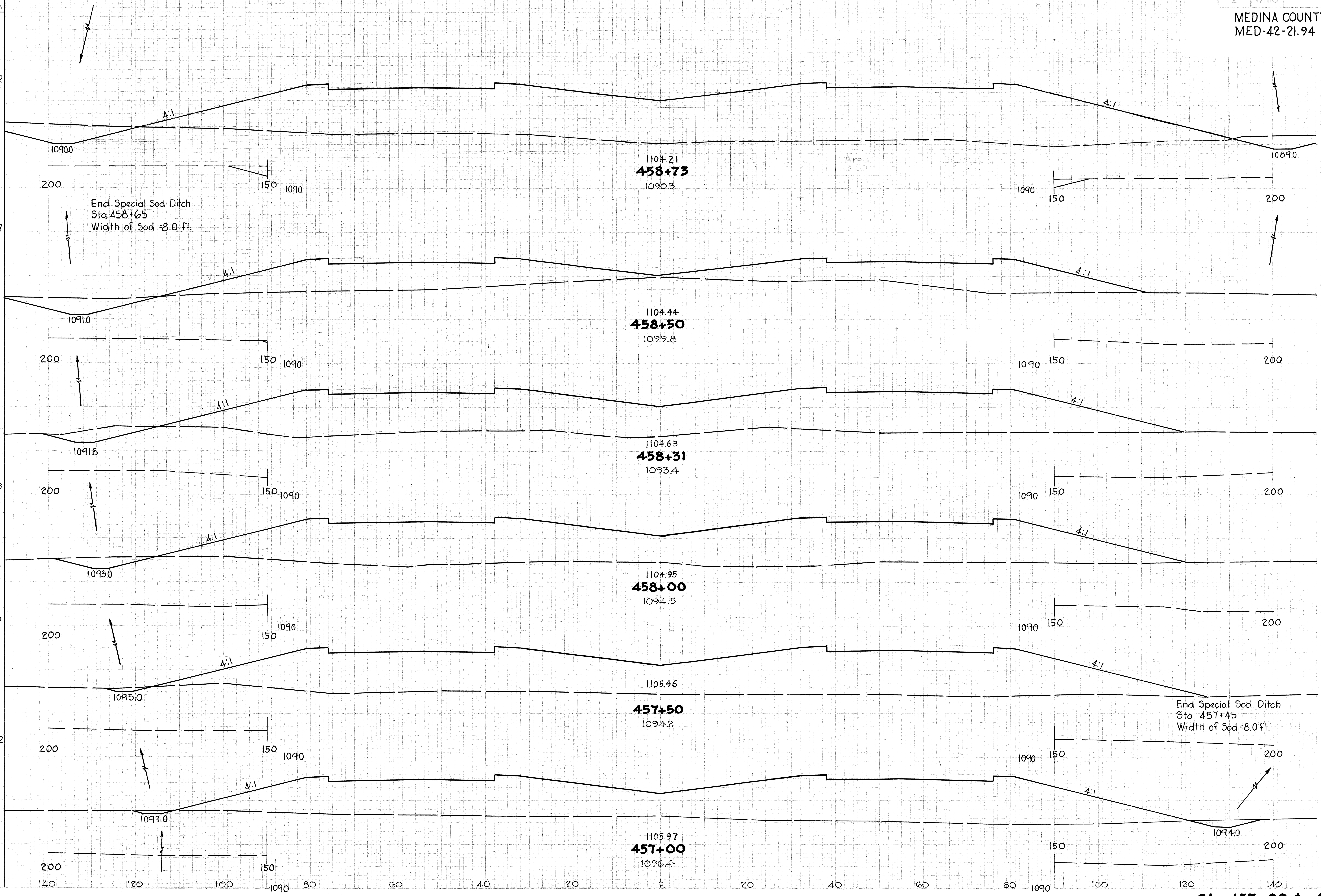


End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
		87	5987
24	1560		
		101	5607
30	1468		
		109	5222
30	1352		
		102	4434
25	1043		
		81	3380
19	782		
		83	2641
26	643		

Sta. 451+00 to 456+00

MEDINA COUNTY
MED-42-21.94

SEEDING END WIDTH	SEEDING SQ. YDS.
	532
283	
	637
216	
	412
175	
	598
172	
	923
160	
	1032
211	

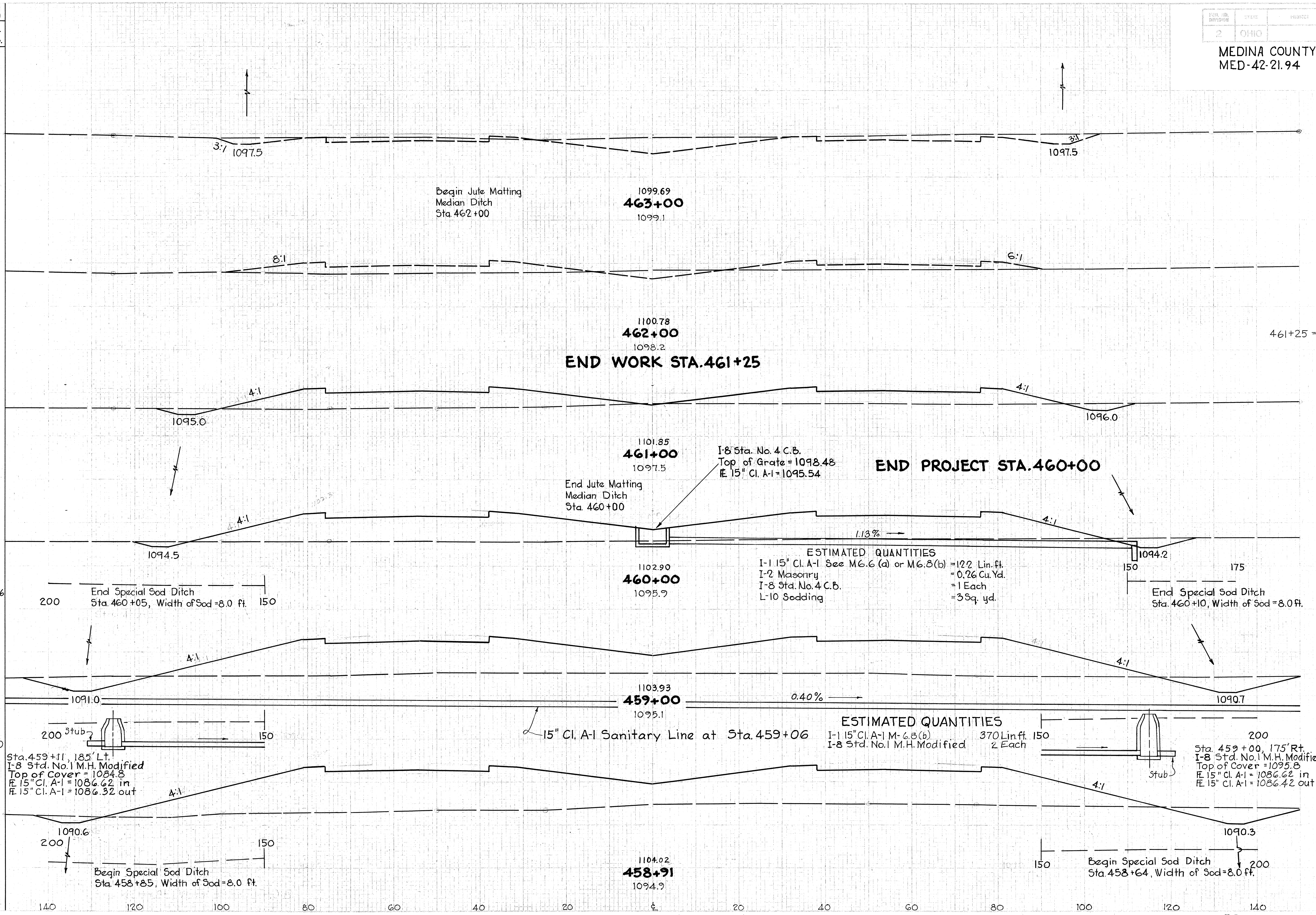


END AREA CUT	END AREA FILL	CU. YDS. CUT	CU. YDS. FILL
		91	1362
188	2357		
		111	1427
73	993		
		42	907
46	1584		
		47	1849
36	1637		
		39	3050
6	1657		
		26	3084
22	1673		

Sta. 457+00 to 458+73

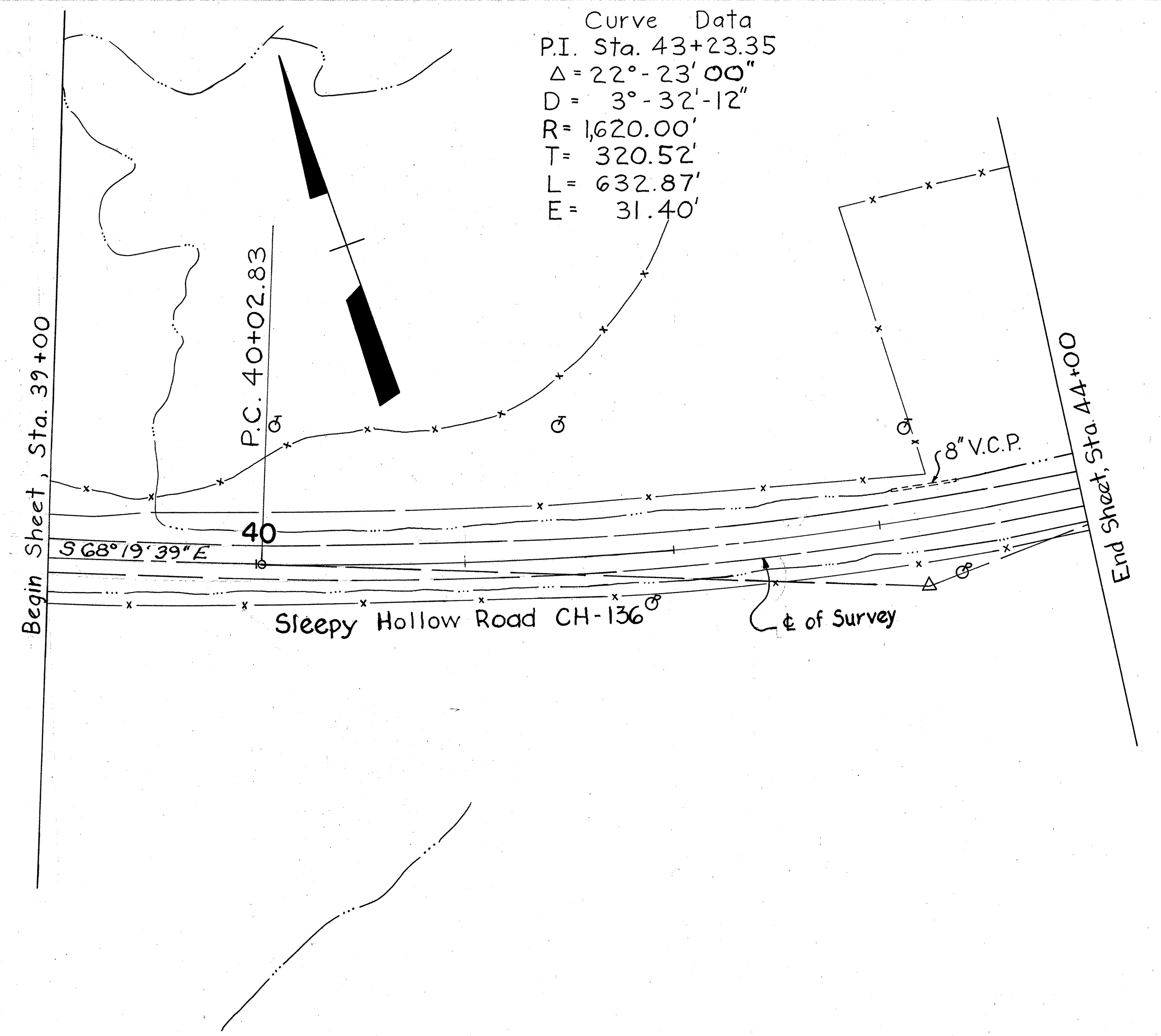
MEDINA COUNTY
MED-42-21.94

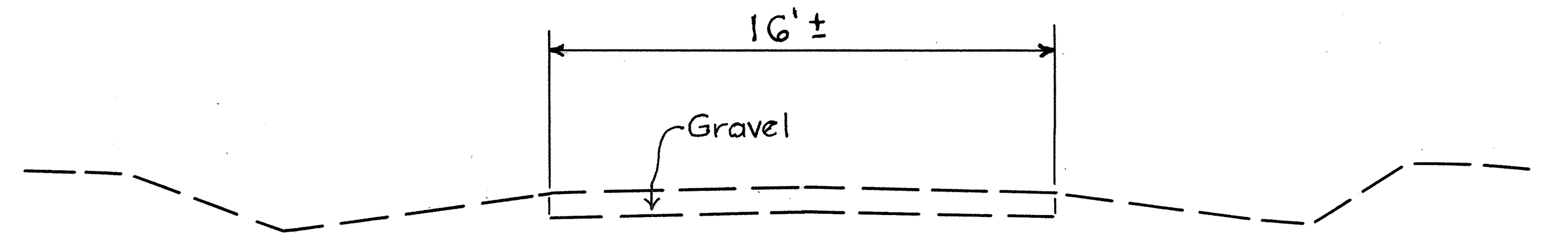
SEEDING END WIDTH	SEEDING SQ. YDS.
	1111
200	
	2506
251	
	250
250	



Station	END AREA CUT	END AREA FILL	CU. YDS. CUT	CU. YDS. FILL
461+25 =	0	0		
			14	265
	30	571		
			140	2911
	46	1000		
			312	4599
	123	1483		
			34	536
	85	1730		

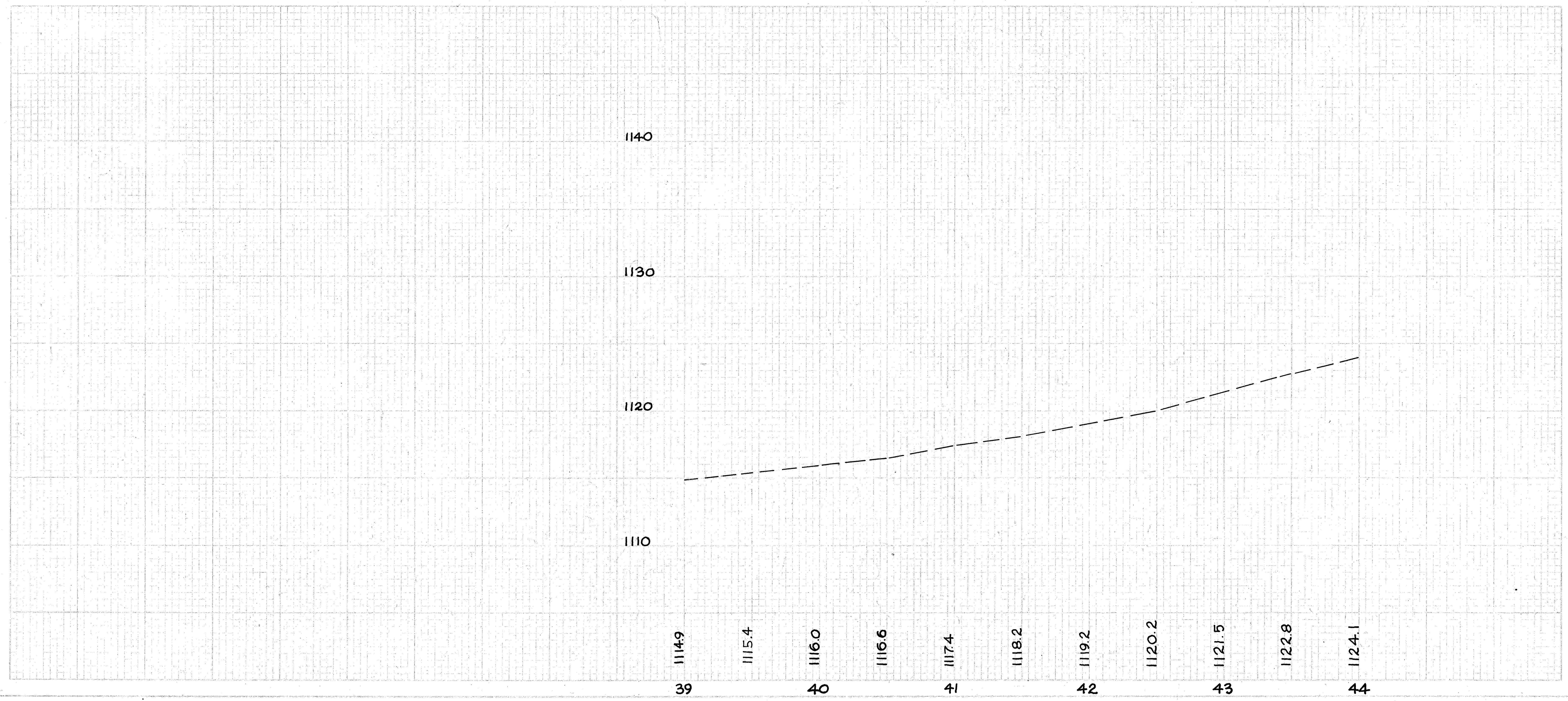
Sta. 458+91 to 463+00

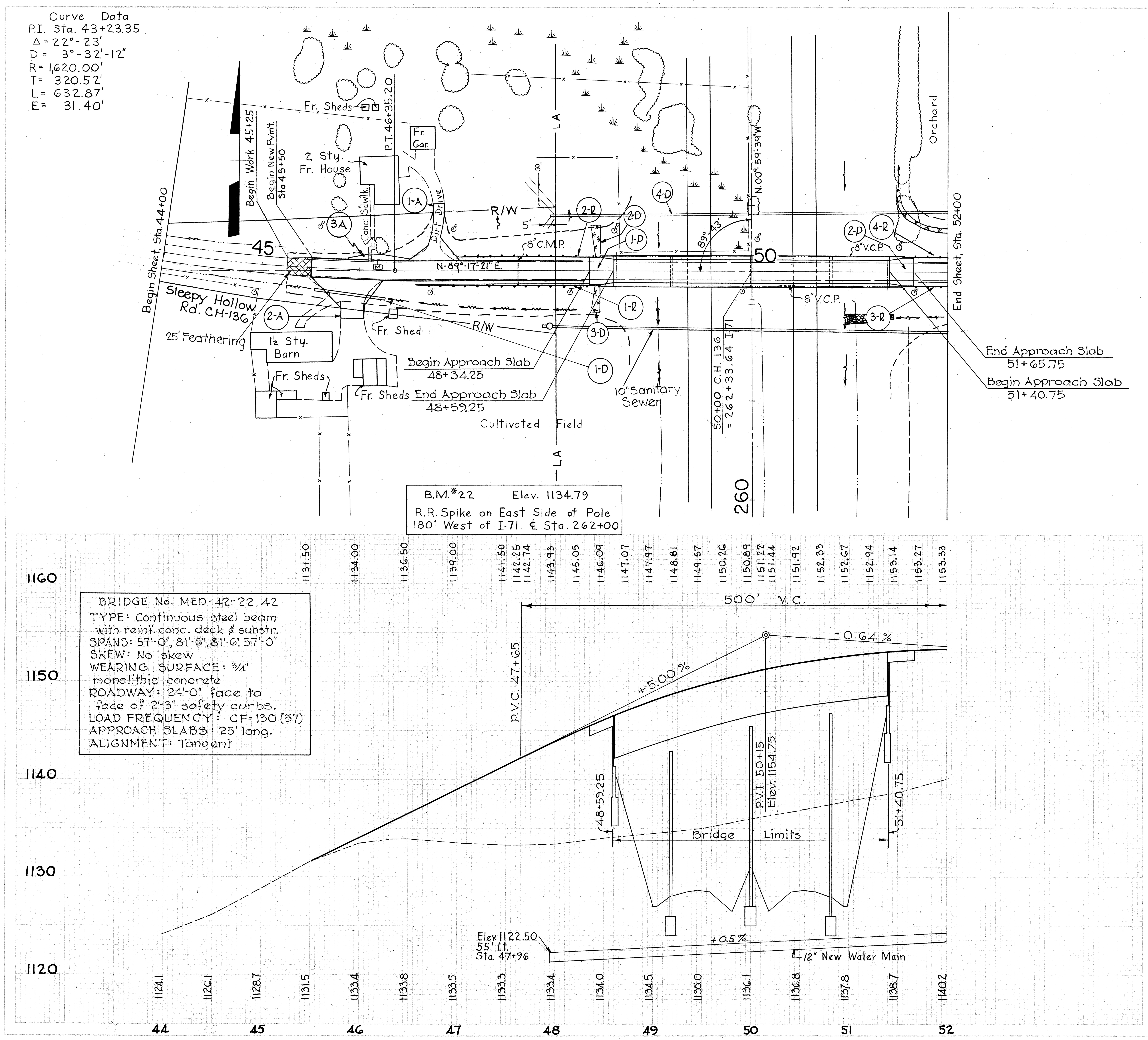




TYPICAL SECTION
ADJOINING PAVEMENT
SLEEPY HOLLOW ROAD (C.H. 136)

Sta. 44+00 Bk.
Sta. 57+00 Ahd.



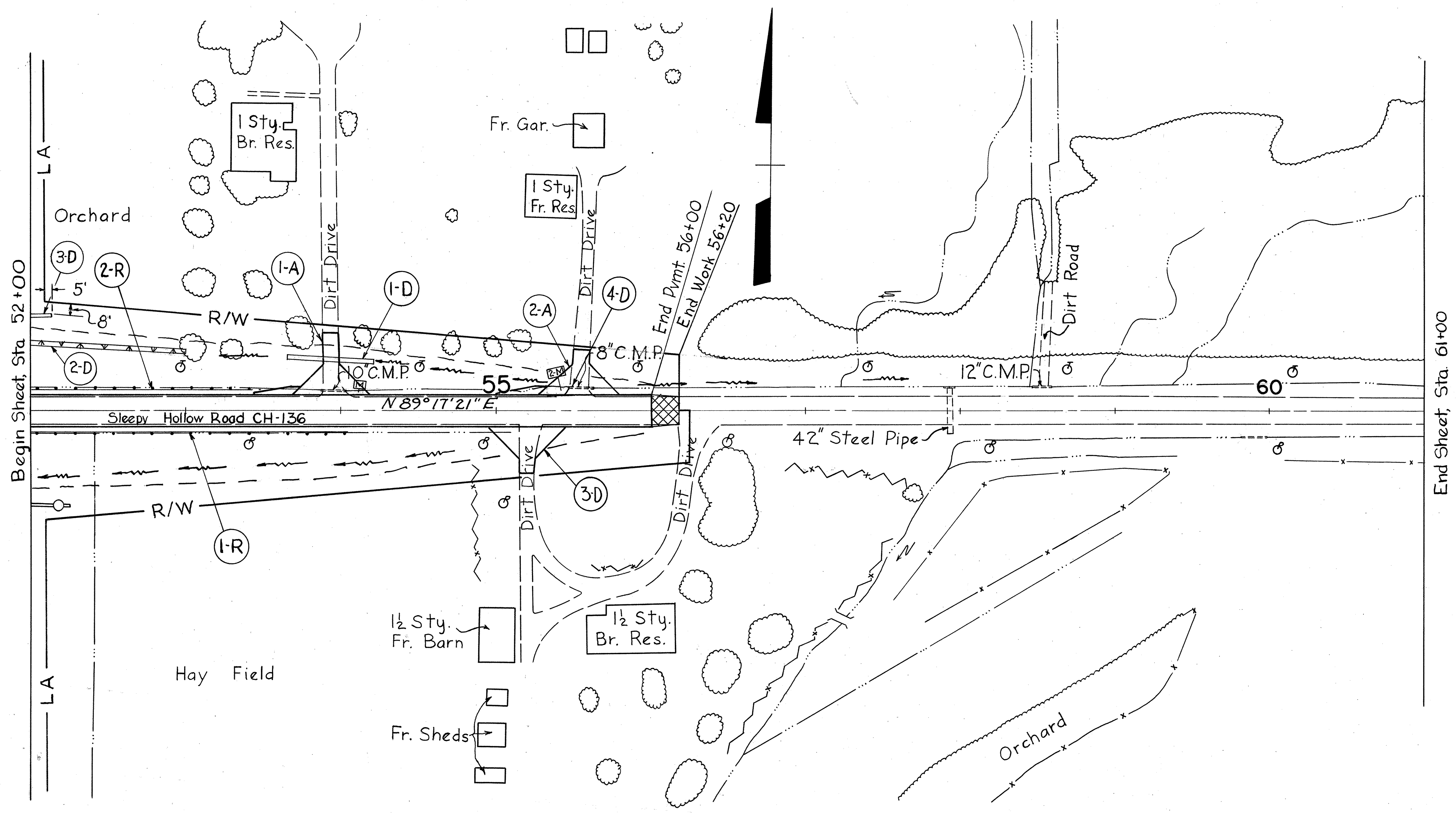


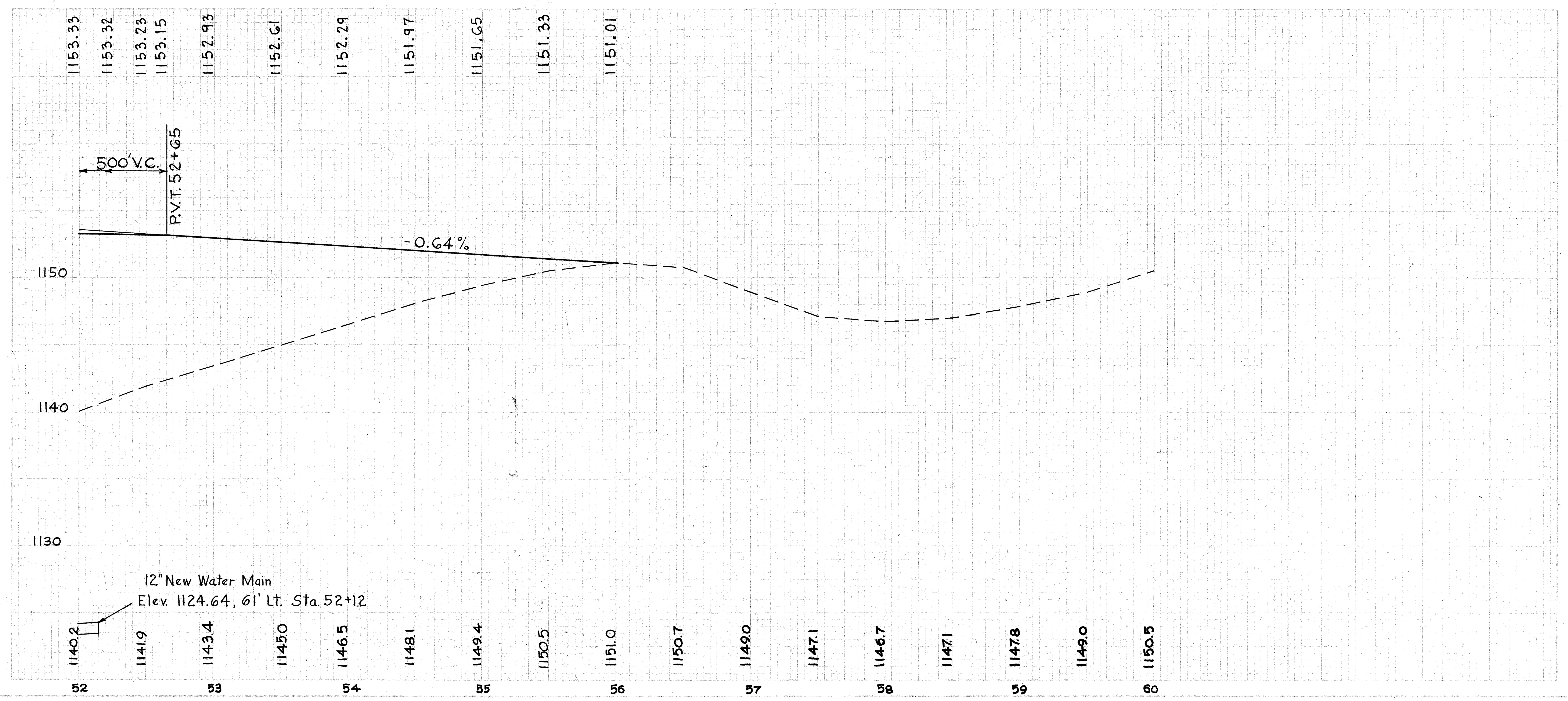
ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	I-1 C.I.F.I Pipe 15" Lin.ft.	I-7 t=13" Reinf. Conc. Appro. Slab Sq.Yd.	I-15 Guard Rail Lin.ft.	I-124 New Water Main 12" Lin.ft.	B-19 Crushed Aggregate Base 5" Cu.Yd.	B-19 Crushed Aggregate Base 8" Cu.Yd.	T-35 Type C Asphalt Conc. Cu.Yd.	[illegible]	L-10 Sodding for Spec. Berm & Slope Protect. Sq.Yd.	SEE SHEET NO.
1-D	45+48 to 46+28	Rt.	74									
2-D	48+45	Lt.									29	
3-D	48+45	Rt.									23	
4-D	47+96 to 52+00	Lt.				404						
1-A	46+70	Lt.					11.5	8.7	2.3			
2-A	46+00	Rt.						43.0				
3-A	46+15	Lt.					4.3		0.85			
1-R	46+58.5 to 48+46	Rt.			187.5							
2-R	47+08.5 to 48+46	Lt.			137.5							
3-R	51+54 to 52+00	Rt.			46							
4-R	51+54 to 52+00	Lt.			46							
1-P	48+35 to 48+60	—		76.4								
2-P	51+40 to 51+65	—		76.4								
	TOTAL		74	152.8	417	404	15.8	51.7	3.15	[illegible]	52	

MEDINA COUNTY
MED - 42 - 21.94

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		



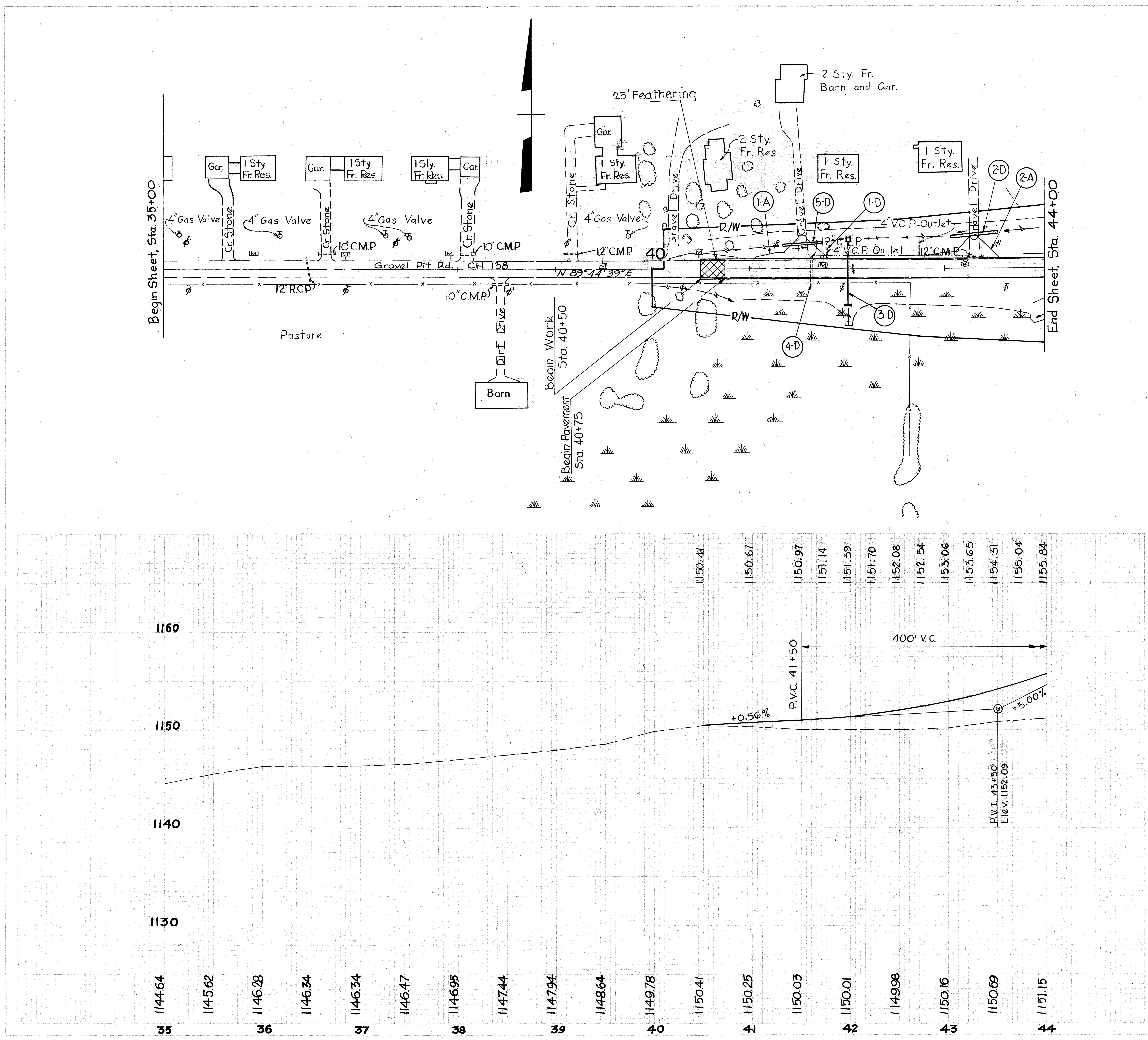


ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	I-1 Class F-1 Pipe 15" (Lin. Ft.)	I-15 Guard Rail (Lin. Ft.)	I-124 New Water Main 12" (Lin. Ft.)	L-10 Sodding (Sq. Yd.)	B-19 Crushed Aggregate Base 5" (Cu. Yd.)	B-19 Crushed Aggregate Base 8" (Cu. Yd.)	T-35 Type "C" Asphaltic Conc. 2"-1" Courses (Cu. Yd.)	E-12 Pipe Removed Under 15" (Lin. Ft.)	SEE SHEET NO.
1-D	53+70 to 54+18	Lt.	56							16	
2-D	52+00 to 53+00	Lt.				67					
3-D	52+00 to 52+12	Lt.			12						
4-D	55+46 to 55+62	Lt.								16	
1-A	53+95	Lt.					11.1	5.0	2.18		
2-A	55+53	Lt.					11.1	2.5	2.18		
3-A	55+20	Rt.					9.9	2.9	1.94		
1-R	52+00 to 53+54	Rt.		154							
2-R	52+00 to 54+04	Lt.		204							
	TOTAL		56	358	12	67	32.1	10.4	6.30	32	

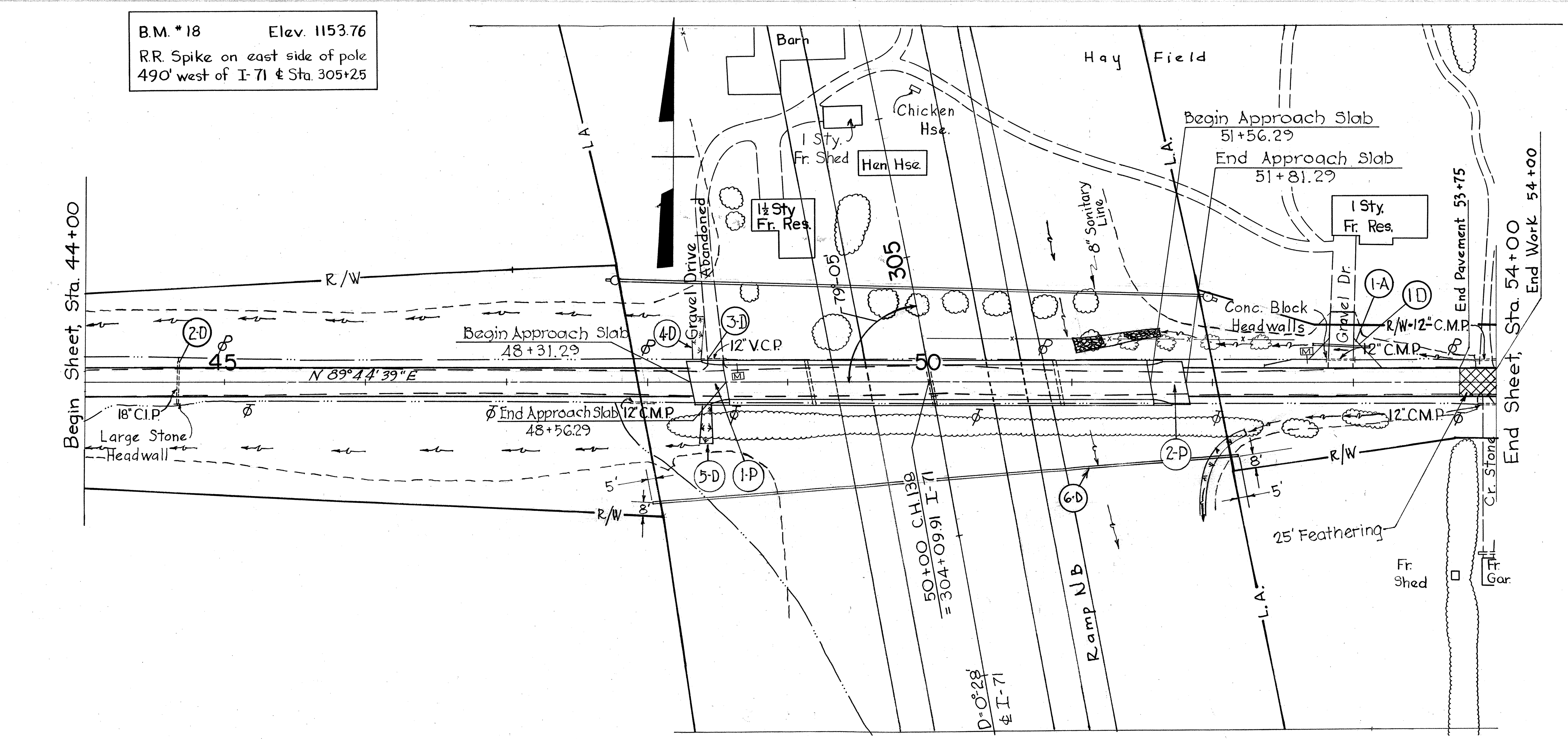
MEDINA COUNTY
MED-42-21.94

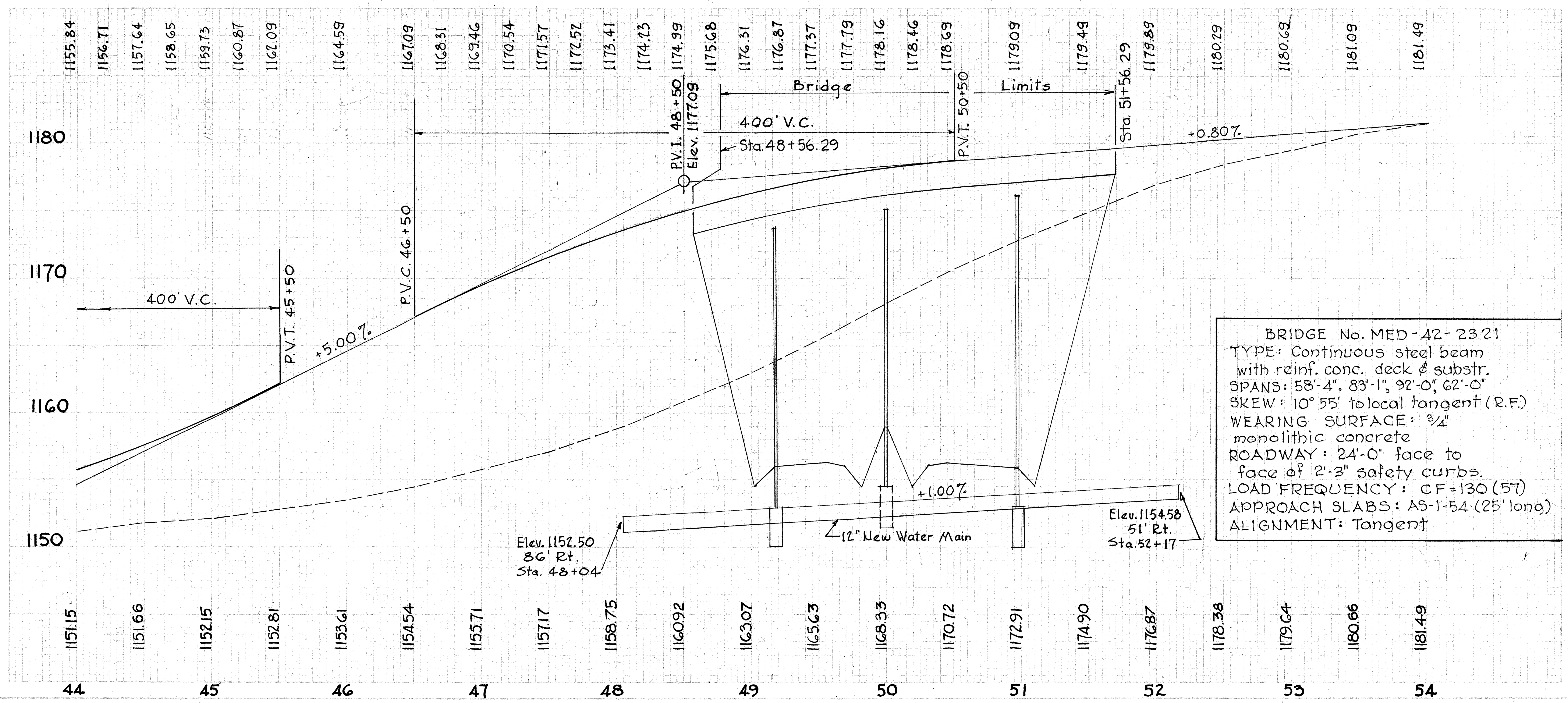
MEDINA COUNTY
MED-42-21.94



ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	I-1 Class A-1 Pipe 24" Lin. Ft.	I-1 Class F-1 Pipe 6" Lin. Ft.	I-1 Class F-1 Pipe 15" Lin. Ft.	I-1 Class F-1 Pipe 24" Lin. Ft.	I-2 Masonry Endwall Type "E" Cu.Yd.	I-8 Std. No. 2-3 C.B. Each	E-3 Chan. Excav. Cu.Yd.	E-12 15" and under Pipe Removal Lin. Ft.	B-19 Crushed Aggregate Base 5" Cu.Yd.	B-19 Crushed Aggregate Base 8" Cu.Yd.		T-35 Type "C" Asphaltic Conc. 2-1" course Cu.Yd.	SEE SHEET NO.
1-D	41+80	Lt.		60											
2-D	43+00 to 43+60	Lt.				48				17					
3-D	42+00	–	68				0.41	1	3						
4-D	41+63	–								30					
5-D	41+35 to 41+75	Lt.			40										
1-A	40+50	Lt.									4.3			0.85	
2-A	41+56	Lt.									11.1	1.2		2.18	
3-A	43+30	Lt.									11.1	4.2		2.18	
	TOTAL		68	60	40	48	0.41	1	3	47	26.5	5.4		5.21	

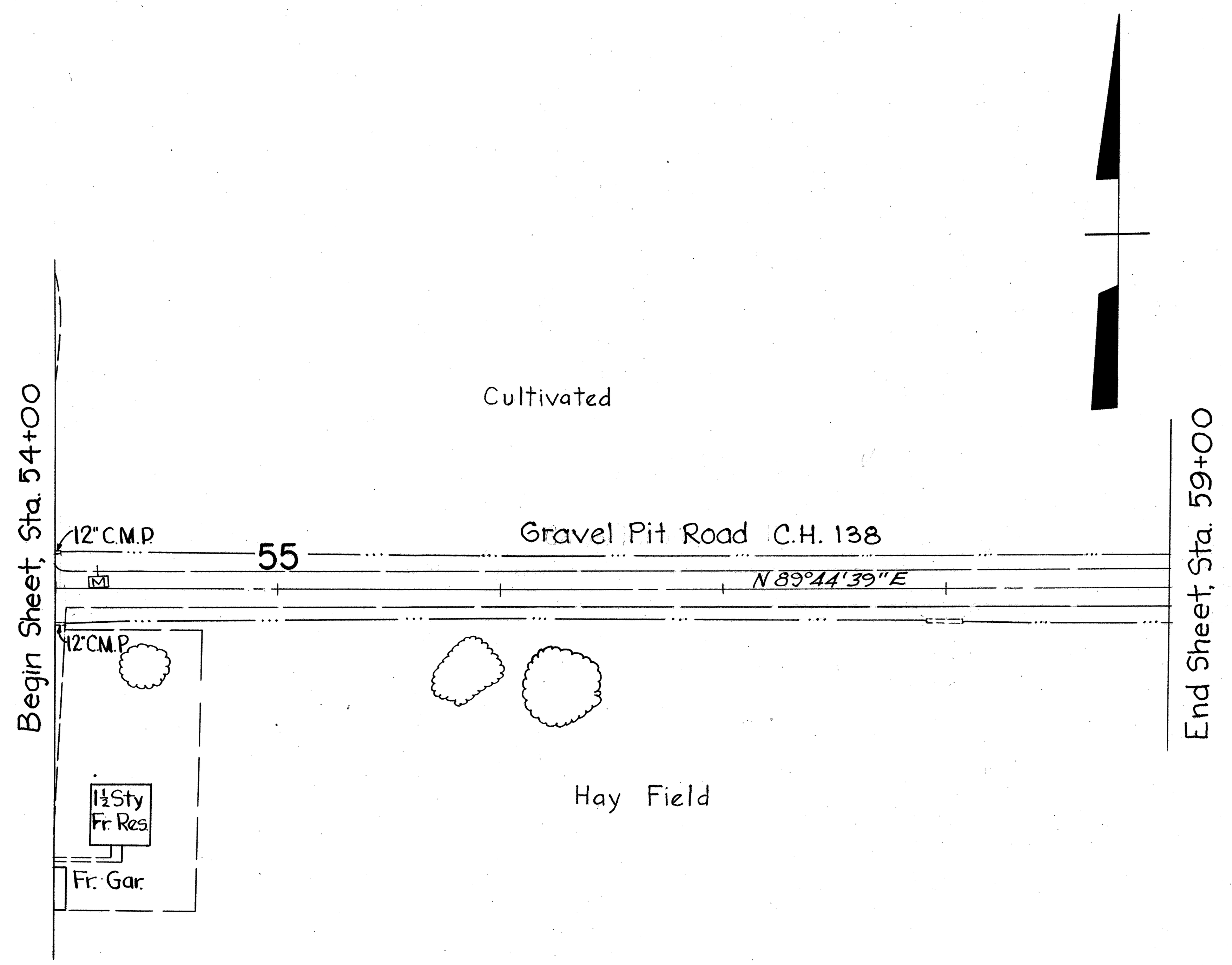


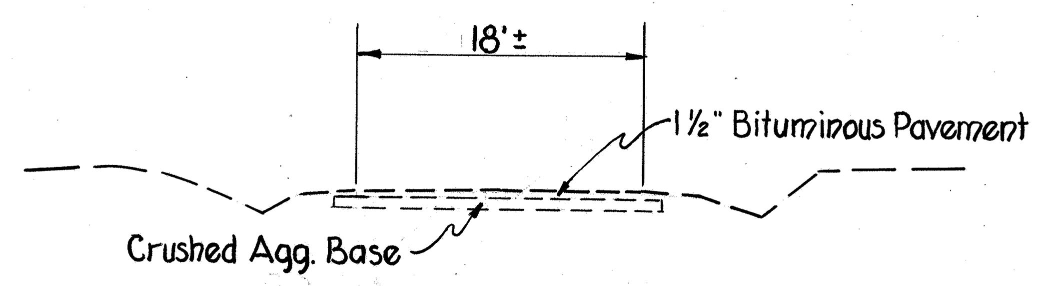


BRIDGE No. MED-42-2321
TYPE: Continuous steel beam with reinf. conc. deck & substr.
SPANS: 58'-4", 83'-1", 92'-0", 62'-0"
SKEW: 10° 55' to local tangent (R.F.)
WEARING SURFACE: ¾" monolithic concrete
ROADWAY: 24'-0" face to face of 2'-3" safety curbs.
LOAD FREQUENCY: CF=130 (57)
APPROACH SLABS: AS-1-54 (25' long)
ALIGNMENT: Tangent

ESTIMATED QUANTITIES

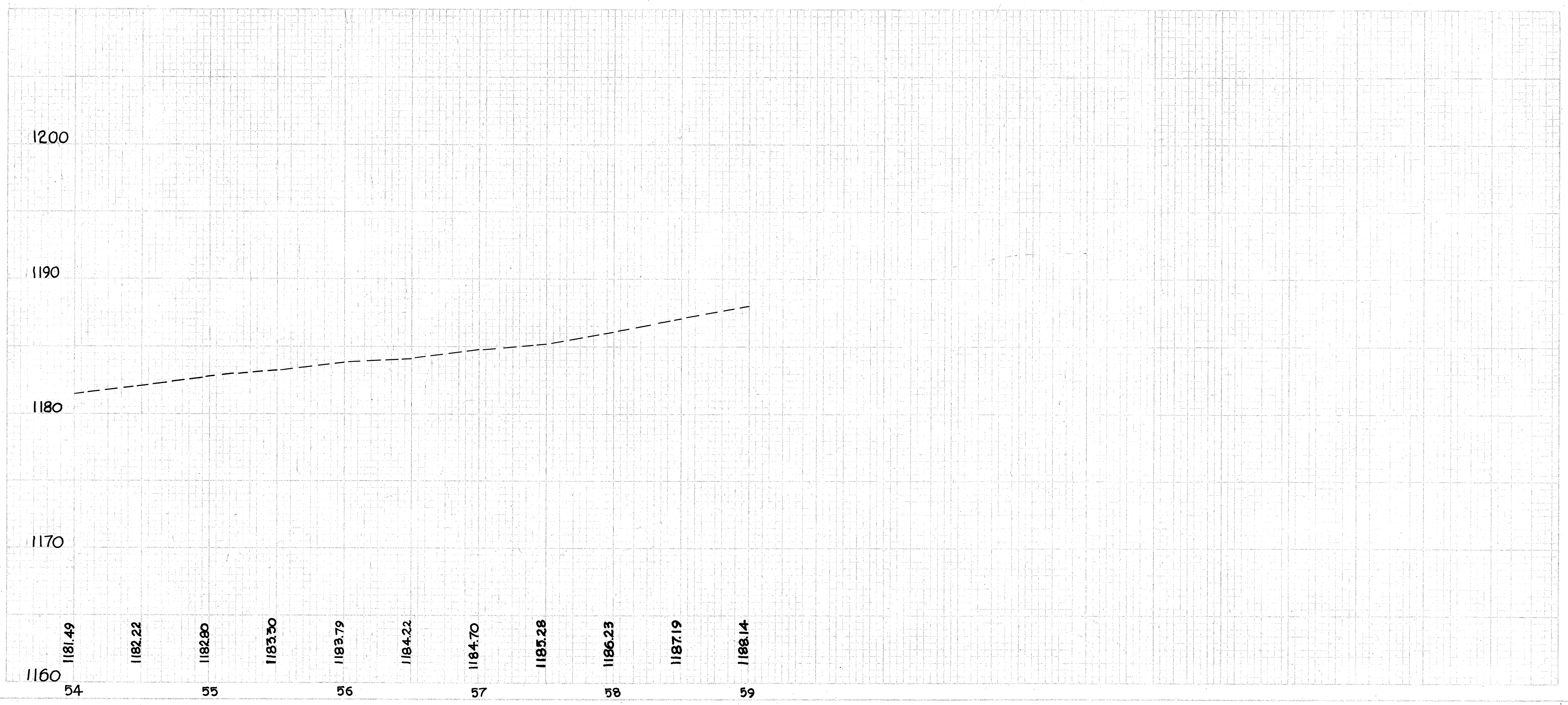
REF. NO.	STATION TO STATION	SIDE	I-1 15" Class F-1 (Lin. Ft.)	I-7 Reinf. Conc. Approach Slab T=13" (Sq. Yd.)	I-15 Guard Rail (Lin. Ft.)	I-124 12" New Water (Lin. Ft.)	L-10 Sodding for Spec. Berm & Slope Prot. (Sq. Yd.)	E-12 Pipe Removal 15" & Under (Lin. Ft.)	E-12 Pipe Removal Over 15" (Lin. Ft.)	B-19 Crushed Aggregate Base 5" (Cu. Yd.)	B-19 Crushed Aggregate Base 8" (Cu. Yd.)	T-35 Type C Asphaltic Concrete 2-1" Courses (Cu. Yd.)	SEE SHEET NO.
1-D	52+71 to 53+15	Lt.	44					21					
2-D	44+66	℄							31				
3-D	48+38 - 48+55	Lt.						17					
4-D	48+40	Lt.					28						
5-D	48+40	Rt.					25						
6-D	48+04 to 52+17	Rt.				416							
1-R	45+40 to 48+40	Lt.			300								
2-R	46+46 to 48+46	Rt.			200								
3-R	51+55 to 52+30	Lt.			75								
1-P	48+31 to 48+56	—		79.2									
2-P	51+56 to 51+81	—		79.2									
1-A	52+92	Lt.								13.2	8.5	2.6	
	TOTAL		44	158.4	575	416	53	38	31	13.2	8.5	2.6	





TYPICAL SECTION
ADJOINING PAVEMENT
GRAVEL PIT ROAD (CH 138)

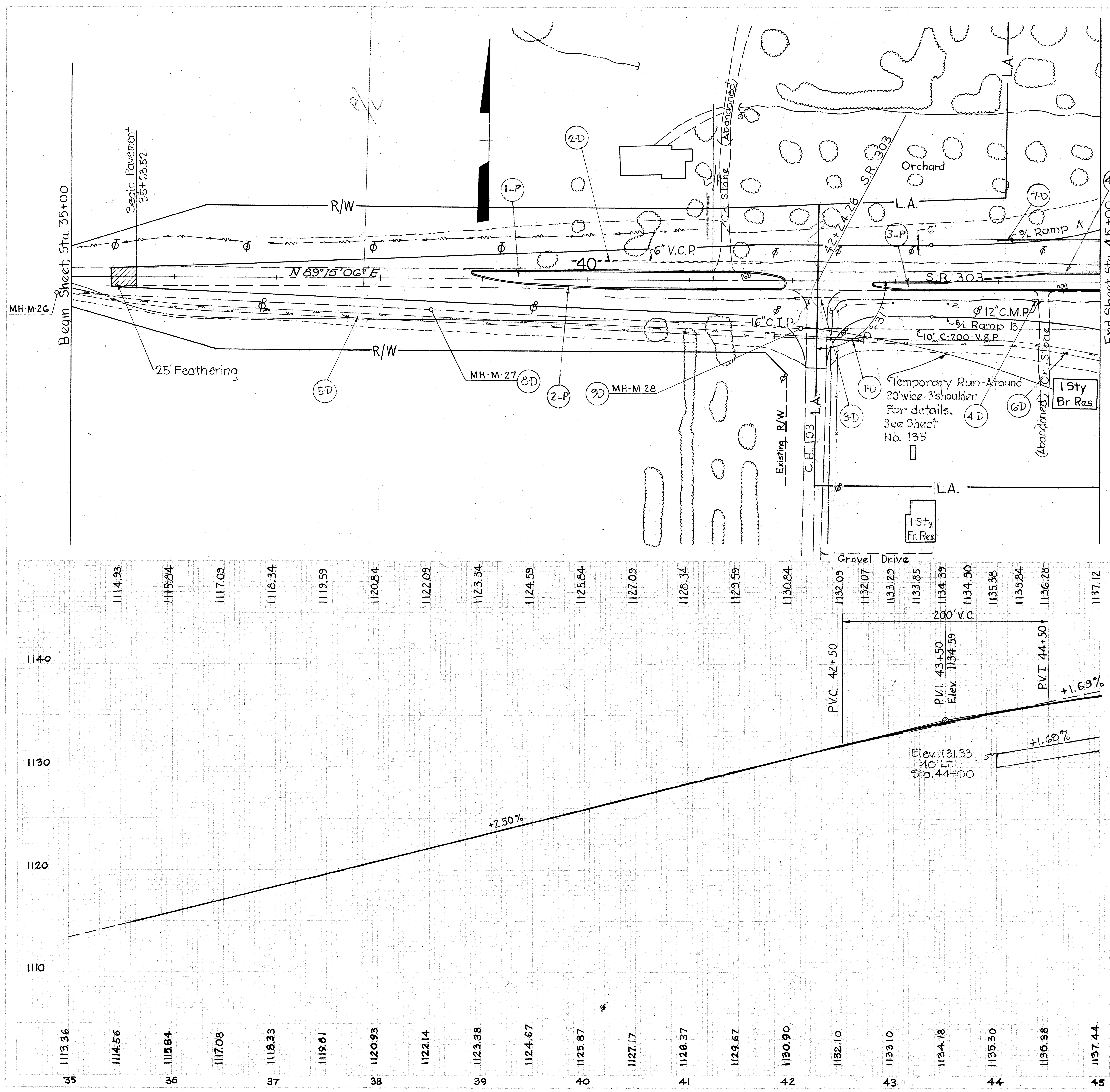
Sta. 40+00 Bk.
Sta. 54+00 Ahd.



MEDINA COUNTY
MED-42-21.94

MEDINA COUNTY
MED-42-21.94

GRAVEL PIT RD.-C.H.138 Sta. 52+00 to 59+00



Note:
* 77 Lin. Ft. 100 % State Participation; 561 Lin. Ft. Federal Participation
o 40 Sq. Yds. 100 % State Participation
302 Lin. Ft. 100 % State Participation; 156 Lin. Ft. Federal Participation

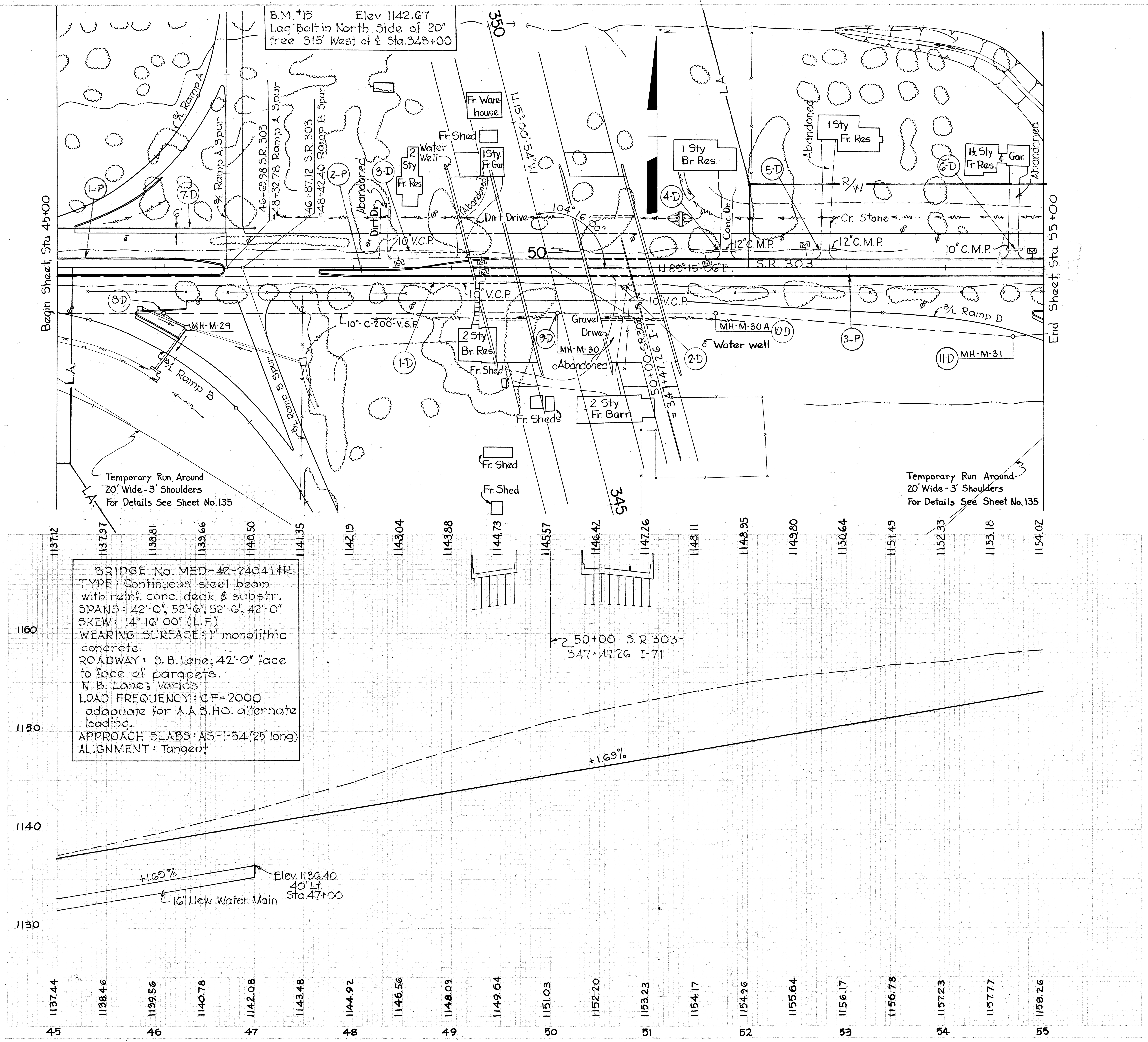
Revised R.E.C. 11-27-62

ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	I-1 Cl. F-1 Pipe 30" Lin. Ft.	L-10 Sodding Sq. Yd.	E-12 Pipe Removed 15" & Under Lin. Ft.	E-12 Pipe Removed Over 15" Lin. Ft.	I-124 16" New Water Main Lin. Ft.	I-8 M.H. Adjust. to Grade Each	I-12 Conc. Curb Type 6 Lin. Ft.	I-21 P.C. Conc. Med. Pave. 4" Type I Sq. Yds.	SEE SHEET NO.
1-D	41+82 to 42+64	Rt.	82								
2-D	39+85 to 40+70	Lt.			85						
3-D	42+04 to 42+48	Rt.				44					
4-D	44+32 to 42+53	Rt.			21						
5-D	35+10 to 41+82	Rt.		373							
6-D	42+64 to 45+00	Rt.		131							
7-D	43+98 to 45+00	Lt.					102				
8-D	38+50	Rt.						1			
9-D	42+08	Rt.						1			
1-P	38+85 to 38+92									7	
2-P	38+85 to 41+99								*638		
3-P	42+75 to 43+43									o40	
4-P	42+75 to 45+00								#458		
TOTAL			82	504	106	44	102	2	1,096	47	

MEDINA COUNTY
MED - 42-21.94

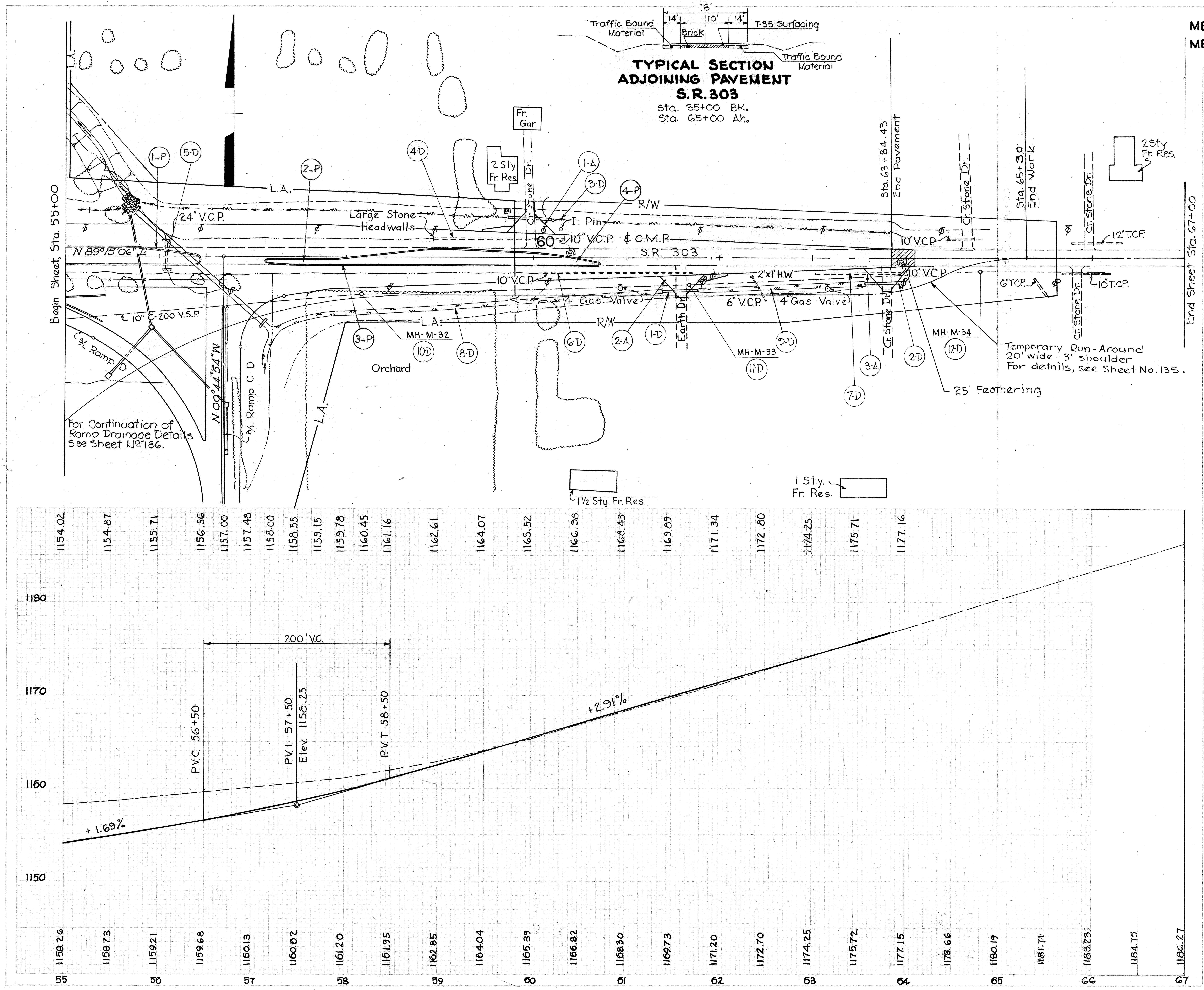
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		



Revised R.E.C. 11-27-62

ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	E-12 Pipe Removed 15" & Under (Lin. Ft.)	I-124 New Water Main 16" (Lin. Ft.)	I-8 M.H. Adjust. to Grade (Each)	I-12 Conc. Curb Type 6 (Lin. Ft.)	I-21 P.C. Conc. Med. Pave. 4" Type I (Sq. Yds.)	SEE SHEET NO.
1-D	48+62 to 49+55	Rt.	93					
2-D	50+63 to 50+83	Rt.	20					
3-D	48+21 to 49+15	Lt.	94					
4-D	51+67 to 51+85	Lt.	18					
5-D	52+65 to 52+89	Lt.	24					
6-D	54+64 to 52+80	Lt.	16					
7-D	45+00 to 47+02	Lt.		202				
8-D	46+05	Rt.			1			
9-D	50+08	Rt.			1			
10-D	51+68	Rt.			1			
11-D	54+68	Rt.			1			
1-P	45+00 to 46+70					346		
2-P	47+69 to 48+35						40	
3-P	47+69 to 55+00					1,472		
TOTAL			265	202	4	1,818	40	



Revised R.E.C. 11-27-62

ESTIMATED QUANTITIES

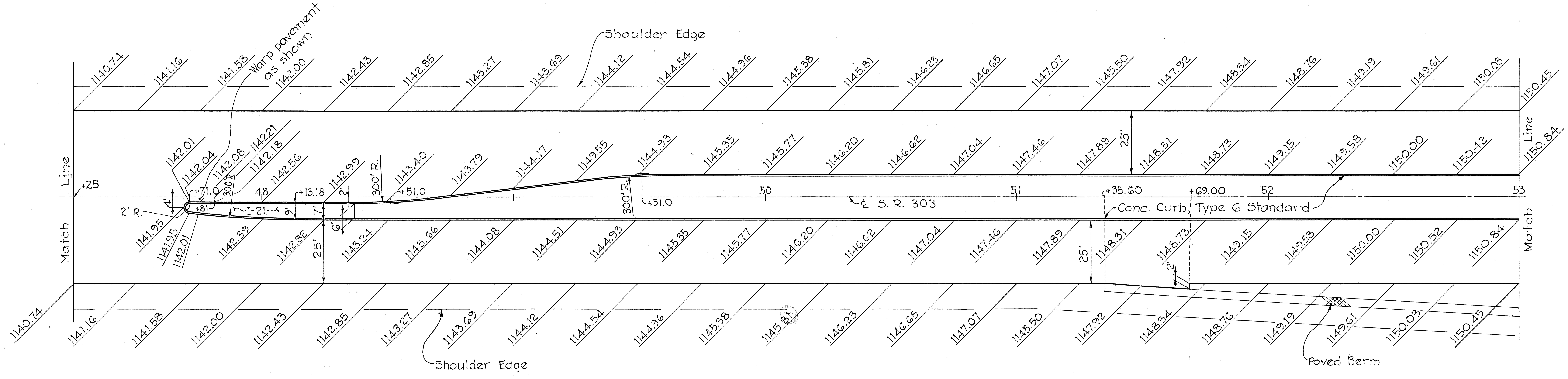
REF. NO.	STATION TO STATION	SIDE	I-1 Class F-1 Pipe 12"	I-1 Class F-1 Pipe 15"	L-10 Sodding	E-12 Pipe Removed 15" & Under	E-12 Pipe Removed Over 15"	B-19 Crushed Aggregate Base 5"	B-19 Crushed Aggregate Base 8"	T-35 Type C Asphaltic Concrete 2-1" Courses	I-8 M.H. Adjust to Grade	I-12 Conc. Curb Type 6	I-21 P.C. Conc. Med. Pave. 4" Type I	SEE SHEET NO.
			Lin. Ft.	Lin. Ft.	Sq. Yd.	Lin. Ft.	Lin. Ft.	Cu. Yd.	Cu. Yd.	Cu. Yd.	Each	Lin. Ft.	Sq. Yds.	
1-D	61+38 to 61+76	Rt.		38										
2-D	63+56 to 63+98	Rt.	42											
3-D	59+73 to 60+19	Lt.		46										
4-D	58+95 to 60+35	Lt.				140								
5-D	56+07						38							
6-D	60+10 to 61+70	Rt.				160								
7-D	63+03 to 63+95	Rt.				92								
8-D	58+00 to 61+38	Rt.			188									
9-D	61+76 to 63+56	Rt.			100									
1-A	58+98	Lt.						11.1	3.5	2.18				
2-A	61+58	Rt.						11.1	2.0	2.18				
3-A	63+80	Rt.						11.1	2.0	2.18				
10-D	58+15	Rt.									1			
11-D	61+68	Rt.									1			
12-D	64+79	Rt.									1			
1-P	55+00 to 56+45											303		
2-P	57+20 to 57+87												40	
3-P	57+20 to 60+62											695		
4-P	60+48 to 60+62												7	
	TOTAL		42	84	288	392	38	33.3	7.5	6.54	3	998	47	

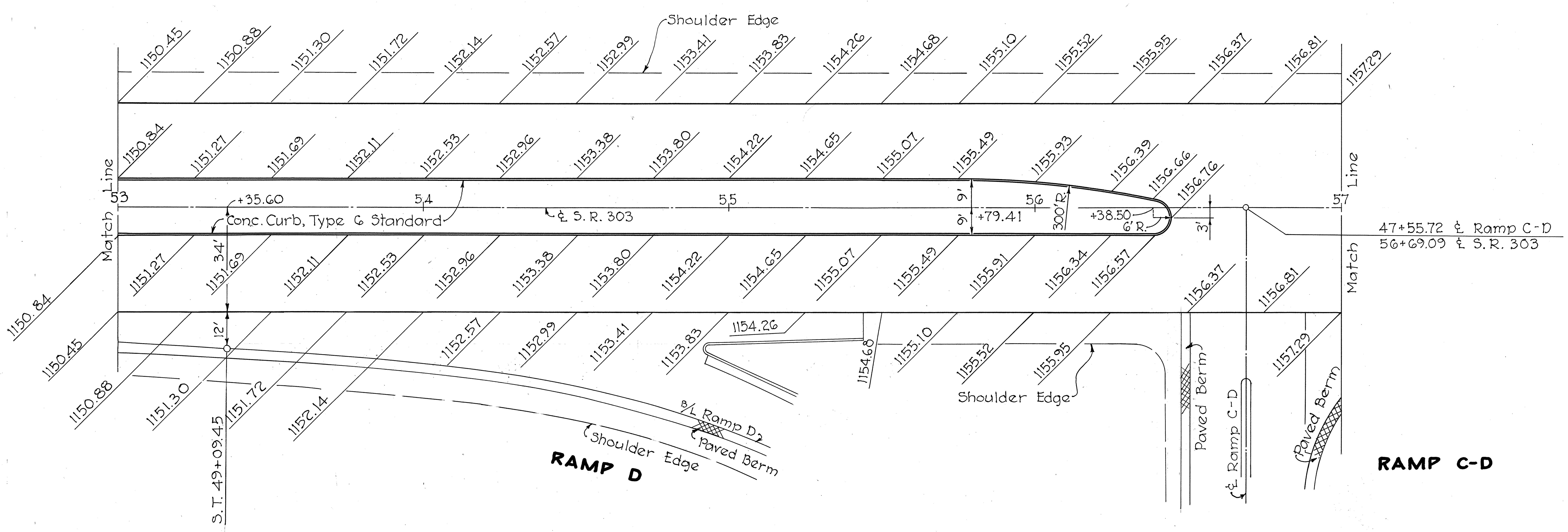
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

MEDINA COUNTY
MED-42-21.94

FED. RD. DIVISION	STATE	PROJECT		
2	OHIO			

MEDINA COUNTY
MED- 42-21.94





FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

MEDINA COUNTY
MED-42-21.94

CURVE DATA

①②⑥⑦

① P.I. Sta. 0+46.17
② P.I. Sta. 1+36.93
⑥ P.I. Sta. 31+08.04
⑦ P.I. Sta. 31+98.79
Δ = 26°-00'-00"
D = 28°-38'-52"
R = 200.00'
L = 90.76'
T = 46.17

③

③ P.I. Sta. 9+35.34
Δ = 32°-00'-00"
D = 6°-00'-00"
R = 954.93'
L = 533.33'
T = 273.82'

④

④ P.I. Sta. 18+02.97
Δ = 74°-00'-00"
D = 10°-00'-00"
R = 572.96'
L = 740.00
T = 431.76'

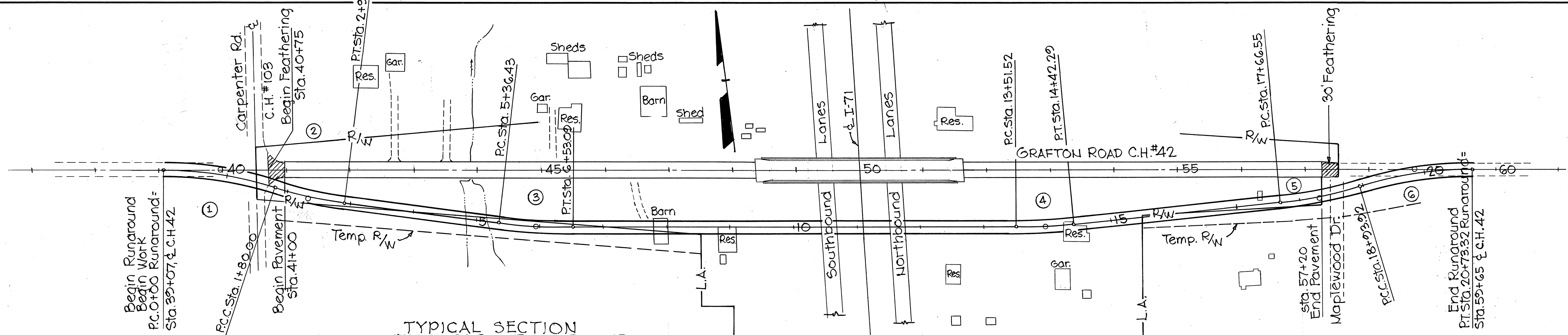
⑤

⑤ P.I. Sta. 23+77.92
Δ = 42°-00'-00"
D = 10°-00'-00"
R = 572.96'
L = 420.00'
T = 219.94'

TYPICAL SECTION
TEMPORARY RUNAROUND
⑧ Class "B" Pavement (Item S-15)

ESTIMATED QUANTITIES
Item S-15 Temporary Runaround Road, using Class B pavement, as per plan ------ Lump Sum.
NOTE: See NOTE below for drainage structure payment.

RUNAROUND AT S. R. 303



TYPICAL SECTION
TEMPORARY RUNAROUND
Same as shown for S.R. 303

CURVE DATA

① ⑥
① P.I. Sta. 0+90.75
⑥ P.I. Sta. 19+84.07
Δ = 18°-00'-00"
D = 10°-00'-00"
R = 572.96'
T = 180.00'
L = 90.75

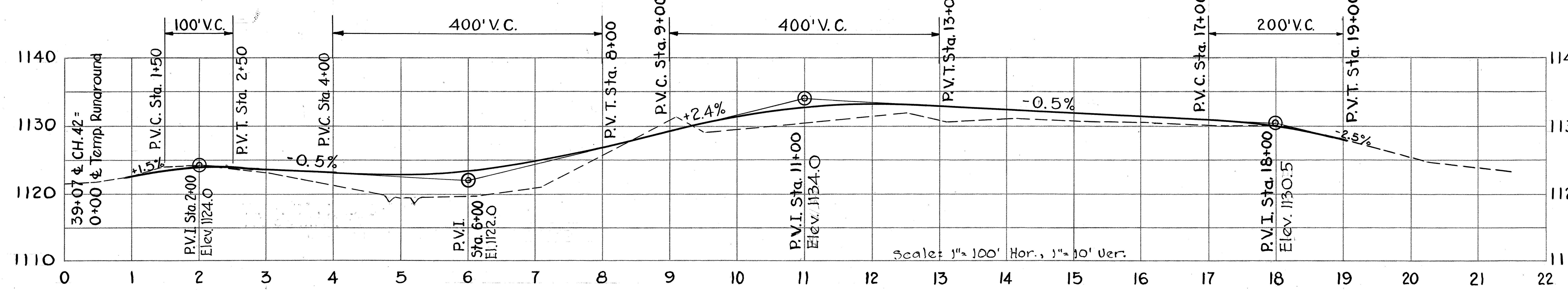
②
P.I. Sta. 2+35.17
Δ = 11°-00'-00"
D = 10°-00'-00"
R = 572.96'
L = 110.00'
T = 55.17'

③
P.I. Sta. 5+94.83
Δ = 7°-00'-00"
D = 6°-00'-00"
R = 954.93'
L = 116.67'
T = 58.41'

④
P.I. Sta. 13+96.94
Δ = 5°-26'-45"
D = 6°-00'-00"
R = 954.93'
L = 90.77'
T = 45.42'

⑤
P.I. Sta. 18+29.58
Δ = 12°-33'-15"
D = 10°-00'-00"
R = 572.96'
L = 125.54'
T = 63.02'

ESTIMATED QUANTITIES
Item S-15 Temporary Runaround Road, using Class B Pavement, as per plan ---- Lump Sum.



NOTE: Provide ditches as required to permit normal drainage. Payment for construction, maintenance, and subsequent removal of temporary drainage structures, where required, is included in the Lump Sum bid for Item S-15 Runaround.

RUNAROUND AT C. H. 42

TEMPORARY RUNAROUNDS

MEDINA COUNTY
MED-42-21.94

	Sta. 39+00		Sta. 38+00		Sta. 37+00		Sta. 36+00		Sta. 35+00
Cu. Yds. Fill	7	19		37		67		27	
Cu. Yds. Cut	770	551		418		311		82	
End Area Fill	3		6		13		23		0
End Area Cut	171		126		97		71		0
Seeding Sq. Yds.	845	816		795		142		142	
Seeding End Width	78		74		73		70		0

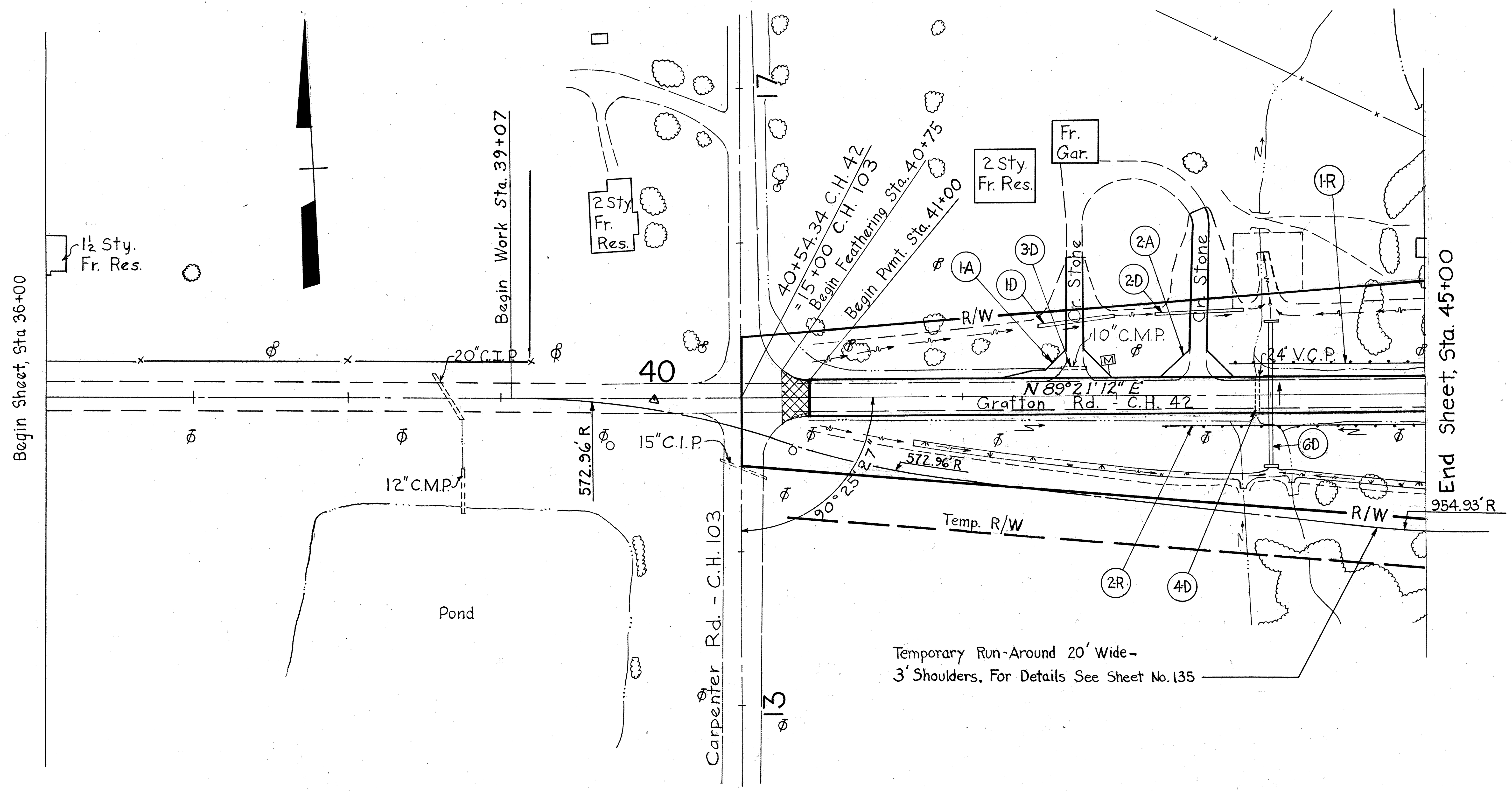
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

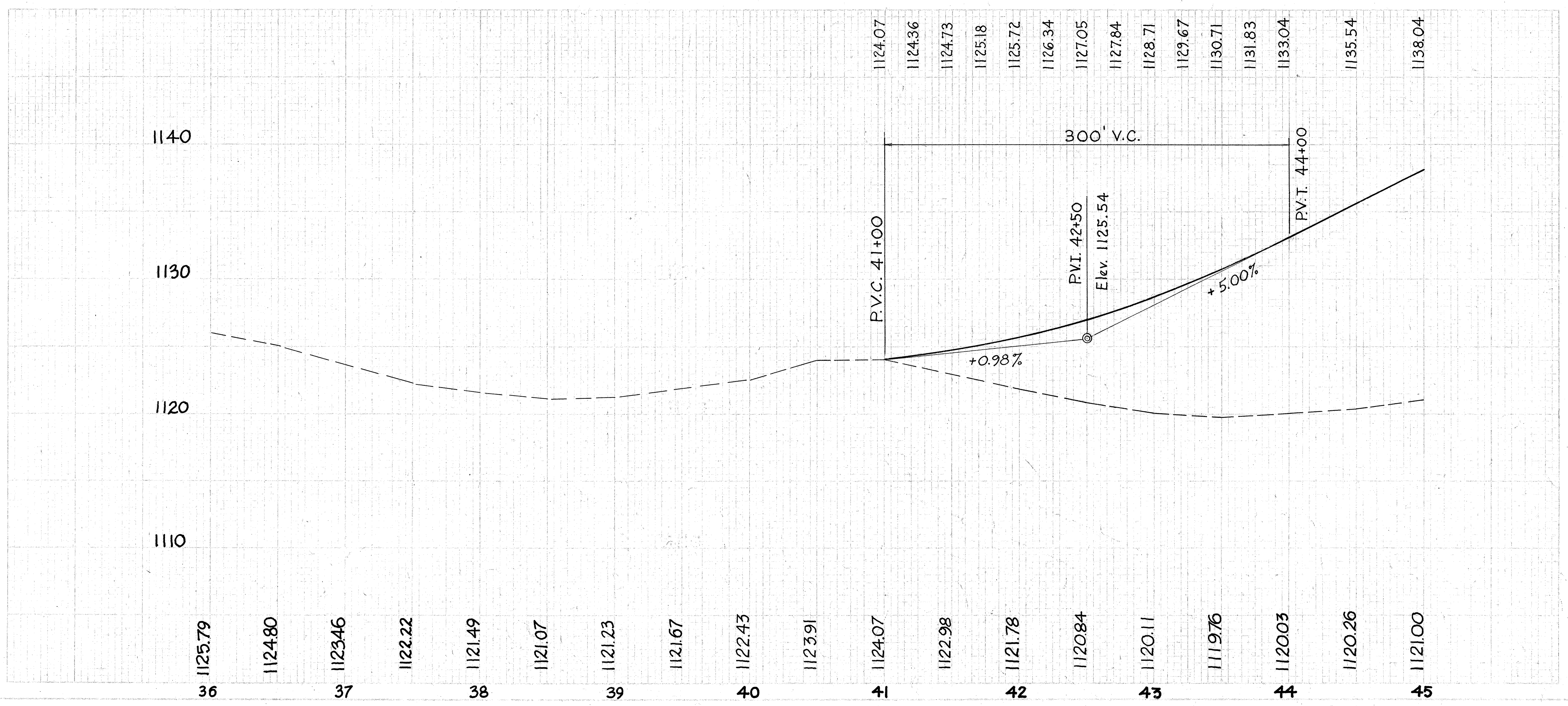
MEDINA COUNTY
MED-42-21.94

MEDINA COUNTY
MED-42-21.94

Station	End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill	Seeding Sq. Yds.	Seeding End Width
61+00	116	2	415	15	826	76
			492	8	855	
60+00	150	2	651	4	855	78
59+00	202	0	858	0	845	76
58+00	262	0	950	0	634	76
57+00	252	0	836	37	467	38
56+00	200	20	1278	37	478	46
55+00	489	0	1890	0	478	40
54+00	531	0	2030	0	790	46
53+00 (SR 303 Ahd.)	566	0				
53+00 (Ramp D)	256	68				
53+00 (SR 303 Bk.)	822	68	3020	141	1045	96
52+00	807	7				92

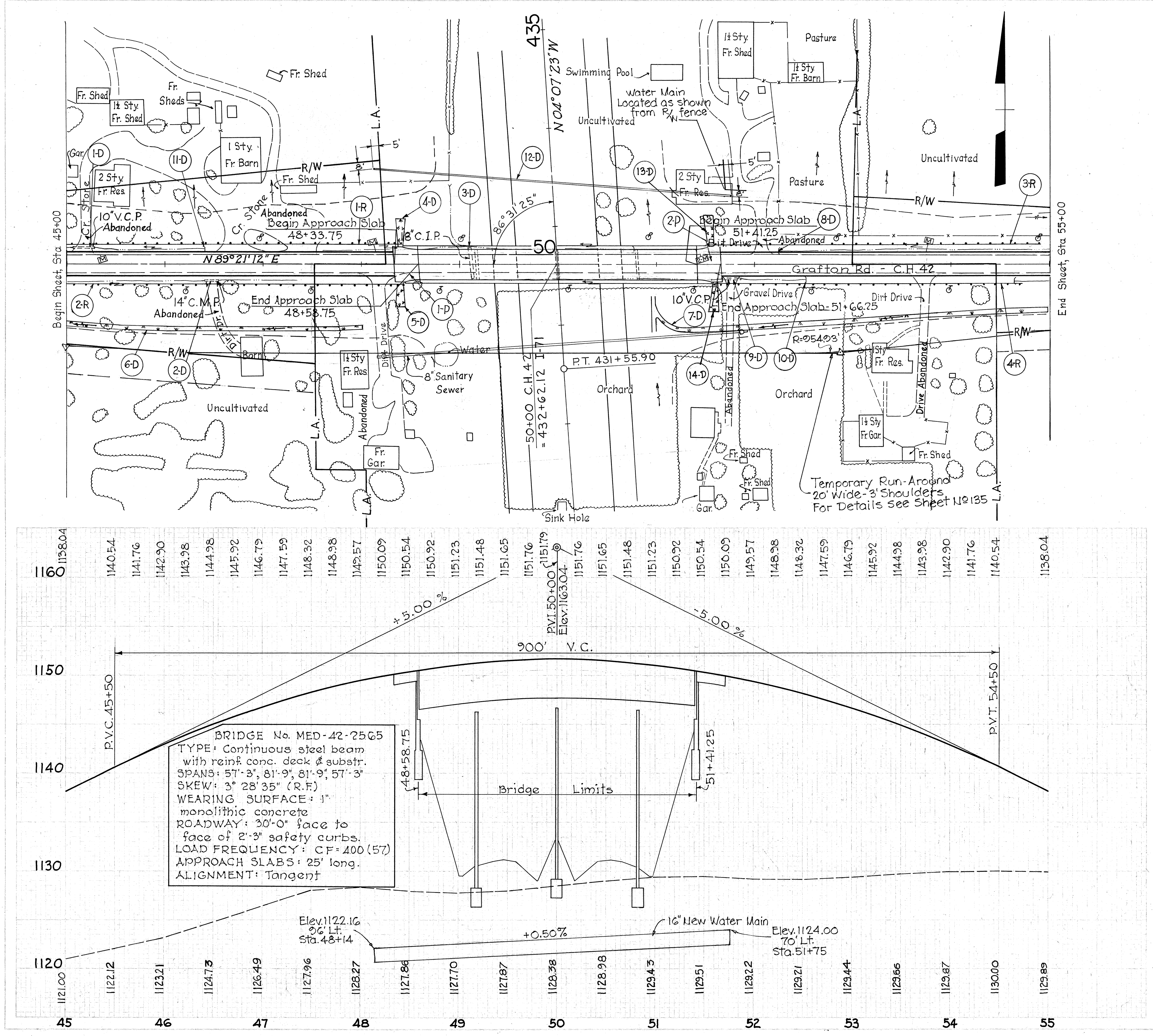
MEDINA COUNTY
MED-42-21.94





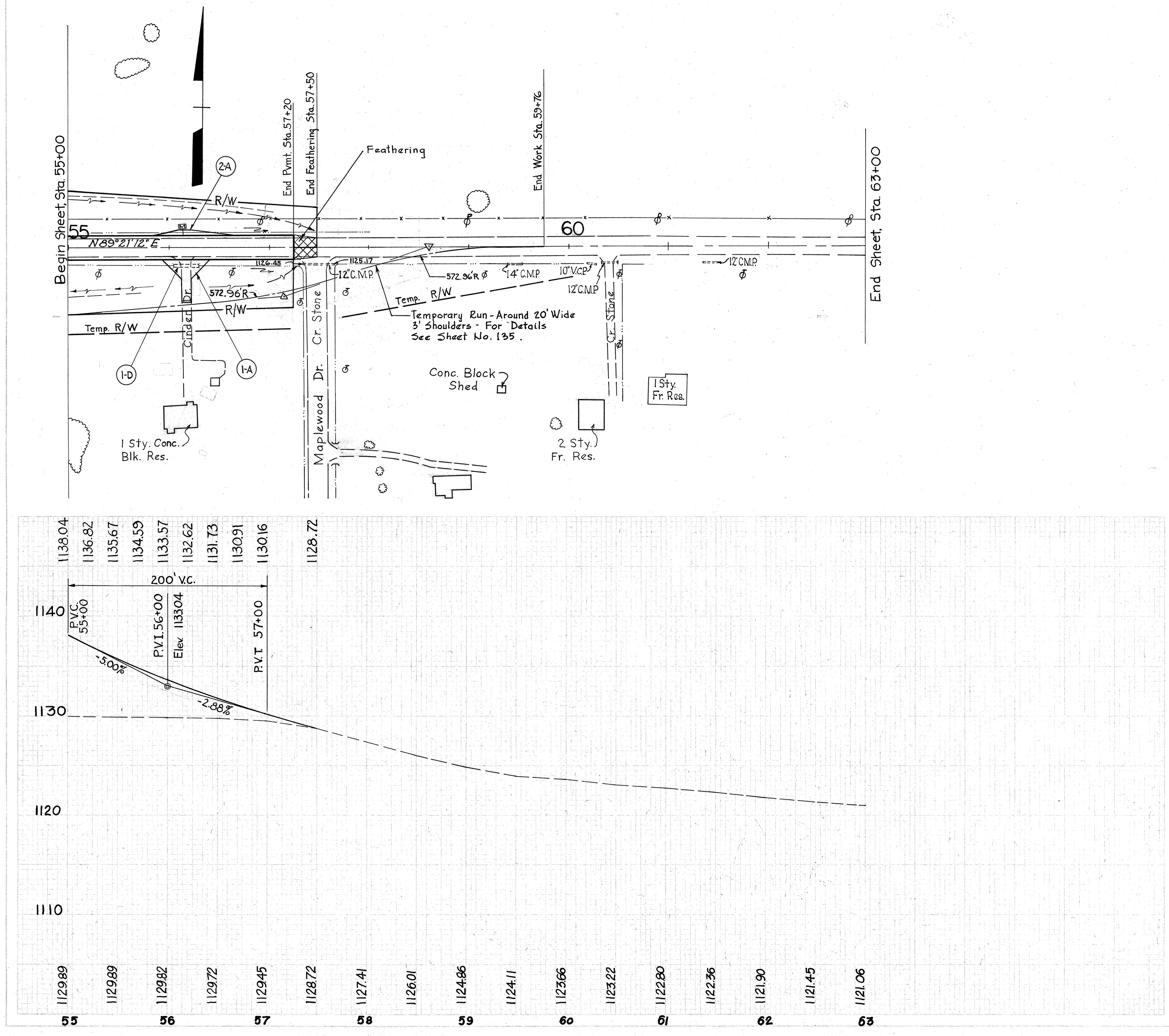
ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	I-1 C1 F-1 15" Lin. Ft.	I-1 C1. A-1 Sec. M 6.6(b) 6.4(d) Lin. Ft.	I-2 Masonry SP 53 Endwall Cu. Yd.	I-15 Guard Rail Lin. Ft.	L-10 Sodding Sq. Yd.	E-12 Pipe Removed 15" & Under Lin. Ft.	E-12 Pipe Removed Over 15" Lin. Ft.	B-19 Crushed Aggregate Base 5" Cu. Yd.	B-19 Crushed Aggregate Base 8" Cu. Yd.		T-35 Type C Asph. Conc. Pave. C.Y.	SEE SHEET NO.
1-D	42+50 to 43+00	Lt.	50											
2-D	43+27 to 43+83	Lt.	58											
3-D	42+65 to 42+82	Lt.						17						
4-D	42+92	Lt.							22					
5-D	41+65 to 45+00	Rt.					233							
6-D	44+00	℄		94	1.52		6							
1-R	43+38.5 to 45+00	Lt.				121.5								
2-R	43+31.5 to 45+00	Rt.				168.5								
1-A	42+70	Lt.								11.1	14.3		2.18	
2-A	43+60	Lt.								9.4	22.2		1.85	
	TOTAL		108	94	1.52	290	239	17	22	20.5	36.5		4.03	



ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	I-7 t=13" Reinf. Conc. Appro. Slab (Sq.Yd.)	L-10 Sodd'g (Sq.Yd.)	L-10 Sodd'g for Spec. Berm & Slope Protect. (Sq.Yd.)	I-15 Guard Rail (Lin.Ft.)	I-124 New Water Main 16" (Lin.Ft.)	E-12 Pipe Removed 15" & Under (Lin.Ft.)	E-12 Pipe Removed over 15" (Lin.Ft.)	SEE SHEET NO.
1-D	45+06 to 45+28	Lt.						22		
2-D	46+41 to 46+56	Rt.						15		
3-D	49+09	℄							30.5	
4-D	48+40	Lt.			24					
5-D	48+40	Rt.			24					
6-D	51+00 to 55+00	Rt.		200						
7-D	45+00 to 48+00	Rt.		267						
8-D	50+80 to 52+28	Lt.							148	
9-D	51+67 to 51+85	Rt.						18		
10-D	52+52 to 54+64	Rt.							212	
11-D	46+40 to 47+60	Lt.						120		
12-D	48+14 to 51+78	Lt.					368			
13-D	51+59	Lt.			24					
14-D	51+59	Rt.			24					
1-R	45+00 to 48+41	Lt.				341				
2-R	45+00 to 48+44	Rt.				344				
3-R	51+53 to 54+90.5	Lt.				337.5				
4-R	51+57 to 54+69.5	Rt.				312.5				
1-P	48+35 to 48+60		93.1							
2-P	51+35 to 51+60		93.1							
	TOTAL		186.2	467	96	1335	368	175	390.5	



ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	E-12 Pipe Removed 15" & Under Lin. Ft.	B-19 Crushed Aggregate Base 5" Cu. Yd.	B-19 Crushed Aggregate Base 8" Cu. Yd.	T-35 Type C Asphaltic Concrete Pave. Cu. Yd.	SEE SHEET NO.
1-D	56+04 to 56+29	Rt.	25				
1-A	56+16	Rt.		9.4	8.7	1.85	
2-A	56+16	Lt.		4.3		0.85	
	TOTAL		25	13.7	8.7	2.70	

2 OHIO

MEDINA COUNTY
MED-42-21.94

2 OHIO

MEDINA COUNTY
MED-42-21.94

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

145
293

Med-42-21.94

REST AREAS GENERAL NOTES

REST AREA TREE PROTECTION

AREAS OTHER THAN THE PARKING LOTS, SHALL NOT BE USED FOR STORAGE OF MATERIALS, PARKING OF EQUIPMENT, OR VEHICLES OR FOR THE LOCATION OF CONSTRUCTION BUILDINGS OF ANY KIND DURING CONSTRUCTION. EQUIPMENT SHALL NOT BE OPERATED OVER TREE ROOT AREAS WHEN THE GROUND IS SOFT THEREBY AVOIDING DEEP RUTTING, SOIL COMPACTION AND DESTRUCTION OF ROOT SYSTEMS. TREES THAT ARE TO BE REMOVED WILL BE MARKED. ALL OTHERS SHALL BE SAVED. TREES TO BE SAVED THAT ARE DAMAGED BEYOND REPAIR BY DESTRUCTION OF MORE THAN 50 PER CENT OF ROOT AREAS OR 30 PER CENT OF THE CIRCUMFERENCE OF BARK AREAS ON INDIVIDUAL TREES SHALL BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE. REPLACEMENTS SHALL BE IN QUANTITY SUFFICIENT TO COMPENSATE FOR SHADED AREAS LOST AND SHALL BE COMPLETED AS PER L-16 WITH THE CONTRACTOR FURNISHING AND PLANTING TREES OF THE SIZE AND VARIETY DIRECTED BY THE ENGINEER.
IN LIEU OF "BOXING FOR TREE PROTECTION AS REQUIRED BY G-7, E-1 AND STANDARD DRAWING L-1, SNOW FENCE SHALL BE USED TO PROHIBIT ACCESS TO TREE ROOT AREAS OF INDIVIDULE TREES AND TREE GROUPS. THE ROOT AREAS ARE EQUAL IN SIZE TO THE SPREAD OF THE TREE BRANCHES.

ITEM SPECIAL

PARK TABLES, ROADSIDE TOILET AND STORAGE UNIT, CHARCOAL GRILL AND SERVING TABLE SHALL INCLUDE ALL EXCAVATION AND BACK-FILL, FURNISHING, HAULING AND PLACING ALL MATERIALS AND ALL LABOR, EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THE ITEMS AS DETAILED ON THE PLAN OR AS SHOWN ON THE PERTINENT STANDARD CONSTRUCTION DRAWINGS AND GENERAL NOTES.
THEY SHALL BE PLACED AT LOCATIONS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

TOPSOIL FOR "L" ITEMS

THIS SHALL BE OBTAINED FROM STOCKPILES PROVIDED BY L-1, L-12 AND ITEMS L-13: AREAS INDICATED ON THE PLANS FOR THESE ITEMS SHALL BE PREPARED AS PLANTING BEDS, EXCAVATED TO A DEPTH OF 12 INCHES AND BACK-FILLED WITH A MIXTURE OF 1/3 TOPSOIL, 1/3 SAND AND 1/3 PEAT MOSS. THIS MIXTURE SHALL BE USED FOR L-14 AND L-16 ITEMS ALSO. PAYMENT FOR ALL OF THE ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEMS L-12, L-13, and L-14 RESPECTIVELY.

ITEM E-9 REMOVAL OF TREES AND STUMPS IN REST AREAS

TREES, STUMPS AND CLUMPS OF BRUSH THAT ARE MARKED ARE TO BE REMOVED. WITHIN THE REST AREAS ONLY THOSE TREES INDICATED BY THE ENGINEER SHALL BE REMOVED. CARE SHALL BE EXERCISED BY THE CONTRACTOR IN PERFORMACE OF THIS WORK SO THAT NO DAMAGE IS DONE TO TREES INDICATED BY THE ENGINEER TO BE SAVED.

CLEARING AND GRUBBING SHALL BE DONE IN ACCORDANCE WITH SECTION E-1.03 EXCEPT IN AREAS WHERE TREES OR STUMPS ARE TO BE REMOVED WITHIN THE TREE ROOT AREAS OF TREES THAT ARE TO REMAIN. IN SUCH AREAS REMOVAL SHALL BE BY CUTTING TO A MINIMUM DEPTH OF 8 INCHES BELOW FINISH GRADE WITH A STUMP CHIPPER OR SIMILAR EQUIPMENT.

THE LUMP SUM BID FOR ITEM E-9, REMOVAL OF TREES AND STUMPS SHALL CONSTITUTE FULL PAYMENT FOR THIS ITEM.

ITEM L-17 PRUNING EXISTING TREES

ALL TREES WITHIN THE REST AREAS THAT ARE INDICATED TO BE SAVED BY THE ENGINEER SHALL BE PRUNED IN ACCORDANCE WITH ITEM L-17 AND IN ADDITION TO L-17 REQUIREMENTS, LOW LIMBS SHALL BE REMOVED TO OBTAIN SEVEN FOOT CLEARANCE ABOVE THE GROUND AS DIRECTED. THE NUMBER AND SIZE OF TREES TO BE PRUNED MAY BE ESTIMATED FROM INFORMATION SHOWN RELATIVE TO EXISTING TREES AND THE PERCENTAGE TO BE REMOVED.

THE STATE WILL NOT BE RESPONSIBLE FOR ANY VARIATIONS FOUND DURING CONSTRUCTION.
THE LUMP SUM BID FOR ITEM L-17, PRUNING EXISTING TREES SHALL CONSTITUTE FULL PAYMENT FOR THIS ITEM AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

ITEM L-9 SEEDING AND PROTECTING REST AREAS

THE SEED BED SHALL BE PREPARED TO PROVIDE A SMOOTH SURFACE FOR A GOOD LAWN. FINE GRADING IS TO ELIMINATE HUMPS OR DEPRESSIONS THAT WOULD INTERFERE WITH MOWING WITH A 24 INCH MOWER. ALL STONE AND DEBRIS LARGER THAN 1 INCH IN DIAMETER SHALL BE REMOVED FROM THE SURFACE AND THE AREAS SHALL BE LOOSENED TO A DEPTH OF 2 INCHES BEFORE SEEDING.

TOP SOIL SALVAGED AS PER L-1 SHALL BE USED IN FINISH GRADING OVER THE TREE ROOT AREAS TO AVOID DAMAGE BY GRADING OR TILLAGE EQUIPMENT. IT SHALL BE USED AS DIRECTED TO FILL DEPRESSIONS TO OBTAIN EXTRA SMOOTH FINE GRADING AND TO PROVIDE A MINIMUM DEPTH OF 3 INCHES OF TOPSOIL FOR THE REST AREA LAWNS. WHERE IT IS NOT NECESSARY TO CHANGE GRADES, TOPSOIL PLACEMENT WILL NOT BE REQUIRED. PLACING TOPSOIL WILL BE PAID FOR UNDER ITEM L-3

THE SEED MIXTURE SHALL BE AS FOLLOWS: 35% Creeping Red Fescue
35% Meadow Fescue
15% Ky. Bluegrass
15% Reed Canarygrass

ITEM L-3 PLACING STOCKPILED TOPSOIL

THE TOPSOIL SHALL BE PLACED TO A DEPTH OF 3 INCHES ON ALL AREAS WHERE GRADING IS REQUIRED IN REST AREAS AS SHOWN ON THE CROSS SECTIONS AND BY THE CONTOUR ON THE PLANS.
IT SHALL BE PLACED AT VARIABLE DEPTHS NECESSARY TO OBTAIN SMOOTH GRADES OVER THE TREE ROOT AREAS AND AREAS WHERE TREES, STUMPS, BOULDERS AND STONE PILES ARE REMOVED. MAXIMUM DEPTH OVER TREE ROOT AREAS SHALL BE 3 INCHES. FERTILIZER FOR THIS ITEM IS INCLUDED IN L-9 QUANTITIES.

ITEM L-6 ROADSIDE CLEANUP MODIFIED

THIS ITEM IS ESTIMATED FOR PERFORMANCE ON ALL EARTH AREAS OUTSIDE THE EXCAVATED OR FILLED AREAS WITHIN THE REST AREAS AS DIRECTED. TREE PRUNING AND REMOVAL OF TREES AND STUMPS WILL BE DONE UNDER OTHER ITEMS. IN ADDITION TO THE SPECIFIED REQUIREMENTS OF L-6 THE FOLLOWING WORK SHALL BE PERFORMED. AREAS OUTSIDE THE TREE ROOT AREAS SHALL BE FITTED AND GRADED TO OBTAIN DRAINAGE AWAY FROM ALL STRUCTURES AND TO PREVENT PONDING AT ANY POINT. ALL ROUGH UNEVEN AREAS INCLUDING FENCE ROWS SHALL BE GRADED TO ELIMINATE HUMPS OR DEPRESSIONS THAT WOULD INTERFERE WITH A 24 INCH MOWER. FENCE SHALL BE REMOVED FROM TREES AND THE TREE TRUNKS REPAIRED. BOULDERS SHALL BE REMOVED AND DISPOSED OF OR BURIED TO A MINIMUM DEPTH OF 2 FEET. STONE PILES SHALL BE REMOVED AND DISPOSED OF OR BURIED TO A MINIMUM DEPTH OF 2 FEET.
THE LUMP SUM BID FOR ITEM L-6 ROADSIDE CLEANUP-MODIFIED, SHALL CONSTITUTE FULL PAYMENT FOR THIS ITEM AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

PRESSURE WATER SYSTEM

METHOD OF MEASUREMENT: THE "ITEM SPECIAL, PRESSURE WATER SYSTEM" AND ALL APPURTENANCES AS DETAILED AND SPECIFIED ON THE PLANS SHALL BE CONSIDERED AS ONE UNIT. THE NUMBER OF UNITS TO BE PAID FOR SHALL BE THE NUMBER OF EACH UNIT, LISTED AND ESTIMATED SEPARATELY, COMPLETE AND ACCEPTED.
BASIS OF PAYMENT: THE WORK INCLUDED IN THIS ITEM SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE BID FOR EACH "ITEM SPECIAL, PRESSURE WATER SYSTEM" COMPLETED AND ACCEPTED, WHICH PRICE AND PAYMENT SHALL CONSTITUTE FULL COMPENSATION FOR FURNISHING, PREPARING, PLACING AND INSTALLING ALL MATERIALS, AND FOR ALL MATERIALS, AND ALL LABOR, EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THIS ITEM AS SHOWN AND SPECIFIED ON THE PLANS.

SEWAGE CHLORINATION UNIT

METHOD OF MEASUREMENT: THE "ITEM SPECIAL, SEWAGE CHLORINATION UNIT" AND ALL APPURTENANCES AS DETAILED AND SPECIFIED ON THE PLANS SHALL BE CONSIDERED AS ONE UNIT. THE NUMBER OF UNITS TO BE PAID FOR SHALL BE THE NUMBER OF EACH UNIT, LISTED AND ESTIMATED SEPARATELY, COMPLETE AND ACCEPTED.

BASIS OF PAYMENT

THE WORK INCLUDED IN THIS ITEM SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE BID FOR EACH "ITEM SPECIAL, SEWAGE CHLORINATION UNIT" COMPLETE AND ACCEPTED, WHICH PRICE AND PAYMENT SHALL CONSTITUTE FULL COMPENSATION FOR FURNISHING, PREPARING, PLACING AND INSTALLING ALL MATERIALS AND FOR ALL METERIALS, AND LABOR, EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THIS ITEM AS SHOWN AND SPECIFIED ON THE PLANS.

AEROBIC SEWAGE TREATMENT PLANT: SEE DETAILS ON PLANS

METHOD OF MEASUREMENT

THE AEROBIC SEWAGE TREATMENT PLANT AND ALL APPURTENANCES AS DETAILED AND SPECIFIED ON THE PLANS SHALL BE CONSIDERED AS ONE UNIT. THE NUMBER OF UNITS TO BE PAID FOR SHALL BE THE NUMBER OF EACH UNIT, LISTED AND ESTIMATED SEPARATELY, COMPLETE AND ACCEPTED

BASIS OF PAYMENT

THE WORK INCLUDED IN THIS ITEM SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE BID FOR EACH ITEM SPECIAL, AEROBIC SEWAGE TREATMENT PLANT COMPLETED AND ACCEPTED, WHICH PRICE AND PAYMENT SHALL CONSTITUTE FULL COMPENSATION FOR ALL EXCAVATION AND BACK-FILL AND FOR FURNISHING, HAULING AND PLACING ALL MATERIALS, AND FOR ALL LABOR, EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THIS ITEM.

BITUMINOUS JOINTS

BITUMINOUS JOINTS FOR SEWERS (SANITARY) AS CALLED FOR IN THESE PLANS SHALL BE BITUMINOUS COMPRESSION TYPE SUCH AS SLIP SEAL OR AN APPROVED EQUAL.

GALVANIZED PIPE

THE 2" GALVANIZED PIPE CALLED FOR ON THIS PLAN SHALL MEET THE REQUIREMENTS OF SEC. M-6.9 AND SEC. M-7.4 (A) OF THE SPECIFICATIONS.

GENERAL NOTES CONCERNING THE BUILDINGS

THE BUILDINGS ARE TO BE CONSTRUCTED AT THE LOCATIONS AND ELEVATIONS SHOWN ON THE PLANS. EXCAVATING AND BACKFILLING SHALL BE AS SPECIFIED UNDER E-1. AGGREGATE FOR SUBGRADE UNDER FLOORS SHALL BE AS SPECIFIED UNDER B-19.

- CONCRETE WORK -

CONCRETE WORK

NOTE: "A" THE CONTRACTOR FOR THIS WORK IS REFERRED TO INSTRUCTIONS TO BIDDERS AND GENERAL CONDITIONS AS A PART OF THIS CONTRACT.

1. EXTENT OF WORK

(A) THIS CONTRACTOR SHALL FURNISH ALL EQUIPMENT, MATERIAL, LABOR AND SERVICES NECESSARY TO FORM, PLACE, FINISH AND CURE ALL PLAIN AND REINFORCED CONCRETE REQUIRED FOR THE COMPLETION OF THE BUILDING, AS SHOWN ON THE PLANS AND AS HEREINAFTER SPECIFIED. DRIVES ARE NOT INCLUDED IN THIS WORK.

5-24-62

REST AREAS ROADSIDE TOILETS AND STORAGE UNIT

CONCRETE WORK (CONTINUED),

2. GENERAL

A. ALL CONCRETE CONSTRUCTION, EXCEPT WHERE OTHERWISE SPECIFIED HEREINAFTER, SHALL BE CLASS "C" ITEM S-1

B. CONCRETE MAY BE EITHER READY-MIXED OR JOB-MIXED. ALL READY-MIXED CONCRETE SHALL BE IN STRICT ACCORDANCE WITH SPECIFICATIONS FOR CLASS "C" CONCRETE EXCEPT AS HEREINAFTER MODIFIED AND SPECIFIED.

C. NO CONCRETE SHALL BE PLACED BEFORE CONDUITS, SLEEVES, INSERTS, ETC. ARE IN PLACE TO THE SATISFACTION OF THE ENGINEER OR BEFORE FORMS, REINFORCING AND AFFECTED WORK OF OTHER TRADES HAVE BEEN APPROVED BY THE ENGINEER.

3. MATERIALS

A. MATERIALS SHALL BE IN ACCORDANCE WITH ITEM S-1 CONCRETE FOR STRUCTURES.

B. FABRICATED STEEL REINFORCEMENT SHALL MEET THE REQUIREMENTS OF TYPE "A" MESH, SEC. M-7.15.

4. REINFORCEMENT

A. FLOOR SLABS SHALL BE REINFORCED THROUGHOUT WITH TYPE "B" BAR MATS OR TYPE "A" MESH, SEC. M-7.15. ADJACENT SHEETS SHALL BE LAPPED AT LEAST 6", SIDES AND ENDS, WITH LAPPED EDGES SECURELY WIRED OR CLIPPED TOGETHER ON NOT OVER 48" CENTERS. FABRIC SHALL BE BROUGHT INTO POSITION IN APPROXIMATELY THE CENTER OF THE SLAB THICKNESS, AS CONCRETE IS PLACED.

B. FOOTINGS SHALL BE REINFORCED THROUGHOUT AND CONTINUOUS WITH TWO (2) NO. 5 BARS PLACED 4" UP FROM BOTTOM AND 3" IN FROM EACH SIDE.

C. OIL, SCALE, RUST, DIRT, OR OTHER COATINGS THAT WOULD DESTROY OR REDUCE THE BOND SHALL BE REMOVED.

5. CONSTRUCTION JOINTS

A. ALL FLOOR SLAB SECTIONS SHALL BE COMPLETED IN ONE POUR.

B. IF AN EMERGENCY JOINT MUST BE MADE, IT SHALL BE KEYED AND DOWELLED TO THE SATISFACTION OF THE ENGINEER. IMMEDIATELY PRIOR TO RESUMING POURING, THE JOINT SURFACE OF CONCRETE IN PLACE SHALL BE CLEANED OF ALL SOIL AND LAITANCE, THOROUGHLY WETTED AND SLUSHED WITH A COAT OF NEAT-CEMENT GROUT.

6. FLOOR SLABS, PLATFORMS, ETC.

A. CONCRETE FLOOR SLABS AND EXTERIOR APRON AND PLATFORM SHALL BE OF THICKNESS SHOWN ON DRAWINGS AND REINFORCED AS SPECIFIED OR NOTED ON DRAWINGS.

B. INTERIOR SLABS SHALL BE PLACED ON POROUS FILL AS PROVIDED FOR UNDER "GENERAL" HEADING. FILL SHALL BE THOROUGHLY SOAKED WITH WATER AND RECOMPACTED AND RE-SHAPED AS MAY BE REQUIRED IMMEDIATELY BEFORE CONCRETE IS POURED.

7. FINISHING CONCRETE

A. FLOOR SHALL BE FINISHED INTEGRALLY BY SCREEDING, FLOATING AND STEEL TROWELING. THE FRESH CONCRETE SHALL BE SCREEDED AND FLOATED WITH WOOD FLOATS OR MECHANICAL FLOATING MACHINES TO TRUE AND EVEN SURFACES AT THE REQUIRED FINISH LEVELS AND UNTIL ONLY ENOUGH MORTAR FOR TROWELING IS BROUGHT TO THE SURFACE. TROWELING SHALL NOT BEGIN UNTIL ALL WATER AND WATER SHEEN HAVE DISAPPEARED FROM THE SURFACE. WATER RISING TO THE SURFACE SHALL BE REMOVED IN A MANNER APPROVED BY THE ENGINEER. NO SAND-CEMENT DUST COAT SHALL BE USED. THE FINISHED SURFACES SHALL BE SMOOTH, EVEN AND FREE FROM BLEMISHES OF ANY KIND. FINISH THE TOP OF DOOR SILLS WITH FLOOR.

B. EXTERIOR APRON AND PLATFORM SHALL BE FINISHED SMOOTH AND EVEN WITH WOOD FLOATS AND WITHOUT THE USE OF SAND-CEMENT DUST COAT.

8. PATCHING

A. ALL NECESSARY PATCHING OF CONCRETE SHALL BE DONE AFTER OTHER CONTRACTORS' WORK IS IN PLACE. POINT CAREFULLY AROUND ALL PIPING ETC.

9. VAPOR BARRIER

A. PROVIDE A ONE (1) INCH THICK SAND CUSHION AND CONTINUOUS MOISTURE VAPOR BARRIER UNDER THE FLOOR SLAB.

CONCRETE WORK (CONTINUED)

9. VAPOR BARRIER (CONTINUED)

B. MOISTURE-VAPOR BARRIER TO BE 6 MIL (.006") THICK PURE POLYETHYLENE PLASTIC FILM, AS MADE BY MEADOWS, SISALCRAFT, VISKING, WASCO OR EQUAL; OR A POLYETHYLENE-FACED LAMINATE EQUAL TO "MOISTOP" BY AMERICAN SISALCRAFT CORPORATION. USE WIDEST PRACTICAL WIDTH, LAP AT LEAST SIX (6) INCHES AT JOINTS, AND SEAL.

10. PERIMETER INSULATION

A. PRIOR TO FINAL SHAPING AND COMPACTION OF EARTH SUBGRADES INSIDE THE BUILDING, INSTALL VERTICAL AND HORIZONTAL PERIMETER INSULATION CONTINUOUSLY AROUND THE EXTERIOR WALLS, AS INDICATED ON THE DRAWINGS AND HEREIN SPECIFIED.

B. MATERIAL TO BE ONE (1) INCH THICK "STYROFOAM" 22 OR "SCORBORD", RIGID PLASTIC INSULATION INSULATING BOARD BY DOW CHEMICAL COMPANY, MIDLAND, MICHIGAN.

11. WELL PIT, MANHOLE COVER AND FRAME

A. PROVIDE AND INSTALL CAST IRON MANHOLE COVER AND FRAME OVER WELL PIT. (SEE DRAWING)

B. MANHOLE FRAME AND COVER TO BE TYPE-R-1737, LIGHT DUTY, ROUND, LOCK-TYPE "H" CAM LUG-ECCENTRIC DEVICE, 1'- 19 1/4" DIAMETER, WEIGHT 115 LBS. BY NEENAH FOUNDRY COMPANY, NEENAH, WISCONSIN, OR SIMILAR TYPE BY FLOCKHART FOUNDRY COMPANY OR APPROVED EQUAL.

C. WELL PIT SHALL BE CONSTRUCTED AS SHOWN ON THE PLAN AND SIX (6) INCH TRANSITE OR PLASTIC CONDUIT PLACED UNDERGROUND AS SHOWN, TO PERMIT PLACING PIPE TO CONNECT THE WELL WITH THE PUMP AND STORAGE TANK. CONCRETE WELL PIT COVER TO HAVE NO. 2 REINFORCING BARS PLACED AT FOUR (4) INCHES O. C. EACH WAY.

ROOFING AND SHEET METAL WORK

1. EXTENT OF WORK

A. INSTALL BUILT-UP ROOFING, SHEET METAL WORK, FLASHINGS, (INCLUDING VENT PIPE FLASHING) GRAVEL STOPS AND SKYLIGHT GRAVITY ROOF VENT UNITS.

2. BUILT-UP ROOFING AND FLASHINGS

A. INSTALL GRAVEL-SURFACED "20 YEAR BOND" TYPE ROOF, EITHER:

(1) BARRETT'S TYPE AA "SPECIFICATION" ROOF, OR CAREY'S "SPECIFICATION NO. 3-B," KOPPER'S "SPECIFICATION NO. 17" ROOF.
(2) JOHNS-MANVILLE'S 4-PLY AQUADAM (SPEC NO. 801) ROOF, OR CAREY'S 3-A, AND GRAVEL SURFACED, OR,
(3) OWENS-CORNING FIBERGLASS CORP'S. "SPEC 320 IGD" FIBERGLASS REINFORCED ASPHALT ROOF BUILT-UP OF ASPHALT FILLED FIBERGLASS MATS AND ASPHALT, GRAVEL SURFACED.

B. GRAVEL STOPS AND OTHER MOPPED-IN METAL FLASHING SHALL BE INSTALLED AFTER ALL ROOFING PLIES ARE IN PLACE AND SHALL HAVE ROOF LEG COATED WITH BITUMINOUS PAINT BEFORE BEING PLACED. APPLY AT LEAST 2-PLY MEMBRANE FLASHINGS OVER SAME BEFORE APPLYING THE FINAL FLOOD COAT OF BITUMINOUS.

3. GRAVEL STOP

A. GRAVEL STOP TO BE EXTRUDED ALUMINUM, TYPE F, STANDARD THICKNESS, BY ALCOA NO. 84968, 7 3/4" FACE OR SIMILAR DESIGN BY REYNOLDS OR KAISER OR APPROVED EQUAL.

4. SKYLIGHT VANTILATORS, FORCED AIR, FAN DRIVEN

A. PLASTIC DOMED SKYLIGHT VENTILATORS TO BE STANDARD SKYDOMES WASCO NO. LV 5252 AS MANUFACTURED BY THE WASOLITE, WASCO PRODUCTS, INC., CAMBRIDGE, MASS., OR VANCO DOMELITE, E. VAN NOORDEN COMPANY, BOSTON, MASS. SIZE 46 1/4" x 46 1/4", OR EQUAL

B. SKYLIGHT VENTILATORS TO BE FACTORY ASSEMBLED UNITS, EACH CONSISTING OF AN ACRYLIC PLASTIC DOME, EXTRUDED ALUMINUM FRAME AND CURB FRAME WITH CONDENSATION AND WEEPAGE GUTTERS. DOMES TO BE "WHITE TRANSLUCENT" PLASTIC, A 110 VOLT, 60 CY, 67 WATTS, 8" FAN, HEAVY-DUTY SHALL BE USED WITH CFM OF 425, CONTINUOUS OPERATION.

WINDOWS

ALUMINUM WINDOWS

1. EXTENT OF WORK

A. FURNISH AND INSTALL ALL ALUMINUM WINDOWS REQUIRED TO COMPLETE THE BUILDING IN ACCORDANCE WITH THE ARCHITECT'S DRAWINGS AND AS HEREINAFTER SPECIFIED.

B. NO GLAZING OR CAULKING OF WINDOWS IS REQUIRED UNDER THIS BRANCH OF WORK.

ALUMINUM WINDOWS (CONTINUED)

1. EXTENT OF WORK (CONTINUED)

C. FURNISH FOUR COPIES OF SHOP DRAWINGS FOR APPROVAL, PRIOR TO SHIPPING.

2. ALUMINUM WINDOWS

A. WINDOWS SHALL BE OF SIZES SHOWN ON THE DRAWINGS AND OF "COMMERCIAL PROJECTED" CONSTRUCTION, OUTSIDE GLAZED.

B. WINDOWS FURNISHED SHALL BE THOSE OF WILLIAM BAYLEY COMPANY, LUDMAN, MESKER BROTHERS OR TRUSCON STEEL COMPANY AND SHALL MEET SPECIFICATION PV-2 OF THE ALUMINUM WINDOW MFRS. ASSOCIATION.

C. WINDOWS SHALL BE PROPERLY CLEANED AFTER FABRICATION.

D. HARDWARE SHALL BE SOLID CAST WHITE BRONZE AND IN ACCORDANCE WITH THE MANUFACTURER'S STANDARD PRACTICE.

E. ALL BOLTS, CLAMPS, ANCHORS ETC., REQUIRED FOR INSTALLATION, SHALL BE FURNISHED.

F. WINDOWS SHALL BE CAUSTIC ETCHED AND SPRAY LACQUERED IN THE SHOP.

3. ERECTION

A. WINDOWS SHALL BE SET PLUMB AND TRUE IN OPENINGS AND SHALL BE SUBSTANTIALLY ANCHORED.

B. PROPER PROVISION SHALL BE MADE FOR CAULKING, BY OTHERS.

C. ALL VENTILATORS SHALL BE ADJUSTED SO AS TO OPERATE SMOOTHLY.

CARPENTRY AND MISCELLANEOUS

1. EXTENT OF WORK

A. FURNISH ALL LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE ALL ROUGH AND FINISHED CARPENTRY REQUIREMENTS OF THE BUILDING AND ALL MISCELLANEOUS ITEMS OF WORK SPECIFIED HEREINAFTER, ALL AS SHOWN ON THE PLANS AND/OR HEREIN SPECIFIED.

B. INCLUDE MISCELLANEOUS WORK AS FOLLOWS:
(1) GLASS AND GLAZING
(2) CAULKING
(3) FINISH HARDWARE

C. FURNISH ALL BOLTS, ANCHORS, INSERTS, ETC., REQUIRED TO BE BUILT INTO THE WORK OF OTHERS FOR SECURING WOOD PARTS, AND SUPERVISE THEIR INSTALLATION

2. ROUGH CARPENTRY

A. ALL LUMBER, SIDING, TRIM, THROUGHOUT: EXCEPT OTHERWISE NOTED, SHALL BE S4S STD. K.D. NO. 1 COMMON OR BETTER, SOUTHERN YELLOW PINE OF SIZE INDICATED ON DRAWINGS. ALL LUMBER TO BE PENTACHLOROPHENOL TREATED-SEE PAR.C.

B. ALL DOORS TO BE FLUSH PANEL, SOLIDCORE, BIRCH, SELECT OF SIZES INDICATED ON DOOR SCHEDULE AND WITH METAL "AIROLITE" LOUVERS AND ALUMINUM SCREENING BY AIROLITE CORPORATION OR APPROVED EQUAL. LOUVERS TO BE MILL INSTALLED.

C. PENTACHLOROPHENOL TREATED LUMBER SHALL BE USED THROUGHOUT THE ENTIRE JOB AND SHALL BE TREATED TO 6 LBS. RETENTION IN ACCORDANCE WITH THE REQUIREMENT FOR PENTACHLOROPHENOL TREATMENT, SEC. M-8.3 OF THE STATE OF OHIO, DEPARTMENT OF HIGHWAYS "CONSTRUCTION AND MATERIAL SPECIFICATIONS." THE TREATING SOLUTION SHALL MEET THE REQUIREMENTS OF SEC. M-10.28.

3. WALL PANELING

A. FOR MEN'S AND WOMEN'S TOILETS ONLY, PROVIDE AND INSTALL WALLS AND CEILINGS OF 48"x96"x 5/32" DELUXE HI GLOSS PANELS OF "MARLITE" (MARSH WALL PRODUCTS INC.) APPLIED TO 5/8" EXTERIOR PLYWOOD SHEATHING BY MARSH MASTIC APPLICATION (MARSH WALL PRODUCTS, INC.) AND FINISHED AT CEILING AND BASE WITH MARSH-M-45A DRIVE-ON ALUMINUM MOLDING: AT CORNER WALL INTERSECTIONS WITH MARSH MOLDING M-59A.

WALL PANELS TO BE APPLIED VERTICALLY WITH MARSH-65 A MOULDING AS INDICATED ON THE DRAWINGS. ENTIRE "MARLITE" INSTALLATION TO BE EXECUTED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS (MARSH WALL PRODUCTS, INC., DOVER, OHIO)

MARLITE COLOR: WILLOW GREEN

ABOVE WALL PANELING TO BE AS SPECIFIED OR APPROVED EQUAL.

REST AREAS-ROADSIDE TOILETS AND STORAGE UNIT

GENERAL NOTES

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

147
293

Mad-42-21.94

CARPENTRY AND MISCELLANEOUS (CONTINUED)

4. INSULATION

A. PROVIDE AND INSTALL 4" FIREPROOF MINERAL WOOL ENCASED BLANKET IN ENTIRE CEILING OF BUILDING AND 2" FIREPROOF MINERAL WOOL ENCASED BLANKET ON ALL WALLS AND PARTITIONS OF THE BUILDING. ACCEPTABLE MANUFACTURERS: CELOTEX CORP., CHICAGO, ILLINOIS, ARMSTRONG AND JOHNS-MANVILLE OR APPROVED EQUAL.

5. INSULATION VENTS

A. ROOF JOIST SPACE VENTILATION WILL DISCHARGE INTO ROOF VENTS - SEE DETAIL.

6. TOILET PARTITIONS

A. PROVIDE AND INSTALL ALL OVERHEAD-BRACED METAL TOILET PARTITIONS COMPLETE WITH HARDWARE. PARTITIONS TO BE GALVANIZED AND BONDERIZED PANELS AT LEAST 1" THICK WITH A BAKED-ON ENAMEL FINISH, COLOR TO BE SELECTED. ACCEPTABLE MANUFACTURERS: MILLS COMPANY, CLEVELAND, OHIO, HENRY WEIS MANUFACTURING CO., ELKHART, INDIANA, FIAT METAL MFG. CO., CHICAGO, ILLINOIS, OR SANYMETAL PRODUCTS CO. INC., CLEVELAND, OHIO.

7. TOILET ROOM ACCESSORIES

A. FURNISH AND INSTALL FOUR (4) 16" × 24" CHROME EDGED MIRRORS AS INDICATED ON DRAWINGS, PARKER CO., MIAMI CAREY OR HALLMACK OR APPROVED EQUAL.

8. GLAZING

A. GLAZE ALL WINDOWS, FURNISHING GLAZING CLIPS FOR WINDOWS.

B. TOILET ROOM WINDOWS SHALL HAVE 1/8" HAMMERED GLASS. GLASS SHALL BE EITHER "L.O.F." OR "BLUE RIDGE" OR "MISSISSIPPI GLASS CO." OR "J. MERRILL RICHARDS," BOSTON, MASS.

C. ALL GLAZING SHALL BE DONE WITH APPROVED GLAZING COMPOUND AS MANUFACTURED BY DICKS-PONTIUS, KUHLS, PERCORA, PITTSBURGH OR TREMCO.

D. GLASS IN METAL WINDOWS SHALL BE BEDDED, CLIPPED AND FACE GLAZED.

E. LEAVE ALL GLASS UNBROKEN AND CLEAN AT COMPLETION OF STRUCTURE.

9. CAULKING

A. CAULK AROUND METAL WINDOWS AND EXTERIOR DOOR FRAMES IN A THOROUGH MANNER, USING THE FIRST QUALITY GUN-GRADE COMPOUND OF THEMCO, PERCORA, KUHL'S OR EQUAL. FOLLOW GUN WITH HAND PRESSURE TOOL WHEREVER NECESSARY FOR FIRST CLASS JOB.

B. REMOVE ALL STAINS FROM CAULKING AT ONCE, FROM SILLS, FRAMES ETC.

10. FINISH HARDWARE

A. SEE "DOOR HARDWARE SCHEDULE" ON PLANS.

B. HARDWARE AS MANUFACTURED BY: STANLEY, GLYNN-JOHNSON, RUSSELL AND ERWIN, CORBIN, SARGENT, YALE AND TOWNE, MCKINNEY, HAGER OR EQUAL WILL BE ACCEPTABLE.

C. ALL LOCK CYLINDERS SHALL BE KEYED ALIKE, AND MASTERKEYED. FURNISH 2 KEYS FOR EACH LOCK.

D. FINISH FOR LOCKSETS SHALL BE AS SHOWN.

E. INSTALL FINISH HARDWARE NEATLY AND ACCURATELY AND SO THAT IT OPERATES EASILY, QUIETLY AND PROPERLY.

F. LOCKS, TRIM, ETC., SHALL BE FITTED PRIOR TO START OF PAINTER'S WORK, BUT SHALL NOT BE PERMANENTLY INSTALLED UNTIL PAINTER'S WORK IS COMPLETED.

ELECTRICAL

1. NOTES

A. THE CONTRACTOR FOR THIS WORK IS REFERRED TO "INSTRUCTIONS TO BIDDERS AND GENERAL CONDITIONS" AS A PART OF THIS CONTRACT.

B. THIS CONTRACTOR SHALL CAREFULLY READ THE SPECIFICATIONS OF ALL BRANCHES OF WORK PERTAINING TO THE BUILDING SO THAT HE MAY BE FULLY INFORMED AS TO THE WORK TO BE DONE BY EACH CONTRACTOR.

C. THIS CONTRACTOR SHALL COORDINATE HIS WORK WITH THE WORK OF THE OTHER CONTRACTORS IN ORDER TO AVOID DELAY AND INTERFERENCE IN CARRYING OUT THE GENERAL CONSTRUCTION OF THE PROJECT.

D. THE SUBMISSION OF A BID FOR THIS BRANCH OF WORK SIGNIFIES THAT THE CONTRACTOR HAS EXAMINED THE DRAWINGS AND SPECIFICATIONS FOR ALL BRANCHES OF WORK FOR THE PROJECT AND HAS VISITED THE SITE AND IS ACQUAINTED WITH ALL CONDITIONS WHICH MAY IN ANY WAY WHATSOEVER AFFECT THE EXECUTION OF THE WORK.

E. WHERE A MATERIAL OR METHOD IS DESCRIBED BY PERFORMANCE DATA ONLY, ANY PRODUCT OR METHOD MEETING SUCH REQUIREMENTS MAY BE USED. WHERE MORE THAN ONE BRAND NAME IS SPECIFIED, THE FIRST NAME IS THE PRODUCT WHOSE DIMENSIONS AND PERFORMANCE CHARACTERISTICS WERE USED IN THE DESIGN. THE OTHER NAMED PRODUCTS MAY BE USED BUT WITH THE UNDERSTANDING THAT IF CHANGES TO THE BUILDING ARE REQUIRED BECAUSE OF DIMENSIONS OR CHARACTERISTICS OF THAT PRODUCT, ANY ADDITIONAL COST SHALL BE A PART OF THE BID.

F. IN CASE ANY CONFLICT DEVELOPS BETWEEN DRAWINGS AND SPECIFICATIONS, SAME SHALL BE REFERRED BY THE CONTRACTOR TO THE ENGINEER FOR DECISION AS TO METHOD AND/OR MATERIAL.

2. EXTENT OF WORK

A. THE CONTRACTOR FOR THIS WORK SHALL FURNISH ALL LABOR, MATERIALS AND EQUIPMENT AND INSTALL COMPLETE ALL ELECTRIC WORK AS HEREINAFTER SPECIFIED AND AS SHOWN ON THE PLANS FOR THE TWO REST AREAS.

B. ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE AND SPECIAL REGULATIONS OF THE STATE FIRE MARSHALL AND THE STATE DEPARTMENT OF WORK-SHOPS AND FACTORIES.

C. ALL MATERIAL SHALL BE NEW AND CONFORM WITH THE STANDARDS OF THE UNDERWRITER'S LABORATORIES, INC WHEREVER SUCH STANDARDS HAVE BEEN ESTABLISHED AND SHALL FULFILL THE NORMAL REQUIREMENTS FOR SATISFACTORY WORKMANSHIP.

3. INSPECTION

A. ALL WORK SHALL BE INSPECTED BY THE ELECTRICAL INSPECTION BUREAU, INC., OR ANY APPROVED ELECTRICAL INSPECTION AGENCY WHICH GUARANTEES ITS WORK.

B. UPON COMPLETION OF THE WORK THE CONTRACTOR SHALL FURNISH TO THE ENGINEER, A CERTIFICATE OF INSPECTION AND APPROVAL FROM SAID BUREAU OR AGENCY BEFORE FINAL PAYMENT ON CONTRACT WILL BE ALLOWED.

C. FEE FOR INSPECTION SHALL BE PART OF THIS CONTRACT.

4. SERVICE

A. SERVICE SHALL BE SINGLE PHASE, 60 CYCLES, 110/220 VOLTS A.C., 3 TO 2 WIRE DISTRIBUTION FOR LIGHTS AND SMALL MOTORS AND 220 VOLTS FOR HEATING UNITS.

~~5. SERVICE ENTRANCE~~

~~A. SERVICE SHALL START FROM A POLE PLACED BY THE CONTRACTOR, LOCATED AT THE REST AREA ENTRY (AS SHOWN ON THE PLAN) AND BE RUN UNDER GROUND IN CONDUIT TO A 100 AMP. SWITCH OR PANEL BOARD IN BUILDING AND BE CONNECTED TO SAME.~~

~~B. CONDUIT SHALL START 20 FEET UP ON POLE. PROVISIONS SHALL BE ON POLE TO MOUNT METER AS PER POWER COMPANY'S INSTRUCTIONS. CONDUIT, WHEN UNDERGROUND, SHALL BE ENCASED IN CONCRETE WITH 3 INCHES ALL AROUND CONDUIT. THIS CONTRACTOR SHALL EXCAVATE TRENCH FOR CONDUIT AND PROPERLY BACKFILL OVER SAME.~~

~~C. THE CONTRACTOR SHALL VISIT THE SITE TO DETERMINE LOCATION OF STARTING POLE. THE POLE IS TO BE FURNISHED AND PLACED BY THE CONTRACTOR. THE POLE IS TO BE 35 FEET CLASS 4 BUTT TREATED CREOSOTED, WESTERN RED CEDAR.~~

~~D. SIZE OF SERVICE FEEDER AND SIZE OF CONDUIT SHALL BE AS PER PLAN. CONDUIT SHALL BE HEAVY WALL GALVANIZED OR SHERARDIZED CONDUIT. TOP OF CONDUIT ON POLE SHALL BE PROVIDED WITH A PROPER TYPE POT HEAD. POWER COMPANY WILL MAKE CONNECTION TO THEIR SERVICE BUT THIS CONTRACTOR SHALL LEAVE HIS WIRES LONG ENOUGH FOR SAID CONNECTIONS.~~

5. SERVICE ENTRANCE CONDUCTORS

The Contractor shall furnish and install three 1/c AWG No. 2/0 Type RHW conductors from the service pole at each site, through 3" galvanized wrought iron conduit to the service panel in the utility building at each site. The cable shall be G.E. No. SI.58006 or approved equal.

This item shall not be included in the lump sum price bid for the Roadside Toilet and Storage Unit. Payment shall be at the unit price bid per lineal foot for Item S-25 Service Entrance Cable and Item S-25 3" Conduit.

ELECTRICAL (CONTINUED)

6. PANELBOARD

A. PANELBOARD SHALL BE DESIGNED FOR a single phase, 3 wire 120/240 V. A-C system. It shall meet requirements for service entrance equipment and the mains rating be 200 amps.

B. Overcurrent protective devices shall be 15 amp single pole circuit breakers for building lights and vent fans, and 30 amp 240 volt circuit breakers for heating, sewage plant, and mercury arc lighting circuits.

C. CABINET SHALL BE SINGLE DOOR TYPE AND PANEL OF SQUARE D, GENERAL ELECTRIC OR BULLDOG MAKE.

D. CABINET SHALL BE OF SURFACE TYPE, CONSTRUCTED OF CODE GAGE STEEL AND GALVANIZED OR PAINTED WITH AN APPROVED PROTECTIVE PAINT OR LACQUER. CABINET SHALL BE PROVIDED WITH WIRING GUTTERS AT TOP, BOTTOM AND SIDES. FRONT SHALL HAVE CODE GAGE METAL TRIM AND DOOR.

E. DOOR SHALL BE PROVIDED WITH CYLINDER TYPE LOCK AND THREE KEYS SHALL BE DELIVERED TO THE ENGINEER.

7. HEATING UNITS AND CONTROLS

A. THIS CONTRACTOR SHALL PROVIDE AND INSTALL WHERE SHOWN, 3 ELECTRIC HEATING UNITS FOR EACH TOILET ROOM.

B. EACH UNIT SHALL HAVE A RATING OF 2 KW AND BE TYPE H AS MADE BY CHROMALOX, OR NO. 690-32 INDEECO FOR 230 VOLTS, SINGLE PHASE, 60 CYCLES, A.C.

C. THE GROUP OF THREE IN EACH TOILET ROOM SHALL BE CONTROLLED BY A PROPER TYPE THERMOSTAT AND CONTACTOR BOTH LOCATED WHERE SHOWN. THERMOSTATS AND CONTACTORS SHALL BE MADE BY MANUFACTURERS OF HEATING UNITS SUPPLIED.

8. PHOTOELECTRIC CONTROL SWITCH

A. Lighting circuit design shall provide manual by-pass switching for lobby circuit and toilet rooms circuit in addition to automatic photo electric control.

B. CONTROL SWITCH SHALL BE A G.E. CATALOG NO. CR206016 OR APPROVED EQUAL.

C. SWITCH SHALL BE MOUNTED ON ROOF AT POINT DIRECTED.

9. WIRE AND WIRING

A. WIRE SHALL BE RUBBER COVERED GRADE RHW NON-METALLIC SHEATH CABLE OF TYPE NMC AND BEAR UNDERWRITER'S LABEL.

B. ALL WIRING SHALL BE RUN CONCEALED.

C. WIRE SHALL NOT BE SPLICED ANYWHERE EXCEPT IN OUTLET BOXES. ALL SPLICE JOINTS SHALL BE CAREFULLY MADE, CLEANED, SOLDERED AND TAPED WITH SCOTCH NO. 33 ELECTRICAL TAPE.

D. NO WIRE LESS THAN NO. 12 AWG SHALL BE USED. WIRE SIZE FOR LONG RUNS SHALL BE SUCH SIZE THAT THE DROP IN POTENTIAL TO THE FARTHEST OUTLET SHALL NOT EXCEED 2 % UNDER MAXIMUM LOAD.

E. NO JOISTS OR BEAMS SHALL BE NOTCHED TO RUN WIRES. HOLES SHALL BE BORED FOR SAME, AND WIRES ARE TO BE BUSHED WITH PORCELAIN TUBES WHERE THEY RUN THROUGH WOOD THE ENTIRE THICKNESS.

F. RUNS OF CABLES BETWEEN OUTLET BOXES SHALL BE PROPERLY SUPPORTED OR STRAPPED IN PLACE.

G. CABLE SHALL ENTER BOXES THROUGH A KNOCKOUT AND SHALL BE CLAMPED TO THE BOX IF NOT SUPPORTED WITHIN 8" OF BOX.

10. OUTLET BOXES AND FITTINGS

A. ALL LIGHT AND SWITCH OUTLET BOXES SHALL BE OF HEAVY PRESSED GALVANIZED STEEL OF A STANDARD MAKE AND OF SIZE, SHAPE, USAGE, AND CONNECTIONS.

B. OUTLETS FOR LIGHT FIXTURES SHALL BE 4" SQUARE OR OCTAGONAL.

C. WHERE TWO OR MORE SWITCHES ARE SHOWN AT ONE POINT, GANG OUTLET BOXES SHALL BE USED.

11. SWITCHES

A. ALL SWITCHES SHALL BE FLUSH TYPE TUMBLE SWITCHES, GENERAL ELECTRIC NO. 2842 OR APPROVED EQUAL AS MADE BY ARROW-HART AND HEGMAN, PASS AND SEYMOUR, BRYANT OR HUBBELL.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

148
293

Med-42-21.94

REST AREAS-ROADSIDE TOILETS & STORAGE UNIT
GENERAL NOTES

ELECTRICAL (CONTINUED)

12. PLATES

"A" ALL SWITCH PLATES SHALL BE .06" THICK METAL, NICKEL PLATED OR STAINLESS STEEL.

"B" AT POINTS WHERE TWO OR MORE SWITCHES ARE LOCATED, GANG OUTLET BOXES SHALL BE USED.

13. GROUNDING

"A" SYSTEM SHALL BE GROUNDED IN ACCORDANCE WITH REQUIREMENTS OF NATIONAL ELECTRICAL CODE.

14. FIXTURE SCHEDULE

"A" THIS CONTRACTOR SHALL FURNISH AND INSTALL COMPLETE, INCLUDING LAMPS, ALL LIGHTING FIXTURES FOR THE BUILDING. THE STYLE OF FIXTURE BY A LETTER AND NUMBER RESPECTIVELY.

"B" STYLE "A" SHALL BE AN ART METAL #15-1115 C.H.
STYLE "B" SHALL BE AN ART METAL #10-1119 C.H.
STYLE "C" SHALL BE AN ART METAL #10-1110 A.A.
STYLE "D" SHALL BE A PORCELAIN OUTLET BOX RECEPTACLE

"C" SIMILAR FIXTURE AS MADE BY PRESCOLITE OR VIRDEN WILL BE ACCEPTABLE SUBJECT TO ENGINEER'S APPROVAL.

15. SEWAGE TREATMENT PLANT

"A" THIS CONTRACTOR SHALL FURNISH AND INSTALL ALL NECESSARY ELECTRICAL DEVICES AND WIRING REQUIRED FOR SERVICE TO AND THE OPERATION OF THE SEWAGE TREATMENT PLANT AS HEREIN DESCRIBED IN SPECIFICATIONS FOR SEWAGE TREATMENT PLANT. CABLE & CONDUIT SPECS. on SHEET 247.

16. VENT FAN WITH SKYDOME - SEE DRAWING

- PLUMBING -

NOTES;

1. "A" THE CONTRACTOR FOR THIS WORK IS REFERRED TO "INSTRUCTIONS TO BIDDERS AND GENERAL CONDITIONS" AS PART OF THIS CONTRACT.

"B" THIS CONTRACTOR SHALL CAREFULLY READ THE SPECIFICATIONS OF ALL BRANCHES OF WORK PERTAINING TO THE BUILDING SO THAT HE MAY BE FULLY INFORMED AS TO THE WORK TO BE DONE BY EACH CONTRACTOR.

"C" THIS CONTRACTOR SHALL CO-ORDINATE HIS WORK WITH THE WORK OF THE OTHER CONTRACTORS IN ORDER TO AVOID DELAY AND INTERFERENCE IN CARRYING ON THE GENERAL CONSTRUCTION OF THE PROJECT.

"D" THE SUBMISSION OF A BID FOR THIS BRANCH OF WORK SIGNIFIES THAT THE CONTRACTOR HAS EXAMINED THE DRAWINGS AND SPECIFICATIONS FOR ALL BRANCHES OF WORK FOR THE PROJECT AND HAS VISITED THE SITE AND IS ACQUAINTED WITH ALL CONDITIONS WHICH MAY IN ANY WAY WHATSOEVER EFFECT THE EXECUTION OF THE WORK.

"E" WHERE A MATERIAL OR METHOD IS DESCRIBED BY PERFORMANCE DATA ONLY, ANY PRODUCT OR METHOD MEETING SUCH REQUIREMENTS MAY BE USED. WHERE MORE THAN ONE BRAND NAME IS SPECIFIED THE FIRST NAMED IS THE PRODUCT WHOSE DIMENSIONS AND PERFORMANCE CHARACTERISTICS WERE USED IN THE DESIGN. THE OTHER NAMED PRODUCTS MAY BE USED BUT WITH THE UNDERSTANDING THAT IF CHANGES TO THE BUILDING ARE REQUIRED BECAUSE OF DIMENSIONS OR CHARACTERISTICS OF THAT PRODUCT. ANY ADDITIONAL COST SHALL BE A PART OF THE BID.

"F" IN CASE ANY CONFLICT DEVELOPS BETWEEN DRAWINGS AND SPECIFICATIONS, SAME SHALL BE REFERRED BY THIS CONTRACTOR TO THE ENGINEER FOR A DECISION AS TO METHOD AND FOR MATERIAL.

2. EXTENT OF WORK

"A" THE CONTRACTOR FOR THIS WORK SHALL FURNISH ALL LABOR, MATERIAL AND EQUIPMENT AND INSTALL COMPLETE, ALL WORK AS HEREINAFTER SPECIFIED. INCLUDING ALL 6" CAST IRON SEWER PIPE TO A MINIMUM DISTANCE OF 100' FROM WATER WELL OR AS SHOWN ON THE PLANS.

3. INSPECTION

"A" ALL WORK SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE OHIO STATE PLUMBING CODE AND HAVE STATE PLUMBING INSPECTION.

"B" THE CONTRACTOR SHALL TAKE OUT A PERMIT WITH THE DIVISION OF STATE PLUMBING INSPECTION BEFORE STARTING ANY WORK. FEE FOR SAME SHALL BE A PART OF THIS CONTRACT AND INCLUDED IN THE UNIT PRICE BID.

"C" WHEN WORK IS COMPLETED, THE CONTRACTOR SHALL FURNISH TO THE ENGINEER, A CERTIFICATE OF APPROVAL FROM THE STATE DEPARTMENT OF HEALTH BEFORE FINAL PAYMENT WILL BE ALLOWED.

4. ROUGHING-IN

"A" ALL PLUMBING FIXTURES SHALL BE LOCATED AND "ROUGHED-IN" AS SHOWN BY PLANS AND PLUMBING DIAGRAMS.

"B" CLEANOUTS SHALL BE PROVIDED WHERE SHOWN AND CALLED FOR BY THE STATE PLUMBING CODE AND BE INSTALLED IN SUCH A MANNER AS TO BE EASILY ACCESSIBLE FOR RODDING.

"C" ALL WASTE AND VENT LINES ABOVE THE FLOOR SHALL BE STANDARD WEIGHT GALVANIZED STEEL PIPE. FITTINGS FOR WASTE LINES SHALL BE BLACK CAST IRON DRAINAGE TYPE. FITTINGS FOR VENT LINES SHALL BE GALVANIZED MALLEABLE IRON.

"D" ALL EXPOSED WORK SHALL BE RUN IN A NEAT MANNER ACCEPTABLE TO THE ENGINEER.

5. BUILDING DRAIN

"A" THE BUILDING DRAIN SHALL BE OF EXTRA HEAVY CAST IRON SOIL PIPE AND FITTINGS AND RUN AS SHOWN ON THE PLANS, AS TO LOCATION, SIZE AND CONNECTIONS, TO A MINIMUM DISTANCE OF 100 FEET FROM THE WELL AS SHOWN ON THE PLANS.

"B" ALL JOINTS SHALL FIRST BE CAULKED WITH OAKUM AND THEN WELL CAULKED WITH LEAD NOT LESS THAN 1" DEEP.

"C" LINES SHALL HAVE A FALL OF NOT LESS THAN 1/8" PER FOOT.

6. EXCAVATION AND BACKFILL

"A" TRENCHES NECESSARY FOR LAYING OF DRAINS, OR ANY OTHER LINES UNDER THIS CONTRACT, SHALL BE EXCAVATED AND BACKFILLED BY THE PLUMBER.

"B" ANY EXCAVATION WITHIN FIVE FEET OF THE EDGE OF ANY FOOTING AND BELOW THE ELEVATION OF BOTTOM OF SAME, SHALL BE BACKFILLED WITH CLASS "E" CONCRETE TO LEVEL OF BOTTOM OF FOOTING.

"C" ALL TRENCHES SHALL BE BACKFILLED BY TAMPING IN THIN LAYERS OF CLEAN DIRT AND PUDDLING.

"D" NO TRENCH SHALL BE BACKFILLED UNTIL THE LINE IN SAME HAS BEEN INSPECTED AND APPROVED BY THE PROPER INSPECTOR.

"E" THE SURFACE OF BACKFILLED TRENCH SHALL BE RESTORED TO A CONDITION AS GOOD AS THE ORIGINAL SURFACE.

7. WATER PIPING

"A" MAIN SHALL START FROM THE STORAGE TANK OF WATER SYSTEM WHICH WILL BE FURNISHED LATER BY OTHERS AND BE RUN AS SHOWN ON THE PLANS AS TO SIZES, LOCATIONS AND VALVING.

"B" EACH BRANCH SHALL BE PROVIDED WITH AN ALL BRASS GATE VALVE, 125 LBS. CLASS.

"C" PIPE SHALL BE GALVANIZED STEEL, FITTINGS GALVANIZED MALLEABLE IRON

"D" TWO BRASS HOSE FAUCET DRAINS SHALL BE PROVIDED AND INSTALLED WHERE SHOWN AND THE LINES SHALL BE RUN SO AS TO DRAIN AT THESE POINTS.

8. CUTTING AND PATCHING

"A" THE CUTTING OF NEW CONCRETE, MASONRY OR ANY OTHER WORK SHALL BE AVOIDED BY THE USE OF SLEEVES INSTALLED AS THE WORK PROGRESSES.

"B" IN CASE IT IS NECESSARY TO CUT INTO THE WORK OF ANOTHER CONTRACTOR IT SHALL BE DONE BY THAT CONTRACTOR AT THIS CONTRACTOR'S EXPENSE OR BY THIS CONTRACTOR WITH THE PERMISSION OF THE OTHER CONTRACTOR.

"C" ANY REPAIRING OF PATCHING MADE NECESSARY BY SUCH CUTTING SHALL BE EXECUTED ON THE SAME BASIS, ALL TO THE SATISFACTION OF THE ENGINEER.

9. FLOOR DRAINS

"A" SHALL BE ZURN FIG. 2N-215V OR APPROVED EQUAL AS MADE BY JOSAM WADE, BOOSEY OR ASCO.

"B" CAST IRON 1/2 "S" TRAPS SHALL BE USED WITH EACH FLOOR DRAIN.

10. WATER CLOSETS

"A" SHALL BE COMPLETE AS AMERICAN STANDARD F-2495-8 EXCEPT SEAT SHALL BE WHITE OLSONITE NO. 1000. OR APPROVED EQUAL AS MADE BY CHURCH OR STASCO. WITH SLOAN NO.152 FLUSH VALVE.

"B" EQUAL CLOSETS AS MADE BY CRANE, KOHLER OR ELJER WILL BE ACCEPTABLE SUBJECT TO ENGINEER'S APPROVAL.

11. URINALS

"A" IN MEN'S TOILET ROOM SHALL BE COMPLETE AS AMERICAN STANDARD F-6235-5 OR APPROVED EQUAL AS MADE BY CRANE, KOHLER OR ELJER. WITH SLOAN NO.152 FLUSH VALVE

"B" THE ONE IN THE WOMEN'S TOILET ROOM SHALL BE COMPLETE AS AMERICAN STANDARD F-5835-5 OR APPROVED EQUAL AS MADE BY CRANE, KOHLER OR ELJER. WITH SLOAN NO.152

12. LAVATORIES

"A" SHALL BE 20" X 18" AND COMPLETE AS PER AMERICAN STANDARD P-3867-40 EXCEPT COLD WATER FAUCET SHALL BE R-2213 OR CHICAGO NAIAD, SHALL BE NO HOT WATER FAUCET BUT A R-2560, FAUCET HOLD COVER FOR SAME, SUPPLY PIPE R-2607 AND TRAP R-7003-45.

"B" EQUAL LAVATORIES AS MADE BY CRANE, KOHLER OR ELJER WILL BE ACCEPTABLE SUBJECT TO THE ENGINEERS APPROVAL.

13. DRINKING FOUNTAIN

"A" SHALL BE A CRANE 6-590 OR APPROVED EQUAL AS MADE BY AMERICAN STANDARD, KOHLER OR ELJER EQUIPPED WITH MODERN KELLY PUSH BUTTON AUTOMATIC FREEZE PROOF WATER AND DRAIN ASSEMBLY AND CABINET.

14. SUPPORTS FOR WATER CLOSETS AND URINALS

"A" WATER CLOSETS SHALL BE SUPPORTED BY ZURN Z-1205 SERIES FIXTURES SUPPORTS.

"B" WOMEN'S URINALS SHALL BE SUPPORTED BY SIMILAR TYPE SUPPORT.

"C" EQUAL SUPPORTS MADE BY JOSAM AND CRANE WILL BE ACCEPTABLE.

15. CLEANING AND PAINTING

"A" AFTER ALL PIPING HAS BEEN APPROVED, ALL SHALL BE CLEANED AND LEFT IN A FIRST CLASS CONDITION FOR PAINTING.

METHOD OF MEASUREMENT

THE ITEM SPECIAL, "ROADSIDE TOILETS AND STORAGE UNIT" AND ALL APPERTENANCES AS DETAILED AND SPECIFIED ON THE PLANS SHALL BE CONSIDERED AS ONE UNIT. THE NUMBER OF UNITS TO BE PAID FOR SHALL BE THE NUMBER OF EACH UNIT, LISTED AND ESTIMATED SEPARATELY, COMPLETE AND ACCEPTED.

BASIS OF PAYMENT

THE WORK INCLUDED IN THIS ITEM SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE BID FOR EACH "ITEM SPECIAL, ROADSIDE TOILETS AND STORAGE UNIT" COMPLETED AND ACCEPTED, WHICH PRICE AND PAYMENT SHALL CONSTITUTE FULL COMPENSATION FOR FURNISHING, PREPARING, PLACING AND INSTALLING ALL MATERIALS, AND FOR ALL LABOR, EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THIS ITEM AS SHOWN AND SPECIFIED ON THE PLANS.

ROADSIDE REST AREAS

CALCULATIONS

T-71 9" REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT

REST AREAS (2) 69,000 Sq. Ft.
RAMP SA: 465' × 16' 7,440
Trans. & Taper = 1,700
9,140 " "
RAMP SB:
327' × 16' 5,232 " "
RAMP NA: 696' × 16' 11,136
Trans. & Taper 1,700
12,836 " "
RAMP NB: 604' × 16' 9,664
Trans. & Taper 4,500
14,164 " "
Total 110,372 Sq. Ft. ÷ 9 = 12,260 Sq. Yds.

T-31 BITUMINOUS SURFACE TREATMENT - BIT. MAT'L.

S.B. Rest Area = 1,216 × 0.25 = 304 Gals.
N.B. Rest Area = 2,959 × 0.25 = 740 Gals.

T-31 BITUMINOUS SURFACE TREATMENT - AGGREGATE

S.B. Rest Area = 1,216 × 0.008 = 9.7 Cu. Yds. No. 6 Agg.
N.B. Rest Area = 2,959 × 0.008 = 23.7 Cu. Yds. No. 6 Agg.

I-22 SUBBASE; Grading A or B as per plans

RAMP SA = 32,368 Sq. Ft. × 0.5' = 16,184 Cu. Ft.
RAMP SA = 7,196 Sq. Ft. × 0.5' = 3,598 " "
RAMP NA = 37,674 Sq. Ft. × 0.5' = 18,837 " "
RAMP NB = 49,822 Sq. Ft. × 0.5' = 24,911 " "
REST AREAS = 74,848 Sq. Ft. × 0.5' = 37,424 " "
Volume 100,954 Cu. Ft. ÷ 27 = 3,739 Cu. Yds.

B-21 3" WATERPROOFED AGGREGATE BASE COURSE

RAMP SA = 2,790 Sq. Ft. × 0.5' = 1,395
Trans. & Taper = 2,873
4,268 Cu. Ft.
RAMP SB = 1,962 Sq. Ft. × 0.5' = 981 " "
RAMP NA = 4,176 Sq. Ft. × 0.5' = 2,088
Trans. & Taper = 2,876
4,964 " "
RAMP NB = 2,724 Sq. Ft. × 0.5' = 1,362
Trans. & Taper = 6,989
8,351 " "
Volume 18,564 Cu. Ft. ÷ 27 = 687 Cu. Yds.

B-112 POROUS BASE COURSE

RAMP SA = 2,790 Sq. Ft. × 0.2292' = 639
Trans. & Taper = 1,459
2,098 Cu. Ft.
RAMP SB = 1,962 Sq. Ft. × 0.2292' = 450 " "
RAMP NA = 4,176 Sq. Ft. × 0.2292' = 957
Trans. & Taper = 1,459
2,416 " "
RAMP NB = 2,724 Sq. Ft. × 0.2292' = 624
Trans. & Taper = 5,444
6,068 " "
Volume 11,032 Cu. Ft. ÷ 27 = 409 Cu. Yds.

I-127 DELINEATORS

SIDE	STATION TO STATION	SPACING FT.	TYPE C-2	TYPE C-3
R	37+00 - 38+00 Ramp SA	100	2	
L	38+00 - 40+00 Ramp SA	100	3	
L	45+30 - 46+80 Ramp SA	50	3	
R	46+80 - 49+80 Ramp SB	100	4	
L	49+80 - 58+00 Ramp SB	100	10	
R	69+00 - 78+00 Ramp NA	100	10	
L	78+00 - 81+00 Ramp NA	100	4	
R	81+00 - 84+60 Ramp NA	90	4	
L	90+00 - 95+00 Ramp NB	100	6	
R	95+00 - 110+00 Ramp NB	100	16	
R	310+80 I-71			1
	Totals		62	1

I-125 LANE & EDGE LINES

4" Lane Lines - 325' ÷ 5280 = 0.06 Miles
4" Edge Lines - 7985' ÷ 5280 = 1.51 Miles

10" T-71 R P C C PAVEMENT

Ramp SA: Terminal 13,614 Sq. Ft.
Ramp NA: Terminal 13,615 Sq. Ft.
Ramp NB: Terminal 15,000 Sq. Ft.
42,229 Sq. Ft ÷ 9
= 4,680 Sq. Yds.

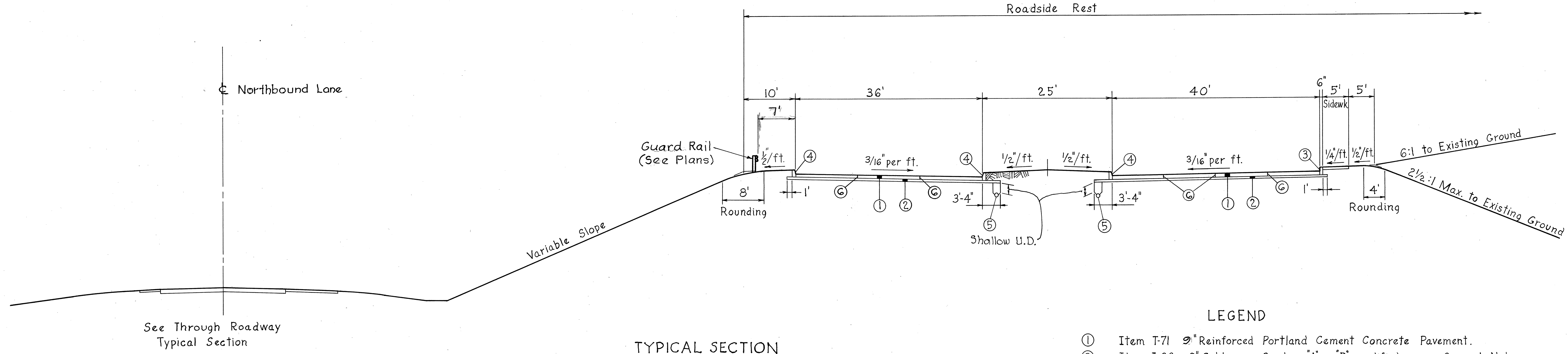
SUB-SUMMARY OF QUANTITIES

Sheet 151	Sheet 153	Sheet 156	Sheet 158	Sheet 163	Sheet 165	ITEM	Normal Participation	No Fed. Part.	TOTAL	UNIT	DESCRIPTION
				116	20	I-1		136	136	Lin. Ft.	6" Pipe Class H-1 Sec 6.8(a) with compression joints, Sec. I-1.06
904	794	1700	744			I-1			4,142	Lin. Ft.	6" Pipe, Class I-3
	20	30	20			I-1			70	Lin. Ft.	6" Pipe, Class F-1
10						I-1			10	Lin. Ft.	8" Pipe, Class F-1
	30		34			I-1			64	Lin. Ft.	15" Pipe, Class E-1
	58		80			I-1			138	Lin. Ft.	18" Pipe, Class A-1
			26			I-1			26	Lin. Ft.	18" Pipe, Class E-1
	0.30		0.30	0.13	0.13	I-2			0.86	Cu. Yds.	Masonry
1	2	3	2			I-5			8	Each	6" Pipe Special, Class I-3
	2		3			I-8			5	Each	Standard No. 3-A Catch Basin
		27		2	3	I-10			32	Cu. Yds.	Dumped Rock Channel Protection
105.5		105.5				I-12			211	Lin. Ft.	Concrete Curb, Type 2-A, Standard
100	386	100	386			I-12			972	Lin. Ft.	Concrete Curb, Type 6, Standard
	1,518	600	1,518			I-12			3,636	Lin. Ft.	Special Barrier Curb
				300	370	I-13		670	670	Sq. Ft.	6" Concrete Sidewalk
				1,790	1,790	I-13		3,580	3,580	Sq. Ft.	4" Concrete Sidewalk
		1,425				I-15			1,425	Lin. Ft.	Guard Rail, Steel Beam Standard Type Deep
30		30				I-21			60	Sq. Yds.	4" Portland Cement Concrete Median Pavement, Std. Type 1
Lump		Lump				I-125			Lump	Lump	Curb and Island Marking
0.23		0.22				I-125			0.45	Mile	Channelizing Lines
Lump		Lump				I-125			Lump	Lump	Diagonal Stripes
	Lump		Lump			I-125			Lump	Lump	Parking Lot Stall Marking
	3					E-3			3	Cu. Yds.	Channel Excavation
						L-1			600	Cu. Yds.	Topsoil Stockpiled
						L-3			5,000	Sq. Yds	Placing Stockpiled Topsoil
				97	104	L-6			201	units	Roadside Cleanup
				11,700	12,500	L-9			24,200	Sq. Yds.	Seeding and Protecting Rest Areas
				1.02	1.25	L-9			2.27	Tons	Commercial Fertilizer, 12-12-12
	3	920	3			L-10			926	Sq. Yds.	Sodding
				146	146	L-13			292	Each	Ligustrum regelianum, 2½ to 3 ft. B. & B. 12 in. min.
				36	48	L-13			84	Each	Cornus amomum, 3 to 4 ft. B. & B. 12 in. min.
				98	85	L-13			183	Each	Viburnum lentago, 3 to 4 ft. B. & B. 12 in. min.
				57	27	L-13			84	Each	Cornus mas, 3 to 4 ft. B. & B. 12 in. min.
					225	L-13			225	Each	Rhamnus frangula columnaris, 3 to 4 ft. B. & B. 12 in. min.
					20	L-14			20	Each	Crataegus lavallei, 6 to 8 ft., B. & B. 15 in. min.
				15	12	L-14			27	Each	Sophora japonica, 5 to 6 ft., B. & B. 14 in. min.
					2	L-14			2	Each	Malus rinki, 6 to 8 ft. B. & B. 15 in. min.
					3	L-14			3	Each	Malus Van Eseltine, 6 to 8 ft. B. & B. 15 in. min.
				3	11	L-14			14	Each.	Malus snowdrift, 1½" to 1¾", B. & B. 20 in. min. 6 ft. stems
					9	L-14			9	Each	Acer plantanoides, 1½" to 1¾", B. & B. 20 min. 6 ft. stems
				31		L-14			31	Each	Crataegus phoenopyrum, 8 to 10 ft., B. & B. 22 in. min.
				9		L-14			9	Each	Liquidamber styraciflua, 1½" to 1¾", B. & B. 20 in. min. 6 ft. stems
						L-17			Lump	Lump	Pruning Existing Trees
				928	937	SS-18			1,865	Lin. Ft.	Rest Area Fence
				121	126	SS-18		247	247	Lin. Ft.	Type C Fence
				1	1	SS-18		2	2	Each	Type C fence gates, 4'
				14	14	Special		28	28	Each	Park Table with concrete slab
				5	5	Special		10	10	Each	Charcoal Grill and Serving Table with concrete slab
				1	1	Special		2	2	Each	Roadside Toilet and Storage Unit
				1	1	Special		2	2	Each	Pressure Water System
				1	1	Special		2	2	Each	Aerobic Digestion Sewage Treatment Plant
				1	1	Special		2	2	Each	Chlorine Contact Tank
				125	70	Special		195	195	Lin. Ft.	2" Galv. Pipe Drain for Well Pit

Rev. 10-10-62

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

MEDINA COUNTY
MED - 42 - 21.94



TYPICAL SECTION
NORTH BOUND REST AREA
SOUTH BOUND AREA SIMILAR
SCALE: 1" = 10'

LEGEND

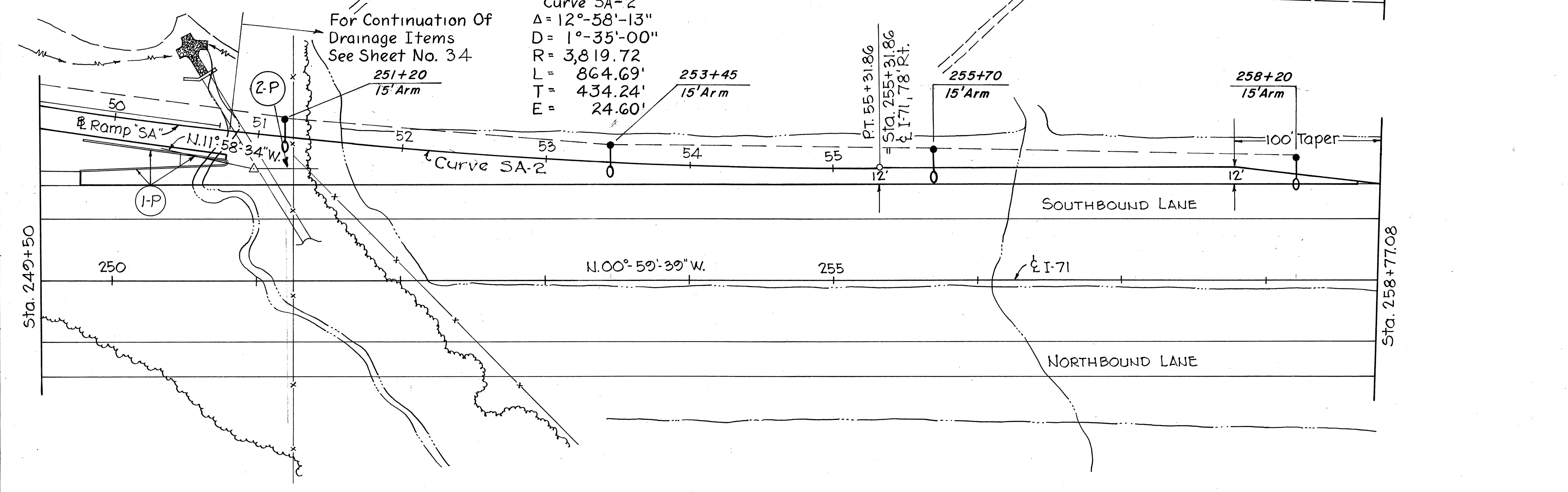
1. Item T-71 9" Reinforced Portland Cement Concrete Pavement.
2. Item I-22 6" Subbase, Grading "A" or "B", modified as per General Note.
3. Item I-12 Concrete Curb, Type 6 Standard.
4. Item I-12 Modified Special Barrier Curb.
5. Item I-1 6" Pipe, Class I-3.
6. Standard Longitudinal Joint.

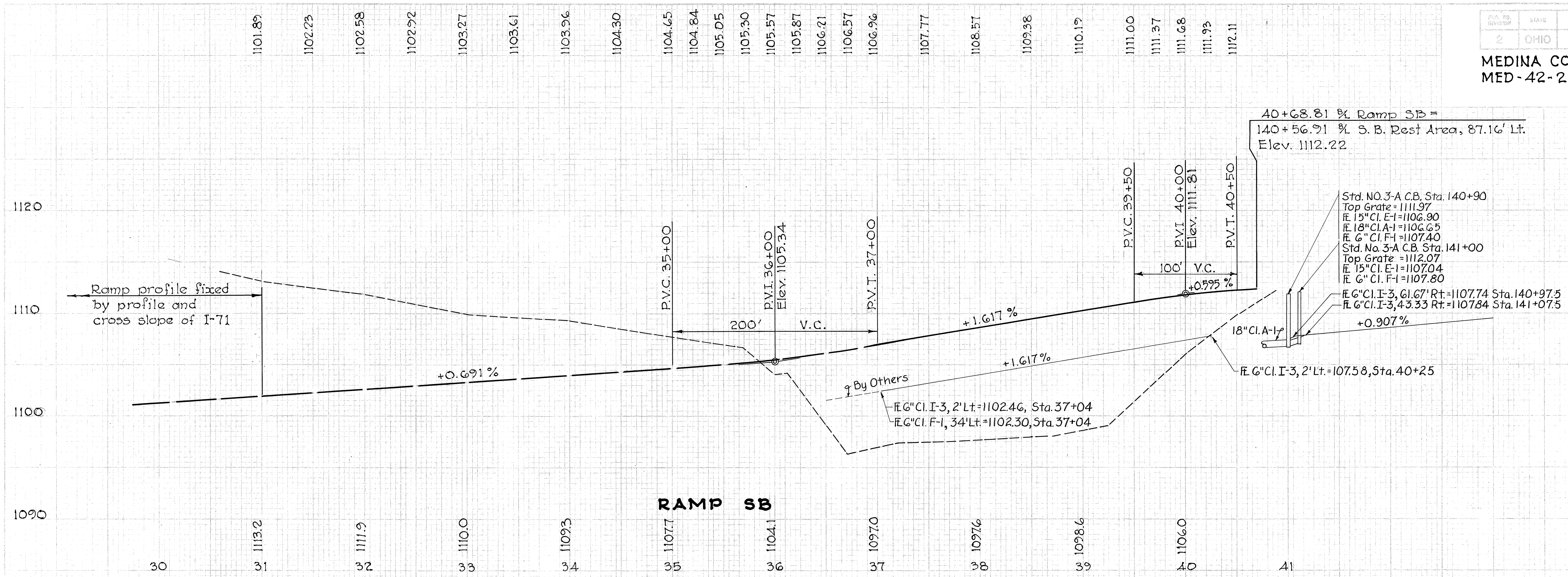
Rev 10-10-62

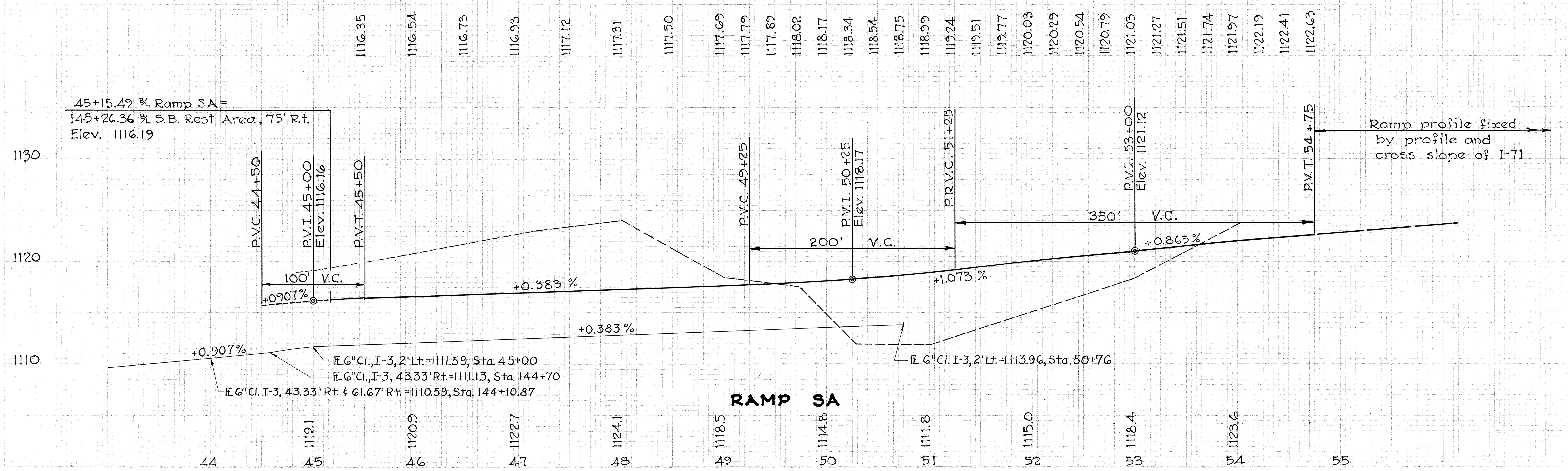
ROADSIDE REST AREAS - TYPICAL SECTION

MEDINA COUNTY
MED-42-21.94

REF. NO.	STATION TO STATION	SIDE	I-1 Cl. I-3 Pipe 6" Shallow	I-1 Cl. F-1 Pipe 8"	I-5 Pipe Specials 6" 90° Bend	I-12 Std. Conc. Curb Type 2-A	I-12 Std. Conc. Curb Type 6	I-21 4" Std. Conc. Median Pvmt. Type-1	I-125 Curb & Island Marking	I-125 Channelizing Lines	I-125 Diagonal Stripes	SEE SHEET NO.
			Lin. Ft.	Lin. Ft.	Each	Lin. Ft.	Lin. Ft.	Sq. Yd.	Lump Sum	Miles	Lump	
1-D	37+04 To 40+25		344	10	1							
2-D	45+15.5 to 50+75		560									
1-P	49+78.79 to 50+78.79	Rt.				105.5	100	30	L.S.			
2-P	51+00 Ramp SA	Rt.								0.14	Lump	
3-P	230+00 ±	Lt.								0.09		
4-P	32+00 ±	RT.							L.S.			
	TOTAL		904	10	1	105.5	100	30	Lump	0.23	Lump	




1101.89 1102.23 1102.58 1102.92 1103.27 1103.61 1103.96 1104.30 1104.65 1104.84 1105.05 1105.30 1105.57 1105.87 1106.21 1106.57 1106.96 1107.77 1108.57 1109.38 1110.19 1111.00 1111.37 1111.68 1111.93 1112.11
40+68.81 ℄ Ramp SB =
140+56.91 ℄ S.B. Rest Area, 87.16' Lt.
Elev. 1112.22
1120
1110
1100
1090
Ramp profile fixed by profile and cross slope of I-71
P.V.C. 35+00
P.V.I. 36+00 Elev. 1105.34
P.V.T. 37+00
200' V.C.
P.V.C. 39+50
P.V.I. 40+00 Elev. 1111.81
P.V.T. 40+50
100' V.C.
+0.595 %
+0.691 %
+1.617 %
+1.617 %
℄ By Others
FE 6" Cl. I-3, 2' Lt. = 1102.46, Sta. 37+04
FE 6" Cl. F-1, 34' Lt. = 1102.30, Sta. 37+04
FE 6" Cl. I-3, 2' Lt. = 107.58, Sta. 40+25
18" Cl. A-1
+0.907 %
Std. NO. 3-A C.B. Sta. 140+90
Top Grate = 1111.97
FE 15" Cl. E-1 = 1106.90
FE 18" Cl. A-1 = 1106.65
FE 6" Cl. F-1 = 1107.40
Std. No. 3-A C.B. Sta. 141+00
Top Grate = 1112.07
FE 15" Cl. E-1 = 1107.04
FE 6" Cl. F-1 = 1107.80
FE 6" Cl. I-3, 61.67' Rt. = 1107.74 Sta. 140+97.5
FE 6" Cl. I-3, 43.33 Rt. = 1107.84 Sta. 141+07.5
RAMP SB
1113.2 1111.9 1110.0 1109.3 1107.7 1104.1 1097.0 1097.6 1098.6 1106.0
30 31 32 33 34 35 36 37 38 39 40 41


1116.35 1116.54 1116.73 1116.93 1117.12 1117.31 1117.50 1117.69 1117.79 1117.89 1118.02 1118.17 1118.34 1118.54 1118.75 1118.99 1119.24 1119.51 1119.77 1120.03 1120.29 1120.54 1120.79 1121.03 1121.27 1121.51 1121.74 1121.97 1122.19 1122.41 1122.63
45+15.49 ℄ Ramp SA =
145+26.36 ℄ S.B. Rest Area, 75' Rt.
Elev. 1116.19
1130
1120
1110
P.V.C. 44+50
P.V.I. 45+00 Elev. 1116.16
P.V.T. 45+50
100' V.C.
+0.907 %
+0.383 %
P.V.C. 49+25
P.V.I. 50+25 Elev. 1118.17
P.R.V.C. 51+25
200' V.C.
+1.073 %
P.V.I. 53+00 Elev. 1121.12
P.V.T. 54+75
350' V.C.
+0.865 %
Ramp profile fixed by profile and cross slope of I-71
+0.383 %
+0.907 %
FE 6" Cl., I-3, 2' Lt. = 1111.59, Sta. 45+00
FE 6" Cl., I-3, 43.33' Rt. = 1111.13, Sta. 144+70
FE 6" Cl. I-3, 43.33' Rt. & 61.67' Rt. = 1110.59, Sta. 144+10.87
FE 6" Cl. I-3, 2' Lt. = 1113.96, Sta. 50+76
RAMP SA
1119.1 1120.9 1122.7 1124.1 1118.5 1114.8 1111.8 1115.0 1118.4 1123.6
44 45 46 47 48 49 50 51 52 53 54 55

ESTIMATED QUANTITIES

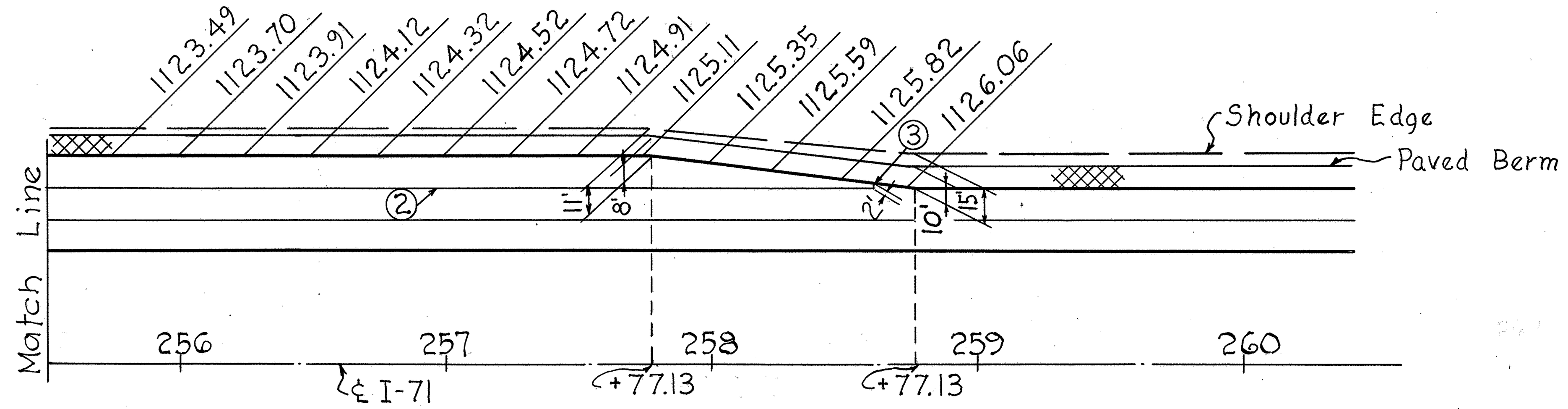
REF. NO.	STATION TO STATION	SIDE	I-1 Class A-1 Pipe Sec.M6.6(a) Sec.M6.8(b) 18" Lin. Ft.	I-1 Class E-1 Pipe 15" Lin. Ft.	I-1 Class F-1 Pipe 6" Lin. Ft.	I-1 Class I-3 Pipe Shallow 6" Lin. Ft.	I-2 Masonry Cu. Yd.	I-5 Pipe Specials 6"-30° Bend Each	I-8 Std. No. 3-A C.B. Each	L-10 Sodding Sq. Yd.	E-3 Channel Excav. Cu. Yd.	I-12 Conc. Curb Std. Type 6 Lin. Ft.	I-12 Special Barrier Curb Lin. Ft.	I-125 Parking Lot Stall Marking Lump	SEE SHEET NO.
1-D	141+07.5 to 144+70				10	364		1							
2-D	140+97.5 to 145+26.4				10	430		1							
3-D	141+00			30					1						162
4-D	140+90		58				0.30		1	3	3				162
1-P	Rest Area											386			
2-P	Rest Area												1518		
3-P	Rest Area													Lump	
TOTAL			58	30	20	794	0.30	2	2	3	3	386	1518	Lump	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

154
293

MEDINA COUNTY
MED-42-21.94

RAMP SA
CONNECTION
Scale: 1" = 20'



RAMP SA
DECELERATION LANE & TAPER
Scale: 1" = 50'

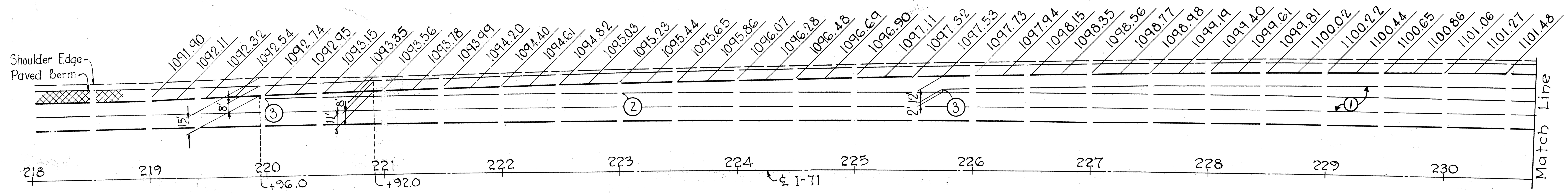
JOINT LEGEND

① Standard Longitudinal Joint
② Standard Longitudinal Key Joint without dowels
③ Expansion Joint without Dowels
④ Standard Expansion Joint

S. B. ROADSIDE REST AREA - RAMP DETAILS

RAMP SB CONNECTION

Scale: 1" = 20'



RAMP SB ACCELERATION LANE & TAPER

Scale: 1" = 50'

JOINT LEGEND

1. Standard Longitudinal Joint
2. Standard Longitudinal key Joint w/o tie bars
3. Expansion Joint without dowels
4. Standard Expansion Joint

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

MEDINA COUNTY
MED-42-21.94

ESTIMATED QUANTITIES

Ref. No.	Station to Station	Side	I-1 Class F-1 Pipe 6"	I-1 Class I-3 Pipe Shallow	I-1	I-5 6"-30° Bend	I-5 6"-60° Wye	I-10 Dumped Rock	L-10 Sodding	I-15 Guard Rail	I-12 Conc. Curb Type 2A Std.	I-12 Conc. Curb Type 6 Std.	I-12 Spec. Barrier Curb	I-21 4" Conc. Median Pav'm't. Type I Std.	I-125 Curb & Island Marking
			Lin. Ft.	Lin. Ft.		Each	Each	Cu. Yd.	Sq. Yd.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Sq. Yd.	Lump Sum
1-D	77+03 to 84+99		10	786		1									
2-D	89+80 to 95+40		10	570			1								
3-D	89+90							27							
4-D	90+00 to 95+40								473						
5-D	95+40 to 98+80								305						
6-D	95+46 to 98+80		10	344			1								
7-D	79+60 to 81+25								142						
1-P	77+03.07 to 78+03.07 Ramp NA	Lt.									105.5	100		30	Lump
2-P	92+80 to 98+80 Ramp NB	Lt.											600		Lump
1-R	78+00 to 84+00									600					
2-R	184+84 Rest Area to 92+91 Ramp NB									825					
TOTAL			30	1700		1	2	27	920	1425	105.5	100	600	30	Lump

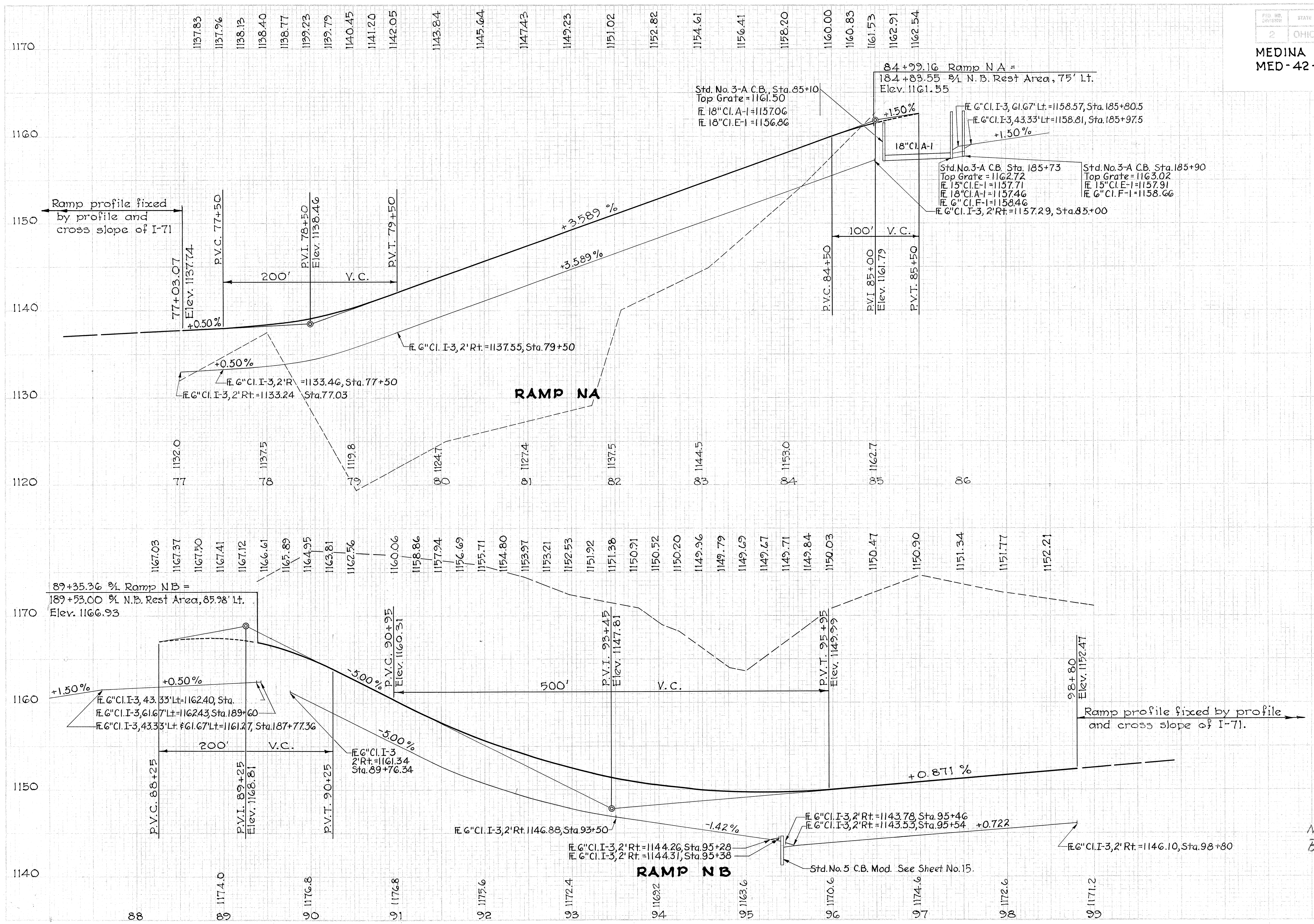
ESTIMATED QUANTITIES

Ref. No.	Station	Side	I-125 Channelizing Lines	I-125 Diagonal Stripes
			Mile	L.S.
3-P	76+00 ± Ramp N.A.		0.14	Lump
4-P	98+80 + Ramp N.B.		0.08	
TOTAL			0.22	Lump

#3-39

N.B. ROADSIDE REST AREA - PLAN

MEDINA COUNTY
MED-42-21.94



NB Rest Area Not Built with This Plan

N. B. ROADSIDE REST AREA - RAMP PROFILES

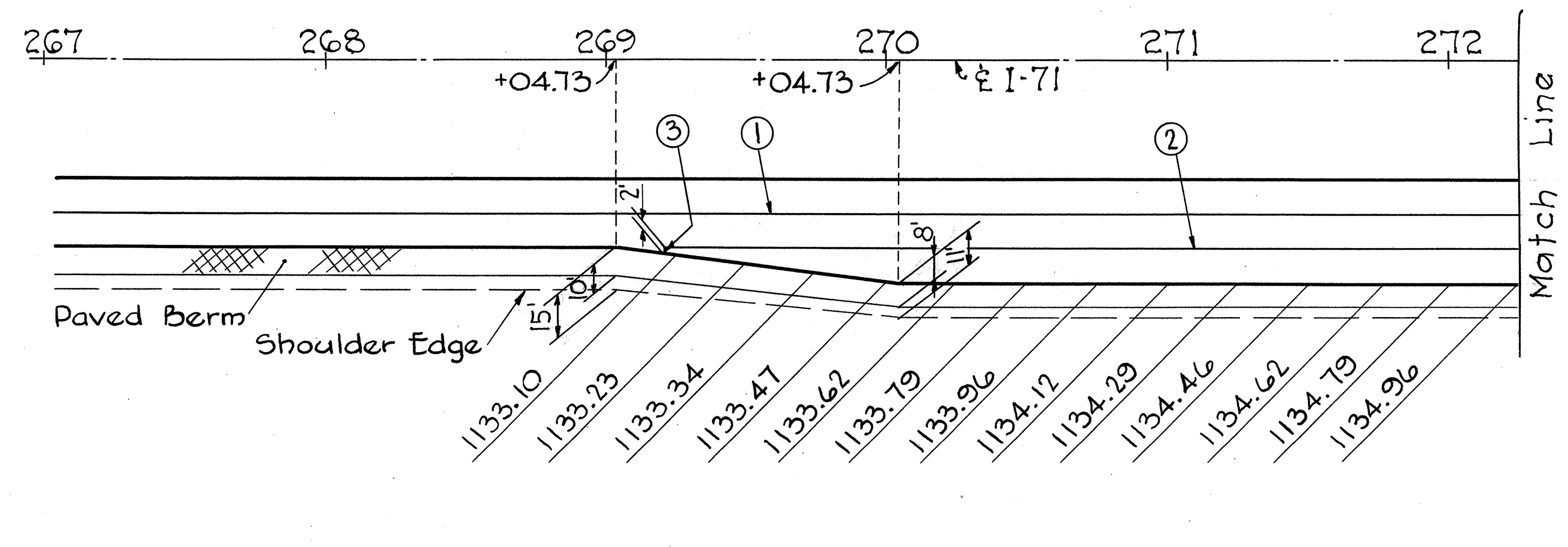
ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	I-1 Class A-1 Pipe Sec. M 6.6(a) M 6.8(b) 18"	I-1 Class E-1 Pipe 15"	I-1 Class E-1 Pipe 18"	I-1 Class F-1 Pipe 6"	I-1 Class I-3 Pipe 6" Shallow	I-2 Masonry Type "E" Endwall	I-5 Pipe Special 6"-30° Bend	I-8 Std. No. 3A C.B.	I-12 Std. Conc. Curb Type 6	I-12 Special Barrier Curb	L-10 Sodding	I-125 Parking Lot Stall Marking		SEE SHEET NO.
			Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Cuyd	Each	Each	Lin. Ft.	Lin. Ft.	Sqyd	Lump		
1-D	185+88 to 189+60	Lt.				10	362		1							
2-D	185+70 to 189+62	Lt.				10	382		1							
3-D	184+90	Lt.			26			0.30		1			3			162
4-D	184+90 to 185+70	Lt.	80							1						162
5-D	185+70 to 185+90	Lt.		34						1						162
1-P	Rest Area											1518				
2-P	Rest Area										386					
3-P	Rest Area													Lump		
TOTAL			80	34	26	20	744	0.30	2	3	386	1518	3	Lump		

NB Rest Area Not Built with This Plan

N.B. ROADSIDE REST AREA - PARKING AREA DETAILS

RAMP NA
CONNECTION
Scale: 1" = 20'



RAMP NA
DECELERATION LANE & TAPER
Scale: 1" = 50'

JOINT LEGEND

1. ① Standard Longitudinal Joint
2. ② Standard Longitudinal Key Joint without Tie Bars
3. ③ Expansion Joint without Dowels
4. ④ Standard Expansion Joint

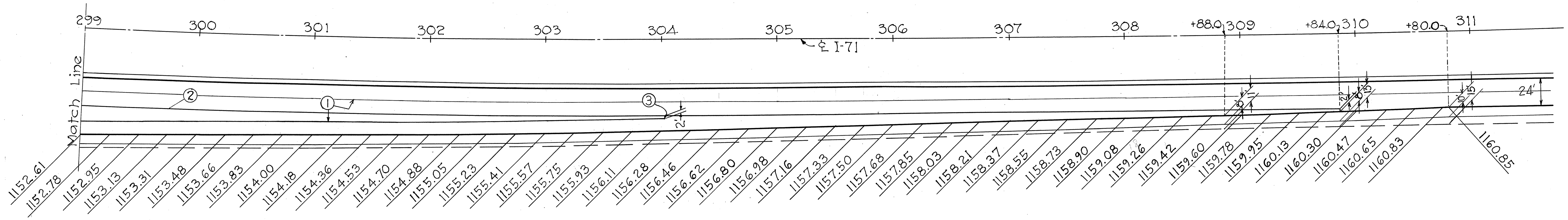
N B Rest Area
Not Built with
This Plan

FED. RD. DIVISION	STATE	PROJECT		
2	OHIO			

MEDINA COUNTY
MED-42-21.94

RAMP NB CONNECTION

Scale: 1" = 20'



JOINT LEGEND

1. Standard Longitudinal Joint
2. Standard Longitudinal key Joint without Tie Bars
3. Expansion Joint without Dowels
4. Standard Expansion Joint

NB Rest Area Not Built with This Plan

N. B. ROADSIDE REST AREA - RAMP DETAILS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

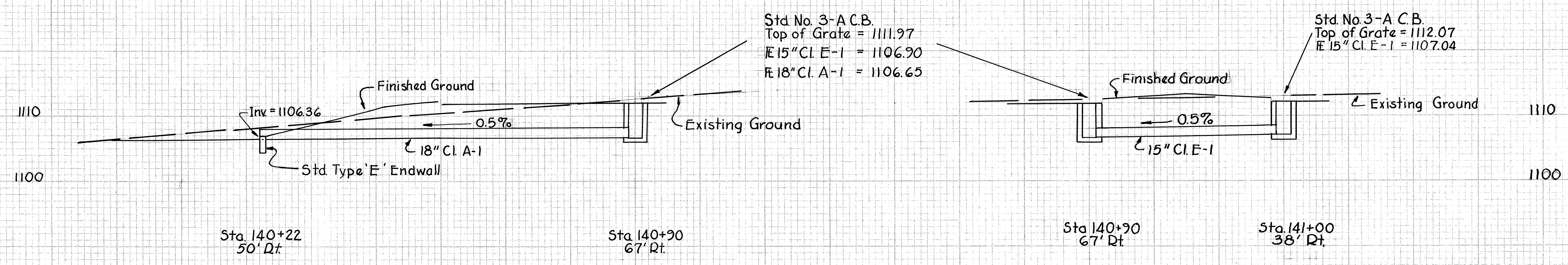
MEDINA COUNTY
MED- 42- 21.94

LEGEND

① Standard Longitudinal Joint
② Standard Longitudinal Key Joint without Tie Bars
③ Expansion Joint without Dowels
④ Standard Expansion Joint

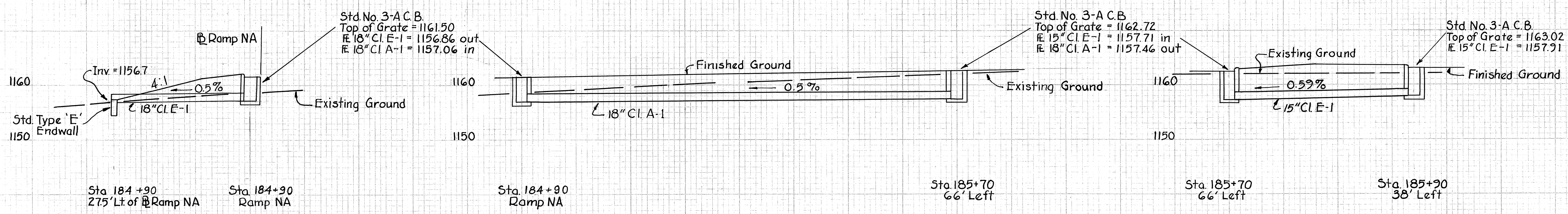
ROADSIDE REST AREAS - TYPICAL JOINT & CURB LAYOUT

MEDINA COUNTY
MED-42-21.94



Scale: 1" = 10'

SOUTHBOUND LANE REST AREA



Scale: 1" = 10'

NB Rest Area
Not Built with
This Plan

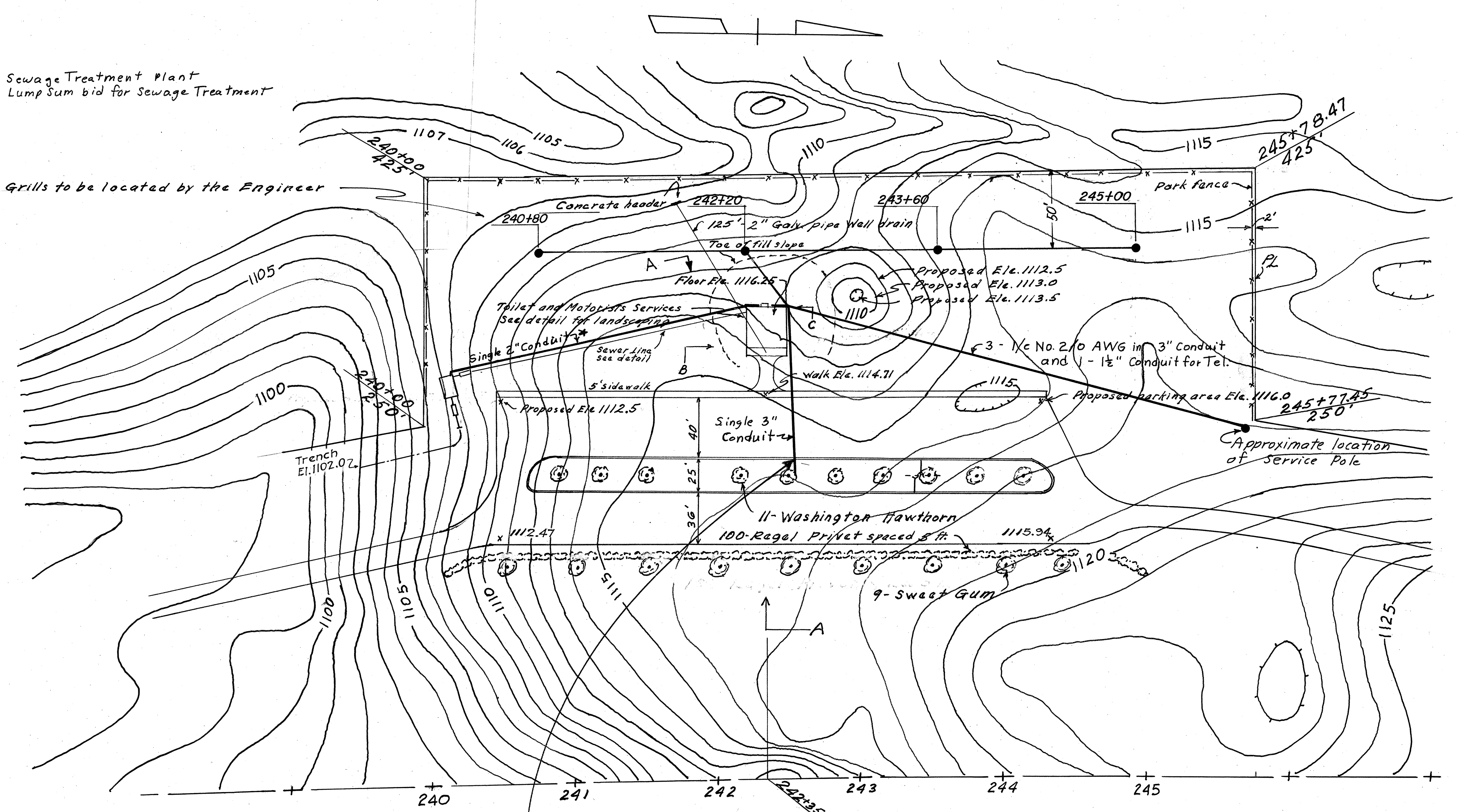
NORTHBOUND LANE REST AREA

ROADSIDE REST AREA - STORM SEWER PROFILES

Med.-42-21.94

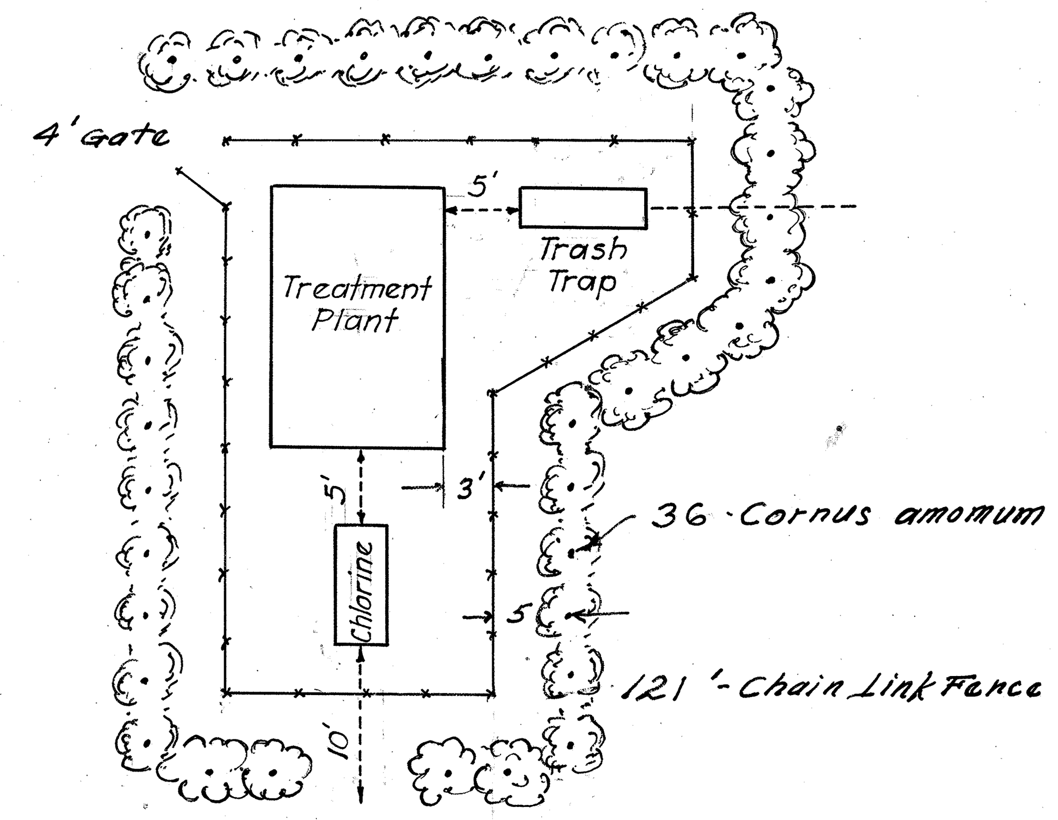
* Cable and Conduit to Sewage Treatment Plant included in Lump Sum bid for Sewage Treatment Plant.

Park Tables and Charcoal Grills to be located by the Engineer



Scale 1" = 50'

LIGHTING NOTE: for Remainder of Rest Area Lighting, See Sheet No. 151.



Plan
Sewage Treatment Plant
Scale 1" = 10'

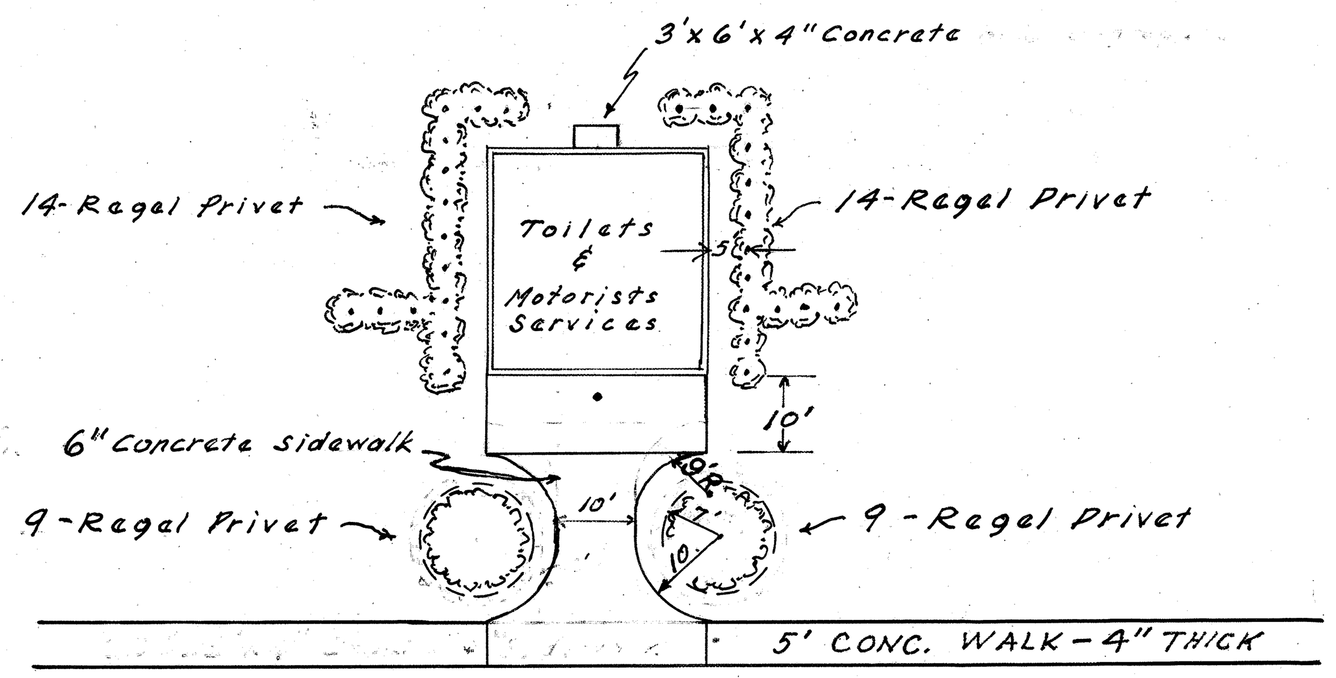
· Notes ·

Item L-6 Pruning to include all tree sizes and shall consist of removal of all dead wood and stubs also to include 9 ft. clearance above the ground.

Item L-9 Seeding formula shall be: 35% Creeping Red Fescue
35% Meadow Fescue
15% Ky. Bluegrass
15% Reed Canarygrass

Item L-9 Commercial Fertilizer. Formula shall be 12-12-12

Item L-13 Regal Privet shall be stock grown from cuttings.
Item L-14 Item L-2.03 Ignition Test shall be waived.
Peatmoss shall be used for planting trees and shrubs.
Wood chips shall be used for mulching.



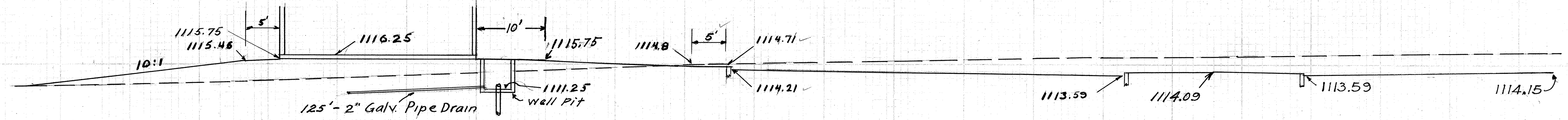
Planting Detail for Toilet Bldg.
Scale 1" = 20'

- Summary -

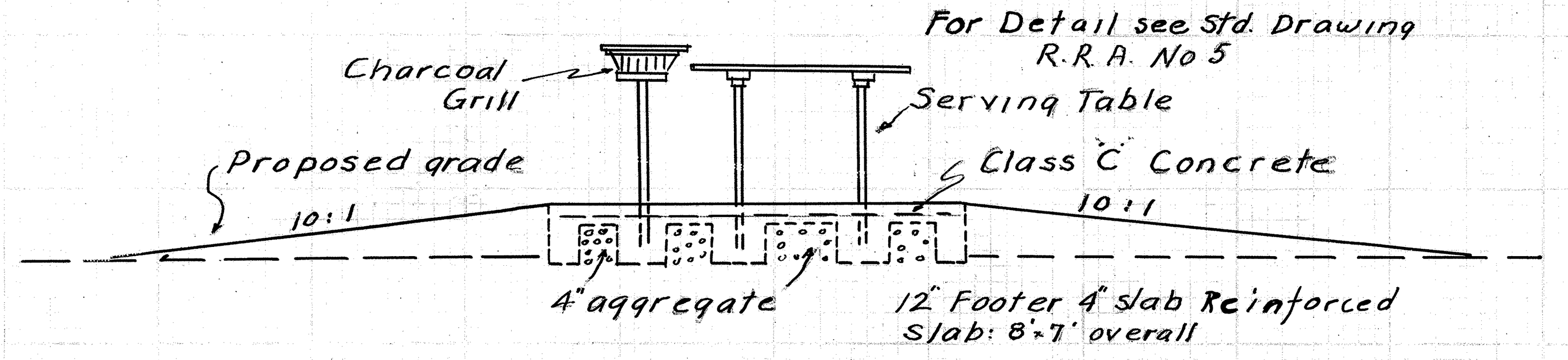
Item	Quan.	Unit	
L-6	97	Units	Roadside Cleanup (Rest Area)
L-9	11,700	Sq. Yd.	Seeding and Protecting
L-9	1.02	Ton	Commercial Fertilizer (12-12-12)
L-13	146	each	Ligustrum regelianum - Regal Privet, 2½ to 3 ft. B.&B. 12 in.
L-14	31	each	Crataegus phaenopyrum - Washington Hawthorn, 8 to 10 ft. B.&B. 22 in.
S.S-18	928	lin. ft.	Rest Area Fence
I-13	300	Sq. ft.	Concrete Sidewalk 6"
Spec.	14	each	Park Table with concrete slab
Spec.	5	each	Charcoal Grill and Serving Table with concrete slab
L-14	9	each	Liquidamber styraciflua - Sweet Gum, 1½" to 1¾" B.&B. 20" min. 6' stems
SS-18	121	Lin. ft.	Type 'C' Fence
SS-18	1	each	Type 'C' Fence Gate (4')
I-10	2	cu. yd.	Dumped Rock
I-13	1790	Sq. ft.	Concrete Sidewalk 4"
I-1	115.5	Lin. ft.	6" Pipe Class H-1, Sec. M-6.8(a) with compression joints
Special	125	Lin. ft.	2" Galv. Pipe Drain for Well Pit
			Drilled Well (By others)
Special	1	each	Roadside Toilet & Storage Unit
Special	1	each	Pressure Water System
Special	1	each	Aerobic Digestion Sewage Treatment Plant
Special	1	each	Chlorine Contact Tank
L-13	36	each	Cornus amomum, 3 to 4 ft. B.&B. 12" min.
L-13	98	each	Viburnum lentago, Nannyberry, 3 to 4 ft. B.&B. 12 in. min.
L-13	57	each	Cornus mas, Corneliancherry Dogwood, 3 to 4 ft. B.&B. 12 in. min.
L-14	15	each	Sophora japonica, Chinese Pagodatree, 5 to 6 ft. B.&B. 14 in. min.
L-14	3	each	Malus snowdrift, Fl. Crab, 1½ to 1¾ in. 6 ft stems, B.&B. 20 in. min.
I-2	0.13	Cu. Yd.	Modified Masonry Headwall

S.B.L. Rest Area No-3-40

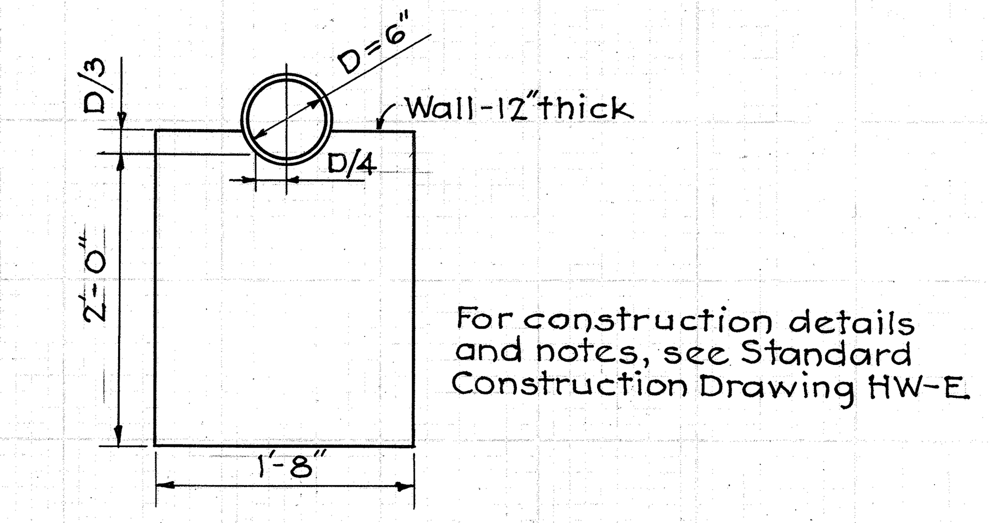
Med.- 42-21.94



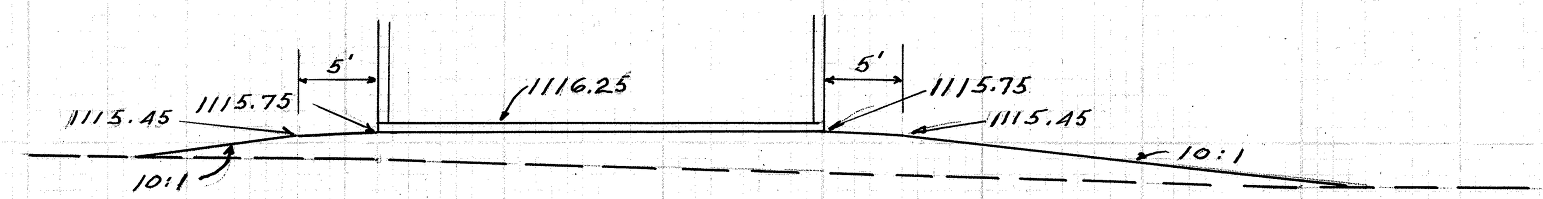
Sec. A-A
Scale : 1" = 10' Hor.
1" = 10' Ver.



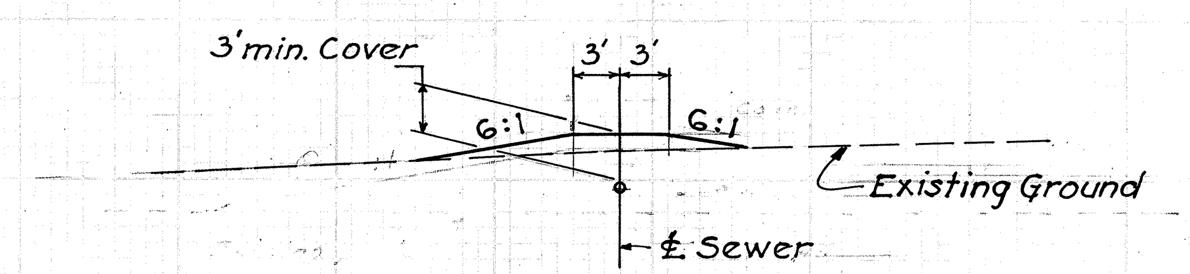
SECTION SHOWING FILL AROUND
GRILL BASE
Scale = 1" = 3'



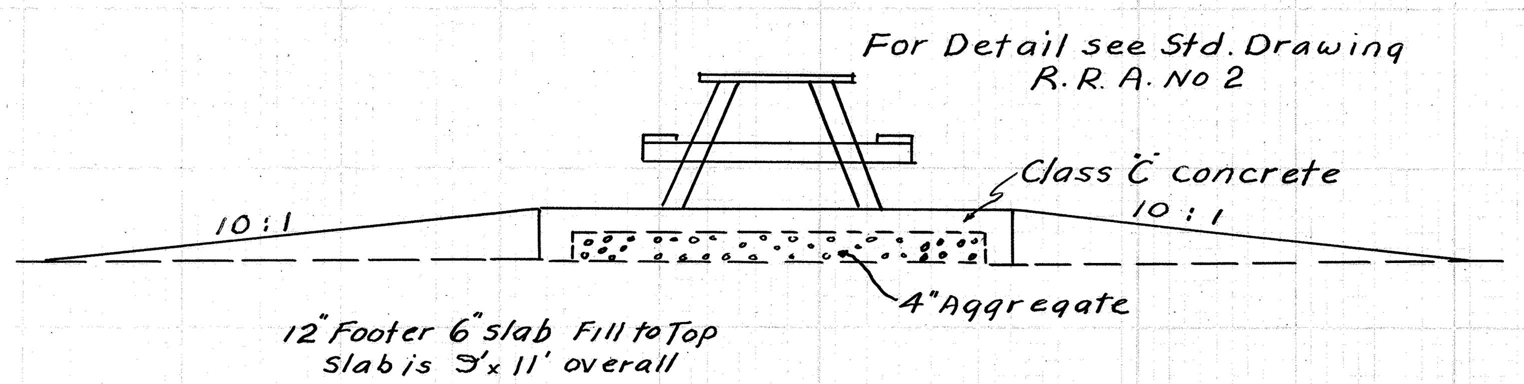
MODIFIED
MASONRY HEADWALL
Scale : 1" = 1'-0"



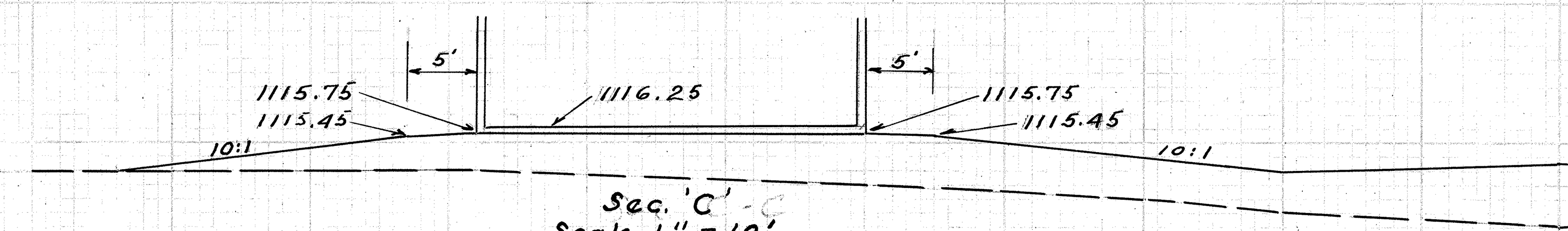
Sec. B-B
Scale 1" = 10' Hor.
1" = 10' Ver.



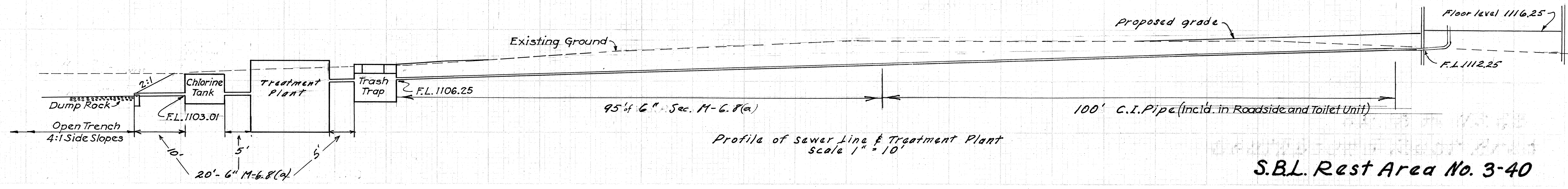
Sec. 'A'
Scale 1" = 10'



SECTION SHOWING FILL AROUND
TABLE BASE
Scale = 1" = 3'



Sec. 'C'
Scale 1" = 10'

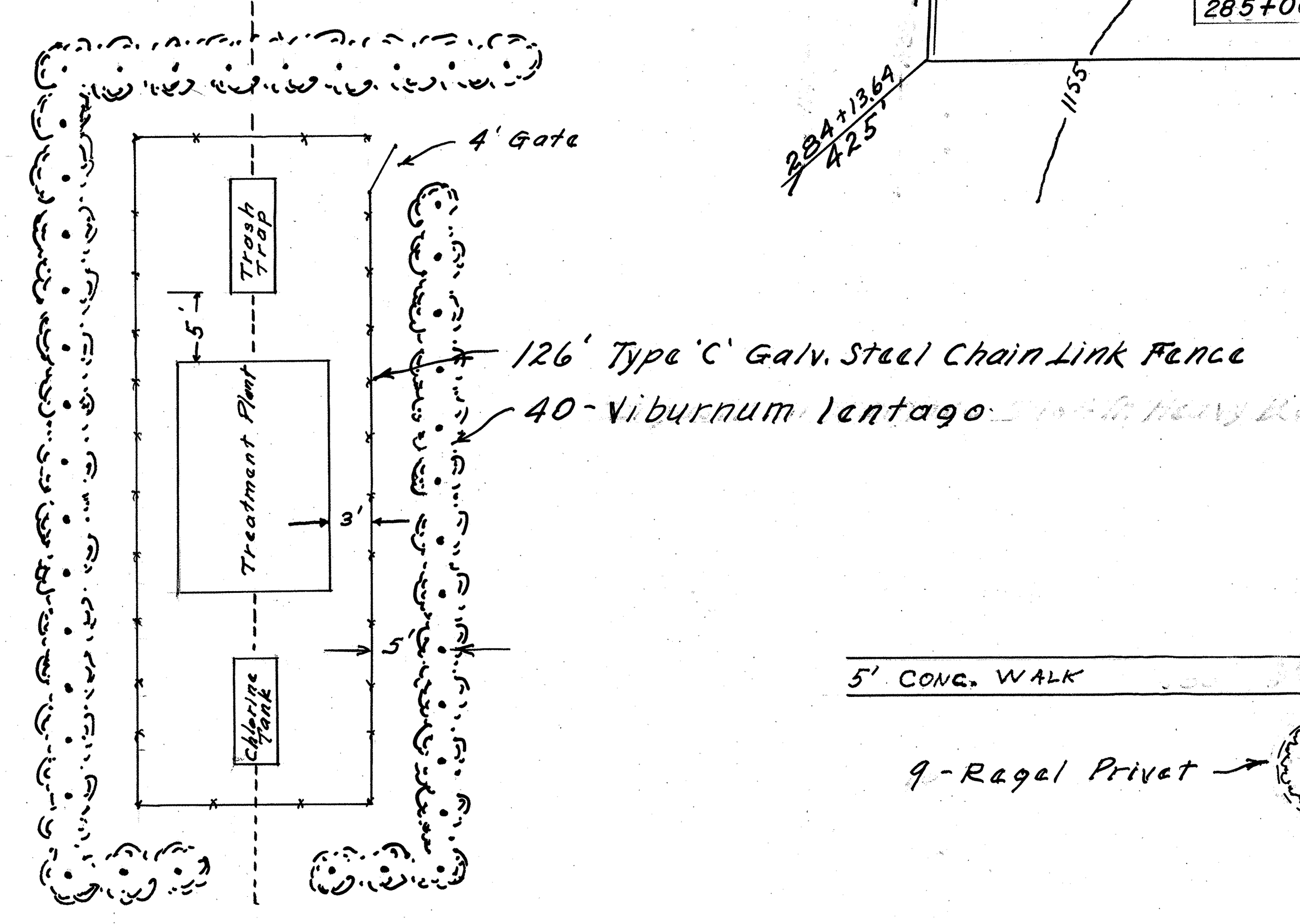


Profile of Sewer Line & Treatment Plant
Scale 1" = 10'

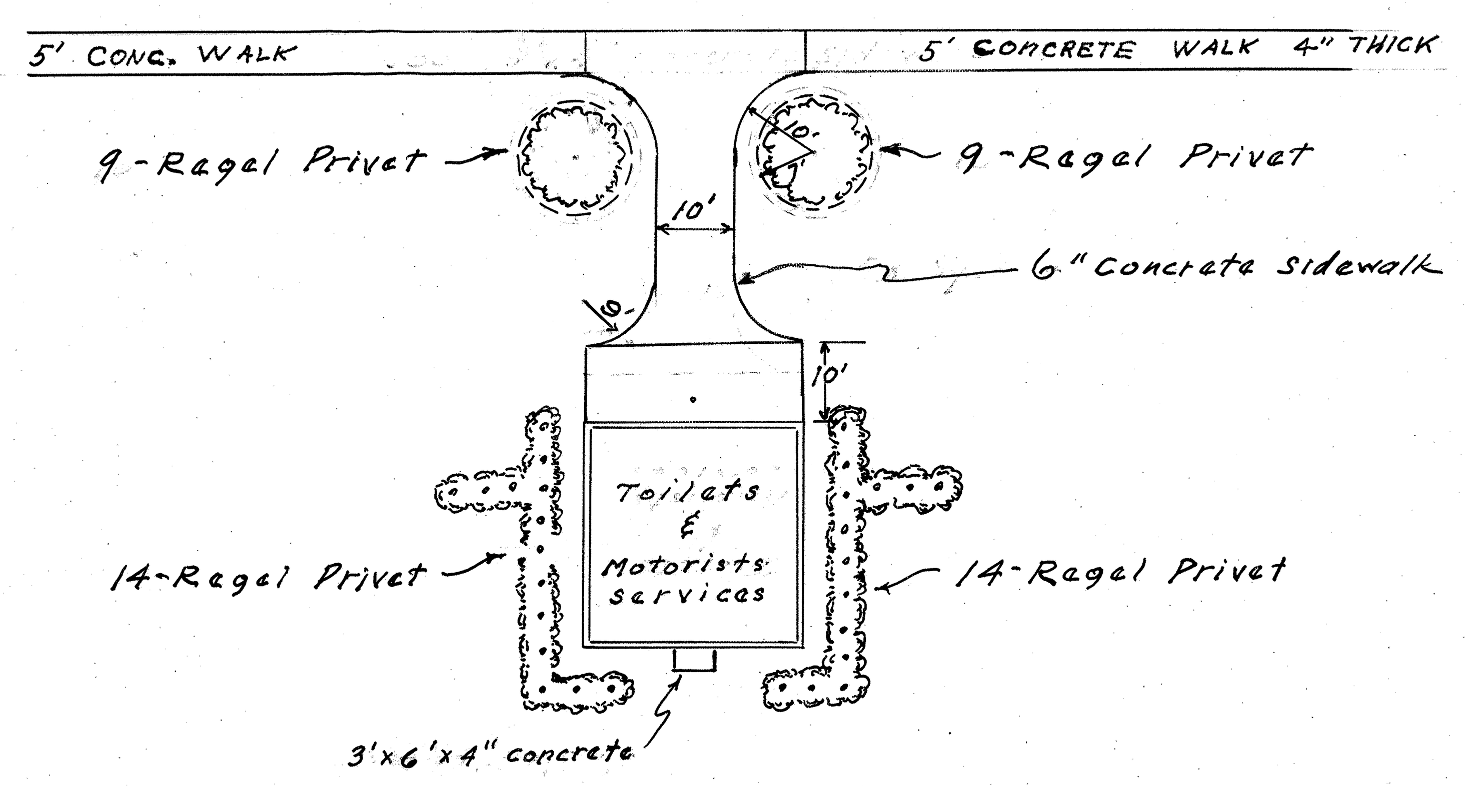
S.B.L. Rest Area No. 3-40

Mad.- 42- 21.94

⊛ 2" Conduit and Cable Included in Lump sum bid for Sewage Treatment Plant.



Plan
Sewage Treatment Plant
Scale 1" = 10'



Planting Detail for Toilet Bldg.
Scale 1" = 20'

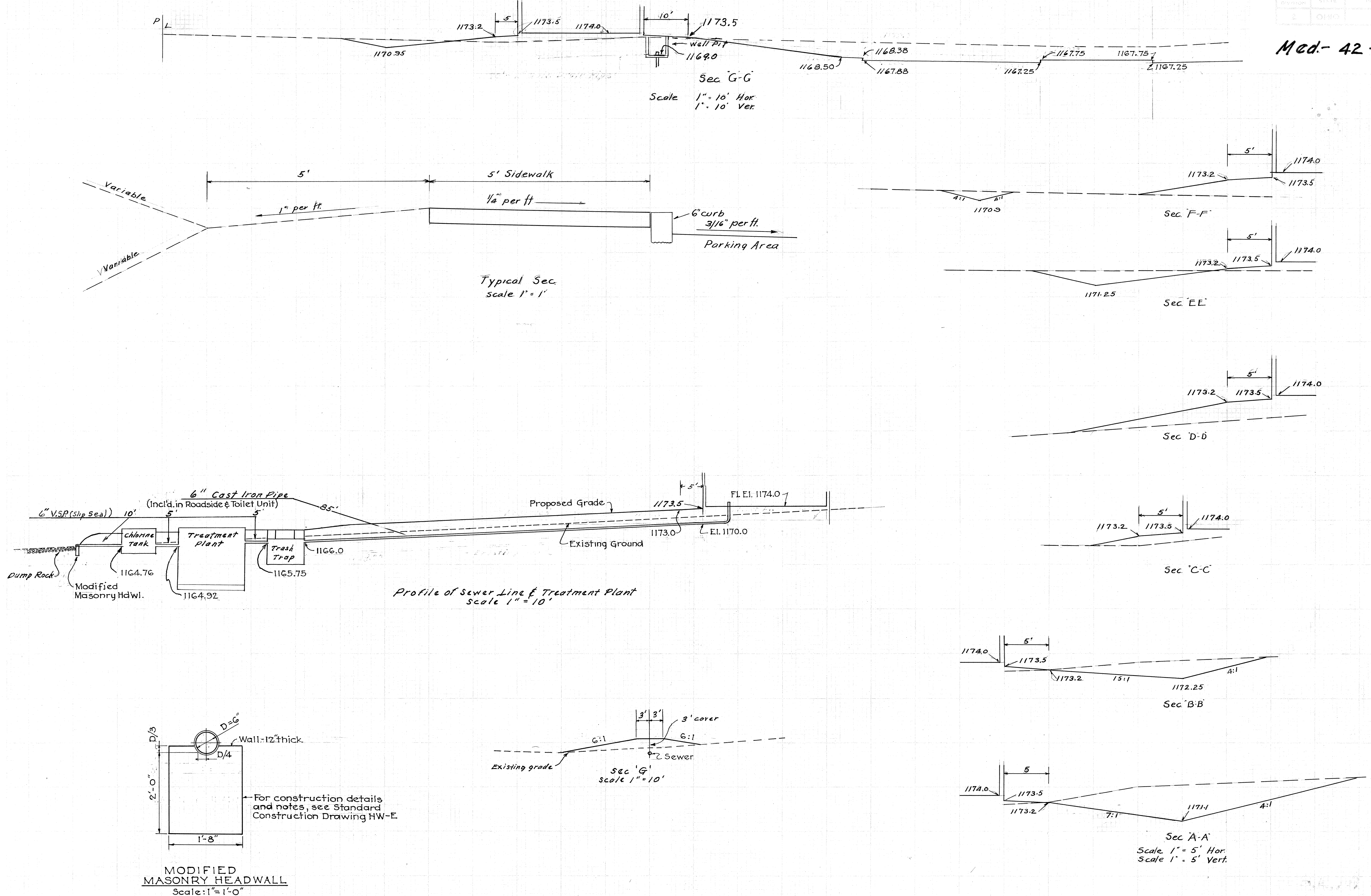
-Summary-

Item	Quan.	Unit	
I-2	0.13	Cu. Yd.	Modified Masonry Headwall
I-13	1790	Sq. Ft.	Concrete Sidewalk-4"
L-13	225	each	Rhamnus frangula columnaris, Tallhadge, 3 to 4 ft. B.&B. 12 in. min.
L-13	48	each	Cornus amomum. Silky Dogwood, 3 to 4 ft. B.&B. 12 in. min
L-13	27	each	Cornus mas, Cornelian cherry Dogwood, 3 to 4 ft. B.&B. 12 in. min.
L-14	20	each	Crataegus lavallei, Hawthorn, 6 to 8 ft. B.&B. 15 in. min.
L-14	12	each	Sophora japonica, Chinese Pagodatree, 5 to 6 ft. B.&B. 14 in. min.
L-14	2	each	Malus rinki, Flowering Crab, 6 to 8 ft. B.&B. 15 in. min.
L-14	3	each	Malus Van Eseltine. Flowering Crab. 6 to 8 ft. B.&B. 15 in. min.
L-6	104	1000 S.F.	Roadside Cleanup (Rest Area)
L-9	12,500	Sq. Yd.	Seeding and Protecting
L-9	1.25	Ton	Commercial Fertilizer (12-12-12)
L-13	146	each	Ligustrum regelianum-Regel Privet, 2½ to 3 ft. B.&B. 12 in.
L-14	11	each	Malus snowdrift-Flowering Crab, 1½" to 1¾" B.&B. 20" min. 6' Stems
S.S-18	937	lin. ft.	Rest Area Fence
I-13	370	Sq. ft.	Concrete Sidewalk 6"
Spec.	14	each	Park Table with concrete slab
Spec.	5	each	Charcoal Grill and Serving Table with concrete slab
L-13	85	each	Viburnum lentago 3 to 4 ft. B.&B. 12" min.
S.S-18	126	lin. ft.	Type 'C' Chain Link Fence
S.S-18	1	each	Type 'C' Chain Link Gate. 4 ft.
I-10	3	Cu. Yd	Dumped Rock
I-1	20	lin. ft.	6" M-6.8 (a) pipe
Special	70	lin. ft.	2" Galv. Pipe Drain for Well Pit.
			Drilled Well. (By Others)
Special	1	each	Roadside Toilet & Storage Unit.
Special	1	each	Pressure Water System.
Special	1	each	Aerobic Digestion Sewage Treatment Plant.
Special	1	each	Chlorine Contact Tank
L-14	9	each	Acer platanoides 'Cleveland' 1½" to 1¾" 6' Stems, B.&B. 20" min.

NB Rest Area
Not Built with
This Plan

N.B.L. Rest Area No. 3-39

Med.- 42-21.94



NB Rest Area
Not Built With
This Plan

N.B.L. Rest Area No. 3-39

21.94

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

Med.-42-21.94

NB Rest Area
Not Built with
This Plan

NOTE: ALL LUMBER, SIDING, ETC. TO BE PRESSURE-TREATED - SEE SPECS.

FED. RD. DIVISION	STATE	PROJECT		
2	OHIO			

168/293

Med-42-21.94

-DOOR HARDWARE - SCHEDULE-

DOORS	A	B	C	A1
4 1/2" BUTTS 1 1/2 PR. STSDBB81	X		X	X
LOCK 77-22 AN				X
KICK PLATE 12" 16GA. 34" U.S.28	X			X
CLOSER 44V EN	X			X
THRESHOLD #60 36X4 US10				X
PUSH PLATE 893 AN	X			X
DOOR PULL 1890 MA AN	X			X
LOCK 77-04 GA.-AN AN		X	X	
KICK PLATE 16GA. 46X12 US28		X		
THRESHOLD #80 48X4 1/4 US10		X		
CLOSER 44V W 90° HOLD OPEN EN			X	
5"x5" BUTTS 1 1/2 PR STSDBB180		X		
KICKPLATE 16GA. 30X12 US28			X	
THRESHOLD #60 32X5 US10			X	
NUMBER REQUIRED	2	1	1	2

THE ABOVE ARE USED AS STANDARDS; EQUAL PRODUCTS ARE ACCEPTABLE. BUTTS - STANLEY, LOCKS - SARGENT, CLOSERS - SARGENT, PLATES AND PULLS - SARGENTS THRESHOLD - ZERO.

INTERIOR FINISH

ROOM	FLOOR	WALLS	CEILING
LOBBY	CONCRETE	WOOD SIDING	WOOD SIDING
STORAGE	CONCRETE	" "	" "
MEN'S T.	*	MARLITE	MARLITE
WOM. T.	*	MARLITE	MARLITE

* - UNGLAZED CERAMIC MOSAIC TILE FLOOR, 1"x1".

BUREAU OF LOCATION AND DESIGN
OHIO DEPARTMENT OF HIGHWAYS.

ROADSIDE TOILET AND STORAGE UNIT

DATE 5-24-'62

STANDARD CONSTRUCTION DRAWING

APPROVED ENGR. L & D.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

169
293

Med-42-21.94

BUREAU OF LOCATION & DESIGN
OHIO DEPARTMENT OF HIGHWAYS

ROADSIDE TOILET & STORAGE UNIT

5-24-62
6-11-62

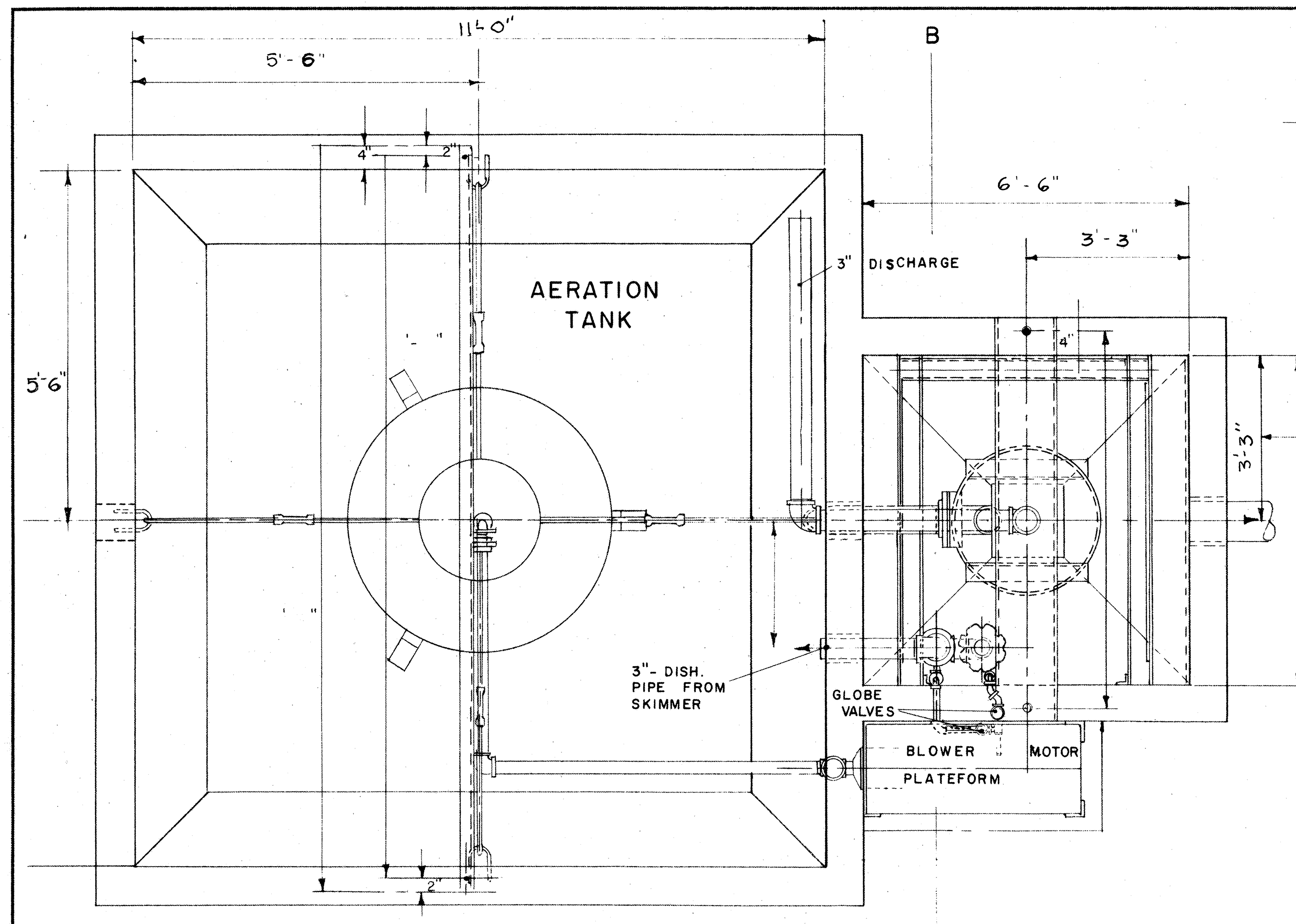
AUXILIARY CONSTRUCTION DRAWING

APPROVED ______________ ENGINEER L&D

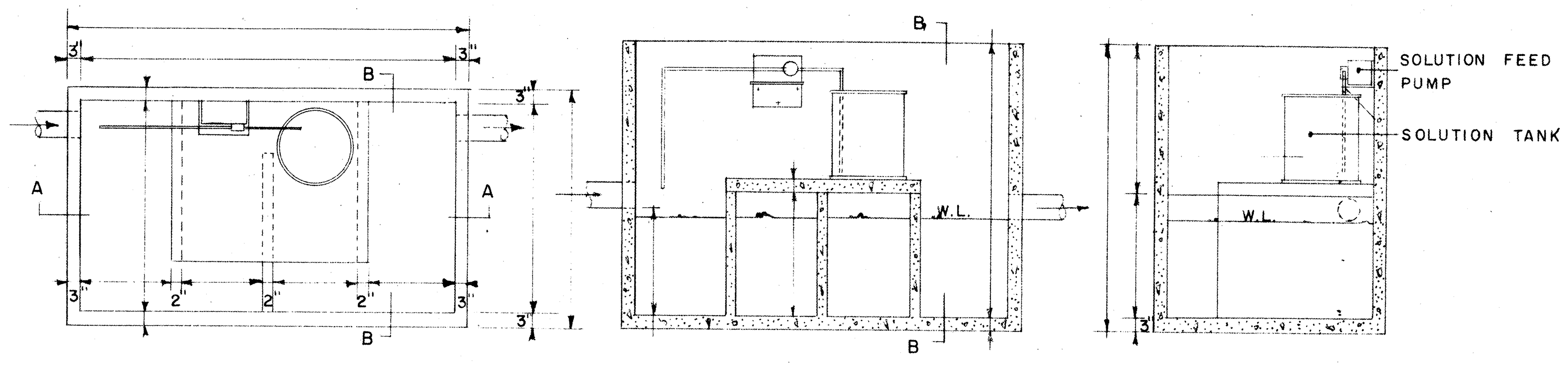

FED. RD. DIVISION 2
STATE OHIO
PROJECT
170
293
Med-42-21.94
NOTE: Locate piping to enable free movement of Service door movement by the Engineer.
4" DIA. THRU ROOF
DRINKING FOUNTAIN
VENT CAN BE OMITTED
PLUG
HOUSE DRAIN
FLOOR LINE
STORAGE RM. FLOOR DRAIN
WASTE PIPE 4"
NO VENT REQ'D. AT DRINKING FOUNTAIN IF INDIRECT WASTE CONNECTED TO FL. DRAIN AS SHOWN
ELEVATION OF PLUMBING STACK
TWO REQUIRED
ALL DRAINAGE AND PLUMBING PIPE SHALL BE RIGIDLY SECURED OR SUPPORTED TO KEEP THEIR ALIGNMENT AND ALL CHANGES OF DIRECTION EITHER VERTICAL OR HORIZONTAL SHALL BE MADE WITH THE APPROPRIATE USE OF 45° FITTINGS, BENDS, ETC.
PLAN PLUMBING TO TAKE OFF IN DIRECTION OF TANK.
LEFT OR RIGHT
END VIEW-ONE STACK
COLD WATER PIPING DIAGRAM
NO SCALE
HOSE BIBB
DRINKING FOUNTAIN
STORAGE TANK
ALL CONDUITS TO SERVICES OUTSIDE OF BUILDING WILL GO THROUGH FLOOR WITH "FACTORY ELLS" FROM PANEL BOARD AND POINT IN DIRECTION OF THE SERVICE TO BE SUPPLIED UNDER FLOOR. THESE "ELLS" MUST BE PLACED AND EXTENDED THROUGH WALL FORMS TO OUTSIDE OF WALLS BEFORE CONCRETE IS POURED. KEEP UPPER END VERTICAL.
SEWAGE TREAT. PLANT
PARKING LOT 3" & FLOOD LIGHTS
PANEL BOARD
SERVICE IN 3" TO UTILITY POLE
TELEPHONE
DIAGRAMATIC-CONDUIT PLACING
UNDERGROUND ELECTRIC SERVICE
PHOTO ELEC. UNIT. TIMER ON ROOF - WHERE DIRECTED
100 AMP PANEL & ENTR. SWITCH
2 KW ELEC. HEATER (220V) TYPICAL 18" CLEAR ABOVE FLOOR
MENS TOILET
STORAGE
WOMENS TOILET
SERVICE DOOR
SEAT
DRINKING FOUNTAIN
BOOTH
LOBBY
28'-0"
WELL PIT 4'-0" DEEP 3'-0" x 3'-0"
WELL
C.I. MANHOLE LOCKTYPE
220 VOLT ELEC. HEATERS
FIN. FLOOR
ELECTRIC HEATER - SEE PLAN LEFT
3/4" = 1'-0"
SCALE - 1/4" = 1'-0"
HEATING & ELECTRIC PLAN
ALTERNATE
SEWER
PLUMBING SHOULD BE DESIGNED SO THAT DRAIN NEAREST THE DISPOSAL UNIT IS EXTENDED. OR
UNDER FLOOR BLDG. DRAINS
ENCLOSURES FOR VENT & WATER PIPING (INSULATED)
FL. DR.
PLUMBING PLAN
THIS VENT MAY BE OMITTED IF AN INDIRECT WASTE IS USED FOR DRINKING FOUNTAIN SEE DETAIL ABOVE
4" THRU ROOF
DROP THRU FLOOR
TO SEWER
PLUMBING DIAGRAM
NO SCALE — SEE ELEVATION OF PLUMBING ABOVE
BUREAU OF LOCATION AND DESIGN
OHIO DEPARTMENT OF HIGHWAYS
ROADSIDE TOILET AND STORAGE UNIT
DATE 5-24-62
STANDARD CONSTRUCTION DRAWING
APPROVED ______ ENGR. L & D

FED. RD. DIVISION	STATE	PROJECT		
2	OHIO			

Med-42-21.94

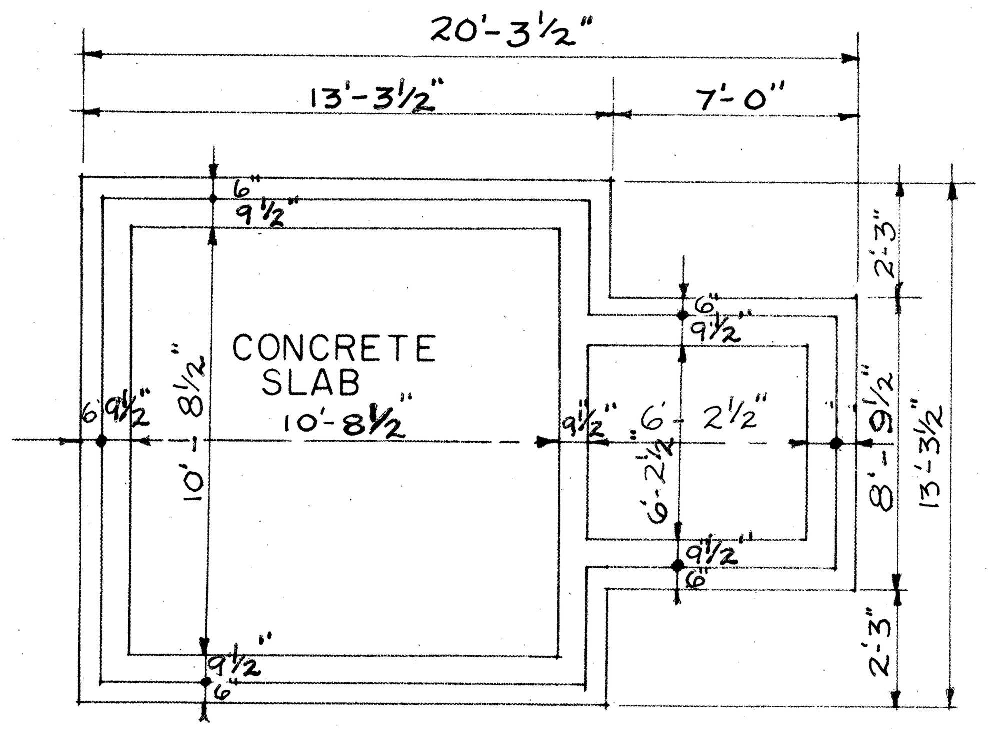


PLAN



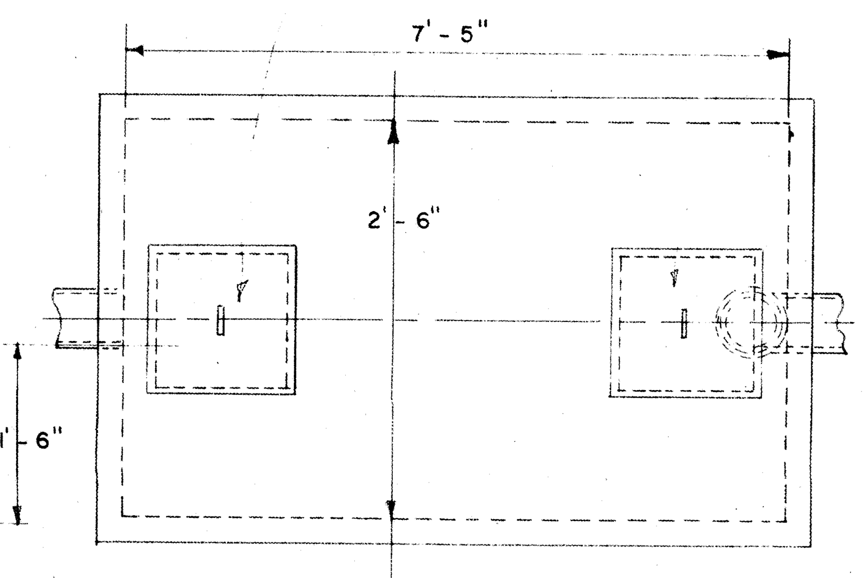
PLAN SECTION A-A SECTION B-B

PRECAST CHLORINE CONTACT TANK

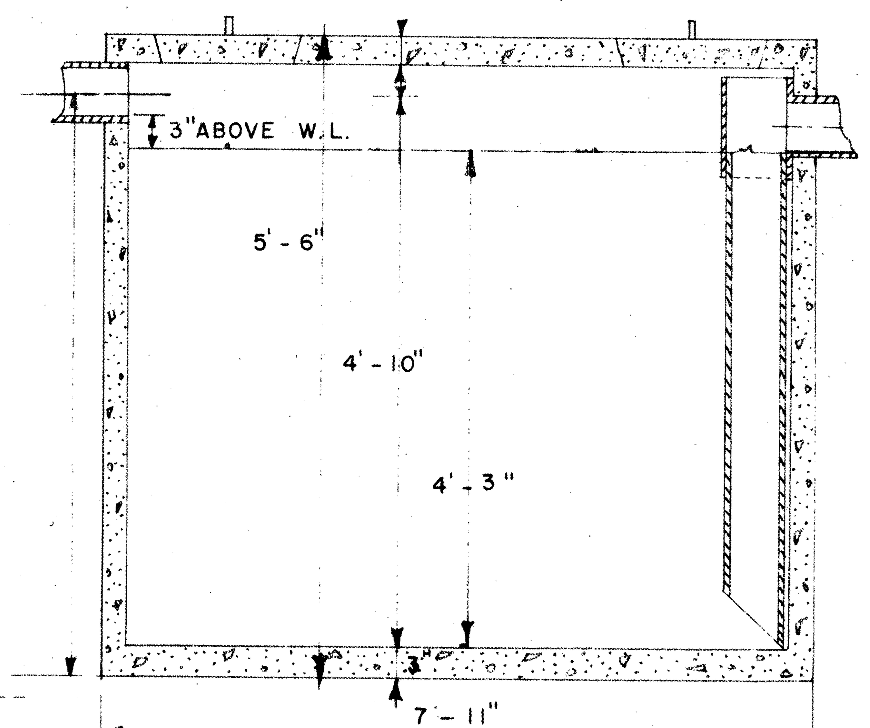


PLAN

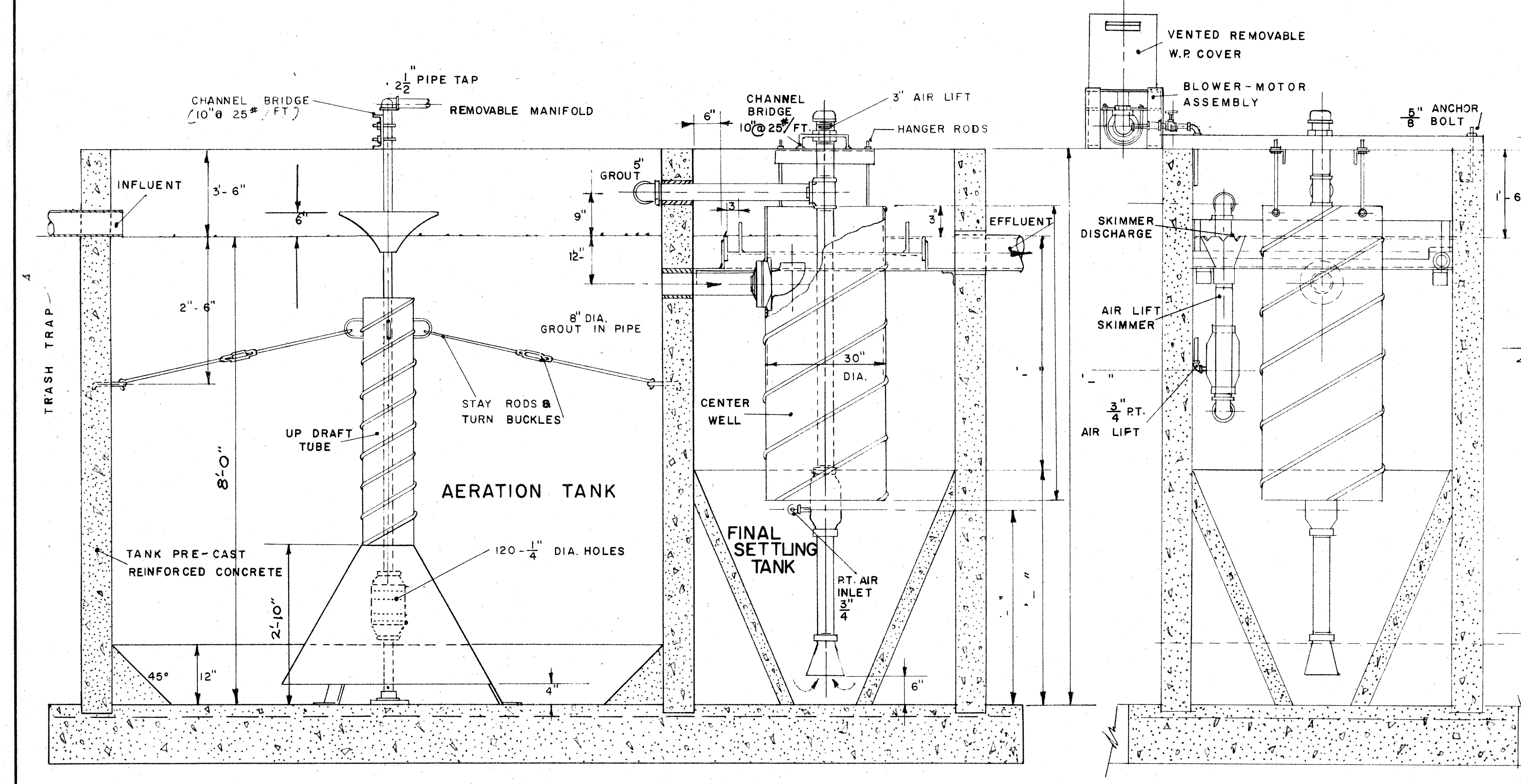
24" RISER OF PRECAST CONCRETE OR VITRIFIED TILE WITH CAP SHALL EXTEND 36" ABOVE FLOW LINE.



TRASH TRAP PLAN



SECTION



SECTION "A"-"A"

SECTION "B"-"B"

YEO-WAVE AEROBIC SEWAGE TREATING PLANT

GENERAL: FURNISH AND INSTALL ONE FACTORY BUILT WASTE TREATMENT PLANT COMPLETE AND READY FOR OPERATION IN ACCORDANCE WITH PLANS AND SPECIFICATIONS STATED HEREIN. THE PLANT SHALL CONSIST OF YEO-WAVE MODEL A-70 AS MANUFACTURED BY YEOMANS BROTHERS COMPANY, OF MELROSE PARK, ILLINOIS, AND PRE-CAST AERATION, AND SETTLING TANKS AS MANUFACTURED BY ASHLAND VAULT INC., OF ASHLAND, OHIO. THE WASTE TREATMENT PLANT SHALL BE OF THE ACTIVATED SLUDGE TYPE, SPECIFICALLY KNOWN AS "AEROBIC DIGESTION", CAPABLE OF TREATING 7000 GALLONS PER DAY DOMESTIC SEWAGE OF 210 PARTS PER MILLION 5 DAY B.O.D. FROM COMPOSITE SAMPLES OF THE AVERAGE DAILY FLOW. THE COMPLETE PLANT SHALL INCLUDE SCREENING, AERATION, AND SECONDARY SEDIMENTATION.

SCREENING: ALL RAW WASTE TRIBUTARY TO THE PLANT SHALL PASS THROUGH A 600 GALLON TRASH TRAP.

PLANT CONSTRUCTION AND ERECTION: FURNISH AND COMPLETELY INSTALL ON THE REINFORCED CONCRETE BASE POURED BY CONTRACTOR, A PREFABRICATED REINFORCED CONCRETE TANK, CONSISTING OF AN AERATION CHAMBER AND A FINAL SETTLING CHAMBER. TANK TO BE CONSTRUCTED OF PRE-CAST REINFORCED CONCRETE PANELS, SIX INCHES THICK, WITH SEALING GASKET IN HORIZONTAL TONGUE AND GROVE JOINTS, GASKETS AND GALVANIZED BOLTS IN VERTICAL JOINTS, KEYED INTO BASE.

AERATION TANK: THE AERATION TANK SHALL BE OF SUFFICIENT CAPACITY TO PROVIDE A 24 HOUR PERIOD OF RETENTION AND A MINIMUM VOLUME OF 80 CUBIC FEET PER POUND OF B.O.D. THE BOTTOM OF THE TANK SHALL BE FILLETED AROUND THE PERIMETER OF THE WALLS TO PREVENT SLUDGE ACCUMULATION.

AERATION EQUIPMENT: SHALL CONSIST OF MODEL A-70 YEO-WAVE SURFACE AERATOR AS MANUFACTURED BY YEOMANS BROTHERS COMPANY. THE SURFACE AERATOR SHALL BE OF THE VERTICAL UPDRAFT TYPE, AND SHALL HAVE SUFFICIENT AERATION CAPACITY TO TURN OVER THE ENTIRE CONTENTS OF THE TANK AT LEAST FOUR TIMES PER HOUR. THE AERATOR SHALL CONSIST OF AN UPDRAFT TUBE, MANIFOLD AND AIR LINE, DEFLECTOR AND ALL NECESSARY APPURTENANCES. THE UPDRAFT TUBE SHALL BE SUPPORTED BY VERTICAL LEGS, RESTING ON THE TANK FLOOR AND ANCHORED WITH ADJUSTABLE GUY RODS AND TURNBUCLES. THE DEFLECTOR SHALL BE CENTERED OVER THE UPDRAFT TUBE, AT A LEVEL IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS, TO INSURE MAXIMUM AERATION. IT SHALL BE SUSPENDED FROM A BRIDGE ACROSS THE AERATION TANK.

BLOWER, MOTOR DRIVE AND CONTROLS: UNIT SHALL CONSIST OF ROTARY POSITIVE BLOWER, POWERED BY A 1½ H.P., 2500 R.P.M., 110-220 VOLT, SINGLE PHASE, 60 CYCLE 40° C RISE MOTOR, WITH V-BELT DRIVE, MAGNETIC STARTER IN NEMA 1 ENCLOSURE. AIR SUPPLY FOR THE PUMPING ACTION OF THE YEO-WAVE SURFACE AERATOR, THE AIR-LIFT SLUDGE PUMP, AND THE AIR-LIFT SKIMMING DEVICE, WILL BE SUPPLIED FROM THIS BLOWER. THE BLOWER UNIT, WITH STARTER SHALL BE MOUNTED ON TANK ABOVE GROUND LEVEL, AND EQUIPPED WITH WEATHER TIGHT COVER.

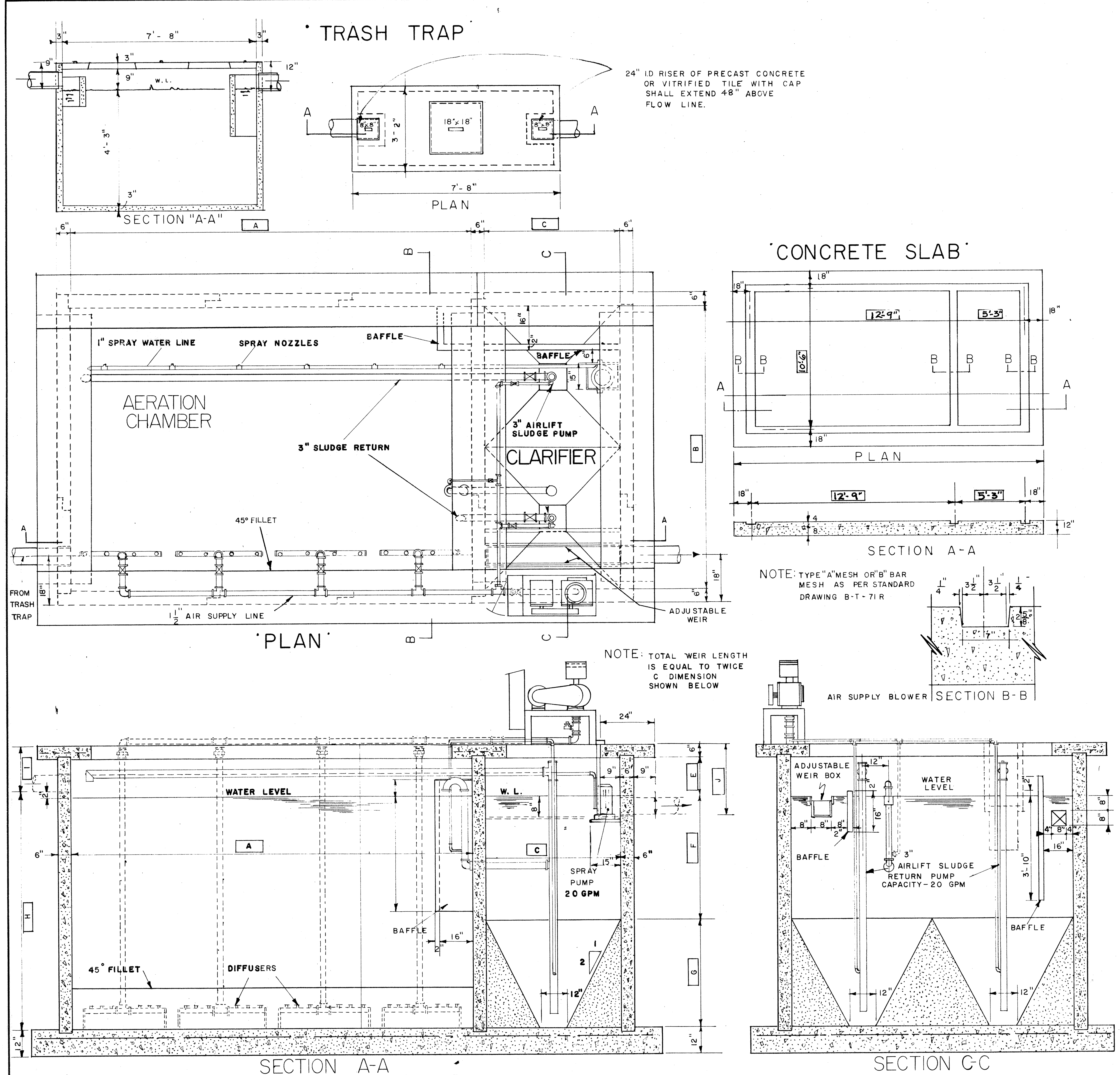
FINAL SETTLING TANK: THE FINAL SETTLING TANK SHALL BE OF AMPLE SIZE TO PROVIDE FOUR HOURS RETENTION, BASED UPON THE SAME FLOW RATES GOVERNING THE AERATION TANK. IT SHALL BE EQUIPPED WITH A YEOMANS CENTER WELL, TO FACILITATE SEPARATION OF THE SOLIDS FROM THE LIQUID. THE SETTLED SOLIDS TO BE RETURNED TO THE AERATION TANK BY AN AIR-LIFT SLUDGE PUMP. AIR FOR THE AIR-LIFT SLUDGE PUMP WILL BE SUPPLIED BY THE BLOWER, CONTROLLED BY A NEEDLE VALVE. THE YEOMANS CENTER WELL AND AIR-LIFT SLUDGE PUMP SHALL BE SUSPENDED FROM A BRIDGE ACROSS THE FINAL SETTLING CHAMBER.

SKIMMING DEVICE: THE FINAL SETTLING TANK SHALL BE EQUIPPED WITH A MANUALLY CONTROLLED AIR-LIFT SKIMMING DEVICE TO RETURN SOLIDS TO AERATION TANK. THE AIR SUPPLY IS FROM THE BLOWER THROUGH A MANUALLY OPERATED VALVE.

FROTH CONTROL: A FROTH CONTROL PUMP OF 20 GPM CAPACITY SHALL BE PROVIDED IN CLARIFIER AND SUFFICIENT SPRAYS ATTACHED TO THE DISCHARGE SIDE OF THE PUMP TO INSURE CONTROL OF FROTHING OR FOAMING IN THE AERATION CHAMBERS. THE SPRAY NOZZLE SHALL HAVE MINIMUM OPENING OF ¼" TO PREVENT CLOGGING AND SHALL PRODUCE A SHARP SPRAY PATTERN ALONG ENTIRE LENGTH OF AERATION TANK. A HOSE BID SHALL BE FURNISHED BETWEEN THE DISCHARGE SIDE OF PUMP AND SPRAY NOZZLES SHUT OFF VALVE TO PROVIDE WASH UP WATER IF REQUIRED.

TANK COVER GRATING: EXPANDED METAL GRATING PANELS SHALL BE PROVIDED FOR ALL TANK OPENINGS. THESE PANELS SHALL CONSIST OF 3/4" X NUMBER 9 EXPANDED METAL GRATING (NOT FLATENED), WELDED TO 1½" X 1½" x 3/16" ANGLE IRON FRAMES. THE UNIT SHALL BE HOT DIP GALVANIZED AFTER MILL SCALE AND GREASE IS REMOVED.

FIELD SERVICE: A FACTORY TRAINED REPRESENTATIVE SHALL BE PROVIDED TO START THE PLANT, INSTRUCT THE OPERATOR, AND MAKE PERIODIC INSPECTIONS FOR A PERIOD OF ONE YEAR.



MODEL NO.	DESIGN FLOW GPD	AERATION VOL. GAL.	CLARIFIER VOL. GAL.	BLOWER CFM	BLOWER HP	DIMENSIONS A	B	C	D	E	F	G	H	I	J	K
PCW 70-33-3	7000	7000	1500	36	3	12'-3"	10'-0"	4'-9"	8'-0"	3'-7½"	4'-0"	4'-0"	8'-2"	3'-11½"	4'-9½"	

AER-O-FLO AEROBIC SEWAGE TREATING PLANT

GENERAL: FURNISH AND INSTALL ONE FACTORY BUILT WASTE TREATMENT PLANT, COMPLETE AND READY FOR OPERATION IN ACCORDANCE WITH PLANS AND SPECIFICATIONS STATED HEREIN. THE PLANT SHALL BE AN AER-O-FLO MODEL PCW70-333 AS MANUFACTURED BY CENTRAL STATES SEWAGE SYSTEMS, INC. THE WASTE TREATMENT PLANT SHALL BE OF THE ACTIVATED SLUDGE TYPE, SPECIFICALLY KNOWN AS "AEROBIC DIGESTION," CAPABLE OF TREATING 7000 GALLONS PER DAY DOMESTIC SEWAGE OF 210 PARTS PER MILLION 5 DAY B.O.D. FROM COMPOSITE SAMPLES OF THE AVERAGE DAILY FLOW. THE COMPLETE PLANT SHALL INCLUDE SCREENING, AERATION, AND SECONDARY SEDIMENTATION.

SCREENING: ALL RAW WASTE TRIBUTARY TO THE PLANT SHALL PASS THROUGH A 600 GALLON TRASH TRAP.

AIR SUPPLY: DIFFUSER AIR SHALL BE SUPPLIED BY A POSITIVE DISPLACEMENT BLOWER OF AMPLE SIZE TO PROVIDE A MINIMUM OF 2100 CUBIC FEET OF AIR FOR EACH POUND OF B.O.D. APPLIED, AND A MINIMUM OF 3 CUBIC FEET OF AIR PER LINEAR FOOT OF AERATION TANK LENGTH. ITS RATED CAPACITY SHALL BE BASED UPON THE HOURLY RATE OF B.O.D. APPLICATION AND TANK SIZE TO MAINTAIN CLEANSING VELOCITIES. THE BLOWER SHALL HAVE A 24 HOUR TIME CLOCK TO VARY THE AIR SUPPLY WITH THE DEMAND AND SHALL DELIVER 36 CFM @ 4 PSI.

DIFFUSERS: THERE SHALL BE A MINIMUM OF ONE AER-O-FLO NON-CLOG DIFFUSER FOR EVERY 6" OF AERATION TANK LENGTH. THESE DIFFUSERS SHALL BE PARALLEL TO AND NEAR THE BASE OF THE FILLET AND AT AN ELEVATION WHICH WILL PROVIDE THE OPTIMUM ROLL OF THE TANK CONTENT.

AERATION TANK: THE AERATION TANK SHALL BE OF SUFFICIENT CAPACITY TO PROVIDE A 24 HOUR PERIOD OF RETENTION AND A MINIMUM VOLUME OF 80 CUBIC FEET PER POUND OF B.O.D. THE BOTTOM OF THE TANK SHALL BE FILLETED ON TWO SIDES TO PREVENT SLUDGE ACCUMULATION.

BLOWER, MOTOR DRIVE AND CONTROLS: UNIT SHALL CONSIST OF ONE 3 HP, 1750 RPM, 110-220 VOLT, SINGLE PHASE, 60 CYCLE, WEATHERPROOF MOTOR, WITH WEATHERPROOF V-BELT DRIVE, MAGNETIC STARTER WITH H.O.A. SELECTOR SWITCH. CONTROLS SHALL BE MOUNTED IN WEATHERPROOF ENCLOSURE EQUIPPED WITH LOCKING DEVICE.

FINAL SETTLING AND SLUDGE RETURN: THE FINAL TANK SHALL BE OF AMPLE SIZE TO PROVIDE A MINIMUM OF FOUR HOURS RETENTION, BASED UPON THE SAME FLOW RATE GOVERNING THE AERATION TANK AND SHALL HAVE PROPER BAFFLING. THE TOTAL SETTLING VOLUME SHALL INCLUDE THE VOLUME OF THE UPPER 1/3 OF THE SLUDGE HOPPER. THE SLOPE OF THE HOPPER WALLS SHALL NOT BE LESS THAN 1.5 VERTICAL TO 1.0 HORIZONTAL. SETTLED SLUDGE SHALL BE RETURNED FROM THE FINAL SETTLING TANK TO THE AERATION CHAMBER BY DUPLICATE AIR LIFT ASSEMBLIES CONSISTING OF TWO AIR LIFT PUMPS ACTUATED BY THE BLOWER. EACH AIR LINE SUPPLYING AIR TO THE SLUDGE PUMP SHALL BE EQUIPPED WITH A NEEDLE VALVE TO VARY THE CAPACITY OF THE AIR LIFT PUMPS. EACH PUMP SHALL HAVE A MINIMUM CAPACITY OF 20 GPM.

SKIMMING DEVICE: AN AIRLIFT SKIMMING DEVICE SHALL BE LOCATED NEAR THE OUTLET WEIR TO RETURN FLOATING MATERIAL TO THE AERATION TANK. THE AIR LINE SUPPLYING AIR TO THE SKIMMING DEVICE SHALL BE EQUIPPED WITH A NEEDLE VALVE TO REGULATE THE AMOUNT OF RETURN.

FROTH CONTROL: A 1/3 HP, 110-220 VOLT, SINGLE PHASE, 20 GPM FROTH CONTROL PUMP SHALL BE PROVIDED IN CLARIFIER AND SUFFICIENT SPRAYS ATTACHED TO THE DISCHARGE SIDE OF THE PUMP TO INSURE CONTROL OF FROTHING OR FOAMING IN THE AERATION CHAMBER. THE SPRAY NOZZLES SHALL HAVE A MINIMUM ¼" OPENING TO PREVENT CLOGGING AND SHALL PRODUCE A SHARP SPRAY PATTERN ALONG ENTIRE LENGTH OF AERATION TANK. A HOSE BIB SHALL BE FURNISHED BETWEEN THE DISCHARGE SIDE OF PUMP AND SPRAY NOZZLES SHUT OFF VALVE TO PROVIDE WASH UP WATER IF REQUIRED.

PREFABRICATED CONCRETE TANKS: THE PREFABRICATED CONCRETE TANKS SHALL BE COMPRISED OF 6" MINIMUM THICKNESS REINFORCED CONCRETE SLABS, BOLTED AT THE JOINTS AND KEYED INTO THE POURED CONCRETE FOUNDATION SLAB. JOINTS SHALL BE GASKETED AND SEALED AND BE MINIMUM IN NUMBER TO PROVIDE WATERTIGHT WALLS. STRUCTURAL STABILITY SHALL BE OBTAINED BY USE OF PRECAST, KEYED, WALL CAP BEAMS AND STRUTS AS REQUIRED. THE POURED AND KEYED FOUNDATION SLAB SHALL BE PROVIDED IN THE FIELD. ALL PREFABRICATED CONCRETE SHALL HAVE A 5000 LBS. 28 DAY COMPRESSION STRENGTH AND BE REINFORCED WITH CONTINUOUS SPECIAL WELDED WIRE FABRIC CONSISTING OF NO. 3 BARS @ 6" CTS. LONGITUDINALLY AND NO. 3 BARS @ 12" CTS. TRANSVERSELY. WITH ADDITIONAL NO. 6 BARS WHERE REQUIRED.

TANK COVER GRATING: EXPANDED METAL GRATING PANELS SHALL BE PROVIDED FOR ALL TANK OPENINGS. THESE PANELS SHALL CONSIST OF 3/4" X NO. 9 EXPANDED METAL GRATING (NOT FLATENED) WELDED TO 1½" X 1½" X 3/16" ANGLE FRAMES. THE UNIT SHALL BE HOT DIP GALVANIZED AFTER MILL SCALE AND GREASE IS REMOVED.

FIELD SERVICE: A FACTORY TRAINED REPRESENTATIVE SHALL BE PROVIDED TO START THE PLANT, INSTRUCT THE OPERATOR, AND MAKE PERIODIC INSPECTIONS FOR A PERIOD OF ONE YEAR.

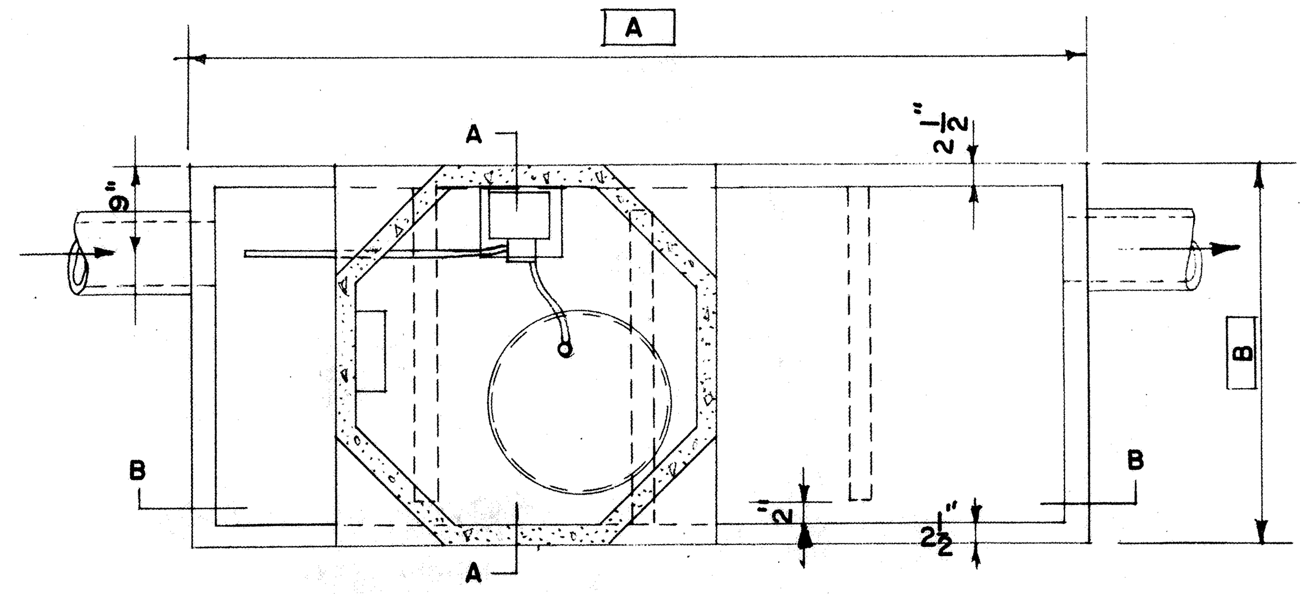
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

Med-42-21.94

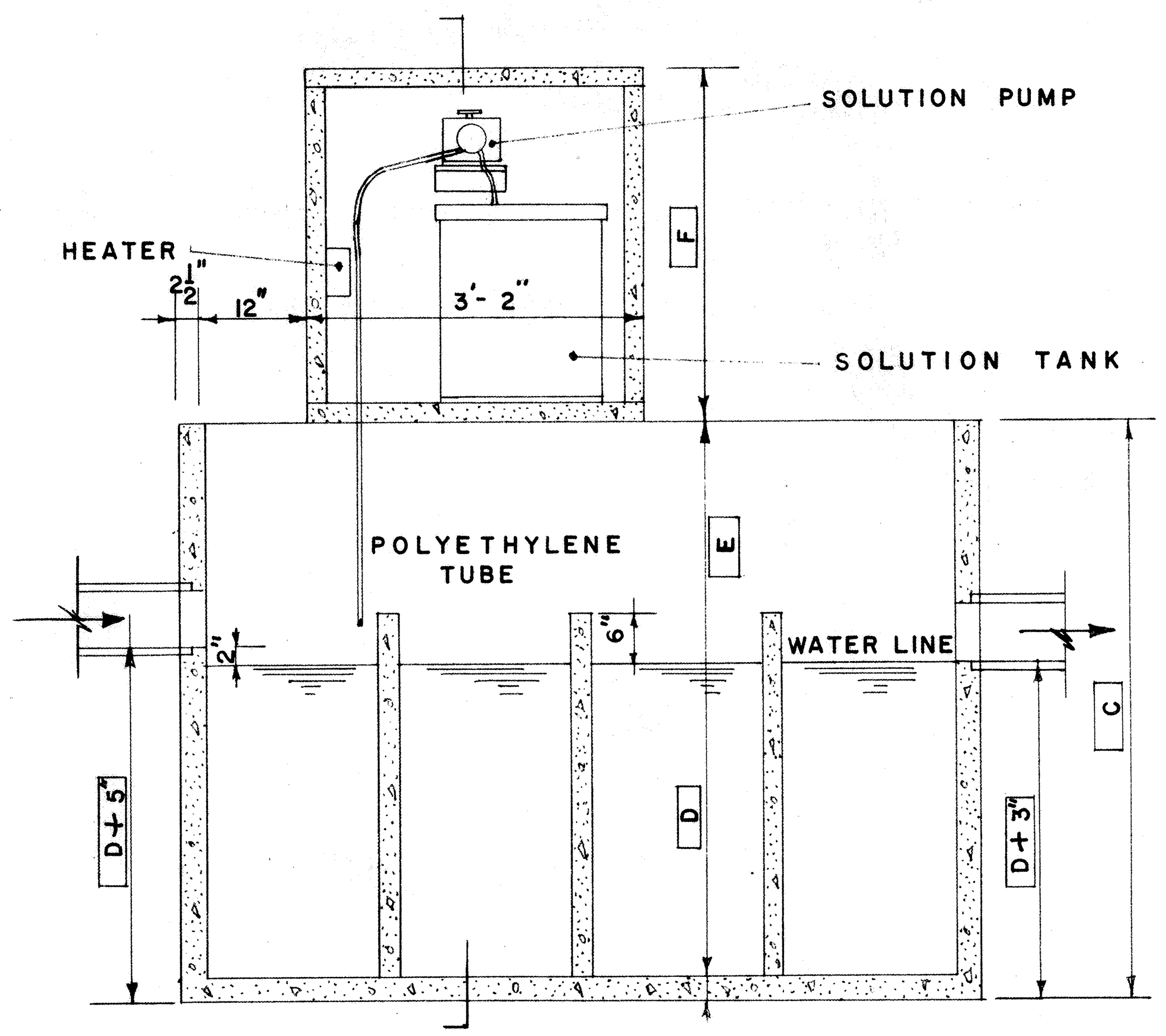
DESIGN DATA

30 MINUTE RETENTION BASED ON 24 HOUR AVERAGE FLOW

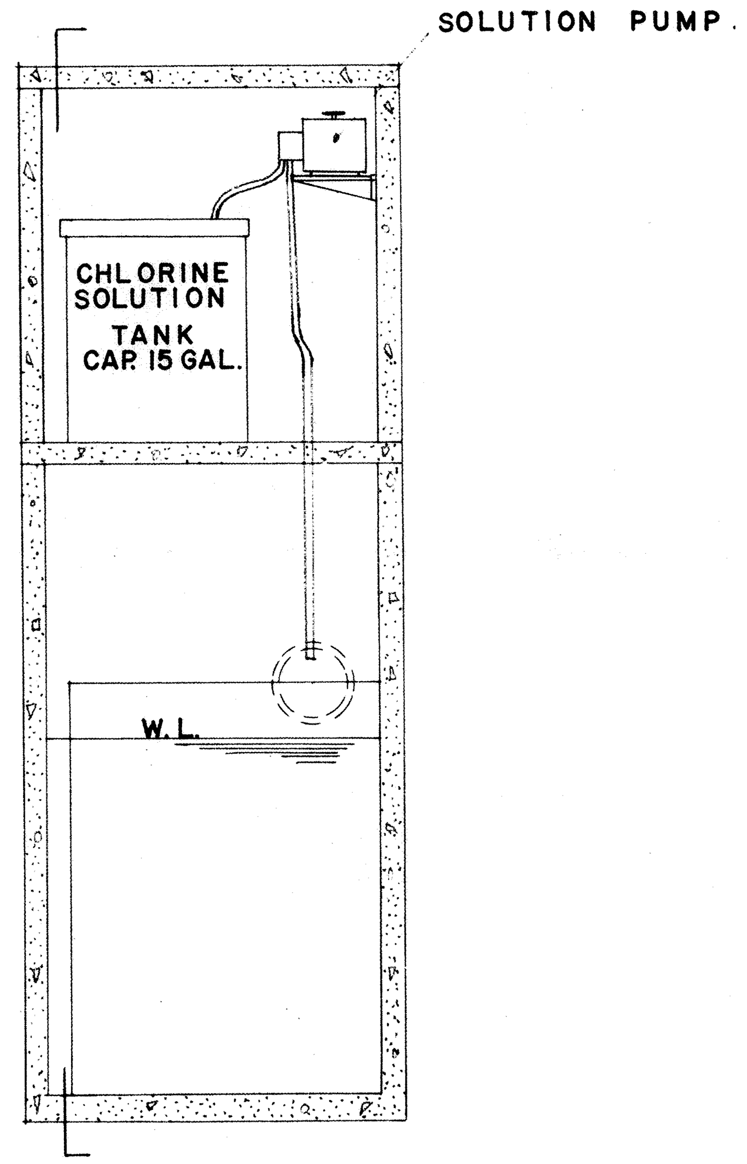
PLANT DESIGN Flow (G.P.D.) 24 Hr. Avg.	CONTACT TANK Vol. Gallons	DIMENSIONS								
		A	B	C	D	E	F	G	H	J
5000	104	7'-6"	3'-2"	5'-6"	9"	4'-6"	2'-0"			
6000	125	7'-6"	3'-2"	5'-6"	11"	4'-4"	2'-0"			
7000	146	7'-6"	3'-2"	5'-6"	13"	4'-2"	2'-0"			
7500	156	7'-6"	3'-2"	5'-6"	14"	4'-1"	2'-0"			
8000	167	7'-6"	3'-2"	5'-6"	15"	4'-0"	2'-0"			
9000	188	7'-6"	3'-2"	5'-6"	17"	3'-10"	2'-0"			
10000	208	7'-6"	3'-2"	5'-6"	19"	3'-8"	2'-0"			



PLAN



SECTION B-B



SECTION A-A

CHLORINATION

FURNISH ONE POST CHLORINATOR, CONSISTING OF PRECAST CONCRETE CONTACT CHAMBER, CHLORINE SOLUTION PUMP, CHLORINE SOLUTION TANK AND PRECAST CONCRETE EQUIPMENT HOUSING.

CONCRETE CONTACT CHAMBER: PRECAST CONCRETE CONTACT CHAMBER SHALL BE SIZED TO GIVE THIRTY MINUTE RETENTION OF DAILY FLOW FROM SEWAGE PLANT. IT SHALL BE PROPERLY BAFFLED TO INSURE THOROUGH MIXING OF SEWAGE PLANT EFFLUENT AND CHLORINE.

SOLUTION PUMP: FURNISH AND INSTALL ONE BRUNER MODEL #20 (OR EQUAL) POSITIVE DISPLACEMENT CHLORINE SOLUTION PUMP. PUMP TO HAVE A CAPACITY OF 2.4 TO 24 GALLONS PER DAY.

SOLUTION TANK: FURNISH ONE 15 GALLON POLYETHYLENE SOLUTION TANK WITH LID.

HOUSING: FURNISH ONE PRECAST CONCRETE HOUSING FOR SOLUTION PUMP AND SOLUTION TANK. HOUSING TO BE EQUIPPED WITH STRIP HEATER OR HEAT LAMP TO PREVENT FREEZING DURING EXTREME LOW TEMPERATURES.

PRECAST CHLORINE CONTACT TANK

PAYMENT INCLUDED IN UNIT PRICE BID FOR "ITEM SPECIAL PRESSURE WATER SYSTEM".

BILL OF MATERIALS

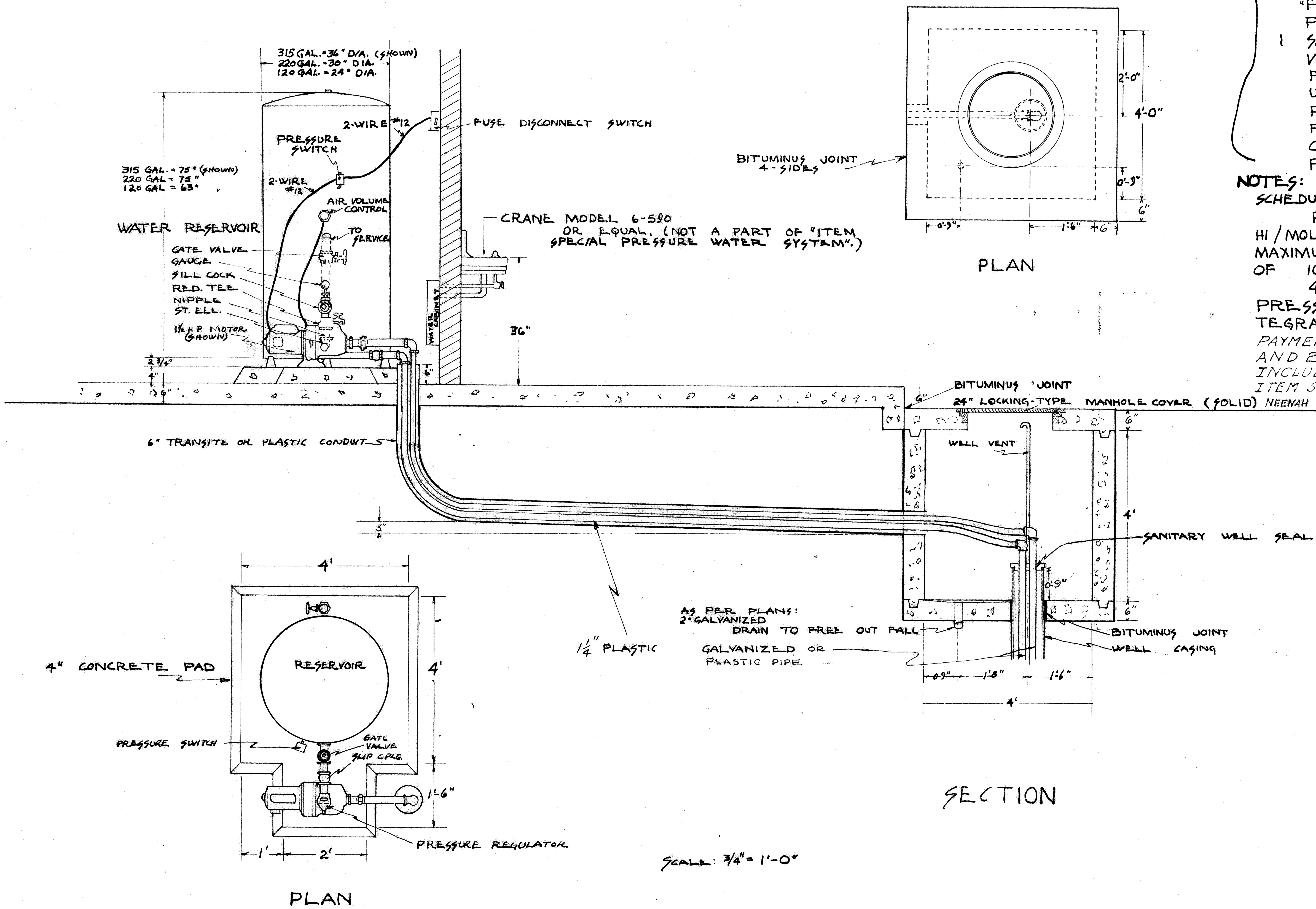
1 MEYERS MODEL HC 100 JET PUMP COMPLETE OR EQUAL.
1 MEYERS EJECTOR PACKAGE #C4C10 OR EQUAL.
1 MEYERS MODEL V120E VERTICAL "FIRE-CURED" EPOXY-COATED PRESSURE TANK OR EQUAL.
1 SANITARY WELL SEAL WITH WELL VENT. GALVANIZED PIPE AND FITTINGS FROM PUMP TO PRESSURE TANK.
PLASTIC OR GALVANIZED PIPE FROM PUMP TO EJECTOR. 4" CONCRETE PAD FOR PUMP AND PRESSURE TANK.

NOTES: GALVANIZED PIPE SHALL BE SCHEDULE 40 GRADE A-53.

PLASTIC PIPE SHALL BE CARLON HI/MOL OR EQUAL. PIPE SHALL HAVE A MAXIMUM CONTINUOUS WORKING PRESSURE OF 100 POUNDS AT 73°F TEMPERATURE.

4" CONCRETE PAD FOR PUMP AND PRESSUR TANK MAY BE POURED INTEGRAL WITH CONCRETE FLOORS.

PAYMENT FOR THE WELL PIT, MANHOLE COVER, AND 2" GALVANIZED PIPE DRAINS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM SPECIAL, ROADSIDE TOILET AND STORAGE UNIT.



PLAN

SECTION

PLAN

SCALE: ¾" = 1'-0"

PAYMENT FOR CUTTING OR EXTENDING WELL CASING IN PLACE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM "PRESSURE WATER SYSTEM".

BUREAU OF LOCATION & DESIGN
OHIO DEPARTMENT OF HIGHWAYS

ROADSIDE REST AREA WATER SYSTEM

DATE
6-15-60
7-6-62

STANDARD CONSTRUCTION DRAWING

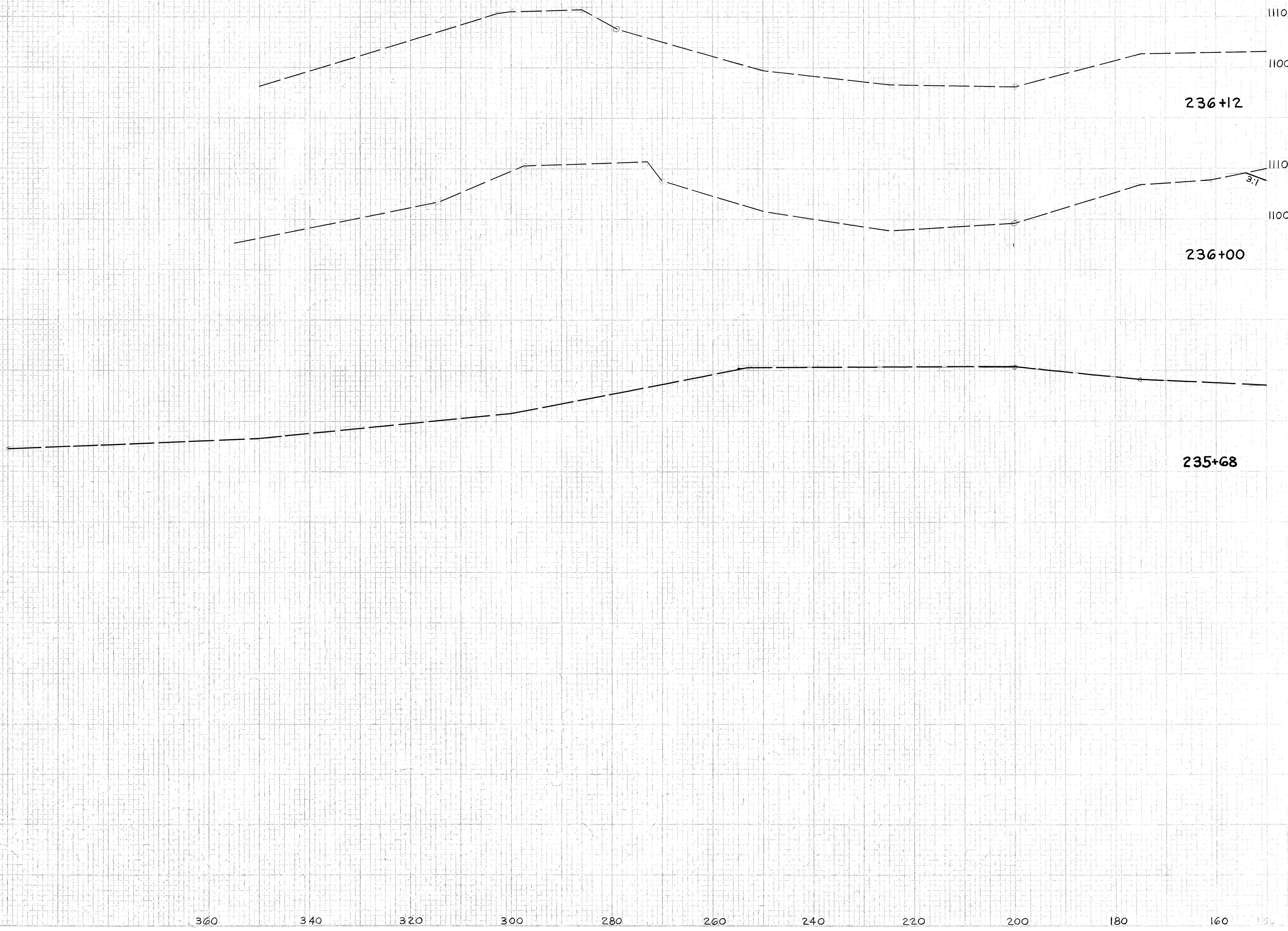
APPROVED ENGR., L. & D.

SEEDING	
END WIDTH	SQ. YDS.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

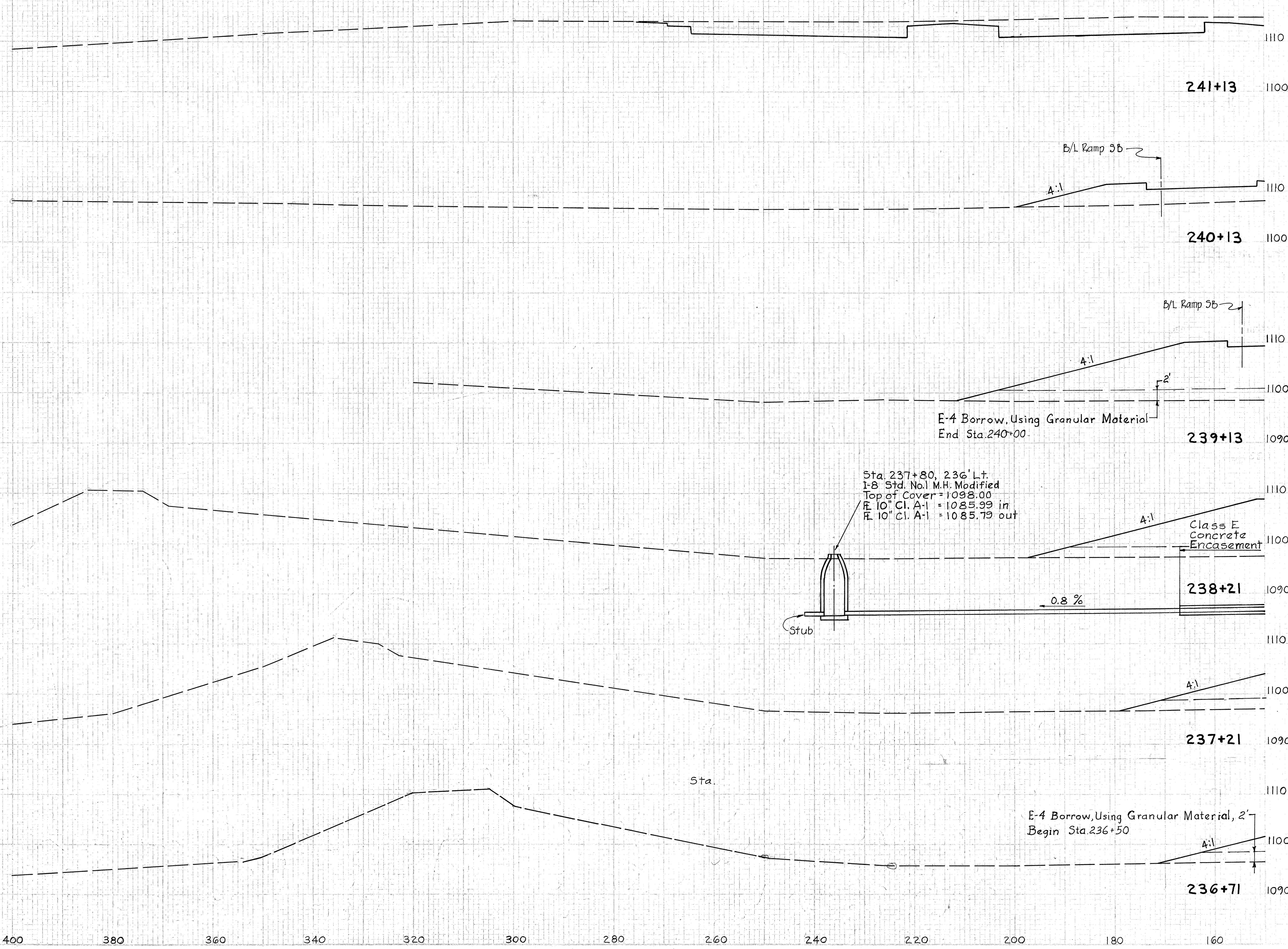
MEDINA COUNTY
MED-42-21.94

END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
		0	57
0	0		



S.B. ROADSIDE REST AREA - EXTENDED SECTIONS - Sta. 235+68 to 236+12

MEDINA COUNTY
MED-42-21.94



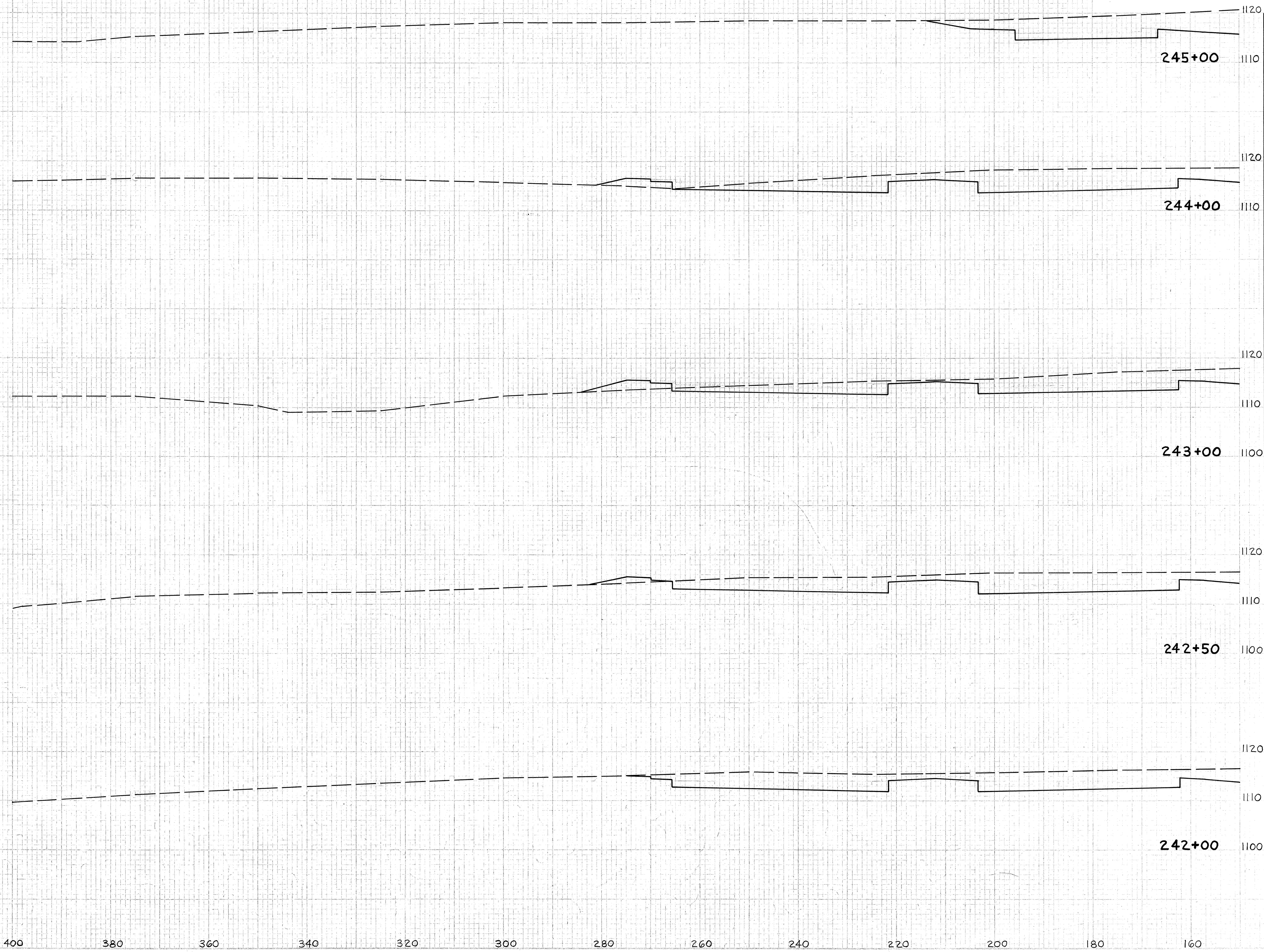
Seeding End Width	Seeding Sq. Yds.
39	
	595
68	
	659
61	
	572
42	
	223
34	

Section	End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
			1068	0
241+13	303	0		
			562	282
240+13	0	151		
			0	1129
239+13	0	459		
			0	1272
238+21	0	287		
			0	714
237+21	0	98		
			0	139
236+71	0	52		

S.B. ROADSIDE REST AREA - EXTENDED SECTIONS - Sta. 236+71 to 241+13

MEDINA COUNTY
MED-42-21.94

SEEDING	
END WIDTH	SQ. YDS.
	533
30	



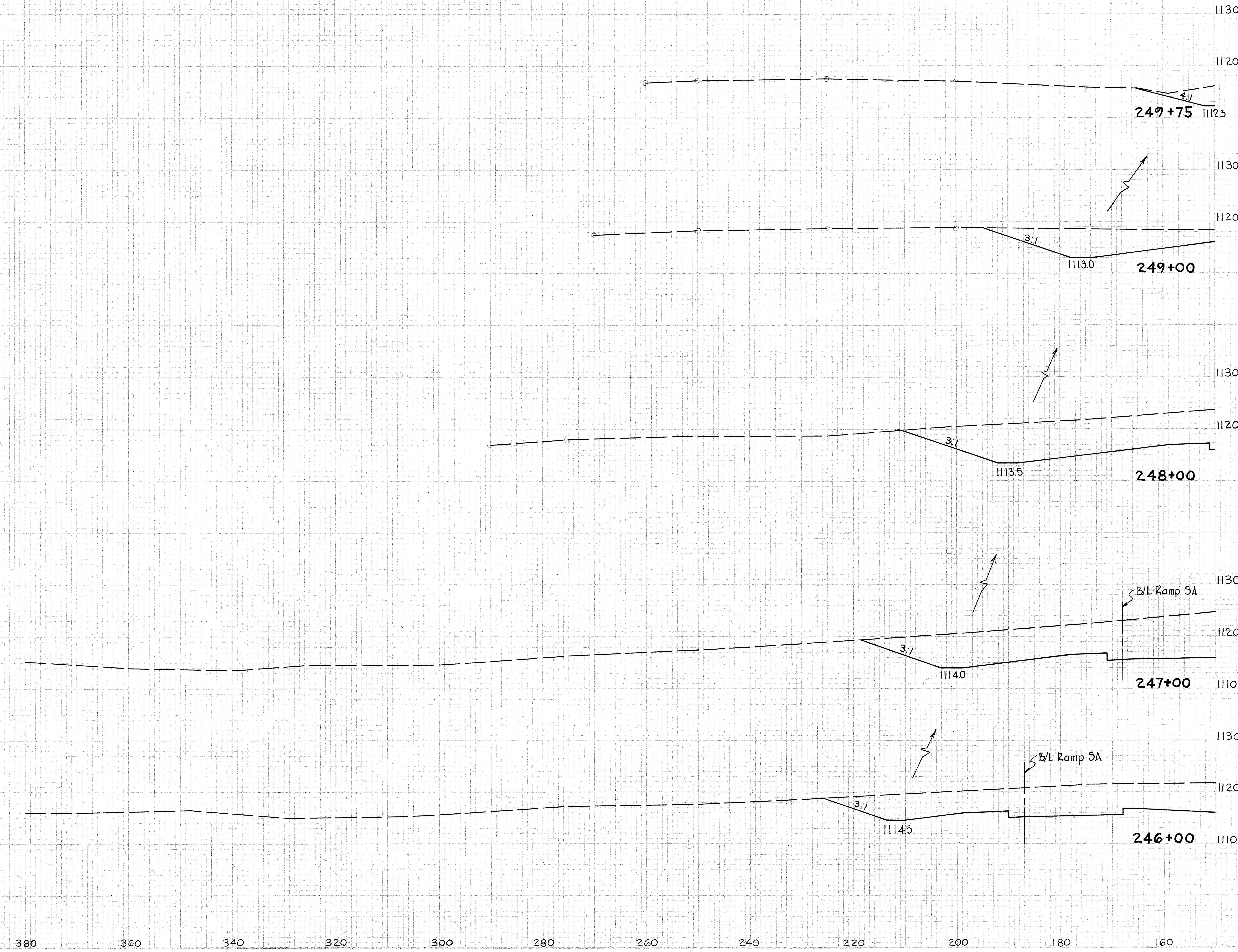
END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
		1025	0
200	0		
		900	44
329	23		
		1100	89
264	25		
		542	33
321	10		
		628	9
358	0		

S.B. ROADSIDE REST AREA - EXTENDED SECTIONS - Sta. 242+00 to 245+00

2 OHIO

MEDINA COUNTY
MED - 42 - 21.94

SEEDING	
END WIDTH	SQ. YDS.
27	
	350
57	
	716
72	
	734
60	
	700
66	

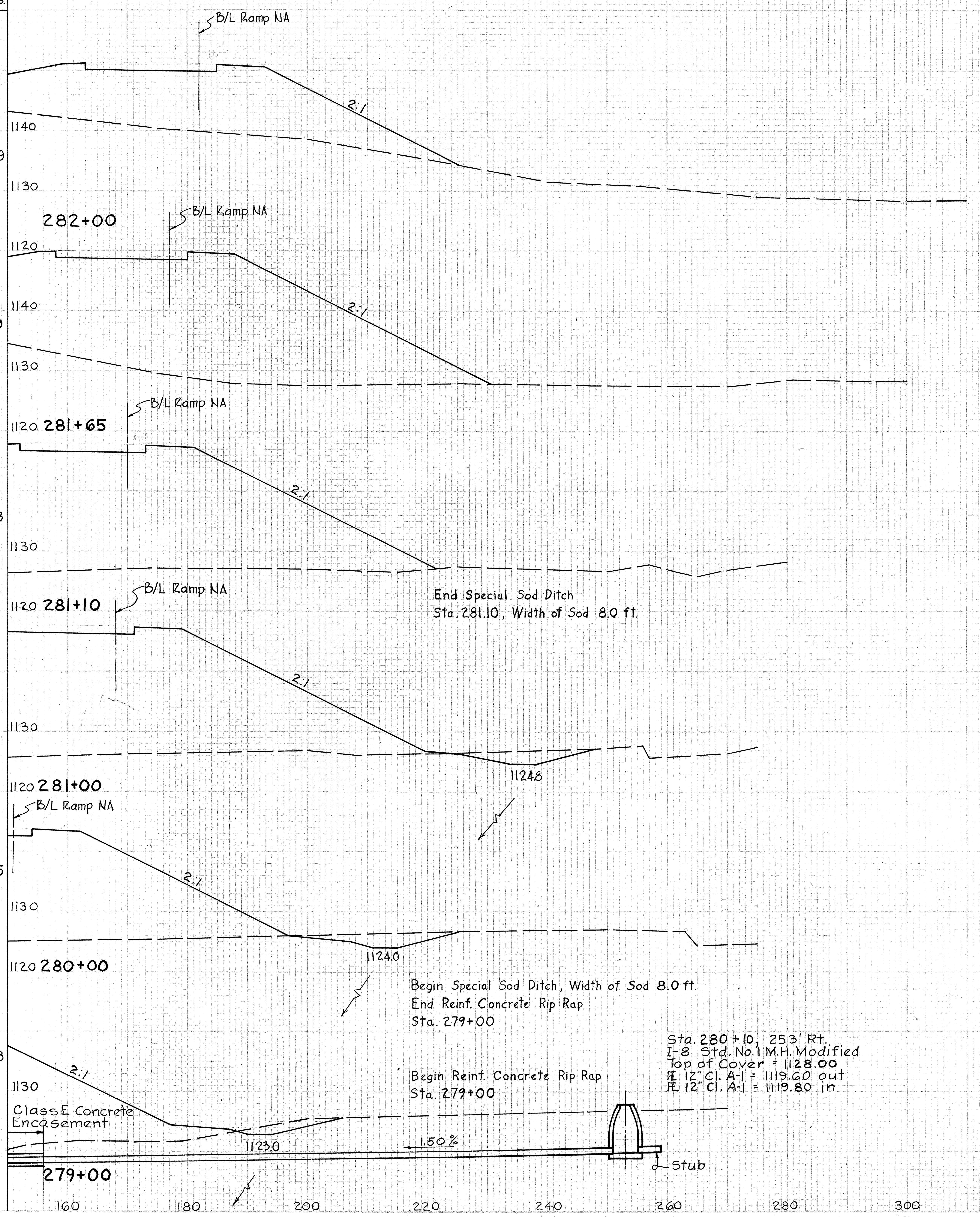


END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
		9	0
20	0		
		236	0
150	0		
		910	0
342	0		
		1403	0
416	0		
		1425	0
354	0		

S.B. ROADSIDE REST AREA - EXTENDED SECTIONS - Sta. 246+00 to 249+75

MEDINA COUNTY
MED-42-21.94

SEEDING	
END WIDTH	SQ. YDS.
	749
69	
	389
67	
	398
67	
	90
95	
	1015
88	
	783
71	

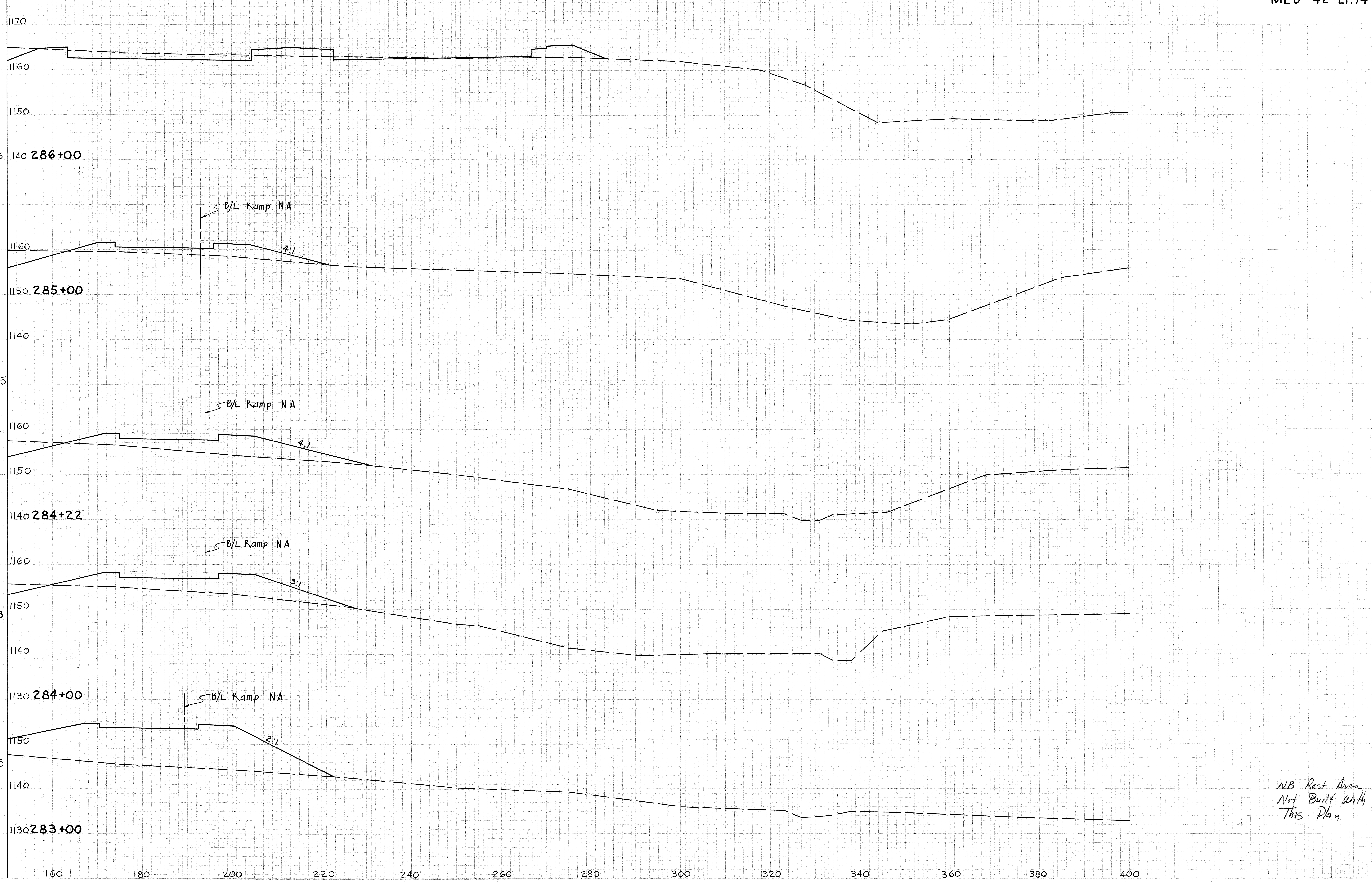


NB Rest Area
Not Built with
This Plan

END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
		0	1982
0	580		
		0	1122
0	1152		
		0	2240
0	1050		
		5	383
27	1021		
		107	2880
30	534		
		89	1510
17	282		
		17	261
Zero Section Sta. 278+50: 0	0		

N.B. ROADSIDE REST AREA - EXTENDED SECTIONS - Sta. 279+00 to 282+00

MEDINA COUNTY
MED-42-21.94



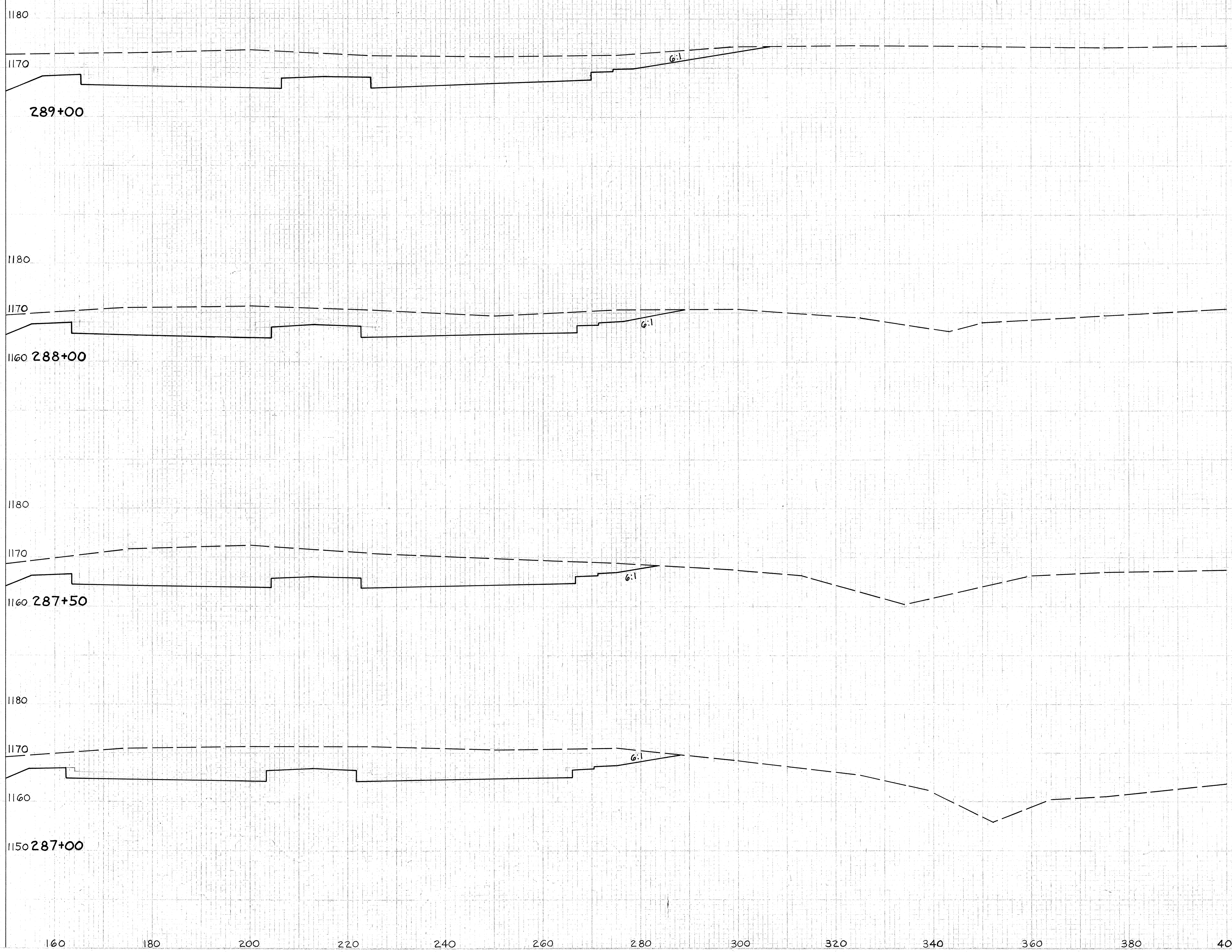
Seeding End Width	Seeding Sq. Yds.
	150
14	
	416
63	
	585
72	
	158
70	
	755
66	

Station	End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
			1500	126
286+00	72	67		
			180	304
285+00	23	96		
			64	382
284+22	21	167		
			13	147
284+00	10	193		
			19	1277
283+00	0	496		

N.B. ROADSIDE REST AREA - EXTENDED SECTIONS - Sta. 283+00 to 286+00

MEDINA COUNTY
MED-42-21.94

SEEDING	
END WIDTH	SQ. YDS.
	515
16	
	161
13	
	72
13	
	72
13	



END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
		2870	0
797	0		
		2550	0
578	0		
		1230	0
747	0		
		1375	0
738	0		

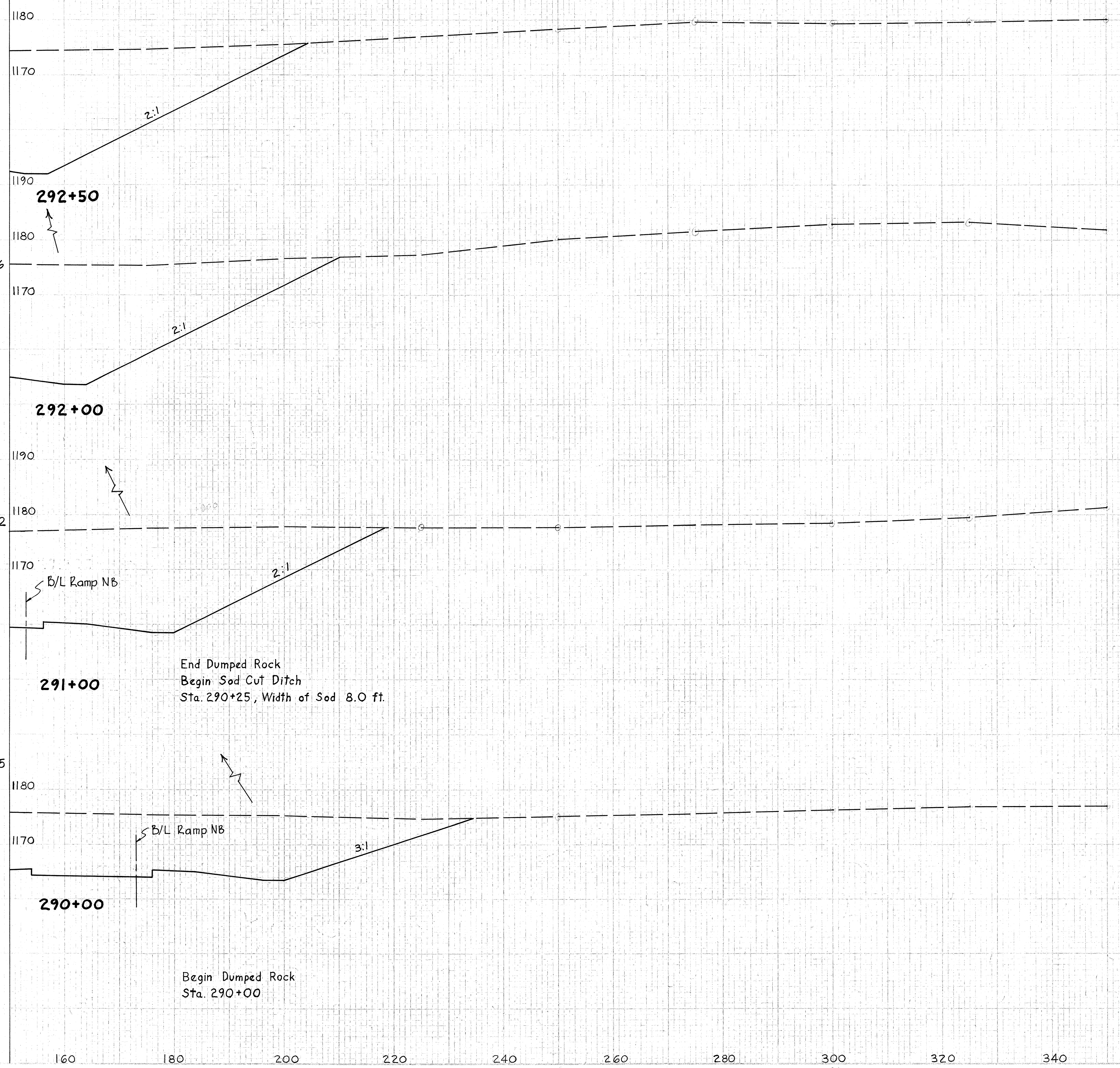
NB Rest Area
Not Built With
This Plan

N.B. ROADSIDE REST AREA - EXTENDED SECTIONS - Sta. 287+00 to 289+00

2 OHIO

MEDINA COUNTY
MED-42-21.94

SEEDING	
END WIDTH	SQ. YDS.
	378
72	
	416
78	
	872
79	
	865
77	



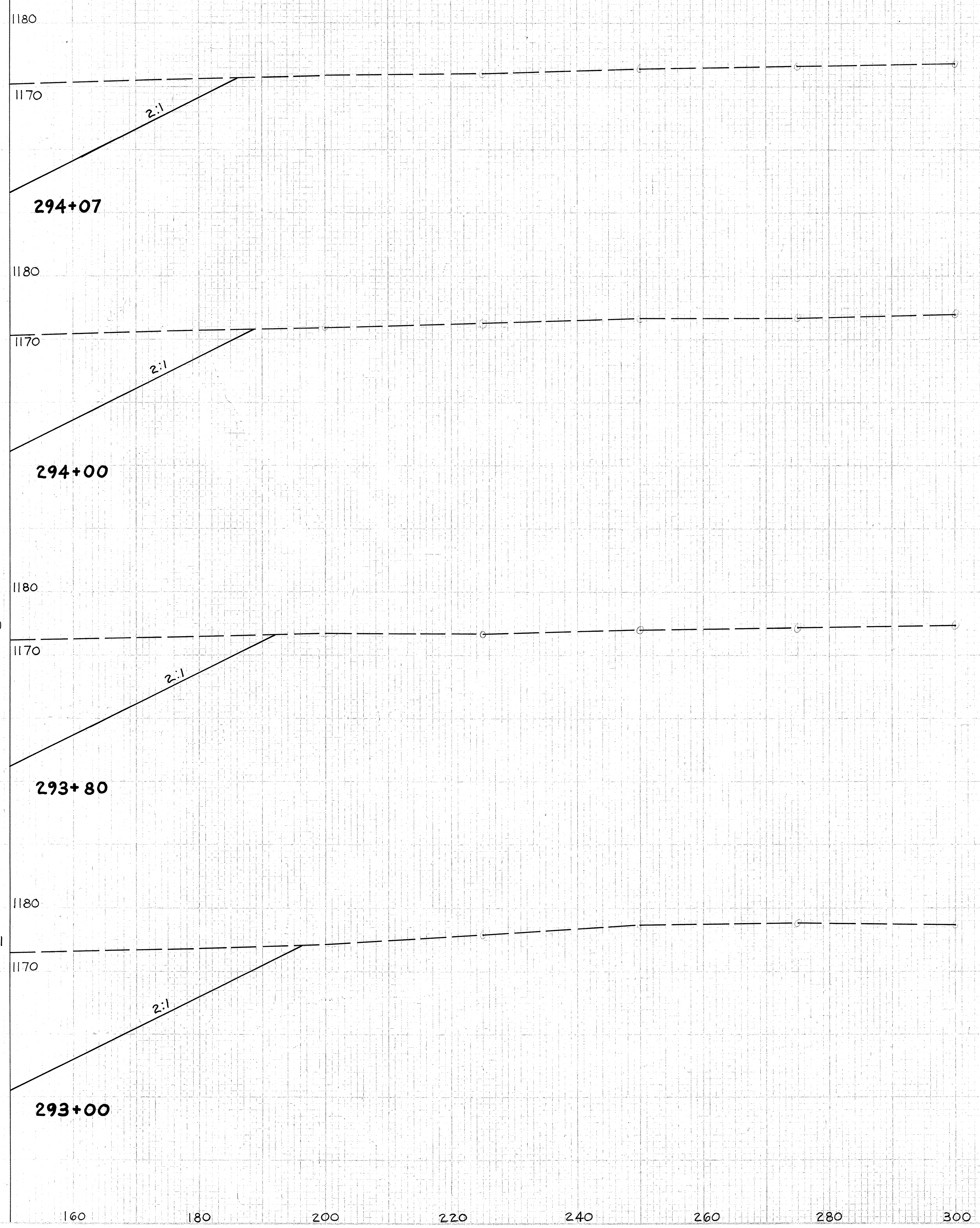
END AREA CUT	END AREA FILL	CU. YDS. CUT	CU. YDS. FILL
		1108	0
683	0		
		1373	0
800	0		
		3145	0
900	0		
		3060	0
755	0		

NB Rest Area Not Built With This Plan

N.B. ROADSIDE REST AREA - EXTENDED SECTIONS - Sta. 290+00 to 292+50

MEDINA COUNTY
MED - 42 - 21.94

SEEDING	
END WIDTH	SQ. YDS.
	84
53	
	42
56	
	129
60	
	551
64	

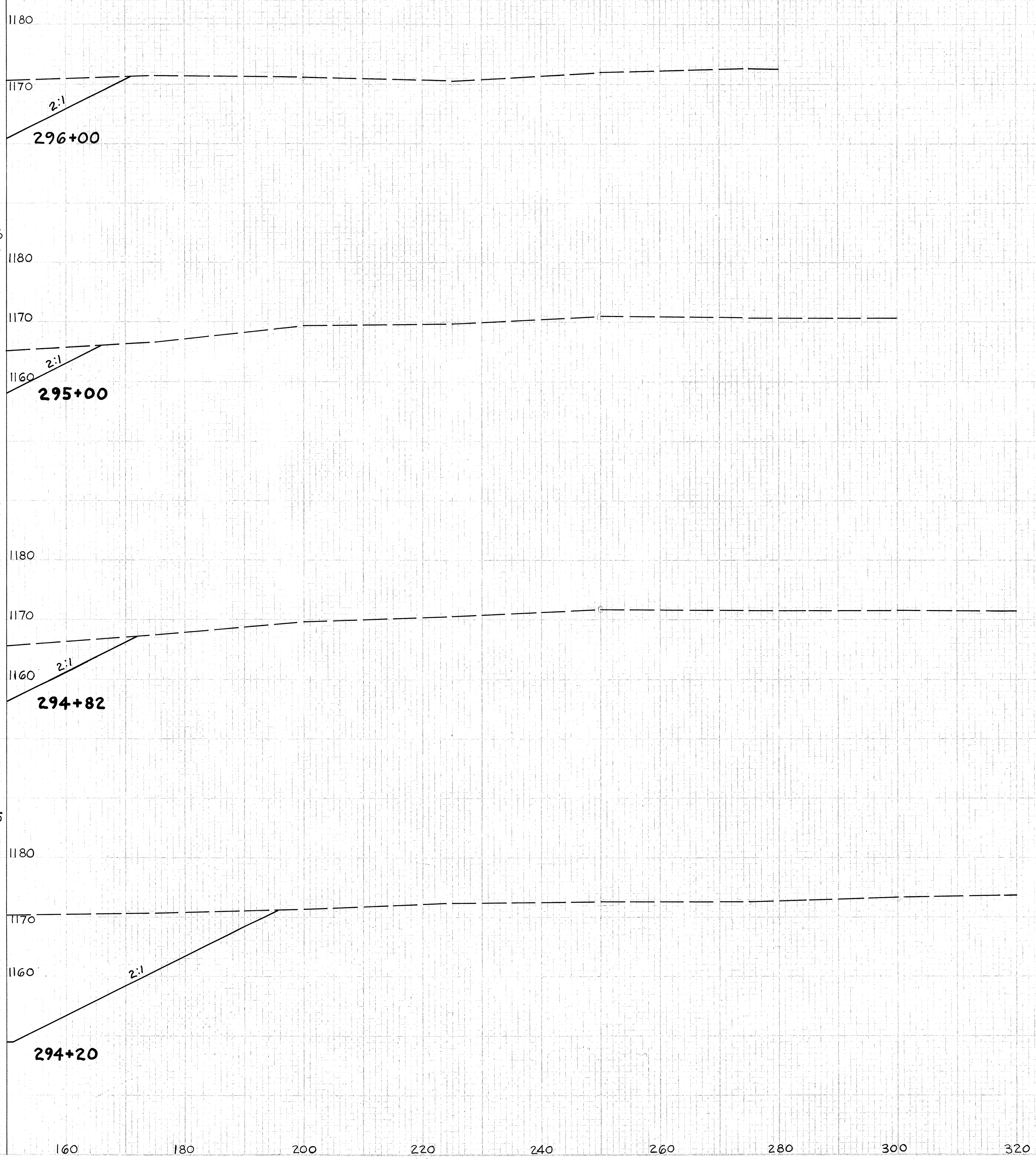


END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
		194	0
311	0		
		87	0
358	0		
		288	0
420	0		
		1382	0
512	0		

NB Rest Area
Not Built With
This Plan

MEDINA COUNTY
MED-42-21.94

SEEDING END WIDTH	SEEDING SQ. YDS.
	404
36	
	366
30	
	67
37	
	345
63	



END AREA CUT	END AREA FILL	CU. YDS. CUT	CU. YDS. FILL
		407	0
100	0		
		292	0
57	0		
		53	0
101	0		
		686	0
497	0		

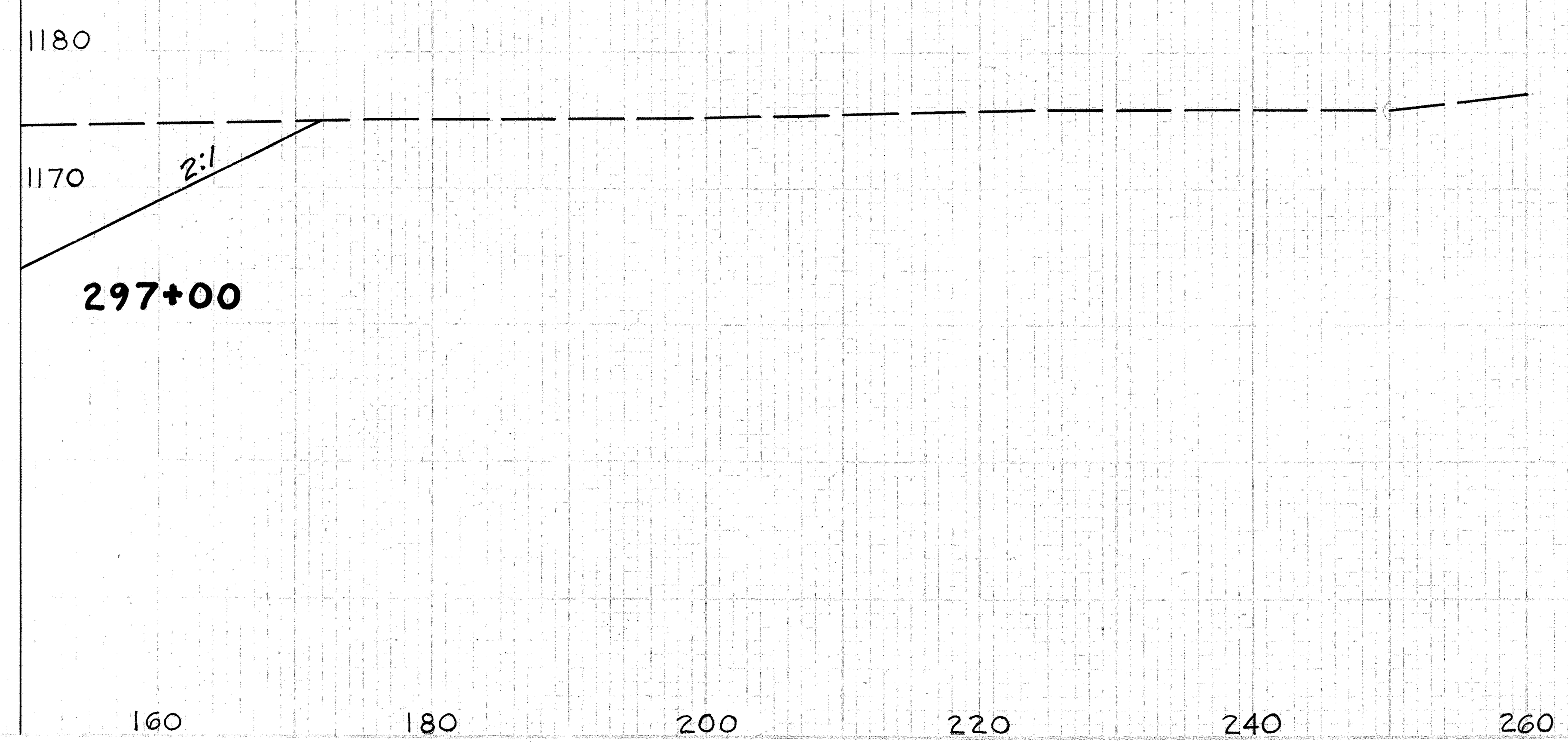
NB Rest Area
Not Built With
This Plan

N.B. ROADSIDE REST AREA - EXTENDED SECTIONS - Sta. 294+20 to 296+00

MEDINA COUNTY
MED - 42 - 21.94

SEEDING	
END WIDTH	SQ. YDS.
0	
	211
37	

Sta ~~298~~+00

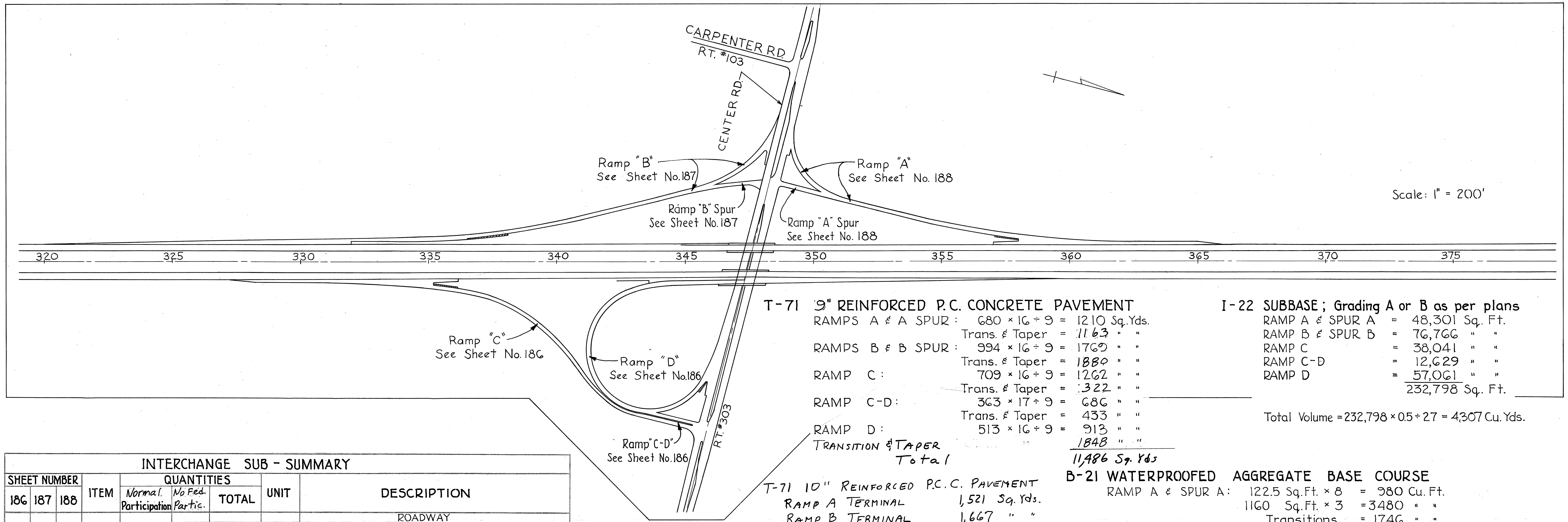


END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
0	0		
		204	0
119	0		

Zero Section Sta. 298+00

NB Rest Area
Not Built With
This Plan

INTERCHANGE AT S.R. 303



INTERCHANGE SUB - SUMMARY

SHEET NUMBER 186	187	188	ITEM	QUANTITIES Normal Participation	No Fed. Partic.	TOTAL	UNIT	DESCRIPTION
								ROADWAY
650	1050	725	I-15			2425	Lin. Ft.	Guard Rail Steel Beam, Standard Type, Deep
L.S.	L.S.	L.S.	I-125			Lump	Lump	Curb and Island Marking
0.25	0.12	0.17	I-125			0.54	Mile	Channelizing Lines
L.S.	L.S.	L.S.	I-125			Lump	Lump	Diagonal Stripes
1931	967	657	L-10			3555	Sq. Yd.	Sodding
								DRAINAGE
	50		I-1			50	Lin. Ft.	15" Pipe, Class E-1
2406	1610	700	I-1			4716	Lin. Ft.	6" Pipe, Class I-3
30	20	20	I-1			70	Lin. Ft.	8" Pipe, Class F-1
50		82	I-1			132	Lin. Ft.	15" Pipe, Class A-1, Sec. M6.6 (a) or M6.8 (b)
114			I-1			114	Lin. Ft.	18" Pipe, Class A-1, Sec. M6.6 (a) or M6.8 (b)
218	176		I-1			394	Lin. Ft.	24" Pipe, Class A-1, Sec. M6.6 (a) or M6.8 (b)
232			I-1			232	Lin. Ft.	30" Pipe, Class A-1, Sec. M6.6 (a) or M6.8 (b)
76			I-1			76	Lin. Ft.	36" Pipe, Class A-1, Sec. M6.6 (a) or M6.8 (b)
		86	I-1			86	Lin. Ft.	48" Pipe, Class A-1
13.28			I-2			13.28	Cu. Yds.	Masonry, Endwall Type A-1
3.37			I-2			3.37	Cu. Yds.	Masonry, Endwall Modified Type B-1
		18.00	I-2			18.00	Cu. Yds.	Masonry, Endwall Type D-1
	0.41	0.26	I-2			0.67	Cu. Yds.	Masonry, Endwall Type E
3	2	2	I-5			7	Each	6" Pipe Special Class I-3
2	1		I-8			3	Each	Standard #3-A Catch Basin
1	2	1	I-8			4	Each	Standard #4 Catch Basin
1			I-8			1	Each	Standard #5 Catch Basin
18		15	I-10			33	Cu. Yds.	Dumped Rock
944		8	E-3			952	Cu. Yds.	Channel Excavation
								PAVEMENT
231	55.5	105.5	I-12			392	Lin. Ft.	Concrete Curb Type 2A, Standard
121	50	100	I-12			271	Lin. Ft.	Concrete Curb Type 6, Standard
599	600	110	I-12			1309	Lin. Ft.	Special Barrier Curb
400			I-21			400	Lin. Ft.	Concrete Median Type 2, Standard
41	11	30	I-21			82	Sq. Yds.	Portland Cement Concrete Median Pavement (4")

T-71 9" REINFORCED P.C. CONCRETE PAVEMENT

RAMPS A & A SPUR: 680 × 16 ÷ 9 = 1210 Sq. Yds.
Trans. & Taper = 1163 " "
RAMPS B & B SPUR: 994 × 16 ÷ 9 = 1769 " "
Trans. & Taper = 1880 " "
RAMP C: 709 × 16 ÷ 9 = 1262 " "
Trans. & Taper = 322 " "
RAMP C-D: 363 × 17 ÷ 9 = 686 " "
Trans. & Taper = 433 " "
RAMP D: 513 × 16 ÷ 9 = 913 " "
TRANSITION & TAPER 1848 " "
Total 11,486 Sq. Yds

T-71 10" REINFORCED P.C.C. PAVEMENT

RAMP A TERMINAL 1,521 Sq. Yds.
RAMP B TERMINAL 1,667 " "
RAMP C TERMINAL 1,403 " "
RAMP D TERMINAL 1,428 " "
TOTAL 6,019 Sq. Yds.

I-22 SUBBASE; Grading A or B as per plans

RAMP A & SPUR A = 48,301 Sq. Ft.
RAMP B & SPUR B = 76,766 " "
RAMP C = 38,041 " "
RAMP C-D = 12,629 " "
RAMP D = 57,061 " "
232,798 Sq. Ft.

Total Volume = 232,798 × 0.5 ÷ 27 = 4,307 Cu. Yds.

B-21 WATERPROOFED AGGREGATE BASE COURSE

RAMP A & SPUR A: 122.5 Sq. Ft. × 8 = 980 Cu. Ft.
1160 Sq. Ft. × 3 = 3480 " "
Transitions = 1746 " "
6206 Cu. Ft.

RAMP B & SPUR B: 552 Sq. Ft. × 8 = 4416 " "
1577 Sq. Ft. × 3 = 4731 " "
Transitions = 2779 " "
11,926 Cu. Ft.

RAMP C: 123 Sq. Ft. × 8 = 984 " "
793.5 Sq. Ft. × 3 = 2381 " "
Transitions = 1751 " "
5116 Cu. Ft.

RAMP C-D: 271 Sq. Ft. × 3 = 813 Cu. Ft.

RAMP D 583 Sq. Ft. × 8 = 4664 " "
857.5 Sq. Ft. × 3 = 2573 " "
Transitions = 1882 " "
9119 Cu. Ft.

TOTAL VOLUME = 33,180 Cu. Ft. ÷ 27 = 1,229 Cu. Yds.

I-127 DELINEATORS

SIDE	STATION TO STATION	SPACING FT.	Post Mounted C-2	Post Mounted C-3	Brkt. Mtd C-2
L	48+70 - 49+20 Spur A	50	2		
R	48+05 - 49+85 Ramp A	30	7		
R	51+00 - 57+00 Ramp A	100	7		
L	57+00 - 336+00 I-71	100	10		
L	320+00 I-71	-		1	
L	321+00, I-71 - 33+00 Ramp B	100	11		
R	33+00 - 41+00 Ramp B	100	9		
L	41+00 - 45+00 Ramp B	100	5		
R	45+00 - 46+00 Ramp B	100	2		
L	47+30 - 47+80 Spur B	50	2		
R	46+80 - 48+40 Ramp B	40	5		
L	48+40 - 50+40 Ramp B	50	5		
R	27+20 - 36+20 Ramp C	100	10		
L	36+20 - 42+70 Ramp C	50	14		
R	42+70 - 44+80 Ramp C	30	8		
R	45+40 - 46+40 Ramp C-D	100	2		
L	45+80 - 47+00 Ramp C-D	60	3		
L	359+59 I-71	-		1	
L	358+58, I-71 - 37+00 Ramp D	100	14		2
R	37+00 - 42+90 Ramp D	30	18		
L	42+90 - 45+00 Ramp D	30	8		
R	45+80 - 47+30 Ramp D	30	6		
R	47+00 - 51+00 Ramp D	100	5		
	TOTAL		153	2	2*

* Carried to Bridge Summary Sheet 232

B-112- POROUS BASE COURSE

RAMP A & SPUR A = 3077 Cu. Ft.
RAMP B & SPUR B = 9446 " "
RAMP C = 2710 " "
RAMP C-D = 406 " "
RAMP D = 6230 " "
TOTAL = 21,869 Cu. Ft. ÷ 27 = 810 Cu. Yds.

T-31 BITUMINOUS SURFACE TREATMENT

BITUMINOUS MATERIALS:
8226.9 × 0.25 = 2,057 Gals.
NO. 6 AGGREGATE:
8226.9 × 0.008 = 66 Cu. Yds.

I-125 LANE & EDGE LINES

4" Edge Lines - 14,317 ÷ 5280 = 2.71 Miles
4" Lane Lines - 437 ÷ 5280 = 0.08 Miles

Rev 10-10-62

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

MEDINA COUNTY
MED-42-21.94

CURVE #C-1

Δ = 6°-50'-00"
D = 1°-30'
R = 3,819.72'
T = 228.05'
L = 455.56'
E = 6.80'

Superelevation Table		
Ramp C Station	Edge of Pavm't. Elev. B/L	Outer Edge
36+50	1171.44	1172.38
36+75	1171.18	1172.26
37+00	1170.88	1172.09
+25	1170.56	1171.89
+50	1170.21	1171.54
+75	1169.87	1171.20
38+00	1169.53	1170.86
+25	1169.18	1170.51
+50	1168.84	1170.17
+75	1168.50	1169.83
39+00	1168.15	1169.48
+25	1167.81	1169.14
+50	1167.47	1168.80

CURVE #C-2

Δ = 10°-30'-00"
La = 200.00'
θa = 7°-30'-00"
pa = 2.18'
T_1 = 124.12'
T_2 = 76.44'
Δ_1 = 1°-30'-00"
D_1 = 1°-30'-00"
R_1 = 3819.72'
Δ_2 = 9°-00'-00"
D_2 = 9°-00'-00"
R_2 = 636.62'

CURVE #C-3

Δ = 34°-01'-48"
Δc = 25°-01'-48"
Dc = 9°-00'
Rc = 636.62'
Lc = 278.11'
Tc = 141.31'
Ec = 15.49'
Ls2 = 200.00'
θs2 = 9°-00'
p2 = 2.62'
k2 = 99.92'
Xc2 = 199.51'
Yc2 = 10.45'
L.T.2 = 133.51'
S.T.2 = 66.82'
Ts1 = 199.49'
Ts2 = 290.86'

CURVE #D-1

Δ = 251°-06'-21"
Δc = 201°-17'-01"
Dc = 24°-54'-40"
Rc = 230.00'
Lc = 808.00'
Tc = 1224.07'
Ec = 1475.49'
Ls1 = Ls2 = 200.00'
θs = 24°-54'-40"
p = 7.20'
k = 99.37'
Xc = 196.25'
Yc = 28.60'
L.T. = 134.68'
S.T. = 67.89'
Ts = -232.52'

Superelevation Table		
Ramp D Table	Edge of Pvmt. Elev. B/L	Outer Edge
40+00	1165.62	1166.95
+25	1165.30	1166.63
+50	1164.98	1166.31
+75	1164.65	1165.98
41+00	1164.31	1165.64
+25	1163.94	1165.27
+50	1163.55	1164.88
+75	1163.12	1164.45
42+00	1162.67	1164.00

ESTIMATED QUANTITIES

NO.	STATION TO STATION	SIDE	I-1 Class A-1 Pipe Sec. M 6.6 (a) or Sec. M 6.8 (b) 15" Lin.Ft.	18" Lin.Ft.	24" Lin.Ft.	30" Lin.Ft.	36" Lin.Ft.		Class I-3 Pipe 6" Shallow Lin.Ft.	Class F-1 Pipe Sec. M6.4(c) 8" Lin.Ft.	I-2 Masonry Endwall Type "A-1" Cu.Yd.	Endwall Mod. Ty."B-1" Cu.Yd.	I-5 Pipe Specials 6"-60° Bend Each	E-3 Channel Excavation Cu.Yd.	I-8 Std. No.4 C.B. Each	Std. No.5 C.B. Each	Std. No.3A C.B. Each	I-10 Dumped Rock Cu.Yd.	I-15 Guard Rail Lin.Ft.	L-10 Sodding Sq.Ft.	I-12 Conc.Curb Type 6 Std. Lin.Ft.	Conc.Curb Type 2A Std. Lin.Ft.	Special Barrier Curb Lin.Ft.	I-21 Conc. Median, Std. Type 2 Lin.Ft.	4" Conc. Med. Pvmt. Type 1 Std. Sq.Yd.	I-125 Curb & Island Marking L.S.	Channelizing Lines Mile	Diagonal Stripes L.S.	SEE SHEET NO.
1-D	34+00 to 46+66 Ramp C	Rt.							1276	10			1																
2-D	37+04 to 46+50 Ramp D	Lt.							958	10			1																
3-D	35+34 to 37+00 Ramp D	Lt.							172	10			1																
4-D	37+80 to 40+00 Ramp C	Rt.																		200									
5-D	40+00 to 40+85 Ramp C	Rt.																		95									
6-D	43+70 to 43+65 Ramp D	Lt.																		240									
7-D	43+50 to 46+80 Ramp C	Rt.																		440									
8-D	46+85 Ramp C	Rt.																		120									
9-D	40+00 Ramp C	—					76				10.02									19									215
10-D	46+70 Ramp D	—													1	1													216
11-D	45+50 to 46+75 Ramp C-D	—	50	114													2												216
12-D	55+80 S.R.303	—			218																								216
13-D	56+30 S.R.303	—				226					3.26	3.37		944				18		17									216
14-D	36+50 to 41+00	Lt.																		800									
7-P	348+00 ±	Rt.																									0.08		
1-R	38+50 to 40+25 Ramp C	Rt.																	175										
2-R	38+50 to 40+25 Ramp C	Lt.																	175										
3-R	38+20 to 35+20 Ramp D	Lt.																	300										
5-P	35+00± Ramp C	Lt.																									0.14	L.S	
1-P	35+21.07 to 36+21.07 Ramp C	Lt.																			100	105.5			30	L.S			
2-P	34+01.45 to 40+00 Ramp D	Rt.																					599			L.S			
3-P	47+09.5 to 47+30 Ramp D	Rt.																			21	25.5			11	L.S.			
4-P	42+00 Rp.D to 47+00 Ramp C-D	Rt.																				100		400					
6-P	47+75± Ramp D	Rt.																									0.03	L.S.	
	TOTAL		50	114	218	226	76		2406	30	13.28	3.37	3	944	1	1	2	18	650	1931	121	231	599	400	41	L.S.	0.25	L.S.	

CURVE #C-4

Δ-θs = 21°-27'-33"
La = 200.00'
p = 6.21'
k = 99.53'
Xc = 197.21'
Yc = 24.72'
L.T. = 134.33'
S.T. = 67.57'

CURVE #C-5

Δ = 15°-38'-15"
D = 23°-03'-24"
R = 248.50'
T = 34.12'
L = 67.82'
E = 2.33'

S.R.303 INTERCHANGE-PLAN-RAMPS C, D & C-D

ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	I-1 Class A-1 Pipe Sec. MG.6(a) MG.8(b) 24"	I-1 Class A-1 Pipe	I-1 Class E-1 Pipe 15"	I-1 Class I-3 Pipe 6" Shallow	I-1 Class F-1 Pipe 8"	I-5 Pipe Specials 6"-60° Bend	I-8 Std. No.3A C.B.	I-8 Std No.4 C.B.	I-15 Guard Rail	L-10 Sodding	I-2 Masonry Endwall Type "E"	I-12 Conc. Curb Type 6 Std.	I-12 Conc. Curb Type 2-A Std.	I-12 Special Barrier Curb	I-21 4" Conc. Med Pvmt. Type 1 Std.	I-125 Curb & Island Marking	SEE SHEET NO.
			Lin. Ft.		Lin. Ft.	Lin. Ft.	Lin. Ft.	Each	Each	Each	Lin. Ft.	Sq. Yd.	Cu. Yd.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Sq. Yd.	L.S.	
1-D	34+50 to 47+90	Lt.				1354	10	1											
2-D	48+10 to 50+20	Lt.				210	10	1											
3-D	48+00 to 50+30	Lt.										190							
4-D	39+95 to 47+35	Lt.										660							
5-D	46+00 to 46+30	Lt.										117							
6-D	47+30 to 48+00	Lt.	124							1									214
7-D	48+10	Lt.	52							1			0.41						214
8-D	48+00 to 48+50	Lt.			50				1										214
9-D	34+00 to 34+46	Lt.				46													
1-R	34+00 to 44+50	Lt									1050								
1-P	32+00 to 38+00	Rt														600			
2-P	48+05 to 48+54.13	Rt												50	55.5		11	L.S.	
	TOTAL		176		50	1610	20	2	1	2	1050	967	0.41	50	55.5	600	11	L.S.	

ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	I-125 Channelizing Lines	I-125 Diagonal Stripes			SEE SHEET NO.
			Miles	L.S.			
3-P	48+50± Ramp B	Rt.	0.03	L.S.			
4-P	46+25± Ramp B	Rt.	0.01	L.S.			
5-P	32+00± Ramp B	Rt.	0.08				
	TOTAL		0.12	L.S.			

Superelevation Table

Ramp B Stations	Edge of Pavm't. Elev. B/L	Edge of Pavm't. Elev. Outer Edge
38+00	1169.78	1170.51
+25	1169.37	1170.10
+50	1168.94	1169.67
+75	1168.47	1169.20
39+00	1167.96	1168.69
+25	1167.43	1168.16
+50	1166.86	1167.60
+75	1166.25	1166.92
40+00	1165.61	1166.21
+25	1164.94	1165.48
+50	1164.24	1164.71
+75	1163.50	1163.91
41+00	1162.73	1163.08
+25	1161.92	1162.19
+50	1161.08	1161.33
+75	1160.21	1160.46
42+00	1159.30	1159.55
+25	1158.36	1158.61
+50	1157.39	1157.64
+75	1156.40	1156.65
43+00	1155.41	1156.14
+25	1154.42	1155.15
+50	1153.43	1154.16
+75	1152.44	1153.17
44+00	1151.45	1152.18
+25	1150.46	1151.19

CURVE # B-3

Δ = 8°-28'-44"
D = 2°-30'-00"
R = 2291.83'
T = 169.89'
L = 339.16'
E = 6.29'

CURVE # B-2

Δ = 61°-31'-16"
Δc = 28°-46'-50.40"
Dc = 16°-22'-12.8"
Rc = 350.00'
Lc = 175.81'
Tc = 89.80'
Ec = 11.34'
Ls1 = Ls2 = 200.00'
θs = 16°-22'-12.8"
p = 4.75'
k = 99.73'
Xc = 198.37'
Yc = 18.94'
L.T. = 133.91'
S.T. = 67.19'
Ts = 310.87'

CURVE # B-1

Δ = 13°-01'-07"
Δc = 7°-01'-07"
Dc = 3°-00'-00"
Rc = 1909.86'
Lc = 233.95'
Tc = 117.12'
Ec = 3.59'
Ls1 = Ls2 = 200.00'
θs = 3°-00'-00"
p = 0.87'
k = 99.99'
Xc = 199.95'
Yc = 3.49'
L.T. = 133.35'
S.T. = 66.68'
Ts = 318.01'

For Continuation of Ramp B Details, see Sheet No. 42.

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

MEDINA COUNTY
MED-42-21.94

CURVE # A-1

Δ = 90°-00'-00"
Δc = 40°-10'-40"
Dc = 24°-54'-40"
Rc = 230.00'
Lc = 161.28'
Tc = 84.12'
Ec = 14.90'
Ls1 = Ls2 = 200.00'
θs = 24°-54'-40"
p = 7.20'
K = 99.37'
Xc = 196.25'
Yc = 28.60'
L.T. = 134.68'
S.T. = 67.89'
T.S. = 336.57'

ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	I-1 Class A-1 Pipe	I-1 Class A-1 Pipe Sec. M6.6(a) M6.8(b)	I-1 Class A-1 Pipe	I-1 Class I-3 Pipe 6" Shallow	I-1 Class F-1 Pipe 8"	I-2 Masonry Endwall Type "D-1"	I-2 Masonry Endwall Type "E"	I-5 Pipe Specials 6"-90° Bend	I-5 Pipe Specials 6"-60° Bend	I-8 Std. No. 4 C.B.	I-10 Dumped Rock	I-15 Guard Rail	E-3 Channel Excav.	L-10 Sodding	I-12 Conc. Curb Type 6, Std.	I-12 Conc. Curb Type 2-A, Std.	I-12 Special Barrier Curb	I-21 4" Conc. Med. Pvmt. Type 1, Std.	I-125 Curb & Island Marking	Channelizing Lines	Diagonal Stripes	SEE SHEET NO.
			48"	15"																				
			Lin. Ft.	Lin. Ft.		Lin. Ft.	Lin. Ft.	Cu. Yd.	Cu. Yd.	Each	Each	Each	Cu. Yd.	Lin. Ft.	Cu. Yd.	Sq. Yd.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Sq. Yd.	L. S.	Mile	L. S	
1-D	47+00 to 49+00 Ramp A	Lt.				100	10			1														
2-D	49+15 to 56+00 Ramp A	Lt.				600	10				1													
3-D	49+10 to 50+50 Ramp A	Rt.														116								
4-D	50+50 to 56+00 Ramp A	Rt.														520								
5-D	50+15 Ramp A	—	86					18.00					15		8	18								213
6-D	49+05 Ramp A	—		82					0.26			1				3								213
1-R	49+75 to 56+00 Ramp A	Lt.												625										
2-R	49+85 to 50+85 Ramp A	Rt.												100										
5-P	58+20± Ramp A	Rt																				0.14	L.S.	
1-P	47+90.17 to 48+80 Ramp A	Rt.																	110					
2-P	57 to 58± & 48 to 49± Ramp A	Rt.															100	105.5		30	L.S.			
3-P	47+80± Ramp A	Rt																				0.01	L.S.	
4-P	50+00± Ramp A	Rt.																				0.02	L.S.	
TOTAL			86	82		700	20	18.00	0.26	1	1	1	15	725	8	657	100	105.5	110	30	L.S.	0.17	L.S	

Superelevation Table

Ramp A Station	Edge of Pavm't. Elev. B/L	Edge of Pavm't. Elev. Outer Edge
51+75	1146.62	1146.87
52+00	1147.50	1147.75
+25	1148.36	1148.61
+50	1149.17	1149.42
+75	1149.94	1150.19
53+00	1150.66	1150.91
+25	1151.34	1151.59
+50	1151.97	1152.22
+75	1152.56	1152.81
54+00	1153.11	1153.36
+25	1153.61	1153.86
+50	1154.06	1154.31
+75	1154.47	1154.72
55+00	1154.84	1155.09
+25	1155.16	1155.41
+50	1155.43	1155.68
+75	1155.66	1155.91
56+00	1155.85	1156.10
+25	1155.99	1156.24
+50	1156.09	1156.34
+75	1156.14	1156.39
57+00	1156.15	1156.40

For Continuation of Ramp A Details, see Sheet No. 45.

S.R. 303 INTERCHANGE - PLAN - RAMP A

MEDINA COUNTY
MED-42-21.94

S. R. 303 INTERCHANGE - RAMP PROFILES

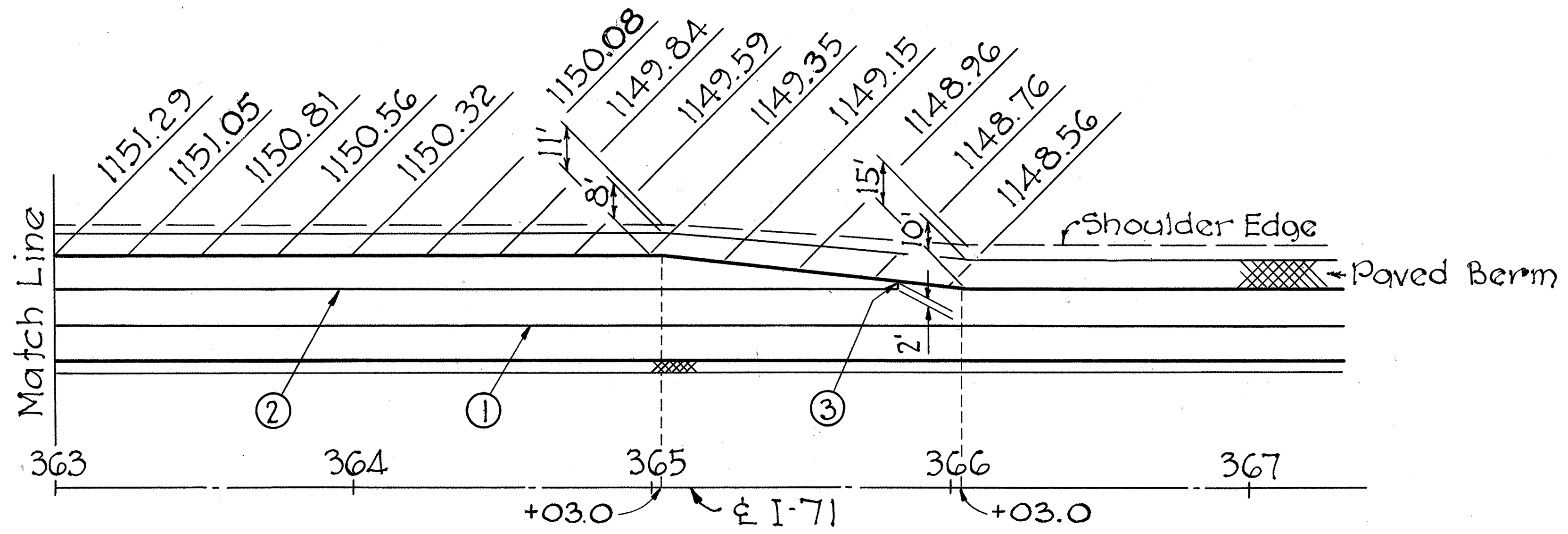
MEDINA COUNTY
MED-42-21.94

S.R. 303 INTERCHANGE - RAMP PROFILES

MEDINA COUNTY
MED-42-21.94

S.R. 303 INTERCHANGE - RAMP PROFILES

RAMP A
CONNECTION
Scale: 1" = 20'

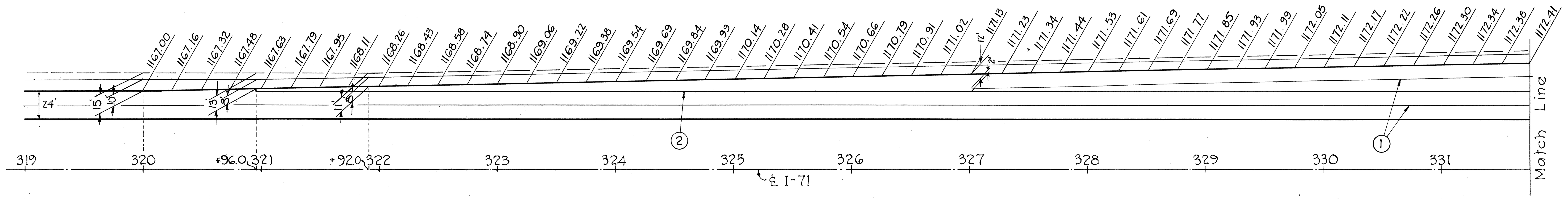


RAMP A
DECELERATION LANE & TAPER
Scale: 1" = 50'

JOINT LEGEND

1. Standard Longitudinal Joint
2. Standard Longitudinal Key Joint without Tie Bars
3. Expansion Joint without Dowels
4. Standard Expansion Joint

RAMP B
CONNECTION
Scale: 1" = 20'

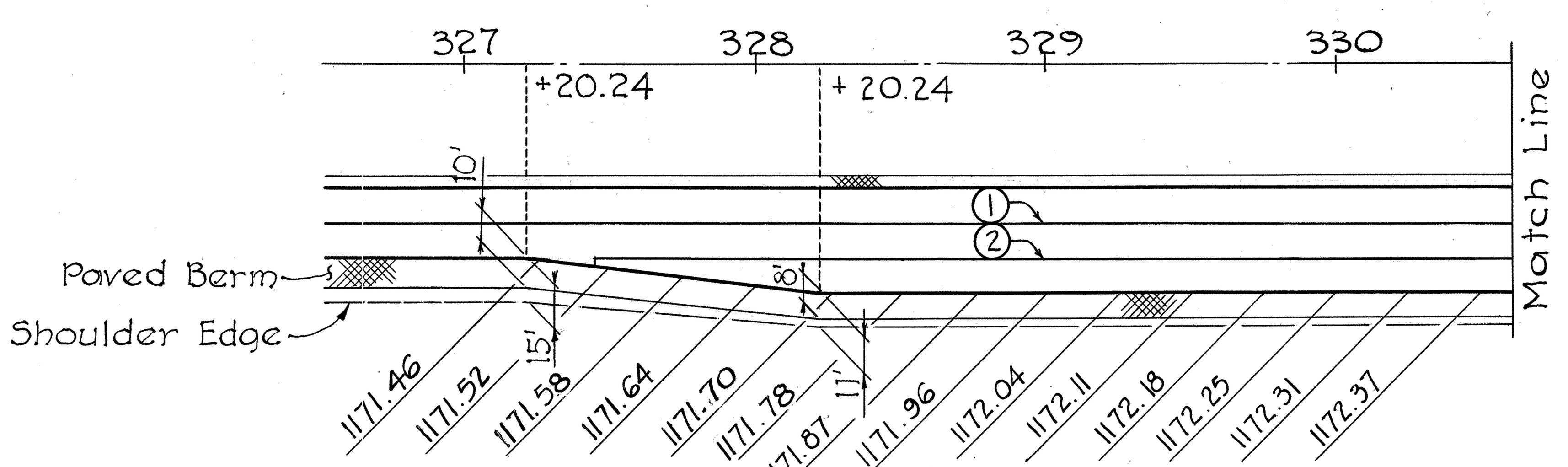


RAMP B
ACCELERATION LANE & TAPER
Scale: 1" = 50'

JOINT LEGEND
1. Standard Longitudinal Joint
2. Standard Longitudinal Joint without Tie Bars
3. Expansion Joint without Dowels
4. Standard Expansion Joint

S.R. 303 INTERCHANGE - DETAILS

RAMP C
CONNECTION
Scale : 1" = 20'

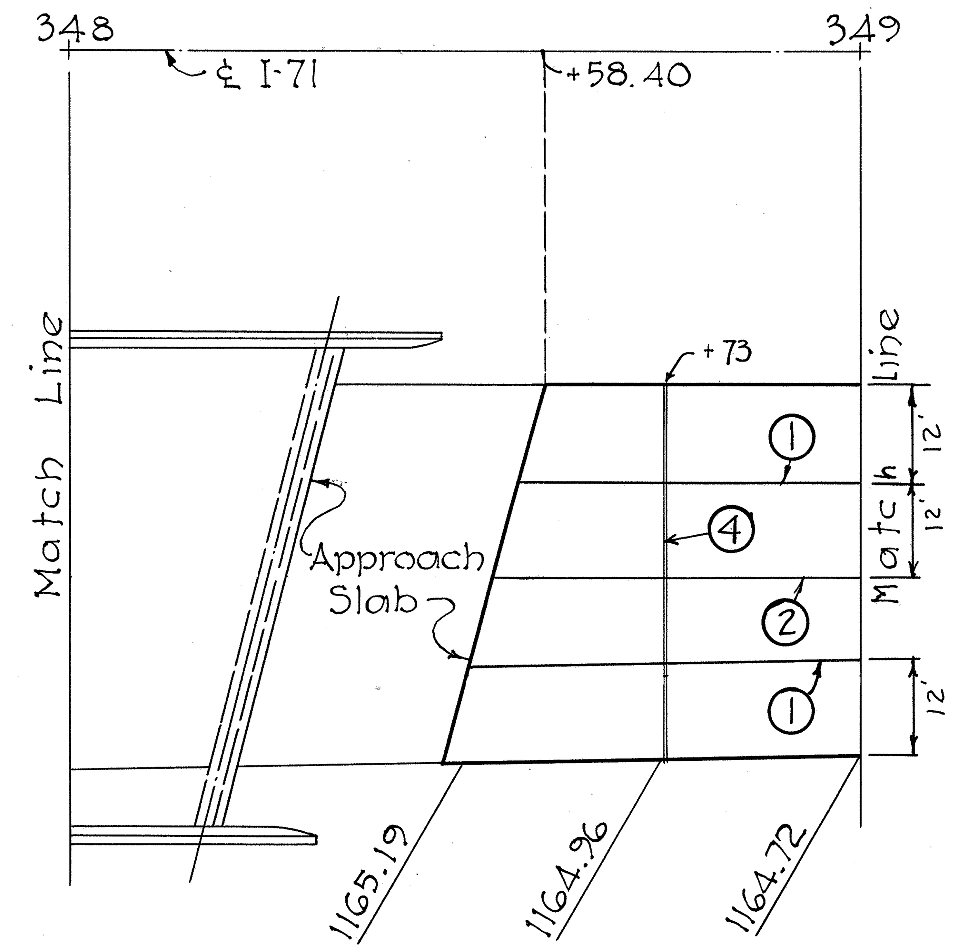


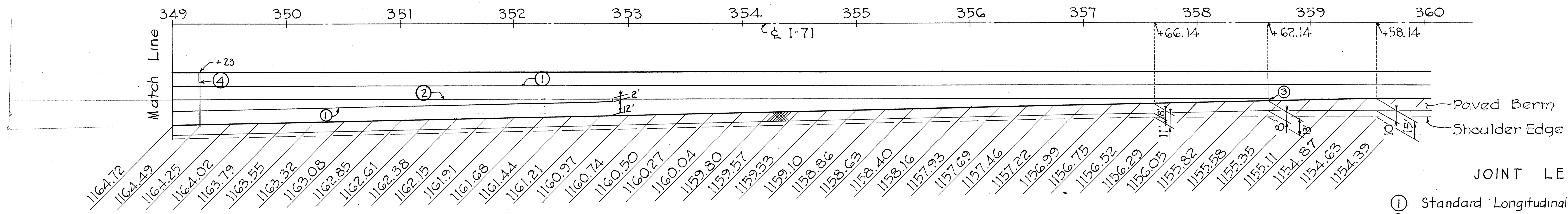
RAMP C
DECELERATION LANE & TAPER
Scale : 1" = 50'

JOINT LEGEND

1. Standard Longitudinal Joint
2. Standard Longitudinal Joint without Tie Bars
3. Expansion Joint without Dowels
4. Standard Expansion Joint

RAMP D
CONNECTION
Scale: 1" = 20'





RAMP D
ACCELERATION LANE & TAPER
Scale: 1" = 50'

JOINT LEGEND

1. Standard Longitudinal Joint
2. Standard Longitudinal Joint without Tie Bars
3. Expansion Joint without Dowels
4. Standard Expansion Joint

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

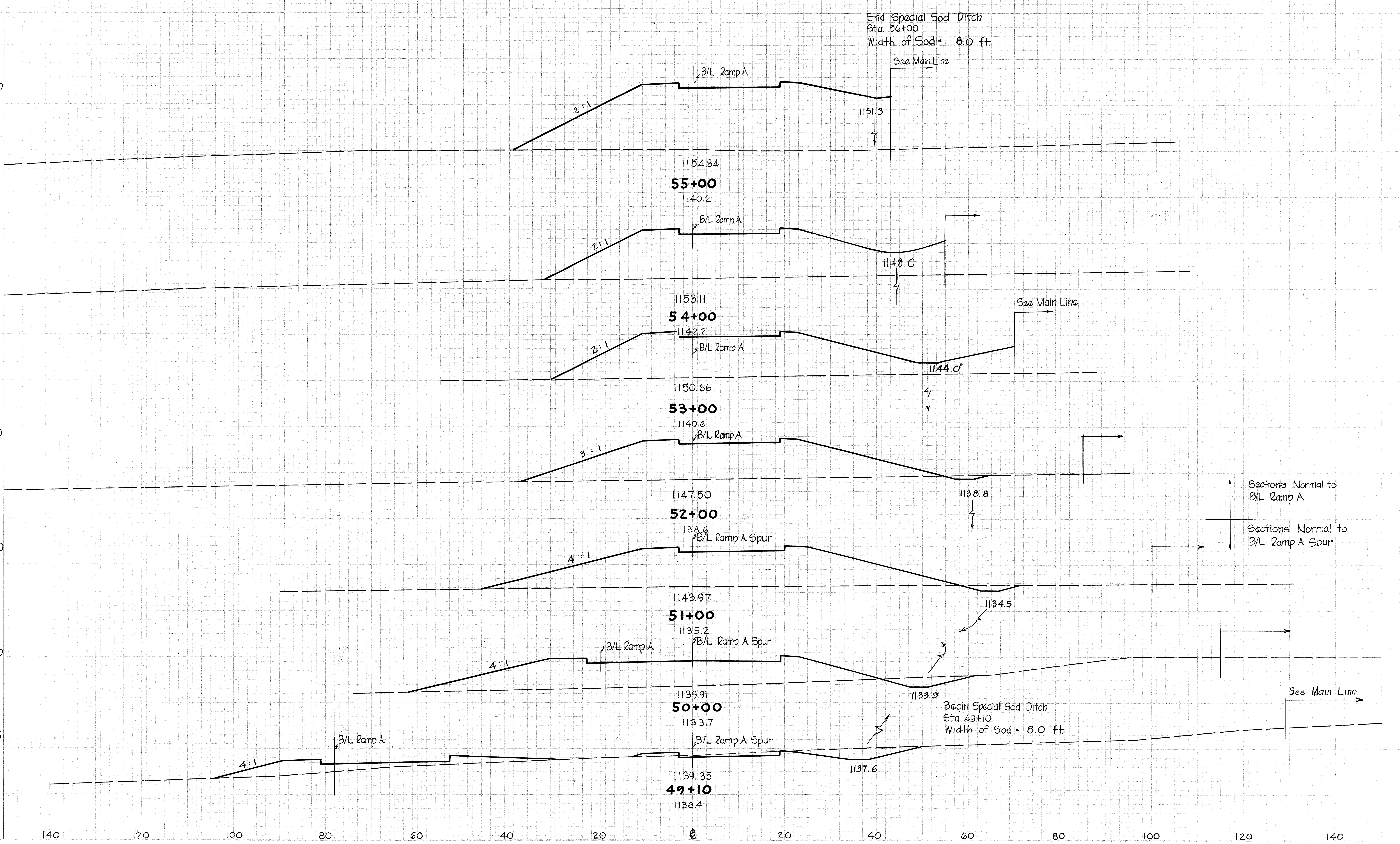
197
293

MEDINA COUNTY
MED-42-21.94

S.R. 303 INTERCHANGE - DETAILS

MEDINA COUNTY
MED-42-21.94

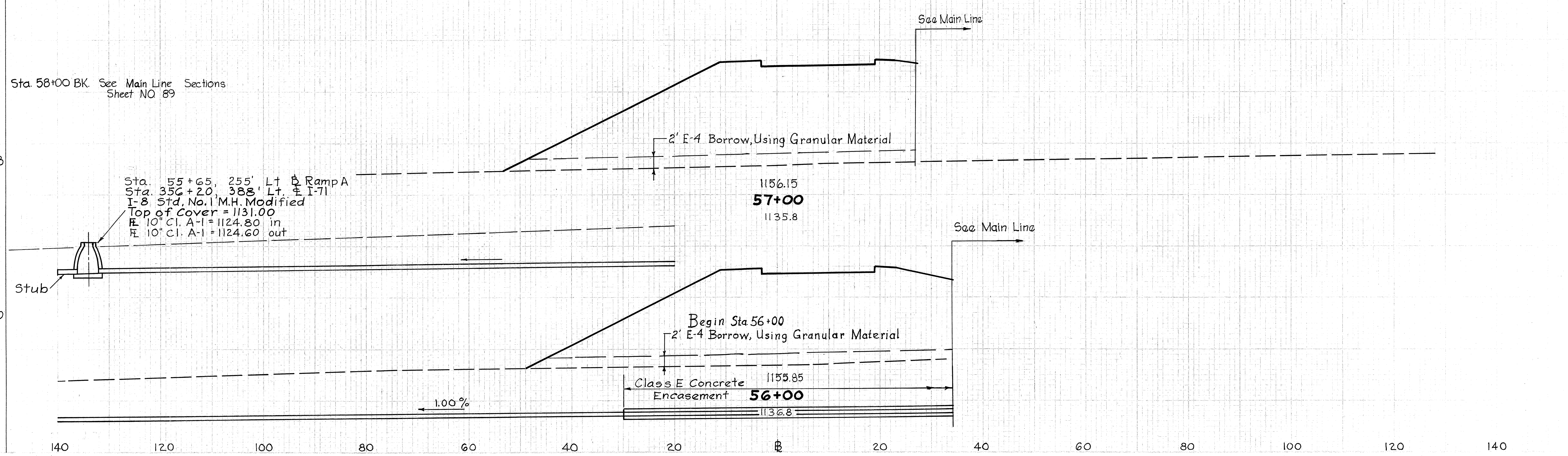
Station	Seeding End Width	Seeding Sq. Yds.	End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
		850			0	3840
55+00	76		0	929		
		978			0	3100
54+00	80		0	714		
		967			0	2520
53+00	94		0	648		
		1160			11	2180
52+00	115		6	528		
		1390			33	2050
51+00	136		12	581		
		1520			70	1920
50+00	149		25	456		
		1725			137	975
49+10	196		57	110		



2 OHIO

MEDINA COUNTY
MED-42-21.94

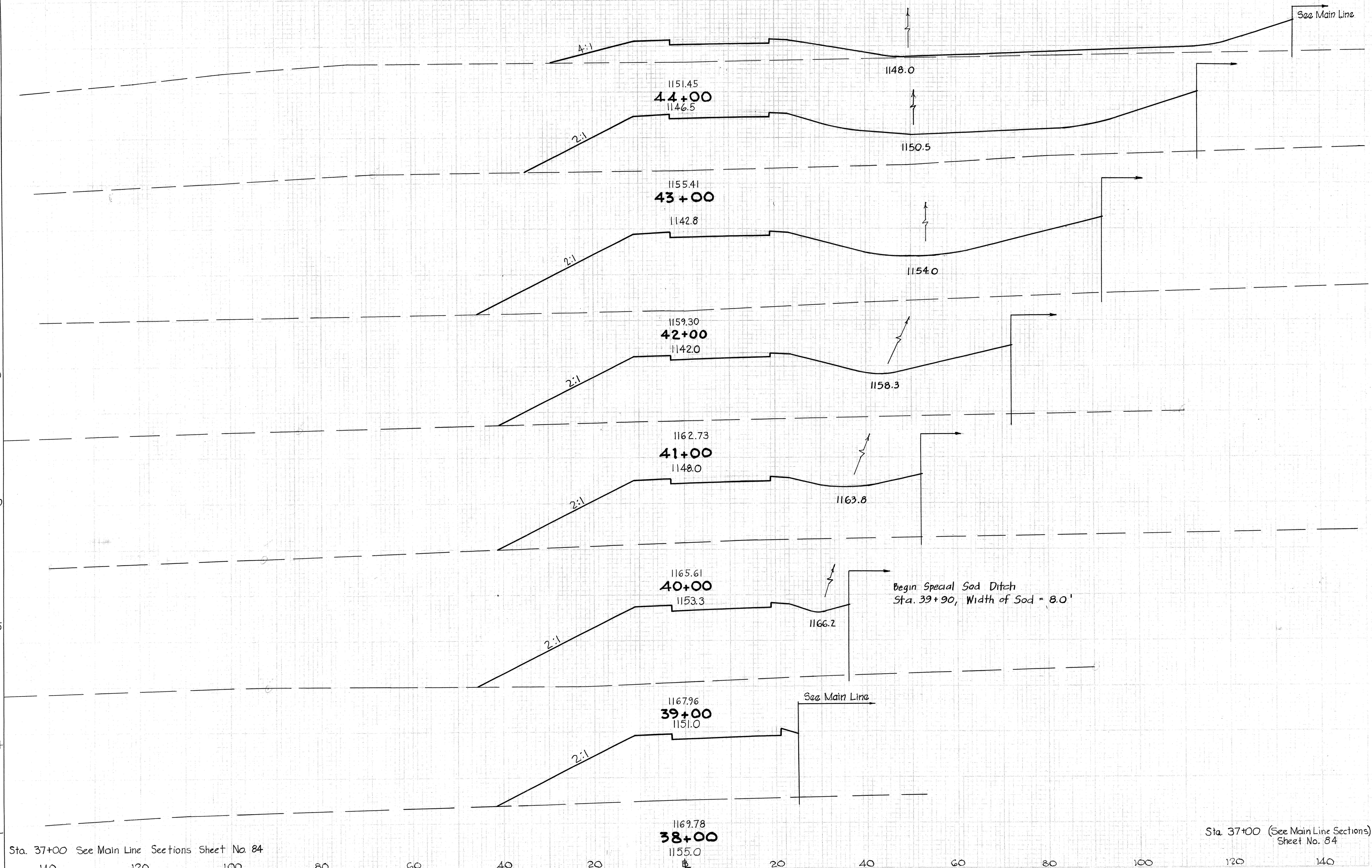
SEEDING	
END WIDTH	SQ. YDS.
54	
	723
75	
	1120
77	



END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
	949		
		0	3930
	1177		
		0	4300
	1148		

MEDINA COUNTY
MED - 42 - 21.94

SEEDING END WIDTH	SEEDING SQ. YDS.
	1760
155	
	1640
141	
	1520
132	
	1330
107	
	1080
88	
	905
75	
	694
50	
	584
55	

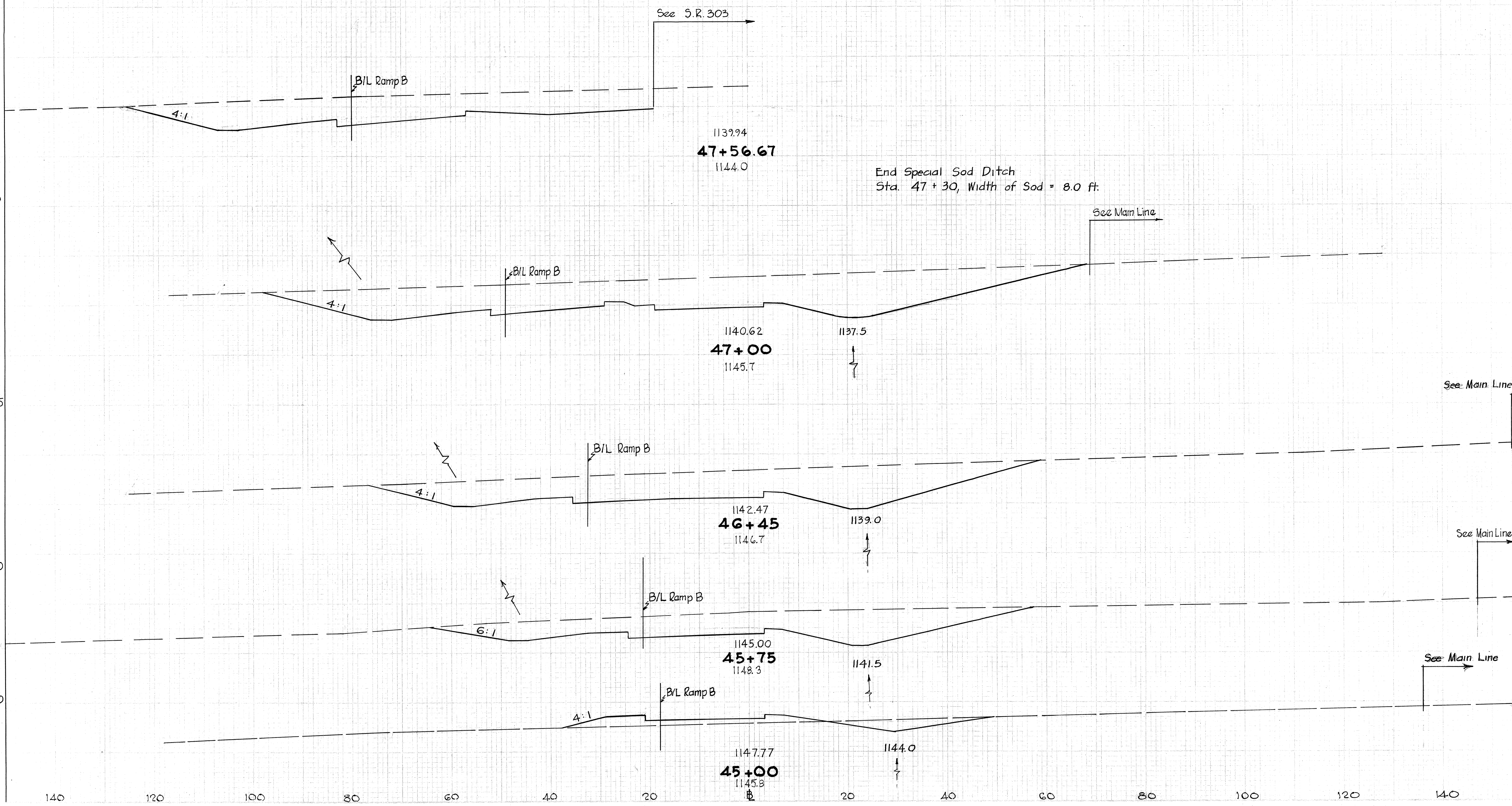


END AREA CUT	END AREA FILL	CU. YDS. CUT	CU. YDS. FILL
		67	788
0	365		
		0	2980
0	1246		
		0	5390
0	1672		
		0	5430
0	1263		
		0	4[illegible]
0	1010		
0	103[illegible]		
0			

S.R. 303 INTERCHANGE RAMP "B" Sta. 38+00

MEDINA COUNTY
MED-42-21.94

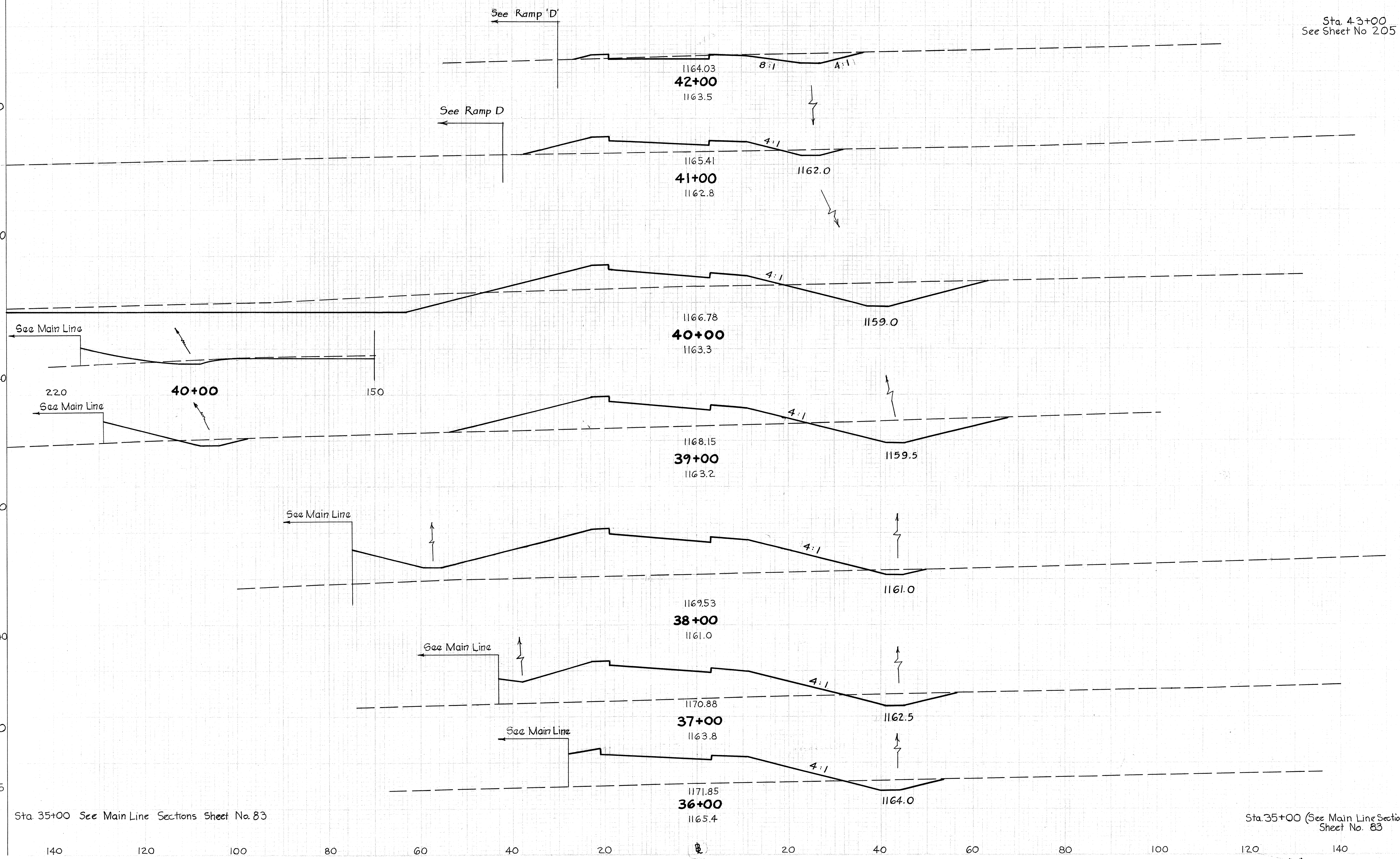
SEEDING End Width	SEEDING Sq. Yds.
93	
	683
124	
	1005
205	
	1550
196	
	1490
162	



End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
475	0		
		1000	0
884	0		
		1573	0
658	0		
		1465	0
470	0		
		704	
36	60		

MEDINA COUNTY
MED-42-21.94

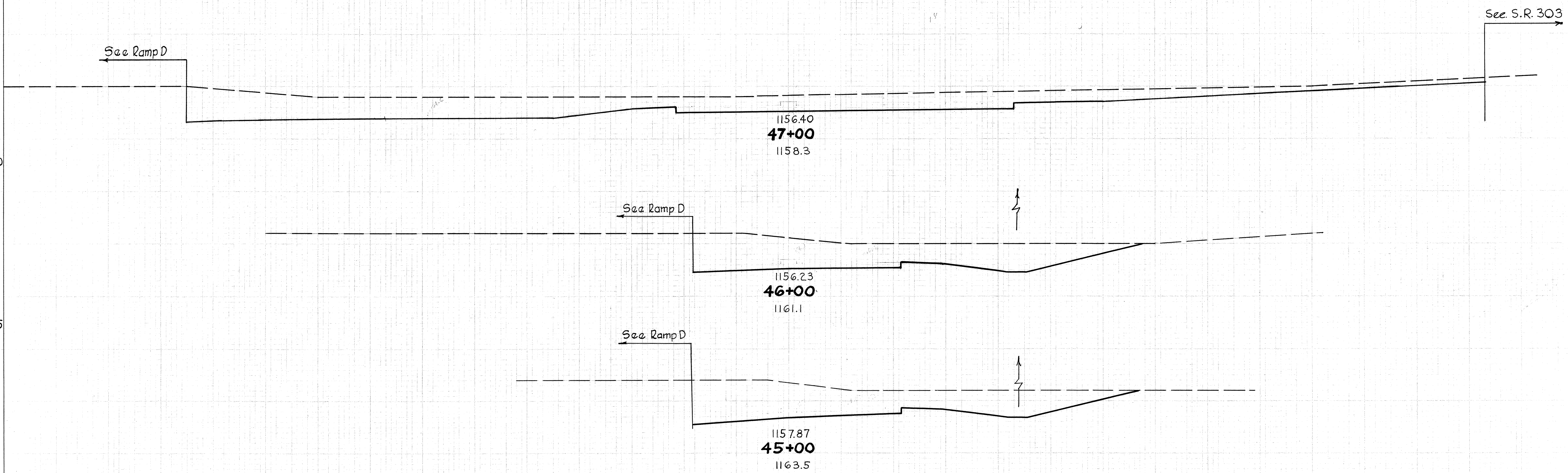
Station	Seeding End Width	Seeding Sq. Yds.	End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
Sta. 43+00 See Sheet No 205			116	0		
					304	15
42+00	57		47	7		
		670			107	215
41+00	64		11	109		
		1740			647	577
40+00	250		338	802		
		2440			862	984
39+00	190		127	329		
		1700			252	1874
38+00	116		8	683		
		1040			78	2045
37+00	90		34	421		
		890			115	1340
36+00	70		28	302		
		705			107	973
Sta. 35+00 (See Main Line Sections) Sheet No. 83	57		29	223		



Sta. 35+00 See Main Line Sections Sheet No. 83

S.R. 303 INTERCHANGE RAMP "C" Sta. 36+00 to 42+00

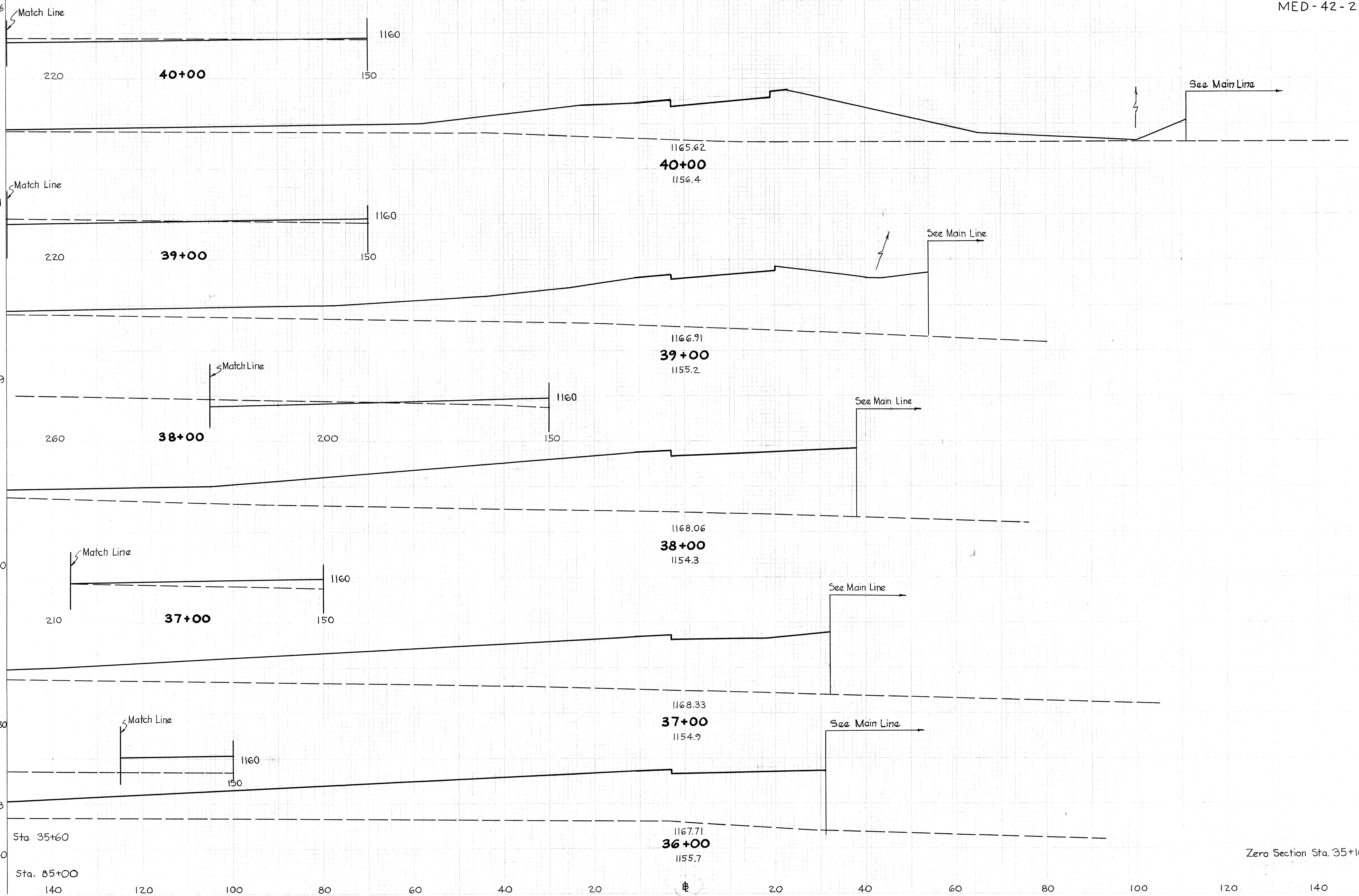
MEDINA COUNTY
MED-42-21.94



Station	SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	CU. YDS. CUT	CU. YDS. FILL
47+00	184		708	0		
		1350			2050	0
46+00	59		402	0		
		645			1500	0
45+00	57		410	0		
					443	0
See Ramp D Sections Sheet No 205			314	0		

MEDINA COUNTY
MED - 42 - 21.94

SEEDING END WIDTH	SEEDING SQ. YDS.
	2046
320	
	1931
261	
	2869
222	
	2350
202	
	2080
172	
	743
162	
	540
0	

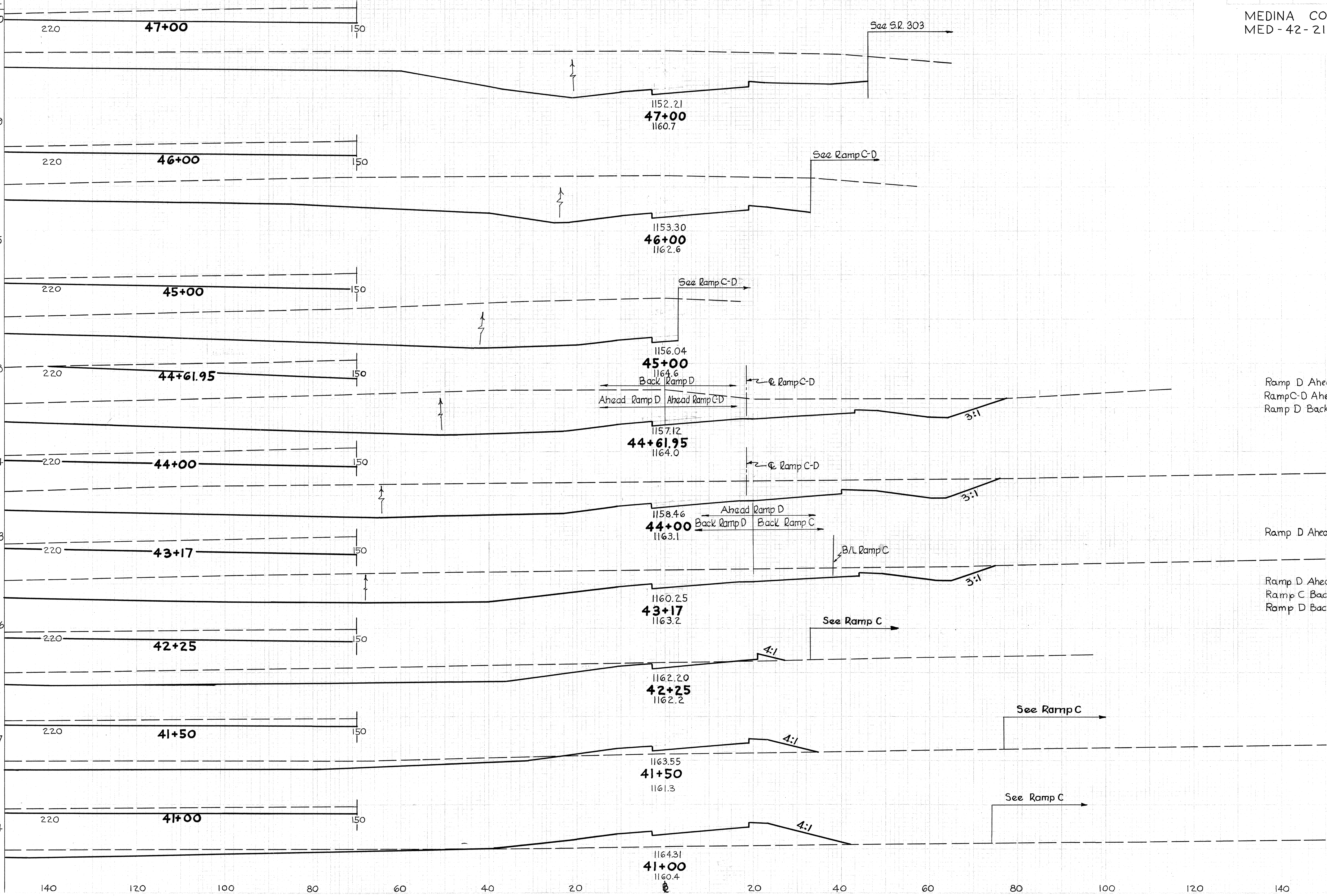


END AREA CUT	END AREA FILL	CU. YDS. CUT	CU. YDS. FILL
		433	2240
34	997		
		115	4340
28	1349		
		111	5470
32	1611		
		59	5780
0	1515		
		0	5800
0	1625		
		0	2690
0	0		

S.R. 303 INTERCHANGE RAMP "D" Sta. 36+00 to 40+00

MEDINA COUNTY
MED - 42 - 21.94

SEEDING END WIDTH	SEEDING SQ. YDS.
	2510
254	
	1449
241	
	1265
227	
	573
270	
	1064
268	
	1433
270	
	1446
239	
	1237
285	
	94.4
282	

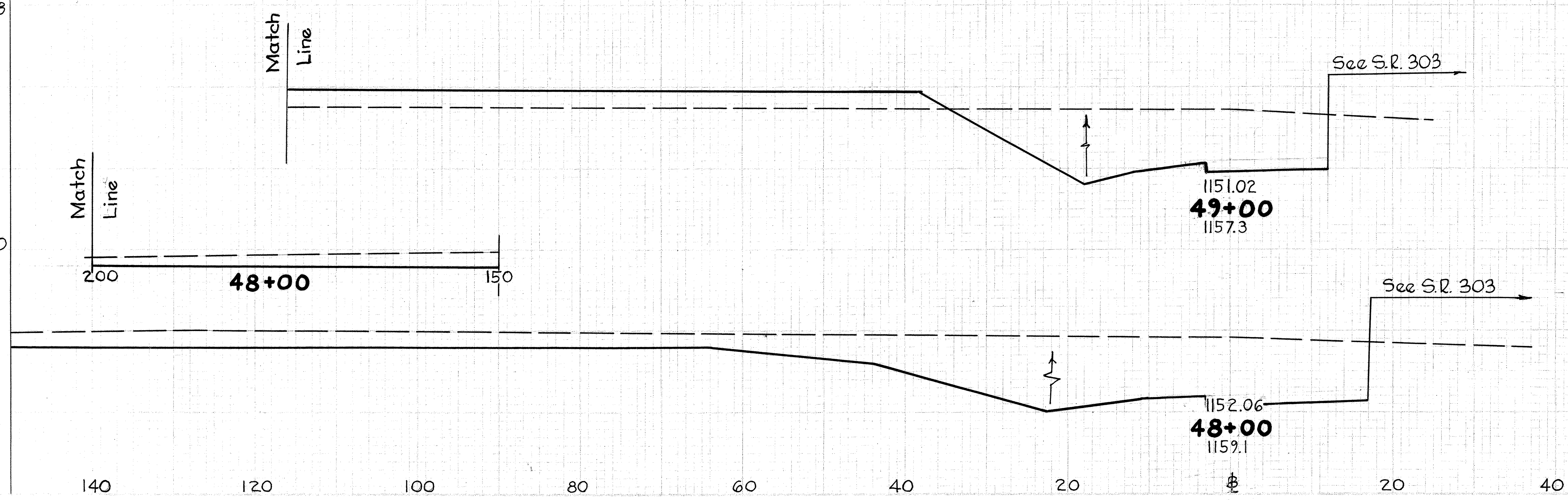


END AREA CUT	END AREA FILL	CU. YDS. CUT	CU. YDS. FILL
		3960	0
1461	0		
		5270	0
1452	0		
		5200	0
1359	0		
		1874	0
Ramp D Ahead = 1299	0		
RampC-D Ahead = 314	0		
Ramp D Back = 1613	0	3540	0
1467	0		
Ramp D Ahead =		4120	0
Ramp D Ahead = 1213	0		
Ramp C Back = 116	0		
Ramp D Back = 1097	0	2890	14
602	8		
		1283	131
322	86		
		483	277
200	214		

MEDINA COUNTY
MED-42-21.94

SEEDING	
END WIDTH	SQ. YDS.
55	
	428
116	
	1740
198	

Sta 49+45 See S.R. 303 Cross Sections Sheet No. 138



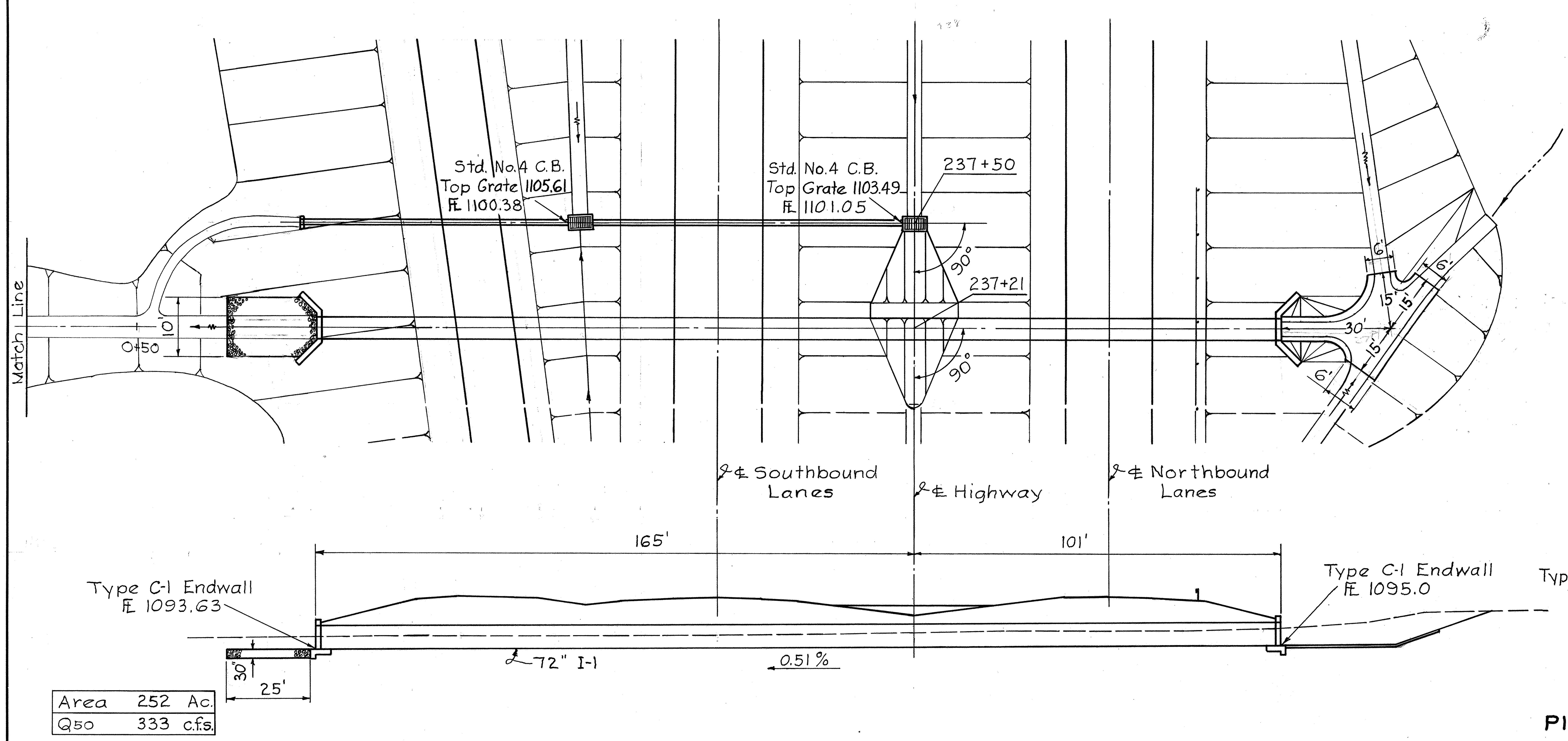
End Station 49+45
See S.R. 303 Cross Sections
Sheet No. 138

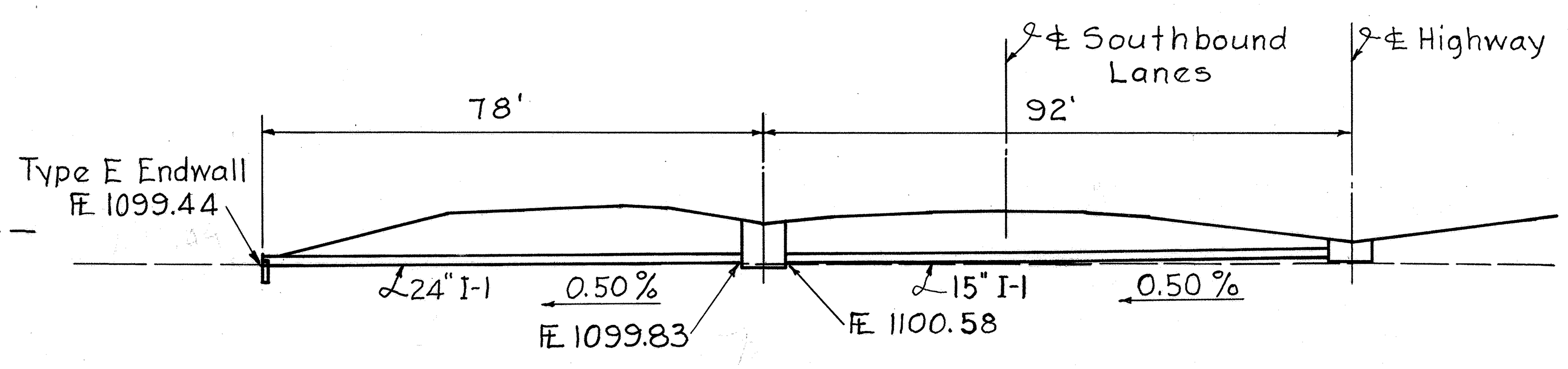
END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
256	68		
		466	202
304	174		
		1925	322
740	0		

MEDINA COUNTY
MED-42-21.94

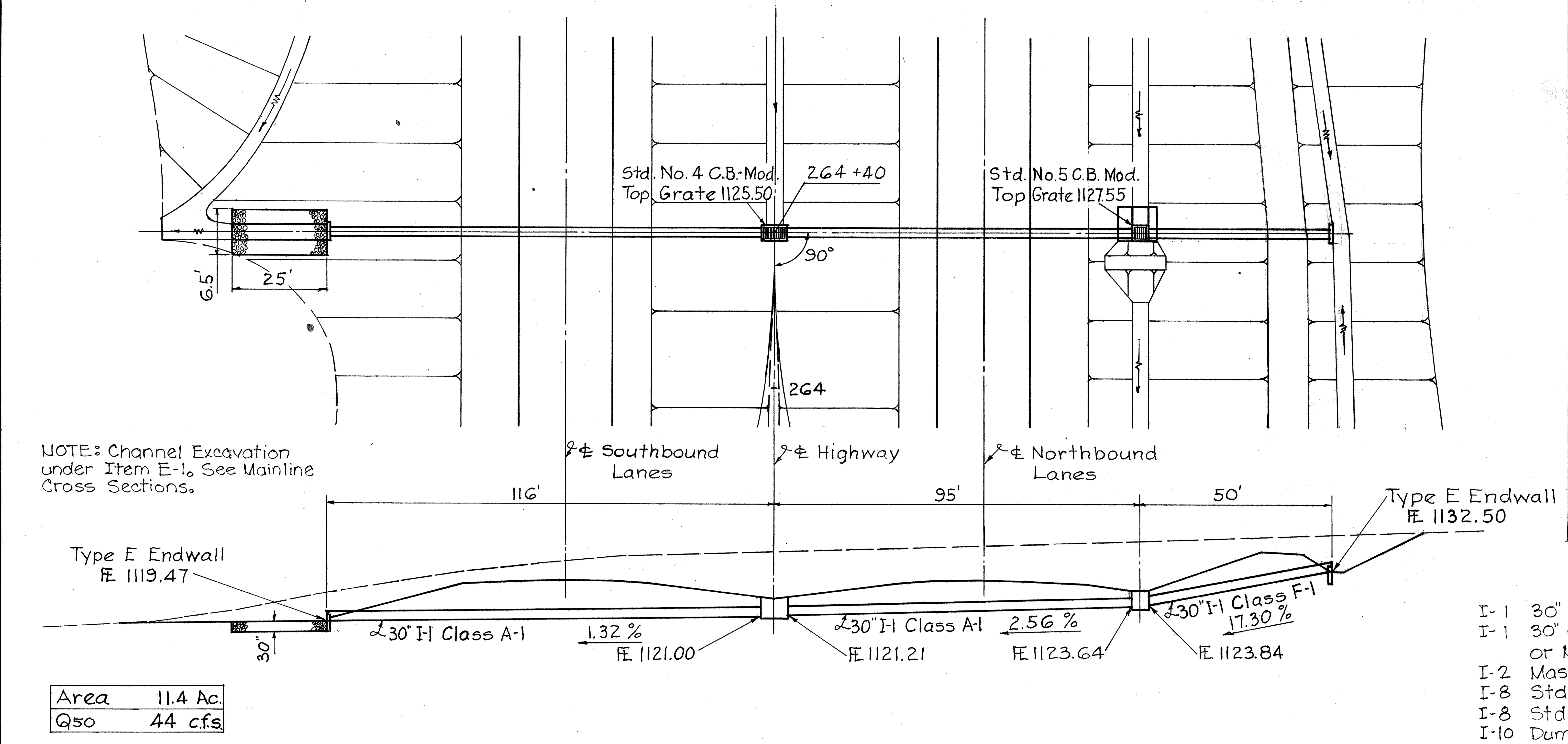
ESTIMATED QUANTITIES

I-1	72" Class A-1 Pipe Sec. M-6.6(a)	266	L.F.
I-1	15" Class A-1 Pipe Sec. M-6.6(a) or M-6.8(b)	92	L.F.
I-2	Masonry	33.79	C.Y.
I-8	Std. No.4 Catch Basin	2	Ea.
I-10	Dumped Rock Channel Protection	37	C.Y.
L-10	Sodding	27	S.Y.
I-1	24" Class A-1 Pipe Sec. M-6.6(a) or M-6.8(b)	78	L.F.
I-10	Riprap	80	S.Y.
E-3	Channel Excavation	2266	C.Y.

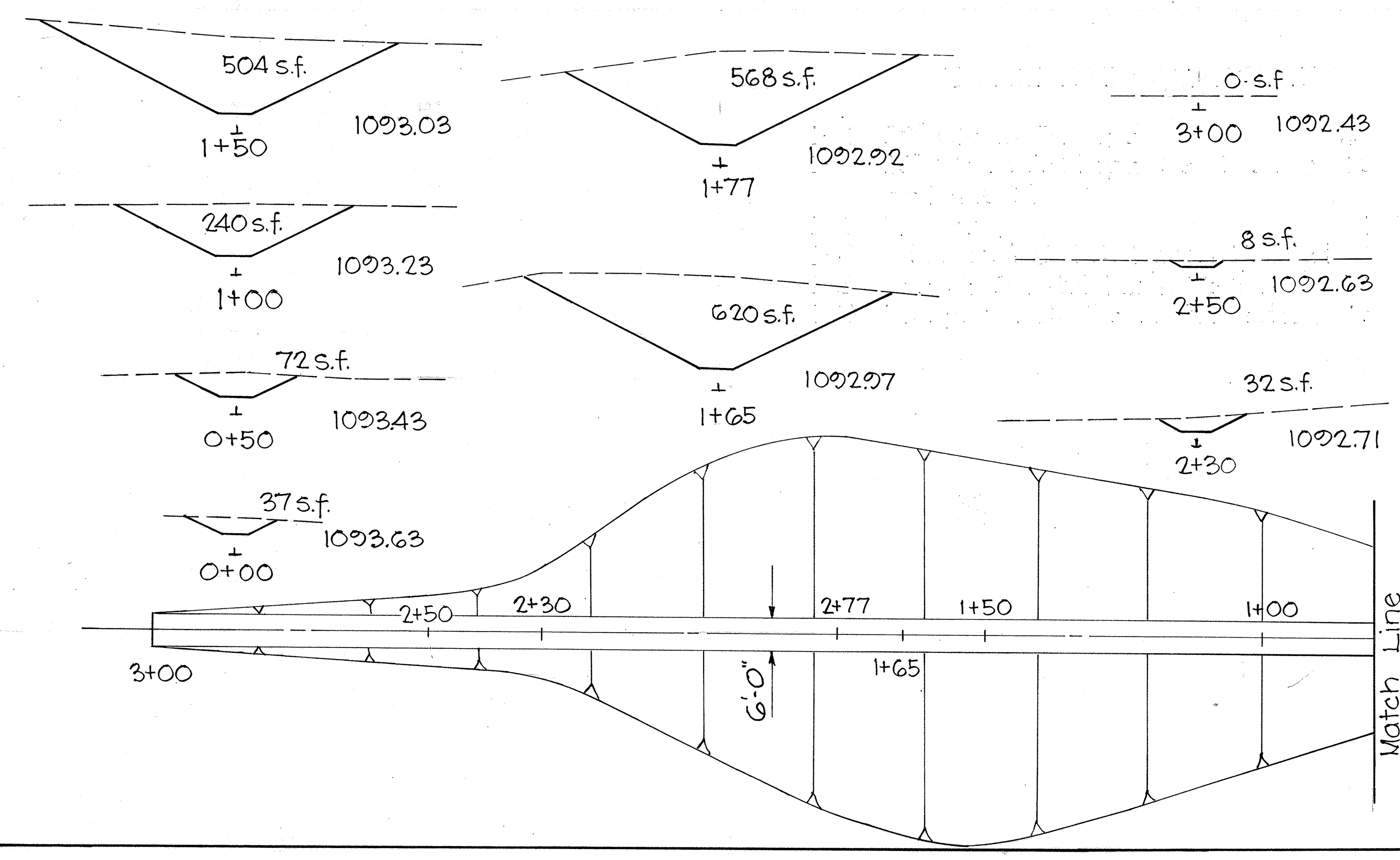




PIPE CULVERT AT STA. 237+21 & STORM SEWER AT STA. 237+50
Scale: 1"=20'



NOTE: Channel Excavation under Item E-1. See Mainline Cross Sections.



ESTIMATED QUANTITIES

I-1	30" Class F-1 Pipe	48	L.F.
I-1	30" Class A-1 Pipe Sec. M-6.6(a) or M-6.8(b)	210	L.F.
I-2	Masonry	1.02	C.Y.
I-8	Std. No.4 Catch Basin-Modified	1	Ea.
I-8	Std. No.5 Catch Basin-Modified	1	Ea.
I-10	Dumped Rock Channel Protection	13	C.Y.

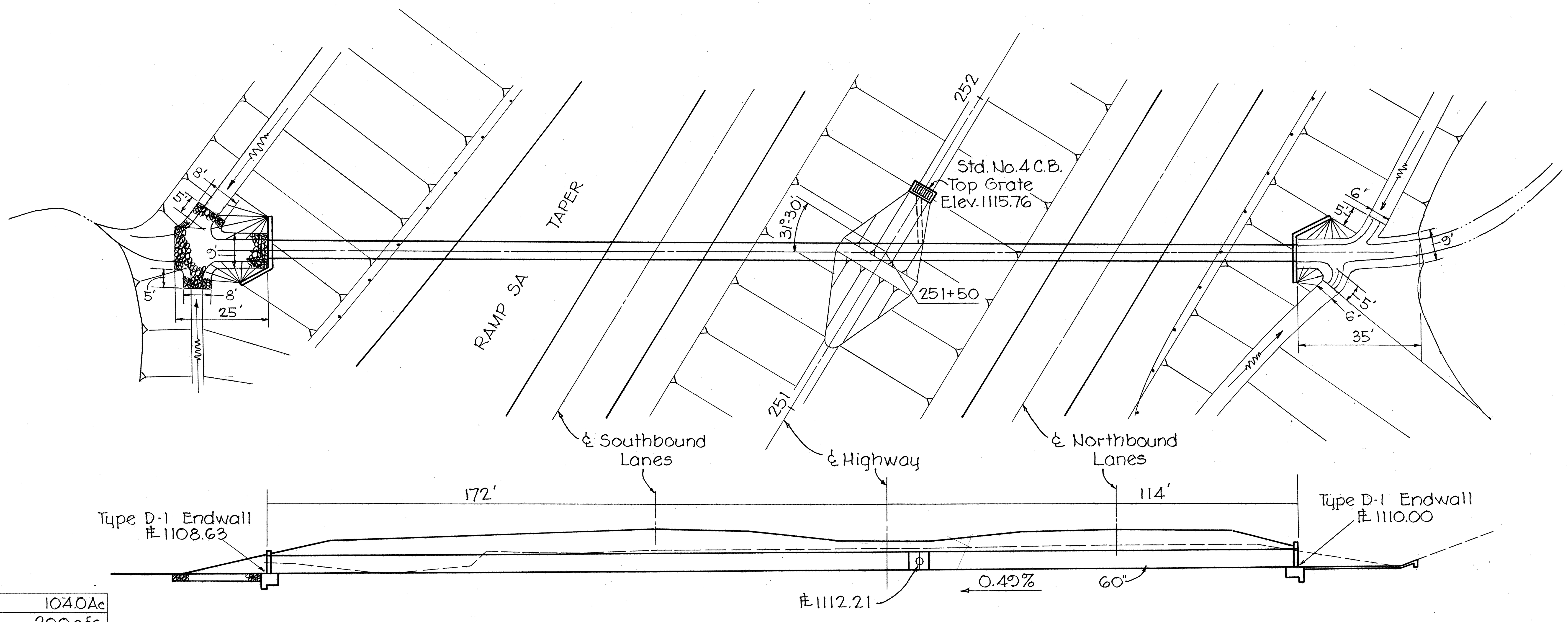
PIPE CULVERT AT STA. 264+40
Scale: 1"=20'

PIPE DETAILS 237+21, 237+50 & 264+40

MEDINA COUNTY
MED-42-21.94

ESTIMATED QUANTITIES

I-1	60" Class A-1 Pipe Sec. M-6.6(a)	286 L.F.
I-2	Masonry	24.54 C.Y.
I-5	60"×15" Tee Pipe Special	1 Each
I-10	Dumped Rock Channel Protection	29 C.Y.
I-10	Rip-Rap (Reinforced Concrete)	39 S.Y.
L-10	Sodding	22 S.Y.

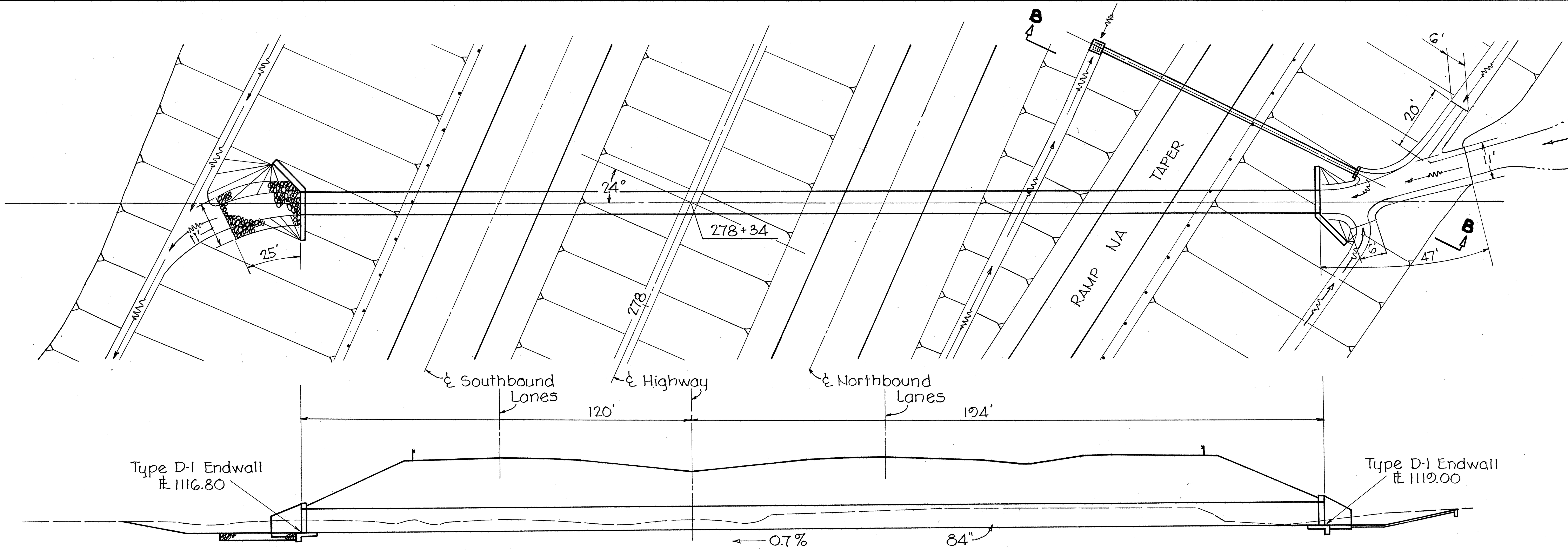


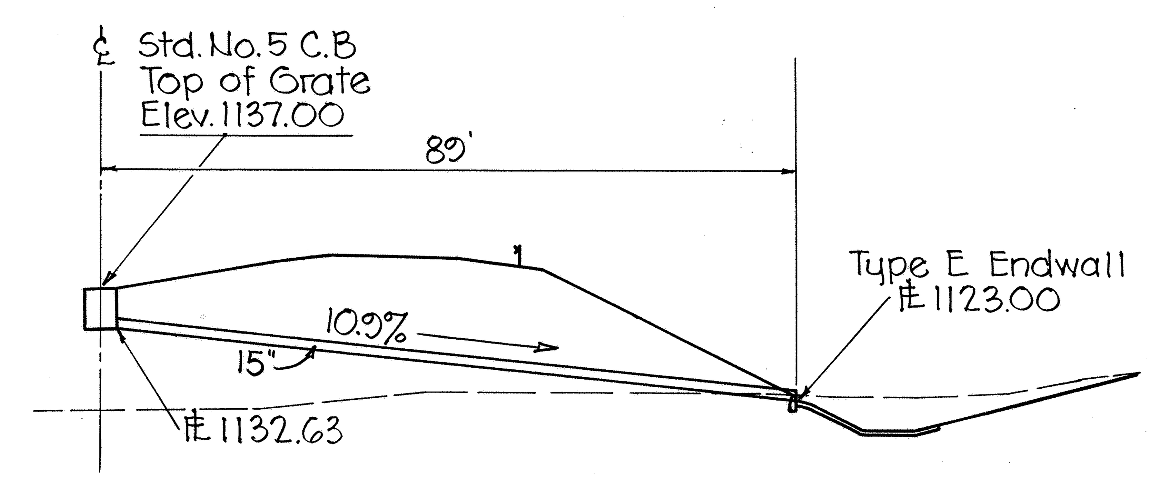
Area	104.0 Ac
Q_{50}	200 c.f.s.

PIPE CULVERT AT STA. 251+50
Scale: 1" = 20'

ESTIMATED QUANTITIES

I-1	15" Class A-1 Pipe Sec. M-6.6(b) M-6.8(b)	88 L.F.
I-1	84" Class A-1 Pipe Sec. M-106.6(c)	314 L.F.
I-2	Masonry	46.92 C.Y.
I-10	Dumped Rock Channel Protection	25 C.Y.
I-10	Rip-Rap (Reinforced Concrete)	79 S.Y.
L-10	Sodding	33 S.Y.
I-8	Std. No. 5 Catch Basin	1-Each

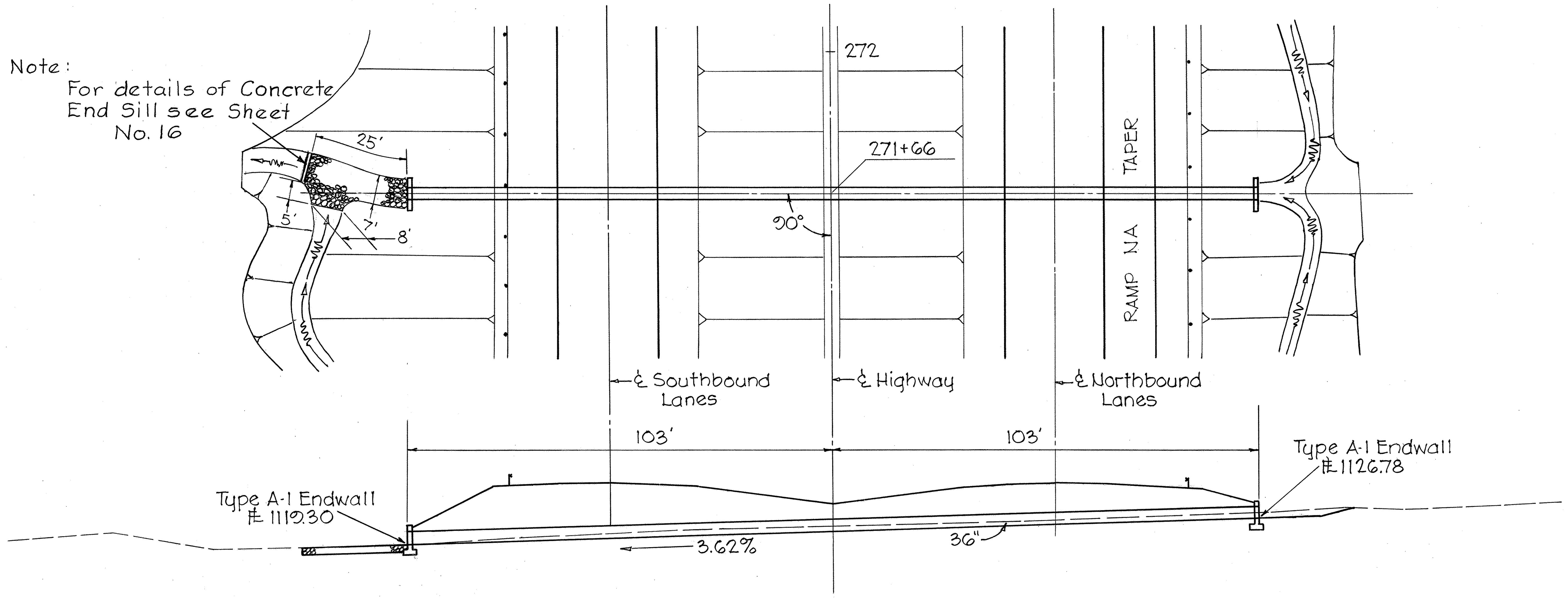




ELEVATION B-B

Area	460.0 Ac
Q_{50}	515 c.f.s.

PIPE CULVERT AT STA. 278+34
Scale: 1" = 20'



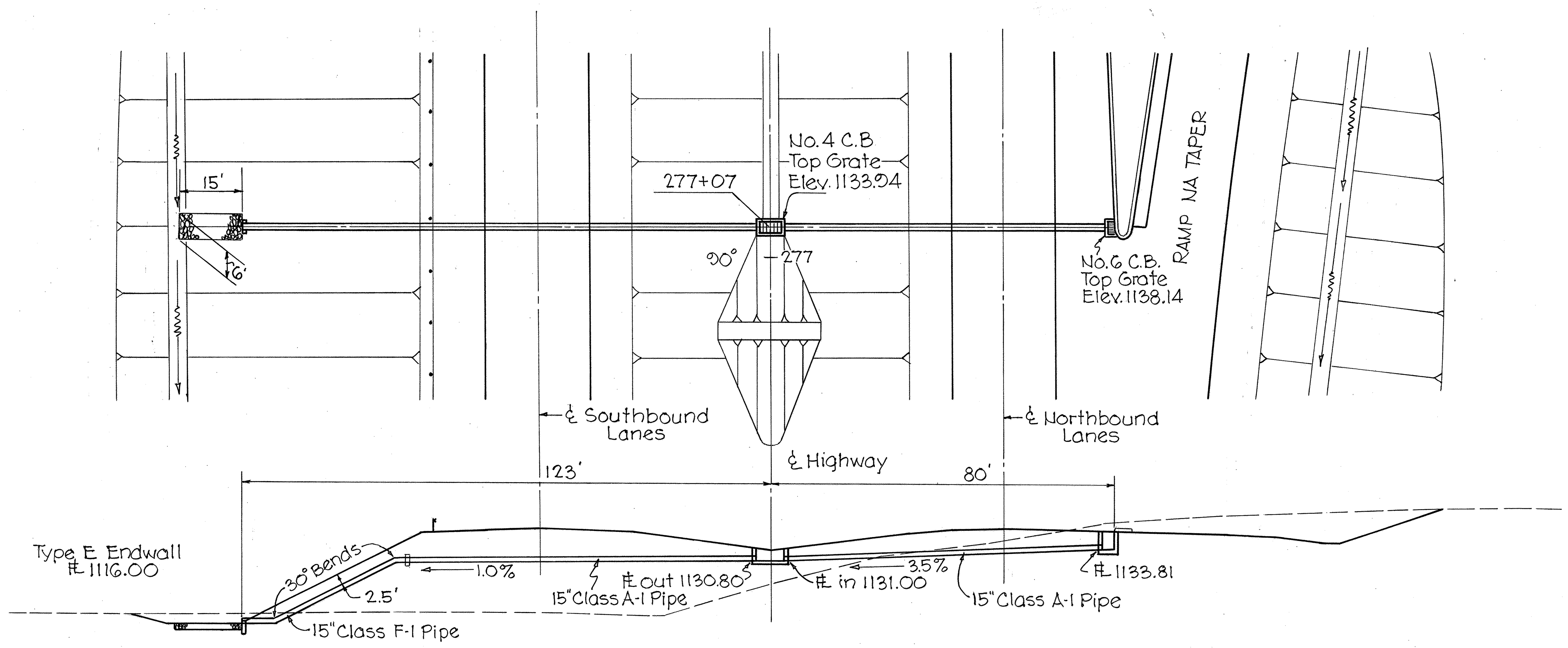
Area	19.3 Ac.
Q_{50}	64 c.f.s.

ESTIMATED QUANTITIES

I-1	36" Class A-1 Pipe Sec. M-6.4 (d) M-6.6 (b)	206 L.F.
I-2	Masonry	16 C.Y.
I-10	Dumped Rock Channel Protection	14 C.Y.
L-10	Sodding	18 S.Y.

PIPE CULVERT AT STA. 271+66

Scale: 1" = 20'



ESTIMATED QUANTITIES

I-1	15" Class A-1 Pipe M-6.6 (a) M-6.8 (b)	158 L.F.
I-1	15" Class F-1 Pipe	42 L.F.
I-2	Masonry	.26 C.Y.
I-5	15" Pipe Special	2-Each
I-8	Std. No. 4 Catch Basin	1-Each
I-8	Std. No. 6 Catch Basin	1-Each
I-10	Dumped Rock Channel Protection	5 C.Y.
L-10	Sodding	3 S.Y.

STORM SEWER AT STA. 277+07

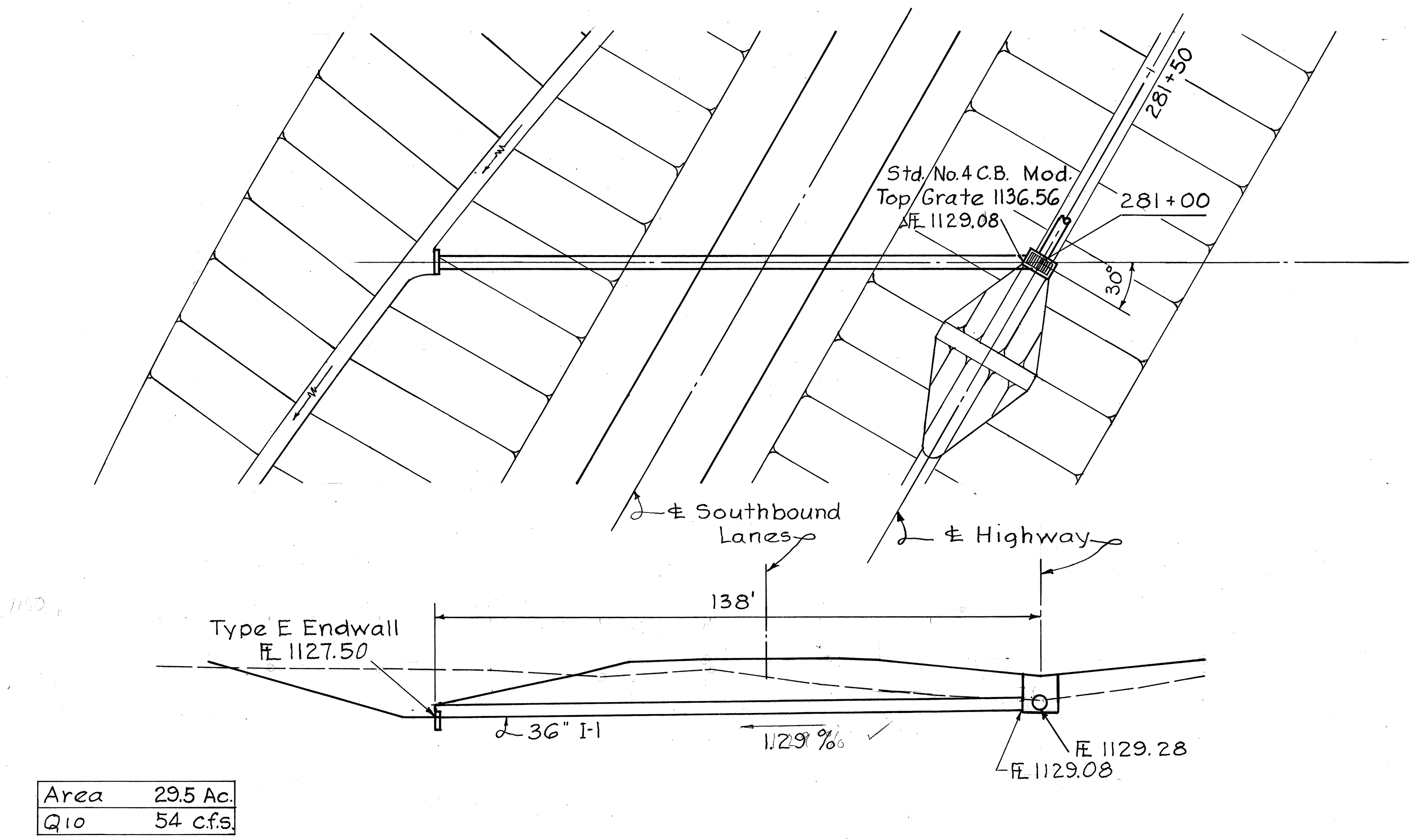
Scale: 1" = 20'

PIPE DETAILS STA. 271+66 & 277+07

MEDINA COUNTY
MED-42-21.94

ESTIMATED QUANTITIES

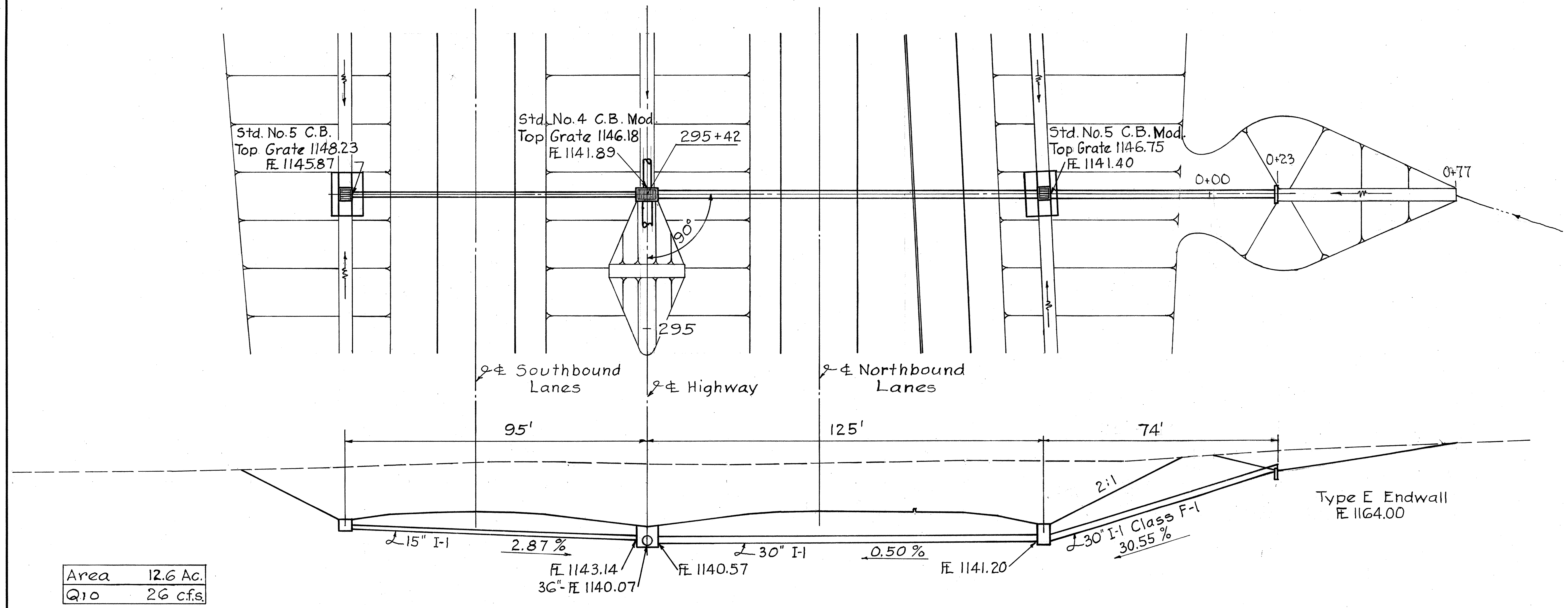
I-1	36" Class A-1 Pipe Sec. M-6.6(b)	138	L.F.
I-2	Masonry	0.59	C.Y.
I-8	Std. No. 4 Catch Basin-Modified	1	Ea.
L-10	Sodding	2	S.Y.

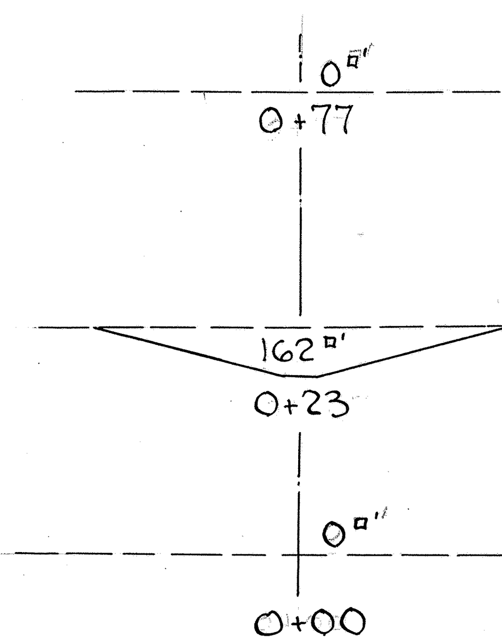


STORM SEWER AT STA. 281+00
Scale: 1"=20'

ESTIMATED QUANTITIES

I-1	30" Class A-1 Pipe Sec. M-6.6(a) or M-6.8(b)	124	L.F.
I-1	30" Class F-1 Pipe	76	L.F.
I-1	15" Class A-1 Pipe Sec. M-6.6(a) or M-6.8(b)	94	L.F.
I-2	Masonry	.51	C.Y.
I-8	Std. No. 4 Catch Basin-Modified	1	Ea.
I-8	Std. No. 5 Catch Basin-Modified	1	Ea.
I-8	Std. No. 5 Catch Basin	1	Ea.
L-10	Sodding	3	S.Y.
E-3	Channel Excavation	116	C.Y.





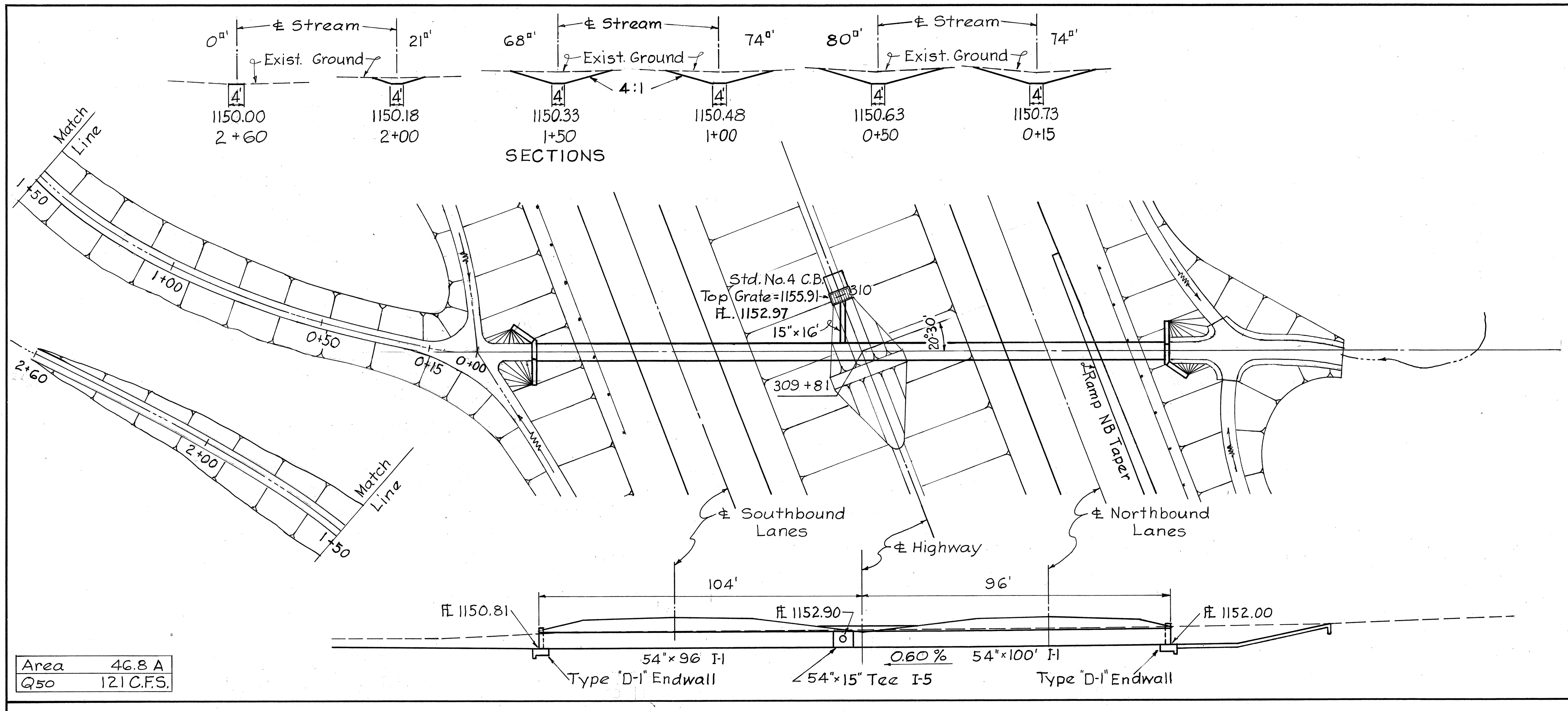
STORM SEWER AT STA. 295+42
Scale: 1"=20'

STORM SEWERS AT STA. 281+00 & STA. 295+42

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

211
293

MEDINA COUNTY
MED-42-21.94



ESTIMATED QUANTITIES

I-1	54" Class A-1 Pipe Sec. M-6.6(a)	200 L.F.
I-1	15" Class A-1 Pipe Sec. M-6.6(a)	8 L.F.
I-5	54"×15" Tee - Pipe Special	1 Ea.
I-2	Masonry	20.98 C.Y.
I-8	Nº 4 Catch Basin	1 Ea.
L-10	Sodding	20 S.Y.
I-10	Riprap (Reinforced Concrete)	79 S.Y.
E-3	Channel Excavation	480 C.Y.

PIPE CULVERT AT STA. 309+81
Scale: 1"=20'

ESTIMATED QUANTITIES

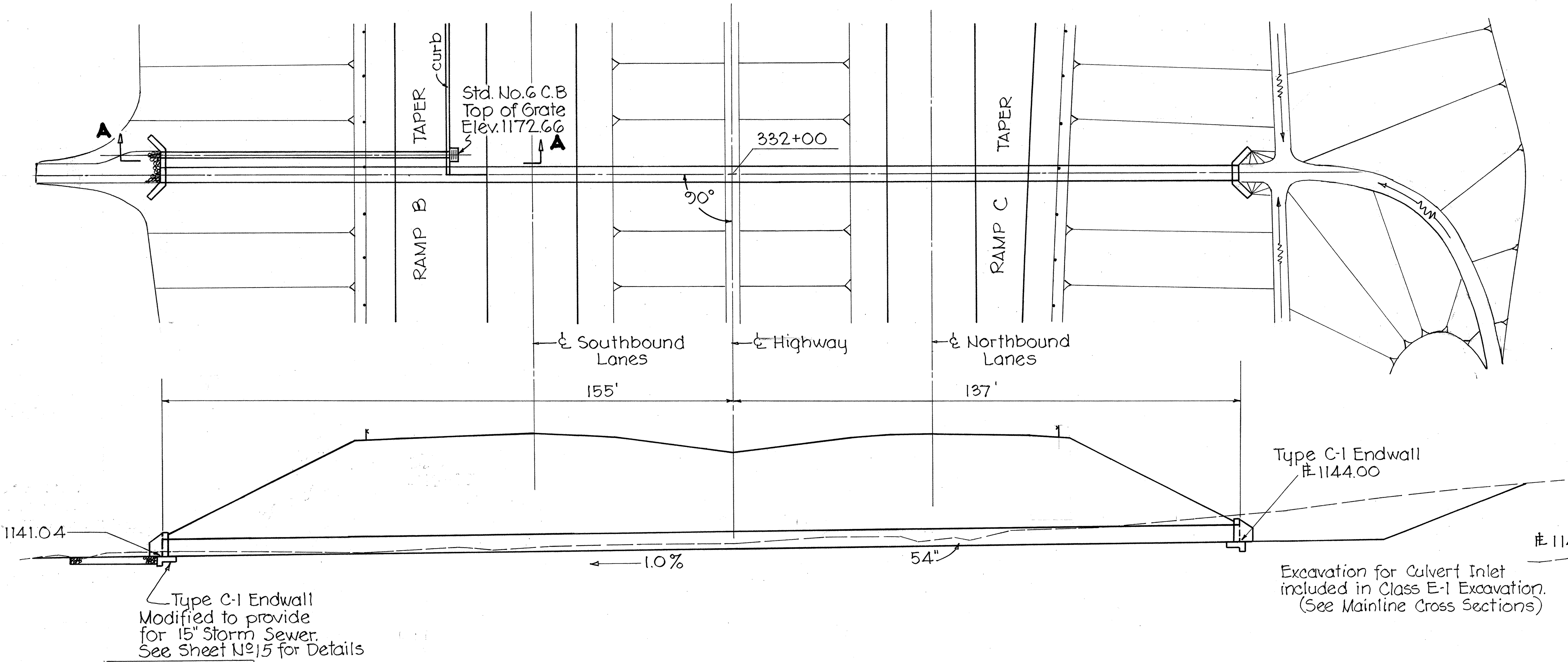
I-1	72" Class A-1 Pipe Sec. M-6.4(g)(10-10) gage or M-6.6(c)	230 L.F.
I-2	Masonry	35.42 C.Y.
I-10	Dumped Rock Channel Protection	23 C.Y.
L-10	Sodding	26 S.Y.
E-3	Channel Excavation	57 C.Y.

PIPE CULVERT AT STA. 319+07
Scale: 1"=20'

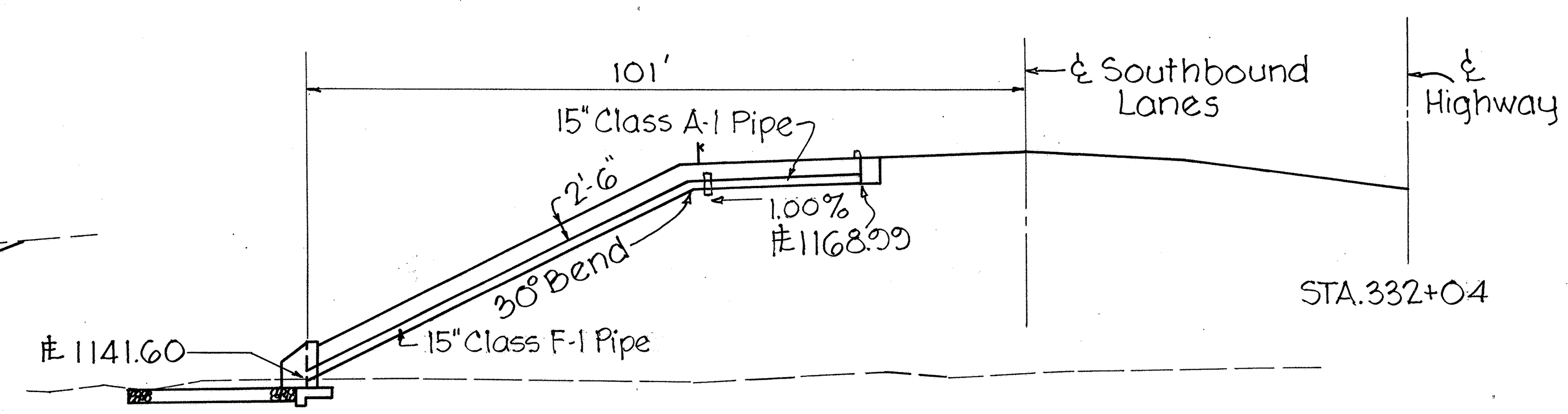
PIPE CULVERT Sta. 309+81 & 319+07

ESTIMATED QUANTITIES

I-1	15" Class A-1 Pipe Sec. M-6.6(a) M-6.8(b)	24 L.F.
I-1	54" Class A-1 Pipe Sec. M-6.6(d)	292 L.F.
I-2	Masonry	24.00 C.Y.
I-8	Std. No. 6 Catch Basin	1 Each
I-10	Dumped Rock Channel Protection	17 C.Y.
L-10	Sodding	20 S.Y.
I-1	15" Class F-1 Pipe	64 L.F.
E-3	Channel Excavation	5 C.Y.
I-5	15" Pipe Special	1 Each



Area	117 Ac.
Q50	204 c.f.s.

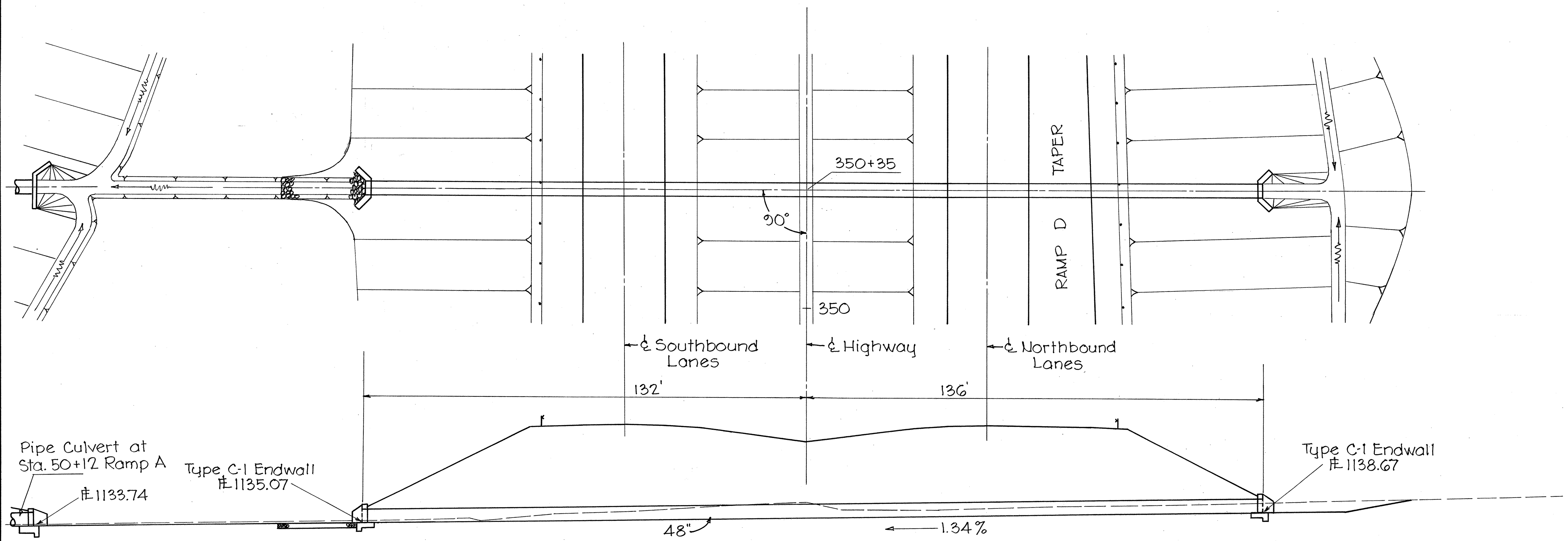


ELEVATION A-A

PIPE CULVERT AT STA. 332+00, STORM SEWER AT STA. 332+04
Scale: 1"=20'

ESTIMATED QUANTITIES

I-1	48" Class A-1 Pipe Sec. M-6.4(d) M-6.6(d)	268 L.F.
I-2	Masonry	17.00 C.Y.
I-10	Dumped Rock Channel Protection	15 C.Y.
L-10	Sodding	16 S.Y.



Area	56.2 Ac.
Q50	111 c.f.s.

PIPE CULVERT AT STA. 350+35
Scale: 1"=20'

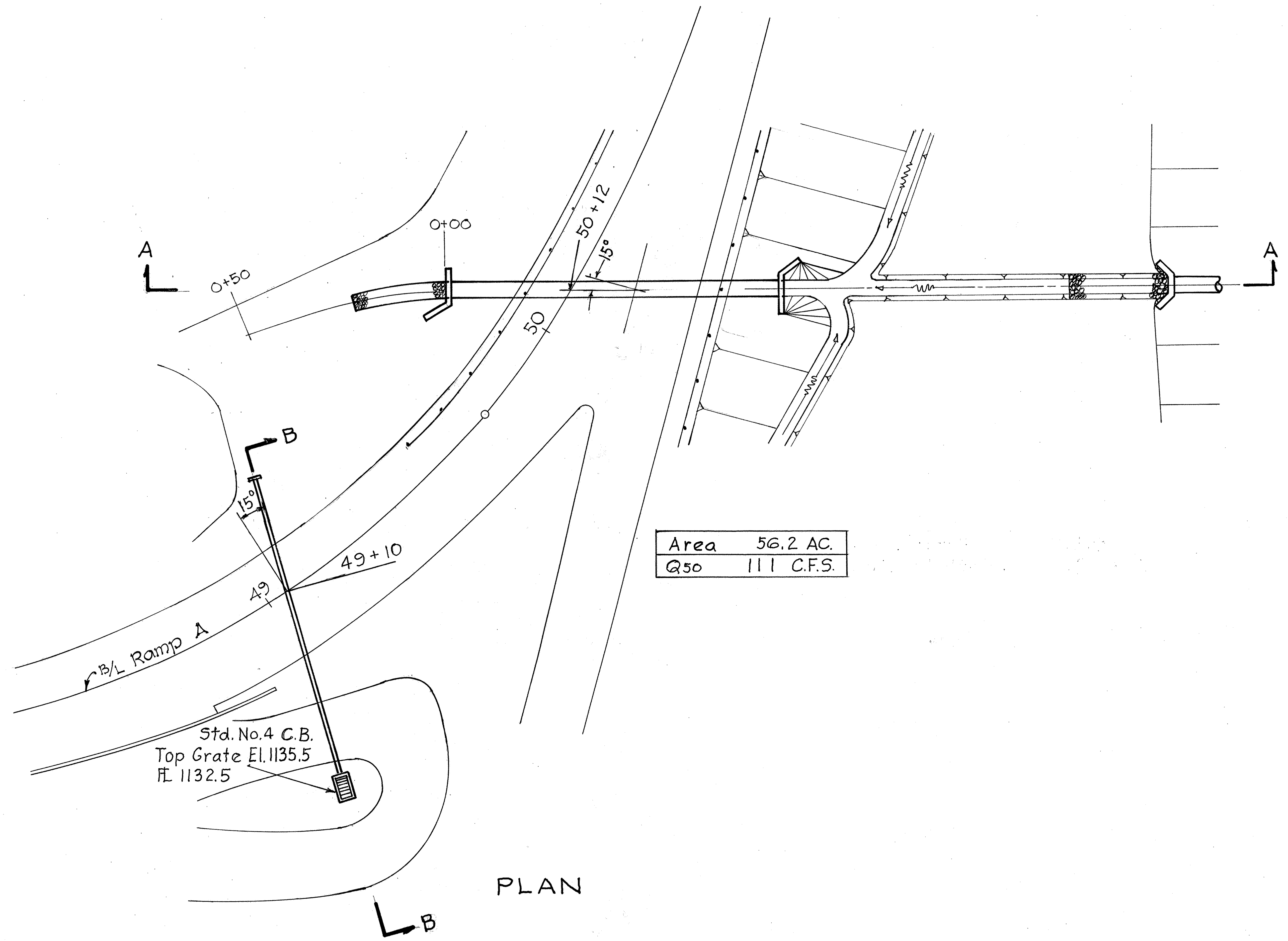
PIPE DETAILS STA. 332+00, 332+04 & 350+35

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

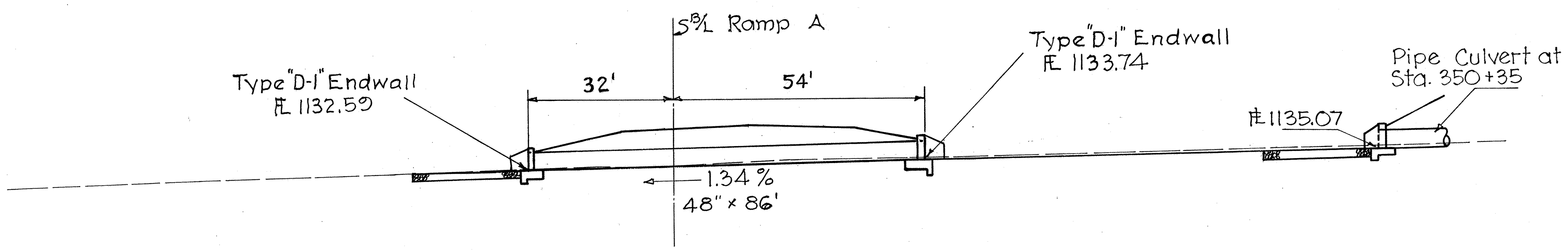
MEDINA COUNTY
MED. 42-21.94

ESTIMATED QUANTITIES

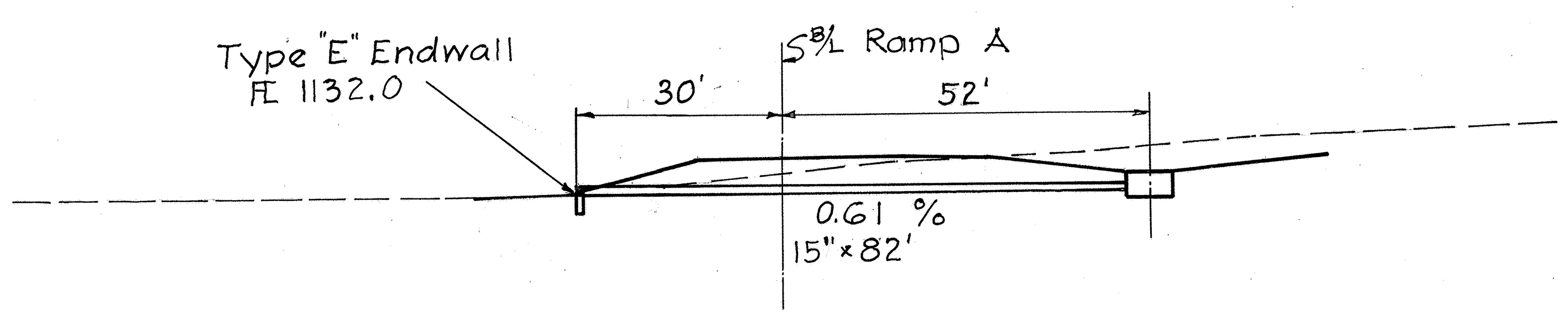
I- 1	48" Class A-1	86 L.F.
I- 1	15" Class A-1 Sec. MG.6(a) 6.8(b)	82 L.F.
I- 8	Std. No. 4 C.B.	1 Ea.
I- 2	Masonry	18.26 C.Y.
L-10	Sodding	25 S.Y.
I-10	Dumped Rock Channel Protection	10 C.Y.
E-3	Channel Excavation	8 C.Y.



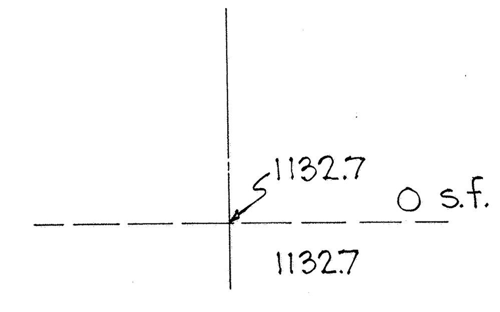
PLAN



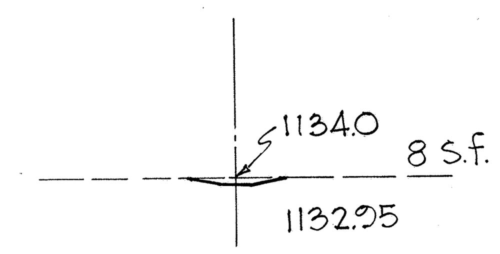
SECTION A-A



SECTION B-B

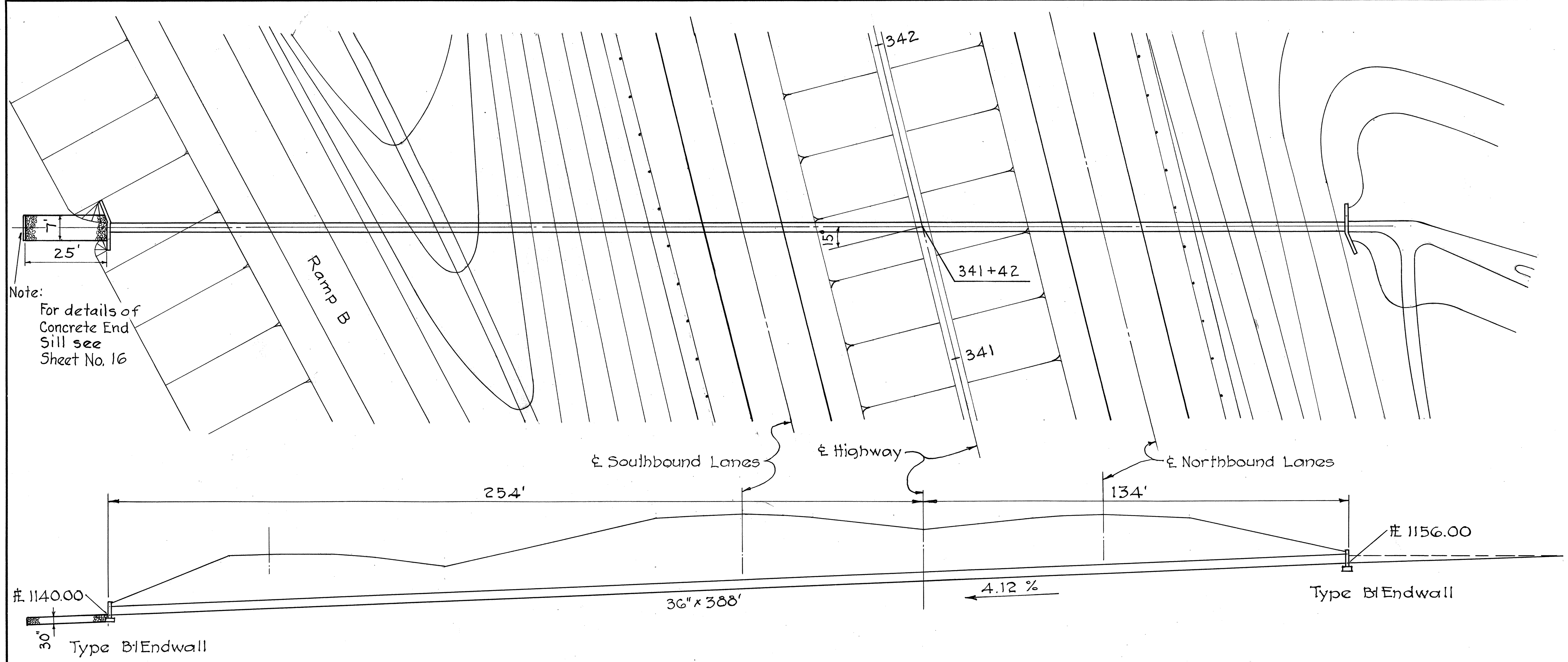


0+50



0+00

SR-303 INTERCHANGE
RAMP "A" GRADING AREA
Scale: 1" = 20'

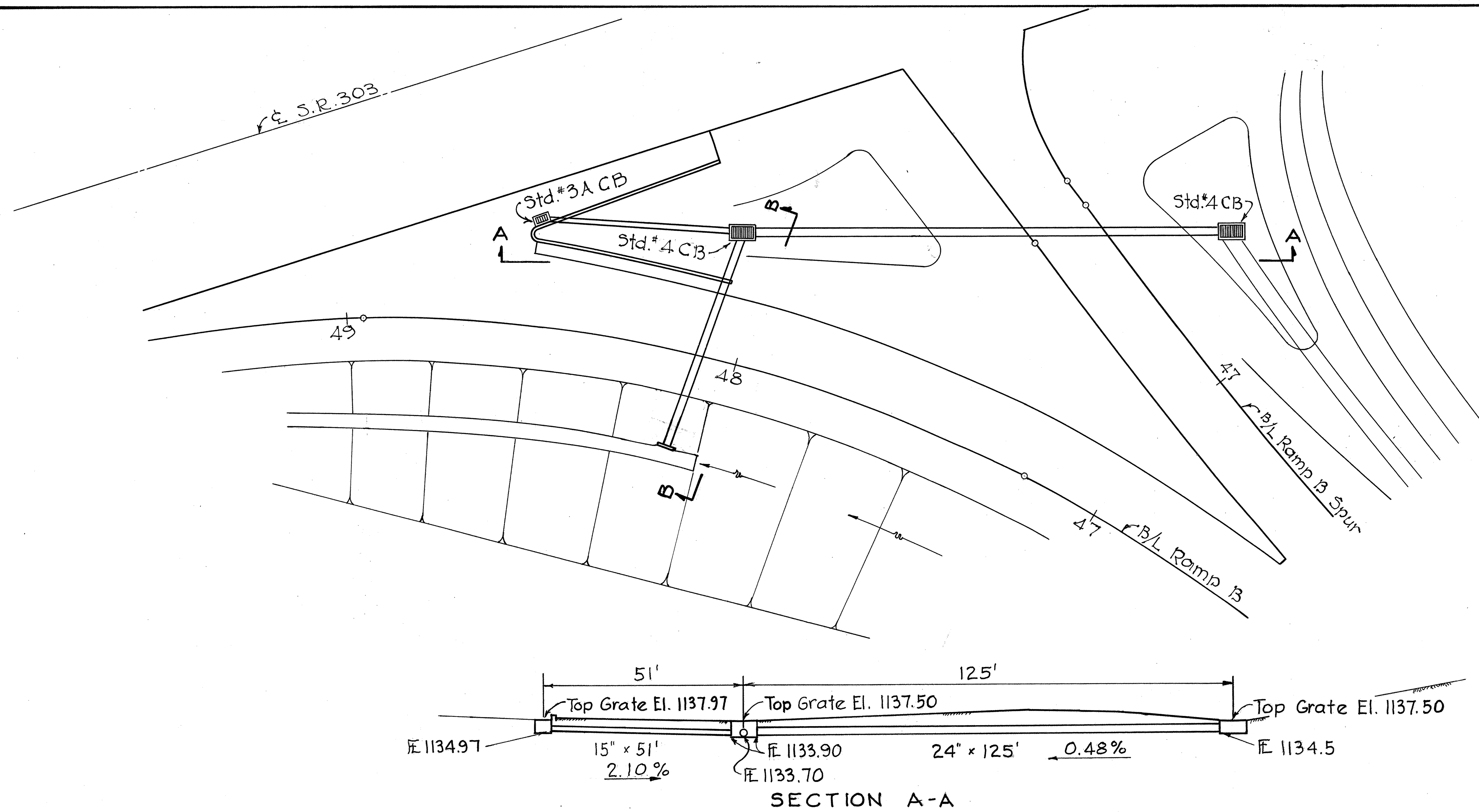


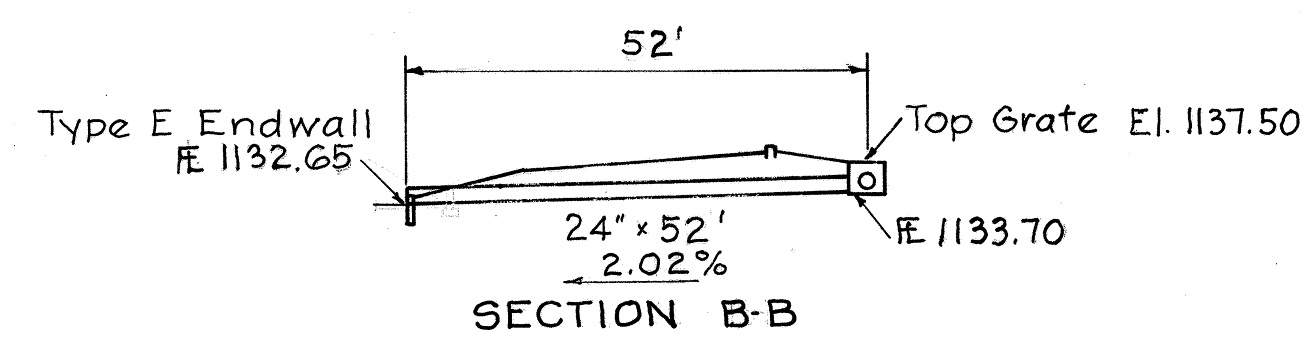
ESTIMATED QUANTITIES

I-1	36" Class A-1 Pipe Sec. M-6.4 (d) or M-6.6 (d)	388 L.F.
I-2	Masonry	9.38 C.Y.
L-10	Sodding	18 S.Y.
I-10	Dumped Rock Channel Protection	10 C.Y.

Area	16 Ac.
Q50	56 cfs

PIPE CULVERT AT STA. 341+42
Scale: 1" = 20'





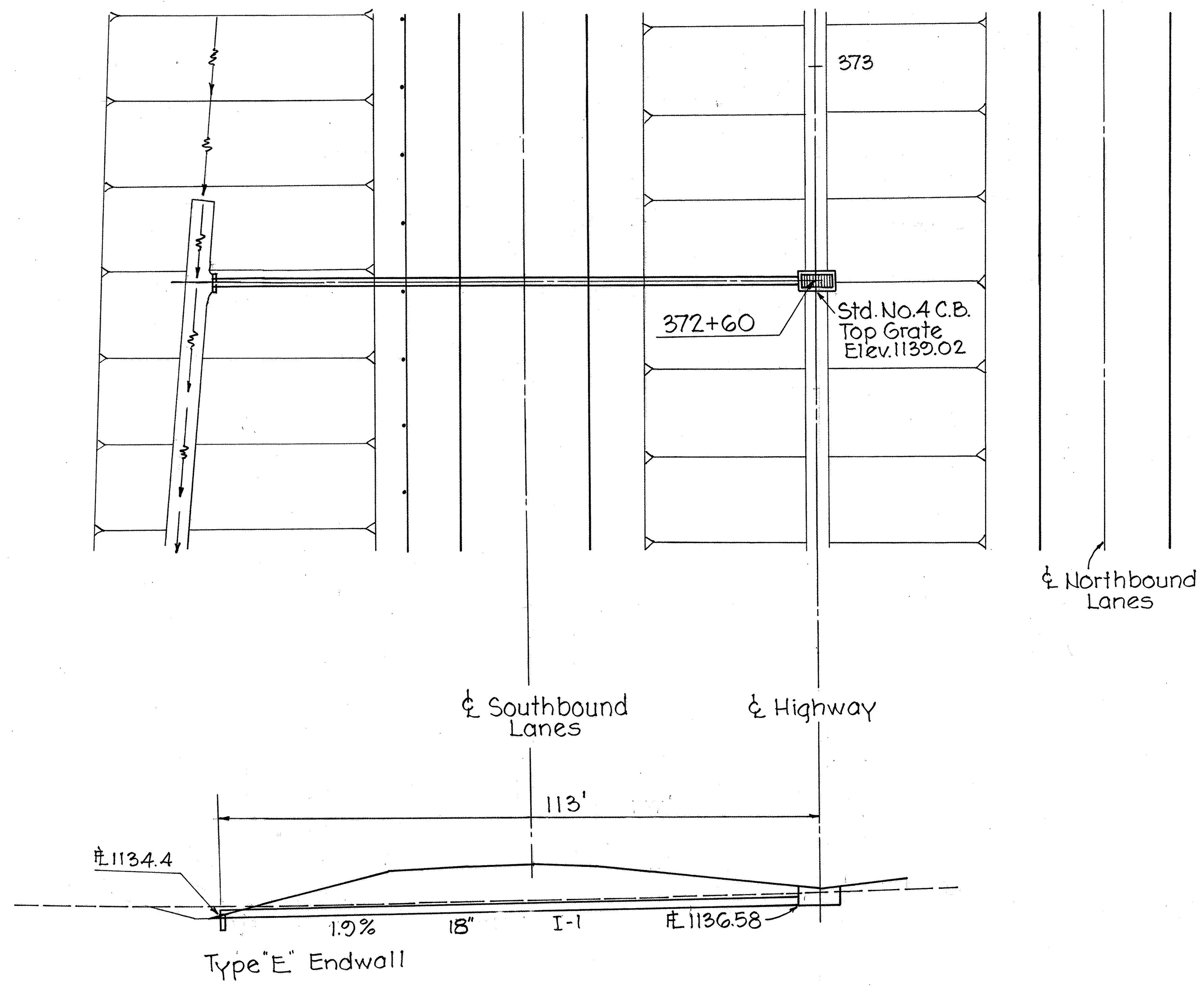
ESTIMATED QUANTITIES

I-1	15" Class E-1 Pipe	50 L.F.
I-1	24" Class A Pipe Sec. M-6.6(a) or M-6.8(b)	176 L.F.
I-2	Masonry	0.41 C.Y.
I-8	Std. No 3A Catch Basin	1 Ea.
I-8	Std. No 4 Catch Basin	2 Ea.
L-10	Sodding	7 S.Y.

SR-303 INTERCHANGE
RAMP B GRADING AREA
Scale: 1" = 20'

PIPE CULVERT AT Sta. 341+42 & RAMP B GRADING AREA

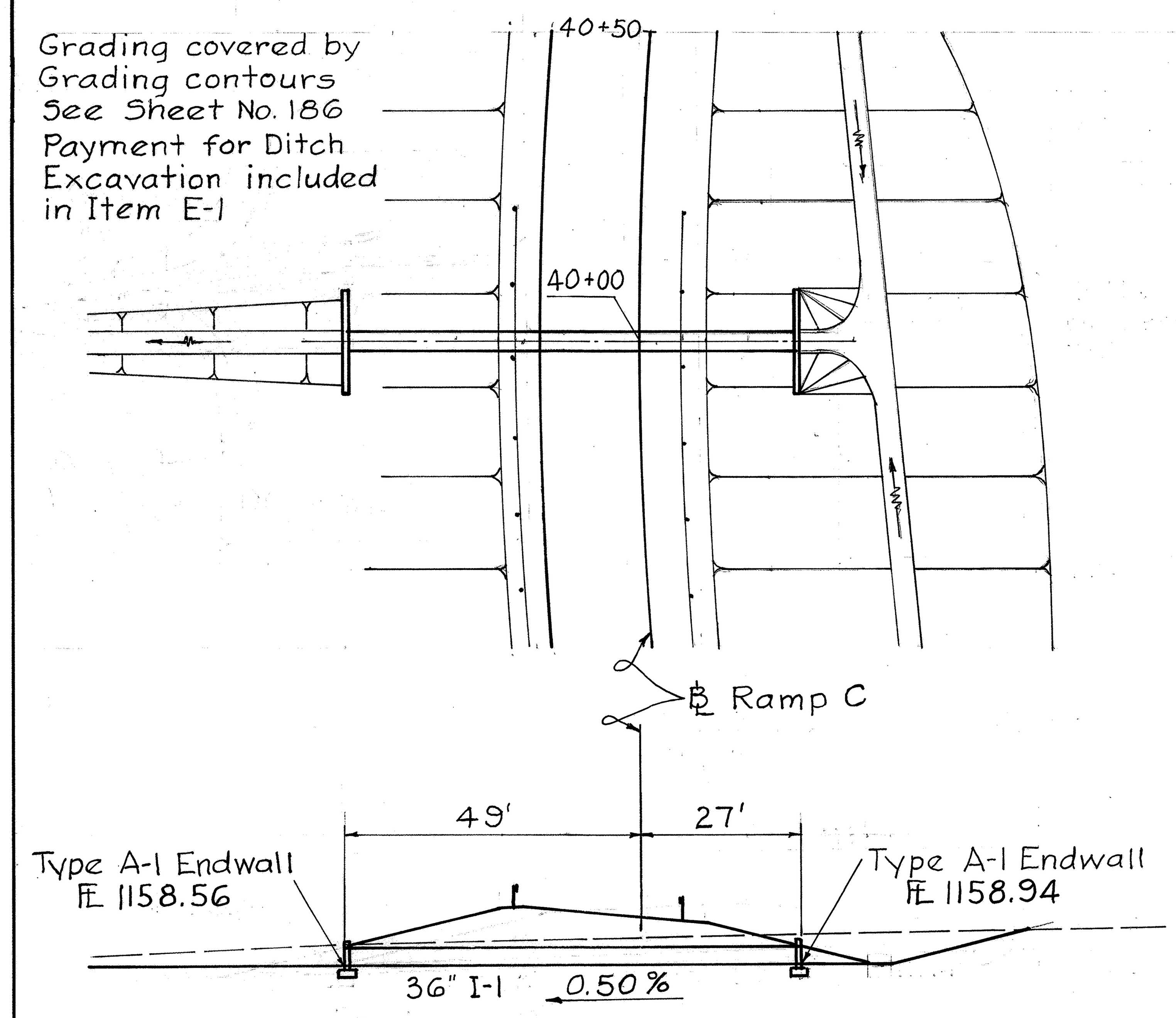
MEDINA COUNTY
MED-42-21.94



ESTIMATED QUANTITIES

I-1 18" Class A-1 Pipe Sec. M-6.6(a) M-6.8(b) 110 L.F.
I-2 Masonry 0.30 C.Y.
I-8 Standard No 4 Catch Basin 1-Each
L-10 Sodding 3 S.Y.

STORM SEWER AT STA. 372+60
Scale: 1" = 20'

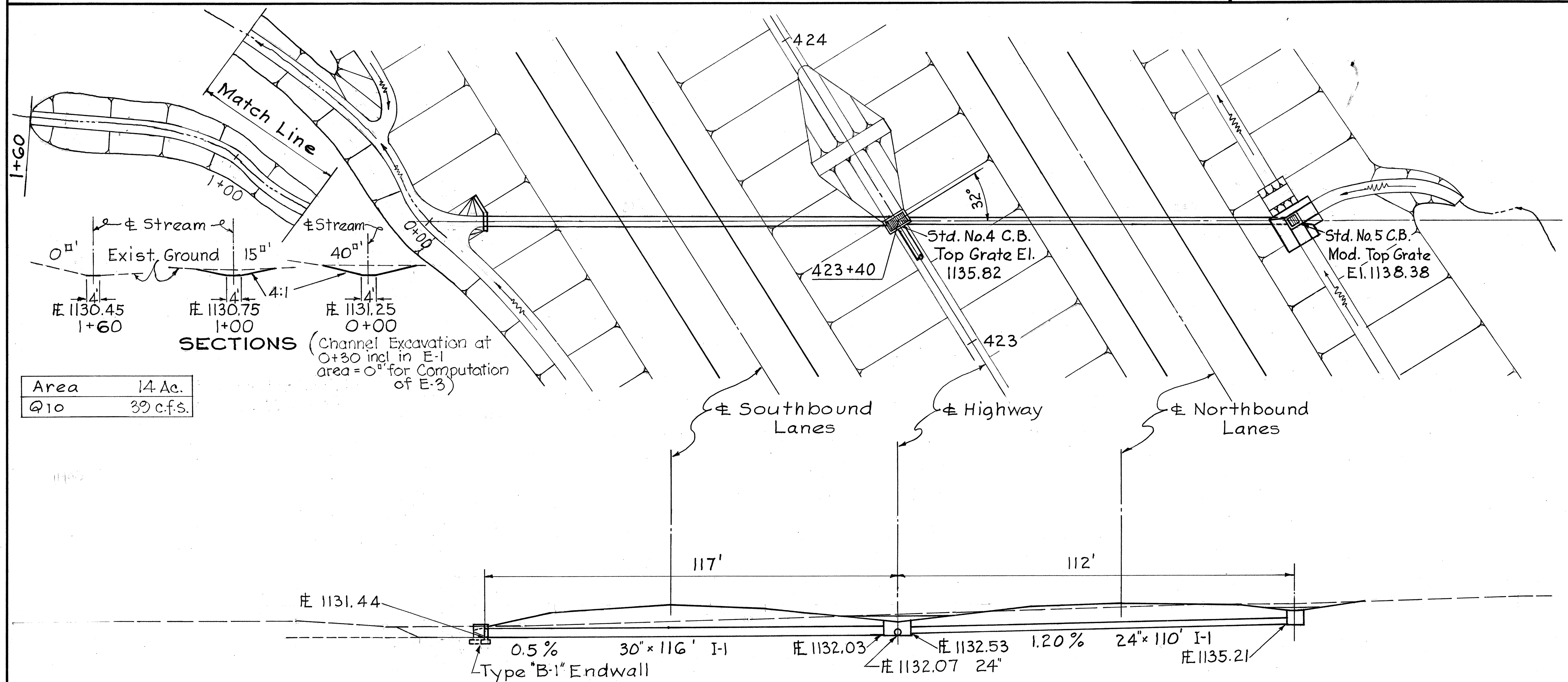


Area	12 Ac.
Q50	46 c.f.s.

ESTIMATED QUANTITIES

I-1	36" Class A-1 Pipe Sec. M6.6(a) or M6.8(b)	76	L.F.
I-2	Masonry	10.02	C.Y.
L-10	Sodding	19	S.Y.

SR-303 INTERCHANGE RAMP "C" STA. 40+00 PIPE CULVERT
Scale: 1" = 20'



Area	14 Ac.
Q10	39 c.f.s.

ESTIMATED QUANTITIES

I-1 24" Class A-1 Pipe Sec. M-6.6(b) M-6.8(b)	110	L.F.
I-1 30" Class A-1 Pipe Sec. M-6.6(b) M-6.8(b)	116	L.F.
I-2 Masonry	3.08	C.Y.
I-8 Std. No.4 Catch Basin Mod.	1	Ea.
I-8 Std. No.5 Catch Basin. Mod.	1	Ea.
L-10 Sodding	8	S.Y.
E-3 Channel Excavation	67	C.Y.

PIPE CULVERT AT STA. 423+40
Scale: 1" = 20'

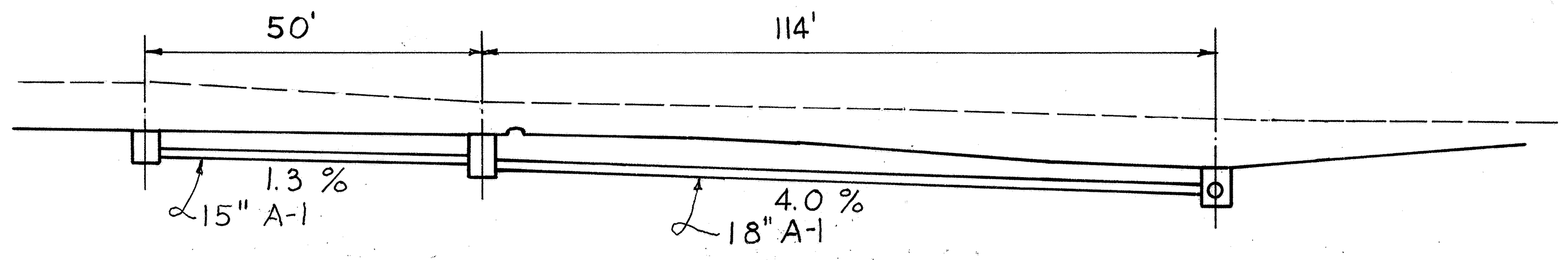
PIPE DETAILS STA. 372+60, 423+40 & 40+00 RAMP "C"

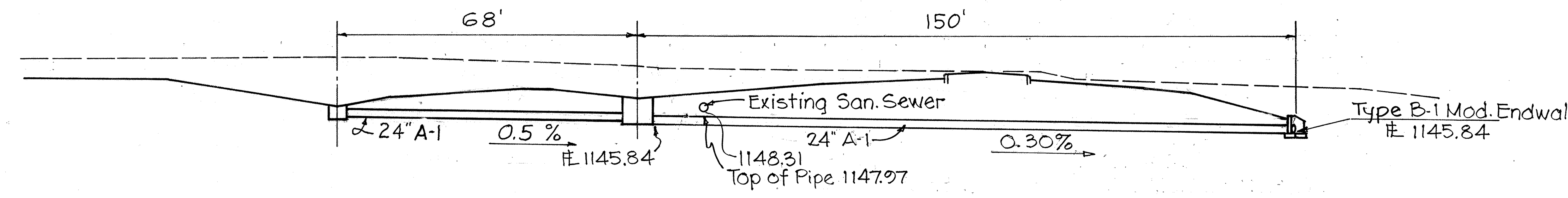
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

MEDINA COUNTY
MED-42-21.94

ESTIMATED QUANTITIES

I-1	30" Class A-1 Pipe Sec. M6.6(a) or M6.8(b)	232 L.F.
I-1	24" Class A-1 Pipe do.	218 L.F.
I-1	18" Class A-1 Pipe "	114 L.F.
I-1	15" Class A-1 Pipe "	50 L.F.
I-8	No. 4 Catch Basin	1 Ea.
I-8	No. 3A Catch Basin	2 Ea.
I-8	No. 5 Catch Basin	1 Ea.
I-2	Masonry	6.69 C.Y.
L-10	Sodding	17 S.Y.
I-10	Dumped Rock Channel Protection	18 C.Y.
E-3	Channel Excavation	944 C.Y.





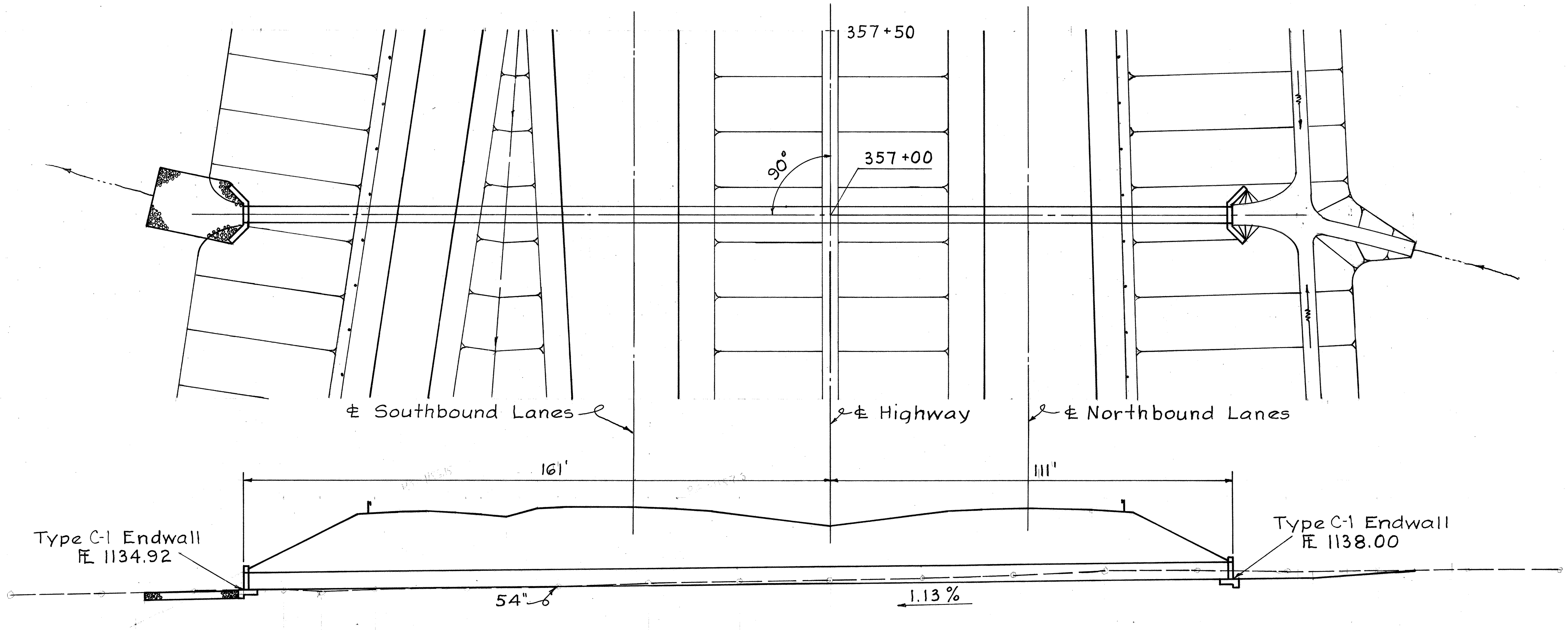
Area	19 Ac.
Q_{25}	44 c.f.s.

PIPE CULVERT SR-303 STA. 56+31, STORM SEWERS RAMP D STA. 46+70
Scale: 1" = 20'

MEDINA COUNTY
MED-42-21.94

ESTIMATED QUANTITIES

E-3	Channel Excavation	5	C.Y.
I-1	54" Class A-1 Pipe Sec. M-6.6(c)	272	L.F.
I-2	Masonry	20.66	C.Y.
I-10	Dumped Rock Channel Protection	20	C.Y.
L-10	Sodding	18	S.Y.

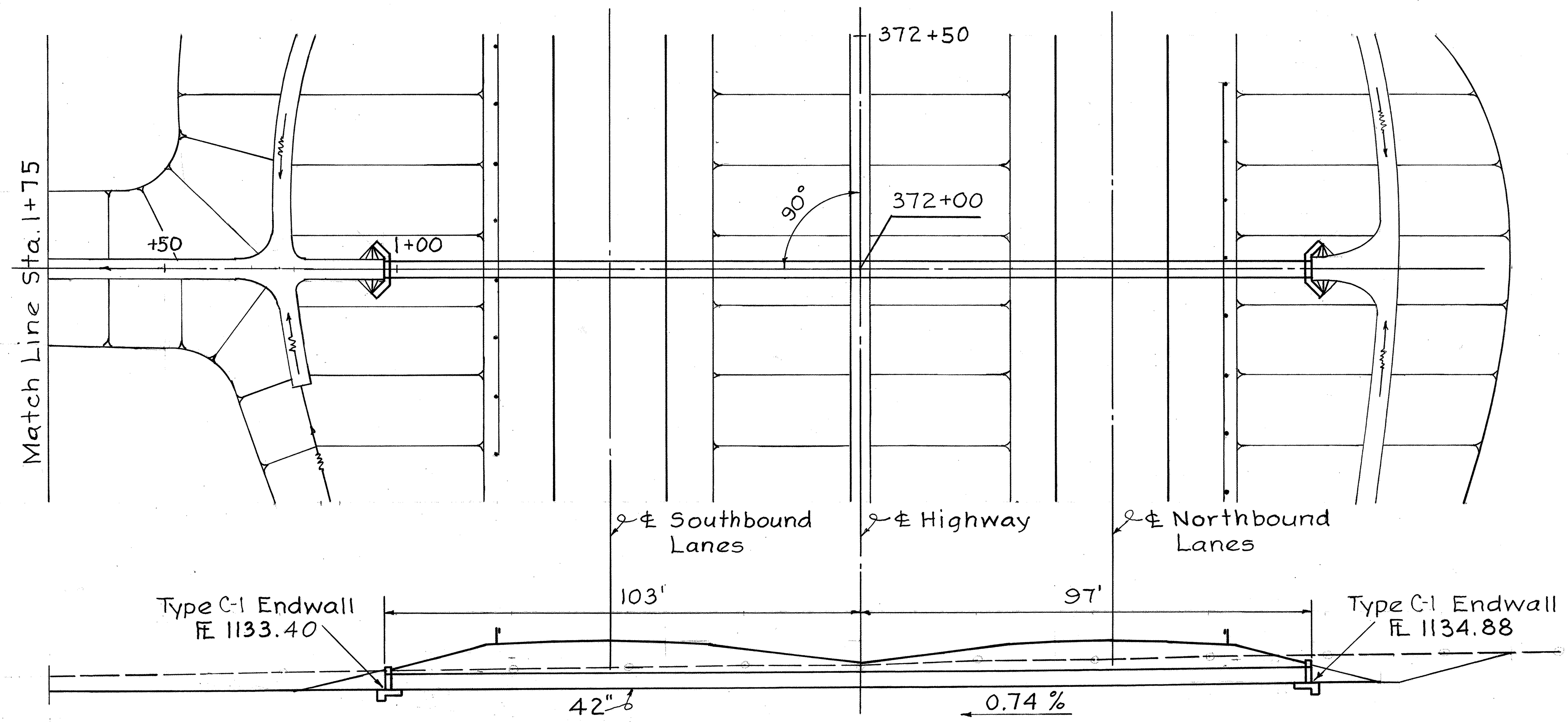


Area	87 Ac.
Q50	173 c.f.s.

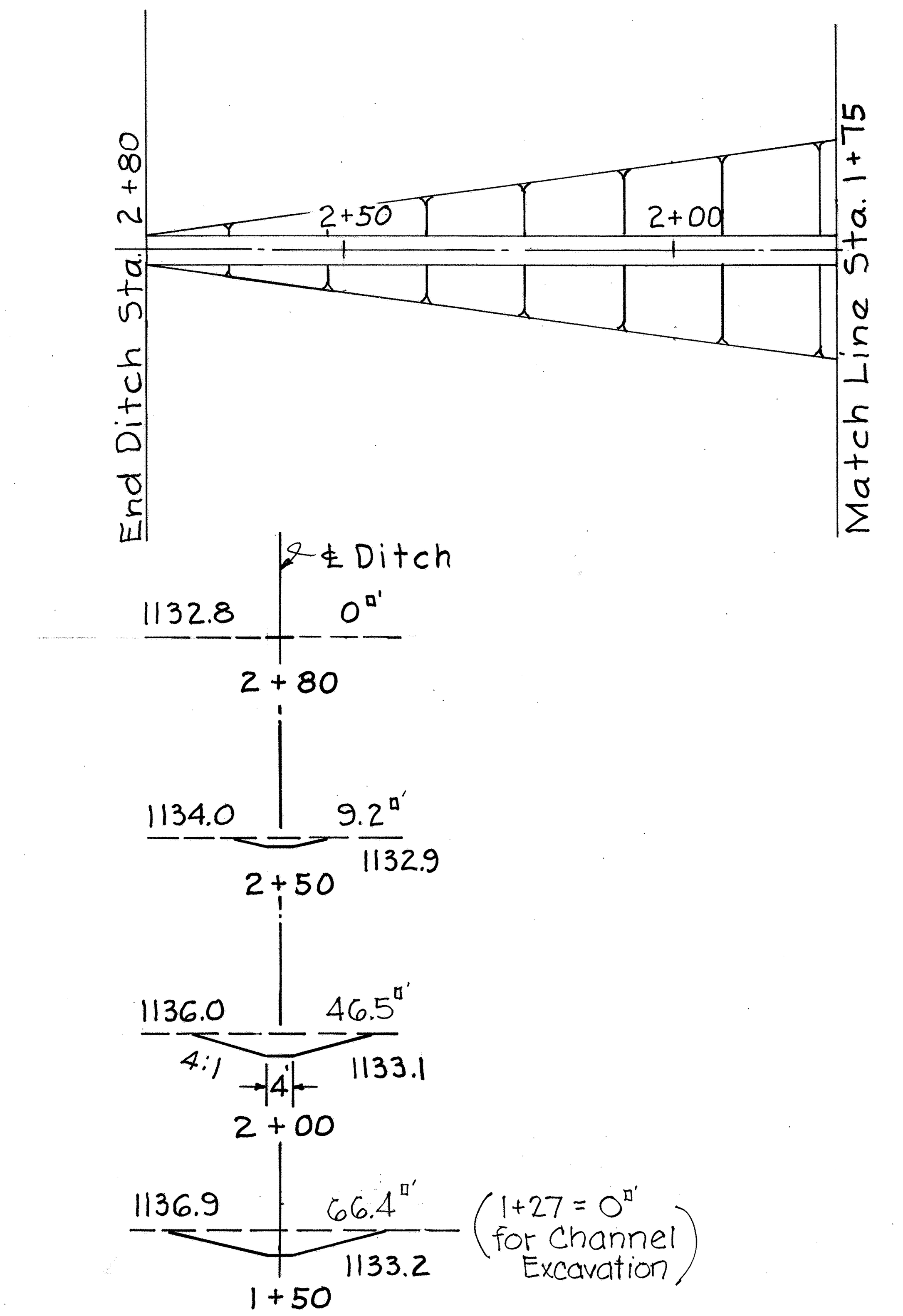
PIPE CULVERT AT STA. 357+00
Scale: 1"=20'

ESTIMATED QUANTITIES

E-3	Channel Excavation	190	C.Y.
I-1	42" Class A-1 Pipe Sec. M-6.6(a)	200	L.F.
I-2	Masonry	13.82	C.Y.
L-10	Sodding	14	S.Y.



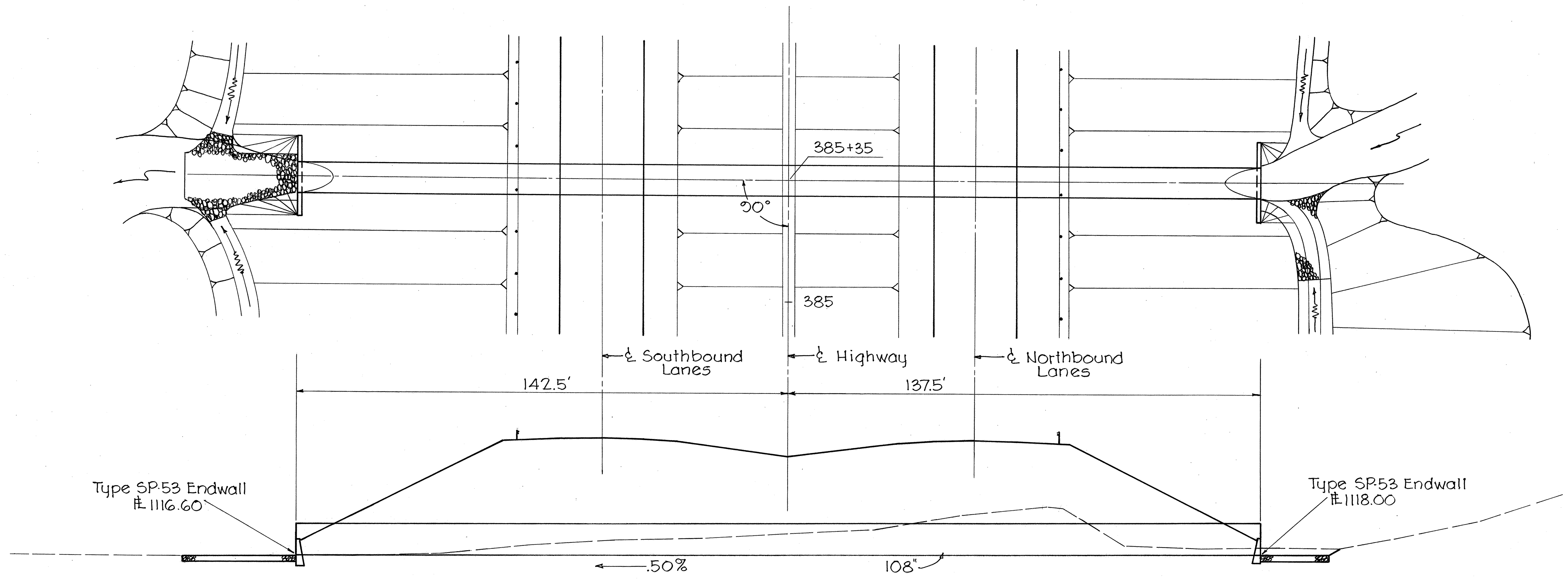
Area	31.6 Ac.
Q50	91 c.f.s.



CROSS SECTIONS

PIPE CULVERT AT STA. 372+00
Scale: 1"=20'

MEDINA COUNTY
MED-42-21.94

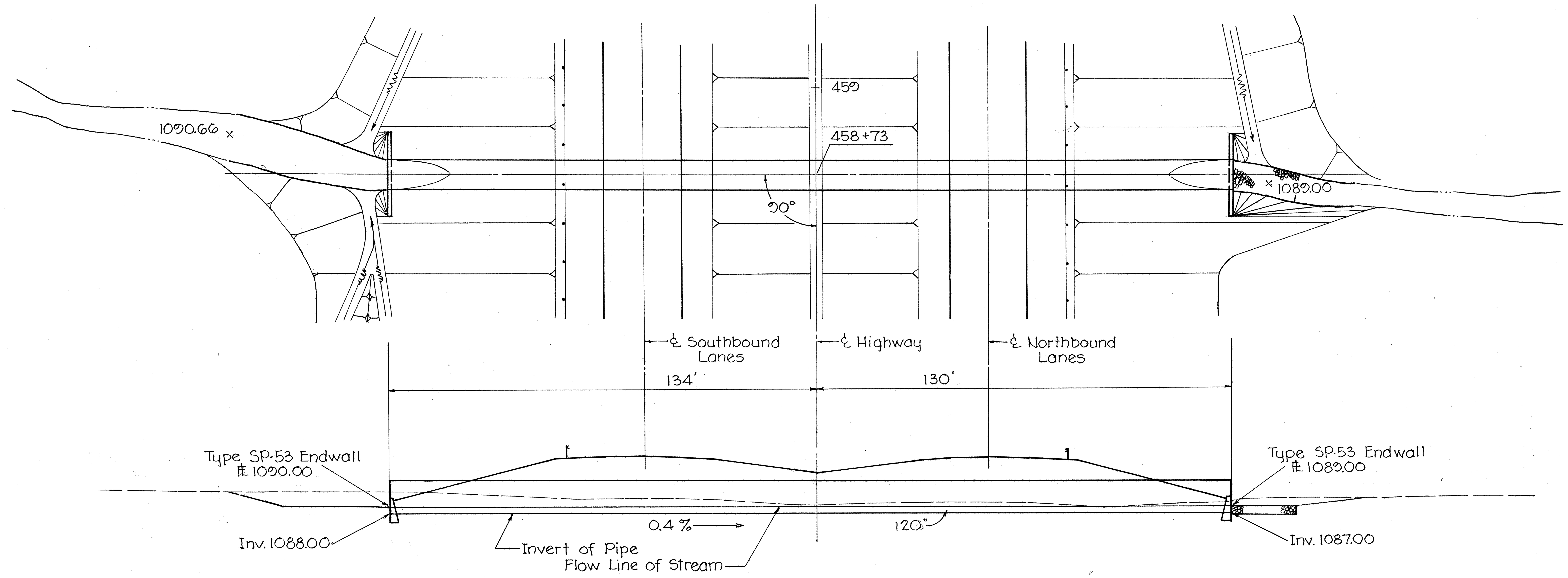


Area	1.75 Ac.
Q_{50}	800 c.f.s.

ESTIMATED QUANTITIES

I-1 108" Class A-1 Pipe Sec. M-106.6(d)	280 L.F.
I-2 Masonry	17.68 C.Y.
I-10 Dumped Rock Channel Protection	44 C.Y.
L-10 Sodding	38 S.Y.

PIPE CULVERT STA. 385+35
Scale: 1" = 20'



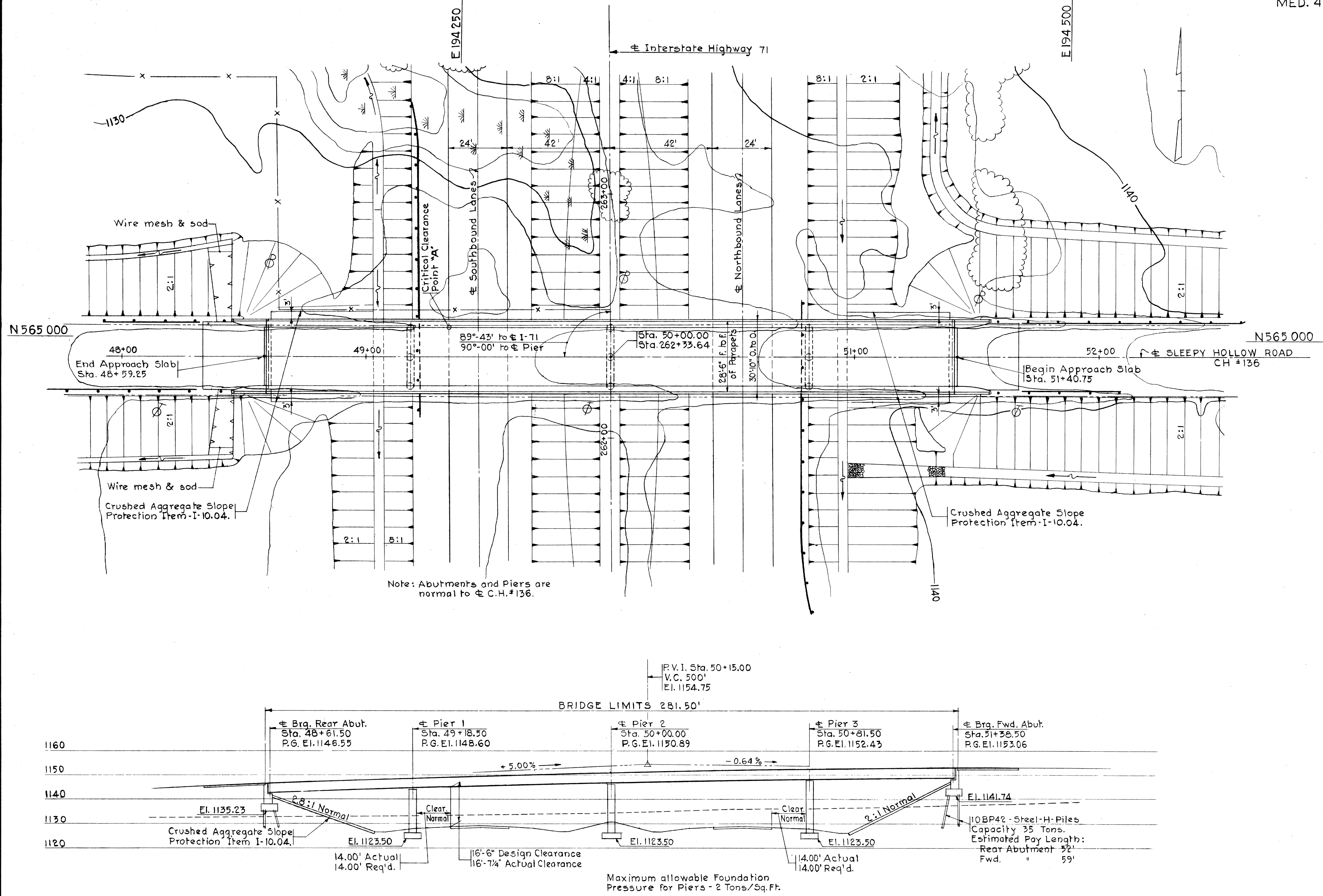
Area	915 Ac.
Q_{50}	808 c.f.s.

ESTIMATED QUANTITIES

I-1 120" Class A-1 Pipe Sec. M—6.6(b)	264 L.F.
I-2 Masonry	22.00 C.Y.
I-10 Dumped Rock Channel Protection	34 C.Y.
L-10 Sodding	38 S.Y.

PIPE CULVERT AT STA. 458+73
Scale: 1" = 20'

PIPE CULVERT STA. 385+35 & 458+73



PROPOSED STRUCTURE

Type: Continuous steel beams with reinforced concrete deck and substructure.
Spans: 57'-0", 81'-6", 81'-6", 57'-0".
Roadway: 24'-0" face to face of 2'-3" safety curbs.
Load Frequency: CF = 130 (57).
Skew: No skew.
Wearing Surface: 3/4" Monolithic concrete.
Approach Slabs: AS-1-54 (25' long)
Traffic Volume: 450, ADT-1975.

FOUNDATION SOUNDINGS: Foundation design and foundation quantities are based on a study of drive sample-core borings and drive rod penetration tests made at the site. This sounding information may be inspected in the office of the Bureau of Bridges in Columbus or in the Division Office, but the State does not guarantee the accuracy thereof.

J.E. GREINER CO.
CONSULTING ENGINEERS
BALTIMORE, MARYLAND

SITE PLAN

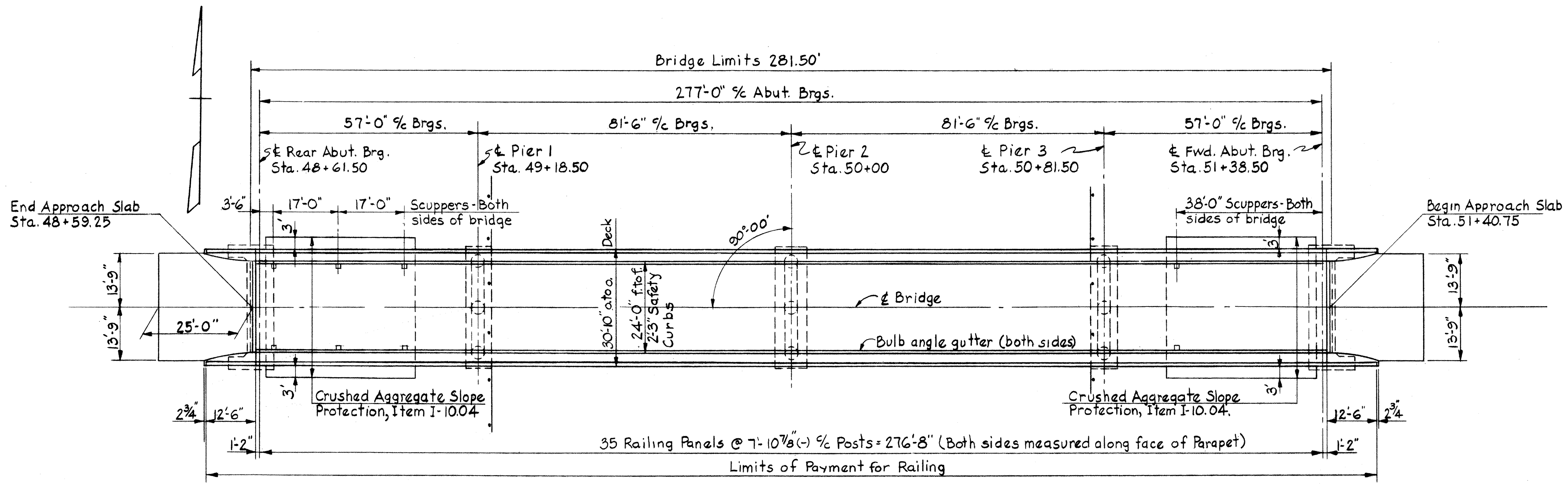
BRIDGE NO. MED.-42-2242
INTERSTATE HIGHWAY #71 UNDER
MEDINA COUNTY HWY. NO. 136

MEDINA CO. STA. 262+33.64

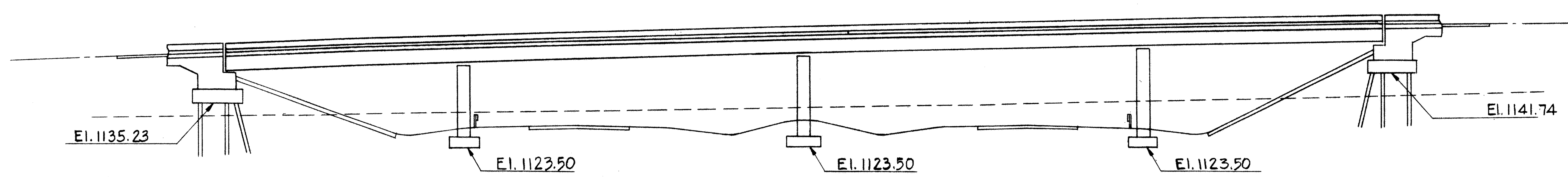
PRESENT TOPOGRAPHY		PROPOSED WORK			
SURVEYED	DRAWN	DESIGNED	DRAWN	CHECKED	REVIEWED
HENRY	AIR SURVEY CORP.	POLLEMANN	CORONEL	ROBINSON	MUDD

MED-42-21.94

FED. RD. DIVISION	STATE	PROJECT		
2	OHIO			



GENERAL PLAN



ELEVATION

GENERAL NOTES

DESIGN SPECIFICATIONS: This structure conforms to the requirements of "Design Specifications for Highway Structures" of the State of Ohio, Department of Highways, dated 9-1-57, together with current revisions thereof.
REFERENCE should be made to:
Standard Drawing FSB-1-62, dated 4-19-62.
Standard Drawing CSB-2-56, Sheets 2 & 3, revised 2-2-59
Standard Drawing AR-1-57, Type A, revised 4-2-62, and
Standard Drawing AS-1-54, revised 7-5-62.

EXCAVATION QUANTITY includes the removal of fill material between the surface of the proposed embankment and the bottom of the abutment.

SURFACE FINISH OF CONCRETE: The requirements of Sec. S-1.22, Rubbed Finish, shall apply to the following exposed concrete surfaces:
a. The entire superstructure except the top and bottom surfaces of safety curbs and roadways.
b. The entire surface of piers and abutments except bridge seats, backwalls and the face of spill-through abutments between the outside beams.

ABUTMENT PILES shall be driven with a hammer of not less than 11,000 ft-lbs. per blow to firm contact with rock. If the length of penetration is approximately equal to the depth of rock according to the bridge foundation investigation report the firm contact will be considered as attained when the capacity according to the formula in Sec. S-18.05 is not less than the following value for a pile hammer of the indicated rating:

43 tons per pile using a 11,000 ft-lb. hammer.
35 tons per pile using a 15,000 ft-lb. hammer.

If the energy rating of the hammer is between the ratings as shown above the required formula capacity shall be determined by interpolation. The design load is 35 tons per pile.

ESTIMATED QUANTITIES

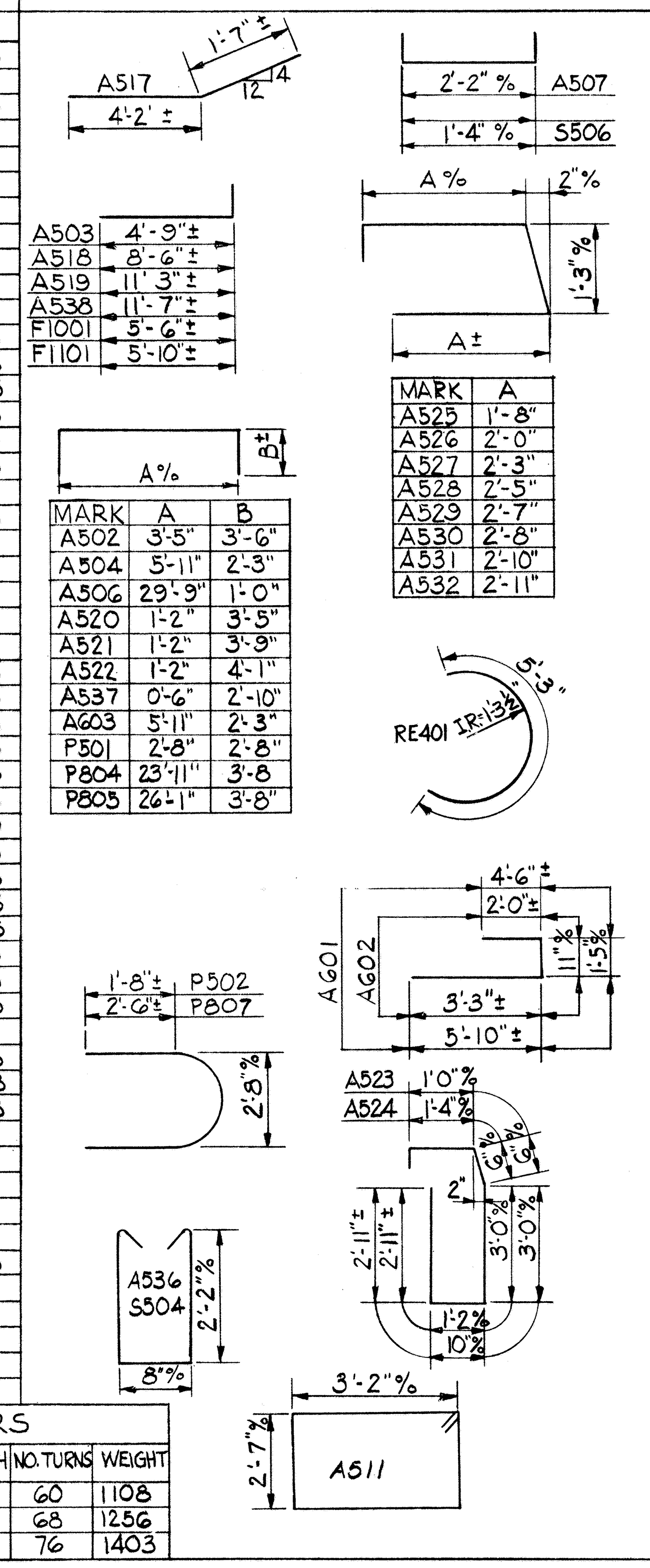
Item	Total	Unit	Description	Super	Abuts.	Piers	Gen.		
E-2	385	Cu.Yds.	Unclassified excavation		197	188			
S-1	273	Cu.Yds.	Class "C" concrete, superstructure	273					
S-1	74	Cu.Yds	Class "C" concrete, piers above footings			74			
S-1	66	Cu.Yds.	Class "E" concrete, abutments above footings		66				
S-1	123	Cu.Yds.	Class "E" concrete, footings		56	67			
S-4	100,074	Lbs.	Reinforcing steel	65,504	9,161	25,409			
S-7	231,900	Lbs.	Structural steel	231,900					
S-8	231,900	Lbs.	Field painting of structural steel	231,900					
S-14	608.00	Lin.Ft.	Railing (aluminum rail, supports and concrete parapet)	558.00	50.00				
S-16	Lump	Sum	First test pile				Lump		
S-18	1110	Lin.Ft.	Steel piles, 10 BP42		1110				
S-29	8	Each	Scuppers	8					
S-29	18	Cu. Yds.	Porous backfill		18				
I-10	363	Sq. Yds.	Crushed aggregate slope protection				363		
*Special	273	Each	Water-reducing, set-retarding admixture	273					

*See Proposal Note

REINFORCING STEEL LIST

MARK	NO.	LENGTH	WEIGHT	SHP.
ABUTMENTS				
A501	14	27'-8"	404	S
A502	40	10'-2"	424	B
A503	80	5'-3"	438	B
A504	44	10'-2"	467	B
A505	6	29'-10"	187	S
A506	12	31'-6"	394	B
A507	48	3'-2"	159	B
A508	24	6'-0"	150	S
A509	8	11'-5"	95	S
A510	24	6'-6"	163	S
A511	20	11'-11"	249	B
A512	12	3'-6"	44	S
A513	28	8'-5"	246	S
A514	8	11'-0"	92	S
A515	8	14'-5"	120	S
A516	4	5'-4"	22	S
A517	8	5'-9"	48	B
A518	8	9'-0"	75	B
A519	28	11'-9"	343	B
A520	8	7'-9"	65	B
A521	4	8'-5"	35	B
A522	4	9'-1"	38	B
A523	4	8'-4"	35	B
A524	4	9'-0"	38	B
A525	4	4'-10"	20	B
A526	4	5'-6"	23	B
A527	4	6'-0"	25	B
A528	4	6'-4"	26	B
A529	4	6'-8"	28	B
A530	4	6'-10"	29	B
A531	4	7'-2"	30	B
A532	20	7'-4"	153	B
A533	8	12'-7"	105	S
A534	8	9'-8"	81	S
A535	8	12'-4"	103	S
A536	36	5'-7"	210	B
A537	8	5'-11"	49	B
A538	28	12'-1"	353	B
A601	54	11'-5"	926	B
A602	54	5'-10"	473	B
A603	44	10'-1"	666	B
A801	18	31'-10"	1,530	S

BENDING DIAGRAMS



MARK	A	B
A502	3'-5"	3'-6"
A504	5'-11"	2'-3"
A506	29'-9"	1'-0"
A520	1'-2"	3'-5"
A521	1'-2"	3'-9"
A522	1'-2"	4'-1"
A537	0'-6"	2'-10"
A603	5'-11"	2'-3"
P501	2'-8"	2'-8"
P804	23'-11"	3'-8
P805	26'-1"	3'-8"

MARK	A
A525	1'-8"
A526	2'-0"
A527	2'-3"
A528	2'-5"
A529	2'-7"
A530	2'-8"
A531	2'-10"
A532	2'-11"

MARK	NO.	LENGTH	WEIGHT	SHP.
PIERS				
P501	60	7'-9"	485	B
P502	18	7'-5"	139	B
P503	12	24'-1"	301	S
P801	9	26'-4"	633	S
P802	6	25'-8"	411	S
P803	6	23'-11"	383	S
P804	6	30'-10"	494	B
P805	9	33'-0"	793	B
P806	4	12'-0"	128	S
P807	6	9'-1"	146	B
P901	8	12'-0"	326	S
P1001	8	18'-0"	620	S
P1002	34	19'-11"	2,915	S
P1003	28	21'-10"	2,630	S
P1101	28	18'-0"	2678	S
F501	100	6'-8"	695	S
F601	50	8'-2"	613	S
F602	32	31'-8"	1,522	S
F801	32	31'-8"	2,706	S
F1001	70	6'-7"	1,983	B
F1101	28	7'-0"	1,041	B
PARAPET RAILING				
R501	16	12'-2"	*	S
R502	16	4'-8"	*	S
R503	136	15'-7"	*	S
*Parapet railing bars are Included with S-14 for payment				
SUPERSTRUCTURE				
S501	447	30'-3"	14,103	S
S504	390	5'-7"	2,270	B
S505	374	2'-9"	1,073	S
S506	748	2'-4"	1,821	B
S601	447	30'-3"	20,310	S
S603	8	3'-0"	36	S
S604	459	32'-8"	22,521	S
S605	66	34'-0"	3,370	S
REPLACEMENT BARS				
RE401	1	5'-3"		B
RE501	2	5'-7"		S
RE601	3	5'-11"		S
RE801	1	6'-6"		S
RE901	1	6'-10"		S
RE1001	1	7'-2"		S
RE1101	1	7'-6"		S

SPIRAL BARS

MARK	NO.	CORE DIA. ℄ SPIRAL	LENGTH	PITCH	NO. TURNS	WEIGHT
SP401	3	32"	14'-3"±	3"	60	1108
SP402	3	32"	16'-3"±	3"	68	1256
SP403	3	32"	18'-2"±	3"	76	1403

SPIRAL REINFORCING BARS: The "Length" shown in the steel list for the spiral bars is the distance from the top of the footing to the bottom of the pier cap. The "No. of Turns" shown is the "Length" divided by the pitch, plus 3 turns (total number of closed coils), expressed as the nearest whole number.
Spiral reinforcing bars shall not have deformations but shall in other respects conform to Item S-4.
1½ closed coils shall be provided at the ends of each spiral unit. Four steel channel tee or angle spacers, weighing approximately 0.68 lb. per lin ft. of spacer, shall be provided for each spiral unit. They shall be equally spaced along the periphery of the coil. The number of pounds of these spacers, based on 0.68 lb. per lin ft., will be paid for as reinforcing steel and is included in the tabulated quantity of spiral bars.

BAR SIZE is indicated in the bar mark. The first digit where three digits are used, and the first two digits where four are used indicate the bar size number. For example A701 is a No. 7 size bar and P1002 is a No. 10 size bar.

J.E GREINER COMPANY
CONSULTING ENGINEERS
BALTIMORE, MARYLAND

GENERAL PLAN AND ELEVATION, NOTES, ESTIMATED QUANTITIES AND REINFORCING STEEL LIST

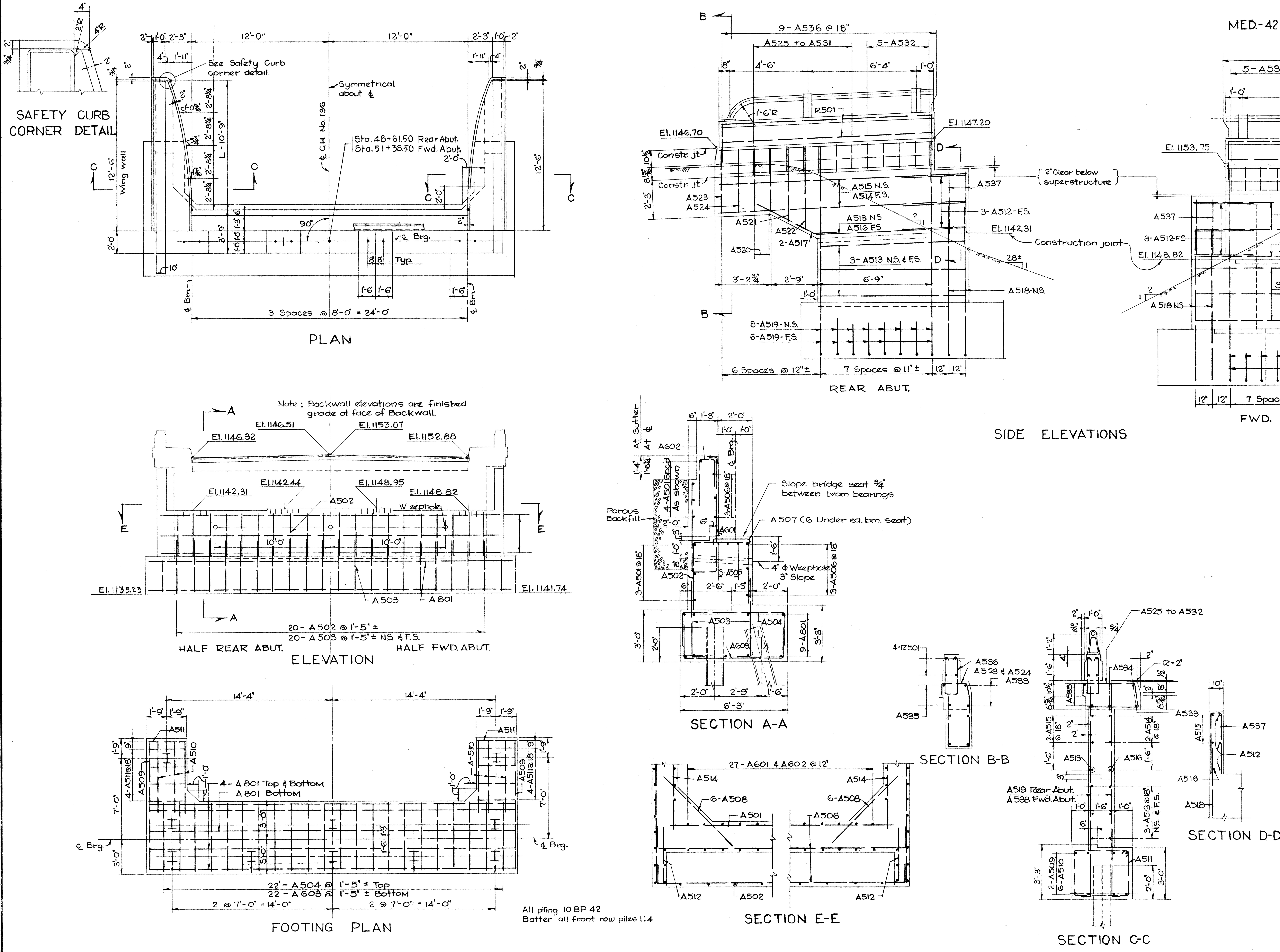
BRIDGE NO. MED.-42-22 42
I.R. #71 UNDER MEDINA CO. HWY. NO. 136
MEDINA CO. STA. 262+33.64

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
LAMBERT	CORONEL	MAYOR	ROBINSON	MUDD	9/27/62	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

MED.-42-21.94

221
293



CLEARANCE of reinforcing steel from face of concrete shall be 3" in bottom of footing, 1½" in parapet and safety curb and 2" elsewhere.

POROUS BACKFILL shall extend upward to the approach slab and outward to the wingwalls. Excavation therefor, in excess of that required for construction of the abutment, shall be considered as paid for in the contract price per cu. yd. paid for porous backfill.

PROCEDURE: The embankment shall be placed and compacted up to the finished spill-thru slope after which excavation shall be made for the abutment and piles driven.

CONCRETE shall be Class E.

Abutment backwalls above the bridge seat shall not be placed until all steel is erected. Abutment backwalls shall be completed prior to placing bridge deck slab.

BRIDGE SEAT REINFORCING: Special care shall be taken in placing reinforcing steel in the vicinity of the bridge seat so as to avoid interference with the drilling of anchor rod holes.

LEGEND:
N.S. = Near Side.
F.S. = Far Side.

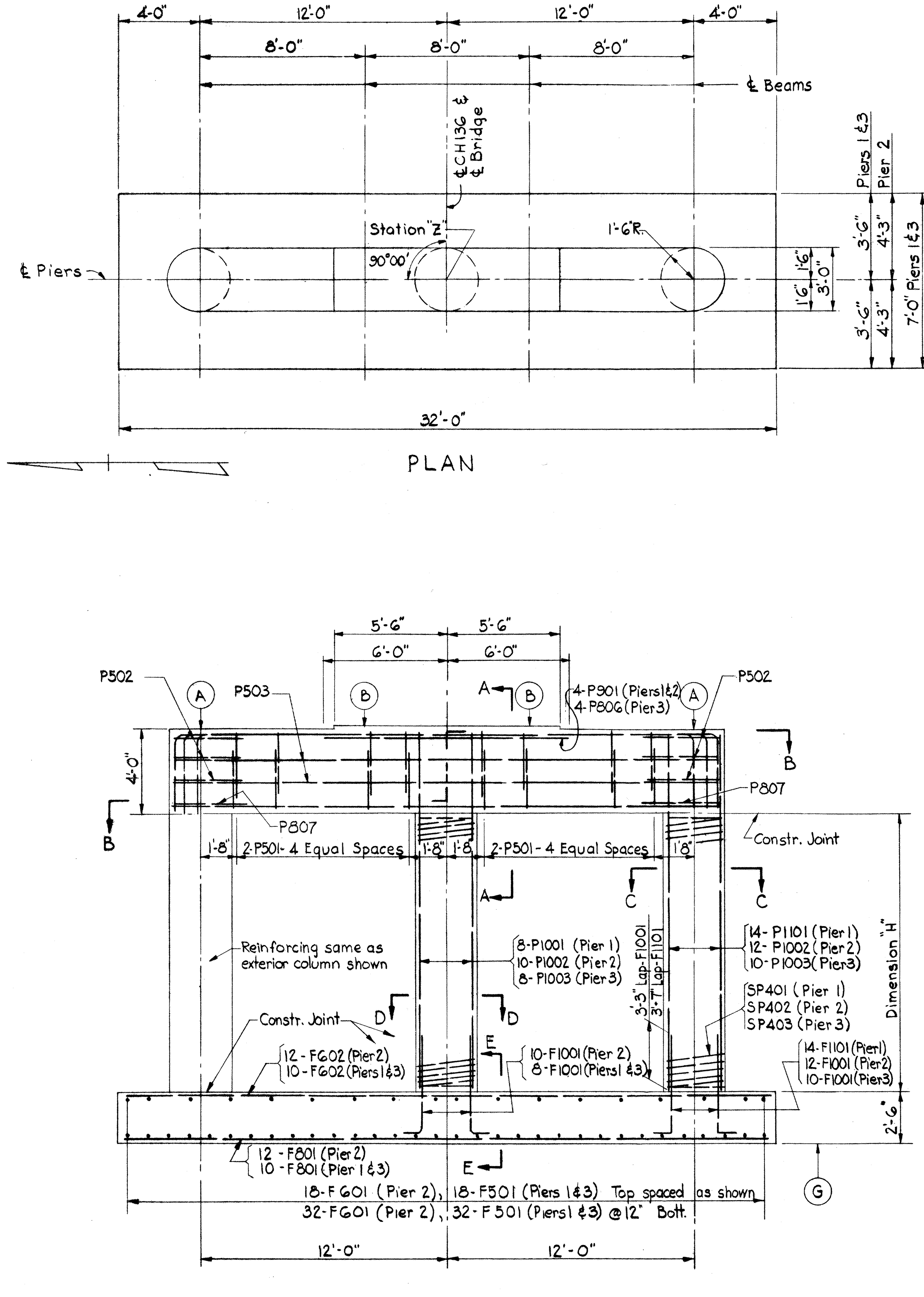
J.E. GREINER COMPANY
CONSULTING ENGINEERS
BALTIMORE, MARYLAND

ABUTMENT DETAILS

BRIDGE NO. MED.-42-22 42
I.R. #71 UNDER MEDINA CO. HWY. NO. 136

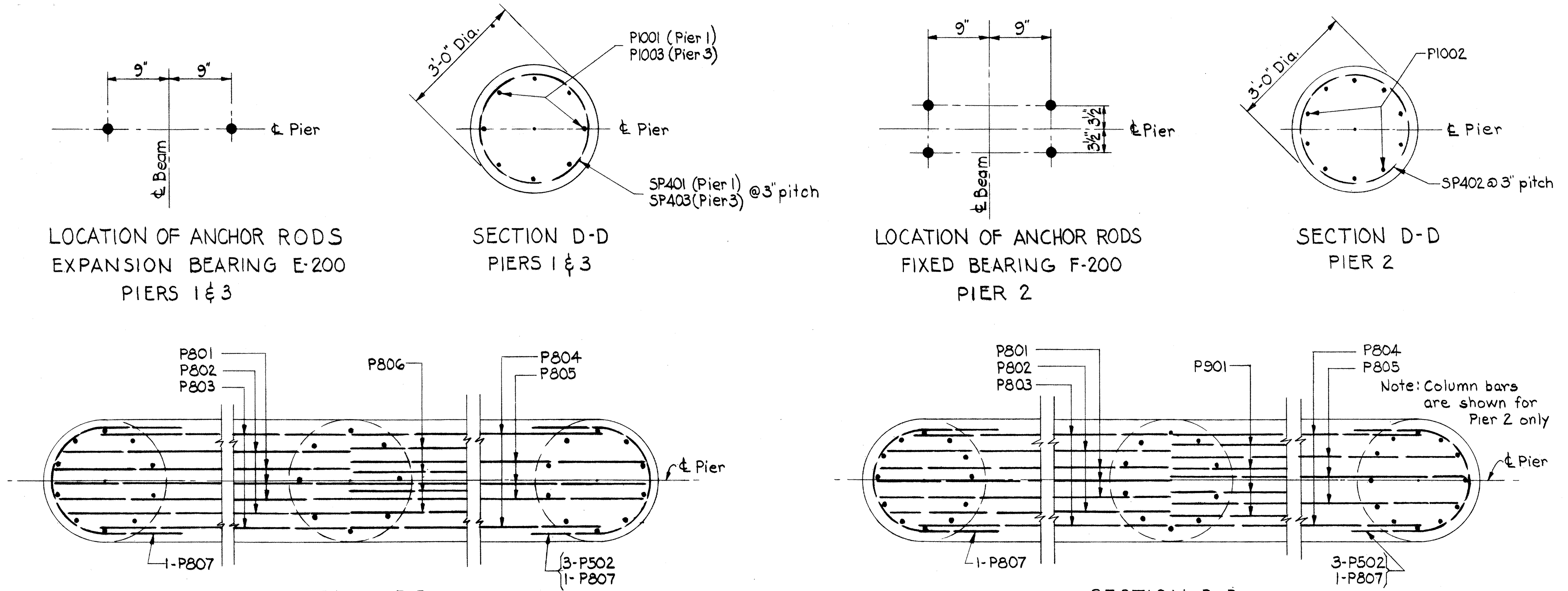
MEDINA CO. STA 262+33.64

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RUARK	ALKEMA	KATZ	ROBINSON	MUDD	9/27/62	



PLAN

ELEVATION



LOCATION OF ANCHOR RODS
EXPANSION BEARING E-200
PIERS 1 & 3

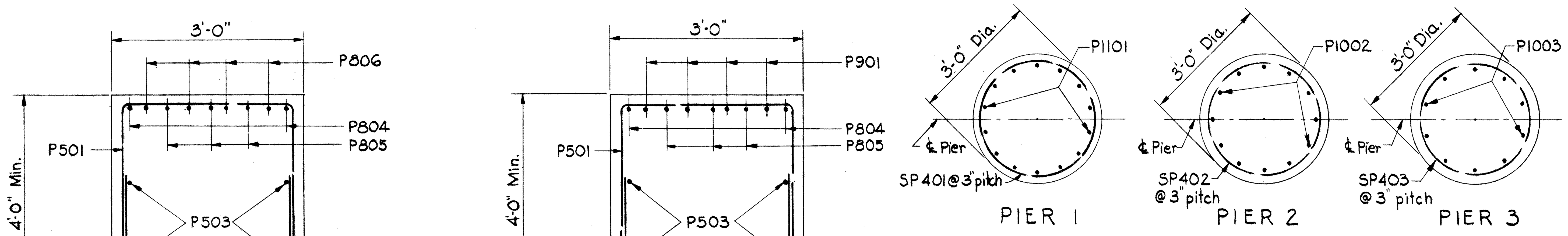
SECTION D-D
PIERS 1 & 3

LOCATION OF ANCHOR RODS
FIXED BEARING F-200
PIER 2

SECTION D-D
PIER 2

SECTION B-B
PIER 3

SECTION B-B
PIERS 1 & 2



SECTION A-A
PIER 3

SECTION A-A
PIERS 1 & 2

PIER 1 PIER 2 PIER 3
SECTION C-C

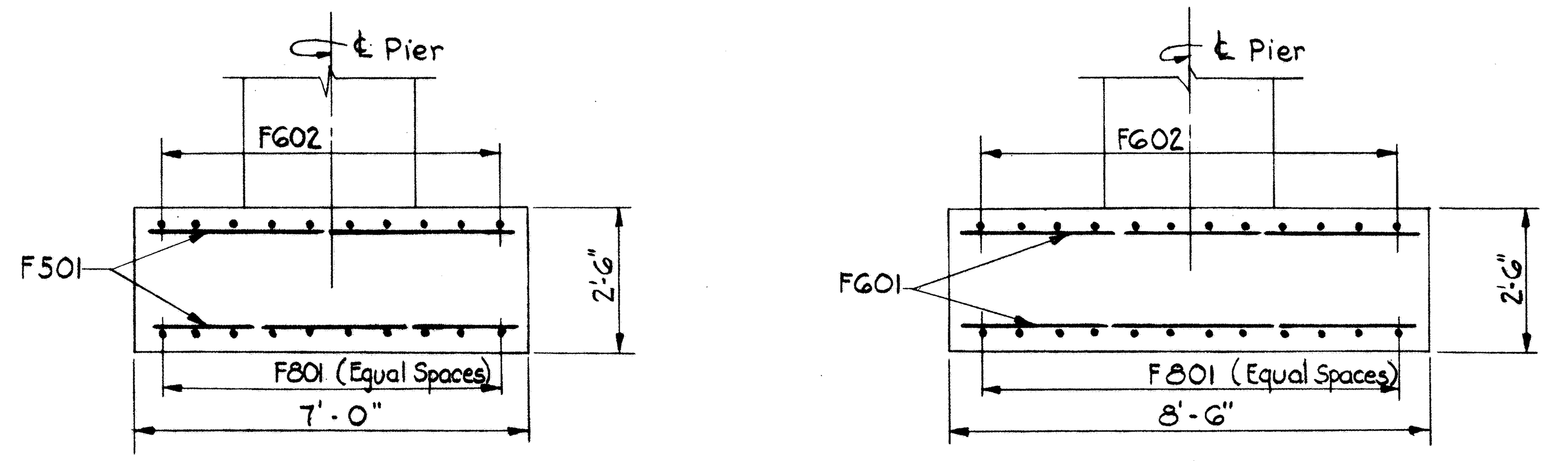
FOUNDATION BEARING PRESSURE: Pier footings are designed for a maximum bearing pressure of 2 Tons per sq. ft.

CLEARANCE of reinforcing steel from face of concrete shall be 3" in bottom of footings and 2" elsewhere.

For details of Fixed and Sliding Bearings see Std. Dwg. No. FSB-1-62.

CONCRETE shall be Class E in footings and Class C above footings.

BRIDGE SEAT REINFORCING: Special care shall be taken in placing reinforcing steel in the vicinity of the bridge seat so as to avoid interference with the drilling of anchor rod holes.



SECTION E-E
PIERS 1 & 3

SECTION E-E
PIER 2

	STATION "Z"	ELEVATION A	ELEVATION B	ELEVATION G	DIMENSION H
Pier #1	49+18.50	1144.29	1144.41	1123.50	14'-3½"
Pier #2	50+00.00	1146.27	1146.40	1123.50	16'-3¾"
Pier #3	50+81.50	1148.12	1148.24	1123.50	18'-1⅟₁₆"

J.E. GREINER COMPANY
CONSULTING ENGINEERS
BALTIMORE, MARYLAND

PIER DETAILS

BRIDGE NO. MED.-42-2242
I.R. #71 UNDER MEDINA CO. HWY. NO. 136

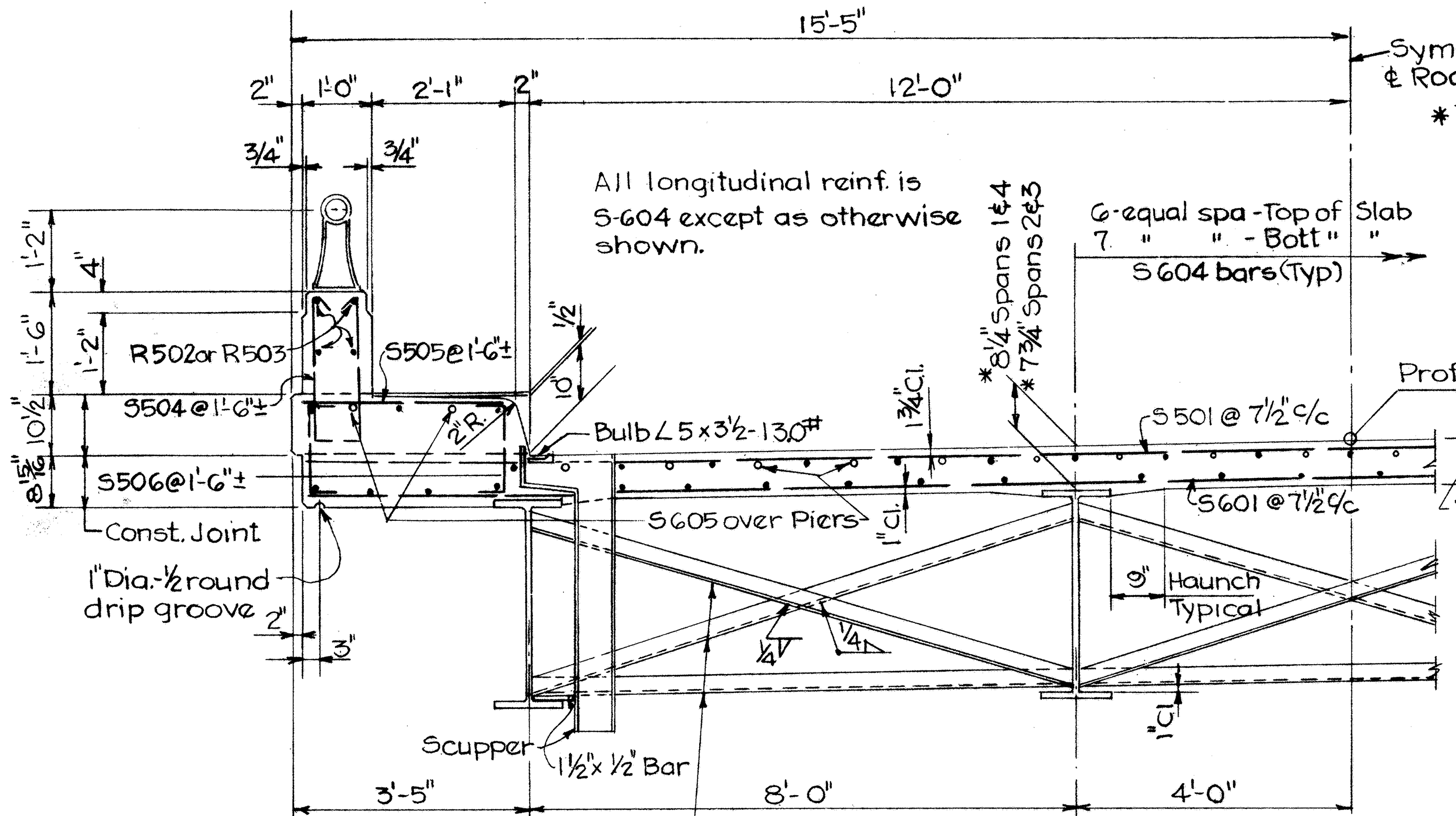
MEDINA CO. STA. 262+33.64

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
WEISER	KEEFER	MAYOR	ROBINSON	MUDD	9/27/62	

MED.-42-21.94

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

223/293



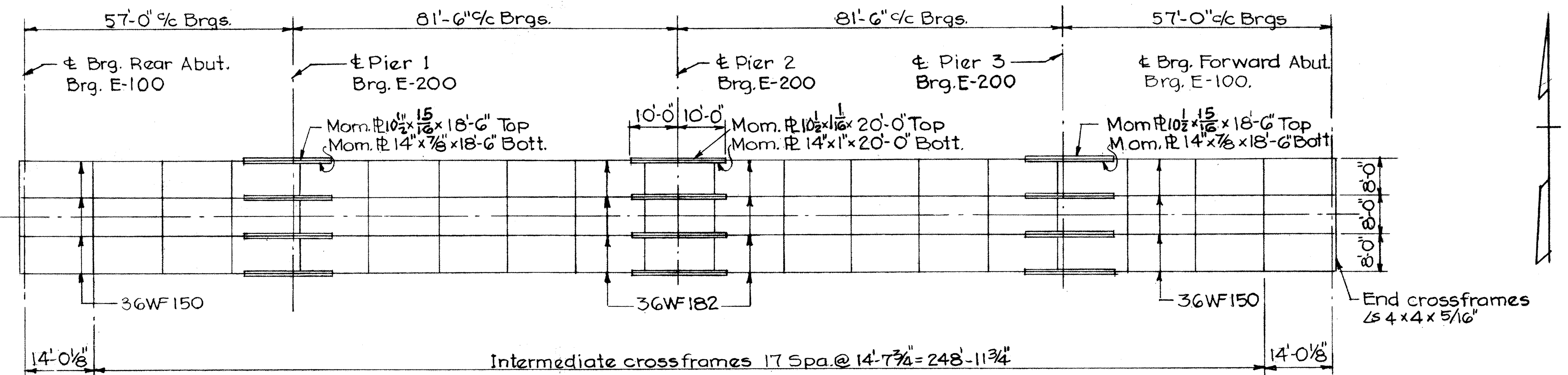
* This is the nominal dimension. The quantity of deck concrete to be paid for shall be based on this dimension, even though deviation from it may be necessary because the top flange of the beam may not have the exact camber or conformation required to place it parallel to the finished grade.

7¾" Includes ¾" monolithic wearing surface.

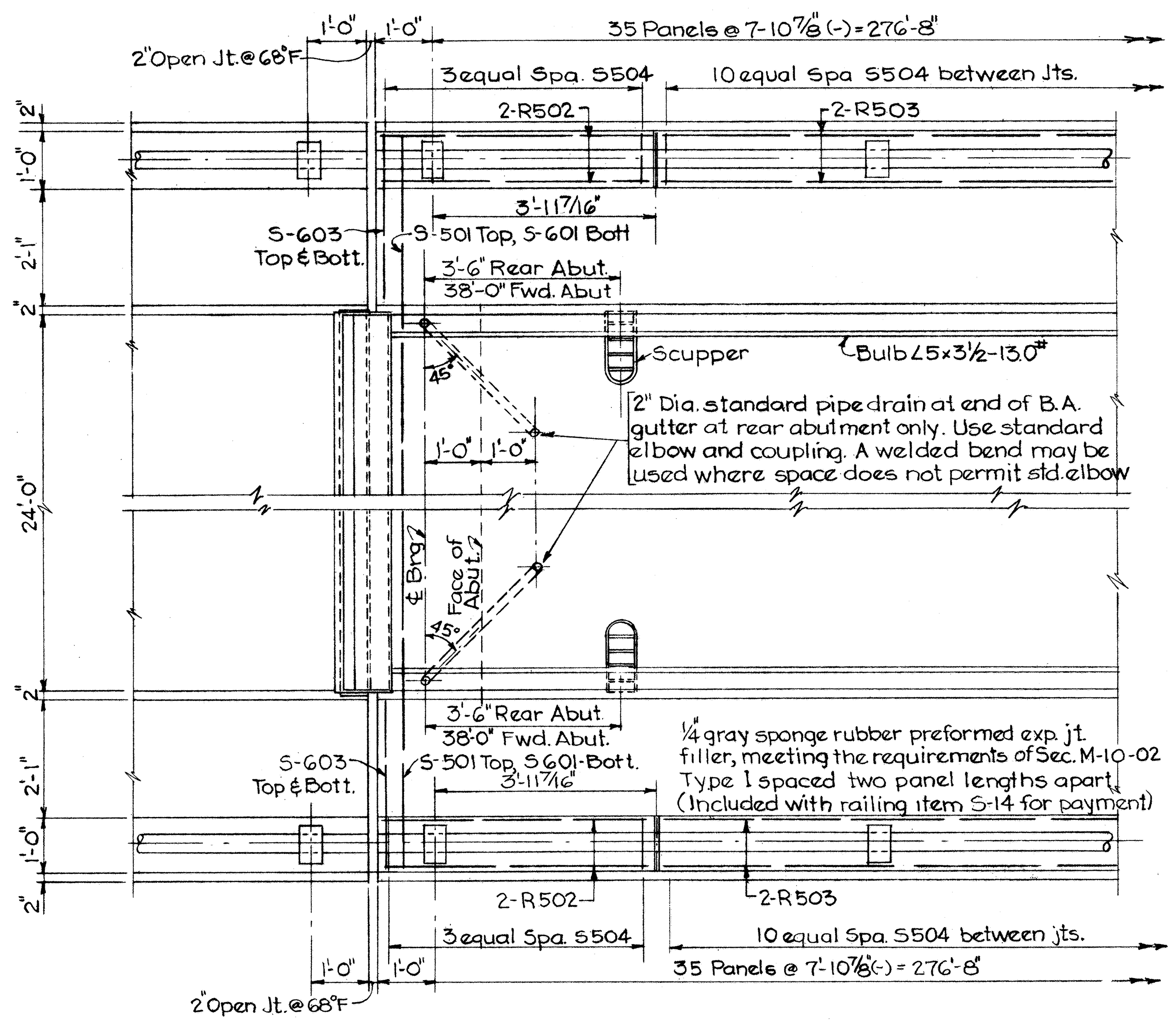
DECK SLAB HAUNCH: The haunch in the deck slab adjacent to the top of steel beams which is shown as 9" wide may vary from this dimension between the limits of 6" and 12" except that the maximum slope shall not exceed 3 inches per foot. Payment for deck slab concrete shall be based on the 9" width.

Intermediate crossframe ∠s 3x3x5/16. Weld both sides of vertical leg and top side of horizontal leg to beam with ¼" continuous weld.

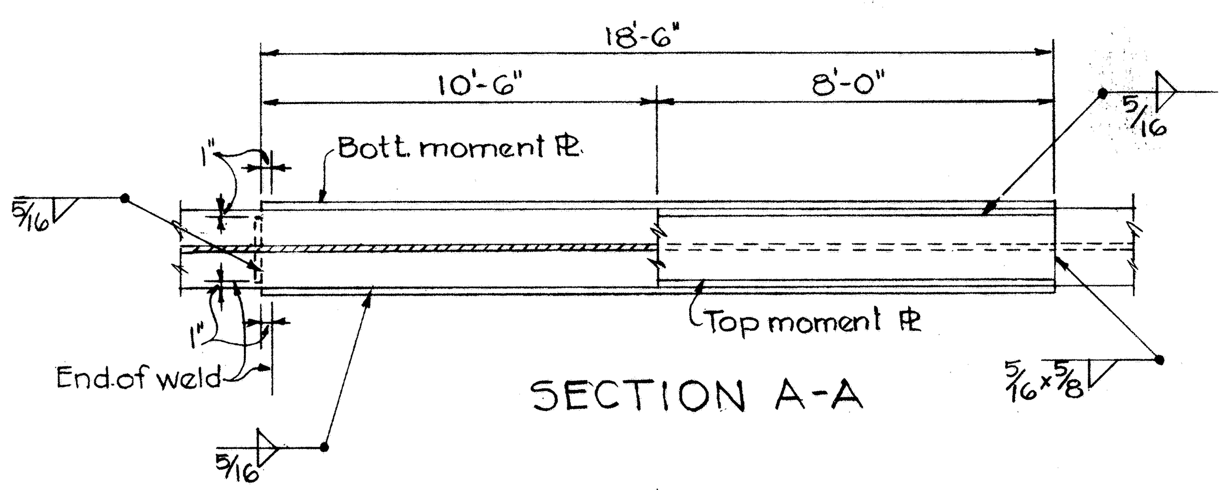
HALF TRANSVERSE SECTION



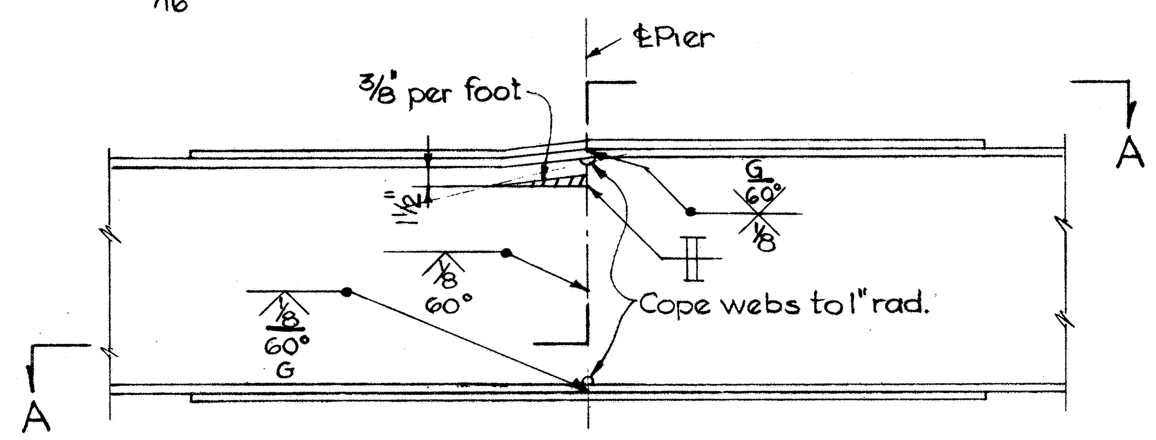
STEEL FRAMING PLAN



PART PLAN AT ABUTMENTS



SECTION A-A



BEAM SPLICE DETAILS AT PIER 1

OPP. HAND AT PIER 3

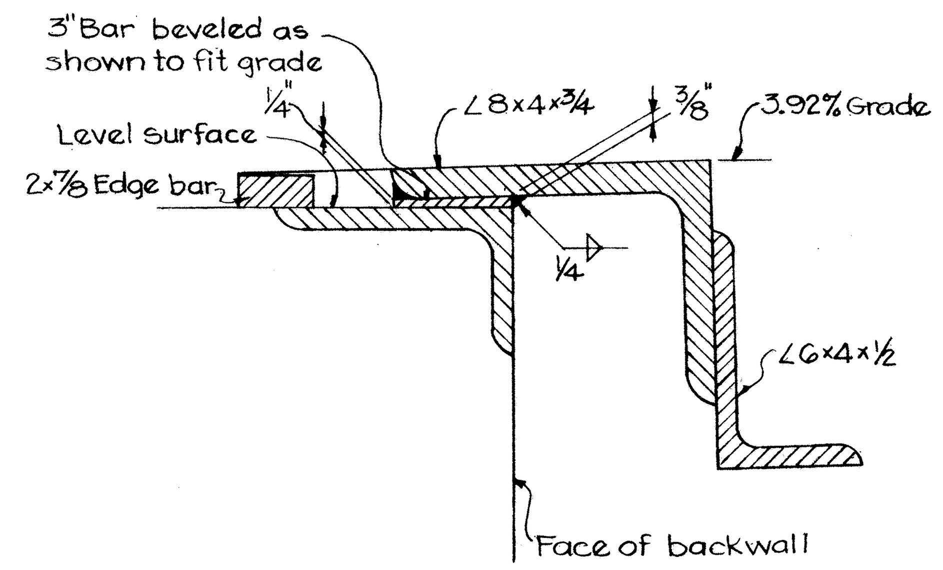
(Split beams at Pier 2 similarly, if depth of one beam exceeds the other by ⅛".)

BEAM SPLICE WELDING PROCEDURE

1. Raise end of beam 3½" at Pier 1.
2. Butt-weld the beam flanges and web at Pier 2, using the following sequence: make one pass on each flange, then two on the web, repeat using one pass at each location, until welds are completed.
3. Weld the bottom and top moment plates at Pier 2.
4. Lower the end of beam at Pier 1 to final position.
5. Make splices at Piers 1 & 3 in the same manner, raising the end of beams 1⅛" at the abutments.

DEFLECTION AND CAMBER

	Outside Beams End Spans	Outside Beams Middle Spans	Inside Beams End Spans	Inside Beams Middle Spans
Deflection due to weight of steel	1/16"	⅛"	1/16"	⅛"
Deflection due to remaining D.L.	5/16"	⅝"	7/32"	15/32"
Convexity required for vertical curve	17/32"	1⅛"	17/32"	1⅛"
Sum of Deflections and Convexity	29/32"	1⅞"	13/16"	1 23/32"
Required Camber	⅞"	1⅞"	⅞"	1¾"



SECTION THRU END DAM AT REAR ABUTMENT

FOR ADDITIONAL NOTES AND DETAILS OF END DAM AT FORWARD ABUTMENT. See Section C-C on Sheet No. 2 of 6 of Std. Dwg. CSB-2-56.

SUPERSTRUCTURE NOTES

CONCRETE DECK PLACING: In order to facilitate water curing of the concrete of the deck slab, the placing of concrete shall progress upgrade. The slab may be placed in sections between transverse construction joints which are parallel to the piers and are located near the center of any span.

MACHINE FINISH: The concrete bridge deck shall be finished by use of a finishing machine.

WELDING of structural steel shall be Class "A" except as otherwise shown. Welds shown as field welds may at the option of the Contractor, be made in the shop.

For details of end crossframes, roadway end finish, beam cut-off at backwall, and welded butt joint in end finish angles at ℄ of roadway, see Standard Drawing CSB-2-56, Sheet 2.

For details of scuppers, bulb angle gutter supports, curb plates, and beam splices at Pier 2, see Standard Drawing CSB-2-56, Sheet 3.

For details of fixed and sliding bearings, see Standard Drawing FSB-1-62.

For details of aluminum railing see Standard Drawing AR-1-57, Type A.

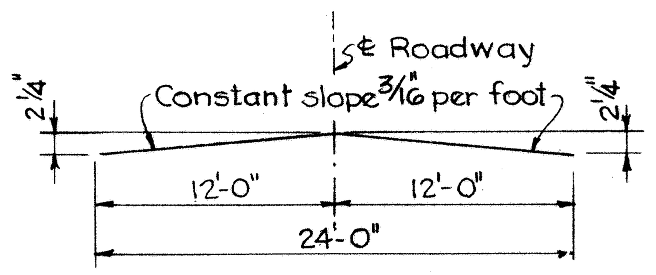
For scupper spacing, see Sheet No. 220.

Reinforcing steel shall be 1½" clear of surfaces in parapet and safety curb.

SHOP PAINTING STEEL: The surface preparation of all steel requiring shop painting as per the Plans and Specifications, shall be accomplished by blast cleaning or power tool cleaning except as noted in the Specifications regarding the use of Chromate Primers.

PAINT: Both Shop and Field, shall be applied by brushing. Spray application will not be permitted.

SHEET LEAD shall conform to the requirements of ASTM Designation B 29 without restriction to the Common Desilverized type.



BRIDGE ROADWAY CROWN

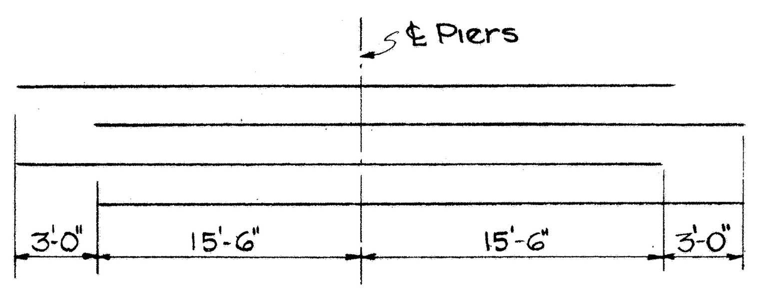


DIAGRAM SHOWING STAGGER OF S605 BARS OVER PIERS

J.E. GREINER COMPANY
CONSULTING ENGINEERS
BALTIMORE, MARYLAND

SUPERSTRUCTURE DETAILS

BRIDGE NO. MED.-42-2242
I.R.# 71 UNDER MEDINA CO. HWY. NO. 136

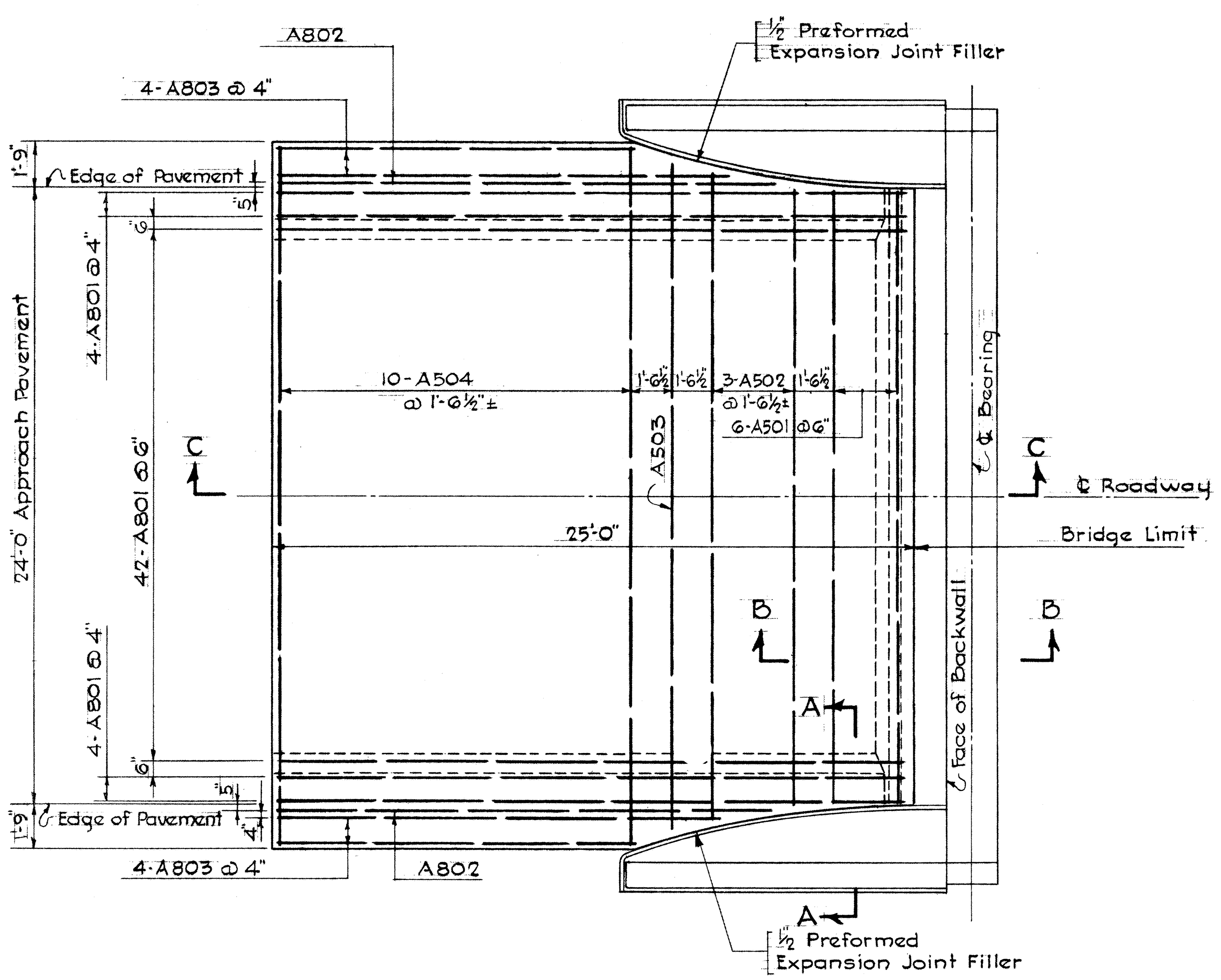
MEDINA CO. STA. 262+33.64

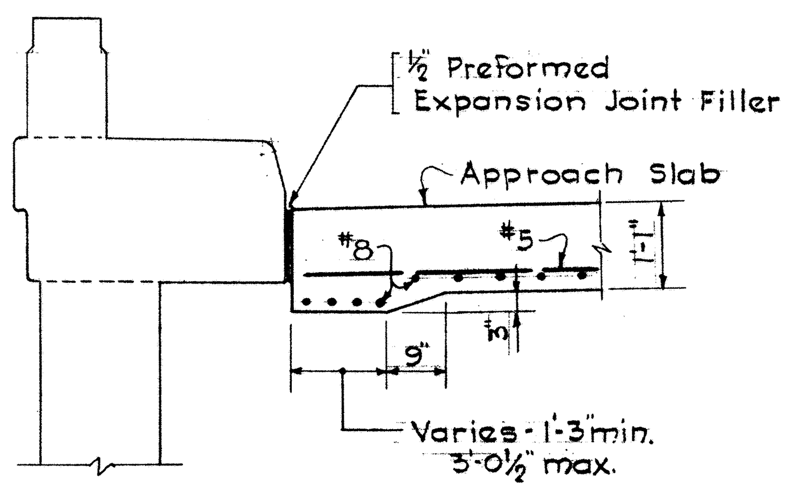
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
LAMBERT	WALTER	CLARK	ROBINSON	MUDD	3/27/62	

MED.-42-21.94

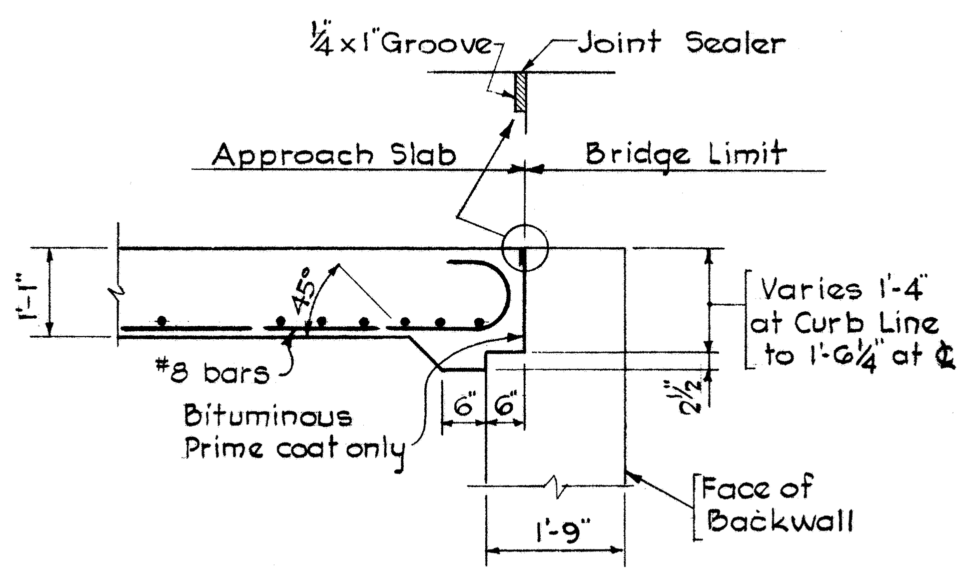
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

224
293

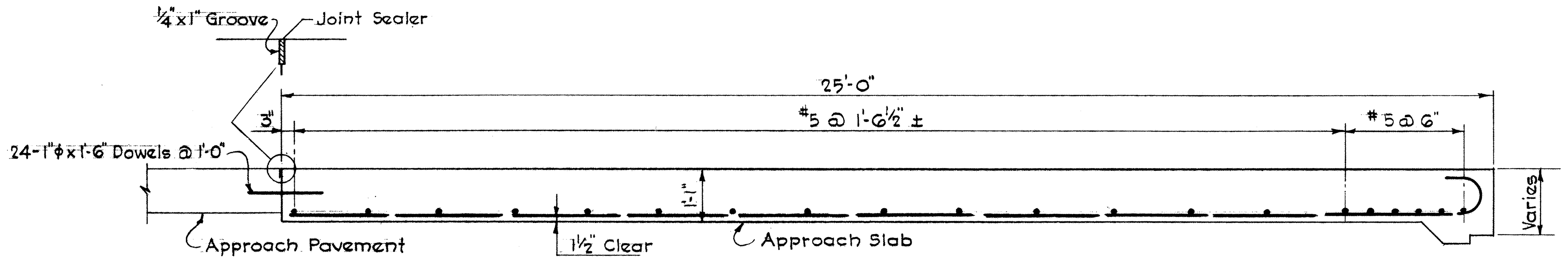




SECTION A-A

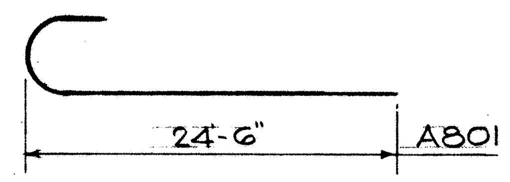


SECTION B-B



SECTION C-C

REINFORCING STEEL LIST				
MARK	NO.	LENGTH	WEIGHT	SHAPE
A801	100	25'-7"	6831	B
A802	4	19'-3"	206	S
A803	4 Series of 4 bars 1'-1" incr.	14'-0" to 17'-3"	668	S
A501	12	23'-6"	294	S
A502	2 Series of 3 bars 1" incr.	24'-0" to 25'-2"	154	S
A503	2	26'-1"	54	S
A504	20	27'-0"	563	S



Quantities are for 2 Approach Slabs

NOTES

½" Preformed Expansion Joint Filler shall be included in Item I-7 "Reinforced Concrete Approach Slabs" for payment.

Bar Size is indicated in the Bar Mark. The first digit indicates the Bar Size Number. For example A801 is a No. 8 Size Bar.

Work this Sheet with Standard Drawing No. AS-1-54 (Revised 7-5-62)

Concrete in approach slabs shall be Class C.

J.E GREINER COMPANY
CONSULTING ENGINEERS
BALTIMORE, MARYLAND

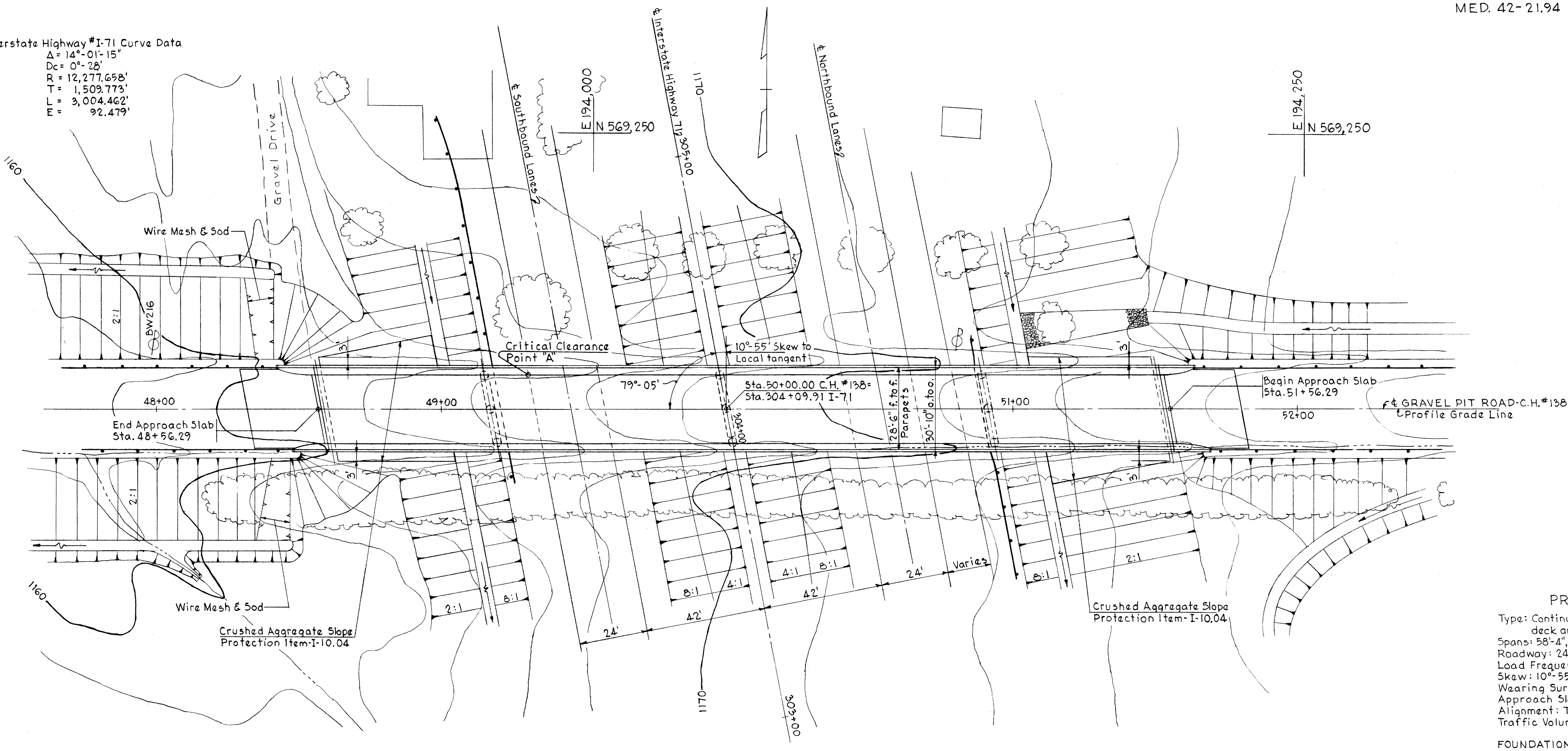
APPROACH SLAB DETAILS

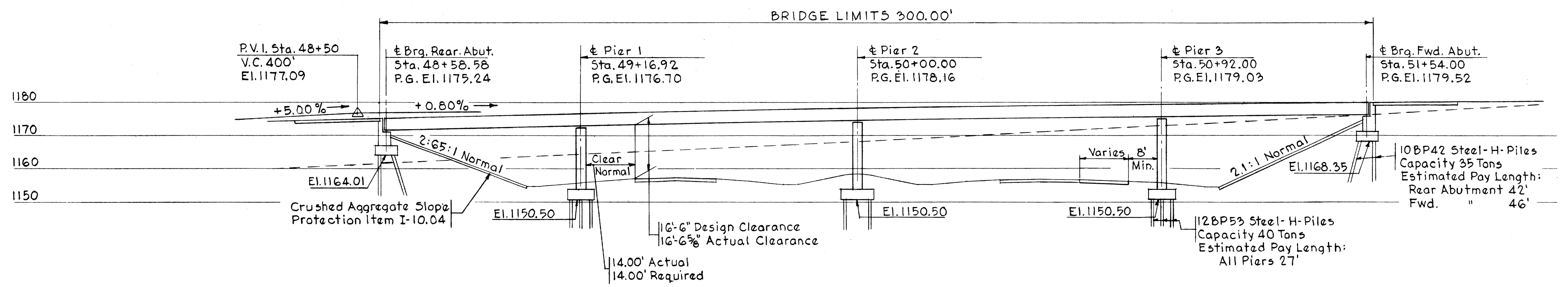
BRIDGE NO. MED. -42-2242
I.R. #71 UNDER MEDINA CO. HWY. NO. 136

MEDINA CO. STA. 262+33.64

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
ALKEMA	ALKEMA	KEEFER	KEEFER	MUDD	9/27/62	

Interstate Highway #I-71 Curve Data
Δ = 14°-01'-15"
Dc = 0°-28'
R = 12,277.658'
T = 1,509.773'
L = 3,004.462'
E = 92.479'





PROPOSED STRUCTURE

Type: Continuous steel beam with reinforced concrete deck and substructure.
Spans: 58'-4", 83'-1", 92'-0", 62'-0"
Roadway: 24'-0" face to face of 2'-3" safety curbs.
Load Frequency: CF= 130 (57)
Skew: 10°-55' to local tangent (R.F.)
Wearing Surface: ¾" Monolithic concrete.
Approach Slabs: AS-1-54 (25' long).
Alignment: Tangent.
Traffic Volume: 1310 ADT-1975

FOUNDATION SOUNDINGS: Foundation design and foundation quantities are based on a study of drive sample-core borings and drive rod penetration tests made at the site. This sounding information may be inspected in the office of the Bureau of Bridges in Columbus or in the Division Office, but the State does not guarantee the accuracy thereof.

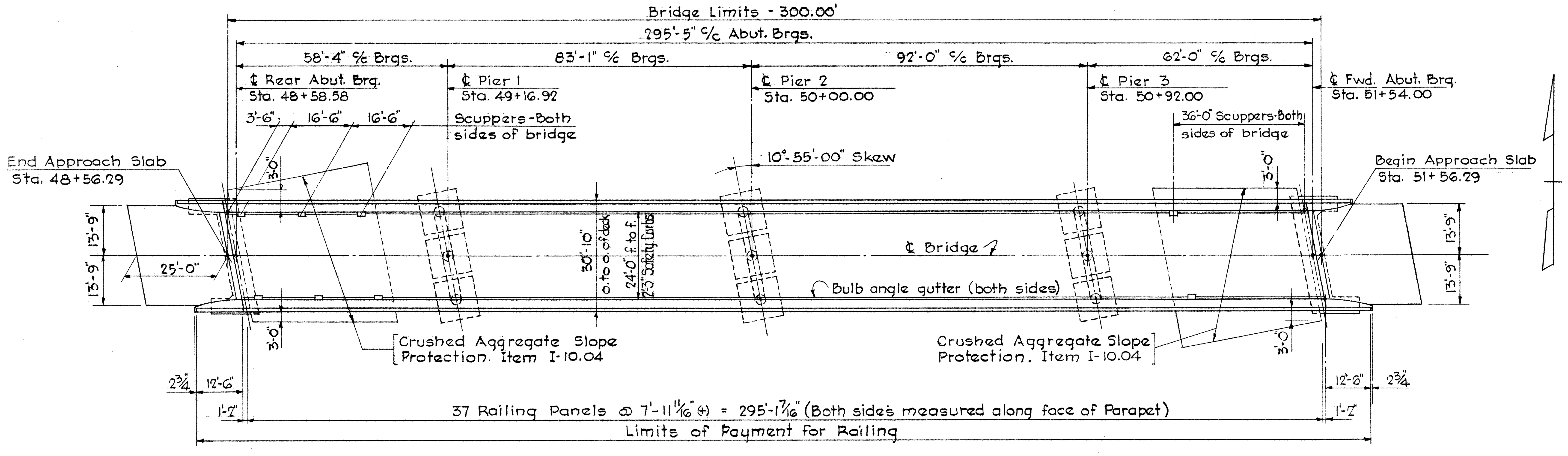
J.E. GREINER CO.
CONSULTING ENGINEERS
BALTIMORE, MARYLAND

SITE PLAN

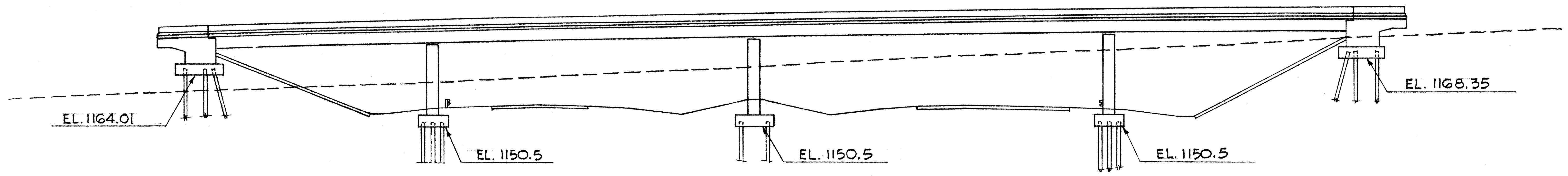
BRIDGE NO. MED-42-2321
INTERSTATE HIGHWAY #71 UNDER
MEDINA COUNTY HWY. NO. 138

MEDINA CO. STA. 304+09.91

PRESENT TOPOGRAPHY		PROPOSED WORK			
SURVEYED	DRAWN	DESIGNED	DRAWN	CHECKED	REVIEWED
HENRY	AIR SURVEY CORP.	POLDEMANN	WALTER	KOHLER	MUDD



GENERAL PLAN



ELEVATION

GENERAL NOTES

DESIGN SPECIFICATIONS: This structure conforms to the requirements of "Design Specifications for Highway Structures" of the State of Ohio, Department of Highways, dated 9-1-57, together with current revisions thereof.

REFERENCE should be made to:
Standard Drawing FSB-1-62 dated 4-19-62
" " CSB-2-56, sheets 2 & 3, revised 2-2-59
" " AR-1-57, Type A, revised 4-2-62
" " AS-1-54, revised 7-5-62

EXCAVATION QUANTITY includes the removal of fill material between the surface of the proposed embankment and the bottom of the abutment.

SURFACE FINISH OF CONCRETE: The requirements of Sec. S-1.22, Rubbed Finish, shall apply to the following exposed concrete surfaces:
a. The entire superstructure except the top and bottom surfaces of safety curbs and roadways.
b. The entire surface of piers and abutments except bridge seats, backwalls and the face of spill-through abutments between the outside beams.

PILES shall be driven to firm contact with rock. If the length of penetration is approximately equal to the depth to rock according to the bridge foundation investigation report, the firm contact shall be considered as attained when the capacity according to the formula in Sec. S-18.05 is not less than the following value for a pile hammer of the indicated energy rating:

For the abutment piles
43 tons per pile using an 11,000 ft.-lb. hammer.
36 tons per pile using a 15,000 ft.-lb. or greater hammer.

For the pier piles
* tons per pile using an 11,000 ft.-lb. hammer.
53 tons per pile using a 15,000 ft.-lb or greater hammer.

If the energy rating of the hammer is between the ratings as shown above, the required formula capacity shall be determined by interpolation. The design load is 35 tons per pile for the abutment piles and 40 tons per pile for the pier piles.

* The 11,000 ft.-lb. hammer will not produce reliable support.

ESTIMATED QUANTITIES

ITEM	TOTAL	UNIT	DESCRIPTION	SUPER	ABUTS.	PIERS	GEN.		
E-2	435	Cu. Yds.	Unclassified Excavation		187	248			
S-1	292	Cu. Yds.	Class "C" concrete, superstructure	292					
S-1	75	Cu. Yds.	Class "C" concrete, piers above footings			75			
S-1	70	Cu. Yds.	Class "E" concrete, abutments above footings		70				
S-1	133	Cu. Yds.	Class "E" concrete, footings		57	76			
S-4	105008	Lbs.	Reinforcing Steel	70514	9271	25223			
S-7	288176	Lbs.	Structural Steel	288176					
S-8	288176	Lbs.	Field painting of structural steel	288176					
S-14	644.73	Lin. Ft.	Railing (aluminum rail, supports and concrete parapet)	594.73	50.00				
S-16	Lump	Sum	First test pile				Lump		
S-18	890	Lin. Ft.	Steel piles, 10 BP 42		890				
S-18	1320	Lin. Ft.	Steel piles, 12 BP 53			1320			
S-29	19	Cu. Yds.	Porous backfill		19				
S-29	8	Each	Scuppers	8					
I-10	417	Sq. Yds.	Crushed aggregate slope protection				417		
★ Special	292	Each	Water-reducing, set-retarding admixture	292					

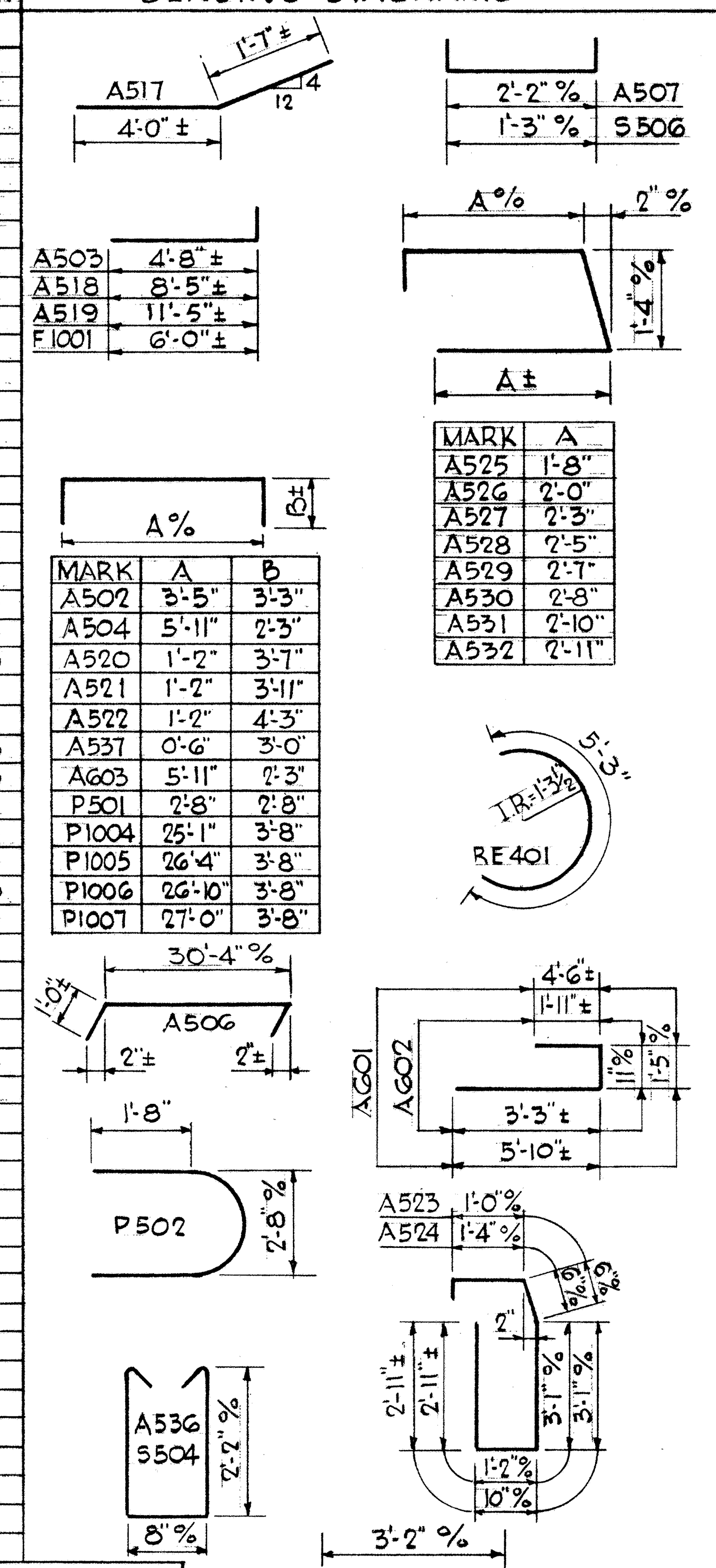
★ See Proposal Note

REINFORCING STEEL LIST

MARK	NO.	LENGTH	WEIGHT	SHP.
ABUTMENTS				
A501	14	28'-2"	411	S
A502	40	9'-8"	403	B
A503	80	5'-2"	431	B
A504	44	10'-2"	467	B
A505	6	30'-4"	190	S
A506	12	32'-1"	407	B
A507	48	3'-2"	159	B
A508	24	6'-0"	150	S
A509	4	11'-6"	48	S
A510	24	6'-6"	163	S
A511	20	12'-2"	254	B
A512	12	3'-6"	44	S
A513	28	8'-5"	246	S
A514	8	11'-0"	92	S
A515	8	14'-5"	120	S
A516	4	5'-4"	22	S
A517	8	5'-7"	47	B
A518	8	8'-11"	74	B
A519	56	11'-11"	696	B
A520	8	8'-1"	67	B
A521	4	8'-9"	37	B
A522	4	9'-5"	39	B
A523	4	8'-4"	35	B
A524	4	9'-0"	38	B
A525	4	4'-11"	21	B
A526	4	5'-7"	23	B
A527	4	6'-1"	25	B
A528	4	6'-5"	27	B
A529	4	6'-9"	28	B
A530	4	6'-11"	29	B
A531	4	7'-3"	30	B
A532	20	7'-5"	155	B
A533	8	12'-7"	105	S
A534	8	9'-8"	81	S
A535	8	12'-4"	103	S
A536	36	5'-10"	219	B
A537	8	6'-3"	53	B
A538	4	11'-9"	49	S
A601	56	11'-6"	967	B
A602	56	5'-10"	491	B
A603	44	10'-2"	672	B
A801	18	32'-5"	1558	S

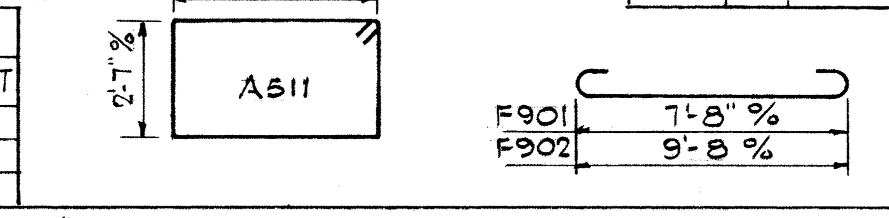
MARK	NO.	LENGTH	WEIGHT	SHP.
PIERS				
P501	72	7'-9"	582	B
P502	24	7'-5"	186	B
P503	12	24'-5"	306	S
P801	9	26'-9"	643	S
P802	6	26'-3"	421	S
P803	6	24'-8"	395	S
P1001	30	18'-3"	2356	S
P1002	30	19'-5"	2507	S
P1003	30	20'-7"	2657	S
P1004	6	31'-10"	822	B
P1005	6	33'-1"	854	B
P1006	6	33'-7"	867	B
P1007	3	33'-9"	436	B
F901	96	10'-2"	3319	B
F902	60	12'-2"	2482	B
F1001	90	6'-11"	2679	B
PARAPET RAILING				
R501	16	12'-2"	*	S
R502	16	4'-8"	*	S
R503	144	15'-8"	*	S
* Parapet railing bars are included with S-14 for payment				
SUPERSTRUCTURE				
S501	474	30'-9"	15,202	S
S504	412	5'-7"	2,399	B
S505	398	3'-0"	1,245	S
S506	796	2'-5"	2,006	B
S601	474	30'-9"	21,892	S
S603	8	3'-0"	36	S
S604	510	31'-5"	24,066	S
S605	66	37'-0"	3668	S
REPLACEMENT BARS				
RE401	1	5'-3"	—	B
RE501	2	5'-7"	—	S
RE601	3	5'-11"	—	S
RE801	1	6'-6"	—	S
RE901	1	6'-10"	—	S
RE1001	1	7'-2"	—	S

BENDING DIAGRAMS



MARK	A	B
A502	3'-5"	3'-3"
A504	5'-11"	2'-3"
A520	1'-2"	3'-7"
A521	1'-2"	3'-11"
A522	1'-2"	4'-3"
A537	0'-6"	3'-0"
A603	5'-11"	2'-3"
P501	2'-8"	2'-8"
P1004	25'-1"	3'-8"
P1005	26'-4"	3'-8"
P1006	26'-10"	3'-8"
P1007	27'-0"	3'-8"

MARK	A
A525	1'-8"
A526	2'-0"
A527	2'-3"
A528	2'-5"
A529	2'-7"
A530	2'-8"
A531	2'-10"
A532	2'-11"



SPIRAL BARS

MARK	NO.	CORE DIA. ℄/℄ SPIRAL	LENGTH	PITCH	NO. OF TURNS	WEIGHT
SP401	3	32"	14'-10"	3"	62	1145
SP402	3	32"	16'-1"	3"	67	1237
SP403	3	32"	17'-2"	3"	72	1329

SPIRAL REINFORCING BARS: The "Length" shown in the steel list for the spiral bars is the distance from the top of the footing to the bottom of the pier cap. The "No. of Turns" shown is the "Length" divided by the pitch, plus 3 turns (total number of closed coils), expressed as the nearest whole number. Spiral reinforcing bars shall not have deformations but shall in other respects conform to Item S-4. 1½ closed coils shall be provided at the ends of each spiral unit.
Four steel channel, tee or angle spacers, weighing approximately 0.68 lb. per lin. ft. of spacer, shall be provided for each spiral unit. They shall be equally spaced along the periphery of the coil. The number of pounds of these spacers, based on 0.68 lb. per lin. ft., will be paid for as reinforcing steel and is included in the tabulated quantity of spiral bars.

BAR SIZE is indicated in the bar mark. The first digit where three digits are used, and the first two digits where four are used, indicate the bar size number. For example, A701 is a No. 7 size bar and P1002 is a No. 10 size bar.

J.E. GREINER COMPANY
CONSULTING ENGINEERS
BALTIMORE, MARYLAND

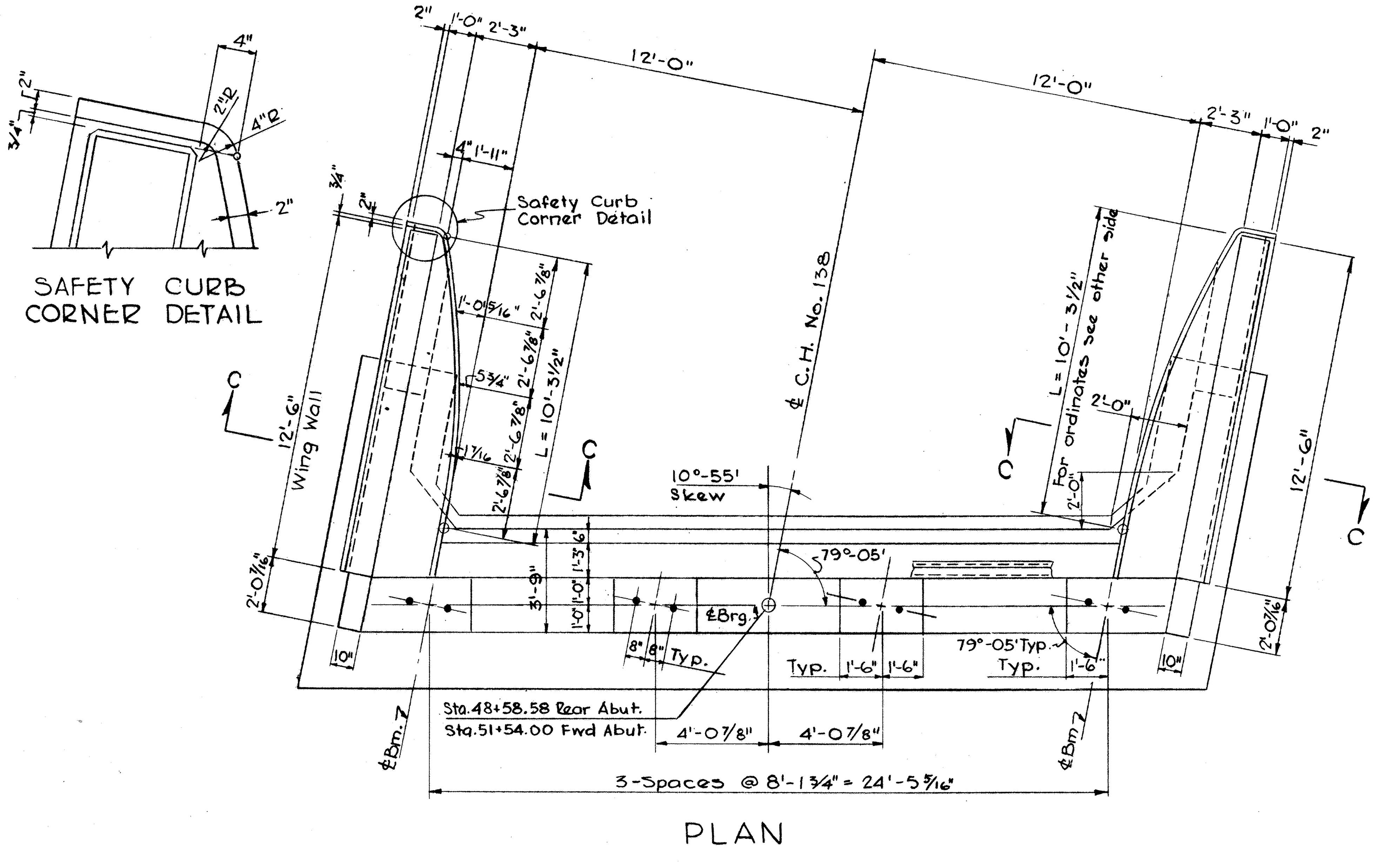
GENERAL PLAN AND ELEVATION, NOTES, ESTIMATED QUANTITIES AND REINFORCING STEEL LIST
BRIDGE NO. MED.-42-2321
I.R.#71 UNDER MEDINA CO. HWY. NO. 138
MEDINA CO. STA. 304+09.91

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
WEISER	COROWEL	KEEFER	KOHLER	MUDD	9/27/62	

MED. - 42-21.94

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

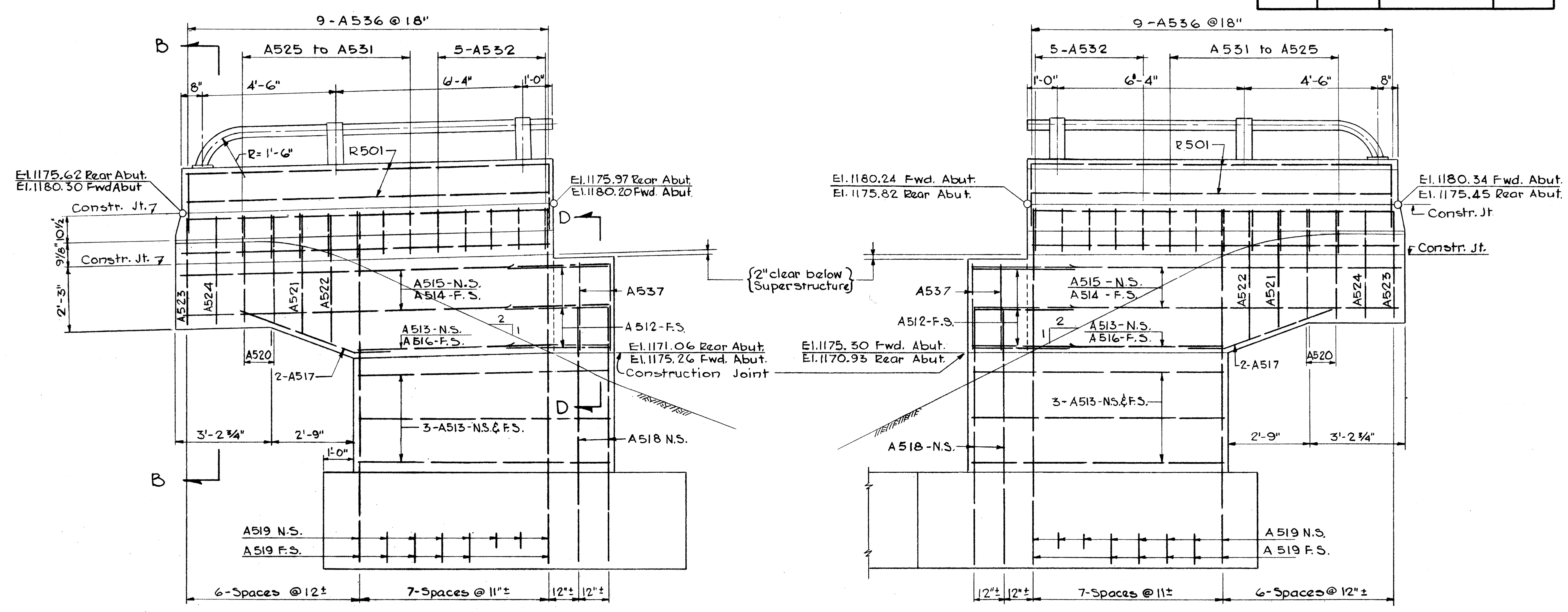
227
293



SAFETY CURB CORNER DETAIL

PLAN

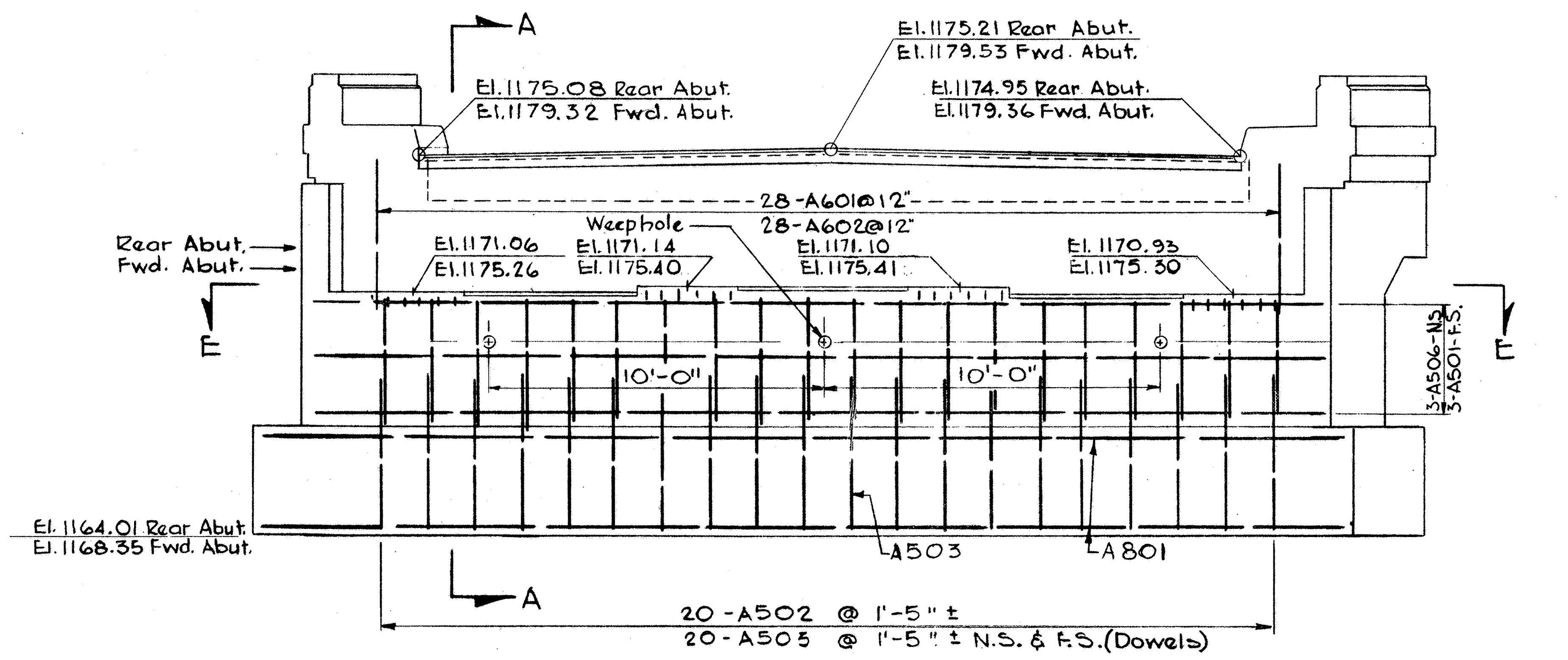
Note: Backwall Elevations are finished grade at face of backwall.



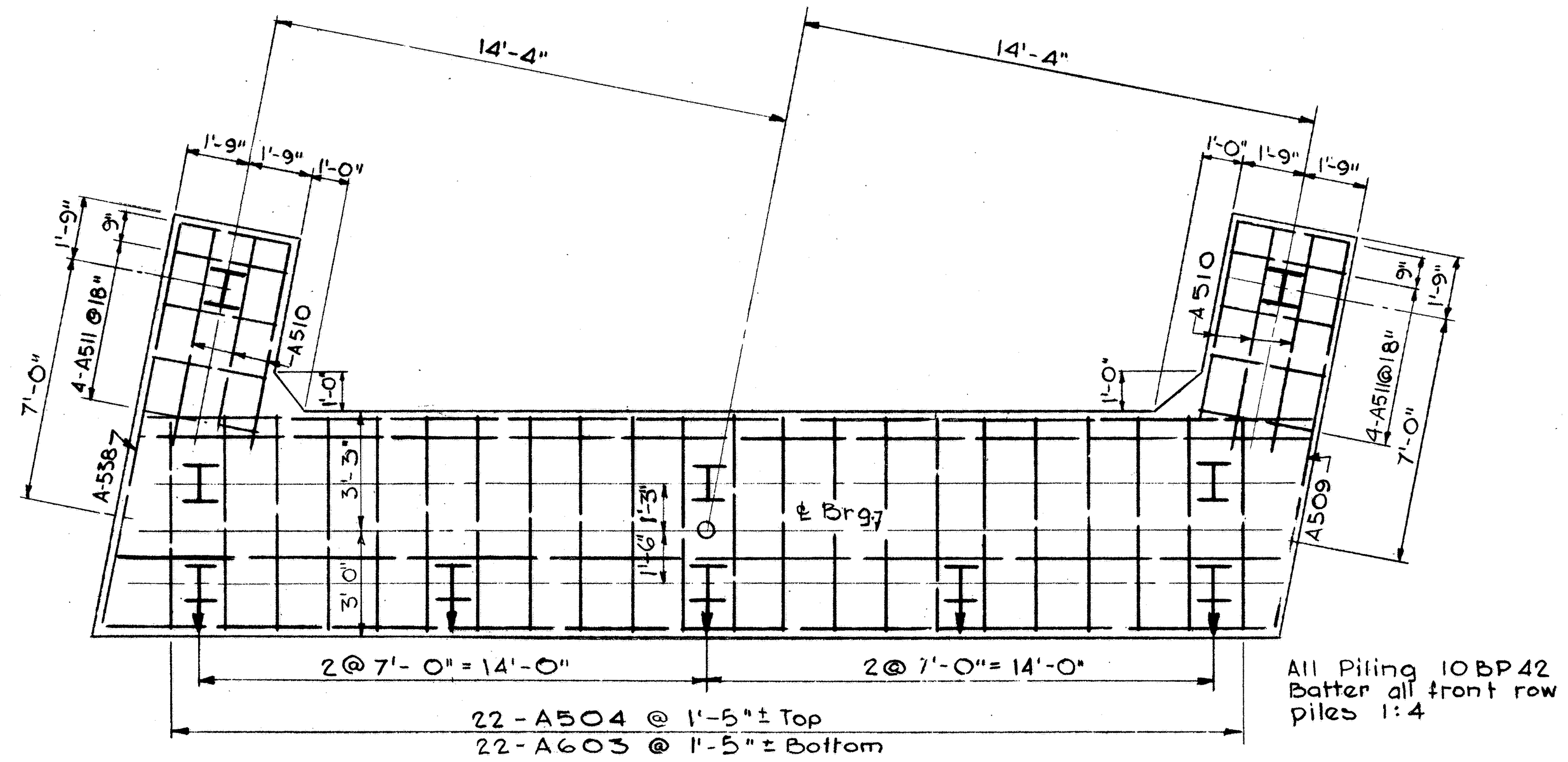
SOUTH WINGWALL - REAR ABUT.
NORTH WINGWALL - FWD. ABUT.

SIDE ELEVATIONS

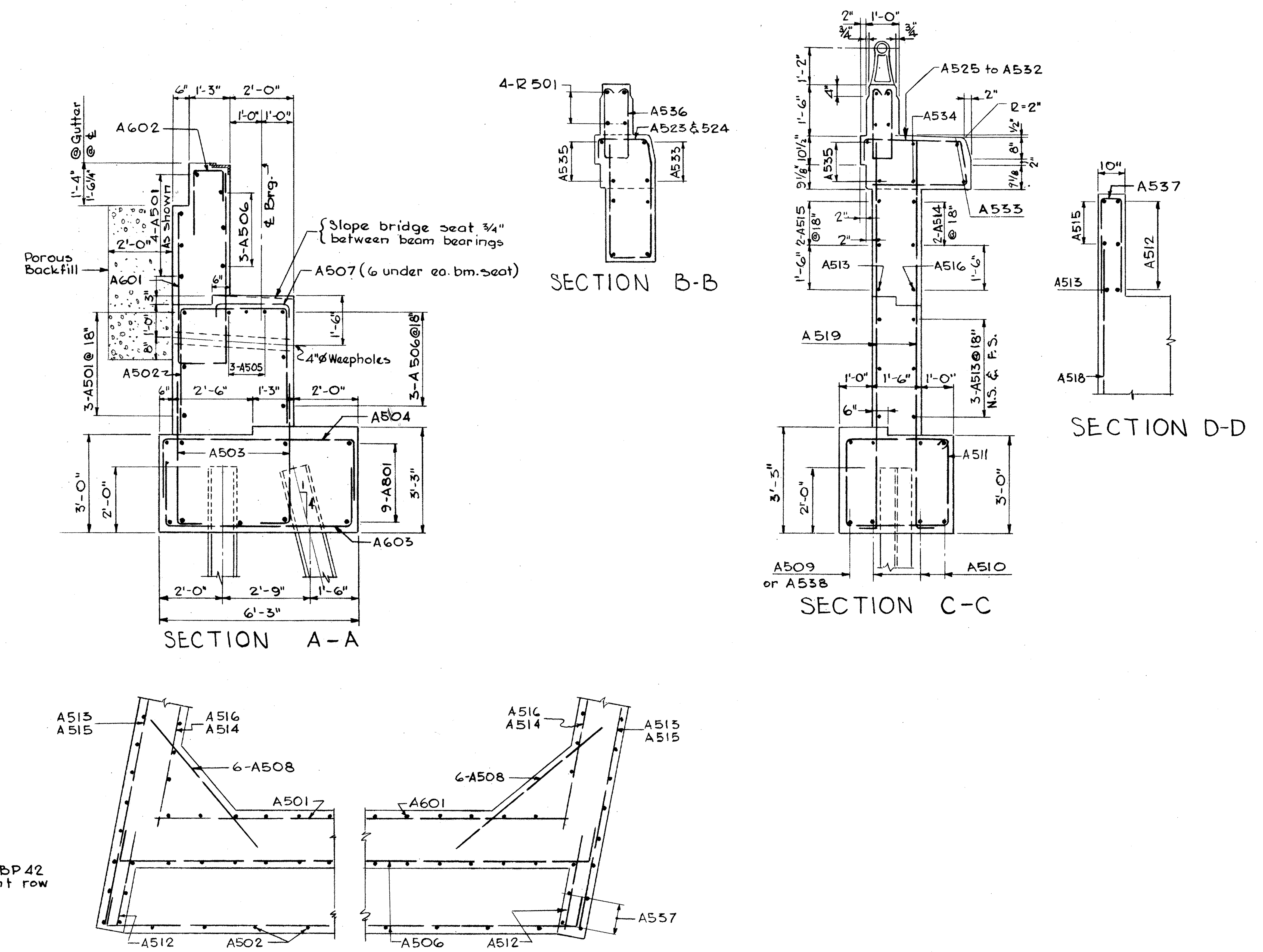
SOUTH WINGWALL - FWD. ABUT.
NORTH WINGWALL - REAR ABUT.



ELEVATION



FOOTING PLAN



SECTION A-A

SECTION B-B

SECTION C-C

SECTION D-D

SECTION E-E

CLEARANCE of reinforcing steel from face of concrete shall be 3" in bottom of footing, 1½" in parapet and safety curb and 2" elsewhere.

POROUS BACKFILL shall extend upward to the approach slab and outward to the wingwalls. Excavation therefor, in excess of that required for construction of the abutment, shall be considered as paid for in the contract price per cu. yd. paid for porous backfill.

PROCEDURE: The embankment shall be placed and compacted up to the finished spill-thru slope after which excavation shall be made for the abutment and piles driven.

CONCRETE shall be Class E.

Abutment backwalls above the bridge seat shall not be placed until all steel is erected. Abutment backwalls shall be completed prior to placing bridge deck slab.

BRIDGE SEAT REINFORCING: Special care shall be taken in placing reinforcing steel in the vicinity of the bridge seat so as to avoid interference with the drilling of anchor rod holes.

LEGEND:
N.S. = Near Side
F.S. = Far Side

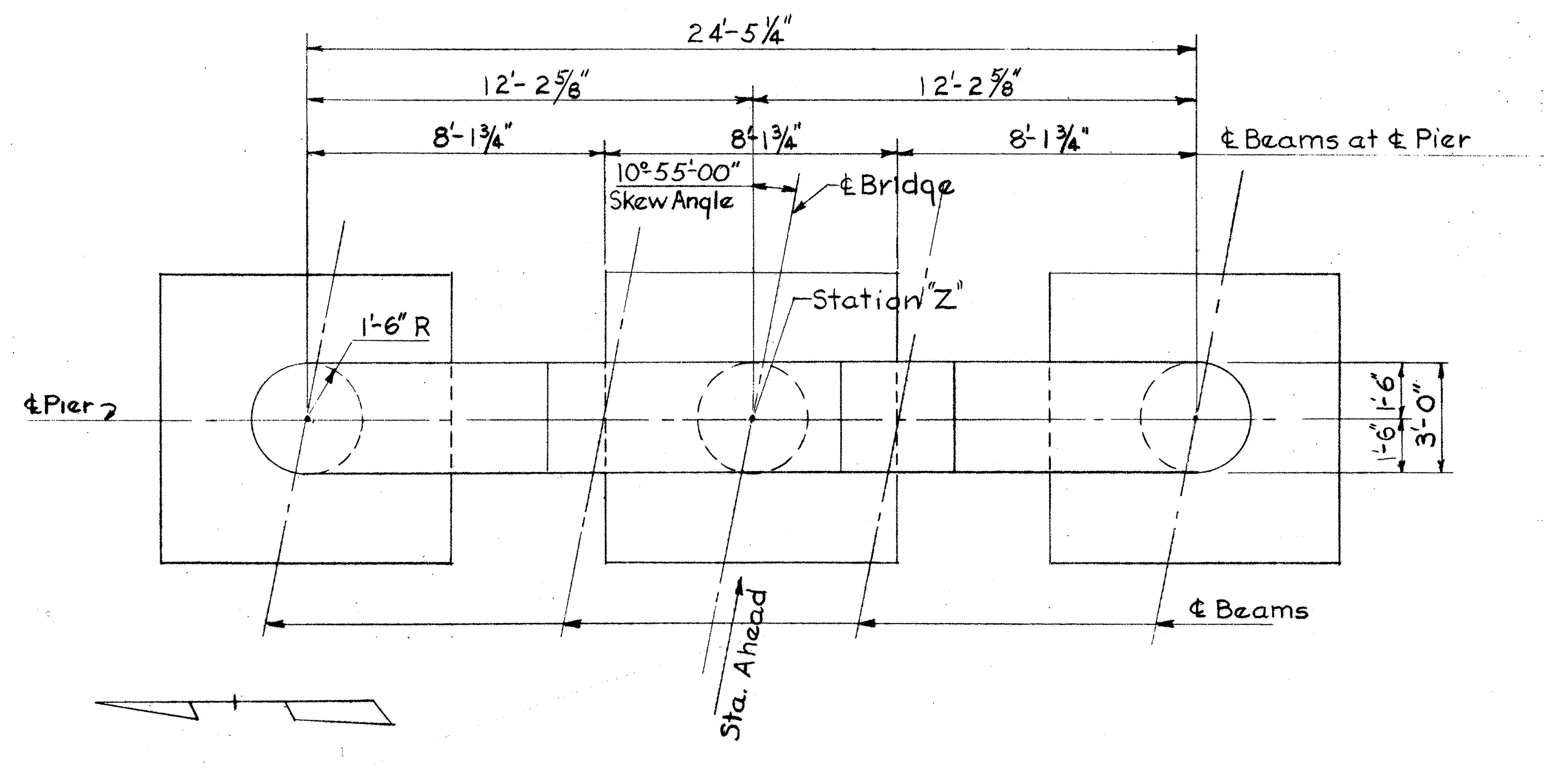
J.E. GREINER COMPANY
CONSULTING ENGINEERS
BALTIMORE, MARYLAND

ABUTMENT DETAILS

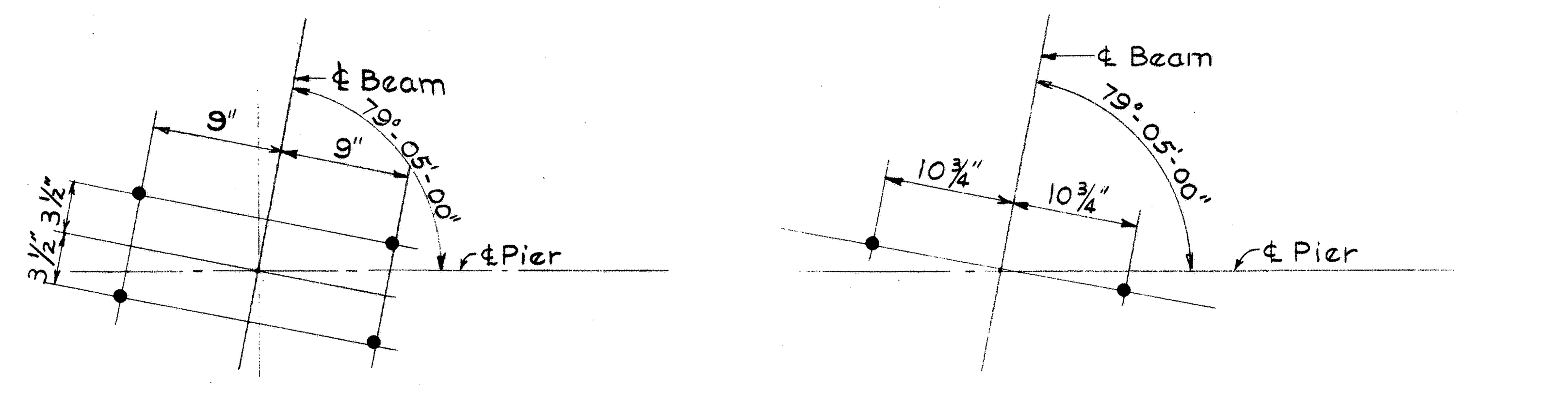
BRIDGE NO. MED.-42-2321
I.R.#71 UNDER MEDINA CO. HWY NO. 138

MEDINA CO. STA. 304+09.91

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RUARK	ALKEMA	LONG	KOHLER	MUDD	9/27/62	



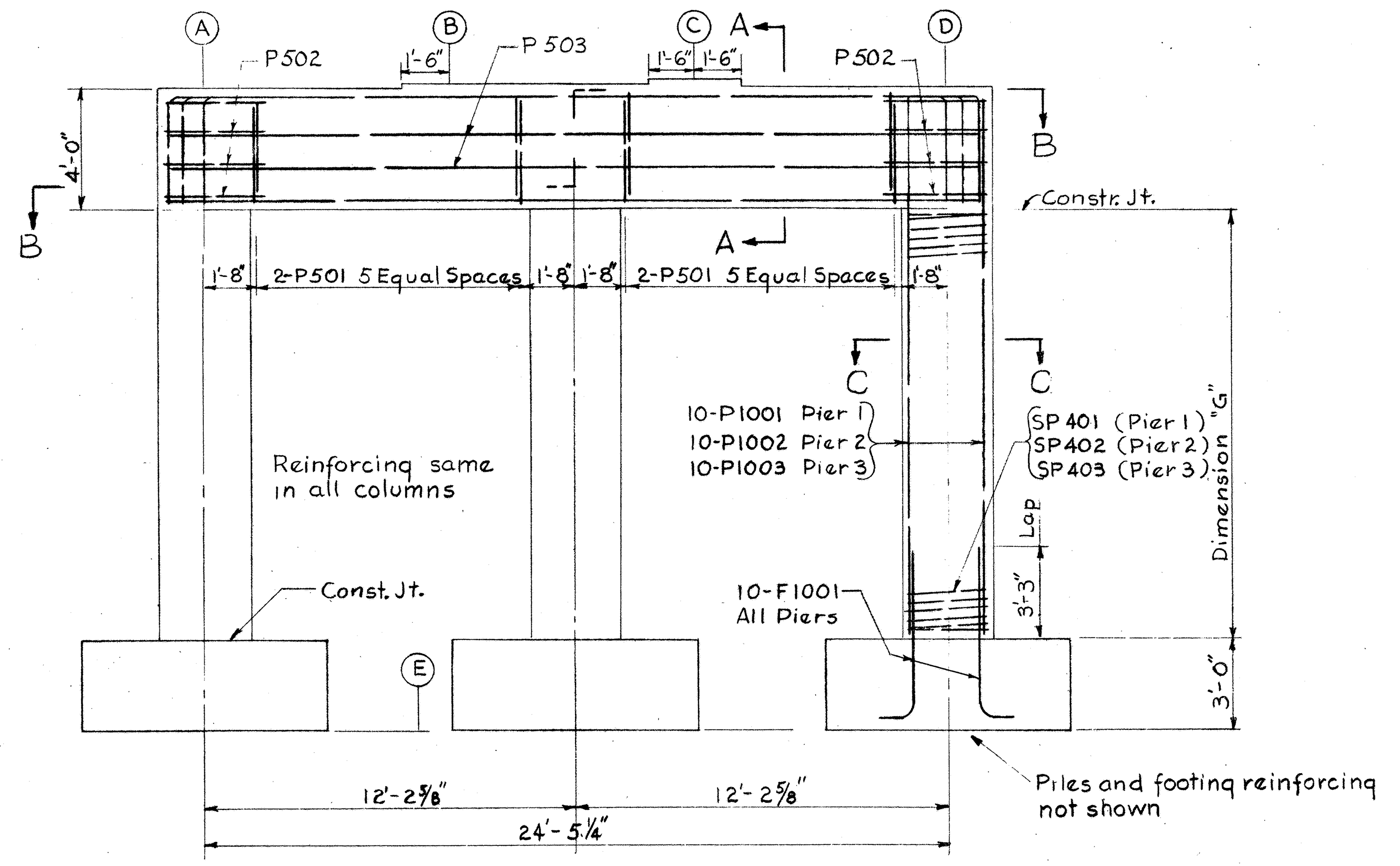
PLAN



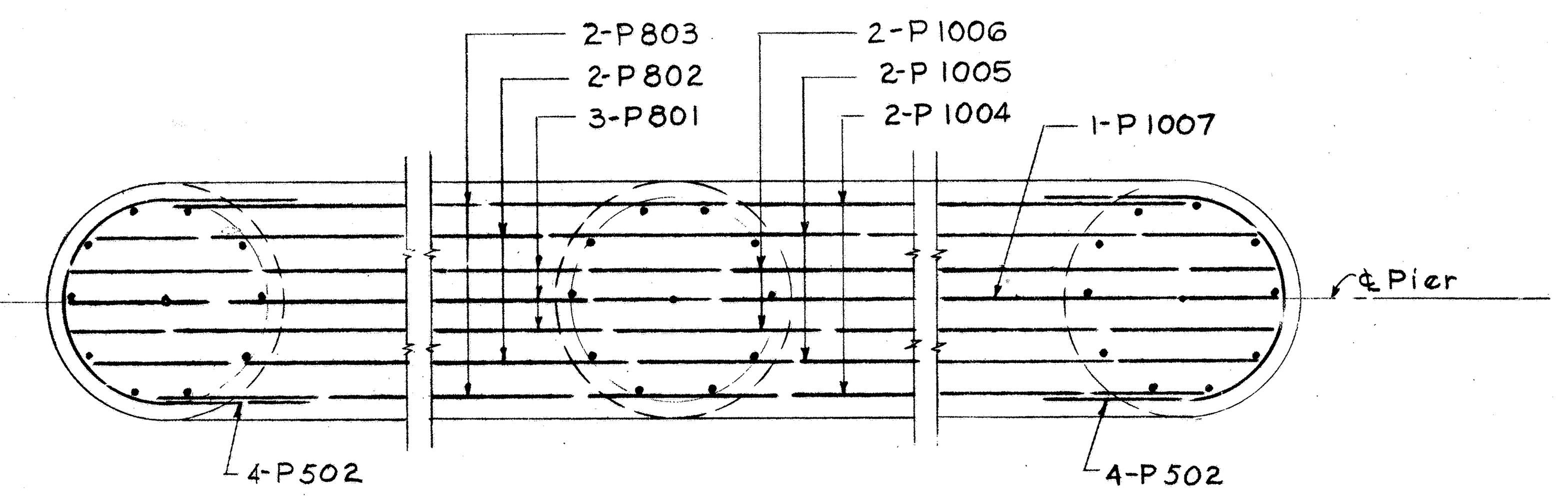
FIXED BEARING F-200
PIER 2

EXPANSION BEARING E-200
PIERS 1 & 3

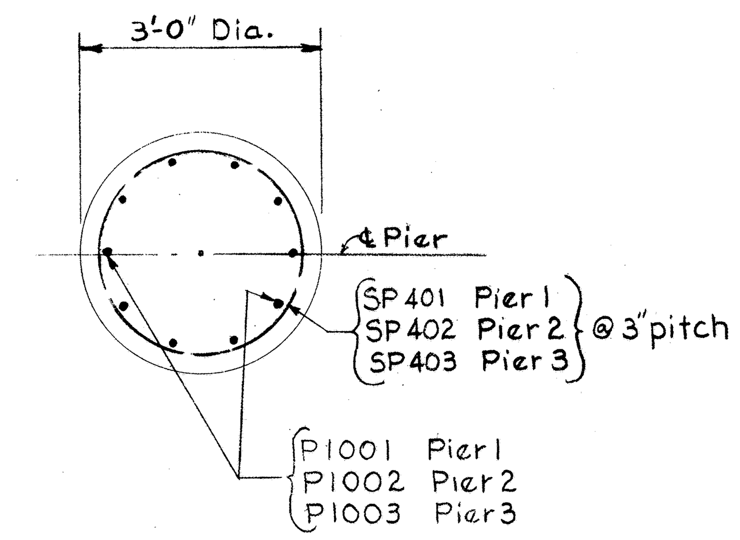
LOCATION OF ANCHOR RODS



ELEVATION

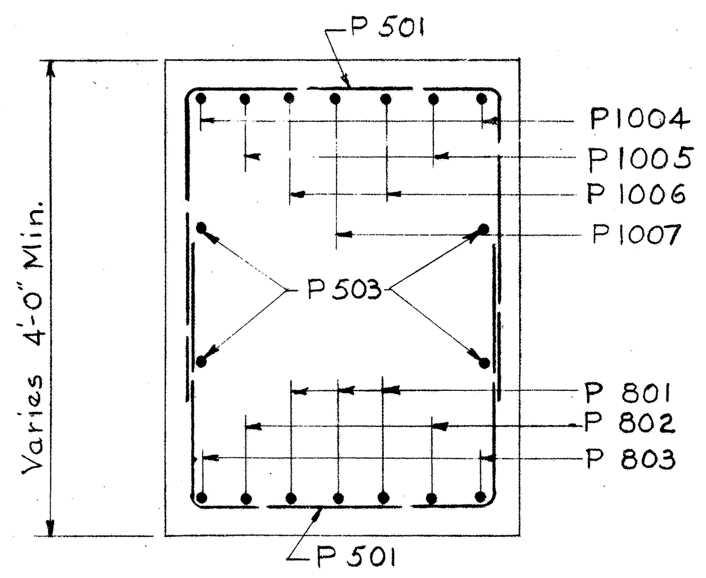


SECTION B-B

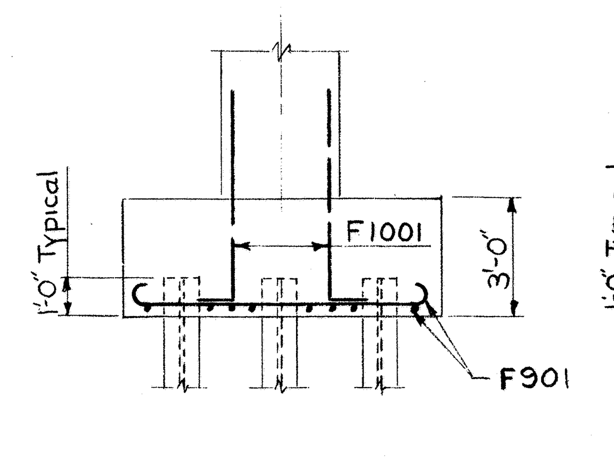


SECTION C-C

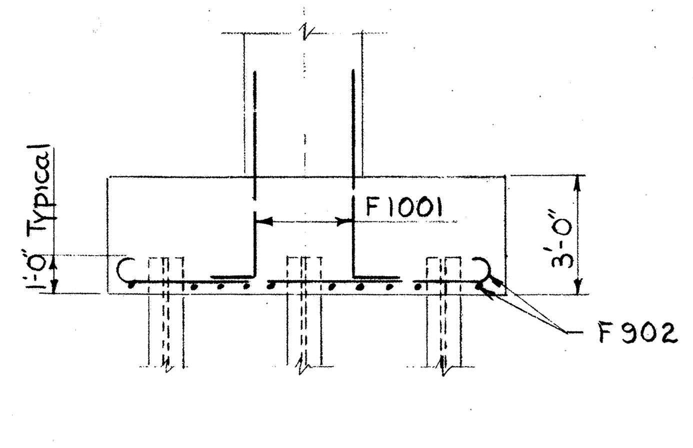
	Station "Z"	ELEVATION					Dimension "G"
		A	B	C	D	E	
Pier 1	49+16.92	1172.35	1172.51	1172.54	1172.45	1150.50	14'-10¼"
Pier 2	50+00.00	1173.54	1173.69	1173.71	1173.60	1150.50	16'-0½"
Pier 3	50+92.00	1174.68	1174.82	1174.83	1174.72	1150.50	17'-2⅛"



SECTION A-A



SECTION D-D



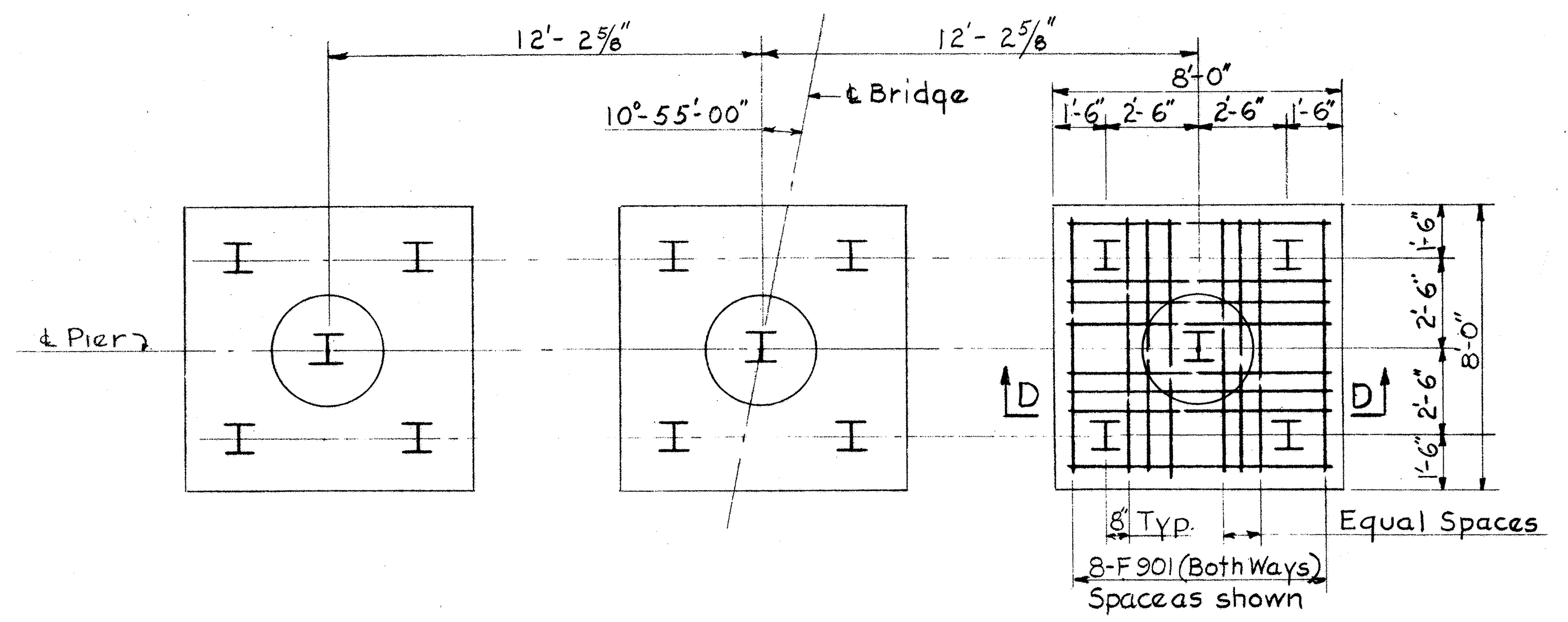
SECTION E-E

For details of Fixed & Sliding Bearings see Std. Dwg. No. FSB-1-62

CLEARANCE of reinforcing steel from face of concrete shall be 3" in bottom of footings and 2" elsewhere.

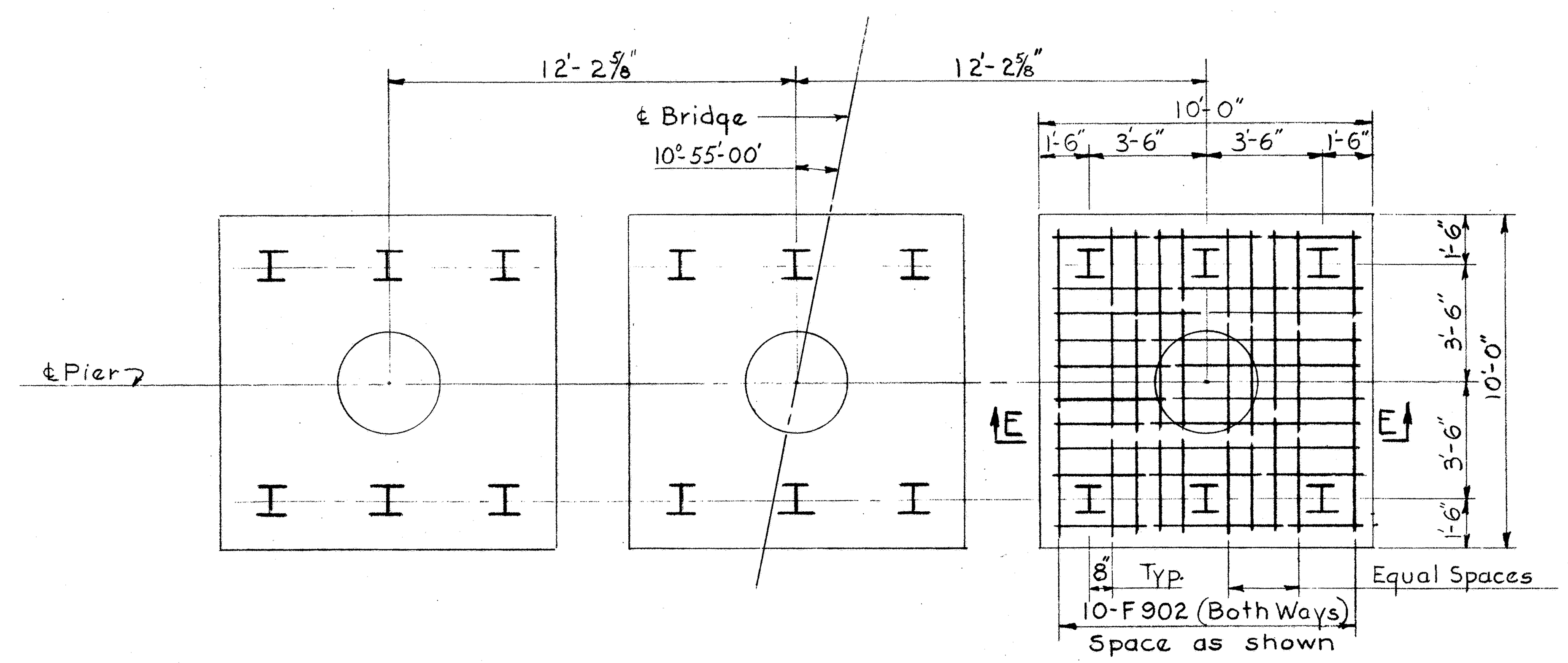
CONCRETE shall be Class E in footings and Class C above footings

BRIDGE SEAT REINFORCING: Special care shall be taken in placing reinforcing steel in the vicinity of the bridge seat so as to avoid interference with the drilling of anchor rod holes



PILE AND FOOTING PLAN
PIERS 1 & 3

Note: All piling 12 BP 53



PILE AND FOOTING PLAN
PIER 2

J.E GREINER COMPANY
CONSULTING ENGINEERS
BALTIMORE, MARYLAND

PIER DETAILS

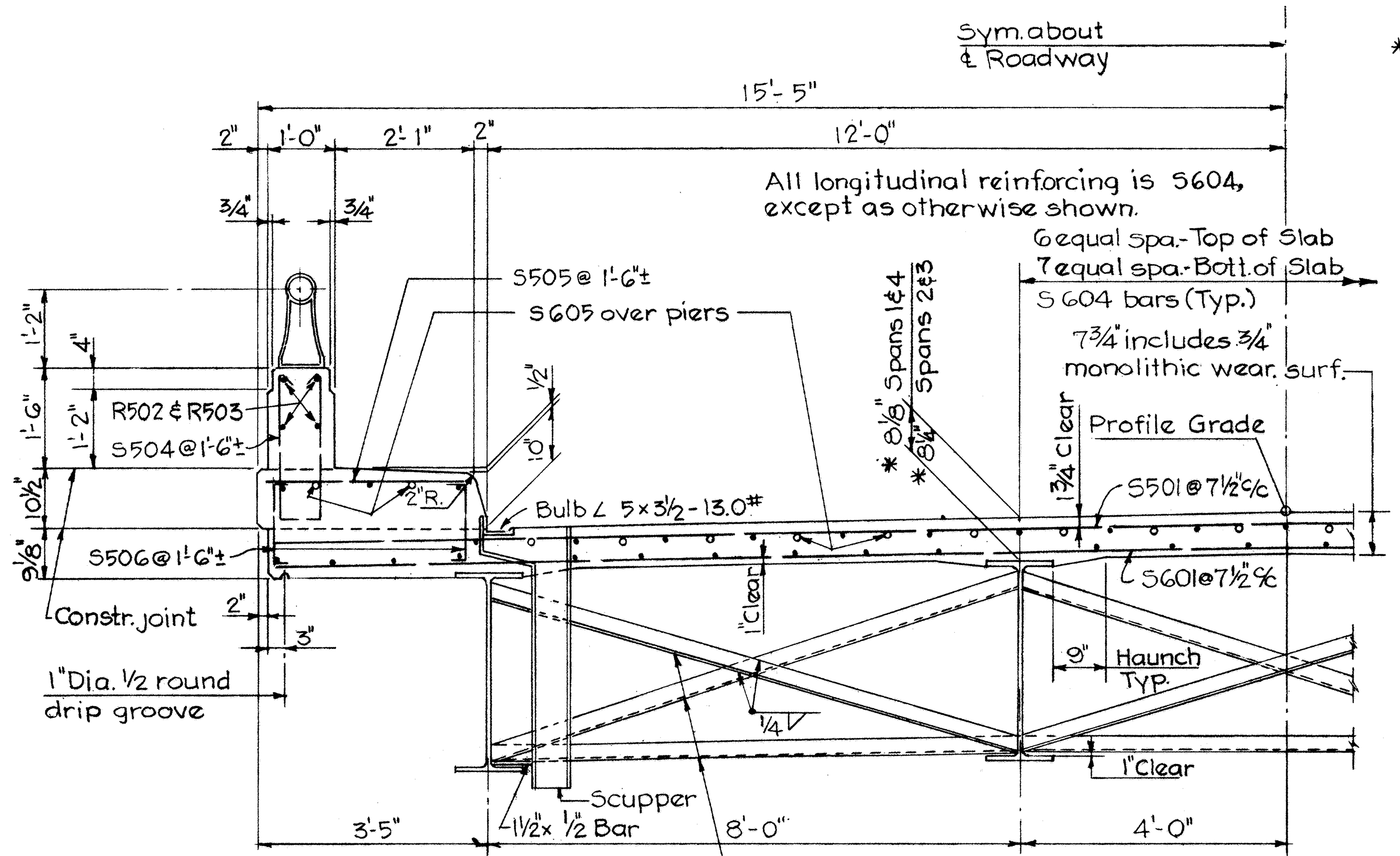
BRIDGE NO. MED.-42-2321
I.R.# 71 UNDER MEDINA CO. HWY.# 138

MEDINA CO. STA. 304+09.91

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DE JESUS	DE JESUS	ORGAIN	KOHLER	MUDD	9/27/62	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

MED.- 42- 21.94

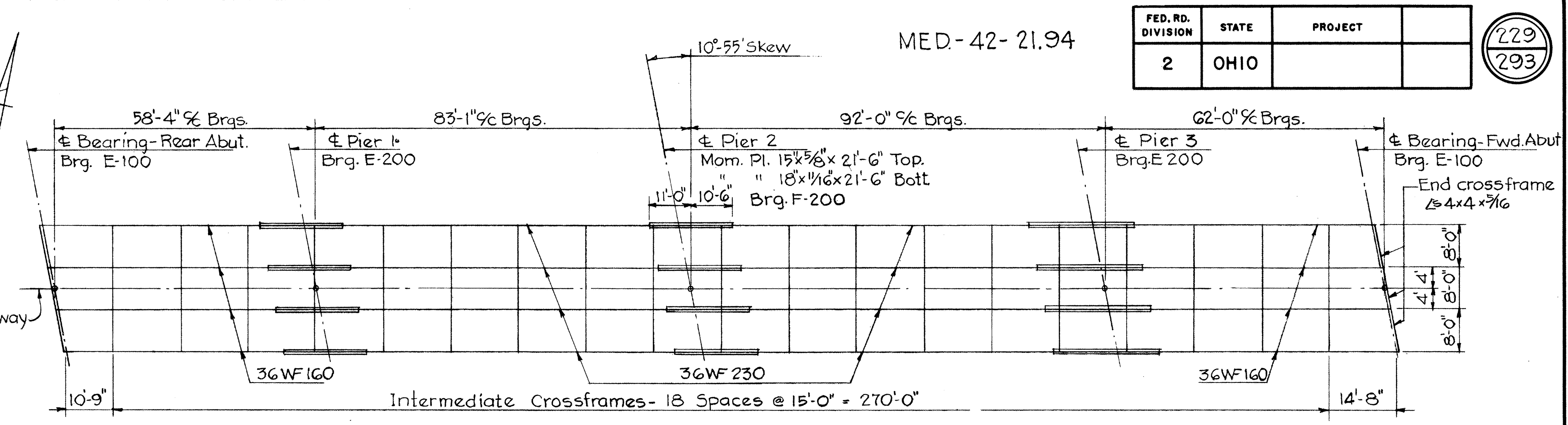


Intermediate Crossframe ∠s 3×3×5/16. Weld both sides of vertical leg and top side of horizontal leg to beam with ¼" continuous fillet weld.

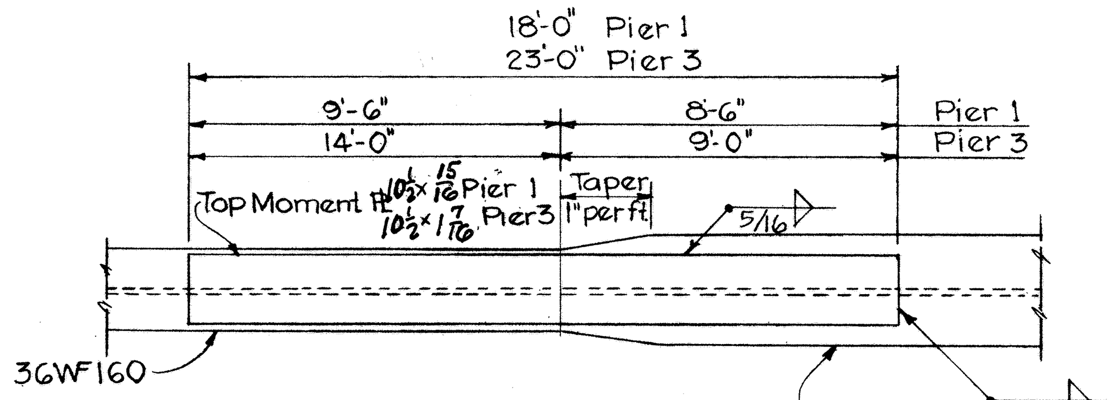
HALF TRANSVERSE SECTION

* This is the nominal dimension. The quantity of deck concrete to be paid for shall be based on this dimension, even though deviation from it may be necessary because the top flange of the beam may not have the exact camber or conformation required to place it parallel to the finished grade.

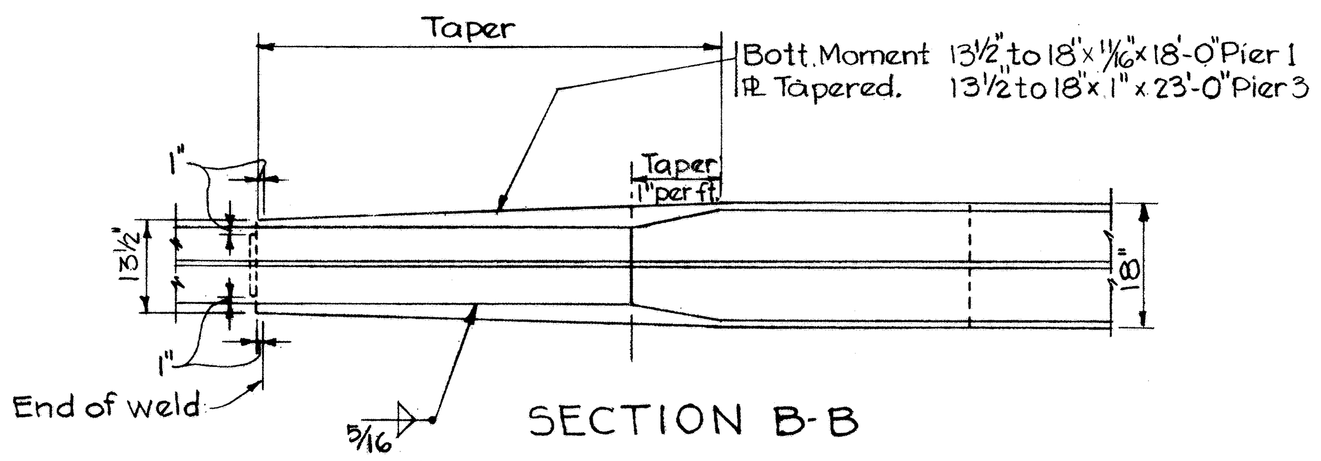
DECK SLAB HAUNCH: The haunch in the deck slab adjacent to the top of steel beams, which is shown as 9" wide may vary from this dimension between the limits of 6" and 12" except that the maximum slope shall not exceed 3 inches per foot. Payment for deck slab concrete shall be based on the 9" width.



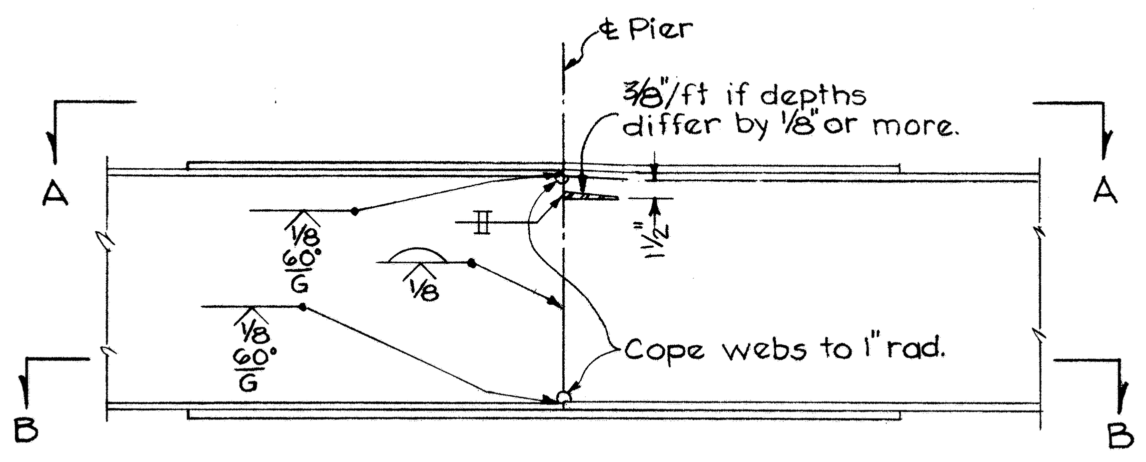
STEEL FRAMING PLAN



SECTION A-A



SECTION B-B

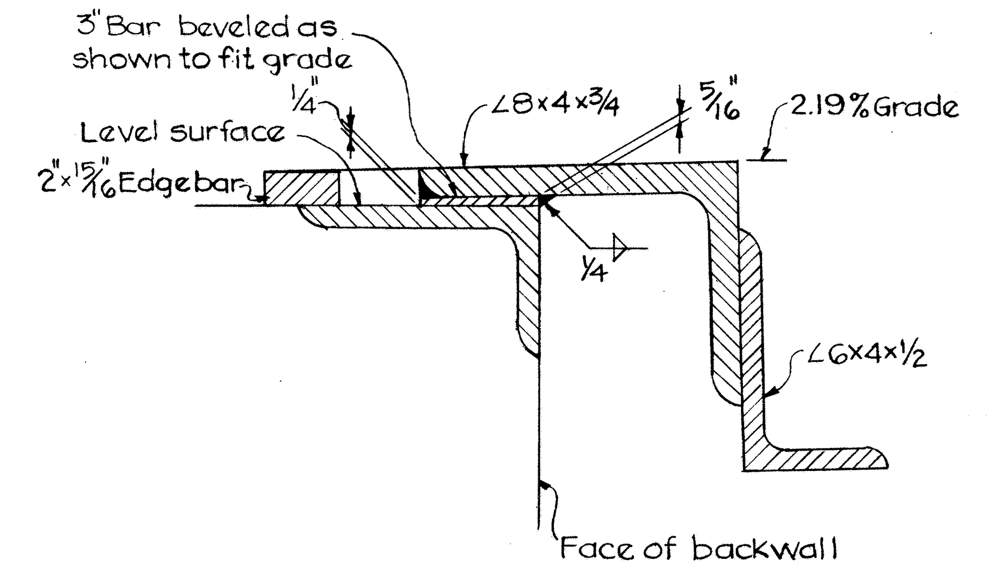


BEAM SPLICE DETAILS AT PIERS 1 & 3
(Split beams at Pier 2 similarly, if depth of one beam exceeds the other by 1/8")

BEAM SPLICE WELDING PROCEDURE

1. Raise end of beam 4¾" at Pier 3.
2. Butt weld the beam flanges and web at Pier 2, using the following sequence: make one pass on each flange, then two on the web; repeat, using one pass at each location until welds are completed.
3. Weld the bottom and top moment plates at Pier 2.
4. Lower the end of beam at Pier 3 to final position.
5. Make the splices at Piers 1 & 3 in the same manner, raising the end of the beams 1" at the rear abutment and 1⅝" at the forward abutment.

DEFLECTION AND CAMBER								
	Outside Beams				Inside Beams			
	Spans				Spans			
	1	2	3	4	1	2	3	4
Deflection due to weight of steel	1/32"	3/32"	3/16"	1/32"	1/32"	3/32"	3/16"	1/32"
Deflection due to remaining D.L.	5/16"	3/8"	25/32"	9/32"	7/32"	9/32"	9/16"	3/16"
Convexity required for vertical curve.	17/32"	1 3/32"	25/32"	0	17/32"	1 3/32"	25/32"	0
Sum of Deflections and Convexity	7/8"	1 9/16"	1 3/4"	5/16"	25/32"	1 15/32"	1 17/32"	7/32"
Required Camber	7/8"	1 5/8"	1 3/4"	0	3/4"	1 1/2"	1 1/2"	0



SECTION THRU END DAM AT REAR ABUTMENT

FOR ADDITIONAL NOTES AND DETAILS OF END DAM AT FORWARD ABUTMENT. See Section C-C on Sheet No. 2 of 6 of Std. Dwg. CSB-2-56.

SUPERSTRUCTURE NOTES

CONCRETE DECK PLACING: In order to facilitate water curing of the concrete of the deck slab, the placing of concrete shall progress upgrade. The slab may be placed in sections between transverse construction joints which are parallel to the piers, and are located near the center of any span.

MACHINE FINISH: The concrete bridge deck shall be finished by use of a finishing machine.

WELDING of structural steel shall be Class "A" except as otherwise shown. Welds shown as field welds may, at the option of the Contractor, be made in the shop.

For details of end crossframes, roadway end finish, beam cut-off at backwall, and welded butt joint in end finish angles at ℄ of roadway, see Standard Drawing CSB-2-56, Sheet 2.

For details of scuppers, bulb angle gutter supports, curb plates, and beam splices at Pier 2, see Standard Drawing CSB-2-56, Sheet 3.

For details of fixed and sliding bearings, see Standard Drawing FSB-1-62.

For details of aluminum railing see Standard Drawing AR-1-57, Type A.

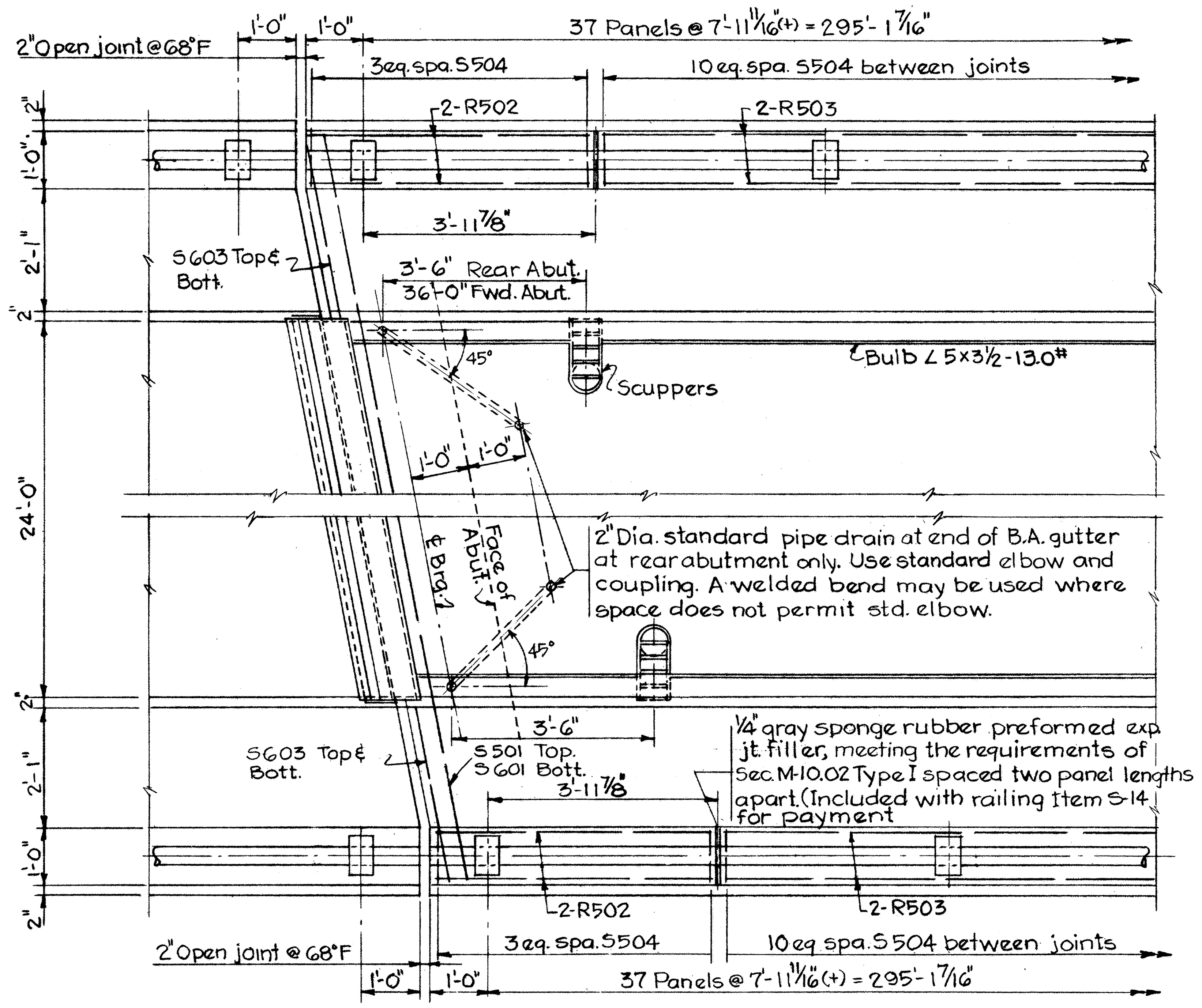
For Scupper spacing, see Sheet No. 226

Reinforcing steel shall be 1½" clear of surfaces in parapets and safety curbs.

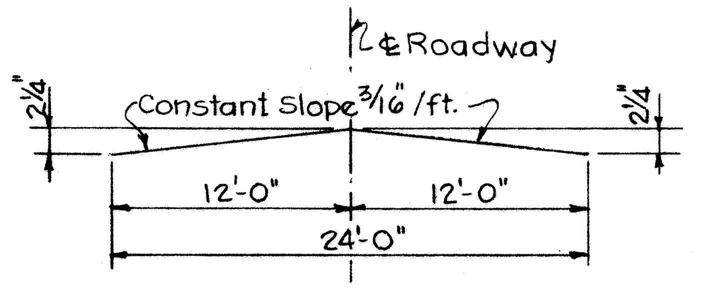
SHOP PAINTING STEEL: The surface preparation of all steel requiring shop painting as per the Plans and Specifications, shall be accomplished by blast cleaning or power tool cleaning, except as noted in the Specifications regarding the use of Chromate Primers.

PAINT: Both shop and field, shall be applied by brushing. Spray application will not be permitted.

SHEET LEAD shall conform to the requirements of A.S.T.M. Designation B 29 without restriction to the Common Desilverized type.



PART PLAN AT ABUTMENTS



BRIDGE ROADWAY CROWN

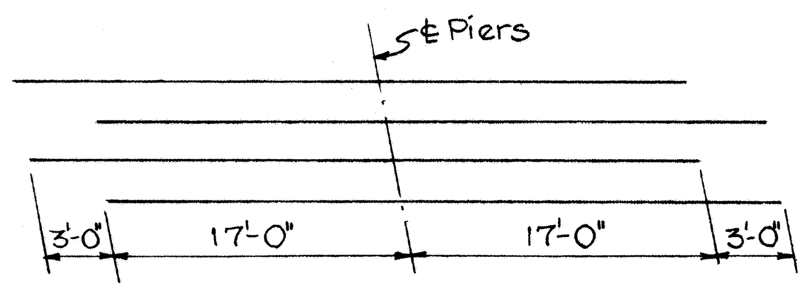


DIAGRAM SHOWING STAGGER OF S605 BARS OVER PIERS

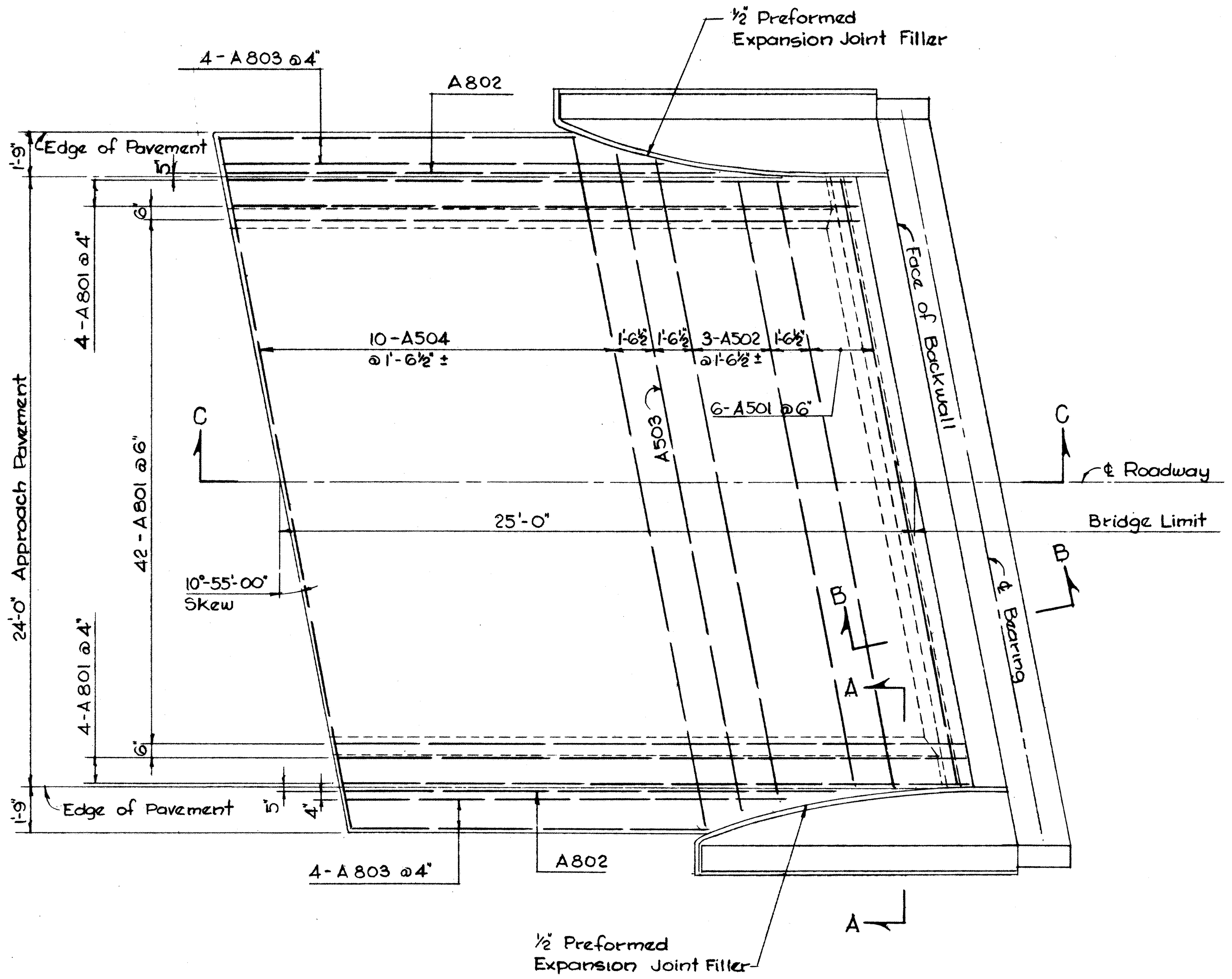
J.E. GREINER COMPANY
CONSULTING ENGINEERS
BALTIMORE, MARYLAND

SUPERSTRUCTURE DETAILS

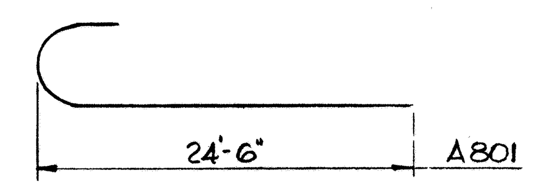
BRIDGE NO. MED.-42-2321
I.R. #71 UNDER MEDINA CO. HWY. NO. 138

MEDINA CO. STA. 304+09.91

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
PAHL	WALTER	CLARK	KOHLER	MUDD	9/27/62	



REINFORCING STEEL LIST				
MARK	NO.	LENGTH	WEIGHT	SHAPE
A801	100	25'-7"	6831	B
A802	4	19'-3"	206	S
A803	4 Series of 4 bars 1'-1" Incr.	14'-0" to 17'-3"	668	S
A501	12	24'-0"	300	S
A502	2 Series of 3 bars 7" Incr.	24'-6" to 25'-8"	157	S
A503	2	26'-7"	55	S
A504	20	27'-6"	574	S



Quantities are for 2 Approach Slabs

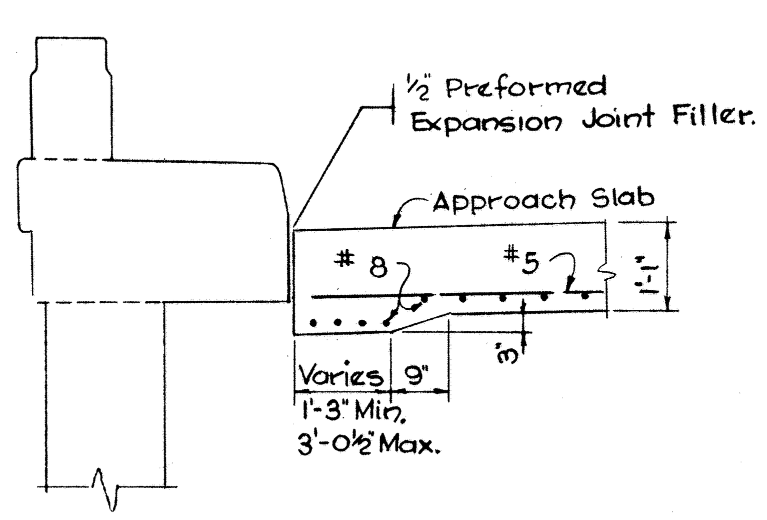
NOTES

½" Preformed Expansion Joint Filler shall be included in Item I-7 "Reinforced Concrete Approach Slab" for payment.

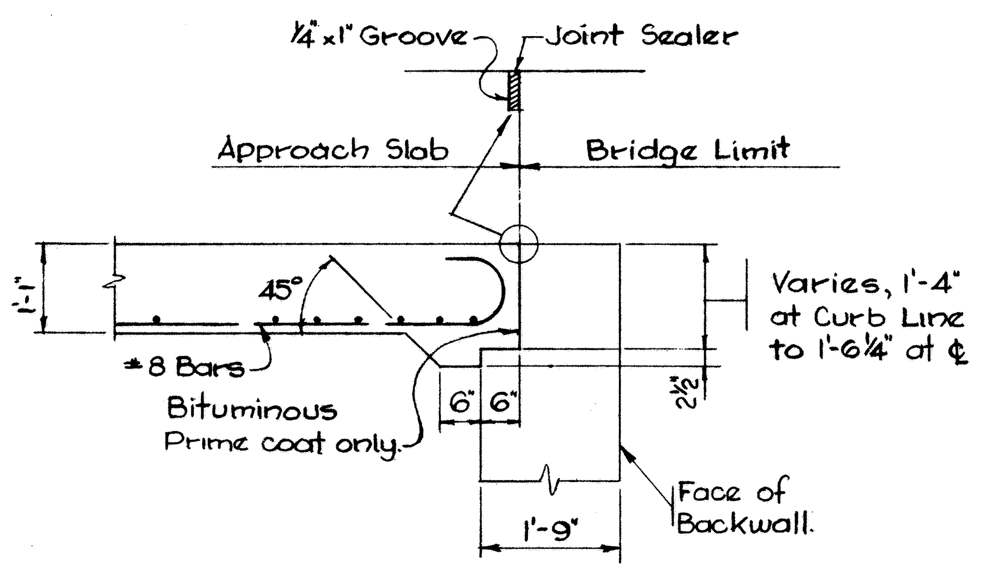
Bar Size is indicated in the Bar Mark. The first digit indicates the Bar Size Number. For example A801 is a No. 8 Size Bar.

Work this Sheet with Standard Drawing No. A.S.-1-54 (Revised 7-5-62)

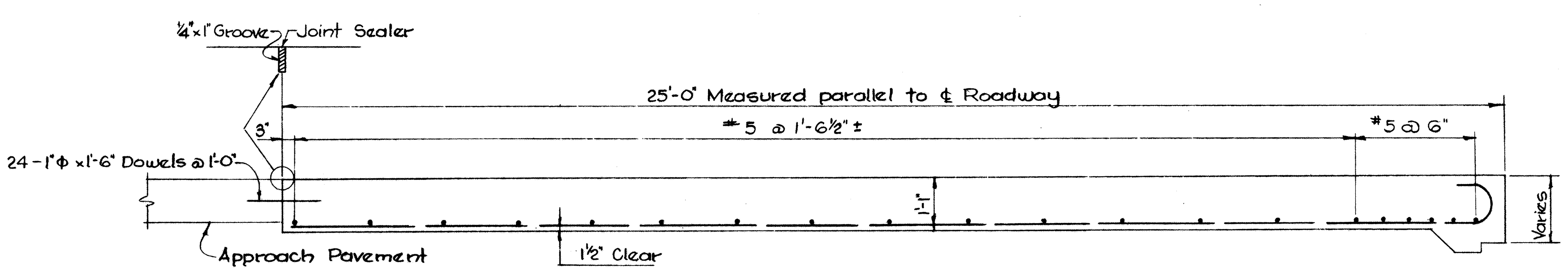
Concrete in approach slabs shall be Class C.



SECTION A-A



SECTION B-B



SECTION C-C

J.E. GREINER COMPANY
CONSULTING ENGINEERS
BALTIMORE, MARYLAND

APPROACH SLAB DETAILS

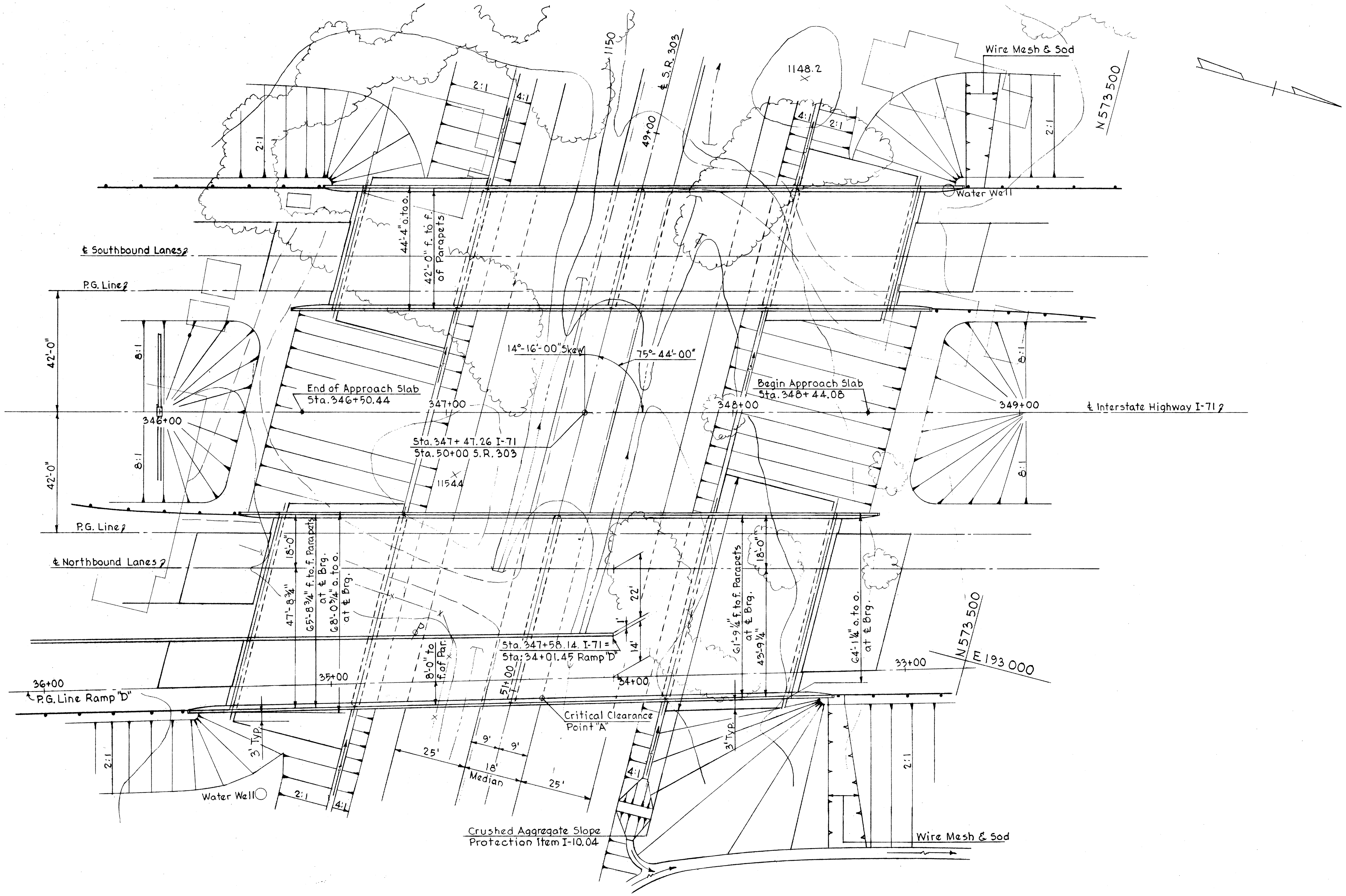
BRIDGE NO. MED.-42-2321
I.R. #71 UNDER MEDINA CO. HWY. NO. 138

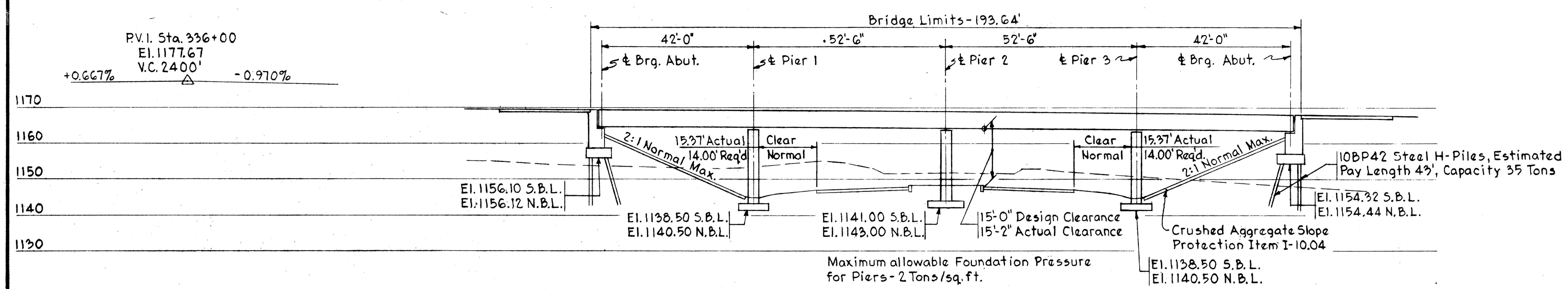
MEDINA CO. STA. 304+09.91

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
ALKEMA	ALKEMA	KATZ	KOHLER	MUDD	9/27/62	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

MED.-42-21.94





PROPOSED STRUCTURE

Type: Continuous steel beams with reinforced concrete deck and substructure
Spans: 42'-0"; 52'-6"; 52'-6"; 42'-0"
Roadway: Southbound lanes - 42'-0" face to face of parapets
Northbound lanes - Varies, see Plan this Sheet
Load Frequency: CF = 2000, Adequate for A.A.S.H.O alternate loading
Skew: 14°-16'-00" (L.F.)
Wearing Surface: 1" Monolithic concrete
Approach Slabs: AS-1-54 (25' long)
Alignment: Tangent
Traffic Volume: 23,000, ADT-1975, I-71
5,800, ADT-1975, S.R. 303
FOUNDATION SOUNDINGS: Foundation design and foundation quantities are based on a study of drive sample-core borings and drive rod penetration tests made at the site. This sounding information may be inspected in the office of the Bureau of Bridges in Columbus or in the Division Office, but the State does not guarantee the accuracy thereof.
Traffic on S.R. No. 303 to be maintained by a temporary run-around, see Sheet No. 135.

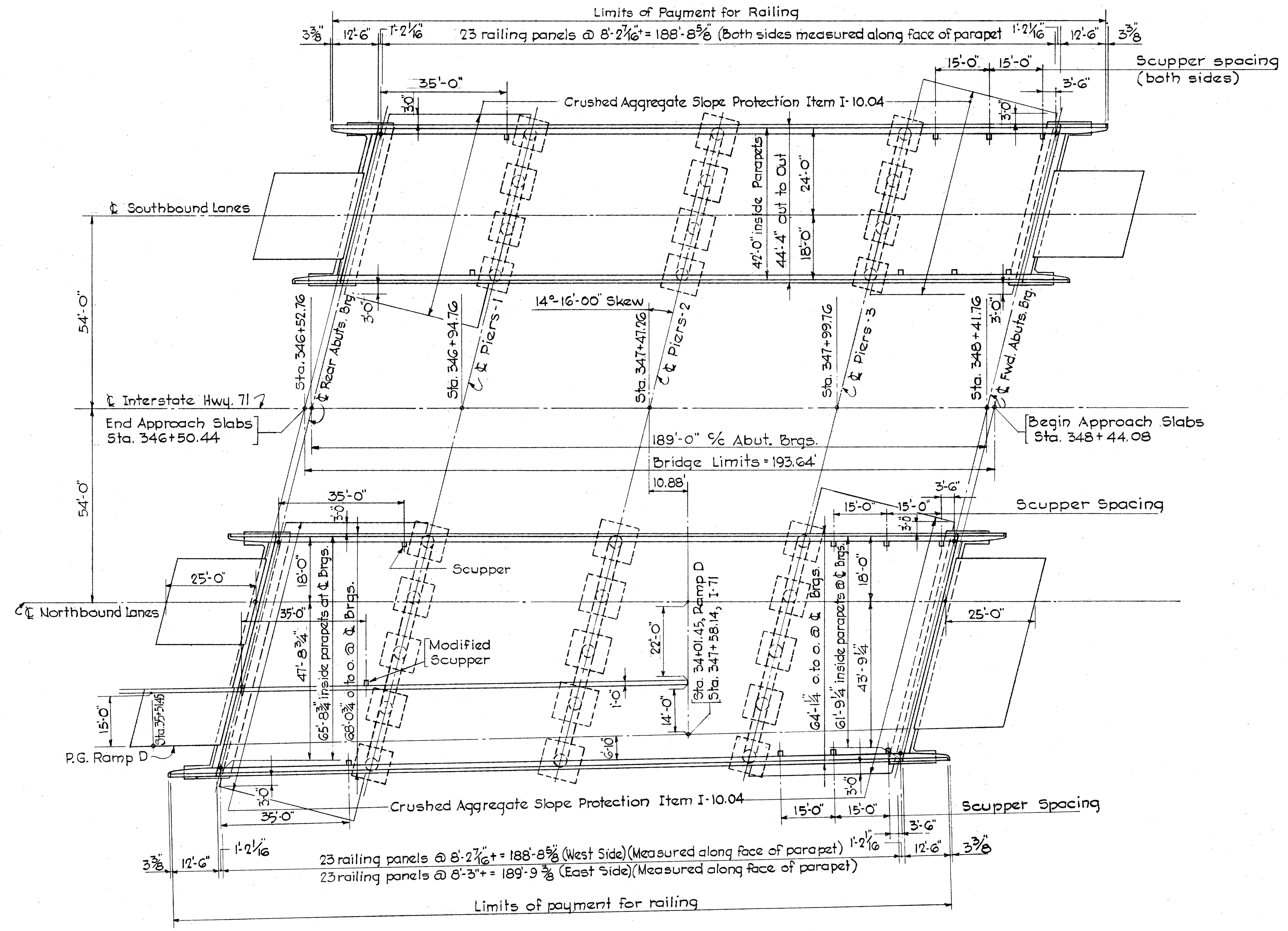
J. E. GREINER CO.
CONSULTING ENGINEERS
BALTIMORE, MARYLAND

SITE PLAN

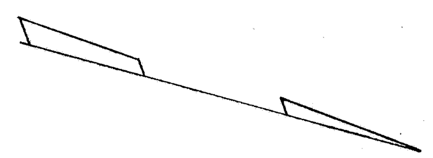
BRIDGE NO. MED.-42-2404 L.&R.
INTERSTATE HIGHWAY #71 OVER
OHIO STATE ROUTE NO. 303

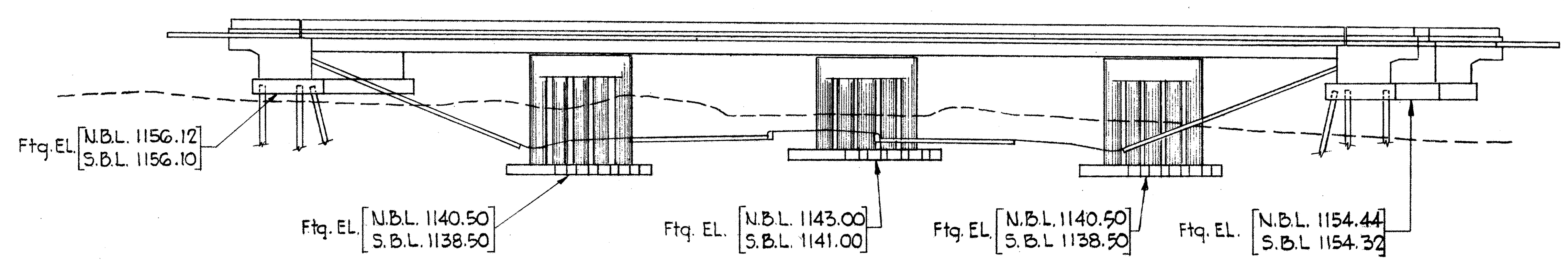
MEDINA CO. STA. 347+47.26

PRESENT TOPOGRAPHY		PROPOSED WORK			
SURVEYED	DRAWN	DESIGNED	DRAWN	CHECKED	REVIEWED
HENRY	AIR SURVEY CORP.	POLDEMANN	ALKEMA	RUARK	MUDD



GENERAL PLAN





ELEVATION

GENERAL NOTES

DESIGN SPECIFICATIONS: This structure conforms to the requirements of "Design Specification for Highway Structures" of the State of Ohio, Department of Highways, dated 9-1-57, together with current revisions thereof.

REFERENCE should be made to:
Standard Drawing FSB-1-62 dated 4-19-62
" " CSB-2-56, Sheets 2&3 revised 2-2-59
" " AR-1-57, Type A, revised 4-2-62, and
" " AS-1-54, revised 7-5-62

EXCAVATION QUANTITY includes the removal of fill material between the surface of the proposed embankment and the bottom of the abutment.

SURFACE FINISH OF CONCRETE: The requirements of Sec. S-1.22, Rubbed Finish, shall apply to the following exposed concrete surfaces:
a. The entire superstructure except the top and bottom surfaces of safety curbs and roadways.
b. The entire surface of piers and abutments except bridge seats, backwalls and the face of spill-through abutments between outside beams.

ABUTMENT PILES shall be driven with a hammer of not less than 11,000 ft.-lbs. per blow, to firm contact with rock. If the length of penetration is approximately equal to the depth of rock according to the bridge foundation investigation report, the firm contact shall be considered as attained when the capacity according to the formula in Sec. S-18.05 is not less than the following value for a pile hammer of the indicated rating:
44 tons per pile using a 11,000 ft.-lb. hammer
37 tons per pile using a 15,000 ft.-lb hammer
If the energy rating of the hammer is between the ratings as shown above, the required formula capacity shall be determined by interpolation. The design load is 35 tons per pile.

ESTIMATED QUANTITIES (2 BRIDGES)

Item	Total	Unit	Description	Super.	Abuts.	Piers	Gen.		
E-2	1165	Cu.Yds.	Unclassified excavation		637	528			
S-1	634	Cu.Yds.	Class "C" concrete, superstructure	634					
S-1	266	Cu.Yds.	Class "C" concrete, piers above footings			266			
S-1	224	Cu.Yds.	Class "E" concrete, abutments above footings		224				
S-1	371	Cu.Yds.	Class "E" concrete, footings		191	180			
S-4	288,267	Lbs.	Reinforcing steel	192,461	29,212	66,594			
S-7	480,400	Lbs.	Structural steel	480,400					
S-8	480,400	Lbs.	Field painting of structural steel	480,400					
S-14	865.32	Lin. Ft.	Railing (aluminum rail, supports and concrete parapet)	765.32	100.00				
S-16	Lump	Sum	First test pile				Lump		
S-18	2752	Lin. Ft.	Steel piles, 10 BP42		2752				
S-29	71	Cu.Yds.	Porous backfill		71				
S-29	17	Each	Scuppers	17					
I-10	1291	Sq.Yds.	Crushed aggregate slope protection				1291		
★ Special	634	Each	Water-reducing, set retarding admixture	634					
I-127	*2*	*Each*	*Delineators, Type C-2, Bracket Mounted*	*2*					
I-127	*1*	*Each*	*Delineator, Type A-1, Bracket Mounted*	*1*					

★ See Proposal Note

J.E GREINER COMPANY
CONSULTING ENGINEERS
BALTIMORE, MARYLAND

GENERAL PLAN & ELEVATION
NOTES & ESTIMATED QUANTITIES
BRIDGE NO. MED.-42-2404 L&R
I.R.# 71 OVER S.R. NO. 303

MEDINA CO. STA. 347+47.25

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
WEISER	CORONEL	KEEFER	ROBINSON	MUDD	3/27/62	

MED.-42-21.94

FED. RD. DIVISION	STATE	PROJECT		
2	OHIO			

REINFORCING STEEL LIST

SOUTHBOUND LANES					NORTHBOUND LANES				
MARK	NO.	LENGTH	WEIGHT	SHP.	MARK	NO.	LENGTH	WEIGHT	SHP.
SUPERSTRUCTURE									
S501	280	5'-4"	1.558	B	S501	280	5'-4"	1,558	B
S502	256	1'-10"	490	S	S502	257	1'-10"	491	S
S503	512	2'-4"	1.246	B	S503	514	2'-4"	1,251	B
					S504	86	3'-6"	314	B
					S505	8	33'-4"	278	S
					S601	286	21'-5"	9,200	S
					S602	286	25'-7"	10,990	S
					S603	64	26'6"	2,547	S
					S604	79	25'-6"	3026	S
					S605	79	24'6"	2907	S
					S606	64	23'6"	2259	S
S607	468	33'-4"	23,429	S	S607	702	33'-4"	35,147	S
S608	102	20'-0"	3,064	S	S608	156	20'-0"	4,686	S
S609	286	45'-0"	19,331	S					
					S701	286	21'-8"	12,668	S
S707	286	45'-0"	26,306	S	S702	286	25'-7"	14,954	S
					S703	64	26'-9"	3499	S
					S704	79	25'-9"	4158	S
					S705	79	24'-9"	3997	S
					S706	64	23'-9"	3107	S
PARAPET RAILING									
R501	16	12'-2"	*	S	R501	16	12'-2"	*	S
R502	16	4'-9"	*	S	R502	16	4'-9"	*	S
R503	88	16'-1"	*	S	R503	88	16'-1"	*	S

*Parapet railing bars are included with S-14 for payment

REPLACEMENT BARS

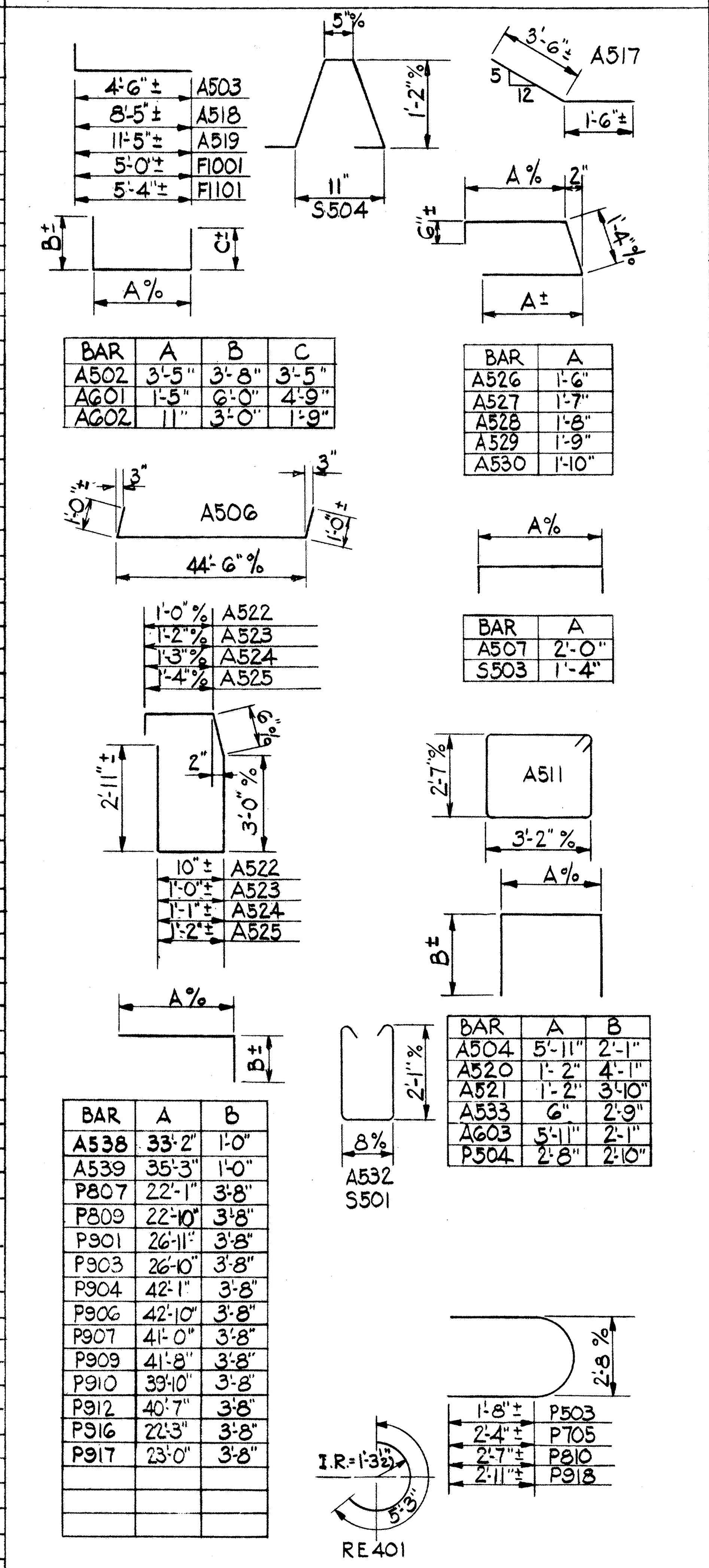
NORTHBOUND & SOUTHBOUND LANES

RE401	1	5'-3"	———	B
RE501	2	5'-7"	———	S
RE601	7	5'-11"	———	S
RE701	4	6'-2"	———	S
RE801	1	6'-6"	———	S
RE901	1	6'-10"	———	S
RE1001	2	7'-2"	———	S
RE1101	1	7'-6"	———	S

SPIRAL REINFORCING

MARK	NO.	CORE DIA. % SPIRAL	LENGTH	PITCH	NO. OF TURNS	WEIGHT
NORTHBOUND LANES						
SP401	5	32"	16'-3"±	3"	68	2092
SP402	5	32"	13'-1"±	3"	55	1692
SP403	5	32"	15'-4"±	3"	64	1970
SOUTHBOUND LANES						
SP404	4	32"	18'-3"±	3"	76	1872
SP405	4	32"	15'-1"±	3"	63	1551
SP406	4	32"	17'-3"±	3"	72"	1773

BENDING DIAGRAMS



BAR	A	B	C
A502	3'-5"	3'-8"	3'-5"
A601	1'-5"	6'-0"	4'-9"
A602	11"	3'-0"	1'-9"

BAR	A
A526	1'-6"
A527	1'-7"
A528	1'-8"
A529	1'-9"
A530	1'-10"

BAR	A
A507	2'-0"
S503	1'-4"

BAR	A	B
A504	5'-11"	2'-1"
A520	1'-2"	4'-1"
A521	1'-2"	3'-10"
A533	6"	2'-9"
A603	5'-11"	2'-1"
P504	2'-8"	2'-10"

BAR	A	B
A538	33'-2"	1'-0"
A539	35'-3"	1'-0"
P807	22'-1"	3'-8"
P809	22'-10"	3'-8"
P901	26'-11"	3'-8"
P903	26'-10"	3'-8"
P904	42'-1"	3'-8"
P906	42'-10"	3'-8"
P907	41'-0"	3'-8"
P909	41'-8"	3'-8"
P910	39'-10"	3'-8"
P912	40'-7"	3'-8"
P916	22'-3"	3'-8"
P917	23'-0"	3'-8"

SOUTHBOUND LANES					NORTHBOUND LANES				
MARK	NO.	LENGTH	WEIGHT	SHP.	MARK	NO.	LENGTH	WEIGHT	SHP.
ABUTMENTS									
A501	14	43'-6"	635	S					
A502	62	10'-3"	663	B					
A503	124	5'-0"	647	B					
A504	64	9'-10"	656	B					
A505	6	44'-0"	275	S					
A506	12	46'-3"	579	B					
A507	72	3'-0"	225	B	A502	100	10'-3"	1069	B
A508	24	5'-9"	144	S	A503	200	5'-0"	1043	B
A509	8	11'-9"	98	S	A504	104	9'-10"	1067	B
A510	24	7'-6"	188	S	A507	108	3'-0"	338	B
A511	24	11'-10"	296	B	A508	24	5'-9"	144	S
A512	12	3'-3"	41	S	A509	8	11'-9"	98	S
A513	16	8'-10"	147	S	A510	24	7'-6"	188	S
A514	8	11'-6"	96	S	A511	24	11'-10"	296	B
A515	8	14'-3"	119	S	A512	12	3'-3"	41	S
A516	16	6'-3"	104	S	A513	16	8'-10"	147	S
A517	8	5'-0"	42	B	A514	8	11'6"	96	S
A518	8	8'-11"	74	B	A515	8	14'-3"	119	S
A519	52	11'-11"	646	B	A516	16	6'-3"	104	S
A520	4	9'-1"	38	B	A517	8	5'-0"	42	B
A521	4	8'-7"	36	B	A518	8	8'-11"	74	B
A522	4	8'-4"	35	B	A519	52	11'-11"	646	B
A523	4	8'-8"	36	B	A520	4	9'-1"	38	B
A524	4	8'-10"	37	B	A521	4	8'-7"	36	B
A525	4	9'-0"	38	B	A522	4	8'-4"	35	B
A526	4	4'-5"	18	B	A523	4	8'-8"	36	B
A527	4	4'-7"	19	B	A524	4	8'-10"	37	B
A528	4	4'-9"	20	B	A525	4	9'-0"	38	B
A529	8	4'-11"	41	B	A526	4	4'-5"	18	B
A530	20	5'-1"	106	B	A527	4	4'-7"	19	B
A531	16	12'-5"	207	S	A528	4	4'-9"	20	B
A532	36	5'-4"	200	B	A529	8	4'-11"	41	B
A533	8	5'-9"	48	B	A530	20	5'-1"	106	B
⊕A540	8	8'-0"	67	S	A531	16	12'-5"	207	S
					A532	36	5'-4"	200	B
					A533	8	5'-9"	48	B
A601	86	11'-10"	1528	B	A534	14	33'-0"	482	S
A602	86	5'-4"	689	B	A535	14	35'-0"	511	S
A603	64	9'-9"	937	B	A536	6	33'-2"	208	S
					A537	6	35'-0"	219	S
					⊕A538	12	34'-0"	426	B
A801	36	24'-8"	2371	S	⊕A539	12	36'-1"	452	B
					⊕A540	8	8'-0"	67	S
					A601	130	11'-10"	2310	B
					A602	130	5'-4"	1041	B
					A603	104	9'-9"	1523	B
					A802	18	34'-9"	1670	S
					A803	18	36'-9"	1766	S

⊕Cost of field bending to be included with Item S-4 for Payment.

SOUTHBOUND LANES					NORTHBOUND LANES				
MARK	NO.	LENGTH	WEIGHT	SHP.	MARK	NO.	LENGTH	WEIGHT	SHP.
PIERS									
P503	18	7'-5"	139	B	P501	8	33'-1"	276	S
P504	108	8'-1"	911	B	P502	16	32'-6"	542	S
P505	24	21'-4"	534	S	P503	18	7'-5"	139	B
					P504	168	8'-1"	1416	B
P701	3	26'-8"	164	S					
P702	6	41'-9"	512	S					
P703	6	43'-0"	527	S	P801	4	34'-0"	363	S
P704	9	43'-4"	797	S	P802	4	34'-6	368	S
P705	6	8'-9"	107	B	P803	6	34'-9"	557	S
					P804	4	32'-10"	351	S
					P805	4	33'-4"	356	S
					P806	6	33'-7"	538	S
					P810	4	9'-3"	99	B
P807	8	25'-6"	545	B					
P808	6	26'-8"	427	S					
P809	8	26'-3"	561	B					
					P901	6	29'-6"	602	B
					P902	9	17'-5"	533	S
					P903	6	30'-3"	617	B
P916	4	25'-8"	349	B	P904	2	45'-6"	309	B
P917	4	26'-5"	359	B	P905	3	33'-8"	343	S
					P906	2	46'-3"	315	B
					P907	2	44'-5"	302	B
					P908	3	33'-1"	337	S
P1004	32	21'-8"	2984	S	P909	2	45'-1"	306	B
P1005	32	18'-6"	2547	S	P910	2	43'-3"	294	B
P1006	32	20'-8"	2846	S	P911	3	32'-6"	332	S
					P912	2	44'-0"	299	B
					P913	4	33'-5"	454	S
					P914	4	34'-0"	462	S
F601	160	8'-2"	1963	S	P915	4	34'-2"	465	S
					P918	2	9'-10"	67	B
F802	88	9'-8"	2272	S					
F1001	96	6'-1"	2512	B	P1001	48	20'-1"	4148	S
					P1002	48	19'-1"	3942	S
					P1003	24	16'-10"	1738	S
					P1101	28	16'-10"	2504	S
					F701	220	9'-2"	4122	S
					F801	110	10'-2"	2986	S
					F1001	120	6'-1"	3139	B
					F1101	28	6'-6"	967	B

SPIRAL REINFORCING BARS: The "Length" shown in the steel list for spiral bars is the distance from the top of footing to the bottom of the pier cap. The "No. of turns" shown is the "Length" divided by the "Pitch" plus 3 turns (total number of closed coils) expressed as the nearest whole number. Spiral reinforcing bars shall not have deformations but shall in other respects conform to Item S-4. 1½ closed coils shall be provided at the ends of each spiral unit. Four steel channel, tee or angle spacers, weighing approximately 0.68 lb. per lin. ft. of spacer, shall be provided for each spiral unit. They shall be equally spaced along the periphery of the coil. The number of pounds of these spacers, based on 0.68 lb. per lin. ft. will be paid for as reinforcing steel and is included in the tabulated quantities of spiral bars.

BAR SIZE is indicated in the bar mark. The first digit where three digits are used, and the first two digits where four are used indicate the bar size number. For example A701 is a No. 7 size bar and P1002 is a No. 10 size bar.

J.E GREINER COMPANY
CONSULTING ENGINEERS
BALTIMORE, MARYLAND

REINFORCING STEEL LIST

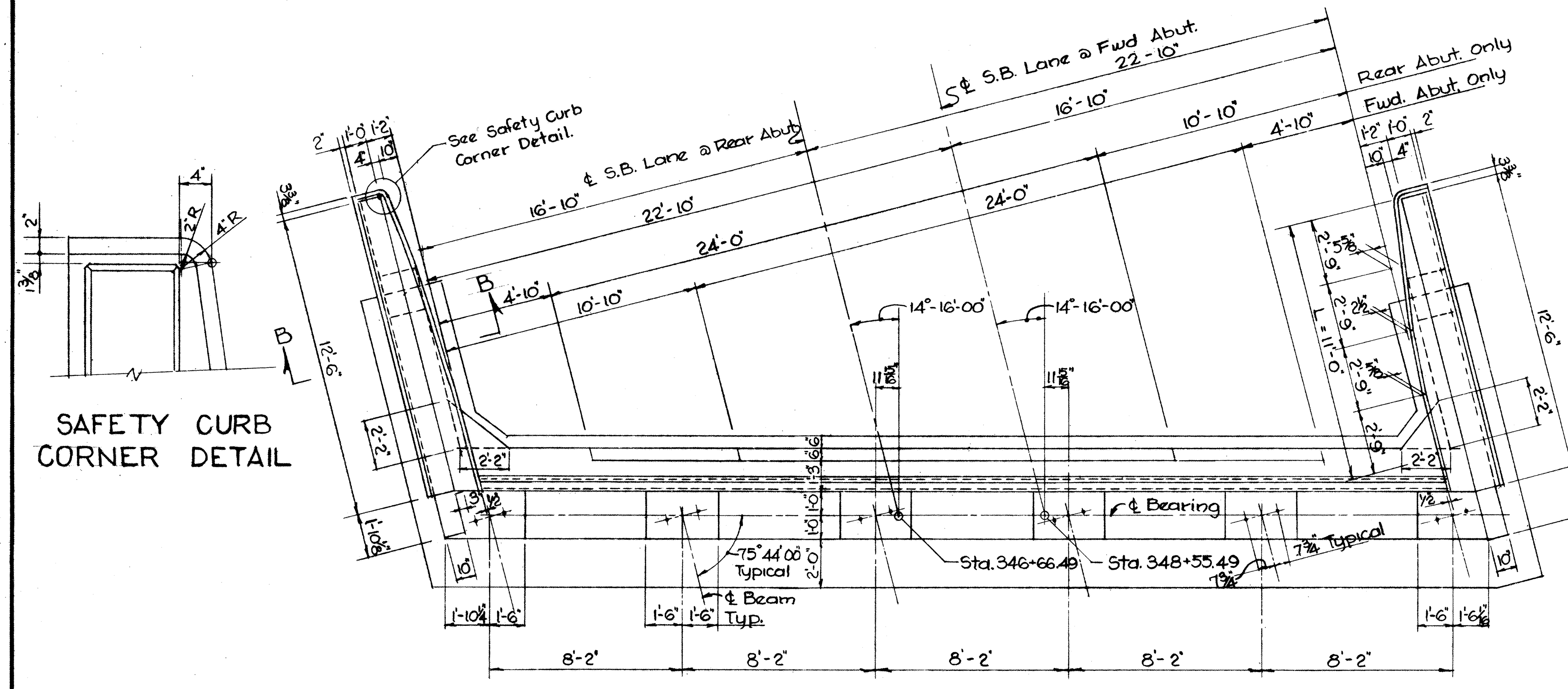
BRIDGE NO. MED.-42-24 04 L. & R.
I. R.* 71 OVER S.R. NO. 303

MEDINA CO. STA. 347+47.26

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
	CORONEL	MAYOR	ROBINSON	MUDD	9/27/62	

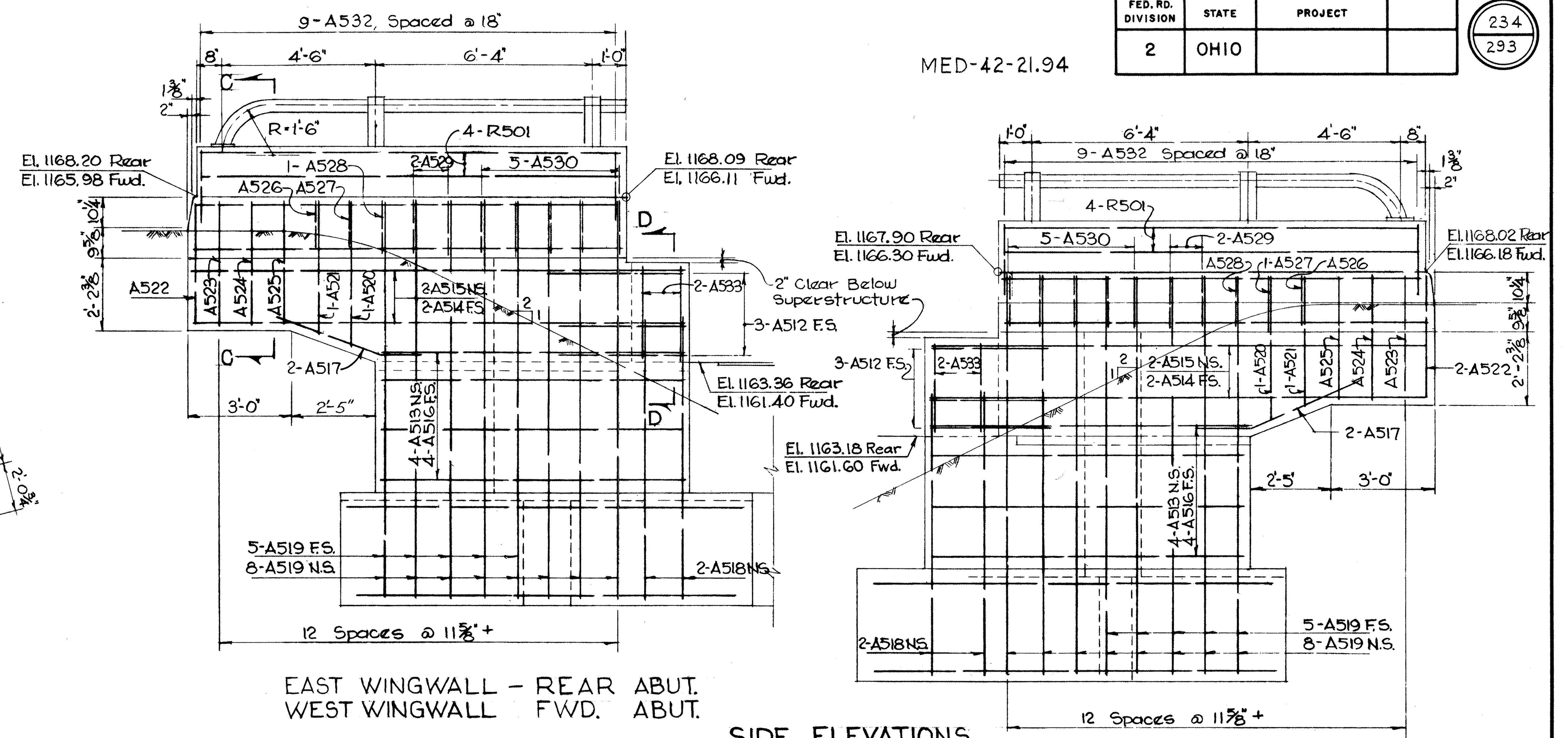
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

MED-42-21.94



SAFETY CURB CORNER DETAIL

PLAN

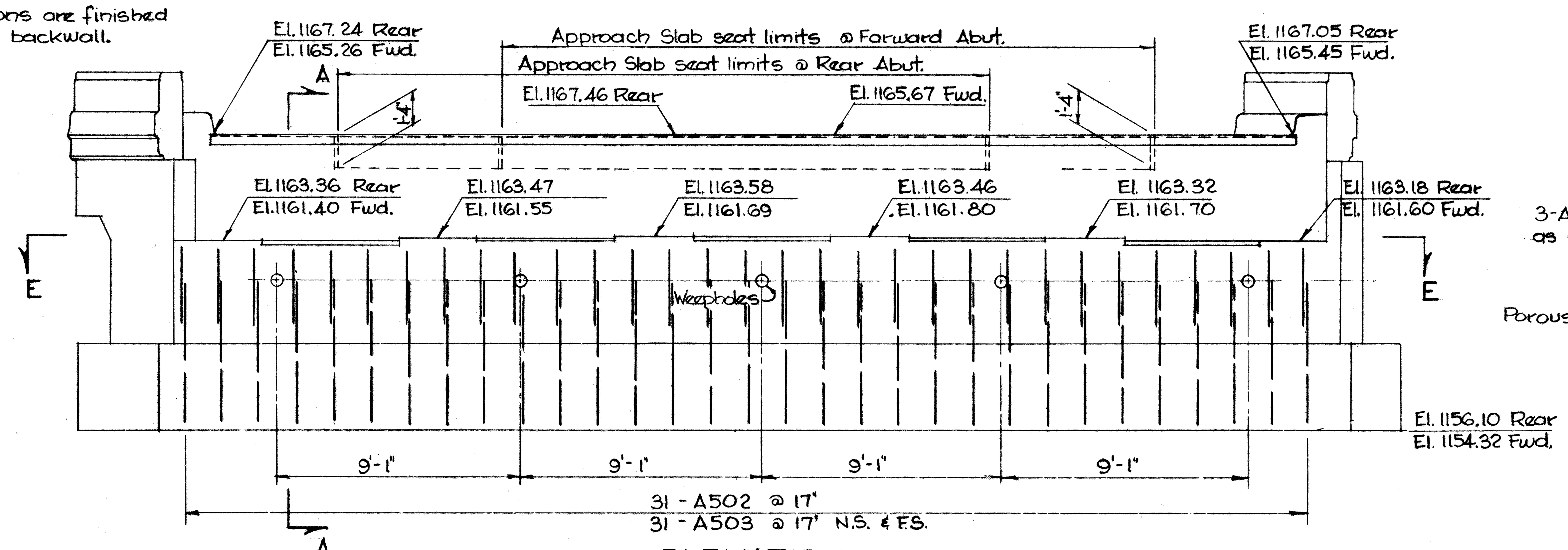


EAST WINGWALL – REAR ABUT.
WEST WINGWALL FWD. ABUT.

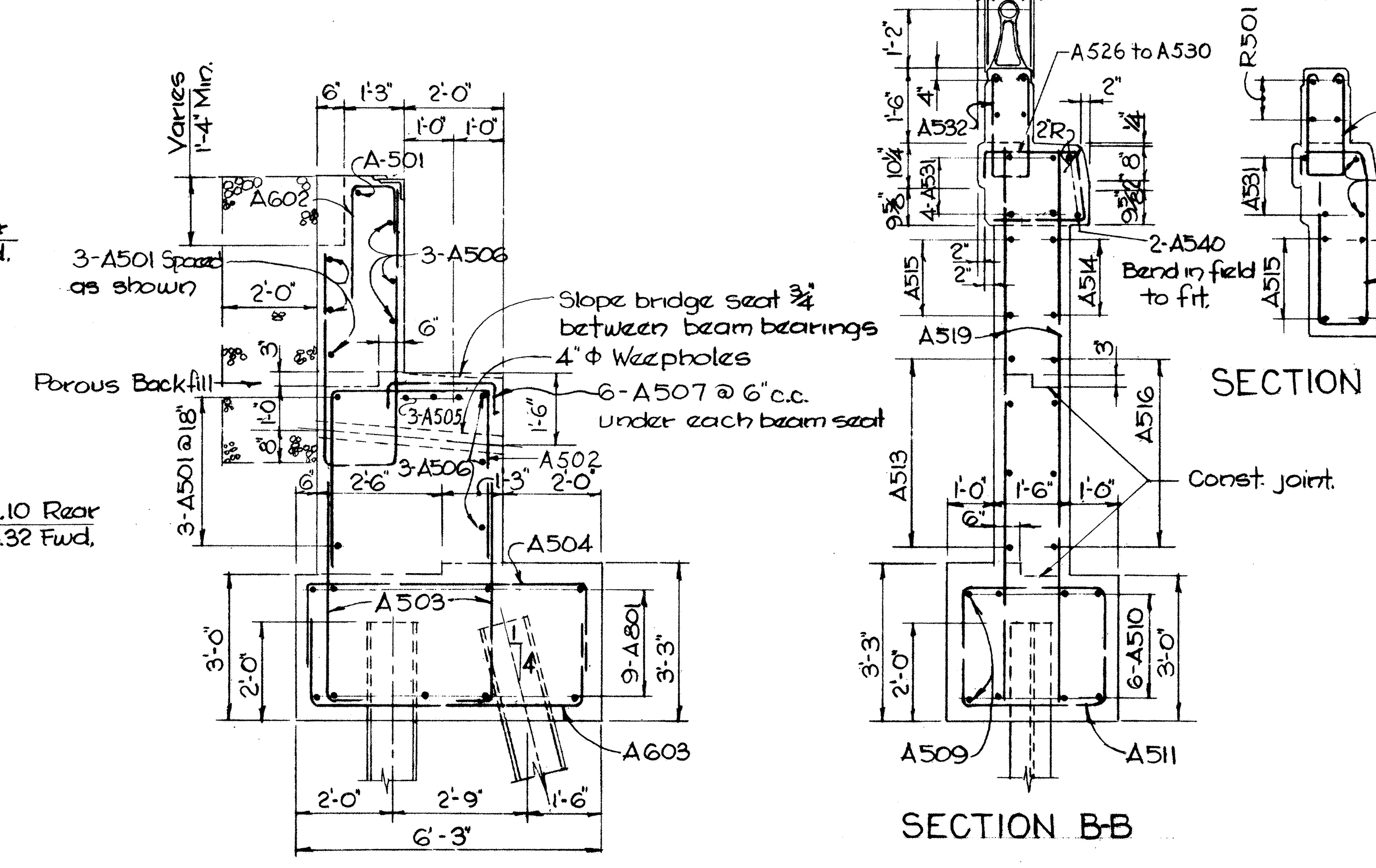
WEST WINGWALL – REAR ABUT.
EAST WINGWALL – FWD ABUT.

SIDE ELEVATIONS

Note: Backwall elevations are finished grade at face of backwall.



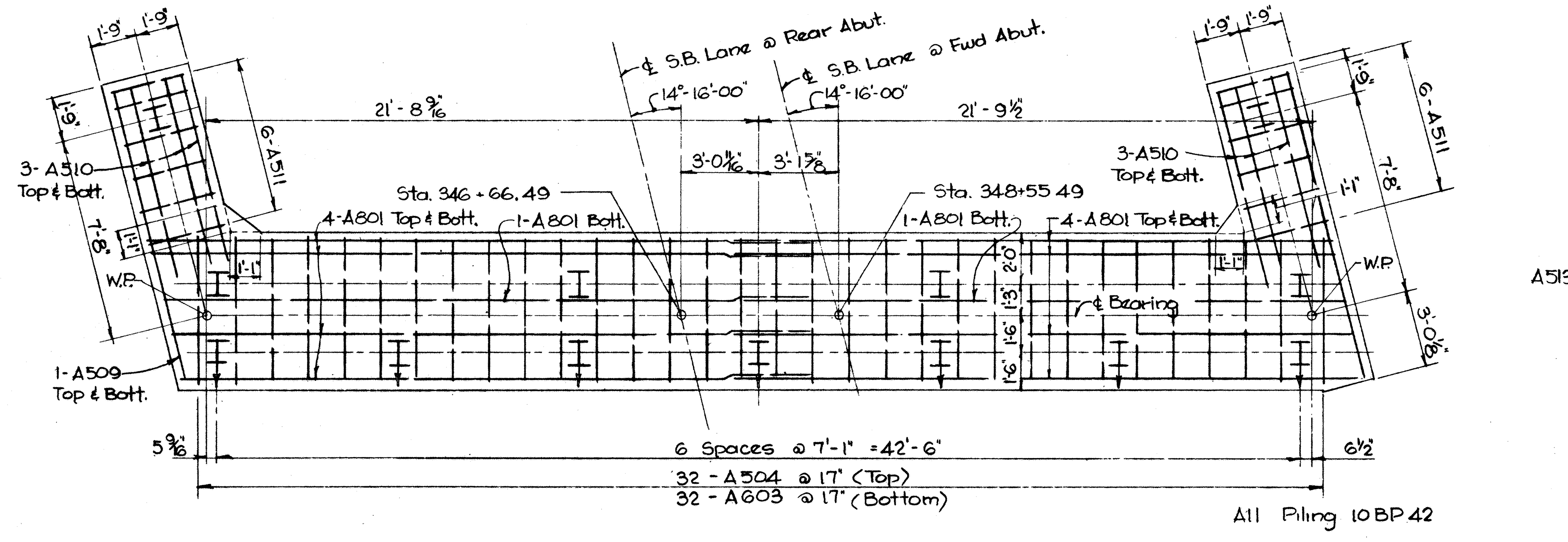
ELEVATION



SECTION A-A

SECTION B-B

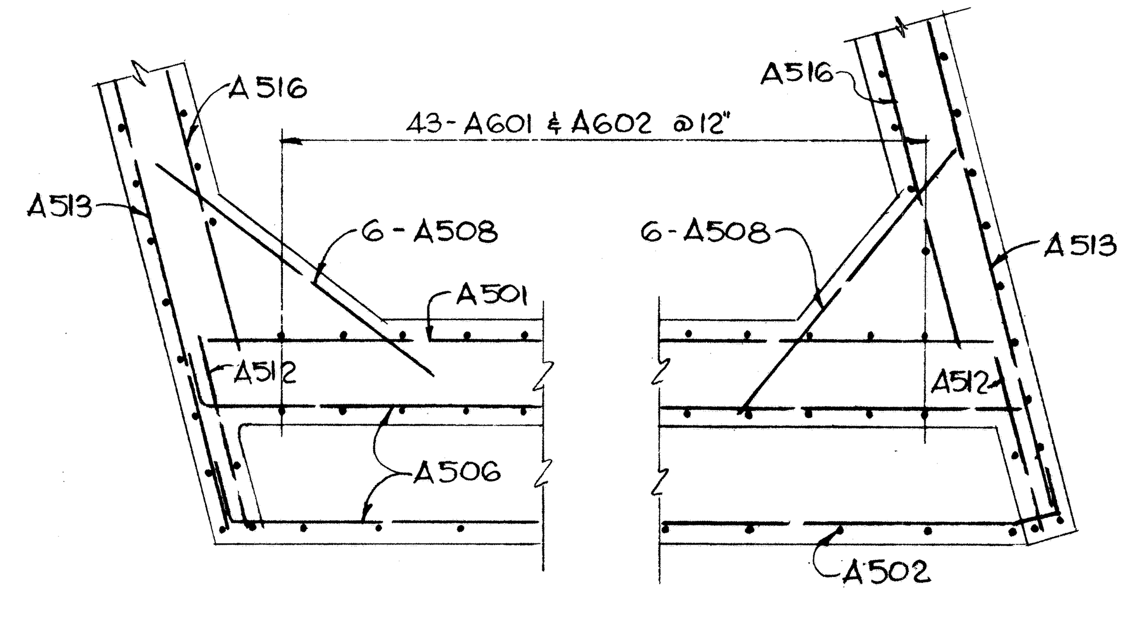
SECTION C-C



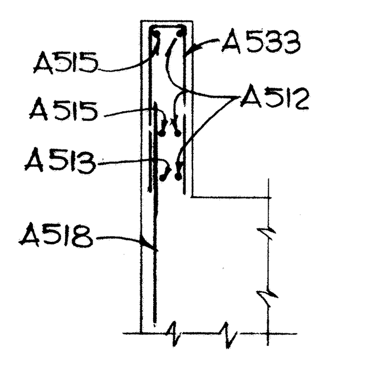
FOOTING PLAN

All Piling 10 BP 42

Batter all front-row piles 1:4



SECTION E-E



SECTION D-D

CLEARANCE of reinforcing steel from face of concrete shall be 3" in bottom of footing, 1½" in parapet and safety curb and 2" elsewhere.

POROUS BACKFILL shall extend upward to the approach slab and to the surface of the earth shoulders and outward to the wingwalls. Excavation therefor in excess of that required for the construction of the abutment, shall be considered as paid for in the contract price per cu. yd. paid for porous backfill.

PROCEDURE: The embankment shall be placed and compacted up to the finished spill-thru slope after which excavation shall be made for the abutment and piles driven.

Abutment backwalls above the bridge seat shall not be placed until all steel is erected. Abutment backwalls shall be completed prior to placing bridge deck slab.

Concrete shall be Class E.

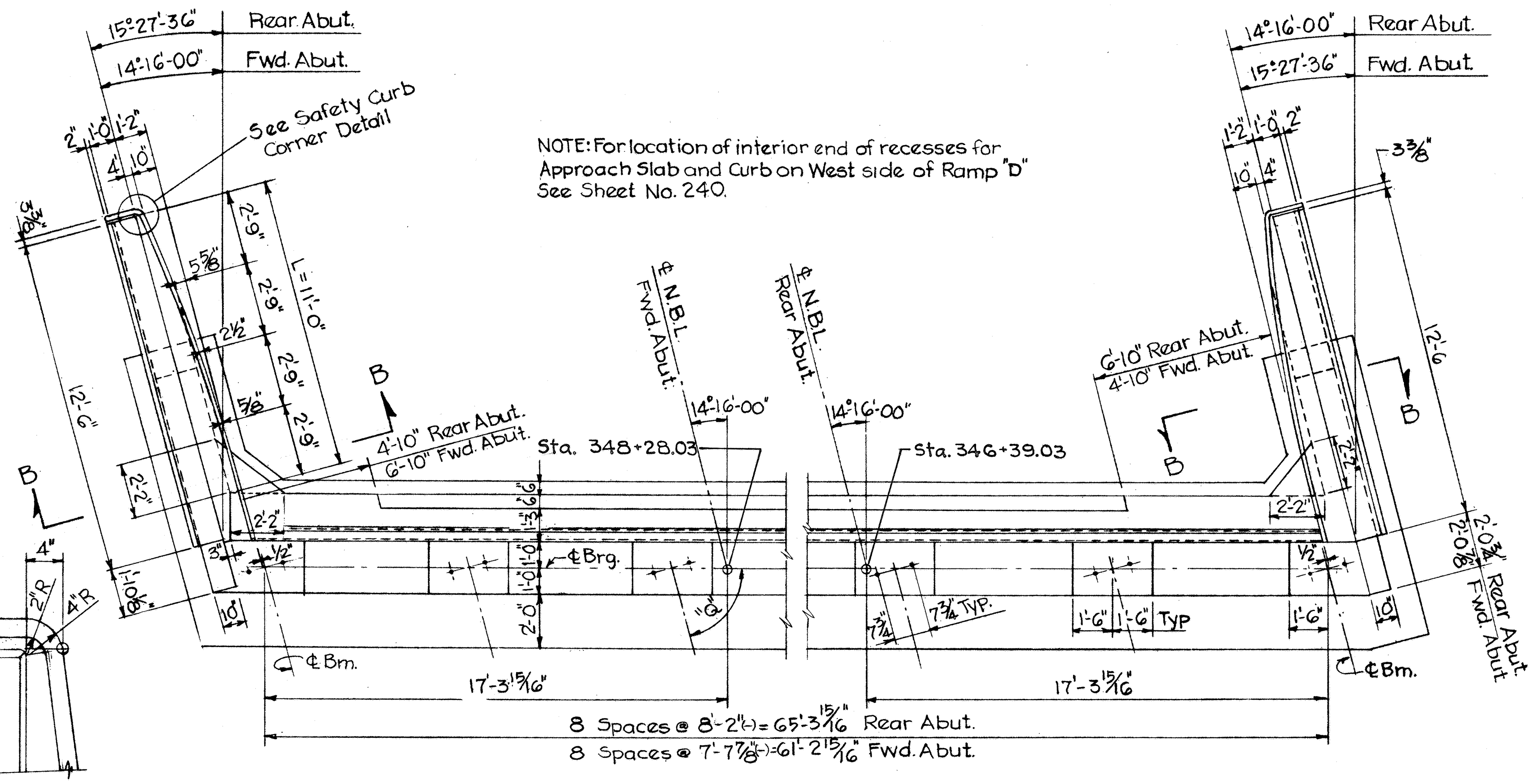
BRIDGE SEAT REINFORCING: Special care shall be taken in placing reinforcing steel in the vicinity of the bridge seat so as to avoid interference with the drilling of anchor rod holes.

LEGEND:
- N.S. - Near Side.
- F.S. - Far Side

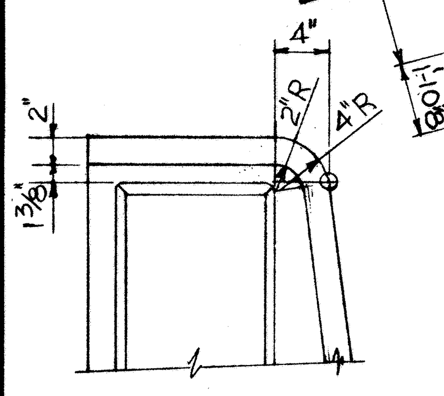
J.E. GREINER COMPANY
CONSULTING ENGINEERS
BALTIMORE, MARYLAND

ABUTMENT DETAILS
SOUTHBOUND LANES
BRIDGE NO. MED.-42-2404 L&R
I.R. #71 OVER S.R. NO. 303
MEDINA CO. STA. 347+47.26

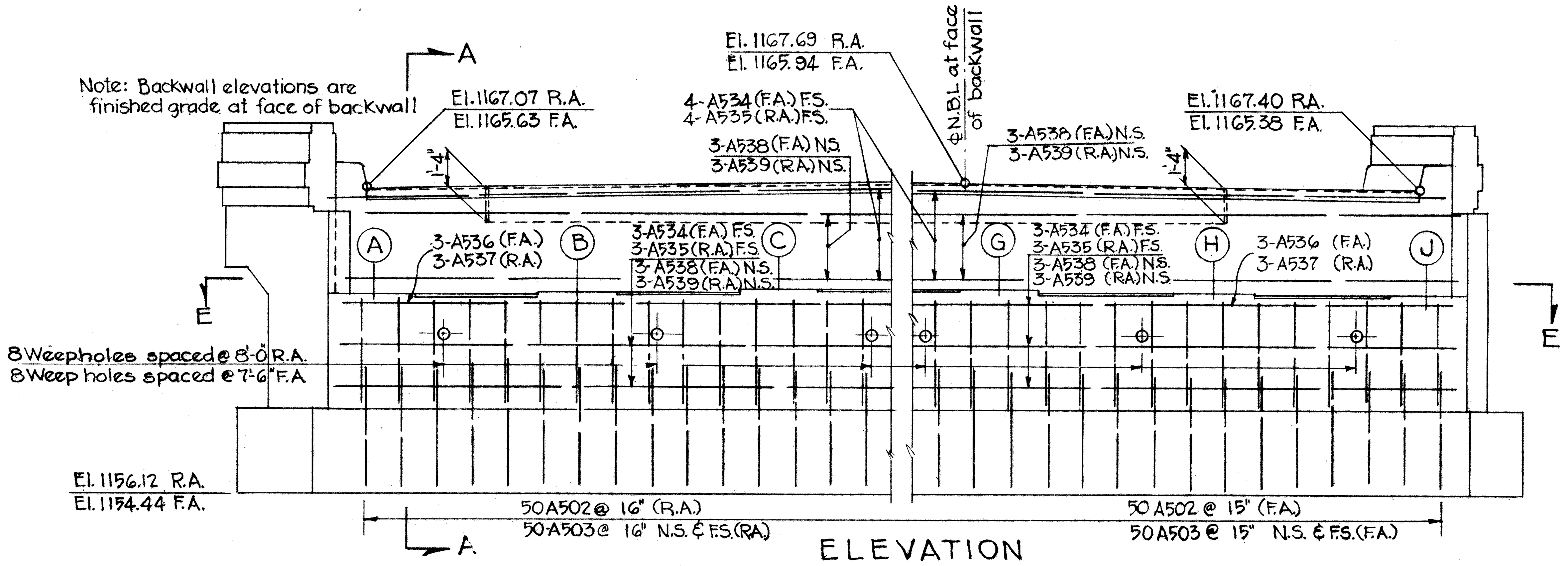
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RUARK	DE JESUS	KATZ	ROBINSON	MUDD	9-27-62	



PLAN



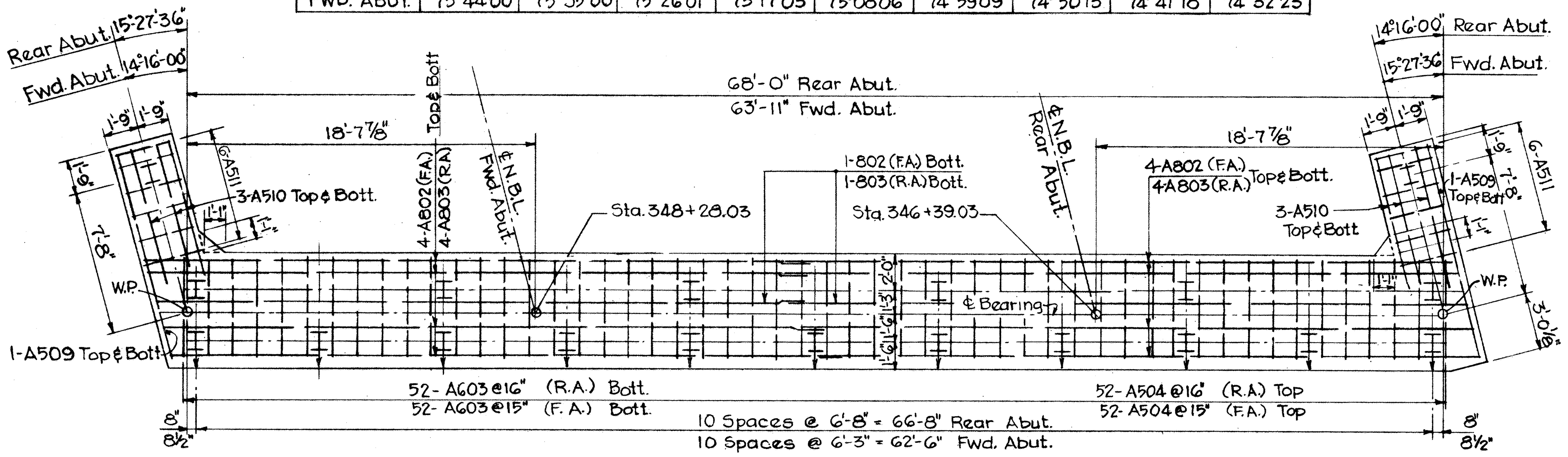
SAFETY CURB CORNER DETAIL



ELEVATION

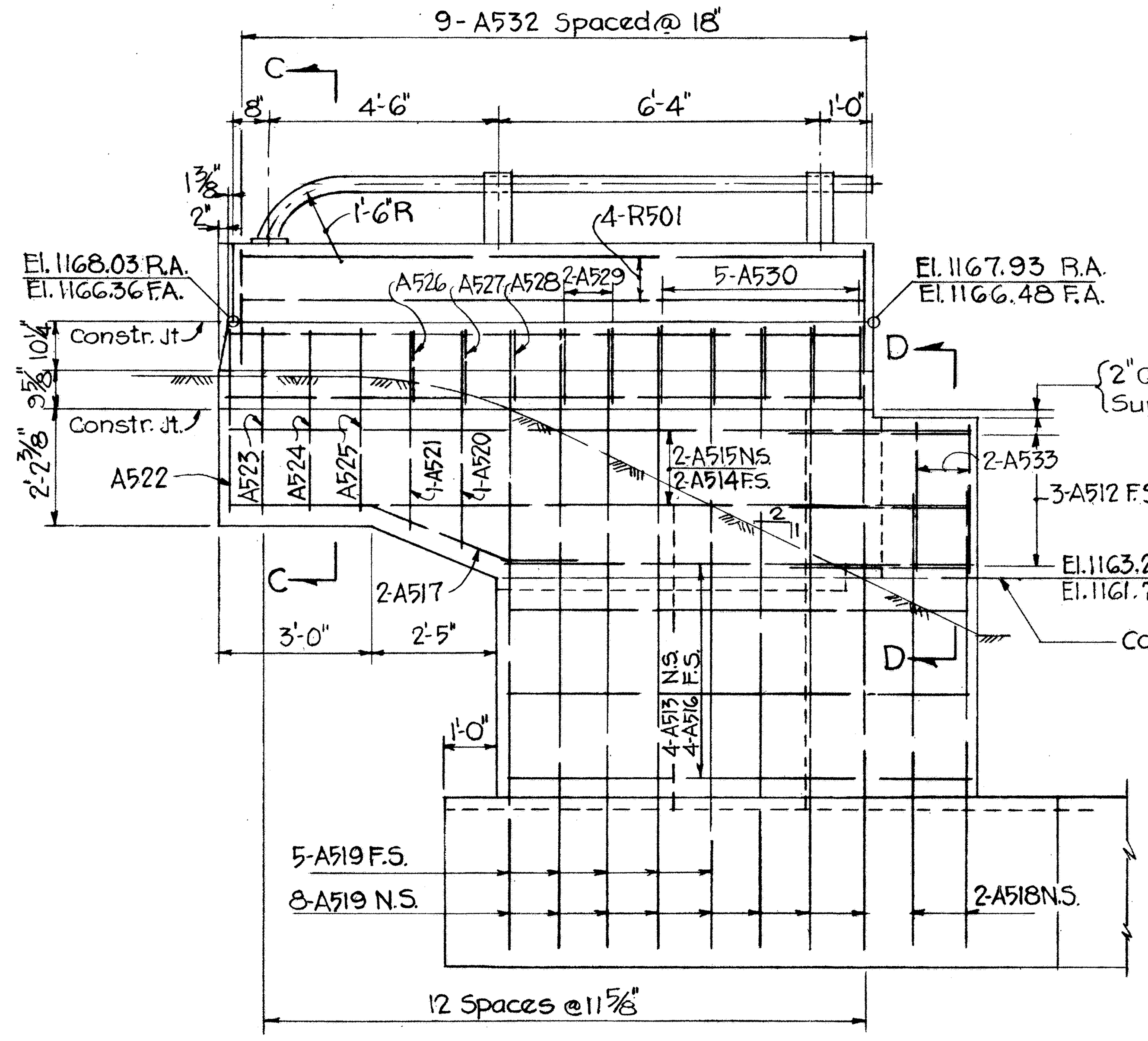
BEARING PADS D, E & F ARE NOT SHOWN

TOP OF MASONRY ELEVATIONS									
	A	B	C	D	E	F	G	H	J
REAR ABUT.	1163.20	1163.31	1163.42	1163.52	1163.63	1163.73	1163.81	1163.67	1163.53
FWD. ABUT.	1161.78	1161.91	1162.05	1162.01	1161.91	1161.82	1161.72	1161.62	1161.52
ANGLE "Q" FOR ANCHOR ROD SETTING									
REAR ABUT.	74°32'23"	74°41'18"	74°50'13"	74°59'09"	75°08'06"	75°17'03"	75°26'01"	75°35'00"	75°44'00"
FWD. ABUT.	75°44'00"	75°35'00"	75°26'01"	75°17'03"	75°08'06"	74°59'09"	74°50'13"	74°41'18"	74°32'23"

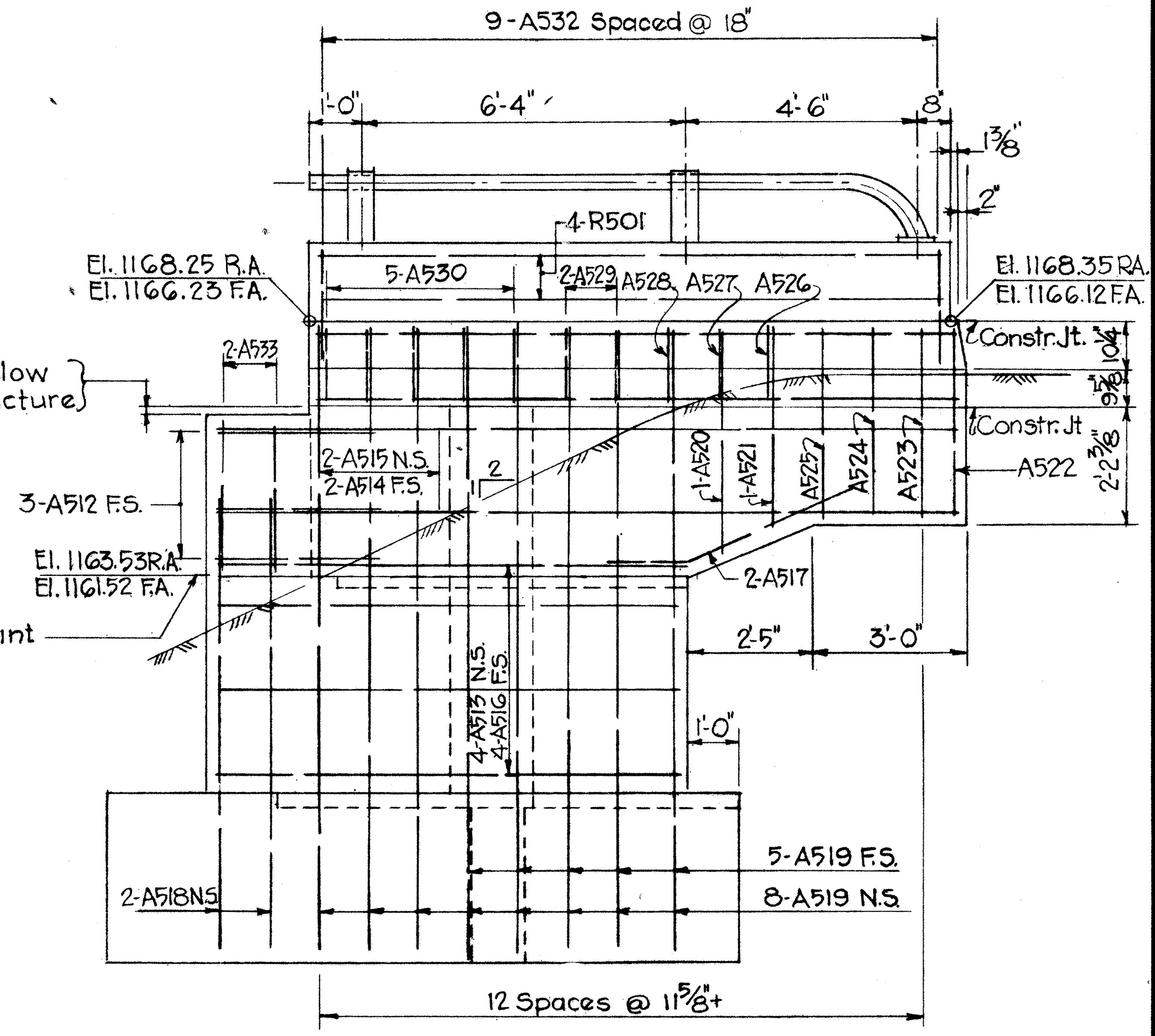


FOOTING PLAN

All piling 10BP42
Batter all front row piles 1:4

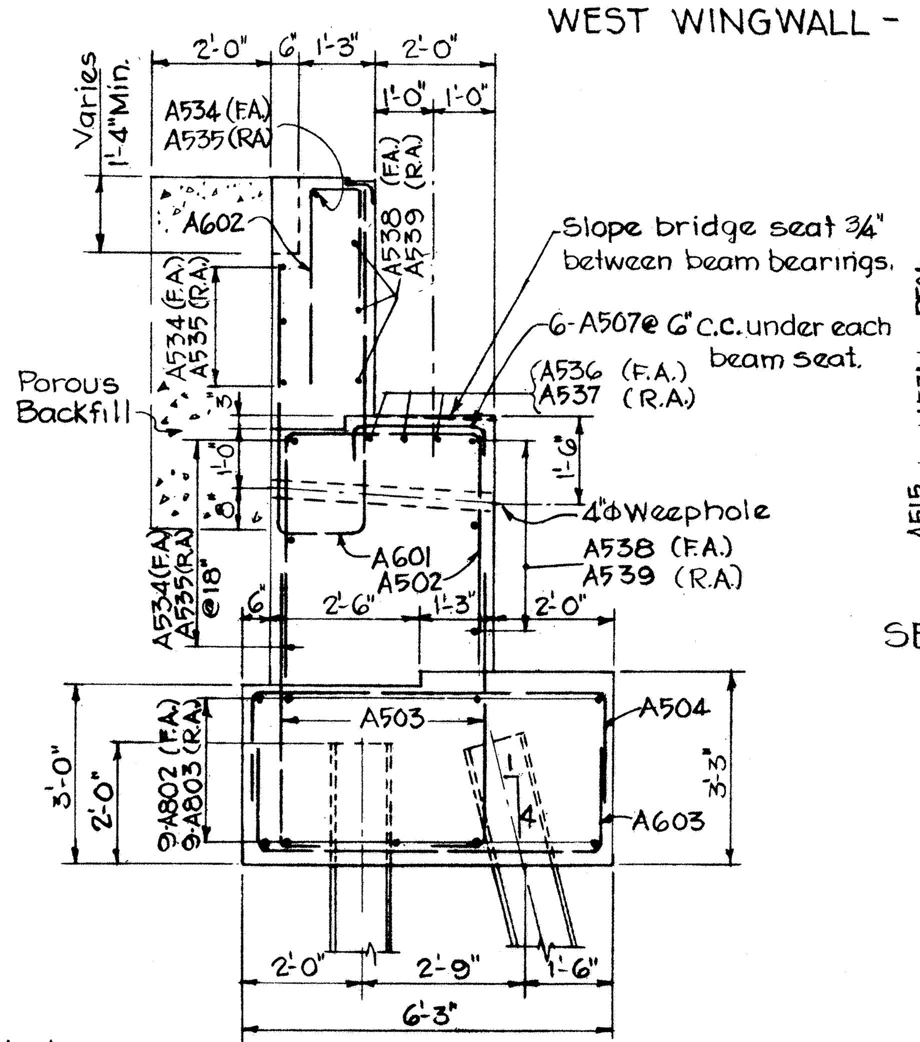


EAST WINGWALL - REAR ABUT.
WEST WINGWALL - FWD. ABUT.

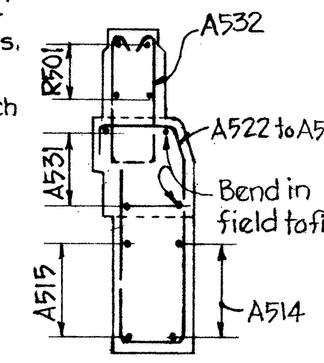


WEST WINGWALL-REAR ABUTMENT
EAST WINGWALL-FWD. ABUTMENT

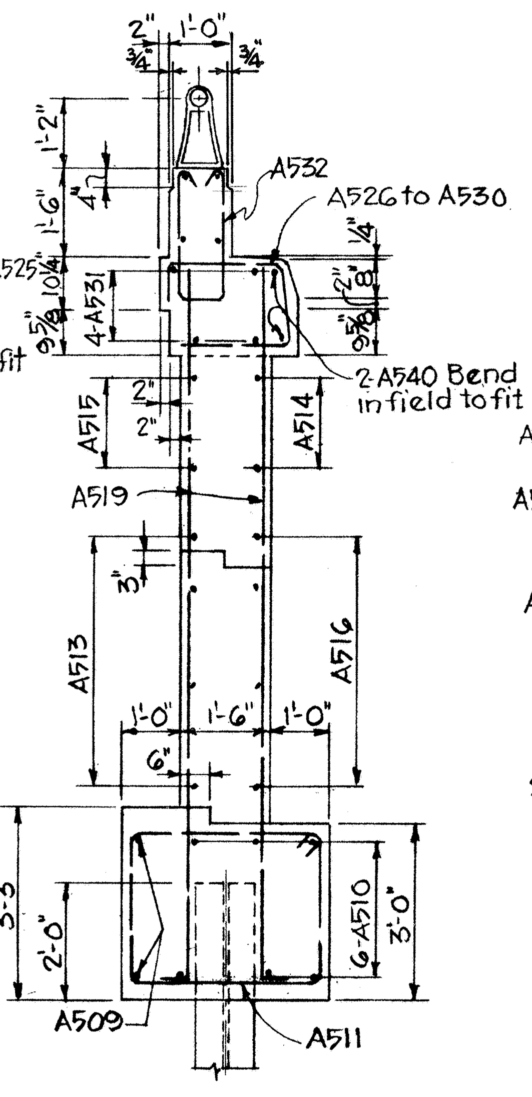
SIDE ELEVATIONS



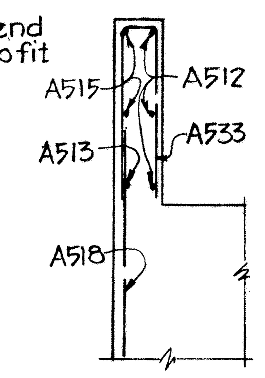
SECTION A-A



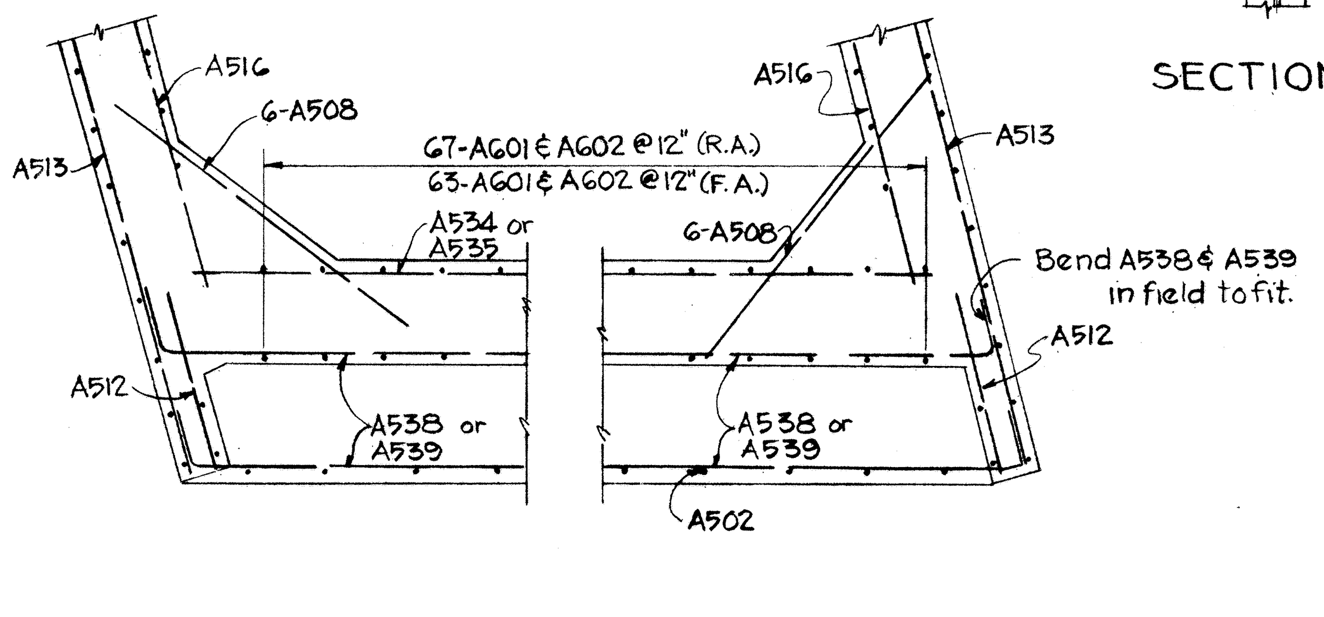
SECTION C-C



SECTION B-B



SECTION D-D



SECTION E-E

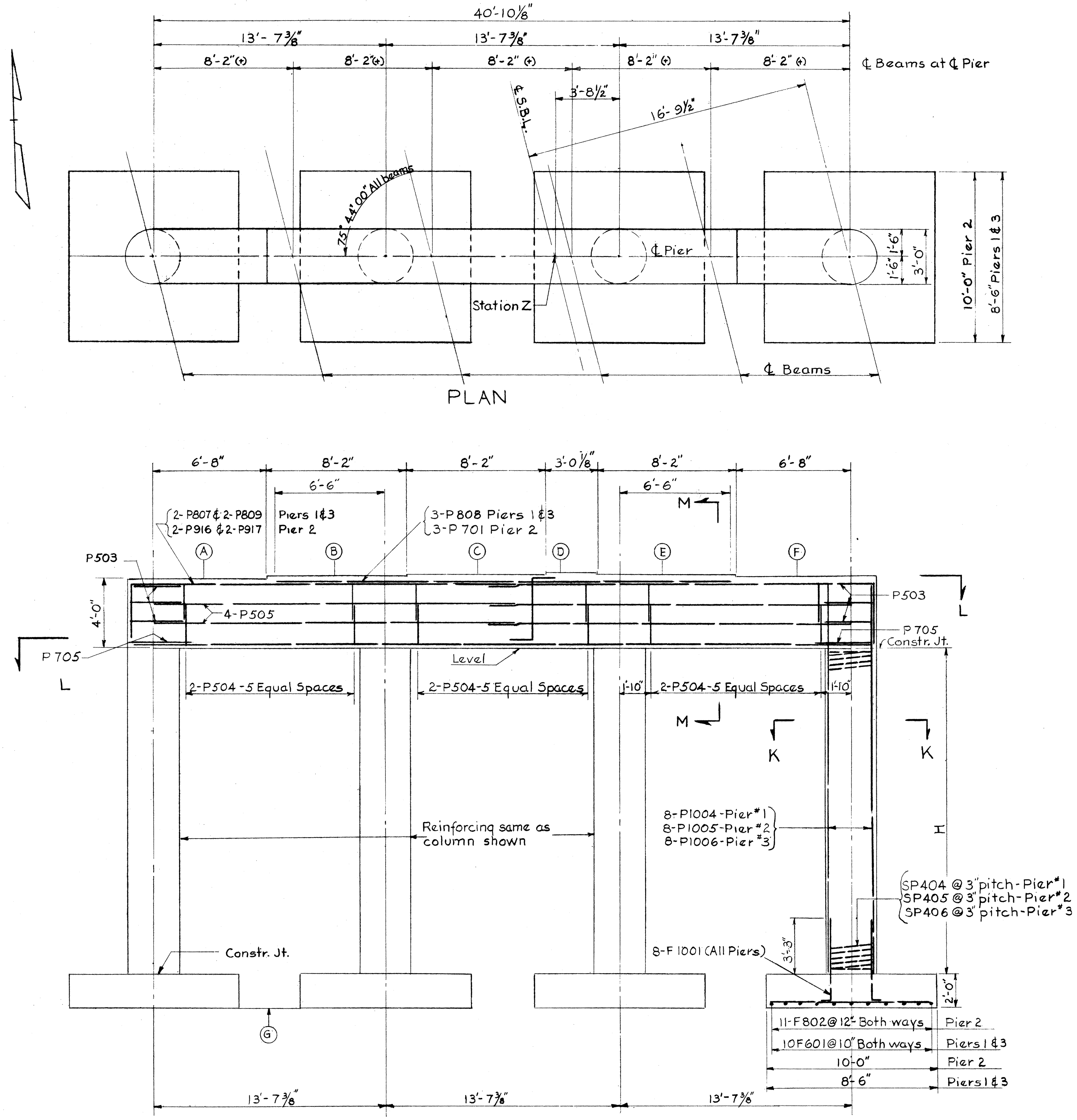
For Notes see Sheet No. 234

LEGEND:
- N.S. - Near Side
- F.S. - Far Side
- R.A. - Rear Abutment
- F.A. - Forward Abutment

J.E GREINER COMPANY
CONSULTING ENGINEERS
BALTIMORE, MARYLAND

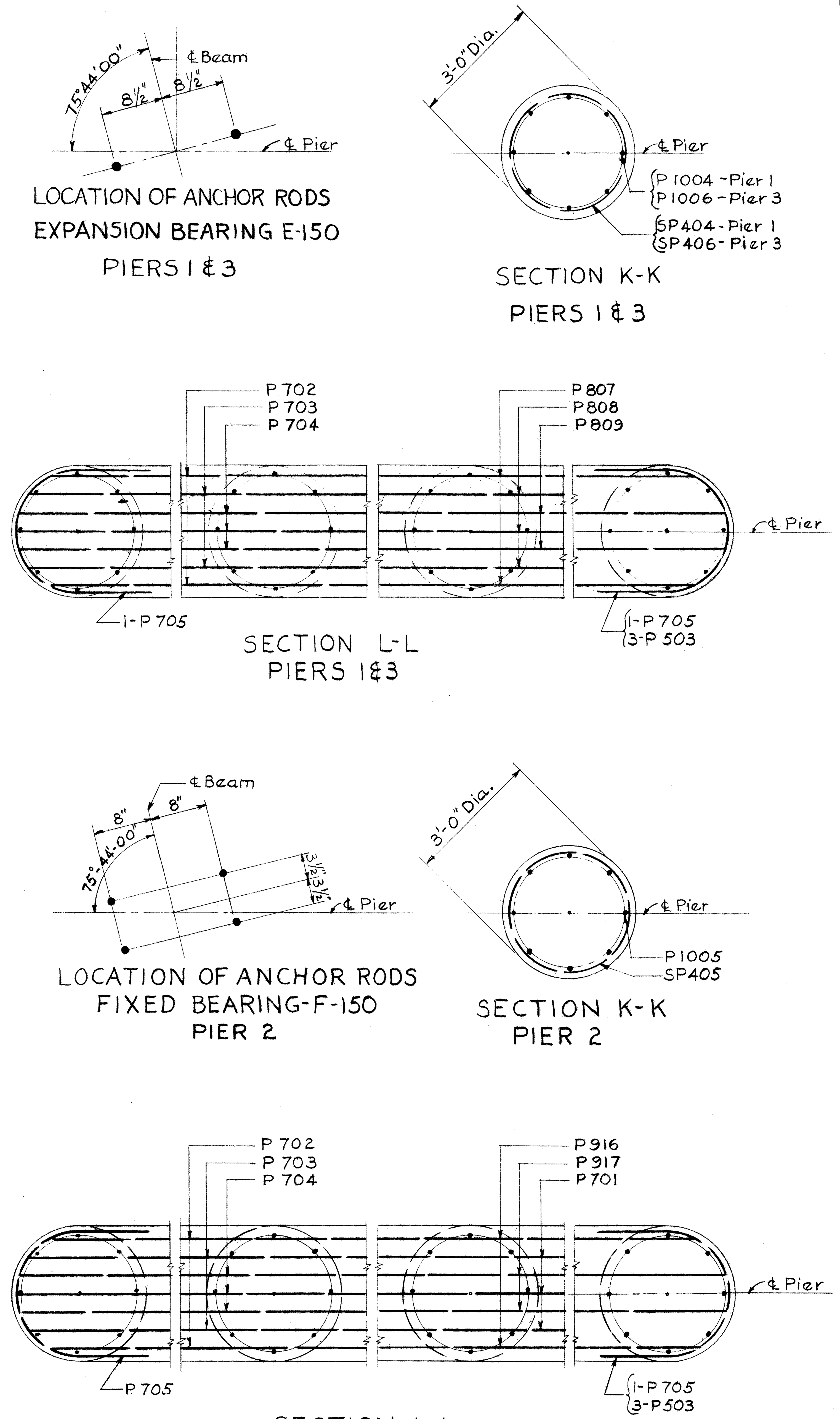
ABUTMENT DETAILS
NORTHBOUND LANES
BRIDGE NO MED.-42-2404 L&R
I.R. #71 OVER S.R. NO. 303
MEDINA CO. STA 347+47.26

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RUARK	ALKEMA	CLARK	ROBINSON	MUDD	9/27/62	



PLAN

ELEVATION



LOCATION OF ANCHOR RODS
EXPANSION BEARING E-150
PIERS 1 & 3

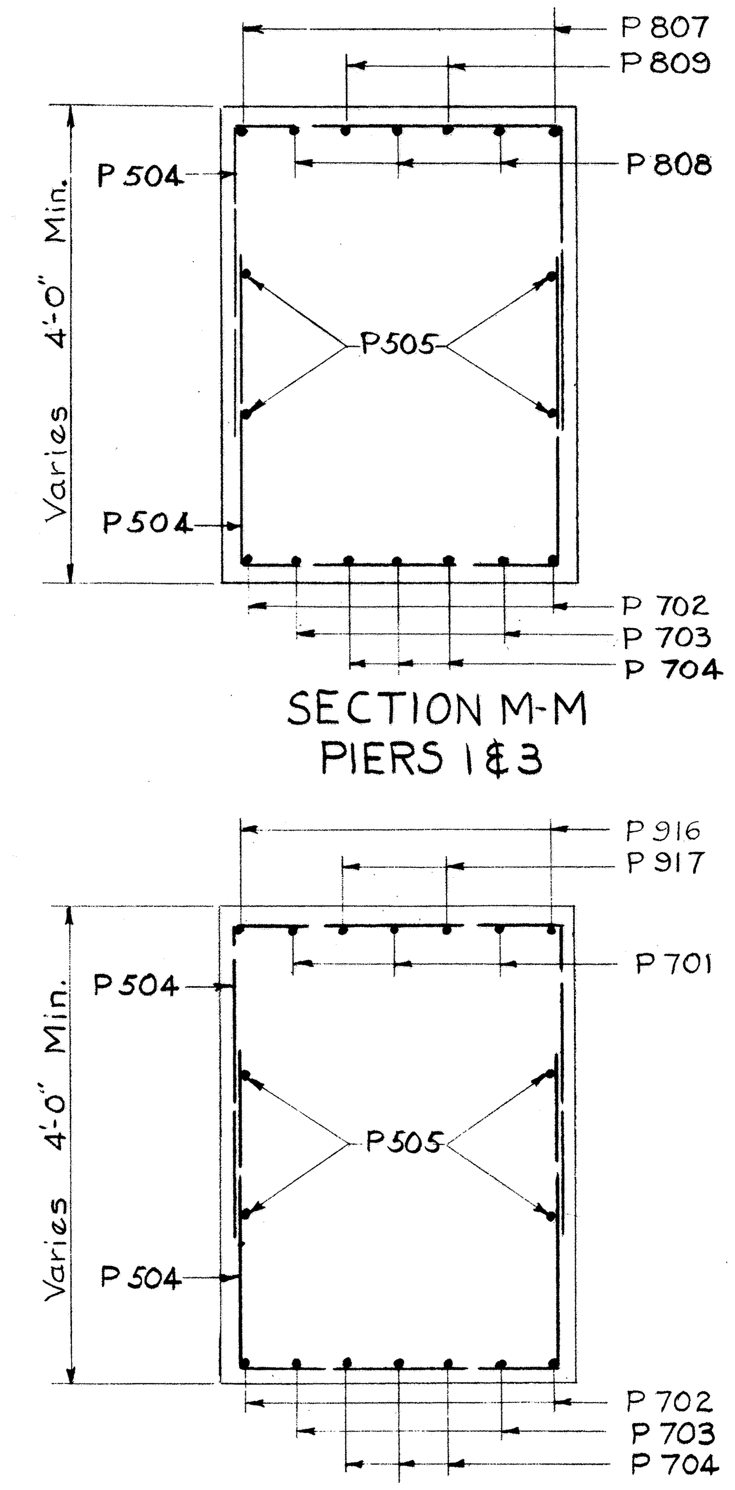
SECTION K-K
PIERS 1 & 3

SECTION L-L
PIERS 1 & 3

LOCATION OF ANCHOR RODS
FIXED BEARING-F-150
PIER 2

SECTION K-K
PIER 2

SECTION L-L
PIER 2



SECTION M-M
PIERS 1 & 3

SECTION M-M
PIER 2

FOUNDATION BEARING PRESSURE: Pier footings are designed for a maximum bearing pressure of 2 tons per sq. ft.

CLEARANCE of reinforcing steel from face of concrete shall be 3" in bottom of footings and 2" elswhere

For details of Fixed and Sliding Bearings see Std. Dwg. No. FSB-1-62

Concrete shall be Class E in footings and Class C above footings

BRIDGE SEAT REINFORCING: Special care shall be taken in placing reinforcing steel in the vicinity of the bridge seat so as to avoid interference with the drilling of anchor rod holes

	STATION	ELEVATION							DIMENSION
	Z	A	B	C	D	E	F	G	H
PIER 1	347+08.49	1162.76	1162.91	1163.05	1163.16	1163.05	1162.95	1138.50	18'-3⅛"
PIER 2	347+60.99	1162.07	1162.21	1162.35	1162.47	1162.36	1162.26	1141.00	15'-0⅞"
PIER3	348+13.49	1161.77	1161.91	1162.06	1162.17	1162.07	1161.96	1138.50	17'-3¼"

J.E GREINER COMPANY
CONSULTING ENGINEERS
BALTIMORE, MARYLAND

PIER DETAILS
SOUTHBOUND LANES
BRIDGE NO. MED. – 42–2404 L & R
I.R.# 71 OVER S.R. NO. 303

MEDINA CO. STA. 347+47.26

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
HUANG	HUANG	ORGAIN	ROBINSON	MUDD	9-27-62	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

MED.-42-21.94

FOUNDATION BEARING PRESSURE: Pier Footings are designed for a maximum bearing pressure of 2 tons per sq. ft.

CLEARANCE of reinforcing steel from face of concrete shall be 3" in bottom of footings and 2" elsewhere.

For details of Fixed and Sliding Bearings see Std. Dwg. No. FSB-1-62

CONCRETE shall be Class E in footings and Class C above footings.

BRIDGE SEAT REINFORCING: Special care shall be taken in placing reinforcing steel in the vicinity of the bridge seat so as to avoid interference with the drilling of anchor rod holes.

	STATION	ELEVATIONS										DIMENSIONS				
	Z	A	B	C	D	E	F	G	H	J	K	L	M	N	Q	R
PIER 1	346+81.03	1163.12	1163.26	1163.40	1163.33	1163.23	1163.12	1163.02	1162.91	1162.81	1140.5	6'-6 5/8"	16'-1 1/4"	8'-0 5/8"	16'-3 3/4"	64'-5"
PIER 2	347+33.53	1162.43	1162.57	1162.71	1162.65	1162.55	1162.45	1162.35	1162.25	1162.14	1143.0	6'-4 7/8"	15'-9 7/8"	7'-10 15/16"	13'-1 11/16"	63'-3 1/2"
PIER 3	347+86.03	1162.15	1162.28	1162.42	1162.37	1162.27	1162.17	1162.07	1161.98	1161.88	1140.5	6'-3 1/8"	15'-6 7/16"	7'-9 7/32"	15'-4 9/16"	62'-1 3/4"

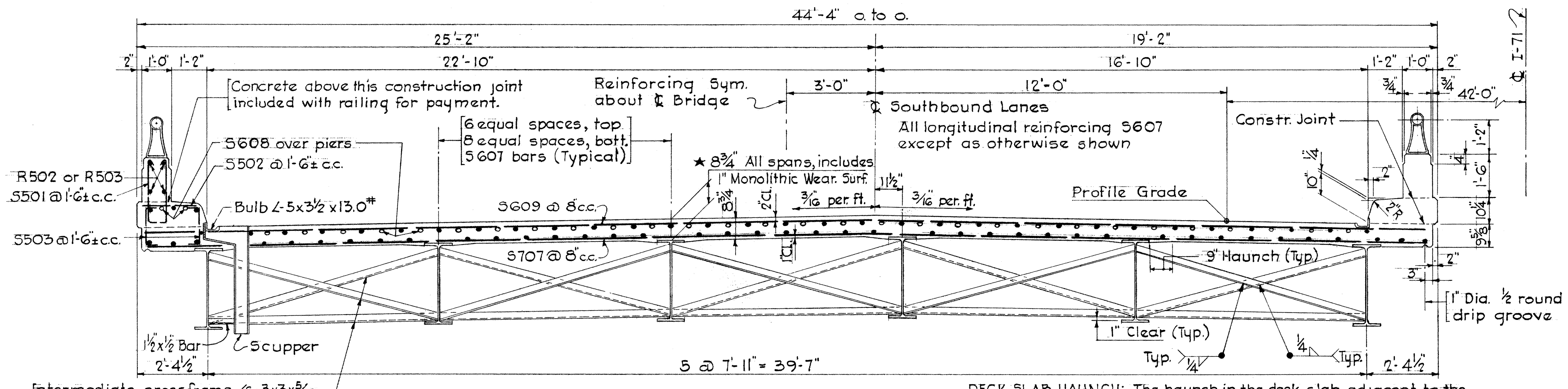
J.E GREINER COMPANY
CONSULTING ENGINEERS
BALTIMORE, MARYLAND

PIER DETAILS
NORTHBOUND LANES
BRIDGE No. MED.-42-2404 L.& R.
I.R.# 71 OVER S.R. No. 303

MEDINA CO. STA. 347+47.26

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
PAHL	HUANG	HAYDEN	ROBINSON	MUDD	9/27/62	

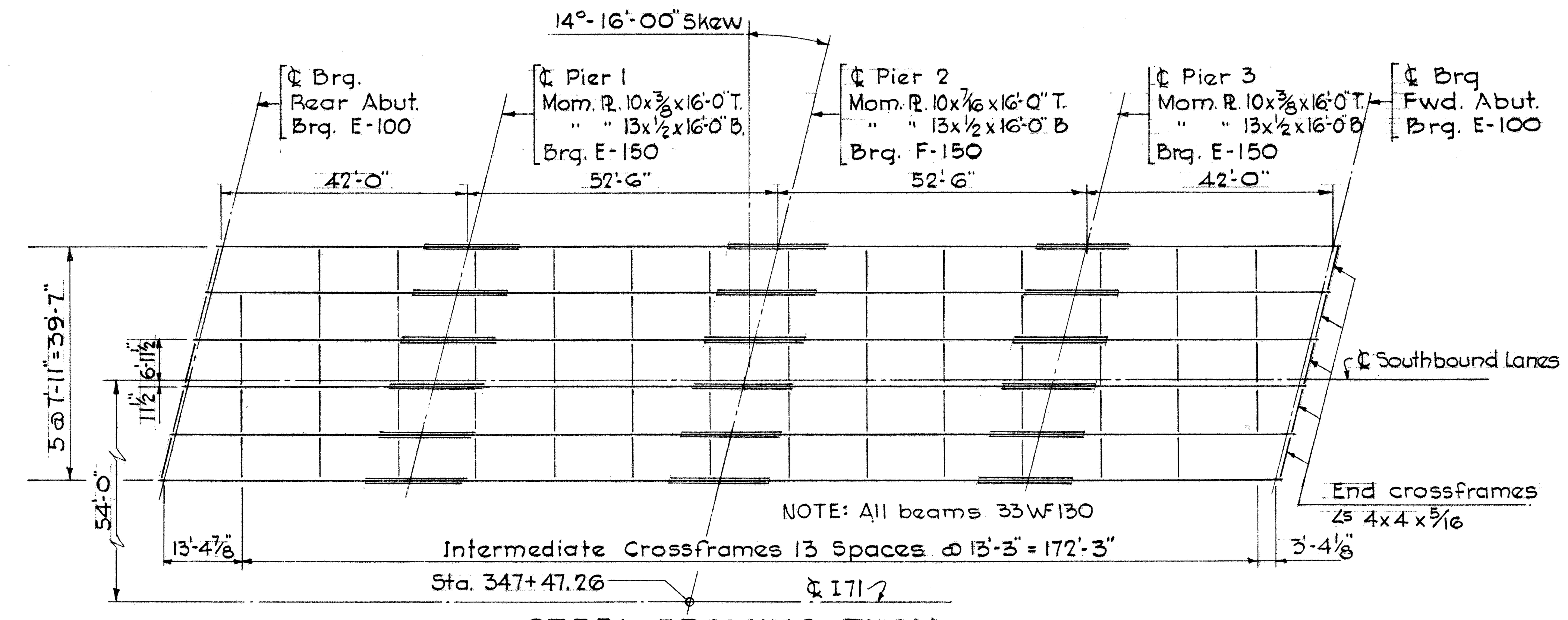
★ This is the nominal dimension. The quantity of deck concrete to be paid for shall be based on this dimension, even though deviation from it may be necessary because the top flange of the beam may not have the exact camber or conformation required to place it parallel to the finished grade.



TRANSVERSE SECTION
SOUTHBOUND LANES

NOTE: Transverse reinforcing in slab is parallel to ℄ Brg.

DECK SLAB HAUNCH: The haunch in the deck slab adjacent to the top of steel beams, which is shown as 9" wide, may vary from this dimension between the limits of 6" and 12", except that the maximum slope shall not exceed 3 inches per foot. Payment for deck slab concrete shall be based on the 9" width.



STEEL FRAMING PLAN
SOUTHBOUND LANES

DEFLECTION AND CAMBER	Outside Beams		Inside Beams	
	End Spans	Inside Spans	End Spans	Inside Spans
Deflection due to weight of steel	1/32"	1/32"	1/32"	1/32"
Deflection due to remaining D.L.	1/8"	1/8"	1/8"	1/8"
Convexity required for vertical curve	1/32"	1/32"	1/32"	1/32"
Sum of Deflections and Convexity	3/16"	3/16"	3/16"	3/16"
Required Camber	None	None	None	None

SUPERSTRUCTURE NOTES

CONCRETE DECK PLACING: In order to facilitate water curing of the concrete of the deck slab, the placing of concrete shall progress upgrade. The slab may be placed in sections between transverse construction joints which are parallel to the piers and are located near the center of any span.

MACHINE FINISH: The concrete bridge deck shall be finished by use of a finishing machine.

CONTINUOUS BEAM SPLICES: If beams having depths differing by more than ⅛" are to be spliced by butt welding, the depth of the smaller-depth beam shall be increased by splitting the web longitudinally at a distance of 1½" below the bottom of the top flange and for a distance sufficient to allow the flange to be bent up at a slope of not more than ⅜" per foot, after which the split in the web shall be completely welded with full depth penetration and ground flush.

WELDING of structural steel shall be Class "A" except as otherwise shown. Welds shown as field welds may, at the option of the Contractor, be made in the shop.

For details of end crossframes, roadway end-finish, beam cut-off at backwall, and welded butt joint in end finish angles at ℄ of roadway see Standard Drawing CSB-2-56, Sheet 2.

For details of scuppers, bulb angle gutter supports, curb plates, and beam splices at Piers see Standard Drawing CSB-2-56, Sheet 3.

For details of fixed and sliding bearings see Standard Drawing FSB-1-62.

For details of aluminum railing see Standard Drawing AR-1-57, Type A.

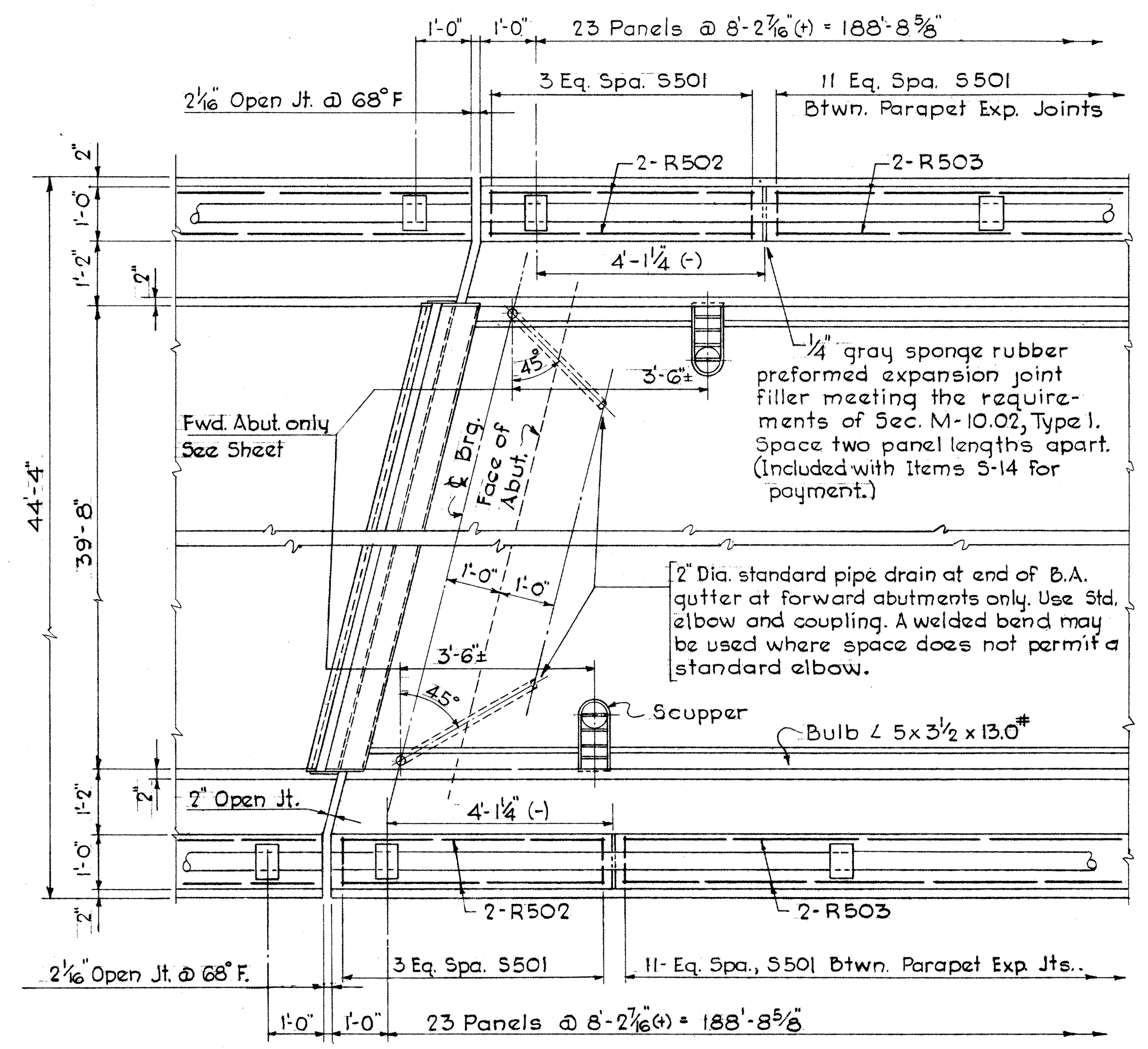
For Scupper spacing see Sheet No. 232

Reinforcing steel shall be 1½" clear of surfaces in parapets and safety curbs

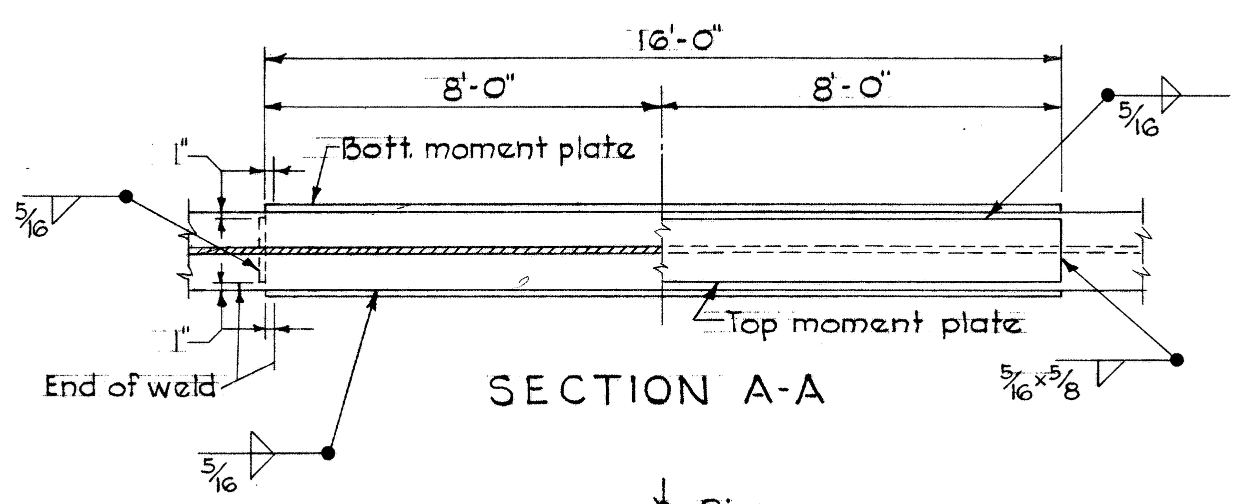
SHOP PAINTING STEEL: The surface preparation of all steel, requiring shop painting as per the Plans and Specifications, shall be accomplished by blast cleaning or power tool cleaning, except as noted in the Specifications regarding the use of Chromate Primers.

PAINT, both shop and field, shall be applied by brushing. Spray application will not be permitted.

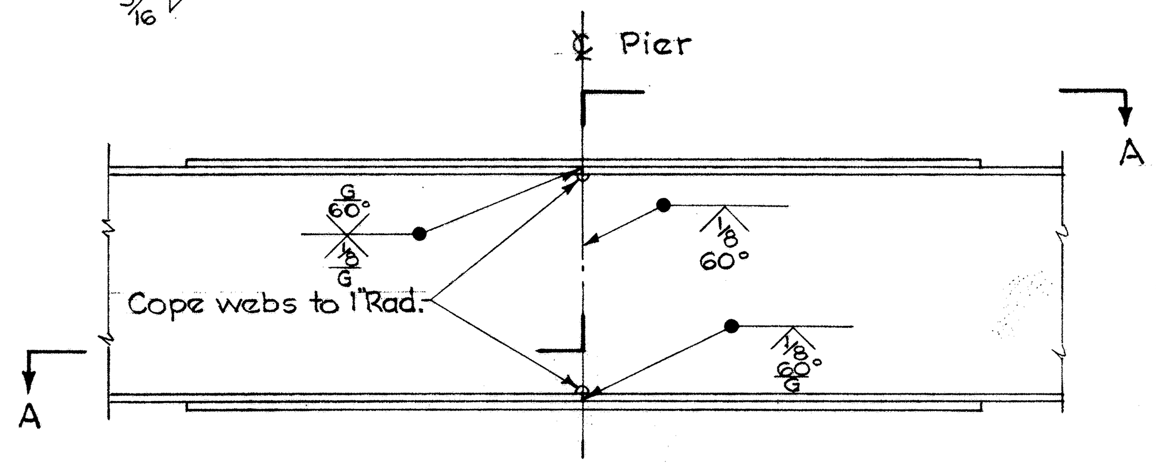
SHEET LEAD shall conform to the requirements of A.S.T.M. Designation B29 without restriction to the common Desilverized type.



PART PLAN AT ABUTMENTS



SECTION A-A



BEAM SPLICE DETAILS AT PIERS

BEAM SPLICE WELDING PROCEDURE

1. Raise end of beam ¾" at Pier 1.
2. Butt-weld the beam flanges and web at Pier 2, using the following sequence: make one pass on each flange, then two on the web; repeat, using one pass at each location, until welds are completed.
3. Weld the bottom and top moment plates at Pier 2.
4. Lower the end of beam at Pier 1 to final position.
5. Make splices at Piers 1 & 3 in the same manner raising the end of beams 5/16" at abutments.

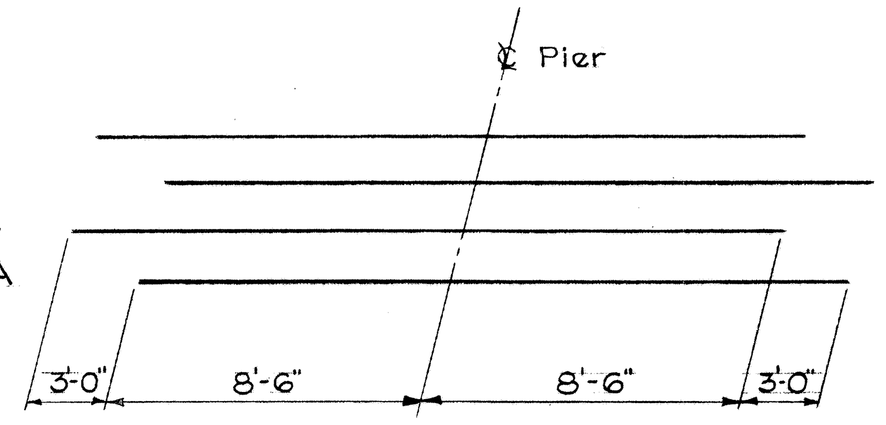
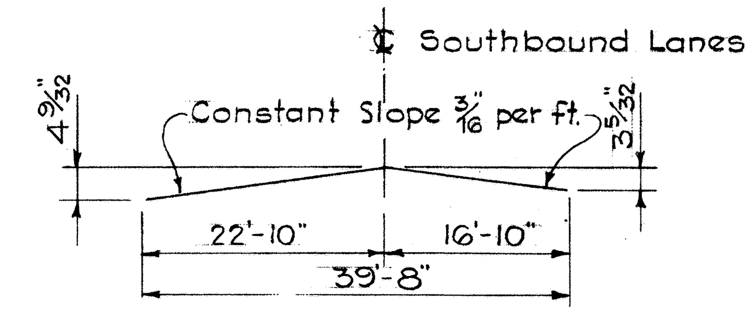


DIAGRAM SHOWING STAGGER OF S608 BARS OVER PIERS



BRIDGE ROADWAY CROWN

J.E. GREINER COMPANY
CONSULTING ENGINEERS
BALTIMORE, MARYLAND

SUPERSTRUCTURE DETAILS
SOUTHBOUND LANES
BRIDGE NO. MED.-42-2404 L&R
I.R.#71 OVER S.R. NO. 303
MEDINA CO. STA. 347+47.26

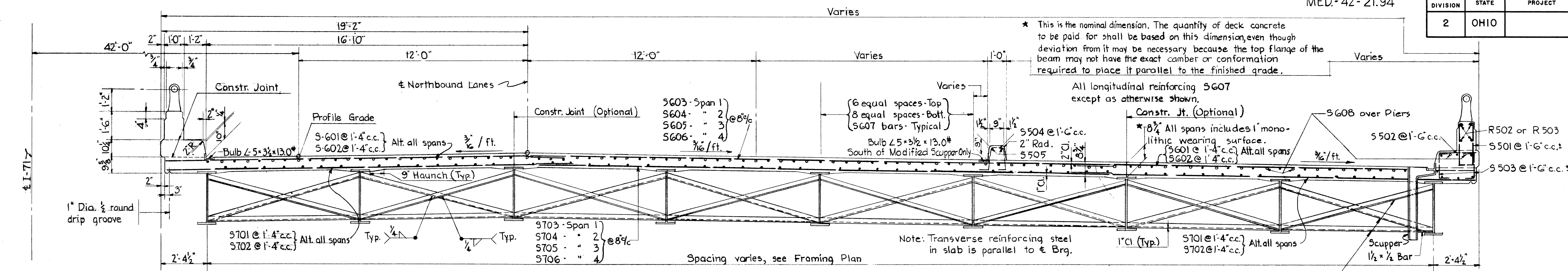
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
WEISER	CORONEL	KEEFER	ROBINSON	MUDD	3/27/62	

MED.- 42- 21.94

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

★ This is the nominal dimension. The quantity of deck concrete to be paid for shall be based on this dimension, even though deviation from it may be necessary because the top flange of the beam may not have the exact camber or conformation required to place it parallel to the finished grade.

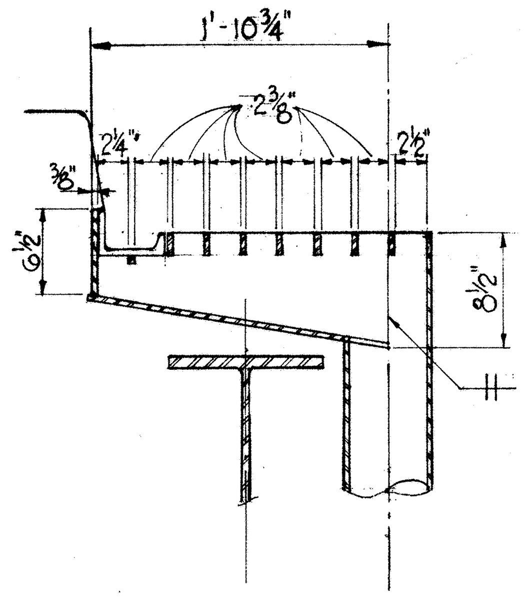
All longitudinal reinforcing S607 except as otherwise shown.



TRANSVERSE SECTION
NORTHBOUND LANES

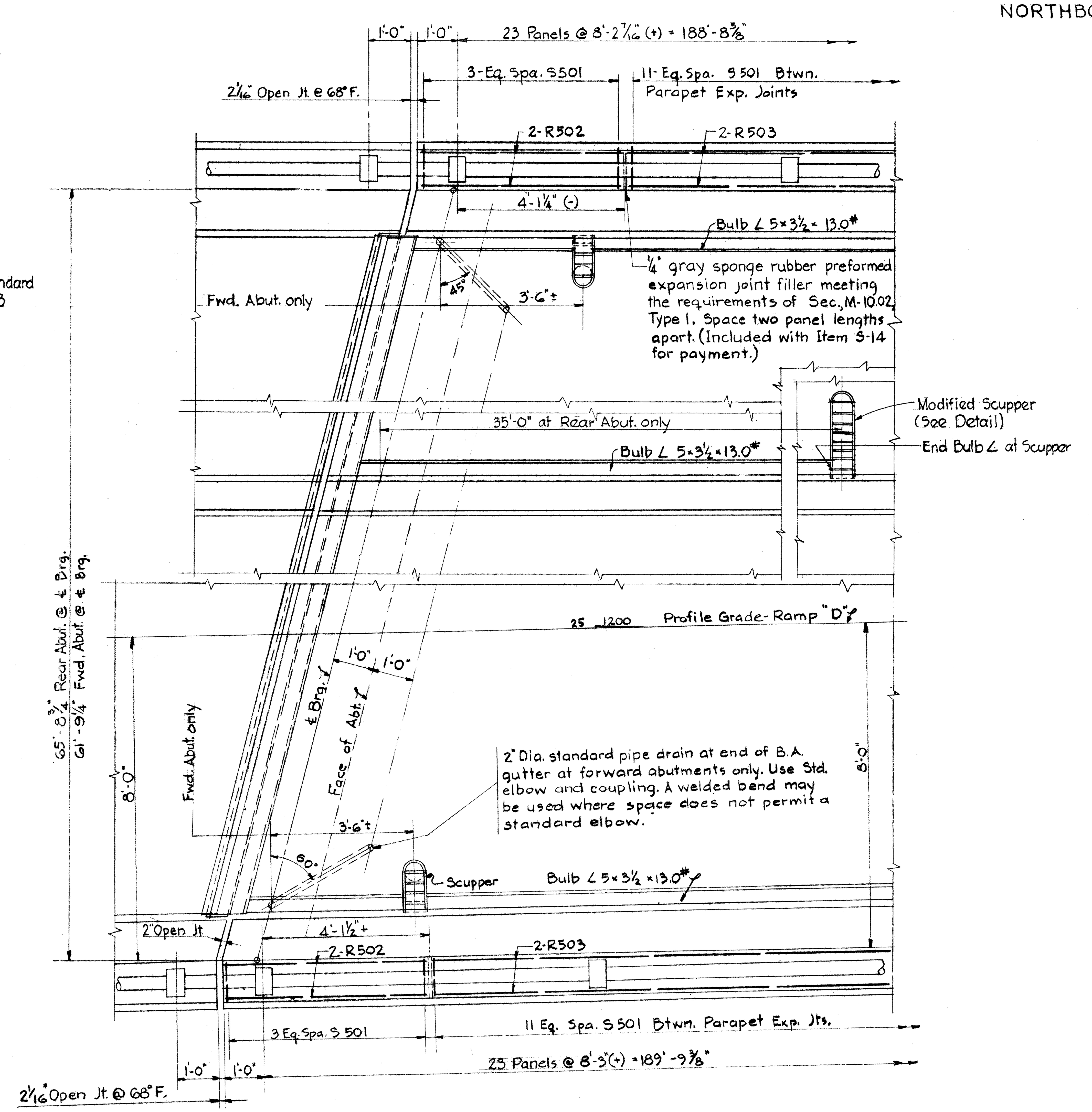
DECK SLAB HAUNCH = The haunch in the deck slab adjacent to the top of steel beams, which is shown as 9" wide, may vary from this dimension between the limits of 6" and 12", except that the maximum slope shall not exceed 3 inches per foot. Payment for deck slab concrete shall be based on the 9" width.

Intermediate crossframe ∠s 3×3×5/16. Weld both sides of vertical leg and top side of horizontal leg to beam with ¼" continuous fillet weld.

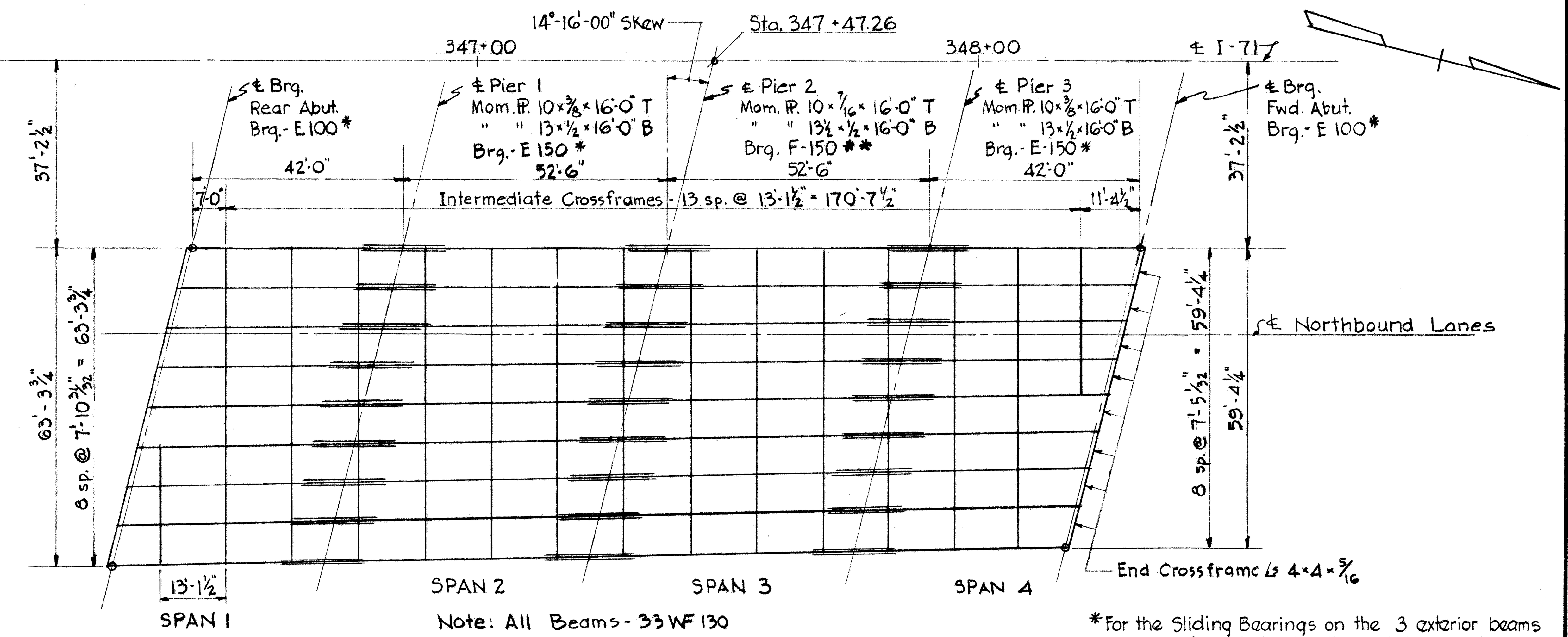


MODIFIED SCUPPER

For all details not shown see Standard Drawing No. CSB-2-56, Sheet No. 3



PART PLAN AT ABUTMENTS



STEEL FRAMING PLAN
NORTHBOUND LANES

* For the Sliding Bearings on the 3 exterior beams on each side of the Northbound Bridge, the width of the recess in the bottom plate shown on Standard Drawing No. FSB-1-62 shall be increased to S + ⅜".

** Increase length of fixed bearing Pin from B + ¼" to B + ¾" for 3 exterior beams on each side of the Northbound Bridge.

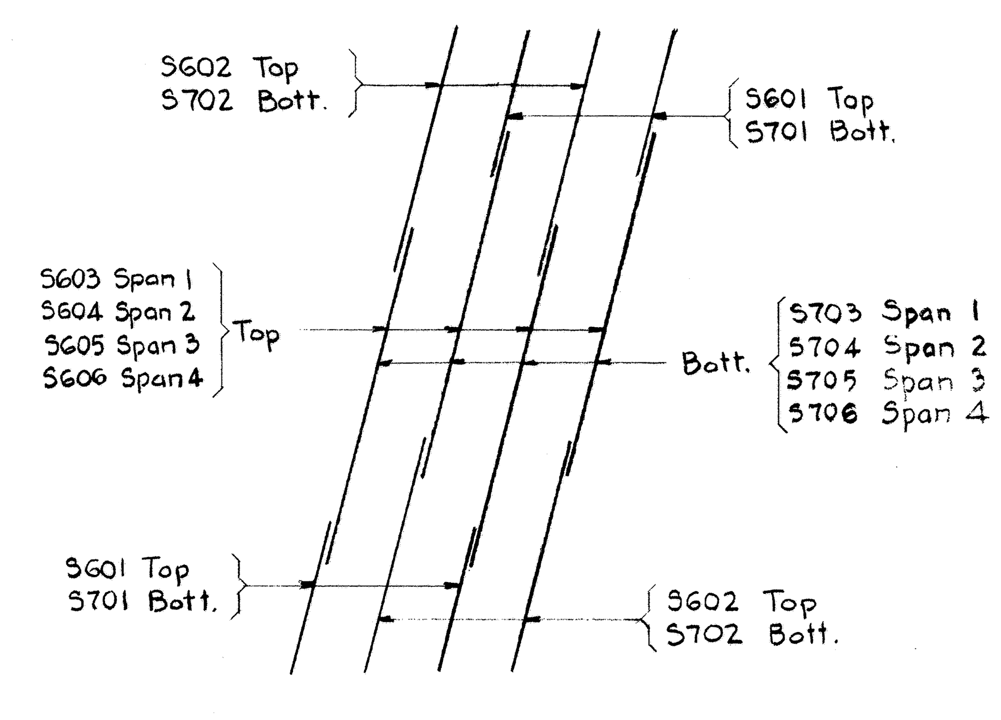
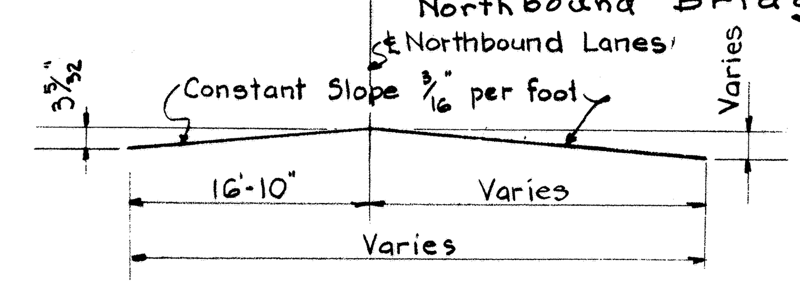


DIAGRAM SHOWING TRANSVERSE REINFORCING IN SLAB



BRIDGE ROADWAY CROWN

Notes:

For Beam Splice Details, Deflections and Camber, Stagger of S608 Bars over Piers and Superstructure Notes, see Sheet No. 238

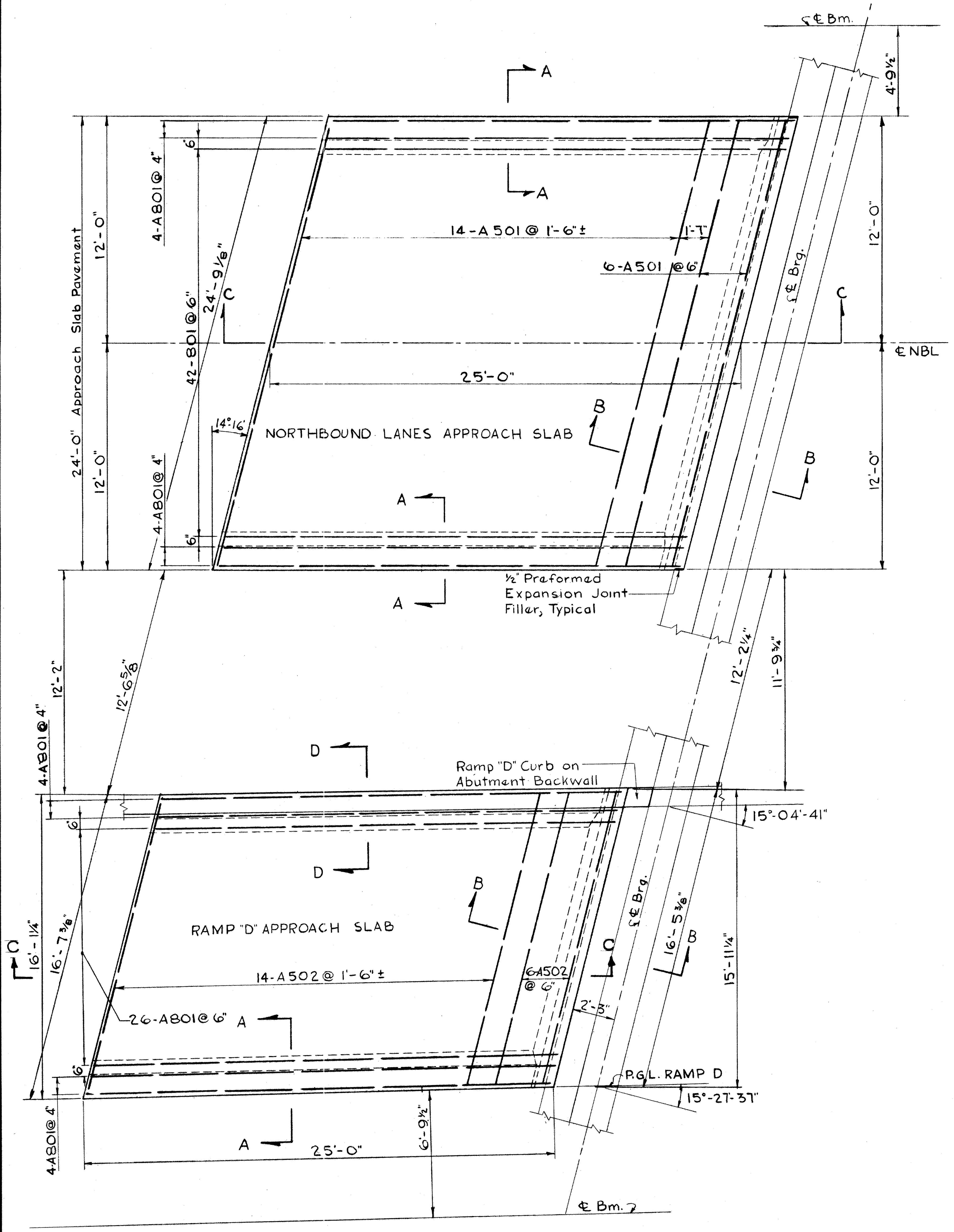
Modified Scupper will be paid for as Item S-29, Scuppers.

J.E GREINER COMPANY
CONSULTING ENGINEERS
BALTIMORE, MARYLAND

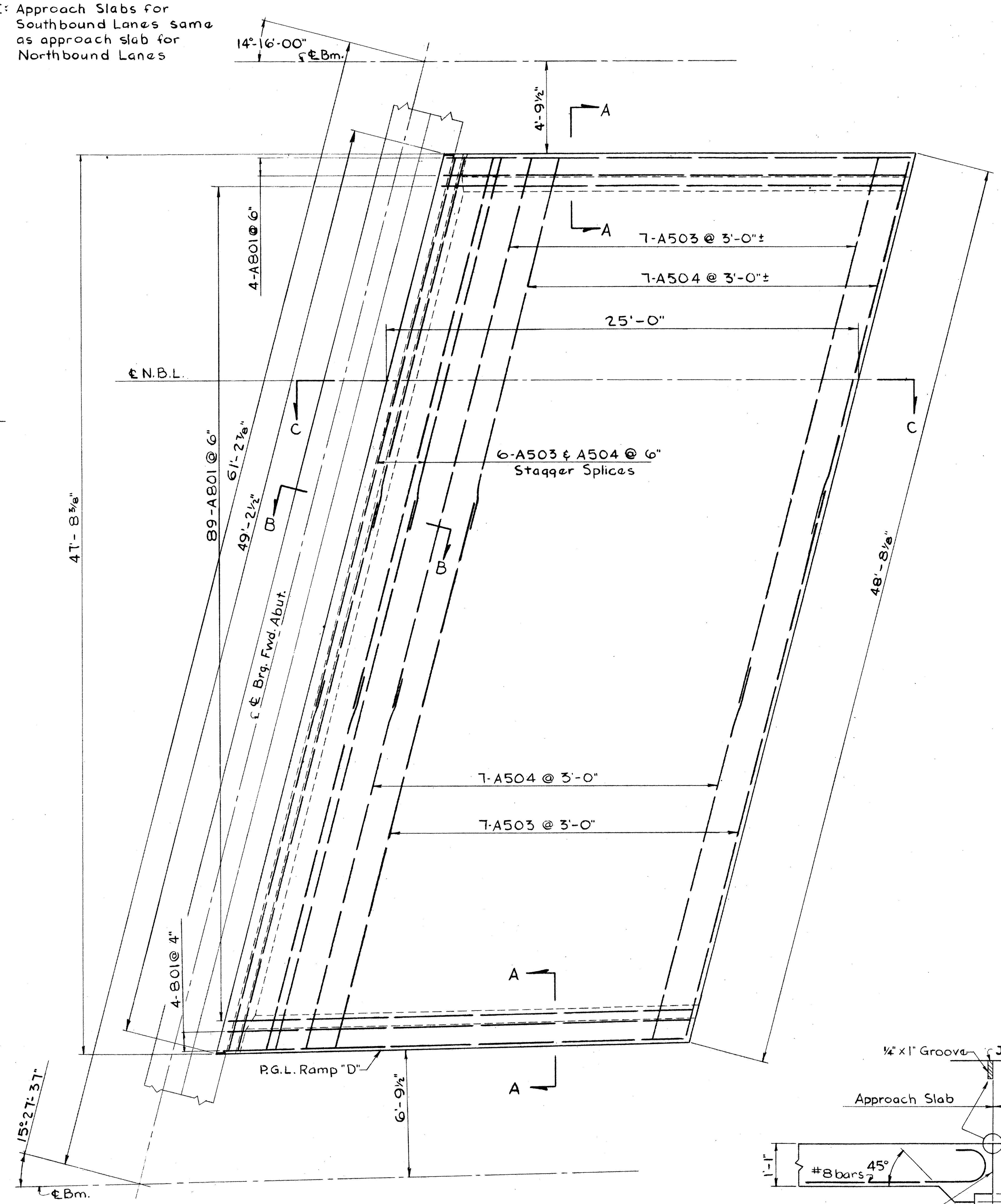
SUPERSTRUCTURE DETAILS
NORTHBOUND LANES
BRIDGE NO. MED.-42-2404 L & R
I.R. #71 OVER S.R. NO 303
MEDINA CO. STA. 347+47.26

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
WEISER	WALTER	BALTER	ROBINSON	MUDD	9/27/62	

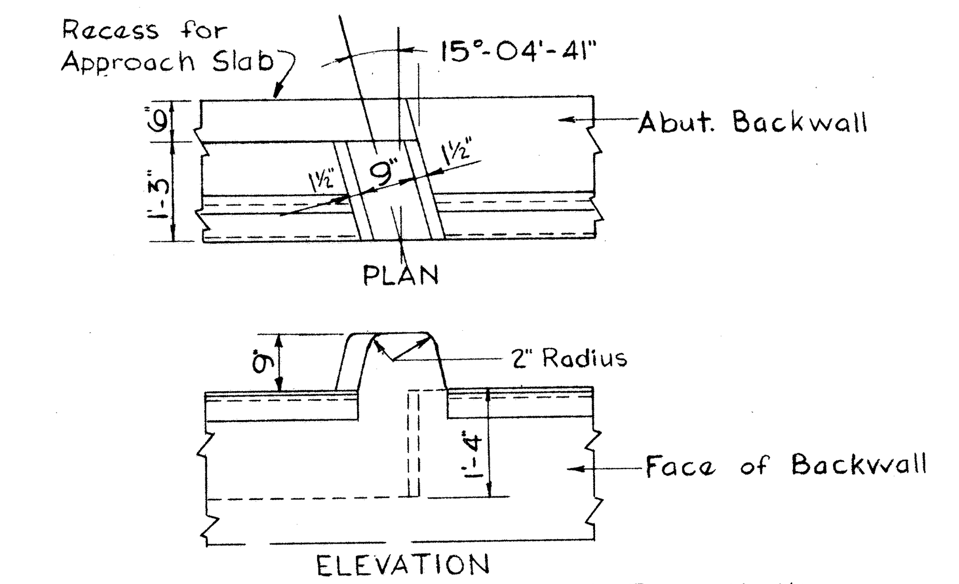
NOTE: Approach Slabs for Southbound Lanes same as approach slab for Northbound Lanes



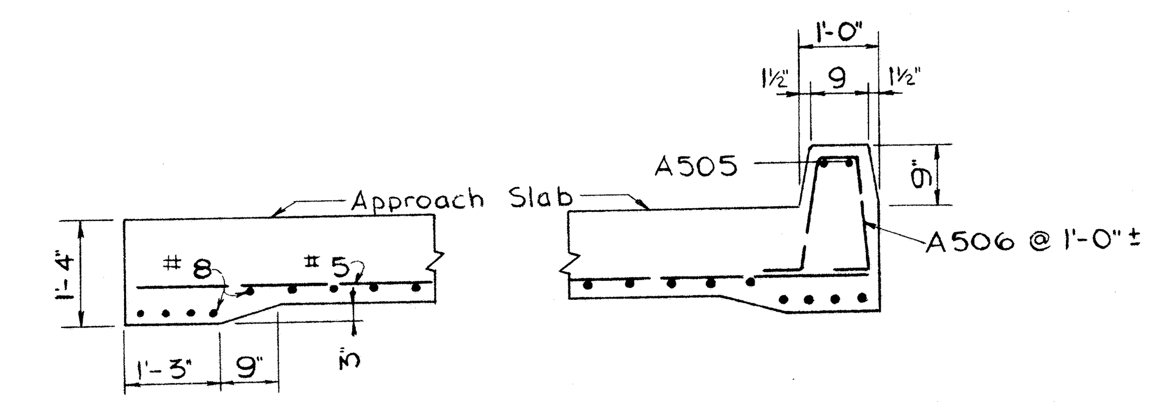
APPROACH SLABS AT REAR ABUTMENT NORTHBOUND LANES & RAMP "D"



APPROACH SLAB AT FORWARD ABUTMENT NORTHBOUND LANES & RAMP "D"



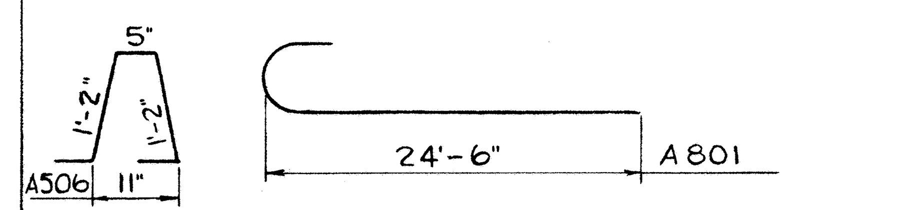
DETAILS OF RAMP "D" CURB AT ABUT. BACKWALL

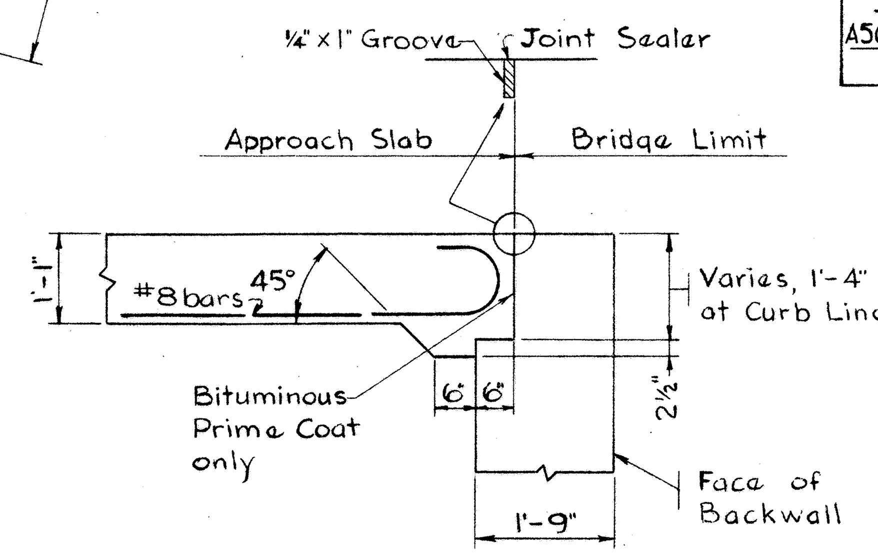


SECTION A-A SECTION D-D

MARK	NUMBER OF BARS: 3-24' WIDE SLABS	RAMP D SLAB	SLAB AT N.E. ABUT.	LENGTH	WEIGHT	SHAPE
A801	150	34	97	25'-7"	19,194	B
A501	60			24'-3"	1,518	S
A502		20		16'-0"	334	S
A503			20	30'-0"	626	S
A504			20	20'-4"	424	S
A505		2		24'-6"	51	S
A506		26		3'-6"	95	B

REINFORCING STEEL LIST





SECTION B-B

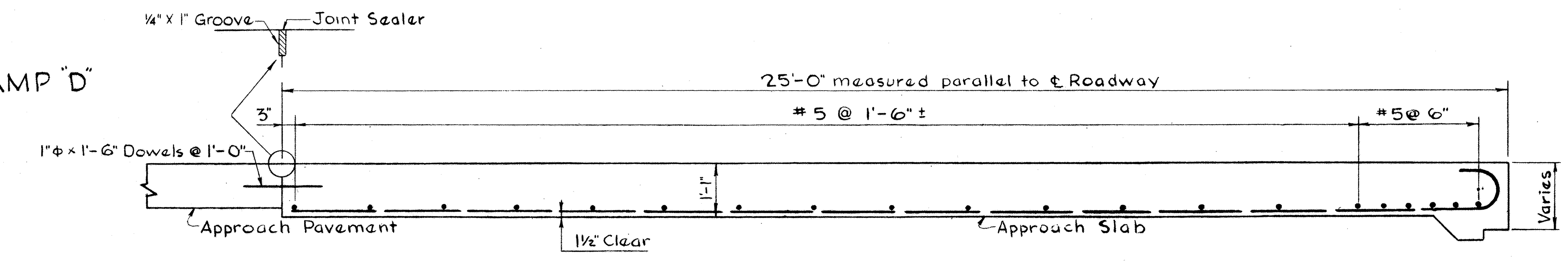
NOTES

½" Preformed Expansion Joint Filler shall be included in Item I-7 "Reinforced Concrete Approach Slab" for payment.

Bar Size is indicated in the Bar Mark. The first digit indicates the Bar Size Number For example A801 is a No. 8 Size Bar.

Work this Sheet with Standard Drawing No. A.S.-1-54 (Revised 7-5-62)

Concrete in Approach Slabs shall be Class "C".



SECTION C-C

J.E GREINER COMPANY
CONSULTING ENGINEERS
BALTIMORE, MARYLAND

APPROACH SLAB DETAILS

BRIDGE NO. MED. - 42-2404 L & R
I.R. #71 OVER S.R. NO. 303

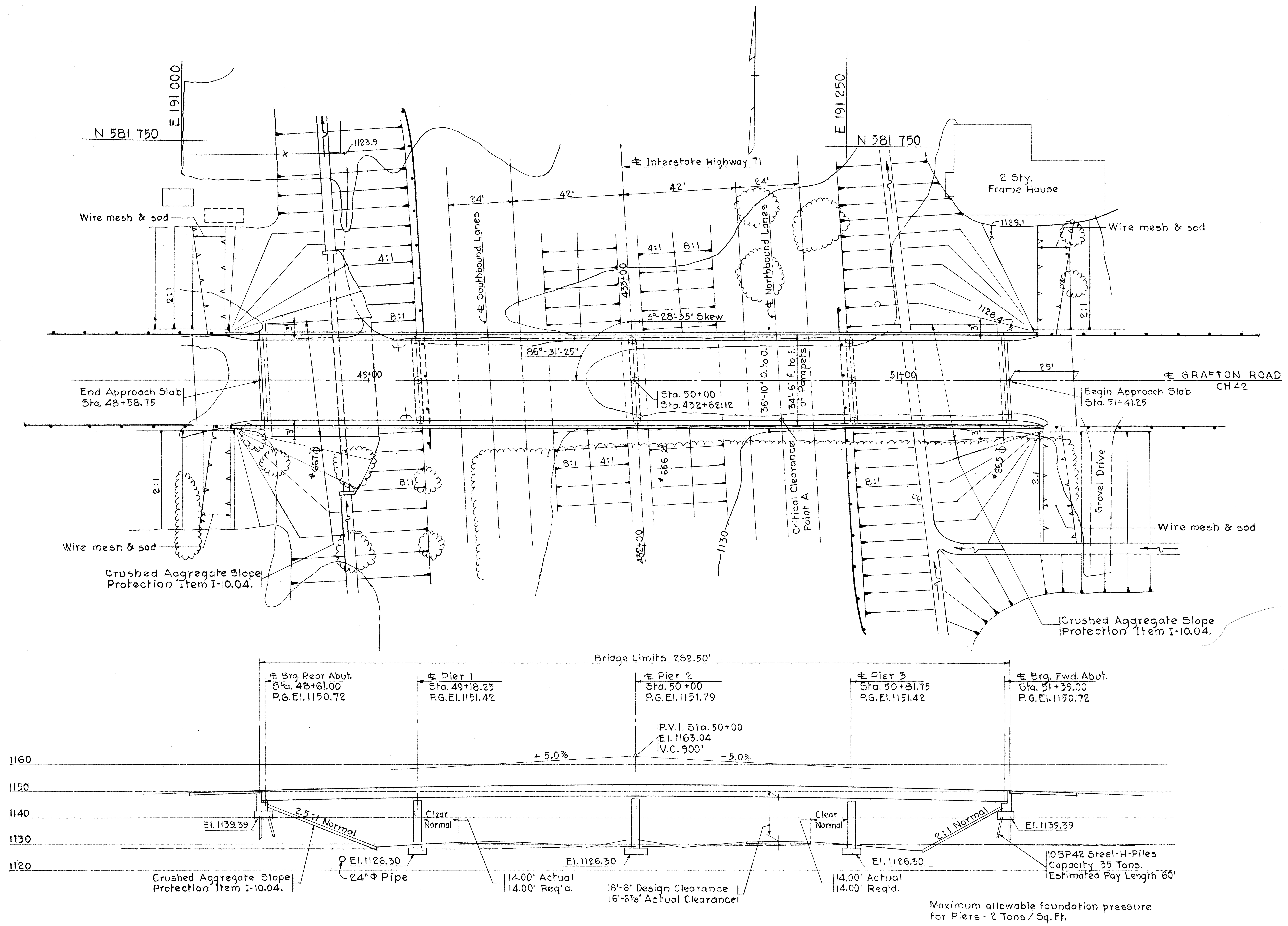
MEDINA CO. STA. 347+47.26

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
ALKEMA	ALKEMA	MILLER	RUARK	MUDD	9/27/62	

MED. 42-21.94

FED. RD. DIVISION	STATE	PROJECT		
2	OHIO			

241
293



PROPOSED STRUCTURE

Type: Continuous steel beams with reinforced concrete deck and substructure.
Spans: 57'-3", 81'-9", 81'-9", 57'-3".
Roadway: 30'-0" face to face of 2'-3" safety curbs.
Load Frequency: CF = 400 (57)
Skew: 3°-28'-35" (R.F.)
Wearing Surface: 1" Monolithic concrete.
Approach Slabs: AS-1-54 (25' long)
Alignment: Tangent.
Traffic Volume: 2,470 ADT - 1975.

FOUNDATION SOUNDINGS: Foundation design and foundation quantities are based on a study of drive sample-core borings and drive rod penetration test made at the site. This sounding information may be inspected in the office of the Bureau of Bridges in Columbus or in the Division Office, but the State does not guarantee the accuracy thereof.

Traffic on Medina Co. Hwy. 42 to be maintained by a temporary run around, see Sheet No. 135.

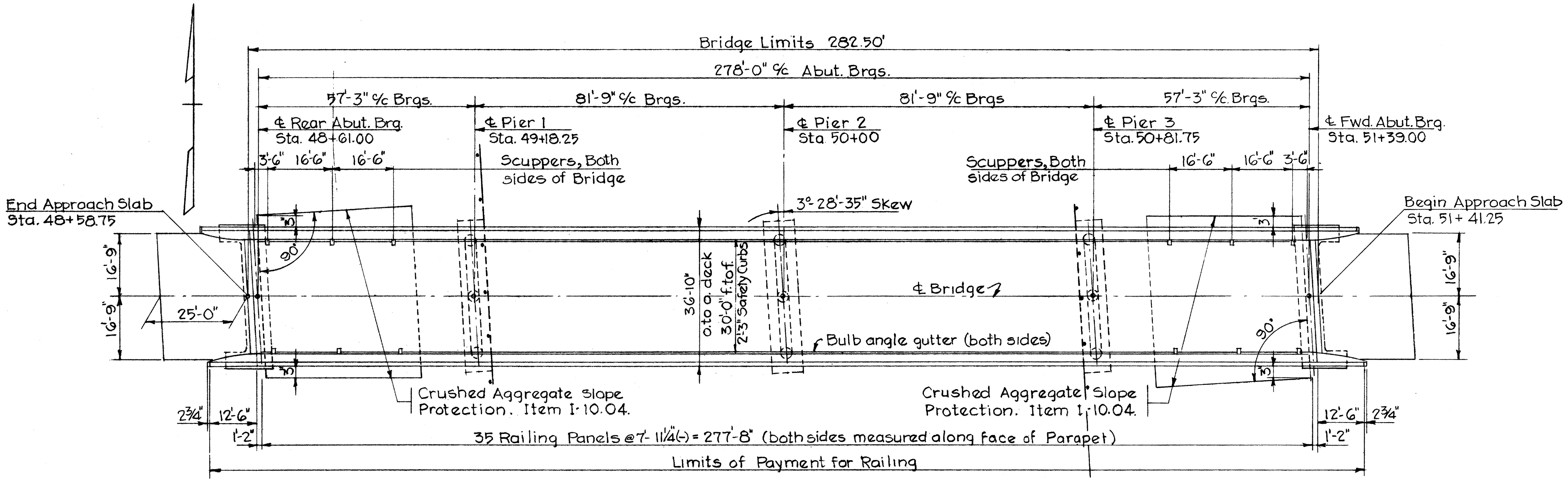
J.E. GREINER CO.
CONSULTING ENGINEERS
BALTIMORE, MARYLAND

SITE PLAN

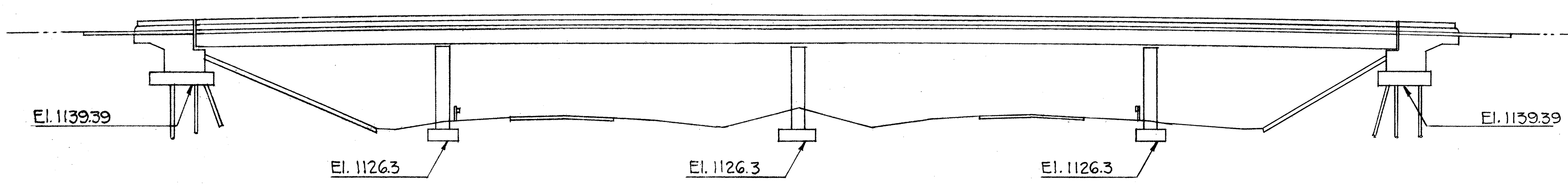
BRIDGE NO. MED.-42-2565
INTERSTATE HIGHWAY #71 UNDER
MEDINA COUNTY HWY. NO. 42

MEDINA CO. STA. 432+62.12

PRESENT TOPOGRAPHY		PROPOSED WORK			
SURVEYED	DRAWN	DESIGNED	DRAWN	CHECKED	REVIEWED
HENRY	AIR SURVEY CORP.	SORTEBERG	CORONEL	RUARK	MUDD



GENERAL PLAN



ELEVATION

GENERAL NOTES

DESIGN SPECIFICATIONS: This structure conforms to the requirements of "Design Specifications for Highway Structures" of the State of Ohio, Department of Highways, dated 9-1-57, together with current revisions thereof.

REFERENCE should be made to:
Standard Drawing FSB-1-62, dated 4-19-62.
Standard Drawing CSB-2-56, Sheets 2&3, revised 2-2-59
Standard Drawing AR-1-57, Type A, revised 4-2-62, and
Standard Drawing AS-1-54, revised 7-5-62.

EXCAVATION QUANTITY includes the removal of fill material between the surface of the proposed embankment and the bottom of the abutment.

SURFACE FINISH OF CONCRETE: The requirements of Sec. S-1.22, Rubbed Finish, shall apply to the following exposed concrete surfaces:
a. The entire superstructure except the top and bottom surfaces of safety curbs and roadways.
b. The entire surface of piers and abutments except bridge seats, backwalls and the face of spill-through abutments between the outside beams.

ABUTMENT PILES shall be driven with a hammer of not less than 11,000 ft-lbs. per blow to firm contact with rock. If the length of penetration is approximately equal to the depth of rock according to the bridge foundation investigation report, the firm contact will be considered as attained when the capacity according to the formula in Sec. S-18.05 is not less than the following value for a pile hammer of the indicated rating:
43 tons per pile using a 11,000 ft-lb. hammer.
35 tons per pile using a 15,000 ft-lb. hammer.
If the energy rating of the hammer is between the ratings as shown above the required formula capacity shall be determined by interpolation. The design load is 35 tons per pile.

ESTIMATED QUANTITIES

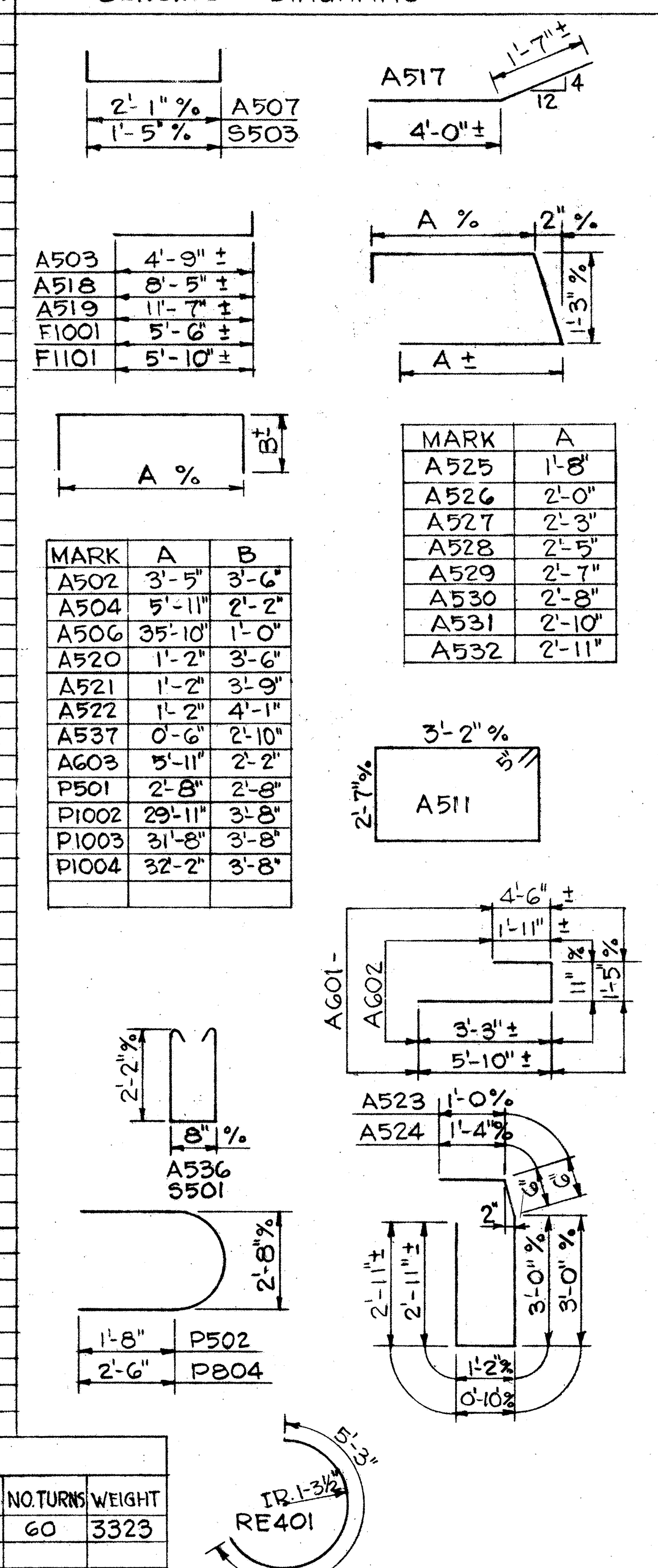
ITEM	TOTAL	UNIT	DESCRIPTION	SUPER	ABUTS	PIERS	GEN.		
E-2	418	Cu.Yds.	Unclassified excavation.		220	198			
S-1	330	Cu.Yds.	Class "C" concrete, superstructure.	330					
S-1	78	Cu.Yds.	Class "C" concrete, piers above footings.			78			
S-1	79	Cu.Yds.	Class "E" concrete, abutments above footings.		79				
S-1	148	Cu.Yds.	Class "E" concrete, footings.		65	83			
S-4	129,005	Lbs.	Reinforcing steel.	82,814	10,352	35,839			
S-7	342,000	Lbs.	Structural steel.	342,000					
S-8	342,000	Lbs.	Field painting of structural steel.	342,000					
S-14	610.00	Lin.Ft.	Railing (aluminum rail, supports and concrete parapet)	560.00	50.00				
S-16	Lump	Sum	First test pile.				Lump		
S-18	1,560	Lin.Ft.	Steel piles, 10BP42.		1560				
S-29	12	Each	Scuppers.	12					
S-29	22	Cu.Yds.	Porous backfill.		22				
I-10	418	Sq.Yds.	Crushed aggregate slope protection				418		
*Special	330	Each	Water-reducing, set-retarding admixture	330					

* See Proposal Note.

REINFORCING STEEL LIST

MARK	NO.	LENGTH	WEIGHT	SHP.
ABUTMENTS				
A501	14	33'-8"	492	S
A502	48	10'-2"	509	B
A503	96	5'-3"	526	B
A504	52	10'-0"	542	B
A505	6	35-10"	224	S
A506	12	37'-7"	470	B
A507	60	3'-1"	193	B
A508	24	6'-0"	150	S
A509	8	11'-5"	95	S
A510	24	6'-6"	163	S
A511	20	11'-11"	248	B
A512	12	3'-6"	44	S
A513	28	8'-5"	246	S
A514	8	11'-0"	92	S
A515	8	14'-5"	120	S
A516	4	5'-4"	22	S
A517	8	5'-7"	47	B
A518	8	8'-11"	74	B
A519	56	12'-1"	706	B
A520	8	7'-9"	65	B
A521	4	8'-5"	35	B
A522	4	9'-1"	38	B
A523	4	8'-4"	35	B
A524	4	9'-0"	38	B
A525	4	4'-10"	20	B
A526	4	5'-6"	23	B
A527	4	6'-0"	25	B
A528	4	6'-4"	26	B
A529	4	6'-8"	28	B
A530	4	6'-10"	29	B
A531	4	7'-2"	30	B
A532	20	7'-4"	153	B
A533	8	12'-7"	105	S
A534	8	9'-8"	81	S
A535	8	12'-4"	103	S
A536	36	5'-7"	210	B
A537	8	5'-11"	50	B
A601	66	11'-5"	1132	B
A602	66	5'-9"	570	B
A603	52	9'-11"	775	B
A801	18	37'-10"	1818	S

BENDING DIAGRAMS



MARK	A	B
A502	3'-5"	3'-6"
A504	5'-11"	2'-2"
A506	35'-10"	1'-0"
A520	1'-2"	3'-6"
A521	1'-2"	3'-9"
A522	1'-2"	4'-1"
A537	0'-6"	2'-10"
A603	5'-11"	2'-2"
P501	2'-8"	2'-8"
P1002	29'-11"	3'-8"
P1003	31'-8"	3'-8"
P1004	32'-2"	3'-8"

MARK	A
A525	1'-8"
A526	2'-0"
A527	2'-3"
A528	2'-5"
A529	2'-7"
A530	2'-8"
A531	2'-10"
A532	2'-11"

MARK	NO.	LENGTH	WEIGHT	SHP.
PIERS				
P501	84	7'-9"	679	B
P502	18	7'-5"	139	B
P503	12	30'-1"	377	S
P801	12	32'-2"	1031	S
P802	6	31'-7"	506	S
P803	6	29'-11"	479	S
P804	6	9'-1"	146	B
P1001	26	17'-9"	1986	S
P1002	6	36'-8"	947	B
P1003	6	38'-5"	992	B
P1004	6	38'-11"	1005	B
P1005	12	13'-0"	671	S
P1006	6	18'-0"	465	S
P1101	96	18'-1"	9223	S
F601	118	6'-8"	1182	S
F602	59	8'-2"	724	S
F701	32	8'-0"	684	S
F702	20	39'-5"	2118	S
F901	36	39'-8"	4855	S
F1001	26	6'-7"	737	B
F1101	96	7'-0"	3570	B
PARAPET RAILING				
R501	16	12'-2"	*	S
R502	16	4'-8"	*	S
R503	136	15'-7"	*	S
*Parapet railing bars are included with S-14 for payment				
SUPERSTRUCTURE				
S501	390	5'-7"	2271	B
S502	374	2'-9"	1073	S
S503	748	2'-5"	1886	B
S601	372	36'-3"	20254	S
S602	8	3'-0"	36	S
S603	472	36'-9"	26054	S
S604	72	34'-0"	3677	S
S701	372	36'-3"	27563	S
REPLACEMENT BARS				
RE401	1	5'-3"	——	B
RE501	1	5'-7"	——	S
RE601	3	5'-11"	——	S
RE701	2	6'-2"	——	S
RE801	1	6'-6"	——	S
RE901	1	6'-10"	——	S
RE1001	1	7'-2"	——	S
RE1101	1	7'-6"	——	S

SPIRAL BARS

MARK	NO.	CORE DIA. ℅ SPIRAL	LENGTH	PITCH	NO. TURNS	WEIGHT
SP401	9	32"	14'-3½	3"	60	3323

SPIRAL REINFORCING BARS: The "Length" shown in the steel list for the spiral bars is the distance from the top of the footing to the bottom of the pier cap. The "No. of Turns" shown is the "Length" divided by the pitch, plus 3 turns (total number of closed coils), expressed as the nearest whole number. Spiral reinforcing bars shall not have deformations but shall in other respects conform to Item S-4. 1½ closed coils shall be provided at the ends of each spiral unit. Four steel channel, tee or angle spacers, weighing approximately 0.68 lb. per lin. ft. of spacer, shall be provided for each spiral unit. They shall be equally spaced along the periphery of the coil. The number of pounds of these spacers, based on 0.68 lb. per lin. ft., will be paid for as reinforcing steel and is included in the tabulated quantity of spiral bars.

BAR SIZE is indicated in the bar mark. The first digit where three digits are used and the first two digits where four are used indicate the bar size number. For example, A701 is a No. 7 size bar and P1002 is a No. 10 size bar.

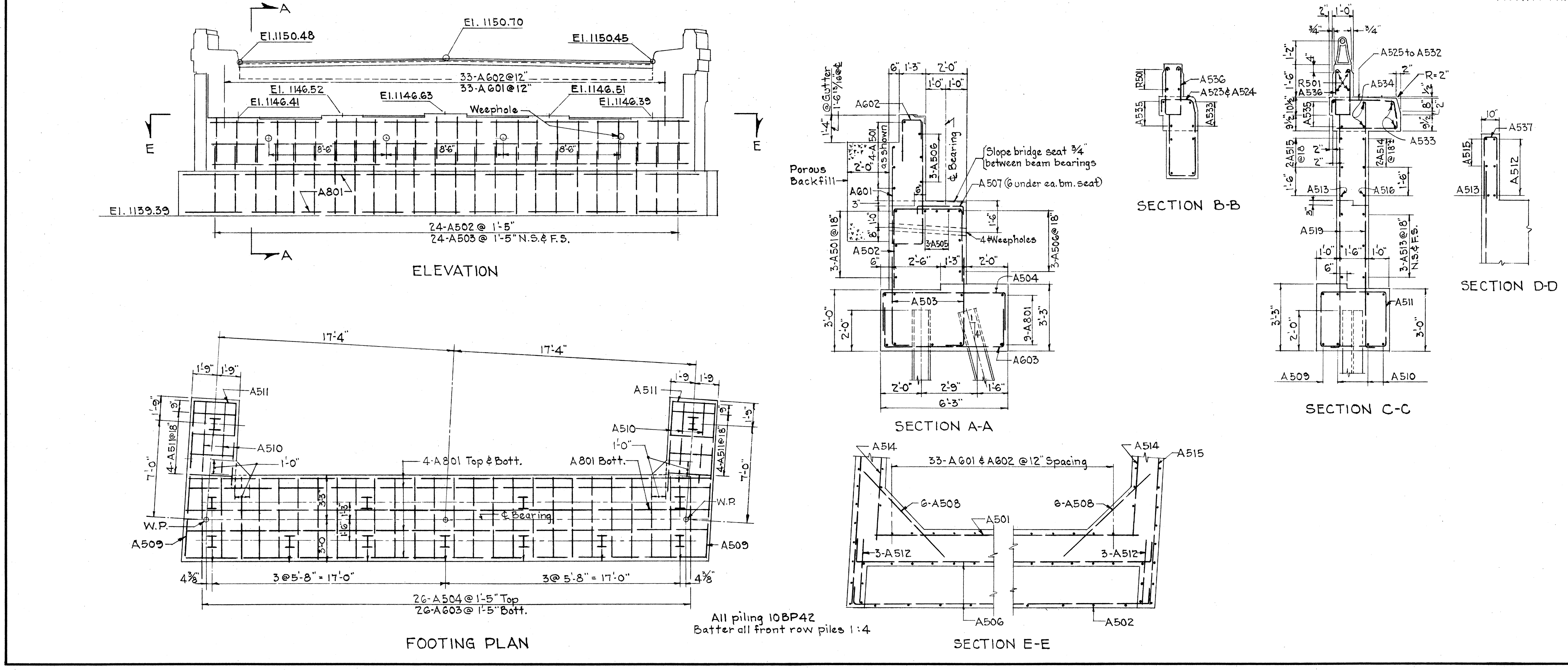
J.E. GREINER COMPANY
CONSULTING ENGINEERS
BALTIMORE, MARYLAND

GENERAL PLAN AND ELEVATION, NOTES, ESTIMATED QUANTITIES AND REINFORCING STEEL LIST
BRIDGE NO. MED.-42-2565
I.R.#71 UNDER MEDINA CO. HWY NO. 42
MEDINA CO. STA. 432+62.12

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
WEISER	CORONEL	CLARK	ROBINSON	MUDD	9/27/62	

MED. 42-21.94

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		



CLEARANCE of reinforcing steel from face of concrete shall be 3" in bottom of footing, 1½" in parapet and safety curb and 2" elsewhere.

POROUS BACKFILL shall extend upward to the approach slab and outward to the wingwalls. Excavation therefor, in excess of that required for construction of the abutment, shall be considered as paid for in the bid price per cu. yd. paid for porous backfill.

PROCEDURE: The embankment shall be placed and compacted up to the finished spill-thru slope after which excavation shall be made for the abutment and piles driven.

CONCRETE shall be Class E

Abutment backwalls above the bridge seat shall not be placed until all steel is erected. Abutment backwalls shall be completed prior to placing bridge deck slab.

BRIDGE SEAT REINFORCING: Special care shall be taken in placing reinforcing steel in the vicinity of the bridge seat so as to avoid interference with the drilling of anchor rod holes.

LEGEND
N.S. = Near Side
F.S. = Far Side

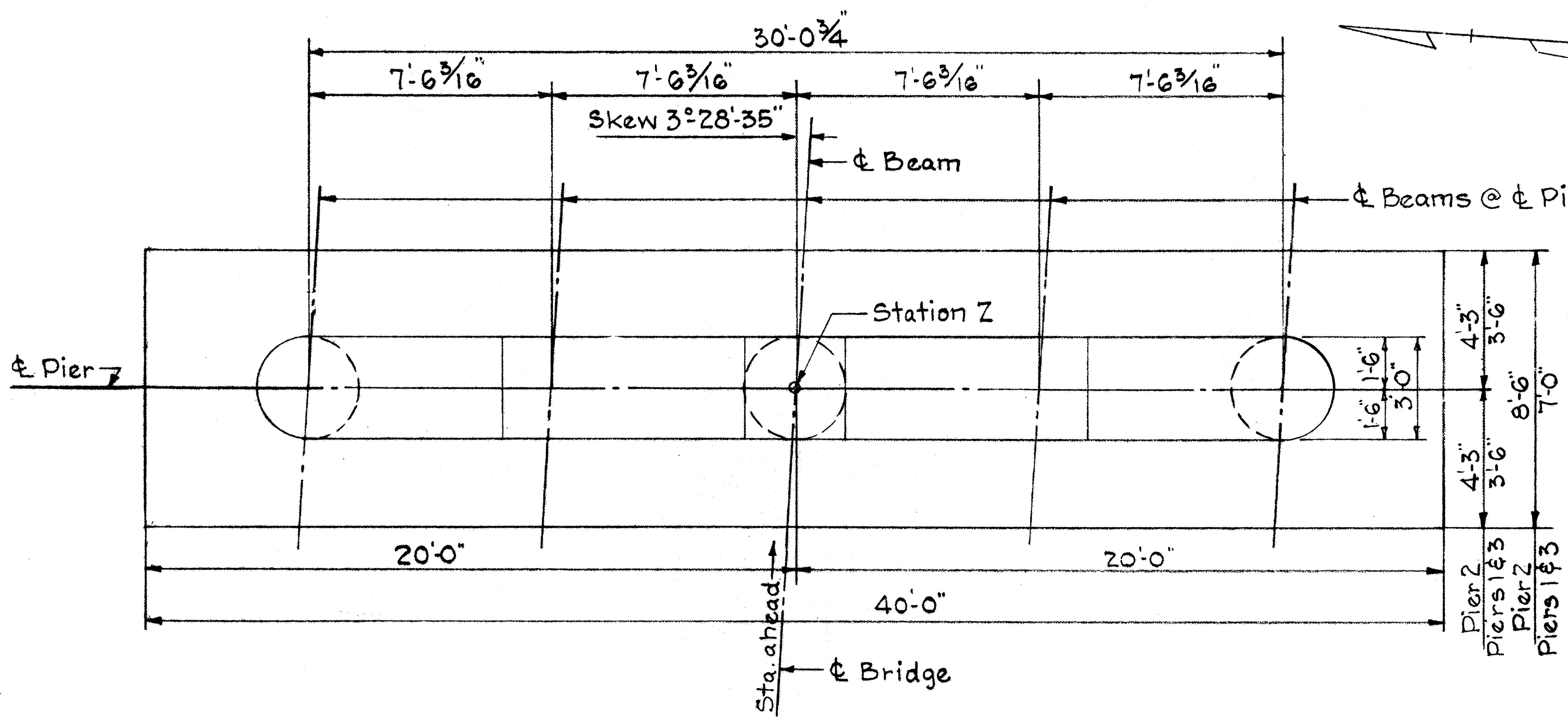
J.E GREINER COMPANY
CONSULTING ENGINEERS
BALTIMORE, MARYLAND

ABUTMENT DETAILS

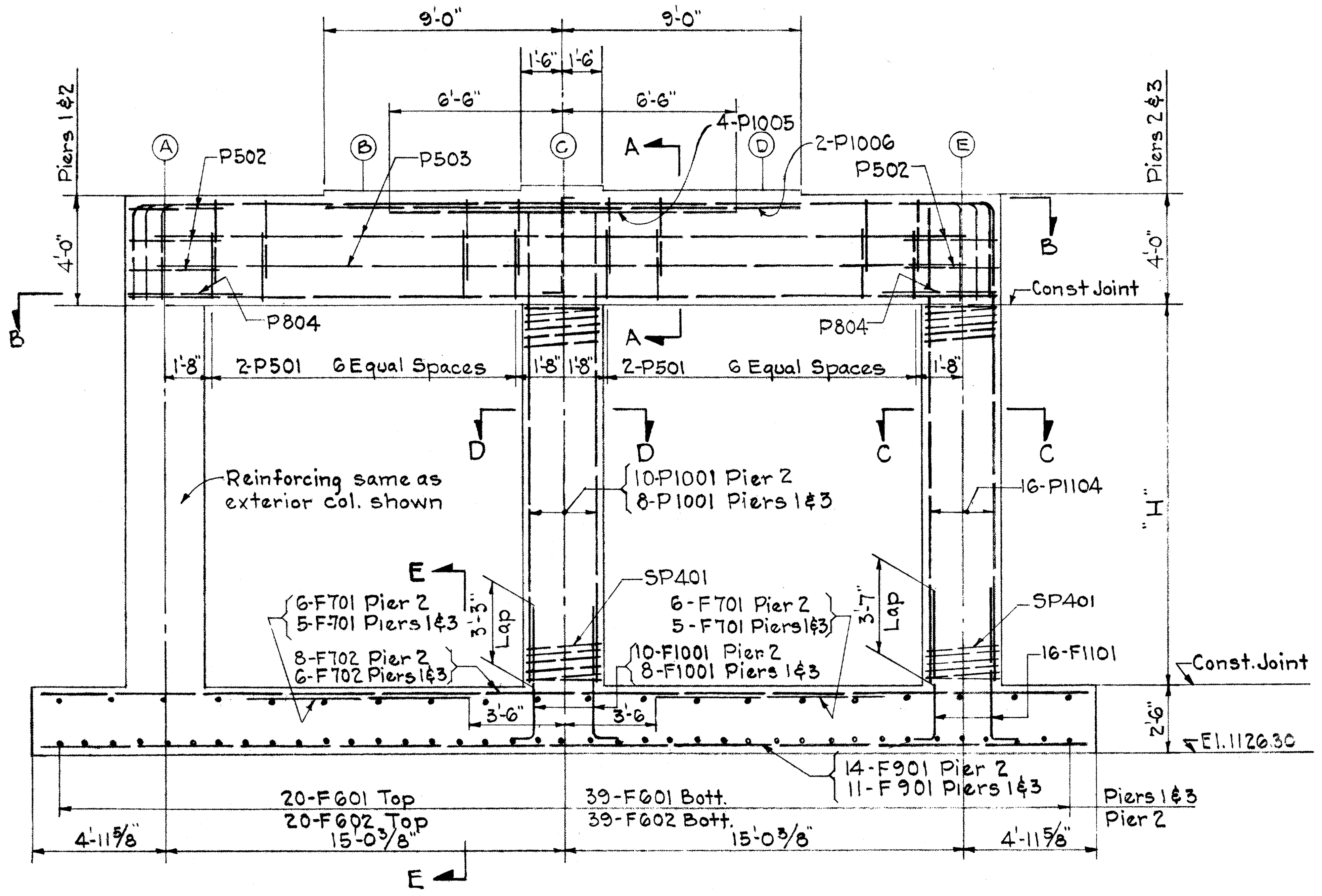
BRIDGE NO. MED.-42-2565
I.R.#71 UNDER MEDINA CO. HWY. NO 42

MEDINA CO. STA. 432+62.12

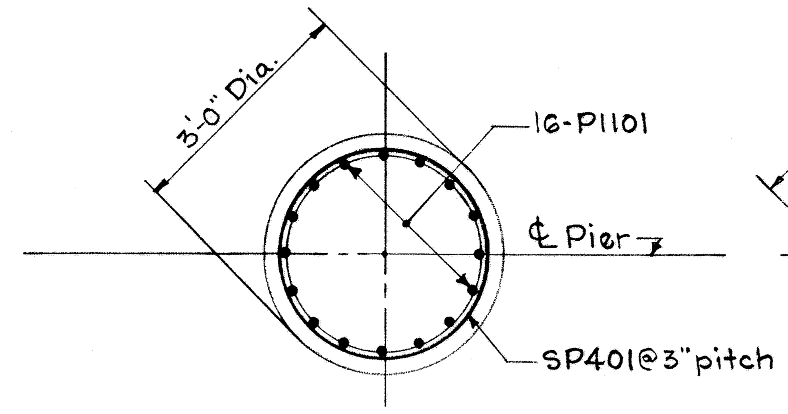
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RUARK	ALKEMA	KATZ	ROBINSON	MUDD	9/27/62	



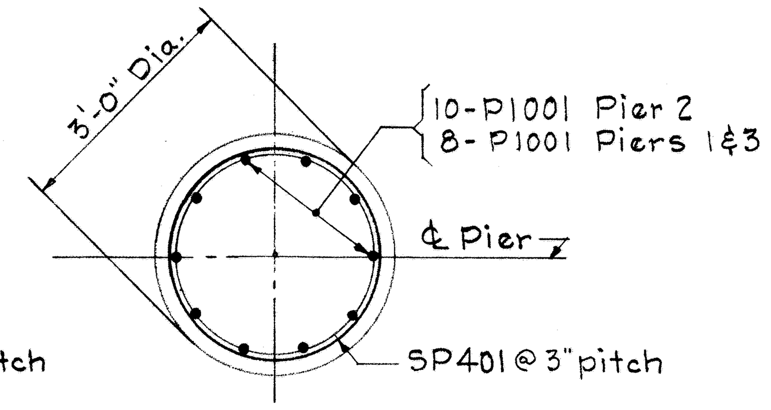
PLAN



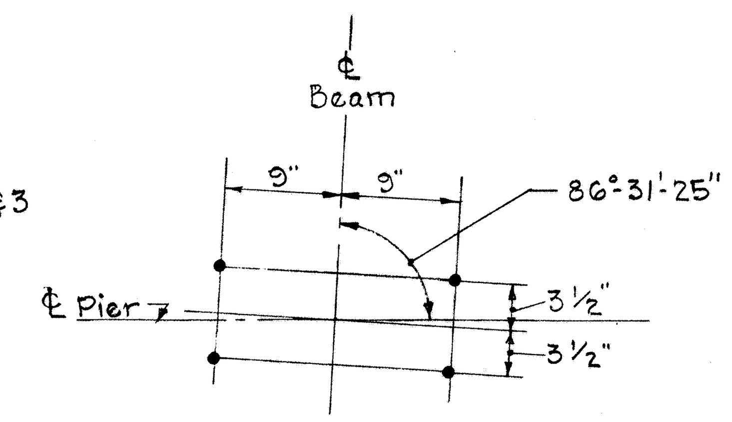
ELEVATION



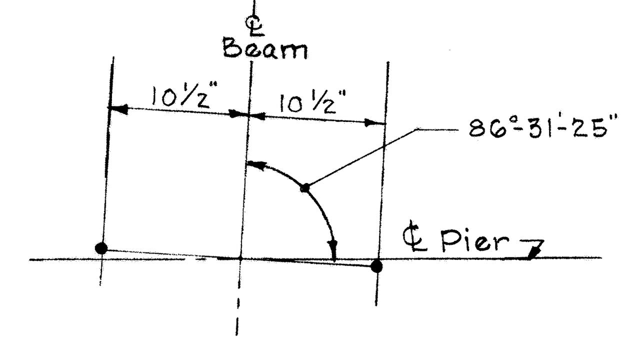
SECTION C-C



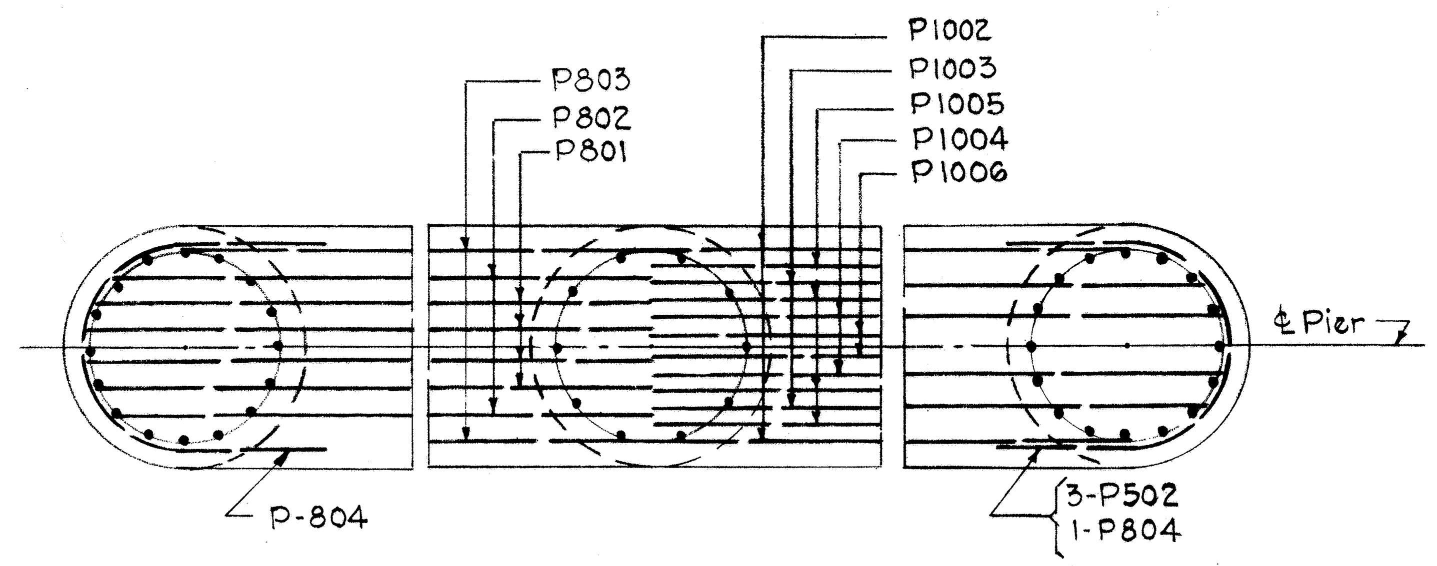
SECTION D-D



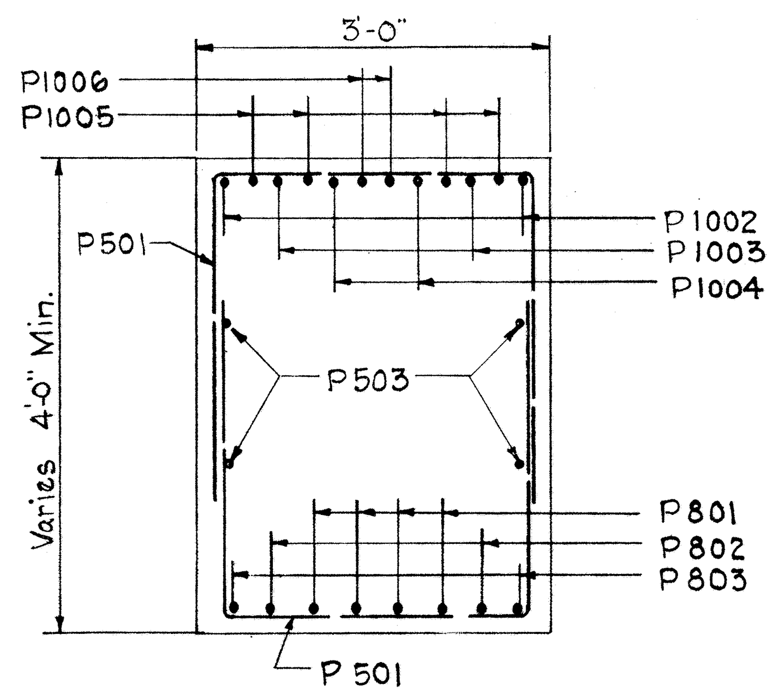
LOCATION OF ANCHOR RODS
FIXED BEARING F-200
PIER 2



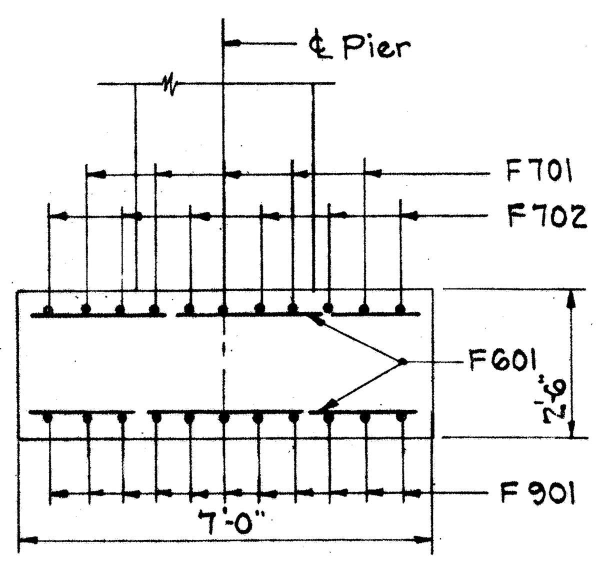
LOCATION OF ANCHOR RODS
EXPANSION BEARING E-200
PIERS 1&3



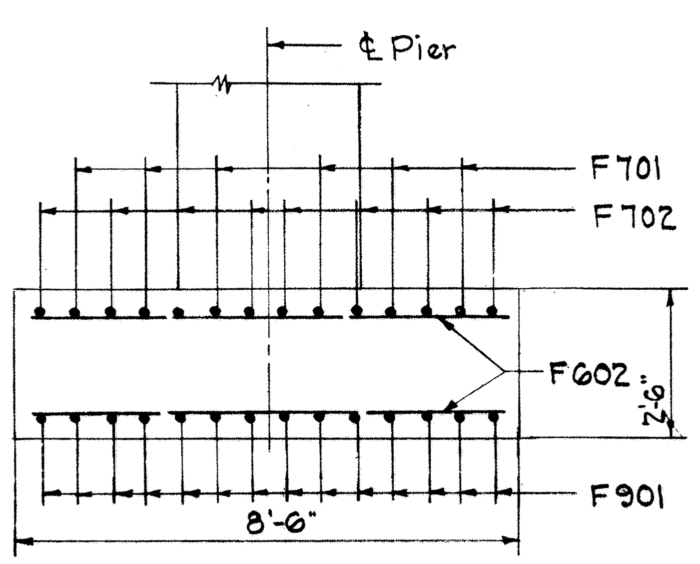
SECTION B-B



SECTION A-A



SECTION E-E
PIERS 1&3



SECTION E-E
PIER 2

FOUNDATION BEARING PRESSURE: Pier footings are designed for a maximum bearing pressure of 2 tons per Sq.Ft.

CLEARANCE of reinforcing steel from face of concrete shall be 3" in bottom of footings and 2" elsewhere.

For details of Fixed and Sliding Bearings see Std. Dwg. No. FSB-1-62

CONCRETE shall be Class E in footings and Class C above footings.

BRIDGE SEAT REINFORCING: Special care shall be taken in placing reinforcing steel in the vicinity of the bridge seat so as to avoid interference with the drilling of anchor rod holes.

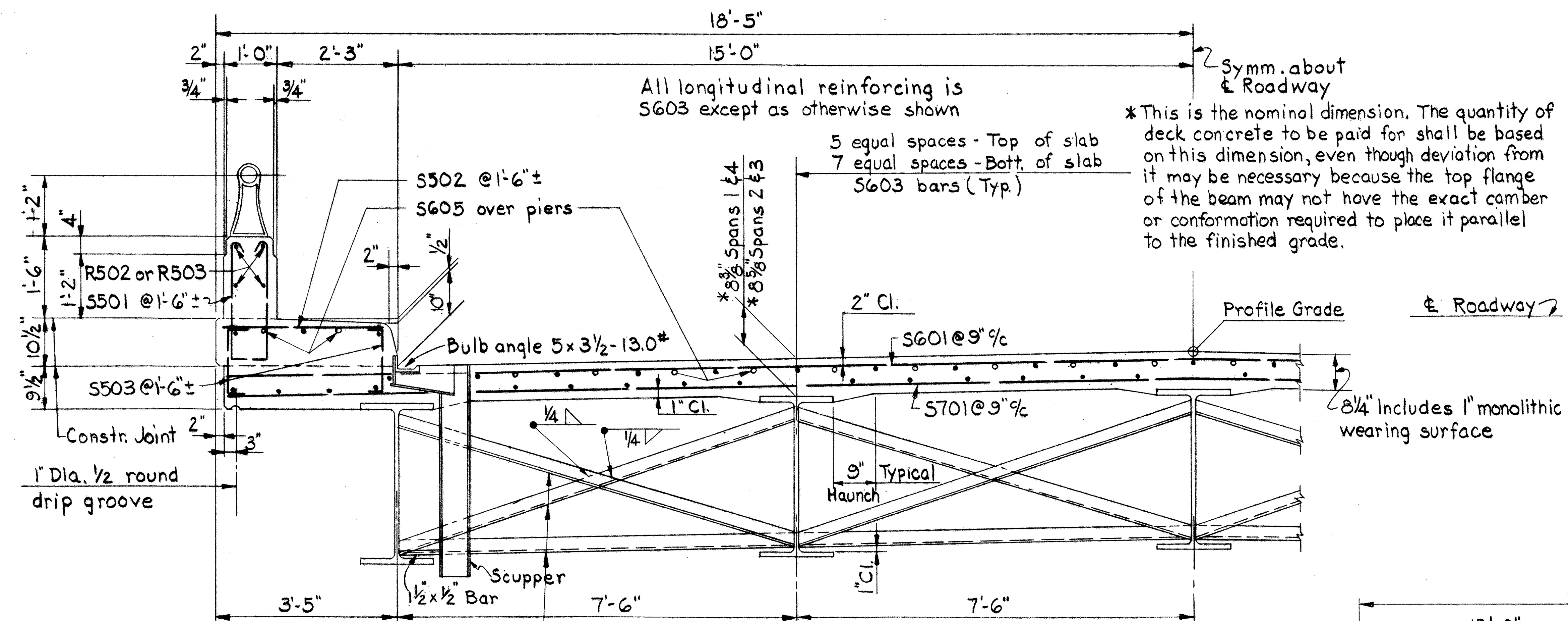
	STATION "Z"	ELEVATIONS					DIMENSION "H"
		A	B	C	D	E	
Pier 1	49+18.25	1147.03	1147.15	1147.27	1147.16	1147.05	14'-2¾"
Pier 2	50+00.00	1147.12	1147.24	1147.36	1147.24	1147.12	14'-3⅞"
Pier 3	50+81.75	1147.05	1147.16	1147.27	1147.15	1147.03	14'-2¾"

J.E. GREINER COMPANY
CONSULTING ENGINEERS
BALTIMORE, MARYLAND

PIER DETAILS
BRIDGE NO. MED.-42-2565
I.R.#71 UNDER MEDINA CO. HWY. NO. 42

MEDINA CO. STA. 432+62.12

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DE JESUS	DE JESUS	HAYDEN	ROBINSON	MUDD	9-27-62	

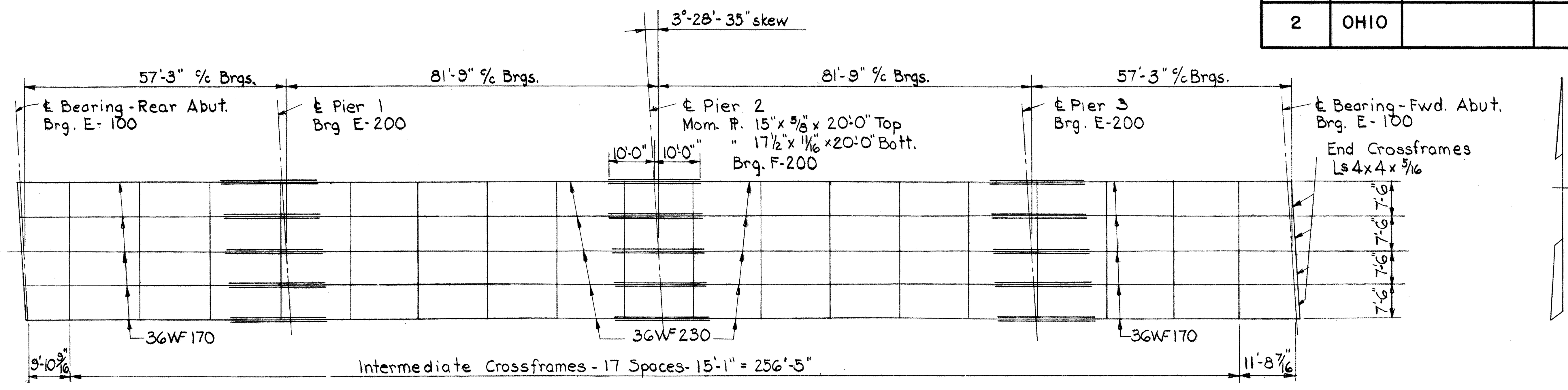


*This is the nominal dimension. The quantity of deck concrete to be paid for shall be based on this dimension, even though deviation from it may be necessary because the top flange of the beam may not have the exact camber or conformation required to place it parallel to the finished grade.

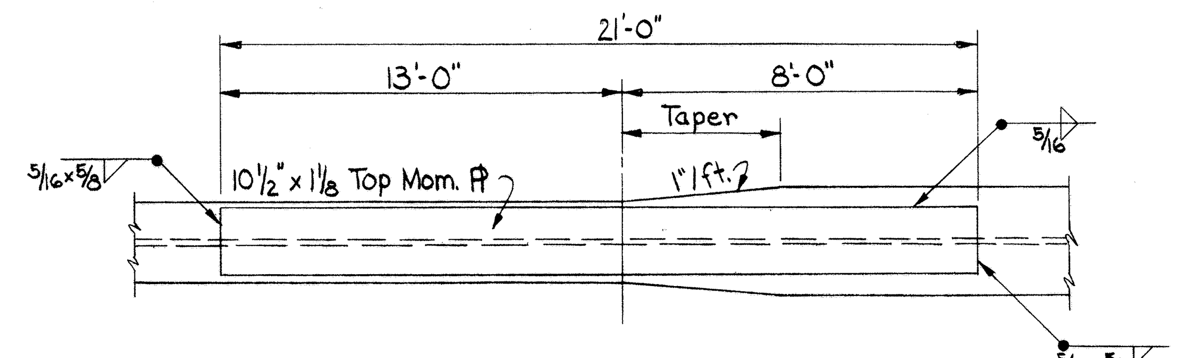
Intermediate Crossframe Ls 3x3x5/16
Weld both sides of vertical leg and top side of horizontal leg to beam with ¼" continuous fillet weld

DECK SLAB HAUNCH: The haunch in the deck slab adjacent to the top of steel beams which is shown as 9" wide, may vary from this dimension between the limits of 6" and 12", except that the maximum slope shall not exceed 3" inches per foot. Payment for deck slab concrete shall be based on the 9" width.

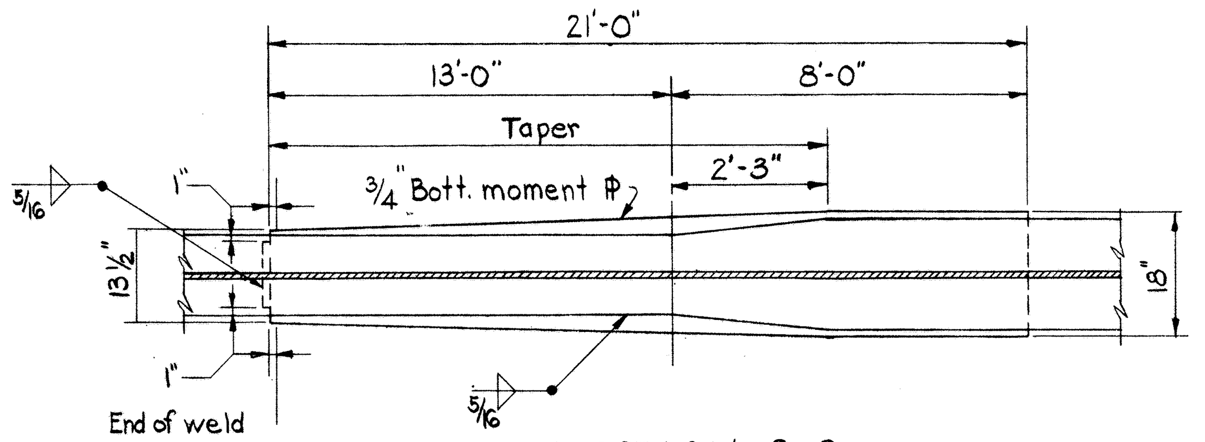
HALF TRANSVERSE SECTION



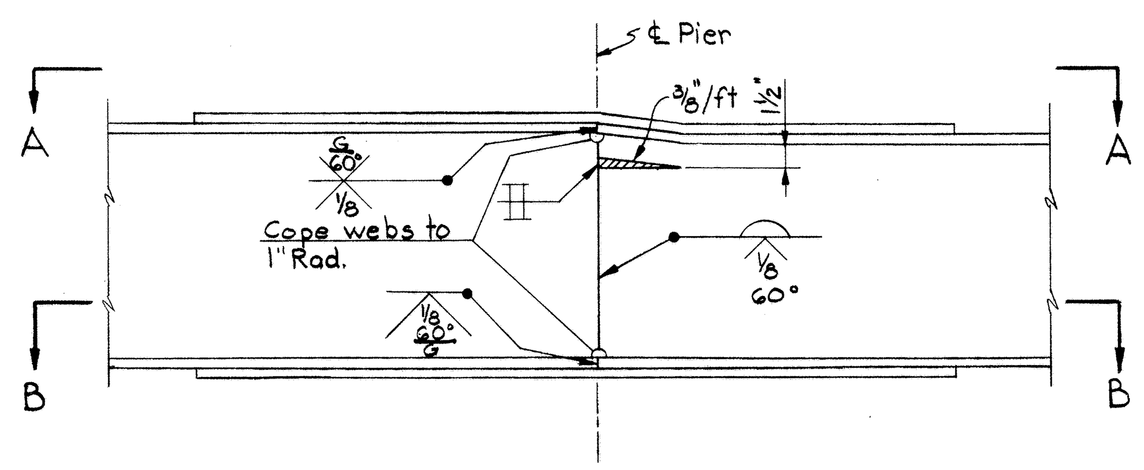
STEEL FRAMING PLAN



SECTION A-A



SECTION B-B

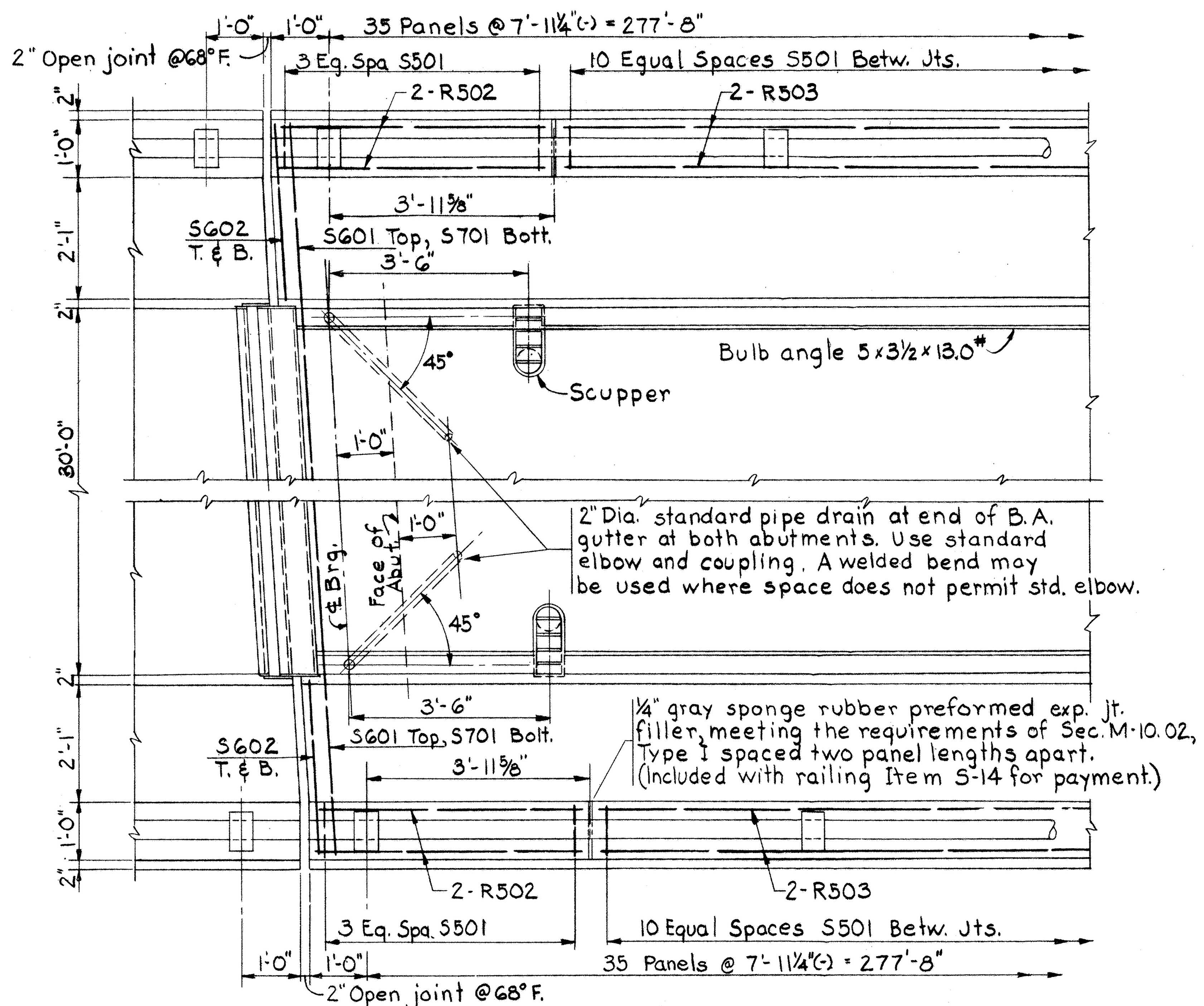


BEAM SPLICE DETAILS AT PIER 1
OPP. HAND AT PIER 3
(Split beams at Pier 2 similarly, if depth of one beam exceeds the other by ⅛")

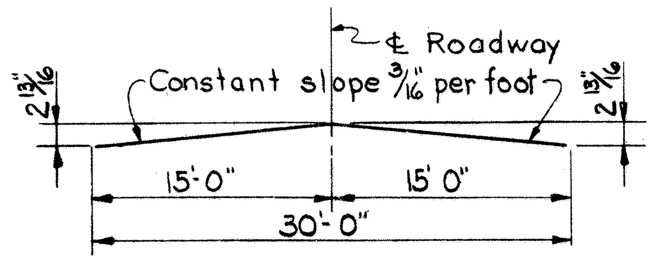
BEAM SPLICE WELDING PROCEDURE

1. Raise end of beam 3⅜" at Pier #1.
2. Butt-weld the beam flanges and web at Pier #2, using the following sequence: make one pass on each flange, then two on the web; repeat using one pass at each location, until welds are completed.
3. Weld the bottom and top moment plates at Pier #2.
4. Lower the end of beam at Pier #1 to final position.
5. Make splices at Piers #1 & #3 in the same manner, raising the end of beams 1" at abutments.

DEFLECTION AND CAMBER	Outside Beams		Inside Beams	
	End Spans	Middle Spans	End Spans	Middle Spans
Deflection due to weight of steel	1/16"	1/8"	1/16"	1/8"
Deflection due to remaining D.L.	9/32"	1/2	7/32"	11/32"
Convexity required for vertical curve	17/32"	1 3/16"	17/32"	1 3/16"
Sum of Deflections and Convexity	7/8"	1 13/32"	13/16"	1 21/32"
Required Camber	7/8"	1 7/8"	7/8"	1 5/8"



PART PLAN AT ABUTMENTS



BRIDGE ROADWAY CROWN

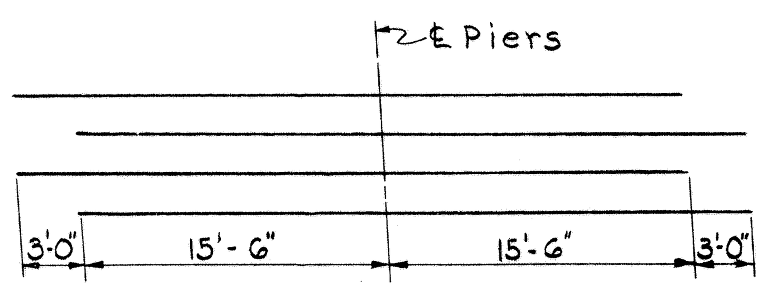


DIAGRAM SHOWING STAGGER OF S605 BARS OVER PIERS

SUPERSTRUCTURE NOTES

CONCRETE DECK PLACING: In order to facilitate water curing of the concrete of the deck slab, the placing of concrete shall progress upgrade. The slab may be placed in sections, between transverse construction joints which are parallel to the piers and are located near the center of any span.

MACHINE FINISH: The concrete bridge deck shall be finished by use of a finishing machine.

WELDING of structural steel shall be class "A" except as otherwise shown. Welds shown as field welds may, at the option of the Contractor, be made in the shop.

For details of end crossframes, roadway end-finish, beam cut-off at backwall, and welded butt joint in end finish angles at ℄ of roadway, see Standard Drawing CSB-2-56, Sheet 2.

For details of scuppers, bulb angle gutter supports, curb plates, and beam splices at Pier 2, see Standard Drawing CSB-2-56, Sheet 3.

For details of fixed and sliding bearings see Standard Drawing FSB-1-62.
For details of aluminum railing, see Standard Drawing AR-1-57, Type A.
For Scupper spacing, see Sheet No. 242

Reinforcing steel shall be 1½" clear of surfaces in parapet and safety curb. Transverse reinforcing parallel to Abutment bearings

SHOP PAINTING STEEL: The surface preparation of all steel, requiring shop painting as per the Plans and specifications, shall be accomplished by blast cleaning or power tool cleaning, except as noted in the Specifications regarding the use of Chromate Primers.

PAINT: Both shop and field, shall be applied by brushing. Spray application will not be permitted.

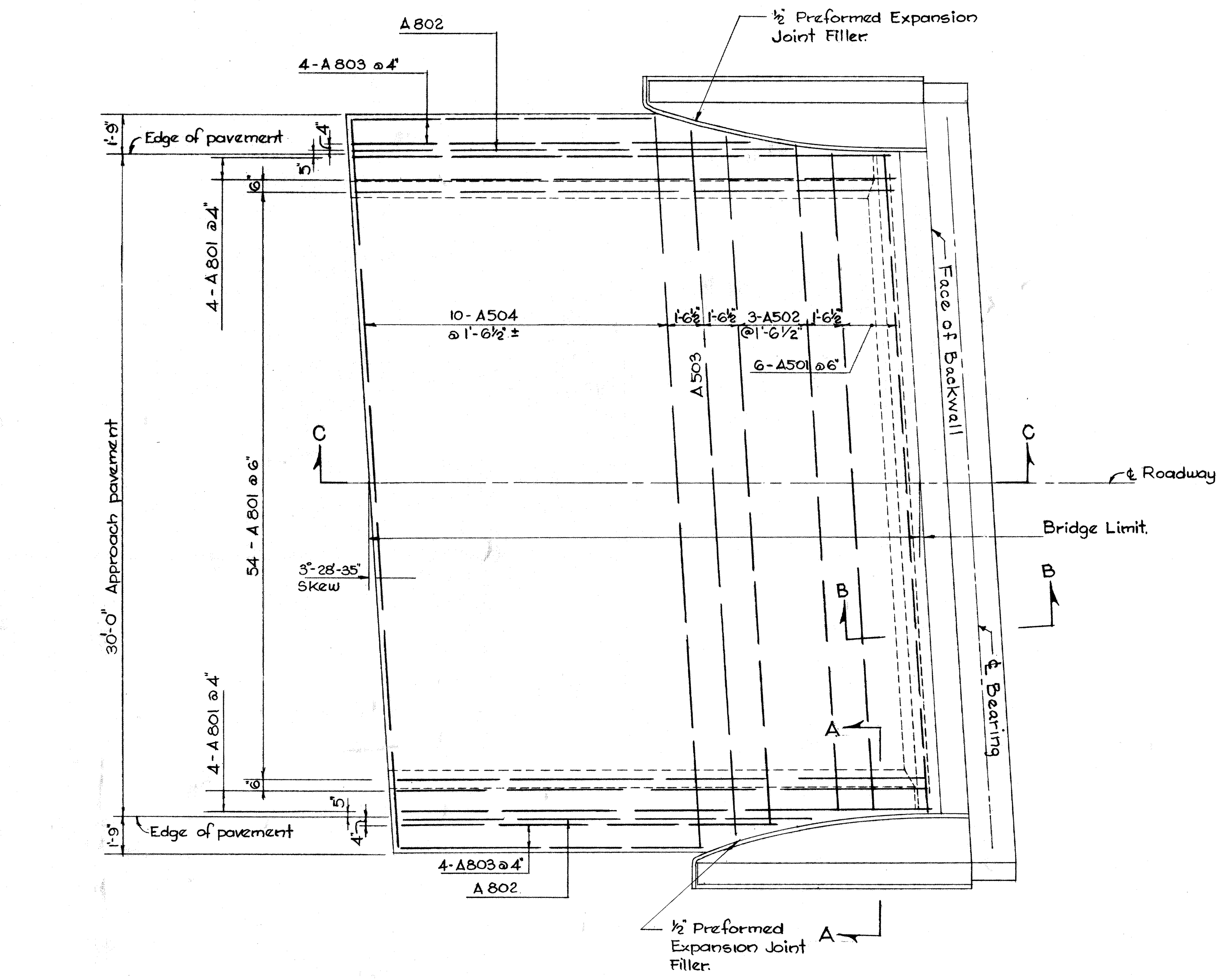
SHEET LEAD shall conform to the requirements of A.S.T.M. Designation B29 without restriction to the Common Desilverized type.

J.E GREINER COMPANY
CONSULTING ENGINEERS
BALTIMORE, MARYLAND

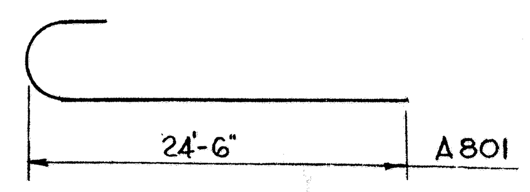
SUPERSTRUCTURE DETAILS

BRIDGE NO. MED.-42-25 65
I.R. #71 UNDER MEDINA CO. HWY. NO. 42
MEDINA CO. STA. 432+62.12

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
WEISER	WALTER	MAYOR	ROBINSON	MUDD	9/27/62	



REINFORCING STEEL LIST				
MARK	NO.	LENGTH	WEIGHT	SHAPE
A801	124	25'-7"	8470	B
A802	4	19'-3"	206	S
A803	4 Series of 4 bars 1'-1" incr.	14'-0" to 17'-3"	668	S
A501	12	29'-6"	369	S
A502	2 Series of 3 bars 7" Incr.	30'-0" to 31'-2"	192	S
A503	2	32'-1"	67	S
A504	20	33'-0"	688	S



Quantities are for 2 Approach Slabs

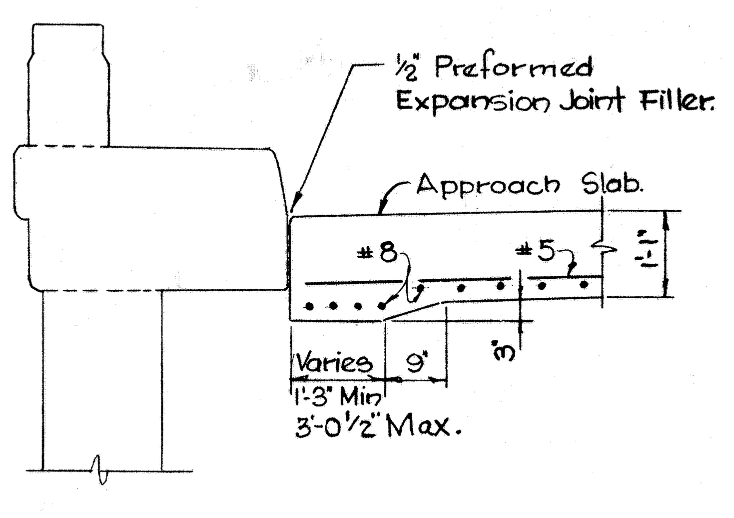
NOTES

½" Preformed Expansion Joint Filler shall be included in Item I-7 "Reinforced Concrete Approach Slab" for payment.

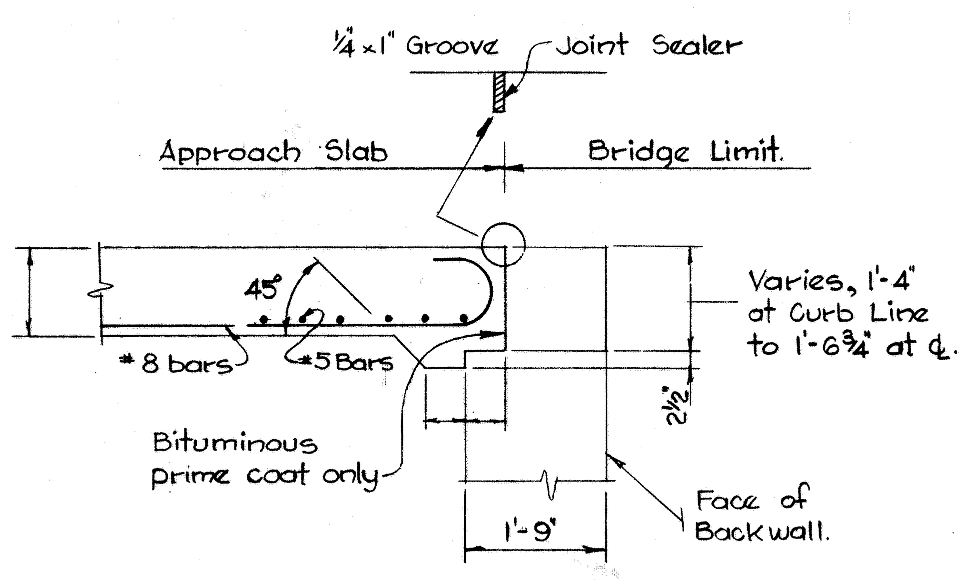
Bar Size is indicated in the Bar Mark. The first digit indicates the Bar Size Number. For example A801 is a No. 8 Size Bar.

Work this Sheet with Standard Drawing No. A.S-1-54 (Revised 7-5-62)

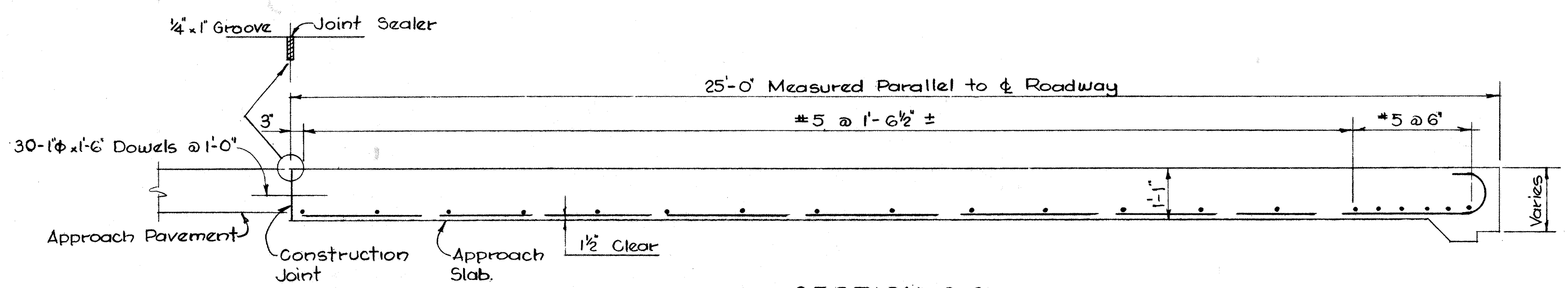
Concrete in approach slabs shall be Class C.



SECTION A-A



SECTION B-B



SECTION C-C

J.E. GREINER COMPANY
CONSULTING ENGINEERS
BALTIMORE, MARYLAND

APPROACH SLAB DETAILS

BRIDGE NO. MED.-42-2565
I.R. #71 UNDER MEDINA CO. HWY. NO. 42

MEDINA CO. STA. 432+62.12

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
ALKEMA	ALKEMA	KATZ	ROBINSON	MUDD	3-27-62	

ELECTRICAL WORK - LIGHTING

DESCRIPTION

THIS ITEM SHALL CONSIST OF FURNISHING ALL NECESSARY MATERIAL, LABOR, AND FACILITIES REQUIRED TO COMPLETE THE ELECTRICAL INSTALLATION IN ACCORDANCE WITH THE DESIGNS, DIMENSIONS AND DETAILS SHOWN IN THE PLANS AND DESCRIBED IN THE SPECIFICATIONS.

ALL MATERIAL, WORKMANSHIP AND CONSTRUCTION METHODS, EXCEPT AS MODIFIED HEREIN, SHALL CONFORM TO THE GENERAL REQUIREMENTS OF THE STATE OF OHIO, DEPARTMENT OF HIGHWAYS, CONSTRUCTION AND MATERIAL SPECIFICATIONS.

THE CONTRACTOR SHALL ALSO COMPLY WITH THE NATIONAL ELECTRIC CODE OF THE NATIONAL BUREAU OF FIRE UNDERWRITERS.

MATERIALS - GENERAL

MATERIALS TO BE FURNISHED MAY BE SPECIFIED IN THE PLANS BY A GIVEN MANUFACTURER'S CATALOG NUMBER OR TYPE. THIS IS FOR DESCRIPTIVE PURPOSES ONLY AND THE CONTRACTOR MAY ASSUME THAT APPROVED EQUAL MATERIALS MAY BE FURNISHED.

CONDUIT - S 25.08

CONDUIT AND COUPLINGS SHALL BE STANDARD WEIGHT GENUINE WROUGHT IRON, GALVANIZED AFTER THREADING, A.S.T.M. SPEC. A-72, FED. SPEC. WWP-441-B, PLUGGED, REAMED AND CENTER BUTT JOINED WITHOUT EXPOSED THREADS, EXCEPT CONCRETE ENCASEMENT IS WAIVED.

PAYMENT FOR CONDUIT SHALL BE MADE AT THE CONTRACT UNIT PRICE FOR EACH SIZE AND SHALL BE FULL COMPENSATION FOR FURNISHING AND INSTALLING CONDUIT, AND ALL MATERIALS INCLUDING ALL FITTINGS & NIPPLES, EXCAVATION, TRENCHING, BACKFILL, RESTORATION, SURPLUS MATERIAL DISPOSAL AND ALL INCIDENTAL TOOLS OR EQUIPMENT REQUIRED TO COMPLETE THE WORK.

WIRE AND CABLE - S 25.09

WIRE AND CABLE INSTALLATION SHALL CONFORM TO THE ABOVE SPECIFICATIONS AND SHALL BE OF THE SIZES AND TYPES SHOWN ON THE PLANS. POLE AND BRACKET CABLE SHALL BE NO. 12 AWG.

WIRE AND CABLE INSTALLED IN CONDUIT, POLES OR DIRECT BURIAL, SHALL MEET FEDERAL AVIATION AGENCY SPECIFICATION NO. L-824 TYPE A, SHALL BE STRANDED SINGLE CONDUCTOR COPPER, G.E. NO. SI 58089, OR APPROVED EQUAL; IF LARGER THAN NO. 4, G.E. NO. SI 58006.

PAYMENT FOR WIRE AND CABLE SHALL BE MADE AT THE CONTRACT UNIT PRICE WHICH SHALL INCLUDE ALL TESTING, SPLICING, MATERIAL, LABOR, EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THIS ITEM.

THE CONTRACTOR SHALL FURNISH ALL NECESSARY EQUIPMENT AND DEMONSTRATE TO THE SATISFACTION OF THE ENGINEER THAT ALL CIRCUITS ARE FREE OF SHORT CIRCUITS AND UNSPECIFIED GROUNDS, AND ARE PROPERLY CONNECTED AND OPERABLE. SYSTEM AND EQUIPMENT GROUNDING SHALL BE TESTED BY APPROVED METHOD IN THE PRESENCE OF THE ENGINEER.

CABLE MARKERS

THE CONTRACTOR SHALL FURNISH AND INSTALL CONCRETE MARKERS (SEE DETAIL) AS SHOWN ON THE PLANS AND AT EACH DEVIATION FROM THE NORMAL TRENCH PARALLEL TO THE ROADWAY AND AS MAY BE REQUIRED TO INDICATE DEVIATION FROM NORMAL STRAIGHT RUNS TO AVOID OBSTACLES. COST OF THE MARKERS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CABLE.

TRENCHING (DIRECT BURIAL CABLE ONLY)

TRENCH SHALL BE PROVIDED FOR ALL UNDERGROUND CABLE AT THE LOCATIONS AND IN CONFORMITY TO THE DESIGN, DETAILS AND DIMENSIONS SHOWN ON THE PLANS.

TRENCH FOR CABLE MAY BE EXCAVATED MANUALLY OR WITH MECHANICAL TRENCHING EQUIPMENT. TRENCH WALLS SHALL BE ESSENTIALLY VERTICAL SO THAT A MINIMUM OF SHOULDER SURFACE IS DISTURBED. ANY DEVIATION FROM THE PLAN LINE OF TRENCH MUST BE APPROVED BY THE PROJECT ENGINEER.

TRENCHING (CONTINUED)

TRENCH BOTTOM SHALL BE SMOOTH AND FREE OF COARSE AGGREGATE. MINIMUM WIDTH OF TRENCH BOTTOM SHALL BE EIGHT INCHES FOR TWO CABLES. MINIMUM DEPTH SHALL BE 24 INCHES. CABLE TRENCH SHALL BE LOCATED AS SHOWN ON THE PLANS. TRENCHES SHALL NOT BE EXCESSIVELY WET OR CONTAIN POOLS OF WATER DURING BACKFILLING OPERATIONS.

BACK FILLING and COMPACTING

Bed 3" and Back Fill to 5" above top of cable with unwashed sand meeting the following grading requirements:

Sieve No.	Percent Passing
4	100 %
8	70 - 100%
50	5 - 60%
200	0 - 20%

Back Fill remainder of trench in accordance with Sec. I-1.07 Class I except that the material in the first 4" above the sand back fill shall contain no pieces larger than 2".

PAYMENT FOR TRENCHES SHALL BE MADE AT THE CONTRACT UNIT PRICE BID. PRICE SHALL INCLUDE EXCAVATION, BACKFILL, RESTORATION, GUARDRAIL REMOVAL AND REPLACEMENT, DISPOSAL OF SURPLUS MATERIAL, REMOVAL OF ROCK, SAND AND GRADED BACKFILL, AND FOR ALL PREPARATION, LABOR, EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THIS WORK.

RESTORATION (IF APPLICABLE)

ALL AREAS DISTURBED BY EXCAVATION REQUIRED FOR INSTALLATION OF CABLE TRENCH, PULL BOXES, DUCTS, LIGHTING STANDARD FOUNDATIONS, CONTROL CENTER FOUNDATIONS, SERVICE POLES, STORING OF EXCAVATED EARTH AND OTHER MATERIALS, CABLE LAYING AND OTHER WORK SHALL BE RESTORED TO ITS ORIGINAL CONDITION.

WHERE SOD IS ESTABLISHED, IT SHALL BE CAREFULLY STRIPPED AND REPLACED AS SOON AS BACKFILLING IS COMPLETED. BACKFILLING OF AREA WHERE SOD IS REMOVED SHALL BE STOPPED AT A DEPTH EQUAL TO THE THICKNESS OF THE SOD TO BE USED WITH PROPER ALLOWANCE FOR SETTLEMENT.

PAVED AREAS SHALL BE PLACED IN A MANNER EQUIVALENT TO ORIGINAL SURFACE OR AS DETAILED ON THE PLANS. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR MAINTAINING ALL DISTURBED SURFACES AND REPLACEMENTS UNTIL FINAL ACCEPTANCE.

NO SEPARATE PAYMENT SHALL BE MADE FOR RESTORATION. THE COST OF RESTORATION SHALL BE INCLUDED IN THE UNIT PRICE BID FOR INSTALLATAION OF ROADWAY LIGHTING SYSTEM ITEMS WHICH REQUIRE EXCAVATION OR OTHERWISE CAUSE EXISTING GROUND SURFACE TO BE DISTURBED.

GROUNDING

ALL SERVICE EQUIPMENT, LIGHTING STANDARDS OR SIGN STRUCTURES SHALL BE PROPERLY GROUNDED IN ACCORDANCE WITH N.E.C. REQUIREMENTS. 5/8" X 8' COPPERCLAD GROUND RODS WITH APPROVED CLAMPS OR EXOTHERMIC TYPE CONNECTION AND #4 7 STRAND COPPER WIRE SHALL BE USED UNLESS OTHERWISE NOTED. ROD CONNECTIONS SHALL BE PAINTED WITH TWO COATS OF GLYPTAL INSULATING ENAMEL AFTER INSTALLATION. RESISTANCE TO GROUND SHALL NOT EXCEED 25 OHMS.

LIGHTING STANDARDS

VOID

LIGHTING STANDARDS ON RAMPS SHALL BE UNION METAL MFG. CO., DESIGN 440A, 30'-0", 11 GAUGE STEEL, ANCHOR BASE TYPE WITH MODIFICATION 2C HANDHOLE, FRAME AND COVER WITH SINGLE 10'-0" BRACKET ARM, Nº H-270-D2. ON SPEED CHANGE LANES LIGHT POLES SHALL HAVE 15'-0" ARMS AS PER NO. J-270-F2.

LIGHTING STANDARDS ON ISLANDS SHALL BE UNION METAL DESIGN 442A WITH TRANSFORMER BASE AND SHALL HAVE DOUBLE 15'-0" BRACKET ARMS, Nº J-250-FF2 OR APPROVED EQUAL.

EACH OF THE ABOVE SHALL HAVE "J" HOOK BUILT IN FOR SUPPORT OF THE INTERNAL WIRING. CONDUCTORS SHALL BE SUITABLY ATTACHED TO RELIEVE STRAIN AT THE BRACKET INLET.

LIGHTING STANDARDS IN PICNIC AREA SHALL BE UNION METAL CO. 21'-3" UPRIGHT STANDARD NO 70805-Y10 OR APPROVED EQUAL.

FINISH PAINT COATS SHALL CONSIST OF ENAMEL AS SPECIFIED UNDER ITEM M-9, SECTION M-9.23, GREEN ENAMEL.

A 1/2" x 13 UNC GROUNDING NUT SHALL BE PROVIDED OPPOSITE CENTER OF HAND HOLE.

LIGHTING STANDARD FOUNDATIONS - S - 25.11

FOUNDATIONS SHALL CONFORM TO ABOVE SPECIFICATION AND SHALL BE SIZED AS NOTED ON THE PLANS.

PAYMENT SHALL BE MADE ON THE BASIS OF UNIT PRICE BID FOR EACH SIZE, WHICH SHALL INCLUDE ALL MATERIAL, LABOR, AND EQUIPMENT NECESSARY TO COMPLETE THE INSTALLATION.

SERVICE POLE - POWER AND TELEPHONE

THE CONTRACTOR SHALL FURNISH AND INSTALL SERVICE POLES AS DETAILED, COMPLETE WITH SERVICE EQUIPMENT AS SHOWN ON THE TYPICAL DETAIL FOR ELECTRIC SERVICE POLE, SHEET NO 248

POLES SHALL BE A.S.A CLASS 4, 35'-0" SOUTHERN YELLOW PINE, FULL "PENTA" TREATED, 8 POUNDS PER CUBIC FOOT, A.W.P.A. SPEC.

THE CONTRACTOR SHALL FURNISH AND INSTALL ALL EQUIPMENT AND APPURTENANCES SHOWN ON SERVICE POLE.

THE CONTRACTOR SHALL CONTACT THE UTILITY COMPANIES SERVING THE AREA AND VERIFY JOINT POLE REQUIREMENTS.

GUY WIRE WILL NOT BE PERMITTED IN THE PARK AREA. IF SUPPORT IS REQUIRED, STRAIN BLOCKING METHOD SHALL BE USED, AS APPROVED BY THE POWER COMPANY.

CLEARANCE BETWEEN POWER LINES AND TELEPHONE LINES SHALL BE APPROVED BY BOTH UTILITIES.

PAYMENT SHALL BE MADE ON THE BASIS OF UNIT PRICE BID AND SHALL INCLUDE ALL MATERIALS, LABOR, AND USE OF EQUIPMENT NECESSARY TO COMPLETE THIS ITEM, INCLUDING SERVICE SWITCH.

SERVICE SWITCH

ENCLOSURE SHALL BE WATERTIGHT NEMA 4 CONSTRUCTION OF A.I.S.A. 302 OR 303 STAINLESS STEEL WITH FLANGE MOUNTED OPERATING HANDLE WHICH CAN BE LOCKED IN BOTH ON AND OFF POSITION, INTERLOCKED WITH DOOR OPENING. NO KNOCK-OUT, NO HUBS, (WATERPROOF HUBS, FIELD INSTALLED) 3 POLE, 3 FUSE. SWITCH SHALL BE 200 AMP, 240 VOLTS. SQUARE "D" CLASS 9421 TYPE W-999-FA-221E.

TELEPHONE SERVICE CONDUIT

THE CONTRACTOR SHALL FURNISH AND INSTALL A CONDUIT RUN FROM THE SERVICE POLE CONTACT POINT TO THE TOILET & STORAGE BUILDING AS SHOWN ON THE LINE DRAWINGS AND DETAILS ON SHEETS 163 & 165. 1 1/2" CONDUIT SHALL TERMINATE IN AN L.B. CONDULET AND EXTEND WITH 3/4" X 4" NIPPLE THROUGH TELEPHONE STAND. A PULL WIRE SHALL BE DRAWN IN THE CONDUIT FOR THE TELEPHONE COMPANYS USE.

ISLAND AND RAMP CIRCUITS

ISLAND AND RAMP CIRCUITS SHALL CONSIST OF THREE 240 VOLT CIRCUITS OF #4 CABLE ENCLOSED IN 2" CONDUIT EXTENDING FROM SERVICE EQUIPMENT TO THE ISLAND. CIRCUITS SHALL BE DIVIDED AT THE ISLAND TO PROVIDE A SEPARATE FUSED CIRCUIT FOR THE ISLAND AND EACH RAMP.

RAMP CIRCUIT CONDUITS SHALL EXTEND 5 FEET BEYOND PAVEMENT AND A CABLE MARKER SHALL BE PLACED AT THAT POINT.

PICNIC AREA CIRCUITS

PICNIC AREA CIRCUITS SHALL CONSIST OF TWO 240 VOLT CIRCUITS OF #4 CABLE ENCLOSED IN 2" CONDUIT EXTENDED FROM SERVICE PANEL. THE CIRCUITS SHALL BE ARRANGED TO PROVIDE FUTURE SEPARATE SWITCHING FOR ONE OF THE CENTER LUMINAIRES.

Locations of lighting are shown on Sheets 151, 156, 163 and 165.

LUMINAIRE STANDARD LOCATIONS

LOCATION OF ISLAND AND RAMP STANDARDS SHALL BE AS SHOWN ON PLANS.

PICNIC AREA STANDARDS ARE SHOWN IN APPROXIMATE LOCATIONS AND ARE SUBJECT TO FINAL LOCATION BY THE PROJECT ENGINEER AND LANDSCAPE ARCHITECT.

CONTROL CENTER

FOR RAMP, ISLAND AND YARD LIGHTS SHALL CONSIST OF NEMA I ENCLOSURE, LOCATED IN THE UTILITY ROOM, WITH ONE (1) - 60 AMP. 240 VOLT, 2 POLE MAGNETIC CONTACTOR CONNECTED TO LOAD SIDE OF MAIN BREAKER IN PANEL BOARD (SHEET NO. 147). OPERATE WITH THE PROPOSED PHOTO-ELECTRIC CONTROL ON BUILDING ROOF. (SHEET NO. 147)

A.S.A.- I.E.S. TYPE LIGHT DISTRIBUTION

A.S.A.- I.E.S. TYPE DISTRIBUTION SPECIFIED MEANS THE RESULTANT FINAL LIGHT PATTERN OBTAINED ON THE ROADWAY SURFACE. CONTRACTOR SHALL BE RESPONSIBLE IN SEEING THAT ANY ADJUSTMENTS NECESSARY ARE PERFORMED TO OBTAIN THE RESULTANT DISTRIBUTION SPECIFIED.

BALLASTS

PICNIC AREA LIGHTING UNITS SHALL HAVE 250 WATT, 230-460 VOLT REGULATOR TYPE BALLASTS INSTALLED ON BALLAST HANGER LOCATED IN POLE TRANSFORMER BASE. LINE MATERIALS INDUSTRIES, CAT. NO. WLU 28A2.

LUMINAIRES

LUMINAIRES SHALL BE MERCURY VAPOR TYPE, SUITABLE FOR USE ON MULTIPLE CIRCUIT, 240 VOLT 60 CYCLE OPERATION AND SHALL BE COMPLETE WITH LAMPS.

LUMINAIRES PLACED ADJACENT TO TRAVELLED ROADWAYS OR WITHIN THE PARKING AREAS SHALL BE 400 WATT, PROVIDE A.S.A.- I.E.S. TYPE III DISTRIBUTION WITH A.S.A. CODE NO. H-33-1CD LAMP, AND SHALL HAVE AN INTEGRAL 230/460 VOLT REGULATED OUTPUT BALLAST. THE LUMINAIRE SHALL BE SIMILAR, IN DESIGN AND CONSTRUCTION, TO GENERAL ELECTRIC TYPE M-400 CATALOGUE NO. C704G009.

LUMINAIRES FOR THE PICNIC AREAS SHALL BE 250 WATT, PROVIDE A.S.A.- I.E.S. TYPE IV. DISTRIBUTION WITH A.S.A. CODE NO. H-37-5 KC/W LAMP. THE LUMINAIRE SHALL BE SIMILAR, IN DESIGN AND CONSTRUCTION, TO LINE MATERIALS CORPORATION TYPE 2D CATALOGUE NO. LM19B3, COMPLETE WITH ACRYLIC PLASTIC PRISMATIC REFRACTOR.

Roadside Rest Area N.B.	Roadside Rest Area S.B.	Total	Item	Unit	Code 7221 LIGHTING (No Fed. Participation)
22	21	43	S-25	Each	Luminaires, 400 W, I.E.S. type III with integral regulated output ballast
4	4	8	S-25	Each	Luminaires, 250 W, I.E.S. type IV, Post Mtd.
6	4	10	S-25	Each	Lighting Standards, 10' Bracket Arm Anchor Base
10	11	21	S-25	Each	Lighting Standards 15' Bracket Arm Anchor Base
4	4	8	S-25	Each	Lighting Standards for Post Mtd. Luminaires.
3	3	6	S-25	Each	Lighting Standards, Twin 15' Bracket Arms, Transformer Base
4	4	8	S-25	Each	Ballasts, 250W, 230/460 volt regulated output
23	22	45	S-25	Each	Standard Foundations
950	900	1850	S-25	Lin.Ft.	2" Galvanized Wrought Iron Conduit
370	200	570	S-25	Lin.Ft.	1½" Galvanized Wrought Iron Conduit
11,100	10,670	21,770	S-25	Lin.Ft.	Circuit Cable, No. 4 AWG stranded 1/c
2288	2211	4499	S-25	Lin.Ft.	Pole & Bracket Cable, No. 12 AWG. stranded 1/c
3625	3400	7025	S-25	Lin.Ft.	Trenching
1	1	2	S-25	Each	Pull Boxes
1	1	2	S-25	Each	Service Pole
1	1	2	S-25	Each	Contactor, Magnetic, 60 amp 240V. 2P.
1220	660	1880	S-25	Lin.Ft.	Service Entrance Cable No 2/0 AWG stranded 1/c Type USE/RHW
500	350	850	S-25	Lin.Ft.	3" Galvanized Wrought Iron Conduit
2	2	4	S-25	Each	Cable Marker

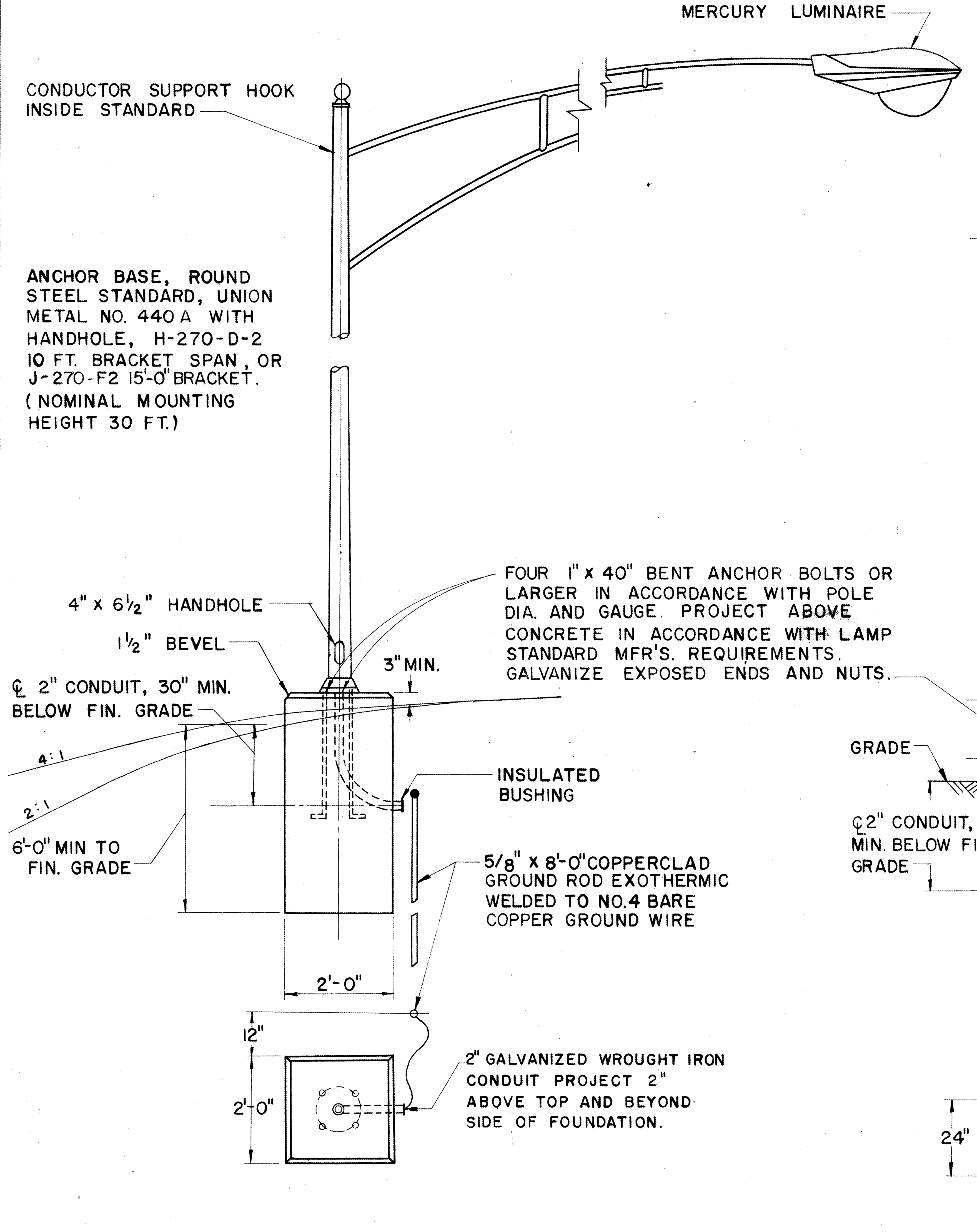
Revised R.E.C. 11-27-62

Rev. 10/2/62 E.W.

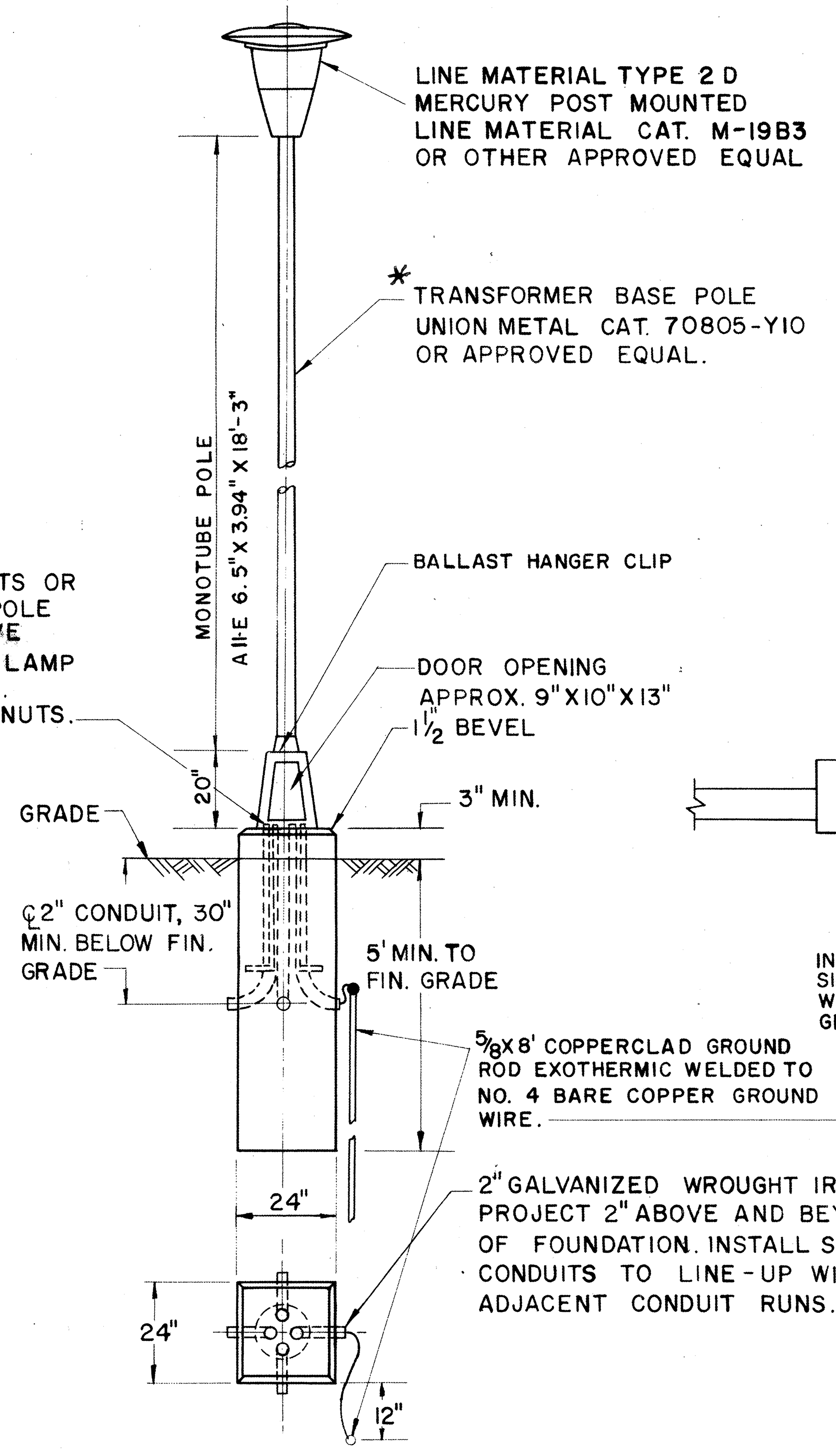
LIGHTING NOTES

FED. RD. DIVISION	STATE	PROJECT		248 / 293
2	OHIO			

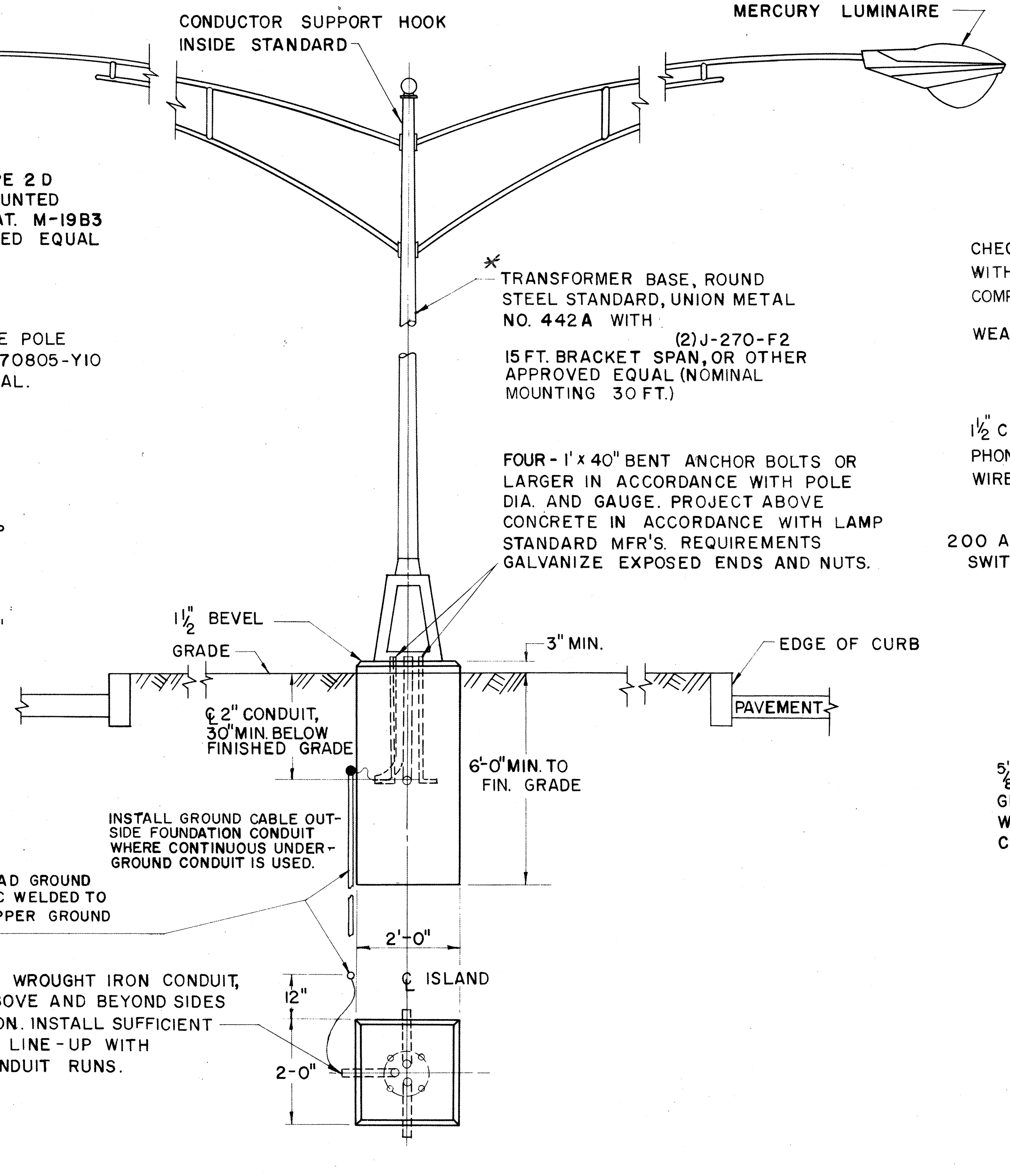
MEDINA COUNTY
MED-42-21.94



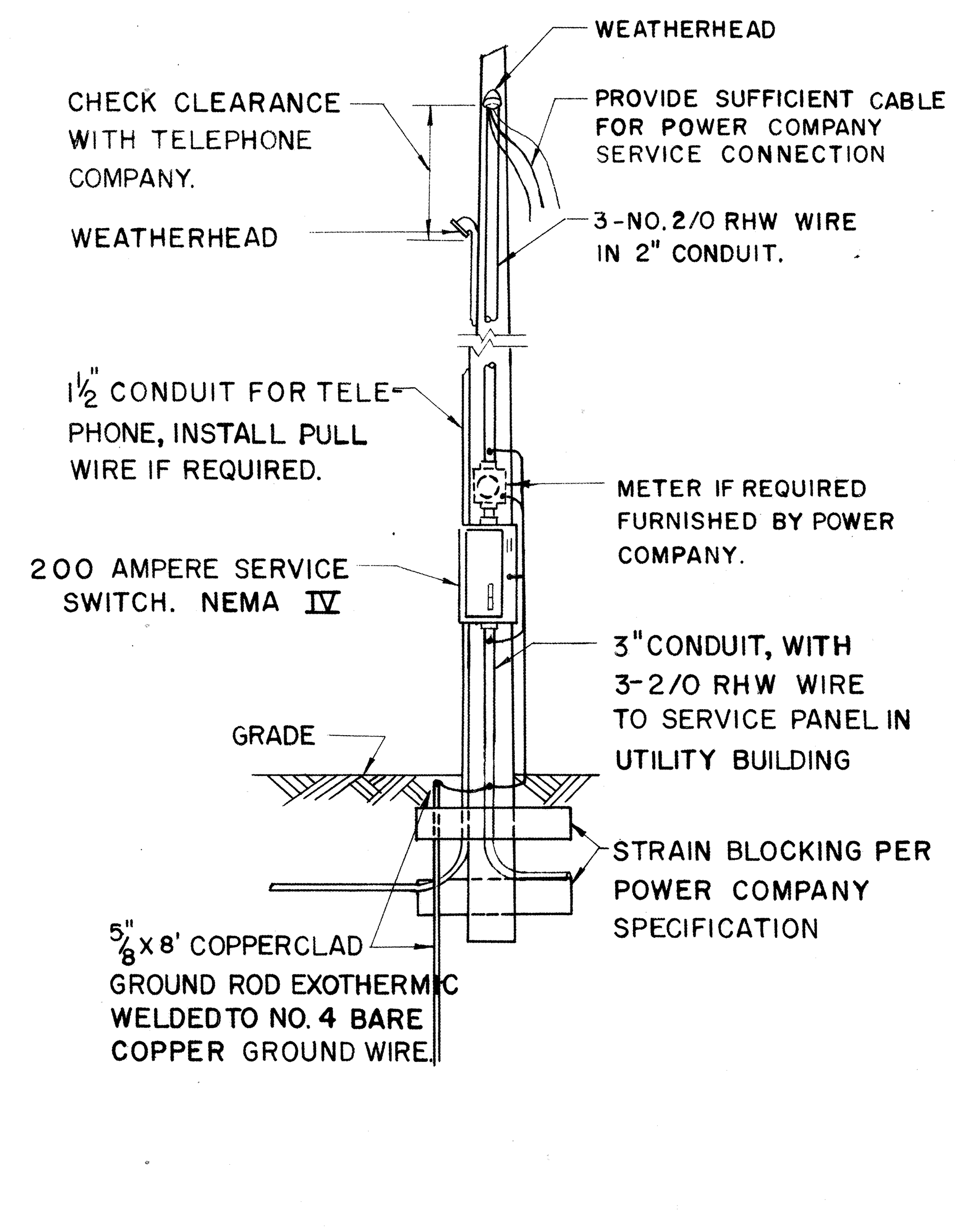
ROADWAY STANDARD



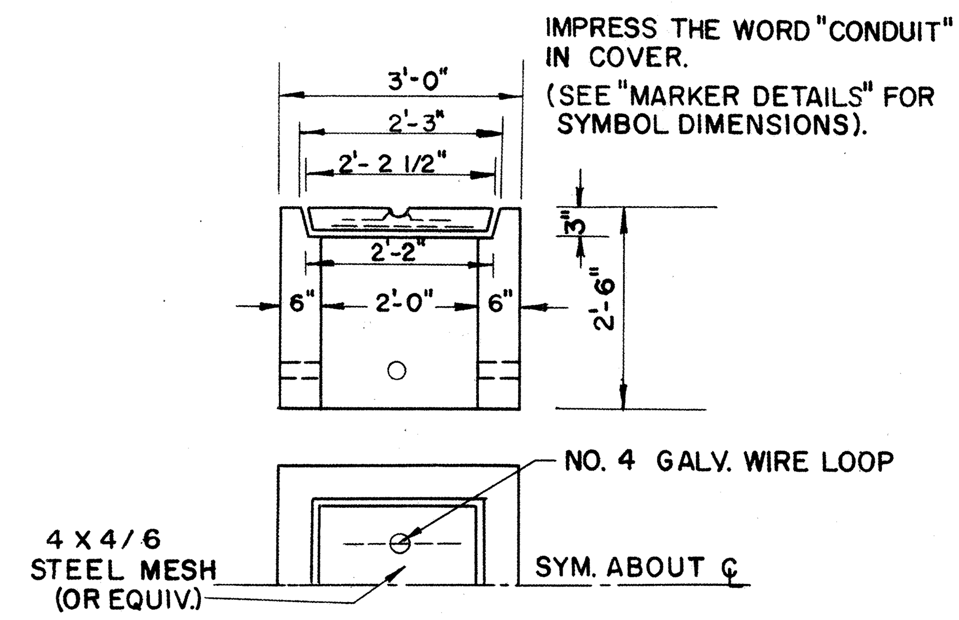
PICNIC AREA STANDARD



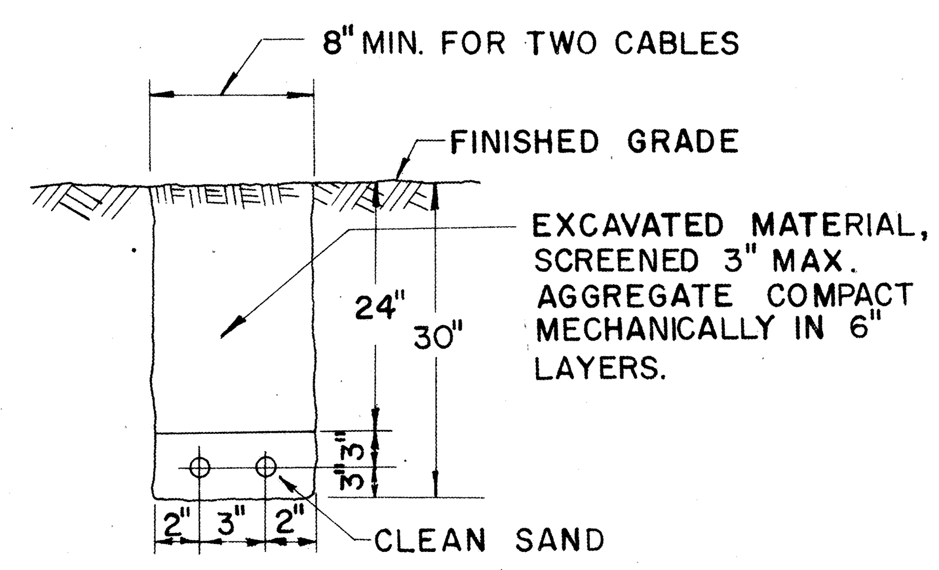
PARKING AREA STANDARD



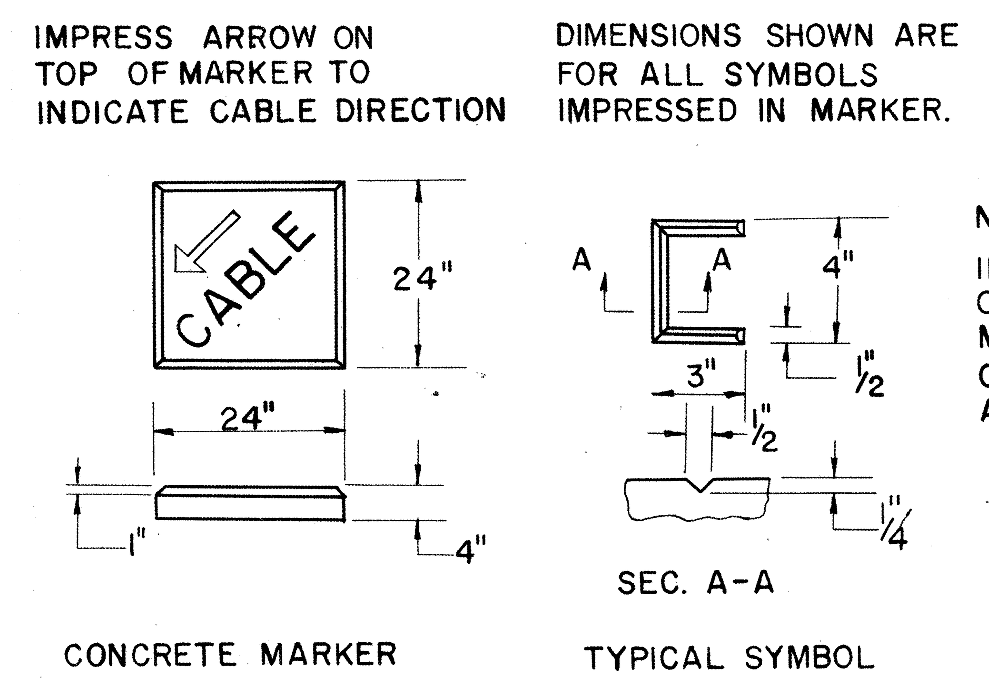
SERVICE POLE



CONCRETE PULL BOX



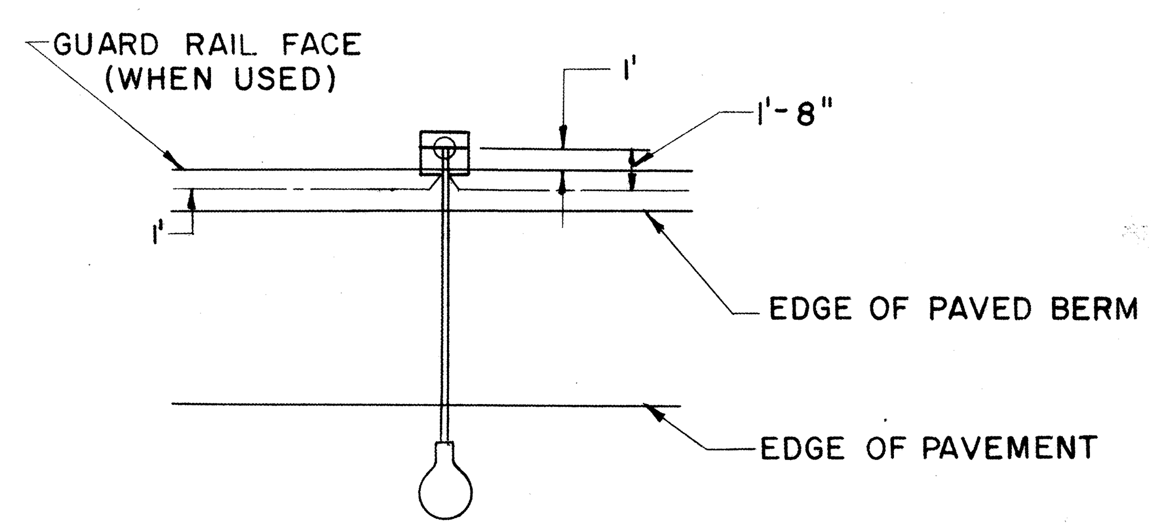
CABLE TRENCH DETAIL



MARKER DETAIL

NOTE

IMPRESS THE WORD CABLE OR SPLICE IN THE TOP OF MARKER USING LETTERS OF THE TYPE AND DIMENSIONS AS PER DETAIL.



ROADWAY CABLE LOCATION

*All references to Union Metal Mfg. Co. are for descriptive purposes only and do not restrict the furnishing of other Manufacturer's Products which meet the specifications.

Revised R.E.C. 11-27-62

LIGHTING DETAILS

CENTER LINE SURVEY PLAT
OHIO INTERSTATE 71
MED-42-21.94
MEDINA COUNTY, OHIO
BRUNSWICK HILLS TOWNSHIP AND CITY OF BRUNSWICK

T-4N R-14W

0 400 800 1200
SCALE IN FEET

79156

Received ________ 19__
Recorded Oct 3. 1962
Book 10 Page 55
Elsie L. Phillips Fetzer
County Recorder
11x17 = $1.87 Fee

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

265

MEDINA COUNTY
MED-42-21.94
LIMITED ACCESS

1/2

Signed E. S. Tolerico
Date 9/17/62 Division Deputy Director, Div. No. 3
Registered Engineer No. 6311

THIS IMPROVEMENT HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY BY ACTION OF THE DIRECTOR OF HIGHWAYS AND RECORDED IN VOLUME 45 PAGE 974 OF THE DIRECTOR'S JOURNAL PURSUANT TO LAW.

ESTIMATED QUANTITIES
Reference Monuments - 30

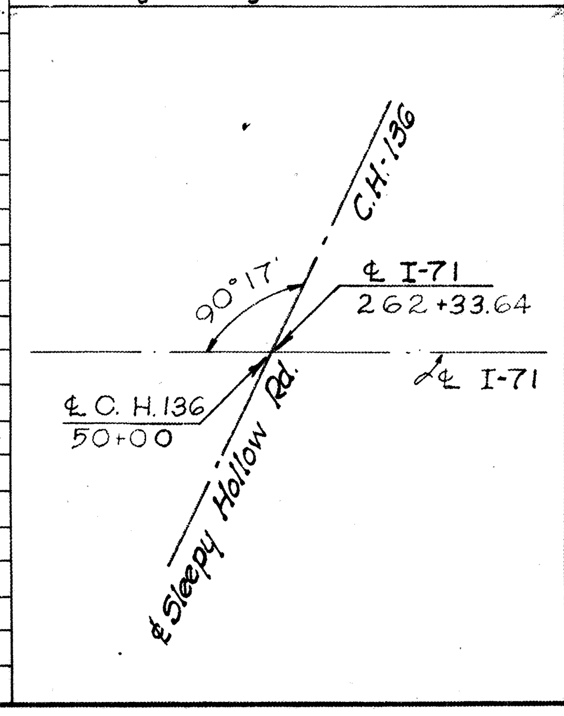
I HEREBY CERTIFY THAT THIS PLAT IS A TRUE DELINEATION OF A SURVEY MADE FOR THE OHIO DEPARTMENT OF HIGHWAYS IN MEDINA COUNTY BY Thomas Henry. DATE 9-4-62

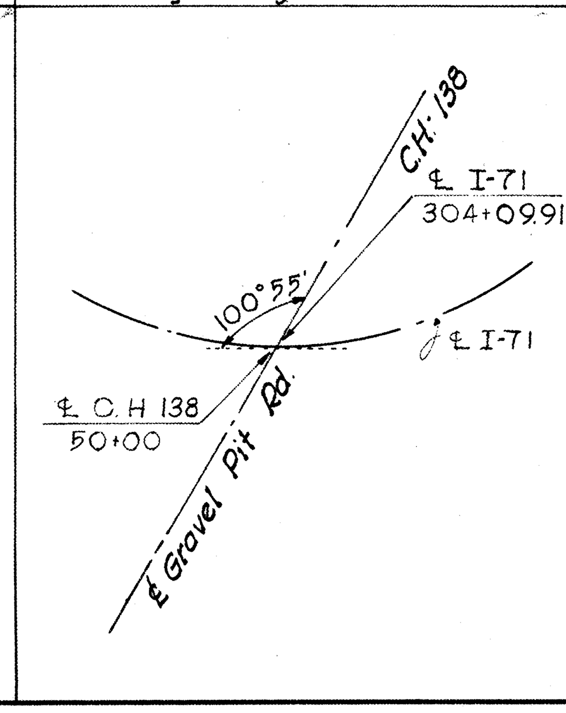
REGISTERED SURVEYOR NO. 4622

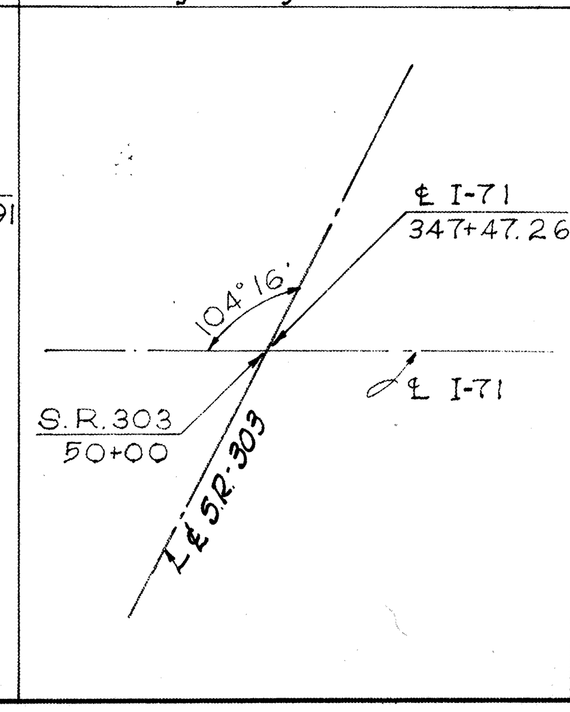
SYMBOLS
- Reference Monument
- Road
- Lot or Tract Line
- Township Line

LOCATION OF CENTERLINE REFERENCE MONUMENTS	
Station	Location
240+00	℄ of Median
245+22.24 P.T.	"
250+00	"
255+00	"
260+00	"
265+00	"
270+00	"
275+00	"
279+00	"
282+28.82 P.C	"
286+00	"
290+00	"
295+00	"
300+00	"
305+00	"
309+00	"
312+33.28 P.T.	"
316+00	"
320+00	"
325+00	"
330+00	"
335+00	"
340+00	"
345+00	"
350+00	"
355+00	"
40+00 S.R.303	℄ of median SR303
46+00 S.R.303	℄ of median S.R.303
53+00 S.R.303	℄ of median S.R.303
60+00 S.R.303	℄ of median SR303

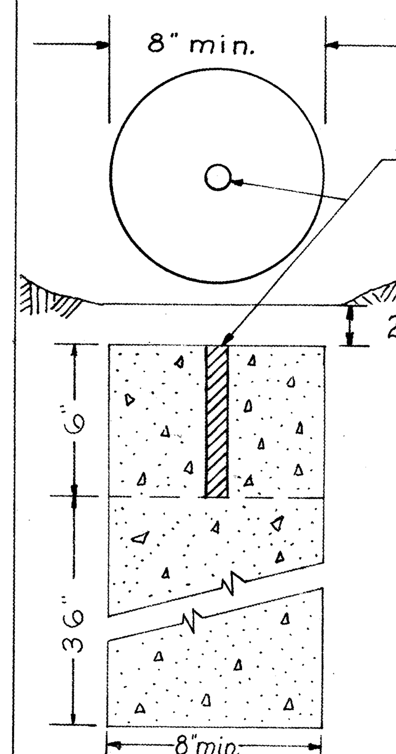
DETAIL A	DETAIL B	DETAIL C
Highway Tie	Highway Tie	Highway Tie







CENTERLINE REFERENCE MONUMENT DETAIL



Notes:
1. Upper 6" to be formed
2. Concrete to be Class "C"
3. Monuments to be placed by Contractor

REVISIONS

9-17-62

CENTER LINE SURVEY PLAT

OHIO INTERSTATE 71

MED-42-21.94

MEDINA COUNTY, OHIO

BRUNSWICK HILLS TOWNSHIP AND CITY OF BRUNSWICK

T-4N R-14W

74157
8:36 A.
Oct. 3, 1962
10 56
1.87
11x17"

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

266

MEDINA COUNTY
MED-42-21.94
LIMITED ACCESS

2/2

ESTIMATED QUANTITIES
Reference Monuments – 22

0 400 800 1200
SCALE IN FEET

CURVE DATA
P.C. 455+98.64
P.I. 466+46.20
P.T. 476+92.31
Δ = 5°14'03"
D = 0°15'00"
R = 22,918.31
T = 1,047.56'
L = 2,093.67'
E = 23.93'

CURVE DATA
P.C. 387+99.12
P.I. 409+84.09
P.T. 431+55.90
Δ = 10°53'31"
D = 0°15'00"
R = 22,918.31'
T = 2,184.97'
L = 4,356.78'
E = 103.92'

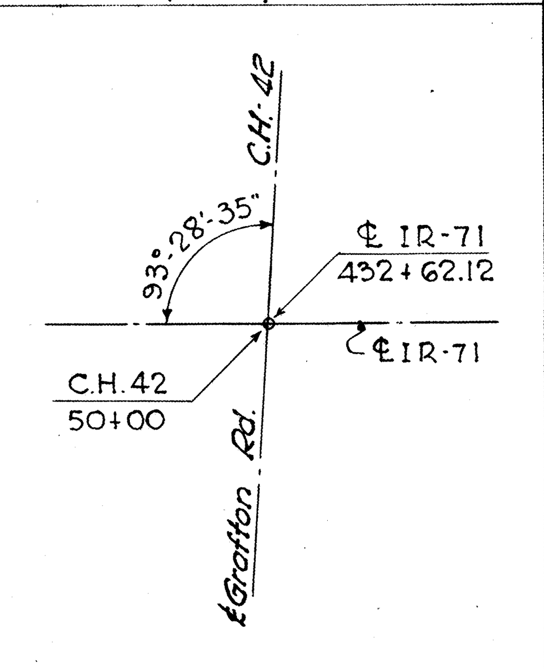
I HEREBY CERTIFY THAT THIS PLAT IS A TRUE DELINEATION OF A SURVEY MADE FOR THE OHIO DEPARTMENT OF HIGHWAYS IN MEDINA COUNTY BY Thomas Henry. DATE 9-4-62

REGISTERED SURVEYOR NO. 4622

LOCATION OF CENTERLINE REFERENCE MONUMENTS

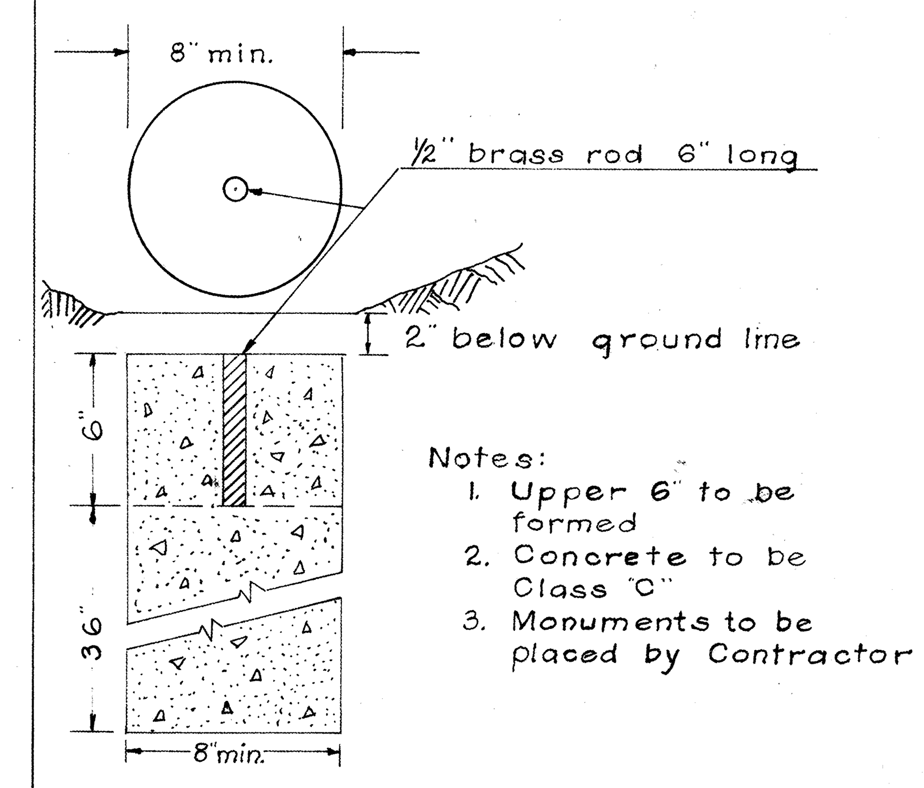
STATION	LOCATION
360 + 00	℄ of Median
365 + 00	"
370 + 00	"
375 + 00	"
380 + 00	"
384 + 00	"
387 + 99.12 P.C.	"
392 + 00	"
395 + 00	"
400 + 00	"
405 + 00	"
410 + 00	"
415 + 00	"
420 + 00	"
426 + 00	"
431 + 55.90 P.T.	"
435 + 00	"
440 + 00	"
445 + 00	"
450 + 00	"
455 + 98.64 P.C.	"
460 + 00	"
~~465 + 00~~	~~"~~
~~470 + 00~~	~~"~~
~~474 + 00~~	~~"~~
~~476 + 92.31 P.T.~~	~~"~~
~~480 + 00~~	~~"~~

DETAIL A
Highway Tie



SYMBOLS
Reference Monument
Road
Lot or Tract Line
Township Line

CENTERLINE REFERENCE MONUMENT DETAIL



Notes:
1. Upper 6" to be formed
2. Concrete to be Class "C"
3. Monuments to be placed by Contractor

REVISIONS

9-17-62

CENTERLINE SURVEY PLAT

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

267
293

MEDINA COUNTY
MED. 42-21.82
LIMITED ACCESS

1
27

I-71-4 (26) 225

SUMMARY OF ADDITIONAL RIGHT OF WAY REQUIRED

	PARCEL NO.	OWNER	DEED RECORD		DEED AREA	TO BE ACQUIRED		RESIDUE		SHEET NO.	REMARKS
			BOOK	PAGE		LAND	BLDGS	LEFT	RIGHT		
	38WL	Earl P. Fuller	99 88 107	455 11 10	227	22.62	No	(L) 67.19	134.41	3A, 3, 7, & 8	Acquired under MED-71-17.46
	38T	Earl P. Fuller				2.27	No			8	" " "
	38X	Earl P. Fuller				.51	No			8	" " "
	39WL	Harold P. Fuller	187	385	29.46	6.32	No	(L) 9	14.	3 & 8	5.33Ac 002-012-00-015-00 LOT 4 0.79Ac 002-012-00-012-00 LOT 3
*	40WL	Lewis W. & Roberta J. Fuller	202	46	48.35	5.39	No	(L) 14	29	3 & 9	4.56Ac. 002-012-00-016-00 LOT 4 0.88Ac. 002-012-00-019-00 LOT 3
*	41WL	Frederick F. & Jeannette T. McClure	206	236	29.21	1.95	No	0.00	27.04	3, 9, & 22	002-012-00-025-00
	41	Frederick F. & Jeannette T. McClure				0.22	No			3, 9, & 22	
	42WL	Bernadine C. Tibbitts	260	163	107.72	15.25	No	92.14	0.00	3, 9, 10, & 22	002-012-00-030-00
	42	Bernadine C. Tibbitts				0.33	Yes			3, 9, 10, & 22	
	43WL	Vincent A. & Grace V. Kopfstein	163	530	8.78	1.35	No	0.00	7.14	3, 9, 10, & 22	1.01-002-012-00-034-00 0.38-002-013-00-022-00
	43	Vincent A. & Grace V. Kopfstein				0.29	No			3, 9, 10, & 22	
	44	Harrison J. & Marilyn Roll	274	164	1.22	0.04	No	0.00	1.18	3 & 22	
	45	Ray R. & Lois Bennett	239	253	1.29					3 & 22	No Taking
	46	Conrad S. & Marie Ulmer	239	255	1.13					3	No Taking
*	47WL	Viena M. Hajduk	148 279	92 362	94.16	1.84	No	0.00	91.93	3, 10, & 11	002-013-00-021-00
*	48WL	Steven & Roza Szanto	281	591	42.75	6.85	No	35.90	0.00	3 & 10	001-013-00-020-000
	49WL	William & Brigita Matulevicus	128	541	24.00	4.38	No	19.62	0.00	3, 10, & 11	001-013-00-019-000
	50WL	Flora L. Johnson	200	22	46.00	6.4	No	0.00	39.6	3, 10, & 11	002-013-00-023-01
	51WL	Glenn V. & June M. Fuller	124 209	327 386	50.75	8.75	No	42.00	0.00	3, 10, & 11	001-013-00-018-000
	52	Walter E. Lang	154	193	13.4					3 & 22	No Taking
	53WL	Amber R. Chidsey Bryenton	131	58	25.10	9.85	No	13	2	3, 10, 11, 12 & 22	001-013-00-017-000
	53X	Amber R. Chidsey Bryenton				0.01	No			3 & 12	Drainage
	53	Amber R. Chidsey Bryenton				0.64	No			3, 12 & 22	
	53A	Amber R. Chidsey Bryenton				0.07	No			3, 12 & 22	
	54	Elbert S. Chidsey	131	588	25.10	0.16	No	24.94	0.00	3 & 22	
	55	Society Homes Inc.	255	452	100.					3 & 22	No Taking
	56WL	Elmer & Alda Donahue	145	599	39.43	12.51	Yes	0.25	26.5	3, 12, 13 & 22	003-02B-01-004-00
	56	Elmer & Alda Donahue				0.10	No			3, 12, 13 & 22	
	56B	Elmer & Alda Donahue				0.07	No			3, 12, & 22	
*	56A	David L. & Marcia V. Taylor	289	607	0.57	0.02	No	0.00	0.55	3 & 22	
	57WL	Alda Donahue	131	587	19.73	6.74	No	12.67	0.00	3 & 12	003-02B-01-003-00
	57X	Alda Donahue			19.73	0.08	No			3 & 12	Drainage
	57Y	Alda Donahue				0.58	No			3 & 12	
*	57	Alda Donahue				0.32	No			3 & 22	
	58	Alfred Sr. & Ruth Taylor	271	268	0.57	0.06	No	0.51	0.00	3 & 22	
	59	Orvey L. & Genevieve Bly	238	312	0.75	0.06	No	0.69	0.00	3 & 22	
	60	Myron G. Chidsey	131.	585	0.64	0.04	No	0.60	0.00	3 & 22	
	61	Walter G. & Bertha Hoehn	243	10	0.57					3 & 22	No Taking
*	62WL	Myron G. Chidsey	176 183 131	242 424 585	30.65	8.65	No	13.21	(L) 8.70	3 & 13	003-02B-01-036-00

* Indicates that a parcel has been added at the end of the summary (L) Indicates residual lands that are landlocked.

	PARCEL NO.	OWNER	DEED RECORD		DEED AREA	TO BE ACQUIRED		RESIDUE		SHEET NO.	REMARKS
			BOOK	PAGE		LAND	BLDGS	LEFT	RIGHT		
	62X	Myron G. Chidsey			30.65	0.09	No	13.21	(L) 8.70	3 & 13	Drainage
	63WD	Eugene & Frieda Sauer	135	564	10.00	0.17	No	0.00	9.63	3 & 23	003-02B-01-032-00
	64WL	Marie L. Barabas	272	322	20.00	1.04	No	0.00	18.69	3, 15 & 23	003-02B-01-034-00
	64WD	Marie L. Barabas			20.00	0.27	No	0.00		3 & 23	003-02B-01-033-00
	65WL	Myron & Helen Chidsey	199	158	39.11	25.27	Yes	(L) 12.95	0.00	3, 13, 14, 15 & 23	003-02B-01-035-00
	66WL	Helen T. Hronek & Anna Tohati	269	63	1.01	0.91	Yes	0.00	0.00	3, 14, 15, & 23	TOTAL TAKE 003-02B-01-037-00
	67WL	Earl J. & Mary Brigadier	285	281	0.50	0.41	Yes	0.00	0.00	3, 14, & 23	TOTAL TAKE 003-02B-06-002-00
	68WL	Myron & Helen Chidsey	199	158	0.73	0.50	No	0.23	0.00	3, 14, & 23	003-02B-06-003-00
	68A-WD	Willard O. & Virginia D. Kobelt	188	351	4.03	0.52	No	3.51	0.00	3, 14, & 23	
	68B-WD	Arthur & Hilda Raabe	192	506	20.00	0.08	No	19.92	0.00	3 & 23	003-02B-26-007-00
	68C-WD	Fred A. & Esther B. Gerspacher	95	625	83.50	0.08	No	83.30	0.00	3 & 23	001-016-00-009-00
	69	Ray E. & Eleanor Zunt & Stefan & Katerina Miko	252	143	1.33					3	No Taking
	70WL	Edward F. Hoban (Bishop of Clev'd)	214	462	27.00	26.72	No	0.00	0.00	3, 4, 14, 16, 17, 23 & 25	TOTAL TAKE
	71WL	William H. & Vernon W. Vetovitz	290	574	24.	23.81	Yes	0.00	0.00	3, 4, 14, 15, 16, 23 & 25	TOTAL TAKE
	71A-WL	William & Myrtice E. Vetovitz	170	27	1.00	0.93	Yes	0.00	0.00	3, 4, 15, 23 & 25	TOTAL TAKE
	72WL	Joseph S. & Inez I. Bailey	188	328	3.77	3.63	No	0.00	0.00	3, 4, 15 23 & 25	TOTAL TAKE
	73WL	Lewis G. Jr. & Doris Schemrich	189	7	1.88	1.81	No	0.00	0.00	3, 4, 15 23 & 25	TOTAL TAKE
	74A-WL	Mamie E. & Carl W. Ochsner	135 214	420 464	50.00	4.74	No	43.99	0.00	4, 16, 17 & 25	003-02A-04-008-00
	74X	Mamie E. & Carl W. Ochsner				0.35	No			4, 17, & 25	Drainage
	74WD	Mamie E. & Carl W. Ochsner				0.44	No			3, 4, 14, & 23	001-016-00-010-00
	74WL	Mamie E. & Carl W. Ochsner				0.30	No			3, 4, 14, & 23	001-016-00-011-00
	75WD	Carol H. & May Damon	84 114	219 228	48.10	1930 Sq.ft.	No	0.00	47.27	3 & 23	003-02A-04-007-00
	75WL	Carol H. & May Damon				0.66	No			3, 4, 15, & 23	
	75T	Carol H. & May Damon				.10	No			3, 15, 23 & 25	Drainage
	75A-WD	Norman Oches	179	206	53.75	0.23	No	0.00	53.52	3 & 23	001-016-00-012-00
*	76WL	David E. & Ruth E. Hier	162	415	70.01	9.92	No	34.	(L) 26.	4 & 17	0.09-003-02A-03-006-00 003-02A-03-005-00
	77WL	Stanley J. & Rosemary J. Stasicki	205	238	45.19	6.93	No	14.	(L) 24.	4 & 17	001-016-00-024-00
	78WL	Robert Rohde	232	367	20.	5.82	No	18	(L) 26	4, 17, & 18	001-016-00-020-00
	79WL	Clarence Rohde	232	362	40.75	4.64	No	13.	(L) 23.	4 & 18	001-016-00-016-00
	80WL	Villa Page	100 109 114	133 162 141	58.73	12.37	No	34.5	(L) 12.	4, 18, & 26	Vol. 114 Page 141 B.P.R. Participation -10.17Ac.
	81 TO	87 INCLUDED								4 & 26	No Taking
	88	George & John Kowal	229	375	6.00	0.69	No	5.31	0.00	4, 24, & 26	
	88T	George & John Kowal				0.46				4, 24, 26	
	89 TO	95 INCLUDED								4 & 26	No Taking
	96	Magdalena Stonitsch	227 235 255	193 17 152	1.54	0.21	No	0.00	1.20	4, 24 & 26	
	96T	Magdalena Stonitsch				0.13	No			4, 24 & 26	
	97T	Ethel Erdley	240	500	0.53	3930 sq.ft.	No			4, 24 & 26	
	98T	Robert G. Bentley	284	33	0.68	625 sq.ft.				4, 24 & 26	

1-5-66 Rev. Par. 50 WL (Area) & Add Par. 47 WL-1

4-13-66 Area Par. 75WD

I-71-4 (26) 225

SUMMARY OF ADDITIONAL RIGHT OF WAY REQUIRED

Par. 80WL, 99WL, 100WL & 101WL Combined - 001-017-00-004-00

PARCEL NO.	OWNER	DEED RECORD		DEED AREA	TO BE ACQUIRED		RESIDUE		SHEET NO.	REMARKS
		BOOK	PAGE		LAND	BLDGS	LEFT	RIGHT		
99WL	Frank C. Jr. & Marie P. Carr	238	226	0.77	.66	No	0.00	0.00	4,24,&26	TOTAL TAKE
100WL	Charles D. & Katherine Bargar	197	235	0.80	.69	Yes	0.00	0.00	4,19,24, & 26	TOTAL TAKE
101 WL	Paul & Johanna Laska	180	108	17.21	16.96	Yes	0.00	0.00	4,19,24 & 26	TOTAL TAKE
102	Howard J. & Rosemary R. Warnkey	180	493	2.24	0.12	No	0.00	2.12	4,24,26, & 27	
103	Betty Jane Rose n.k.a. Betty Jane Sweeney	180	495	2.24	0.09	No	0.00	2.15	4,24,26, & 27	
104	Robert S. & Rita L. Pritchard	180	497	2.24	0.05	No	0.00	2.19	4,24,26 & 27	
105	Anthony J. Rose Jr.								4,24,26 & 27	No Taking
106 WL	Howard W. & Anne Peters	167	312	25.00	24.72	Yes	0.00	0.00	4,19,20,24, 26 & 27	001-018-00-031-00 TOTAL TAKE
107 WL	Grace F. & Earle L. Behner	117	172	49.00	9.92	No	38.42	0.00	4,19,20,24 26 & 27	001-018-00-030-00
107T	" " " " "				0.06				24&26	
* 107x	" " " " "				0.07	No			4,24,&26	Drainage
107Y	" " " " "				0.13	No			4,20,&27	Drainage
107	" " " " "				0.66	No			4,24&26	
107A	Earl Bahner	97	314	1.00	0.03	No	0.97		4,24&26	
108	Pauline Rose								4&27	No Taking
* 109WL	Charles H. Waite	222	457	25.00	3.62	No	5.75	(L) 15.5	4,20,&27	001-018-00-029-00
110 WL	Charles H. Waite	291	692	92.10	13.86	No	15	(L) 63	4,20,21, & 27	Vol. 88 Page 363 Vol. 90 Pages 381 & 404
110x	Charles H. Waite				0.03	No			21	Drainage
47WL-1	Viena Hedjuk	148 279	92 362	94.16	0.39					002-013-00-023-00
107T-1	Grace F. & Earle L. Behner	117	172		0.08				24&26	
107T-2	" " " " "				0.04				24&26	
107T-3	" " " " "				0.06				24&26	
40 S	Lewis W. & Roberta J. Fuller	202	46	240 Sqft.	240 Sqft.				9	
41 S	Frederick F. & Jeannette T. McClure	206	236		240 Sqft.				9	
47S	Viena M. Hejduk	148 279	92 362	94.16	240 Sqft.				10	
47S-1	" " "				240 Sqft.				10	
48S	Steven & Roza Szanto	281	591	42.75	240 Sqft.				10	
48S-1	" " "				240 Sqft.				10	
56S	Elmer & Alda Donahue	145	599	39.43	240 Sqft.				12	
57S	Alda Donahue	131	587	19.73	240 Sqft.				13	
62S	Myron G. Chidsey	131 176 183	585 242 424	30.65	240 Sqft.				13	
62S-1	" " "				240 Sqft.				13	
76S	David E. & Ruth E. Hier	162	415	70.01	240 Sqft.				17	
76S-1	" " " " "				240 Sqft.				17	
109S	Charles H. Waite				240 Sqft.				20	
109S-1	" " "				240 Sqft.				20	
109AWD	Patsy & Corinne DeMetteo	325	329	15.5	15.5	Total Take			20A	Court Order #77CV-12-5323

R/W = 10.410 Ac.

001-018-00-027-00 = 9.36 Ac
001-018-00-028-00 = 4.50 Ac

(*) Indicates that a parcel has been added at the end of the summary (L) Indicates residual lands that are landlocked

5-9-79 Added Par. 109AWL RMS
1-5-66 Added Par. 47WL-1

R/W PLAN PROPERTY MAP

R/W PLAN PROPERTY MAP

MED - 42 - 21.82 4/27

R/W PLAN PROPERTY MAP

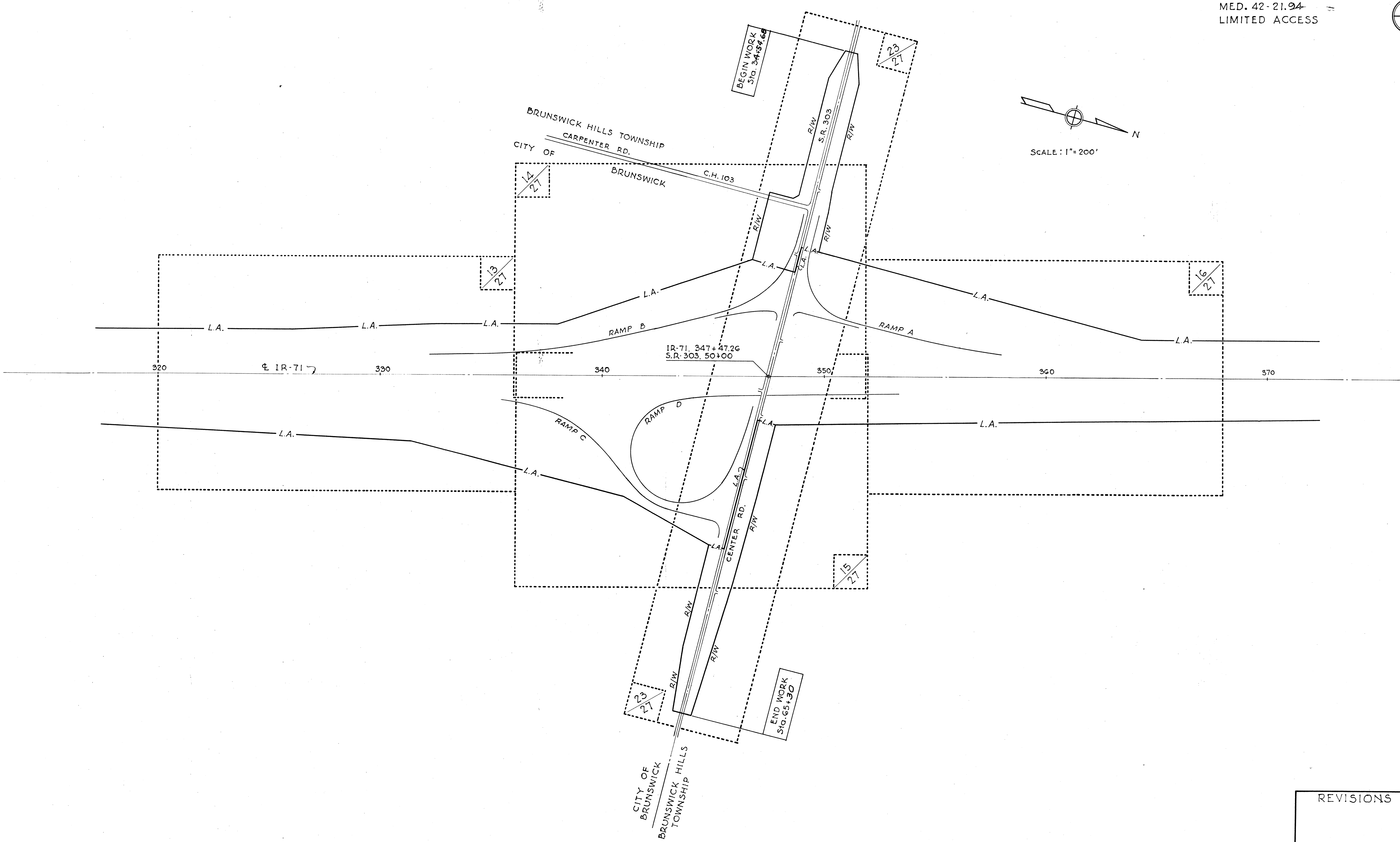
R/W PLAN PROPERTY MAP

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

272/293

MEDINA COUNTY
MED. 42-21.94
LIMITED ACCESS

6/27



REVISIONS

RIGHT OF WAY SHEET INDEX

R/W PLAN SCHEMATIC-S.R. 303 INTERCHANGE

R/W PLAN Sta. 203+00 to 230+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

MEDINA COUNTY
MED-42-21.94
LIMITED ACCESS
SCALE 1"=50'
DICKEY TRACT T-4N, R-14W

Legend for R/W Fence Symbols

I.A.P.A. – Intermediate Anchor Post Assembly
C.P.A. – Corner Post Assembly
H.C.A. – Headwall or Wingwall Connection Assembly
A.C.A. – Abutment Connection Assembly

MED. 42-17.46 | MED. 42-21.94

ESTIMATED QUANTITIES
R/W Fence Type "D" — 1211 Lin. Ft.

REVISIONS

R/W PLAN Sta. 230+00 to 245+80

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

MEDINA COUNTY
MED-42-21.94
LIMITED ACCESS
SCALE 1" = 50'

DICKEY TRACT T-4N, R-14W

ESTIMATED QUANTITIES
R/W Fence Type "D" — 5073 Lin. Ft.

R/W PLAN Sta. 245+80 to 270+00

MED - 42 - 21.82 10/27

R/W PLAN Sta. 270+00 to 295+00

R/W PLAN Sta. 282+00 to 295+00 RIGHT

R/W PLAN Sta. 295+00 to 320+00

R/W PLAN Sta. 320+00 to 336+00

MED - 42 - 21.82 14/27

R/W PLAN Sta. 336+00 to 352+00 Left


FED. RD. DIVISION 2 STATE OHIO PROJECT
281
293
MEDINA COUNTY
MED-42-21.82
LIMITED ACCESS
15
27
SCALE 1" = 50'
HELEN T. HRONEK & ANNA TOHATI
66WL
Cont.-0.91Ac.± P.R.O-0.10Ac.±
Total-1.01Ac.±
WILLIAM & MYRTICE VETOVITZ
71WL Cont.-23.81 Ac.±
P.R.O.-0.19 Ac.±
Total-24.00Ac.±
Orchard
Dry Pond
MYRON & HELEN CHIDSEY
Myron & Helen Chidsey
65WL Cont.-25.27 Ac.±
P.R.O.- 0.70Ac.±
Total.-25.97 Ac.±
WILLIAM VETOVITZ
71AWL Cont.- 0.93Ac.±
P.R.O.-0.08Ac.±
Total-1.01 Ac.±
SOLD
71EL
SOLD
72-EL
JOSEPH J. & INEZ I. BAILEY
72WL
Cont. -3.63 Ac.±
P.R.O. -0.14Ac.±
Total -3.77Ac.±
LEWIS G. & DORIS SCHEMRICH
73WL Cont.-1.82 Ac.±
P.R.O.-0.07Ac.±
Total -1.89Ac.±
SOLD
73-EL
CAROL H. & MAY DAMON
75X Cont. - 0.10Ac.±
75WL
Cont. - 0.46 Ac.±
P.R.O. - 0.27 Ac.±
Total - 0.73 Ac.±
75WD
Cont. - 2230 Sq.Ft.
P.R.O. - 2230 Sq.Ft.
Total - 4460 Sq.Ft.
75T
Cont. - 0.10 Ac.±
MARIE L. BARABAS
Marie L. Barabas
64WL Cont.-1.04 Ac± Total-1.24 Ac±
P.R.O.-0.20 Ac±
64WD Cont.-0.27 Ac± Total-0.47 Ac±
P.R.O.-0.20 Ac±
Match Line Sta. 336+00
Match Line Sta. 352+00
Match Line Sta. 58+00
℄ I-71
N.15°00'54" W.
347+47.26 I-71 =
50+00.00 SR-303
47+55.72 Ramp "C-D"
= 56+69.09 SR-303
℄ RAMP "C"
℄ RAMP "D"
℄ RAMP C-D
Construction Limits
Type "D" R/W Fence
Type I Crossing
Channel Change
Water Well
Ohio Edison Co.
Northern Ohio Telephone Co.
CITY OF BRUNSWICK
BRUNSWICK HILLS TOWNSHIP
S.R. 303
2 Sty. Fr. Barn
1 Sty. Br. Res.
1 Sty. Fr. Res.
1½ Sty. Fr. Res. & Gar.
Gravel Drive
Conc. Drive
Cr. Stone Drive
B.P.R. PART LINE ONLY
SEE SHEET NO. 25 FOR EXCESS LANDS
ESTIMATED QUANTITIES
R/W Fence Type "D"-1449. Ft.
See Sheet No.23 of 27
for Details of S.R. 303
See Sheet No.25 of 27
for Areas North of S.R.-303
TRACT-2 T-4N R-14W
REVISIONS
4-27-64 ADDITIONAL INFO. ADDED FOR EXCESS LANDS. D.F.
4-13-66 REVISED PAR. 75, LA
4-13-66 BEARINGS, DISTANCES

R/W PLAN Sta. 352+00 to 368+00

R/W PLAN Sta. 368+00 to 395+00

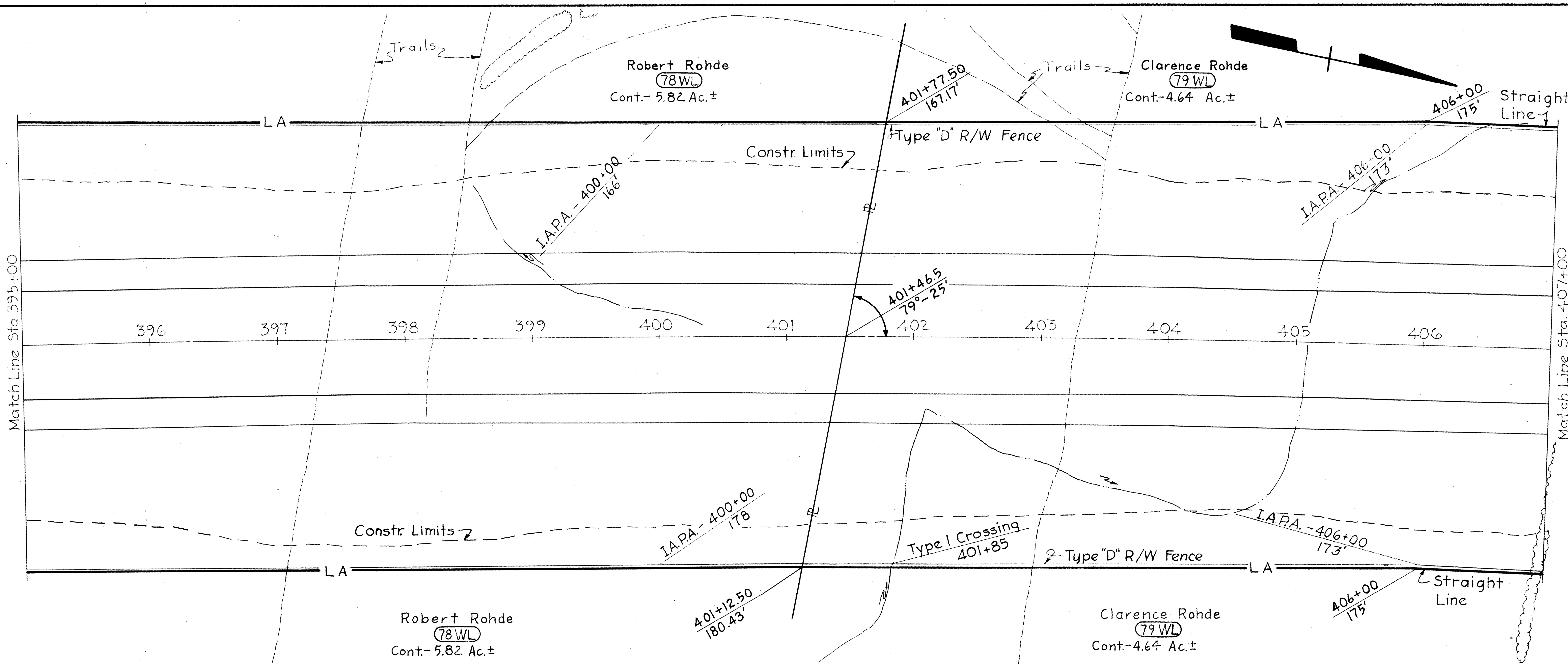
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

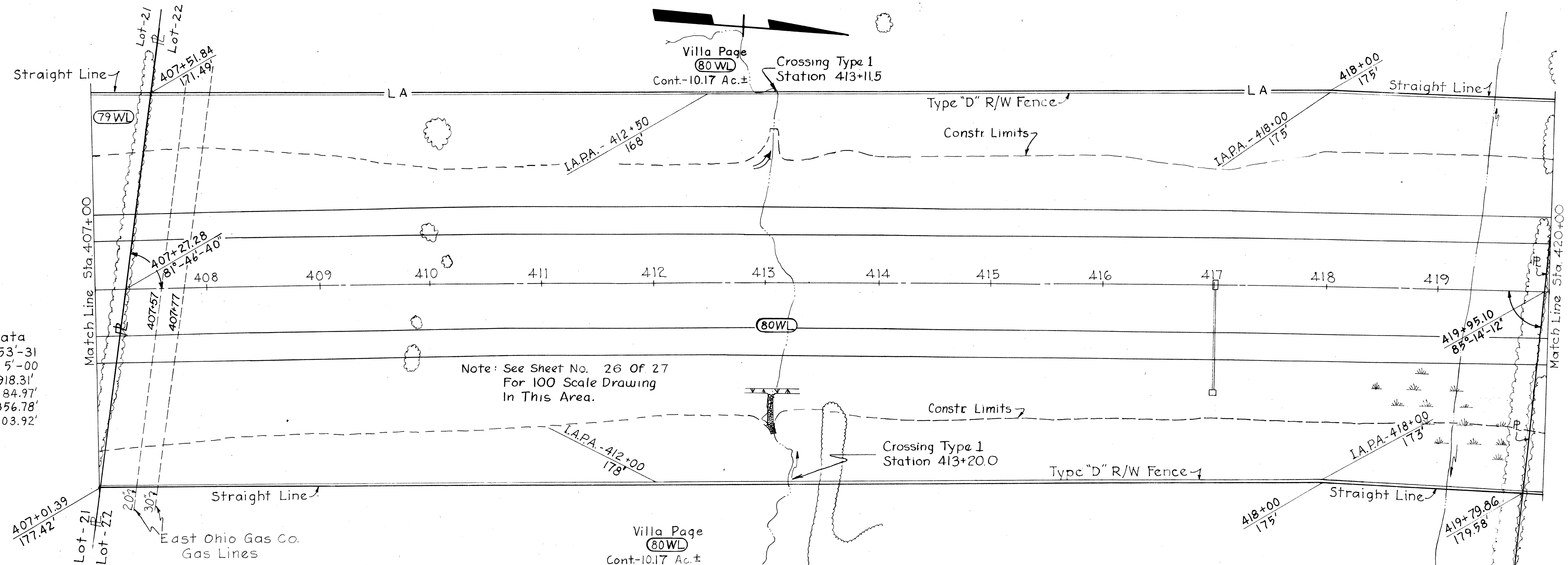
MEDINA COUNTY
MED-42-21.94
LIMITED ACCESS
SCALE 1" = 50'

TRACT-2 T-4N R-14W

ESTIMATED QUANTITIES

R/W Fence Type "D" - 5000 Ft.





Note: See Sheet No. 26 of 27 for 100' scale Drawing of this Area.

Note: See Sheet No. 26 Of 27 For 100 Scale Drawing In This Area.

Curve Data
Δ = 10°-53'-31
D_c = 0°-15'-00
R = 22,918.31'
T = 2,184.97'
L = 4,356.78'
E = 103.92'

REVISIONS

R/W PLAN Sta. 395+00 to 420+00


FED. RD. DIVISION
STATE
PROJECT
2
OHIO
285
293
MEDINA COUNTY
MED.-42-21.82
LIMITED ACCESS
SCALE 1" = 50'
19
27
Curve Data
Δ = 10°-53'-31"
Dc = 0°-15'-00"
R = 22,918.31'
T = 2,184.97'
L = 4,356.78'
E = 103.92'
(N-3°-16'W 1048' D.)
815.53'
420+20.95
101AEL
Straight Line 0.54AC. LEASED TO A.T.&T.
L.A.
Type "D" R/W Fence
N-5°-20'-08"W
1155.66'
Paul & Johanna Laska
101WL
Cont. 16.96 Ac.±
Total 17.21 Ac.±
P.R.O. 0.25 Ac.±
425+66
Type I Crossing
I.A.P.A. 424+50
164.5'
Constr. Limits
I.A.P.A. 430+50
170'
I.R.-71430+67.68
264.67'
I.R.-71430+64.43
217.77'
CHARLES D. & KATHERINE BARGAR
Dirt Drive
P.T. Sta. 431+55.90
175'
C.P.A.-431+73
173'
C.P.A.-431+71
140'
47+48.84
100'
431+85
175'
Charles D. & Katherine Bargar
100WL
Cont. 0.69 Ac.±
P.R.O. 0.11 Ac.±
Total 0.80 Ac.±
TRACT-2 T-4N R-14W
See Sheet No. 26 Of 27
For Complete Coverage
ESTIMATED QUANTITIES
R/W Fence Type "D" 5062 Ft.
Match Line Sta. 420+00
Match Line Sta. 432+00
PAUL & JOHANNA LASKA
421
422
423
424
425
426
427
428
429
430
431
Sink Hole
N.04° 07' 23"W
101WL
18" Sanitary Line
Medina Co.
Orchard
P.T. 431+55.902
C.P.A.-431+76
140'
C.P.A.-431+74
173'
175'
431+85
175'
Type "D" R/W Fence
Type I Crossing
422+10
I.A.P.A. 424+00
182'
Type I Crossing
427+24
I.A.P.A. 428+00
179.5'
Gar.
Fr. Sheds
Gravel Drive
Orchard
P.T. Sta. 431+55.90
175'
Straight Line
(N-88°-30'W 663' D)
(S-3°-05'W 1026.5 D.)
335.19'
419+66.66
101EL
SEE SHEET NO. 26 FOR EXCESS LANDS
Paul & Johanna Laska
101WL
Cont. 16.96 Ac.± P.R.O. 0.25 Ac.± Total 17.21 Ac.±
47+48.84
Lot 22
Lot 23
C.H. 42
Cr. Stone
107
432+72.75
175'
A.C.A. 432+86
140
433+77-175' I.R.-71
48+17-105' C.H.-42
Drive
100WL
175'
C.P.A. 433+77
173'
C.P.A.-433+77
140'
Grace & Earle Behner
107WL
Cont.-9.92 Ac.±
P.R.O.-.04 Ac.±
Total 9.96 Ac.±
107
Cont. -0.66 Ac.±
P.R.O. -0.44 Ac.±
Total -1.10 Ac.±
Type "D" R/W Fence
442+44
Type I Crossing
175'
I.A.P.A. 445+00
173'
Constr. Limits
I.A.P.A. 439+00
173'
107WL
GRACE & EARLE BEHNER
Dirt Road
A.C.A. 432+55
140'
18" C.I. Culvert
432+68.97-112.70'
48+87.09
86°-31'-25"
432+69
79.5'
101WL
432+62.12 =
= 50+00
Existing
GRAFTON ROAD
Match Line Sta. 432+00
433
434
435
436
437
438
439
440
441
442
443
444
106WL
N. 04° 07' 23" W
HOWARD W. & ANNE PETERS
Northern Ohio Telephone Co.
Match Line Sta. 445+00
See Sheet No. 24 of 27
for Details of C.H. 42
Existing R/W
A.C.A. 432+70
140'
C.P.A. 433+36.16
140'
Ohio Edison Co.
106 WL
106WL
I.A.P.A. 439+00
148'
2 Sty. Fr. House
Swimming Pool
C.P.A. 433+36.16
148'
Type "D" R/W Fence
Constr. Limits
I.A.P.A. 445+00
148'
150'
N-4° 07' 23" W
2265.48'
LA
A.C.A. 432+38
140'
℄ STA. 432+53.01
150'
175'
℄ Sta. 432+51.49
175'
433+33.16 @ 150'
51+45.42 @ 80'
106 WL
Bit. Drive
1½ Sty. Fr. Shed
1½ Sty. Fr. Barn
106 WL
Cont. - 10.13 Ac.
P.R.O. - 0.28 Ac.
Total - 10.41 Ac.
106 EL
Cont. - 14.59 Ac.
Howard W. & Anne Peters
106WL
Cont. 24.72 Ac.±
P.R.O. 0.28 Ac.±
Total 25.00 Ac.±
106 EL
Cont. - 14.59 Ac.
SEE SHEET NO. 27 FOR EXCESS LANDS
REVISIONS
11-24-70 - Rev. Par 106WL & Par 106EL
2/6/63 - L/A LINE REVISED ON PAR. 106 WL - D.M.F.

R/W PLAN Sta. 445+00 to 470+00

Job Number	FHWA REGION	STATE	PROJECT	
03581(0)	5	OHIO		

286A
293

MED-42-21.82
RIGHT OF WAY PLAN
LIMITED ACCESS

20A
27

100 0 100 300
Scale in Feet

MEDINA COUNTY, OHIO

INFO NOTE: Par. 109A-WD (DeMetteo) acquired by Mandamus action filed in Franklin Co. Common Pleas Court Case No. 77CV 125323.
11-30-78 Decision rendered by Court to acquire.
12-20-78 Journal Entry Filed.
5-27-80 Appropriation filed Medina Co. Common Pleas Court Case No. 36808
2-4-81 Judgment Entry filed.
5-7-85 Entry on Journal of the Director of Transportation to transfer Par. 109A-WD to City of Brunswick - V-14; P-130
7-30-85 Director's Deed to City recorded in O.R. 263, P. 170 Medina Co. Deed Records. P.P. No. 001-028-05-008
SUBJECT TO EX. 40' SANITARY SEWER EASEMENT AND RESERVE FLOODAGE EASEMENT OVER 15.5 Ac.

Plan Completion 5-23-79		
REV.	DATE	DESCRIPTION
J.E.C.	11-12-85	Added Info. Note.

R/W PLAN Sta. 470+00 to 490+00

R/W PLANS CROSSROADS C.H. 136
C.H. 138


FED. RD. DIVISION 2 STATE OHIO PROJECT
289
293
MEDINA COUNTY
MED 42-21.82
LIMITED ACCESS
SCALE 1" = 50'
23
27
TRACT-2 T-4N R-14W
Fred A. & Esther B. Gerspacher
68C WD Cont.- 0.08 Ac.± P.R.O.- 0.12 Ac.± Total - 0.20 Ac.±
Mamie E. & Carl W. Ochsner
74 WD Cont.- 0.44 Ac.± P.R.O.- 0.33 Ac.± Total = 0.77 Ac.±
74 WL Cont.- 0.30 Ac.± P.R.O.- 0.20 Ac.± Total = 0.50 Ac.±
Carol H. & May Damon
75 WD Cont.- 1930 Sq.Ft. P.R.O.- 1930 Sq.Ft. Total - 3860 Sq.Ft.
75 WL Cont.- 0.66 Ac.± P.R.O.- 0.32 Ac.± Total 0.98 Ac.±
75T Cont.- 0.10 Ac.±
Norman Oches
75A WD Cont.- 0.23 Ac.± P.R.O.- 0.35 Ac.± Total - 0.58 Ac.±
Match Line Sta. 34+00
Match Line Sta. 41+50
Match Line Sta. 57+50
BRUNSWICK HILLS TOWNSHIP
CITY OF BRUNSWICK
Constr. Limits
R/W
LA
S 82°44'02" E
S 88°22'49" E 509.1'
S 89°15'06" W
60+54.29 (Ahead N. Side only)
65+62.98 40' (Ahead N. Side only)
10" V.C.P.
6" V.C.P.
4" Gas Valve
Orchard
Arthur & Hilde Raabe
68B WD Cont.- 0.08 Ac.± P.R.O.- 0.12 Ac.± Total - .20 Ac.±
Willard O. & Virginia D. Kobelt
68A WD Cont.- 0.52 Ac.± P.R.O.- 0.44 Ac.± Total - .96
Maria L. Barabas
64 WD Cont.- 0.27 Ac.± P.R.O.- 0.20 Ac.± Total - 0.47 Ac.±
64 WL Cont.- 1.04 Ac.± P.R.O.- 0.20 Ac.± Total - 1.24 Ac.±
Eugene & Frieda Sauer
63 WD Cont.- 0.17 Ac.± P.R.O.- 0.20 Ac.± Total - 0.37 Ac.±
1½ Sty. Fr. Res.
1 Sty. Fr. Res.
SEE SHEET NO. 25 FOR EXCESS LANDS
Edward F. Hoban Bishop of Cleveland
70 WL Cont.- 26.72 Ac.± P.R.O.- 0.28 Ac.± Total - 27.00 Ac.±
William & Myrtice Vetovitz
71 WL Cont.- 23.81 Ac.± P.R.O.- 0.19 Ac.± Total - 24.00 Ac.±
William Vetovitz
71A WL Cont.- 0.93 Ac.± P.R.O.- 0.08 Ac.± Total - 1.01 Ac.±
Joseph J. & Inez I. Bailey
72 WL Cont.- 3.63 Ac.± P.R.O.- 0.14 Ac.± Total - 3.77 Ac.±
Lewis G. & Doris Schemrich
73 WL Cont.- 1.82 Ac.± P.R.O.- 0.07 Ac.± Total - 1.89 Ac.±
REVISIONS
6-1-64 Rev. R/W, LA, & ℄ on Par. 75
Channel Change 75T Cont. - 0.10 Ac.±
R/W B.P.R. Participation
N 89°15'06" E
Existing R/W
Ramp A
Ramp B
Ramp C-D
Ramp D
47+55.72 Ramp "C-D" = 56+69.09 S.R. 303
Myron & Helen Chidsey
68 WL Cont.- 0.14 Ac.±
Earl J. & Mary Brigadier
67 WL Cont.- 0.50 Ac.± P.R.O.- 0.09 Ac.± Total - 0.59 Ac.±
67 EL Sold Cont.- 0.30 Ac.±
Ray E. & Eleanor Zunt
BRUNSWICK HILLS TOWNSHIP Carpenter Rd. - Rt. #103
Helen T. Hronek & Anna Tahati
66 WL Cont.- 0.91 P.R.O.- 0.10 Total - 1.01
Myron & Helen Chidsey
65 WL Cont. 26.16 Ac.± P.R.O. 0.70 Ac.± Total - 26.86 Ac.±
Water well
Fr. Warehouse
Fr. Shed
2 Sty Br. Res.
1 Sty Br. Res.
2 Sty Fr. Barn
Fr. Sheds
Constr. Limits

R/W PLANS CROSS ROADS C.H. 42

R/W PLAN Sta. 345+00 to 377+00

R/W PLAN Sta. 412+00 to 437+00

MED - 42 - 21.82 27/27

R/W PLAN Sta 437+00 to 464+00

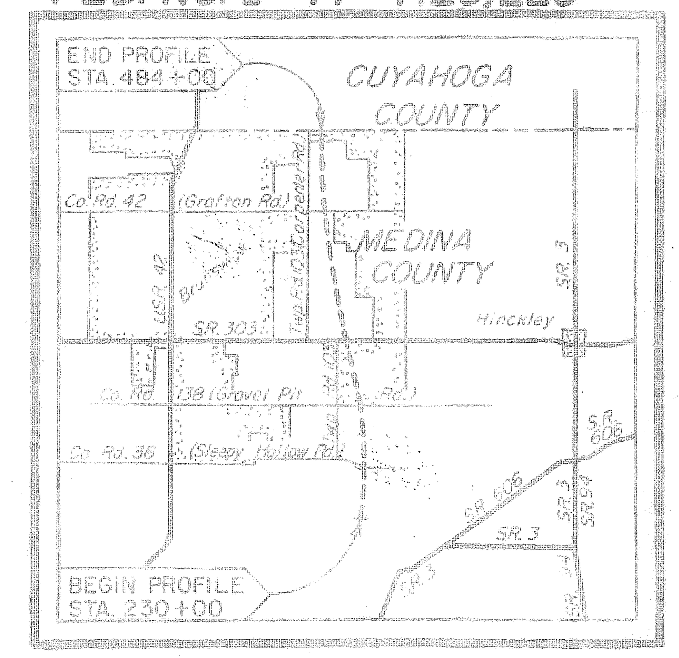
SOIL PROFILE
MEDINA COUNTY
MED – 42 – 21.94

OHIO STATE HIGHWAY TESTING LABORATORY
COLUMBUS, OHIO

1/21

NOTE: INFORMATION SHOWN BY THIS SUBGRADE PROFILE WAS OBTAINED SOLELY FOR USE IN ESTABLISHING DESIGN CONTROLS FOR THE PROJECT. THE STATE OF OHIO DOES NOT GUARANTEE THE ACCURACY OF THIS DATA AND IT IS NOT TO BE CONSTRUED AS A PART OF THE PLANS GOVERNING CONSTRUCTION OF THE PROJECT.

FED. NO. I-71-4(26)225



LOCATION MAP

Recon – F.I.R. – 5/29/62

Drilling – T.R.S., C.M.C. – 4/4/62 to 4/25/62

Drafting – C.L.L., D.M. – 5/24/62

GENERAL INFORMATION

INTRODUCTION

The project consists of a major relocation of USR 42, approximately 4.8 miles in length, beginning 0.7 mile north of the intersection of SR 3 and County Road 17, approximately 2 miles north of Weymouth, extending northward, and terminating approximately 600 feet south of the Cuyahoga-Medina County line.

The proposed grade indicates cuts, maximum 24 feet in depth; fill embankments, maximum 32 feet in height.

GEOLOGY AND OBSERVATIONS OF THE PROJECT

The alignment is situated in a glaciated portion of the Allegheny Plateau, on moderately thick morainal deposits, overlying shale and sandstone bedrock, of Mississippian age. Several areas of poor surface drainage were observed along the project.

EXPLORATION

Exploratory borings were made by means of truck-mounted mechanical earth auger and hand auger (in areas of difficult access), between April 4 and 25, 1962.

INVESTIGATIONAL FINDINGS

Material occurring immediately below grade consists predominantly of silt clays and clays, in the A-6 and A-7-6 classifications, having moisture contents generally in the lower portion of the plastic range. Frost susceptible sandy silt, in the A-4a classification, was encountered within 3 feet of grade at stations 257+00 and 417+00.

In the embankment foundation areas, soils consist predominantly of silt clays and clays, in the A-6 and A-7-6 classifications, with some gravels, sandy gravels and sandy silts. It is noted that wet materials were encountered between approximately stations 318+50 and 319+50, 350+00, 370+00 to 374+25, 380+00, and 457+00 to 458+00.

LEGEND FOR PROJECT-AVERAGE RESULTS OF TESTS– 366 SAMPLES TESTED

DESCRIPTION	H.R.B. CLASS	OHIO CLASS	% AGG	% C SAND	% F SAND	% SILT	% CLAY	LIQUID LIMIT	PLASTICITY INDEX	WATER CONTENT	SAMPLES TESTED
Gravel or stone fragments	A-1-a(0)	A-1-a	85	6	4	2	3	NP	NP	16	4
Gravel or stone fragments with sand	A-1-b(0)	A-1-b	51	11	12	12	14	25	2	20	7
Gravel or stone fragments with sand and silt	A-2-4(0)	A-2-4	54	10	10	12	14	20	8	18	10
Stone fragments with sand, silt and clay	A-2-6(1)	A-2-6	52	6	8	14	20	36	13	24	3
Sandy silt	A-4(4)	A-4a	17	8	22	26	27	23	5	18	21
Silt	A-4(8)	A-4b	2	1	7	53	37	25	4	21	4
Silt and clay	A-6(8)	A-6a	13	5	10	31	41	31	11	17	277
Silty clay	A-6(11)	A-6b	13	4	11	30	42	37	17	20	23
Clay	A-7-6(12)	A-7-6	7	3	8	28	54	43	19	28	17
Various other materials	VISUAL CLASSIFICATION										

Sod or Topsoil – X' – Approximate depth.

Berm material.

Auger boring – plan view.

Auger boring plotted to vertical scale only.

Water content nearly equal to or greater than liquid limit.

Indicates a non-plastic material with high water content.

Free water.

NOTE: Figures beside borings indicate water content in percent, e.g. 15

SOIL PROFILE
MEDINA COUNTY
MED-42-2194
OHIO STATE HIGHWAY TESTING LABORATORY
COLUMBUS, OHIO

2/21

SUMMARY OF SOIL TEST DATA

NOTE: NP shown in Liquid Limit and Plasticity Index columns indicates that the material is non-plastic.
*Denotes sample taken at or near grade.

STATION	OFFSET	DEPTH FROM-TO	% AGG.	% C.S.	% F.S.	% SILT	% CLAY	L.L.	P.I.	% W.C.	CLASS.
234+00	CL	0.5-2.0	10	6	21	25	38	31	11	24	A-6a
		2.0-4.0	41	5	14	17	23	32	16	22	A-6b
236+00	CL	0.5-3.0	15	2	8	39	36	38	11	21	A-6a*
237+00	CL	9.0-14.0	Brown and Gray Sandy Clayey Silt W/Stone Fragments							-	Visual
238+00	CL	8.5-14.0	Brown and Gray Silty Clay W/Stone Fragments							-	Visual
240+55	CL	0.5-2.5	0	4	13	34	40	32	13	24	A-6a*
		2.5-5.0	35	3	9	26	27	37	11	30	A-6a
245+00	20'Rt	0.5-3.0	0	2	16	34	48	33	13	22	A-6a
248+00	20'Rt	0.5-4.0	13	3	12	31	41	36	16	28	A-6b
250+15	CL	0.5-3.0	11	5	13	31	40	31	11	19	A-6a*
		3.0-5.0	11	4	24	20	41	31	11	16	A-6a*
252+50	20'Lt	0.5-6.0	21	5	37	16	21	22	7	19	A-4a
		6.0-10.0	21	4	13	28	34	28	12	13	A-6a
		10.0-13.0	35	5	12	25	23	23	7	13	A-4a
254+20	CL	0.5-2.0	36	6	10	19	26	33	12	21	A-6a*
		2.0-7.0	38	13	13	19	17	29	7	21	A-4a*
		7.0-10.0	27	5	11	27	30	27	11	13	A-6a
257+00	CL	0.5-5.0	11	4	8	29	48	34	15	14	A-6a
		5.0-9.5	20	3	8	31	38	34	14	15	A-6a*
		9.5-12.0	5	3	25	32	35	22	4	10	A-4a*
		12.0-15.0	0	2	5	50	43	24	4	21	A-4b
		15.0-18.0	16	9	10	28	37	28	11	15	A-6a
260+00	CL	0.5-5.0	18	3	7	30	42	32	11	14	A-6a
		5.0-8.0	22	4	8	27	39	31	11	15	A-6a
		8.0-10.0	10	4	8	29	49	34	16	15	A-6b
		10.0-16.0	11	5	8	28	48	28	11	16	A-6a*
		16.0-17.0	51	8	8	16	17	24	9	11	A-2-4
		17.0-20.0	13	2	6	36	43	27	11	18	A-6a
263+00	15'Lt	0.0-3.0	0	1	2	41	56	43	14	35	A-7-6*
		3.0-6.0	17	8	17	24	36	35	12	32	A-6a*
264+50	CL	0.0-5.0	12	7	14	27	40	28	11	17	A-6a
		5.0-10.0	12	4	8	60	16	35	13	18	A-6a*
		10.0-14.0	0	0	0	23	77	41	15	27	A-7-6
		14.0-20.0	62	13	9	7	9	25	6	15	A-1-b
265+00	80'Lt	0.0-5.0	20	8	15	28	29	36	11	29	A-6a
266+00	CL	0.0-5.0	13	4	9	32	42	32	11	20	A-6a*
		5.0-11.0	21	4	7	26	42	33	11	16	A-6a
269+00	CL	0.0-5.0	16	4	9	31	40	29	11	18	A-6a
		5.0-8.0	13	4	9	31	43	28	11	16	A-6a*
		8.0-14.0	13	5	9	32	41	33	14	15	A-6a*
		14.0-20.0	12	6	10	39	33	26	11	13	A-6a
271+00	CL	0.0-6.0	13	4	19	27	37	37	16	19	A-6b*
		6.0-10.0	0	5	10	38	47	30	11	15	A-6a
272+00	CL	0.5-3.0	42	12	11	14	21	38	10	34	A-2-4
273+20	CL	0.0-5.5	19	7	13	23	38	34	11	20	A-6a*
276+00	130'Lt	0.8-4.0	0	0	3	42	55	39	18	22	A-6b
276+00	95'Rt	0.0-5.0	48	10	12	14	16	33	7	18	A-2-4
278+35	CL	0.5-3.0	54	13	10	15	8	32	10	23	A-2-4
280+50	100'Rt	0.5-4.0	57	3	7	13	20	38	11	15	A-2-6
281+75	CL	0.0-6.0	0	5	12	39	44	34	11	23	A-6a*
282+00	95'Lt	0.5-5.0	9	2	4	50	35	29	5	22	A-4b
		5.0-9.0	0	1	7	61	31	NP	NP	20	A-4b
		9.0-14.0	12	5	9	34	40	32	11	13	A-6a
		14.0-20.0	19	5	14	35	27	20	3	10	A-4a
		20.0-23.0	25	5	10	28	32	28	11	19	A-6a
		23.0-30.0	20	4	9	28	39	27	11	12	A-6a
283+50	CL	0.5-5.0	15	3	7	30	45	30	11	15	A-6a
		5.0-10.0	19	5	8	27	41	34	11	15	A-6a
		10.0-15.0	17	3	7	36	37	26	11	14	A-6a*
		15.0-20.0	15	5	8	30	42	26	11	14	A-6a*
		20.0-25.0	16	6	12	31	35	23	11	12	A-6a

STATION	OFFSET	DEPTH FROM-TO	% AGG.	% C.S.	% F.S.	% SILT	% CLAY	L.L.	P.I.	% W.C.	CLASS.
290+00	CL	0.0-5.0	20	6	7	27	40	35	12	16	A-6a
		5.0-9.0	12	4	8	33	43	30	11	14	A-6a
		9.0-14.0	11	5	12	33	43	26	11	12	A-6a
		14.0-20.0	20	4	6	31	33	26	12	15	A-6a
		20.0-25.0	15	5	9	33	41	33	12	15	A-7-6*
		25.0-30.0	15	5	7	31	42	37	20	18	A-6b
293+00	95'Rt	0.5-5.0	7	0	4	43	45	30	11	19	A-6a
		5.0-10.0	10	5	6	26	43	31	15	17	A-6a
		10.0-15.0	11	3	7	40	39	31	11	15	A-6a
		15.0-20.0	15	6	8	28	43	28	11	15	A-6a
		20.0-24.0	15	6	9	28	43	26	12	15	A-6a
		24.0-28.0	16	5	17	37	25	21	3	17	A-4a
		28.0-30.0	12	5	10	32	40	31	12	13	A-6a
294+75	CL	0.0-5.0	0	5	8	36	51	33	12	15	A-6a
		5.0-10.0	10	4	7	28	50	30	11	15	A-6a
		10.0-15.0	20	8	13	28	31	31	11	14	A-6a*
		15.0-20.0	51	4	6	20	19	27	9	17	A-4a
		20.0-25.0	30	7	4	22	28	-	-	16	A-4a
297+00	CL	0.0-5.0	33	3	7	29	38	29	11	15	A-6a
		5.0-7.5	16	3	9	30	33	30	11	15	A-6a
		7.5-10.0	25	6	16	29	31	21	1	17	A-4a
		10.0-15.0	33	3	8	25	31	25	11	15	A-6a
		15.0-20.0	13	4	8	32	43	25	11	14	A-6a
		20.0-25.0	17	12	7	27	37	33	11	15	A-6a*
		25.0-28.0	15	5	9	31	40	33	11	15	A-6a*
300+50	95'Lt	0.5-5.0	14	5	6	29	45	29	11	15	A-6a
		5.0-10.0	12	4	11	34	39	28	11	15	A-6a
		10.0-15.0	12	5	9	32	42	27	11	15	A-6a
		15.0-19.0	17	3	4	34	42	25	11	14	A-6a
		19.0-23.0	57	6	7	18	12	22	5	10	A-2-4
		23.0-27.0	15	4	9	29	43	29	11	15	A-6a
300+50	95'Rt	0.0-4.0	0	0	3	42	55	30	18	22	A-6b
		4.0-9.0	20	4	8	30	38	28	11	14	A-6a
		9.0-15.0	21	5	9	31	34	27	11	13	A-6a
		15.0-20.0	16	4	7	33	32	36	11	14	A-6a
		20.0-25.0	15	6	8	32	39	27	11	13	A-6a
		25.0-28.0	0	4	9	38	49	20	13	15	A-6a
304+00	CL	0.5-5.0	16	4	9	35	36	31	11	12	A-6a
		5.0-8.0	9	6	9	36	40	31	11	15	A-6a
		8.0-13.0	14	5	4	35	42	27	11	13	A-6a*
		13.0-18.0	15	4	8	38	35	30	15	15	A-6a*
308+25	CL	0.5-6.0	8	4	8	32	48	30	16	31	A-6b*
309+00	CL	0.0-6.0	29	13	17	21	20	29	11	21	A-6a*
310+75	CL	0.5-5.0	55	4	4	14	23	37	12	22	A-6a*
312+40	CL	0.0-5.0	12	3	12	32	41	39	14	24	A-6a*
313+65	CL	0.5-6.0	38	3	6	23	30	36	15	28	A-6a*
316+85	CL	0.0-5.0	0	3	9	35	53	42	15	16	A-7-6*
318+00	CL	0.8-5.0	19	6	10	25	40	31	11	32	A-6a
318+50	100'Rt	0.5-1.5	11	4	18	33	34	26	5	27	A-4a
		1.5-3.0	47	15	14	8	16	21	5	14	A-1-b
319+00	120'Lt	0.0-4.0	90	5	3	-2-		NP	NP	13	A-1-a
319+00	60'Lt	0.0-4.5	84	6	4	0	6	NP	NP	20	A-1-a
319+50	120'Lt	0.0-6.0	26	9	25	15	25	26	4	32	A-4a
319+50	120'Rt	0.0-4.0	78	6	6	2	8	33	10	16	A-2-4
322+00	CL	0.5-5.0	37	3	5	17	38	30	11	31	A-6a*
326+00	95'Lt	0.6-5.0	0	5	22	35	38	32	12	23	A-6a
326+00	95'Rt	0.6-6.0	32	2	7	25	34	41	19	19	A-7-6
329+00	CL	0.0-5.0	0	4	19	40	37	32	11	30	A-6a
329+00	100'Rt	0.0-5.0	18	9	20	31	22	27	11	30	A-6a
331+00	130'Rt	0.0-4.5	0	4	27	32	37	33	11	22	A-6a
331+05	CL	0.5-2.0	61	9	8	10	12	NP	NP	31	A-1-b
332+00	130'Lt	0.5-3.0	60	10	13	6	8	NP	NP	20	A-1-b

STATION	OFFSET	DEPTH FROM-TO	% AGG.	% C.S.	% F.S.	% SILT	% CLAY	L.L.	P.I.	% W.C.	CLASS.
334+00	CL	0.0-5.0	32	4	7	20	37	34	14	17	A-6a
		5.0-10.0	23	5	8	29	35	32	13	14	A-6a
		10.0-14.0	16	5	9	32	38	29	11	14	A-6a
		14.0-16.0	12	8	26	31	23	19	4	18	A-4a
		16.0-20.0	0	0	12	50	38	22	6	16	A-4b
336+50	CL	0.0-5.0	0	4	9	36	51	36	12	17	A-6a
		5.0-9.5	16	6	8	29	41	31	11	15	A-6a
		9.5-12.0	20	5	8	34	33	29	11	13	A-6a
338+00	CL	0.0-5.0	11	4	8	28	49	34	14	16	A-6a
		5.0-10.0	12	7	9	30	42	32	11	16	A-6a
		10.0-14.0	30	9	9	25	27	31	11	13	A-6a
		14.0-30.0	8	5	10	37	40	29	12	14	A-6a
340+00	130'Lt	0.0-4.5	10	4	8	29	49	33	11	15	A-6a
		4.5-9.5	13	5	8	28	46	32	14	13	A-6a
		9.5-14.0	13	5	8	30	44	30	11	16	A-6a
		14.0-17.5	10	9	16	30	35	25	6	14	A-4a
		17.5-20.0	6	4	11	35	44	27	11	12	A-6a
342+00	30'Lt	0.0-5.0	19	8	14	26	33	30	11	13	A-6a
		5.0-11.0	17	3	8	29	43	34	13	15	A-6a
		11.0-16.0	18	5	8	33	36	27	11	13	A-6a
		16.0-20.0	11	6	9	35	39	31	14	14	A-6a
342+00	120'Rt	0.0-5.0	0	4	7	34	55	36	15	18	A-6a
		5.0-10.0	0	5	9	33	53	33	14	14	A-6a
		10.0-15.5	13	5	8	27	47	31	11	15	A-6a
		15.5-20.0	16	5	9	31	39	28	11	15	A-6a
345+00	40'Rt	0.0-5.0	15	5	9	32	39	30	11	14	A-6a
		5.0-10.0	0	5	9	37	49	33	12	14	A-6a
		10.0-15.0	26	4	8	31	31	29	11	17	A-6a
		15.0-16.0	27	6	7	29	31	29	11	15	A-6a
		18.0-20.0	13	5	9	33	40	30	13	15	A-6a
347+35	CL	0.5-5.0	15	6	9	32	38	32	14	22	A-6a
		5.0-9.0	10	6	8	31	45	29	11	14	A-6a
		9.0-15.0	9	6	10	29	46	28	11	14	A-6a
350+00	130'Rt	0.0-4.5	0	5	9	37	49	30	11	24	A-6a
		4.5-9.0	8	7	10	32	43	31	13	13	A-6a
		9.0-14.0	14	7	12	32	35	25	11	13	A-6a
		14.0-19.0	31	10	15	22	22	21	6	12	A-4a
		19.0-22.0	50	12	8	18	12	24	6	15	A-2-4
350+03	CL	0.6-5.0	27	4	9	28	32	31	11	37	A-6a
		5.0-9.0	26	5	8	28	33	34	14	15	A-6a
		9.0-14.0	8	4	8	35	45	29	12	14	A-6a
		14.0-19.0	16	4	9	30	41	28	11	13	A-6a
350+70	CL	0.0-4.5	43	5	11	14	27	36	11	18	A-6a
351+00	130'Lt	0.0-5.0	9	7	11	30	43	31	11	16	A-6a
		5.0-9.0	17	7	7	31	38	26	11	13	A-6a
		9.0-14.0	9	6	8	36	41	29	11	16	A-6a
		14.0-19.0	16	6	10	32	36	27	11	12	A-6a
		19.0-21.0	18	10	18	29	25	21	6	10	A-4a
		21.0-27.0	62	11	8	10	9	NP	NP	12	A-1-b
354+00	120'Lt	0.0-4.0	14	7	21	29	29	28	11	17	A-6a
		4.0-9.0	15	7	9	33	36	31	11	14	A-6a
		9.0-14.0	24	6	8	28	34	30	11	13	A-6a
		14.0-18.0	15	5	8	32	40	27	11	16	A-6a
		18.0-21.0	12	5	9	34	40	30	13	15	A-6a
		21.0-22.5	47	15	11	12	15	24	6	12	A-2-4
		22.5-25.0	19	6	10	28	37	29	11	16	A-6a
354+00	120'Rt	0.0-5.0	16	5	9	30	40	30	11	14	A-6a
		5.0-9.5	14	6	9	31	40	34	13	16	A-6a
		9.5-15.0	11	5	9	33	42	32	12	14	A-6a
		15.0-20.0	10	4	7	27	52	32	11	17	A-6a
		20.0-23.5	26	7	10	26	31	26	11	14	A-6a
		23.5-25.5	19	8	12	31	30	26	11	16	A-6a
		25.5-30.0	31	4	7	28	30	30	12	11	A-6a
356+00	CL	0.5-4.5	17	6	9	31	37	29	11	15	A-6a
		4.5-8.0	9	6	9	37	39	29	11	16	A-6a
		8.0-15.0	13	7	10	29	41	27	11	15	A-6a
357+00	130'Lt	0.0-5.0	33	6	13	21	27	34	11	32	A-6a
357+00	CL	0.5-4.0	14	8	11	15	50	30	17	26	A-2-6
357+00	120'Rt	0.5-3.0	44	10	13	13	20	30	11	19	A-6a
358+00	120'Lt	0.0-6.0	10	3	7	36	44	37	13	26	A-6a

STATION	OFFSET	DEPTH FROM-TO	% AGG.	% C.S.	% F.S.	% SILT	% CLAY	L.L.	P.I.	% W.C.	CLASS.
360+50	CL	0.0-5.0	12	4	6	32	46	34	13	16	A-6a
		5.0-10.0	9	5	8	27	51	37	15	18	A-6a
		10.0-13.0	11	4	7	31	47	33	14	15	A-6a
362+74	100'Lt	0.0-5.0	17	5	8	34	36	30	11	15	A-6a
		5.0-10.0	7	5	8	33	46	30	11	13	A-6a
362+74	10'Rt	0.0-5.0	20	4	7	32	37	33	[illegible]	[illegible]	A-6a*
		5.0-8.5	16	6	6	30	41	30	[illegible]	15	A-6a
		8.5-10.0	11	5	8	34	42	28	11	13	A-6a
362+74	65'Rt	0.0-4.5	5	5	10	37	[illegible]	30	11	14	A-6a
		4.5-10.0	20	5	8	[illegible]	38	31	12	15	A-6a
364+00	100'Lt	0.0-6.0	15	4	9	36	39	34	13	15	A-6a
		6.0-11.0	13	5	8	33	41	26	11	12	A-6a
364+20	32'Lt	0.0-4.0	6	5	11	40	44	33	14	23	A-6a*
		4.0-7.0	11	5	9	35	40	28	11	15	A-6a
		7.0-11.0	13	5	9	36	40	28	11	16	A-6a
364+50	CL	0.0-4.0	14	3	9	34	40	37	16	19	A-6b*
		4.0-9.0	15	5	8	36	39	34	14	17	A-6a
		9.0-11.0	15	5	10	[illegible]	33	29	11	15	A-6a
364+60	50'Rt	0.0-3.0	0	3	15	41	41	38	21	21	A-6b*
		3.0-8.0	0	5	16	39	38	30	11	15	A-6b
		8.0-11.0	0	5	14	38	42	25	11	15	A-6a
364+20	100'Rt	0.0-3.0	18	4	14	24	44	40	18	21	A-6b
		3.0-8.0	33	4	8	29	26	30	11	16	A-6a
		8.0-11.0	15	5	9	36	36	28	11	13	A-6a
365+00	CL	0.0-5.5	17	5	9	32	45	33	15	18	A-6a*
		5.5-12.0	22	5	11	32	37	25	11	15	A-6a
366+00	23'Rt	0.0-3.5	0	3	12	30	35	35	12	25	A-6a*
		3.5-7.0	2	5	10	37	46	33	11	21	A-6a*
		7.0-12.0	12	5	8	32	42	32	11	15	A-6a
369+65	CL	0.5-4.0	31	6	12	25	31	29	11	23	A-6a*
370+00	100'Rt	0.0-6.0	7	2	13	32	46	31	12	20	A-6a
372+25	100'Lt	0.5-3.0	0	2	10	52	36	37	13	29	A-6a
372+25	50'Lt	0.5-2.0	0	2	9	36	53	38	14	27	A-6a
		2.0-4.0	0	2	8	36	53	37	12	19	A-6a
372+25	100'Rt	0.5-4.0	16	2	6	43	34	31	13	23	A-6a
373+50	100'Rt	[illegible]	[illegible]	[illegible]	10	[illegible]	74	57	30	37	[illegible]
374+25	100'Lt	0.0-3.0	0	3	16	20	[illegible]	43	17	34	A-7-6
		3.0-6.0	0	3	13	27	[illegible]	48	19	40	A-7-6
377+60	100'Lt	0.5-3.0	[illegible]	4	10	32	57	36	15	33	A-6a
377+60	100'Rt	0.0-5.0	0	2	13	13	50	40	19	25	A-6b
378+38	130'Lt	0.0-4.0	53	6	[illegible]	14	20	31	14	24	A-2-6
378+38	130'Rt	0.0-3.0	5	2	19	34	40	30	11	24	A-6a
		3.0-5.0	65	9	7	6	13	30	[illegible]	25	A-2-[illegible]
380+00	100'Lt	0.5-4.0	0	3	37	20	40	26	[illegible]	10	A-4a
380+00	CL	0.0-3.0	0	6	25	31	42	27	7	[illegible]	A-4a
380+00	100'Rt	0.5-5.0	14	1	13	25	27	35	[illegible]	[illegible]	A-6a
381+17	CL	0.0-2.0	38	6	12	19	25	35	11	14	A-6a
381+75	25'Lt	0.0-5.5	0	2	53	[illegible]	13	NP	NP	24	A-3a
383+25	100'Rt	0.5-2.0	89	3	3	-5-		NP	NP	12	A-1-a
384+50	130'Lt	0.0-5.0	47	10	16	9	18	31	7	18	A-2-4
386+00	150'Lt	0.0-4.0	55	11	15	6	12	NP	NP	22	A-1-b
386+00	CL	0.0-6.0	14	8	24	14	40	31	11	26	A-6a
386+00	150'Rt	0.5-1.0	78	10	5	1	7	NP	NP	16	A-1-a
		1.0-2.0	12	6	11	31	40	25	11	12	A-6a
389+00	130'Lt	0.0-5.0	9	3	9	22	57	41	19	25	A-7-6
389+00	130'Rt	0.5-5.0	13	4	8	19	56	42	18	25	A-7-6

SOIL PROFILE
MEDINA COUNTY
MED-42-21.94

OHIO STATE HIGHWAY
TESTING LABORATORY
COLUMBUS, OHIO

3
21

SUMMARY OF SOIL TEST DATA (Cont'd)

NOTE: NP shown in Liquid Limit and Plasticity Index columns indicates that the material is non-plastic.
*Denotes sample taken at or near grade.

STATION	& OFFSET	DEPTH FROM-TO	% AGG.	% C.S.	% F.S.	% SILT	% CLAY	L.L.	P.I.	% W.C.	SOIL CLASS.
393+05	CL	0.5-4.0	24	3	9	23	41	30	15	25	A-6a*
397+00	CL	0.0-5.5	14	4	8	28	46	31	12	14	A-6a
		5.5-11.0	0	4	8	40	48	26	11	15	A-6a
		11.0-16.0	15	5	9	28	43	27	11	15	A-6a*
		16.0-22.0	10	5	10	29	46	26	11	16	A-6a
401+00	100'Lt	0.6-5.0	12	4	9	30	45	32	13	13	A-6a
		5.0-10.0	17	4	7	27	45	30	12	15	A-6a
		10.0-15.0	20	2	6	30	42	28	11	15	A-6a
		15.0-20.0	17	7	17	25	34	22	11	14	A-6a
		20.0-25.0	9	1	15	41	34	22	11	14	A-6a
401+00	90'Rt	0.5-5.0	0	2	7	31	60	30	11	20	A-6a
		5.0-9.5	13	4	9	21	53	33	15	16	A-6a
		9.5-15.0	16	4	8	25	47	29	11	17	A-6a
		15.0-20.0	15	5	9	29	42	28	11	17	A-6a
		20.0-25.0	16	4	8	31	41	27	11	17	A-6a
405+00	CL	0.6-5.0	20	9	14	11	46	29	11	16	A-6a
		5.0-10.0	10	5	9	29	47	29	11	15	A-6a*
		10.0-15.0	13	4	7	32	44	30	11	17	A-6a*
		15.0-20.0	19	5	27	35	14	NP	NP	13	A-4a
409+00	CL	0.0-5.0	13	3	9	27	48	38	16	15	A-6b
		5.0-9.5	9	4	10	29	48	30	11	15	A-6a*
		9.5-14.0	14	5	9	22	50	40	21	15	A-6b*
		14.0-16.0	10	2	5	41	42	27	11	15	A-6a
		16.0-20.0	13	5	10	24	40	24	11	16	A-6a
413+00	CL	0.5-5.5	12	4	9	29	46	35	13	15	A-6a*
		5.5-10.0	18	5	9	26	42	34	13	16	A-6a
		10.0-12.0	16	4	7	28	45	28	12	14	A-6a
417+00	CL	0.0-5.0	11	5	10	23	51	33	14	15	A-6a
		5.0-11.0	16	4	9	21	50	33	16	15	A-6b*
		11.0-14.0	8	15	26	15	36	22	7	15	A-4a*
		14.0-19.0	14	5	11	29	41	25	11	20	A-6a
419+00	95'Rt	0.5-5.0	0	5	10	31	54	36	14	16	A-6a
		5.0-10.0	12	3	7	36	42	33	16	14	A-6b
		10.0-15.0	16	3	7	30	41	30	13	15	A-6a
		15.0-19.0	16	18	24	26	16	NP	NP	13	A-4a
422+50	CL	0.0-5.0	14	5	7	34	40	33	11	10	A-6a*
		5.0-10.0	14	5	9	28	44	33	15	39	A-6a
423+00	CL	0.5-5.0	12	4	9	29	46	34	16	15	A-6b*
		5.0-9.5	20	4	8	27	41	31	12	16	A-6a
		9.5-11.0	12	4	8	31	45	29	11	17	A-6a
425+00	95'Lt	0.6-5.0	20	6	12	25	37	41	21	13	A-7-6
		5.0-9.0	0	5	11	32	52	33	11	17	A-6a
		9.0-14.0	0	5	9	34	52	28	11	15	A-6a
425+00	CL	0.6-5.0	12	5	9	32	42	29	11	13	A-6a*
		5.0-9.0	11	4	8	27	50	33	13	9	A-6a*
		9.0-14.0	13	4	8	30	45	29	11	20	A-6a
427+50	CL	0.5-5.0	13	4	8	24	51	34	11	15	A-6a*
		5.0-10.0	12	4	8	25	51	31	11	29	A-6a
429+50	CL	0.6-3.0	0	3	15	45	37	32	11	25	A-6a
		3.0-8.0	13	4	9	29	45	31	11	16	A-6a
		8.0-12.0	11	8	8	27	46	33	14	14	A-6a
432+50	CL	0.0-5.0	15	6	9	24	46	34	14	15	A-6a*
		5.0-9.0	11	6	9	24	50	33	12	16	A-6a
		9.0-15.0	12	6	9	27	46	28	11	16	A-6a
436+00	CL	0.0-5.0	26	7	10	23	34	30	11	18	A-6a*
		5.0-10.0	10	7	11	23	49	29	11	16	A-6a
		10.0-15.0	16	7	9	27	41	33	12	15	A-6a
438+00	CL	0.0-5.0	10	4	10	37	39	42	21	20	A-7-6
		5.0-9.0	10	6	10	32	42	32	12	14	A-6a
		9.0-15.0	9	7	10	32	42	32	13	16	A-6a
441+00	CL	0.0-5.0	11	5	10	25	49	27	11	15	A-6a
		5.0-9.0	10	7	12	27	44	31	12	15	A-6a
		9.0-15.0	11	5	10	27	47	28	11	14	A-6a
442+60	140'Lt	0.0-2.0	0	1	2	22	75	44	15	39	A-7-6
		2.0-4.0	11	1	4	33	51	44	20	28	A-7-6
		4.0-6.0	12	3	10	30	45	45	23	28	A-7-6
445+60	CL	0.5-6.0	0	3	16	37	44	37	17	28	A-6b
448+00	CL	0.0-5.0	0	4	7	29	60	42	17	24	A-7-6*
452+00	CL	0.0-5.0	0	2	8	35	55	40	13	18	A-6a
455+00	CL	0.5-5.0	0	3	13	40	44	41	17	21	A-7-6
457+00	100'Rt	0.5-3.0	0	1	27	33	39	26	11	23	A-6a
		3.0-6.0	44	3	6	20	27	39	17	16	A-6b
458+00	110'Lt	0.5-3.0	29	1	10	44	16	36	16	27	A-6b
459+00	CL	0.5-2.0	0	6	20	35	39	27	11	25	A-6a
		2.0-4.0	0	17	35	16	32	24	9	17	A-4a
		4.0-5.0	Brown and Gray Sandy Clayey Silt W/Stone Fragments							-	Visual
460+00	110'Rt	0.5-3.0	18	0	8	45	29	35	14	30	A-6a
460+00	CL	0.5-3.0	0	10	22	30	38	33	14	22	A-6a
		3.0-5.5	9	5	9	35	42	33	12	15	A-6a
		5.5-10.0	16	5	9	29	41	29	11	14	A-6a
		10.0-13.0	7	6	10	33	44	29	11	14	A-6a
462+50	CL	0.5-3.0	0	2	22	29	47	35	16	22	A-6b*
		3.0-6.0	0	7	11	37	45	33	11	15	A-6a*
		6.0-8.0	0	1	4	30	65	31	12	23	A-6a
		8.0-12.0	16	8	9	28	39	28	11	19	A-6a
465+00	CL	0.2-5.0	11	6	10	30	43	33	13	16	A-6a
		5.0-8.0	9	7	10	29	45	32	11	16	A-6a
		8.0-9.0	16	10	13	25	36	31	15	15	A-6a
		9.0-12.0	Brown Silty Sand & Gravel & Stone Fragments							-	Visual
		12.0-14.0	11	6	11	27	45	24	11	19	A-4a
		14.0-18.0	10	5	9	36	40	26	11	17	A-6a
468+00	95'Rt	0.5-5.0	11	3	8	31	47	33	11	19	A-6a
		5.0-9.0	13	6	9	28	44	31	14	16	A-6a
		9.0-12.5	10	5	9	27	49	34	13	20	A-6a
		12.5-18.0	12	8	9	29	42	27	11	16	A-6a
		18.0-24.0	12	7	13	34	34	26	11	14	A-6a
472+00	95'Lt	0.0-5.0	0	4	10	34	52	35	14	17	A-6a
		5.0-10.0	0	6	10	40	44	30	11	17	A-6a
		10.0-15.0	10	8	10	47	25	30	11	16	A-6a
		15.0-20.0	15	7	10	27	41	22	11	13	A-6a
472+00	95'Rt	0.0-5.0	12	4	6	36	42	30	11	18	A-6a
		5.0-10.0	0	5	9	43	43	33	13	16	A-6a
		10.0-15.0	0	7	11	43	33	31	12	13	A-6a
		15.0-26.0	0	6	10	32	52	29	11	15	A-6a
474+10	CL	0.0-5.0	0	5	11	27	57	30	14	30	A-6a
476+00	CL	0.5-5.0	0	7	10	35	48	30	11	15	A-6a
		5.0-10.0	0	5	8	34	45	32	12	12	A-6a*
		10.0-15.0	0	5	11	45	38	37	11	15	A-6a*
		15.0-20.0	10	5	8	39	38	23	12	13	A-6a
479+00	CL	0.0-5.0	0	7	10	31	52	34	15	20	A-6a*
		5.0-9.0	16	7	9	28	40	33	15	16	A-6a*
		9.0-13.0	12	7	12	33	36	29	11	14	A-6a
481+00	CL	0.0-5.0	15	4	8	29	44	30	16	15	A-6b*
		5.0-10.0	0	9	10	31	50	32	13	15	A-6a
482+00	CL	0.0-6.0	0	5	18	35	42	38	15	30	A-6a*
482+00	25'Rt	0.0-6.0	11	5	8	33	43	34	12	17	A-6a*
		5.0-10.0	17	5	8	27	43	34	13	15	A-6a
		10.0-15.0	27	5	8	25	34	36	16	14	A-6b
484+00	75'Rt	0.0-5.0	13	6	8	29	44	32	11	20	A-6a*
		5.0-10.0	10	7	10	27	46	37	15	17	A-6a*
		10.0-15.0	12	7	10	27	44	29	11	16	A-6a

SOIL PROFILE
MEDINA COUNTY
MED—42—21.94

OHIO STATE HIGHWAY TESTING LABORATORY
COLUMBUS, OHIO

4/21

SOIL PROFILE
MEDINA COUNTY
MED — 42 — 21.94
OHIO STATE HIGHWAY
TESTING LABORATORY
COLUMBUS, OHIO
5
21
Co. Rd. 36 (Sleepy Hollow Road)
Pasture
Hayfield
Woods
℄ Proposed U.S.R. 42
NOTE: For cross section of Sta. 265+00, see sheet 12.
NOTE: For cross section of Sta. 276+00, see sheet 12.
Refusal (Hand auger)
Hole squeezed in at elev. 1121.9'
TS=0.5'
Sod=0.5'
1180
1170
1160
1150
1140
1130
1120
1110
262
263
264
265
266
267
268
269
270
271
272
273
274
275
276
277
278
279
280
281
282
283
284
285
286
287
288
289
290
291
292
293
294

SOIL PROFILE
MEDINA COUNTY
MED-42-21.94

OHIO STATE HIGHWAY
TESTING LABORATORY
COLUMBUS, OHIO

6
21

SOIL PROFILE
MEDINA COUNTY
MED – 42 – 21.94

7/21

OHIO STATE HIGHWAY TESTING LABORATORY
COLUMBUS, OHIO

CROSS SECTION INDEX	
STATION	SHEET
326+00	13
342+00	13
349+99	14
351+07	14
357+00	14

SOIL PROFILE
MEDINA COUNTY
MED - 42 - 21.94
OHIO STATE HIGHWAY TESTING LABORATORY
COLUMBUS, OHIO

8 / 21

CROSS SECTION INDEX

STATION	SHEET
363+00	15
364+00	15
372+00	15
378+00	15
380+00	16
386+00	16


SOIL PROFILE
MEDINA COUNTY
MED-42-21.94
OHIO STATE HIGHWAY
TESTING LABORATORY
COLUMBUS, OHIO
9
21
Woods
Orchard
Hayfield
℄ Proposed U.S.R. 42
100' Lt. TS=0.6'
90' Rt. Sod=0.5'
TS=0.5'
Refusal (Hand auger)
TS=0.6'
Sod=0.5'
1170
1160
1150
1140
1130
390 391 392 393 394 395 396 397 398 399 400 401 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420 421 422

SOIL PROFILE
MEDINA COUNTY
MED-42-21.94

OHIO STATE HIGHWAY
TESTING LABORATORY
COLUMBUS, OHIO

10
21

SOIL PROFILE
MEDINA COUNTY
MED-42-21.94
OHIO STATE HIGHWAY
TESTING LABORATORY
COLUMBUS, OHIO
11
21
NOTE: For cross section of Sta. 458+00, see sheet 16.
Hayfield
Poorly drained area
NOTE: Creek flowing on sandy silt and sand with some gravel.
Wet area
Field
Pasture
Woods
℄, Proposed U.S.R. 42
NOTE: Numerous pools of standing water occuring throughout the poorly drained area. 3/26/62.
Sod=0.5'
Refusal (Hand auger) (Boulders)
100' Rt.
Sod =0.5'
Refusal (Hand auger)
Brown, and gray sandy clay silt with stone fragments.
TS=0.5'
Hole caved in at elev. 1090.8'
Gray silty sand with gravel and stone fragments
Hole caved in at elev. 1091.0'
(Hole squeezed in at elev. 1089.0')
95' Rt.
TS=0.5'
95' Lt.
95' Rt.
25' Rt.
1110
1100
1090
1080
1070
1060
454
455
456
457
458
459
460
461
462
463
464
465
466
467
468
469
470
471
472
473
474
475
476
477
478
479
480
481
482
483
484

SOIL PROFILE
MEDINA COUNTY
MED-42-21.94
OHIO STATE HIGHWAY TESTING LABORATORY
1620 W. BROAD ST., COLUMBUS 23, OHIO
12
21
Cross Section Sta. 319+00
Proposed section
(Sta. 318+50)
Refusal (Hand auger)
Refusal (Gravel) (Hand auger)
Cross Section Sta. 276+00
Refusal (Hand auger) (Hole squeezed in at elev. 1113.6')
Cross Section Sta. 265+00
(Sta. 264+50)
Hole squeezed in at elev. 1121.9'
Cross Section Sta. 237+21
(Sta. 237+00)
Brown and gray sandy clay silt with stone fragments.


SOIL PROFILE
MEDINA COUNTY
MED-42-21.94
13/21
OHIO STATE HIGHWAY TESTING LABORATORY
1620 W. BROAD ST., COLUMBUS 23, OHIO
Cross Section Sta. 342+00
Proposed section
Cross Section Sta. 326+00
Sod=0.6'
Refusal (Boulders) (Hand auger)
Refusal (Hand auger)
Cross Section Sta. 319+50
Refusal (Hand auger)
1170
1160
1150
1140
1130
1120


SOIL PROFILE
MEDINA COUNTY
MED-42-21.94
OHIO STATE HIGHWAY
TESTING LABORATORY
1620 W. BROAD ST. COLUMBUS 23, OHIO
14
21
Cross Section
Sta. 357+00
Proposed section
TS ±05'
Refusal
(Hand auger)
Cross Section
Sta. 351+07
(Sta. 351+00)
(Sta. 350+70)
Refusal
(Boulders)
Cross Section
Sta. 349+99
(Sta. 350+00)
Sod .05'
1160
1150
1140
1130
1120
1110
160
150
100
50
℄


SOIL PROFILE
MEDINA COUNTY
MED-42-21.94
OHIO STATE HIGHWAY
TESTING LABORATORY
1620 W. BROAD ST. COLUMBUS 23, OHIO
15
21
Cross Section
Sta. 378+00
(Sta. 378+38)
(Sta. 377+68)
TS ±0.5'
(Sta. 377+58)
Refusal
(Hand auger)
Proposed section
Cross Section
Sta. 372+00
(Sta. 372+25)
TS ±0.5'
Refusal
(Hand auger)
Proposed section
Cross Section
Sta. 364+00
(Sta. 364+20)
Sod ±0.6'
Proposed section
Cross Section
Sta. 363+00
(Sta. 362+74)
Sod ±0.5'
Proposed section
1150
1140
1130
160
150
100
50
℄

SOIL PROFILE

MEDINA COUNTY

MED - 42 - 21.94

16/21

OHIO STATE HIGHWAY TESTING LABORATORY

1620 W. BROAD ST., COLUMBUS 23, OHIO

GENERAL INFORMATION

INTRODUCTION

The project consists of the USR 42-SR 303 Interchange, located on SR 303, approximately 2.5 miles east of Hinckley. Included in this report are profiles of SR 303, Ramps A, A-1, B, B-1, C and D.

The proposed grades indicate the following:

SR 303 - cut, maximum 5 feet in depth.

Ramp A - fill embankment, maximum 20 feet in height.

Ramp A-1 - no grade indicated.

Ramp B - cut, maximum 3 feet in depth; fill embankment, maximum 30 feet in height.

Ramp B-1 - no grade indicated.

Ramp C - cut, maximum 5 feet in depth; fill embankment, maximum 8 feet in height.

Ramp D - cut, maximum 8 feet in depth; fill embankment, maximum 13 feet in height.

GEOLOGY OF THE PROJECT

The project is located on the glaciated portion of the Allegheny Plateau, where moderately thick morainal deposits overlie shale, sandstone and clay bedrock, of Mississippian age.

EXPLORATION

Exploratory borings were made by means of truck-mounted mechanical earth auger, on August 15, 1962. Included with this report is the log of a drive sample-core boring made in conjunction with the structure foundation investigation.

INVESTIGATIONAL DISCLOSURES

Materials occurring immediately below proposed grade and in the embankment foundation areas are predominantly comprised of silty clays, in the A-6 classification, having moisture contents in the lower portion of or below the plastic range.

LEGEND FOR PROJECT-AVERAGE RESULTS OF TESTS- 36 SAMPLES TESTED

DESCRIPTION	H. R. B. CLASS	OHIO CLASS	% AGG.	% C. SAND	% F. SAND	% SILT	% CLAY	LIQUID LIMIT	PLASTICITY INDEX	WATER CONTENT	SAMPLES TESTED
Coarse and fine sand	-----	A-3a	17	16	36	3	28	23	6	20	1
Gravel with sand and silt	A-2-4(0)	A-2-4	60	5	5	16	6	24	4	8	-
Sandy silt	A-4(7)	A-4a	0	6	22	47	25	NP	NP	22	1
Silt	A-4(8)	A-4b	0	0	12	50	38	22	6	16	1
Silt and clay	A-6(8)	A-6a	20	4	7	31	38	33	13	19	30
Silty clay	A-6(10)	A-6b	16	3	7	30	44	37	16	15	3
Various other materials			VISUAL CLASSIFICATION								
Sandstone			VISUAL CLASSIFICATION								
Shale			VISUAL CLASSIFICATION								

Sod or Topsoil = X' = Approximate depth.

Berm material.

Auger boring - plan view.

Drive sample core boring - plan view.

Auger boring plotted to vertical scale only.

Drive sample core boring plotted to vertical scale only.

Number of blows for "Standard Penetration" test.
X = number of blows for the first 6 inches.
Y = number of blows for the second 6 inches.

Water content nearly equal to or greater than liquid limit.

W Free water.

NOTE: Figures beside borings indicate water content in percent. e.g. 15

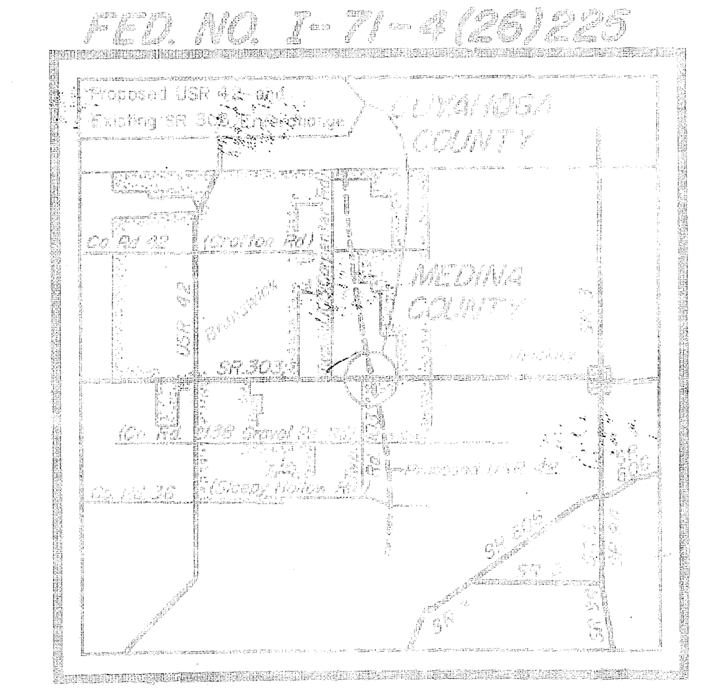
SOIL PROFILE
MEDINA COUNTY
MED-42-21.94
SR 303 INTERCHANGE

OHIO STATE HIGHWAY TESTING LABORATORY
1620 W. BROAD ST., COLUMBUS 23, OHIO

17
21

NOTE: INFORMATION SHOWN BY THIS SUBGRADE PROFILE WAS OBTAINED SOLELY FOR USE IN ESTABLISHING DESIGN CONTROLS FOR THE PROJECT. THE STATE OF OHIO DOES NOT GUARANTEE THE ACCURACY OF THIS DATA AND IT IS NOT TO BE CONSTRUED AS A PART OF THE PLANS GOVERNING CONSTRUCTION OF THE PROJECT.

FED. NO. I-71-4(26)225



LOCATION MAP

Recon - D.A. - [illegible]/62

Drilling - Auger - CMC, E.B. - 8/15/62

Drafting - [illegible], D.A. - [illegible]/62

SUPPLEMENTARY SUMMARY OF SOIL TEST DATA

NOTE: NP shown in Liquid Limit and Plasticity Index columns indicates that the material is non-plastic.
*Denotes sample taken at or near grade.

PROPOSED USR 42 AND EXISTING SR 303 INTERCHANGE

STATION & OFFSET		DEPTH FROM-TO	% AGG.	% C.S.	% F.S.	% SILT	% CLAY	L.L.	P.I.	% W.C.	SHTL CLASS.	
SR 303												
39+00	10'Rt	0.5-2.0	0	4	10	39	47	37	15	17	A-6a	*
		2.0-4.0	17	16	36	3	28	23	6	20	A-3a	*
		4.0-8.0	17	7	10	36	30	30	11	14	A-6a	
43+00	10'Rt	0.5-4.0	27	3	8	30	32	36	14	23	A-6a	*
		4.0-10.0	12	4	6	27	51	36	14	16	A-6a	
47+00	10'Rt	0.5-4.0	16	5	13	36	30	31	11	22	A-6a	*
		4.0-9.0	20	6	6	28	40	32	14	17	A-6a	*
		9.0-12.0	15	3	6	36	40	32	13	16	A-6a	
54+00	10'Rt	0.5-2.0	9	4	9	35	43	33	14	17	A-6a	
		2.0-7.0	15	5	9	31	40	33	12	16	A-6a	*
		7.0-15.0	31	3	6	27	33	29	11	15	A-6a	*
56+70	10'Rt	0.5-3.0	0	6	22	47	25	NP	NP	22	A-4a	
		3.0-9.0	6	4	9	35	46	32	13	16	A-6a	*
60+00	10'Rt	0.5-5.0	10	3	7	35	45	37	13	17	A-6a	*
		5.0-10.0	12	4	8	25	51	33	14	16	A-6a	
64+00	10'Rt	0.5-4.0	14	4	10	30	42	35	12	22	A-6a	*
		4.0-9.0	6	5	8	36	45	30	11	16	A-6a	
		9.0-10.0	7	5	8	37	43	31	12	14	A-6a	
Ramp A												
52+00	BL	0.5-3.0	9	3	7	30	51	40	17	13	A-6b	
		3.0-10.0	13	4	7	29	47	35	14	15	A-6a	
		10.0-12.0	14	5	8	33	40	29	11	17	A-6a	

	STATION & OFFSET		DEPTH FROM-TO	% AGG.	% C.S.	% F.S.	% SILT	% CLAY	L.L.	P.I.	% W.C.	SHTL CLASS.
Ramp A (Cont'd)												
* *	56+96	14'Lt	0.0-5.0	33	6	13	21	27	34	11	38	A-6a
* *	57+97	17'Lt	0.0-6.0	10	3	7	36	44	37	13	26	A-6a
* *	60+54	80'Rt	0.6-5.0	12	4	6	32	46	34	13	16	A-6a
			5.0-10.0	9	5	8	27	51	37	15	18	A-6a
			10.0-13.0	11	4	7	31	47	33	14	15	A-6a
Ramp B												
* *	33+87	95'Rt	0.0-5.0	32	4	7	20	37	34	14	17	A-6a
			5.0-10.0	23	5	8	29	35	32	13	14	A-6a
			10.0-14.0	16	5	9	32	38	29	11	14	A-6a
			14.0-16.0	12	8	26	31	23	19	4	18	A-4a
			16.0-20.0	0	0	12	50	38	22	6	16	A-4b
* *	35+36	100'Rt	0.0-5.0	0	4	9	36	51	36	12	17	A-6a
			5.0-9.5	16	6	8	29	41	31	11	15	A-6a
			9.5-12.0	20	5	8	34	33	29	11	13	A-6a
* *	37+75	110'Rt	0.0-5.0	11	4	8	28	49	34	14	16	A-6a
			5.0-10.0	12	7	9	30	42	32	11	16	A-6a
			10.0-14.0	30	9	9	25	27	31	11	13	A-6a
			14.0-30.0	8	5	10	37	40	29	12	14	A-6a
	40+00	BL	0.5-5.0	9	4	7	36	44	37	16	16	A-6b
			5.0-10.0	31	3	6	24	36	35	16	15	A-6b
			10.0-15.0	39	4	8	24	25	29	11	21	A-6a
	44+00	BL	0.5-5.0	37	1	5	24	33	35	13	15	A-6a
			5.0-10.0	33	3	6	27	31	36	14	16	A-6a
			10.0-15.0	0	4	8	36	52	35	13	16	A-6a

	STATION & OFFSET		DEPTH FROM-TO	% AGG.	% C.S.	% F.S.	% SILT	% CLAY	L.L.	P.I.	% W.C.	SHTL CLASS.	
Ramp C													
	40+00	BL	0.5-5.0	22	3	7	37	31	37	15	16	A-6a	
			5.0-10.0	34	3	5	23	35	32	11	15	A-6a	
	44+00	BL	0.5-4.0	26	3	6	24	41	33	12	18	A-6a	*
			4.0-8.0	28	3	9	30	30	33	12	18	A-6a	*
			8.0-12.0	37	2	4	38	19	30	12	15	A-6a	
Ramp D													
* *	36+58	56'Rt	0.0-5.0	15	5	9	32	39	30	11	14	A-6a	
			5.0-10.0	0	5	9	37	49	33	12	14	A-6a	
			10.0-15.0	26	4	8	31	31	29	11	17	A-6a	
			15.0-18.0	27	6	7	29	31	29	11	15	A-6a	
			18.0-20.0	13	5	9	33	40	30	13	15	A-6a	
	40+00	BL	0.5-5.0	25	5	7	27	36	35	14	16	A-6a	
			5.0-10.0	34	3	6	24	33	29	11	14	A-6a	
			10.0-15.0	40	2	4	24	30	27	11	15	A-6a	

DRIVE SAMPLE SOIL TEST DATA

STATION & OFFSET		DEPTH FROM-TO	% AGG.	% C.S.	% F.S.	% SILT	% CLAY	L.L.	P.I.	% W.C.	SHTL CLASS.
SR 303											
50+50	52'Rt	5.0-6.0	10	3	7	33	[illegible]	30	[illegible]	16	A-6a
		10.0-11.0	25	5	8	27	34	27	7	16	A-4a
		17.5-18.5	22	4	8	25	40	30	[illegible]	19	A-6a
		20.0-21.0	17	5	8	28	42	27	[illegible]	[illegible]	[illegible]
		22.5-23.5	34	8	9	25	24	[illegible]	[illegible]	[illegible]	[illegible]
		27.5-28.5	Brown Sandy Silty Gravel							[illegible]	(Visual)
		30.0-31.0	16	5	[illegible]	36	[illegible]	22	[illegible]	[illegible]	[illegible]
		32.5-33.0	38	5	5	16	[illegible]	24	[illegible]	[illegible]	[illegible]
		35.0-35.5	43	3	[illegible]	33	[illegible]	25	[illegible]	[illegible]	[illegible]

* * Borings referenced from Proposed USR 42

SOIL PROFILE

MEDINA COUNTY
MED-42-21.94
SR 303 INTERCHANGE

OHIO STATE HIGHWAY
TESTING LABORATORY
1620 W. BROAD ST., COLUMBUS 23, OHIO

18
21

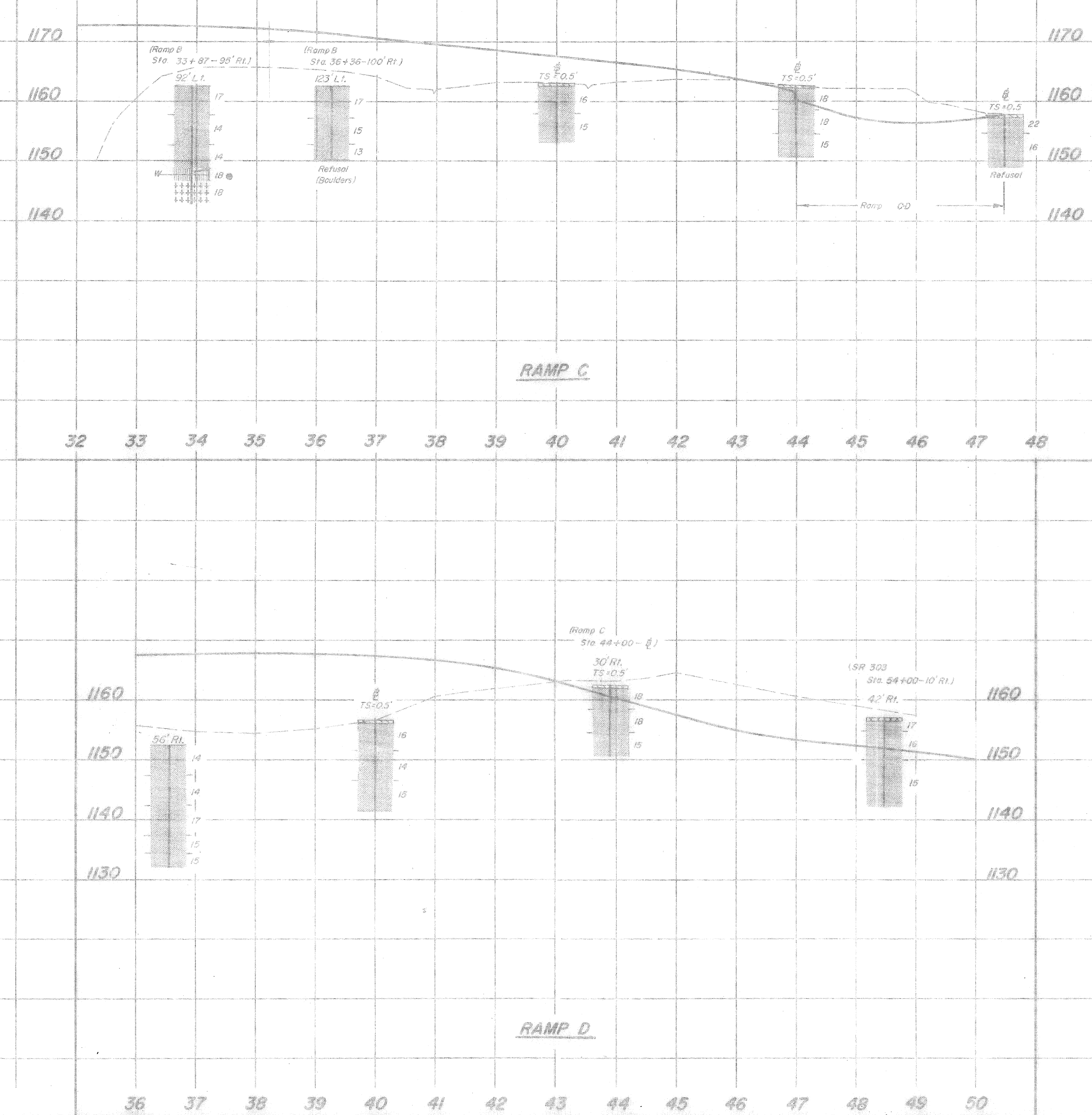
PROFILE INDEX	
PROFILE	SHEET
SR 303	3
Ramp A	4
Ramp A-1	4
Ramp B	4
Ramp B-1	4
Ramp C	5
Ramp D	5

SOIL PROFILE
MEDINA COUNTY
MED-42-21.94
SR 303 INTERCHANGE
OHIO STATE HIGHWAY TESTING LABORATORY
1620 W. BROAD ST., COLUMBUS 23, OHIO

19/21


SOIL PROFILE
MEDINA COUNTY
MED-42-21.94
SR 303 INTERCHANGE
OHIO STATE HIGHWAY
TESTING LABORATORY
1620 W. BROAD ST., COLUMBUS 23, OHIO
20
21
RAMP A
TS = 0.5'
14' Lt.
17 Lt.
Refusal (Hand Auger)
Refusal (Hand auger)
80' Rt.
Sod = 0.6'
RAMP A-1
160' Rt.
RAMP B
95' Rt.
100' Rt.
Refusal (Boulders)
110' Rt.
TS = 0.5'
TS = 0.5'
RAMP B-1
110' Rt.

SOIL PROFILE
MEDINA COUNTY
MED-42-21.94
SR 303 INTERCHANGE
OHIO STATE HIGHWAY
TESTING LABORATORY
1620 W. BROAD ST. COLUMBUS, OHIO

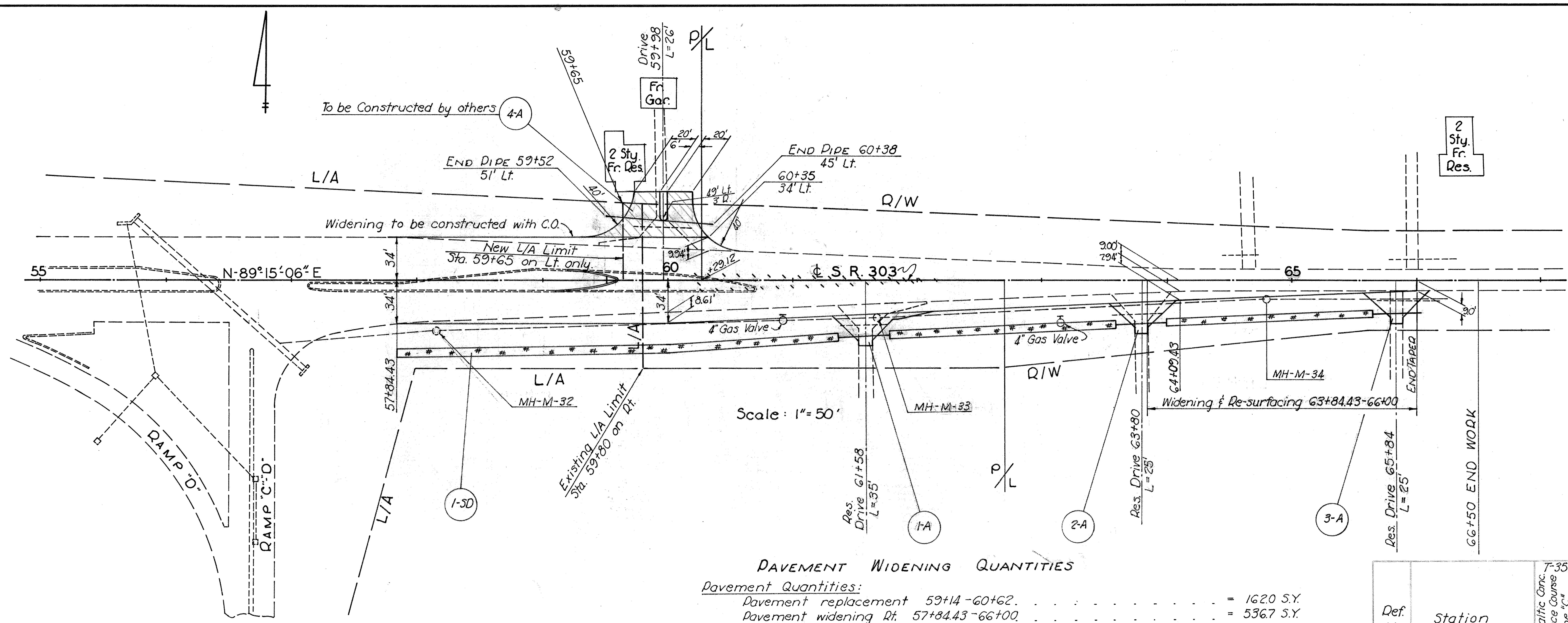


FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

1/2

MED-42-21.94
Project 700 (1962)
Change Order No.

Refer to Sheet No's. 10, 131, 134.



Pavement Widening Quantities

Pavement Quantities:

Pavement replacement 59+14 - 60+62 . . . . = 162.0 S.Y.
Pavement widening Rt. 57+84.43 - 66+00 . . . . = 536.7 S.Y.
Pavement widening Lt. 57+84.43 - 60+52 . . . . = 145.3 S.Y.
Total Area of Pavement Surface . . . . = 844.0 S.Y.

1¼" T-35 Asphaltic Concrete Surface Course, Type "C" (70-85):
[844.0 S.Y. + 215.55' x 18' ÷ 9 (Widening and Resurfacing)] 1.25/36 . . . = 44.27 C.Y.

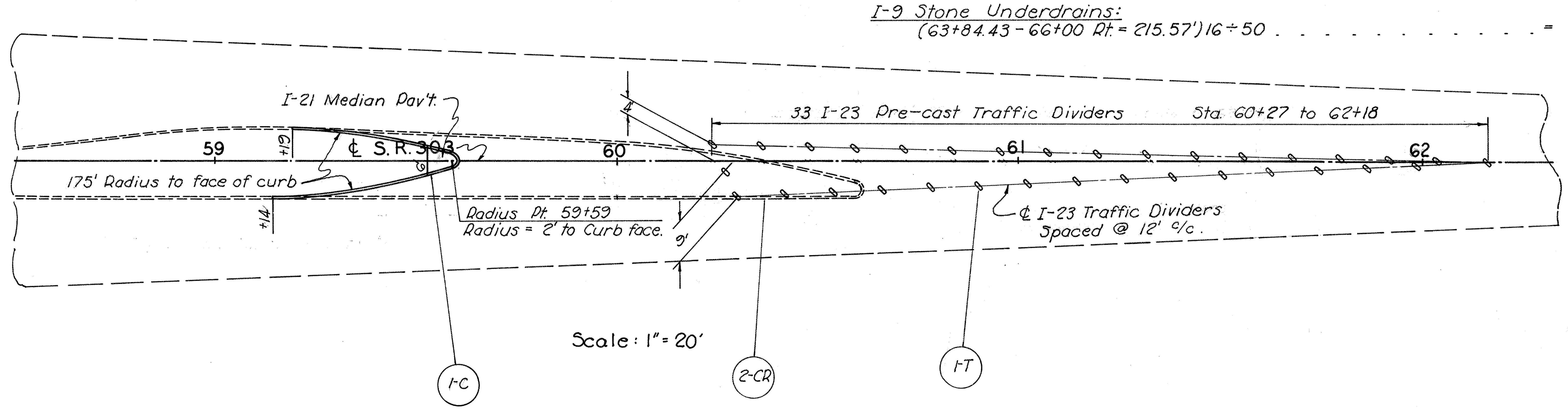
1¼" B-35 Asphaltic Concrete Leveling Course (70-85):
844.0 S.Y. x 1.25/36 . . . . = 29.30 C.Y.

7" B-21 Waterproofed Aggregate Base Course:
[844.0 S.Y. + 190.57 x 7½/12 (Widening and Resurfacing) ÷ 9] 7"/36 . . . = 166.51 C.Y.

6" I-22 Subbase:
[844.0 S.Y. + 190.57 x 13"/12 (Widening and Resurfacing) ÷ 9] 6"/36 . . . = 144.48 C.Y.

E-1 Compacted Subgrade:
844.0 S.Y. . . . . = 844.0 S.Y.

I-9 Stone Underdrains:
(63+84.43 - 66+00 Rt. = 215.57') 16 ÷ 50 . . . . = 64.0 L.F.



Sheet Quantities

Ref. No.	Station	T-35 Asphaltic Conc. Surface Course Type "C" C.Y.	B-19 Aggregate Base Course C.Y.			E-8 Removal & Disposal of Exist. Conc. Curb L.F.		I-1 Pipe Class F-1 L.F.		I-12 Concrete Curb Type 6 L.F.	I-21 Concrete Median Pavement Type 1 S.Y.	I-23 Pre-cast White Portland Cement Conc. Traffic Dividers Each		L-10 Sodding (6' Wide) S.Y.		
		2-1"	5"	8"				12"	15"		4"					
1-A	61+58 L=25'	5.12	12.7						40							
2-A	63+80 L=25'	4.32	10.8					40								
3-A	65+84 L=25'	4.32	10.8					38								
4-A	59+98	(To Be Constructed By Others)														
1-C	59+14 - 59+61									96	11.2					
2-CR	59+14 - 60+62					290										
1-T	60+27 - 62+18											33				
1-SD	57+84.43 - 65+65 Rt.													442		
	Totals:	13.76	34.3			290		78	40	96	11.2	33		442		

* Change Order Quantities

Proj. Ref. No.	Item	Quantities Additions	Quantities Non-Perform	Unit	Description
1	E-1	1304		Cu.Yds.	Roadway Excavation, Method "B", as per plan.
2	E-1	844		Sq.Yds.	Compacted Subgrade.
112	I-1	38		Lin.Ft.	12" Pipe, Class F-1.
138	I-9	64		Lin.Ft.	Stone Underdrain, No. 2, as per plan.
143	L-10	154		Sq.Yds.	Sodding.
149	B-19		6.5	Cu.Yds.	Aggregate Base Course.
150	B-21	167		Cu.Yds.	Waterproofed Aggregate Base Course.
151	B-35	30		Cu.Yds.	Asphaltic Concrete Leveling Course (70-85).
156	T-35	52		Cu.Yds.	Asphaltic Concrete Surface Course (70-85), Type "C".
161	I-12	96		Lin.Ft.	Concrete Curb, Type 6 Standard.
163	I-21		3.0	Sq.Yds.	Portland Cement Concrete Median Pavement, 4" Standard Type I.
165	I-22	145		Cu.Yds.	Subbase.
	I-23	33		Each	Pre-cast White Portland Cement Concrete Traffic Dividers.
	E-8	290		Lin.Ft.	Removal & Disposal of Existing Concrete Curb.

* These Quantities include Sheet and Pavement quantities as listed above minus Plan quantities not yet constructed.

MED-42-21.94

	End Areas Cut	End Areas Fill	Cu. Yards Cut	Cu. Yards Fill
66+50	0	0		
			22	0
Drive 65+84 Lt.			6	0
Ahead	23	0		
Back	25	0		
			94	19
	26	10		
			107	33
Drive 63+80 Lt.			6	0
	32	8		
			109	41
	27	14		
			106	44
Drive 61+58 Rt.			3	0
	30	10		
			126	37
	38	10		
			283	52
	115	18		
			265	85
59+00	28	28		
			74	63
58+00	12	6		
			4	2
57+84	0	0		
			1205	376
E-1 Excav. Median (59+14-60+62)			99	0
Total Earthwork			1304	376

MED-42-21.94
Project 700 (1962)
Change Order No.

2 2

MED-42-21.94

1
3

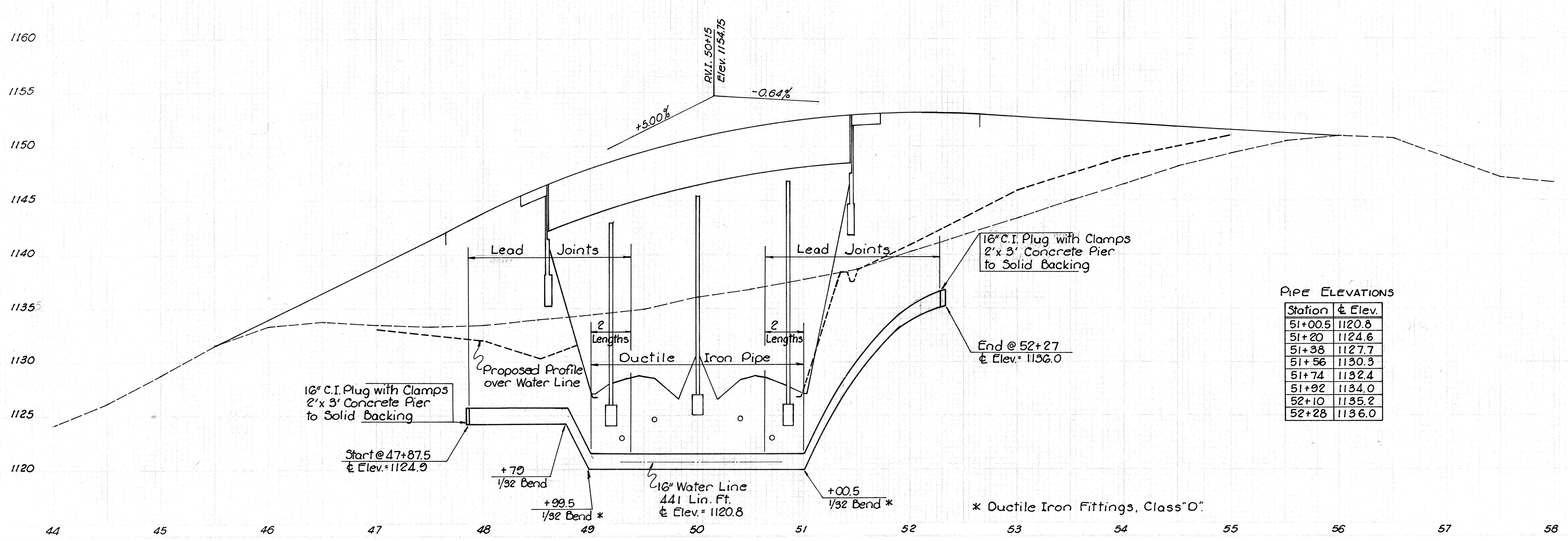
MED-42-21.94

Project No. 700 (62)
Change Order No. 7

Refer to Sheet No's. 120 & 121, 125
129 & 130, 141

For Change Order Quantities
And General Notes
See Sheet 3/3

Sleepy Hollow Rd. C.H. #136



Pipe Elevations

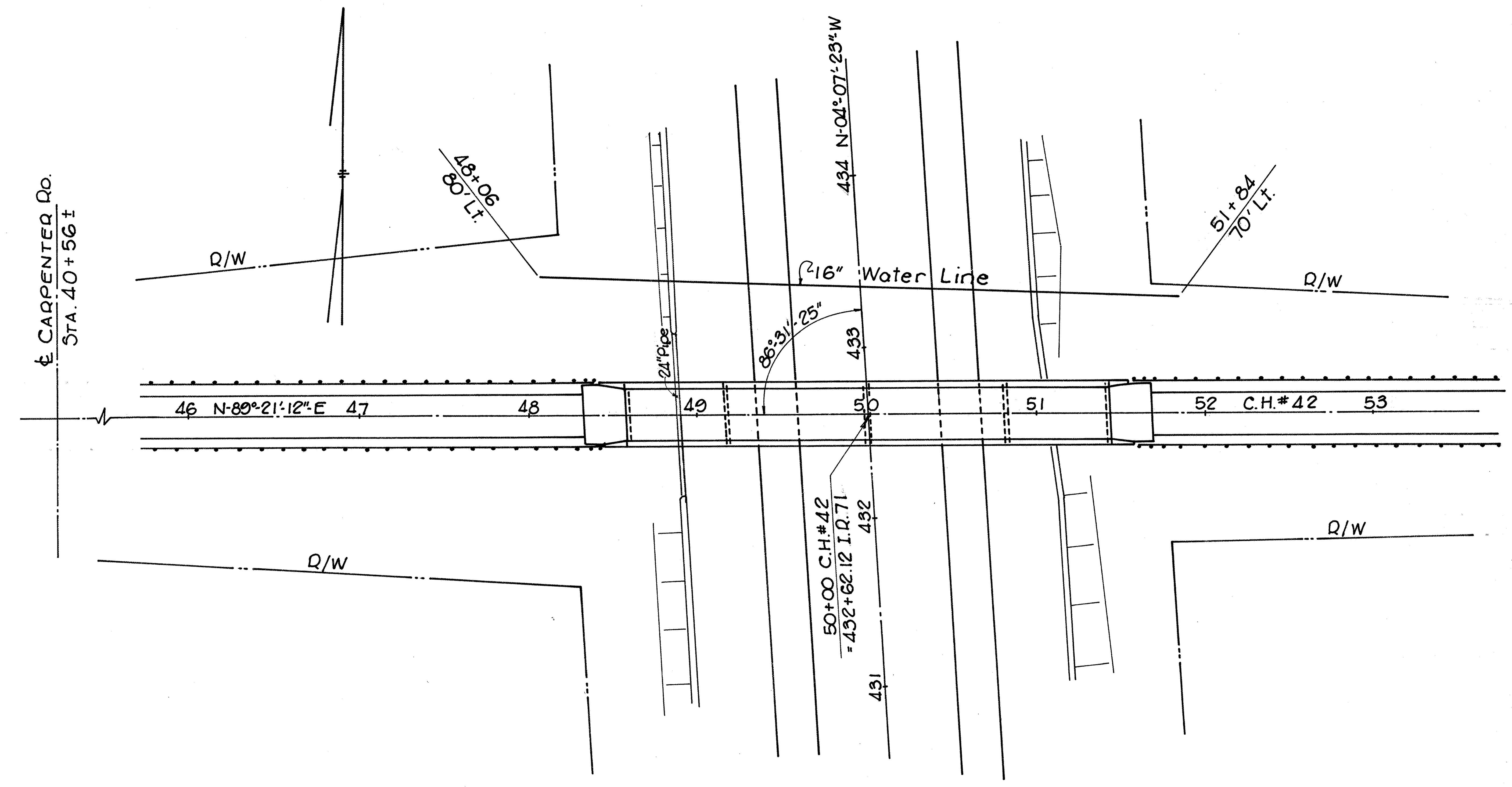
Station	℄ Elev.
51+00.5	1120.8
51+20	1124.6
51+38	1127.7
51+56	1130.3
51+74	1132.4
51+92	1134.0
52+10	1135.2
52+28	1136.0

MED-42-21.94

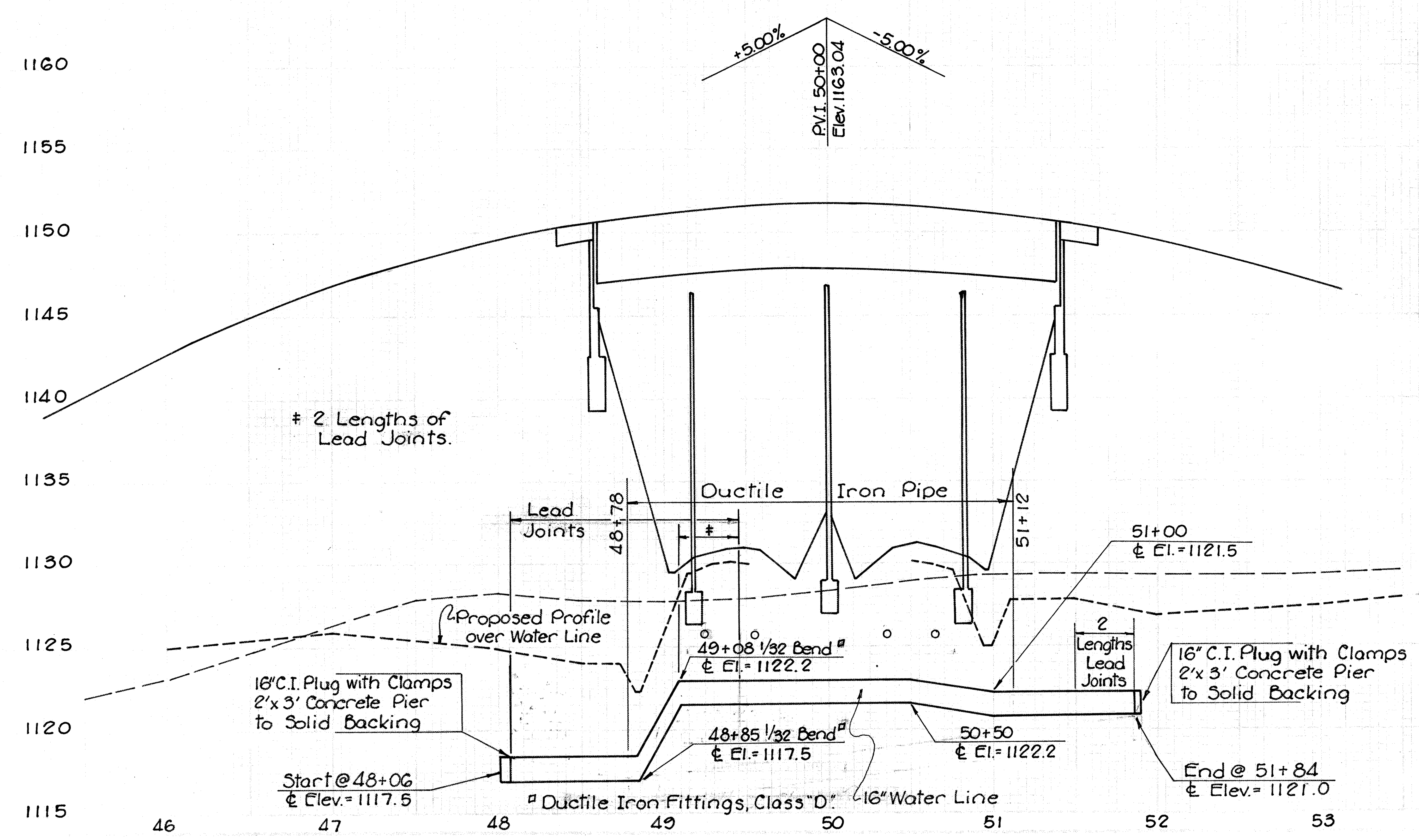
Sleepy Hollow Road. C.H. #136

MED-42-21.94

S.R. 303 & C.H. 138



GRAFTON RD. C.H.#42



REVISED PLAN

	DUCTILE					CAST IRON									
Ref. No	262	263	264	265	265	146	147	266	267	268	268	269			
Unit	Lin. Ft.	Each	Lin. Ft.	Each	Each	Lin. Ft.	Lin. Ft.	Each	Each	Each	Each	Each			
	16" Pipe	16" 1/32 Bend	12" Pipe	12" 1/32 Bend	12" 1/16 Bend	12" Pipe	16" Pipe	16" 1/32 Bend	16" Plug	12" 1/32 Bend	12" 1/16 Bend	12" Plug			
SLEEPY HOLLOW - C.H.#136	200	2					241	1	2						
LAUREL ROAD - C.H.#138			210	1	1	222				1	1	2			
S.R. No. 303							306		2						
GRAFTON ROAD - C.H.#42	227	2					151		2						
TOTAL	427	4	210	1	1	*222	**698	1	6	1	1	2			

NOTE. * Ref. No. 146 610 Lin. Ft. Cast Iron Pipe to be non performed from Original Plan Quantity.
** Ref. No. 147 26 Lin. Ft. Cast Iron Pipe additional required over original Plan Quantity

SPECIFICATIONS

The Standard Specifications for Constructing Water Mains and Appurtenances of the City of Cleveland, Department of Public Utilities, Division of Water and Heat, as of August 1, 1963 will govern the water main construction provided in this change order with the following:

All work will be done under the jurisdiction of the State of Ohio, Department of Highways, with the stipulation that the Cleveland Division of Utilities Engineering must be notified so that they may inspect the installation.(*)

The Contractor shall arrange for and pay all costs involved for shop inspection of all materials furnished, manufacture of all pipe, fittings, etc.; field and shop welds and welding, and furnish to the State and the City of Cleveland copies of all shop, fabrication, manufacture and other related inspection reports of material furnished. This inspection shall be done by a reconized inspection laboratory approved by the City of Cleveland.

All water mains are to be Cast Iron Class 25, Fittings Class "D", except pipe and fittings which are indicated on plans to be Ductile Iron Pipe and Fittings. The Ductile Iron Pipe shall be Class 25 Pipe, Class "D" Fittings.

All pipe and fittings to be Cement Lined.

All fittings to have bell and bell or bell and spigot ends with cast lead joints unless otherwise noted.

All pipe to have bell and spigot ends for cast lead joints or slip-on type joints with compressed rubber ring inserts except as noted for flange ends.

Taps for chlorination to be provided after work is begun. The City of Cleveland, Division of Water, will determine the location of necessary taps.

(*) Notify Mr. Edwin C. Fruits at Tower 1-4600, Extension 813, Cleveland, Ohio at least 72 Hours prior to starting water line construction so that the Cleveland Division of Utilities can arrange for inspection without delay.