G-15

E 11

CONVENTIONAL SIGNS

State Line
County Line
Township Line
Section Line
Center Line
Corporation Line
Fence Line
Guard Rail (existing)
Guard Rail (proposed)
Steam Railroad
Power Poles
Telephone Poles
Trees or Stumps (existing)

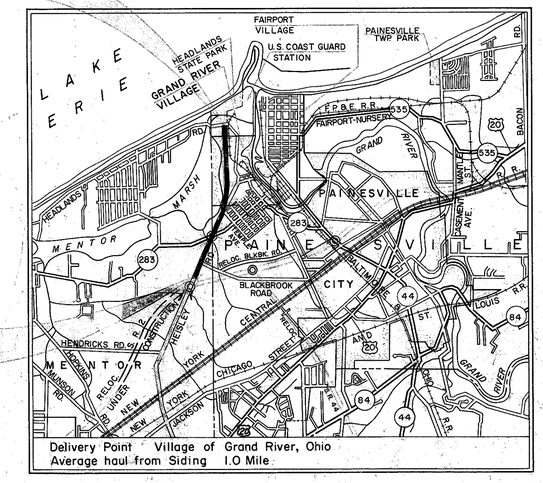
INDEX

TITLE SHEET	1
SCHEMATIC LAYOUT	2
TYPICAL SECTIONS	3-6
MISCELLANEOUS DETAILS	7-12
GENERAL NOTES	13-15
COMPUTATIONS AND SUB-SUMMARY	16
GENERAL SUMMARY	17-19
S. R. 44 PLAN AND PROFILE	20-34
S. R. 44 CROSS SECTIONS	35-99
S. R. 44 INTERSECTION DETAILS, OLIVE ST. AND HEADLANDS ROAD	100
FRONTAGE ROAD LEFT PLAN AND PROFILE	101-103
FRONTAGE ROAD LEFT CROSS SECTIONS	104-109
CONNECTOR PLAN AND PROFILE	103
CONNECTOR CROSS SECTIONS	110
FRONTAGE ROAD RIGHT PLAN AND PROFILE	111-113
FRONTAGE ROAD RIGHT CROSS SECTIONS	114-122
RECONSTR. BLACKBROOK ROAD PLAN AND PROFILE	112
RECONSTR. BLACKBROOK ROAD CROSS SECTIONS	123
RECONSTR. S.R. 283 PLAN AND PROFILE	124-127
RECONSTR. S.R. 283 CROSS SECTIONS	128-137
S. R. 283 INTERCHANGE RAMPS A, A SPUR, B, C AND D PLANS AND PROFILES	138-142
CROSS SECTIONS	143-154
TEMPORARY RUNAROUND	155
GRADING PLAN	156
INTERSECTION DETAILS AND PAVT. ELEVATIONS	157-161
RECONSTR. TEMPLE AVENUE PLAN AND PROFILE	162
RECONSTR. TEMPLE AVENUE CROSS SECTIONS	163-164
RELOC. OLIVE STREET PLAN AND PROFILE	165-166
RELOC. OLIVE STREET CROSS SECTIONS	167-168
RELOC. HEADLANDS ROAD PLAN AND PROFILE	169-170
RELOC. HEADLANDS ROAD CROSS SECTIONS	171-175
EAST AND WEST PARK ROADS AND MORTON SALT CO. ROAD PLAN AND PROFILE	33-34
CROSS SECTIONS	176-178
STRUCTURES 20 FT. SPAN AND UNDER	179-186
TYPE B HEADWALL DETAILS	187
POWER LINE ADJUSTMENT PLAN AND DETAILS	188
STRUCTURES OVER 20 FT. SPAN	189-196
RIGHT OF WAY PLANS	197-212

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
LAK — 44 — 7.22
MENTOR & PAINESVILLE TOWNSHIP
VILLAGE OF GRAND RIVER
LAKE COUNTY

END PROJECT
STA. 164+34.08

BEGIN PROJECT
STA. 36+99.10



Delivery Point Village of Grand River, Ohio
Average haul from Siding 1.0 Mile

LOCATION MAP

SCALE IN MILES

LEGEND

Portion to be improved
Future extension
State Roads
Other Roads
Highway Under Construction
Interchanges

SCALE

Plan ..... 1" = 50'
Profile: Horizontal ..... 1" = 50'
Profile: Vertical ..... 1" = 10'

LINE DATA

BEGIN PROJECT	STA. 36 + 99.10	
END PROJECT	STA. 164 + 34.08	
GROSS LENGTH OF PROJECT	12,734.98 L.F.	
DEDUCT FOR EQUATION	14.96 L.F.	
NET LENGTH OF PROJECT	12,720.02 L.F.	OR 2.409 MILES
ADD FOR APPROACHES (SEE SHEET 14)	4,651.00 L.F.	
TOTAL LENGTH OF WORK	17,371.02 L.F.	OR 3.289 MILES

SUPPLEMENTAL PRINTS OF STANDARD CONSTRUCTION DRAWINGS

B-T-70-71E	11-15-60	I-8 C.B. 2-2-A & B	3-2-59	I-21-23	8-1-56
B-T-71R	3-2-53	I-8 C.B. 2-3 & 2-4	1-26-59	L-1	4-1-50
DR-1	1-3-55	I-8 C.B. NO. 5	7-1-58	L-3	4-1-50
F-1	9-1-59	I-8 C.B. NO. 6	1-26-59	L-3-A	4-1-50
F-2	10-1-58	I-8 I NO. 2-A	4-23-59	L. J. NO. 1	7-1-55
F-3	9-1-59	I-8 M.H. NO. 1	1-26-59	RI-1	7-15-58
G-7.07	6-1-56	I-8 M.H. NO. 1-A	2-16-61		
HW-A & B	7-15-57			SP-53	11-25-58
HW-C	7-15-57	I-12	7-1-54	T-35	1-2-56
HW-E	11-15-60	I-14G	1-22-52	T. J.	9-12-60
I-1	11-15-60	I-15 NO. 1	11-15-60	RB-1-55	2-2-59
		I-15 NO. 2-A	8-17-60	CSB-2-56 SHTS. 1, 2 & 3	2-2-59
		I-15 NO. 6	7-1-59	AR-1-57	12-12-60

SUPPLEMENTAL SPECIFICATIONS

I-124	R. 3-20-61
M-106.6(d)	R. 4-1-58
18	R. 6-15-59

00194

File No.	
	LAKE COUNTY LAK-44-7.22
	Date of Letting 196
	Contract No. .....

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.

APR 7 1965
GROUND PHOTOLAB

FEDERAL RD. DIVISION	STATE	PROJECT	
2	OHIO	S-1183(3)	

1/212

LAKE COUNTY
LAK-44-7.22

1961 SPECIFICATIONS

S-1183(3)

County of Lake
Board of County Commissioners

Approved 2-13-61 Date — Roger E. Short — Chairman of Board

Approved 13 Feb 61 Date — John D. Haddon — Member of Board

Approved 13 Feb 61 Date — J. William Stanton — Member of Board

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 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 of the highway to traffic and that provisions for the maintenance and safety of traffic will be as set forth on the plans and estimates.

Approved — Date 3/14/61 — A. E. Dorman — Division Deputy Director - Acting

Approved — Date 5-4-61 — Engineer of Bridges

Approved — Date 5-8-61 — Engineer of Location and Design

Approved — Date 5-8-61 — C. W. McCaughey — Deputy Director of Design and Construction

Approved — Date 4-19-61 — Deputy Director of Right of Way

See attached note 4-BV-7 5-3-61

Approved — Date 5-25-61 — Deputy Director of Planning and Programming

Approved — Date 5-25-61 — First Assistant Director

Approved — Date 5-25-61 — Director of Highways

Prepared and Recommended By
Capitol Engineering Associates
Consulting Engineers, Dillsburg, Pa.
Partner

STATE OF PA — ROBERT E. SMITH — REGISTERED PROFESSIONAL ENGINEER

APR 7 1965
GROUND PHOTOLAB

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

APPROVED

DIVISION ENGINEER — DATE

SCHEMATIC LAYOUT PLAN

FED. RD. DIVISION	STATE	PROJECT		2 / 212
2	OHIO			

LAKE COUNTY
LAK-44-7.22

NOTE: Marker to be furnished and erected on the right by the State of Ohio before acceptance of this project.

BEGIN PROJECT
STA. 36+99.10

S - 1183 - 3

8080 | 4065 | 2000 | 5000 | S.R. 44 | 735 | 0

ADT 1979

N

END WORK STA. 161+75

BEGIN WORK STA. 21+80

PARTIAL BARRICADE

PERMANENT BARRICADE

CONNECTOR

FRONTAGE ROAD, LEFT

STRUCT. NO. LAK-44-0745

RAMP A

RAMP A SPUR

RAMP B

RAMP C

RAMP D

STRUCT. NO. LAK-44-0795

STRUCT. NO. LAK-44-0826

STRUCT. NO. LAK-44-0791

MENTOR TWP.
PAINESVILLE TWP.

GRAND RIVER
PAINESVILLE VILLAGE TWP.

Township Dump Area

C.E.I. Co.

ERECT TEMPORARY BARRICADE AT JACKSON STREET

245 FRONTAGE ROAD, RIGHT

END WORK STA. 3+50

CURVE DATA
P.I. Sta. 113 + 19.40
Δ = 28° 57' 53" Lt.
Δ_c = 23° 57' 53"
D = 2° 00' 00"
R = 2864.79'
L_c = 1198.23'
T_s = 865.17'
Θ_s = 2° 30'
L_s = 250.00'

Match Line

T.S. Sta. 104+54.23

S.C. Sta. 107+04.23

Blackbrook Road

S.T. Sta. 121+52.46 Bk. =
Sta. 121 + 67.42 Ah.

C.S. Sta. 119+02.46

STRUCT. NO. LAK-44-0867

STRUCT. NO. LAK-44-0903

STRUCT. NO. LAK-44-0931

PERMANENT BARRICADE

Heisley Road

Olive Street

TEMPORARY BARRICADE

END WORK STA. 9+60

Williams Road

℄ TEMPORARY RUNAROUND

PARTIAL BARRICADE

S.R. 283

END WORK STA. 42+00

GRAND RIVER VILLAGE
PAINESVILLE TWP.

ACCESS ROAD

BEGIN WORK STA. 46+00

Headlands Road

Headlands State Park

New York Central R. R.

END WORK STA. 55+50

CURVE DATA
P.I. Sta. 160 + 50.47
Δ = 7° 50' 26" Rt.
D = 1° 15'
R = 4583.66
L = 627.24
T = 314.11
P.C. Sta. 157 + 36.36
P.T. Sta. 163 + 63.60

END PROJECT
STA. 164+34.08

S - 1183 - 3

NOTE: Marker to be furnished and erected on the **left** by the State of Ohio before acceptance of this project.

Scale: 1" = 200

LIGHTS, SIGNS, AND BARRICADES

The Contractor Shall in addition to the general requirements of Sec. G-7.07 on this project perform the following:

(a) Provide, erect, and maintain movable gates on intersecting roads closed to traffic at all points where local traffic movement terminates.

(b) Provide, erect, and maintain lights, signs, and barricades at the work limits on all intersecting roads which remain open to traffic.

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

1. Heisley Rd. just North of Jackson St.
2. Temple Ave. just North of S.R. 283
3. Olive St. just West of Williams Rd.

Lights, barricades, and danger and warning signs shall be provided at locations shown above in accordance with Sec. 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, light, signs, and sign supports shall be included in the lump sum price for "Maintaining Traffic."

TYPICAL SECTIONS

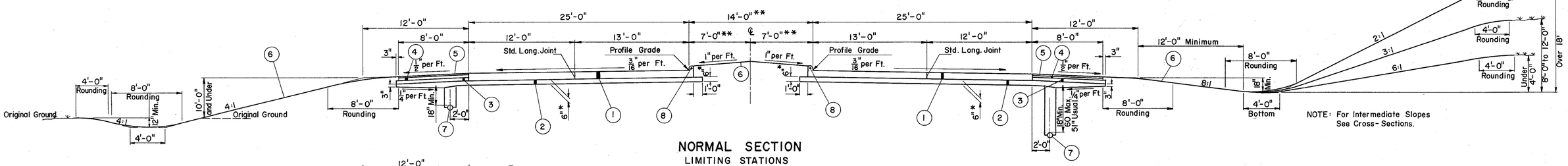
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

3
212

LAKE COUNTY
LAK-44-7.22

TYPE T-71

SCALE $\frac{3}{16}$" = 1'-0"



NOTE: For Intermediate Slopes See Cross-Sections.

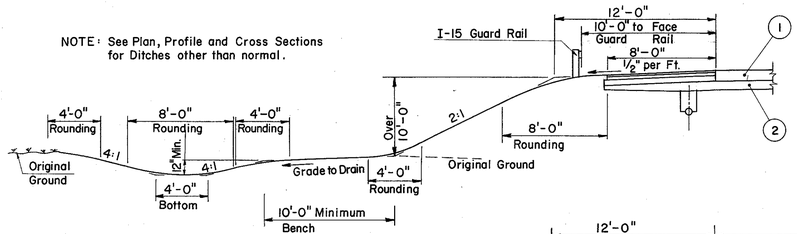
NORMAL SECTION

LIMITING STATIONS

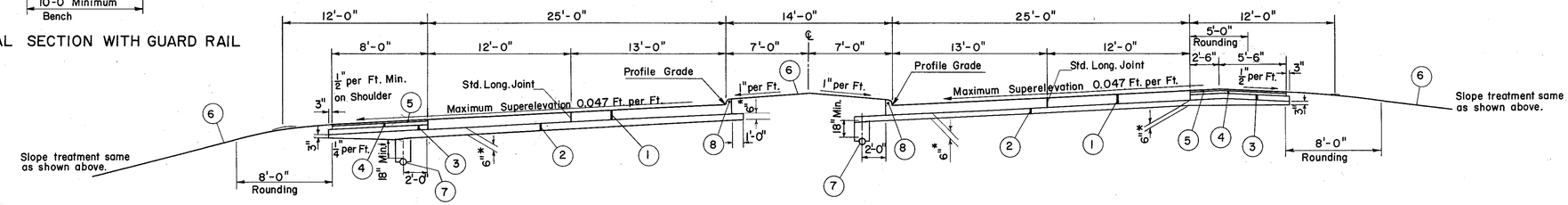
STA. 36+99.10 TO STA. 102+98.23
STA. 123+08.46 TO STA. 157+50

** Width Variable Sta. 154+22.71 thru. Sta. 157+50

NOTE: See Plan, Profile and Cross Sections for Ditches other than normal.



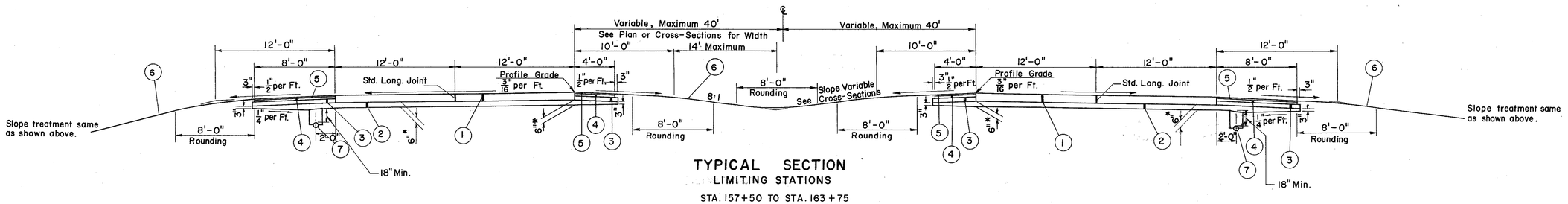
NORMAL SECTION WITH GUARD RAIL



SUPERELEVATED SECTION

LIMITING STATIONS

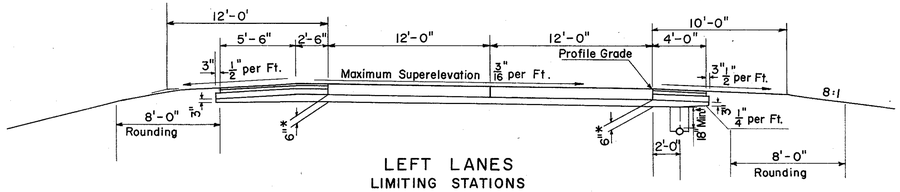
STA. 102+98.23 TO STA. 123+08.46



TYPICAL SECTION

LIMITING STATIONS

STA. 157+50 TO STA. 163+75
Except Left Lanes Shown Below



LEFT LANES

LIMITING STATIONS

STA. 159+63 TO STA. 163+75

* 18" Subbase Thickness
Approximate Sta. 93+50 to Sta. 95+00
Approximate Sta. 101+00 to Sta. 103+50
Approximate Sta. 162+00 to Sta. 165+00
Frost-Susceptible Silt is anticipated thru these Areas.

† Thickness shown is "designed" thickness as described in Section B-21.01

LEGEND

(1)	T-71	9" Reinforced Portland Cement Concrete Pavement.
(2)	I-22	Variable depth Subbase Grading A or B as per plan.
(3)	I-18	5" Stabilized Crushed Aggregate
(4)	B-21	3" Waterproofed Aggregate Base Course †
(5)	T-31	Bituminous Surface Treatment (See Proposal Note)
(6)	L-9	Seeding and Protecting
(7)	I-1	6" Pipe Class I-3
(8)	I-12	Concrete Curb, Std. Type 2-A

TYPICAL SECTIONS

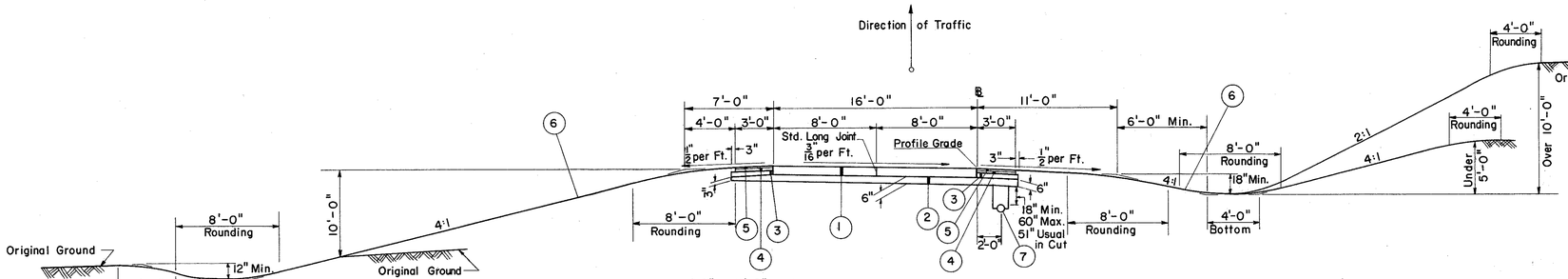
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

4
212

LAKE COUNTY
LAK-44-7.22

TYPE T-71

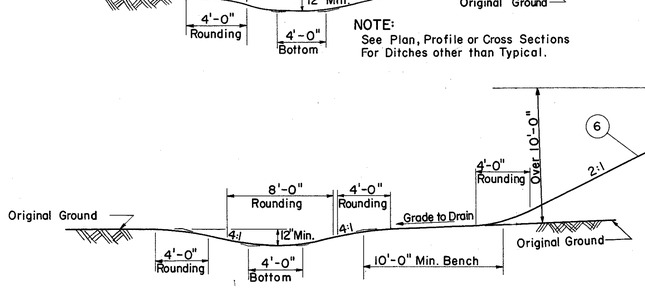
SCALE: $\frac{3}{16}$" = 1'-0"



NORMAL RAMP SECTION

NOTE:
See Plan, Profile or Cross Sections For Ditches other than Typical.

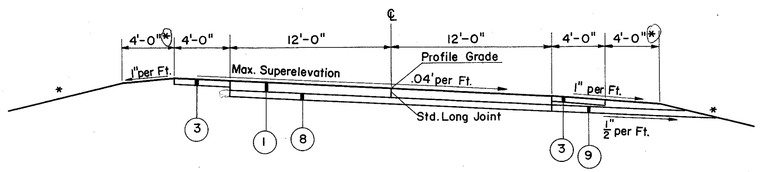
NOTE:
For Intermediate Slope See Cross Sections



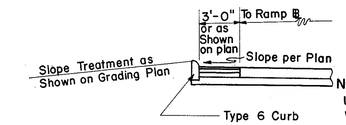
NORMAL SECTION WITH GUARD RAIL

HEADLANDS ROAD
Sta. 46+50 To Sta. 47+02.76
Sta. 54+46 To Sta. 50+00

*NOTE:
See Standard Construction Drawing No. RI-1 Roadway Items, for normal Slope, guard rail and ditch design. Also see Cross Sections for ditches.

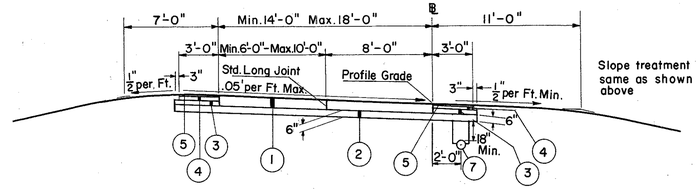


HEADLANDS ROAD
Superelevated Section
Sta. 47+02.76 To Sta. 54+46



DETAIL OF CURB
When Called For on Plan

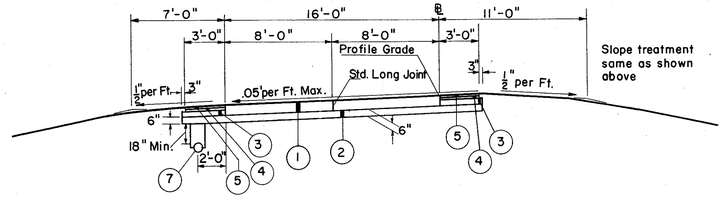
NOTE:
Underdrain to be used when on low side.



SUPERELEVATED RAMP SECTION

Slope treatment same as shown above

Direction of Traffic



SUPERELEVATED RAMP SECTION

Slope treatment same as shown above

LEGEND

(1) Item T-71 9" Reinforced Portland Cement Concrete Pavement
(2) Item I-22 Variable depth Subbase, Grading A or B as per plan
(3) Item I-18 5" Stabilized Crushed Aggregate Shoulders & Approaches (See Note)**
(4) Item B-21. 3" Waterproofed Base Course ≠
(5) Item T-31 Bituminous Surface Treatment (See proposal note)
(6) Item L-9 Seeding & Protecting
(7) Item I-1 6" Pipe Class I-3
(8) Item I-22 6" Subbase Grading A or B as per plan (Unless Otherwise Shown)
(9) Item I-9 Stone Underdrain No. 2 (See general notes for Spacing)

**NOTE:
See note in proposal for additional Stabilization with Calcium Chloride on Headlands Road Shoulders.

≠ Thickness shown is "designed" thickness as described in Section B-21.01

HEADLANDS ROAD & RAMP TYPICAL SECTIONS

TYPICAL SECTIONS

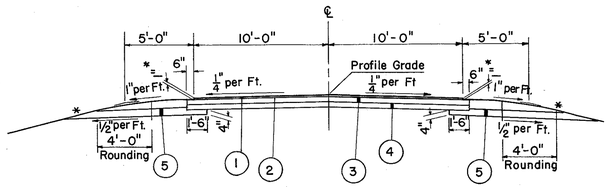
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

5/212

LAKE COUNTY
LAK-44-7.22

TYPE T-32 & T-35 on B-19

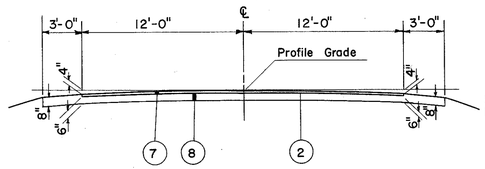
SCALE: $\frac{3}{16}$" = 1'-0"



FRONTAGE ROADS

FRONTAGE ROAD LT. STA. 139+95.39 TO STA. 161+50
FRONTAGE ROAD RT. STA. 242+86.60 TO STA. 267+35
FRONTAGE ROAD CONNECTOR STA. 0+80 TO STA. 2+30

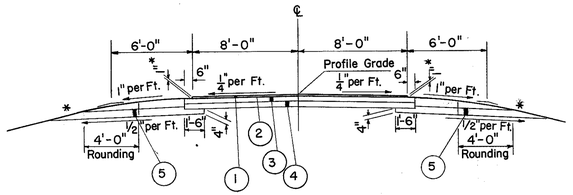
FOR SLOPE AND PAVEMENT TREATMENT AT CUL-DE-SAC LOOPS, SEE SHEET 101



See Cross Sections For Slope & Ditch Treatment

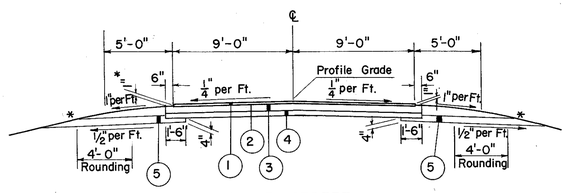
MORTON SALT CO. ROAD

STA. 0+57.90 TO STA. 1+00



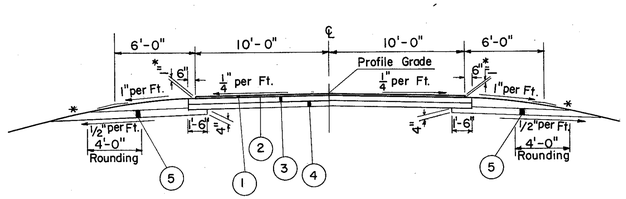
TEMPLE AVENUE

STA. 1+10 TO STA. 4+00



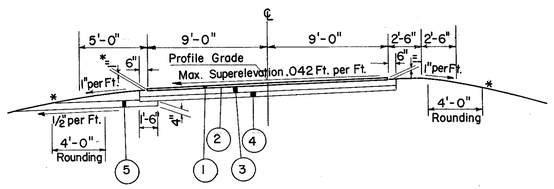
OLIVE STREET

STA. 0+32 TO STA. 1+83
STA. 6+34 TO STA. 9+61



BLACKBROOK ROAD

STA. 0+80 TO STA. 3+50

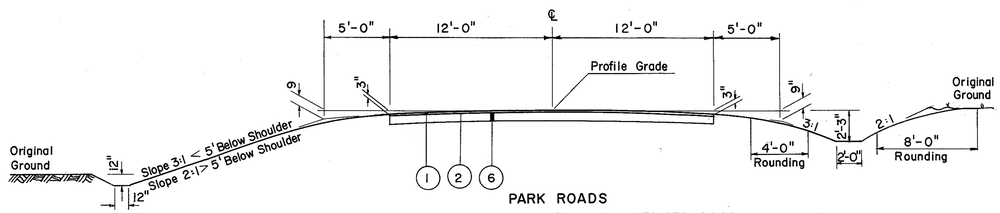


OLIVE STREET SUPERELEVATED SECTION

STA. 1+83 TO STA. 6+34

*NOTE:
See Standard Construction Drawing No. RI-1, Roadway Items, for Normal Slope, Guard Rail and Ditch Design. Also see Cross-Section for ditches.

\# Thickness shown is "designed" thickness as described in Section T-35.01



PARK ROADS

WEST PARK ROAD STA. 10+46.47 TO STA. 12+00
EAST PARK ROAD STA. 10+61.03 TO STA. 11+50

LEGEND

(1)	T-32	Bituminous Road Mix, Method B or C, using 0.056 C.Y. No. 46 Aggregate per S.Y. and 1.1 Gal. Sec. M-5.2, RC-2 or RC-3 or Sec. M-5.7, RT 8 or RT 9 or Sec. M-5.3, MC-4-5 per S.Y. Bituminous Choke & Seal Coat using 0.004 C.Y. No. 6 Aggregate per S.Y. for choke, 0.008 C.Y. No. 6 Aggregate per S.Y. for Seal Coat and 0.25 Gal. Sec. M-5.7, RT 9 or RT 10 or Sec. M-5.2, RC-3 or RC-4, or Sec. M-5.3, MC-4-5 per S.Y. for Seal.
(2)	T-30	Bituminous Prime Coat Sec. M-5.7, RT 2 or RT 3 applied at rate of 0.4 Gal per S.Y.
(3)	B-19	5" Aggregate Base Course.
(4)	I-22	4" Subbase.
(5)	I-9	Stone Underdrain, No. 2 (See General Notes for spacing).
(6)	B-19	8" Aggregate Base Course
(7)	T-35	$2\frac{1}{2}$" Asphaltic Concrete Surface Course, Type C (70-85). (2 Courses) #
(8)	B-19	Variable depth Aggregate Base Course.

TEMPLE AVENUE, FRONTAGE ROADS, BLACKBROOK RD., PARK ROADS, OLIVE ST. & MORTON SALT CO. ROAD- TYPICAL SECTIONS

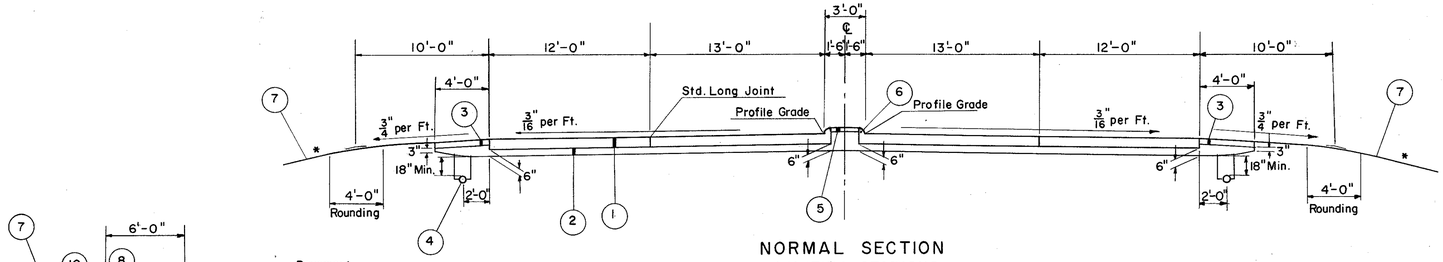
TYPICAL SECTIONS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

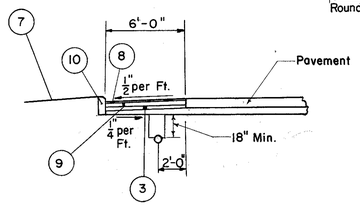
6
212

LAKE COUNTY
LAK-44-7.22

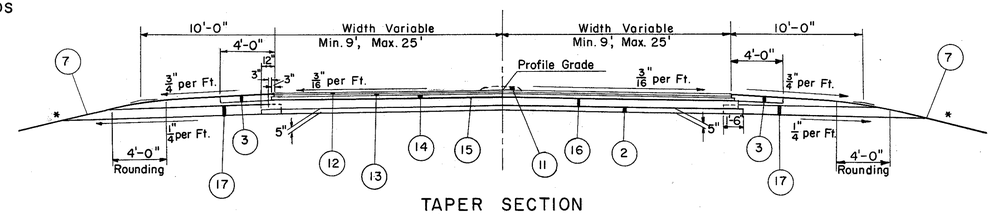
SCALE: $\frac{3}{16}$" = 1'-0"



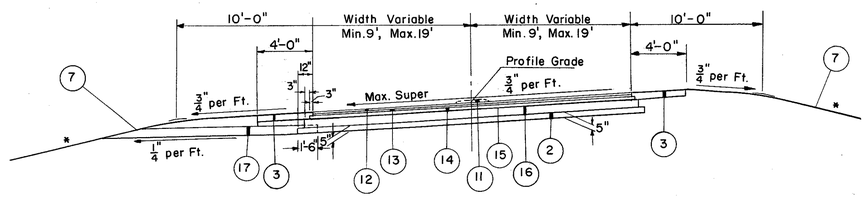
NORMAL SECTION
LIMITING STATIONS
STA. 27+39.61 TO STA. 34+02.81



PAVED SHOULDER ADJACENT TO CURBED ISLANDS



TAPER SECTION
LIMITING STATIONS
STA. 23+39.22 TO STA. 27+39.61
STA. 34+02.81 TO STA. 35+75



SUPERELEVATED SECTION
LIMITING STATIONS
STA. 35+75 TO STA. 40+50

* NOTE: See Standard Construction Drawing No. RI-1, Roadway Items for Normal Slope, Guard Rail and Ditch Design. Also See Cross Sections for Ditches.

† *Thicknesses shown are "designed" thicknesses as described in Section T-35.01, B-35.01 and B-21.01*

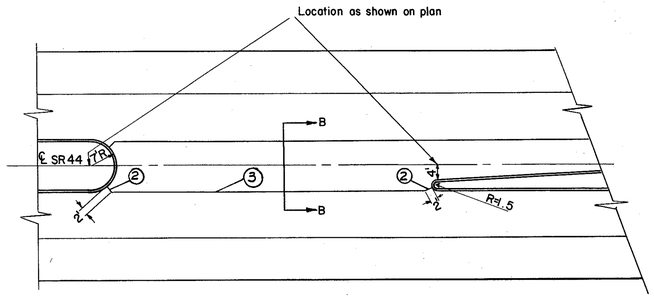
LEGEND

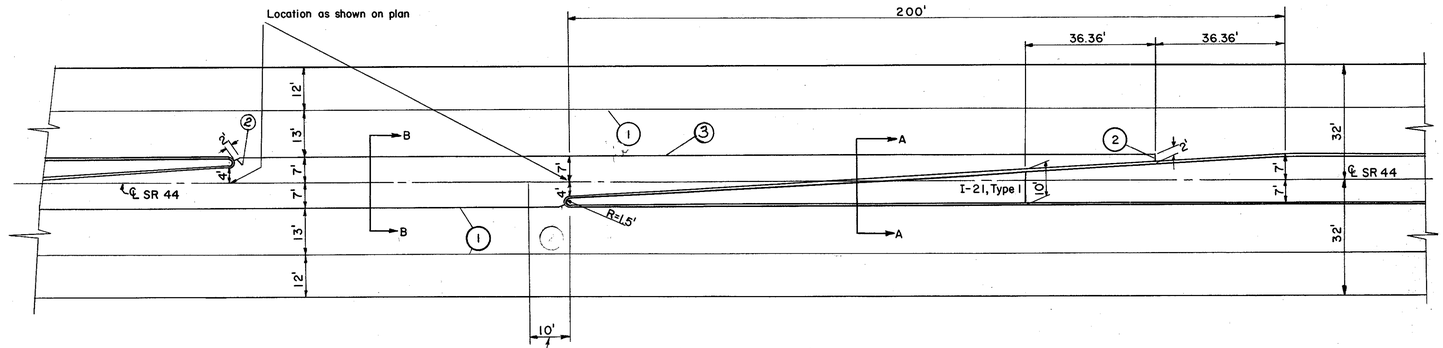
1. T-71 9" Reinforced Portland Cement Concrete Pavement
2. I-22 Variable Depth Subbase, Grading A or B as per Plan.
3. I-18 5" Stabilized Crushed Aggregate. (See note in proposal for additional Stabilization with Calcium Chloride.)
4. I-1 6" Pipe Class I-3
5. I-21 Portland Cement Concrete Median or Traffic Island Pavement, Type 1
6. I-12 Concrete Curb, Std. Type 2-A
7. L-9 Seeding and Protecting.
8. T-31 Bituminous Surface Treatment. (See note in proposal)
9. B-21 3" Waterproofed Aggregate Base Course. †
10. I-12 Concrete Curb, Std. Type 6.
11. I-23 Precast White Portland Cement Concrete Traffic Dividers. 12'-0" C.C.
12. T-35 1 1/4" Asphaltic Concrete Surface Course, Type C (70-85) †
13. B-35 1 3/4" Asphaltic Concrete Leveling Course (70-85) †
14. B-35 2 3/4" Asphaltic Concrete Base Course (70-85) †
15. T-30 Bituminous Prime Coat. Sec. M-5.7, Rt.-2 or Rt-3 Applied at the Rate of 0.40 gal. per Sq. Yd.
16. B-19 8" Aggregate Base Couse.
17. I-9 Stone Underdrain (No.2) Staggered at 50' Intervals (See General Note)

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

7
212

LAKE COUNTY
LAK-44-7.22



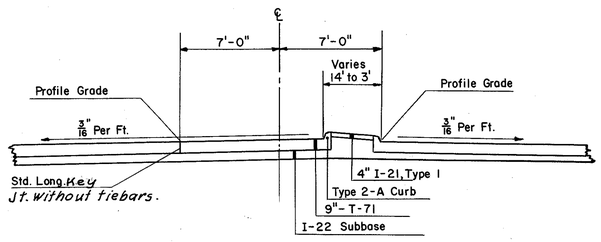


JOINT LEGEND

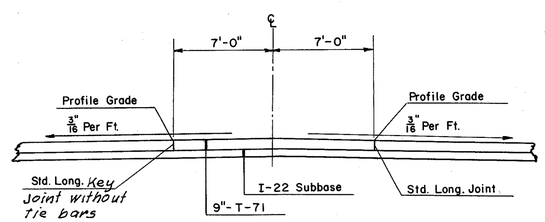
(1) Standard Longitudinal Joint

(2) Expansion Joint Without Dowels

(3) Standard longitudinal key joint without tie bars



SECTION "A-A" *

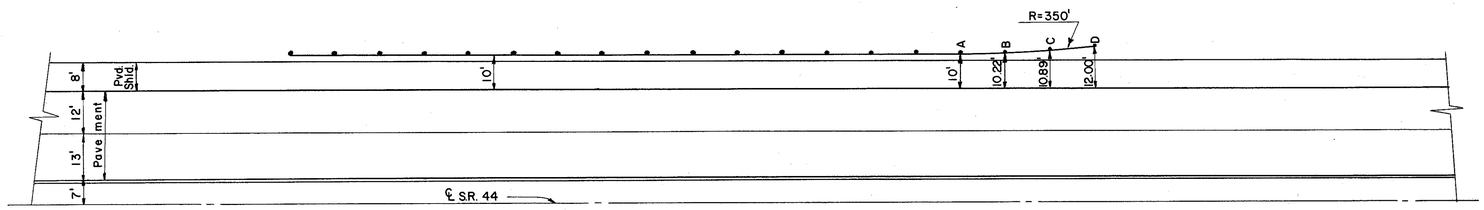


SECTION "B-B" *

* NOTE: These sections not applicable to median opening in superelevated section. See Sheet 100

DETAILS OF MEDIAN OPENINGS

DETAIL OF GUARD RAIL FLARE



Edge of pavement to face of rail.

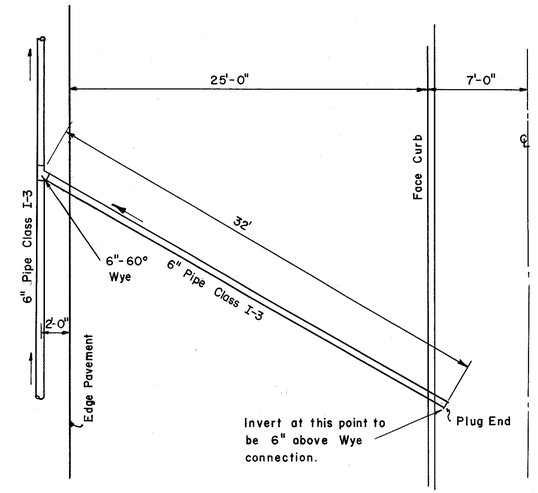
Post	Offset
A	10'
B	10.22'
C	10.89'
D	12.00'

MISCELLANEOUS DETAILS

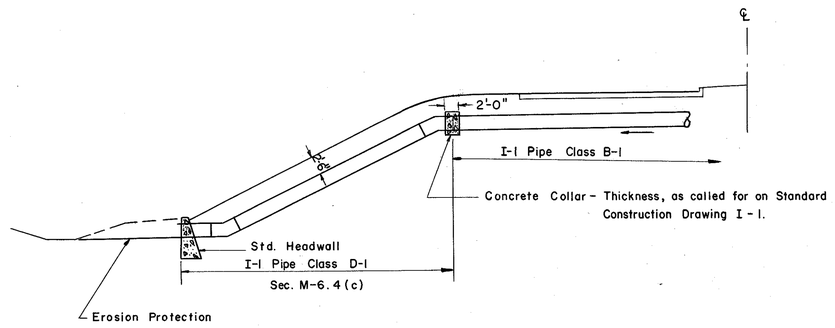
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

8
212

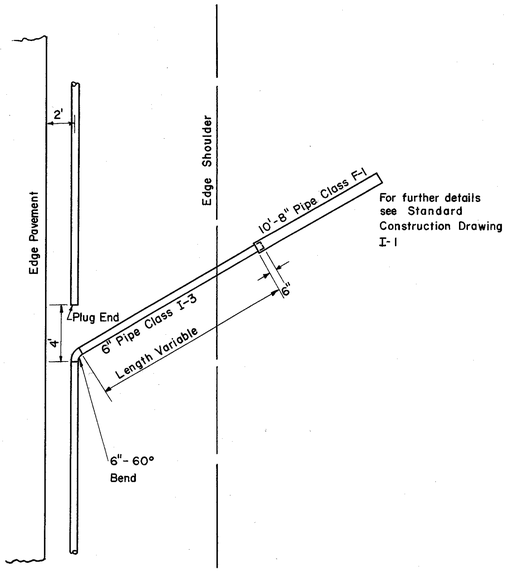
LAKE COUNTY
LAK-44-7.22



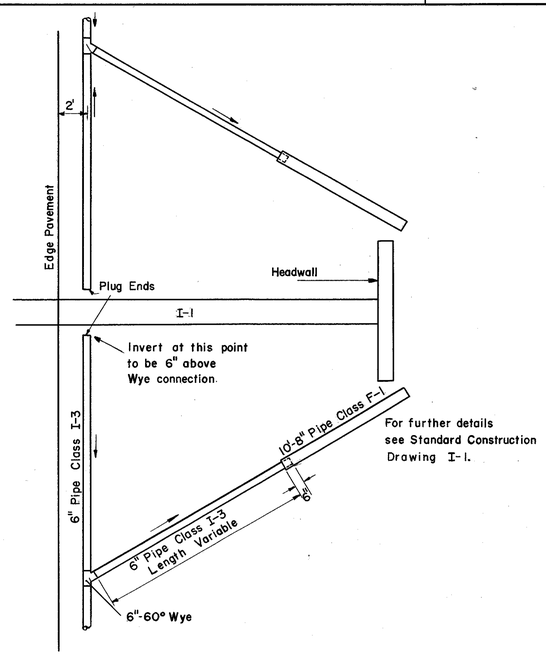
DETAIL OF TRANSVERSE DRAIN AT CUT TO FILL SECTION



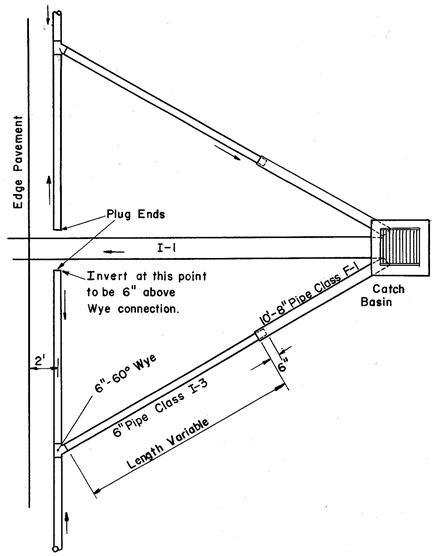
DETAIL STORM SEWER OUTLET IN HIGH FILL



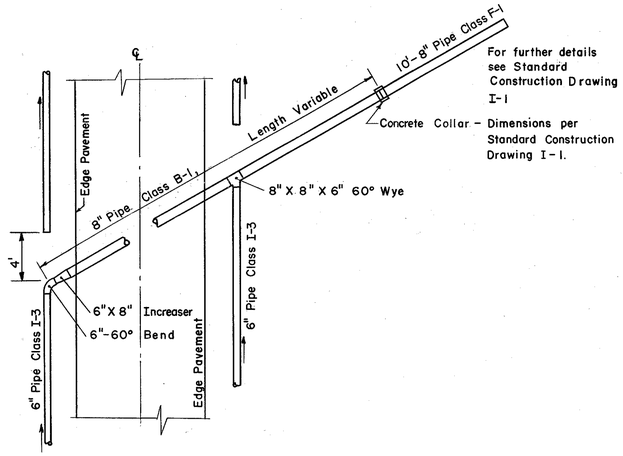
UNDERDRAIN OUTLET DETAIL A



UNDERDRAIN OUTLET DETAIL B

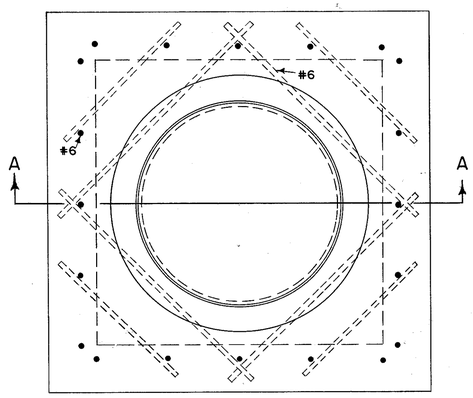


UNDERDRAIN OUTLET DETAIL C

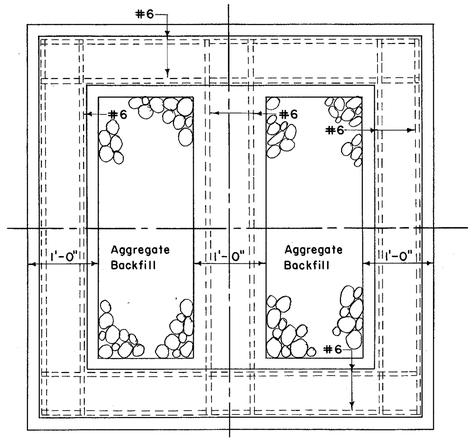


OUTLET DETAIL D

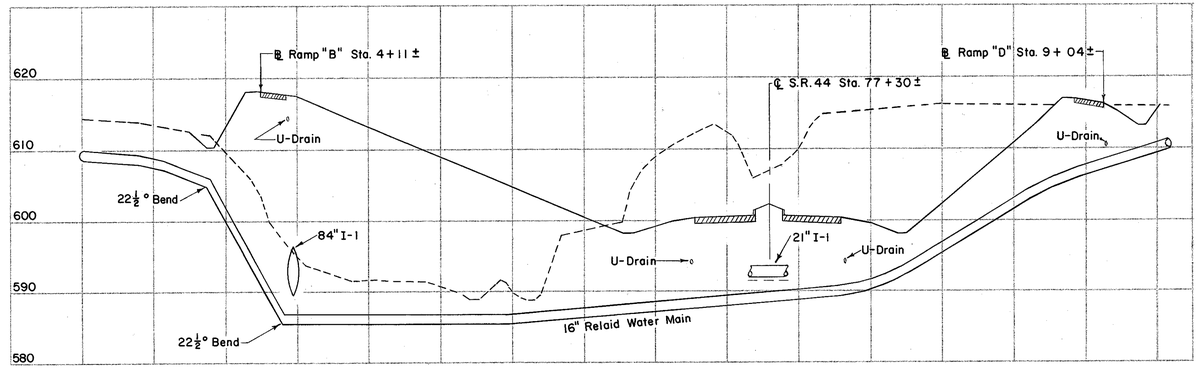
MISCELLANEOUS DETAILS



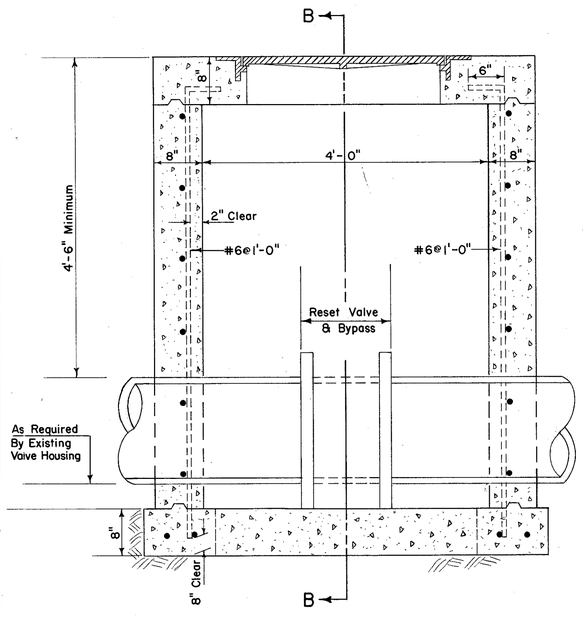
PLAN



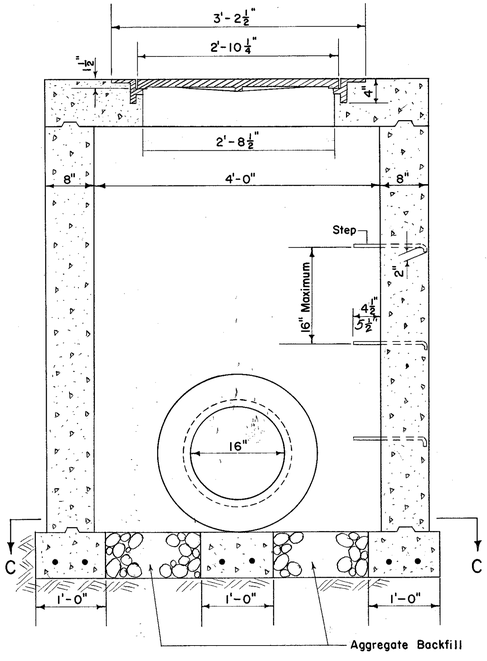
SECTION C-C



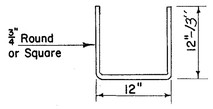
PROFILE OF 16" RELAID WATER MAIN THROUGH INTERCHANGE AREA



SECTION A-A



SECTION B-B



STEP DETAIL

NOTE:

Castings shall meet the requirements of Item I-8. The design shall be essentially the same, and equally as strong as the one shown hereon, and shall be given one coat of paint as per specifications.

Minimum weight 295 lbs.

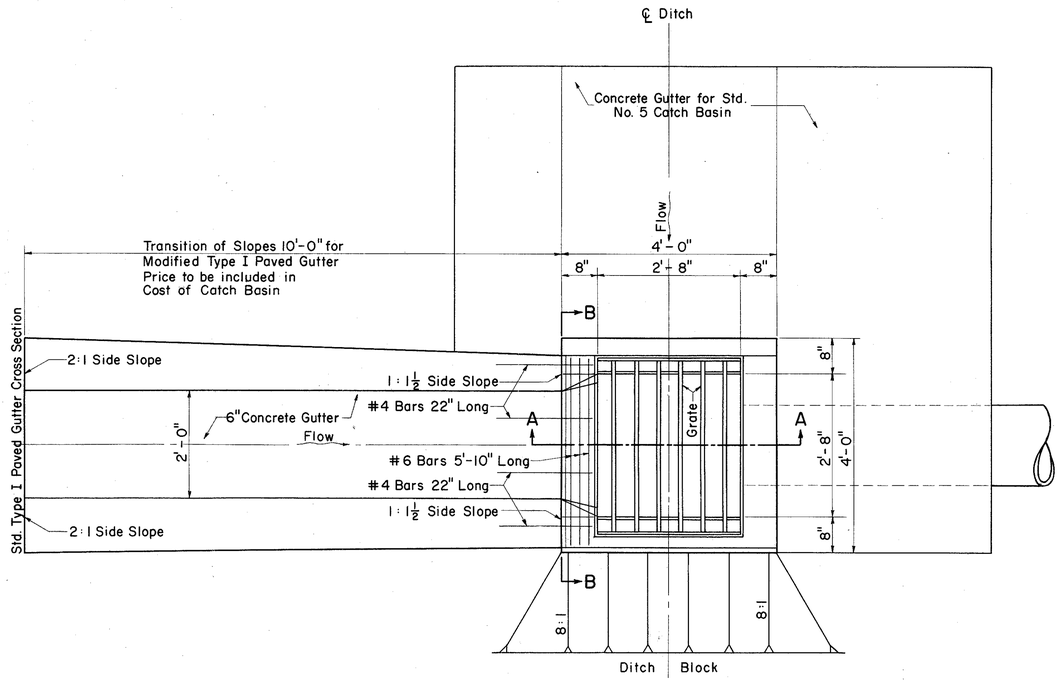
Top of valve chamber & casting to conform to the finished pavement or shoulder grade.

All reinforcing steel shall have a minimum cover of 2" unless shown otherwise.

Aggregate Backfill shall meet the requirements of Specifications M-3, No. 2.

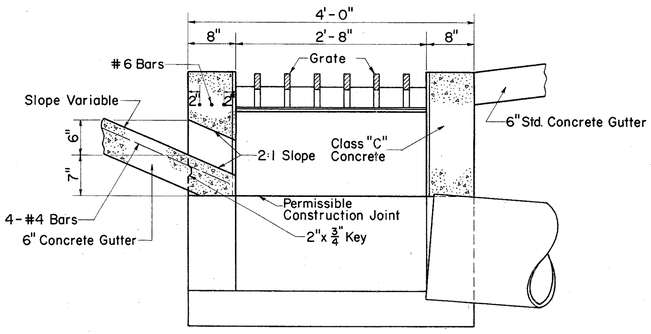
VALVE CHAMBER FOR 16" WATER VALVE

MISCELLANEOUS DETAILS

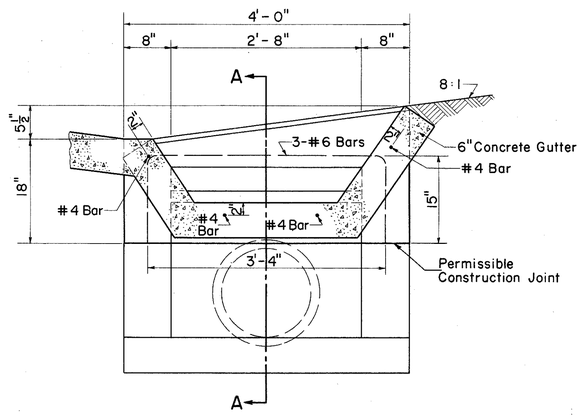


PLAN

NOTE:
Unless otherwise shown, Details and Notes shall conform to STANDARD DRAWING NO. I-8 C.B. No. 5.

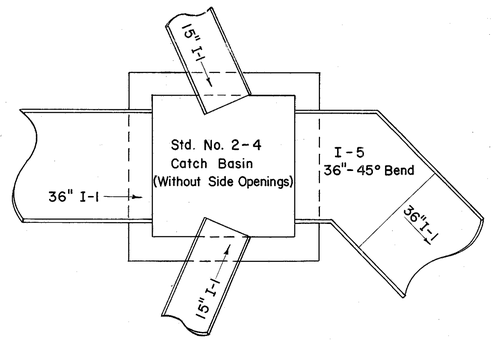


SECTION A-A

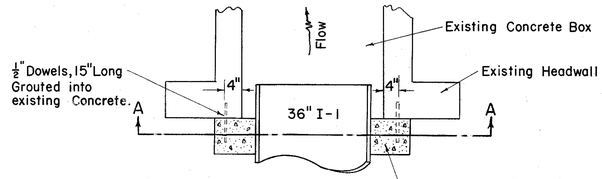


SECTION B-B

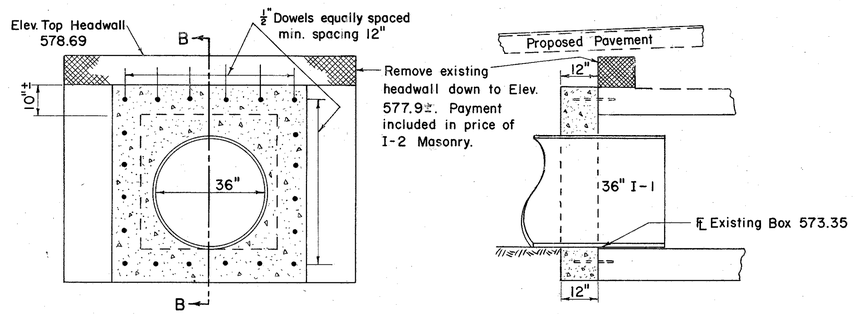
DETAIL OF SOD STRIP ALONG PAVED GUTTER



DETAIL OF CONNECTIONS AT STD. NO. 2-4 C.B.
69 LT. STA. 51+00 HEADLANDS ROAD RELOC.



PLAN



SECTION A-A

SECTION B-B

DETAIL OF 36" I-1 PIPE CONNECTION TO EXISTING CONCRETE BOX CULVERT AT STATION 0+90 RECONSTR. MORTON SALT COMPANY ROAD

MODIFIED STANDARD NO. 5 CATCH BASIN
WITH MODIFIED TYPE I PAVED GUTTER

MISCELLANEOUS DETAILS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

10
212

LAKE COUNTY
LAK-44-7.22

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

11
212

LAKE COUNTY
LAK-44-7.22

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 and alternated in rows four feet apart.

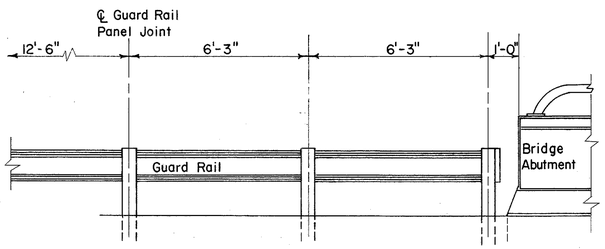
Stakes shall be 1" x 1" x 8" wood stakes and shall be perpendicular to the ground and flush with the finished grade.

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

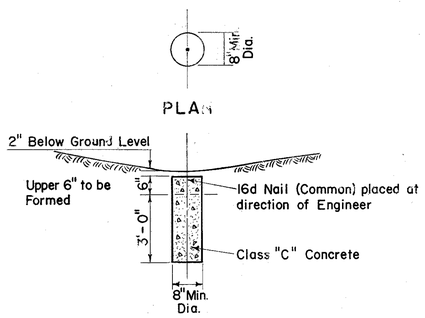
Each strand of fencing shall be fastened together at twelve inch intervals by means of hog rings.

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

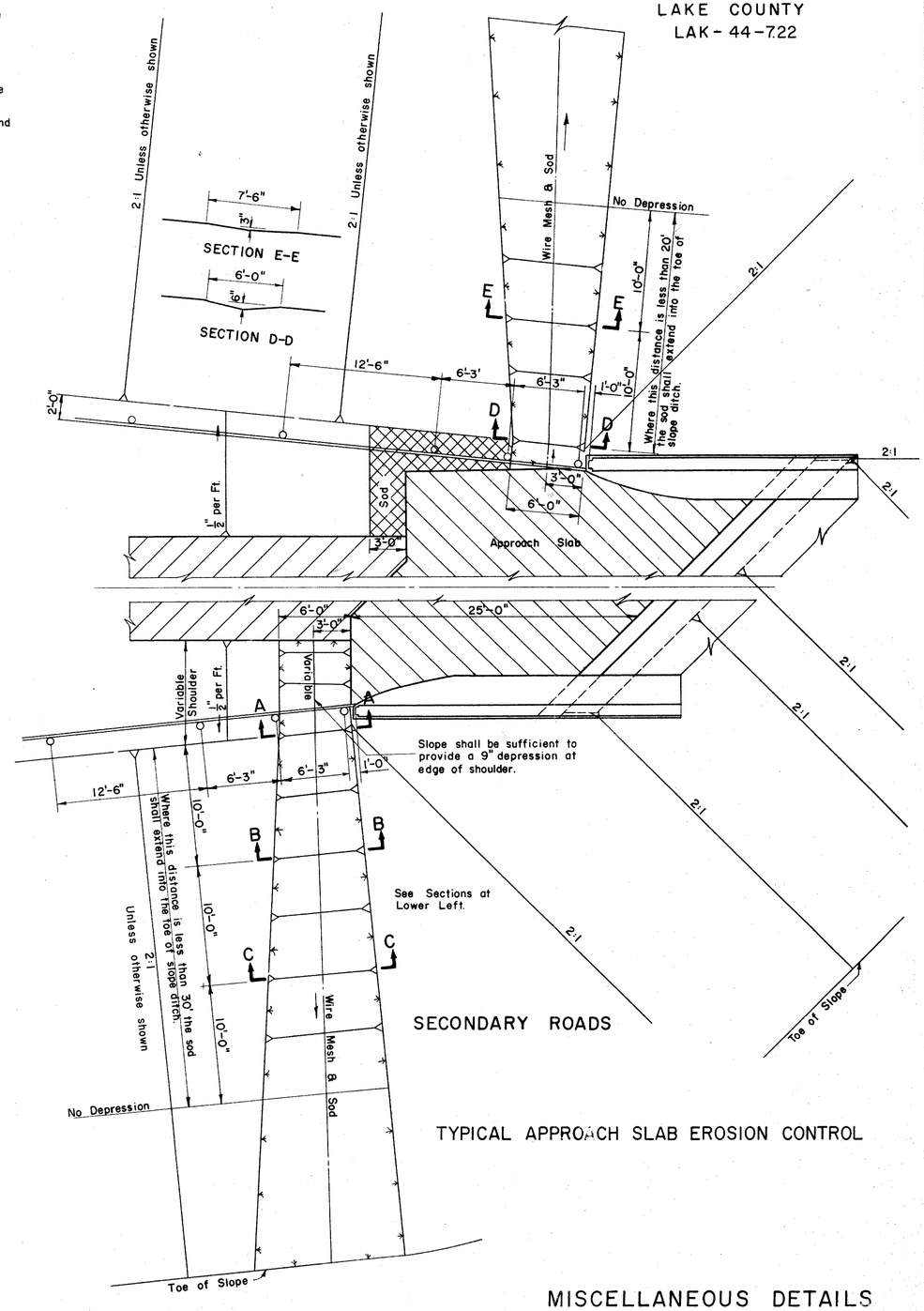
Sod shall be laid in accordance with Construction and Materials Specifications Section L-10.07.



GUARD RAIL DETAIL
END PANEL AT STRUCTURES



DETAIL OF CENTERLINE REFERENCE MONUMENTS



SECONDARY ROADS

TYPICAL APPROACH SLAB EROSION CONTROL

MISCELLANEOUS DETAILS

SUPERELEVATION TABLES

S. R. 44

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

12
212

LAKE COUNTY
LAK-44-7.22

D = 2°00'00" LEFT — Max. Superelevation for 25' = 1.18' — S= 0.047" per ft.

STATION	GRADE 32' LT. OF ℄	PROFILE GRADE 7' LT. & RT. OF ℄	GRADE 32' RT. OF ℄
102 + 98.23	597.96	598.35	597.96
103 + 00	597.95	598.34	597.95
103 + 25	597.86	598.25	597.93
103 + 50	597.77	598.16	597.90
103 + 75	597.68	598.07	597.87
104 + 00	597.59	597.98	597.84
104 + 25	597.50	597.89	597.82
104 + 50	597.41	597.80	597.79
T.S. 104 + 54.23	597.39	597.78	597.78
104 + 75	597.32	597.71	597.81
105 + 00	597.23	597.62	597.84
105 + 25	597.14	597.53	597.86
105 + 36.86	597.10	597.49	597.88
105 + 50	596.99	597.44	597.89
105 + 75	596.78	597.35	597.92
106 + 00	596.57	597.26	597.95
106 + 25	596.36	597.17	597.98
106 + 50	596.16	597.08	598.00
106 + 75	595.95	596.99	598.03
107 + 00	595.74	596.90	598.06
S.C. 107 + 04.23	595.70	596.88	598.06
107 + 25	595.63	596.81	597.99
107 + 50	595.54	596.72	597.90
107 + 75	595.45	596.63	597.81
108 + 00	595.36	596.54	597.72
108 + 25	595.27	596.45	597.63
108 + 50	595.18	596.36	597.54
108 + 75	595.09	596.27	597.45
109 + 00	595.00	596.18	597.36
109 + 25	594.91	596.09	597.27
109 + 50	594.82	596.00	597.18
109 + 75	594.73	595.91	597.09
110 + 00	594.64	595.82	597.00
110 + 25	594.55	595.73	596.91
110 + 50	594.46	595.64	596.82
110 + 75	594.37	595.55	596.73
111 + 00	594.28	595.46	596.64
111 + 25	594.19	595.37	596.55
111 + 50	594.10	595.28	596.46
111 + 75	594.01	595.19	596.37
112 + 00	593.92	595.10	596.28
112 + 25	593.83	595.01	596.19
112 + 50	593.74	594.92	596.10
112 + 75	593.65	594.83	596.01
113 + 00	593.56	594.74	595.92
113 + 25	593.47	594.65	595.83
113 + 50	593.38	594.56	595.74
113 + 75	593.29	594.47	595.65
114 + 00	593.20	594.38	595.56
114 + 25	593.11	594.29	595.47
114 + 50	593.02	594.20	595.38
114 + 75	592.93	594.11	595.29
115 + 00	592.84	594.02	595.20
115 + 25	592.75	593.93	595.11
115 + 50	592.66	593.84	595.02
115 + 75	592.57	593.75	594.93
116 + 00	592.48	593.66	594.84
116 + 25	592.39	593.57	594.75
116 + 50	592.30	593.48	594.66
116 + 75	592.21	593.39	594.57
117 + 00	592.12	593.30	594.48
117 + 25	592.03	593.21	594.39
117 + 50	591.94	593.12	594.30
117 + 75	591.85	593.03	594.21
118 + 00	591.76	592.94	594.12
118 + 25	591.67	592.85	594.03
118 + 50	591.58	592.76	593.94
118 + 75	591.49	592.67	593.85

D = 2°00'00" LEFT

STATION	GRADE 32' LT. OF ℄	PROFILE GRADE 7' LT. & RT. OF ℄	GRADE 32' RT. OF ℄
119 + 00	591.40	592.58	593.76
C.S. 119 + 02.46	591.39	592.57	593.75
119 + 25	591.42	592.49	593.56
119 + 50	591.44	592.40	593.36
119 + 75	591.47	592.31	593.15
120 + 00	591.50	592.22	592.94
120 + 25	591.53	592.13	592.73
120 + 50	591.56	592.04	592.52
120 + 69.83	591.58	591.97	592.36
120 + 75	591.56	591.95	592.32
121 + 00	591.47	591.86	592.11
121 + 25	591.38	591.77	591.90
121 + 50	591.29	591.68	591.69
	STATION EQUATION		
121 + 75	591.25	591.64	591.62
122 + 00	591.16	591.55	591.57
122 + 25	591.07	591.46	591.32
122 + 50	590.98	591.37	591.17
122 + 75	590.89	591.28	591.01
123 + 00	590.80	591.19	590.86
123 + 23.42	590.72	591.11	590.72

SOUTHBOUND LANES ONLY
D = 3°00'00" Rt. — S = 3/16" per ft.
Max. Superelevation for 24' = 0.38'

STATION	LEFT EDGE	PROFILE GRADE RIGHT EDGE
159 + 63	579.76	580.01
159 + 75	579.69	580.04
160 + 00	579.68	579.97
160 + 25	579.66	579.89
160 + 50	579.66	579.82
160 + 75	579.64	579.74
161 + 00	579.63	579.67
161 + 25	579.64	579.59
161 + 50	579.70	579.52
161 + 75	579.75	579.45
162 + 00	579.75	579.37
162 + 25	579.70	579.32
162 + 50	579.66	579.28
162 + 75	579.66	579.28
163 + 00	579.67	579.29
163 + 25	579.71	579.33
163 + 50	579.76	579.38
163 + 75	579.84	579.46

For additional pavement edge elevations
See Detail Sheet 100

SUPERELEVATION TABLES
MISCELLANEOUS DETAILS

GENERAL NOTES

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

13
212

LAKE COUNTY
LAK-44-7.22

FIELD OFFICE

THE CONTRACTOR SHALL PROVIDE A SUITABLE FIELD OFFICE FOR THE EXCLUSIVE USE OF THE STATE EMPLOYEES, IN ACCORDANCE WITH SEC. S-0.01(b), HAVING A MINIMUM OF 500 SQUARE FEET OF FLOOR SPACE. THE CONTRACTOR SHALL HAVE A TELEPHONE INSTALLED AND MAINTAINED IN THE FIELD OFFICE DURING THE CONSTRUCTION OF THIS PROJECT. CONTRACTOR SHALL ALSO INSTALL WIRING AND OUTLETS SUITABLE FOR CONNECTING TO OFFICE EQUIPMENT, AND PROVIDE 110 VOLT ALTERNATING CURRENT DURING THE CONSTRUCTION OF THIS PROJECT.

DESIGN SPEED

THE GEOMETRICS FOR THIS PROJECT HAVE BEEN PLANNED FOR A DESIGN SPEED OF 60 MILES PER HOUR.

UTILITIES

THE CONTRACTOR SHALL NOTIFY AT LEAST 48 HOURS BEFORE BREAKING GROUND 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.

ROUNDING OF CORNERS ON CROSS SECTIONS

THE ROUNDED CORNERS, AS SHOWN ON STANDARD DRAWING RI-1, APPLY TO ALL CROSS SECTIONS UNLESS OTHERWISE SHOWN ON THE TYPICAL SECTIONS.

R/W MONUMENTS, FEDERAL PROJECT MARKERS & SECTION MARKERS

EXISTING R/W MONUMENTS, BENCH MARKS, 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 CONSTRUCTION CREW.

ELEVATION DATUM

ALL ELEVATIONS ARE BASED ON U. S. G. S. DATUM.

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.

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.

GUARD RAIL POST ANCHORS

AT LOCATIONS WHERE PIER FOOTINGS INTERFERE WITH INSTALLATION OF FULL LENGTH GUARD RAIL POSTS, SHORT POSTS SHALL BE PROVIDED AND SHALL BE ANCHORED IN ACCORDANCE WITH THE DETAIL SHOWN ON STANDARD DRAWING NO. I-15 NO.6 . COST OF PROVIDING AND INSTALLING NECESSARY ANCHORS SHALL BE INCLUDED IN THE UNIT PRICE BID PER LINEAL FOOT FOR GUARD RAIL.

DEEP LONGITUDINAL DRAINAGE

IT IS INTENDED, THAT DEEP LONGITUDINAL UNDERDRAINS BE PROVIDED UNDER EACH OUTSIDE SHOULDER FOR ITS ENTIRE LENGTH THROUGH EACH SOIL CUT. AT EACH END OF EACH SOIL CUT, A TRANSVERSE DRAIN IS LOCATED AT THE POINT WHERE SUBGRADE CHANGES FROM CUT TO FILL, AND SHALL DISCHARGE INTO THE DEEP UNDERDRAIN.

THE ENGINEER SHALL MAKE WHATEVER ADJUSTMENTS IN THE LENGTHS OF UNDERDRAINS OR LOCATIONS OF TRANSVERSE UNDERDRAINS THAT ARE NECESSARY TO ACCOMPLISH THE ABOVE.

REMOVAL OF EXISTING DRAINS

THE REMOVAL OF ALL EXISTING PIPE DRAINS WHICH INCLUDES SANITARY, YARD, ROOF, BASEMENT OR OTHER SIMILAR PIPE DRAINS WITHIN THE ROADWAY CONSTRUCTION LIMITS SHALL BE CLASSIFIED AND PAID FOR AS ROADWAY EXCAVATION, UNLESS OTHERWISE ITEMIZED FOR PAYMENT IN THE PLANS.

REMOVAL OF TREES AND STUMPS

ALL TREES AND STUMPS LYING WITHIN THE CONSTRUCTION LIMITS OF THIS PROJECT SHALL BE REMOVED UNDER THE LUMP SUM PRICE BID FOR ITEM E-9, REMOVAL OF TREES AND STUMPS, EXCEPT THAT THOSE TREES FOR WHICH PROTECTION AND PRESERVATION WORK IS INDICATED ELSEWHERE IN THESE PLANS SHALL NOT BE REMOVED.

THE FOLLOWING IS AN APPROXIMATE ESTIMATE OF THE NUMBER OF TREES AND STUMPS TO BE REMOVED:

SIZES	NO. TREES	NO. STUMPS
12" - 18"	2465	2
18" - 24"	245	2
24" - 30"	66	
30" - 36"	37	1
36" - 42"	16	
42" - 48"		1
Over 48"	1	1

THE ABOVE ESTIMATE IS APPROXIMATE AND THE STATE OF OHIO RESERVES THE RIGHT TO ORDER THE REMOVAL OF ADDITIONAL TREES OR STUMPS OUTSIDE OF THE LIMITS OF CONSTRUCTION BUT WITHIN THE RIGHT-OF-WAY AND/OR EASEMENT LINES. PAYMENT FOR THE REMOVAL OF THESE ADDITIONAL TREES OR STUMPS SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM E-9, REMOVAL OF TREES AND STUMPS.

SPECIAL DITCHES

FOR SPECIAL DITCH GRADES, SEE CROSS SECTIONS AND/OR PLANS.

AGGREGATE BASE COURSE

THE COMPLETED AGGREGATE BASE COURSE B-19 MAY BE USED FOR MAINTAINING LOCAL TRAFFIC ON THIS PROJECT. ANY DAMAGE DONE TO THE BASE, SUBBASE OR SUBGRADE BY LOCAL TRAFFIC SHALL BE REPAIRED BY RESHAPING, RECOMPACTING AND BY ADDITION OF EXTRA B-19 MATERIAL AT NO ADDITIONAL COST TO THE STATE.

PLUGGING PIPE

THE UPSTREAM ENDS OF ALL PIPE OR TILE LINES INTERCEPTED BY EARTHWORK OPERATIONS AND, WHERE INDICATED ON THE PLANS, 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, A 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.

GUARD RAIL REMOVAL

THE REMOVAL OF ANY GUARD RAIL OR GUARD RAIL POSTS LYING WITHIN THE LIMITS OF ROADWAY EXCAVATION OR EMBANKMENT AND NOT SPECIFICALLY PAID FOR UNDER A SEPARATE ITEM IS INCLUDED IN THE CONTRACT UNIT PRICE BID FOR ROADWAY EXCAVATION. ALL RESULTING MATERIALS SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF BY HIM AT NO EXTRA COST TO THE STATE.

EXCAVATION FOR ITEM B-19

EXCAVATION FOR B-19 MATERIAL USED ON SIDE ROAD APPROACHES, MAIL BOX TURNOUTS AND DRIVES HAS BEEN INCLUDED IN EARTHWORK QUANTITIES WHEN SAME IS IN "CUT". WHERE SIDE APPROACHES, MAIL BOX TURNOUTS, AND DRIVES ARE IN "FILL", EXCAVATION FOR B-19 MATERIAL SHALL BE MADE BY THE CONTRACTOR AT HIS OWN EXPENSE IF HE BUILDS THE EMBANKMENT UP TO FINISH GRADE BEFORE PLACING THE B-19 MATERIAL.

DRAINAGE OF SUBBASE MATERIAL

WHERE THE SUBBASE MATERIAL IS DRAINED BY I-9 STONE UNDERDRAIN OR BY EXTENSIONS THROUGH THE SHOULDERS TO THE FILL SLOPE OR THE DITCH LINE, THE CONTRACTOR SHALL FINISH, SEED AND MULCH THE SLOPES SO AS NOT TO IMPEDE DRAINAGE OF THE SUBBASE MATERIAL. THE ACTUAL AREA OF THE OUTCROP OF THE SUBBASE MATERIAL OR I-9 UNDERDRAIN SHALL NOT BE SEEDED.

EROSION CONTROL AT HEADWALLS

AN 18" WIDE STRIP OF SOD SHALL BE PLACED ALONG THE BACK AND BOTH ENDS OF EACH STANDARD HEADWALL OR ENDWALL TO PREVENT EROSION. THE QUANTITY OF SODDING REQUIRED TO PREVENT EROSION AT THE HEADWALLS OR ENDWALLS IS INCLUDED IN THE CULVERT ESTIMATED QUANTITIES.

PART WIDTH CONSTRUCTION

BECAUSE OF THE NECESSITY OF BUILDING CERTAIN CROSS ROADS 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 BASE AND SUBBASE COURSES.

THIS SHALL BE ACCOMPLISHED BY BUILDING THE BASE AND SUBBASE COURSES PLACED WITH THE FIRST PORTION OF THE PAVEMENT BUILT, AT LEAST EIGHTEEN INCHES (18") BEYOND THE CENTER LINE AND BY SURFACING NO CLOSER THAN EIGHTEEN INCHES (18") TO THE EDGE OF THE ABOVE COURSES. WHEN THE SECOND PORTION OF THE PAVEMENT IS BUILT, AT LEAST TWELVE INCHES (12") 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. PAYMENT FOR THIS OPERATION SHALL BE INCLUDED IN THE UNIT PRICES BID FOR THE PERTINENT PAVEMENT ITEMS.

EXISTING FLEXIBLE PAVEMENT

WITHIN THE LIMITS OF CONSTRUCTION WHERE THE EXISTING FLEXIBLE PAVEMENT WILL HAVE LESS THAN SIX INCHES (6") 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 PLANE OF SEPARATION BETWEEN IT AND THE EMBANKMENT PLACED THEREON. OUTSIDE THE LIMITS OF CONSTRUCTION, THE EXISTING FLEXIBLE PAVEMENT SHALL BE THOROUGHLY SCARIFIED, MIXED WITH SUFFICIENT SOIL AND SHAPED TO FIT THE SURROUNDING TERRAIN IN SUCH A MANNER AS TO INSURE THE GROWTH OF SEED PLANTED THEREON. PAYMENT FOR ALL THE ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ROADWAY EXCAVATION.

WHERE REMOVAL IS CALLED FOR ON THE PLAN, THE COST SHALL BE INCLUDED WITH THE PRICE BID FOR ROADWAY EXCAVATION.

CONSTRUCTION LAYOUT STAKES

SEE NOTE IN PROPOSAL DESCRIBING THE WORK INCLUDED IN THIS LUMP SUM PAY ITEM.

EROSION CONTROL AT BRIDGES

SODDED CHANNELS SHALL BE PROVIDED AT ENDS OF BRIDGES WHERE REQUIRED BY 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". PLACEMENT SHALL BE MADE IN ACCORDANCE WITH THE METHOD SHOWN ON SHEET 11.

RECORDS

ITEMS SET UP IN THE GENERAL NOTES FOR USE UNDER THE DIRECTION OF THE ENGINEER SHALL REQUIRE PROPER RECORDS AND VERIFICATION BEFORE PAYMENT IS APPROVED.

REPLACEMENTS

THE CONTRACTOR SHALL REPLACE AT HIS OWN EXPENSE ANY ITEM NOT SPECIFICALLY LISTED FOR REMOVAL THAT IS DAMAGED OR DESTROYED BY HIS OPERATIONS.

ITEM I-9 STONE UNDERDRAINS, NO. 2

WHEN CALLED FOR ON THE TYPICAL SECTION AND PLAN, STONE UNDERDRAINS SHALL BE PLACED AT FIFTY (50) FOOT INTERVALS ON EACH SIDE OF NORMAL CROWNED SECTIONS AND AT TWENTY-FIVE (25) FOOT INTERVALS ON THE LOW SIDE ONLY OF SUPERELEVATED SECTIONS. THIS ITEM SHALL NOT BE PLACED WHERE I-3 UNDERDRAINS ARE PROVIDED.

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.

EROSION CONTROL

ITEMS I-10, I-14, AND L-10 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 NON-PERFORM QUANTITIES OR ADJUST LOCATIONS AND QUANTITIES FOR THESE ITEMS WHERE INDICATED BY FIELD CONDITIONS DURING CONSTRUCTION.

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 TWENTY (20) POUNDS PER 1,000 SQUARE FEET.

SEEDING AND PROTECTING

QUANTITIES FOR SEEDING ARE CALCULATED FOR THE SOIL AREAS BETWEEN LINES TEN (10) FEET OUTSIDE THE WORK LIMITS, AS SHOWN ON THE CROSS SECTIONS, OR TO THE RIGHT-OF-WAY LINE IF SUCH LINE IS LESS THAN TEN (10) FEET FROM THE WORK LIMITS; OR TO WORK LIMITS FOR AREAS OUTSIDE THE RIGHT-OF-WAY LINES COVERED BY WORK AGREEMENT.

SEED SHALL BE SOWN AT THE RATE OF 3 POUNDS PER 1,000 SQUARE FEET EXCEPT AS OTHERWISE NOTED IN THE PLANS. SEEDING FORMULA FOR ALL SEEDED AREAS SHALL BE IN ACCORDANCE WITH THE FOLLOWING:

65% KENTUCKY 31 FESCUE	5% REDTOP
25% KENTUCKY BLUEGRASS	5% ALSIKE CLOVER

CENTERLINE REFERENCE MONUMENTS

THE CENTERLINE REFERENCE MONUMENTS FOR THIS PROJECT SHALL BE CONSTRUCTED AS SHOWN ON SHEET 11 OF THE PLANS RATHER THAN THE STANDARD SHOWN ON STANDARD DRAWING RI-1.

GRATE ELEVATIONS

THE FLOW LINE OF GRATE ELEVATIONS SHOWN FOR I-8 #5 CATCH BASIN IS THE LOWEST POINT ON THE GRATE.

FIELD DRAINS

ALL FARM TILES WHICH ARE ENCOUNTERED DURING CONSTRUCTION SHALL BE PROVIDED WITH UNOBSTRUCTED OUTLETS UNDER THE DIRECTION OF THE ENGINEER. EXISTING COLLECTORS WHICH ARE LOCATED BELOW THE ROADWAY DITCH ELEVATIONS AND WHICH CROSS THE ROADWAY SHALL BE REPLACED WITHIN THE RIGHT-OF-WAY LIMITS BY ITEM I-1 PIPE CLASS B-1.

EXISTING COLLECTORS AND ISOLATED FARM TILES WHICH ARE ENCOUNTERED ABOVE THE ELEVATION OF THE ROADWAY DITCHES SHALL BE OUTLETTED INTO THE ROADWAY DITCH. THE OPTIMUM OUTLET ELEVATION SHALL BE, IF POSSIBLE, ONE FOOT ABOVE THE FLOWLINE ELEVATION OF THE DITCH. LATERAL TILE FIELDS WHICH CROSS THE ROADWAY SHALL BE INTERCEPTED BY ITEM I-1 PIPE CLASS H-2 AND CARRIED IN A LONGITUDINAL DIRECTION TO AN ADEQUATE OUTLET OR ROADWAY CROSSING.

THE LOCATION, TYPE, SIZE, AND GRADE OF REQUIRED REPLACEMENTS SHALL BE DETERMINED BY THE ENGINEER DURING CONSTRUCTION AND PAYMENT SHALL BE MADE FOR THE ACTUAL LINEAL FEET PLACED.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

I-1	8" PIPE CLASS B-1	500	LIN. FT.
I-1	8" PIPE CLASS H-2	1000	LIN. FT.
I-1	10" PIPE CLASS F-1	100	LIN. FT.
I-5	8" PIPE SPECIALS CLASS H-2	25	EACH
I-10	DUMPED ROCK CHANNEL PROTECTION	50	CU. YDS.

FLARED APPROACH SLABS

PLACE ADDITIONAL "A"-BARS IN FLARED AREAS BY MAINTAINING THE STANDARD SPACING ALONG THE WIDE END OF THE SLAB AND FANNING THE BARS IN TOWARD THE BRIDGE AS DIRECTED BY THE ENGINEER.

I-22 SUBBASE GRADING

I-22 SUBBASE GRADING A AND B AS PER PLAN. MATERIAL FOR THIS ITEM SHALL MEET THE REQUIREMENTS FOR I-22 GRADING A OR B EXCEPT THAT FOR BOTH GRADINGS THE PERCENT PASSING NO. 200 SIEVE SHALL NOT EXCEED TEN.

TEMPORARY DRAINAGE

TEMPORARY DRAINAGE WILL BE REQUIRED FOR THE PIPE UNDERDRAINS AND SUBBASE DURING CONSTRUCTION OF THIS SECTION, PAYMENT FOR WHICH IS INCLUDED IN THE PRICE BID PER LINEAL FOOT FOR ITEM I-1 PIPE CLASS I-3.

MANHOLE CASTING

MANHOLE CASTINGS LOCATED IN SLOPES SHALL BE SET SO THAT THE COVER WILL CONFORM WITH THE PLANE OF THE SLOPED SURFACE, WHERE THE SLOPE RATE IS 5:1 OR LESS.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

14
212

LAKE COUNTY
LAK-44-7.22

GENERAL NOTES

SEPTIC TANKS

WHERE SEPTIC TANKS, CESSPOOLS OR LEACHING BASINS ARE ENCOUNTERED ALL MATERIAL CONTAINED IN THEM SHALL BE REMOVED FROM THE RIGHT OF WAY LIMIT.

EACH STRUCTURE SHALL THEN BE PROPERLY BACKFILLED, OR REMOVED IF DIRECTED BY THE ENGINEER, AS PROVIDED IN THE STANDARD SPECIFICATIONS AND PAYMENT FOR SAME SHALL BE MADE UNDER ITEM E-1. REMOVAL OF THE TILE FIELDS ADJOINING THESE FEATURES IS NOT REQUIRED UNLESS THEY WOULD ALLOW FLOW OF WATER UNDER THE EMBANKMENT.

DITCH SODDING

THE SOD WIDTH "W" WHERE NOTED ON THE PLANS IS THE PLAN WIDTH REQUIRED. PLACEMENT SHALL BE AS DEFINED IN ITEM L-10 SODDING.

A QUANTITY OF 1,200 SQUARE YARDS OF ITEM L-10 SODDING HAS BEEN PROVIDED IN THE GENERAL SUMMARY TO BE USED FOR EROSION CONTROL WHERE AND AS DIRECTED BY THE ENGINEER.

COOPERATION BETWEEN CONTRACTORS

THE WORK COVERED BY THESE PLANS ADJOINS CONSTRUCTION OF HEISLEY ROAD TO THE SOUTH. IN THE EVENT THAT CONSTRUCTION ON THE ADJOINING SECTION IS BEING CARRIED ON SIMULTANEOUSLY WITH THIS SECTION, THE CONTRACTOR SHALL PLAN AND COORDINATE HIS WORK WITH THAT OF THE OTHER CONTRACTOR SO THAT A MINIMUM OF INTERFERENCE AND INCONVENIENCE WILL RESULT.

PRIVATE SEWER TAPS

THIS PLAN MAKES NO PROVISION FOR CONNECTING, NOR SHALL THE ENGINEER OR CONTRACTOR CONNECT, ANY EXISTING OR NEW PRIVATE DRAINAGE TO THE NEW HIGHWAY DRAINAGE SYSTEM WHEN SUCH PRIVATE DRAINS CARRY EFFLUENT OR DRAINAGE FROM LEACHING BED OUTLETS, CELLAR DRAINS, OR SINK DRAINS, OR POLLUTED WATER OF ANY KIND.

EXPANSION JOINTS

ALTHOUGH SPECIFIC LOCATIONS OF CERTAIN EXPANSION JOINTS HAVE BEEN DETAILED ON THIS PLAN, NO WAIVER OF THE SPECIFICATIONS IS INTENDED AND EXPANSION JOINTS SHALL BE PROVIDED AT ALL MAJOR STRUCTURES AS REQUIRED BY STANDARD CONSTRUCTION DRAWING T. J., 9-12-60.

ITEM T-10, AS PER PLAN

THE WEIGHTS TO BE USED IN CALCULATING THE YARDAGE TO BE PAID FOR UNDER THIS ITEM SHALL, IF A STANDARD SIZE COARSE AGGREGATE IS SPECIFIED, BE THE SAME AS THOSE INDICATED IN THE CONSTRUCTION AND MATERIAL SPECIFICATIONS FOR CRUSHER RUN OR BANK RUN MATERIALS.

ROAD MIX QUANTITIES

THE QUANTITY OF BITUMINOUS MATERIAL ESTIMATED FOR THE BITUMINOUS ROAD MIX SURFACE COURSE HAS BEEN CALCULATED FOR USE WITH SLAG AGGREGATE. IF THE CONTRACTOR ELECTS TO USE STONE OR GRAVEL AGGREGATE, BITUMINOUS MATERIAL FOR THE ROAD MIX SHALL BE APPLIED AT THE RATE OF 0.9 GALLON PER SQUARE YARD WHICH WILL REQUIRE A TOTAL QUANTITY OF APPROXIMATELY 18,000 GALLONS. PAYMENT WILL BE MADE ON FINAL MEASUREMENT.

SIGHT DISTANCE

BASIS FOR MEASURING SIGHT DISTANCE SHALL BE 4.5 FEET FOR HEIGHT OF EYE AND 4 INCHES FOR HEIGHT OF OBJECT. THE MINIMUM STOPPING SIGHT DISTANCE ON THIS PROJECT IS 475 FEET.

MAINTAINING LOCAL TRAFFIC

AGGREGATE AND CHLORIDE REQUIRED FOR MAINTENANCE OF LOCAL TRAFFIC, IN ACCORDANCE WITH THE PROVISIONS OF SEC. G-4.05 OF THE SPECIFICATIONS IS PROVIDED IN THE SUMMARY OF QUANTITIES IN THE FOLLOWING AMOUNTS:

500 CU. YDS. TRAFFIC COMPACTED SURFACE COURSE,
ITEM T-10

10 TONS CALCIUM CHLORIDE FURNISHED AND APPLIED,
ITEM M-10

REQUIREMENTS FOR HARDNESS AND SOUNDNESS WILL BE WAIVED FOR AGGREGATE USED FOR MAINTAINING LOCAL TRAFFIC.

PROPOSED SCHEDULE OF WORK AND TRAFFIC MAINTENANCE

THE PROPOSED FRONTAGE ROADS, LEFT AND RIGHT OF HEISLEY ROAD AND THE CONNECTOR LEFT, SHALL BE SCHEDULED FOR CONSTRUCTION AND COMPLETED BEFORE WORK IS COMMENCED ON THAT PORTION OF HEISLEY ROAD SOUTH OF S. R. 283.

THE RECONSTRUCTION OF BLACKBROOK ROAD SHALL BE BUILT SO AS TO PROVIDE ACCESS FOR ALL LOCAL RESIDENTS IN THE VICINITY, WHICH MUST USE BLACKBROOK ROAD, AND OTHER CONNECTIONS TO THEIR PROPERTY.

A TEMPORARY RUNAROUND IS PROVIDED AT THE INTERSECTION OF S.R. 283 AND HEISLEY ROAD TO FACILITATE THE MOVEMENT OF TRAFFIC ON S.R. 283 DURING SUCH TIME AS IT TAKES TO CONSTRUCT THE NEW WORK REQUIRED TO CARRY S.R. 283 OVER HEISLEY ROAD.

WHEN THE CONTRACTOR HAS PROVIDED THE PROPER ENTRY FOR LOCAL RESIDENTS, AS OUTLINED ABOVE, HE MAY CLOSE HEISLEY ROAD TO TRAFFIC, IN ORDER TO COMPLETE THE NEW WORK FOR THIS ROAD. AT SUCH TIME AS THE CONTRACTOR CLOSES THIS ROAD TO TRAFFIC, HE SHALL NOTIFY THE COUNTY SO THE COUNTY ENGINEER CAN PROVIDE PROPER SIGNING FOR DETOURING TRAFFIC OVER OTHER LOCAL ROADS; SAID NOTIFICATION SHALL BE GIVEN EARLY ENOUGH TO ALLOW THE COUNTY TO PROVIDE THE NECESSARY ITEMS.

THE RECONSTRUCTION OF HEADLANDS ROAD SHALL BE DONE IN SUCH A MANNER AS TO ALLOW TRAFFIC TO CONTINUE OPERATING. PROPER TEMPORARY CONNECTIONS SHALL BE MADE AND MAINTAINED TO THE LOCAL ROADS WITHIN THE LIMITS OF THIS RECONSTRUCTION AND PARTICULARLY TO THE MORTAN SALT CO. ROAD WHICH CARRIES A LARGE VOLUME OF COMMERCIAL TRAFFIC. ALL THE ABOVE WORK ITEMS ARE SUBJECT TO THE OHIO STANDARD SPECIFICATIONS, SECTION G-4.05. THIS SECTION SHALL APPLY UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

EXISTING WATER WELLS

DUG WELLS WITHIN THE WORK LIMITS SHALL BE FILLED WITH ROCK, OR GRANULAR MATERIAL MEETING THE REQUIREMENTS OF SEC. E-1.02 AND COMPACTED WITH WATER AS PROVIDED IN SEC. E-2.08 METHOD (b).

DRILLED WELL CASING SHALL BE REMOVED TO AN ELEVATION APPROXIMATELY THREE FEET BELOW FINISHED GRADE AND CAPPED WITH CLASS "E" CONCRETE OR A STANDARD THREADED PIPE CAP.

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 ROADWAY EXCAVATION, ITEM E-1.

LINE DATA CALCULATIONS FOR APPROACHES

RECONSTRUCTION OF BLACKBROOK ROAD STA. 0+32.00 TO STA. 3+50.00 NET LENGTH OF WORK	318.00 LIN. FT.
RECONSTRUCTION OF S. R. 283 STA. 21 + 60.00 TO STA. 42+00.00 NET LENGTH OF WORK	2,040.00 LIN. FT.
RECONSTRUCTION OF TEMPLE AVENUE STA. 0+35.00 TO STA. 4+50.00 NET LENGTH OF WORK	415.00 LIN. FT.
RELOCATION OF OLIVE STREET STA. 0+32.00 TO STA. 9+60.00 NET LENGTH OF WORK	928.00 LIN. FT.
RELOCATION OF HEADLANDS ROAD STA. 46+00.00 TO STA. 55+50.00 NET LENGTH OF WORK	950.00 LIN. FT.
TOTAL LENGTH APPROACHES	4,651.00 LIN. FT.

DRIVEWAYS

DRIVEWAYS HAVE BEEN PROVIDED IN THE PLAN TO REESTABLISH ACCESS TO EXISTING BUILDINGS ALONG THE FRONTAGE ROADS. PARTS OF THIS WORK MAY BE NON-PREFORMED AS A RESULT OF RIGHT OF WAY NEGOTIATIONS WITH THE RESPECTIVE PROPERTY OWNERS. ADJUSTMENTS TO THE LOCATION AND LENGTH OF DRIVES MAY BE PERMITTED DURING CONSTRUCTION AS DIRECTED BY THE ENGINEER.

TYPE OF JOINTS

INSTALL DRESS ER STYLE 60 BELL JOINT CLAMPS ON THE NEW 24" WATER MAIN.

ALL PIPE AND FITTINGS TO BE IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION NO. I-124.02.
ALL PIPE SHALL BE CEMENT-MORTAR LINED IN ACCORDANCE WITH FEDERAL SPECIFICATIONS WW-P-421a, EXCEPT THE 24" LINE.

MINIMUM COVER

ALL WATER MAINS, EITHER NEW OR RELAID, WILL HAVE A MINIMUM COVER OF 4'-6", UNLESS OTHERWISE NOTED ON THE PLAN.

RESET FIRE HYDRANTS

THE BID PRICE FOR THE REMOVING AND RESETTING OF A FIRE HYDRANT SHALL INCLUDE THE REMOVING AND RESETTING OR REPLACING OF ALL VALVES, FITTINGS, AND PIPE NECESSARY TO MAKE A PROPER CONNECTION TO THE WATER MAIN.

WATER SERVICE

THE CONTRACTOR SHALL SCHEDULE ALL WATER MAIN WORK IN SUCH A MANNER THAT SERVICE WILL NOT BE DISRUPTED FOR ANY UNREASONABLE LENGTH OF TIME AND IN NO CASE FOR A PERIOD GREATER THAN EIGHT HOURS. ANY ADDITIONAL PIPE AND FITTINGS OR OTHER MATERIALS USED FOR PROVIDING TEMPORARY SERVICE OR MAINTAINING SERVICE WILL BE FURNISHED AT THE CONTRACTOR'S EXPENSE.

THE ABOVE NOTE IS NOT TO BE CONSTRUED, IN ANY WAY, AS AMENDMENTS OR ALTERATIONS OF THE REQUIREMENTS OF SUPPLEMENTAL SPECIFICATIONS NO. 1 - 124.

WATER SUPPLY

IN ORDER TO COMPLETE THE ITEM OF "RELAID WATER LINE", IT WILL BE NECESSARY TO SEVER THOSE PROPERTIES SERVED FROM THE 16-INCH MAIN ON HEISLEY ROAD NORTH OF S.R.283, FROM THE NORMAL SOURCE OF SUPPLY USED BY THE OHIO WATER SERVICE. WHEN THIS SITUATION ARISES THE CONTRACTOR SHALL NOTIFY THE BEFORE NOTED UTILITY, WELL IN ADVANCE, SO THEY MAY MAKE ARRANGEMENTS TO KEEP THE 16-INCH RELAID MAIN FILLED FROM THE 24-INCH MAIN IN THE VICINITY OF OLIVE STREET RELOCATION.

RELAID AND/OR NEW WATER LINE - 16-INCH

A SUFFICIENT QUANTITY OF 16-INCH NEW WATER MAIN HAS BEEN INCLUDED TO COVER ANTICIPATED NORMAL BREAKAGE, WHERE THE 16-INCH MAIN IS INTENDED TO BE RELAID. THIS QUANTITY IS NOT TO BE USED UNLESS THE EXISTING LINE IS NOT USABLE OR IS FAIRLY AND REASONABLY BROKEN DURING THE REMOVAL, AS JUDGED BY THE ENGINEER OR HIS REPRESENTATIVE. IF, IN THE OPINION OF THE ENGINEER, THE CONTRACTOR DID NOT USE PROPER METHODS AND CARE WHILE REMOVING THE EXISTING 16-INCH MAIN, THE CONTRACTOR SHALL, AT HIS OWN EXPENSE, REPLACE THE BROKEN PIPE WITH PIPE EQUAL TO THAT SPECIFIED FOR 16-INCH NEW WATER MAIN.

EXCAVATION OF UNSUITABLE MATERIAL

THE RUBBISH FILL MATERIAL, AS INDICATED IN THE PLANS BETWEEN STA. 94+00 ± AND STA. 101+00 ±, SHALL BE REMOVED TO A DEPTH OF THREE FEET BELOW SUBGRADE WITHIN THE LIMITS OF THE PROPOSED OUTSIDE SHOULDER EDGES AND THE UNDERLYING RUBBISH ROLLED WITH A 50 TON PNEUMATIC RUBBER-TIRED ROLLER UNTIL NO FURTHER COMPACTION CAN BE REALIZED. A QUANTITY OF GRANULAR BORROW HAS BEEN PROVIDED TO AID IN LEVELING THE AREA AS ROLLING PROGRESSES. THE REMAINING FILL REQUIRED TO BRING THE GRADE TO SUBGRADE ELEVATION MAY BE REGULAR E-1 MATERIAL FROM ROADWAY EXCAVATION OR BORROW. ESTIMATED QUANTITIES FOR THE WORK ARE SHOWN ON THE COMPUTATION AND SUB-SUMMARY SHEET.

DISPOSAL OF THE EXCAVATED UNSUITABLE MATERIAL SHALL BE IN ACCORDANCE WITH SEC. E-1.06 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

15
212

LAKE COUNTY
LAK-44-7.22

GENERAL NOTES
POWER ADJUSTMENTS

SPECIFICATIONS

THE OHIO STANDARD SPECIFICATIONS SHALL GOVERN WHERE APPLICABLE UNLESS OTHERWISE NOTED IN THE FOLLOWING GENERAL NOTES CONCERNING POWER ADJUSTMENTS, OR ON THE PLANS.

GENERAL SCOPE OF CONTRACTOR'S RESPONSIBILITY

THE CONTRACTOR SHALL FURNISH AND INSTALL ALL POLE LINE WIRES, CABLES, GUYS, CROSS ARMS, INSULATORS, TIE WIRES, CLAMPS, BRACES, AND ALL APPURTENANCES, INCLUDING ALL MATERIALS AND LABOR NECESSARY TO COMPLETE THE POWER ADJUSTMENTS AS SHOWN ON THE PLANS.

THE CONTRACTOR SHALL REMOVE ALL POLES, LINE CONDUCTORS, GUYS, AS REQUIRED AND AS SHOWN ON THE PLANS. ALL SUCH REMOVALS NOT REUSED SHALL REMAIN THE PROPERTY OF THE OWNER AND SHALL BE PLACED AS DIRECTED.

THE CONTRACTOR SHALL INITIATE CONTACT WITH RESPONSIBLE OFFICIALS OF THE CITY OF PAINESVILLE, ELECTRICAL DEPARTMENT, RELATIVE TO THE DISRUPTING OF SERVICE TO ANY DISTRIBUTION LINE. ANY INTERRUPTION TO ELECTRICAL SERVICE SHALL BE SCHEDULED SUBJECT TO APPROVAL BY THE CITY OF PAINESVILLE, BOTH AS TO TIME AND DURATION, BEFORE MAKING SUCH INTERRUPTION.

THE REBUILT SECTION OF THE OVERHEAD LINE SHALL BE BUILT TO 12 KV REQUIREMENTS FOR FUTURE CONVERSION FROM 7.2 KV TO 12 KV OPERATION.

ALL OVERHEAD ELECTRICAL LINE WORK SHALL COMPLY WITH APPLICABLE PROVISIONS OF THE NATIONAL ELECTRICAL SAFETY CODE.

PROTECTIVE GROUNDING OR LOCK-OUT OF DISTRIBUTION LINES SHALL BE ACCOMPLISHED FOR SAFETY.

THE CONTRACTOR SHALL ALSO COOPERATE CLOSELY WITH ALL OTHER CONTRACTORS WHO MAY SUBSEQUENTLY BE ASSIGNED TO PERFORM WORK IN THE AREA OF THIS CONTRACT.

POLE LINE HARDWARE

ALL POLE LINE HARDWARE SHALL BE HOT-DIP-GALVANIZED. SUITABLE WASHERS SHALL BE INSTALLED UNDER BOLT HEADS AND NUTS ON WOOD SURFACES. WASHERS USED ON THROUGH BOLTS AND DOUBLE-ARMING BOLTS SHALL BE APPROXIMATELY $2\frac{1}{4}$ INCHES SQUARE AND $\frac{3}{16}$ INCH THICK. THE DIAMETER OF HOLES IN WASHERS SHALL BE THE CORRECT STANDARD SIZE FOR THE BOLTS ON WHICH THEY ARE USED. WASHERS FOR USE UNDER THE HEAD OF CARRIAGE BOLTS SHALL BE OF PROPER SIZE TO FIT OVER THE SQUARE SHANK OF THE BOLT. EYEBOLTS, BOLT EYES, EYENUTS, STRAIN PLATES, AND CLEVISES SHALL BE USED WHEREVER REQUIRED TO ADEQUATELY SUPPORT THE POLES, CROSSARMS, GUY WIRES, AND INSULATORS.

POLES

ALL POLES SHALL BE WESTERN RED CEDAR, AND SHALL COMPLY WITH AMERICAN STANDARD 05.1, AND SHALL BE OF LENGTH AND CLASS INDICATED ON THE PLANS. ALL POLES SHALL BE FULL LENGTH PENTACHLOROPHENOL TREATED. EACH POLE SHALL BE MARKED IN ACCORDANCE WITH THE REQUIREMENTS OF AMERICAN STANDARD 05.1, SUCH MARKING BEING TEN (10) FEET FROM THE BUTT OF THE POLE.

POLES SHALL BE CAREFULLY SELECTED FOR STRAIGHTNESS.

POLES SHALL BE ROOFED, GAINED, AND BORED BEFORE TREATMENT.

GAINS SHALL BE CUT IN FACE OF POLE AND GAINED SURFACES SHALL BE IN APPROXIMATELY PARALLEL PLANES.

NOMINAL SPACING OF GAINS ON THE SAME SURFACE SHALL BE FOUR (4) FEET.

MINIMUM SPACING BETWEEN LINE CONDUCTOR CROSSARMS AND GAINS FOR BUCKARMS SHALL BE 2 FEET.

ALL DIMENSIONS ARE CENTER TO CENTER.

POLES SHALL BE SET TO FOLLOWING MINIMUM DEPTHS:

POLE LENGTH	SETTING DEPTH
30 FT.	5 FT. 6 IN.
35 FT.	6 FT. 0 IN.
40 FT.	6 FT. 6 IN.

AS FAR AS PRACTICABLE, POLES SHALL BE SET TO MAINTAIN AN EVEN GRADE; CONSECUTIVE POLES SHOULD NOT VARY MORE THAN FIVE (5) FEET IN HEIGHT.

POLES SHALL BE SET IN HOLES OF AMPLE SIZE AND THE SIZE OF THE HOLE AT THE BOTTOM SHALL BE LARGE ENOUGH TO PERMIT THE PROPER USE OF TAMPERS. WHEN BACKFILLING, A MINIMUM OF THREE (3) TAMPERS SHALL BE USED TO EACH SHOVELER TO INSURE THAT EARTH IS PACKED TIGHTLY. NO LAYER OF EARTH GREATER THAN SIX (6) INCHES SHALL BE PLACED WITHOUT BEING PROPERLY TAMPED BEFORE THE NEXT LAYER IS PLACED. SURPLUS EARTH SHALL BE PLACED AND PACKED IN A CONICAL SHAPE AROUND THE POLE TO INSURE PROPER DRAINAGE.

POLES (Continued)

POLES IN STRAIGHT RUNS SHALL BE CAREFULLY ALIGNED WITH CROSSARMS AT RIGHT ANGLES TO THE RUN.

WHERE DIRECTION OF LINE CHANGES, CROSSARMS SHALL BISECT ANGLE OF CHANGE.

CROSSARMS AND FITTINGS

ALL CROSSARMS SHALL BE STRAIGHT GRAINED, AIR OR KILN DRIED, STANDARD CROSSARM-GRADE DOUGLAS FIR OR SOUTHERN PINE, PENTACHLOROPHENOL TREATED.

THE VERTICAL AND LONGITUDINAL STRENGTH OF CROSSARMS SHALL CONFORM TO THE REQUIREMENTS OF NATIONAL BUREAU OF STANDARDS HANDBOOK H 30.

CROSSARMS SHALL BE STRAIGHT TO WITHIN 1/10 INCH PER FOOT.

CROSSARMS SHALL BE DRILLED FOR TWO 3/4-INCH STEEL PINS, THROUGH BOLTS, BRACE BOLTS, AND DOUBLE ARMING BOLTS AS APPLICABLE TO THE INSTALLATION.

HOLES PROVIDED FOR THROUGH BOLTS AND DOUBLE-ARMING BOLTS SHALL BE 11/16-INCH IN DIAMETER. HOLES PROVIDED FOR BRACE BOLTS SHALL BE 7/8-INCH DIAMETER. HOLES PROVIDED FOR STEEL PINS SHALL BE 13/16-INCH.

STANDARD CROSSARMS SHALL BE $3\frac{1}{2}$-INCH BY $4\frac{1}{2}$-INCH BY 5 FEET, 7 INCHES.

NOMINAL CENTER PIN SPACING SHALL BE 30 INCHES.

PROVIDE CLIMBING SPACE OF NOT LESS THAN 36 INCHES.

CROSSARMS SHALL BE BOLTED TO POLES BY MEANS OF 5/8-INCH THROUGH BOLTS, UTILIZING SQUARE WASHERS AT BOTH ENDS. THROUGH BOLTS SHALL EXTEND AT LEAST 1/8 INCH AND NOT OVER 2 INCHES BEYOND THE NUT WHEN INSTALLATION IS COMPLETE.

CROSSARM BRACES SHALL BE $1\frac{1}{2}$-INCH BY $\frac{1}{4}$-INCH STEEL. LENGTH OF BRACES SHALL BE APPROXIMATELY 28 INCHES OVERALL. BRACES SHALL BE BOLTED TO CROSSARMS BY MEANS OF 3/8-INCH CARRIAGE BOLTS, WITH ROUND WASHER INSERTED BETWEEN BOLT HEAD AND CROSSARM. AFTER THE CROSSARM HAS BEEN CAREFULLY ALIGNED, THE BRACES SHALL BE SECURED TO THE POLE BY MEANS OF A 1/2-INCH BY 4-INCH LAG SCREW. BUCK ARMS SHALL BE INSTALLED AT CORNERS AND JUNCTION POLES. DOUBLE CROSSARMS SHALL BE PROVIDED AT DEAD-ENDS, ANGLES, AND CORNERS AS REQUIRED TO PROVIDE ADEQUATE VERTICAL AND LONGITUDINAL STRENGTH. DOUBLE CROSSARMS SHALL BE SECURELY HELD IN POSITION BY MEANS OF FOUR (4) DOUBLE-ARMING BOLTS. EACH DOUBLE-ARMING BOLT SHALL BE EQUIPPED WITH FOUR NUTS AND FOUR SQUARE WASHERS.

ALL PINS FOR INSULATORS SHALL BE STEEL, ONE PIECE, FORGED, WITH LEAD THREADS, AND SHALL BE DESIGNED TO CARRY THE FULL STRENGTH OF THE PIN BODY TO THE TOP. THEY SHALL BE OF THE LONG SHANK TYPE AND SHALL BE EQUIPPED WITH LOCK WASHERS AND SQUARE NUTS AT THE BOTTOM OF THE CROSSARMS. DIAMETER OF SHANK SHALL BE 3/4-INCH WITH 1 3/8-INCH THIMBLE.
PIN TYPE TO BE JOSLYN J-607-AR, OR EQUAL.
LEAD THREADS SHALL BE SECURELY BONDED TO THE STEEL AND CAREFULLY FORMED TO FIT THE INSULATOR THREADS. LEAD TOPS SHALL BE DESIGNED TO PREVENT LOCALIZED PRESSURE ON THE INSULATOR TOP WHEN IT IS TURNED DOWN TOO TIGHTLY. PIN BASES SHALL BE OF ADEQUATE DIAMETER TO INSURE MAXIMUM RESISTANCE TO STRAIN. PINS SHALL HAVE A HEIGHT ABOVE THE ARM OF NOT LESS THAN $4\frac{1}{2}$ INCHES. PINS SHALL HAVE CROSSARM SADDLES.

POLE TOP PINS SHALL BE JOSLYN J-2011, OR EQUAL, WITH 1 3/8-INCH THIMBLE.

ALL PINS SHALL COMPLY WITH THE STRENGTH REQUIREMENTS OF THE NATIONAL BUREAU OF STANDARDS HANDBOOK H 30, THREADS SHALL BE OF PROPER DESIGN AND DIMENSIONS FOR THE INSULATOR TO BE INSTALLED THEREON.

INSULATORS

ALL INSULATORS SHALL BE BROWN-GLAZE, WET-PROCESS PORCELAIN.

PIN TYPE INSULATORS SHALL BE SUITABLE TO CARRY 12 KV, NOMINALLY RATED AT 13.5 KV. NEMA STANDARD, EEI-NEMA CLASS 55-3, RADIO FREED.

DEAD END INSULATORS SHALL BE AS FOLLOWS:

a. 12 KV (COPPER) – 10 INCH DIAMETER, CLEVIS (COPPER) TONGUE TYPE, 2 INSULATORS PER TERMINATION. NEMA STANDARD, EEI-NEMA CLASS 52-4. INSTALL ON 2" X 1/4" STEEL EYELET WITH 5/8" PIN AND BRASS COTTER AND PINCO, OR EQUAL, STRAIGHT LINE STRAIN CLAMPS

b. GUY INSULATORS – TYPE 506, NEMA STANDARD, EEI-NEMA CLASS 54-3.

GUYING

GUYS SHALL BE INSTALLED WHERE INDICATED ON THE PLANS AND AS OTHERWISE REQUIRED WHEREVER CONDUCTOR TENSIONS ARE NOT BALANCED AS AT CORNERS, ANGLES, AND DEAD ENDS.

SPAN GUYS OR HEAD GUYS SHALL BE PROVIDED WHERE A CHANGE IN SIZE OR NUMBER OF CONDUCTORS CREATES A TOTAL UNBALANCED PULL WHEN FULLY LOADED IN EXCESS OF 10% OF THE TOTAL BREAKING STRENGTH OF THE CONDUCTORS IN THE LIGHTLY LOADED SPAN.

GUYS SHALL BE ATTACHED AS NEAR AS PRACTICABLE TO THE CENTER OF THE CONDUCTOR LOADS TO BE SUSTAINED. GUY WIRE SHALL BE EXTRA-GALVANIZED.

WHERE A SINGLE GUY WILL NOT PROVIDE THE REQUIRED STRENGTH WITHOUT EXCEEDING 87% OF ULTIMATE STRAND STRENGTH, 2 GUYS SHALL BE PROVIDED.

EACH GUY SHALL HAVE A 506 GUY INSULATOR AT 8 FEET FROM POLE. PROVIDE SECOND INSULATOR ON SPAN GUYS CROSSING ROADWAYS 8 FEET FROM SECOND POLE.

GUY TERMINATIONS SHALL BE MADE BY TAPERED GRIP STRAND TERMINAL, RELIABLE "STRAND VISE" OR EQUAL.

ANCHORS SHALL BE CONE TYPE.

GUY RODS SHALL BE 3/4-INCH DIAMETER BY 7 FEET LONG, TWIN EYE, "COPPERWELD".

EACH ANCHOR GUY SHALL HAVE A GUY GUARD HEAVY TYPE, 8 FEET LONG, JOSLYN J-1605 OR EQUAL.

GUYS SHALL BE ATTACHED BY 3/4-INCH DIAMETER THROUGH BOLTS, ANGLE EYE TYPE OR STRAIGHT (FOR SPAN GUYS).

EACH ANCHOR GUY OVER 4000 LB. SHALL HAVE LEFT PLATE WITH 1/2" X 4" LAG SCREW.

ANCHOR GUY COMPONENTS SHALL BE AS FOLLOWS:

MAXIMUM STRENGTH	COMPONENTS		
5,400 LB.	1-3/8"	SIEMENS-MARTIN STRAND,	10" CONE
2,660 LB.	1-1/4"	SIEMENS-MARTIN STRAND,	10" CONE
1,500 LB.	1-1/4"	SIEMENS-MARTIN STRAND,	8" CONE

SPAN GUYS SHALL HAVE STRAND AS FOR ANCHOR GUYS.

ANCHOR GUY LEADS SHALL BE AS INDICATED ON THE PLANS.

LINE CONDUCTORS

COPPER PRIMARY BASE CONDUCTORS SHALL BE HARD DRAWN BARE, SOLID COPPER, FEDERAL SPECIFICATION QQ-W-336

SPLICES UNDER TENSION SHALL BE MADE MECHANICALLY AND ELECTRICALLY SECURED BY MEANS OF SLEEVE OR TENSION LINE SPLICES. SLEEVES, CONNECTORS AND LINE SPLICES SHALL BE MADE OF MATERIALS THAT WILL NOT ADVERSELY AFFECT THE CONDUCTORS ON WHICH THEY ARE USED. SPLICES UNDER TENSION SHALL HAVE A BREAKING STRENGTH AT LEAST EQUAL TO THE CONDUCTOR IN WHICH THEY ARE MADE.

LINE WIRES SHALL BE TIED TO INSULATORS IN AN APPROVED MANNER. TIE WIRES FOR COPPER WIRES SHALL BE SOFT COPPER OF SAME SIZE AND INSULATION AS LINE WIRES.

CARE SHALL BE TAKEN IN HANDLING AND STRINGING CONDUCTORS TO GUARD AGAINST CUTS, SCRATCHES, OR KINKS. CONDUCTORS SHALL NOT BE DRAWN OVER ROUGH GROUND IN SUCH A WAY AS TO BE INJURED.

INITIAL STRINGING SAG-#2 BARE SOLID HARD DRAWN COPPER

SAG IN INCHES

	SPAN IN FEET		
TEMP. DEG. F	100	125	150
30	6	11	13
60	10	15	18
90	14	20	24

COMPUTATIONS & SUB-SUMMARY

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

16/212

LAKE COUNTY
LAK-44-7.22

EARTHWORK

STATION FROM	STATION TO	E-1 ROADWAY EXCAVATION CU. YDS.	EMBANKMENT PLUS 20% CU. YDS.
36+99.10	40+00	1980	194
40+00	50+00	3592	3343
50+00	60+00	1229	4933
60+00	70+00	14,014	3271
70+00	80+00	36,436	26,524
80+00	90+00	69,445	0
90+00	100+00	21,033	23,130
100+00	110+00	40,528	1416
110+00	120+00	36,134	11,886
120+00	130+00	8877	31,796
130+00	140+00	841	40,045
140+00	150+00	1352	26,036
150+00	160+00	1739	12,635
160+00	164+00	735	3502
FRONTAGE ROAD LT.		3423	2902
CONNECTOR		197	30
FRONTAGE ROAD RT.		4440	3918
BLACKBROOK ROAD		228	455
S.R. 283		2302	25,813
RAMP "A"		1224	172
RAMP "A" SPUR		27	1027
RAMP "B"		14,256	33,601
RAMP "C"		4025	25,867
RAMP "D"		4467	377
TEMPLE AVENUE		2763	10
OLIVE STREET		4653	199
HEADLANDS ROAD		1344	1864
WEST PARK ROAD		59	257
EAST PARK ROAD		51	253
MORTON SALT CO. ROAD		29	150
ACCESS ROAD		179	1,661
S.R.44, 94± to 101±		4,000 *	4,800
TOTAL		285,602	292,067

*Unsuitable material thru rubbish dump area.
See General Note, Sheet 14

ITEM SPECIAL (DUMP AREA)

HOURS FILL COMPACTION TIME
USING HEAVY PNEUMATIC ROLLER 4 HRS.
SEE GENERAL NOTE, SHEET 14

E-1, COMPACTED SUBGRADE

PAVEMENT (T-71)	88,220	S.Y.
PAVEMENT (T-35)	3,966	S.Y.
FLEXIBLE PAVEMENT	18,182	S.Y.
PAVED SHOULDERS (B-21)	24,948	S.Y.
APPROACH SLABS (I-7)	340	S.Y.
TOTAL	135,656	S.Y.

L-9 SEEDING & PROTECTING

STATION FROM	STATION TO	AREA S.Y.
36+99.10	40+00	3571
40+00	50+00	10,576
50+00	60+00	9337
60+00	70+00	11,606
70+00	80+00	12,837
80+00	90+00	14,668
90+00	100+00	13,682
100+00	110+00	13,728
110+00	120+00	14,066
120+00	130+00	13,642
130+00	140+00	14,643
140+00	150+00	13,407
150+00	160+00	12,389
160+00	164+00	6244
FRONTAGE ROAD LT.		10,859
CONNECTOR		1254
FRONTAGE ROAD RT.		13,454
BLACKBROOK ROAD		1517
S.R. 283		9290
RAMP "A"		1008
RAMP "A" SPUR		779
RAMP "B"		9748
RAMP "C"		8483
RAMP "D"		2458
TEMPLE AVENUE		2537
OLIVE STREET		6035
HEADLANDS ROAD		5148
WEST PARK ROAD		613
EAST PARK ROAD		938
MORTON SALT CO. ROAD		229
TOTALS		238,746

E-4 GRANULAR BORROW

DUMP AREA STA. 94± — STA. 101± 1,600 C.Y.
SEE GENERAL NOTE, SHEET 14

L-9 COMMERCIAL FERTILIZER

SEEDING AREA	=	238,746	S.Y.
SODDING AREA	=	4,310	S.Y.
SPECIAL SODDING AREA	=	230	S.Y.
TOTAL (SQUARE YARDS)	=	243,286	S.Y.
FERTILIZER @ 20LBS. PER 1000 SQ. FT.	=	21.90	TONS

E-11, WATER M-GAL. = VOL X 5 / 1000

EMBANKMENT	292,067	C.Y.
I-22	24,010	C.Y.
I-18	3,839	C.Y.
B-19	4,612	C.Y.
TOTAL VOLUME	324,528	C.Y.
M-GALLONS	1,623	

E-4, BORROW

EMBANKMENT PLUS 20%		292,067 C.Y.
E-1 ROADWAY EXCAVATION	285,602 C.Y.	
E-3 CHANNEL EXCAVATION	2,399 C.Y.	
TOTAL EXCAVATION	288,001 C.Y.	
UNSUITABLE FOR EMB.	4,000 C.Y.	
TOTAL EXC. AVAILABLE FOR EMB.		284,001 C.Y.
REQUIRED E-4 BORROW		8,066 C.Y.
LESS E-4 GRANULAR BORROW		1,600 C.Y.
E-4 BORROW		6,466 C.Y.

SHEET NO.	SS-18 FENCE, TYPE "A" LIN. FT.	I-10 DUMPED ROCK CHANNEL PROTECTION CU. YDS.
203	1596	
204	2849	12
205	2815	10
206	2520	5
207	1580	4
208	1529	11
209	704	
210	1500	10
211	2007	10
212	2133	
TOTAL	19,233	62

LENGTH OF SHOULDERS TO BE TREATED WITH CALCIUM CHLORIDE

S.R. 283	1,900 L.F.
HEADLANDS ROAD	1,813 L.F.
TOTAL LENGTH	3,713 L.F.

ITEM SPECIAL, MIXING CALCIUM CHLORIDE AND CRUSHED AGGREGATE = 3713 X 4 X 1/9 = 1651 S.Y.

ITEM M-10, CALCIUM CHLORIDE FOR STABILIZED SHOULDERS
1651 X 2.1 ÷ 2000 = 1.74 TON.

GENERAL SUMMARY

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

LAKE COUNTY
LAK-44-7.22

CODE 7221

	SUB-SUMMARY & GENERAL NOTES			SHEET NUMBER																																ITEM NO.	QUAN.	UNIT	DESCRIPTIONS
	16	13	14	20	21	22	23	24	25	26	27	28	29	30	31	32	33	101	102	103	111	112	113	124	125	126	138	139	140	141	162	165	166	169	170	198				
																																							ROADWAY
E-1	285,602																																			E- 1	285,602	C.Y.	Roadway Excavation, Method B, as per plan
E-1	135,656																																			E- 1	135,656	S.Y.	Compacted Subgrade
E-4	1600																																			E- 4	1600	C.Y.	Granular Borrow
E-4	5410																																			E- 4	6466	C.Y.	Borrow
E-8																							322	2178	830							830	752		E- 8	4912	S.Y.	Removal & Disposal of Existing Pavement
E-9		LUMP																																		E- 9	Lump	Lump	Removal of Trees and Stumps
E-11	1618																																			E- 11	1623	M Gal.	Water
E-12				100	72	108	64		158	62													670	126						35			E- 12	1395	L.F.	Pipe Removed, 15" and under, as per plan
E-12																28																			E- 12	28	L.F.	Pipe Removed, over 15", as per plan
I-8																																			21	I - 8	21	Ea.	Centerline Reference Monuments, as per plan
																																			1	I - 8	1	Ea.	Standard Monument Assembly
I-15							400.0		1100.0	212.5	525.0	1300.0	850.0	475.0									237.5		200.0	387.5	475.0	312.5						I - 15	6475	L.F.	Guard Rail, Steel Beam Standard Type (Deep)
L-9	238,746																																			L - 9	238,746	S.Y.	Seeding and Protecting, as per plan
L-9	21.90																																			L - 9	21.90	Tons	Commercial Fertilizer (12-12-12)
L-10		1200		55		184	80	33	59	12	321	310	6	12			240		57	10	48		126		488	147	353	230	171	160		8		L-10	4310	S.Y.	Sodding
L-10																								230											L-10	230	S.Y.	Sodding for Special Berm and Slope Protection
M-10	1.74		10																																	M-10	11.74	Tons	Calcium Chloride Furnished and Applied
S-15																																				S-15	Lump	Lump	Temporary Runaround Road, using Class "B" Pavement, as per plan
SS-18	19,233																																			SS-18	19,233	L.F.	Fence Type "A"
T-10		500																																	T- 10	500	C.Y.	Traffic Compacted Surface Course for Maintaining Traffic
SPECIAL	4																																			SPECIAL	4	Hrs.	Fill Compaction using Heavy Pneumatic-Tired Roller
																																							BUILDING REMOVAL
E-10																																				E - 10	Lump	Lump	Removal of 1½ Story Frame Dwelling, Parcel No. 1 LA
E-10																																				E - 10	Lump	Lump	Removal of 1 Story Frame Dwelling, Parcel No. 1 LA
E-10																																				E - 10	Lump	Lump	Removal of 1 Story Frame Dwelling, Parcel No. 5 LA
E-10																																				E - 10	Lump	Lump	Removal of 1 Story Frame Dwelling, Parcel No. 13 LA
E-10																																				E - 10	Lump	Lump	Removal of Metal Quonset Hut (Concrete Floor), Parcel No. 14
E-10																																				E - 10	Lump	Lump	Removal of Shed, Parcel No. 14
E-10																																				E - 10	Lump	Lump	Removal of 1 Story Block Dwelling with Garage, Parcel No. 15 LA
E-10																																				E - 10	Lump	Lump	Removal of 1 Story Frame Dwelling, Parcel No. 18 LA
E-10																																				E - 10	Lump	Lump	Removal of 1 Frame Shed, Parcel No. 19
E-10																																				E - 10	Lump	Lump	Removal of Concrete Block Garage, Parcel No. 22
E-10																																				E - 10	Lump	Lump	Removal of 2 Story Frame Dwelling, Parcel No. 29
E-10																																				E - 10	Lump	Lump	Removal of 2 Frame Sheds, Parcel No. 29
E-10																																				E - 10	Lump	Lump	Removal of 1½ Story Frame Dwelling, Parcel No. 33 LA
E-10																																				E - 10	Lump	Lump	Removal of 1 Story Frame Garage and Greenhouse, Parcel No. 36
E-10																																				E - 10	Lump	Lump	Removal of 1½ Story Frame Dwelling, Parcel No. 39 LA
E-10																																				E - 10	Lump	Lump	Removal of 2½ Story Brick Dwelling, Patio and Garage, Parcel No. 44B-LA
E-10																																				E - 10	Lump	Lump	Removal of Cinder Block Garage, Parcel No. 44B-LA
E-10																																				E - 10	Lump	Lump	Removal of Frame Garage, Parcel No. 44B-LA
E-10																																				E - 10	Lump	Lump	Removal of Screened Patio, Parcel No. 47 LA
E-10																																				E - 10	Lump	Lump	Removal of House Trailer (Office), Parcel No. 55 LA
																																							DRAINAGE
E-3				2		50		1		2		35		39		208																	E - 3	337	C.Y.	Channel Excavation
I-1																52																			I - 1	52	L.F.	15" Paved Bituminous Coated Corrugated Metal Pipe, Sec. M-6.4 (d), Class A-1
I-1																40																			I - 1	40	L.F.	24" Paved Bituminous Coated Corrugated Metal Pipe, Sec. M-6.4 (d), Class A-1 UNDER RAILROAD *
I-1													124				54																	I - 1	178	L.F.	30" Reinforced Concrete Pipe, Sec. M-6.6 (b), or Extra-Strength Vitrified Sewer Pipe, Sec. M-6.8 (b), Class A-1
I-1									156																										I - 1	156	L.F.	36" Reinforced Concrete Pipe, Sec. M-6.6 (c), Class A-1
I-1														142																					I - 1	142	L.F.	48" Paved Bituminous Coated Corrugated Metal Pipe, Sec. M-6.4 (d), Class A-1
I-1											126																								I - 1	126	L.F.	48" Reinforced Concrete Pipe, Sec. M-6.6 (b), Class A-1
I-1							272																												I - 1	272	L.F.	84" Reinforced Concrete Pipe, Sec. M-6.6 (b), Class A-1
I-1							286																												I - 1	286	L.F.	84" Heavy Duty Reinforced Concrete Pipe, Sec. M-106.6 (d), Class A-1
I-1		500					94	38	98	110		72																							I - 1	912	L.F.	8" Pipe Class B-1
I-1																																42			I - 1	42	L.F.	12" Pipe Class B-1
I-1											72	154													44									I - 1	270	L.F.	15" Pipe Class B-1
I-1								58	190		138																		44				I - 1	430	L.F.	18" Pipe Class B-1
I-1							132		134																									I - 1	266	L.F.	21" Pipe Class B-1
I-1								264																	216									I - 1	480	L.F.	24" Pipe Class B-1
I-1							422																												I - 1	422	L.F.	27" Pipe Class B-1
I-1																											264								I - 1	264	L.F.	33" Reinforced Concrete Pipe, Sec. M-6.6 (d), Class B-1
I-1																								40	146										I - 1	186	L.F.	12" Bituminous Coated Corrugated Metal Pipe, Sec. M-6.4 (c), Class C-1
I-1																220	50	50	186	92	226	294							52	56				I - 1	1226	L.F.	15" Bituminous Coated Corrugated Metal Pipe, Sec. M-6.4 (c), Class C-1
I-1																106																			I - 1	106	L.F.	18" Bituminous Coated Corrugated Metal Pipe, Sec. M-6.4 (c), Class C-1
I-1																138																			I - 1	138	L.F.	36" Bituminous Coated Corrugated Metal Pipe, Sec. M-6.4 (c), Class C-1

*12 Ga., as per plan

GENERAL SUMMARY

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

18
212

LAKE COUNTY
LAK-44-7.22

CODE 7221

SUB-SUMMARY & GENERAL NOTES 16	13	14	SHEET NUMBER 20	21	22	23	24	25	26	27	28	29	30	31	32	33	101	102	103	111	112	113	124	125	126	138	139	140	141	162	165	166	169	170	ITEM NO.	QUAN.	UNIT	DESCRIPTIONS
																																					DRAINAGE Continued
									32																									I-1	32	L.F.	18" Bituminous Coated Corrugated Metal Pipe, Sec. M-6.4 (c), Class D-1
																															30		I-1	30	L.F.	12" Pipe Class E-1
							200																		184								I-1	384	L.F.	15" Pipe Class E-1
							14																										I-1	14	L.F.	21" Pipe Class E-1
																									234								I-1	234	L.F.	24" Reinforced Concrete Pipe, Sec. M-6.6(b), or Extra-Strength Vitrified Sewer Pipe, Sec. M-6.8(b), Class E-1
				40			60	10	40	20	20	20	20	20	20	20								80		20	20	20	10					I-1	440	L.F.	8" Pipe Class F-1
	100																																I-1	100	L.F.	10" Pipe Class F-1
																					48												I-1	48	L.F.	22" x 13" Paved Bituminous Coated Corrugated Metal Arch with Integral Base, Sec. M-6.4(i)(d), Class G-1
				106																56													I-1	162	L.F.	45" x 29" Elliptical Reinforced Concrete Pipe, Sec. M-6.7(b), Class G-1
	1000																																I-1	1000	L.F.	8" Pipe Class H-2
			664	2124	2064	1598	2188	1466	2176	2144	2140	1982	2008	2022	2016	818								914		1166	1104	1094	890					I-1	30,578	L.F.	6" Pipe Class I-3
				14.0			7.5		15.5	3.5	26.0	3.1	10.6	1.7		1.0		2.7		1.5	1.4						0.6						I-2	89.1	C.Y.	Masonry
			2	6	2	2	10	1	6	1	4	2	2	2	2	4								4		1	4	6	2					I-5	63	Ea.	6" Pipe Special Class I-3
	25																																I-5	25	Ea.	8" Pipe Special Class H-2
							2	2	2	3		2																					I-5	11	Ea.	8" Pipe Special Class B-1
									2																								I-5	2	Ea.	18" Bituminous Coated Corrugated Metal Pipe, Sec. M-6.4 (c), Specials Class C-1
																1																	I-5	1	Ea.	36" Bituminous Coated Corrugated Metal Pipe, Sec. M-6.4 (c), Specials Class C-1
							1																										I-5	1	Ea.	84" Reinforced Concrete Pipe, Sec. M-6.6(b), Specials Class A-1
											2																						I-8	2	Ea.	Standard No. 2-A 10 Inlet
												1																					I-8	1	Ea.	Standard No. 2-A 6 Inlet
									2																					2	2		I-8	6	Ea.	Standard No. 2-2A Catch Basin
																2									1								I-8	3	Ea.	Standard No. 2-2B Catch Basin
																1																	I-8	1	Ea.	Standard No. 2-4 Catch Basin
							3	2								1									1								I-8	7	Ea.	Standard No. 5 Catch Basin
												1													2								I-8	3	Ea.	Standard No. 6 Catch Basin
										1															1								I-8	2	Ea.	Modified Standard No.5 Catch Basin
							1	1																	1								I-8	3	Ea.	Standard No. 1 Manhole
															119	126	144	360	450	396	423	396	70	140	168					160	261	45	187	242	I-9	3687	L.F.	Stone Underdrain No. 2
62	50						30		140		74	9															40	177							I-10	582	C.Y.	Dumped Rock Channel Protection
										32															22								I-14	54	L.F.	Type 1 Paved Gutter, Standard
							Lump		Lump																								S-24	Lump	Lump	Removal of Existing Structures
																																					PAVEMENT
											12				110	349	170	361	607	456	637	473	124	420	431					157	252	53			B-19	4612	C.Y.	Aggregate Base Course
			44	148	127	100	140	92	142	148	148	141	148	148	166	96								8		84	60	59	80					B-21	2079	C.Y.	Waterproofed Aggregate Base Course
																							22	81	81									B-35	184	C.Y.	Asphaltic Concrete Leveling Course (70-85)
																							35	129	129									B-35	293	C.Y.	Asphaltic Concrete Base Course (70-85)
																								340									I-7	340	S.Y.	Reinforced Concrete Approach Slabs (T = 13")
																							143		471	206	206	154					I-12	1180	L.F.	Standard Type 6 Concrete Curb
			600	2000	1818	2000	2000	2000	1822	2000	1976	1830	2000	2000	1500								550											I-12	24,096	L.F.	Standard Type 2-A Concrete Curb
																									200			200					I-12	400	L.F.	Special Portland Cement Concrete Curb, as per Plan
			76	255	218	172	241	158	244	255	255	242	255	255	287	167							15	89	54	145	107	105	139			40	65	I-18	3839	C.Y.	Stabilized Crushed Aggregate Shoulders and Approaches
					156				3	75		78												59		30	30	30						I-21	461	S.Y.	4" Portland Cement Concrete Median Pavement, Standard Type 1
			382	1274	1430	1334	1258	1295	1704	1660	1303	1325	1274	1274	1369	1421	93	259	391	274	364	281	67	698	247	579	511	474	714	107	191	42	174	241	I-22	24,010	C.Y.	Subbase, Grading A or B, as per Plan
																								34	22									I-23	56	Ea.	Standard Precast White Portland Cement Concrete Traffic Dividers
																432	389	922	1467	1059	1503	1184	179	663	662					433	693	145			T-30	9731	Gal.	Bituminous Prime Coat, Sec. M-5.7 RT-2 or RT-3
			133	444	380	300	421	276	426	444	444	422	444	444	499	289								25		251	181	177	239					T-31	6239	Gal.	Bituminous Surface Treatment, Bituminous Material, as per Plan
			4	14	12	10	14	9	14	14	14	14	14	14	16	9								1		8	6	6	8					T-31	201	C.Y.	Bituminous Surface Treatment, No. 6 Aggregate
																960	1072	2534	4032	2911	4132	3257								1190	1904	398			T-32	22,390	Gal.	Road Mix Bituminous Material, Sec. M-5.2, RC-2-3 or Sec. M-5.3, MC 4-5 or Sec. M-5.7, RT 8-9
																218	244	576	916	660	939	741								271	432	91			T-32	5088	Gal.	Seal Coat Bituminous Material, Sec. M-5.2, RC-3-4 or Sec. M-5.3, MC 4-5 or Sec. M-5.7, RT 9-10
																49	55	129	206	148	211	166								61	97	20			T-32	1142	C.Y.	No. 46 Aggregate for Road Mix
																4	4	9	15	11	15	12								5	7	2			T-32	84	C.Y.	No. 6 Aggregate for Choke
																7	8	19	30	21	30	24								9	14	3			T-32	165	C.Y.	No. 6 Aggregate for Seal Coat
																14							24	73	70									T-35	181	C.Y.	Asphaltic Concrete Surface Course, Type "C" (70-85)
			1700	5667	6104	6597	5667	6455	6017	5776	5691	5809	5667	5667	5578	2937								2135		2224	2130	2118	1791			1045	1445	T-71	88,220	S.Y.	9" Reinforced Portland Cement Concrete Pavement
1651																																	Special	1651	S.Y.	Mixing Calcium Chloride and Crushed Aggregate

GENERAL SUMMARY

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

LAKE COUNTY
LAK-44-7.22

CODE-Y060

SHEET NUMBER

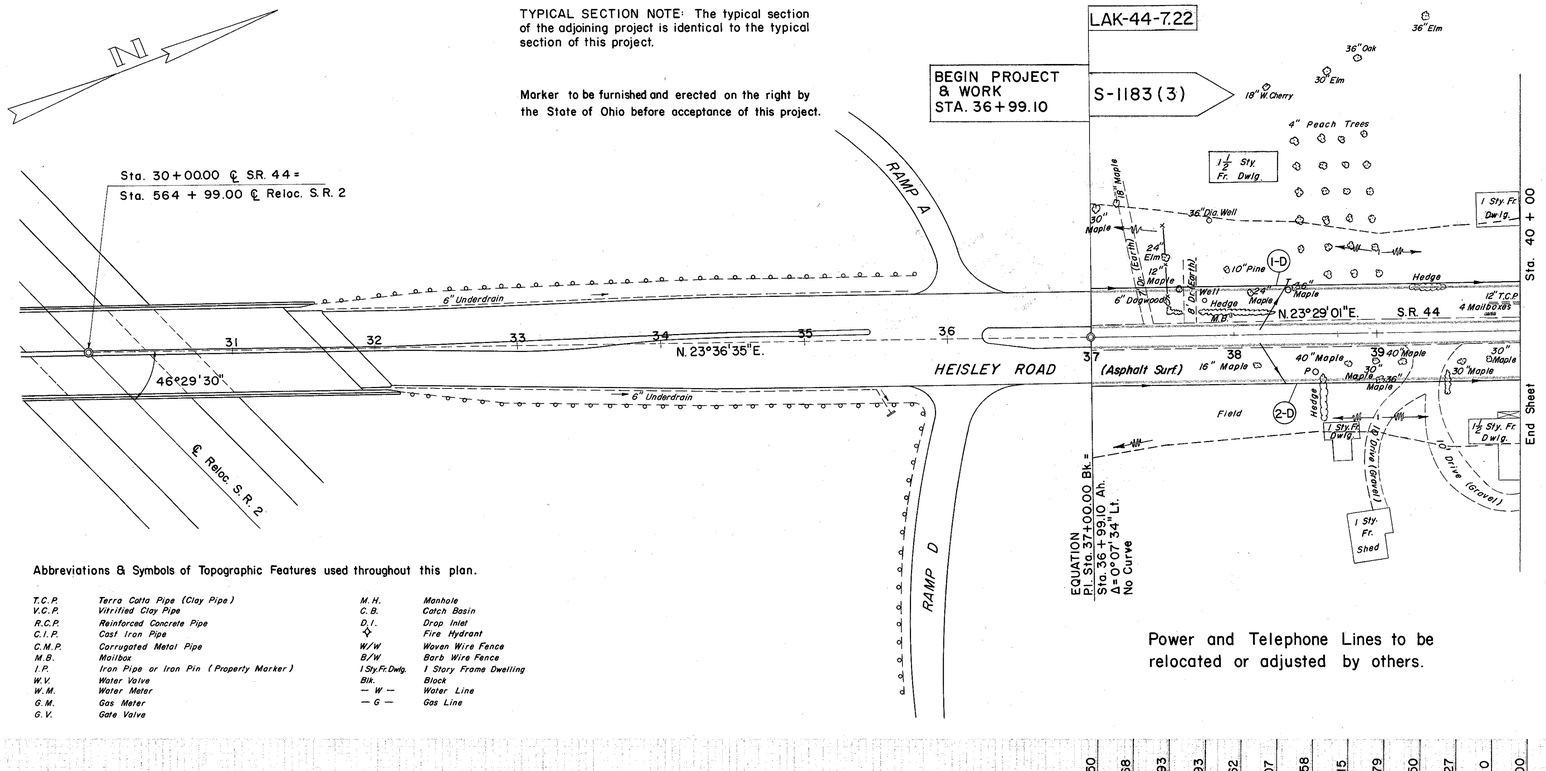
	22	23	25	26	27	28	124	125	141	165	188			ITEM NO.	QUAN.	UNIT	DESCRIPTIONS		
														NO FED. PARTICIPATION			WATER LINES	OWNED BY OHIO WATER SERVICE	LEASED BY OHIO WATER SERVICE
I-124.03		350												I-124.	350	L.F.	6" New Water Main, Cement Mortar Lined Pipe	350	
I-124.03	447	1008					265							I-124.	1720	L.F.	10" New Water Main, Cement Mortar Lined Pipe	1720	
I-124.03								417						I-124.	417	L.F.	16" New Water Main, Cement Mortar Lined Pipe		417
I-124.03										80				I-124.	80	L.F.	24" New Water Main with Dresser Style 60 Bell Joint Clamps	80	
I-124.03		1					1							I-124.	2	Ea.	10" Cast Iron Fittings (1/32 Bend) or an approved equal	2	
I-124.03		1												I-124.	1	Ea.	10" Cast Iron Fittings (1/8 Bend)	1	
I-124.03	1													I-124.	1	Ea.	10" Cast Iron Fittings (10" Tee)	1	
I-124.03	2							1						I-124.	3	Ea.	10" Cast Iron Fittings (Plugs or Caps)	3	
I-124.03	1													I-124.	1	Ea.	10" Cast Iron Fittings (10" X 8" Reducer)	1	
I-124.03		1												I-124.	1	Ea.	10" Cast Iron Fittings (10"X10"X6" Tee)	1	
I-124.03				4			1	2						I-124.	7	Ea.	16" Cast Iron Fittings (1/16 Bend)		7
I-124.03									1					I-124.	1	Ea.	16" Cast Iron Fittings (1/8 Bend)		1
I-124.03							1							I-124.	1	Ea.	16" Cast Iron Fittings (16"X16"X10" Tee)		1
I-124.03				4		3								I-124.	7	Ea.	16" Cast Iron Fittings (1/32 Bend)		7
I-124.03										4				I-124.	4	Ea.	24" Cast Iron Fittings (1/16 Bend)	4	
I-124.03										2				I-124.	2	Ea	24" Cast Iron Fittings (1/64 Bend)	2	
I-124.03	1													I-124.	1	Ea.	1" Valves and Boxes	1	
I-124.03	1													I-124.	1	Ea.	10" Valves and Boxes	1	
I-124.03	1													I-124.	1	Ea.	Air Release Valve	1	
I-124.04							10							I-124.	10	L.F.	10" Water Main Removed and Relaid	10	
I-124.04			604	988	1010	250	52	515	444					I-124.	3863	L.F.	16" Water Main Removed and Relaid		3863
I-124.06	2	1		1				1						I-124.	5	Ea.	Fire Hydrants Removed and Reset	3	2
I-124.07								456						I-124.	456	L.F.	New Service Branch 3/4"	456	
I-124.07	222													I-124.	222	L.F.	New Service Branch 1"	222	
I-124.08	2		1	2	1			2	2					I-124.	10	Ea.	Service Stops and Boxes Removed and Reset	2	8
I-124.08								1						I-124.	1	Ea.	Service Stops and Boxes Removed		1
I-124.11	2		1	2	1			2	2					I-124.	10	Ea.	Water Meters and Boxes Removed and Reset	2	8
I-124.11								1						I-124.	1	Ea.	Water Meters and Boxes Removed		1
I-8				1			2							I-8	3	Ea.	Valve Chamber as per plan.		3
												NORMAL PARTICIPATION	100% CITY PAINESVILLE				ELECTRICAL WORK		
S-25											1		1	S-25	1	Ea.	Pole, 40 Foot, Class 3		
S-25											5	2	3	S-25	5	Ea.	Pole, 35 Foot, Class 3		
S-25											1		1	S-25	1	Ea.	Pole, 30 Foot, Class 3		
S-25											9	3	6	S-25	9	Ea.	Remove Existing Pole		
S-25											5	2	3	S-25	5	Ea.	Single Cross Arm, 5'-9"		
S-25											5	2	3	S-25	5	Ea.	Double Cross Arm, 5'-9"		
S-25											2	1	1	S-25	2	Ea.	Anchor Guy, 5400#		
S-25											3	1	2	S-25	3	Ea	Anchor Guy, 2660#		
S-25											35		35	S-25	35	L.F.	Span Guy, 1500#		
S-25											21	6	15	S-25	21	Ea.	Pin Insulator, 12 K.V.		
S-25											24	18	6	S-25	24	Ea.	Dead End Insulator, 12 K.V.		
S-25											3485	1245	2240	S-25	3485	L.F.	Wire, #2 Bare Copper		
																	STRUCTURES OVER 20' SPAN		
																	See Sheet 190 for Estimated Quantities Bridge No. LAK-44-0795		
												Lump	Lump		Lump	Lump	Construction Layout Stakes		
															Lump	Lump	Maintaining Traffic		

REV. TO PROJECT	STATE	PROJECT		20
2	OHIO			212

LAKE COUNTY
LAK-44-7.22

TYPICAL SECTION NOTE: The typical section of the adjoining project is identical to the typical section of this project.

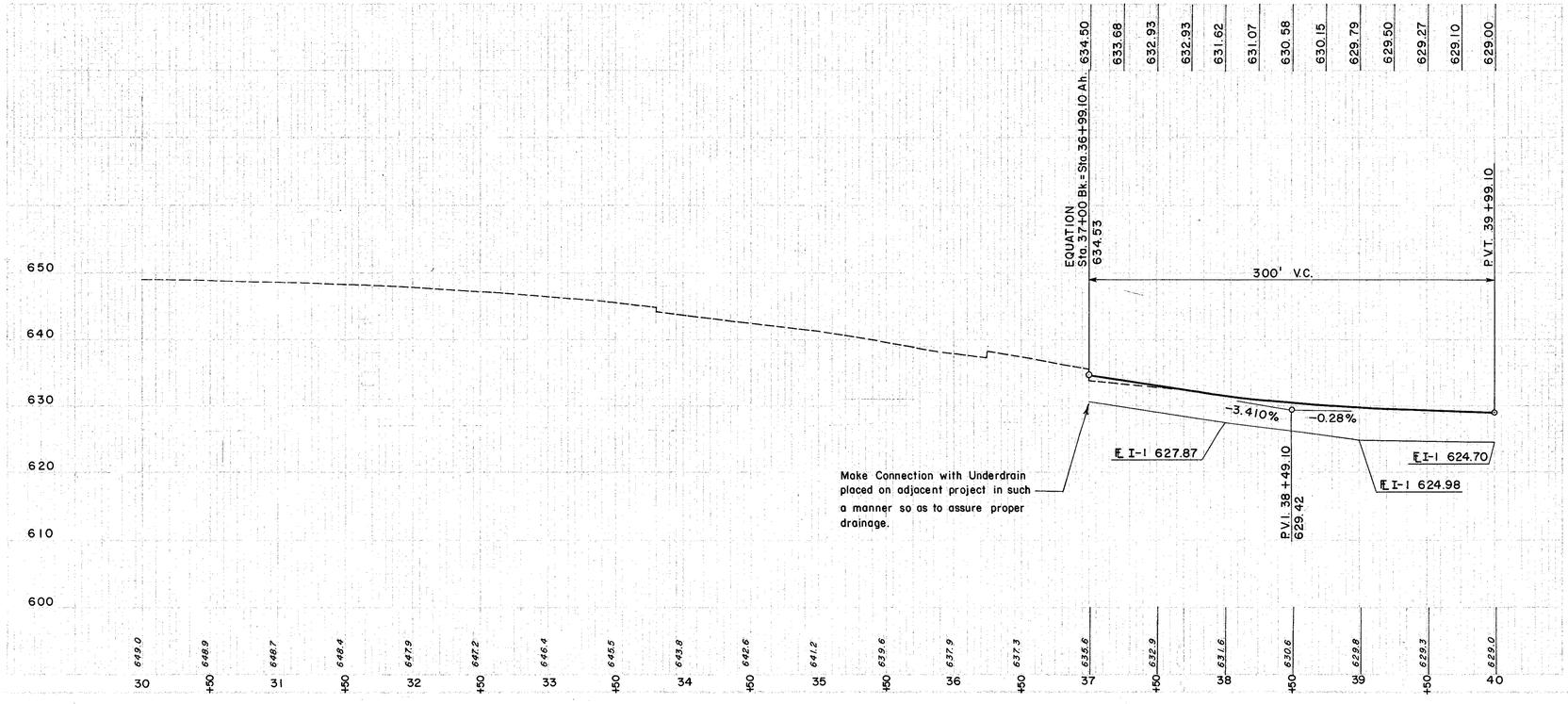
Marker to be furnished and erected on the right by the State of Ohio before acceptance of this project.



Power and Telephone Lines to be relocated or adjusted by others.

Abbreviations & Symbols of Topographic Features used throughout this plan.

T.C.P.	Terra Cotta Pipe (Clay Pipe)	M.H.	Manhole
V.C.P.	Vitrified Clay Pipe	C.B.	Catch Basin
R.C.P.	Reinforced Concrete Pipe	D.I.	Drop Inlet
C.I.P.	Cast Iron Pipe		Fire Hydrant
C.M.P.	Corrugated Metal Pipe	W/W	Woven Wire Fence
M.B.	Mailbox	B/W	Barb Wire Fence
I.P.	Iron Pipe or Iron Pin (Property Marker)	1 Sty. Fr. Dwlg.	1 Story Frame Dwelling
W.V.	Water Valve	Blk.	Block
W.M.	Water Meter	— W —	Water Line
G.M.	Gas Meter	— G —	Gas Line
G.V.	Gate Valve		



UTILITIES

Lake County (Water)
Office of the Sanitary Engineer
Erie Street Office Building
Painesville, Ohio

The Cleveland Electric Illuminating Co.
4737 Main Avenue
Ashtabula, Ohio

The Ohio Bell Telephone Co.
820 West Superior Avenue
Cleveland 13, Ohio

The East Ohio Gas Co.
Cleveland, Ohio

City of Painesville
7 Richmond St.
Painesville, Ohio

Ohio Water Service
235 State Street
Struthers, Ohio

Ⓓ DRAINAGE

REF NO.	STATION FROM	STATION TO	SIDE	I-1 6" PIPE CLASS I-3 (DEEP) L.F.	I-5 6" 60° WYE EA.
I-D	37+00	40+00	LT.	332	1
2-D	37+00	40+00	RT.	332	1
TOTAL				664	2

Ⓟ PAVEMENT

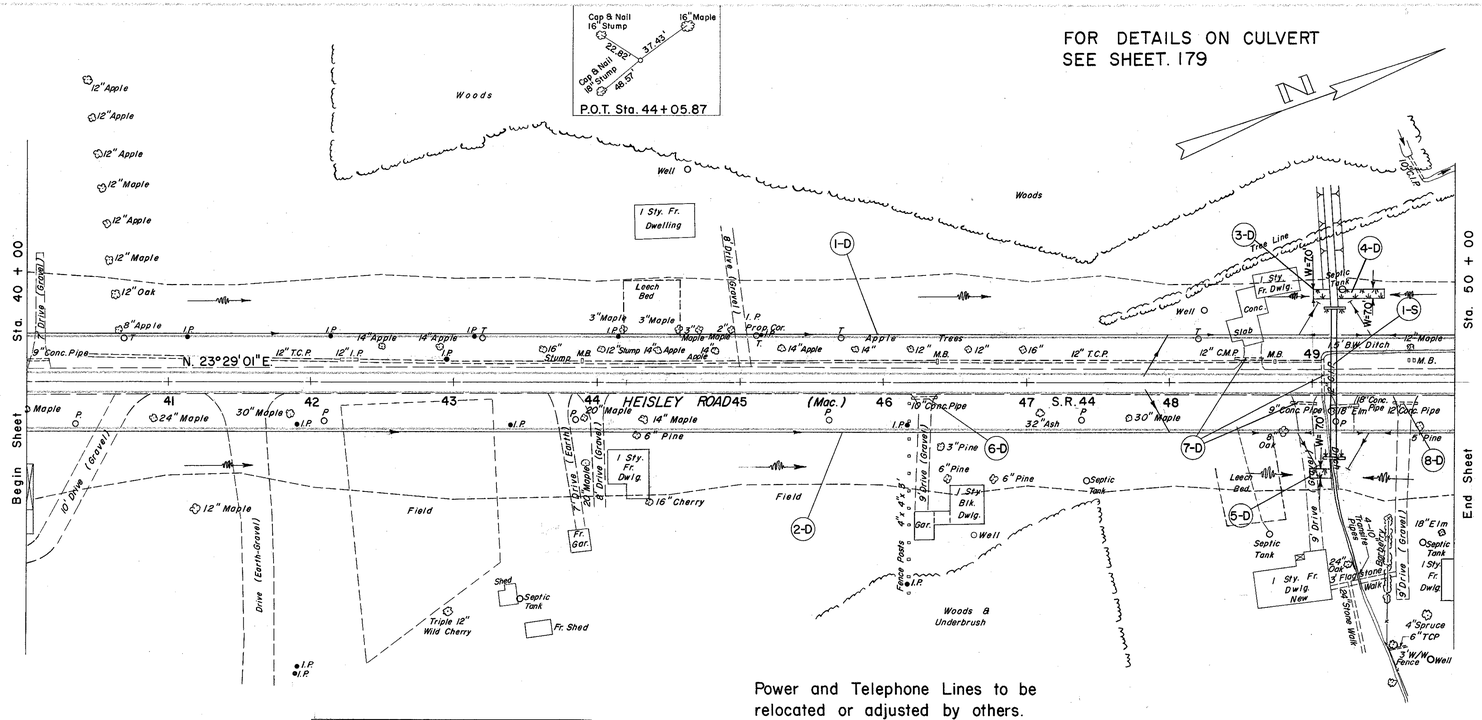
REF NO.	STATION FROM	STATION TO	SIDE	B-21 WATER-PROOFED AGGR. BASE COURSE C.Y.	I-12 CONC. CURB TYPE 2A L.F.	I-18 STAB. CRUSH. AGGR. C.Y.	I-22 SUB-BASE S.Y.	T-31 BIT. MAT'L. GALS.	T-31 #6 AGGR. C.Y.	T-71 REINF. PORT. CEM. CONC. PAVT. 9" S.Y.
	37+00	40+00	—	44	600	76	382	133	4.3	1700

EXCAVATION		1,980 C.Y.
EMBANKMENT		162 C.Y.
EMBANKMENT	20	194 C.Y.

S.R.44 STA. 30+00 TO STA. 40+00

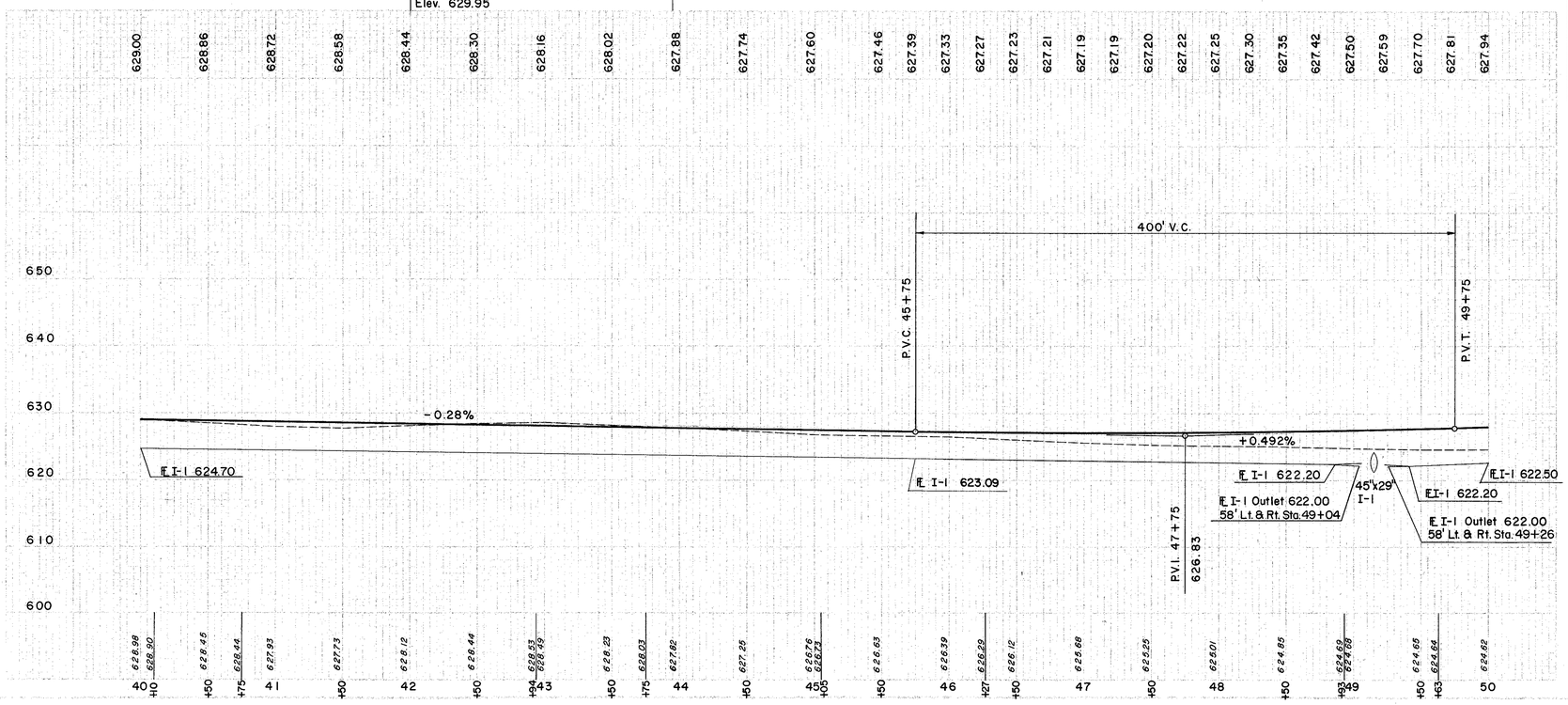
FOR DETAILS ON CULVERT SEE SHEET. 179

FOR DETAILS & QUANTITIES ON CHANNEL SEE SHEET 102



Power and Telephone Lines to be relocated or adjusted by others.

B.M. #1 Lag Bolt W. Side of Triple 12" Cherry
150' Rt. Sta. 43+00
Elev. 629.95



(D) DRAINAGE

REF. NO.	STATION FROM	STATION TO	SIDE	I-1 6" PIPE CLASS I-3 (DEEP)	I-1 8" PIPE CLASS F-1	I-5 6" 60° WYE	L-10 SODDING	E-12 PIPE REMOVED 15" & UNDER
				L.F.		EA.	S.Y.	L.F.
1-D	40+00	50+00	LT.	1062	20	3		
2-D	40+00	50+00	RT.	1062	20	3		
3-D	49+00	49+13	LT.				10	
4-D	49+15	49+50	LT.				27	
5-D	49+00	49+14	RT.				11	
6-D	46+20	46+38	RT.					18
7-D	48+45	49+08	—					64
8-D	49+57	49+75	RT.					18
TOTAL				2124	40	6	48	100

(S) STRUCTURES

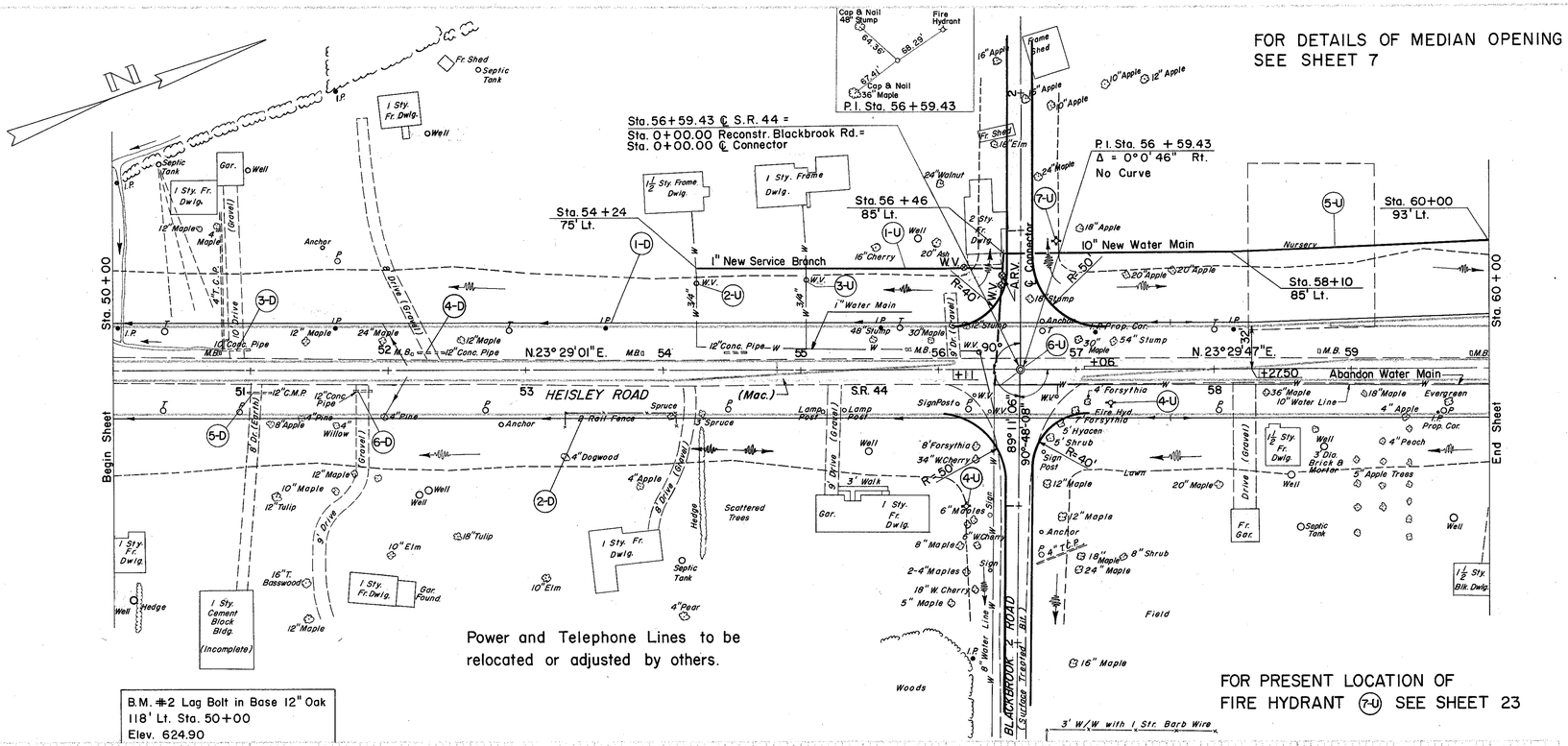
REF. NO.	STATION	I-1 45" X 29" PIPE CLASS G-1 M-6.7(b)	E-3 CHANNEL EXC.	L-10 SODDING	I-2 MASONRY
		L.F.	C.Y.	S.Y.	C.Y.
1-S	49+15	106	2	7	14.0

(P) PAVEMENT

REF. NO.	STATION FROM	STATION TO	SIDE	B-21 WATER-PROOFED AGGR. BASE COURSE	I-12 CONC. CURB TYPE 2A	I-18 STAB. CRUSHED AGGR.	I-22 SUB-BASE	T-31 BIT. MAT'L.	T-31 #6 AGGR.	T-71 REINF. PORT. CEM. CONC. PAVT. 9"
				C.Y.	L.F.	C.Y.	C.Y.	GAL.	C.Y.	S.Y.
1-P	40+00	50+00	—	148	2000	255	1274	444	14.2	5667

EXCAVATION	3,592 C.Y.
EMBANKMENT	2,786 C.Y.
EMBANKMENT 20	3,343 C.Y.

S.R. 44 STA. 40+00 TO STA. 50+00



LAKE COUNTY
LAK-44-7.22

Ⓓ DRAINAGE

REF. NO.	STATION		SIDE	E-12	I-1	I-5
				PIPE REMOVED 15" & UNDER	6" PIPE CLASS I-3 (DEEP)	6" 60° WYE
	FROM	TO		L.F.	L.F.	Ea.
1-D	50+00	60+00	LT.		1032	1
2-D	50+00	60+00	RT.		1032	1
3-D	50+80	51+00	LT.	20		
4-D	52+22	52+42	LT.	20		
5-D	50+98	51+16	RT.	18		
6-D	51+76	51+90	RT.	14		
TOTAL				72	2064	2

Ⓟ PAVEMENT

REF. NO.	STATION		SIDE	B-21	I-12	I-18	I-21	I-22	T-31		T-71
				WATER-PROOFED AGGR. BASE COURSE	CONC. CURB TYPE 2A	STAB. CRUSHED AGGR.	PORT. CEM. CONC. MEDIAN TYPE 1	SUB-BASE	BIT. MAT'L.	#6 AGGR.	REINF. PORT. CEM. CONC. PAVT. 9"
	FROM	TO		C.Y.	L.F.	C.Y.	S.Y.	C.Y.	GAL.	C.Y.	S.Y.
1-D	50+00	60+00	—	127	1818	218	156	1430	380	12.2	6104

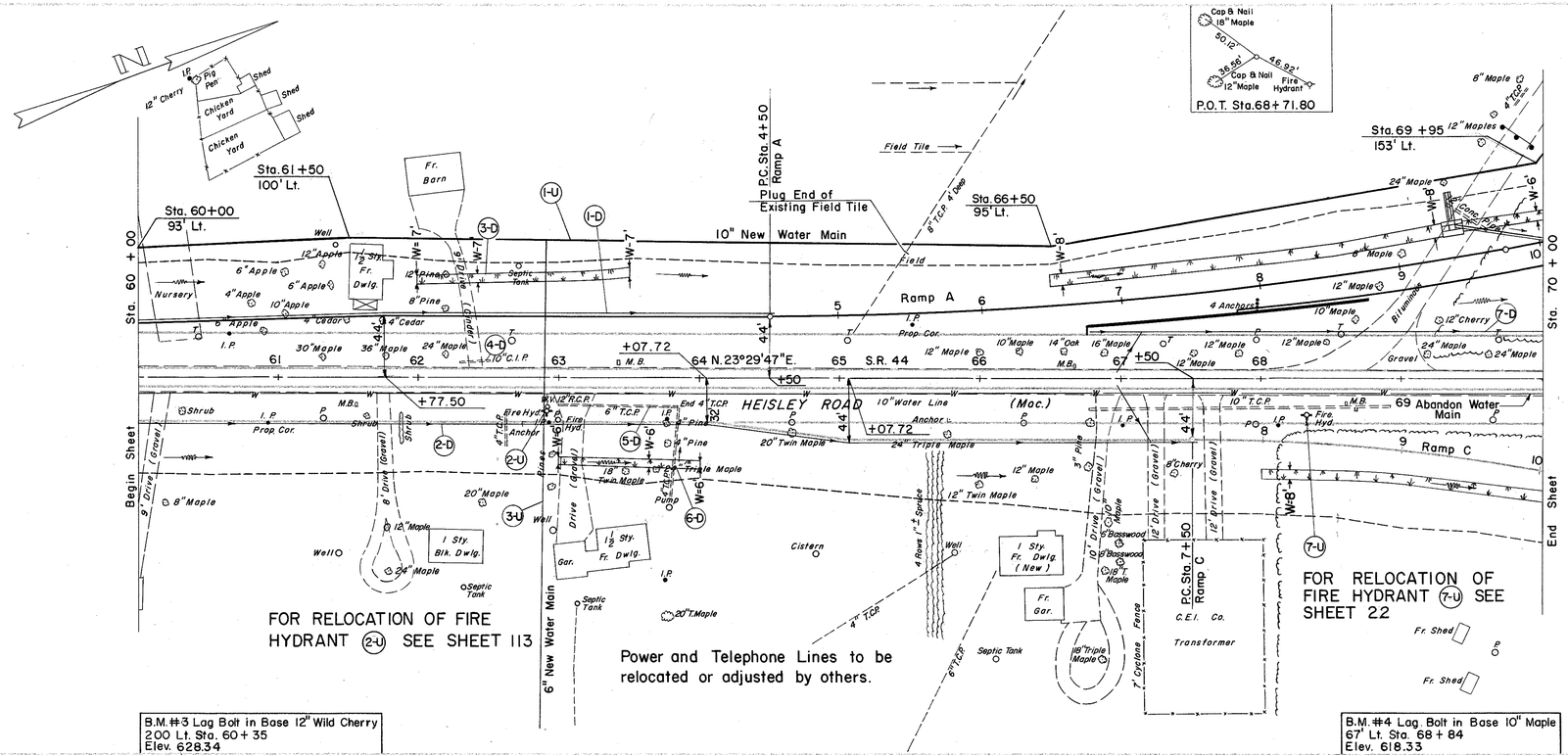
Ⓤ UTILITIES

REF. NO.	STATION		SIDE	I-124.07	I-124.03							I-124.06	I-124.08	I-124.11
				1" NEW SERVICE BRANCHES	10" NEW WATER MAIN	VALVES & BOXES		AIR RELEASE VALVES	CAST IRON FITTINGS			FIRE HYDRANTS REMOVED & RESET	SERVICE STOPS & BOXES REMOVED & RESET	WATER METERS & BOXES REMOVED & RESET
						1"	10"		10"x8" RED.	10" TEE	10" PLUGS OR CAPS			
	FROM	TO		L.F.		EACH								
1-U	54+24	56+46	LT.	222		1								
2-U	54+24		LT.										1	1
3-U	55+04		LT.										1	1
4-U	56+20		RT.									1		
5-U	56+45	60+00	LT.		447		1	1	1	1	1			
6-U	56+45		RT.								1			
7-U	56+86		LT.									1		
TOTAL				222	447	1	1	1	1	1	2	2	2	2

EXCAVATION	1,229 C.Y.
EMBANKMENT	4,111 C.Y.
EMBANKMENT + 20%	4,933 C.Y.

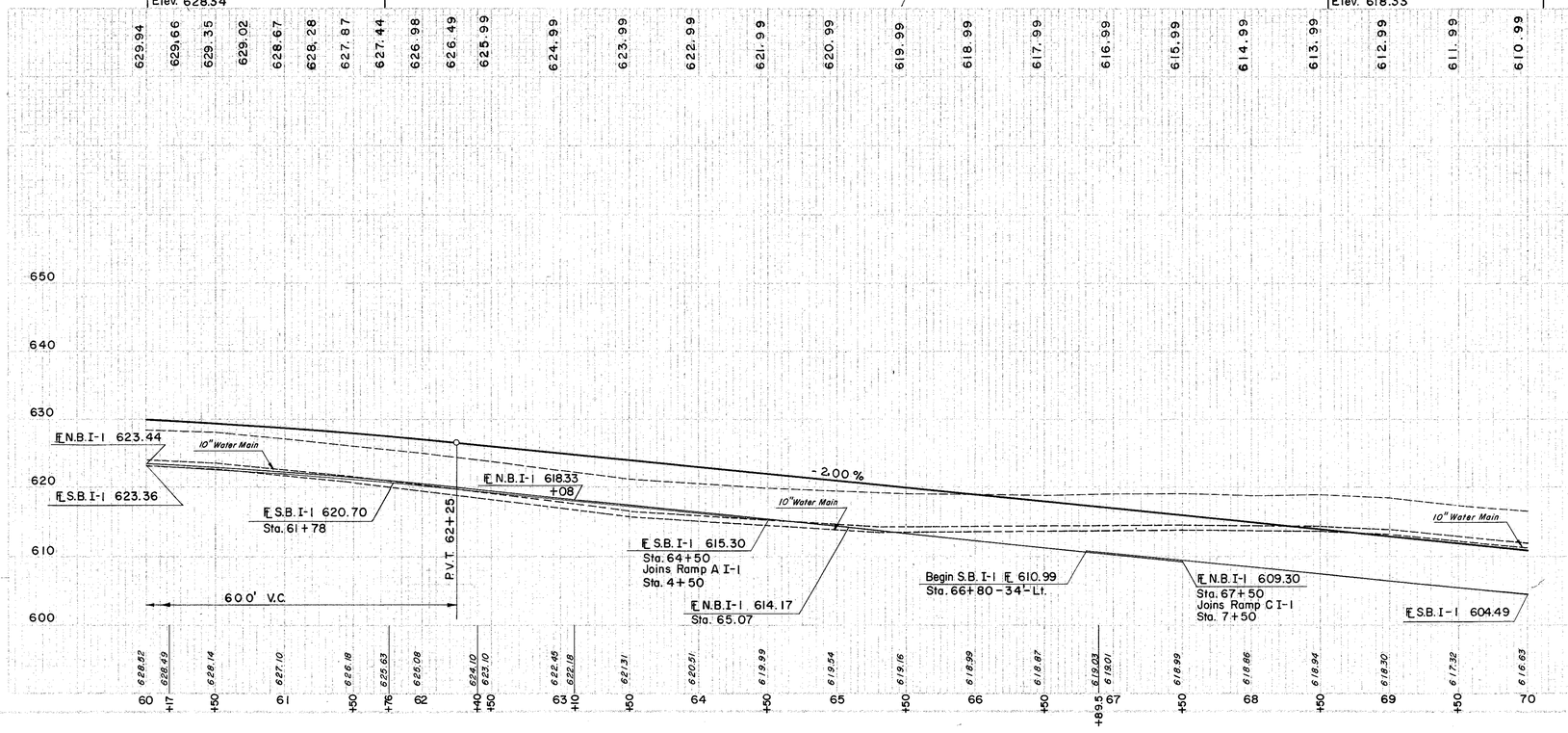
S. R. 44 STA. 50 + 00 TO STA. 60 + 00

LAKE COUNTY
LAK-44-7.22



B.M.#3 Lag Bolt in Base 12" Wild Cherry
200 Lt. Sta. 60+35
Elev. 628.34

B.M.#4 Lag Bolt in Base 10" Maple
67' Lt. Sta. 68+84
Elev. 618.33



(D) DRAINAGE

REF NO.	STATION FROM	STATION TO	SIDE	E-12 PIPE REMOVED 15" & UNDER L.F.	I-1 6" PIPE CLASS I-3 (DEEP) L.F.	I-5 6" 60° WYE EA.	L-10 SODDING S.Y.
1-D	60+00	64+50	LT.		450		
2-D	60+00	67+50	RT.		796	1	
3-D	62+00	63+50	LT.				117
4-D	62+30	62+52	LT.	22			
5-D	63+00	63+86	RT.	86			
6-D	63+00	64+00	RT.				67
7-D	66+80	70+00	LT.		352	1	
TOTAL				108	1598	2	184

(P) PAVEMENT

REF NO.	STATION FROM	STATION TO	SIDE	B-21 WATER-PROOFED AGGR. BASE COURSE C.Y.	I-12 CONC. CURB TYPE 2A L.F.	I-18 STAB. CRUSHED AGGR. C.Y.	I-22 SUB-BASE C.Y.	T-31 BIT. MAT'L. GAL	T-31 #6 AGGR. C.Y.	T-71 REINF. PORT. CEM. CONC. PAVT. 9" S.Y.
1-P	60+00	70+00	—	100	2000	172	1334	300	9.6	6597

(U) UTILITIES

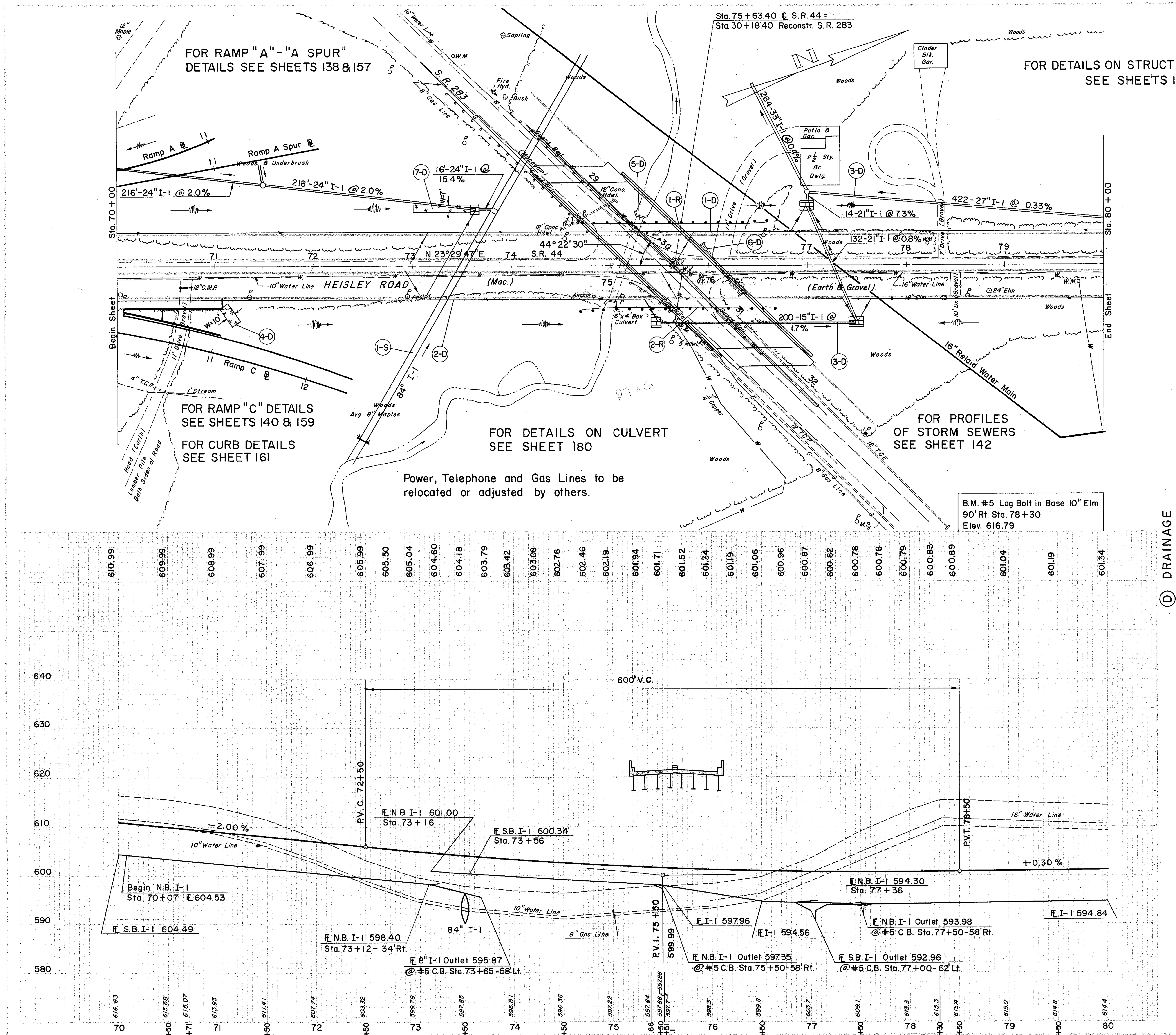
REF NO.	STATION FROM	STATION TO	SIDE	I-124.03 10" NEW WATER MAIN L.F.	10" CAST IRON FITTINGS 1/8 BEND EA.	1/32 BEND EA.	10"X10"X6" TEE EA.	6" NEW WATER MAIN L.F.	I-124.06 FIRE HYDRANTS REMOVED & RESET EA.
1-U	60+00	70+00	LT.	1008	1	1	1		
2-U	62+90		RT.						1
3-U	62+90		—					350	

EXCAVATION		14,014 C.Y.
EMBANKMENT		2,726 C.Y.
SHRINKAGE	20	3,271 C.Y.

S.R. 44 STA. 60 + 00 TO STA. 70 + 00

2 OHIO

LAKE COUNTY
LAK-44-7.22



(D) DRAINAGE

REF. NO.	STATION FROM	STATION TO	SIDE	E-12 PIPE REMOVED 15" & UNDER (L.F.)	I-1 PIPE CLASS B-1 21" (L.F.)	I-1 PIPE CLASS B-1 27" (L.F.)	I-1 PIPE CLASS E-1 15" (L.F.)	I-1 PIPE CLASS E-1 21" (L.F.)	I-1 8" PIPE CLASS B-1 (L.F.)	I-1 8" PIPE CLASS F-1 (L.F.)	6" PIPE CLASS I-3 SHALLOW (L.F.)	6" PIPE CLASS I-3 DEEP (L.F.)	I-5 6" 60° WYE (EA.)	I-5 6" 60° BEND (EA.)	8"x6" INCR. (EA.)	8"x8"x6" 60° WYE (EA.)	I-8 STD. #5 CATCH BASIN (EA.)	I-8 STD. #1 M.H. (EA.)	L-10 SODDING (S.Y.)	S-24 REMOVAL OF EXIST. STRUCT. (LUMP)
1-D	70+00	80+00	LT.						94	30	196	898	4			1				
2-D	70+00	80+00	RT.							30	238	856	4	2	1					
3-D	75+50	81+20	-		132	422	200	14									3	1		
4-D	71+10		RT.																24	
5-D	75+15		-																	Lump
6-D	76+10		-	64																
7-D	73+00	73+58	LT.																45	
TOTAL				64	132	422	200	14	94	60	434	1754	8	2	1	1	3	1	69	LUMP

(S) STRUCTURES

REF. NO.	STATION FROM	STATION TO	SIDE	E-3 CHANNEL EXC. (C.Y.)	I-5 84"x24" 60° WYE M-6.6(b) (EA.)	I-10 DUMPED ROCK CHANNEL PROTECT. (C.Y.)	L-10 SODDING (S.Y.)	I-2 MASONRY (C.Y.)	I-1 84" PIPE CLASS A-1 M-106.6(d) (L.F.)	I-1 84" PIPE CLASS A-1 M-6.6(b) (L.F.)
1-S	73+50		-	50	1	30	11	7.50	286	272

(P) PAVEMENT

REF. NO.	STATION FROM	STATION TO	SIDE	B-21 WATER-PROOFED AGGR. BASE COURSE (C.Y.)	I-12 CONC. CURB TYPE 2A (L.F.)	I-18 STAB. CRUSHED AGGR. (C.Y.)	I-22 SUB-BASE (C.Y.)	T-31 BIT. MAT'L. (GAL.)	T-31 #6 AGGR. (C.Y.)	T-71 REINF. PORT. CEM. CONC. PAVT. 9" (S.Y.)
1-P	70+00	80+00	-	140	2000	241	1258	421	13.5	5667

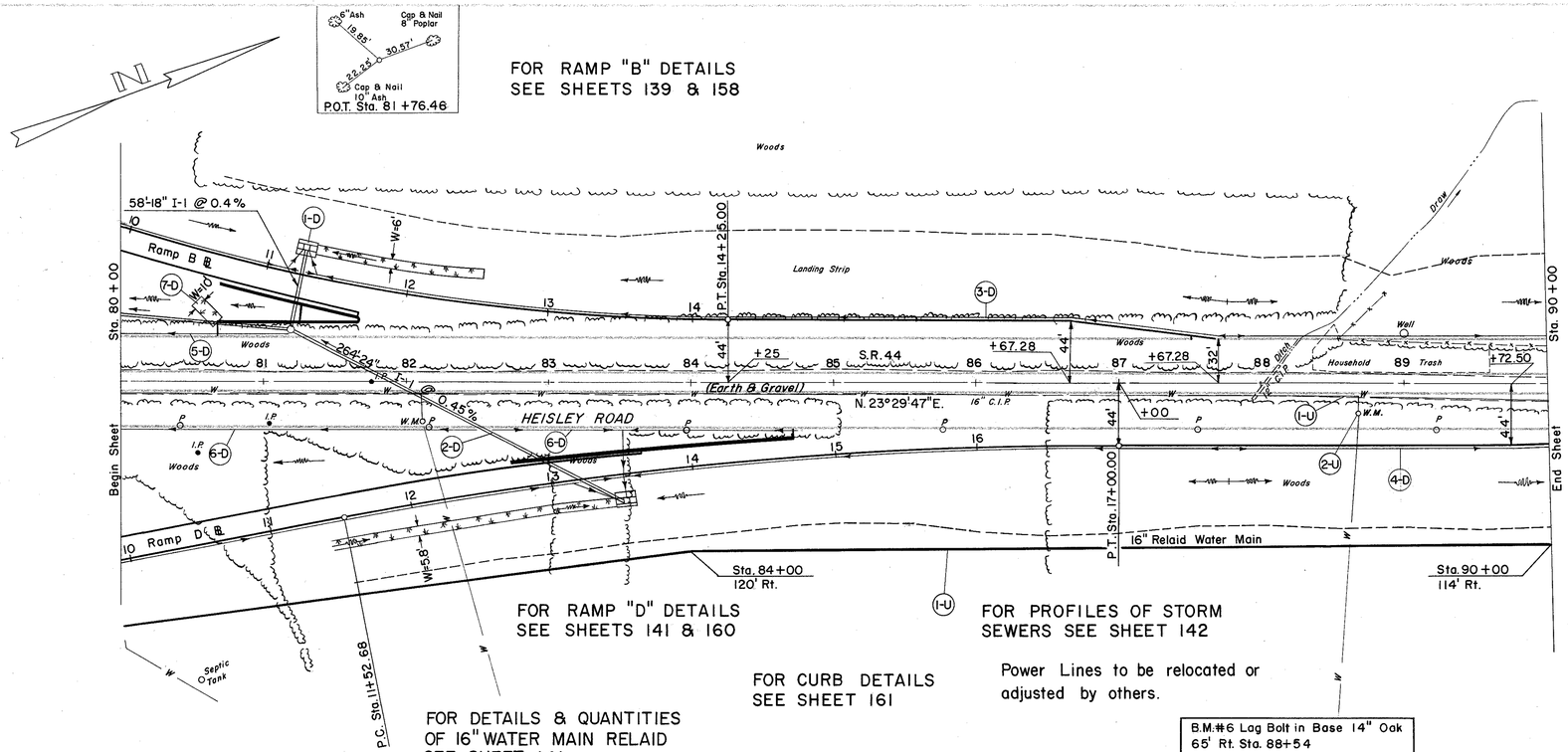
(R) ROADWAY

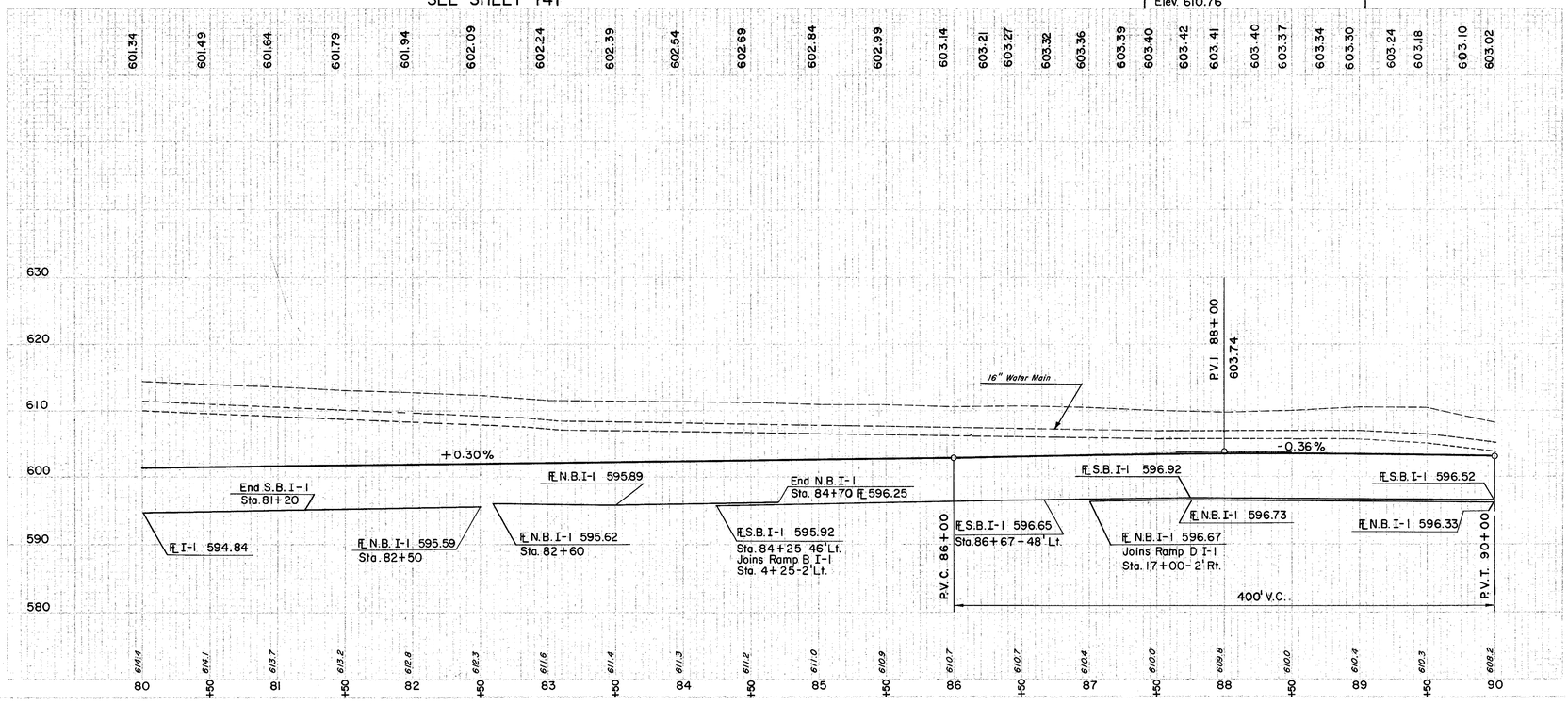
REF. NO.	STATION FROM	STATION TO	SIDE	I-15 GUARD RAIL STEEL BEAM, STD TYPE (DEEP) (L.F.)
1-R	74+61	76+61	LT.	200.0
2-R	74+70	76+70	RT.	200.0
TOTAL				400.0

EXCAVATION	=	36,436 C.Y.
EMBANKMENT	=	22,103 C.Y.
EMBANKMENT + 20%	=	26,524 C.Y.

S.R. 44 STA. 70 + 00 TO STA. 80 + 00

LAKE COUNTY
LAK-44-7.22





Ⓓ DRAINAGE

REF NO.	STATION FROM	STATION TO	SIDE	I-1 PIPE CLASS B-1 18"-8" LIN. FT.	I-1 24" PIPE CLASS B-1 LIN. FT.	I-1 8" PIPE CLASS F-1 FT.	I-1 6" PIPE CLASS I-3 (DEEP) FT.	I-5 6"X 8" INCR. TEE E.A.	I-5 6"X 8" DOUBLE TEE E.A.	I-8 STD. #5 CATCH BASIN E.A.	I-8 STD. #1 MANHOLE E.A.	I-10 SODDING S.Y.
1-D	81+20	83+50	—	58	264					1	1	33
2-D	81+20	83+50	—						1	1		
3-D	84+25	90+00	LT			576						
4-D	87+00	90+00	RT			300						
5-D	80+00	81+20	LT			120						
6-D	80+00	84+70	RT		38	470		1			1	
7-D	80+60	TOTAL	LT	58	264	10	1466	1				33

Ⓟ PAVEMENT

REF NO.	STATION FROM	STATION TO	SIDE	B-21 WATER PROOFED AGGR. BASE COURSE C.Y.	I-12 CONC. CURB TYPE 2A L.F.	I-18 8" STAB. CRUSHED AGGR. C.Y.	I-22 SUB-BASE C.Y.	T-31 BIT. MAT'L. GAL.	T-31 #6 AGGR. C.Y.	T-71 REINF. CONC. PAVT. 9" CEM. CONC. PAVT. 9" S.Y.
1-P	80+00	90+00	—	92	2000	158	1295	276	8.8	6465

Ⓤ UTILITIES

I-124.04 I-124.08 I-124.11

REF NO.	STATION FROM	STATION TO	SIDE	16" WATER MAIN L.F.	SERVICE STOPS EA.	METERS & BOXES REMOVED EA.	METERS & BOXES RELAID & RESET EA.
1-U	84+00	90+00	RT.	604			
2-U	88+70		RT.		1	1	1

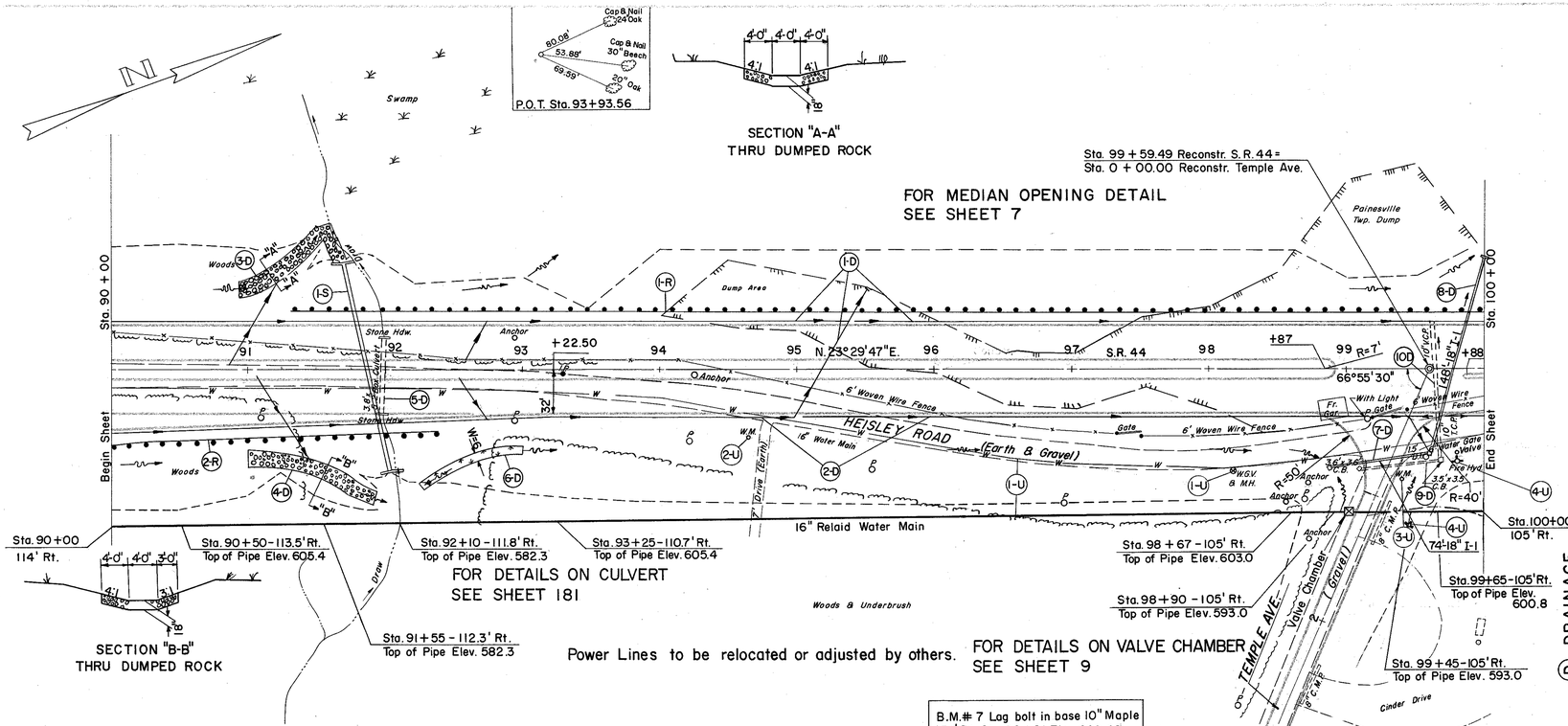
EXCAVATION	69,445 C.Y.
EMBANKMENT	0 C.Y.
SHRINKAGE 20	0 C.Y.

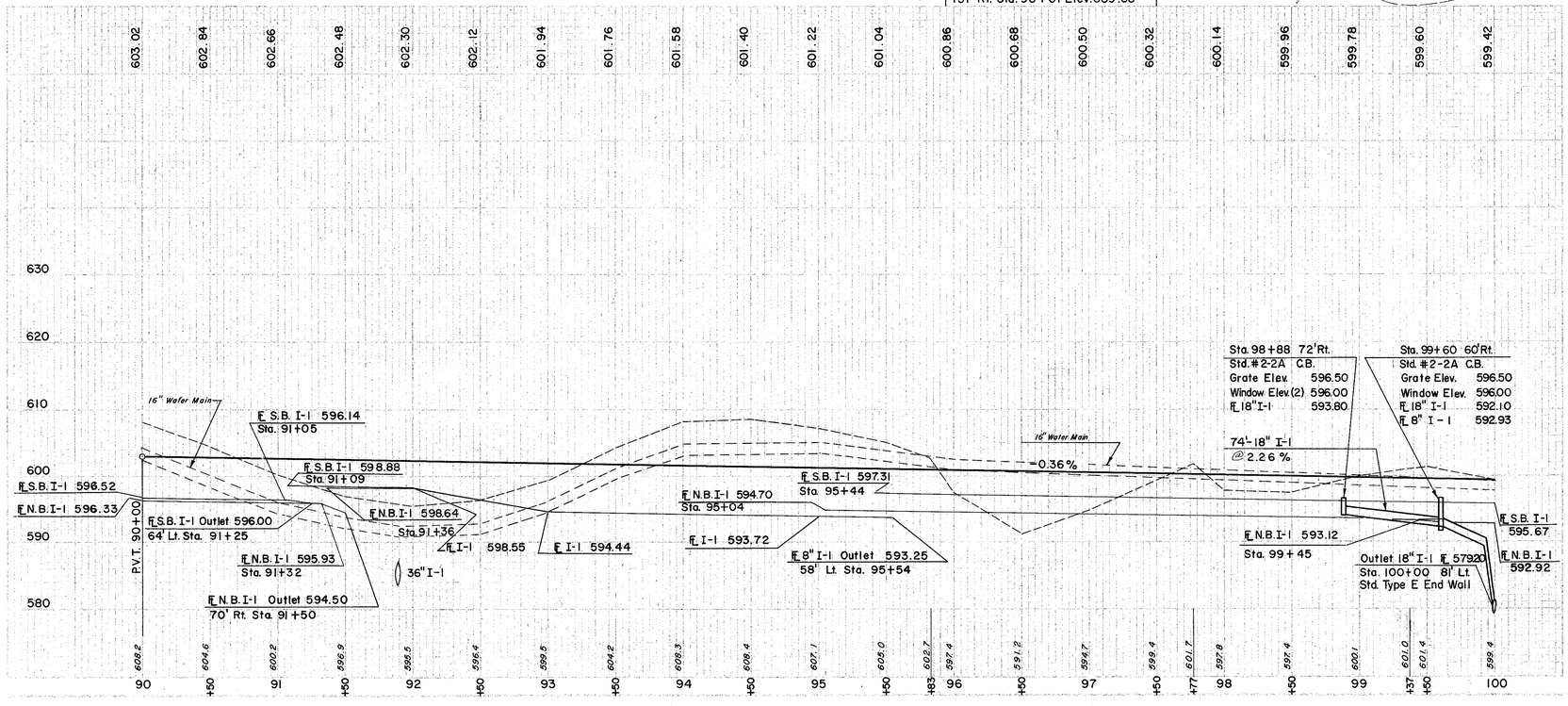
S.R.44 STA. 80 + 00 TO STA. 90 + 00

FED. AID DIVISION	STATE	PROJECT	
2	OHIO		

26
212

LAKE COUNTY
LAK-44-7.22





(D) DRAINAGE

REF. NO.	STATION FROM	STATION TO	S-24 REMOVAL OF EXISTING STRUCT. LUMP	I-2 MASONRY C.Y.	L-10 SODDING S.Y.	I-10 DUMPED ROCK CHANNEL PROTECT. C.Y.	I-8 STD. #2-2A CATCH BASIN EA.	I-5 6" BEND 60° EA.	I-5 6"x8" WYE 60° EA.	I-5 6"x8" INCR-EASER EA.	I-5 6" WYE 60° EA.	I-5 18" 25° BEND M-6.4(c) EA.	I-1 6" PIPE CLASS I-3 SHALLOW L.F.	I-1 6" PIPE CLASS I-3 DEEP L.F.	I-1 8" PIPE CLASS F-1 L.F.	I-1 18" PIPE CLASS D-1 M-6.4(c) L.F.	I-1 18" PIPE CLASS B-1 L.F.	E-12 PIPE REMOVAL 15" & UNDER L.F.	B-21 WATER-PROOFED AGGR. BASE COURSE C.Y.	I-12 CONC. CURB TYPE 2A L.F.	I-18 STAB. CRUSHED AGGR. C.Y.	I-21 PORT. CEM. CONC. MEDIAN TYPE I S.Y.	I-22 SUB-BASE C.Y.	T-71 REINF PORT. CEM. CONC. PAVT. 9" S.Y.	T-31 BIT. MAT'L. AGGR. # 6 GAL.	T-31 BIT. MAT'L. AGGR. # 6 C.Y.
1-D	90+00	100+00											547													
2-D	90+00	100+00											64													
3-D	91+00	91+50												533	20											
4-D	91+00	91+95												1,032	20											
5-D	91+99	92+00																								
6-D	92+25	93+00																								
7-D	99+00	99+60															74									
8-D	99+60	100+00															116									
9-D	99+10	99+70										2				32		58								
10-D	99+64	99+70																100								
	TOTAL		LUMP	0.30	53	110	2	1	1	1	1	2	611	1565	40	32	98	158	190	1822	244	3.3	1704	6017	426	13.6

(P) PAVEMENT

(S) STRUCTURES

REF. NO.	STATION FROM	STATION TO	I-1 36" PIPE CLASS A-1 M-6.6(c) C.Y.	E-3 CHANNEL EXC. C.Y.	I-10 DUMPED ROCK CHANNEL PROTECT. C.Y.	L-10 SODDING S.Y.	I-2 MASONRY C.Y.
1-S	91+88		—	156	30	6	15.2

(R) ROADWAY

REF. NO.	STATION FROM	STATION TO	I-5 GUARD RAIL STEEL BEAM STD. TYPE (DEEP) L.F.
1-R	91+34	99+07.5	862.5
2-R	90+00	92+37.5	237.5
		TOTAL	1100.0

(U) UTILITIES

REF. NO.	STATION FROM	STATION TO	T-124.03 16" CAST IRON FITTINGS 1/16 1/32 BEND/BEND EA.	T-124.04 16" WATER MAIN REMOVED & RELAID L.F.	T-124.06 FIRE HYDRANTS REMOVED & RESET EA.	T-124.08 SERVICE STOPS & BOXES REMOVED & RESET EA.	T-124.11 WATER METERS REMOVED & RESET EA.	I-8 SPECIAL VALVE CHAMBER EA.
1-U	90+00	100+00	4	988				
2-U	94+65				1	1	1	
3-U	99+40					1	1	
4-U	99+45				1	2	2	1
	TOTAL		4	988	2	4	4	1

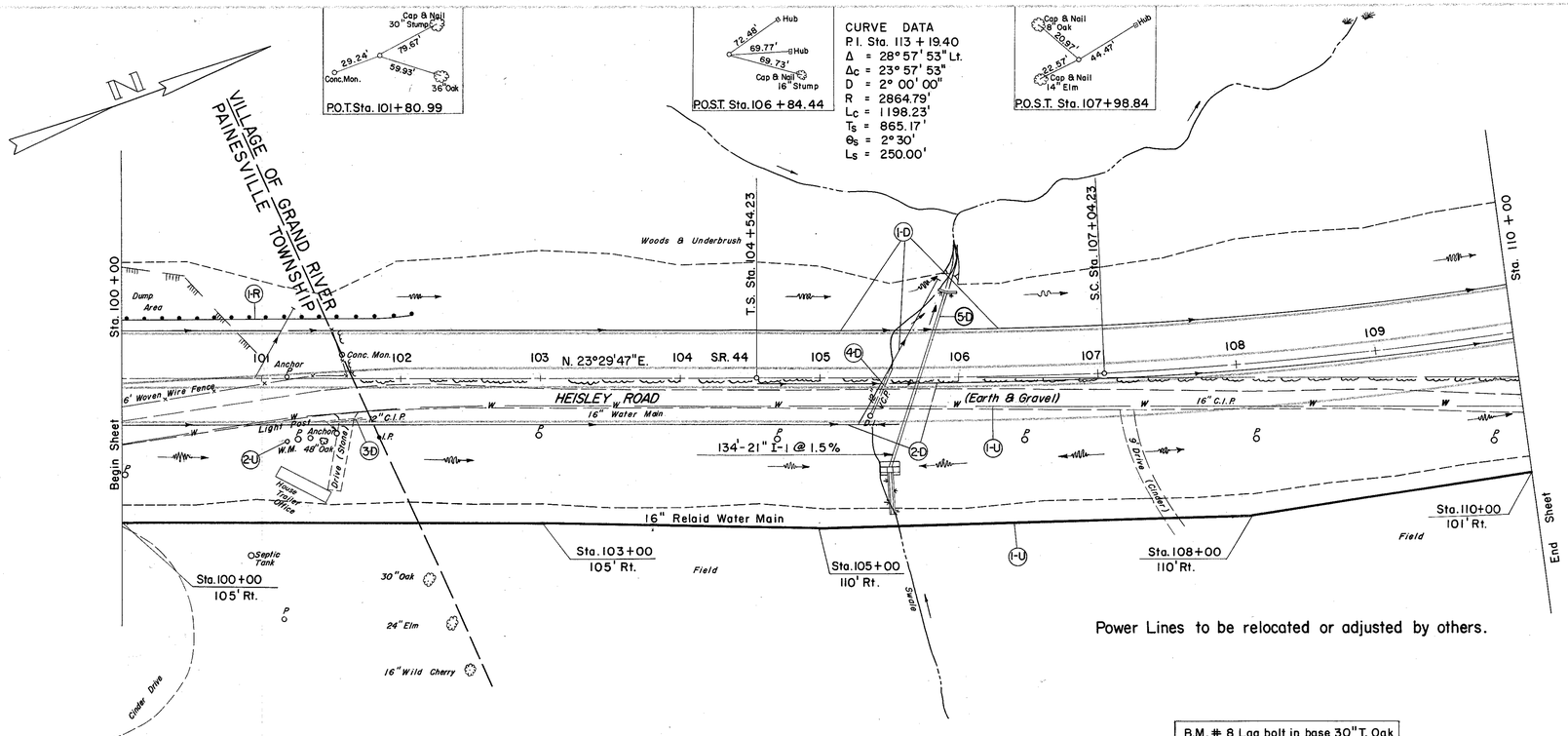
EXCAVATION	21,033 C.Y.
EMBANKMENT	19,275 C.Y.
EMBANKMENT - 20%	23,130 C.Y.

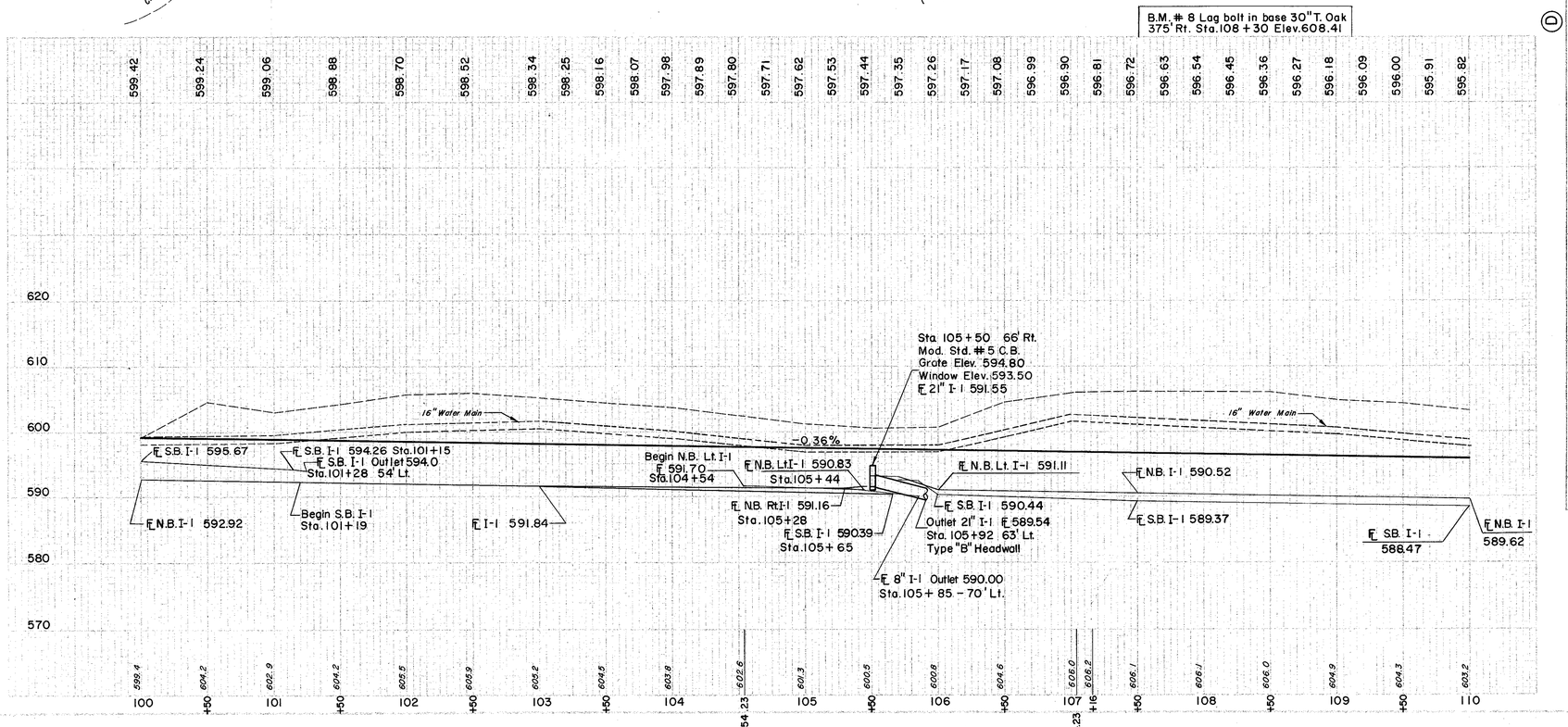
S.R. 44 STA. 90 + 00 TO STA. 100 + 00

FED. AID DIVISION	STATE	PROJECT		
2	OHIO			

27
212

LAKE COUNTY
LAK-44-7.22





Ⓓ DRAINAGE

REF NO.	STATION FROM	STATION TO	SIDE	I-5 6" 6.0° WYE	I-5 6" x 8" INCR-EASER	I-5 6"x8"x8" 60° WYE	I-8 MOD. STD. #5 CATCH BASIN	I-14 TYPE I PAVED GUTTER	I-2 MASONRY	L-10 SODDING
				EA.	EA.	EA.	EA.	L.F.	C.Y.	S.Y.
1-D	100+00	110+00	LT.	1	1	2				
2-D	100+00	110+00	RT.	1				1044		
3-D	101+50	101+75	RT.					1100		
4-D	105+37	105+52	—				1	32	3.5	12
5-D	105+50	105+90	—				1	32	3.5	12
	TOTAL			1	1	2	1	2144	7	24

Ⓔ DRAINAGE

REF NO.	STATION FROM	STATION TO	SIDE	E-12 PIPE REMOVAL 15" & UNDER	21" PIPE CLASS B-1	I-1 8" PIPE CLASS B-1	I-1 8" PIPE CLASS F-1	I-1 6" PIPE CLASS I-3 (DEEP)
				L.F.	L.F.	L.F.	L.F.	L.F.
1-D	100+00	110+00	LT.			110	20	1044
2-D	100+00	110+00	RT.					1100
3-D	101+50	101+75	RT.	25				
4-D	105+37	105+52	—	37	134			
5-D	105+50	105+90	—	62	134	110	20	2144
	TOTAL							

Ⓡ ROADWAY

REF NO.	STATION FROM	STATION TO	SIDE	I-15 GUARD RAIL STEEL BEAM TYPE (DEEP)
				L.F.
1-R	99+97.5	102+10	LT.	212.5

Ⓤ UTILITIES

REF NO.	STATION FROM	STATION TO	SIDE	I-124-04 I-124-08 16" WATER MAIN REMOVED & RELAID L.F.	I-124-11 SERVICE STOPS WATER METERS & BOXES REMOVED & RELOCATED EA.	I-124-11 SERVICE STOPS WATER METERS & BOXES REMOVED & RESET EA.
1-U	100+00	110+00	Rt.	1010		1
2-U	101+19		Rt.		1	

Ⓟ PAVEMENT

REF NO.	STATION FROM	STATION TO	SIDE	B-21 WATER-PROOFED AGGR. BASE COURSE	I-12 CONC. CURB TYPE 2A	I-18 STAB. CRUSHED AGGR.	I-21 PORT. CEM. CONC. MEDIAN TYPE I	I-22 SUB-BASE	T-31 BIT. MAT'L.	T-31 #6 AGGR.	T-71 REINF. PORT. CEM. CONC. PAVT. 9"
				C.Y.	L.F.	C.Y.	S.Y.	C.Y.	GAL.	C.Y.	S.Y.
1-P	100+00	110+00	—	148	2000	255	74.6	1660	444	14.2	5776

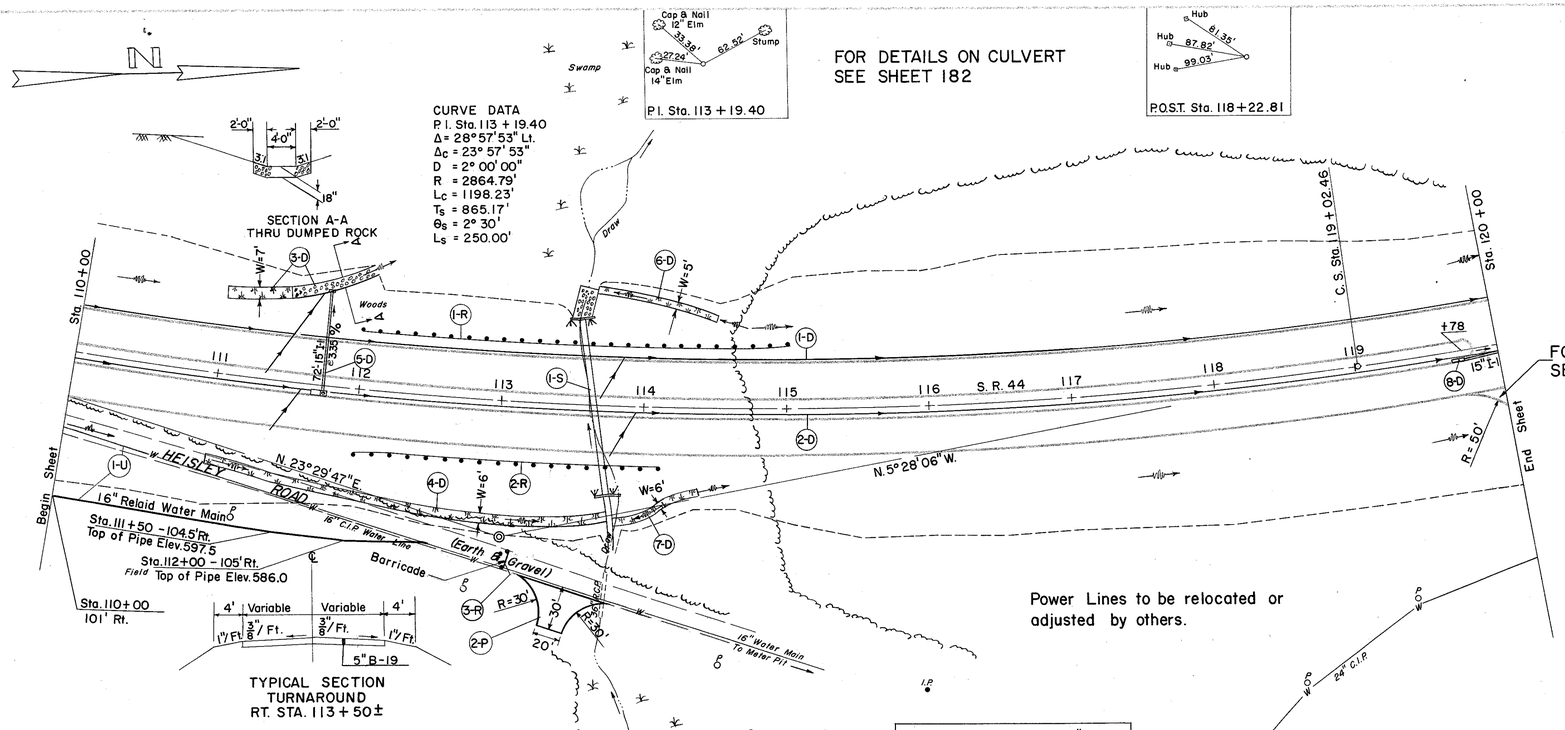
EXCAVATION	40,528 C.Y.
EMBANKMENT	1,180 C.Y.
EMBANKMENT 20 %	1,416 C.Y.

S.R.44 STA. 100 + 00 TO STA. 110 + 00

FED. ROAD DIVISION	STATE	PROJECT		
2	OHIO			

28
212

LAKE COUNTY
LAK-44-7.22



(U) UTILITIES

REF. NO.	STATION FROM	STATION TO	I-124.03 16" CAST IRON FITTINGS 22½ BEND Ea.	I-124.04 16" WATER MAIN REMOVED & RELAID L.F.
I-U	110+00	112+40	3	250

(D) DRAINAGE

REF. NO.	STATION FROM	STATION TO	SIDE	I-1 6" PIPE CLASS I-3 SHALLOW DEEP L.F.	I-1 8" PIPE CLASS F-1 L.F.	I-1 6" 60° WYE EA.	I-2 MASONRY C.Y.	I-8 STD. 2-A 10 INLET EA.	I-5 DUMPED ROCK CHANNEL PROTECT C.Y.	I-10 SODDING S.Y.	I-10 DUMPED ROCK CHANNEL PROTECT C.Y.	I-2 MASONRY C.Y.	I-10 SODDING S.Y.	I-10 DUMPED ROCK CHANNEL PROTECT C.Y.	I-2 MASONRY C.Y.	I-15 GUARD RAIL STEEL BEAM STD. TYPE (DEEP) L.F.	B-19 AGGR. BASE COURSE C.Y.
1-D	110+00	120+00	LT.	196	894	2					44		35		0.26		
2-D	110+00	120+00	RT.	170	880	2							190				
3-D	111+00	112+00	LT.					1									
4-D	111+00	113+75	RT.										48		0.26		
5-D	111+75		LT.										40				
6-D	113+65	114+50	LT.					1									
7-D	113+79	114+38	RT.														
8-D	119+75		RT.														
	TOTAL			366	1774	20		2			44		313		0.26		

(S) STRUCTURE

REF. NO.	STATION FROM	STATION TO	SIDE	E-3 CHANNEL EXC. C.Y.	I-10 DUMPED ROCK CHANNEL PROTECT C.Y.	I-2 SODDING S.Y.	I-2 MASONRY C.Y.	I-1 48" PIPE CLASS A-1 SEC. M-6.6(b) L.F.
1-S	113+64		-	2	30	8	25.7	126

(P) PAVEMENT

REF. NO.	STATION FROM	STATION TO	SIDE	T-31 # 6 AGGR. BIT. MAT'L. GAL.	T-71 REINF. PORT. CEM. CONC. PAVT. 9" C.Y.	B-19 AGGR. BASE COURSE C.Y.	I-12 CONC. CURB TYPE 2A L.F.	B-21 WATER PROOFED AGGR. BASE COURSE C.Y.
1-P	110+00	120+00	-	444	5691	12	1976	148
2-P	113+50		RT.	14.2				

(R) ROADWAY

REF. NO.	STATION FROM	STATION TO	SIDE	I-15 GUARD RAIL STEEL BEAM STD. TYPE (DEEP) L.F.
1-R	112+00	115+00	LT.	300.0
2-R	112+00	114+12.5	RT.	212.5
3-R	113+10		RT.	12.5
	TOTAL			525.0

EXCAVATION	=	36,134 C.Y.
EMBANKMENT	=	9,905 C.Y.
EMBANKMENT @ 20%	=	11,886 C.Y.

S.R. 44 STA. 110+00 TO STA. 120+00

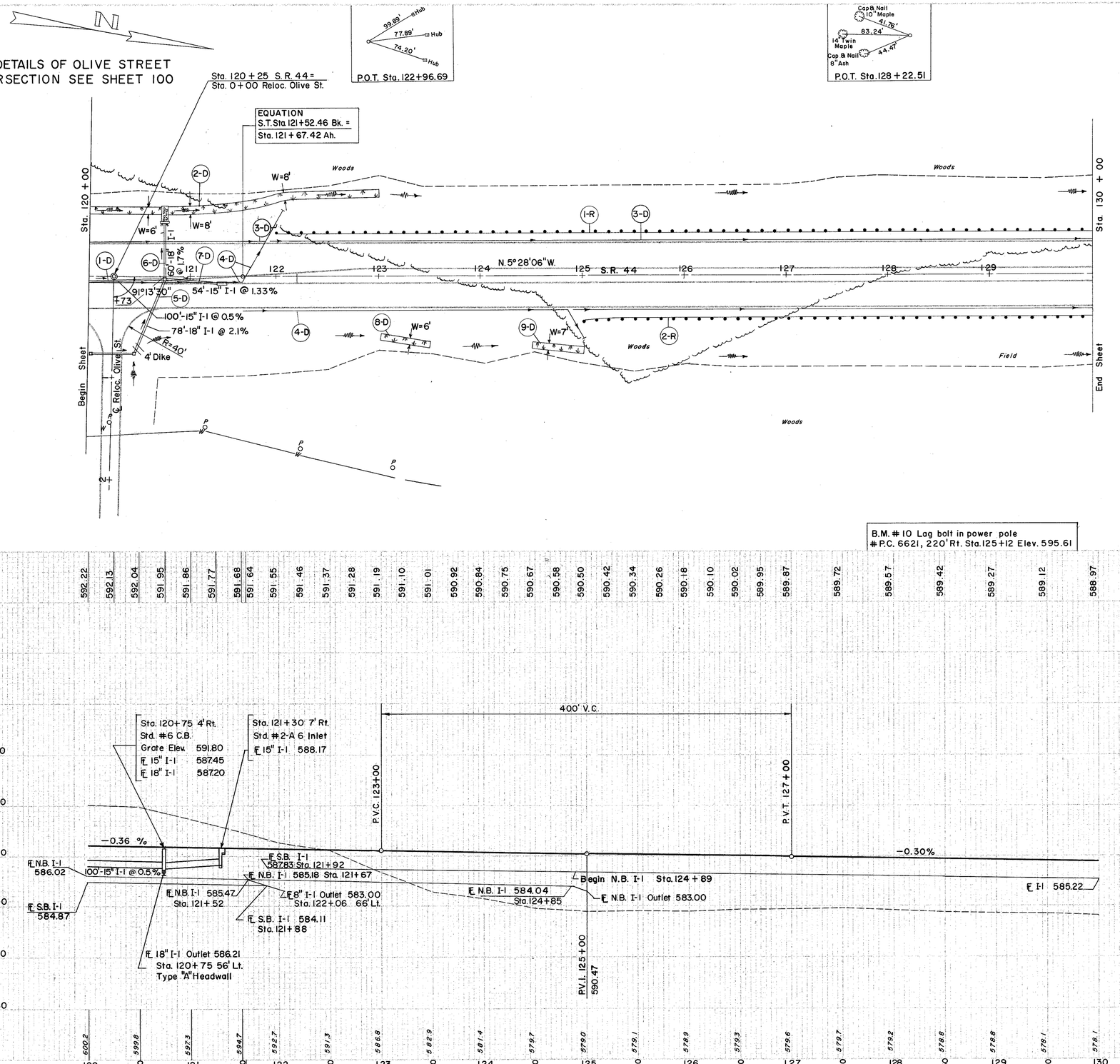
142

SHEET NO.	STATE	PROJECT		
2	OHIO			

29
212

LAKE COUNTY
LAK-44-7.22

FOR DETAILS OF OLIVE STREET INTERSECTION SEE SHEET 100



(D) DRAINAGE

REF. NO.	STATION FROM	STATION TO	S I D E	I-5 6"x8"x8" 60° WYE EA.	I-5 6" 60° BEND EA.	I-8 6"x8" INCR. EASER EA.	I-8 STD. #6 CATCH BASIN EA.	I-8 STD. 2-A 6 INLET EA.	I-10 DUMPED ROCK CHANNEL PROTECTION C.Y.	L-10 SODDING S.Y.	I-2 MASONRY C.Y.
1-D	119+75	120+75	RT.						9	235	
2-D	120+00	123+00	LT.								
3-D	120+00	130+00	LT.								
4-D	120+00	130+00	-	1	2	1	1	1		2	3.1
5-D	120+46	120+75	RT.								
6-D	120+75	-	-							33	
7-D	120+75	121+30	RT.							40	
8-D	123+00	123+50	RT.								
9-D	124+50	125+00	RT.								
	TOTAL			1	2	1	1	1	9	310	3.1

(P) PAVEMENT

REF. NO.	STATION FROM	STATION TO	S I D E	I-1 18" PIPE CLASS B-1 LF.	I-1 15" PIPE CLASS B-1 LF.	I-1 8" PIPE CLASS F-1 LF.	I-1 6" PIPE CLASS I-3 SHALLOW DEEP	B-21 WATER-PROOFED AGGR. BASE COURSE C.Y.	I-12 CONC. CURB TYPE 2A LF.	I-18 STAB. CRUSHED AGGR. C.Y.	I-21 PORT. CEM. CONC. MEDIAN TYPE 1 S.Y.	I-22 SUB-BASE C.Y.	T-31 #6 AGGR. BIT. MAT'L. C.Y. GAL.	T-71 REINF. PORT. CEM. CONC. PAV'T. S.Y.
1-P	120+00	130+00	-		100			141	1850	242	78	1325	808 422	5809

(R) ROADWAY

REF. NO.	STATION FROM	STATION TO	S I D E	I-15 GUARD RAIL STEEL BEAM STD. TYPE (DEEP) L.F.
1-R	122+00	130+00	LT.	800.0
2-R	125+00	130+00	-	500.0
	TOTAL			1300.0

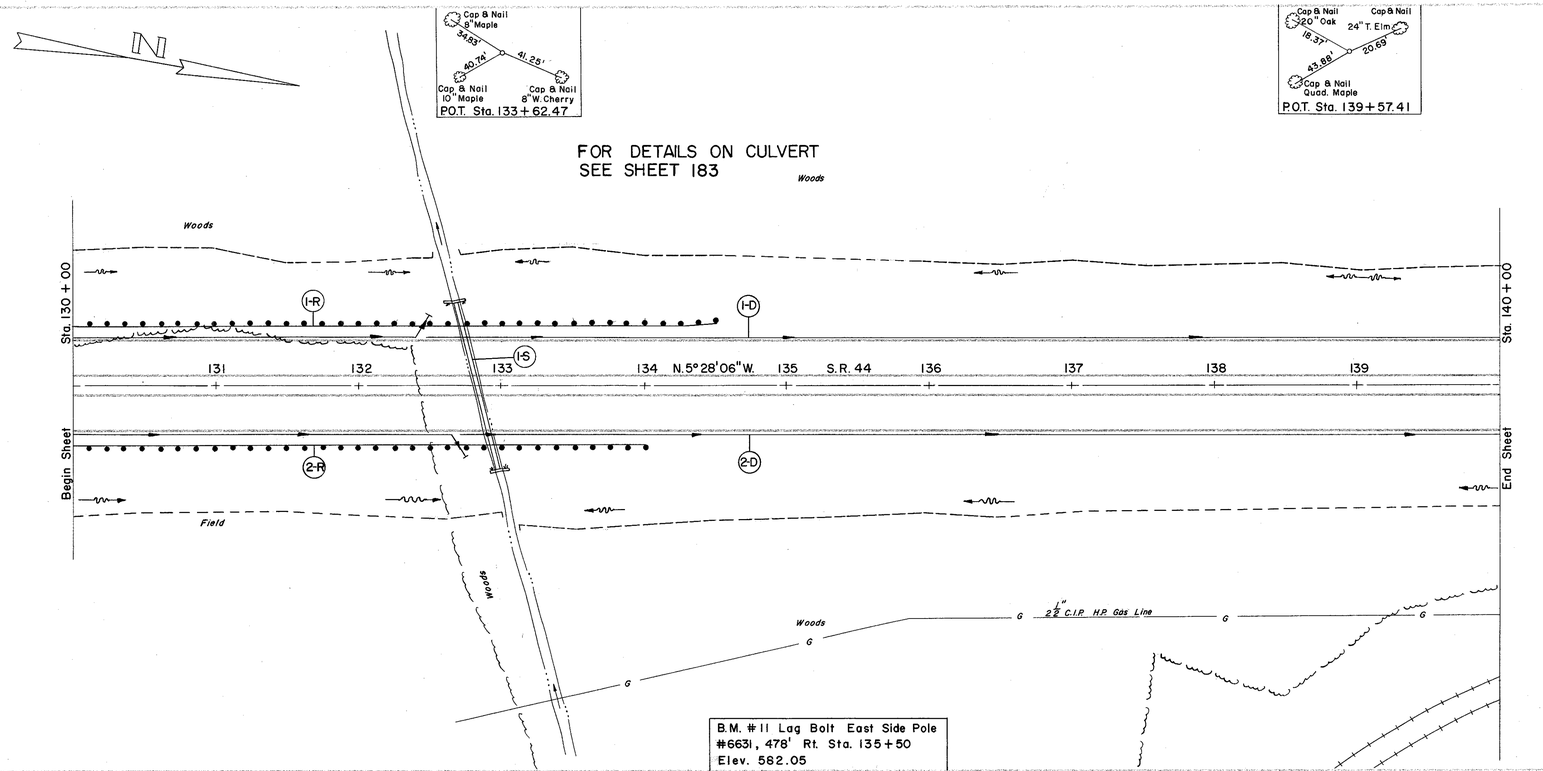
EXCAVATION		8,877 C.Y.
EMBANKMENT		26,497 C.Y.
EMBANKMENT	20	31,796 C.Y.

S.R. 44 STA. 120 + 00 TO STA. 130 + 00

SEQ. NO. DIVISION	STATE	PROJECT	
2	OHIO		

30
212

LAKE COUNTY
LAK-44-7.22



(D) DRAINAGE

REF. NO.	STATION FROM	STATION TO	SIDE	I-1 6" PIPE CLASS I-3 (SHALLOW) L.F.	I-1 8" PIPE CLASS F-1 L.F.	I-5 6" 60° BEND EA.
1-D	130+00	140+00	LT.	1004	10	1
2-D	130+00	140+00	RT.	1004	10	1
		TOTAL		2008	20	2

(S) STRUCTURES

REF. NO.	STATION FROM	STATION TO	SIDE	I-1 30" PIPE CLASS A-1 M-6.6(b) OR M-6.8(b) L.F.	L-10 SODDING S.Y.	I-2 MASONRY C.Y.
1-S	132+82		–	124	6	10.6

(R) ROADWAY

REF. NO.	STATION FROM	STATION TO	SIDE	I-15 GUARD RAIL, STEEL BEAM STD. TYPE (DEEP) L.F.
1-R	130+00	134+50	LT.	450.0
2-R	130+00	134+00	LT.	400.0
		TOTAL		850.0

(P) PAVEMENT

REF. NO.	STATION FROM	STATION TO	SIDE	B-21 WATER PROOFED AGGR. BASE COURSE C.Y.	I-12 CONC. CURB TYPE 2A L.F.	I-18 STAB. CRUSHED AGGR. C.Y.	I-22 SUB-BASE C.Y.	T-31 BIT. MAT'L. GAL.	T-31 #6 AGGR. C.Y.	T-71 REINF. PORT. CEM. CONC. PAVT. 9" S.Y.
1-P	130+00	140+00	–	148	2000	255	1274	444	14.2	5667

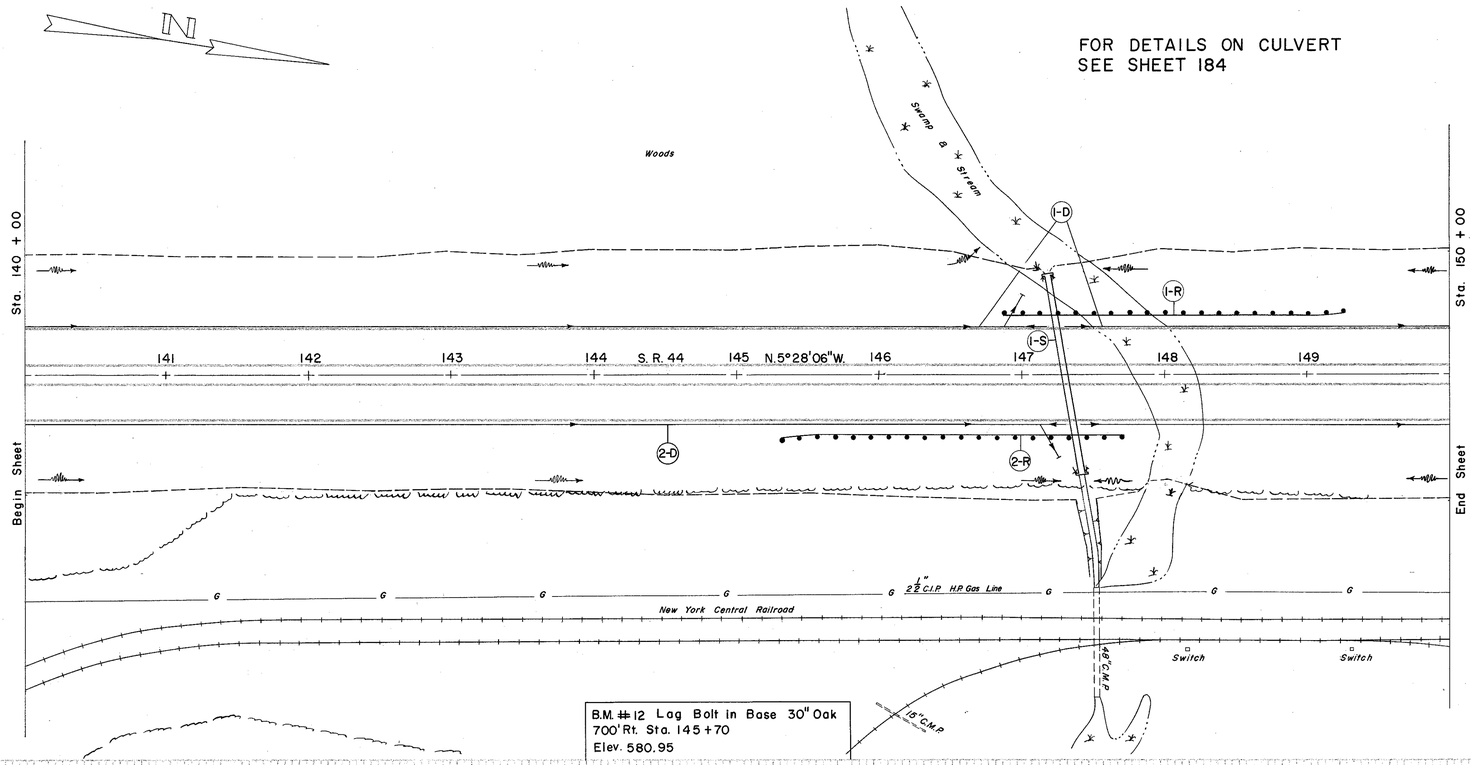
EXCAVATION	841	C.Y.
EMBANKMENT	33,371	C.Y.
EMBANKMENT 20 %	40045	C.Y.

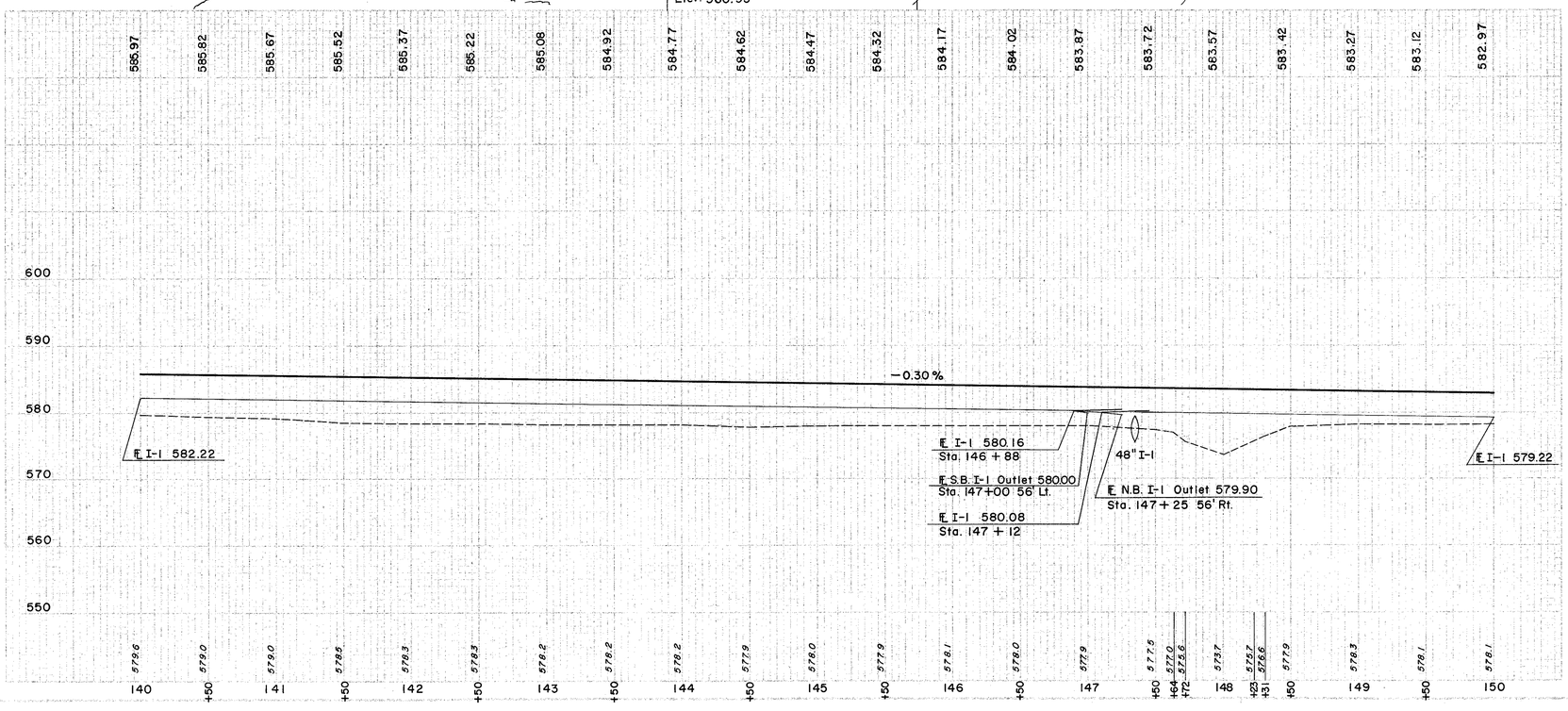
S.R. 44 STA. 130 + 00 TO STA. 140 + 00

FED. AID DIVISION	STATE	PROJECT	
2	OHIO		

31
212

LAKE COUNTY
LAK-44-7.22





(D) DRAINAGE

REF. NO.	STATION FROM	STATION TO	SIDE	I-1 6" PIPE CLASS I-3 SHALLOW	I-1 8" PIPE CLASS F-1	I-5 6" 60° WYE
				L.F.		EA.
1-D	140+00	150+00	LT.	1010	10	1
2-D	140+00	150+00	RT.	1012	10	1
TOTAL				2022	20	2

(S) STRUCTURES

REF NO.	STATION FROM	STATION TO	SIDE	E-3 CHANNEL EXC.	L-10 SODDING	I-2 MASONRY	I-1 48" PIPE CLASS A-1 M-6.4 (d)
				C.Y.	S.Y.	C.Y.	L.F.
1-S	147+30		—	35	12	1.72	142

(R) ROADWAY

REF NO.	STATION FROM	STATION TO	SIDE	I-15 GUARD RAIL STEEL BEAM STD TYPE (DEEP)
				L.F.
1-R	146+87.5	149+25	LT.	237.5
2-R	145+32	147+69.5	RT.	237.5
TOTAL				475.0

(P) PAVEMENT

REF NO.	STATION FROM	STATION TO	SIDE	B-21 WATER-PROOFED AGGR. BASE COURSE	I-12 CONC. CURB TYPE 2A	I-18 STAB. CRUSHED AGGR.	I-22 SUB-BASE	T-31 BIT. MAT'L.	T-31 #6 AGGR.	T-71 REINF. PORT. CEM. CONC. PAVT. 9"
				C.Y.	L.F.	C.Y.	C.Y.	GAL.	C.Y.	S.Y.
1-P	140+00	150+00	—	148	2000	255	1274	444	14.2	5667

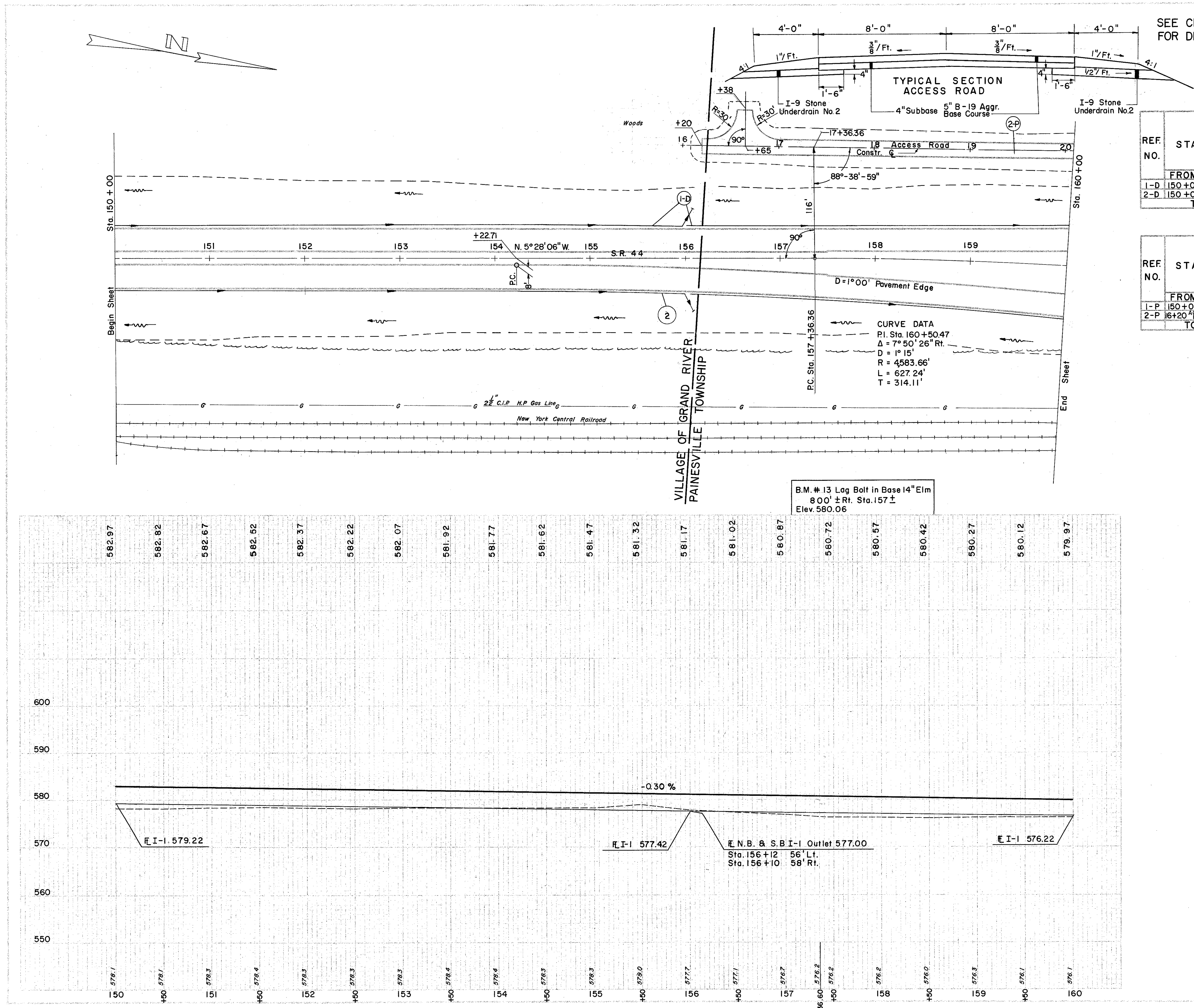
EXCAVATION	1,352 C.Y.
EMBANKMENT	21,697 C.Y.
EMBANKMENT 20%	26,036 C.Y.

SR. 44 STA. 140 + 00 TO STA. 150 + 00

JAR

SEE CROSS SECTIONS FOR DITCHES LT. & RT.

LAKE COUNTY
LAK-44-7.22



(D) DRAINAGE

REF. NO.	STATION FROM	STATION TO	SIDE	I-1 6" PIPE CLASS I-3 SHALLOW (L.F.)	I-1 8" PIPE CLASS F-1 (L.F.)	I-5 6" 60° BEND (EA.)
1-D	150+00	160+00	LT.	1,010	10	1
2-D	150+00	160+00	RT.	1,006	10	1
TOTAL				2,016	20	2

(P) PAVEMENT

REF. NO.	STATION FROM	STATION TO	SIDE	B-21 WATER PROOFED AGGR. BASE COURSE (C.Y.)	I-12 CONC. CURB TYPE 2A (L.F.)	I-18 STAB. CRUSHED AGGR. (C.Y.)	I-22 SUB-BASE (C.Y.)	T-71 REINF. PORT. CEM. CONC. PAVT. 9" (S.Y.)	T-31 BIT. MATL. (GAL.)	T-31 #6 AGGR. (C.Y.)	B-19 AGGR. BASE COURSE (C.Y.)	I-9 STONE UNDER DRAIN NO. 2 (L.F.)
1-P	150+00	160+00	—	166	1500	287	1282	5578	499	16		
2-P	16+20 ACCESS ROAD	20+08	—				87				110	119
TOTAL				166	1500	287	1369	5578	499	16	110	119

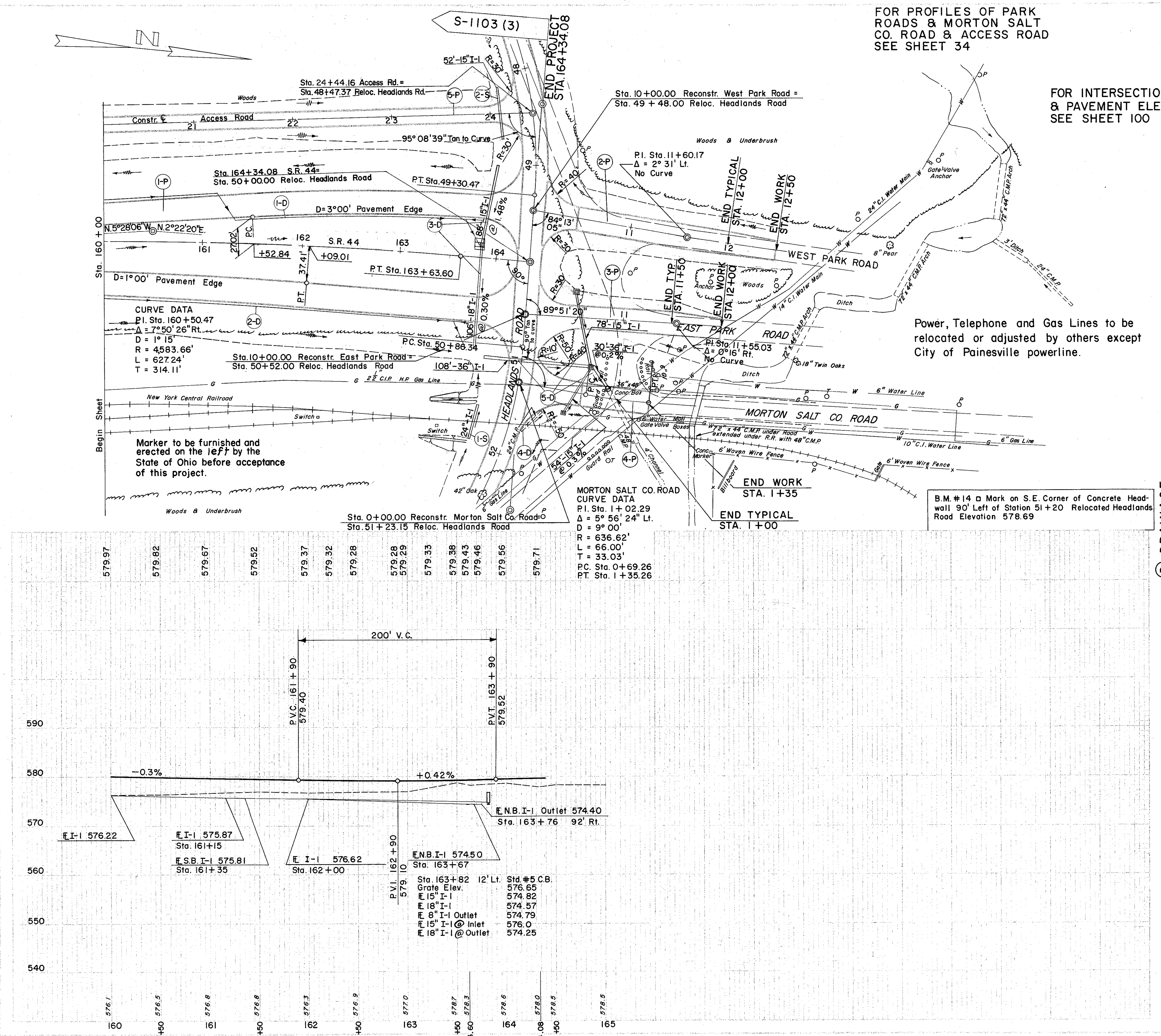
ACCESS ROAD

EXCAVATION	=	C.Y.
EMBANKMENT	=	880 C.Y.
EMBANKMENT +20%	=	1056 C.Y.

S.R. 44

EXCAVATION	=	1,739 C.Y.
EMBANKMENT	=	10,529 C.Y.
EMBANKMENT +20%	=	12,635 C.Y.

LAKE COUNTY
LAK-44-7.22



FOR INTERSECTION DETAILS
& PAVEMENT ELEVATIONS
SEE SHEET 100

Ⓓ DRAINAGE

REF. NO.	STATION FROM	STATION TO	SIDE		E-12 PIPE REMOVED 15" & OVER	I-1 PIPE CLASS C-1 M-6.4(c) 36"	I-1 PIPE CLASS C-1 M-6.4(c) 18"	I-1 PIPE CLASS C-1 M-6.4(c) 15"	I-1 6" PIPE CLASS I-3 SHALLOW	I-1 8" PIPE CLASS F-1	I-5 6" 60° BEND	I-5 6" 60° WYE	I-5 36" 45° M-6.4(c)	I-8 STD. #5 CATCH BASIN	I-8 STD. #2-2B CATCH BASIN	I-8 STD. #2-4 CATCH BASIN	I-2 MASONRY
					L.F.	LIN. FT.					EACH						C.Y.
1-D	160+00	163+82	LT.						422	10	2	1					
2-D	160+00	163+82	RT.						396	10		1					
3-D	163+82		—				106	88						1			
4-D	51+49	51+74	LT.		28												
5-D	164+05		—			138		132					1		2	1	1
TOTAL					28	138	106	220	818	20	2	2	1	1	2	1	1

Ⓟ PAVEMENT

REF. NO.	STATION FROM	STATION TO	B-19 AGGR. BASE COURSE	B-21 WATER PROOFED AGGR. BASE COURSE	I-18 STAB. CRUSHED AGGR.	I-22 SUB-BASE	T-30 BIT. PRIME COAT	T-31 BIT. MAT'L.	T-31 #6 AGGR.	T-32 BIT. MAT'L. FOR ROAD MIX	T-32 #46 AGGR. FOR ROAD MIX	T-32 #6 AGGR. FOR CHOKE	T-32 #6 AGGR. FOR SEAL COAT	T-32 BIT. MAT'L. FOR SEAL COAT	T-35 ASPH. CONC. SURF. COURSE 2½"	T-71 REINF. PORT. CEM. CONC. PAVT. 9"	I-9 STONE UNDER-DRAIN NO. 2
			C.Y.	C.Y.	C.Y.	C.Y.	GAL.	GAL.	C.Y.	GAL.	C.Y.	C.Y.	C.Y.	GAL.	C.Y.	S.Y.	L.F.
1-P	160+00	165+00		96	167	1247		289	9.2							2422	
2-P	10+00-12+50 W. PK. RD.		115			24	208			571	29.1	2.1	4.2	130		144	
3-P	10+00-12+00 E. PK. RD.		79			33	142			389	19.9	1.4	2.8	88		197	
4-P	0+00-1+35 M.SALT RD.		46			29	82								14.3	174	
5-P	20+08-24+30 Acc. Rd.		109			88											126
TOTAL			349	96	167	1421	432	289	9.2	960	49.0	3.5	7.0	218	14.3	2937	126

Ⓢ STRUCTURES

REF. NO.	STATION FROM	STATION TO	SIDE	I-1 PIPE CLASS A-1 M-6.4(d) 15"	I-1 PIPE CLASS A-1 M-6.4(d) 24"	E-3 CHANNEL EXC.
				L.F.	L.F.	C.Y.
1-S	51+54	51+94	RT.		40	39
2-S	24+10	Acc. Rd.	℄	52		

WEST PARK ROAD

EXCAVATION	=	59 C.Y.
EMBANKMENT	=	214 C.Y.
EMBANKMENT + 20%	=	257 C.Y.

SR # 44

EXCAVATION		735 C.Y.
EMBANKMENT		2,918 C.Y.
EMBANKMENT + 20		3,502 C.Y.

EAST PARK ROAD

EXCAVATION	=	51 C.Y.
EMBANKMENT	=	211 C.Y.
EMBANKMENT + 20%	=	253 C.Y.

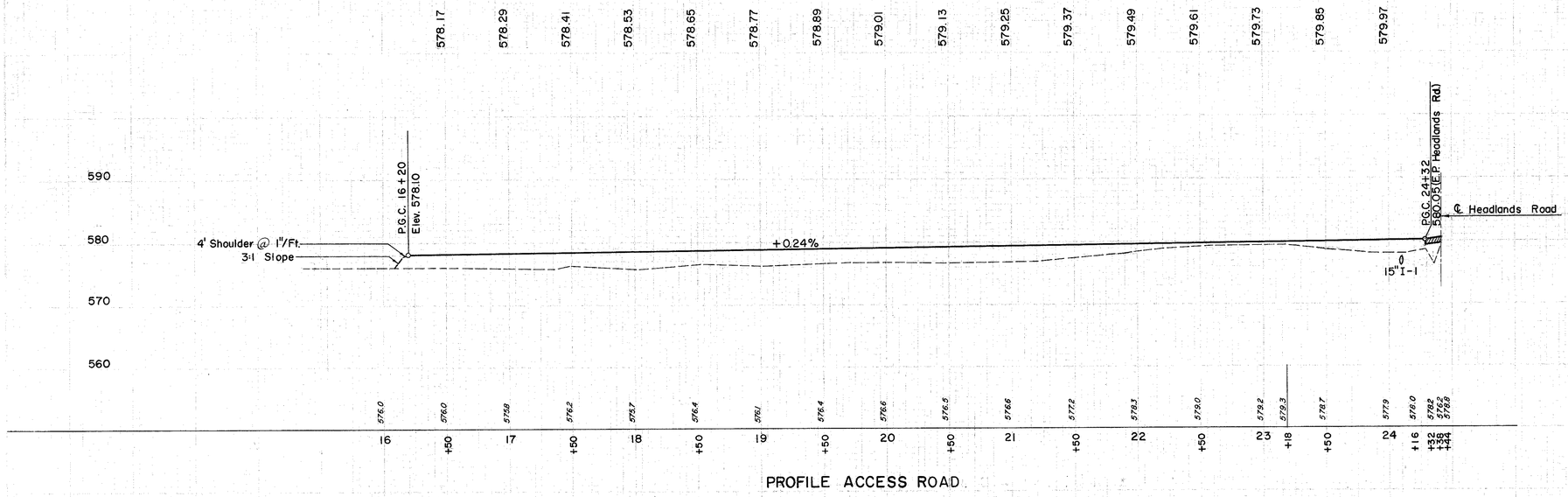
MORTON SALT ROAD

EXCAVATION	=	29 C.Y.
EMBANKMENT	=	125 C.Y.
EMBANKMENT + 20%	=	150 C.Y.

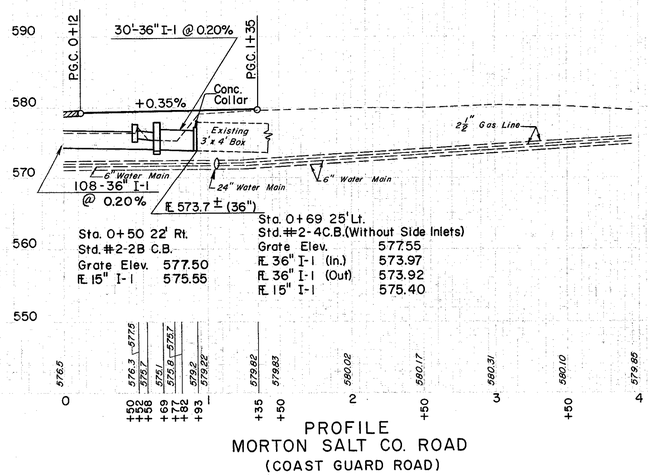
ACCESS ROAD

EXCAVATION	=	179 C.Y.
EMBANKMENT	=	504 C.Y.
EMBANKMENT + 20%	=	605 C.Y.

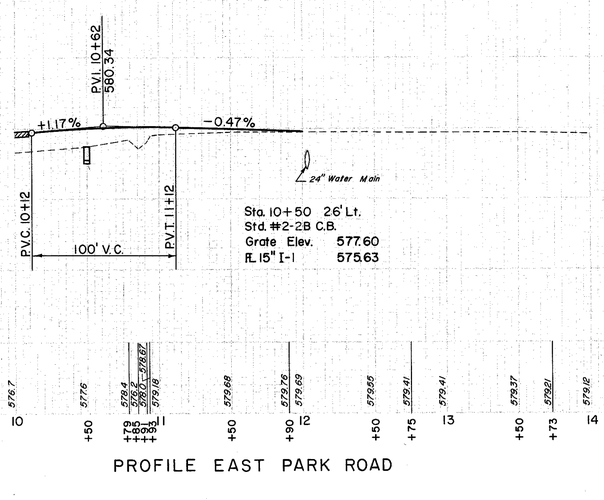
LAKE COUNTY
LAK-44-7.22



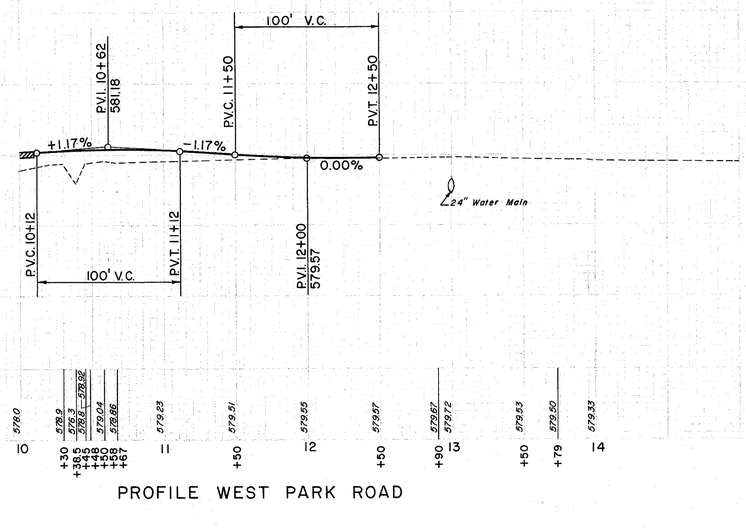
PROFILE ACCESS ROAD



PROFILE
MORTON SALT CO. ROAD
(COAST GUARD ROAD)



PROFILE EAST PARK ROAD



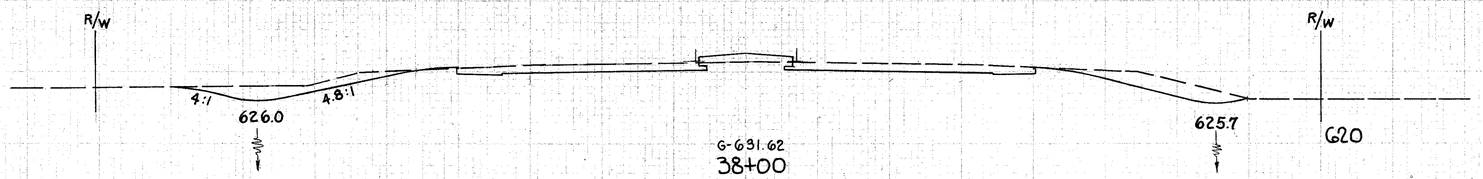
PROFILE WEST PARK ROAD

G-15

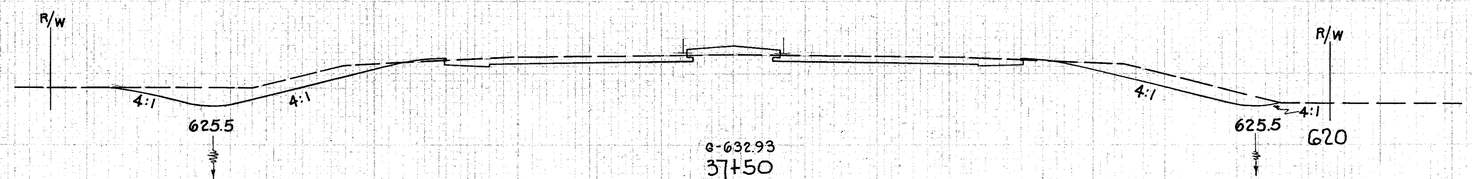
S11

SEEDING	
END WIDTH	SQ. YDS.
103	
	617
119	
	681
126	
	13
126	

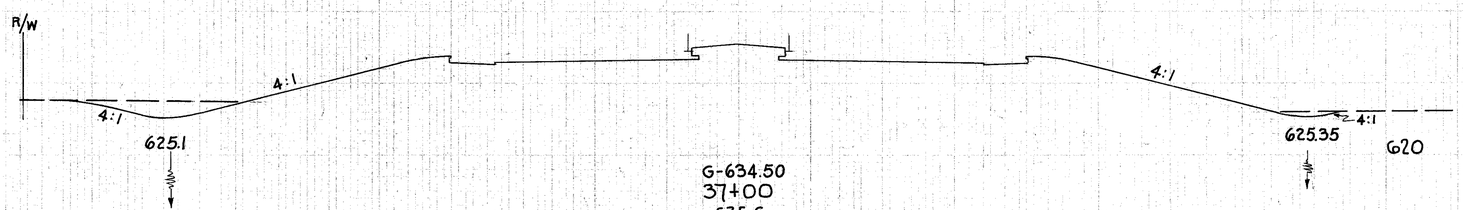
140 120 100 80 60 40 20 ℄ 20 40 60 80 100



G-631.62
38+00
631.6



G-632.93
37+50
632.9



G-634.50
37+00
635.6

STA. 36+99.10

STA. 36+99.10

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

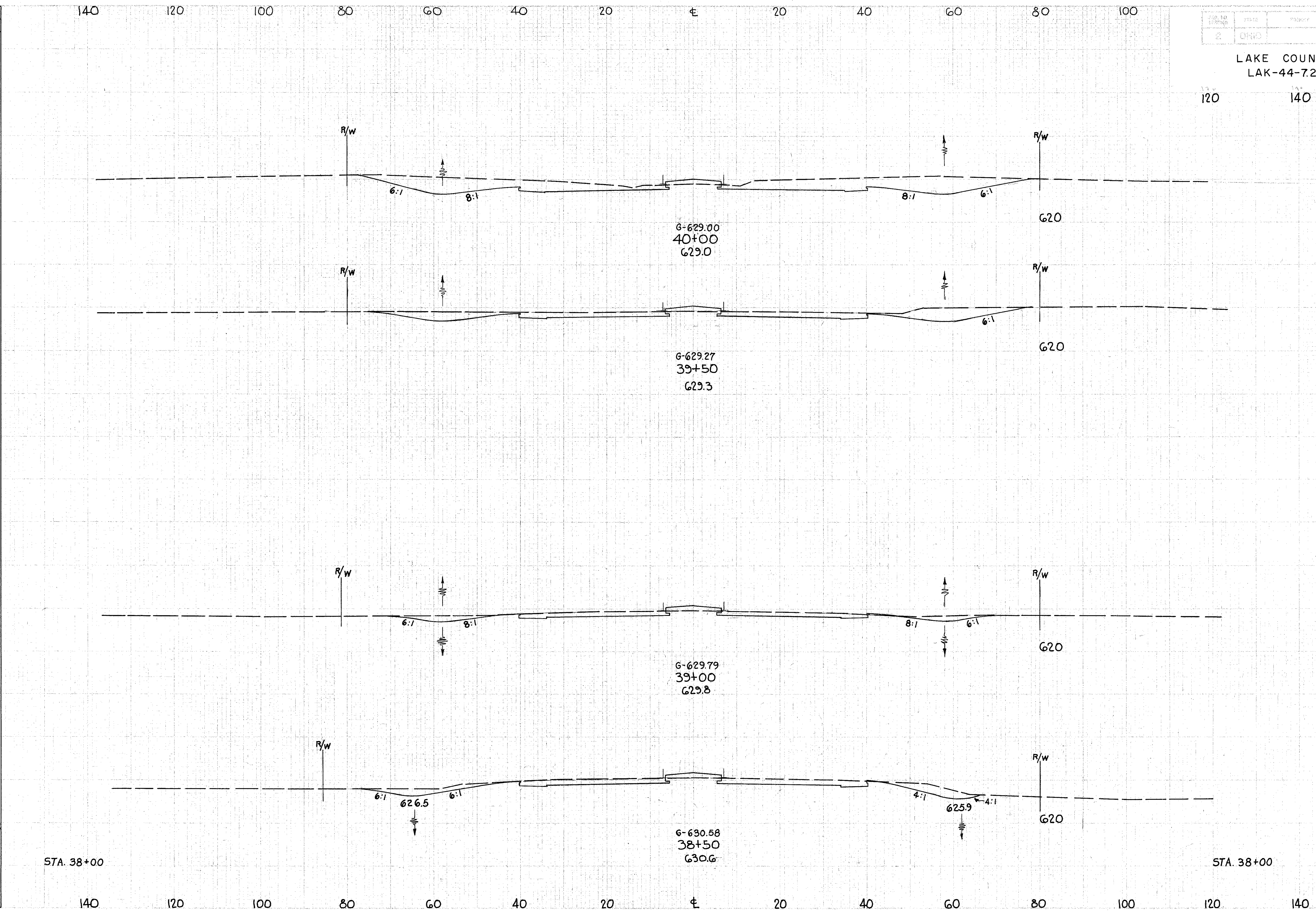
END AREA		VOLUME	
CUT	FILL	CUT	FILL
155	14		
		300	27
169	15		
		313	28
169	15		
		6	1
169	15		

			35
	OHIO		212

LAKE COUNTY
LAK-44-7.22

S.R. 44 Sta. 37+00 to 38+00

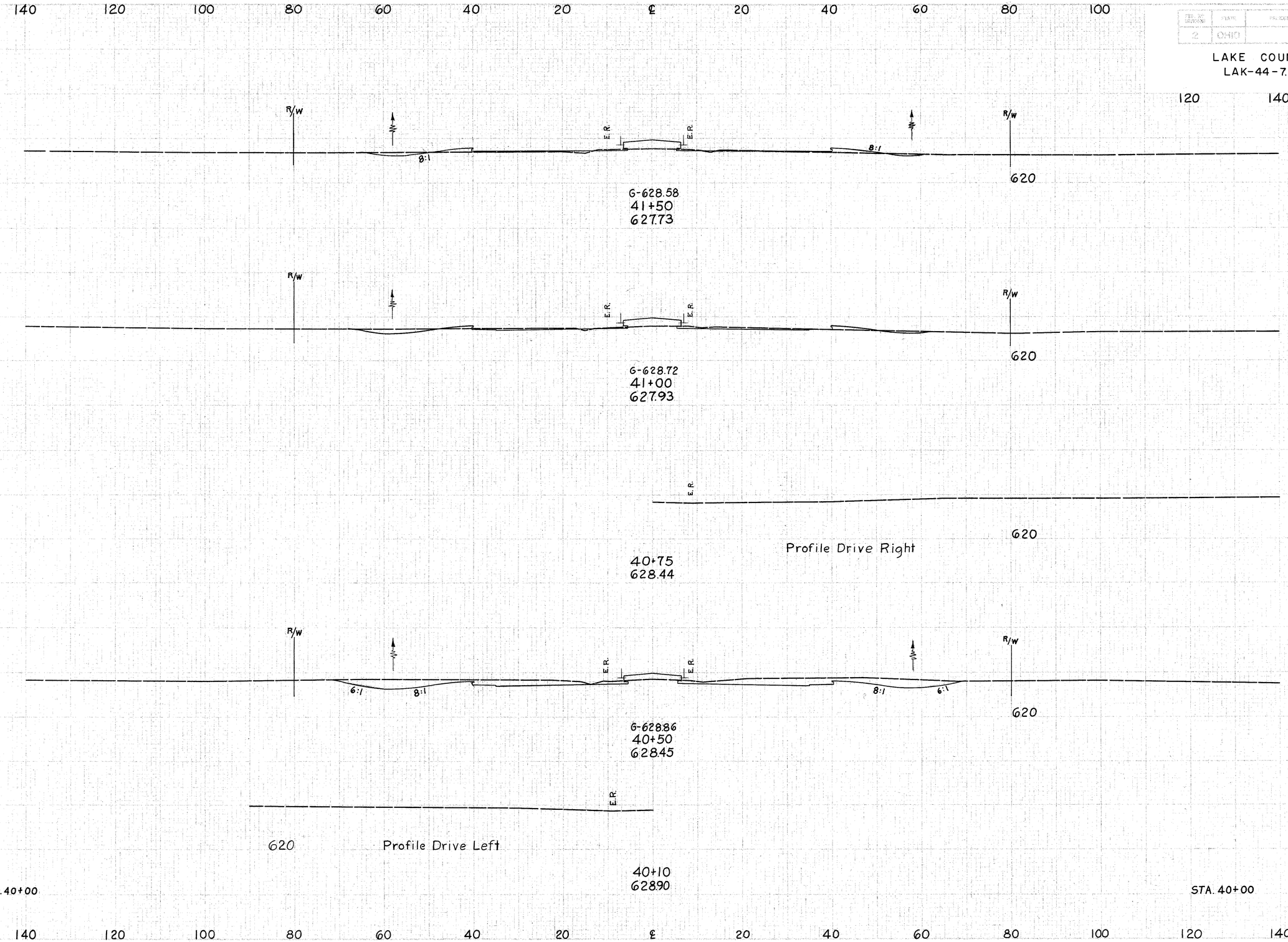
LAKE COUNTY
LAK-44-7.22



SEEDING END WIDTH	SEEDING SQ. YDS.
113	
	611
107	
	558
94	
	533
98	
	558
103	

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
347	16		
		511	28
205	14		
		302	26
121	14		
		258	26
158	14		
		290	26
155	14		

SEEDING	
END WIDTH	SQ. YDS.
78	
	442
81	
	489
95	
	578
113	



END AREA		VOLUME	
CUT	FILL	CUT	FILL
13	34		
		45	59
36	30		
		162	41
139	14		
		450	28
347	16		

FED. AID PROJECT	STATE	PROJECT	
2	OHIO		

37
212

LAKE COUNTY
LAK-44-7.22

S.R.44 Sta. 40+10 to 41+50

SEEDING	
END WIDTH	SQ. YDS.
105	
	572
101	
	564
102	
	536
91	
	469
78	

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

R/W E.R. E.R. R/W 6:1 8:1 8:1 6:1 620

625.40

G-628.02
43+50
628.23

R/W E.R. E.R. R/W 6:1 8:1 620

625.77

G-628.16
43+00
628.49

E.R. 620

Profile Ditch Left

42+94
628.53

R/W E.R. E.R. R/W 620

G-628.30
42+50
628.44

R/W E.R. E.R. R/W 6:1 8:1 8:1 6:1 620

G-628.44
42+00
628.12

STA. 41+50 STA. 41+50

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

END AREA		VOLUME	
CUT	FILL	CUT	FILL
214	9		
		398	14
216	6		
		404	15
220	10		
		310	23
115	15		
		119	45
13	34		

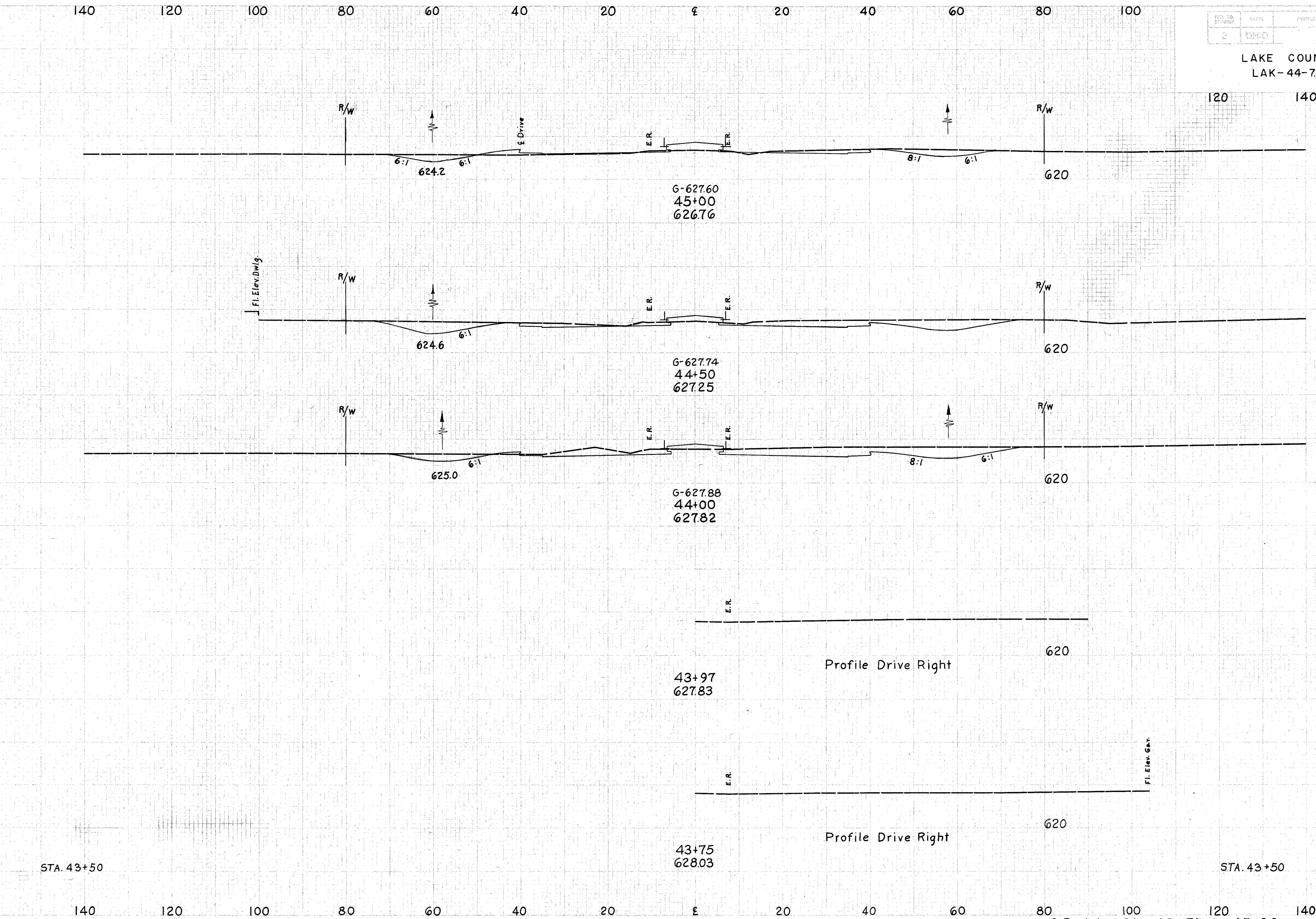
FED. AID PROJECT	STATE	PROJECT	
2	OHIO		

38
212

LAKE COUNTY
LAK-44-7.22

S.R. 44 Sta. 42+00 to 43+50

LAKE COUNTY
LAK-44-7.22

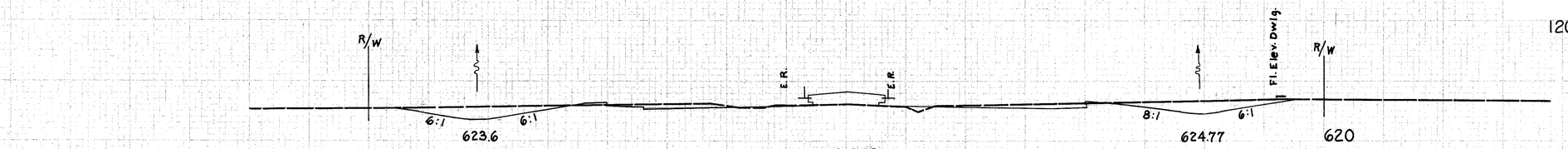


SEEDING END WIDTH	SEEDING SQ. YDS.
91	
	531
100	
	553
99	
	567
105	

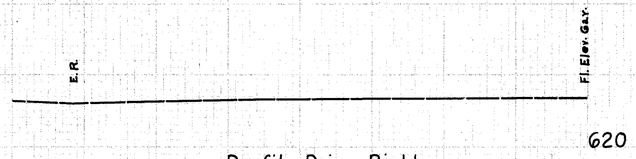
END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
50	33		
		188	45
153	16		
		294	29
164	15		
		350	22
214	9		

SEEDING	
END WIDTH	SQ. YDS.
103	547
94	517
92	508
91	

140	120	100	80	60	40	20	℄	20	40	60	80	100	120	140

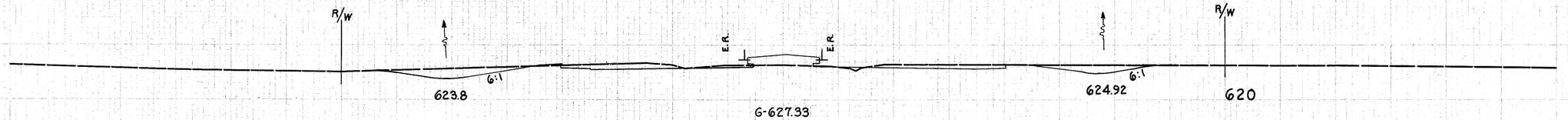


G-627.23
46+50
626.12

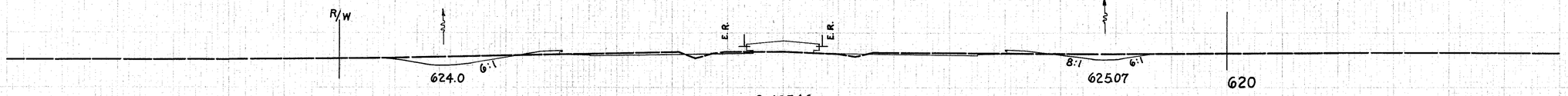


Profile Drive Right

46+27
626.29



G-627.33
46+00
626.39



G-627.46
45+50
626.63

Profile Drive Left

45+05
626.73

STA. 45+00

STA. 45+00

140	120	100	80	60	40	20	℄	20	40	60	80	100	120	140

END AREA		VOLUME	
CUT	FILL	CUT	FILL
90	27		
		159	45
82	22		
		128	50
56	32		
		98	60
50	33		

SHEET NO.	STATE	PROJECT
2	OHIO	

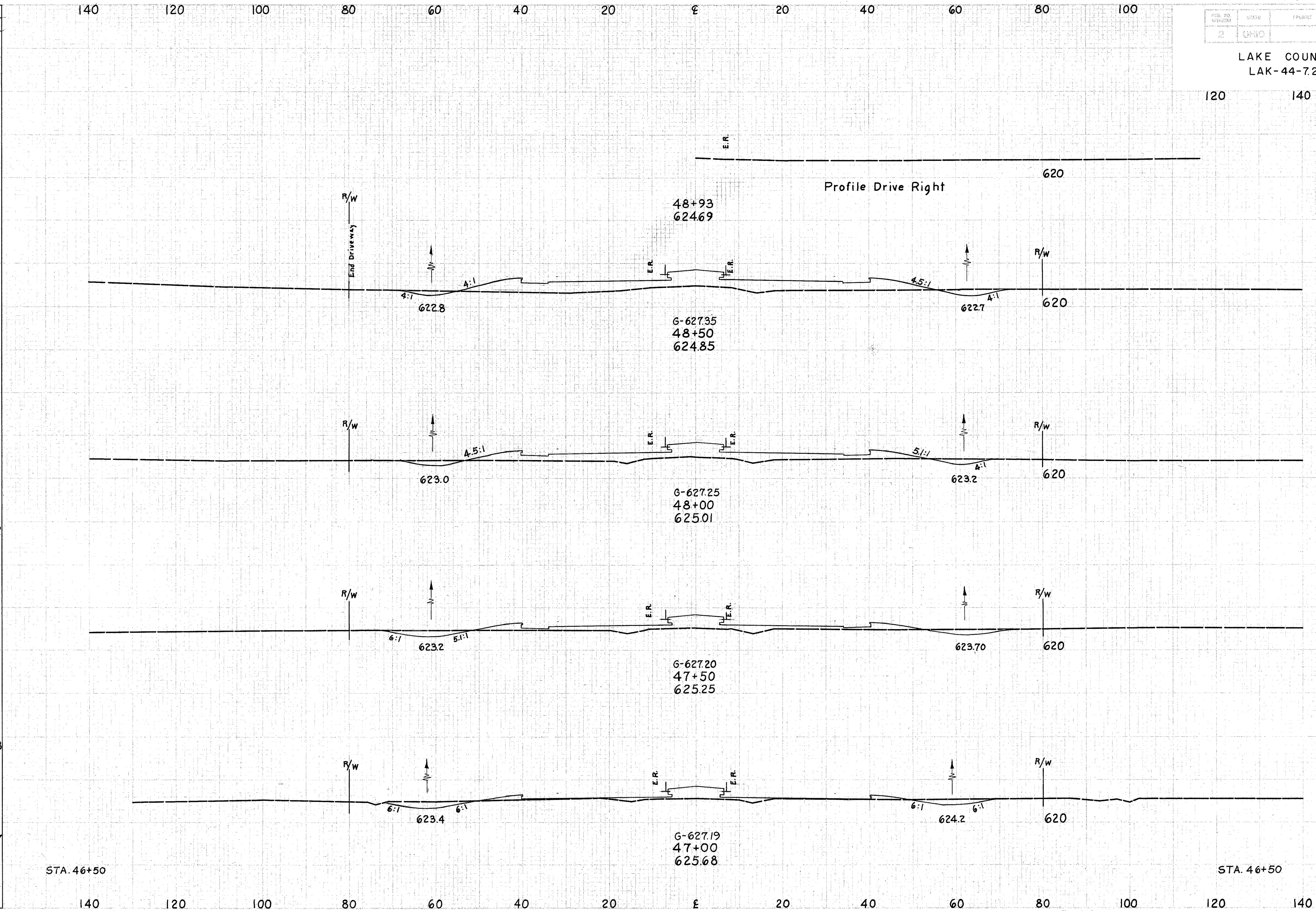
40
212

LAKE COUNTY
LAK-44-7.22

S.R. 44 Sta. 45+05 to 46+50

LAKE COUNTY
LAK-44-7.22

SEEDING END WIDTH	SQ. YDS.
94	
	511
90	
	522
98	
	533
94	
	547
103	



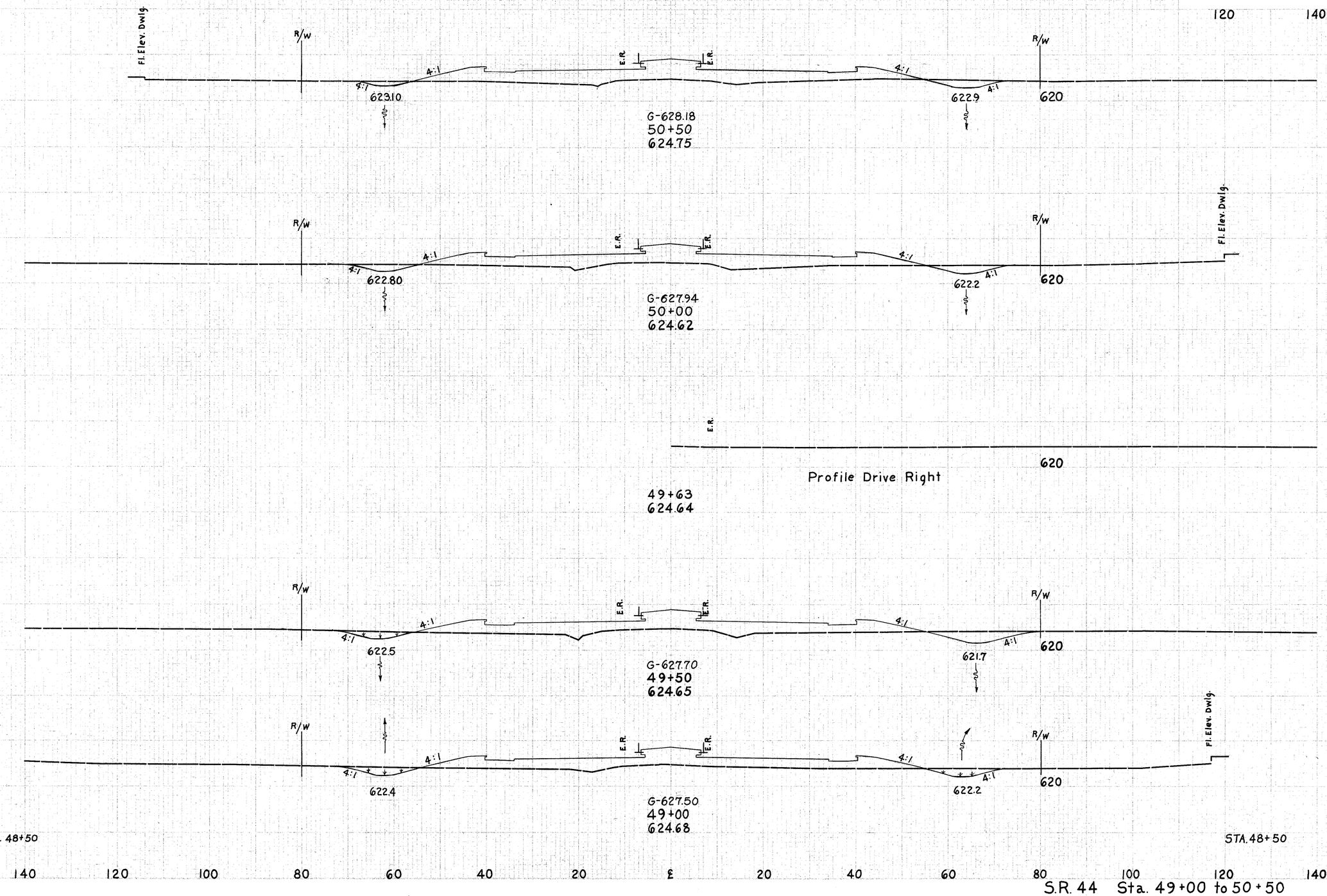
END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
23	244		
		42	388
22	175		
		52	282
34	130		
		65	169
36	53		
		117	74
90	27		

S.R. 44 Sta. 47+00 to 48+93

SEEDING	
END WIDTH	SQ. YDS.
94	
	533
98	
	558
103	
	556
97	
	531
94	

LAKE COUNTY
LAK-44-7.22

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140



END AREA		VOLUME	
CUT	FILL	CUT	FILL
29	287		
		61	519
37	273		
77	494		
46	260		
78	459		
38	236		
56	444		
23	244		

S.R. 44 Sta. 49+00 to 50+50

SEEDING	
END WIDTH	SQ. YDS.
91	
506	
91	
514	
94	

LAKE COUNTY
LAK-44-7.22

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

E.R.
620
Profile Drive Right
51+83
626.32

R/W R/W
4:1 4:1 4:1 4:1
E.R. E.R.
623.7 624.3 620
G-628.68
51+50
625.79

E.R.
620
Profile Drive Right
51+08
625.26

R/W R/W
4:1 4:1 4:1 4:1
E.R. E.R.
623.4 623.6 620
G-628.43
51+00
625.14

Fl. Elev. Gar.
E.R.
620
Profile Drive Left
50+89
625.06

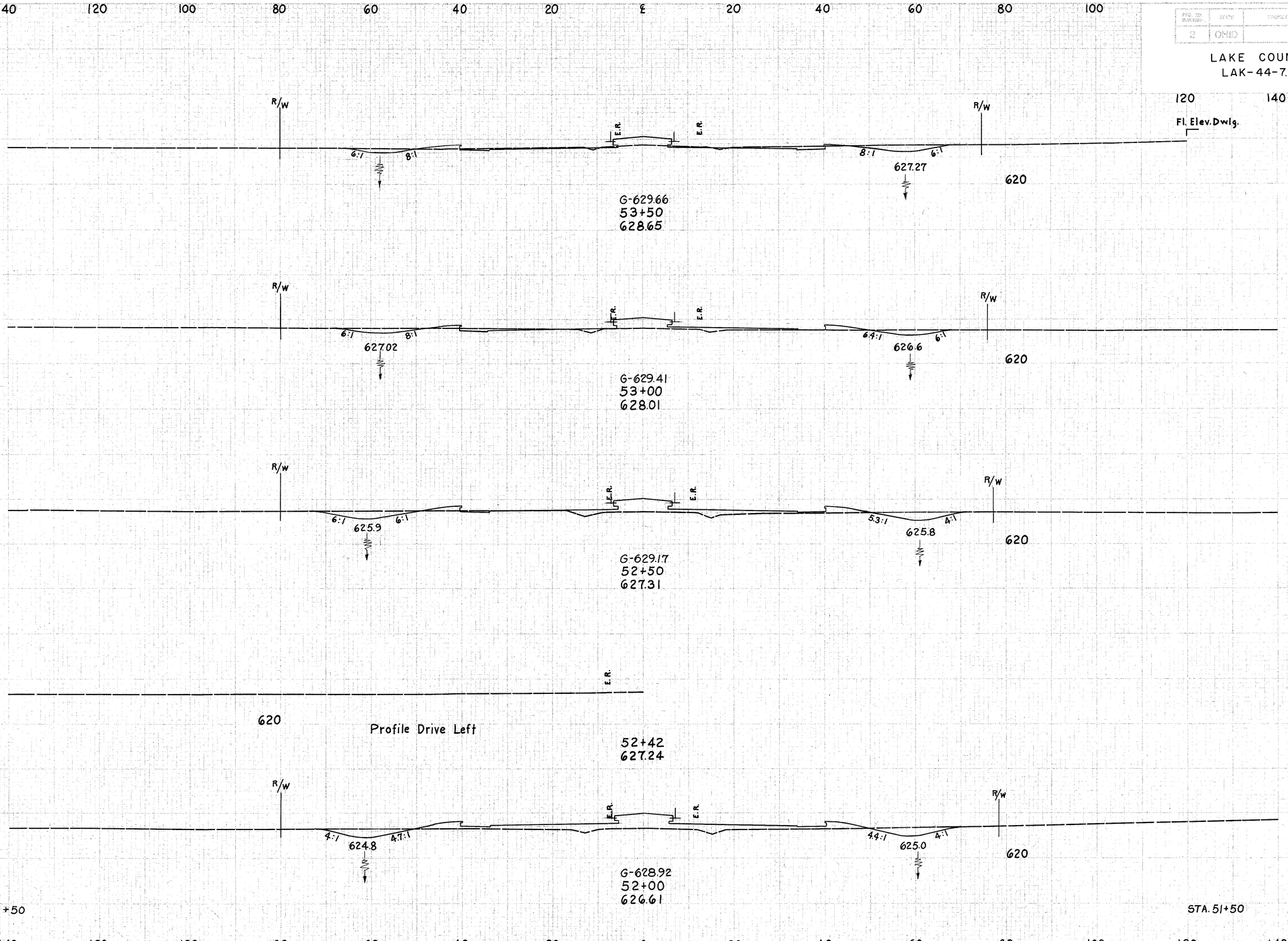
STA. 50+50 STA. 50+50

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

END AREA		VOLUME	
CUT	FILL	CUT	FILL
23	226		
		44	456
25	266		
		50	512
29	287		

S.R. 44 Sta. 50+89 to 51+83

SEEDING	
END WIDTH	SQ. YDS.
87	
	483
87	
	511
97	
	528
93	
91	511



END AREA		VOLUME	
CUT	FILL	CUT	FILL
36	28		
		57	75
26	53		
		66	121
45	78		
		81	211
43	150		
		61	348
23	226		

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

44
212

LAKE COUNTY
LAK-44-7.22

Fl. Elev. Dwlg.

S.R. 44 Sta. 52+00 to 53+50

SEC. NO.	STATE	PROJECT		SHEET NO.	TOTAL SHEETS
2	OHIO			45	212

LAKE COUNTY
LAK-44-7.22

SEEDING	
END WIDTH	SQ. YDS.
82	456
82	461
84	475
87	

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

Fl. Elev. Gar.
E.R.
620
Profile Drive Right

55+25
629.14

R/W
E.R. E.R.
6:1 6:1
627.0
R/W
620
1" Water-Service Branch
G-630.40
55+00
629.22

R/W
E.R. E.R.
8:1 6:1
627.76
R/W
620
1" Water-Service Branch
G-630.15
54+50
629.20

E.R.
Fl. Elev. Gar.
620
Profile Drive Right

54+22
629.08

R/W
E.R. E.R.
6:1 8:1 8:1 6:1
R/W
620
G-629.91
54+00
629.00

STA. 53+50 STA. 53+50

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

END AREA		VOLUME	
CUT	FILL	CUT	FILL
42	24		
		77	50
41	30		
		64	54
28	28		
		59	52
36	28		

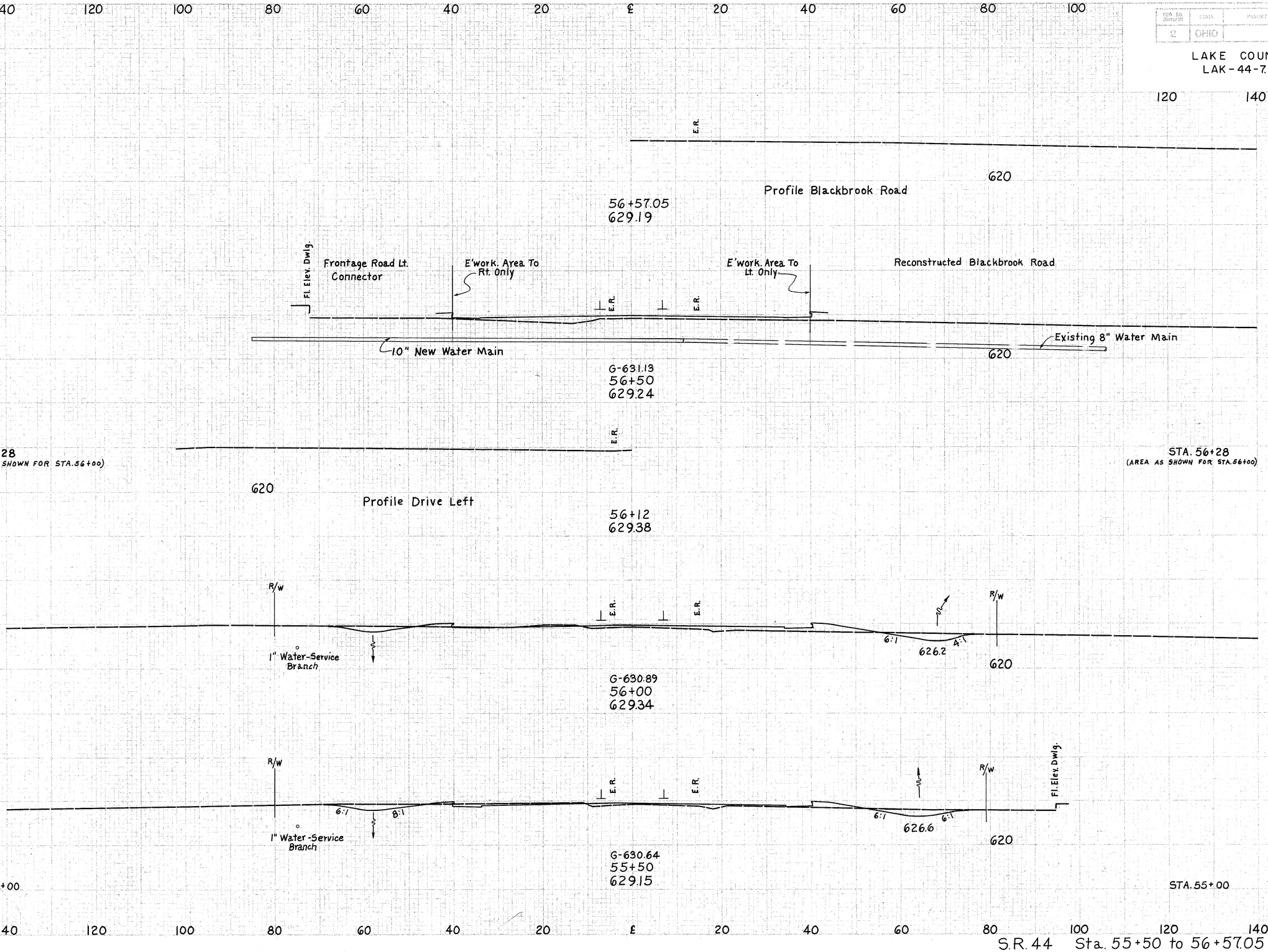
S.R. 44 Sta. 54+00 to 55+25

SEEDING	
END WIDTH	SQ. YDS.
84	261
84	469
85	464
82	

FED. ROAD DIVISION	STATE	PROJECT		46
2	OHIO			212

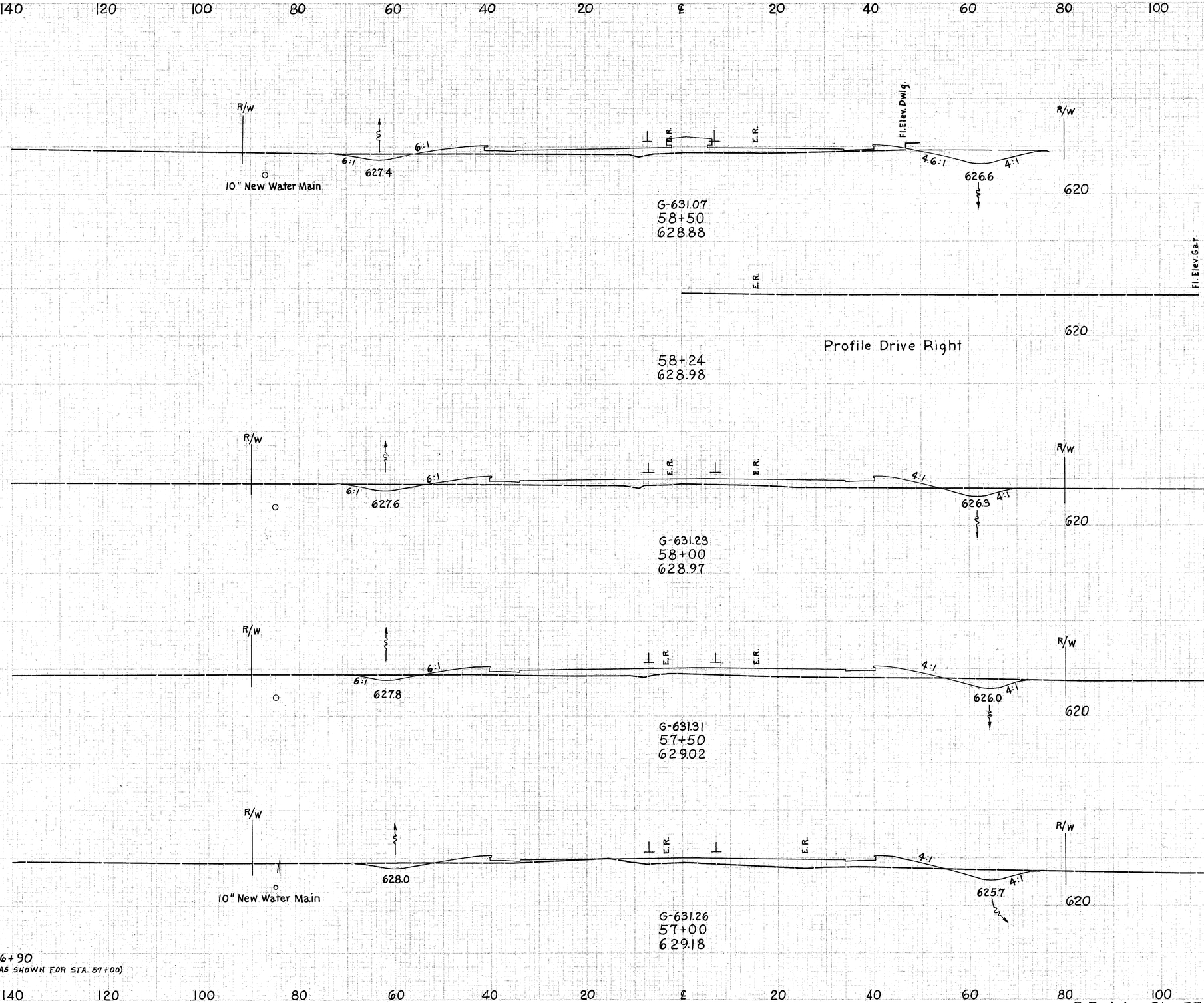
LAKE COUNTY
LAK-44-7.22

END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	73		
		10	55
25	63		
		26	65
25	63		
		73	84
54	28		
		89	48
42	24		



S.R. 44 Sta. 55+50 to 56+57.05

SEEDING	
END WIDTH	SQ. YDS.
101	
	511
83	
	461
83	
	464
84	
	93
84	



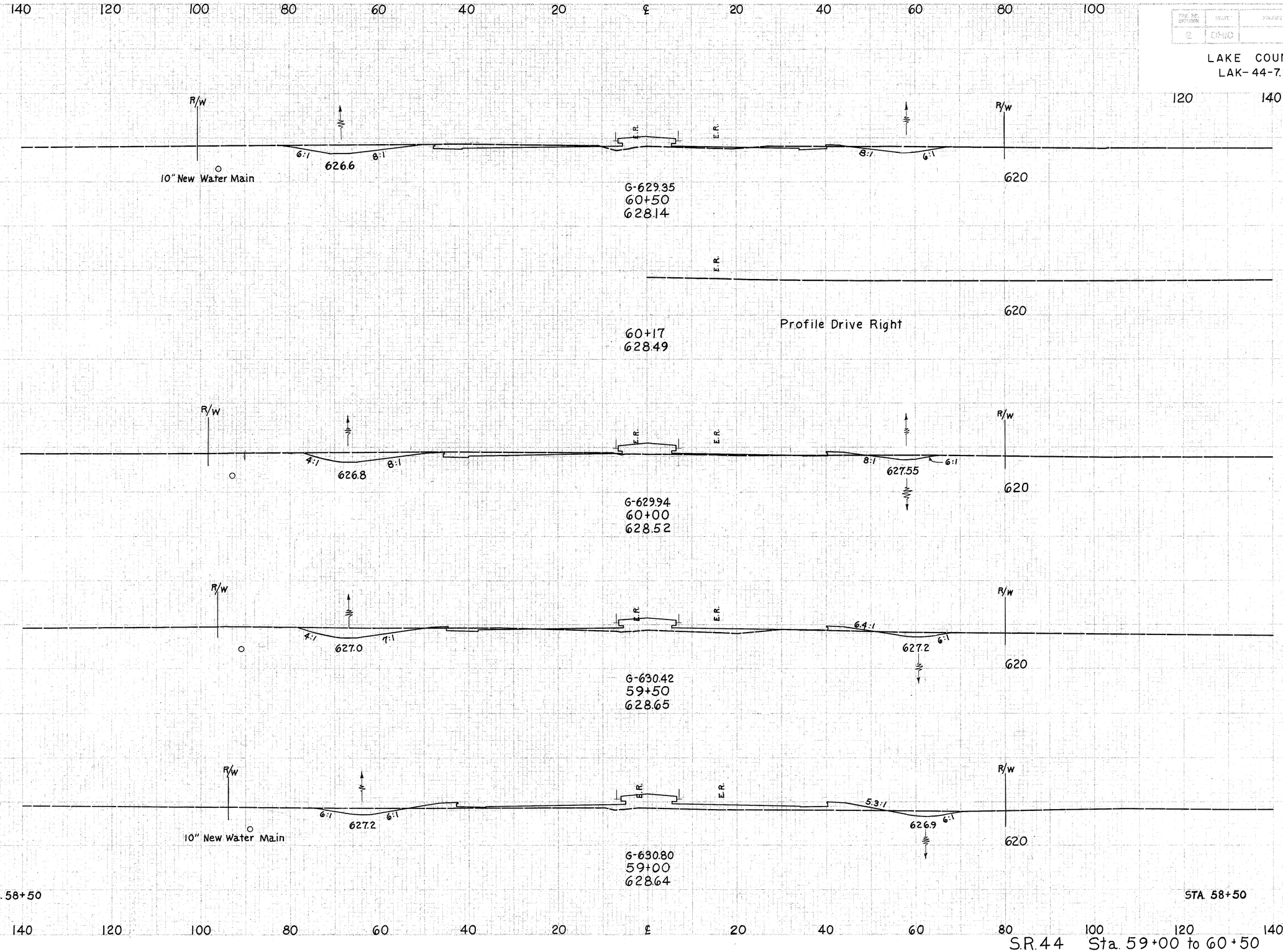
FED. AID PROJECT	STATE	PROJECT		47 212
2	OHIO			

LAKE COUNTY
LAK-44-7.22

END AREA		VOLUME	
CUT	FILL	CUT	FILL
11	139		
		38	247
30	128		
		56	269
30	162		
		56	255
30	113		
		28	172
0	73		

S.R. 44 Sta. 57+00 to 58+50

SEEDING	
END WIDTH	SQ. YDS.
96	528
94	542
101	547
96	547
101	



END AREA		VOLUME	
CUT	FILL	CUT	FILL
66	33		
		116	66
59	38		
		108	88
58	57		
		84	177
33	134		
		41	253
11	139		

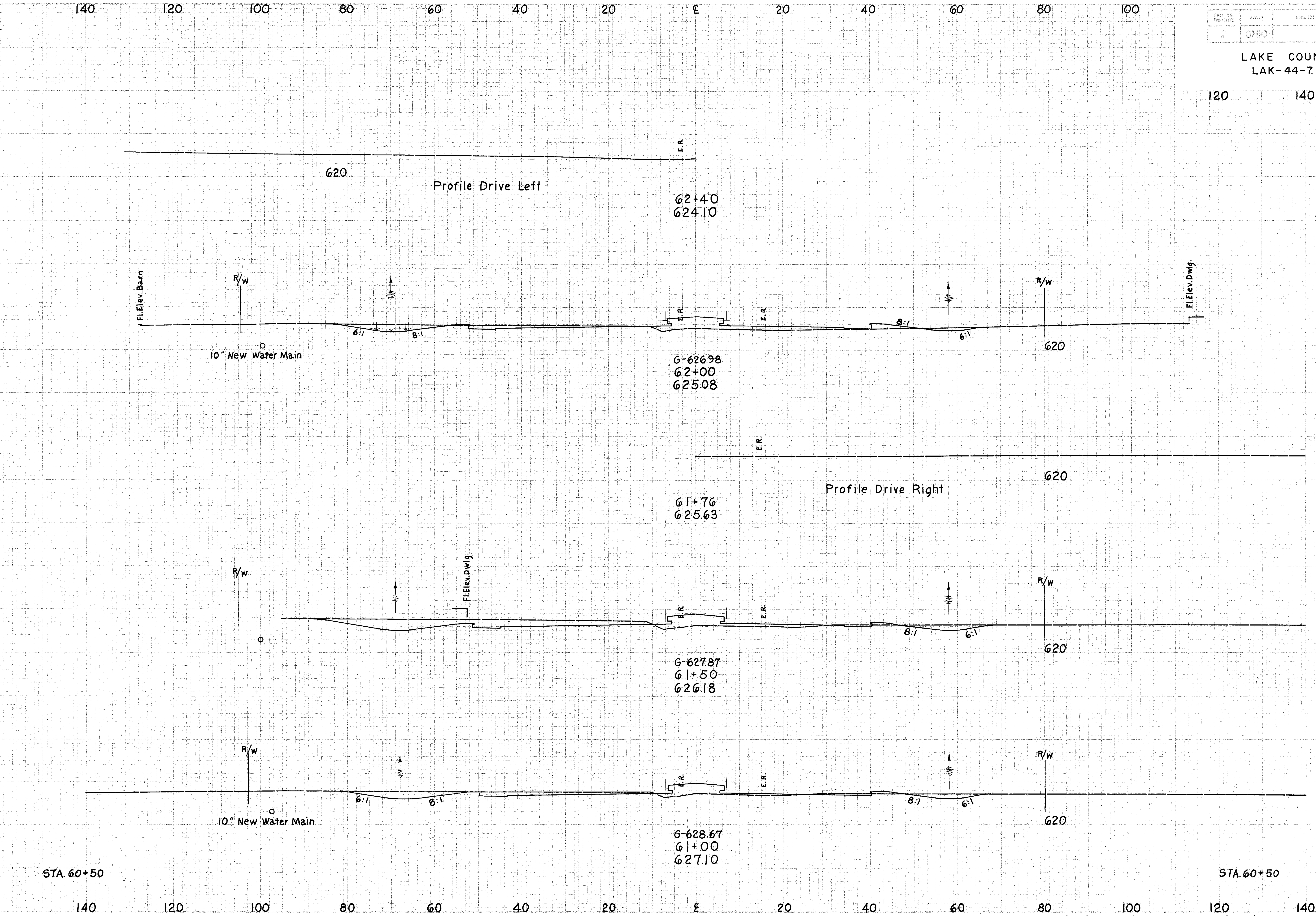
DIV. OF DIVISION	STATE	PROJECT		48
2	OHIO			212

LAKE COUNTY
LAK-44-7.22

S.R. 44 Sta. 59+00 to 60+50

LAKE COUNTY
LAK-44-7.22

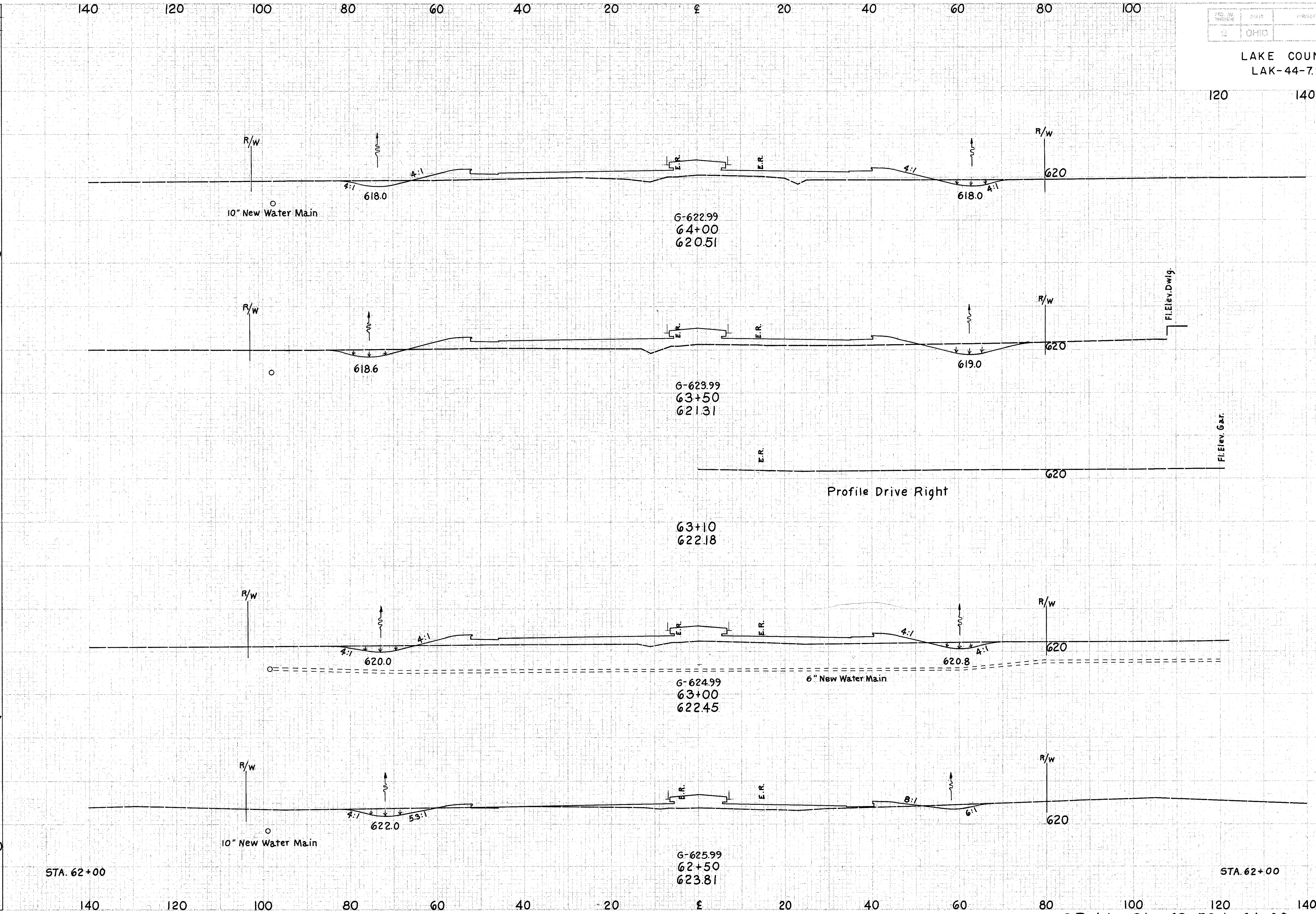
SEEDING END WIDTH	SEEDING SQ. YDS.
90	
	525
99	
	536
94	
	528
96	



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
47	56		
		163	98
129	50		
		187	84
73	41		
		129	69
66	33		

LAKE COUNTY
LAK-44-7.22

Station	Seeding End Width	Seeding Sq. Yds.	End Area Cut	End Area Fill	Volume Cut	Volume Fill
64+00	95		27	233		
		550			69	431
63+50	103		48	233		
		553			68	417
63+00	96		25	217		
		517			48	296
62+50	90		27	103		
		500			69	147
STA. 62+00	90		47	56		



SEEDING	
END WIDTH	SQ. YDS.
98	544
98	531
93	514
92	511
92	519
95	

140 120 100 80 60 40 20 ℄ 20 40 60 80 100

R/W 615.00 E.R. E.R. 5:1 4:1 614.2 610 R/W 120 140 Fl. Elev. Dwlg.

10" New Water Main

G-617.99
66+50
618.87

R/W 615.6 E.R. E.R. 4:1 4:1 614.9 610 R/W

G-618.99
66+00
618.99

R/W 616.20 E.R. E.R. 615.6 610 R/W

G-619.99
65+50
619.16

R/W 616.80 E.R. E.R. 616.3 610 R/W

G-620.99
65+00
619.54

R/W 617.40 E.R. E.R. 4:1 617.0 4:1 620 R/W

10" New Water Main

G-621.99
64+50
619.99

STA. 64+00 STA. 64+00

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

STATE	COUNTY	SHEET	TOTAL SHEETS
OHIO		51	212

LAKE. COUNTY
LAK-44-7.22

END AREA		VOLUME	
CUT	FILL	CUT	FILL
293	1		
		398	19
137	20		
		166	113
42	102		
		65	231
28	148		
		51	338
27	217		
		50	417
27	233		

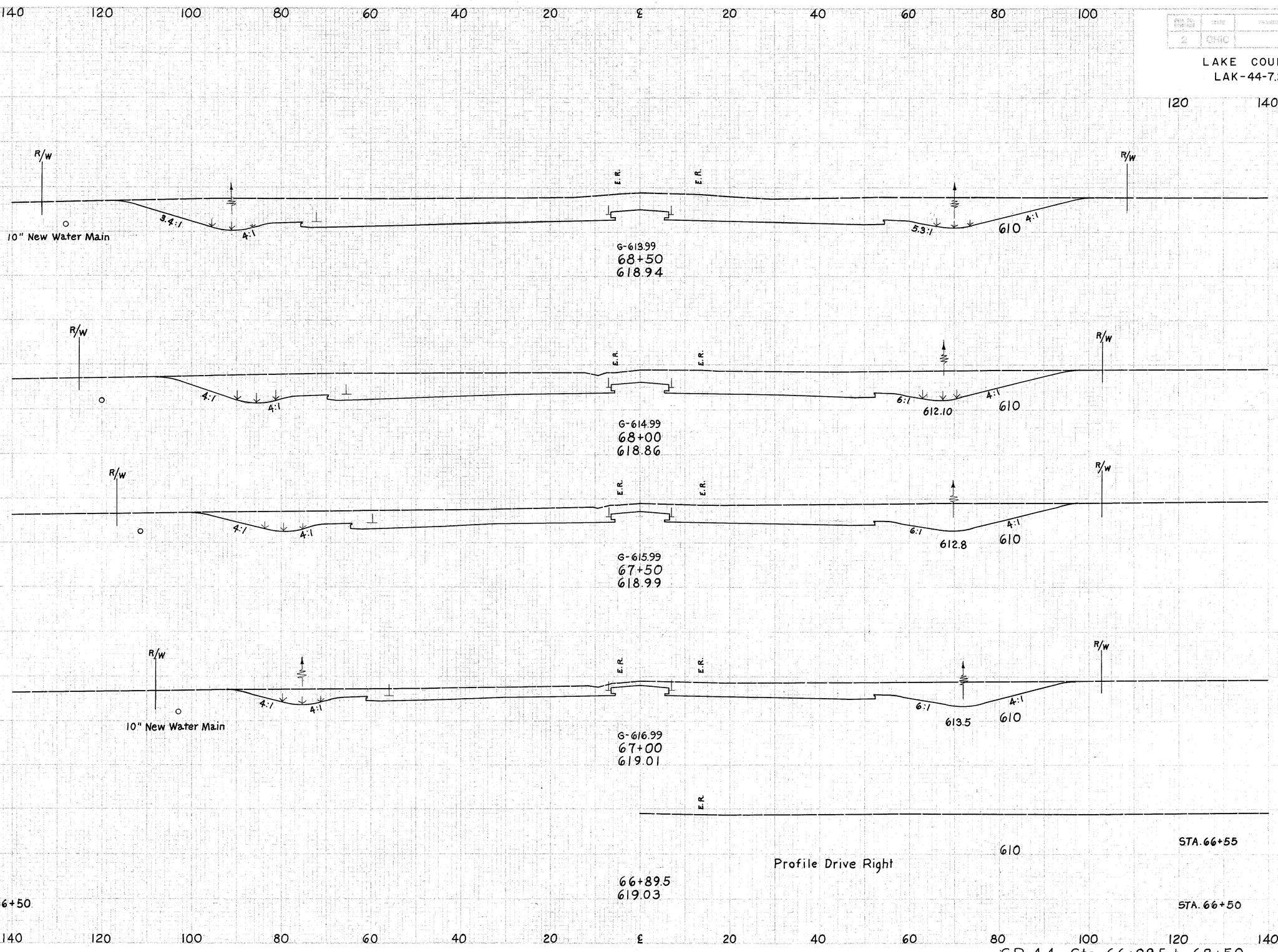
S.R. 44 Sta. 64+50 to 66+50

SEEDING	
END WIDTH	SQ. YDS.
119	656
117	642
114	619
109	575
98	

PER. NO.	STATE	PROJECT
2	OHIO	

52
212

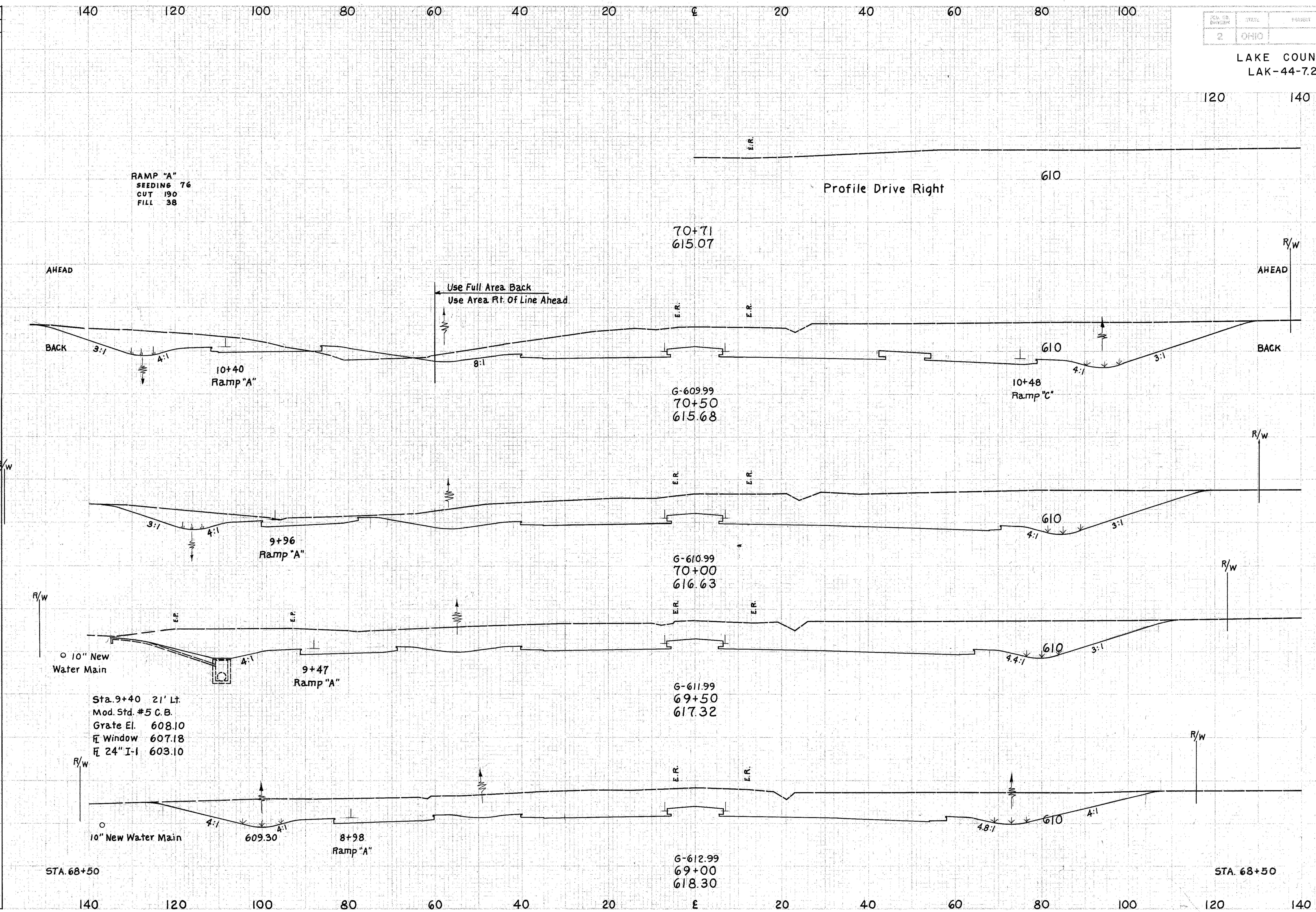
LAKE COUNTY
LAK-44-7.22



END AREA		VOLUME	
CUT	FILL	CUT	FILL
1096			
		1901	
957			
		1544	
710			
		1150	
532			
		764	
0			
		0	
293	1		

S.R. 44 Sta. 66+89.5 to 68+50

SEEDING END WIDTH	SQ. YDS.
107	
183	
	942
156	
	861
154	
	839
148	
	742
119	


140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140
E.R.
610
Profile Drive Right
RAMP "A"
SEEDING 76
CUT 190
FILL 38
70+71
615.07
R/W
AHEAD
Use Full Area Back
Use Area Rt. Of Line Ahead
BACK
3:1
4:1
8:1
10+40
Ramp "A"
10+48
Ramp "C"
G-609.99
70+50
615.68
9+96
Ramp "A"
G-610.99
70+00
616.63
E.P.
10" New
Water Main
4.4:1
9+47
Ramp "A"
G-611.99
69+50
617.32
Sta. 9+40 21' Lt.
Mod. Std. #5 C.B.
Grate El. 608.10
℄ Window 607.18
℄ 24" I-1 603.10
4.8:1
10" New Water Main
609.30
8+98
Ramp "A"
G-612.99
69+00
618.30
STA. 68+50

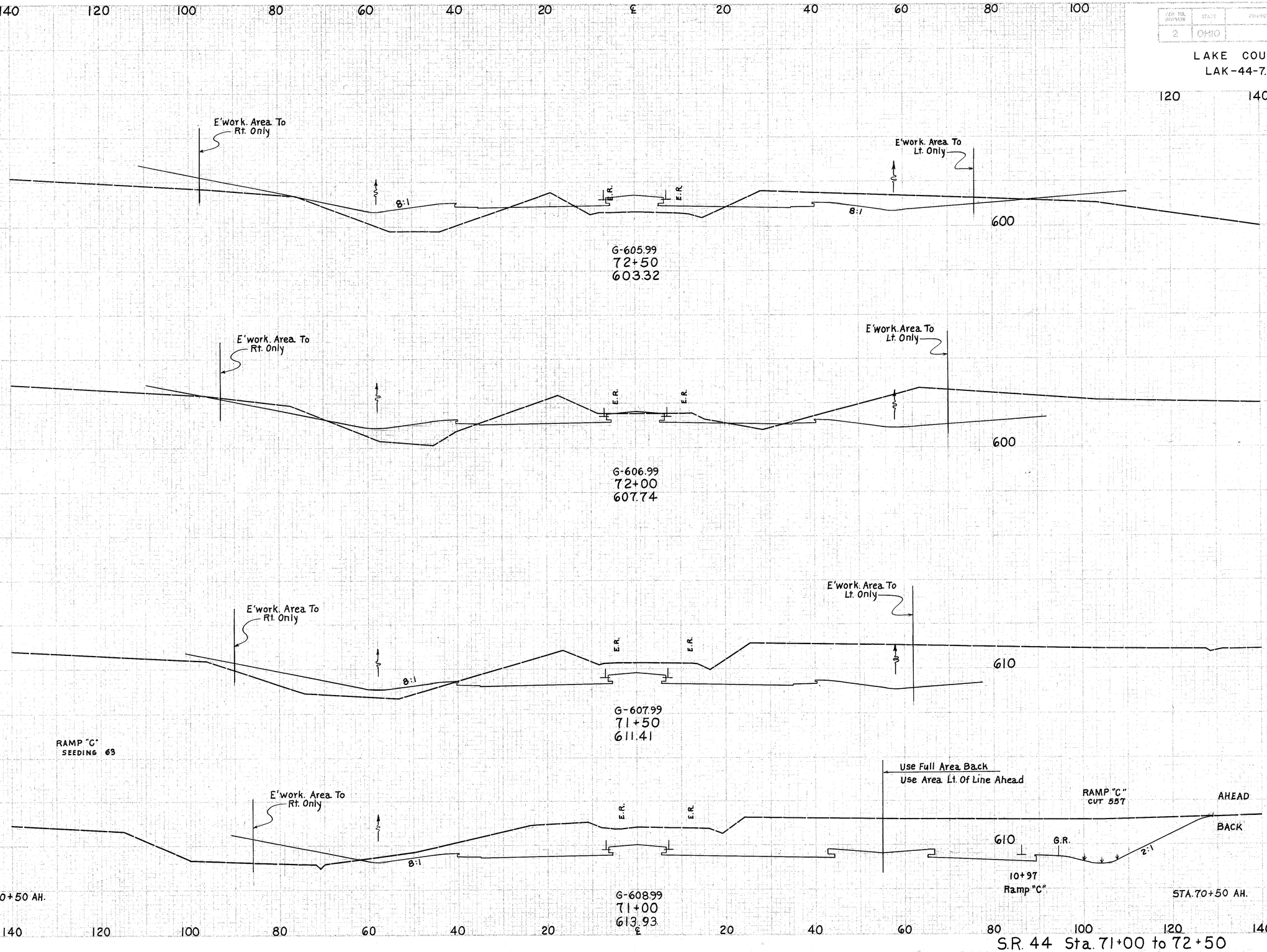
END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
1218	0		
1408	38		
		2506	35
1298	0		
		2501	
1403			
		2430	
1221			
		2145	
1096			

SEEDING	
END WIDTH	SQ. YDS.
107	
	564
96	
	503
85	
	433
71	
134	
	669
107	

FED. NO. DIVISION	STATE	PROJECT	
5	OHIO		

54
212

LAKE COUNTY
LAK-44-7.22



END AREA		VOLUME	
CUT	FILL	CUT	FILL
159	247		
		434	319
310	97		
		870	183
630	101		
		1200	161
666	73		
1218	73		
		2256	68
1218	0		

S.R. 44 Sta. 71+00 to 72+50

SEEDING	
END WIDTH	SQ. YDS.
126	
	675
117	
661	
121	
	706
133	
	667
107	

END AREA		VOLUME	
CUT	FILL	CUT	FILL
	1658		
			2991
	1572		
			2853
	1509		
			2501
	1192		
			1332
0			
			88
159	247		

55
212

LAKE COUNTY
LAK-44-7.22

S.R. 283 Structure

E'work. Area To Rt. Only

E'work. Area To Lt. Only

2:1

8:1

E.P.

E.R.

E.R.

T.B.

E.W.

E.W.

600

G-602.76
74+50
596.36

E'work. Area To Rt. Only

E'work. Area To Lt. Only

8:1

E.P.

E.R.

E.R.

T.B.

E.W.

E.W.

T.B.

600

Sta. 73+75± Lt.
84" x 24" 60° Wye

G-603.42
74+00
596.81

E'work. Area To Rt. Only

E'work. Area To Lt. Only

E.R.

E.R.

T.B.

E.W.

E.W.

T.B.

590

Sta. 73+65 58' Lt.
Std. #5 C.B.
Grate El. 601.30
FL 24" I-I 594.54

G-604.18
73+50
597.85

E'work. Area To Rt. Only

E'work. Area To Lt. Only

8:1

8:1

E.R.

E.R.

600

G-605.04
73+00
599.78

STA. 72+80

STA. 72+50

STA. 72+50

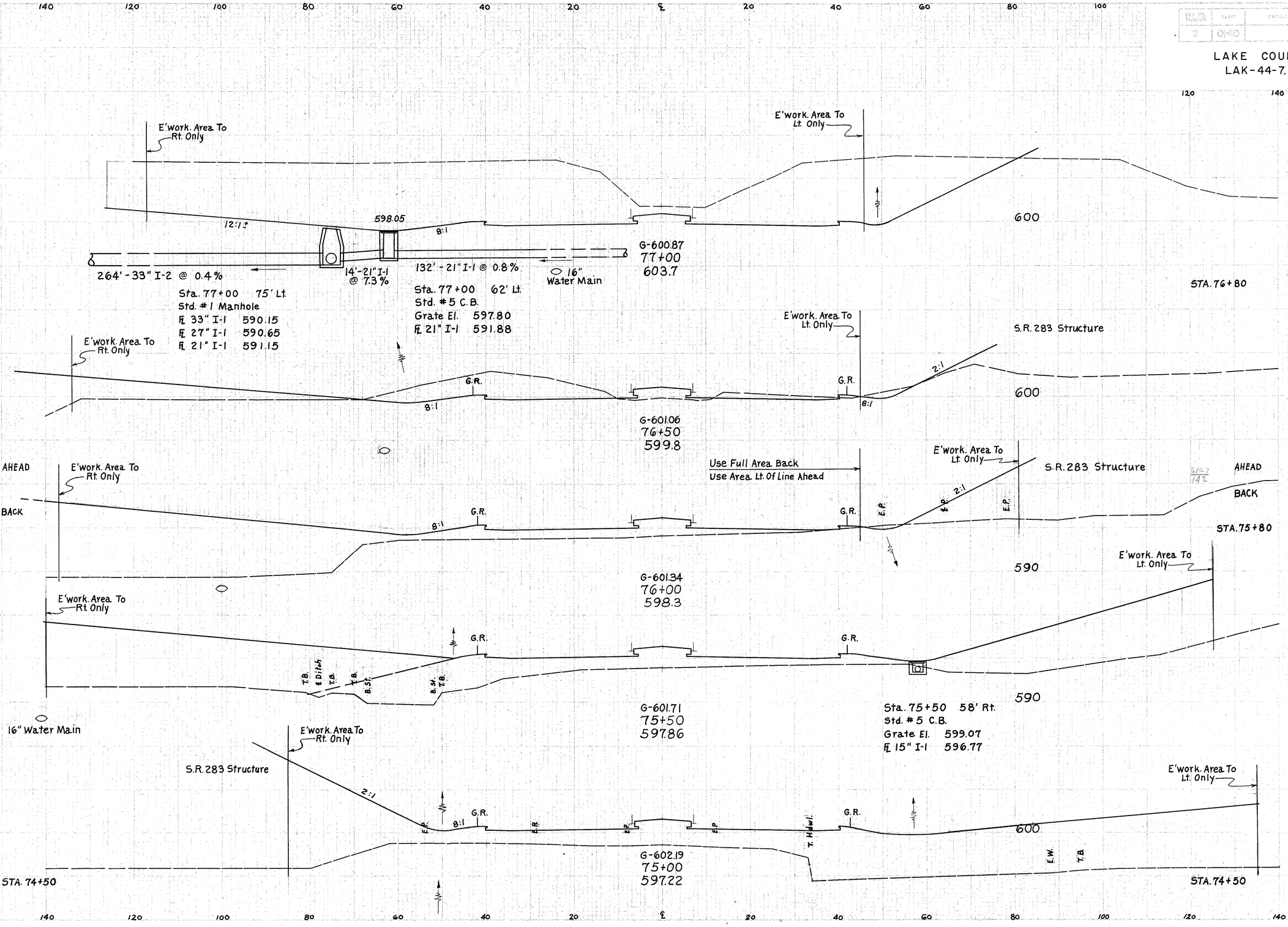
140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

S.R. 44 Sta. 73+00 to 74+50

STATE	COUNTY	PROJECT		SHEET NO.	TOTAL SHEETS
3	OHIO			56	212

LAKE COUNTY
LAK-44-7.22

SEEDING	
END WIDTH	SQ. YDS.
96	
	581
113	
	636
116	
153	
	939
185	
	947
156	
	783
126	



END AREA		VOLUME	
CUT	FILL	CUT	FILL
	1957		
		2044	
	0		
			121
250	217		
		231	1245
0	1128		
3	1281		1
0			3106
		2073	
			3786
		2016	
			3402
		1658	

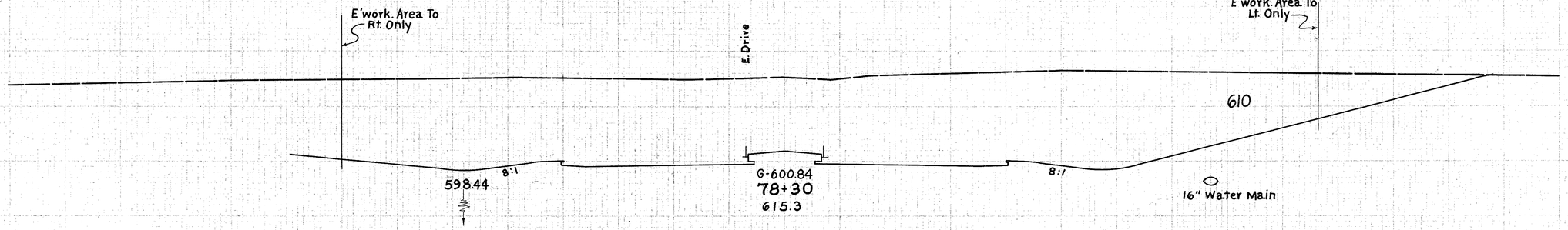
S.R. 44 STA. 75+00 to 77+00

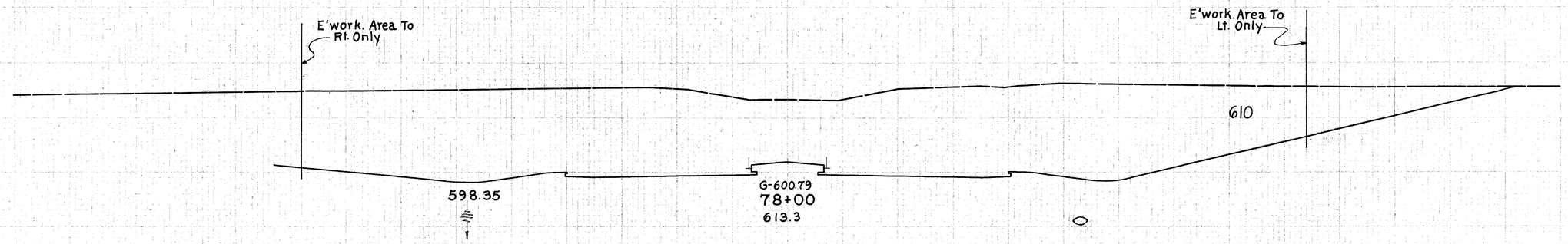
SEEDING	
END WIDTH	SQ. YDS.
110	
	375
115	
	619
108	
	567
96	

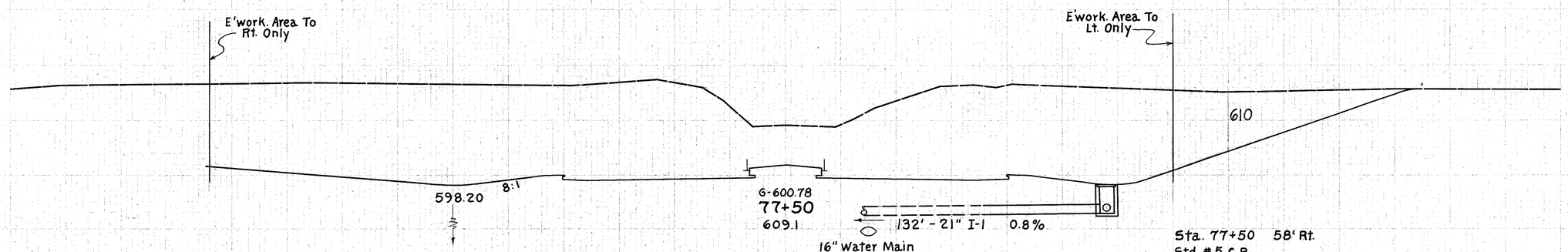
FED. AID PROJECT	STATE	PROJECT		57 212
2	OHIO			

LAKE COUNTY
LAK-44-7.22

END AREA		VOLUME	
CUT	FILL	CUT	FILL
2705			
		3039	
2765			
		5116	
2760			
		4368	
1957			







Sta. 77+50 58' Rt.
Std. #5 C.B.
Grate El. 598.14
fl. 21" I-1 592.90
fl. 15" I-1 593.40

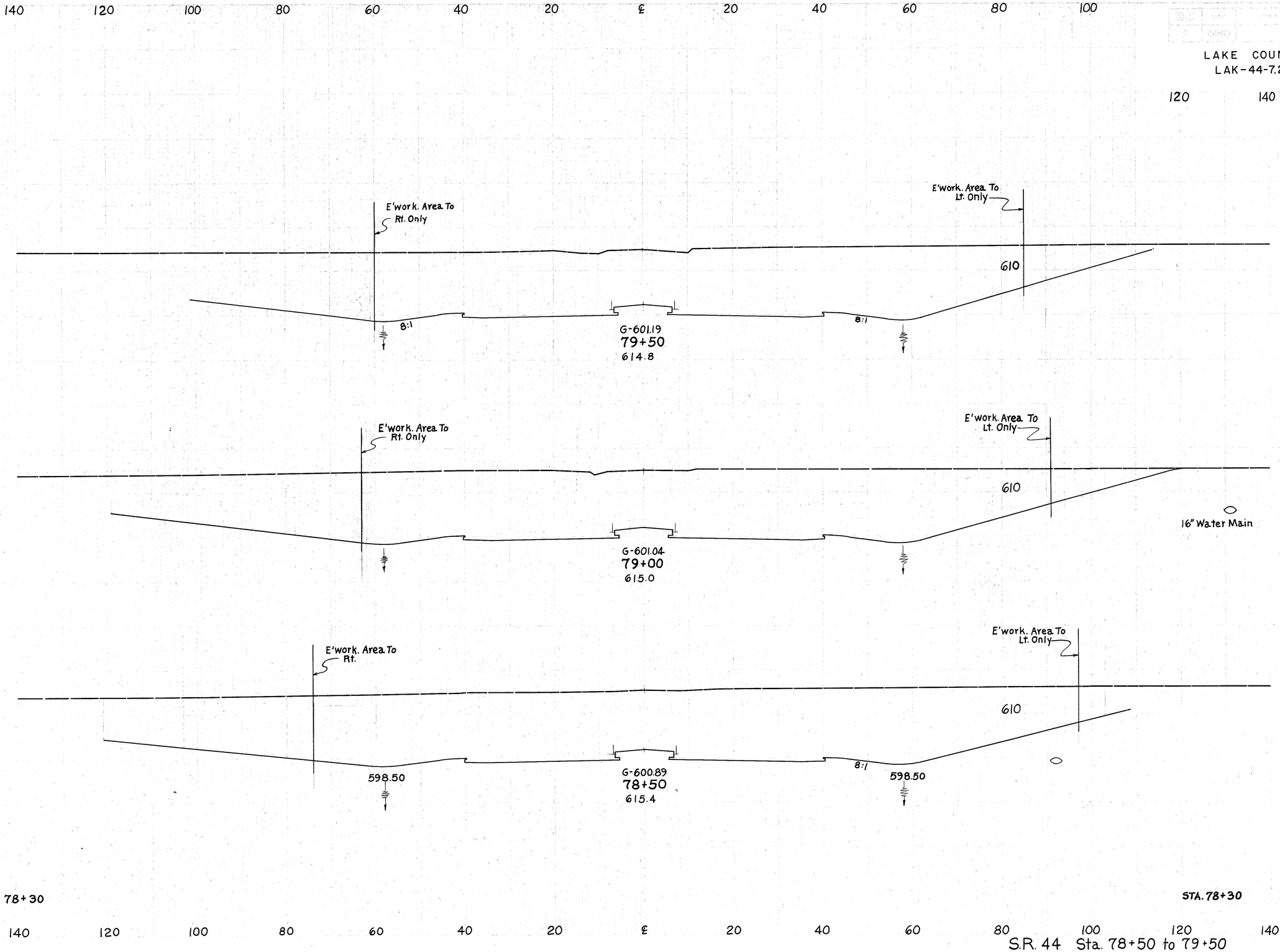
STA. 77+00

STA. 77+00

S.R. 44 Sta. 77+50 to 78+30

LAKE COUNTY
LAK-44-7.22

SEEDING	
END WIDTH	sq. YDS.
79	464
88	536
105	239
110	

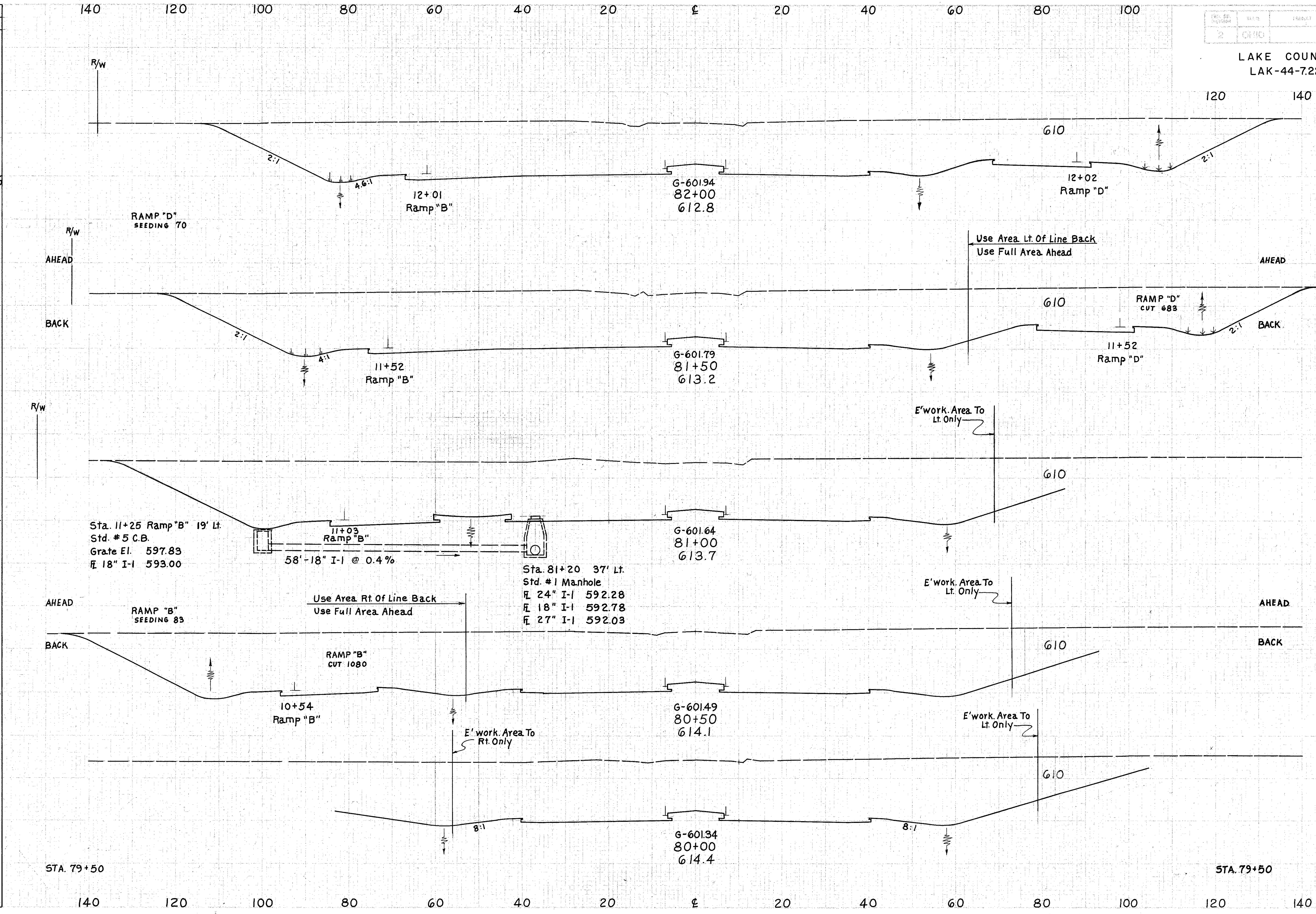


END AREA		VOLUME	
CUT	FILL	CUT	FILL
2117		4079	
2288		4521	
2595		1963	
2705			

S.R. 44 Sta. 78+50 to 79+50

LAKE COUNTY
LAK-44-7.22

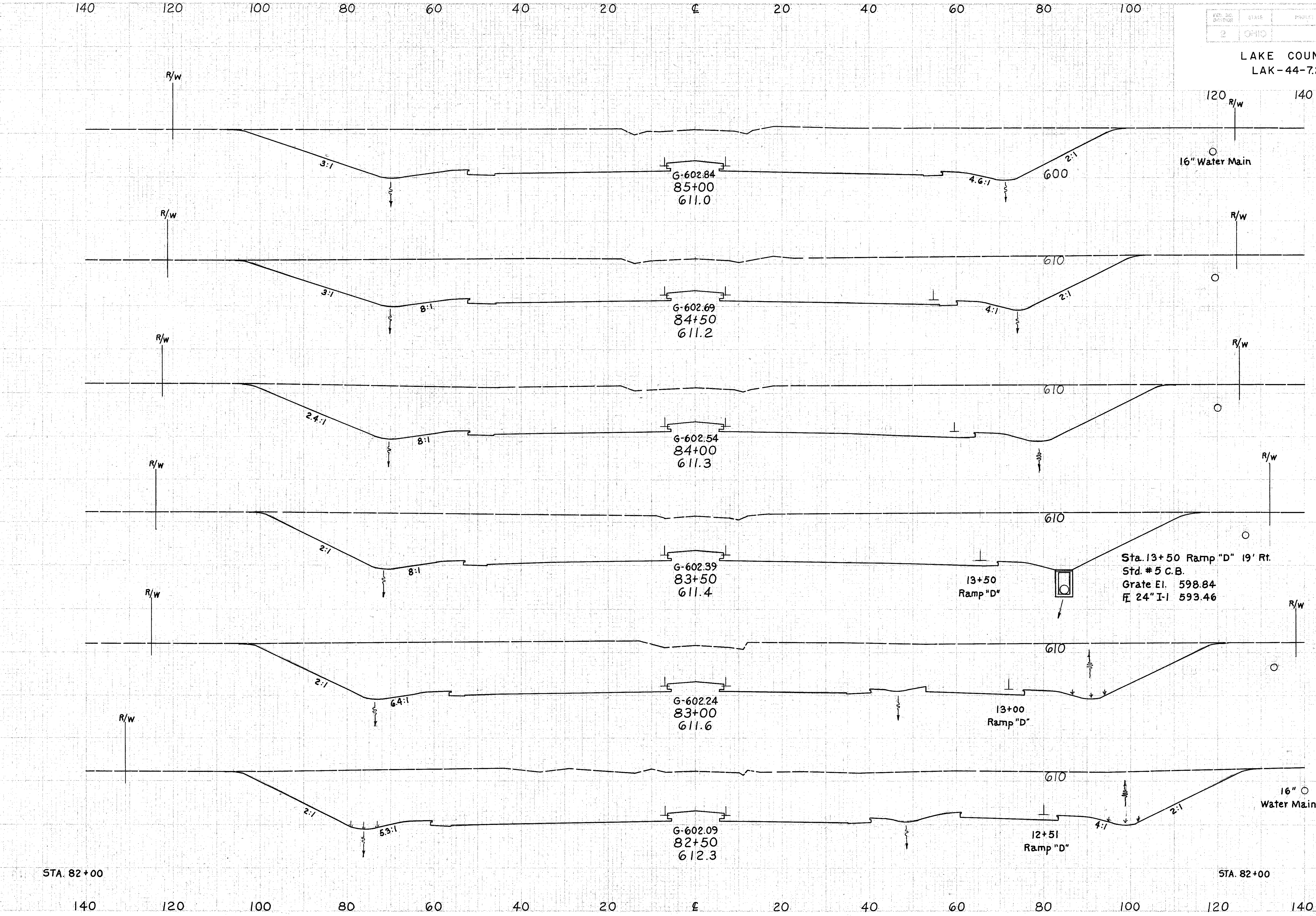
SEEDING END WIDTH	SQ. YDS.
158	
	906
168	
98	
	622
126	
	747
143	
60	
	358
69	
	411
79	


140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140
R/W
2:1
4.6:1
12+01
Ramp "B"
G-601.94
82+00
612.8
610
12+02
Ramp "D"
RAMP "D"
SEEDING 70
AHEAD
BACK
Use Area Lt. Of Line Back
Use Full Area Ahead
4:1
11+52
Ramp "B"
G-601.79
81+50
613.2
RAMP "D"
CUT 683
11+52
Ramp "D"
E'work. Area To
Lt. Only
Sta. 11+25 Ramp "B" 19' Lt.
Std. #5 C.B.
Grate El. 597.83
℄ 18" I-1 593.00
11+03
Ramp "B"
58'-18" I-1 @ 0.4%
Sta. 81+20 37' Lt.
Std. #1 Manhole
℄ 24" I-1 592.28
℄ 18" I-1 592.78
℄ 27" I-1 592.03
G-601.64
81+00
613.7
Use Area Rt. Of Line Back
Use Full Area Ahead
RAMP "B"
SEEDING 83
RAMP "B"
CUT 1080
10+54
Ramp "B"
G-601.49
80+50
614.1
E'work. Area To
Rt. Only
8:1
G-601.34
80+00
614.4
STA. 79+50

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
2698			
		5243	
2965			
2282			
		4552	
2634			
		5075	
2847			
1767			
		3396	
1901			
		3720	
2117			

LAKE COUNTY
LAK-44-7.22

SEEDING END WIDTH	SEEDING SQ. YDS.
132	
	728
130	
	736
135	
	739
131	
	756
141	
	808
150	
	856
158	



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
1761			
		3345	
1852			
		3587	
2022			
		3853	
2139			
		4118	
2309			
		4374	
2415			
		4734	
2698			

S.R. 44 Sta. 82+50 to 85+00

SEEDING	
END WIDTH	SQ. YDS.
131	739
135	764
140	778
140	772
138	758
135	742
132	

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

R/W

610

3:1 8:1 8:1 3:1

16" Water Main

G-603.41
88+00
609.8

600

G-603.40
87+50
610.0

600

G-603.36
87+00
610.4

600

G-603.27
86+50
610.7

600

G-603.14
86+00
610.7

3:1 8:1 5.3:1 2.4:1

600

G-602.99
85+50
610.9

STA. 85+00

STA. 85+00

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

END AREA		VOLUME	
CUT	FILL	CUT	FILL
1214			
		2409	
1388			
		2716	
1545			
		2908	
1596			
		3000	
1644			
		3106	
1711			
		3215	
1761			

FED. PR. PROJECT	STATE	PROJECT	
2	OHIO		

6.1
212

LAKE COUNTY
LAK-44-7.22

S.R.44 Sta. 85+50 to 88+00

SEEDING	
END WIDTH	SQ. YDS.
138	
	761
136	
	750
134	
	708
121	
	703
132	
	731
131	

BRIDGE	STATE	SHEET	
2	OHIO		

6.2
212

LAKE COUNTY
LAK-44-7.22

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

R/W T.B. 3:1 8:1 E.R. ℄ R.

G-602.84
90+50
604.6

G.R. 8:1 3:1 600 16" Water Main

R/W T.B. E.R. ℄ R. E.R. T.B. G.R. 600

G-603.02
90+00
608.2

R/W T.B. E.R. ℄ R. E.R. G.R. 600

G-603.18
89+50
610.3

R/W ℄ Ditch B.B. T.B. E.R. ℄ R. E.R. T.B. 600

G-603.30
89+00
610.4

R/W T.B. ℄ Ditch T.B. E.R. ℄ R. E.R. T.B. 3:1 8:1 600 16" Water Main

G-603.37
88+50
610.0

STA. 88+00 STA. 88+00

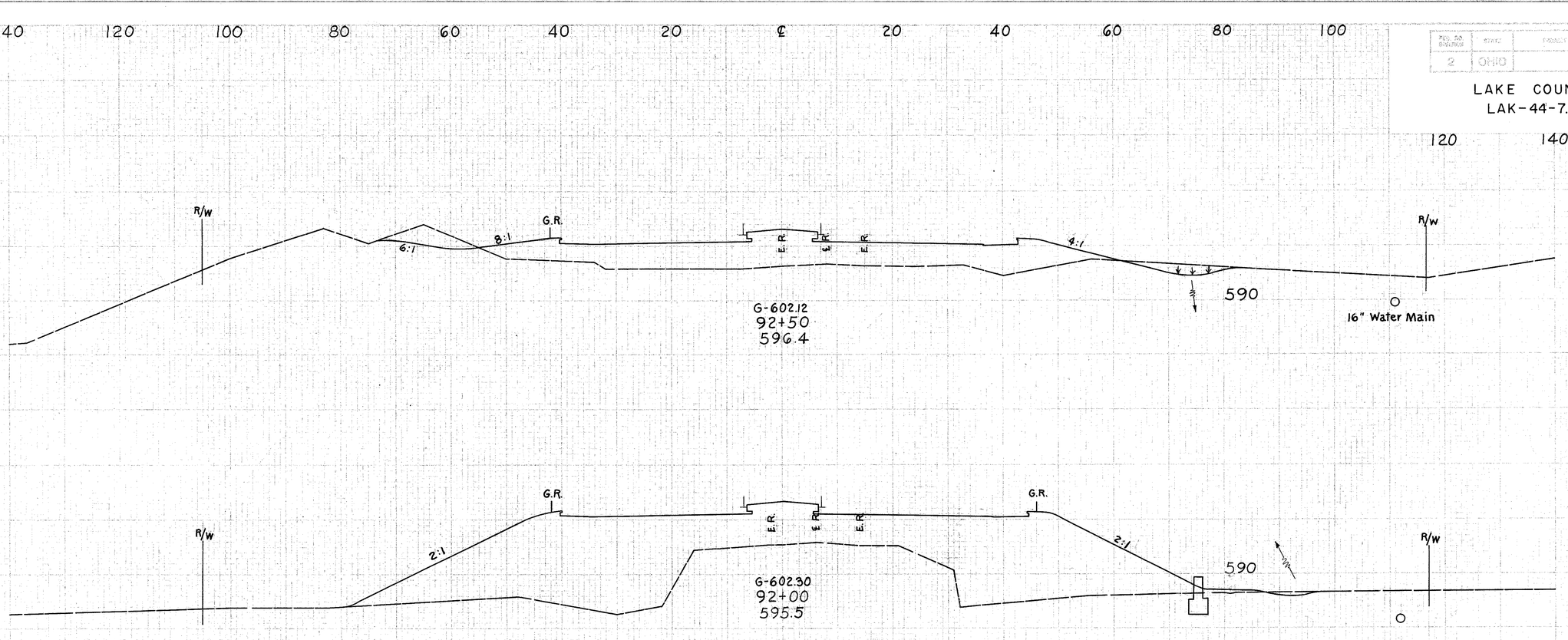
END AREA		VOLUME	
CUT	FILL	CUT	FILL
1278			
		2519	
1443			
		2673	
1444			
		2524	
1282			
		2340	
1245			
		2277	
1214			

S.R.44 Sta. 88+50 to 90+50

SEEDING	
END WIDTH	SQ. YDS.
105	661
133	703
120	692
129	742
138	

FED. AID PROJECT	STATE	PROJECT		SHEET NO.	TOTAL SHEETS
2	OHIO			63	212

LAKE COUNTY
LAK-44-7.22



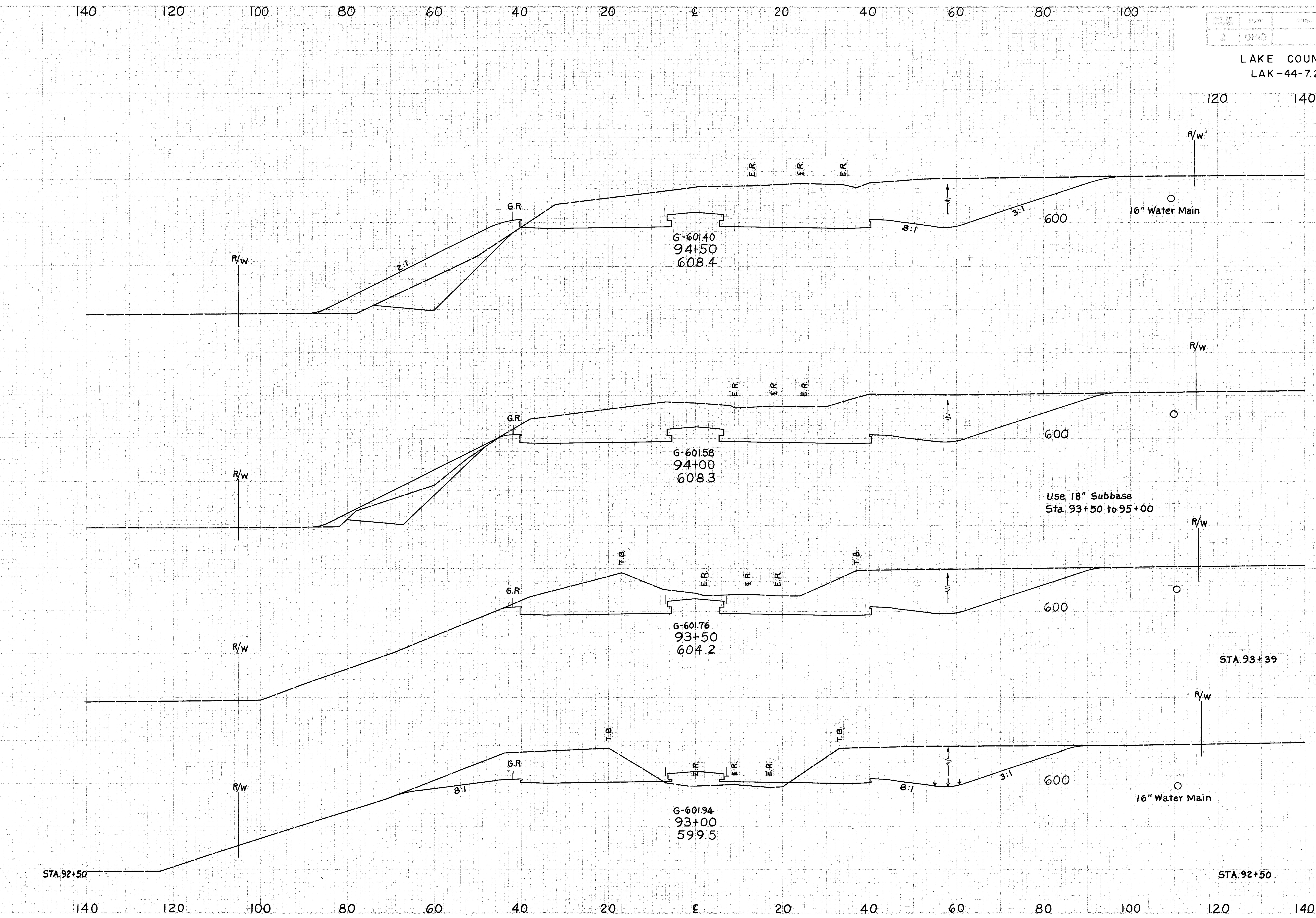
END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
57	490		
		57	1888
5	1549		
56	2234		
56	864		
		882	850
897	54		39
	0	2014	
1278			

S.R. 44 Sta. 91+00 to 92+50

2 OHIO

LAKE COUNTY
LAK-44-7.22

SEEDING END WIDTH	SEEDING SQ. YDS.
146	
	797
141	
	642
90	
	553
109	
	594
105	

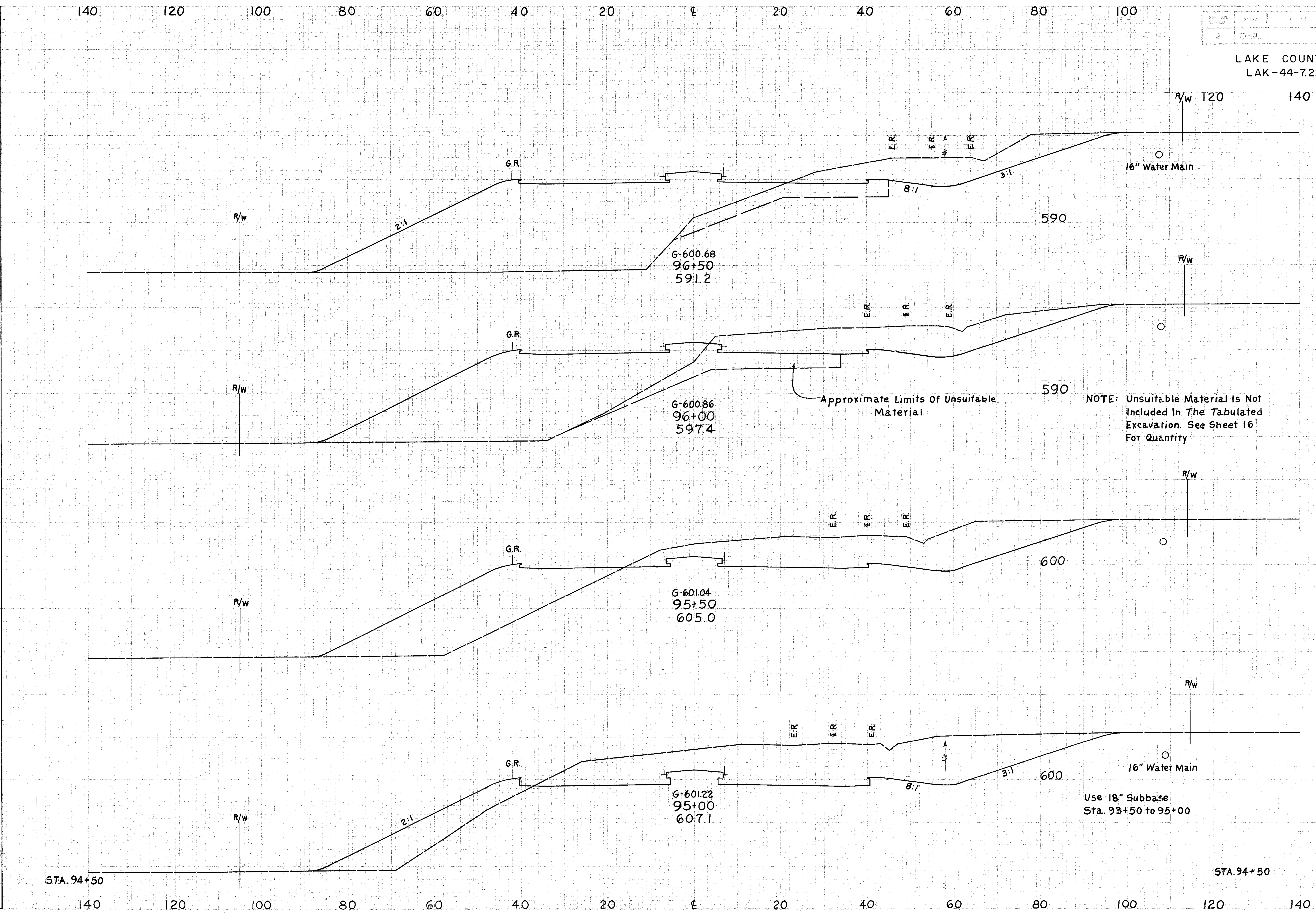


END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
1026	222		
		1906	285
1033	86		
		1715	80
819	0		
	0	1409	
			38
703	53		
		704	503
57	490		

S.R.44 Sta. 93+00 to 94+50

LAKE COUNTY
LAK-44-7.22

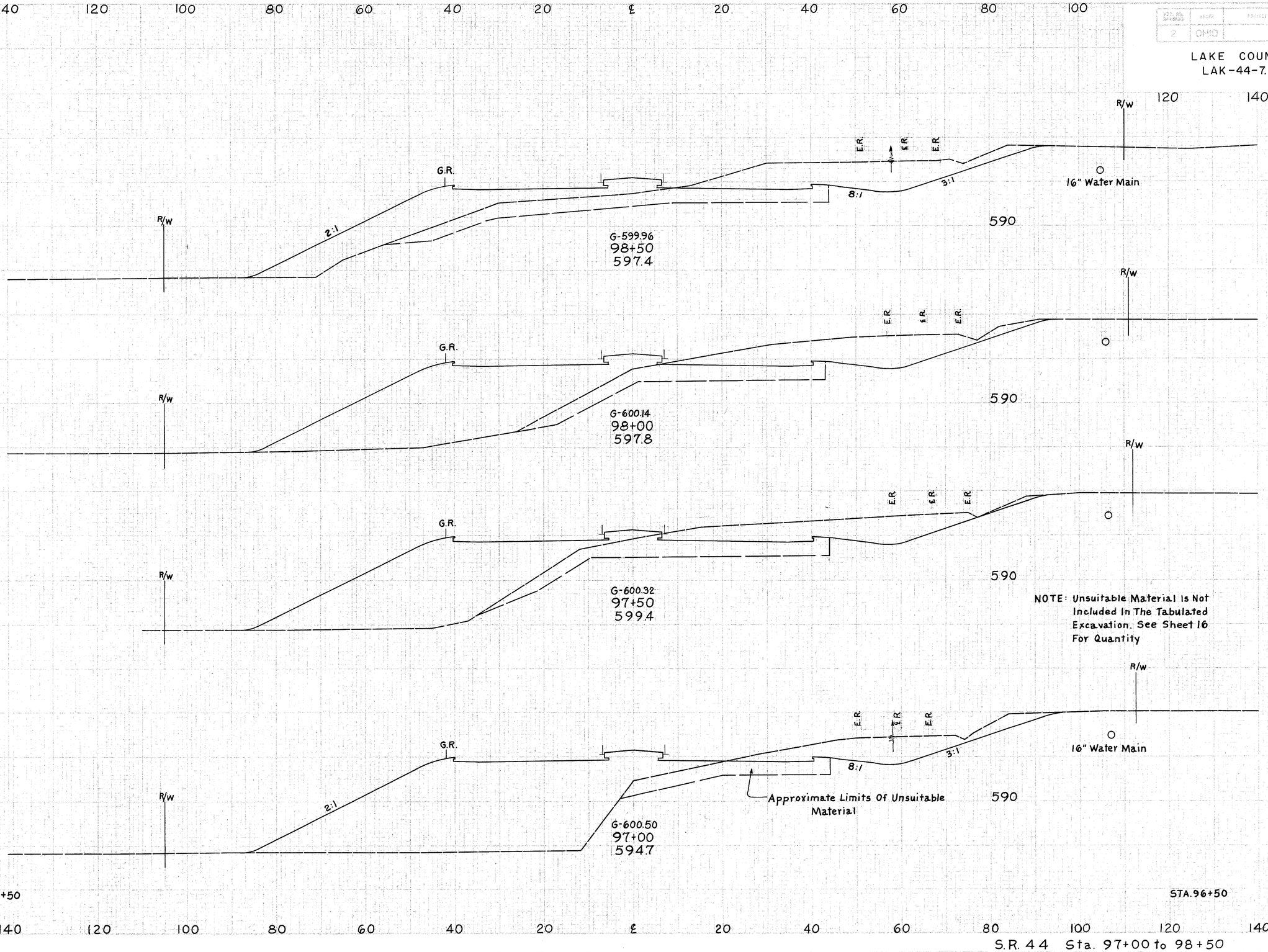
SEEDING END WIDTH	SEEDING SQ. YDS.
146	
	806
144	
	800
144	
	803
145	
	808
146	



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
305	1442		
		703	2337
454	1082		
		1025	1556
653	598		
		1489	830
955	298		
		1834	481
1026	222		

S.R. 44 Sta. 95+00 to 96+50

SEEDING	
END WIDTH	SQ. YDS.
137	764
138	764
137	775
142	800
146	



END AREA		VOLUME	
CUT	FILL	CUT	FILL
333	444		
		613	1294
329	954		
		556	1634
271	811		
		464	1994
230	1343		
		495	2579
305	1442		

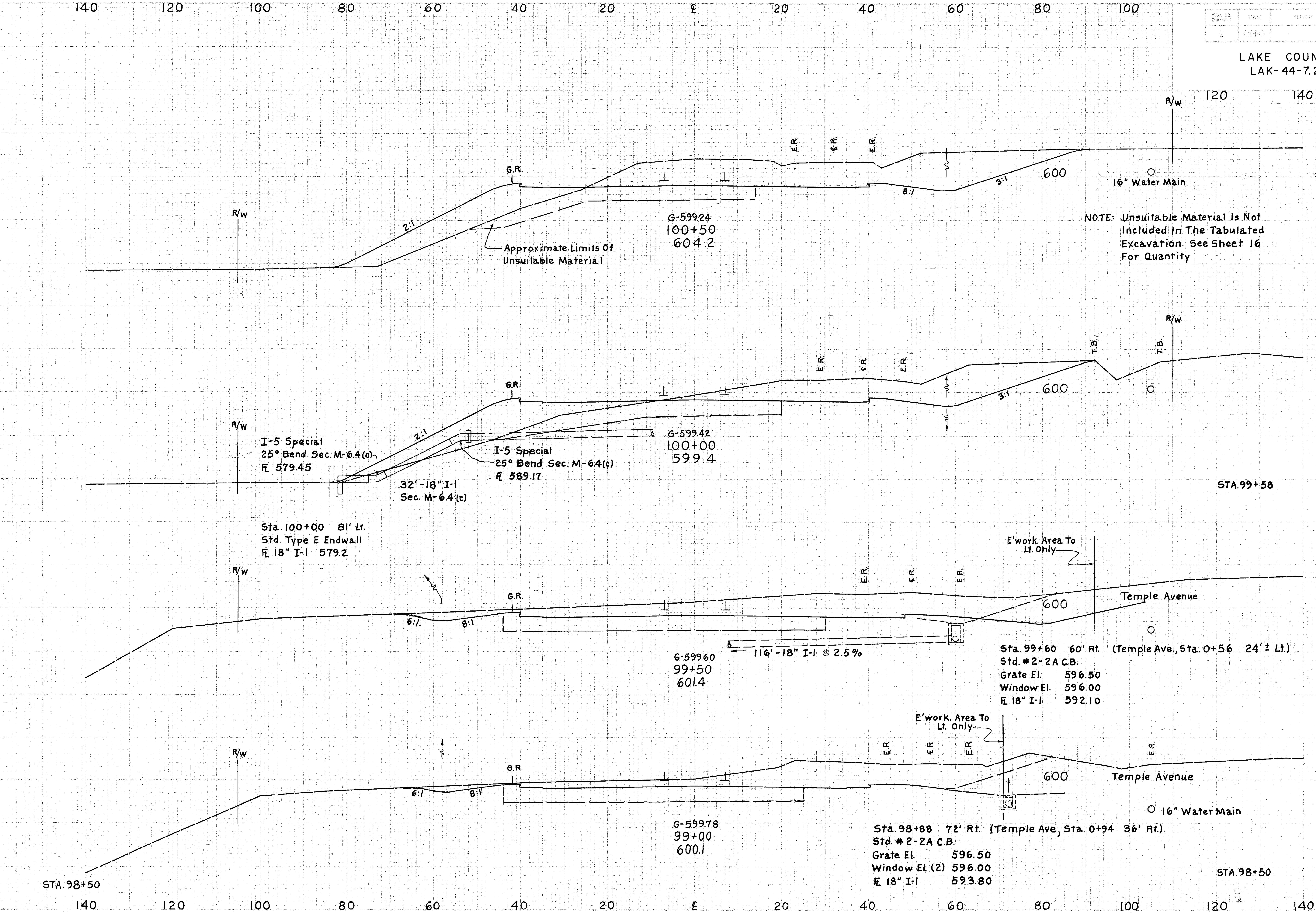
FED. ROAD DIVISION	STATE	PROJECT		SHEET NO.	TOTAL SHEETS
2	OHIO			66	212

LAKE COUNTY
LAK-44-7.22

S.R. 44 Sta. 97+00 to 98+50

LAKE COUNTY
LAK-44-7.22

SEEDING END WIDTH	SQ. YDS.
119	
	667
121	
	561
81	
	414
68	
	569
137	

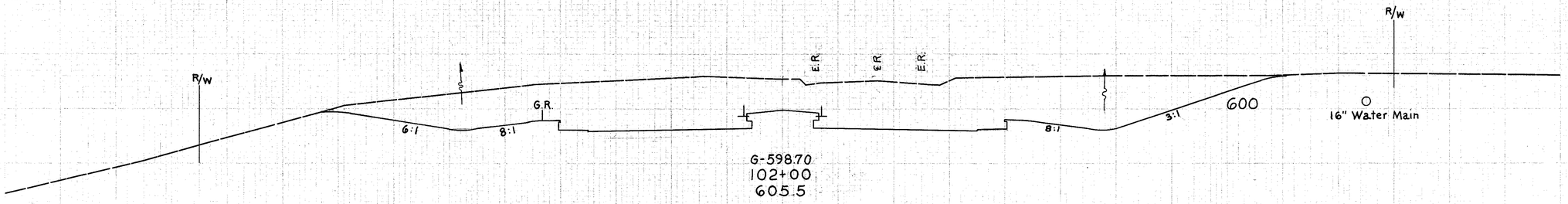

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140
R/W
G.R.
E.R.
℄R.
2:1
8:1
3:1
600
16" Water Main
G-599.24
100+50
604.2
Approximate Limits Of Unsuitable Material
NOTE: Unsuitable Material Is Not Included In The Tabulated Excavation. See Sheet 16 For Quantity
T.B.
I-5 Special
25° Bend Sec. M-6.4(c)
℄ 579.45
I-5 Special
25° Bend Sec. M-6.4(c)
℄ 589.17
32'-18" I-1
Sec. M-6.4 (c)
G-599.42
100+00
599.4
STA. 99+58
Sta. 100+00 81' Lt.
Std. Type E Endwall
℄ 18" I-1 579.2
E'work. Area To Lt. Only
Temple Avenue
6:1
116'-18" I-1 @ 2.5%
G-599.60
99+50
601.4
Sta. 99+60 60' Rt. (Temple Ave., Sta. 0+56 24'± Lt.)
Std. #2-2A C.B.
Grate El. 596.50
Window El. 596.00
℄ 18" I-1 592.10
G-599.78
99+00
600.1
Sta. 98+88 72' Rt. (Temple Ave, Sta. 0+94 36' Rt.)
Std. #2-2A C.B.
Grate El. 596.50
Window El. (2) 596.00
℄ 18" I-1 593.80
STA. 98+50

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
607	250		
		940	519
408	311		
		925	242
	0		
591			
		953	
438	0		
		714	411
333	444		

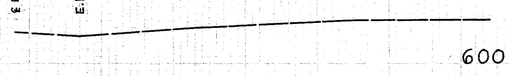
SEEDING	
END WIDTH	SQ. YDS.
126	642
105	575
102	614
119	

LAKE COUNTY
LAK-44-7.22

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140



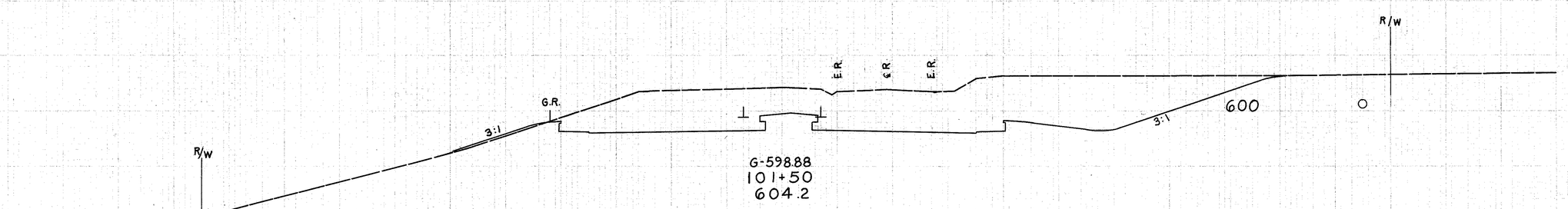
G-598.70
102+00
605.5



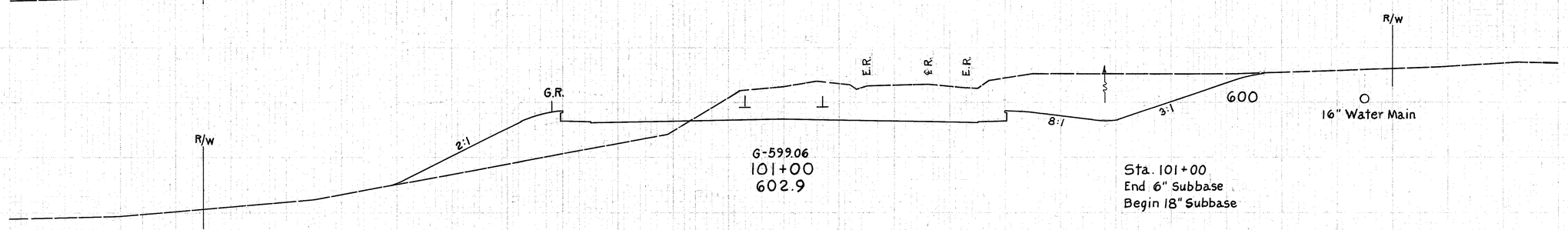
Profile Drive Right

101+67

STA. 101+55



G-598.88
101+50
604.2



G-599.06
101+00
602.9

Sta. 101+00
End 6" Subbase
Begin 18" Subbase

STA. 100+50

STA. 100+50

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

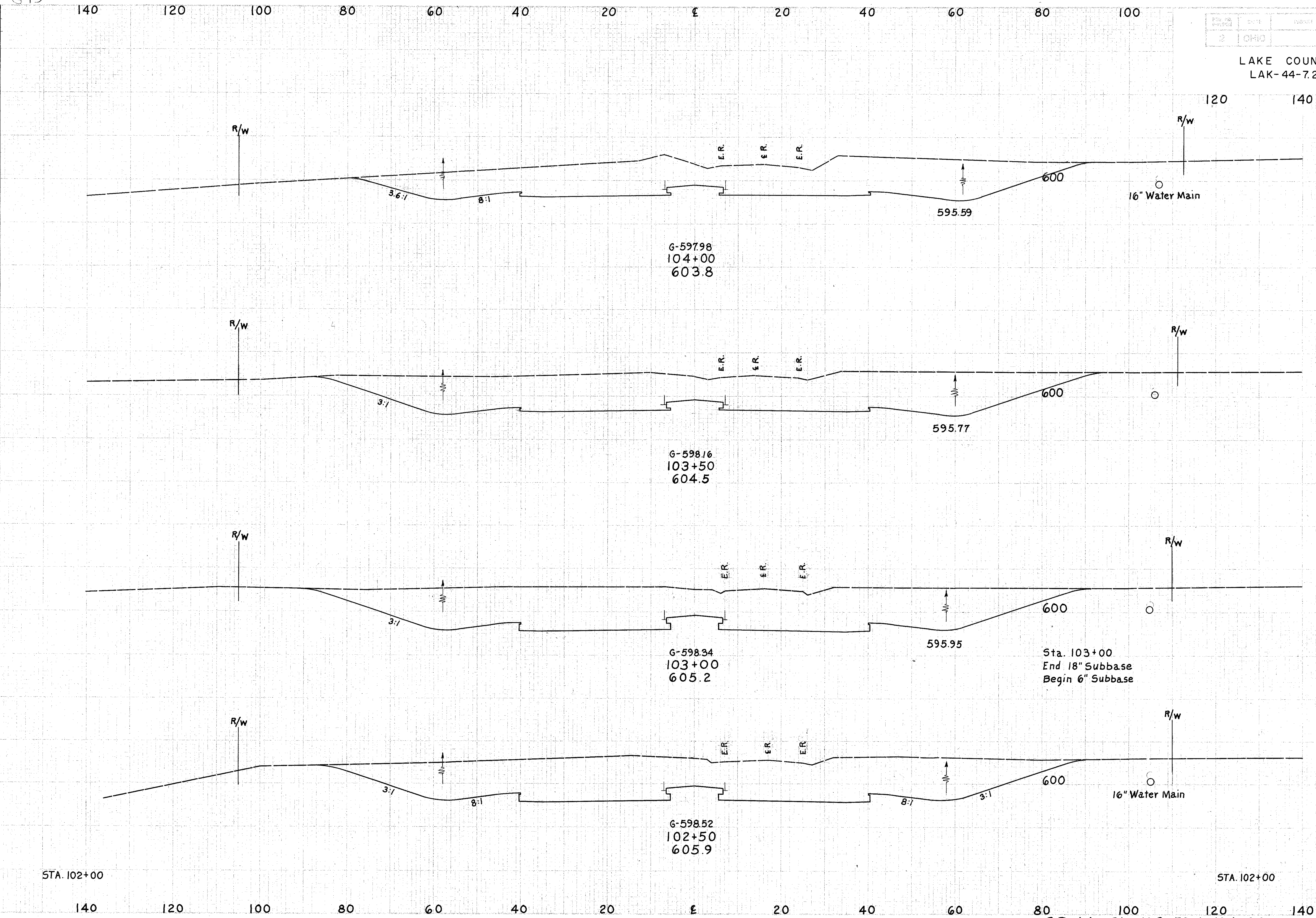
END AREA		VOLUME	
CUT	FILL	CUT	FILL
1221			
		1931	
0			0
865	3		
		1335	205
577	218		
		1096	433
607	250		

S.R. 44 Sta. 101+00 to 102+00

8-H G-15

LAKE COUNTY
LAK-44-7.22

SEEDING END WIDTH	SEEDING SQ. YDS.
125	
	725
136	
	750
134	
	736
131	
	714
126	



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
1094			
		2184	
1265			
		2450	
1381			
		2538	
1360			
		2390	
1221			

S.R. 44 Sta. 102+50 to 104+00

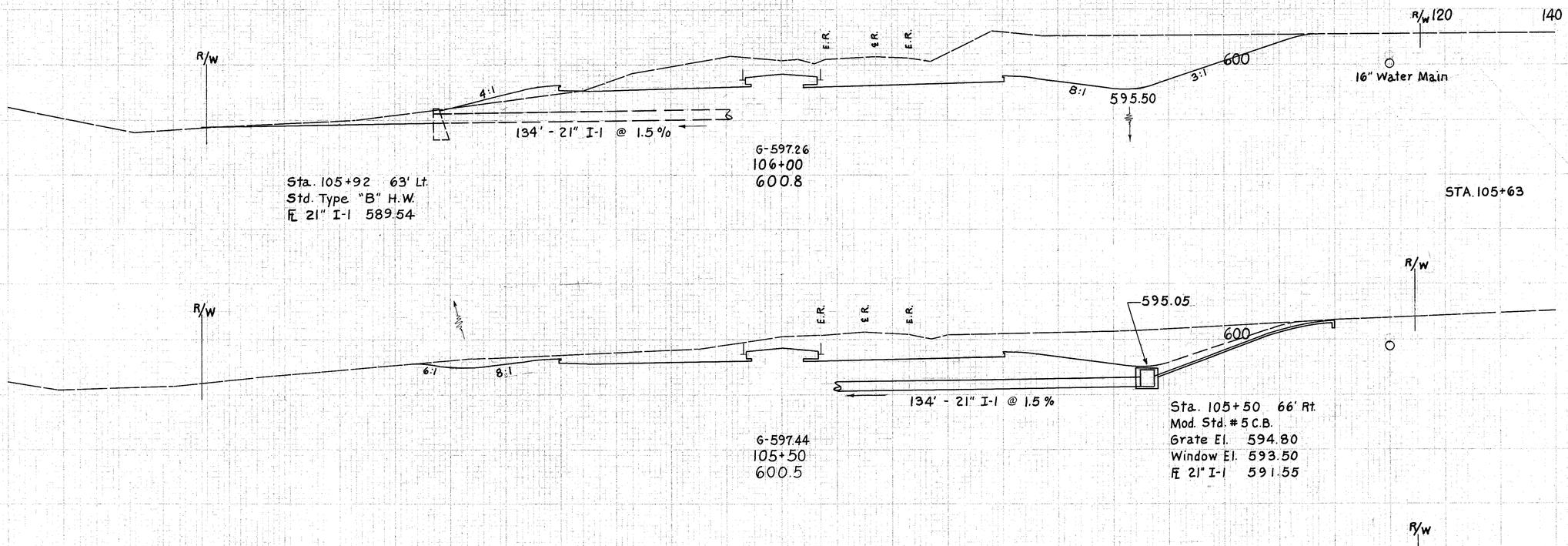
SEEDING	
END WIDTH	SQ YDS.
110	
	614
111	
	658
126	
	644
126	
	753
125	

140 120 100 80 60 40 20 ℄ 20 40 60 80 100

FOR NO. ENGINEER	STATE	PROJECT	
2	OHIO		

70
212

LAKE COUNTY
LAK-44-7.22



END AREA		VOLUME	
CUT	FILL	CUT	FILL
709	24		
			16
	0		
		1118	
498			
		1391	
1004			
		1774	
1079			
		2173	
1094			

S.R. 44 Sta. 104+54.23 to 106+00

LAKE COUNTY
LAK-44-7.22

S.R. 44 Sta. 106+50 to 107+50

SEEDING	
END WIDTH	SQ. YDS.
133	739
133	744
135	756
137	728
125	

END AREA	VOLUME
1350	2552
1406	2670
1478	2755
1497	2601
1312	

FED. ROAD DIVISION	STATE	PROJECT	
2	OHIO		

72
212

LAKE COUNTY
LAK-44-7.22

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

R/W
3:1
8:1
E.R.
600
16" Water Main

G-596.00
109+50
604.3

R/W
3:1
E.R.
600

G-596.18
109+00
604.9

R/W
3.6:1
E.R.
600

G-596.36
108+50
606.0

R/W
4.5:1
8:1
E.R.
3:1
600
16" Water Main

G-596.54
108+00
606.1

STA. 107+50

STA. 107+50

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

S.R. 44 Sta. 108+00 to 109+50

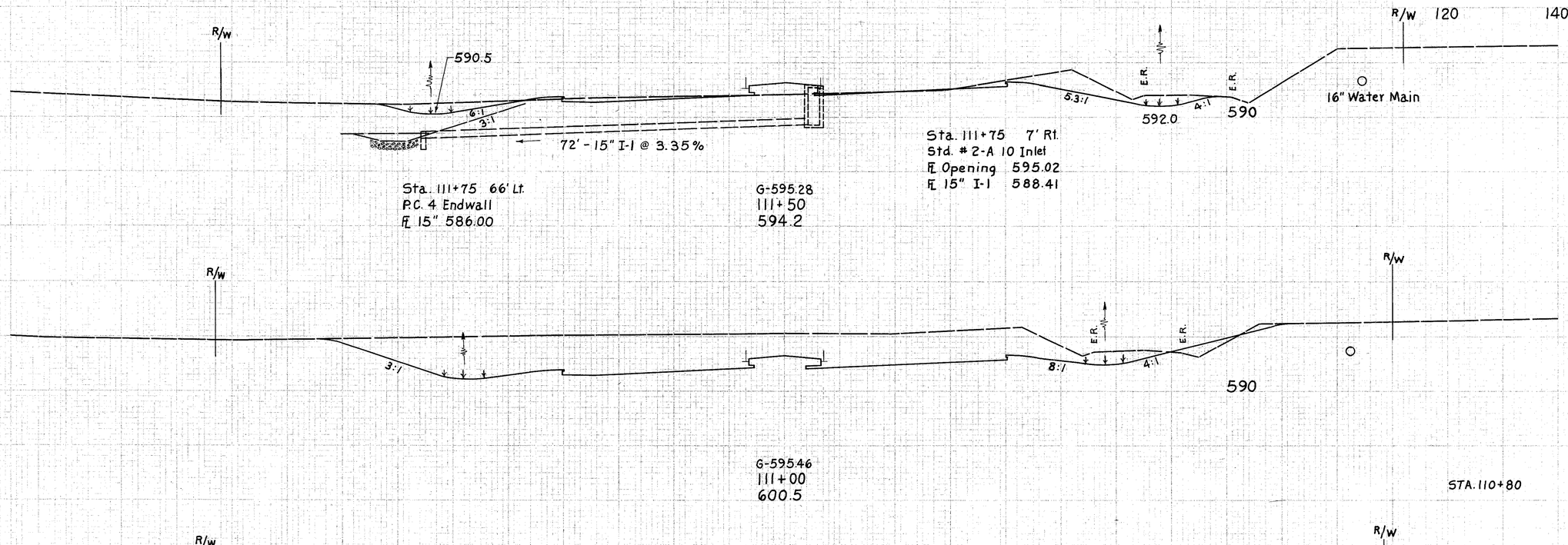
SEEDING	
END WIDTH	SQ. YDS.
105	650
129	731
134	758
139	756
133	

FED. ROAD NUMBER	STATE	PROJECT	
2	OHIO		

73
212

LAKE COUNTY
LAK-44-7.22

140 120 100 80 60 40 20 ℄ 20 40 60 80 100



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
115	23		
		851	33
804	13		
			5
	0		
		1839	
1182			
		2326	
1330			
		2481	
1350			

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

S.R. 44 Sta. 110+00 to 111+50

SEEDING	
END WIDTH	SQ. YDS.
120	667
120	650
114	669
127	644
105	

END AREA		VOLUME	
CUT	FILL	CUT	FILL
14	1313		
		22	2580
10	1473		
		64	2608
59	1344		
		125	1952
76	764		
		177	729
115	23		

DIST.	STATE	PROJECT	
2	OHIO		

74
212

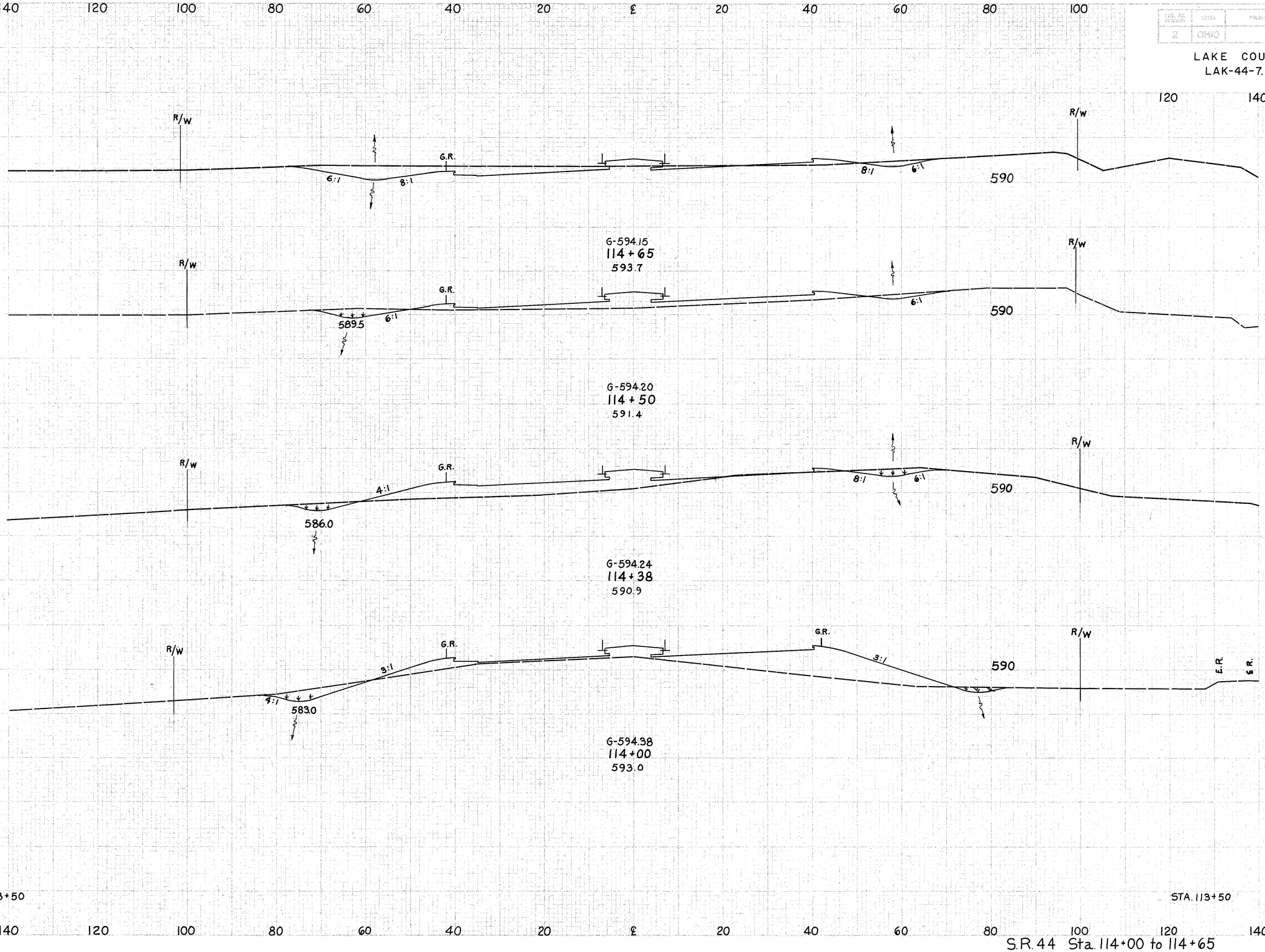
LAKE COUNTY
LAK-44-7.22

S.R. 44 Sta. 112+00 to 113+50

FED. AID PROJECT	STATE	PROJECT		75 / 212
2	OHIO			

LAKE COUNTY
LAK-44-7.22

SEEDING	
END WIDTH	SQ. YDS.
97	
	158
93	
	128
99	
	462
120	
	667
120	



END AREA		VOLUME	
CUT	FILL	CUT	FILL
119	27		
		42	47
31	143		
		13	73
27	187		
		45	358
37	322		
		47	1514
14	1313		

S.R. 44 Sta. 114+00 to 114+65

SEEDING	
END WIDTH	SQ. YDS.
150	
	806
140	
	769
137	
	722
123	
	428
97	

140 120 100 80 60 40 20 ℄ 20 40 60 80 100

FED. AID PROJECT	STATE	PROJECT		SHEET NO.	TOTAL SHEETS
2	OHIO			76	212

LAKE COUNTY
LAK-44-7.22

120 140

R/W

3:1

8:1

600

3:1

R/W

G-593.48
116+50
603.3

R/W

3:1

600

3:1

R/W

G-593.66
116+00
602.7

R/W

3:1

590

3:1

R/W

G-593.84
115+50
601.4

R/W

4:1

G.R.

8:1

8:1

4:1

590

R/W

STA. 114+77

STA. 114+65

STA. 114+65

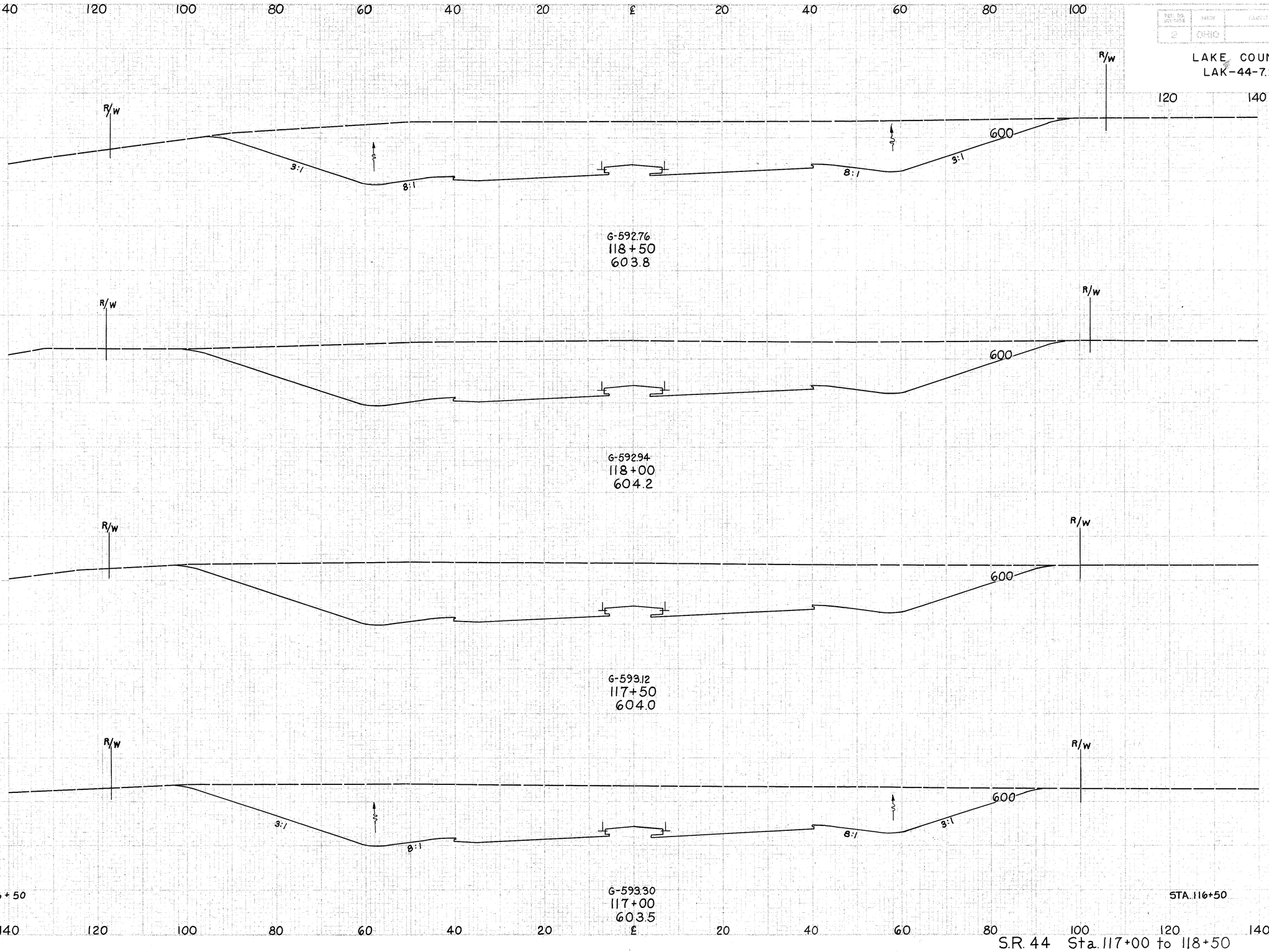
G-594.02
115+00
597.4

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

END AREA		VOLUME	
CUT	FILL	CUT	FILL
1767			
		3075	
1554			
		2695	
1357			
		1956	
755			
		566	
119	27	0	6

S.R.44 Sta. 115+00 to 116+50

SEEDING	
END WIDTH	SQ. YDS.
149	844
155	856
153	844
151	836
150	



END AREA		VOLUME	
CUT	FILL	CUT	FILL
1908			
		3592	
1971			
		3581	
1897			
		3426	
1803			
		3306	
1767			

FED. ROAD DIV. NO.	STATE	PROJECT		77 212
2	OHIO			

LAKE COUNTY
LAK-44-7.22

S.R. 44 Sta. 117+00 to 118+50

SEEDING	
END WIDTH	SQ. YDS.
89	481
84	606
134	736
142	841
149	

140 120 100 80 60 40 20 ℄ 20 40 60 80 100

FED. AID DIVISION	STATE	PROJECT	78 212
5	OHIO		

LAKE COUNTY
LAK-44-7.22

120 140

E'work. Area To Lt. Only

600

Olive Street

R/W

6:1 4.8:1

586.9

G-592.04
120+50
599.8

E'work. Area To Lt. Only

600

Olive Street

R/W

6:1 8:1

588.90

G-592.22
120+00
600.2

R/W

600

R/W

4:1

589.10

Sta. 119+7.5 7' Rt.
Std.# 2-A10 Inlet
℄ Opening 592.14
℄ 15" I-I 587.95

G-592.40
119+50
599.6

R/W

600

R/W

3:1 8:1 8:1 3:1

589.33

STA. 118+50

G-592.57
119+02.46
602.5

STA. 118+50

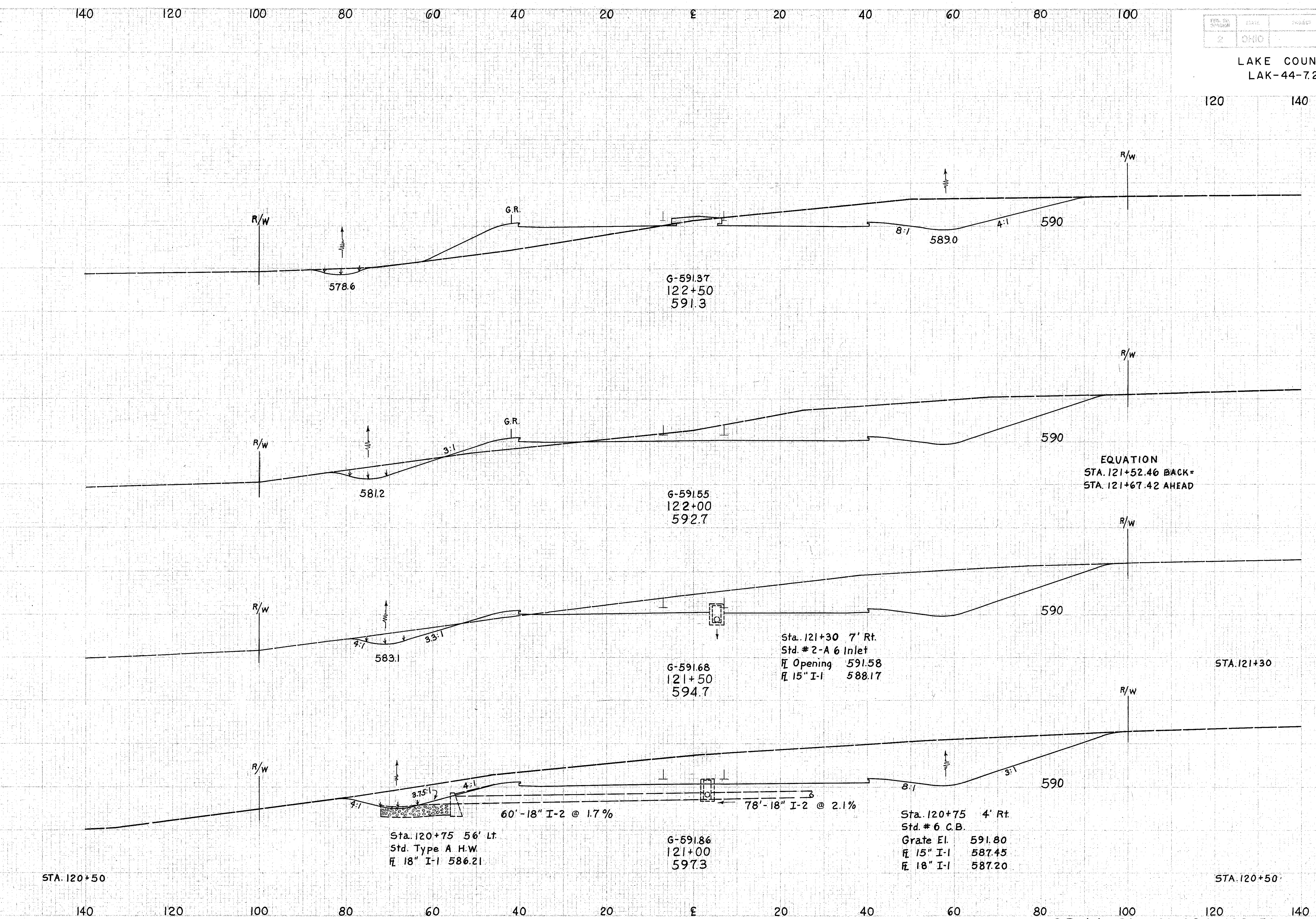
140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

END AREA		VOLUME	
CUT	FILL	CUT	FILL
1155		2197	
1218		2328	
1296		2565	
1651		3493	
1908			

S.R. 44 Sta. 119+02.46 to 120+50

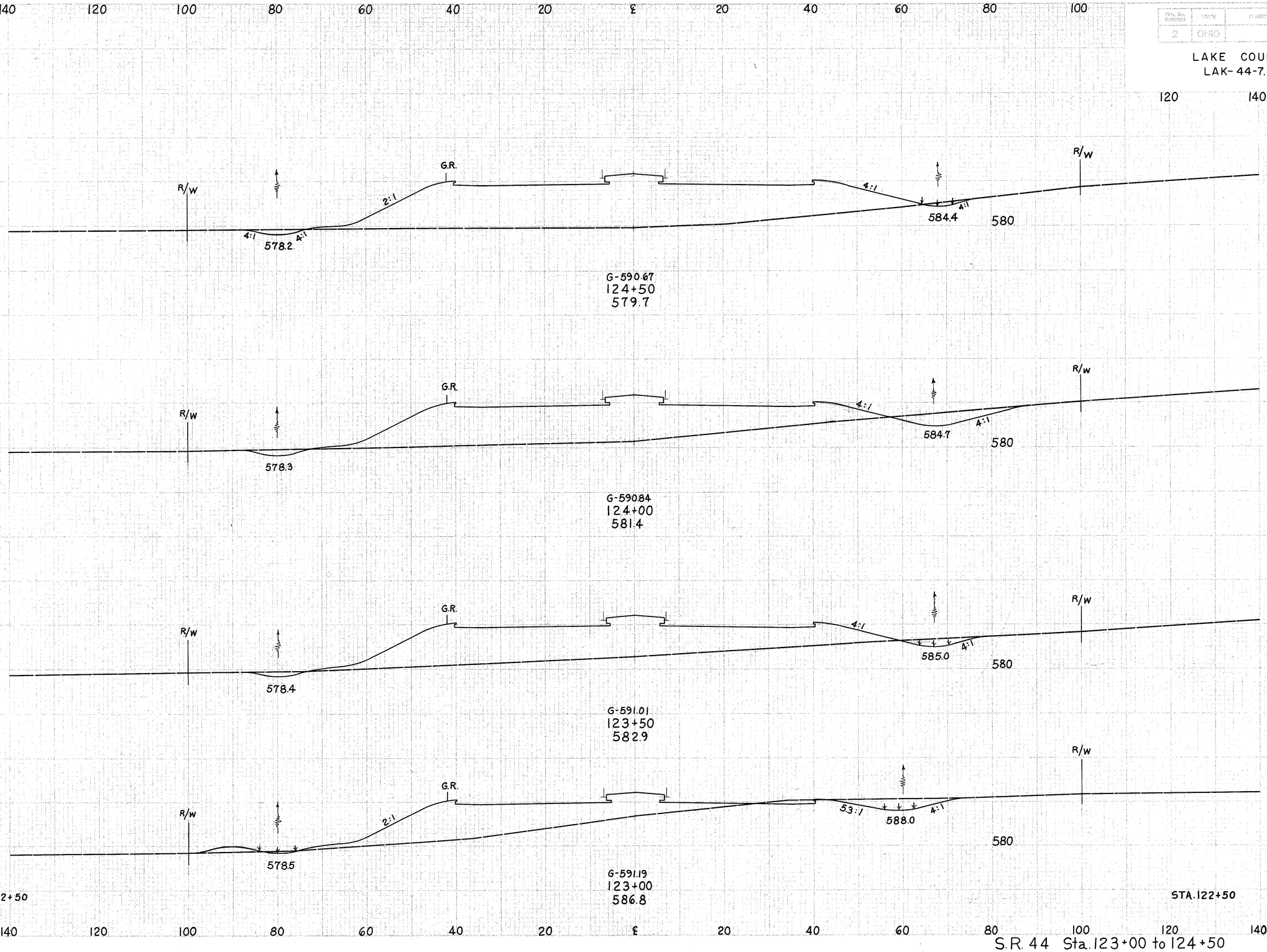
LAKE COUNTY
LAK-44-7.22

SEEDING END WIDTH	SEEDING SQ. YDS.
134	
	708
121	
	463
117	
	658
120	
	581
89	



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
359	179		
		954	197
671	34		
		929	30
760	13		
			5
	0		
		1647	
1019			
		2013	
1155			

SEEDING	
END WIDTH	SQ. YDS.
116	
	683
130	
	694
120	
	669
121	
	708
134	



END AREA		VOLUME	
CUT	FILL	CUT	FILL
15	1018		
		72	1669
63	784		
		85	1411
29	740		
		81	1077
58	423		
		386	557
359	179		

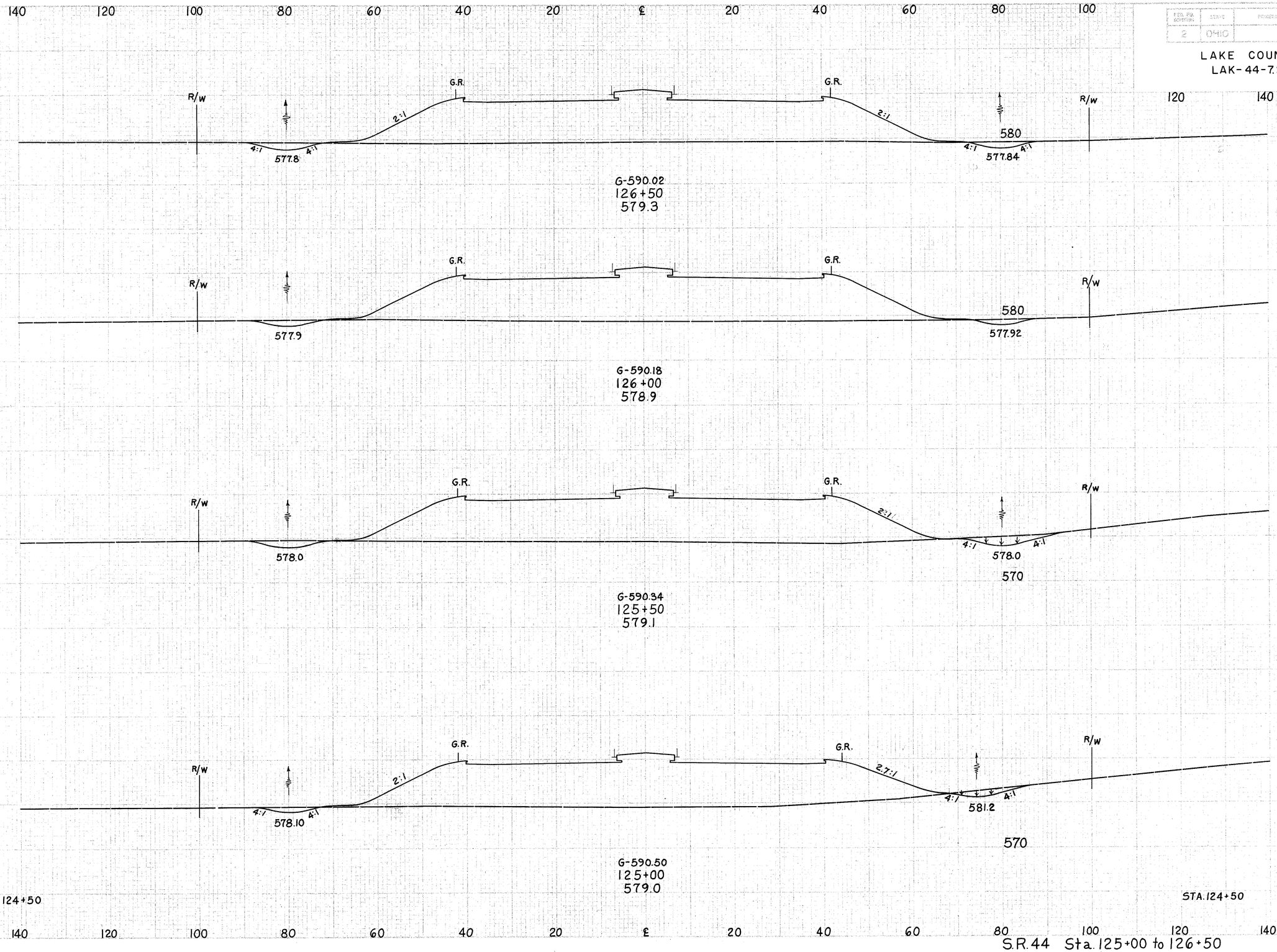
FED. ROAD SYSTEM	STATE	PROJECT	
2	OHIO		

80
212

LAKE COUNTY
LAK-44-7.22

S.R. 44 Sta. 123+00 to 124+50

SEEDING	
END WIDTH	SQ. YDS.
133	
	731
130	
	742
137	
	739
129	
	681
116	



END AREA		VOLUME	
CUT	FILL	CUT	FILL
23	1056		
		40	2017
20	1122		
		50	2066
34	1109		
		52	2059
22	1115		
		34	1975
15	1018		

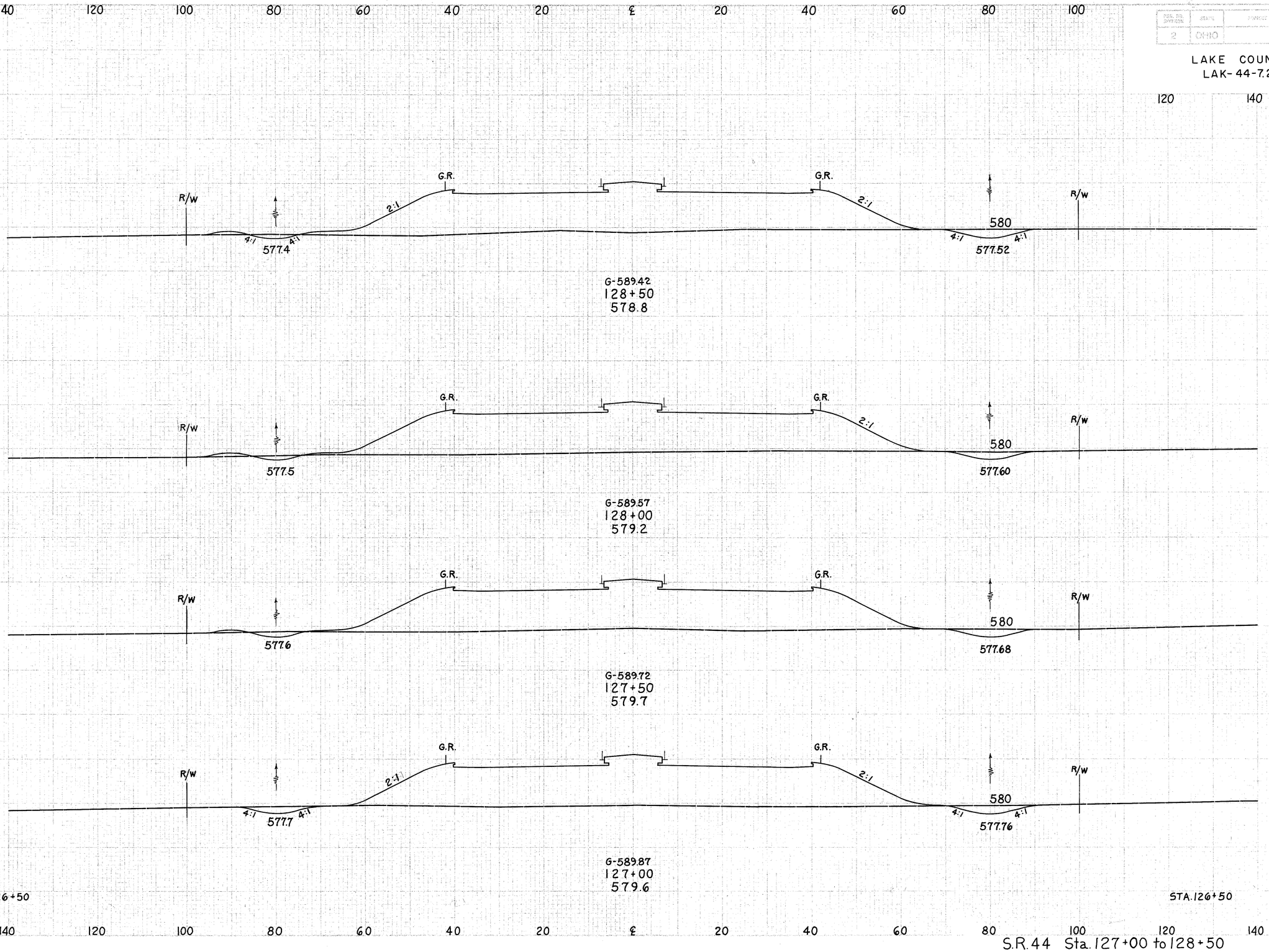
DIST. NO.	STATE	PROJECT	
2	OHIO		

81
212

LAKE COUNTY
LAK-44-7.22

S.R.44 Sta. 125+00 to 126+50

SEEDING	
END WIDTH	SQ. YDS.
142	794
144	794
142	767
134	742
133	



END AREA		VOLUME	
CUT	FILL	CUT	FILL
27	1005		
		46	1887
23	1033		
		50	1898
31	1017		
		62	1889
36	1023		
		55	1925
23	1056		

DIST. NO. DIVISION	STATE		
2	OHIO		

82
212

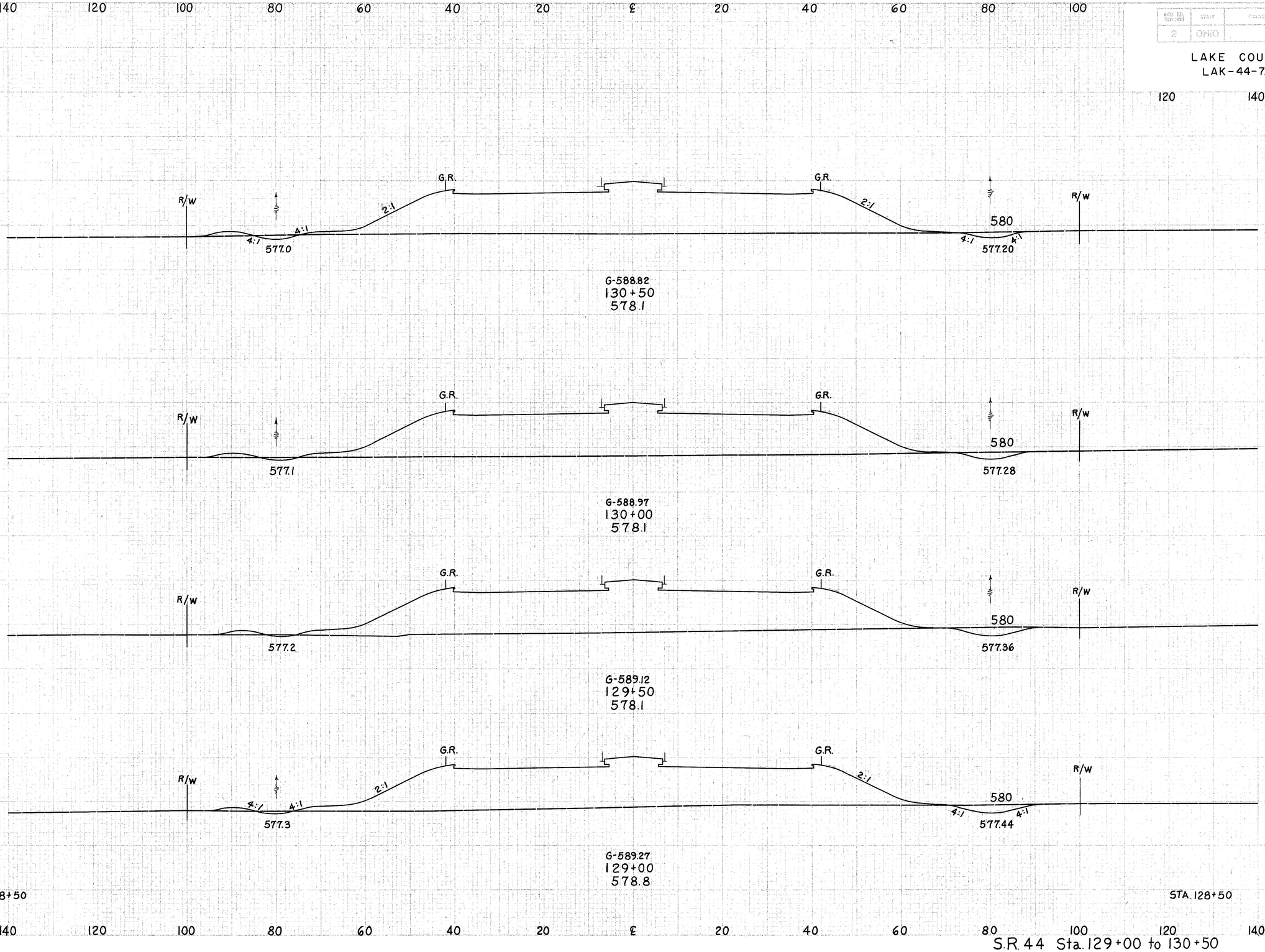
LAKE COUNTY
LAK-44-7.22

S.R. 44 Sta. 127+00 to 128+50

FED. ROAD DESIGNATION	STATE	PROJECT		SHEET NO. / TOTAL SHEETS
2	OHIO			83 / 212

LAKE COUNTY
LAK-44-7.22

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
140	772	15	1036	28	1947
138	767			34	1978
138	775	22	1069	43	1958
141	786	24	1046	47	1899
142		27	1005		



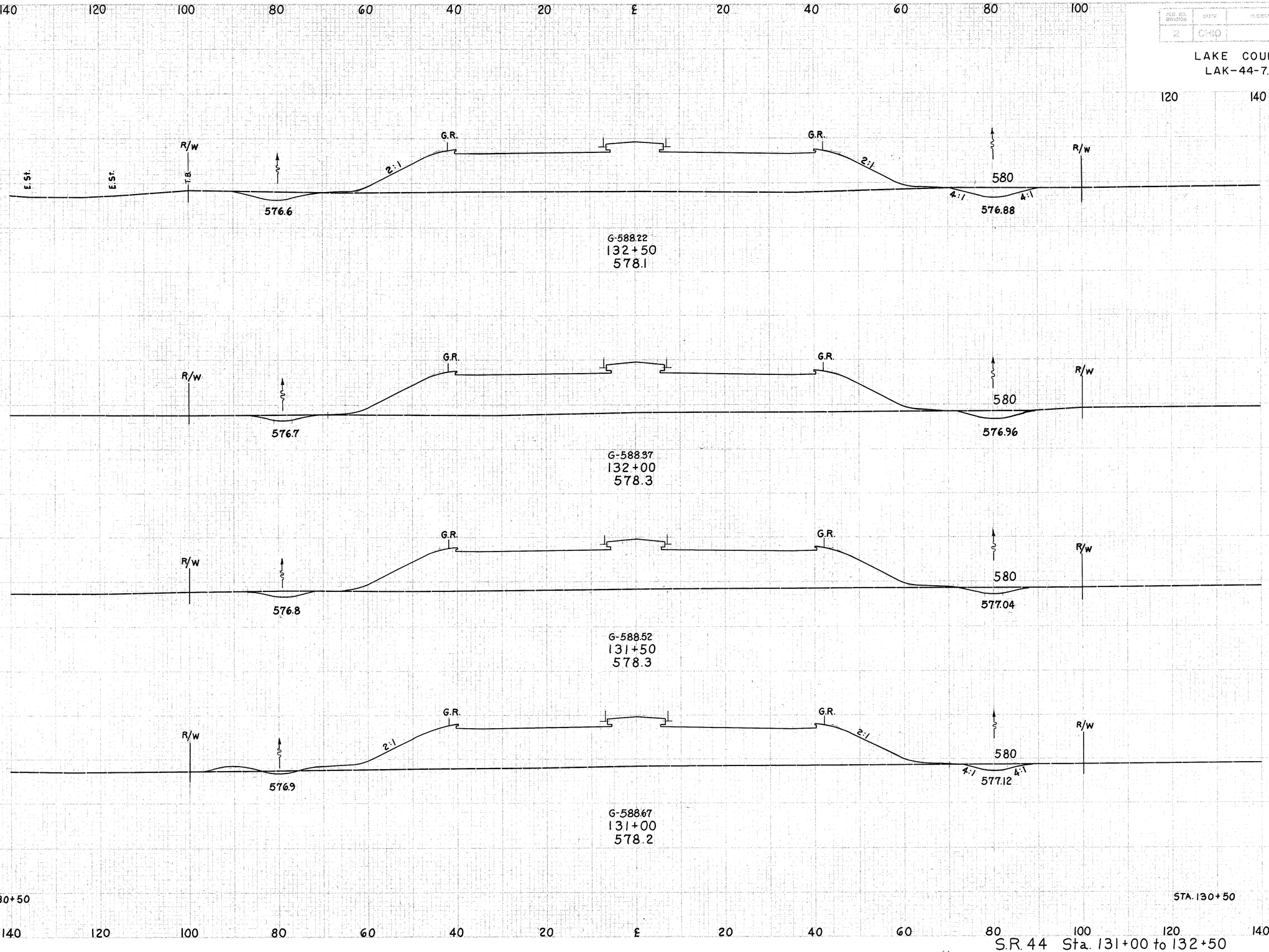
S.R. 44 Sta. 129+00 to 130+50

SEEDING	
END WIDTH	SQ. YDS.
139	747
130	714
127	742
140	778
140	

NO. OF DIVISIONS	STATE		
2	OHIO		

84
212

LAKE COUNTY
LAK-44-7.22



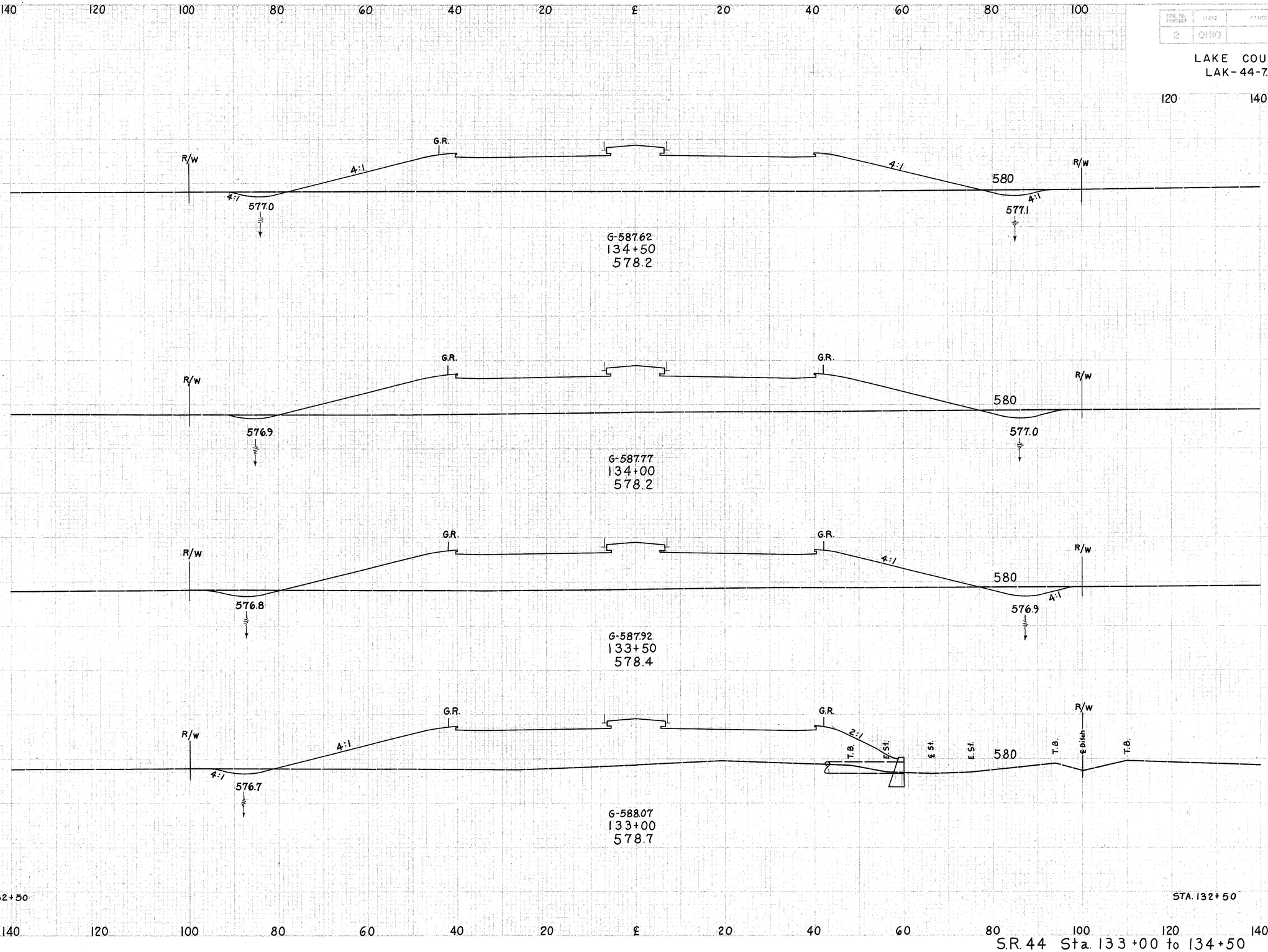
END AREA		VOLUME	
CUT	FILL	CUT	FILL
45	955		
		65	1800
25	989		
		44	1826
22	983		
		33	1876
14	1043		
		27	1925
15	1036		

S.R. 44 Sta. 131+00 to 132+50

SEEDING	
END WIDTH	SQ. YDS.
138	806
152	839
150	744
118	714
139	

FED. ROAD NUMBER	STATE	PROJECT		85 212
2	OHIO			

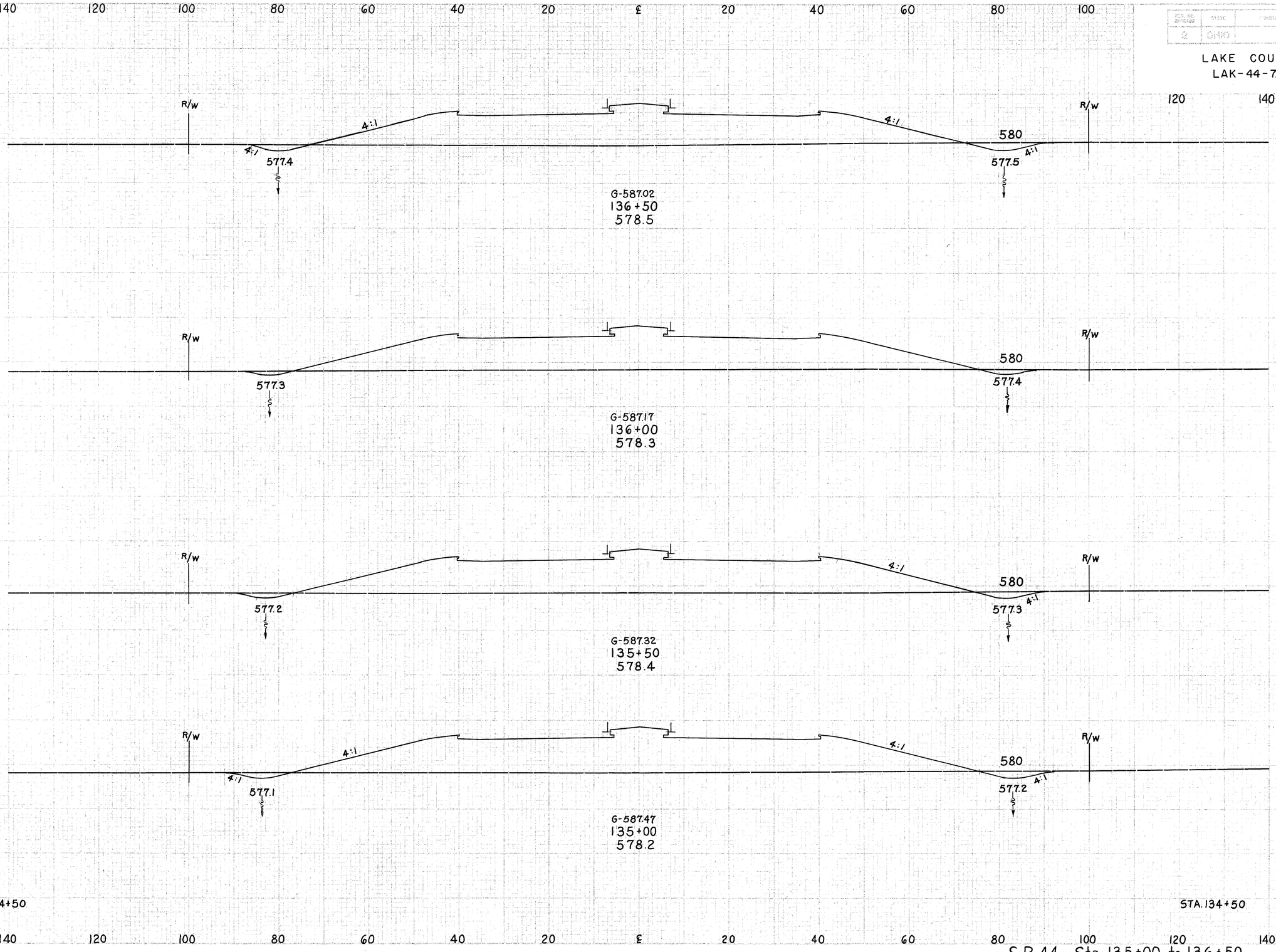
LAKE COUNTY
LAK-44-7.22



END AREA		VOLUME	
CUT	FILL	CUT	FILL
21	1002		
		44	1892
27	1041		
		61	1929
39	1042		
		47	1904
12	1014		
		53	1823
45	955		

S.R. 44 Sta. 133+00 to 134+50

SEEDING	
END WIDTH	SQ YDS.
130	719
129	731
134	750
136	761
138	

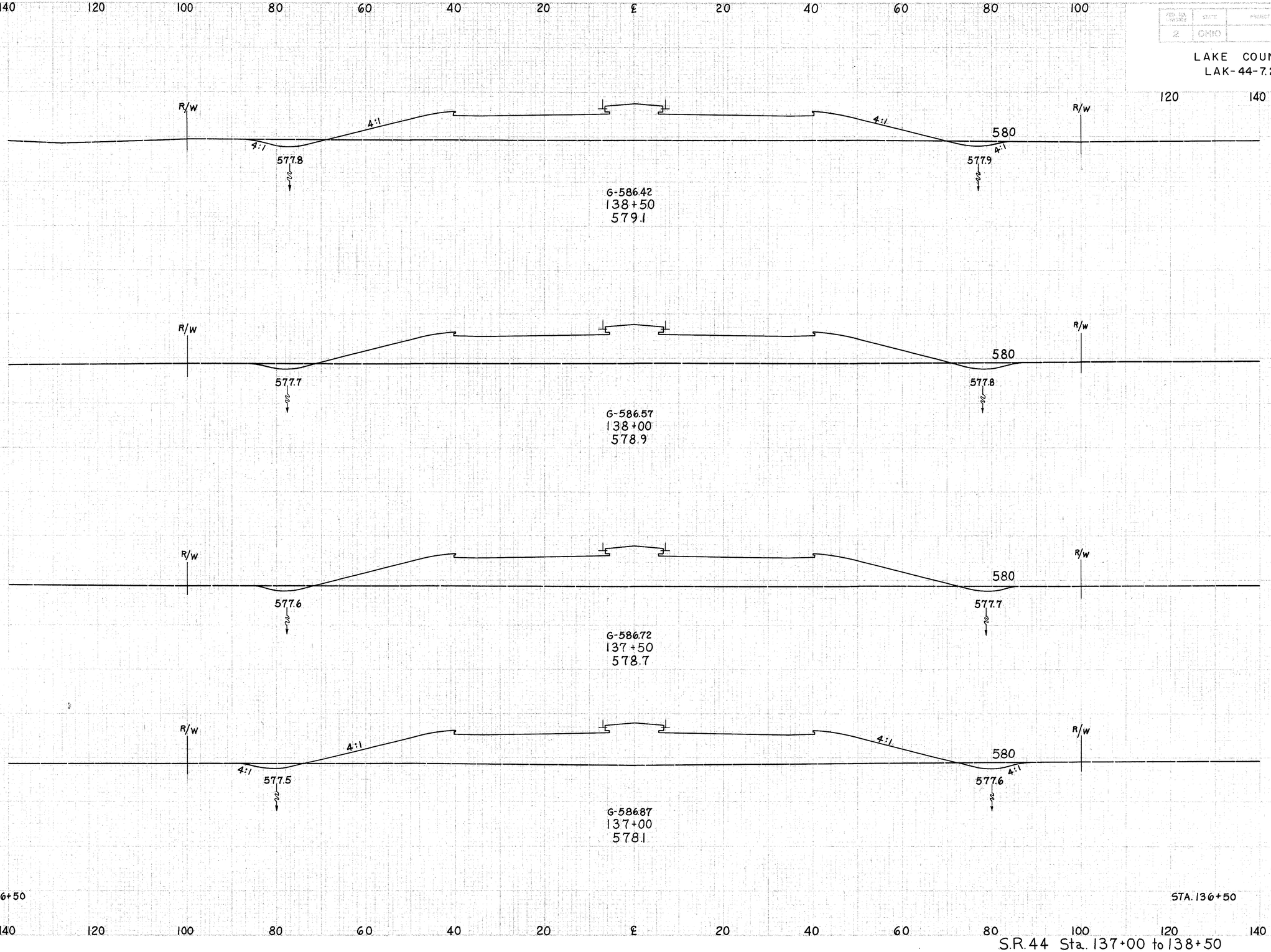


END AREA		VOLUME	
CUT	FILL	CUT	FILL
25	851		
		35	1656
13	937		
		31	1733
20	935		
		41	1769
24	975		
		42	1831
21	1002		

LAKE COUNTY
LAK-44-7.22

S.R. 44 Sta. 135+00 to 136+50

SEEDING	
END WIDTH	SQ. YDS.
125	694
125	692
124	706
130	722
130	



END AREA		VOLUME	
CUT	FILL	CUT	FILL
25	679		
		42	1343
20	771		
		34	1459
17	805		
		37	1545
23	864		
		44	1588
25	851		

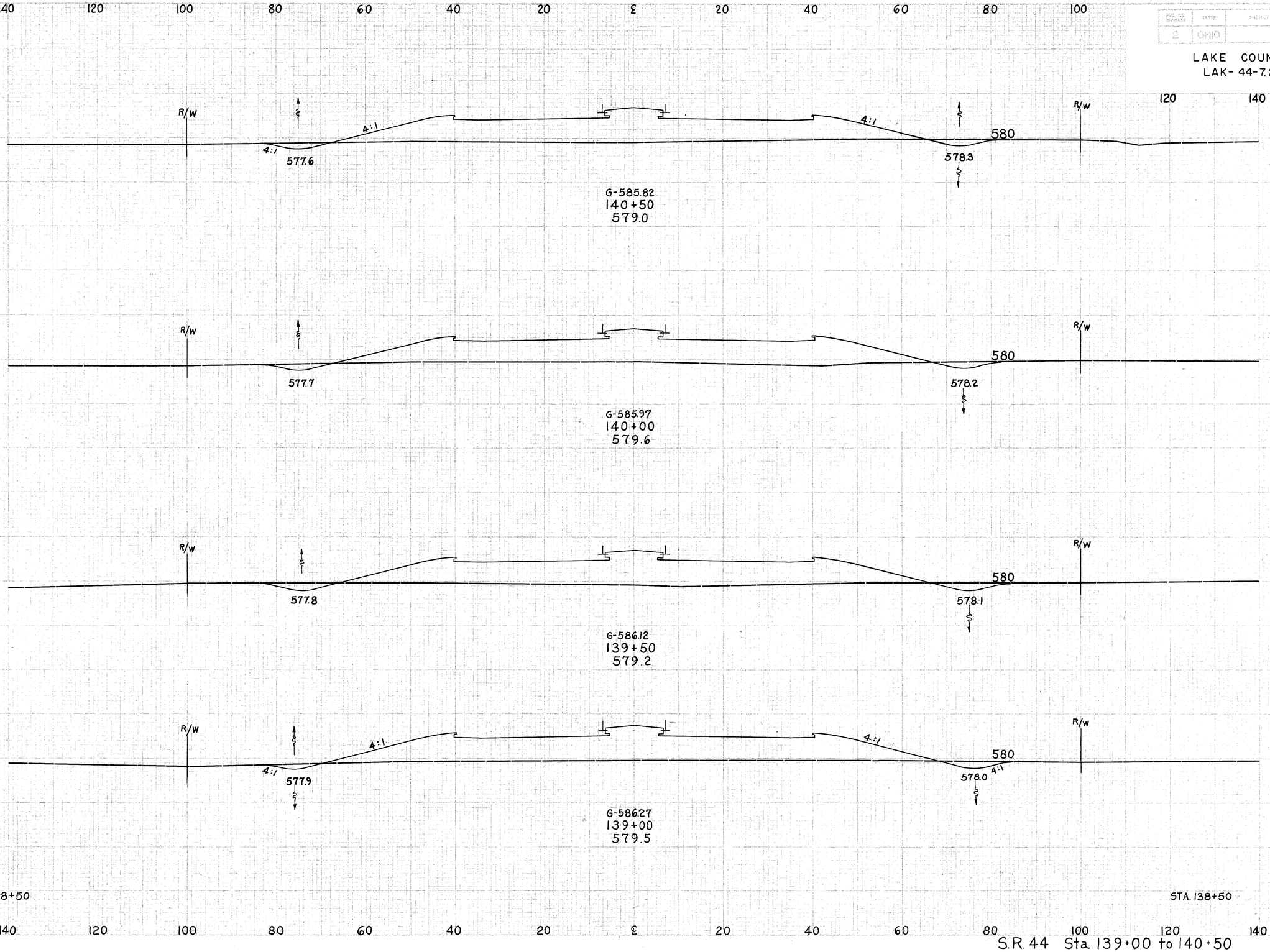
FED. ROAD DIV. NO.	STATE	PROJECT	
2	OHIO		

87
212

LAKE COUNTY
LAK-44-7.22

S.R. 44 Sta. 137+00 to 138+50

SEEDING	
END WIDTH	39. YDS.
118	
	661
120	
	669
121	
	669
120	
	681
125	



END AREA		VOLUME	
CUT	FILL	CUT	FILL
25	583		
		45	1106
24	612		
		49	1134
29	613		
		44	1165
18	645		
		40	1226
25	679		

REG. NO.	STATE	PROJECT	
2	OHIO		

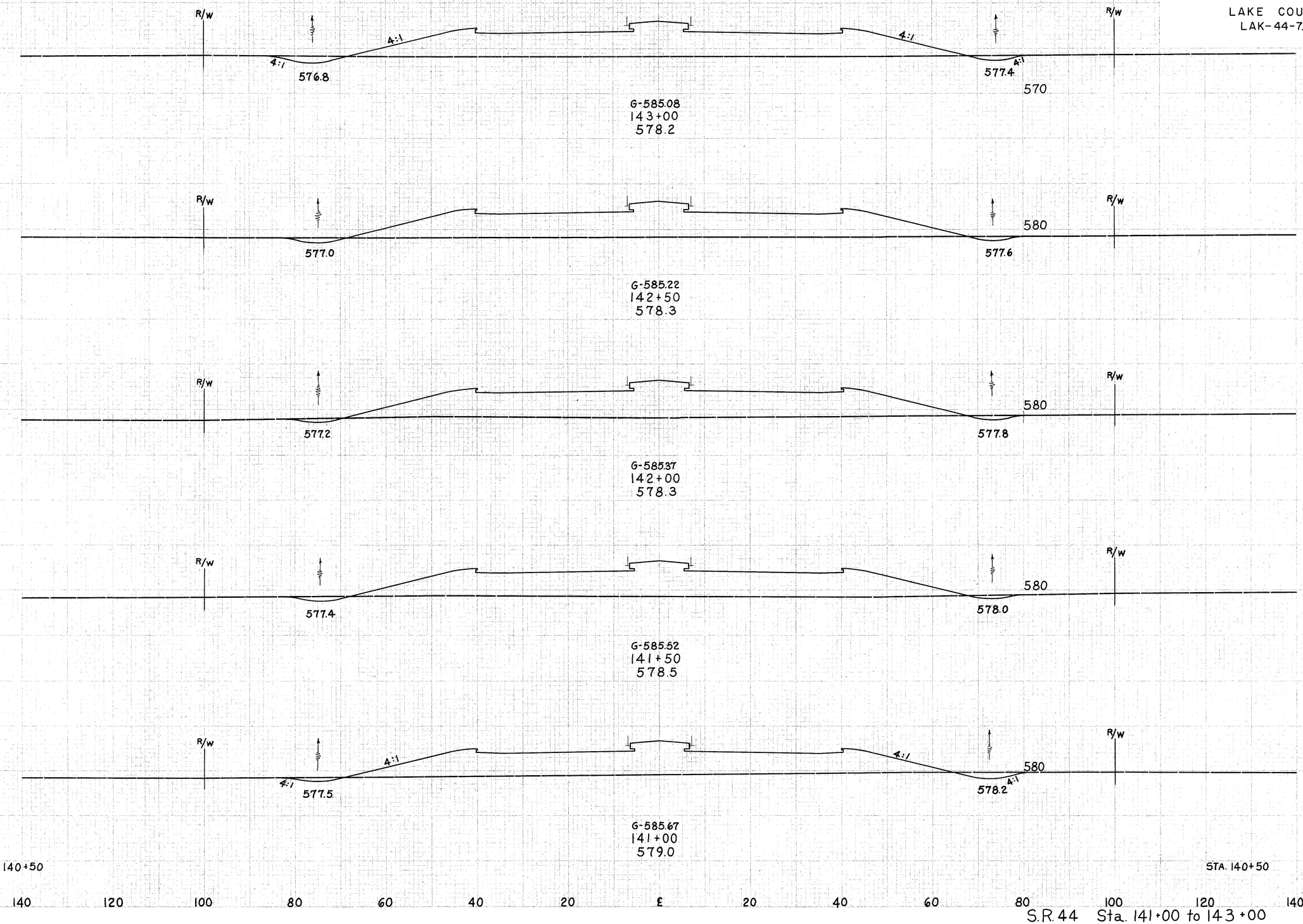
88
212

LAKE COUNTY
LAK-44-7.22

S.R. 44 Sta. 139+00 to 140+50

SEEDING	
END WIDTH	SQ. YDS.
119	650
115	633
113	628
113	633
115	647
118	

140 120 100 80 60 40 20 ℄ 20 40 60 80 100



END AREA		VOLUME	
CUT	FILL	CUT	FILL
22	635		
		33	1194
14	655		
		24	1229
12	672		
		22	1232
12	659		
		28	1171
18	606		
		40	1101
25	583		

DIST. NO.	STATE	PROJECT	
2	OHIO		

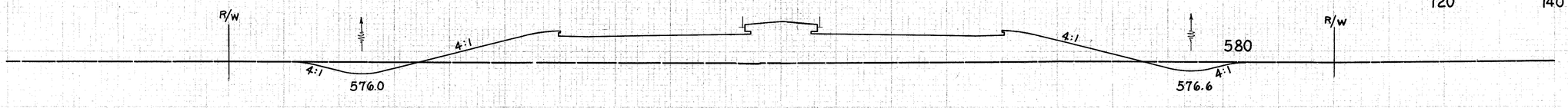
89
212

LAKE COUNTY
LAK-44-7.22

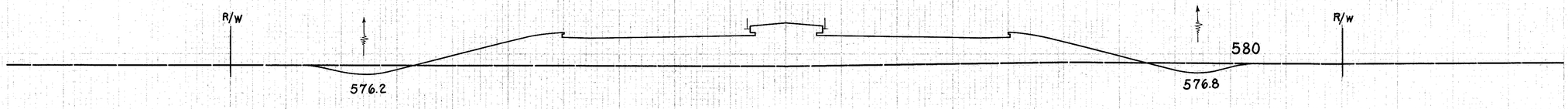
S.R.44 Sta. 141+00 to 143+00

SEEDING	
END WIDTH	SQ YDS.
124	
	686
123	
	678
121	
	661
117	
	656
119	

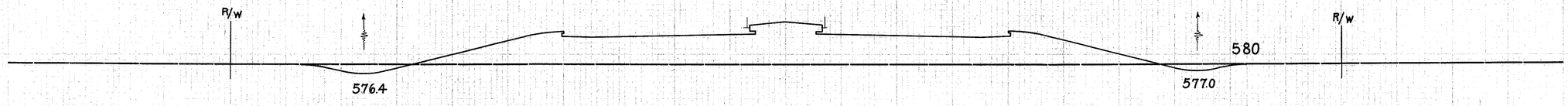
140 120 100 80 60 40 20 ℄ 20 40 60 80 100



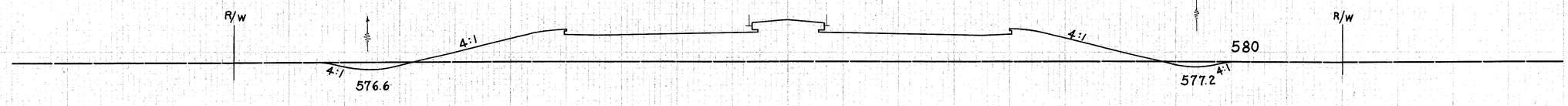
G-584.47
145+00
578.0



G-584.62
144+50
577.9



G-584.77
144+00
578.2



G-584.92
143+50
578.2

STA. 143+00

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

STA. 143+00

END AREA		VOLUME	
CUT	FILL	CUT	FILL
43	585		
		73	1096
36	599		
		57	1131
26	623		
		42	1167
19	637		
		38	1178
22	635		

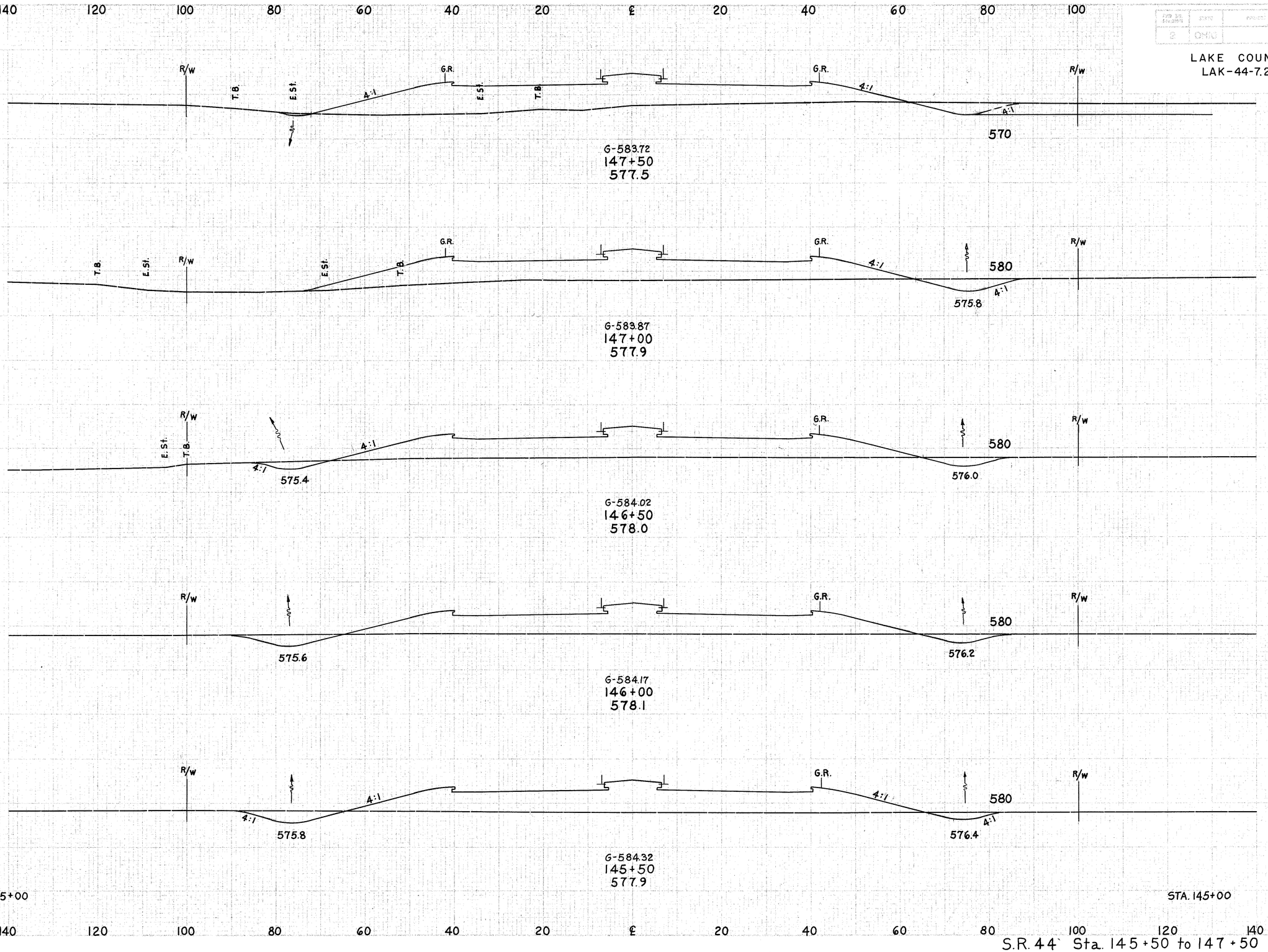
LAKE COUNTY
LAK-44-7.22

90
212

S.R. 44 Sta. 143+50 to 145+00

LAKE COUNTY
LAK-44-7.22

SEEDING END WIDTH	SEEDING SQ. YDS.		END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
120			36	609		
	653				65	1079
115			34	556		
	669				62	1031
126			33	557		
	711				80	1000
130			53	523		
	711				94	1016
126			49	574		
	694				85	1073
124			43	585		



S.R. 44 Sta. 145+50 to 147+50

SEEDING	
END WIDTH	SQ. YDS.
127	
	711
129	
	706
125	
	667
115	
	653
120	

140 120 100 80 60 40 20 ℄ 20 40 60 80 100

R/W 4:1 575.6 580 4:1 575.6 R/W

G-583.12
149+50
578.1

R/W G.R. 580 R/W

G-583.27
149+00
578.3

R/W G.R. 580 R/W

G-583.42
148+50
577.9

R/W G.R. T.B. E.St. 4:1 4:1 R/W E.St. 570

G-583.57
148+00
573.7

STA. 147+50 STA. 147+50

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

END AREA		VOLUME	
CUT	FILL	CUT	FILL
75	397		
		150	749
87	412		
		135	835
59	490		
		81	1235
28	844		
		59	1345
36	609		

SHEET NO.	STATE	PROJECT	
2	OHIO		

92
212

LAKE COUNTY
LAK-44-7.22

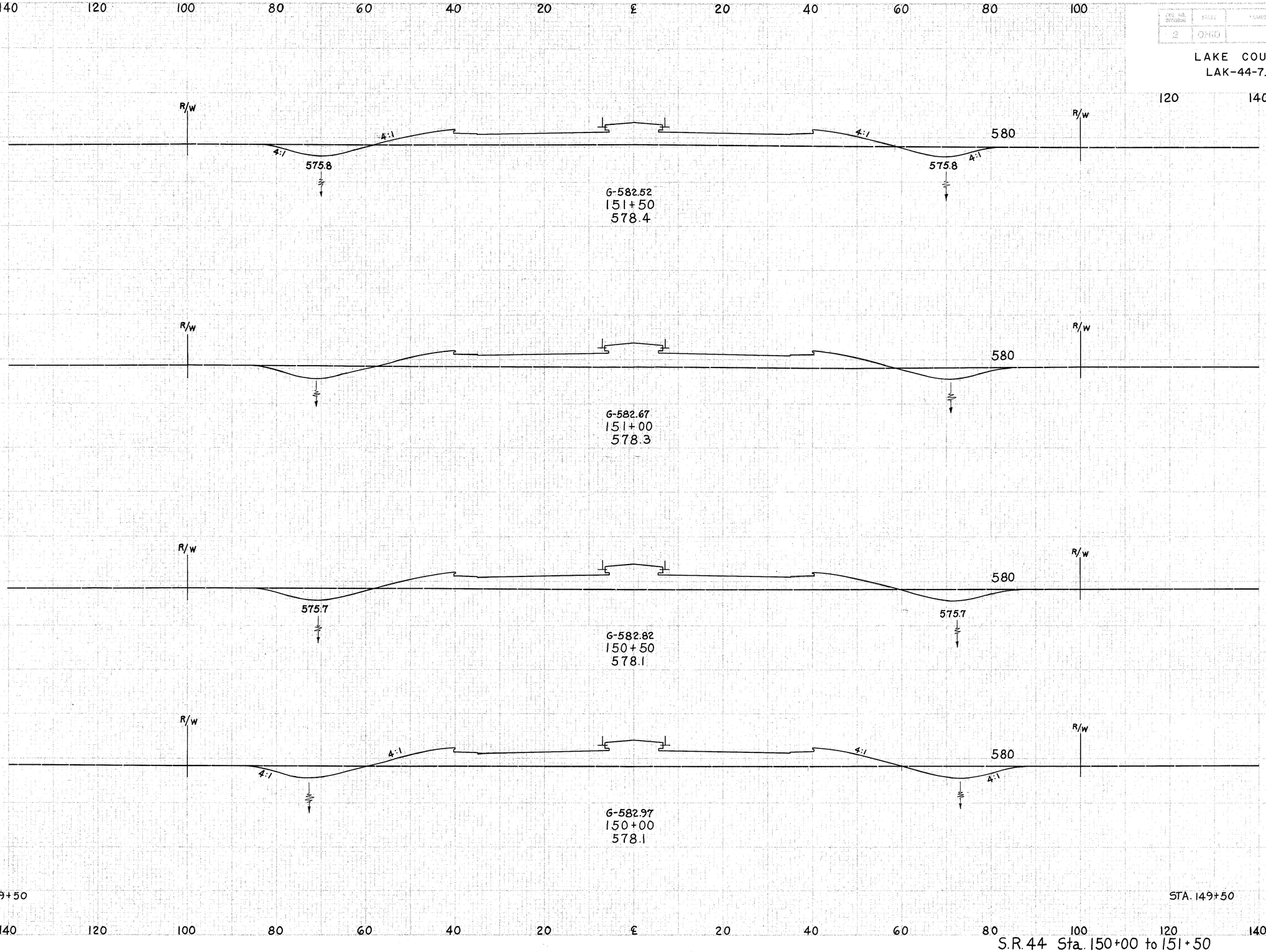
S.R. 44 Sta. 148+00 to 149+50

DIST. NO. DIVISION	STATE	PROJECT	
2	OHIO		

93
212

LAKE COUNTY
LAK-44-7.22

SEEDING END WIDTH	SEEDING SQ. YDS.
119	
	675
124	
	689
124	
	703
129	
	711
127	

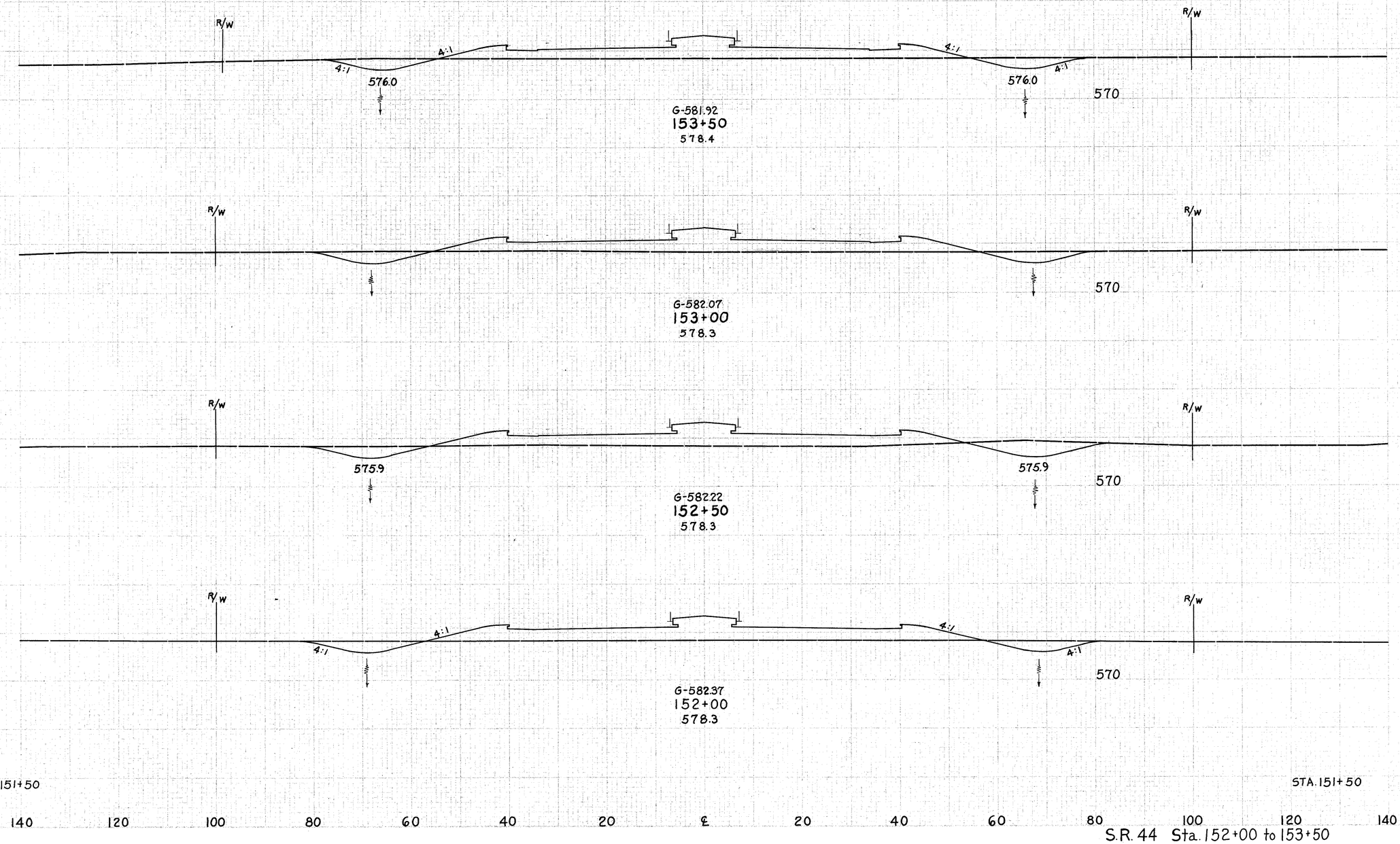


END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
65	312		
		136	611
82	348		
		145	654
75	358		
		139	693
75	390		
		139	729
75	397		

S.R. 44 Sta. 150+00 to 151+50

SEEDING	
END WIDTH	50 YDS.
111	628
115	650
119	656
117	656
119	

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140



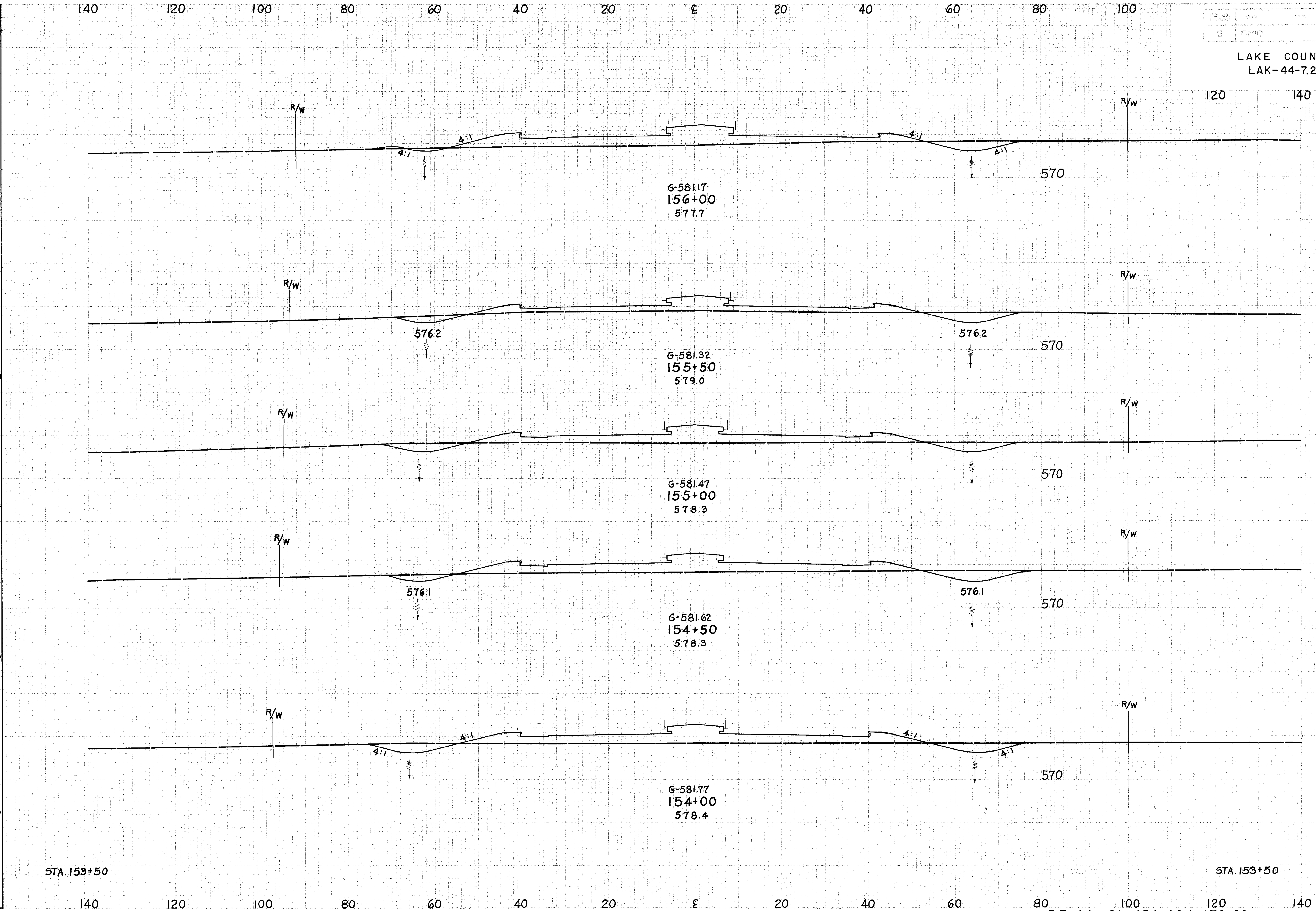
END AREA		VOLUME	
CUT	FILL	CUT	FILL
65	232		
		121	456
66	261		
		147	494
93	273		
		145	535
64	305		
		119	571
65	312		

FED. AID PROJECT	STATE	PROJECT		SHEET NO.	TOTAL SHEETS
2	OHIO			94	212

LAKE COUNTY
LAK-44-7.22

S.R. 44 Sta. 152+00 to 153+50

LAKE COUNTY
LAK-44-7.22



Seeding End Width	Seeding Sq. Yds.	End Area Cut	End Area Fill	Volume Cut	Volume Fill
103		31	237		
	561			71	365
99		46	157		
	556			91	332
101		52	202		
	564			90	389
102		45	218		
	578			94	414
106		56	229		
	603			112	427
111		65	232		

S.R. 44 Sta. 154+00 to 156+00

SEEDING	
END WIDTH	SQ. YDS.
99	
	575
108	
	165
104	
	416
104	
	578
104	
	575
103	

ACCESS ROAD				
STA.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
18+02		68		108
17+51		46		
				31
17+36		64		
				87
17+00		66		
				107
16+50		50		
				57
16+16		40		
				6
16+08		0		
				70

Add for Turnaround Sta. 16+65

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

R/W ℄ R/W 4:1 4:1 4:1 R/W

G-578.54 18+02 — G-580.57 158+00 576.2 — 570

R/W ℄ R/W 576.4 576.4 R/W

G-578.42 17+51 — G-580.72 157+50 576.2 — 570

R/W ℄ R/W R/W

G-578.38 17+36 — G-580.76 157+36.36 576.2 — 570

℄ R/W R/W

G-578.29 17+00 — G-580.87 157+00 576.7 — 570

℄ R/W 4:1 4:1 4:1 R/W

576.3 576.3

G-578.17 16+50 — G-581.02 156+50 577.1 — 570

STA. 156+00 STA. 156+00

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
8	354		
		34	619
29	314		
		14	159
25	299		
		30	411
20	318		
		53	552
37	278		
		63	477
31	237		

FED. AID PROJECT	STATE	PROJECT	
	OHIO		

96
212

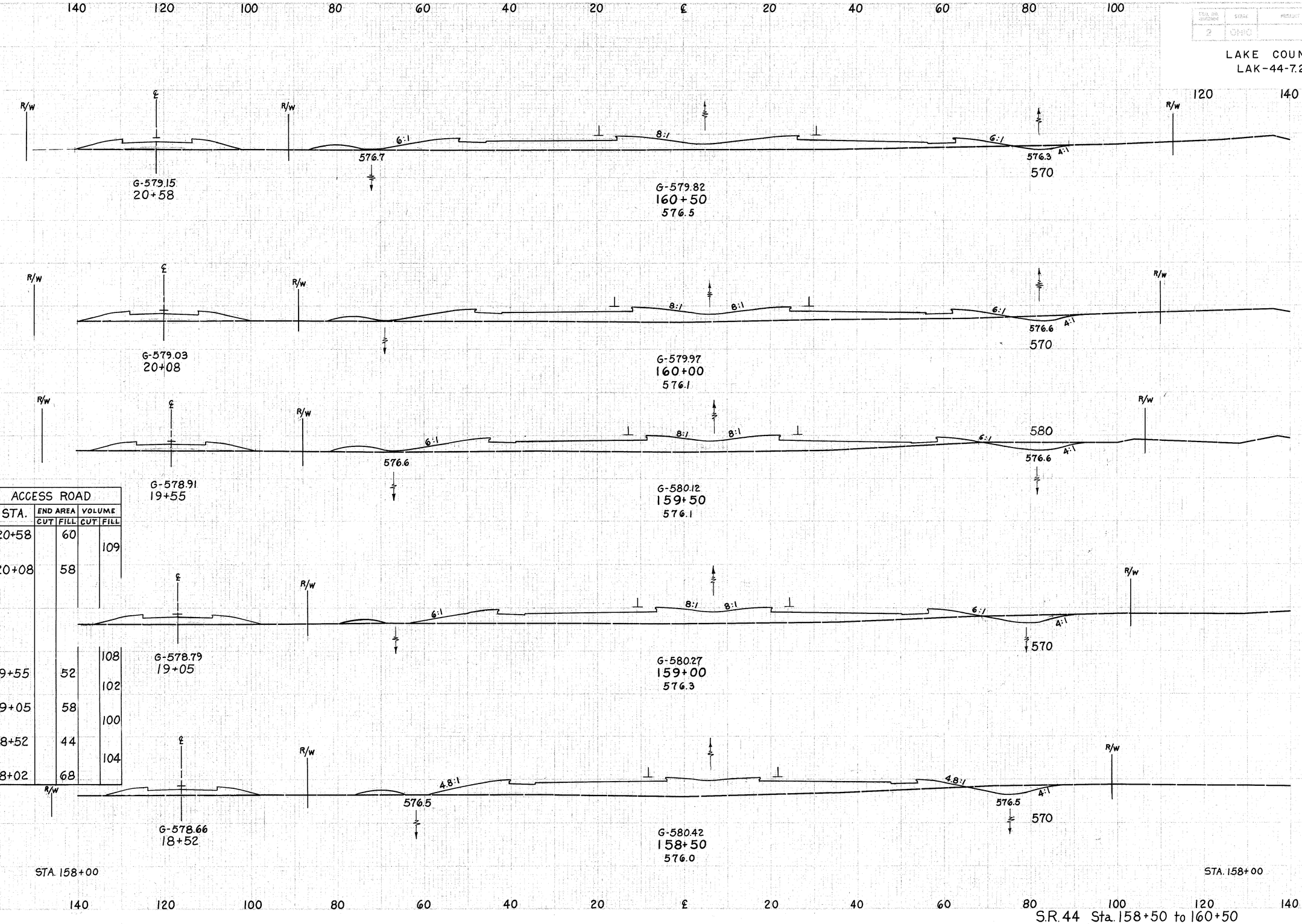
LAKE COUNTY
LAK-44-7.22

S.R. 44 Sta. 156+50 to 158+00

DIST. NO.	STATE	PROJECT		97
2	OHIO			212

LAKE COUNTY
LAK-44-7.22

SEEDING	
END WIDTH	SQ. YDS.
123	678
121	675
122	667
118	636
111	583
99	



ACCESS ROAD

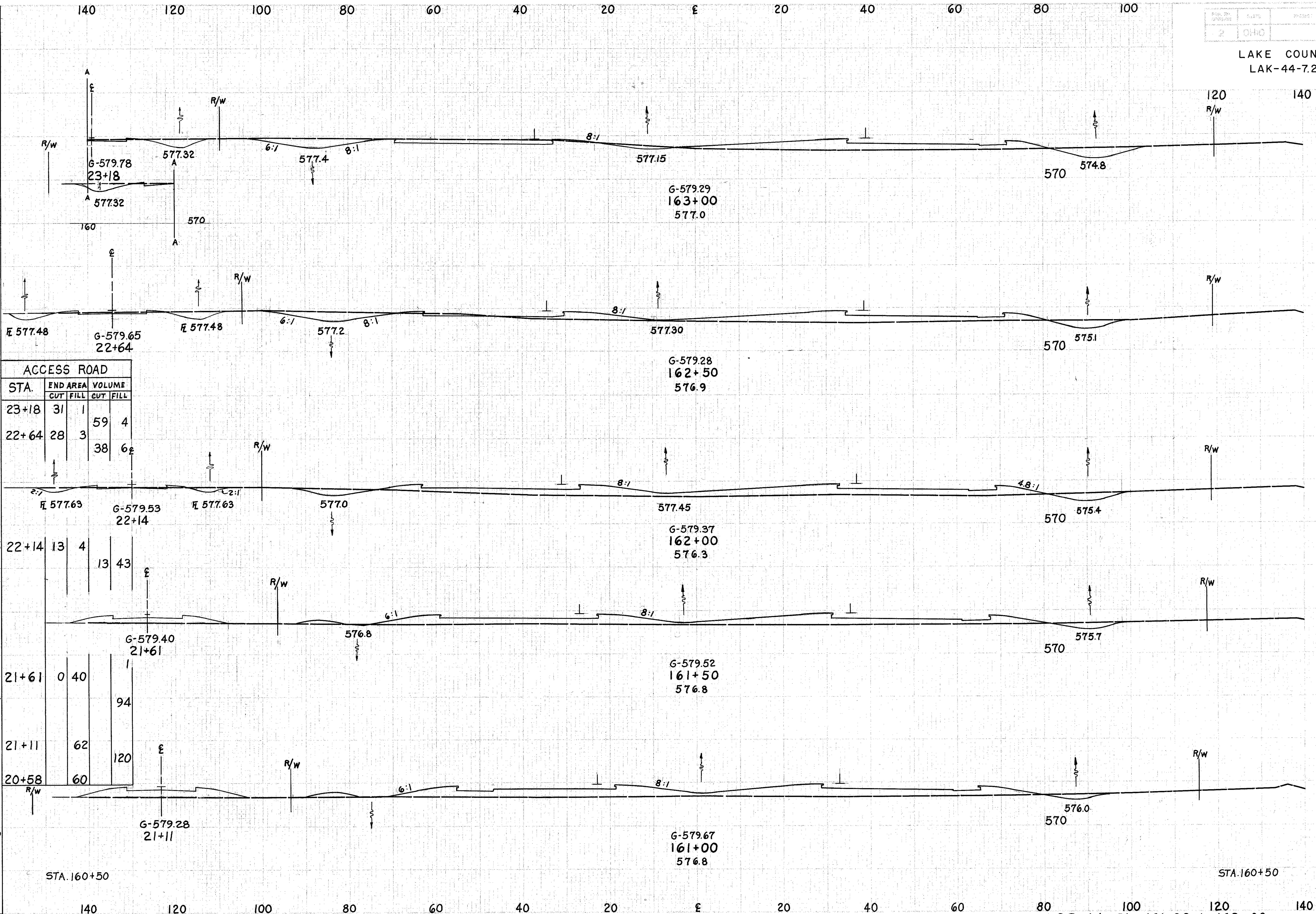
STA.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
20+58		60		109
20+08		58		
19+55		52		108
19+05		58		102
18+52		44		100
18+02		68		104

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
7	281		
		19	533
13	295		
		30	553
19	302		
		36	560
20	303		
		40	605
23	350		
		29	652
8	354		

S.R. 44 Sta. 158+50 to 160+50

LAKE COUNTY
LAK-44-7.22

SEEDING END WIDTH	SEEDING SQ. YDS.
155	
	853
152	
	814
141	
	775
138	
	747
131	
	706
123	



ACCESS ROAD

STA.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
23+18	31	1		
			59	4
22+64	28	3		
			38	6
22+14	13	4		
			13	43
21+61	0	40		1
				94
21+11		62		
				120
20+58		60		

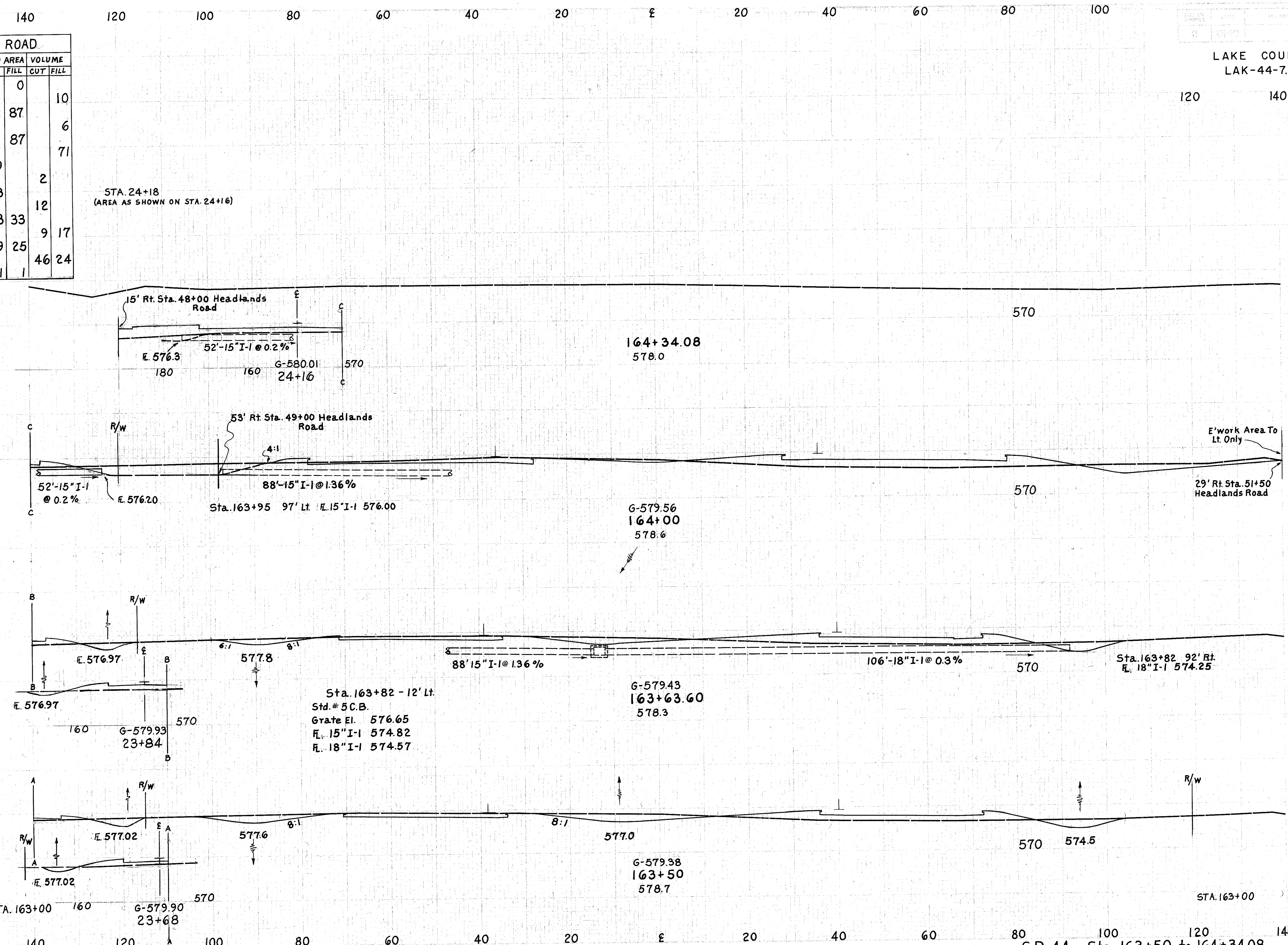
STA.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
163+00	106	123		
			153	256
162+50	59	154		
			91	349
162+00	39	223		
			45	419
161+50	10	230		
			16	458
161+00	7	265		
			13	506
160+50	7	281		

LAKE COUNTY
LAK-44-7.22

SEEDING END WIDTH	SQ. YDS.
140	
	586
153	
	240
155	
	861
155	

ACCESS ROAD

STA.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
24+24		0		
				10
24+18		87		
				6
24+16		87		
				71
24+12	9			
			2	
24+08	13			
			12	
23+84	13	33		
			9	17
23+68	19	25		
			46	24
23+18	31	1		


140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140
STA. 24+18
(AREA AS SHOWN ON STA. 24+16)
15' Rt. Sta. 48+00 Headlands Road
52'-15"I-1 @ 0.2%
FL. 576.3
G-580.01
24+16
180
160
570
164+34.08
578.0
53' Rt. Sta. 49+00 Headlands Road
4:1
52'-15"I-1 @ 0.2%
FL. 576.20
88'-15"I-1 @ 1.36%
Sta. 163+95 97' Lt. FL. 15"I-1 576.00
G-579.56
164+00
578.6
E'work Area To Lt. Only
29' Rt. Sta. 51+50 Headlands Road
R/W
FL. 576.97
577.8
6:1
8:1
88'15"I-1 @ 1.36%
106'-18"I-1 @ 0.3%
Sta. 163+82 92' Rt. FL. 18"I-1 574.25
Sta. 163+82 - 12' Lt.
Std. # 5 C.B.
Grate El. 576.65
FL. 15"I-1 574.82
FL. 18"I-1 574.57
G-579.93
23+84
G-579.43
163+63.60
578.3
FL. 577.02
577.6
8:1
577.0
574.5
G-579.90
23+68
G-579.38
163+50
578.7
STA. 163+00
STA. 163+00

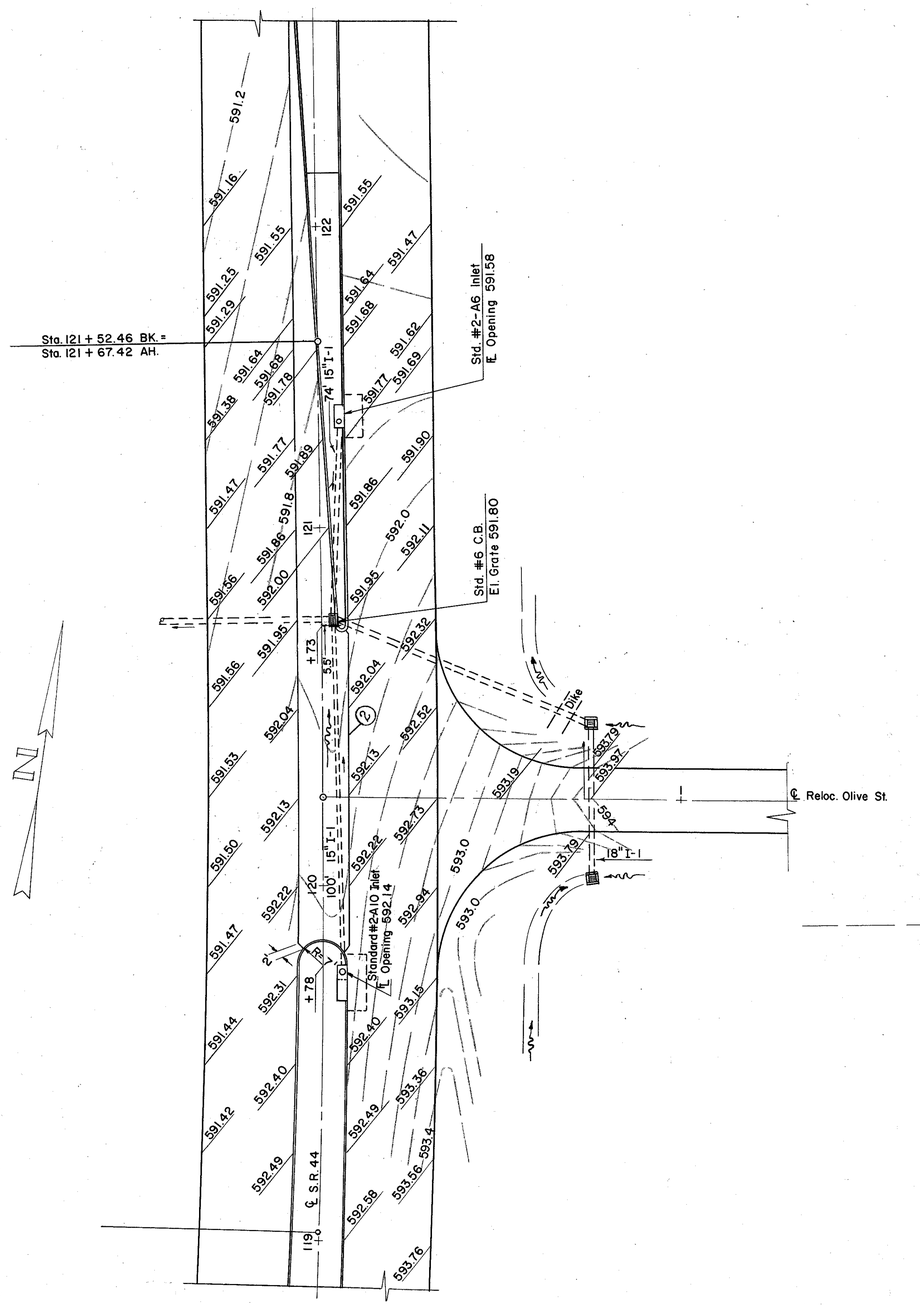
END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
101	148		
		127	159
90	90		
		56	45
126	85		
		215	193
106	123		

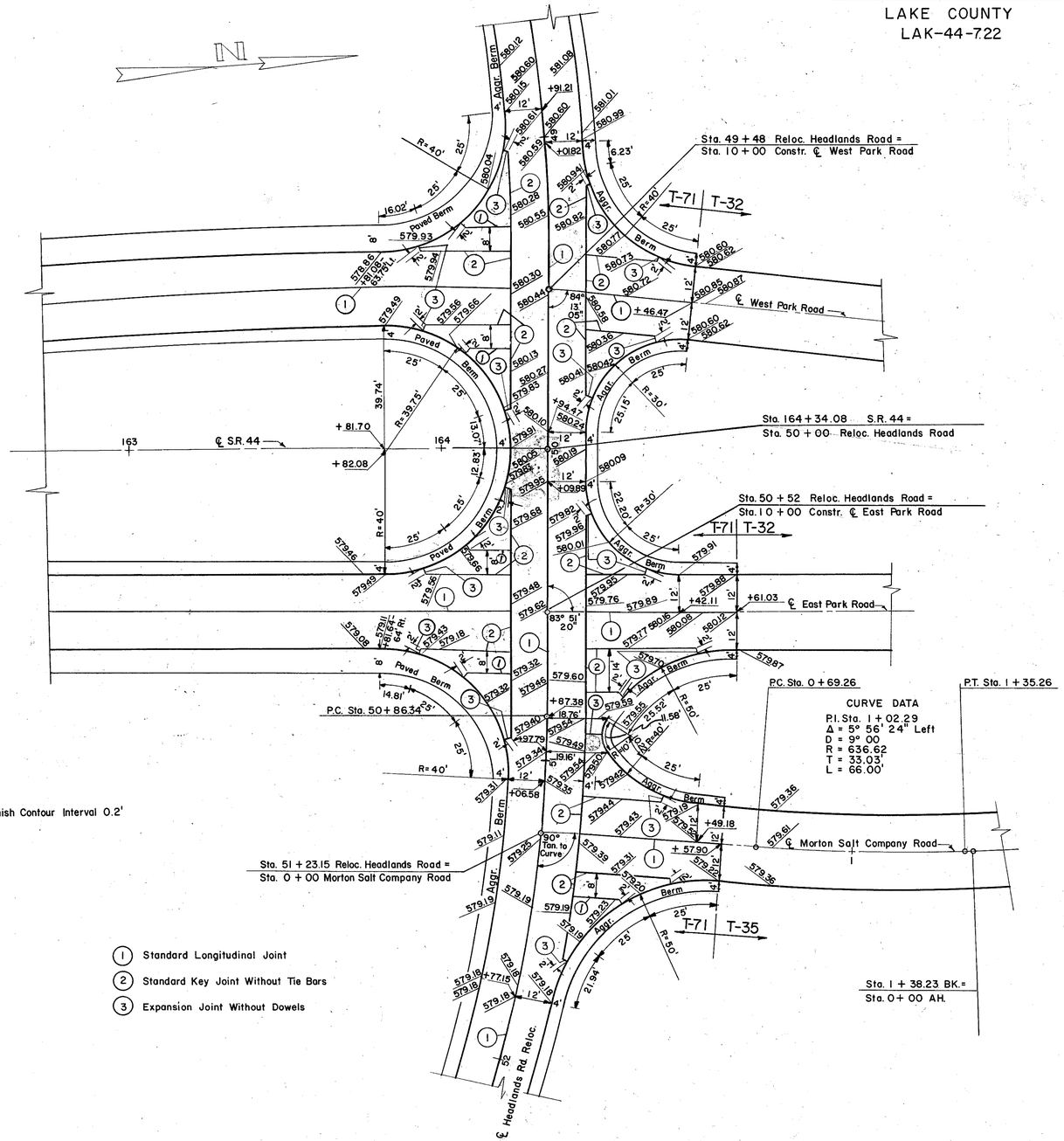
8-H

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

100
212

LAKE COUNTY
LAK-44-7.22

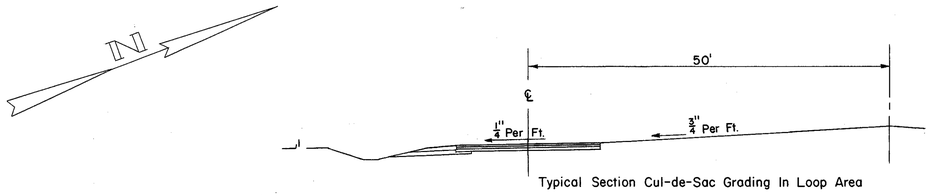




INTERSECTION DETAILS
OLIVE STREET & S.R.-44
HEADLANDS ROAD & S.R.-44

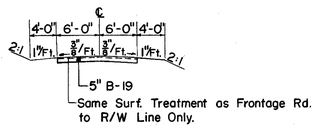
FED. AID DIVISION	STATE	PROJECT		101
2	OHIO			212

LAKE COUNTY
LAK-44-7.22

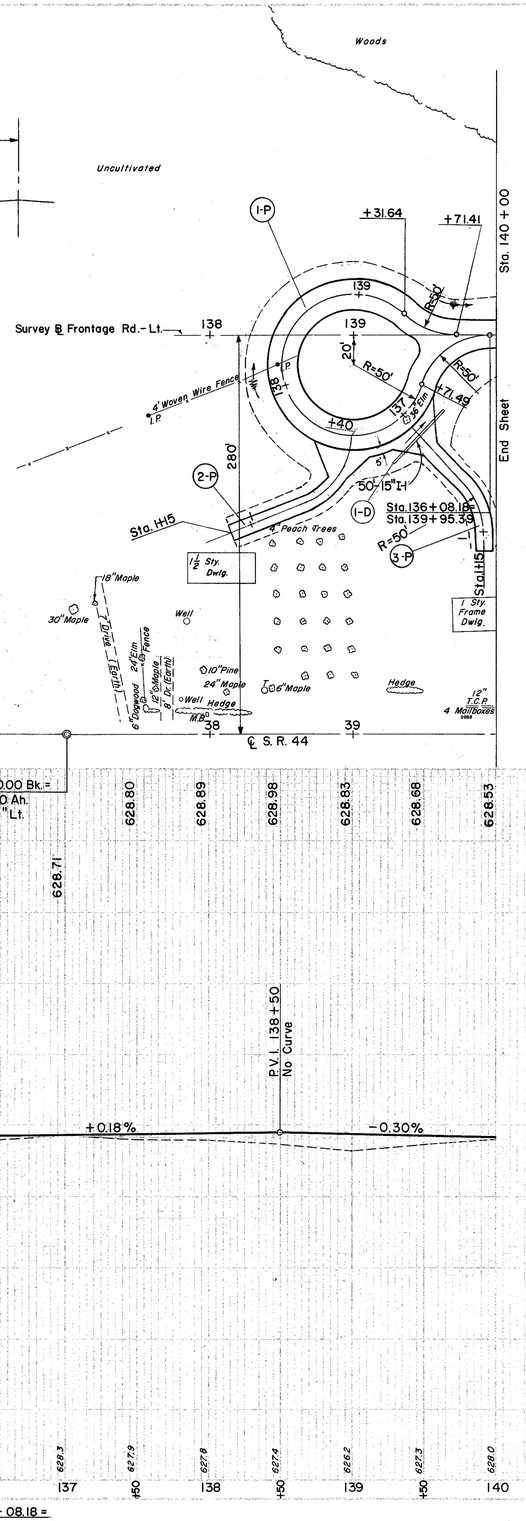


Typical Section Cul-de-Sac Grading In Loop Area

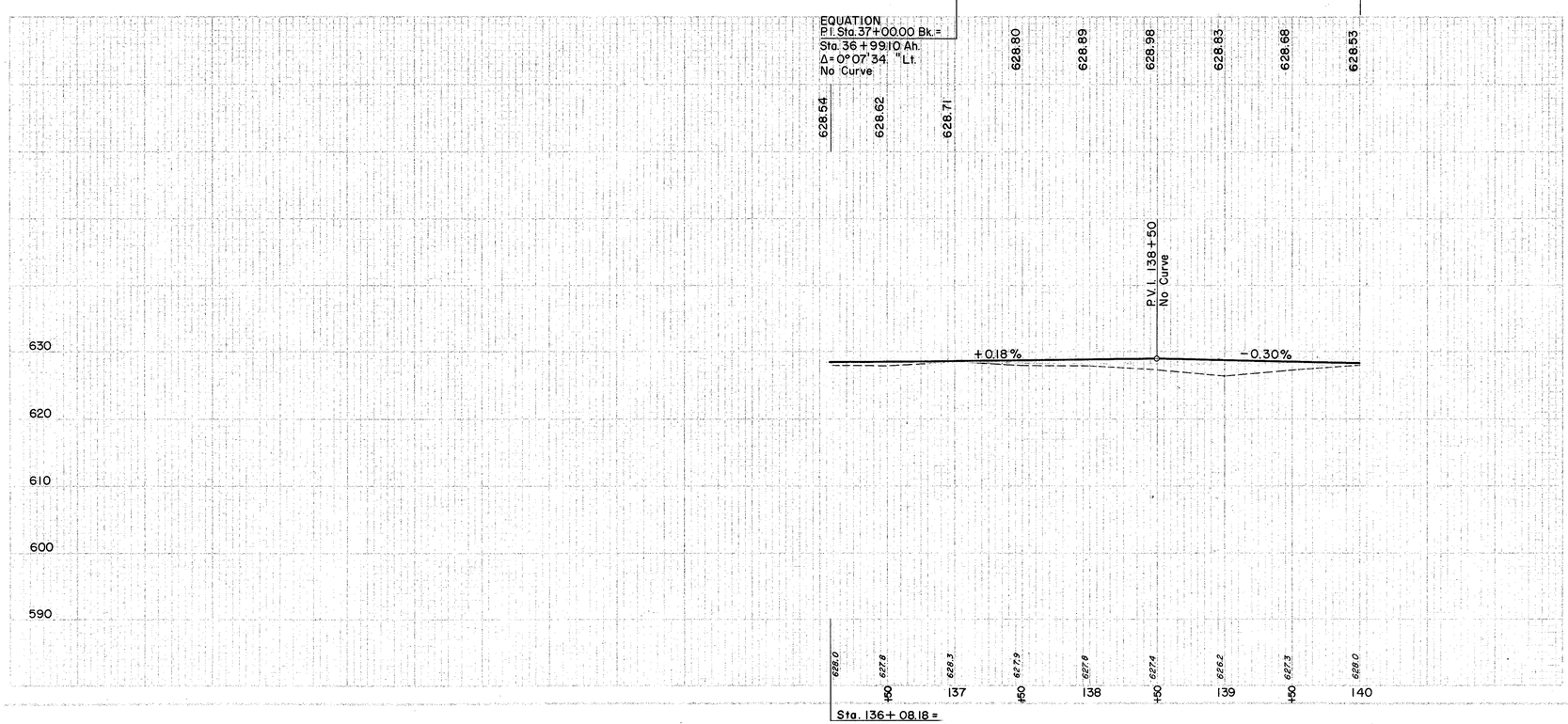
FOR PAVING DETAILS SEE
TYPICAL SECTION SHEET 5



TYPICAL SECTION DRIVES



EQUATION
P.I. Sta. 37+00.00 Bk. =
Sta. 36+99.10 Ah.
Δ = 0° 07' 34" Lt.
No Curve



(P) PAVEMENT

REF. NO.	STATION FROM	STATION TO	SIDE	B-19 AGGR. BASE COURSE	I-9 STONE U-DRAIN NO. 2	I-22 SUBBASE	T-30 BIT. PRIME COAT	T-32 BIT. MAT'L. FOR ROAD MIX	T-32 #46 AGGR. FOR ROAD MIX	T-32 #6 AGGR. FOR CHOKE	T-32 #6 AGGR. FOR SEAL COAT	T-32 BIT. MAT'L. FOR SEAL COAT
				C.Y.	L.F.	C.Y.	GAL.	GAL.	C.Y.	C.Y.	C.Y.	GAL.
1-P	136+08.18	140+00	—	116	144	93	325	894	45.5	3.3	6.5	203
2-P	DRIVE	137+40	Lt.	27			32	89	4.5	0.3	0.7	20
3-P	DRIVE	137+00	Lt.	27			32	89	4.5	0.4	0.6	21
	TOTAL			170	144	93	389	1072	54.5	4.0	7.8	244

(D) DRAINAGE

REF. NO.	STATION FROM	STATION TO	SIDE	I-1 15" PIPE CLASS C-1 M-6.4(c)
				L.F.
1-D	136+85	137+16	Lt.	50

EXCAVATION		189 C.Y.
EMBANKMENT		636 C.Y.
EMBANKMENT	20%	763 C.Y.

FRONTAGE ROAD LEFT STA. 136+08.18 TO STA. 140 + 00

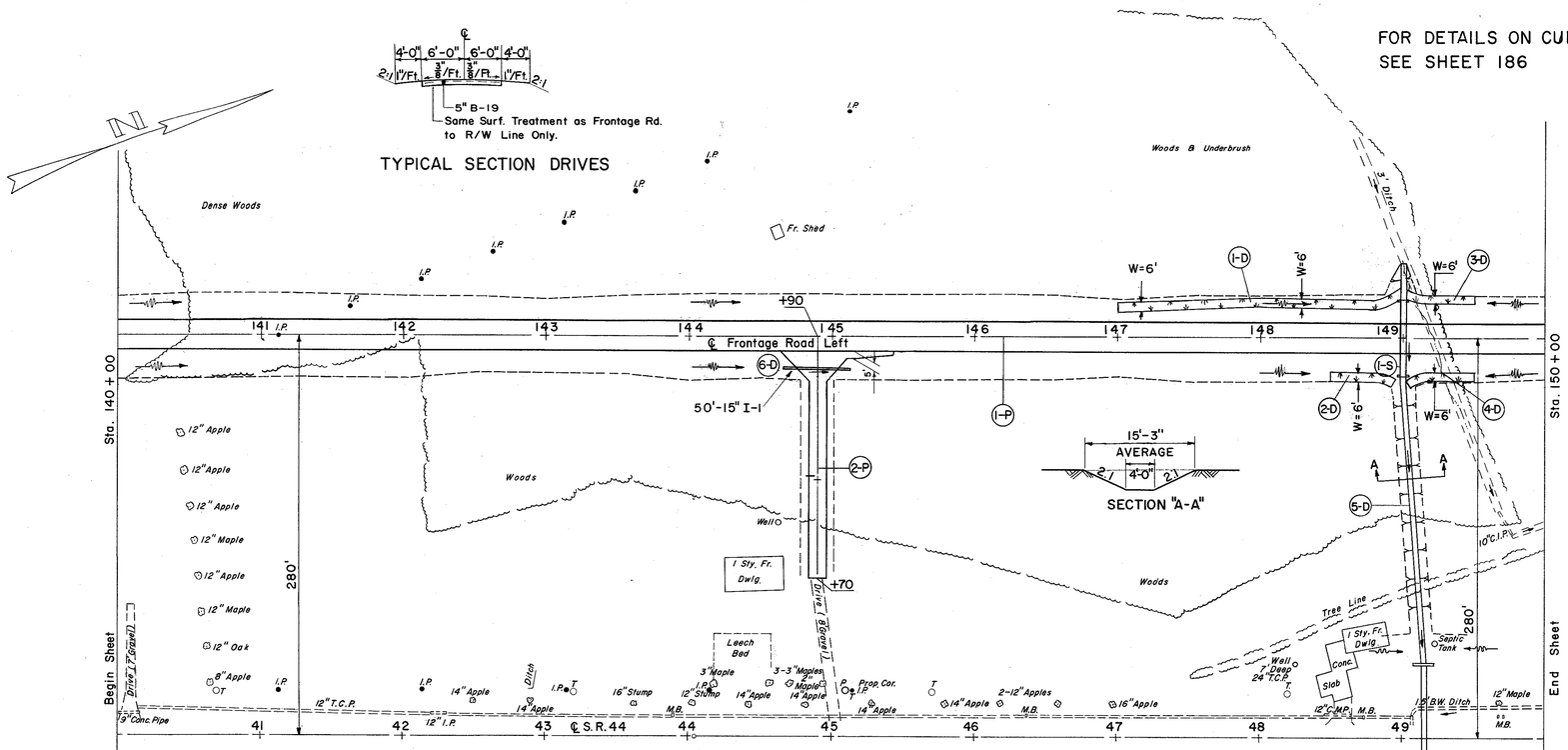
REV. DIV.	STATE	PROJECT	
2	OHIO		

102
212

LAKE COUNTY

LAK-44-7.22

FOR DETAILS ON CULVERT
SEE SHEET 186



(D) DRAINAGE

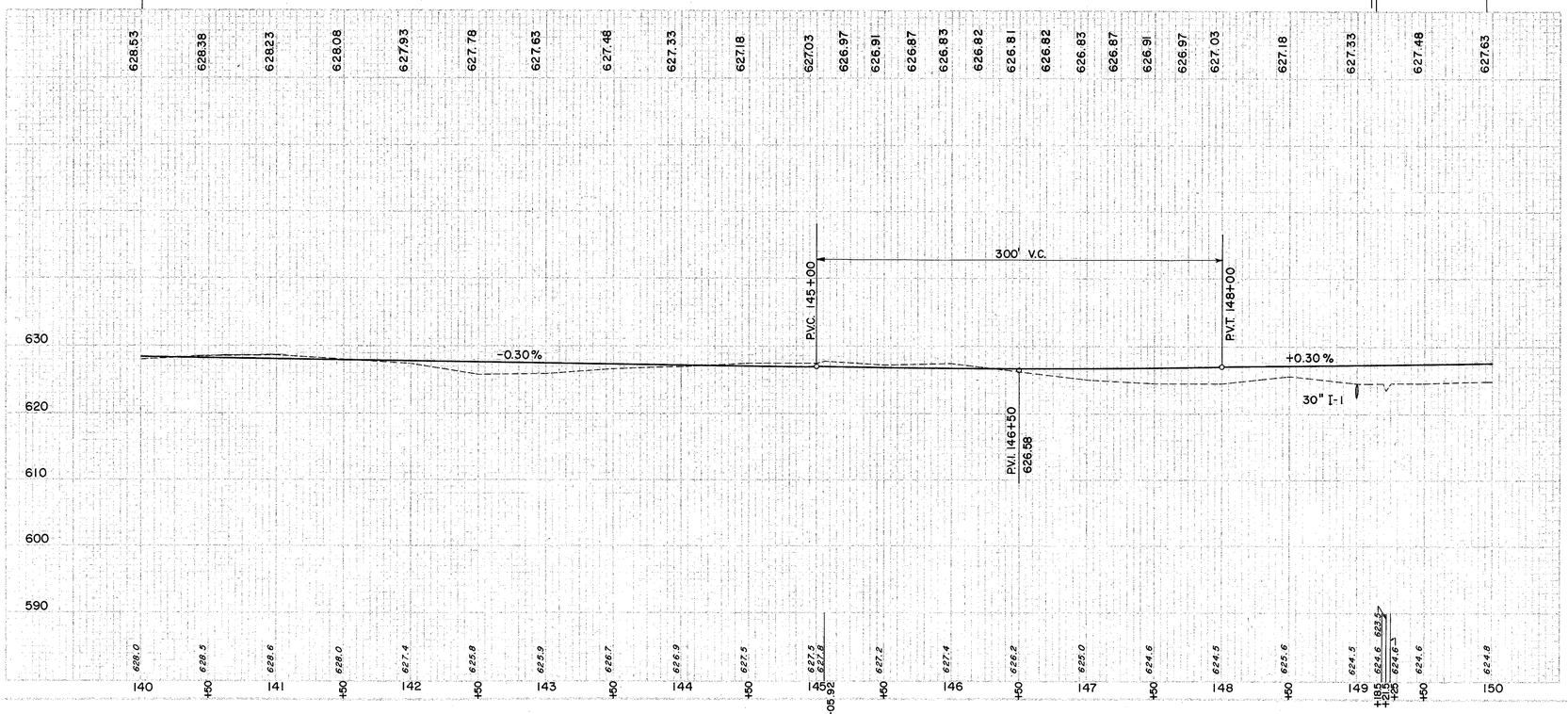
REF. NO.	STATION FROM	STATION TO	SIDE	E-3 CHANNEL EXC.	L-10 SODDING	I-1 15" PIPE CLASS C-1 M-6.4 (c)
				C.Y.	S.Y.	L.F.
1-D	147+00	149+00	LT.		134	
2-D	148+50	148+98	RT.		33	
3-D	149+02	149+50	LT.		33	
4-D	149+02	149+50	RT.		33	
5-D	149+00	149+15	RT.	197		
6-D	144+70	145+10	RT.			50
TOTAL				197	233	50

(S) STRUCTURES

REF. NO.	STATION FROM	STATION TO	SIDE	E-3 CHANNEL EXC.	L-10 SODDING	I-2 MASONRY	I-1 30" PIPE CLASS A-1 M-6.6(b) or M-6.8(b)
				C.Y.	S.Y.	C.Y.	L.F.
1-S	149+00		—	11	7	2.7	54

(P) PAVEMENT

REF. NO.	STATION FROM	STATION TO	SIDE	B-19 AGGR. BASE COURSE	I-9 STONE U-DRAIN NO.2	I-22 SUB-BASE	T-30 BIT. PRIME COAT	T-32 BIT. MAT'L. FOR ROAD MIX	T-32 #46 AGGR. FOR ROAD MIX	T-32 #6 AGGR. FOR CHOKE	T-32 #6 AGGR. FOR SEAL COAT	T-32 BIT. MAT'L. FOR SEAL COAT
				C.Y.	L.F.	C.Y.	GAL.	GAL.	C.Y.	C.Y.	C.Y.	GAL.
1-P	140+00	150+00	—	324	360	259	889	2444	124.4	8.9	17.8	556
2-P	Drive	144+90	RT.	37			33	90	4.6	0.3	0.7	20
TOTAL				361	360	259	922	2534	129.0	9.2	18.5	576



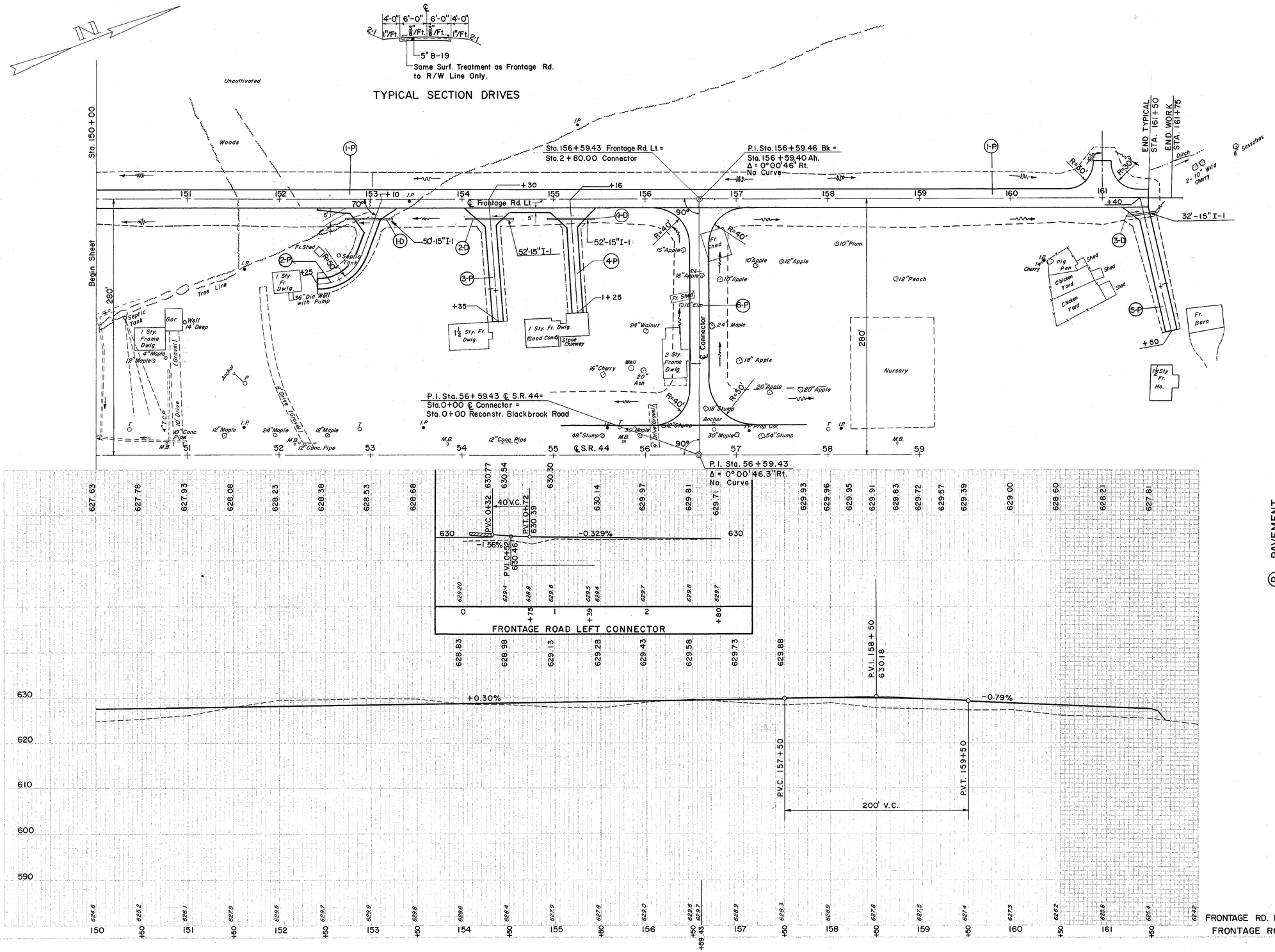
EXCAVATION		1,452 C.Y.
EMBANKMENT		748 C.Y.
EMBANKMENT	20	898 C.Y.

FRONTAGE ROAD LEFT STA. 140+00 TO STA. 150+00

FED. AID PROJECT	STATE	PROJECT	
2	OHIO		

103
212

LAKE COUNTY
LAK-44-7.22



T-32

Ⓟ PAVEMENT

REF. NO.	STATION FROM	STATION TO	SIDE	B-19 AGGR. BASE COURSE C.Y.	I-9 STONE U-DRAIN NO. 2 L.F.	I-22 SUB-BASE C.Y.	T-30 BIT. PRIME COAT GAL.	BIT. MAT'L. FOR ROAD MIX GAL.	#46 AGGR. FOR ROAD MIX C.Y.	#6 AGGR. FOR SEAL COAT C.Y.	BIT. MAT'L. FOR SEAL COAT GAL.
1-P	150+00	161+50	—	387	450	310	1066	2932	149.3	10.7	666
2-P	DRIVE	153+10	RT.	30			40	110	5.6	0.4	25
3-P	DRIVE	154+30	RT.	31			33	90	4.6	0.3	20
4-P	DRIVE	155+16	RT.	29			33	90	4.6	0.7	20
5-P	DRIVE	161+40	RT.	28			34	77	3.7	1.9	8
6-P	0+00 Conn	2+80+00	—	102		81	281	773	39.4	0.2	176
	TOTAL			607	450	391	1467	4032	205.4	14.7	916

Ⓓ DRAINAGE

REF. NO.	STATION FROM	STATION TO	SIDE	I-1 PIPE CLASS C-1 M-6.4(c) 15" L.F.
1-D	152+00	152+50	Rt.	50
2-D	154+05	154+57	Rt.	52
3-D	161+20	161+60	Rt.	32
4-D	154+92	155+44	Rt.	52
	TOTAL			186

CONNECTOR FRONTAGE RD. LT.

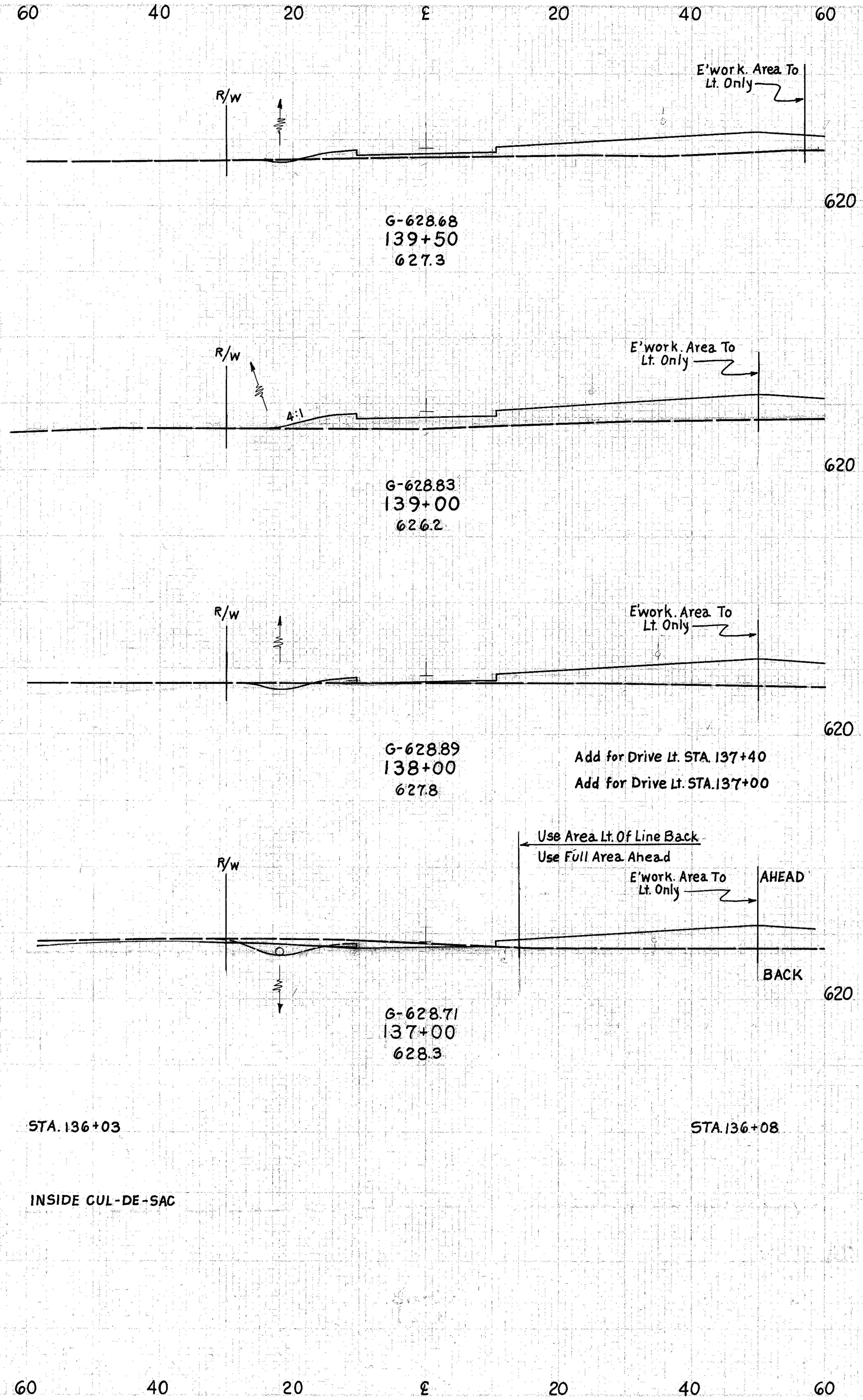
EXCAVATION	=	197	C.Y.
EMBANKMENT	=	25	C.Y.
EMBANKMENT +20%	=	30	C.Y.

EXCAVATION		1,750	C.Y.
EMBANKMENT		1,034	C.Y.
EMBANKMENT	20%	1,241	C.Y.

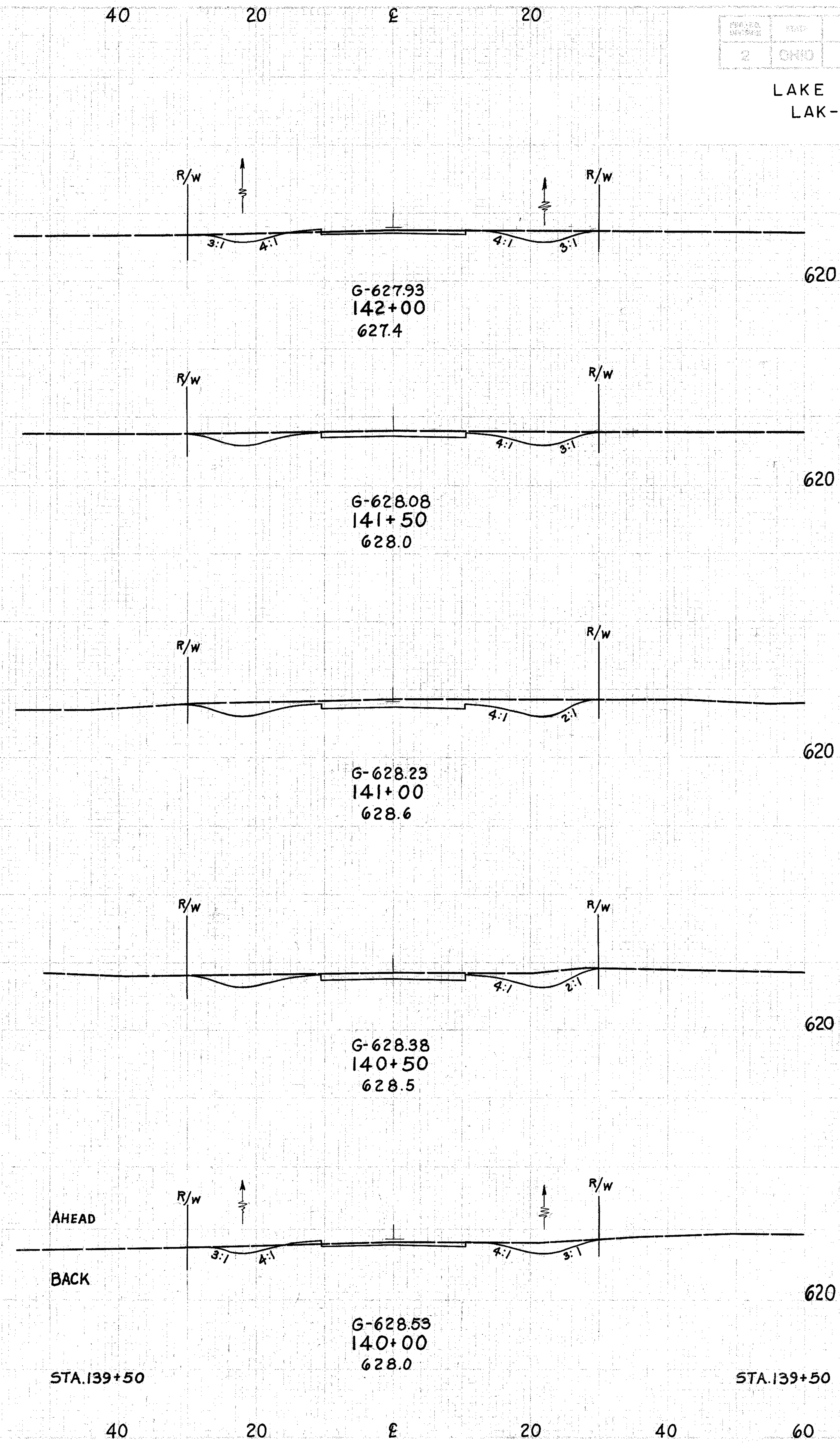
FRONTAGE RD. LEFT CONNECTOR STA. 0+00 TO STA. 2+80
FRONTAGE ROAD LEFT STA. 150+00 TO STA. 161+75

LAKE COUNTY
LAK-44-7.22

SEEDING END WIDTH	SEEDING SQ. YDS.
20	
	138
20	
	313
20	
	313
20	
	171
20	
	559



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL	SEEDING END WIDTH	SEEDING SQ. YDS.
1	119				
				40	
		1	223		222
0	168			40	
		22	182		222
9	113			40	
		16			
		16			
		107	93		222
33	88				
				40	
	4				
		37	5		222
0	0				
				40	
				20	
					93
				20	



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
31	1		
		78	1
53	0		
		119	
76			
		126	
60	0		
	82	1	
29	1		
		22	133
1	119		

FRONTAGE ROAD, LEFT Sta. 138+00 to 142+00

SEEDING	
END WIDTH	SQ. YDS.
40	
	222
40	
	222
40	
	222
40	
	222
40	

60 40 20 ℄ 20 40 60

R/W R/W 2:1 4:1 4:1 3:1 620

G-627.18
144+50
627.5

R/W R/W 3:1 4:1 620

G-627.33
144+00
626.9

R/W R/W 620

G-627.48
143+50
626.7

R/W R/W 620

G-627.63
143+00
625.9

R/W R/W 3:1 4:1 4:1 3:1 620

G-627.78
142+50
625.8

STA. 142+00 STA. 142+00

60 40 20 ℄ 20 40 60

END AREA		VOLUME		SEEDING	
CUT	FILL	CUT	FILL	END WIDTH	SQ. YDS.
72				40	
		113			222
50	0			40	
		58	4		222
13	4			40	
		18	26		196
6	24			40	
		11	53		27
6	33			40	
		34	31		222
31	1			40	

40 20 ℄ 20

R/W R/W 2:1 4:1 4:1 2:1 624.40 624.40 620

G-626.81
146+50
626.2

R/W R/W 624.55 624.55 620

G-626.83
146+00
627.4

R/W R/W 624.70 620

G-626.91
145+50
627.2

R/W R/W 620

G-627.01
145+05.92
627.8

R/W R/W 2:1 4:1 4:1 2:1 620

G-627.03
145+00
627.5

STA. 144+50 Add for Drive Rt. STA. 144+90
STA. 144+50

40 20 ℄ 20 40 60

END AREA		VOLUME	
CUT	FILL	CUT	FILL
41	0		
		123	
92			
		157	
78			
		135	
88			
		19	
86			
		146	
72		26	

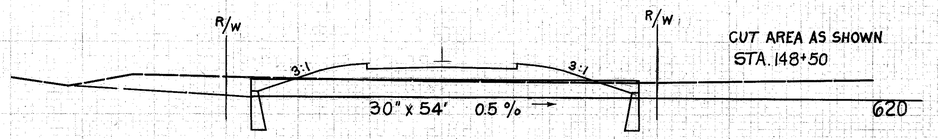
FRONTAGE ROAD, LEFT Sta. 142+50 to 146+50

LAKE COUNTY
LAK-44-7.22

105
212

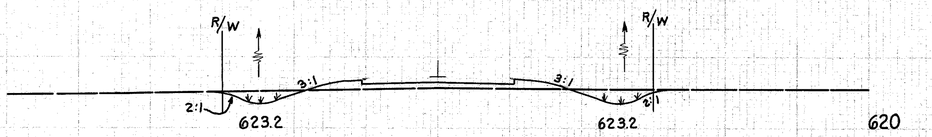
SEEDING	
END WIDTH	SQ. YDS.
40	
	222
40	
	222
40	
	222
40	
	222
40	

60 40 20 ℄ 20 40 60

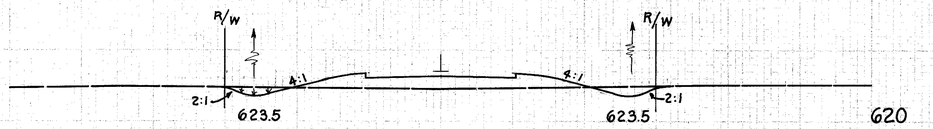


CUT AREA AS SHOWN
STA. 148+50

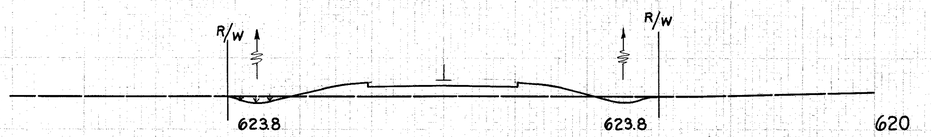
G-627.33
149+00
624.5



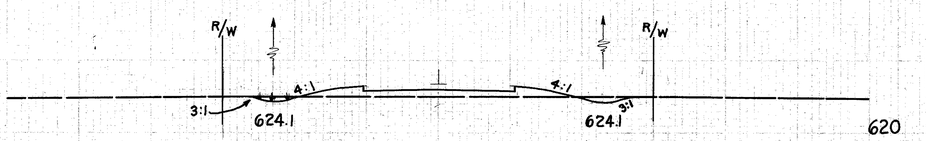
G-627.18
148+50
625.6



G-627.03
148+00
624.5



G-626.91
147+50
624.6



G-626.83
147+00
625.00

STA. 146+50

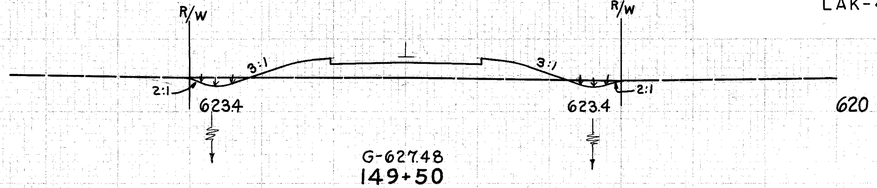
STA. 146+50

60 40 20 ℄ 20 40 60

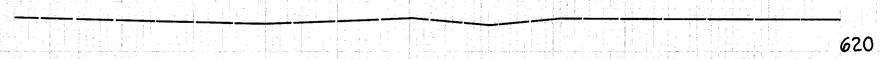
END AREA		VOLUME	
CUT	FILL	CUT	FILL
26	66		
		48	85
26	26		
		36	75
13	55		
		19	97
8	50		
		13	74
6	30		
		44	28
41	0		

SEEDING	
END WIDTH	SQ. YDS.
40	
	222
40	
	222
40	
	222
40	
	222
40	

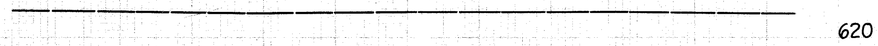
40 20 ℄ 20



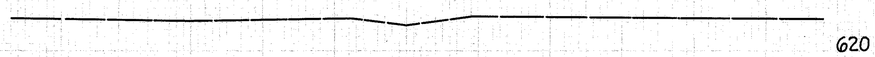
G-627.48
149+50
624.6



149+25
624.6
Top Bank



149+21.5
623.5
Profile Along ℄ Ditch



149+21.5
623.5
℄ Ditch

149+18.5
624.6
Top Bank

STA. 149+00

STA 149+00

40 20 ℄ 20 40 60

END AREA		VOLUME	
CUT	FILL	CUT	FILL
10	77		
		33	132
26	66		

LAKE COUNTY
LAK-44-7.22

106
212

FRONTAGE ROAD, LEFT Sta. 147+00 to 149+50

SEEDING	
END WIDTH	SQ. YDS.
40	
	222
40	
	222
40	
	222
40	
	222
40	

60 40 20 ℄ 20 40 60

R/W R/W 630
2:1 4:1 4:1 2:1
G-628.23
152+00
629.5

R/W R/W 620
2:1 4:1 4:1 2:1
G-628.08
151+50
627.9

R/W R/W 620
3:1 4:1 4:1 3:1
625.2 625.2
G-627.93
151+00
626.1

R/W R/W 620
3:1 4:1 4:1 3:1
624.6 624.6
G-627.78
150+50
625.2

R/W R/W 620
3:1 3:1
624.0 624.0
G-627.63
150+00
624.8

STA. 149+50 STA. 149+50

60 40 20 ℄ 20 40 60

END AREA		VOLUME	
CUT	FILL	CUT	FILL
135			
		182	
62	0		
		68	25
11	27		
		17	82
7	62		
		11	127
5	75		
		14	141
10	77		

SEEDING	
END WIDTH	SQ. YDS.
40	
	222
40	
	222
40	
	222
40	
	222
40	

40 20 ℄ 20

R/W R/W 630
4:1 2:1
G-628.98
154+50
628.4

Add for Drive Rt. STA. 154+30

R/W R/W 620
2:1 4:1 4:1 3:1
G-628.83
154+00
628.6

R/W R/W 630
4:1 2:1
G-628.68
153+50
629.8

Add for Drive Rt. STA. 153+00

R/W R/W 630
4:1 4:1
G-628.53
153+00
629.9

R/W R/W 630
2:1 4:1 4:1 2:1
G-628.38
152+50
629.7

STA. 152+00 STA. 152+00

40 20 ℄ 20 40 60

END AREA		VOLUME	
CUT	FILL	CUT	FILL
30	0		
		78	
		20	
54			
			156
115			
			223
		18	
126			
			248
142			
			256
135			

DIST. NO. DIVISION	STATE		
4	OHIO		

107
212

LAKE COUNTY
LAK-44-7.22

FRONTAGE ROAD, LEFT Sta. 150+00 to 154+50

SEEDING	
END WIDTH	SQ. YDS.
20	
	20
20	
	50
40	
	156
40	
	222
40	
	222
40	
	222
40	

60 40 20 ℄ 20 40 60

R/w E'work. Area To Lt. Only Connector 3:1 4:1

620

G-629.60
156+59.43
629.7

R/w E'work. Area To Lt. Only Connector

620

G-629.58
156+50
629.6

STA. 156+35
(Area as shown on STA. 156+00)

R/w R/w

620

G-629.43
156+00
629.0

R/w R/w

620

G-629.28
155+50
627.8

R/w R/w

620

G-629.13
155+00
627.9

STA. 154+50 STA. 154+50

60 40 20 ℄ 20 40 60

END AREA		VOLUME		SEEDING	
CUT	FILL	CUT	FILL	END WIDTH	SQ. YDS.
51				40	
		19			222
62				40	
		98			222
44	0			40	
48	26				222
8	28			40	
12	9			40	
		39	8		137
30	0			20	

40 20 ℄ 20

R/w R/w 3:1 4:1 4:1 2:1 626.7 626.6

620

G-629.72
159+00
627.5

R/w R/w 627.1 626.8

620

G-629.91
158+50
627.8

R/w R/w 627.5 4:1 2:1 627.0

620

G-629.96
158+00
628.9

R/w R/w 627.2

620

G-629.88
157+50
628.3

R/w R/w 3:1 4:1 4:1 3:1 627.4

620

G-629.73
157+00
628.9

STA. 156+69
STA. 156+59.43

STA. 156+59.43

40 20 ℄ 20 40 60

END AREA		VOLUME	
CUT	FILL	CUT	FILL
12	57		
		23	91
13	41		
		30	42
19	4		
		32	23
16	21		
		30	22
16	3		
		51	2
51		0	

			108
2	OHIO		212

LAKE COUNTY
LAK-44-7.22

FRONTAGE ROAD, LEFT Sta. 155+00 to 159+00

SEEDING	
END WIDTH	SQ. YDS.
40	
	67
40	
	208
35	
	208
40	
	222
40	
	222
40	

60 40 20 ℄ 20 40 60

STA.161+65 STA.161+65

R/W R/W

620

G-627.81
161+50
625.4

Add for Drive Rt. STA. 161+40

R/W R/W

4:1 3:1

625.8

620

G-628.21
161+00
625.8

R/W R/W

4:1

626.0

620

G-628.60
160+50
626.2

R/W R/W

625.9 626.20

620

G-629.00
160+00
627.3

R/W R/W

3:1 4:1 4:1 3:1

626.3 626.40

620

G-629.39
159+50
627.4

STA. 159+00 STA. 159+00

60 40 20 ℄ 20 40 60

END AREA		VOLUME	
CUT	FILL	CUT	FILL
0			
			15
0	55		
		20	14
		6	144
6	101		
		8	131
3	41		
		13	75
11	40		
		18	79
8	45		
		19	94
12	57		

40 20 ℄ 20

620

163+00
621.5

620

162+50
622.4

620

162+00
624.2

40 20 ℄ 20 40 60

FRONTAGE ROAD, LEFT Sta. 159+50 to 163+00

STATE	FED. PROJ.
OHIO	

109
212

LAKE COUNTY
LAK-44-7.22

LAKE COUNTY
LAK-44-7.22

SEEDING	
END WIDTH	SQ. YDS.
57	247
57	156
55	153
55	

60 40 20 ℄ 20 40 60

R/W R/W 3:1 4:1 4:1 3:1

G-630.17
1+39
629.5

620

R/W R/W E. House

G-630.30
1+00
629.8

620

E. Drive E. Drive 3:1 4:1 4:1 3:1

G-630.38
0+75.4
628.8

620

E. Drive E. Drive

Area as shown for Sta. 0+75 — Area as shown for Sta. 0+75

G-630.54
0+50
629.4

620

0+00
629.20

60 40 20 ℄ 20 40 60

END AREA		VOLUME		SEEDING	
CUT	FILL	CUT	FILL	END WIDTH	SQ. YDS.
31	0				
		44	1		
30	1				
		21	8		
				56	
15	16				
					311
14	15				
				56	
15	16				
					317
				58	
					70
				57	

40 20 ℄ 20

Area as shown for Sta. 2+00 — Area as shown for Sta. 2+00

620

G-629.81
2+50
629.8

R/W R/W 627.68 627.68

620

G-629.97
2+00
629.7

R/W R/W

620

G-630.14
1+50
629.4

Sta. 1+39 — Sta. 1+39

40 20 ℄ 20 40 60

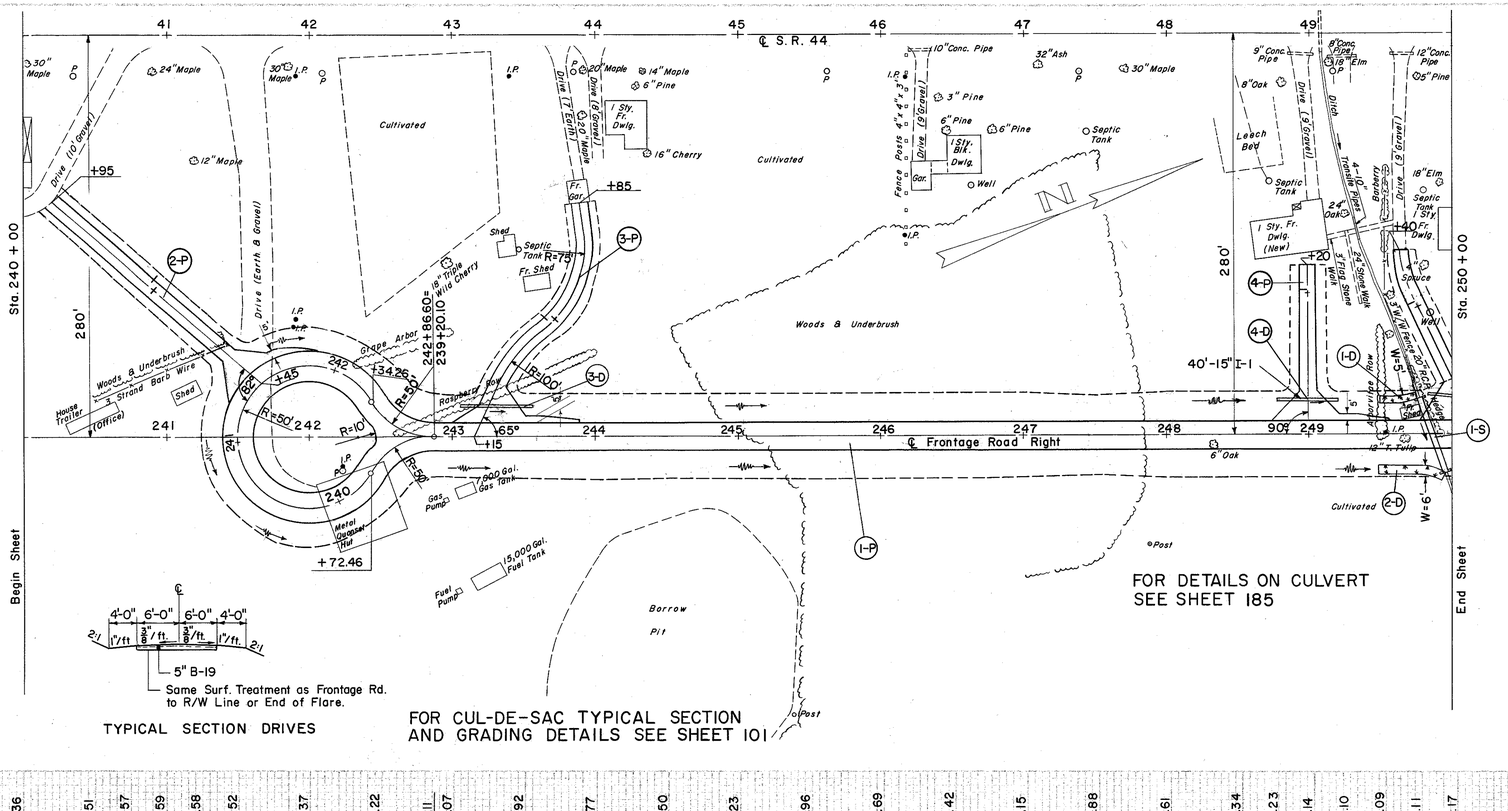
END AREA		VOLUME	
CUT	FILL	CUT	FILL
29	0		
			54
		52	1
29	0		
			12
27	1		
			0
31	0		

CONNECTOR Sta. 0+00 to 2+50

REC. DIV. DIVISION	STATE	PROJECT	
2	OHIO		

111
212

LAKE COUNTY
LAK-44-7.22



TYPICAL SECTION DRIVES

Ⓓ DRAINAGE

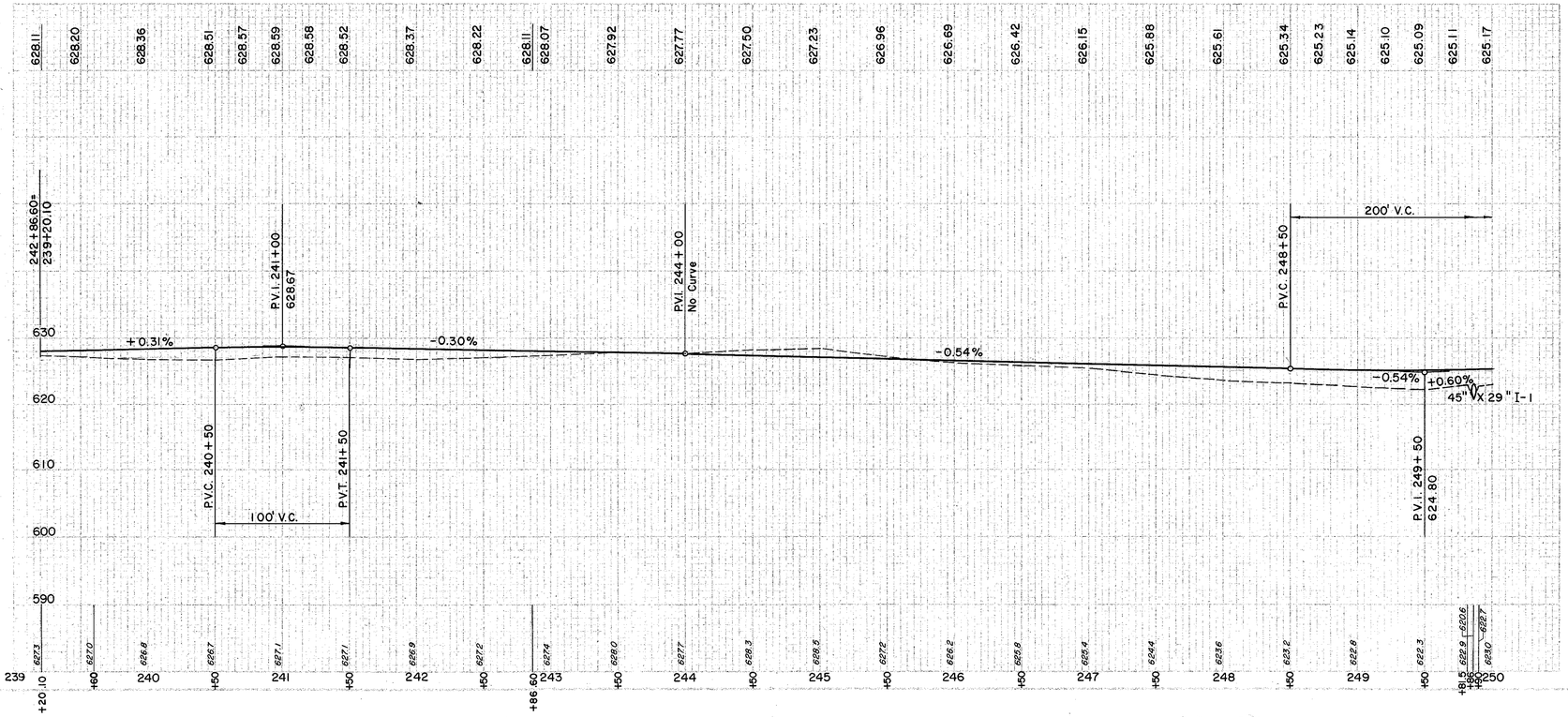
REF NO.	STATION FROM	STATION TO	SIDE	L-10 SODDING S.Y.	I-1 15" PIPE CLASS C-1 M-64(c) L.F.
1-D	249+50	249+73	LT.	13	
2-D	249+50	249+97	RT.	31	
3-D	243+05	243+57	LT.		52
4-D	248+78	249+18	LT.		40
TOTAL				44	92

Ⓢ STRUCTURES

REF NO.	STATION FROM	STATION TO	SIDE	I-1 45" x29" PIPE CLASS G-1 M-6.7(b) L.F.	I-2 MASONRY C.Y.	L-10 SODDING S.Y.
I-S	249+85		–	56	1.5	13

Ⓟ PAVEMENT

REF NO.	STATION FROM	STATION TO	SIDE	B-19 AGGR. BASE COURSE C.Y.	I-9 STONE U-DRAIN NO. 2 L.F.	I-22 SUBBASE C.Y.	T-30 BIT. PRIME COAT Gal.	T-32 BIT. MAT'L. FOR ROAD MIX Gal.	T-32 #46 AGGR. FOR ROAD MIX C.Y.	T-32 #6 AGGR. FOR CHOKE C.Y.	T-32 #6 AGGR. FOR SEAL COAT C.Y.	T-32 BIT. MAT'L. FOR SEAL COAT Gal.
1-P	239+72.46	250+00	–	342	396	274	945	2598	132.3	9.5	18.9	590
2-P	Drive	241+45	LT.	42			37	103	5.2	0.4	0.8	23
3-P	Drive	243+15	LT.	44			44	120	6.1	0.4	0.9	27
4-P	Drive	249+00	LT.	28			33	90	4.6	0.3	0.7	20
TOTAL				456	396	274	1059	2911	148.2	10.6	21.3	660



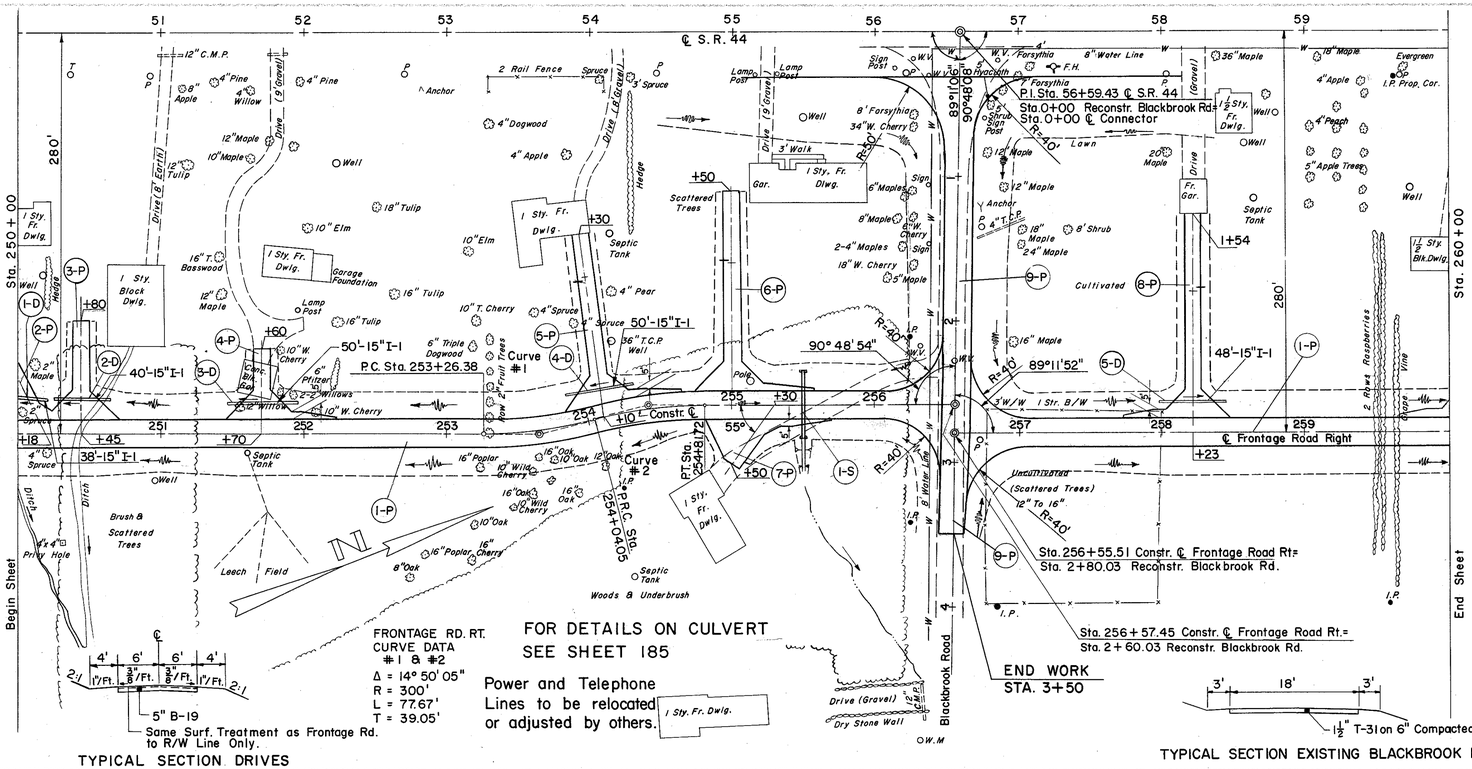
EXCAVATION		1,229 C.Y.
EMBANKMENT		1,169 C.Y.
EMBANKMENT	20	1,403 C.Y.

FRONTAGE ROAD RIGHT STA. 239+20.10 TO STA. 250 + 00

FED. RD. DIVISION	STATE	COUNTY		
2	0410			

112
212

LAKE COUNTY
LAK-44-7.22



FRONTAGE RD. RT.
CURVE DATA
#1 & #2
Δ = 14° 50' 05"
R = 300'
L = 77.67'
T = 39.05'

TYPICAL SECTION DRIVES

4' 6' 6" 3/8"/Ft. 6" 3/8"/Ft. 6' 4' 1"/Ft. 1"/Ft. 2:1 2:1
5" B-19
Same Surf. Treatment as Frontage Rd. to R/W Line Only.

TYPICAL SECTION EXISTING BLACKBROOK RD.

3' 18' 3'
1½" T-31 on 6" Compacted Gravel

(S) STRUCTURES

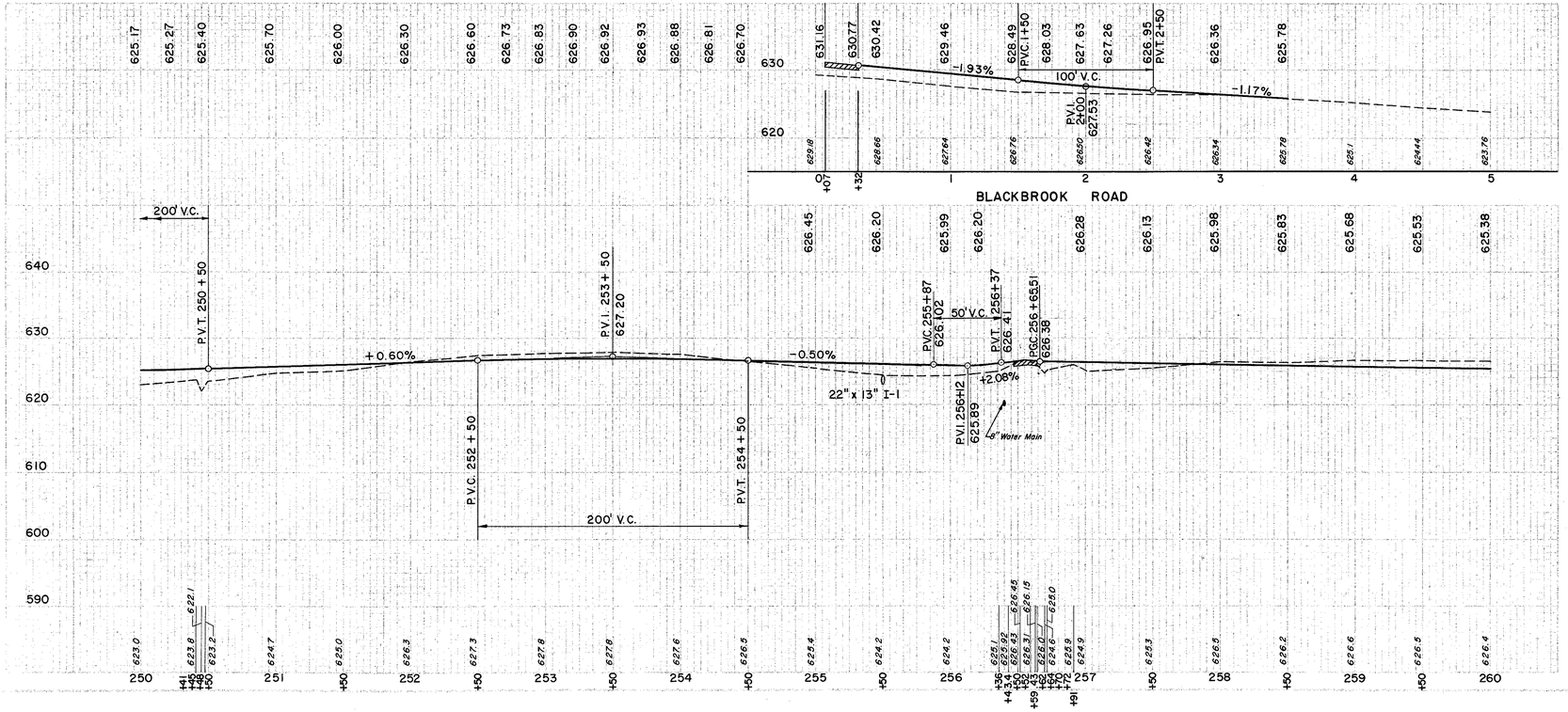
REF. NO.	STATION FROM	STATION TO	SIDE	I-1 22"X13" PIPE CLASS C-1 M-6.4(i) & (d)	I-2 MASONRY	L-10 SODDING
				L.F.	C.Y.	S.Y.
1-S	255+50		–	48	1.4	10

(P) PAVEMENT

REF. NO.	STATION FROM	STATION TO	SIDE	B-19 AGGR. BASE COURSE	I-9 STONE U-DRAIN NO. 2	I-22 SUB-BASE	T-30 BIT. PRIME COAT	T-32 BIT. MAT'L. FOR ROAD MIX	T-32 #46 AGGR. FOR ROAD MIX	T-32 #6 AGGR. FOR CHOKE	T-32 #6 AGGR. FOR SEAL COAT	T-32 BIT. MAT'L. FOR SEAL COAT
				C.Y.	L.F.	C.Y.	GAL.	GAL.	C.Y.	C.Y.	C.Y.	GAL.
1-P	250+00	260+00	–	339	333	271	934	2568	130.8	9.3	18.7	584
2-P	DRIVE	250+18	LT.	32			42	116	5.9	0.4	0.8	26
3-P	DRIVE	250+45	LT.	18			27	73	3.7	.3	.6	17
4-P	"	251+70	LT.	17			33	90	4.6	.3	.7	20
5-P	"	254+10	LT.	30			33	90	4.6	.3	.7	21
6-P	"	255+00	LT.	34			32	90	4.6	.4	.6	20
7-P	"	255+30	RT.	16			47	129	6.6	.5	.9	30
8-P	"	258+23	LT.	34			33	90	4.6	.3	.6	20
9-P	Blackbrook Rd. C+00	Blackbrook Rd. 2+50	–	117	90	93	322	886	45.1	3.2	6.4	201
TOTAL				637	423	364	1503	4132	210.5	15.0	30.0	939

(D) DRAINAGE

REF. NO.	STATION FROM	STATION TO	SIDE	I-1 15" PIPE CLASS C-1 M-6.4(c)
				L.F.
1-D	249+82	250+20	LT.	38
2-D	250+27	250+67	LT.	40
3-D	251+48	251+98	LT.	50
4-D	253+88	254+38	LT.	50
5-D	257+98	258+46	LT.	48
TOTAL				226



BLACKBROOK ROAD

EXCAVATION	=	228 C.Y.
EMBANKMENT	=	379 C.Y.
EMBANKMENT +20%	=	455 C.Y.

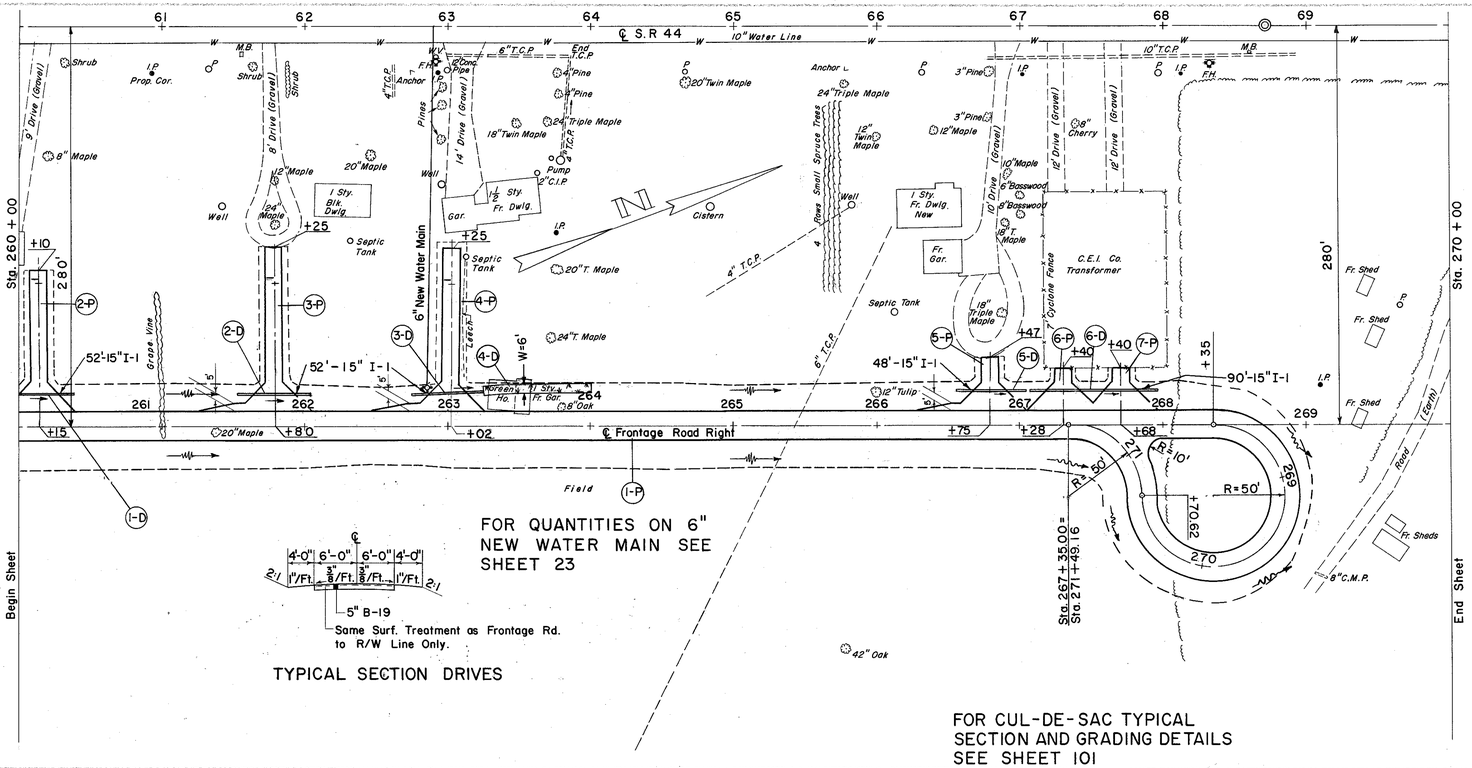
EXCAVATION		2041 C.Y.
EMBANKMENT		296 C.Y.
EMBANKMENT +20%		355 C.Y.

RECONSTR. BLACKBROOK ROAD STA. 0+00 TO STA. 3+50
FRONTAGE ROAD RIGHT STA. 250+00 TO STA. 260+00

SHEET NO.	STATE	PROJECT	
2	OHIO		

113
212

LAKE COUNTY
LAK-44-7.22



FOR QUANTITIES ON 6" NEW WATER MAIN SEE SHEET 23

TYPICAL SECTION DRIVES

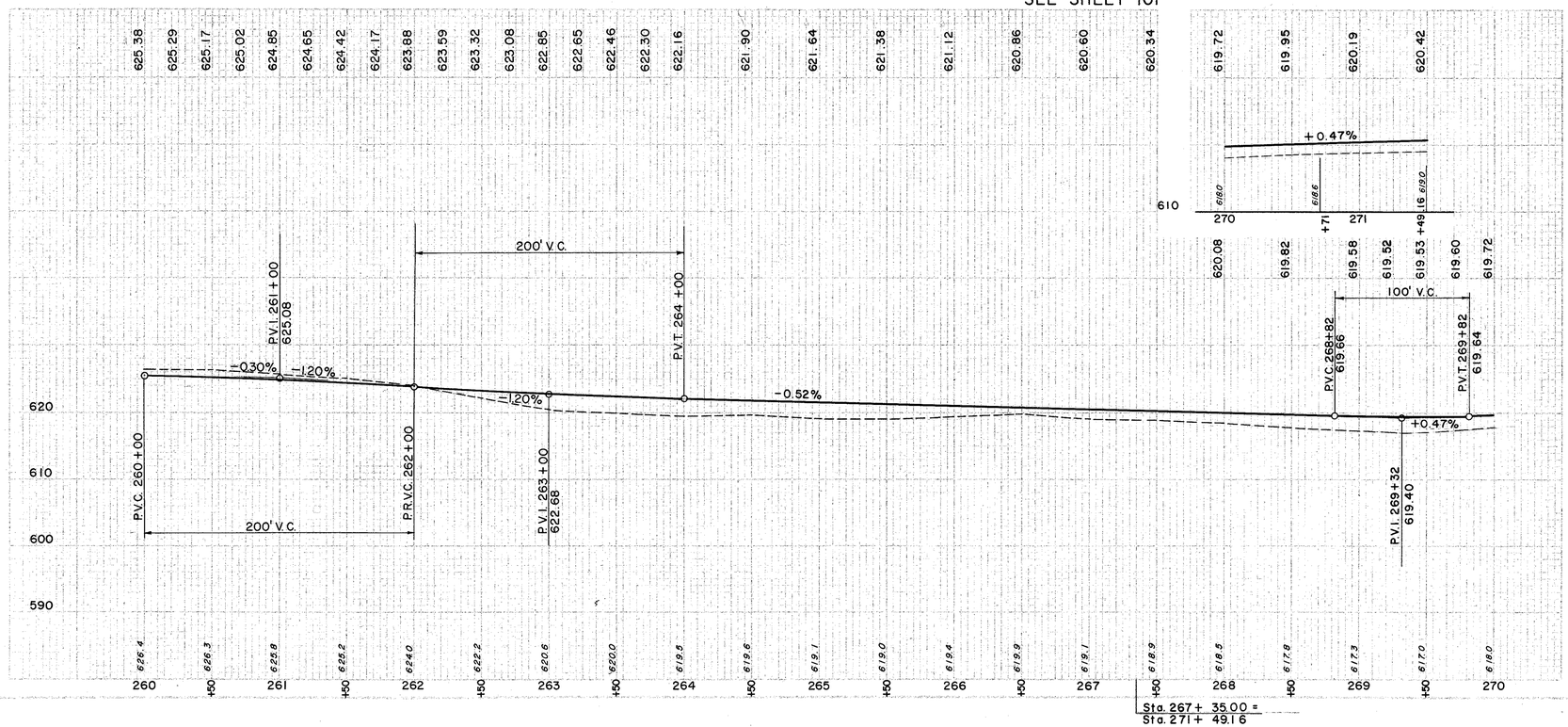
FOR CUL-DE-SAC TYPICAL SECTION AND GRADING DETAILS SEE SHEET 101

Ⓟ PAVEMENT

REF. NO.	STATION FROM	STATION TO	SIDE	B-19 AGGR. BASE COURSE	I-9 STONE U-DRAIN NO. 2	I-22 SUBBASE	T-30 BIT. PRIME COAT	T-32 BIT. MAT'L. FOR ROAD MIX	T-32 # 46 AGGR. FOR ROAD MIX	T-32 # 6 AGGR. FOR CHOKE	T-32 # 6 AGGR. FOR SEAL COAT	T-32 BIT. MAT'L. FOR SEAL COAT
				C.Y.	L.F.	C.Y.	GAL.	GAL.	C.Y.	C.Y.	C.Y.	GAL.
1-P	260+00	271+49.16	-	352	396	281	998	2745	139.8	10.0	20.0	624
2-P	DRIVE	260+15	Lt.	26	—	—	33	90	4.6	0.3	0.7	20
3-P	"	261+80	Lt.	29	—	—	33	90	4.6	0.3	0.7	21
4-P	"	263+00	Lt.	29	—	—	32	90	4.6	0.4	0.6	20
5-P	"	266+75	Lt.	14	—	—	33	90	4.6	0.3	0.7	21
6-P	"	267+28	Lt.	11	—	—	28	76	3.9	0.3	0.6	17
7-P	"	267+68	Lt.	12	—	—	27	76	3.9	0.3	0.6	18
TOTAL				473	396	281	1184	3257	166.0	11.9	23.9	741

Ⓓ DRAINAGE

REF. NO.	STATION FROM	STATION TO	SIDE	I-1 15" PIPE CLASS C-1 M-6.4(c)	L-10 SODDING
				L.F.	S.Y.
1-D	259+89	260+41	Lt.	52	
2-D	261+54	262+06	Lt.	52	
3-D	262+75	263+27	Lt.	52	
4-D	263+27	264+00	Lt.		48
5-D	266+53	267+01	Lt.	48	
6-D	267+03	267+93	Lt.	90	
TOTAL				294	48



EXCAVATION	=	1,170 C.Y.
EMBANKMENT	=	1,800 C.Y.
EMBANKMENT	= 20 %	2,160 C.Y.

FRONTAGE ROAD RIGHT STA. 260 +00 TO STA. 271 + 49.16

SEEDING	
END WIDTH	SQ. YDS.
20	
	147
20	
	113
20	
	80
20	
	559

60 40 20 ℄ 20 40 60

E'work. Area To Lt. Only

R/W

3/4"/Ft.

4:1

3:1

G-628.51
240+50
626.7

620

E'work. Area To Lt. Only

R/W

3/4"/Ft.

G-628.36
240+00
626.8

620

E'work. Area To Lt. Only

R/W

3:1

4:1

G-628.23
239+60
627.0

620

STA. 243+00
(Area as shown Right of ℄)

INSIDE CUL-DE-SAC

Sta. 239+50
Area as shown for
Sta. 239+60

END AREA		VOLUME		SEEDING	
CUT	FILL	CUT	FILL	END WIDTH	SQ. YDS.
1	156			20	
		2	100		124
1	145			20	
		8	113		149
7	29			20	
		2	15		
7	29				149
				20	
					144
				20	

40 20 ℄ 20

E'work. Area To Lt. Only

R/W

3:1

4:1

G-628.22
242+50
627.2

620

E'work. Area To Lt. Only

R/W

3/4"/Ft.

G-628.37
242+00
626.9

620

STA. 241+52

E'work. Area To Lt. Only

R/W

3/4"/Ft.

G-628.52
241+50
627.1

620

Add for Drive Lt. STA. 241+45

STA. 241+35

E'work. Area To Lt. Only

R/W

3/4"/Ft.

4:1

3:1

G-628.59
241+00
627.1

620

STA. 240+50

STA. 240+50

END AREA		VOLUME	
CUT	FILL	CUT	FILL
9	23		
		15	124
5	145		
		6	
0			94
			93
0			
		2	
2	142		
		4	99
1	156		

40 20 ℄ 20 40 60

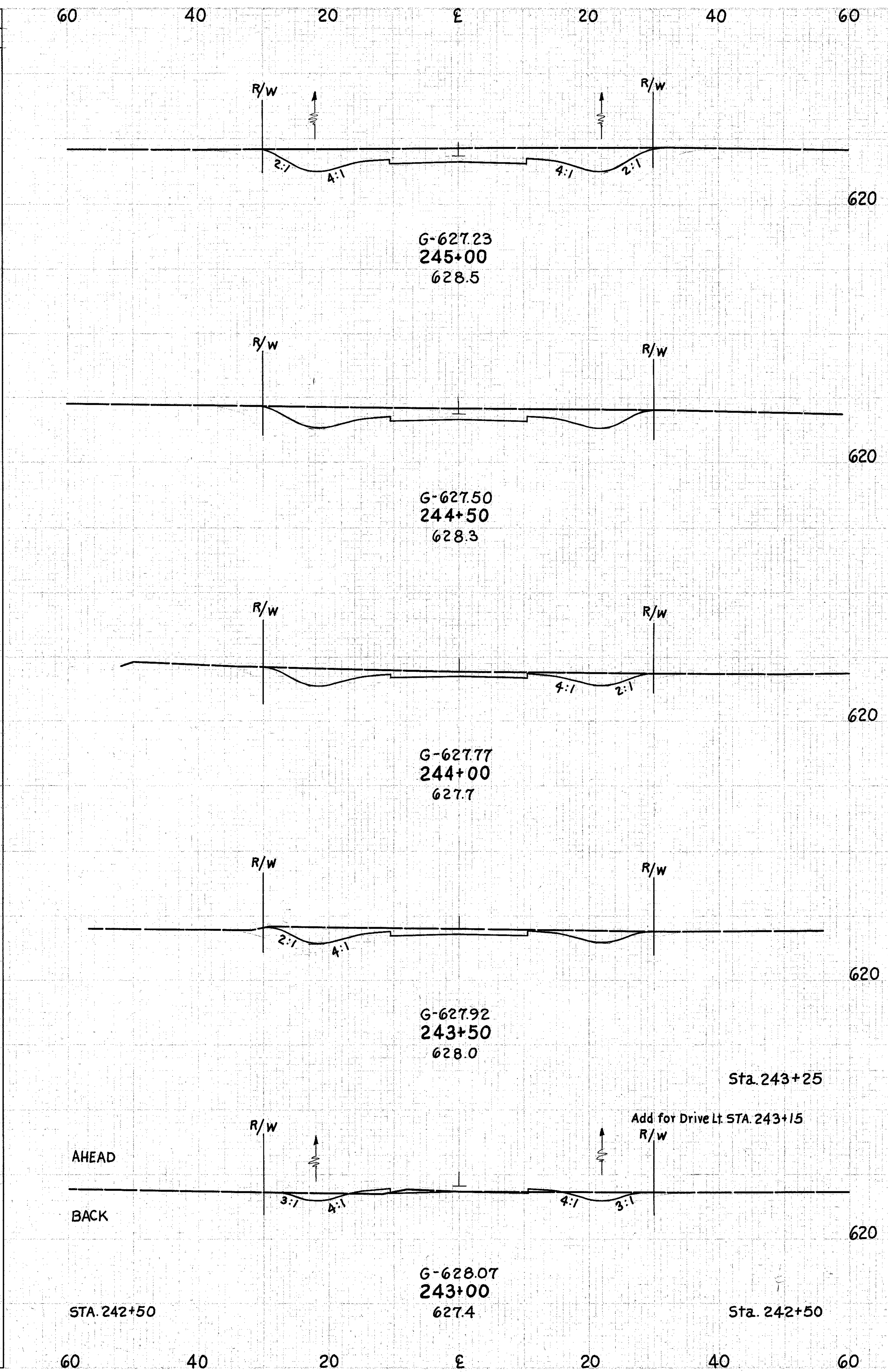
FRONTAGE ROAD, RIGHT Sta. 239+60 to 242+50

FED. AID PROJECT	STATE	PROJECT		SHEET NO.	TOTAL SHEETS
2	OHIO			114	212

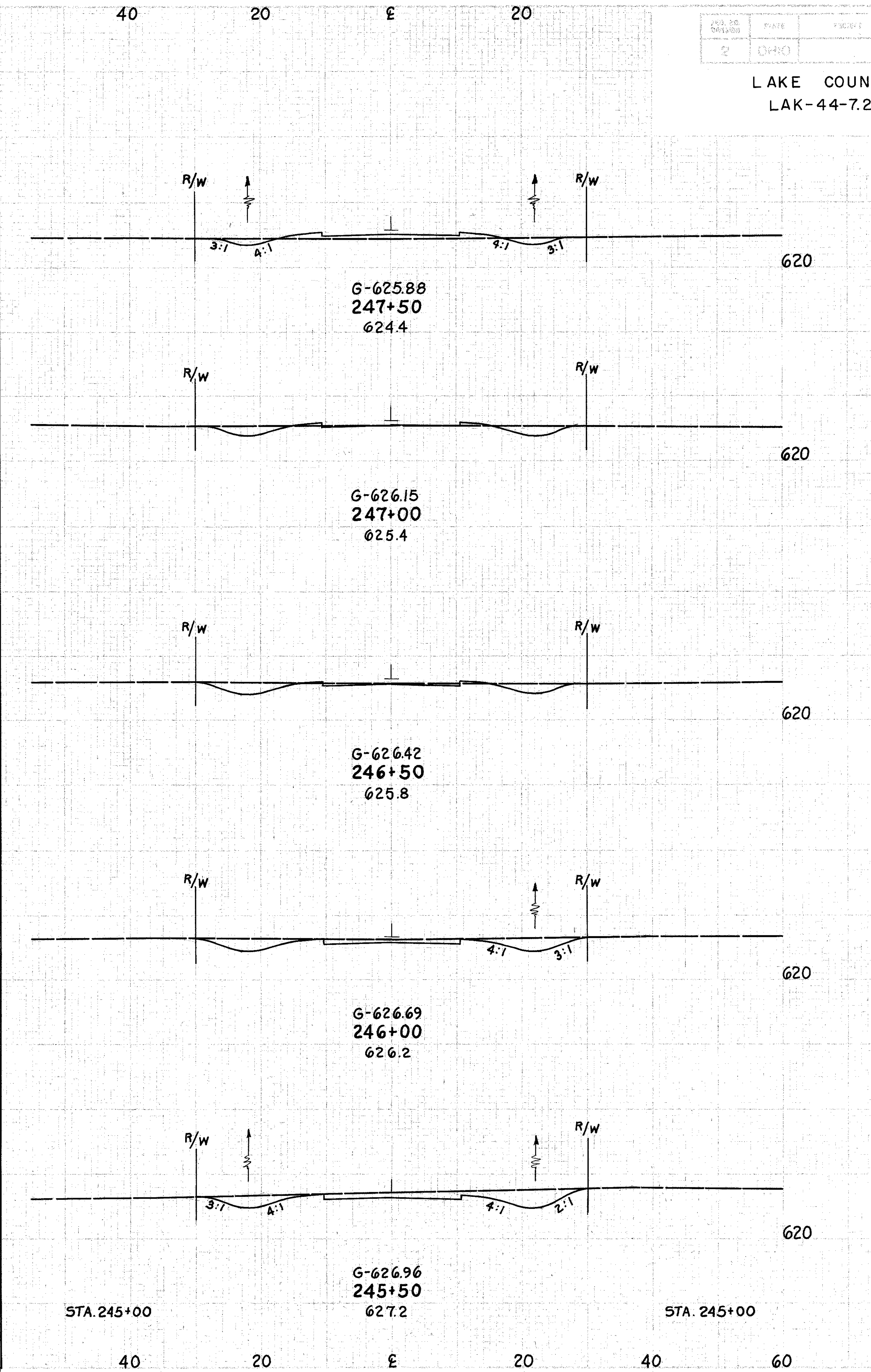
LAKE COUNTY
LAK-44-7.22

LAKE COUNTY
LAK-44-7.22

SEEDING END WIDTH	SEEDING SQ. YDS.
40	
	222
40	
	222
40	
	222
40	
	222
40	
20	
	76
20	



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL	SEEDING END WIDTH	SEEDING SQ. YDS.
129					
				40	
		219			
					222
108				40	
		161			222
66				40	
		118			222
61				40	
		72			222
	0				
		30	2		
17	4			40	
		21	28		222
9	23			40	



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
10	18		
		29	19
21	2		
		48	3
31	1		
		73	1
48	0		
		103	
63			
		178	
129			

SEEDING	
END WIDTH	SQ. YDS.
40	222
40	222
40	222
40	222
40	

60 40 20 ℄ 20 40 60

249+81.5
622.9
Top Bank

620

R/W 3:1 3:1 R/W
621.4 621.4
620

G-625.09
249+50
622.3

R/W 3.5:1 3:1 R/W
621.8 621.8
620

G-625.14
249+00
622.8

Add for Drive Lt. STA. 249+00

R/W 4:1 4:1 R/W
622.2 622.2
620

G-625.34
248+50
623.2

R/W 4:1 4:1 3:1 R/W
622.6 622.6
620

G-625.61
248+00
623.6

STA. 247+50 STA. 247+50

60 40 20 ℄ 20 40 60

END AREA		VOLUME		SEEDING	
CUT	FILL	CUT	FILL	END WIDTH	SQ. YDS.
12	70			40	
		19	119		222
8	59				
		13	17		
		15	96		
8	45				
		17	79		
10	40				
		19	54		
10	18			40	

40 20 ℄ 20

250+41
623.8
Top Bank

620

Add for Drive Lt. STA. 250+18

R/W R/W
621.8 621.5
620

G-625.17
250+00
623.0

620

249+90
622.7
Top Bank

620

249+86
620.6
Profile Along ℄ Ditch

620

249+86
620.6
℄ Ditch

STA. 249+50 STA. 249+50

40 20 ℄ 20 40 60

END AREA		VOLUME	
CUT	FILL	CUT	FILL
		20	15
15	52		
		25	113
12	70		

STATE	DIST.	COUNTY	
2	0440		

116
212

LAKE COUNTY
LAK-44-7.22

FRONTAGE ROAD, RIGHT Sta. 248+00 to 250+41

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL	SEEDING END WIDTH	SEEDING SQ. YDS.
40		10	7			40	
	222			20	53		222
40		12	50			40	
	222			25	94	40	
							222
				9		40	
40		15	52			40	

60 40 20 ℄ 20 40 60

R/W R/W 620

G-625.70
251+00
624.7

R/W R/W 3:1 3:1 622.3 622.0 620

G-625.40
250+50
623.5

620

250+48
623.2
Top Bank

Add for Drive Lt. STA. 250+45

620

250+45
622.1
Profile Along ℄ Ditch

620

250+45
622.1
℄ Ditch

STA. 250+00 STA. 250+00

60 40 20 ℄ 20 40 60

FED. ROAD SYSTEM	STATE	PROJECT		SHEET NO.	TOTAL SHEETS
2	OHIO			117	212

LAKE COUNTY
LAK-44-7.22

40 20 ℄ 20

R/W R/W 2:1 4:1 4:1 2:1 624.80 624.80 620

G-626.92
253+50
627.8

R/W R/W 624.62 624.62 620

G-626.83
253+00
627.8

R/W R/W 2:1 4:1 4:1 2:1 620

G-626.60
252+50
627.3

R/W R/W 2:1 4:1 4:1 3:1 620

G-626.30
252+00
626.3

Add for Drive Lt. STA. 251+70

R/W R/W 3:1 4:1 4:1 3:1 620

G-626.00
251+50
625.0

STA. 251+00 STA. 251+00

40 20 ℄ 20 40 60

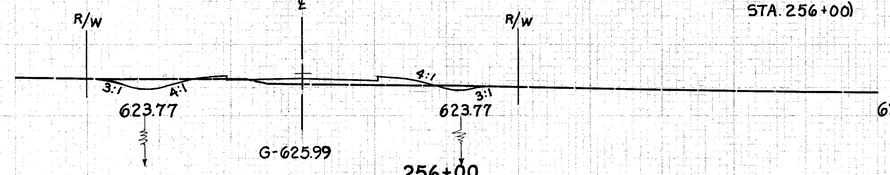
END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
103			
			194
106			
			187
96			
			141
56	0		
			84 1
			6
35	1		
			42 7
10	7		

FRONTAGE ROAD, RIGHT Sta. 250+45 to 253+50

SEEDING END WIDTH	SEEDING SQ. YDS.
40	
	44
40	
	222
40	
	222
40	
	222
40	
	222
40	

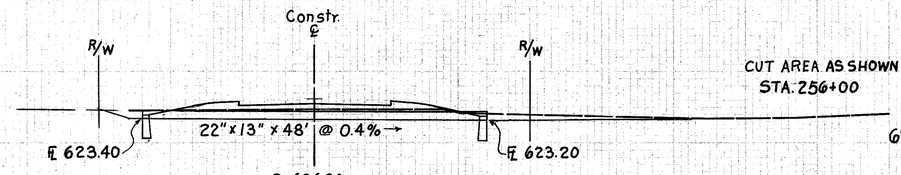
60 40 20 ℄ 20 40 60

STA. 256+10
(Area as shown on STA. 256+00)



256+00
624.2

STA. 256+10
(Area as shown on STA. 256+00)

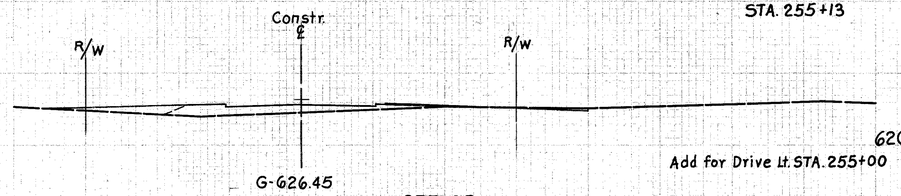


255+50
624.2

CUT AREA AS SHOWN
STA. 256+00

Add for Drive Rt. STA. 255+30

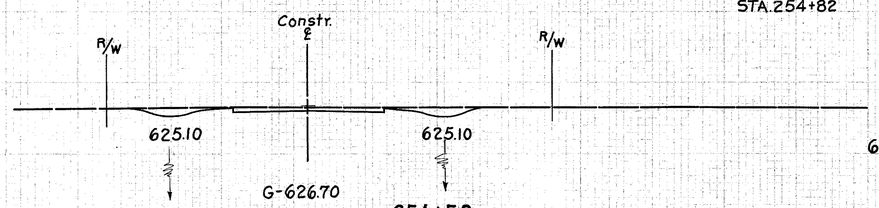
STA. 255+13



255+00
625.4

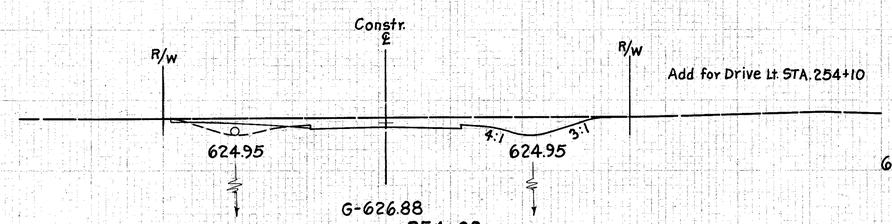
Add for Drive Lt. STA. 255+00

STA. 254+82



254+50
626.5

Add for Drive Lt. STA. 254+10



254+00
627.6

STA. 253+50

STA. 253+50

60 40 20 ℄ 20 40 60

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
12	17		
		4	6
12	17		
		22	38
12	24		
		8	
		4	
			50
0			
	30		
		22	
			10
0	0		
		17	
28			
		107	
		20	
88			
		177	
103			

40 20 ℄ 20

256+59.43
626.31

620

256+52
626.45
℄ Pavement

620

256+50
626.43

620

256+43.4
625.92
Edge Pavement

620

256+36
625.1

620

40 20 ℄ 20 40 60

DIST.	STATE	ROUTE	SHEET NO.
2	OHIO		118 212

LAKE COUNTY
LAK-44-7.22

FRONTAGE ROAD, RIGHT Sta. 254+00 to 256+59.43

STATE	PROJECT		
OHIO			

119
212

LAKE COUNTY
LAK-44-7.22

60 40 20 ℄ 20 40 60

620

256+72
625.0
Top Bank

620

256+70
624.6
Profile Along ℄ Ditch

620

256+70
624.6
℄ Ditch

620

256+64
626.0
Top Bank

620

256+62
626.15
Edge Pavement

60 40 20 ℄ 20 40 60

SEEDING	
END WIDTH	SQ. YDS.
40	222
40	222
40	222
40	

40 20 ℄ 20

R/W 2:1 4:1 4:1 3:1 R/W

620

G-625.83
258+50
626.2

Add for Drive Lt. STA. 258+23

R/W 2:1 4:1 R/W

620

G-625.98
258+00
626.5

STA. 257+80

R/W R/W

620

G-626.13
257+50
625.3

R/W 3:1 4:1 4:1 3:1 R/W

620

G-626.28
257+00
624.9

620

256+91
625.9

40 20 ℄ 20 40 60

END AREA		VOLUME	
CUT	FILL	CUT	FILL
87			
		155	
		23	
80			
		93	
	0		
			3
20	5		
		27	19
9	16		

FRONTAGE ROAD, RIGHT Sta. 256+62 to 258+50

SEEDING	
END WIDTH	SQ. YDS.
40	
	222
40	
	222
40	
	222
40	
	222
40	

60 40 20 ℄ 20 40 60

R/W R/W 2:1 4:1 4:1 2:1 620

G-624.85
261+00
625.8

R/W R/W 620

G-625.17
260+50
626.3

R/W Add for Drive Lt. STA. 260+15 R/W 620

G-625.38
260+00
626.4

R/W R/W 620

G-625.53
259+50
626.5

R/W R/W 2:1 4:1 4:1 2:1 620

STA. 258+50 G-625.68 259+00 626.6 STA. 258+50

60 40 20 ℄ 20 40 60

END AREA		VOLUME		SEEDING	
CUT	FILL	CUT	FILL	END WIDTH	SQ. YDS.
117				40	
		221			222
122				40	
		219			222
114		15		40	
		223			222
127				40	
		224			222
115				40	
		187			222
87				40	

40 20 ℄ 20

R/W R/W 3:1 4:1 4:1 3:1 619.5 619.5 620

G-622.46
263+50
620.0

R/W R/W Add for Drive Lt. STA. 263+02 620.0 620.0 620

G-622.85
263+00
620.6

R/W R/W 3:1 4:1 4:1 3:1 621.10 621.10 620

G-623.32
262+50
622.2

STA. 262+17

R/W R/W 620

G-623.88
262+00
624.0

Add for Drive Lt. STA. 261+80

R/W R/W 2:1 4:1 4:1 2:1 620

STA. 261+00 G-624.42 261+50 625.2 STA. 261+00

40 20 ℄ 20 40 60

END AREA		VOLUME	
CUT	FILL	CUT	FILL
7	61		
		14	100
		17	4
8	47		
		21	48
15	5		
			3
		0	69
60			
			144
			18
95			
			196
117			

FED. ROAD DIVISION	STATE	PROJECT
2	OHIO	

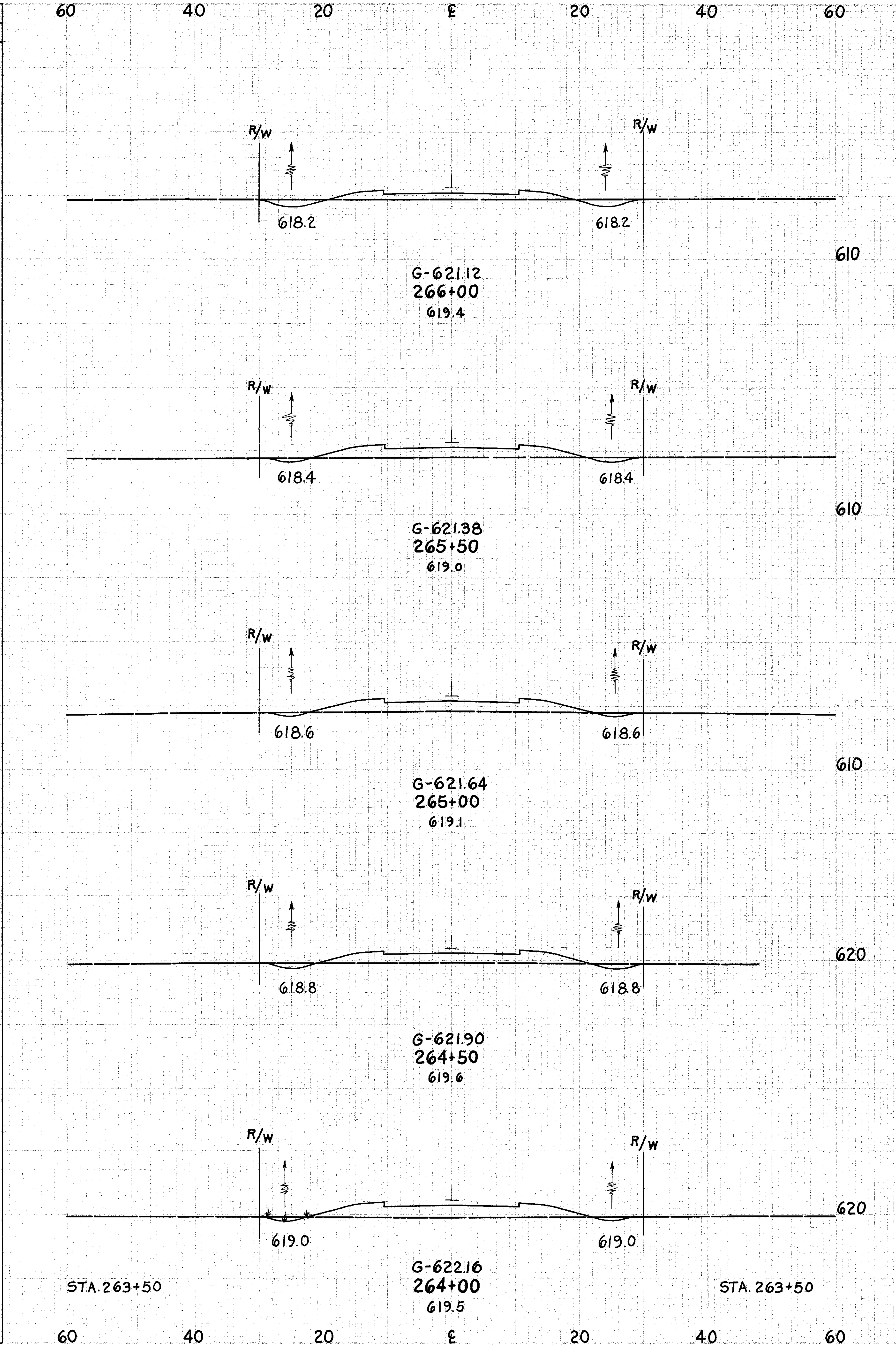
120
212

LAKE COUNTY
LAK-44-7.22

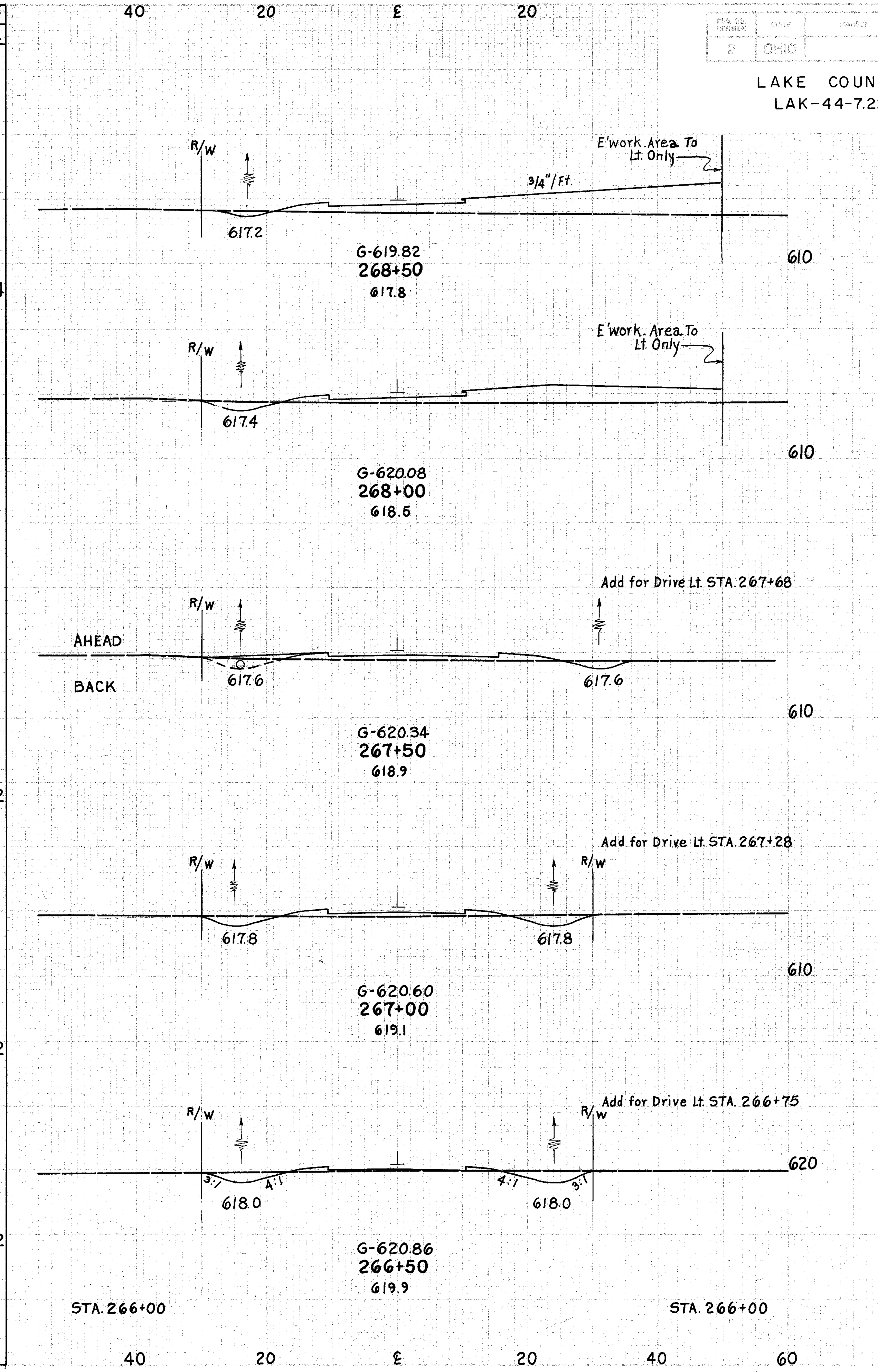
FRONTAGE ROAD, RIGHT Sta. 259+00 to 263+50

LAKE COUNTY
LAK-44-7.22

SEEDING END WIDTH	SEEDING SQ. YDS.
40	
	222
40	
	222
40	
	222
40	
	222
40	
	222
40	



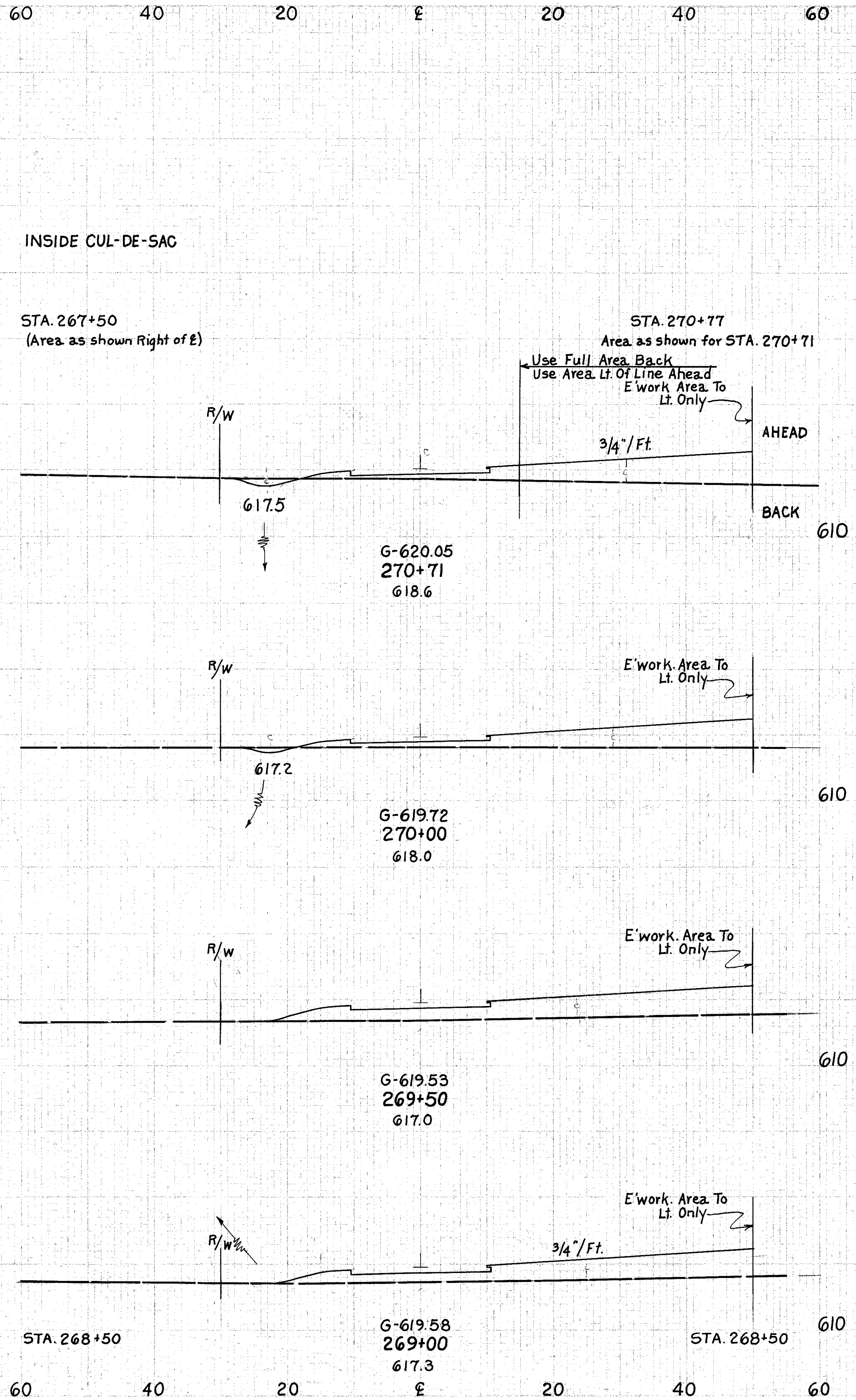
END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL	SEEDING END WIDTH	SEEDING SQ. YDS.
13	35			20	
					124
		17	88		
				20	
5	60				
					111
		8	117		
				20	
				40	
4	66				
					222
		9	108		
				40	
6	51				
					222
		9	116		
				40	
4	74				222
		10	125		
7	61			40	



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
4	181		
		16	236
11	122		
		24	131
		2	
15	20		
		31	38
		2	
19	21		
		42	23
		3	
26	4		
		36	36
13	35		

FRONTAGE ROAD, RIGHT Sta. 264+00 to 268+50

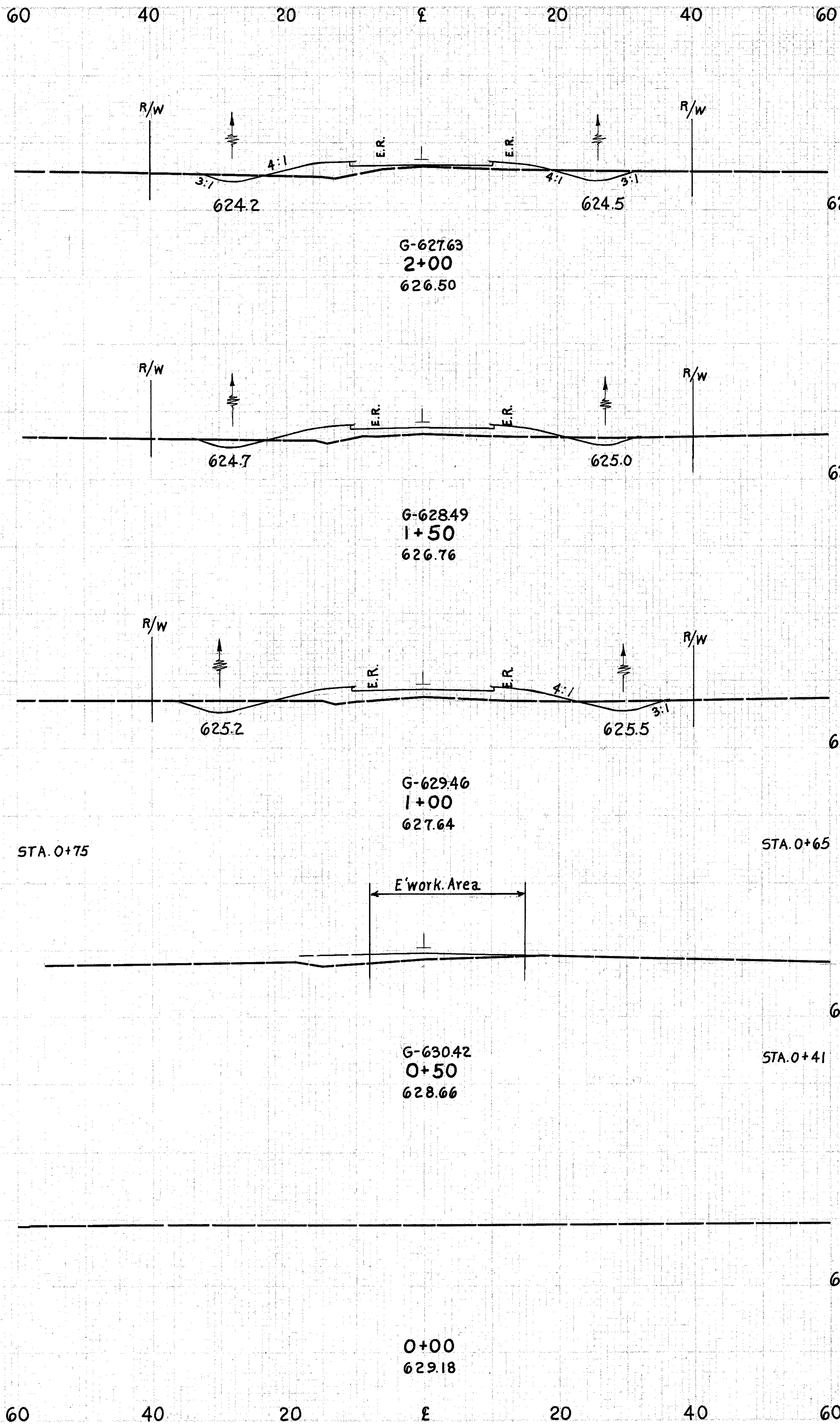
SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	559				
20		6	26		
	73			1	6
		6	26		
20					
		6	161		
	218			17	157
20		3	153		
	149			4	153
20		0	191		
	151				161
20		0	171		
	149			5	150
20		4	181		


60 40 20 ℄ 20 40 60
INSIDE CUL-DE-SAC
STA. 267+50
(Area as shown Right of ℄)
STA. 270+77
Area as shown for STA. 270+71
Use Full Area Back
Use Area Lt. Of Line Ahead
E'work Area To Lt. Only
AHEAD
BACK
R/W
3/4"/Ft.
617.5
G-620.05
270+71
618.6
610
R/W
E'work. Area To Lt. Only
617.2
G-619.72
270+00
618.0
610
R/W
E'work. Area To Lt. Only
G-619.53
269+50
617.0
610
E'work. Area To Lt. Only
R/W
3/4"/Ft.
G-619.58
269+00
617.3
610
STA. 268+50
STA. 268+50
60 40 20 ℄ 20 40 60

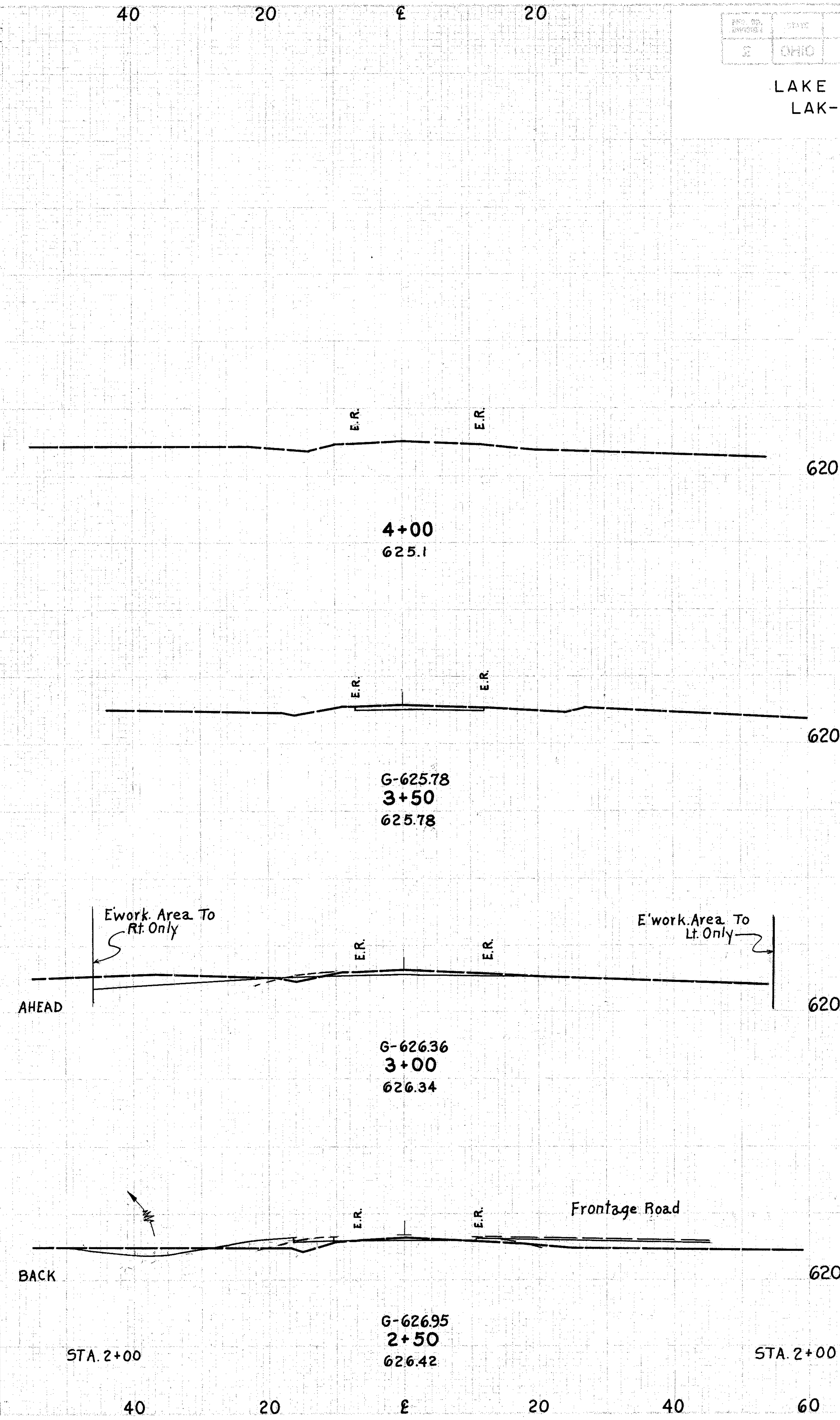
FRONTAGE ROAD, RIGHT STA. 269+00 to 270+71

LAKE COUNTY
LAK-44-7.22

SEEDING END WIDTH	SEEDING SQ. YDS.
63	
	353
64	
	378
72	
	200
72	



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL	SEEDING END WIDTH	SEEDING SQ. YDS.
13	42				
		21	91		
10	56				
		30	107		
22	60			20	
		29	68		
22	45				
					194
			17		
	16				
				50	
			3		
	0				
				78	
					392
				63	



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
10	0		
		54	2
48	2		
		63	27
20	27		
		31	64
13	42		

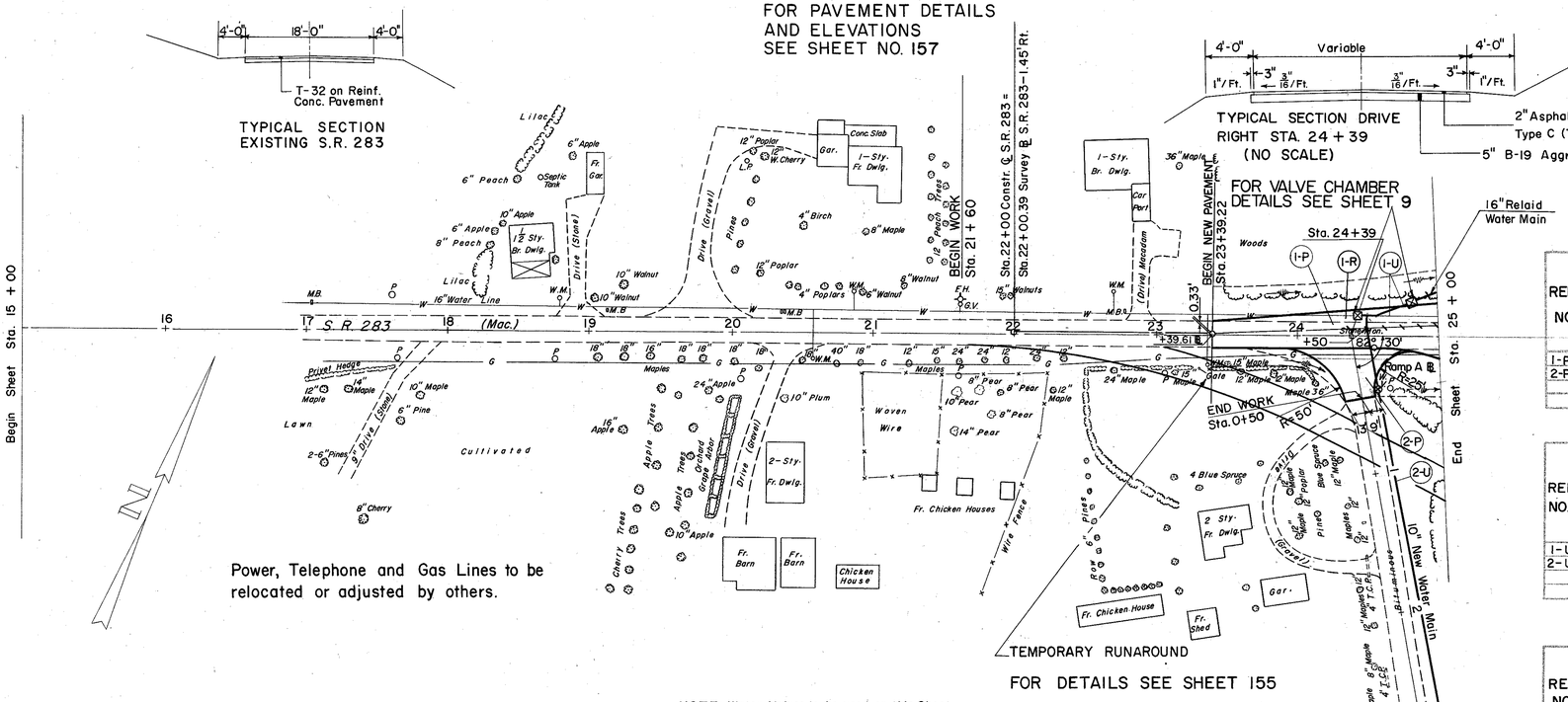
RECONSTRUCTION BLACKBROOK ROAD Sta. 0+00 to 4+00

DIST. NO.	STATE	PROJECT		
2	OHIO			

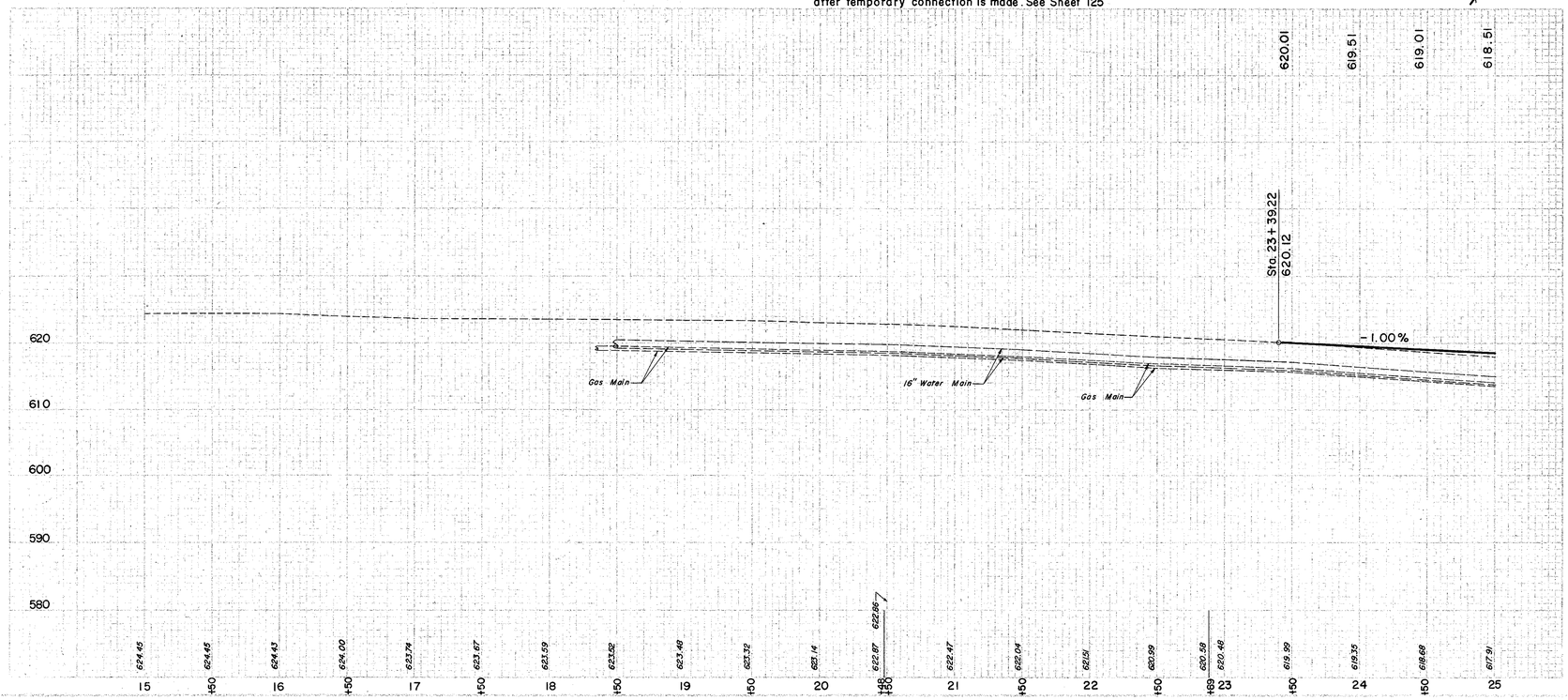
124
212

LAKE COUNTY
LAK-44-7.22

FOR PAVEMENT DETAILS
AND ELEVATIONS
SEE SHEET NO. 157



NOTE: Water Valves to be used on this Sheet Shall be removed from existing S.R. 283 & Heisley Road intersection after temporary connection is made. See Sheet 125



(P) PAVEMENT

REF. NO.	STATION FROM	STATION TO	SIDE	B-19 AGGR. BASE COURSE	B-35 ASPH. CONC. LEVEL. COURSE 1¾"	B-35 ASPH. CONC. BASE COURSE 2¾"	I-9 STONE U-DRAIN NO. 2	I-18 STAB. CRUSH. AGGR.	I-22 SUB-BASE	T-30 BIT. PRIME COAT	T-35 ASPH. CONC. SURF. COURSE 1¼"	T-35 ASPH. CONC. SURF. COURSE 2"
				C.Y.	C.Y.	C.Y.	L.F.	C.Y.	C.Y.	Gal.	C.Y.	C.Y.
1-P	23+39.22	25+00	–	103	22	35	70	15	67	179	15	
2-P	24+39		Rt.	21								9
	TOTAL			124	22	35	70	15	67	179	15	9

(U) UTILITIES

REF. NO.	STATION FROM	STATION TO	SIDE	I-124.03 10" NEW WATER MAIN	I-124.03 CAST IRON FITTINGS 10" 1/32 BEND	I-124.03 CAST IRON FITTINGS 16"X16"X10" TEE	I-124.03 CAST IRON FITTINGS 16" 1/16 BEND	I-124.04 10" WATER MAIN REMOVED & RELAYED	I-124.04 16" WATER MAIN REMOVED & RELAYED	I-8 SPECIAL VALVE CHAMBER
				L.F.	Ea.	Ea.	Ea.	L.F.	L.F.	Ea.
1-U	24+45	25+00	Lt.			1	1		52	2
2-U	24+50			265	1			10		

(R) ROADWAY

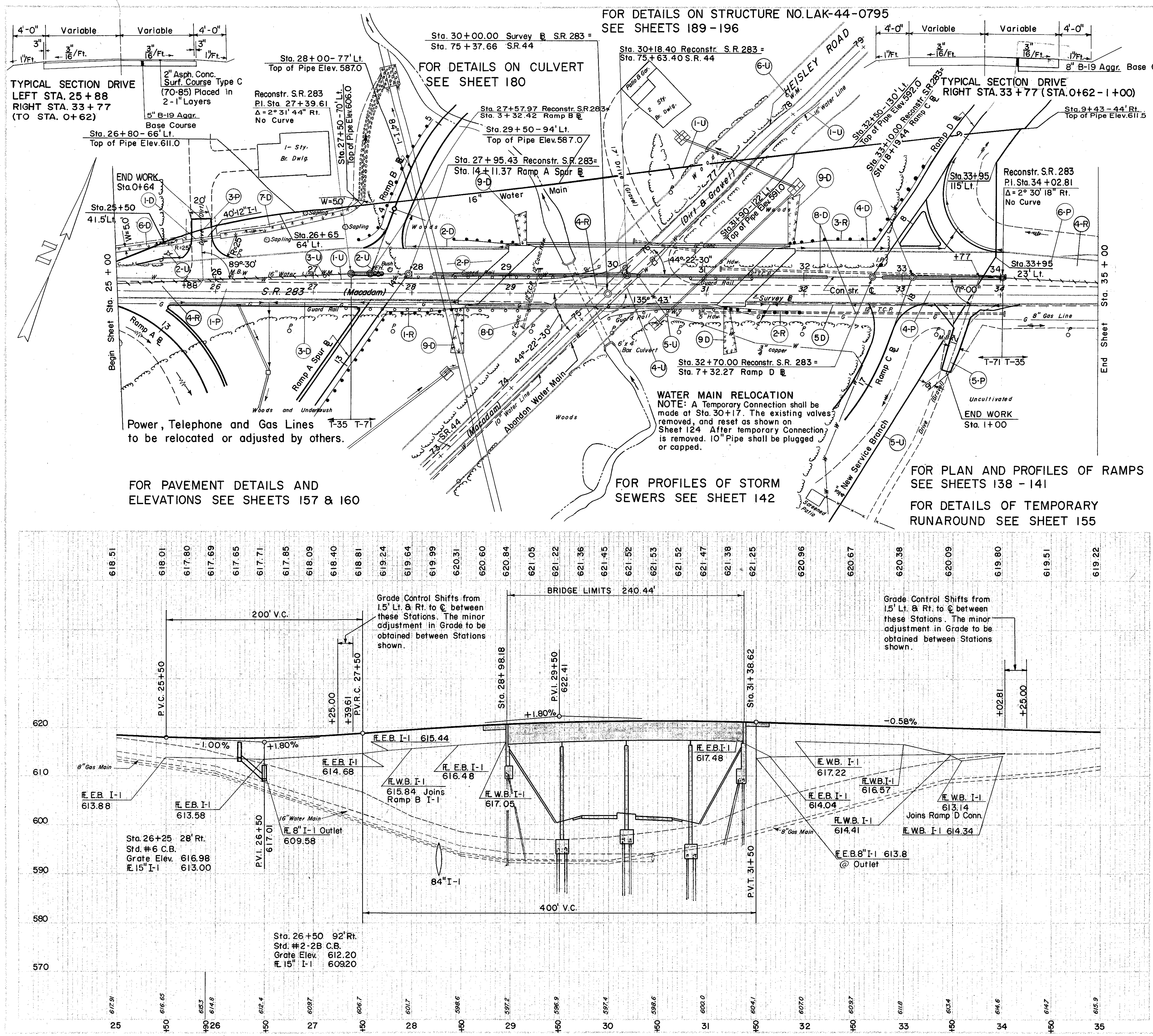
REF. NO.	STATION FROM	STATION TO	SIDE	E-8 PAVT. REMOVAL
				S.Y.
1-R	23+39.22	25+00	–	322

EXCAVATION	=	317 C.Y.
EMBANKMENT	=	42 C.Y.
EMBANKMENT 20	=	50 C.Y.

RECONSTR. S.R. 283 STA. 15 +00 TO STA. 25 + 00

REG. NO. DIVISION	STATE	PROJECT	
2	OHIO		

LAKE COUNTY
LAK-44-7.22



(D) DRAINAGE

REF. NO.	STATION FROM	STATION TO	SIDE	I-1 12" PIPE CLASS C-1 M-6-4(c) L.F.	I-1 6" PIPE CLASS I-3 DEEP L.F.	I-1 6" PIPE CLASS I-3 SHALLOW L.F.	I-1 8" PIPE CLASS F-1 L.F.	I-5 6" TEE EA.	I-5 6" 60° WYE EA.	I-5 6"-60° BEND EA.	L-10 SODDING S.Y.	L-10 SOD FOR SPECIAL BERM & SLOPE PROTECT S.Y.	E-12 PIPE REMOVED 15" & UNDER L.F.
1-D	25+68	26+06	Lt.	40									
2-D	27+94	28+98	Lt.			104		1					
3-D	25+50	28+46	Rt.			296	70	1					
4-D	31+90	34+00	Lt.		124	110				1			
5-D	31+40	34+00	Rt.		280		10		1				
6-D	25+00	25+68	Lt.								40		
7-D	26+06	27+50	Lt.								86		
8-D	29+30	34+05	—										670
9-D	28+50	31+80	—									230	
TOTAL				40	404	510	80	2	1	1	126	230	670

(P) PAVEMENT

REF. NO.	STATION FROM	STATION TO	SIDE	B-19 AGGR. BASE COURSE C.Y.	B-35 ASPH. CONC. LEVEL COURSE 1¾" C.Y.	B-35 ASPH. CONC. BASE COURSE 2¾" C.Y.	B-21 WATER-PROOFED AGGR. BASE COURSE C.Y.	I-7 REINF. CONC. APPR. SLAB 13" S.Y.	I-9 STONE U-DRAIN NO. 2 L.F.	I-12 CONC. CURB TYPE 6 L.F.	I-12 CONC. CURB TYPE 2-A L.F.
1-P	25 + 00	27+39.61	—	255	55	88	8		70	143	
2-P	27+39.61	28+98.18	—					170			177
3-P	DRIVE	25 + 88	Lt.	18							
4-P	31+38.62	34+02.81	—					170			373
5-P	DRIVE	33 + 77	Rt.	27							
6-P	34+02.81	35+00	—	120	26	41			70		
TOTAL				420	81	129	8	340	140	143	550

REF. NO.	I-18 STAB. CRUSHED AGGR. C.Y.	I-21 PORT. CEM. CONC. MEDIAN TYPE I S.Y.	I-22 SUBBASE C.Y.	I-23 PRECAST CONC. TRAFFIC DIVIDERS EA.	T-30 BIT. PRIME COAT Gal.	T-31 BIT. MAT'L. Gal.	T-31 #6 AGGR. C.Y.	T-35 ASPH. CONC. SURFACE COURSE 1¼" C.Y.	T-35 ASPH. CONC. SURFACE COURSE 2" C.Y.	T-71 REINF. PORT. CEM. CONC. PAVT. 9" S.Y.
1-P	25		209	26	452.6	25	0.8	39		
2-P	11	18.7	148							768
3-P									9	
4-P	41	40.3	265							1367
5-P					210.4				6	
6-P	12		76	8				19		
TOTAL	89	59.0	698	34	663	25	0.8	58	15	2135

(U) UTILITIES

REF. NO.	STATION FROM	STATION TO	SIDE	I-124.03 16" NEW WATER MAIN L.F.	I-124.03 CAST IRON FITTINGS 10" PLUG OR CAP Ea.	I-124.03 CAST IRON FITTINGS 16" 1/16 BEND Ea.	I-124.04 16" WATER MAIN REMOVED & RELAID L.F.	I-124.06 FIRE HYDRANTS REMOVED & RESET Ea.	I-124.07 ¾" NEW SERVICE BRANCHES Ea.	I-124.08 SERVICE STOPS & BOXES REMOVED & RESET Ea.	I-124.08 SERVICE STOPS & BOXES REMOVED Ea.	I-124.11 WATER METERS & BOXES REMOVED & RESET Ea.	I-124.11 WATER METERS & BOXES REMOVED Ea.
1-U	25+00	9+43 Ramp "D"	Lt.	417		2							
2-U	25+55		Lt.				515	1					
3-U	27+12									1		1	
4-U	30+17				1								
5-U	33+81								456	1		1	
6-U	78+12 S.R. 44		Lt.								1		1

(R) ROADWAY

REF. NO.	STATION FROM	STATION TO	SIDE	I-15 GUARD RAIL STEEL BEAM STD. TYPE (DEEP) L.F.	E-8 PAVT. REMOVAL S.Y.
1-R	27+78	28+53	Rt.	75.0	
2-R	31+19	31+94	Rt.	75.0	
3-R	31+83	32+70.5	Lt.	87.5	
4-R	25+00	35+00	—		2177.6
TOTAL				237.5	2177.6

EXCAVATION	1,639	C.Y.
EMBANKMENT	19,977	C.Y.
EMBANKMENT 20	23,973	C.Y.

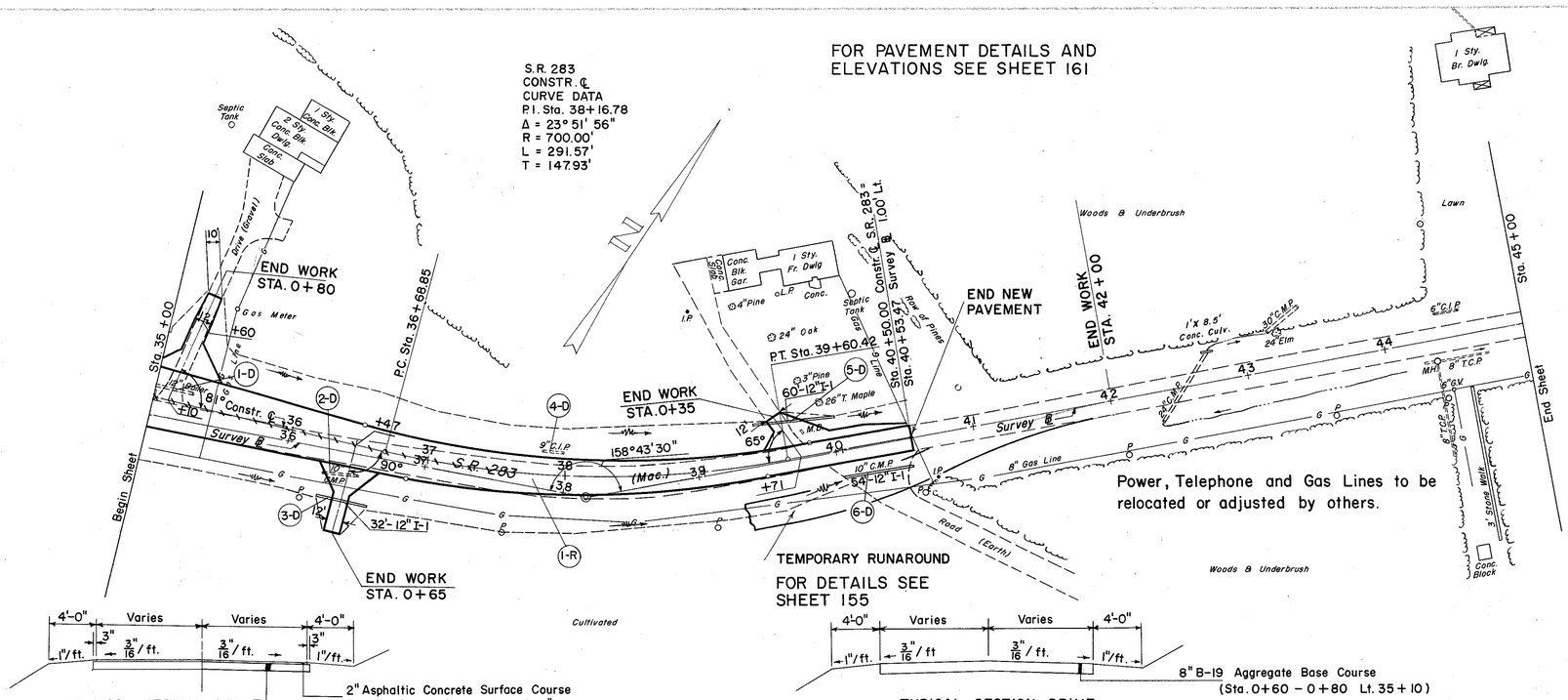
RECONSTR. S.R. 283 STA. 25 +00 TO STA. 35 +00

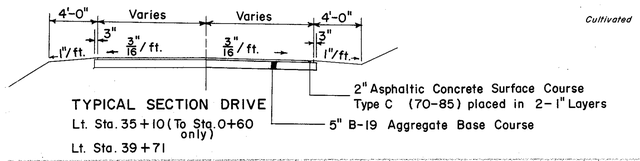
FED. RD. DIVISION	STATE	PROJECT		
2	OHIO			

126
212

LAKE COUNTY

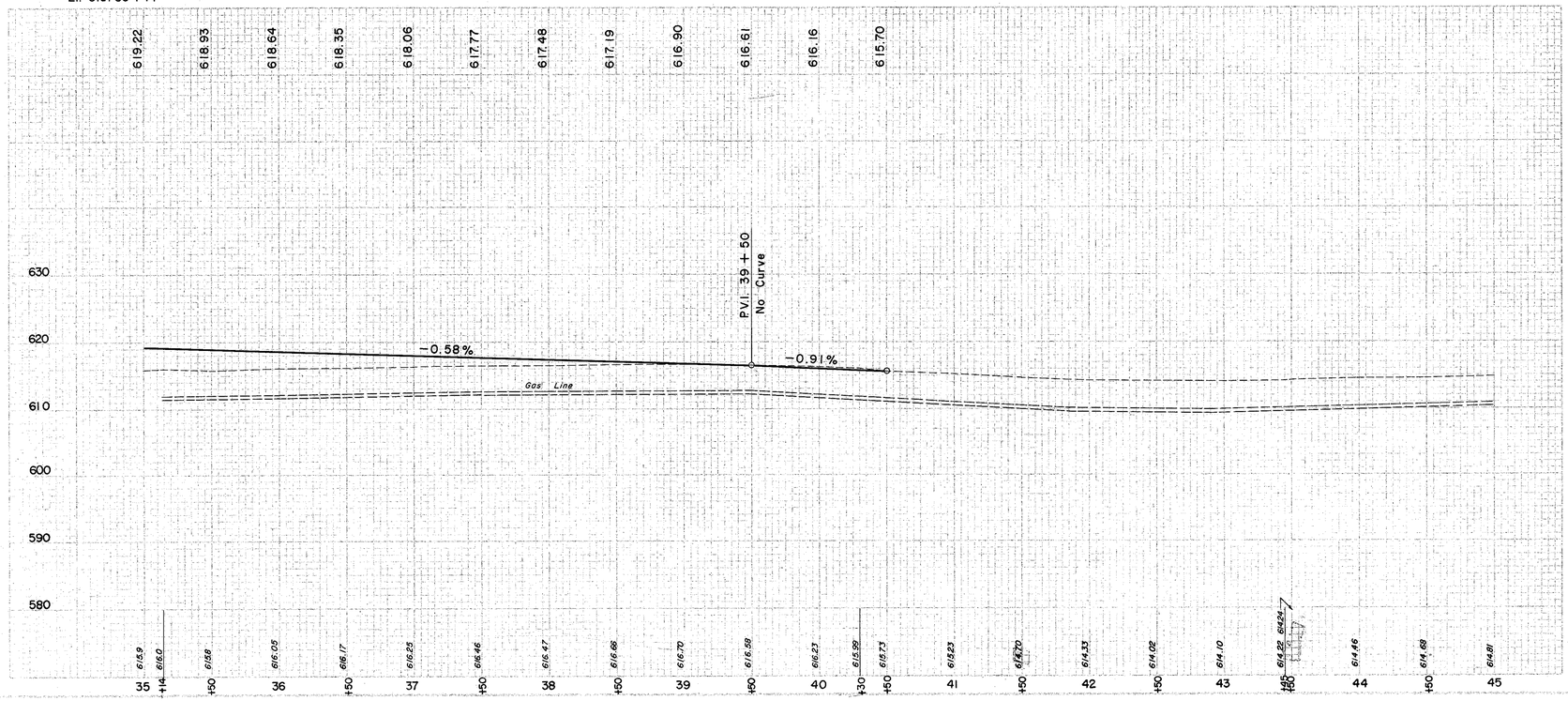
LAK-44-7.22





TYPICAL SECTION DRIVE
Lt. Sta. 35+10 (To Sta. 0+60 only)
Lt. Sta. 39+71

TYPICAL SECTION DRIVE
Lt. Sta. 35+10 0+60-0+80
Rt. Sta. 36+47



(D) DRAINAGE

REF. NO.	STATION FROM	STATION TO	SIDE	E-12 PIPE REMOVED 15" & UNDER	I-1 12" PIPE CLASS C-1 M-6.4(c)
				L.F.	
1-D	34+98	35+28	LT.	30	
2-D	36+28	36+55	RT.	27	
3-D	36+28	36+65	RT.		32
4-D	37+84	37+99	LT.	15	
5-D	39+40	40+00	LT.		60
6-D	39+97	40+51	RT.	54	54
TOTAL				126	146

(P) PAVEMENT

REF. NO.	STATION FROM	STATION TO	SIDE	B-19 AGGR. BASE COURSE	B-35 ASPH. CONC. LEVELING COURSE 1¾	B-35 ASPH. CONC. BASE COURSE 2¾	I-9 STONE UNDER-DRAIN NO. 2	I-18 STAB. CRUSHED AGGR.	I-22 SUBBASE	I-30 BIT. PRIME COAT	T-35 ASPH. CONC. SURF. COURSE 1¼	T-35 ASPH. CONC. SURF. COURSE 2"	I-23 PRECAST CONC. TRAFFIC DIVIDERS
				C.Y.	C.Y.	C.Y.	L.F.	C.Y.	C.Y.	GAL.	C.Y.	C.Y.	EA.
1-P	35+00	40+50	—	382	81	129	168	54	247	662	58		22
2-P	Drive-35	+10	LT.	21									
3-P	Drive-36	+47	RT.	13								6	
4-P	Drive-39	+71	LT.	15								6	
TOTAL				431	81	129	168	54	247	662	58	12	22

(R) ROADWAY

REF. NO.	STATION FROM	STATION TO	SIDE	E-8 PAVT. REMOVAL
				S.Y.
1-R	35+00	40+50	—	830

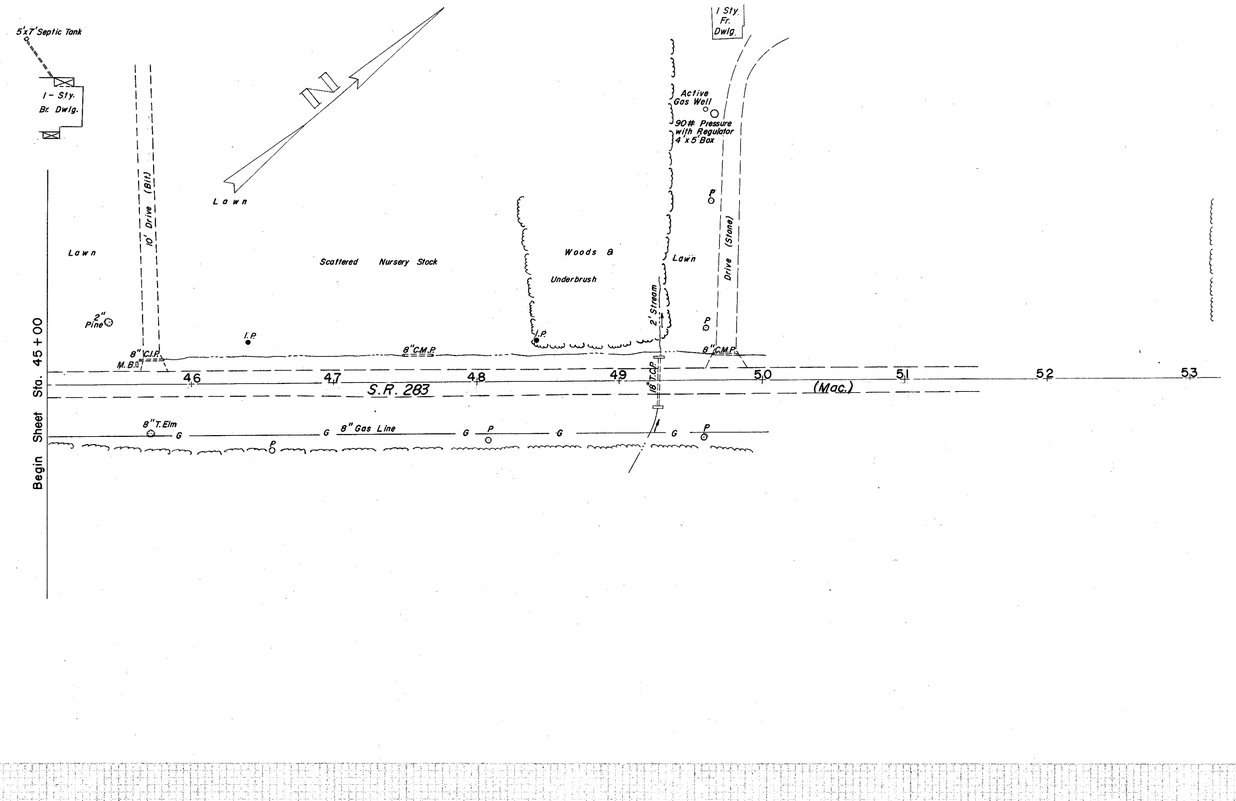
EXCAVATION	=	346 C.Y.
EMBANKMENT	=	1,492 C.Y.
EMBANKMENT 20	=	1,790 C.Y.

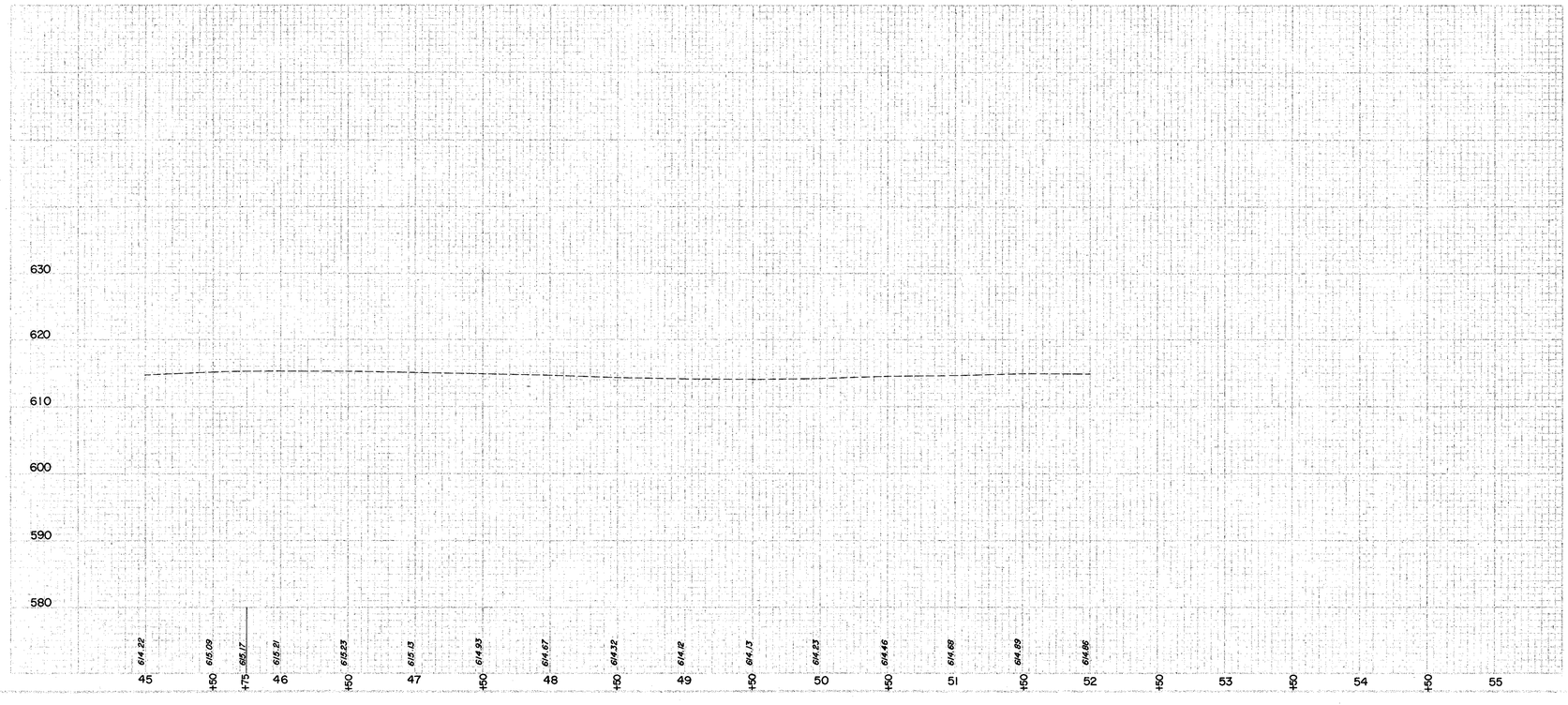
RECONSTR. S.R. 283 STA. 35+00 TO STA. 45+00

FED. RD. DIVISION	STATE	PROJECT		127
2	OHIO			212

LAKE COUNTY

LAK-44-7.22





EXCAVATION	=	0 C.Y.
EMBANKMENT	=	0 C.Y.
EMBANKMENT + %	=	0 C.Y.

RECONSTR. S.R. 283 STA. 45 + 00 TO STA. 55 + 00

SEEDING	
END WIDTH	SQ. YDS.
45	27
0	

END AREA		VOLUME	
CUT	FILL	CUT	FILL
59	0		
		16	
23			

FED. ROAD DESIGNATION	STATE	PROJECT
2	OHIO	

128
212

LAKE COUNTY
LAK-44-7.22

140 120 100 80 60 40 20 Constr. ℄ 20 40 60 80 100 120 140

Fl. Elev. Dwlg.

Survey ℄ R/W R/W E.P. E.P.

620

G-620.01
23+50
619.99

Limit Of Work
Sta. 23+39.22

STA. 23+39.22 STA. 23+39.22

Survey ℄ E.P. E.P.

620

23+00
620.48

Survey ℄ E.P.

620

Profile Drive Left

22+89
620.58

Survey ℄ E.P. E.P.

620

22+50
620.99

Survey ℄ E.P. E.P.

610

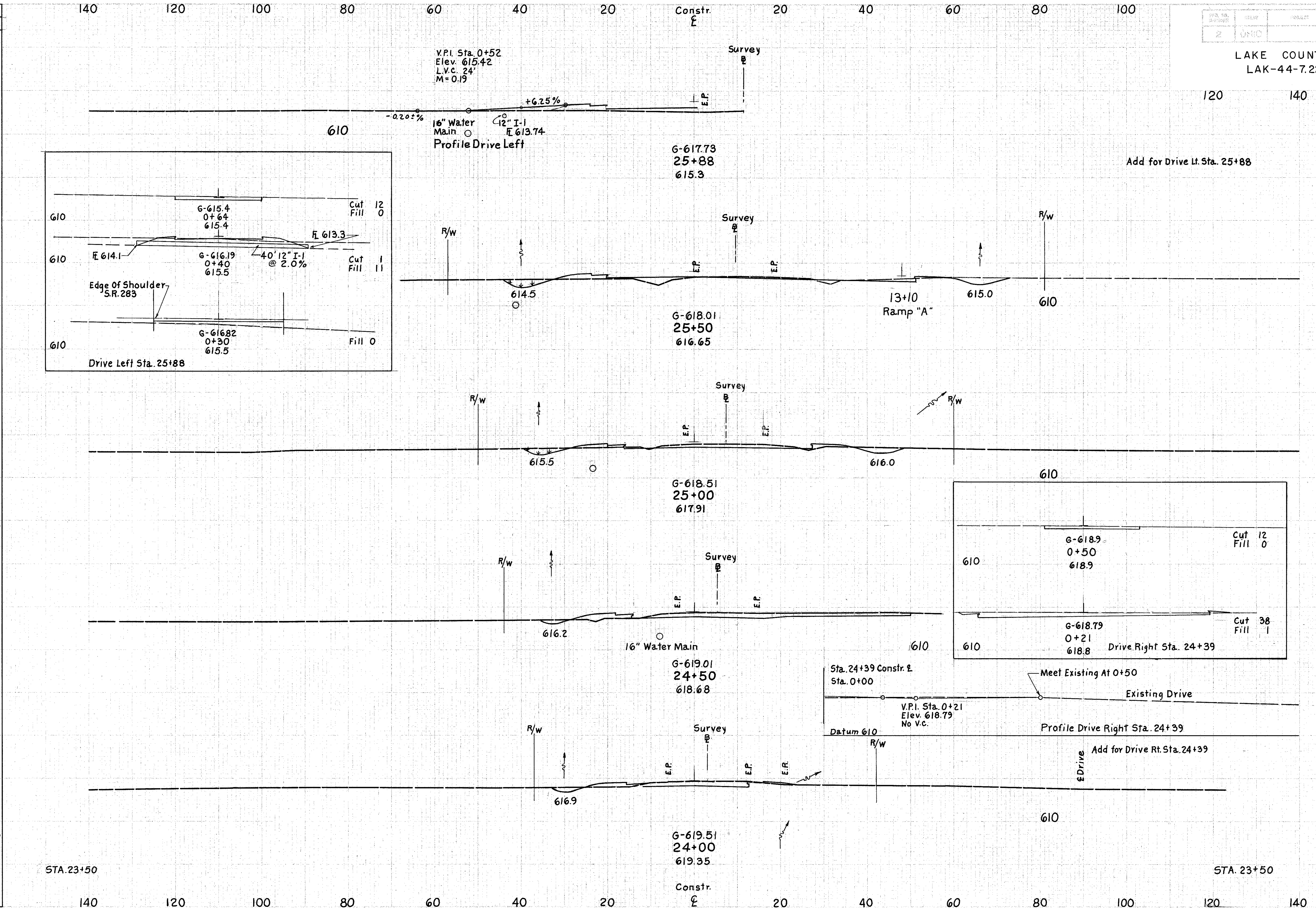
22+00
621.51
Constr. ℄

140 120 100 80 60 40 20 20 40 60 80 100 120 140

RECONSTR. S.R. 283 Sta. 22+00 to 23+50

LAKE COUNTY
LAK-44-7.22

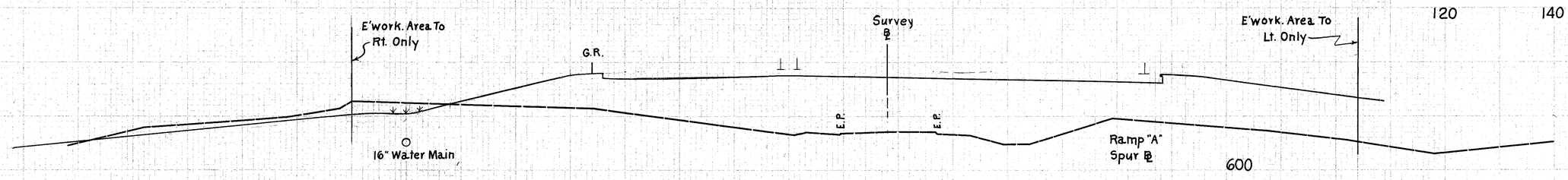
SEEDING END WIDTH	SEEDING SQ. YDS.
62	
	342
61	
	242
26	
	181
39	
	233
45	


V.P.I. Sta. 0+52
Elev. 615.42
L.V.C. 24'
M= 0.19
+6.25%
-0.20±%
16" Water Main
12" I-1
FL 613.74
610
Profile Drive Left
Survey
E.P.
G-617.73
25+88
615.3
Add for Drive Lt. Sta. 25+88
G-615.4
0+64
615.4
Cut 12
Fill 0
FL 613.3
FL 614.1
G-616.19
0+40
615.5
40' 12" I-1 @ 2.0%
Cut 1
Fill 11
Edge Of Shoulder S.R. 283
G-616.82
0+30
615.5
Fill 0
Drive Left Sta. 25+88
R/W
614.5
13+10
Ramp "A"
615.0
G-618.01
25+50
616.65
615.5
616.0
G-618.51
25+00
617.91
G-618.9
0+50
618.9
G-618.79
0+21
618.8
Cut 38
Fill 1
Drive Right Sta. 24+39
616.2
16" Water Main
G-619.01
24+50
618.68
Sta. 24+39 Constr. ℄
Sta. 0+00
Meet Existing At 0+50
Existing Drive
V.P.I. Sta. 0+21
Elev. 618.79
No V.C.
Datum 610
Profile Drive Right Sta. 24+39
Add for Drive Rt. Sta. 24+39
℄ Drive
616.9
G-619.51
24+00
619.35
STA. 23+50
Constr. ℄
140 120 100 80 60 40 20 20 40 60 80 100 120 140

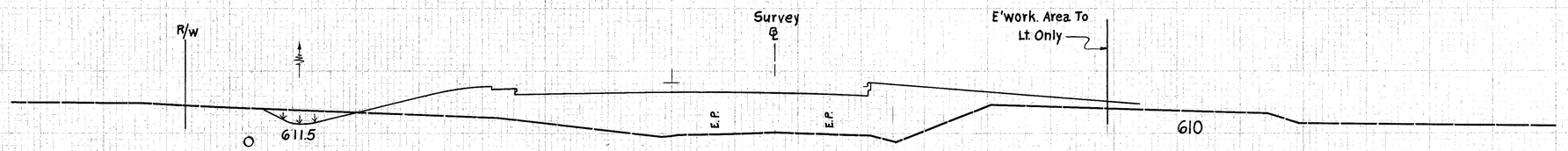
END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		6	7
29	27		
		69	34
45	10		
		101	19
64	10		
		89	16
		27	1
32	7		
		84	6
59	0		

SEEDING	
END WIDTH	SQ. YDS.
83	467
85	542
110	467
58	506
120	
62	

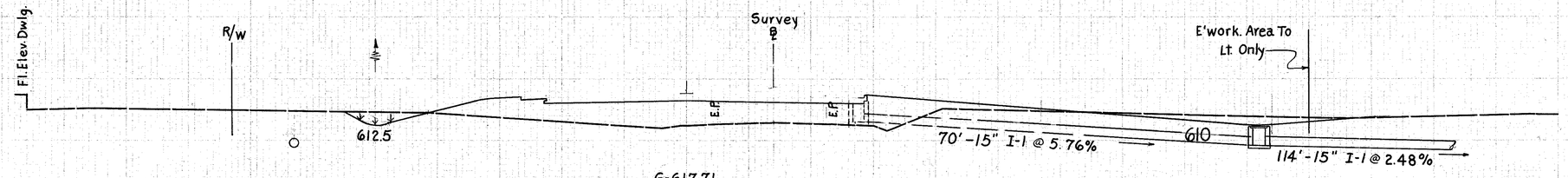
140 120 100 80 60 40 20 Constr. ℄ 20 40 60 80 100



G-618.81
27+50
606.7



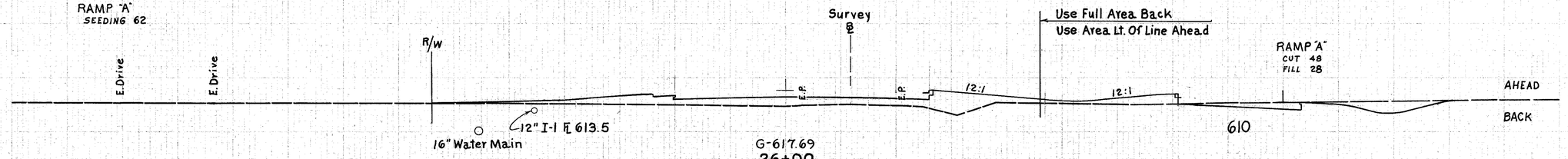
G-618.09
27+00
609.7



G-617.71
26+50
612.4

Sta. 26+25 28' Rt.
Std. #6 C.B.
Grate El. 616.98
℄ 15" I-1 613.00

Sta. 26+50 92' Rt.
Std. # 2-2-B C.B.
Grate El. 612.20
℄ 15" I-1 609.20



G-617.69
26+00
614.8

Constr. ℄

140 120 100 80 60 40 20 20 40 60 80 100 120 140

END AREA		VOLUME	
CUT	FILL	CUT	FILL
30	1377		
		47	1811
21	579		
46	290	62	805
		56	399
14	141		
48	169		
		71	181
29	27		

LAKE COUNTY
LAK-44-7.22

130
212

RECONSTR. S.R. 283 Sta. 26+00 to 27+50

SEEDING	
END WIDTH	SQ. YDS.
18	
	30
18	
142	
	33
	303
76	
	442
83	

END AREA		VOLUME	
CUT	FILL	CUT	FILL
	444		
			247
	444		
			2326
	2068		
			3714
	1943		
0		6	3074
30	1377		

140 120 100 80 60 40 20 Constr. ℄ 20 Survey ℄ 40 60 80 100 120 140

STA. 29+15

16" Water Main

Ramp "B"

Ramp "B" Slope

STA. 27+50

16" Water Main

STA. 27+60

E'work. Area To Rt. Only

E'work. Area To Lt. Only

G.R.

E.P.

2:1

4:1

Structure

590

600

G-621.22
29+50
596.9

G-620.84
29+00
597.2

G-620.31
28+50
598.6

G-619.64
28+00
601.7

Survey ℄

Constr. ℄

LAKE COUNTY
LAK-44-7.22

131
212

RECONSTR. S.R. 283 Sta. 28+00 to 29+50

FED. ROAD NUMBER	STATE	PROJECT	
2	OHIO		

132
212

LAKE COUNTY
LAK-44-7.22

SEEDING	
END WIDTH	SQ. YDS.
62	

END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	354		

140 120 100 80 60 40 20 Constr. ℄ 20 Survey ℄ 40 60 80 100 120 140

E'work. Area To Rt. Only

E'work. Area To Lt. Only

Structure

E.R. E.R. E.P. E.P.

600

16" Water Main

G-621.47
31+00
600.0

Structure

E.P. E.P.

600

G-621.53
30+50
598.6

Structure

E.P. E.R. E.P. T.Rdwl.

600

16" Water Main

G-621.45
30+00
597.4

Survey ℄ Constr. ℄

140 120 100 80 60 40 20 20 40 60 80 100 120 140

RECONSTR. S.R. 283 Sta. 30+00 to 31+00

SEEDING	
END WIDTH	SQ. YDS.
63	
23	
	311
89	
	494
89	
494	
89	
49	
	308
62	

140 120 100 80 60 40 20 Constr. ℄ 20 Survey ℄ 40 60 80 100

FED. ROAD DIVISION	STATE	PROJECT	
2	OHIO		

133
212

LAKE COUNTY
LAK-44-7.22

E'work. Area To Rt. Only

Ramp "D"

Use Area Lt. Of Line Back
Use Full Area Ahead

120 R/W 140

AHEAD

BACK

E.P. E.P.

610

G-620.38
33+00
611.8

16" Water Main

STA. 32+90

E'work. Area To Rt. Only

G.R.

E'work. Area To Lt. Only

S.R. 44

E.P. E.P.

610

G-620.67
32+50
609.7

E'work. Area To Rt. Only

G.R.

E'work. Area To Lt. Only

S.R. 44

E.P. E.P.

600

G-620.96
32+00
607.0

E'work. Area To Rt. Only

STA. 31+50 AHEAD
USE AREA AS SHOWN FOR STA. 32+00

G.R.

E'work. Area To Lt. Only

AHEAD

E.R.

BACK

Structure

E.P. E.P.

600

G-621.25
31+50
604.1

STA. 31+00

16" Water Main

STA. 31+00

Survey ℄

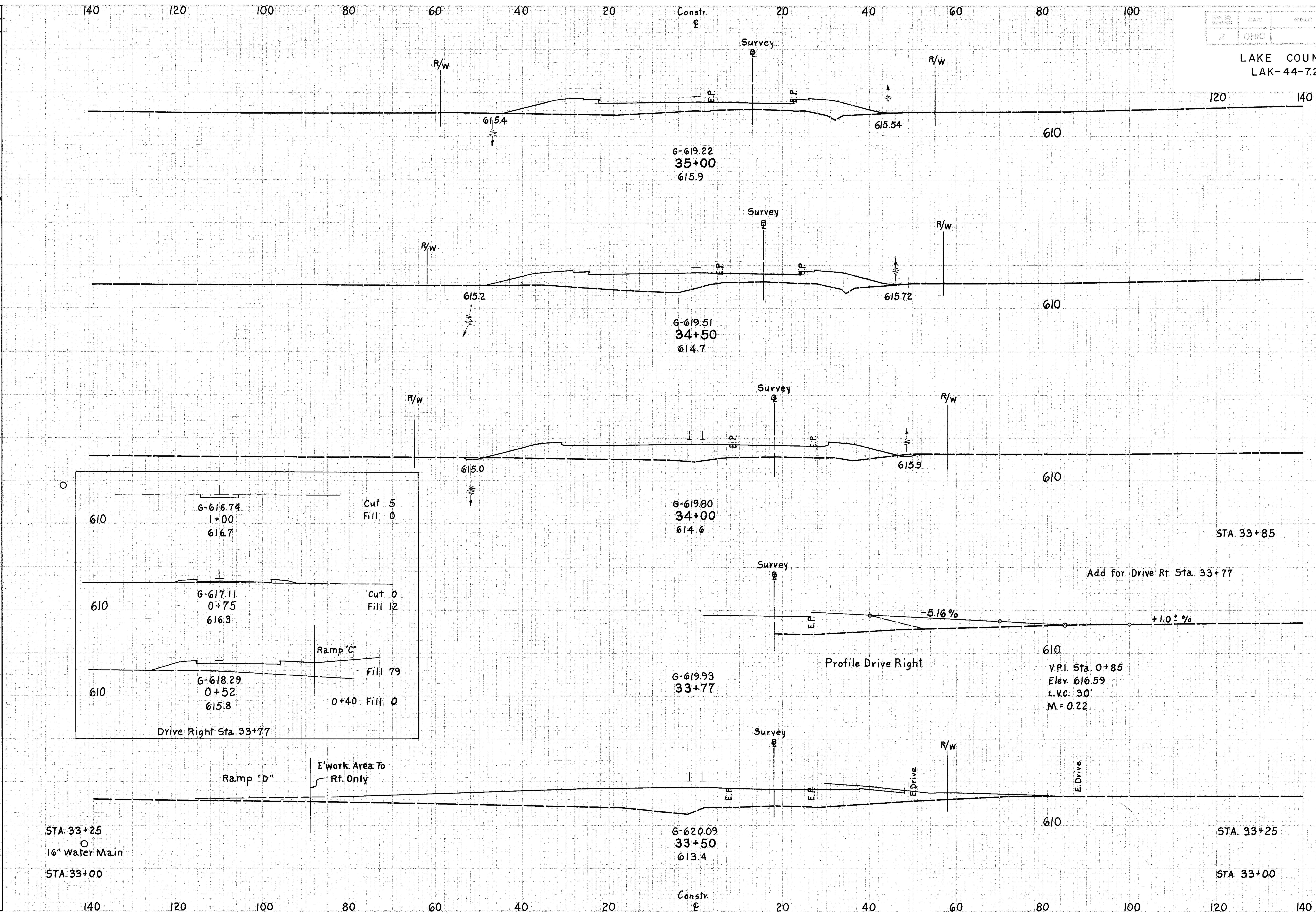
Constr. ℄

140 120 100 80 60 40 20 20 40 60 80 100 120 140

END AREA		VOLUME	
CUT	FILL	CUT	FILL
	694		
	663		
			1176
0			
		185	
250	607		
			1339
		501	
291	839		
		539	1554
291	839		
98	242		
		91	552
0	354		

RECONSTR. S.R. 283 Sta. 31+50 to 33+00

LAKE COUNTY
LAK-44-7.22


140 120 100 80 60 40 20 Constr. ℄ 20 40 60 80 100 120 140
Survey ℄
R/W
E.P.
615.4
615.54
610
G-619.22
35+00
615.9
615.2
615.72
G-619.51
34+50
614.7
615.0
615.9
G-619.80
34+00
614.6
G-616.74
1+00
616.7
Cut 5
Fill 0
G-617.11
0+75
616.3
Cut 0
Fill 12
Ramp "C"
Fill 79
G-618.29
0+52
615.8
0+40 Fill 0
Drive Right Sta. 33+77
STA. 33+85
Add for Drive Rt. Sta. 33+77
-5.16 %
+1.0± %
Profile Drive Right
V.P.I. Sta. 0+85
Elev. 616.59
L.V.C. 30'
M = 0.22
G-619.93
33+77
Ramp "D"
E'work. Area To Rt. Only
E.Drive
G-620.09
33+50
613.4
STA. 33+25
16" Water Main
STA. 33+00

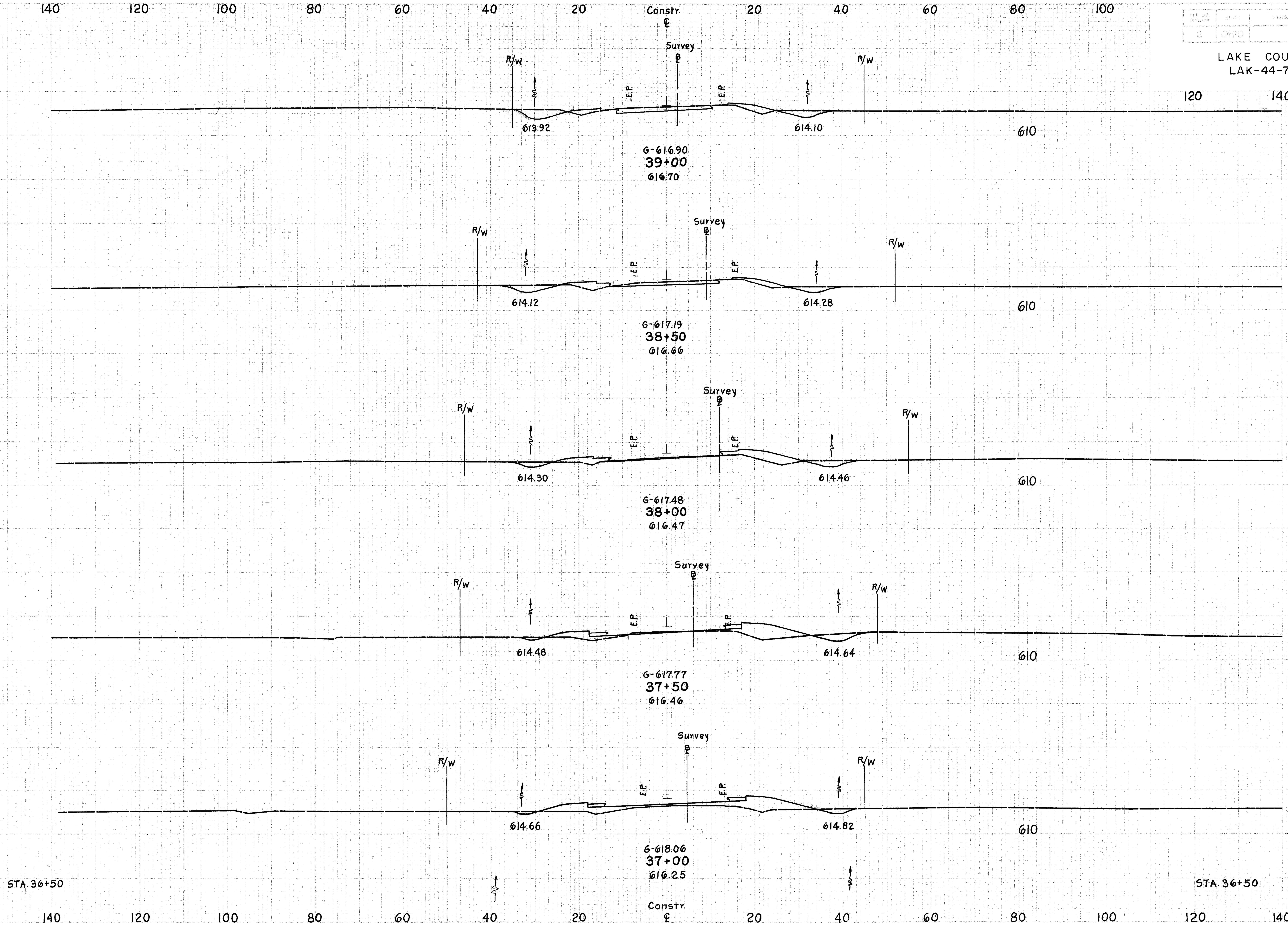
SEEDING

Station	End Width	Sq. Yds.
35+00	58	
		328
34+50	60	
		342
34+00	63	
		267
33+50	33	
		113
33+25	48	
		154
33+00	63	

Station	End Area Cut	End Area Fill	Volume Cut	Volume Fill
35+00		191		
				428
34+50	0	271		
			2	503
34+00	2	272		
			1	
33+85	0			
			3	62
				720
33+50		506		
				479
33+25		528		
				566
33+00		694		


SEEDING
END WIDTH
SQ. YDS.
END AREA
CUT
FILL
VOLUME
CUT
FILL
Constr. ℄
Survey ℄
R/W
E.P.
614.84
12" I-1
FL 615.0
610
G-618.35
36+50
616.17
1
161
Add for Drive Rt. Sta. 36+47
3
18
V.P.I. Sta. 0+65
Elev. 616.0
L.V.C. None
-6.25%
12" I-1 FL 615.01
Profile Drive Right
G-618.37
36+47
311
282
G-616.0
0+65
616.0
Cut 8
Fill 0
FL 614.96
FL 615.07
32'-12" I-1
@ 0.36%
G-617.38
0+43
616.0
Cut 0
Fill 20
Slope S.R. 283
G-617.69
0+37
616.0
Fill 30
0+29 Fill 0
Drive Right Sta. 36+47
615.02
615.18
54
144
G-618.64
36+00
616.05
294
298
615.2
615.36
52
178
Add for Drive Lt. Sta. 35+10
3
28
G-618.93
35+50
615.8
G-615.76
0+80
615.8
Cut 7
Fill 0
G-616.39
0+60
615.8
Cut 0
Fill 8
S.R. 283
G-617.51
0+42
616.0
Fill 42
0+32 Fill 0
Drive Left Sta. 35+10
306
342
0.00%
+6.25%
Profile Drive Left
V.P.I. Sta. 0+70
Elev. 615.76
L.V.C. 20'
M = 0.16
G-619.16
35+10
616.0
58
STA. 35+00
191
140 120 100 80 60 40 20 20 40 60 80 100 120 140

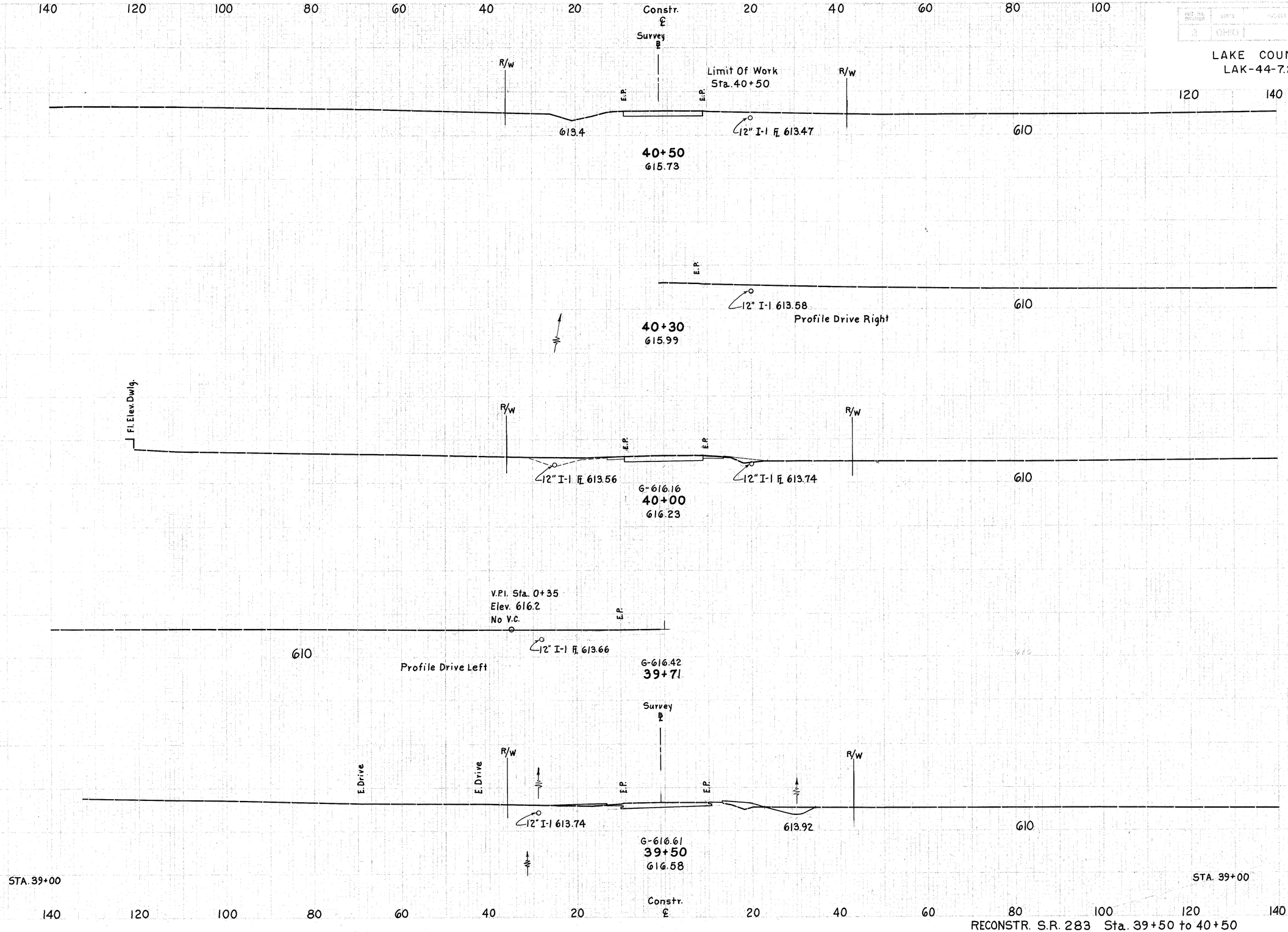
LAKE COUNTY
LAK-44-7.22



SEEDING END WIDTH	SEEDING SQ. YDS.
53	
	314
60	
	342
63	
	325
54	
	297
53	
	308
58	

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
50	16		
		81	31
37	18		
		47	46
14	32		
		24	76
12	50		
		17	117
6	76		
		6	219
1	161		

SEEDING	
END WIDTH	SQ. YDS.
0	
	133
48	
	281
53	



END AREA		VOLUME	
CUT	FILL	CUT	FILL
22			
		41	
22	0		
		49	10
31	11		
		75	25
50	16		

137
212

LAKE COUNTY
LAK-44-7.22

RECONSTR. S.R. 283 Sta. 39+50 to 40+50

DES. ORGANIZATION	STATE	PROJECT	
2	OHIO		

138
212

LAKE COUNTY
LAK-44-7.22

RAMP A
CURVE DATA
P.I. Sta. 7+13.80
Δ = 10° 31' 21" Lt.
D = 2° 00'
R = 2864.79
L = 526.12'
T = 263.80'

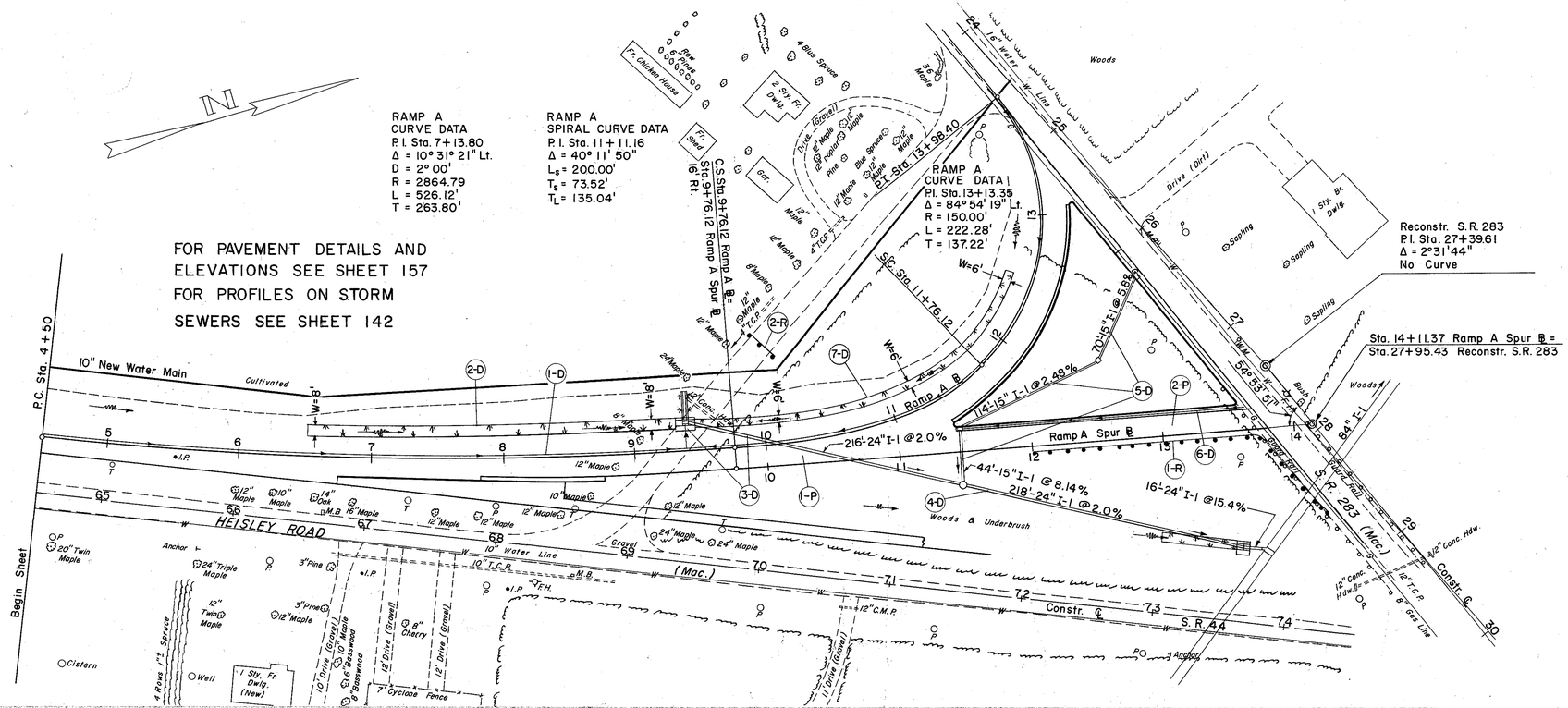
RAMP A
SPIRAL CURVE DATA
P.I. Sta. 11+11.16
Δ = 40° 11' 50"
L_S = 200.00'
T_S = 73.52'
T_L = 135.04'

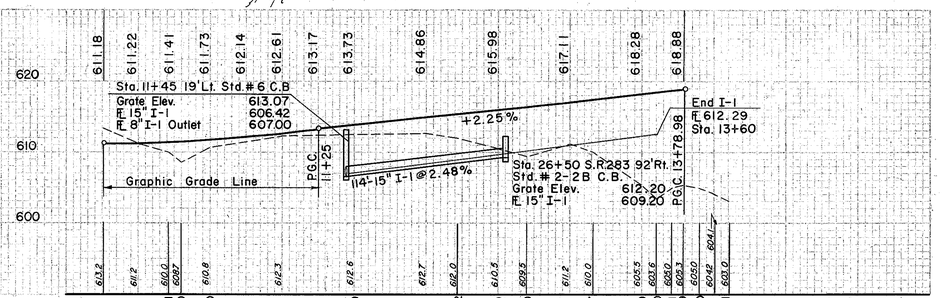
RAMP A
CURVE DATA
P.I. Sta. 13+13.35
Δ = 84° 54' 19" Lt.
R = 150.00'
L = 222.28'
T = 137.22'

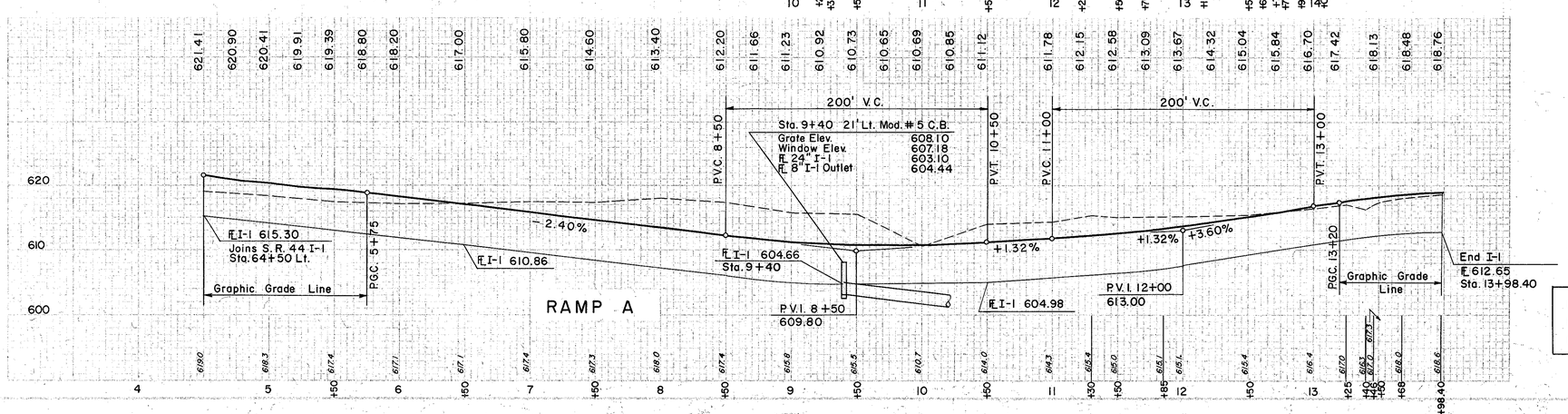
FOR PAVEMENT DETAILS AND ELEVATIONS SEE SHEET 157
FOR PROFILES ON STORM SEWERS SEE SHEET 142

Reconstr. S.R. 283
P.I. Sta. 27+39.61
Δ = 2° 31' 44"
No Curve

Sta. 14+11.37 Ramp A Spur B =
Sta. 27+95.43 Reconstr. S.R. 283







REF. NO.	STATION FROM	STATION TO	I-8 STD. #2-2B CATCH BASIN EA.	I-8 STD. #5 CATCH BASIN EA.	I-8 MOD. STD. #5 CATCH BASIN EA.	I-8 STD. #6 CATCH BASIN EA.	I-12 CONC. CURB SPECIAL L.F.	I-12 CONC. CURB TYPE 6 L.F.	I-18 STAB. CRUSH. AGGR. C.Y.	I-21 PORT. CEM. CONC. MEDIAN TYPE I S.Y.	I-22 SUB-BASE C.Y.	I-22 MANHOLE EA.	I-14 TYPE I PAVED GUTTER L.F.	I-14 SODDING S.Y.
1-D	4+50	13+98.40												
2-D	6+50	9+35												
3-D	9+40	11+25												
4-D	11+25	11+78												
5-D	11+78	12+58												
6-D	12+58	13+09												
7-D	13+09	12+50												
TOTAL			1	1	1	2	1	1	1	2	1	22	488	200

Ⓟ PAVEMENT

REF. NO.	STATION FROM	STATION TO	T-31 BIT. MAT'L. GAL	T-31 #6 AGGR. C.Y.	T-71 REINF. PORT. CEM. CONC. PAVT. 9" S.Y.
1-P	4+50	13+98.40	213	6.8	1816
2-P	11+25	13+98.40	38	1.2	408
TOTAL			251	8	2224

Ⓓ DRAINAGE

REF. NO.	STATION FROM	STATION TO	SIDE	I-1 24" PIPE CLASS B-1 L.F.	I-1 24" PIPE CLASS E-1 M-6.6(b)or M-6.8(b) L.F.	I-1 15" PIPE CLASS E-1 L.F.	I-1 15" PIPE CLASS B-1 L.F.	I-3 6" PIPE CLASS I-3 (DEEP) L.F.	I-5 8" PIPE CLASS F-1 L.F.	I-5 6" 90° TEE EA.	SIDE	B-21 WATER PROOFED AGGR. BASE COURSE C.Y.
1-P	4+50	13+98.40	LT.			184	44	206	10	1		
			LT.									
2-P	11+25	13+98.40	RT.									
			RT.									
TOTAL				216	234	184	44	206	10	1		

Ⓡ ROADWAY

REF. NO.	STATION FROM	STATION TO	SIDE	I-15 GUARD RAIL STEEL BEAM STD. TYPE (DEEP) L.F.
1-R	4+50	10+00	RT.	175
2-R	10+00	13+70	LT.	25
TOTAL				200

RAMP A

EXCAVATION	=	27 C.Y.
EMBANKMENT	=	856 C.Y.
EMBANKMENT +20 %	=	1,027 C.Y.

RAMP A SPUR

EXCAVATION		1,224 C.Y.
EMBANKMENT		143 C.Y.
EMBANKMENT +20 %		172 C.Y.

RAMP A & RAMP A SPUR S.R. 283 INTERCHANGE
STA. 4 + 50.00 TO STA. 13 + 98.40

LAKE COUNTY
LAK-44-7.22

FOR PROFILES OF STORM SEWERS SEE SHEET 142
FOR DETAILS OF CULVERT SEE SHEET 180

FOR PAVEMENT DETAILS AND ELEVATIONS SEE SHEETS 158

Ⓓ DRAINAGE

REF. NO.	STATION FROM	STATION TO	SIDE	I-1 33" PIPE CLASS B-1 M-6.6(d)	I-1 6" PIPE CLASS I-3 DEEP	I-1 6" PIPE CLASS I-3 SHALLOW	I-1 8" PIPE CLASS F-1	I-5 6" 60° BEND	I-5 6" 60° WYE	I-10 DUMPED ROCK CHANNEL PROTECT.	L-10 SODDING	I-2 MASONRY
				L.F.	L.F.	L.F.	L.F.	EA.	EA.	C.Y.	S.Y.	C.Y.
1-D	3+70	14+25	—		834	270	20	2	2			
2-D	5+80	—	—	264								0.55
3-D	6+50	7+50	LT.								68	
4-D	4+00	5+00	LT.							40		
5-D	11+32	12+50									79	
TOTAL				264	834	270	20	2	2	40	147	0.55

Ⓡ ROADWAY

REF. NO.	STATION FROM	STATION TO	SIDE	I-15 GUARD RAIL STEEL BEAM, STD. TYPE (DEEP)
				L.F.
1-R	S.R. 283 27+46	Ramp B 7+37.5	LT.	387.5

Ⓟ PAVEMENT

REF. NO.	STATION FROM	STATION TO	SIDE	B-21 WATER-PROOFED AGGR. BASE COURSE	I-12 CONC. CURB TYPE 6	I-18 STAB. CRUSHED AGGR.	I-21 PORT. CEM. CONC. MEDIAN TYPE I	I-22 SUB-BASE	T-31 BIT. MAT'L.	T-31 #6 AGGR.	T-71 REINF. PORT. CEM. CONC. PAVT. 9"
				C.Y.	L.F.	C.Y.	S.Y.	C.Y.	GAL.	C.Y.	S.Y.
1-P	3+32.42	14+25	—	60	206	107	30.2	511	181	5.8	2130

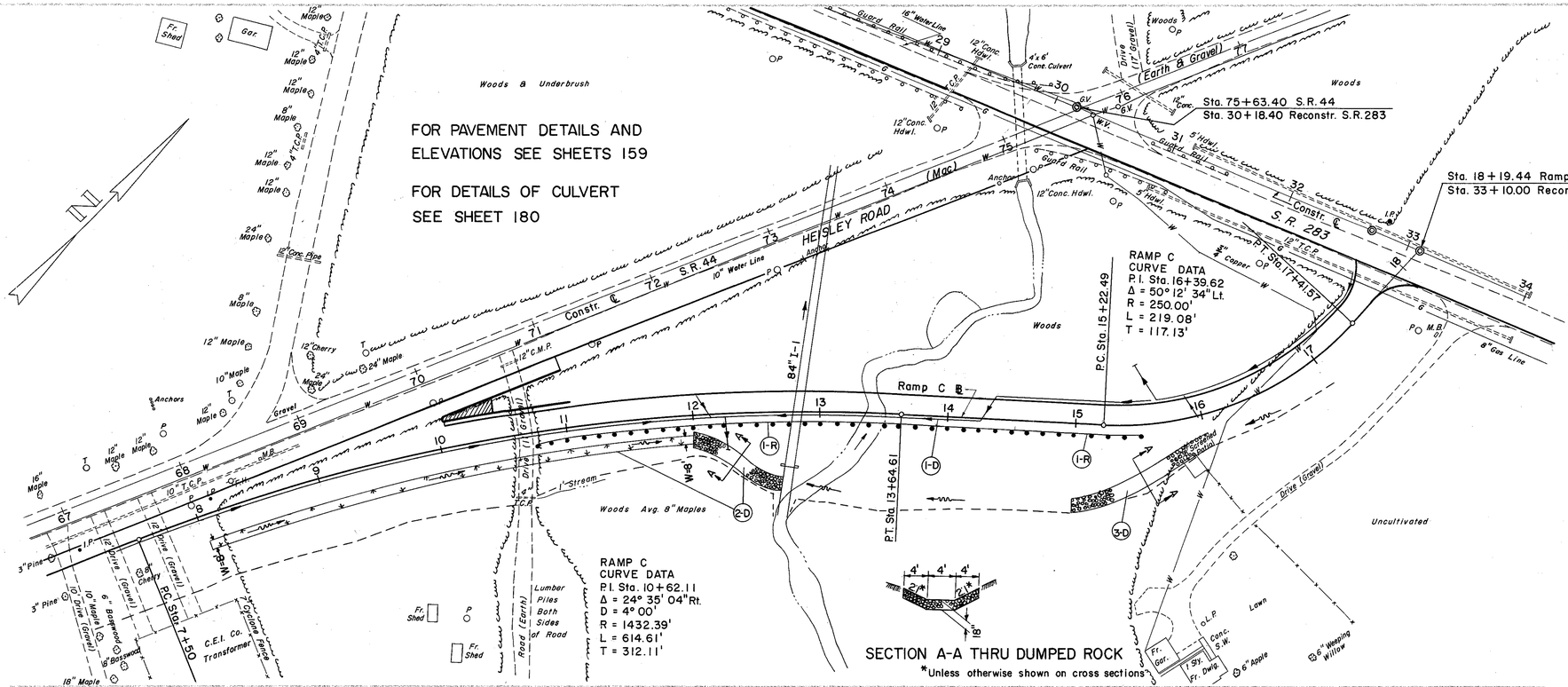
EXCAVATION	= 14,256 C.Y.
EMBANKMENT	= 28,001 C.Y.
EMBANKMENT + 20 %	= 33,601 C.Y.

RAMP B S.R. 283 INTERCHANGE
STA. 3 + 32.42 TO STA. 14 + 25.00

SHEET NO.	STATE	PROJECT	
2	OHIO		

140
212

LAKE COUNTY
LAK-44-7.22



(D) DRAINAGE

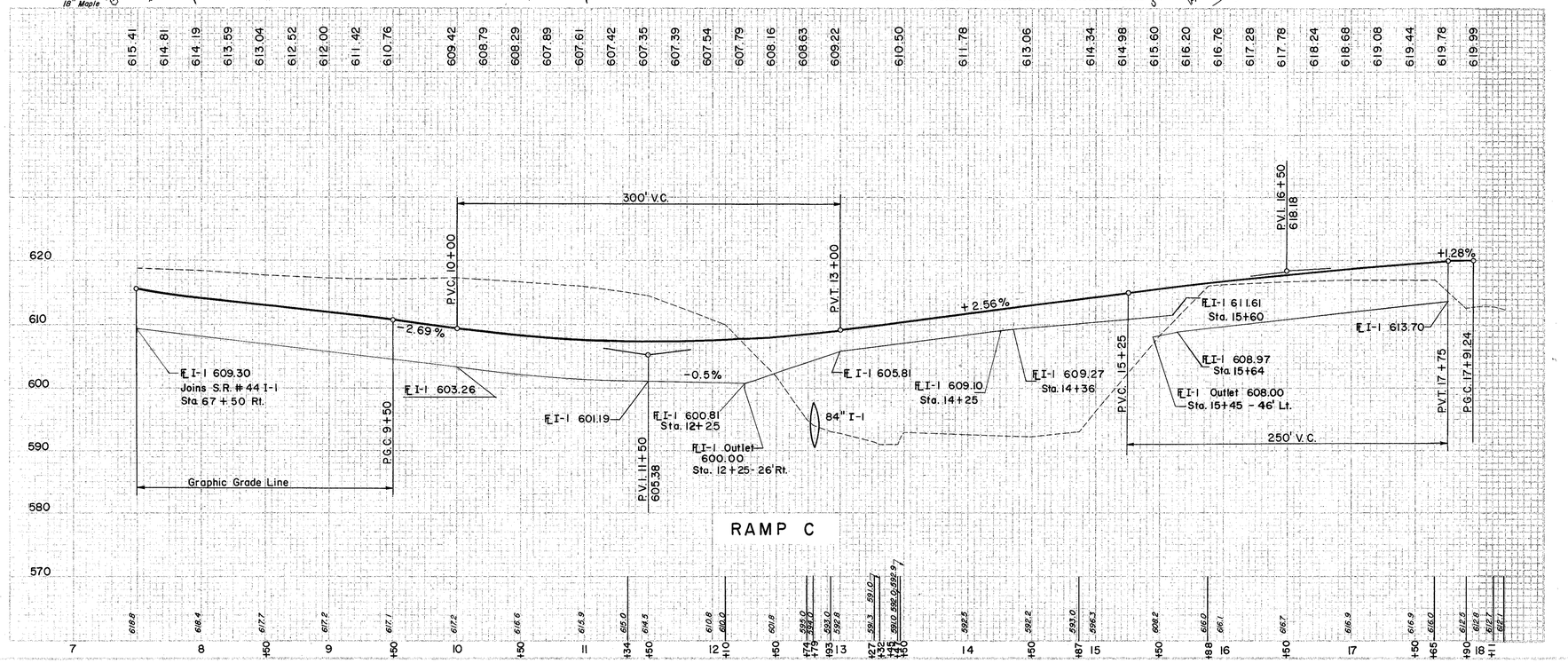
REF. NO.	STATION FROM	STATION TO	SIDE	I-1 6" PIPE CLASS I-3 SHALLOW	I-1 6" PIPE CLASS I-3 DEEP	I-1 8" PIPE CLASS F-1	I-5 6" 60° BEND	I-5 6" 60° WYE	I-5 6" TEE	I-10 DUMPED ROCK CHANNEL PROTECT	I-10 SODDING
				L.F.			EA.			C.Y.	S.Y.
1-D	7+50	17+72	-	270	824	20	3	2	1		
2-D	8+00	12+70	RT.							67	353
3-D	15+00	16+00	RT.							110	
	TOTAL			270	824	20	3	2	1	177	353

(R) ROADWAY

REF. NO.	STATION FROM	STATION TO	SIDE	I-15 GUARD RAIL STEEL BEAM STD. TYPE (DEEP)
				L.F.
1-R	10+75	15+50	RT.	475

(P) PAVEMENT

REF. NO.	STATION FROM	STATION TO	SIDE	B-21 WATER PROOFED AGGR. BASE COURSE	I-12 CONC. CURB. TYPE 6	I-18 STAB. CRUSHED AGGR.	I-21 PORT. CEM. CONC. MEDIAN TYPE I	I-22 SUBBASE	T-31 BIT. MAT'L.	T-31 #6 AGGR.	T-71 REINF PORT. CEM. CONC. PAVT. 9"
				C.Y.	L.F.	C.Y.	S.Y.	C.Y.	GAL.	C.Y.	S.Y.
1-P	7+50	18+19.44	-	59	206	105	30.2	474	177	5.7	2118



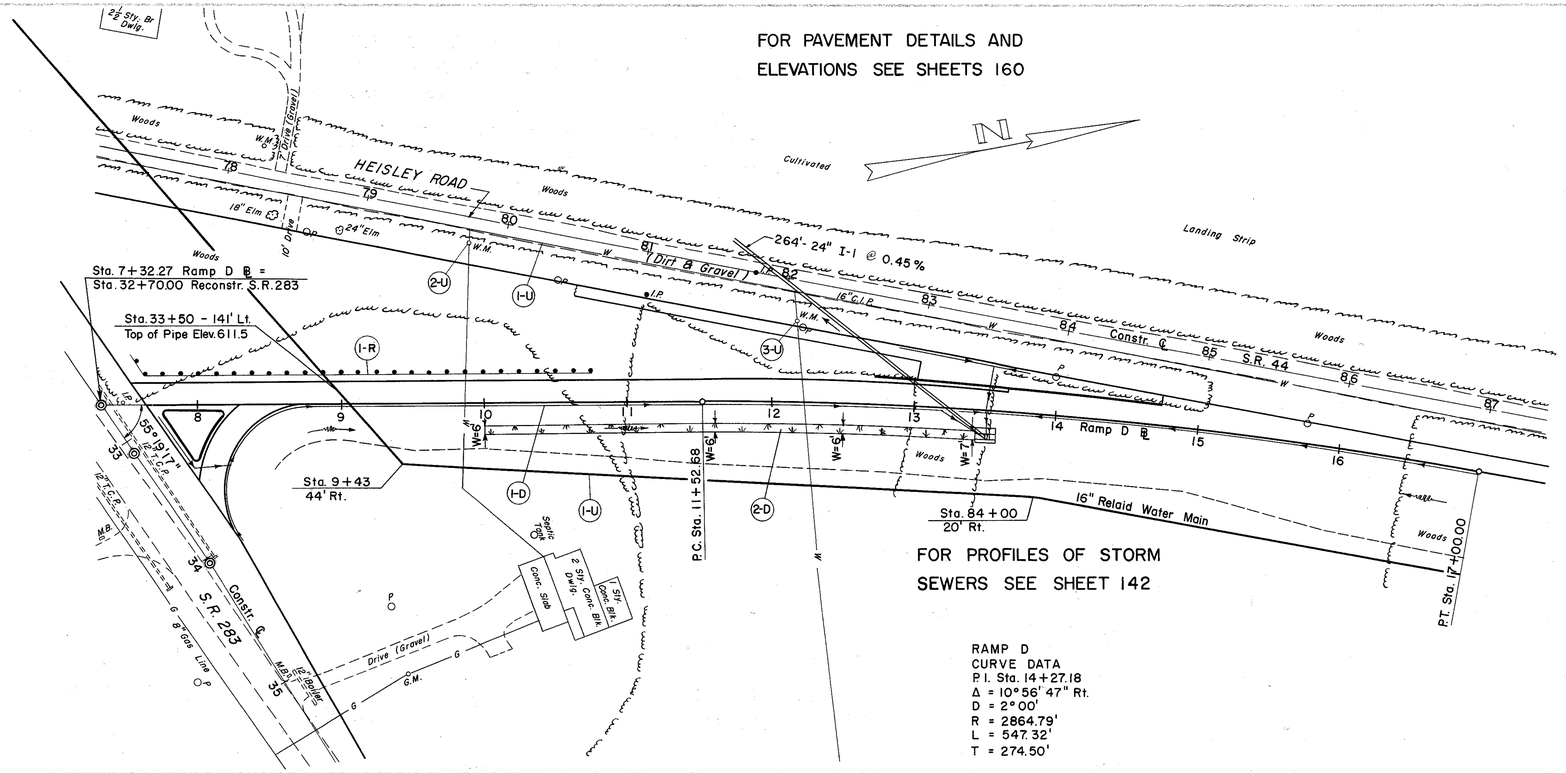
EXCAVATION	=	4,025 C.Y.
EMBANKMENT	=	21,556 C.Y.
EMBANKMENT x 20 %	=	25,867 C.Y.

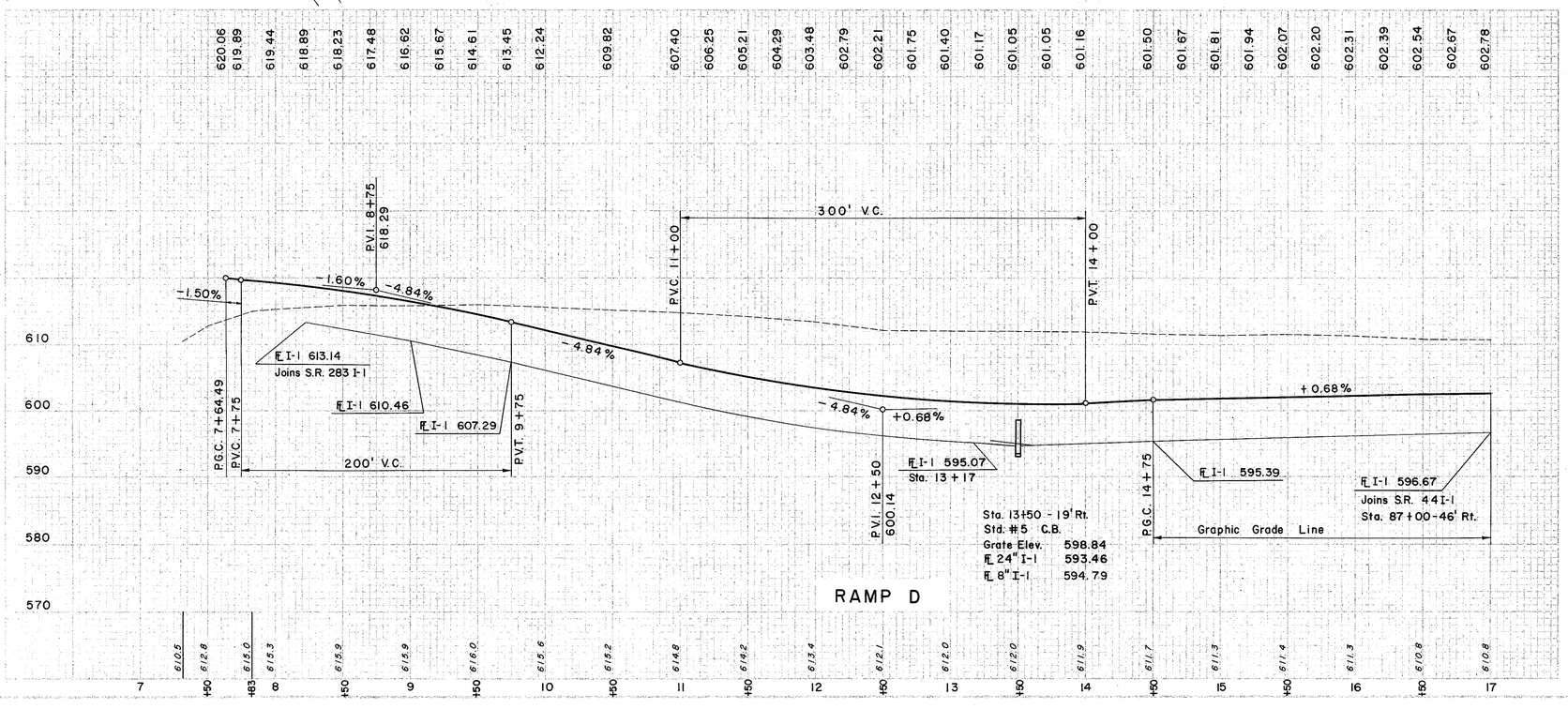
RAMP C S.R. 283 INTERCHANGE
STA. 7 + 50.00 TO STA. 18 + 19.44

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

141
212

LAKE COUNTY
LAK-44-7.22





(D) DRAINAGE

REF NO.	STATION FROM	STATION TO	SIDE	I-1 6" PIPE CLASS I-3 (DEEP) L.F.	I-1 8" PIPE CLASS F-1 L.F.	I-5 6" 60° WYE EA.	I-5 6" 30° BEND EA.	L-10 SODDING S.Y.
1-D	8+23	17+00	RT.	890	10	1	1	
2-D	10+00	13+45	RT.					230

(R) ROADWAY

REF NO.	STATION FROM	STATION TO	SIDE	I-15 GUARD RAIL STEEL BEAM STD. TYPE (DEEP) L.F.
1-R	7+62.5	10+75	LT.	312.5

(P) PAVEMENT

REF NO.	STATION FROM	STATION TO	SIDE	B-21 WATER PROOFED AGGR. BASE COURSE C.Y.	I-12 CONC. CURB SPECIAL L.F.	I-12 CONC. CURB TYPE 6 L.F.	I-18 STAB. CRUSH. AGGR. C.Y.	I-22 SUB-BASE C.Y.	T-31 BIT. MAT'L. GAL.	T-31 #6 AGGR. C.Y.	T-71 REINF. PORT. CEM. CONC. PAVT. 9" S.Y.
1-P	7+32.27	17+00	-	80	200	154	139	714	239	7.6	1791

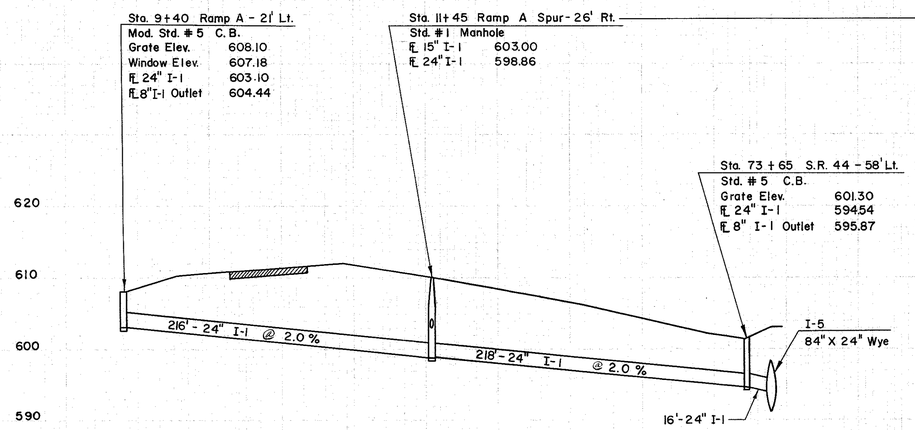
(U) UTILITIES

REF NO.	STATION FROM	STATION TO	SIDE	I-124.03 16" CAST IRON FITTINGS 1/8 BEND EA.	I-124.04 16" WATER MAIN REMOVED & RELAID L.F.	I-124.08 SERVICE STOPS & BOXES REMOVED & RESET EA.	I-124.11 WATER METERS & BOXES REMOVED & RESET EA.
1-U	9+43	84+00 S.R. 44		1	444		
2-U	9+86					1	1
3-U	12+23					1	1
TOTAL				1	444	2	2

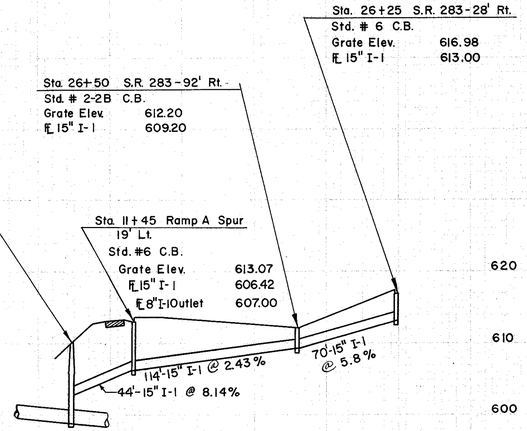
EXCAVATION	=	4,467 C.Y.
EMBANKMENT	=	314 C.Y.
EMBANKMENT 20 %	=	377 C.Y.

RAMP D S.R. 283 INTERCHANGE
STA. 7+32.27 TO STA. 17+00.00

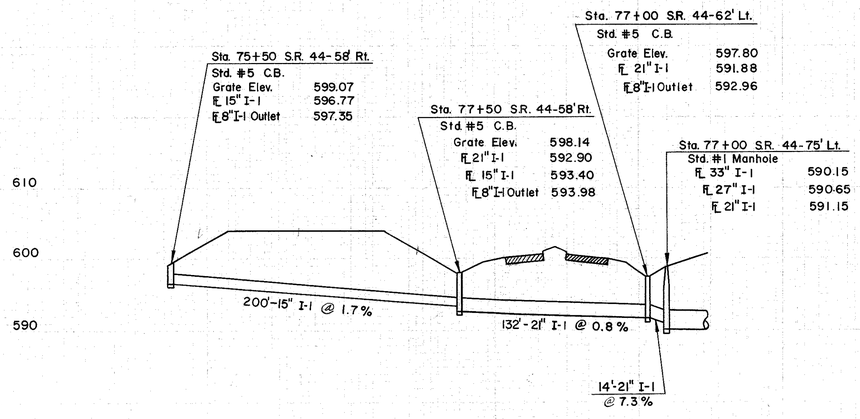
LAKE COUNTY
LAK-44-7.22



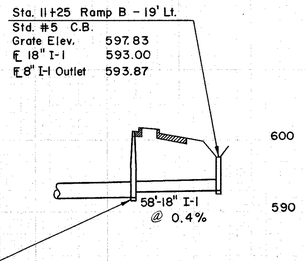
PROFILE STORM SEWER 9+40 RAMP A TO 73+80 LT. S.R. 44

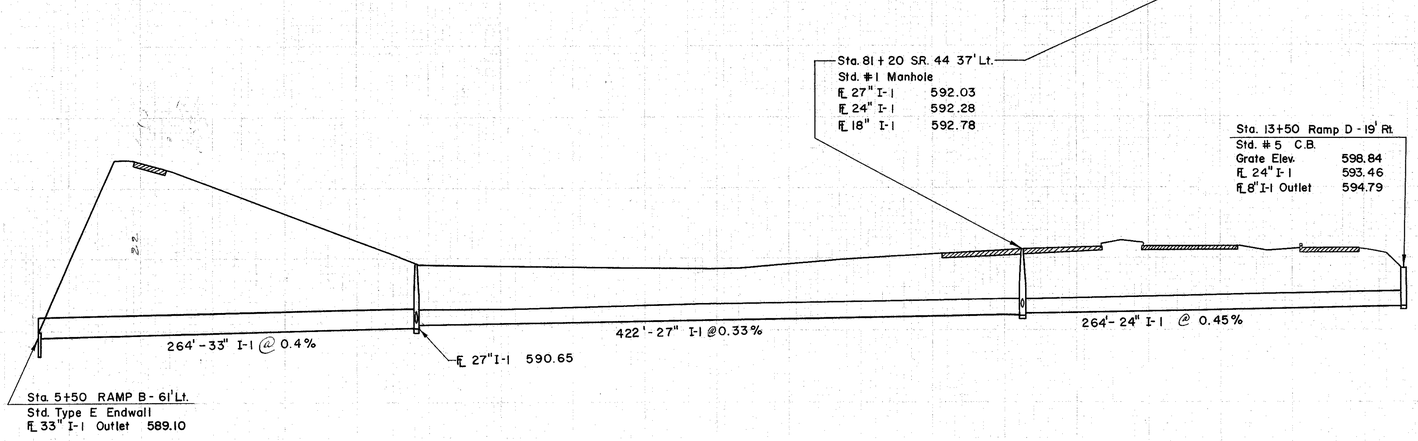


PROFILE STORM SEWER 26+25RT. S.R. 283 TO 11+45 RAMP A SPUR



PROFILE STORM SEWER 75+50 RT. S.R.44 TO 77+00 Lt. S.R. 44





PROFILE STORM SEWER FROM OUTLET 5+50 LT. RAMP B TO 13+50 RT. RAMP D

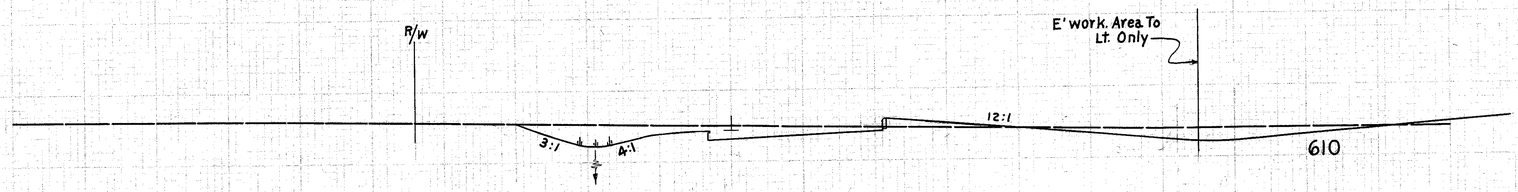
PROFILES STORM SEWERS IN S.R. 283 INTERCHANGE AREA

LAKE COUNTY
LAK-44-7.22

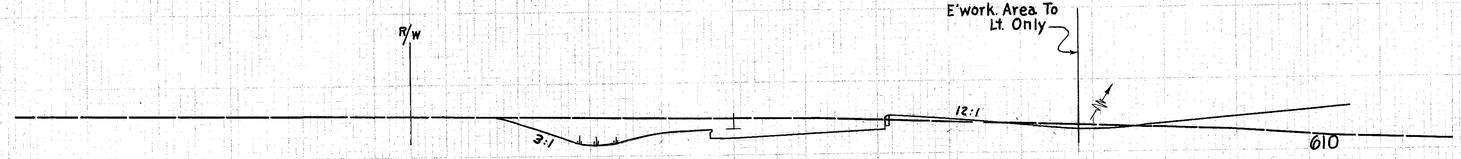
SEEDING	
END WIDTH	SQ. YDS.
62	
	318
81	
	204
66	
	308
45	
69	
	333
51	
	423
76	

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

STA. 12+65
(AREA AS SHOWN ON STA. 26+00 S.R.283)



G-614.32
12+25
615.0

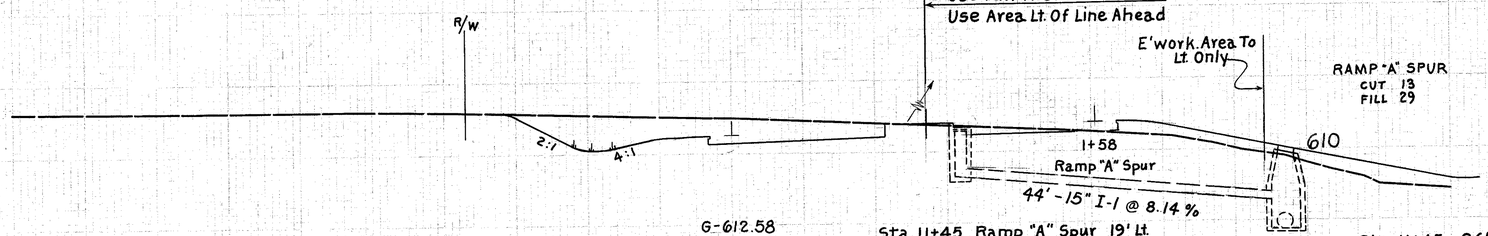


G-613.67
12+00
615.1

RAMP "A" SPUR
SEEDING 24

AHEAD

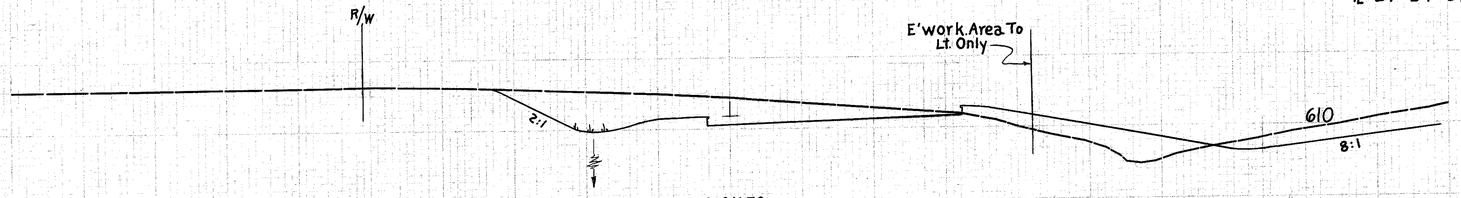
BACK



G-612.58
11+50
615.0

Sta. 11+45 Ramp "A" Spur 19' Lt.
Std. #6 C.B.
Grate El. 613.07
Fl 15" I-1 606.42

Sta. 11+45 26' Rt.
Std. #1 Manhole
Fl 15" I-1 603.00
Fl 24" I-1 598.86



G-611.78
11+00
614.3

STA. 10+40
(AREA AS SHOWN ON STA. 70+50 S.R. 44)

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

STA. 12+65
(AREA AS SHOWN ON STA 26+00 S.R. 283)

END AREA		VOLUME	
CUT	FILL	CUT	FILL
48	28		
		107	27
97	9		
		102	6
124	4		
		259	4
AHEAD 156	0		
BACK 169	29		
		333	44
191	18		
		423	62
190	38		

STA. 10+40
(AREA AS SHOWN ON STA. 70+50 S.R. 44)

RAMP A Sta. 11+00 to 12+25

SEEDING	
END WIDTH	SQ. YDS.
36	294
70	322
46	163
24	

JOB NO.	SHT.	SHTS.
2	ONG	

144
212

LAKE COUNTY
LAK-44-7.22

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

E'work. Area To Rt. Only
E'work. Area To Lt. Only
G.R.
610
8:1

G-617.11
13+00
611.2

STA. 12+61

E'work. Area To Rt. Only
E'work. Area To Lt. Only
G.R.
12:1
610

G-615.98
12+50
610.5

E'work. Area To Rt. Only
E'work. Area To Lt. Only
G.R.
12:1
610
8:1

G-614.86
12+00
612.7

STA. 11+58
(AREA AS SHOWN ON STA. 11+50 RAMP A)

STA. 11+58
(AREA AS SHOWN ON STA. 11+50 RAMP A)

END AREA		VOLUME	
CUT	FILL	CUT	FILL
	275		
			513
0			
		1	
6	279		
		11	292
6	36		
		15	51
13	29		

RAMP A SPUR Sta 12+00 to 13+00

LAKE COUNTY
LAK-44-7.22

145
212

SEEDING	
END WIDTH	SQ. YDS.
165	
	266
177	
	992
180	
	728
105	

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

G.R.
R/W
2:1
12:1
E'work. Area To Lt. Only
600
G-616.03
5+14
589.8

G.R.
R/W
2:1
12:1
E'work. Area To Lt. Only
600
590.0
G-616.42
5+00
591.1
16" Water Main

R/W
G.R.
2:1
12:1
E'work. Area To Lt. Only
600
600.0
G-617.56
4+50
592.3

R/W
G.R.
3:1
4:1
E'work. Area To Lt. Only
600
610.4
G-618.35
4+00
607.5
16" Water Main

STA. 4+04
(AREA AS SHOWN ON STA. 4+00)

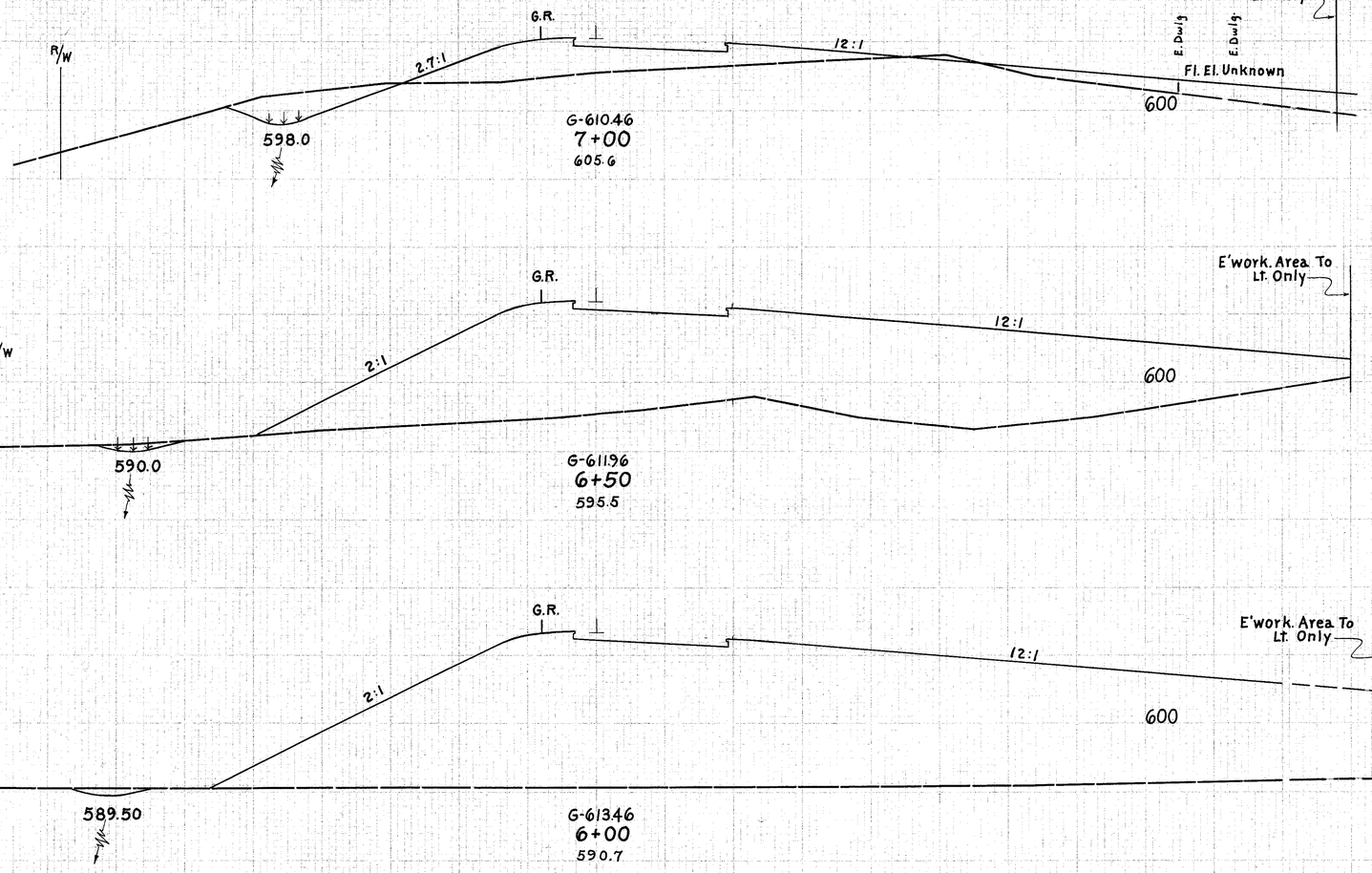
STA. 4+04
(AREA AS SHOWN ON STA. 4+00)

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	4 3232		
		2 1661	
	4 3175		
		10 6280	
	7 3607		
		15 4211	
	11 1336		

RAMP B Sta. 4+00 to 5+14

8-H

SEEDING	
END WIDTH	SQ. YDS.
152	
	914
177	
	1008
186	
	975
165	
	660
165	



END AREA		VOLUME	
CUT	FILL	CUT	FILL
65	306		
		69	1936
9	1785		
		17	4256
		9	2811
		8	5382
		0	3002
		3	4156
4	3232		

SHEET NO.	STATE	PROJECT	
2	OHIO		

146
212

LAKE COUNTY
LAK-44-7.22

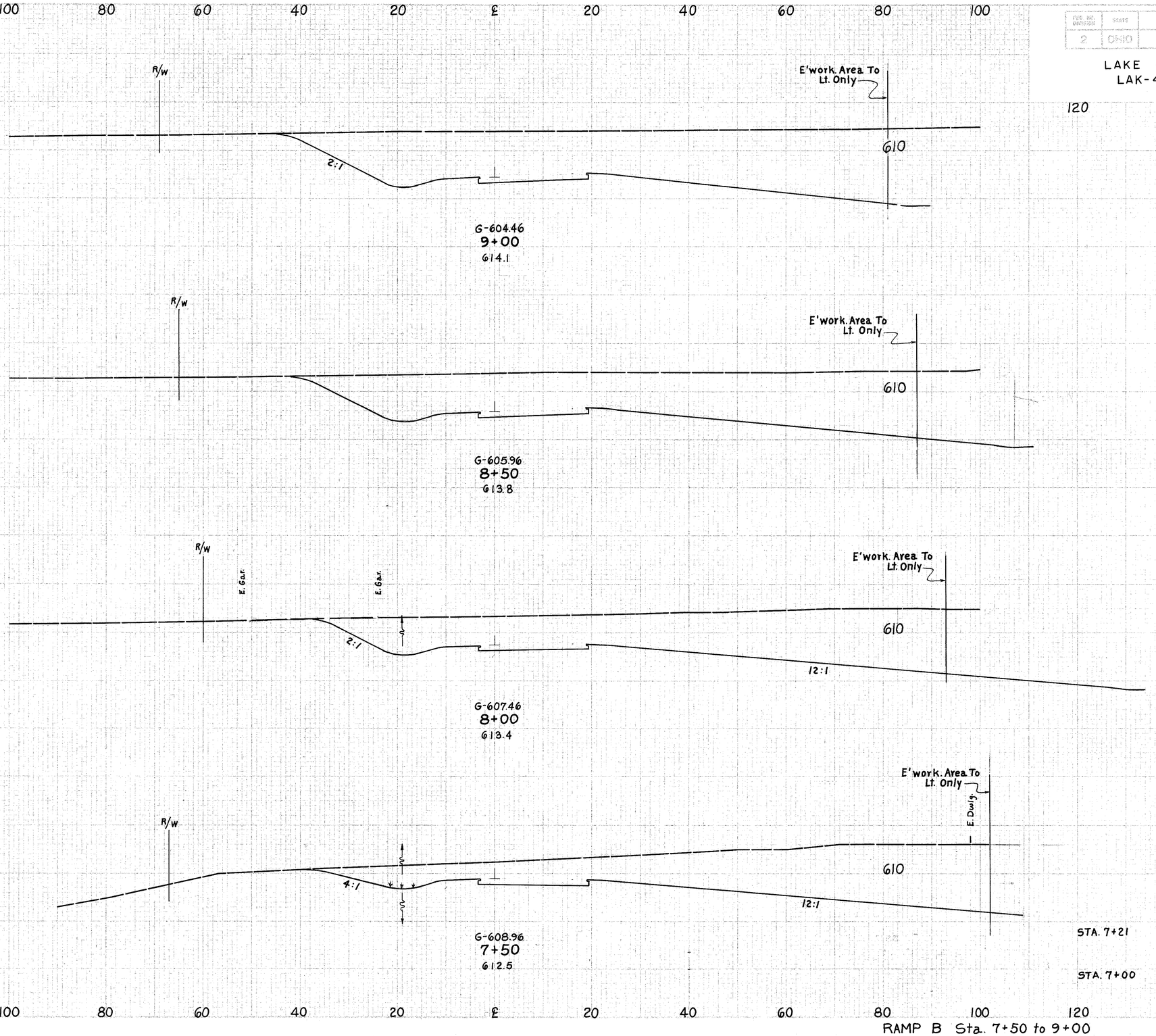
RAMP B Sta. 5+50 to 7+00

FED. ROAD DIVISION	STATE	PROJECT	
2	OHIO		

147
212

LAKE COUNTY
LAK-44-7.22

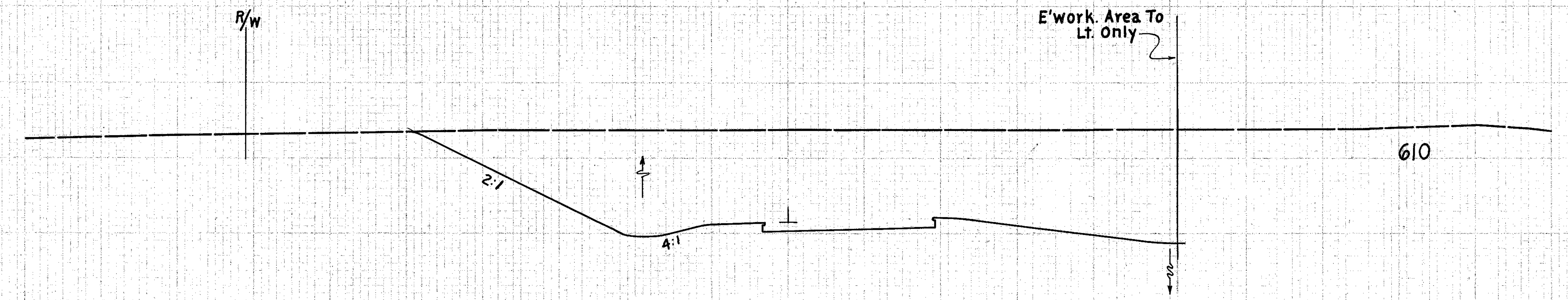
SEEDING END WIDTH	SEEDING SQ. YDS.
115	642
116	653
119	686
128	778
152	



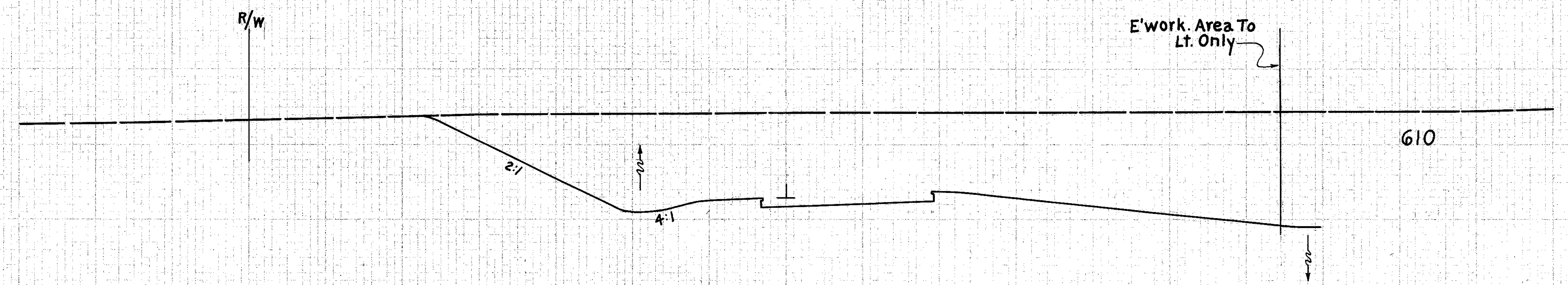
END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
1297			
		2274	
1159			
		2064	
1070			
		1947	
1033			
		1017	
	0		119
65	306		

RAMP B Sta. 7+50 to 9+00

STA. 10+54
(AREA AS SHOWN ON STA. 80+50 S.R. 44)



G-601.52
10+00
613.9

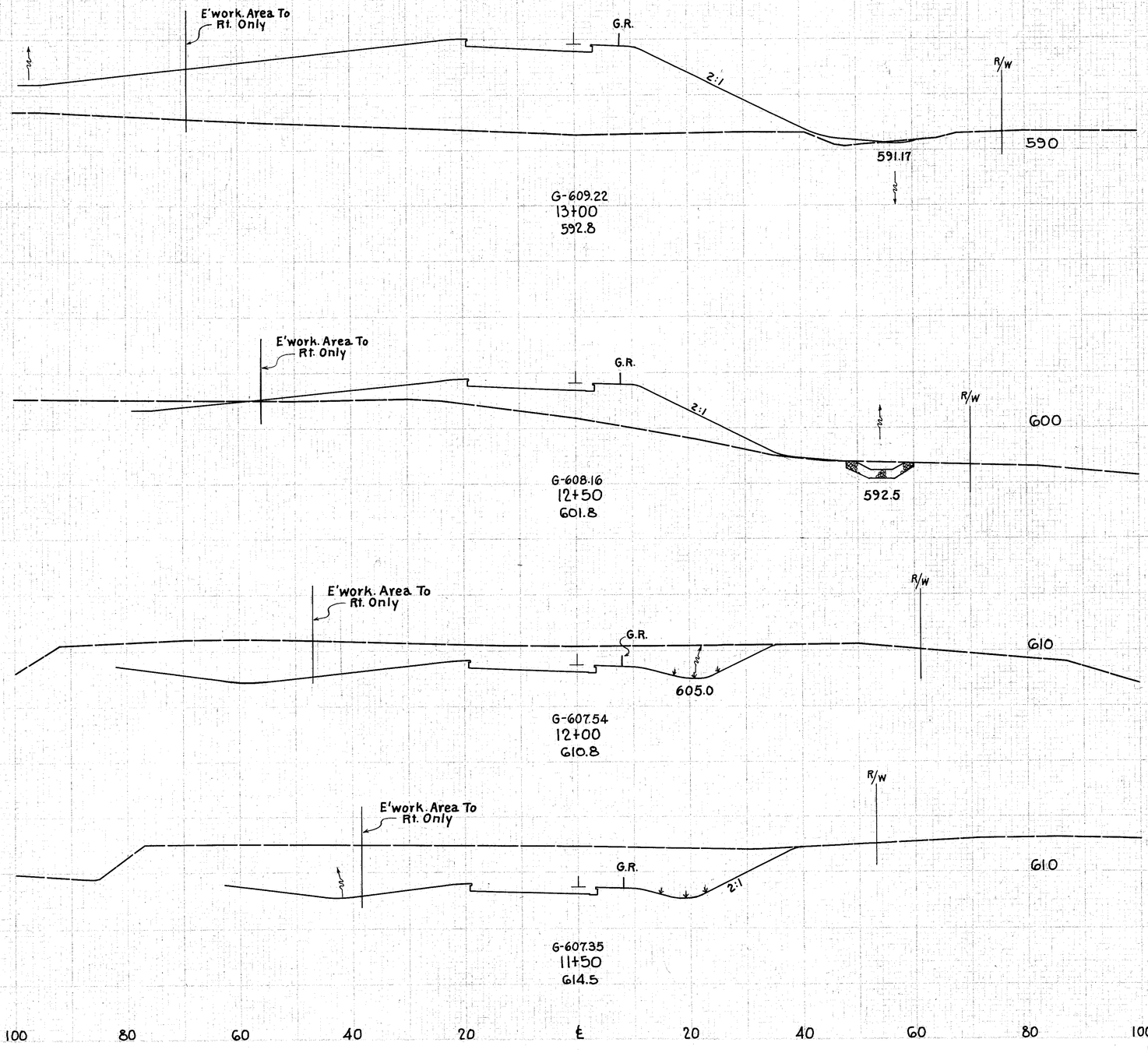


G-602.96
9+50
614.2

STA. 9+00

Station	Seeding End Width	Seeding Sq. Yds.	End Area Cut	End Area Fill	Volume Cut	Volume Fill
10+54	83		1080			
		525			2248	
10+00	92		1168			
		542			2231	
9+50	103		1242			
		606			2351	
9+00	115		1297			

SEEDING	
END WIDTH	SQ. YDS.
122	639
108	497
71	386
68	386
63	



DIST. NO.	STATE	PROJECT	
2	OHIO		

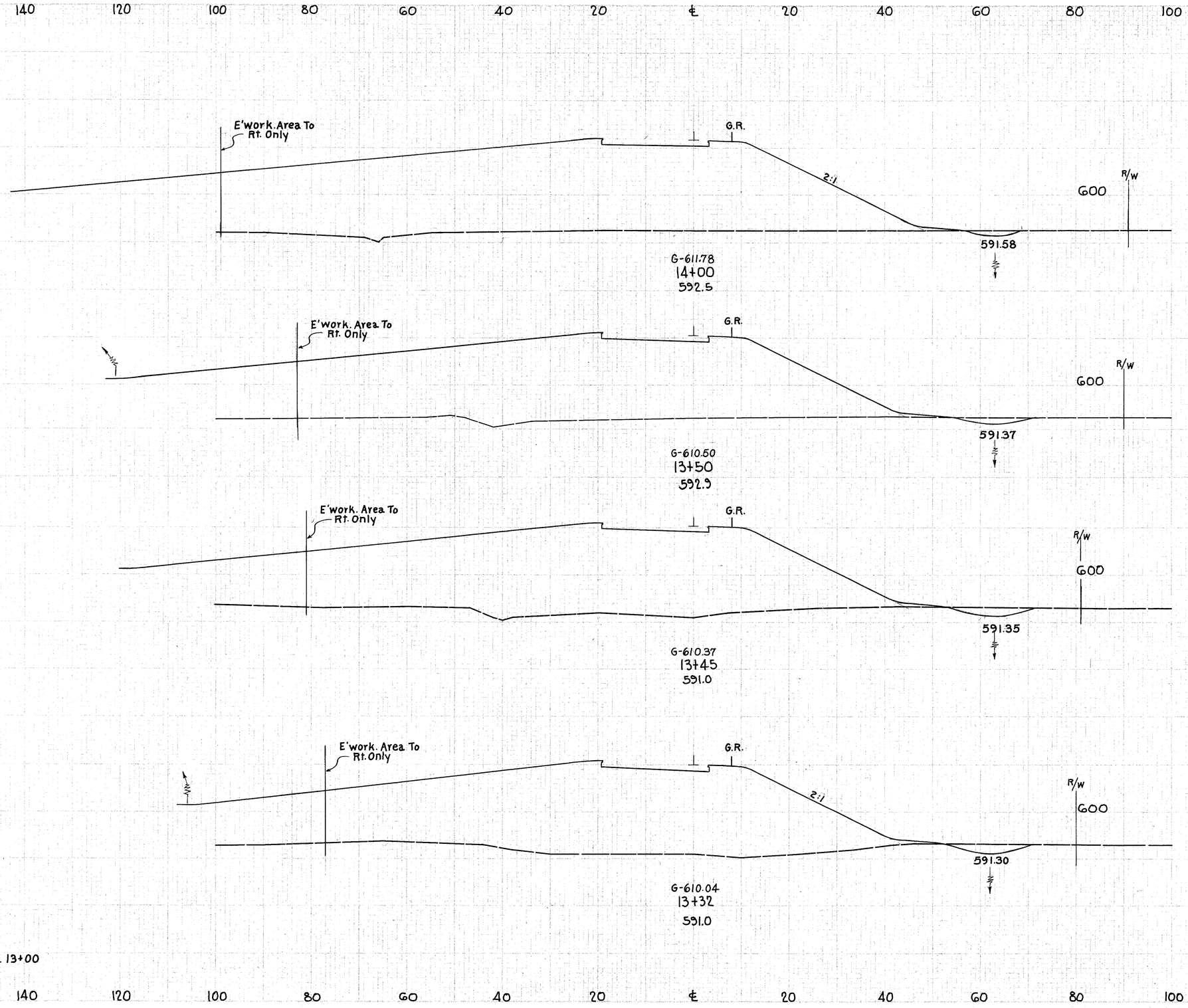
149
212

LAKE COUNTY
LAK-44-7.22

END AREA		VOLUME	
CUT	FILL	CUT	FILL
1	1355		
			6 1569
6	340		
		157	
0		333	
354			
		826	
538			
		1075	
557			

RAMP C Sta. 11+50 to 13+00

SEEDING END WIDTH	SEEDING SQ. YDS.
161	
	856
147	
	81
146	
	206
139	
	464
122	



LAKE COUNTY
LAK-44-7.22

150
212

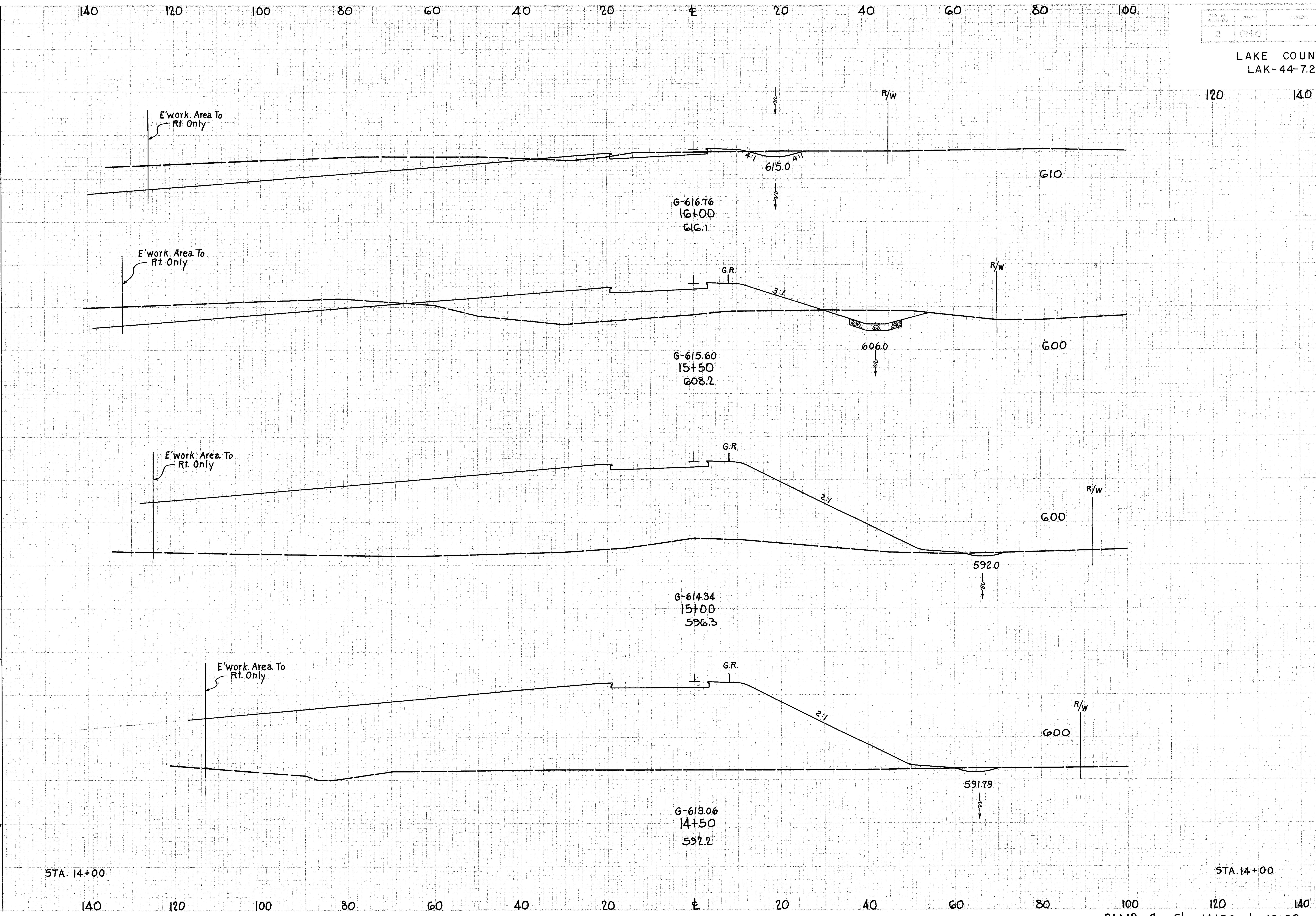
END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	9	2227	
			24 3741
	17	1813	
			4 337
	22	1830	
			10 867
	21	1771	
			13 1852
	1	1355	

STA. 13+00

RAMP C Sta. 13+32 to 14+00

LAKE COUNTY
LAK-44-7.22

SEEDING	
END WIDTH	SQ. YDS.
140	
	878
176	
	1017
190	
	1014
175	
	933
161	



END AREA		VOLUME	
CUT	FILL	CUT	FILL
337	14		
		531	454
237	476		
		225	2952
6	2712		
		11	4948
6	2632		
		14	4499
9	2227		

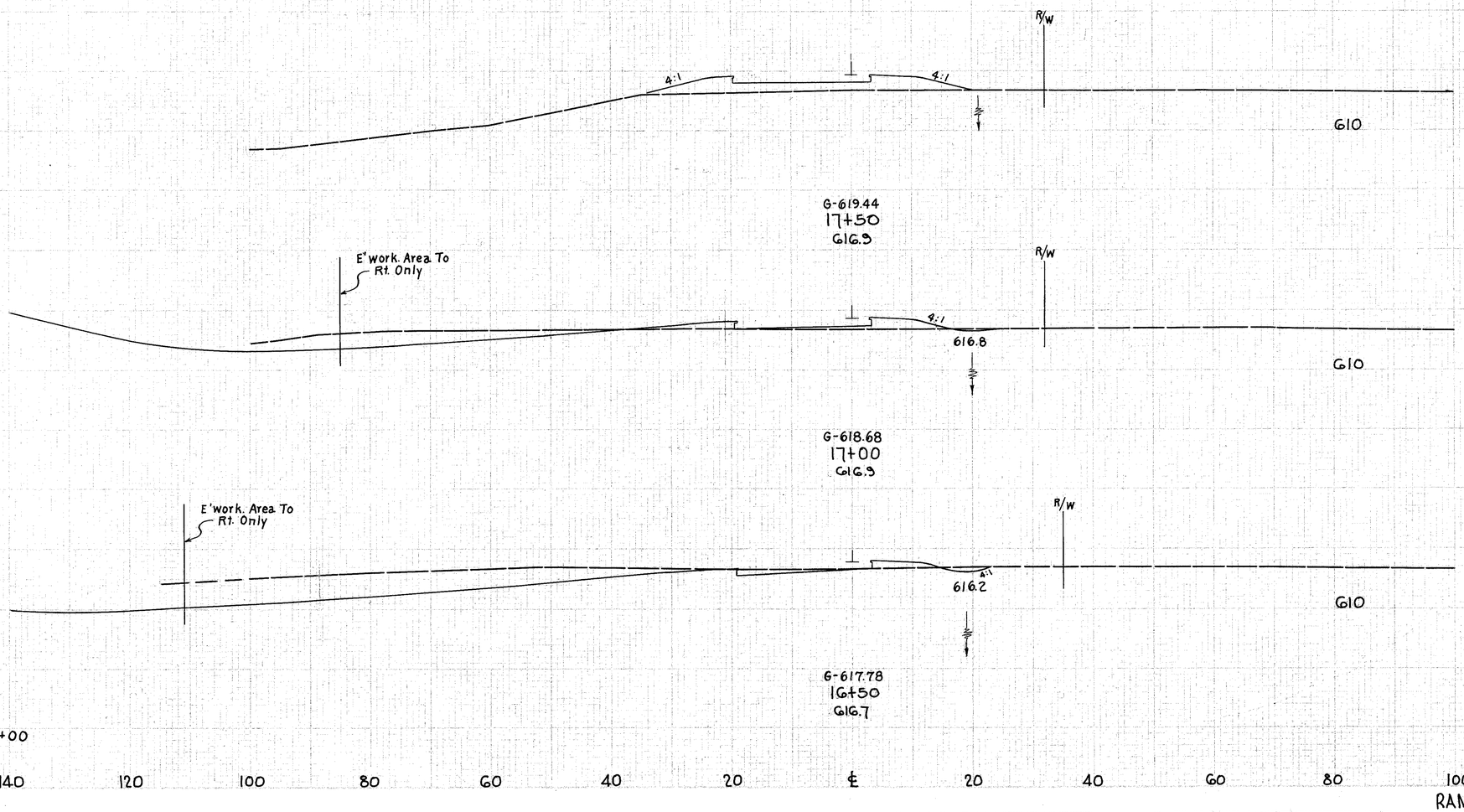
RAMP C Sta. 14+50 to 16+00

SEEDING	
END WIDTH	SQ. YDS.
52	
411	
96	
608	
123	
731	
140	

140 120 100 80 60 40 20 ℄ 20 40 60 80 100

DIST.	STATE	PROJECT		SHEET NO.
2	OHIO			152 212

LAKE COUNTY
LAK-44-7.22



120 140

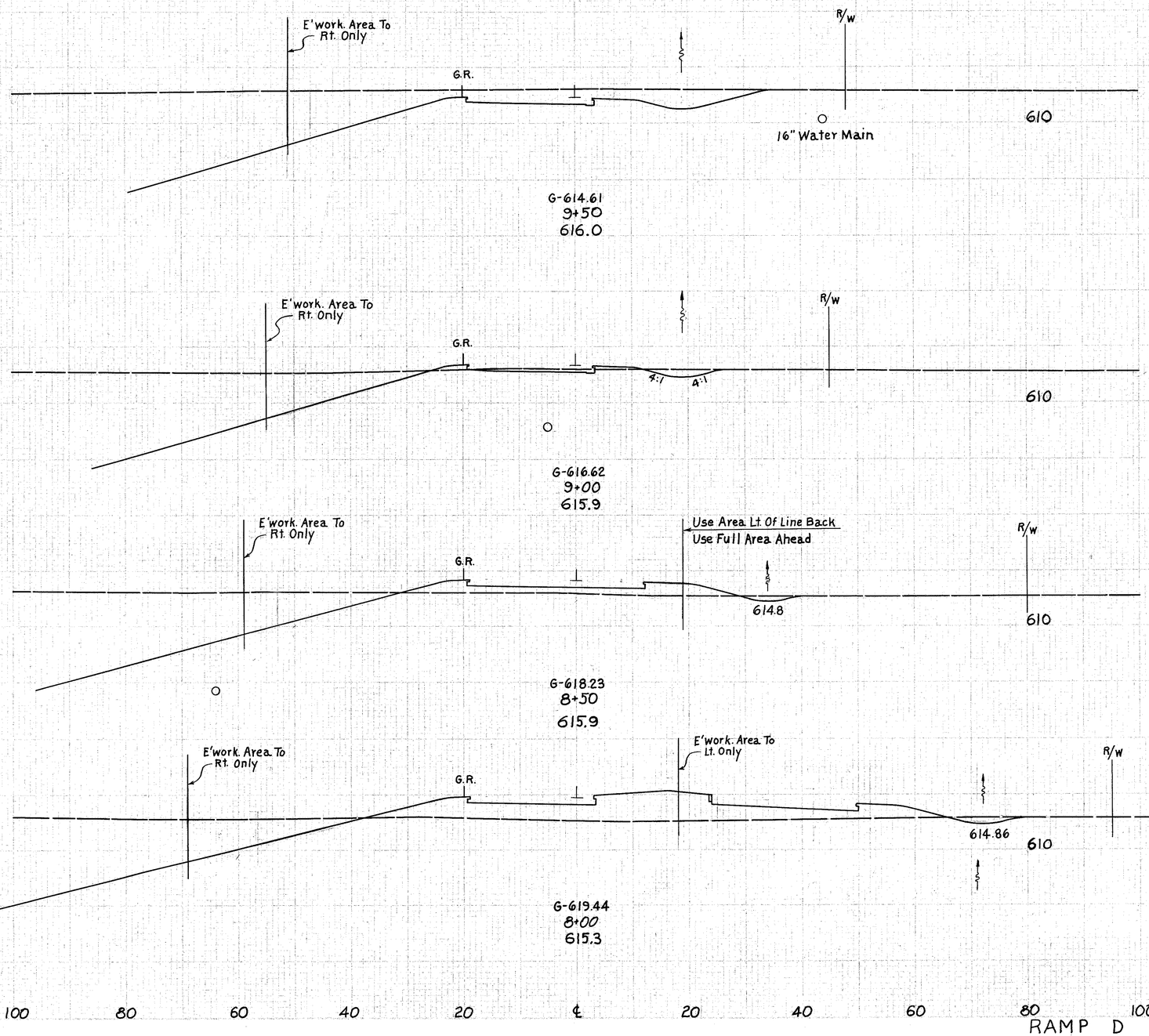
END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	90		
		66	116
71	35		
		320	42
275	10		
		567	22
337	14		

RAMP C Sta 16+50 to 17+50

FED. ROAD DISTRICT	STATE	PROJECT		153 212
2	ILL.			

LAKE COUNTY
LAK-44-7.22

SEEDING END WIDTH	SEEDING SQ. YDS.
74	
	400
70	
	411
78	AHEAD
48	BACK
	317
66	



		END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		276			
				374	
STA. 9+17			0		
					3
		128	8		
				225	81
	AHEAD	115	80		
	BACK	110	7.0		
				212	230
		119	178		

RAMP D Sta. 8+00 to 9+50

SEEDING	
END WIDTH	SQ. YDS.
70	
	402
69	
	383
69	
	381
68	
	394
74	

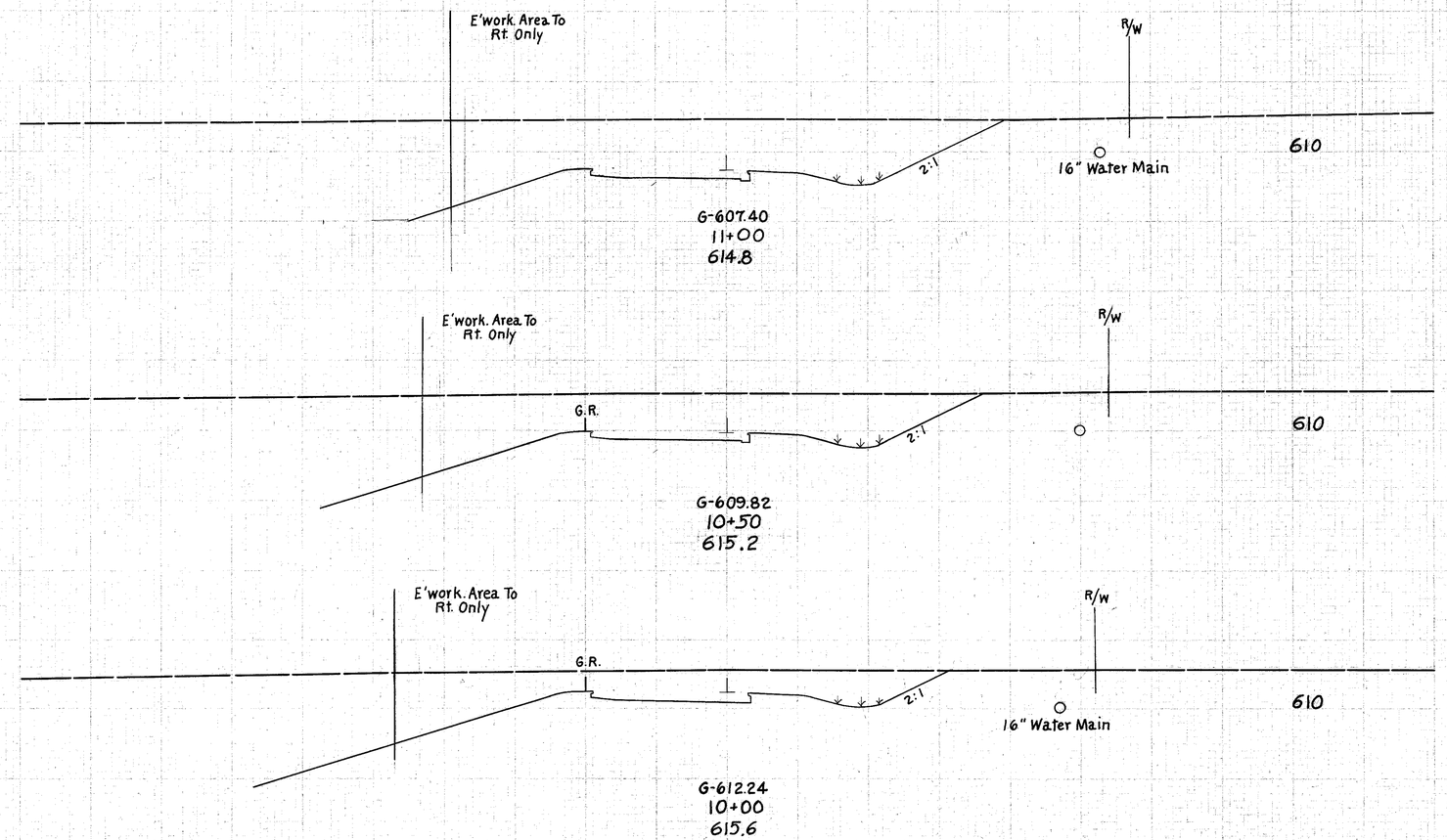
SEC. NO. DIVISION	STATE	PROJECT	
2	OHIO		

154
212

LAKE COUNTY
LAK-44-7.22

END AREA		VOLUME	
CUT	FILL	CUT	FILL
	683		
			1230
	594		
			1014
	501		
			810
	374		
			602
	276		

STA. 11+52
(AREA AS SHOWN ON STA. 81+50 S.R. 44)



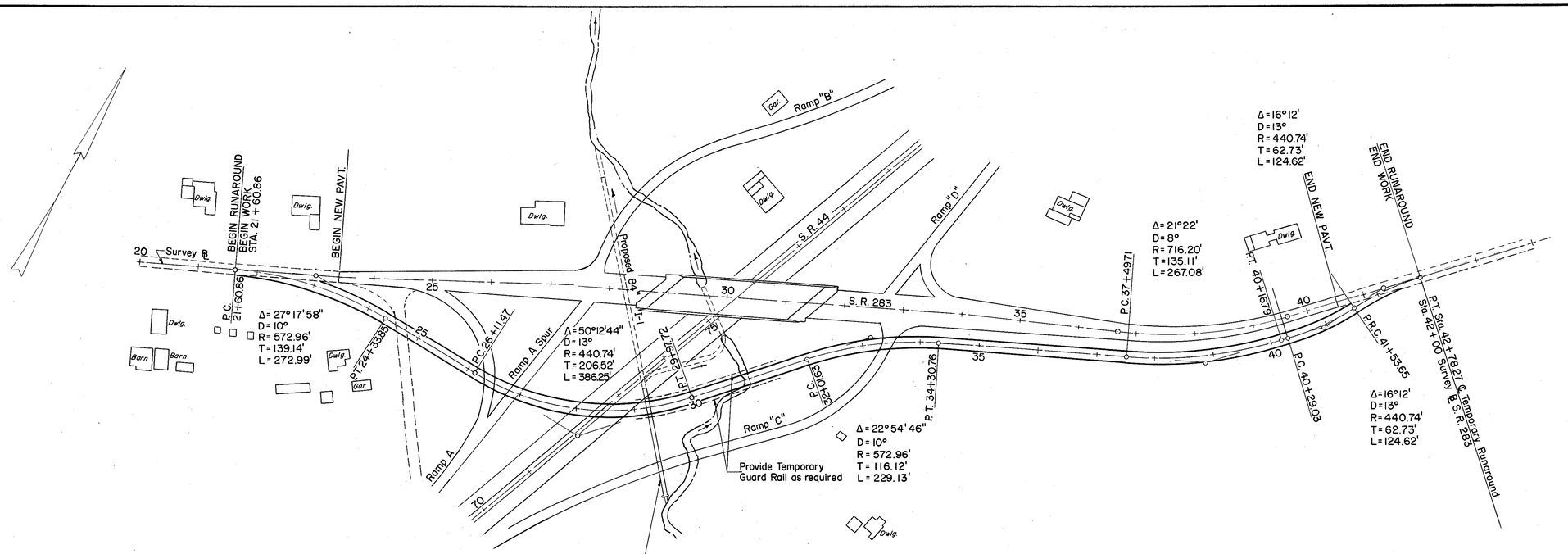
STA. 9+50

RAMP D Sta. 10+00 to 11+00

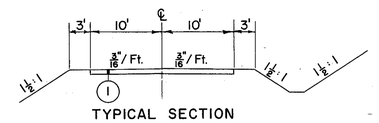
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

155
212

LAKE COUNTY
LAK-44-7.22

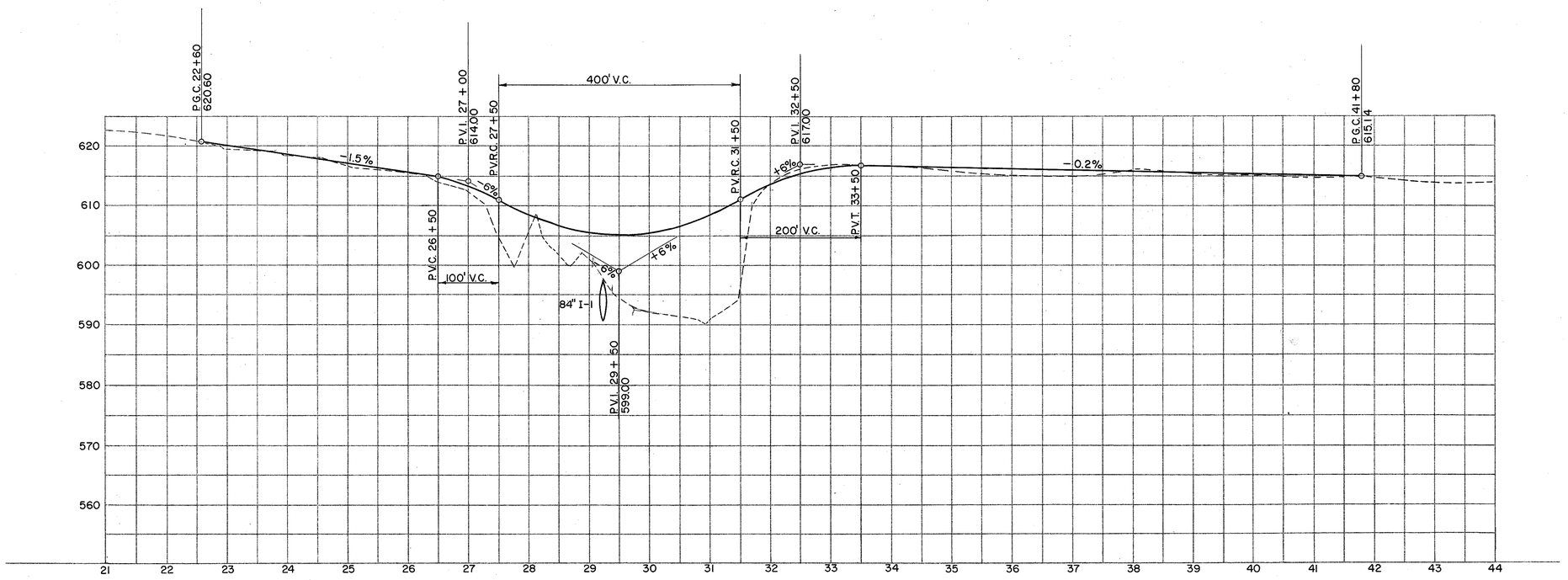


NOTE: Construct approx. 190' of 84" I-1 and excavate temporary channel before construction of temporary runaround.



TYPICAL SECTION
TEMPORARY RUNAROUND

(1) Class "B" Pavement
(Item S-15)

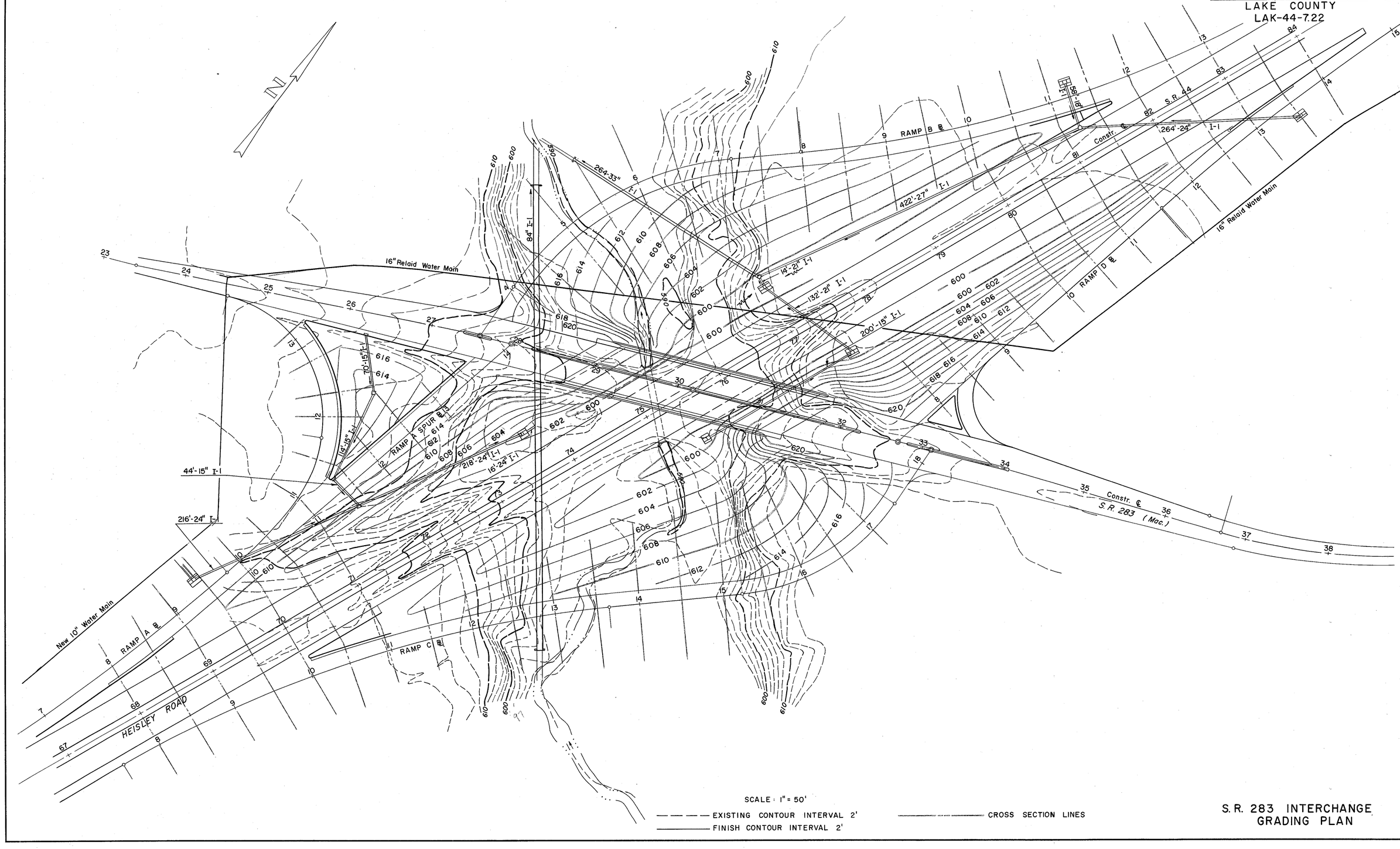


TEMPORARY RUNAROUND
STA. 21 + 60.86 TO STA. 42 + 78.27

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

156
212

LAKE COUNTY
LAK-44-7.22



SCALE: 1" = 50'

EXISTING CONTOUR INTERVAL 2'

FINISH CONTOUR INTERVAL 2'

CROSS SECTION LINES

S.R. 283 INTERCHANGE GRADING PLAN

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

157
212

LAKE COUNTY
LAK-44-7.22

RAMP A

CONSTR ℄
S. R. 283
CURVE DATA
P. I. Sta. 23+39.22
Δ = 2°59'14"
No Curve

Constr ℄ S.R.283

Sta. 3+32.42 Ramp B =
Sta. 27+57.97 Reconstr. S.R. 283

Match Line Sheet 158

98.82' | 50.00' | 137.02'

P.T. Sta. 13+98.40

I-21 Type I

Paved Berm

Standard Type 6 Curb

FOR NOSE DETAILS
SEE SHEET 161

RAMP A
CURVE DATA
P.I. Sta. 13+13.35
Δ = 84°54'19"
R = 150.00'
L = 222.28'
T = 137.22'

Ramp A ℄

Standard Type 6 Curb

S.C. Sta. 11+76.12

Match Line Sta. 11+75

Ramp A Spur ℄

Sta. 14+11.37 Ramp A Spur =
Sta. 27+95.43 Reconstr. S.R. 283

CONSTR ℄
S. R. 283
CURVE DATA
P.I. Sta. 27+39.61
Δ = 2°31'44"
No Curve

CONSTRUCTION JOINT LEGEND

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

N

P.C. Sta. 4+50

Paved Berm

Sta. 5+40

Match Line

+50.00

RAMP A
CURVE DATA
P.I. Sta. 7+13.80
Δ = 10°31'21"
D = 2°00'
R = 2864.79'
L = 526.12'
T = 263.80'

CURB CURVE DATA
Δ = 4°00'00"
R = 831.31'
L = 58.04'
T = 29.03'

RAMP A
ENTRANCE TERMINAL

Match Line Sta. 5+40

+57.25

N. 23°29'47"E.

+77.50

Constr. ℄ S.R. 44

+56

Paved Berm

Crown Line

Special Curb

FOR CURB DETAILS SEE SHEET 161

C.S. Sta. 9+76.12 Ramp A ℄ =
Sta. 9+76.12 Ramp A Spur ℄, 16' Rt.

RAMP A
SPIRAL CURVE DATA
P.I. Sta. 11+11.16
Δ = 40°11'50"
L_s = 200.00'
T_s = 73.52'
T_L = 135.04'

Ramp A ℄

Paved Berm

Match Line Sta. 11+75

N

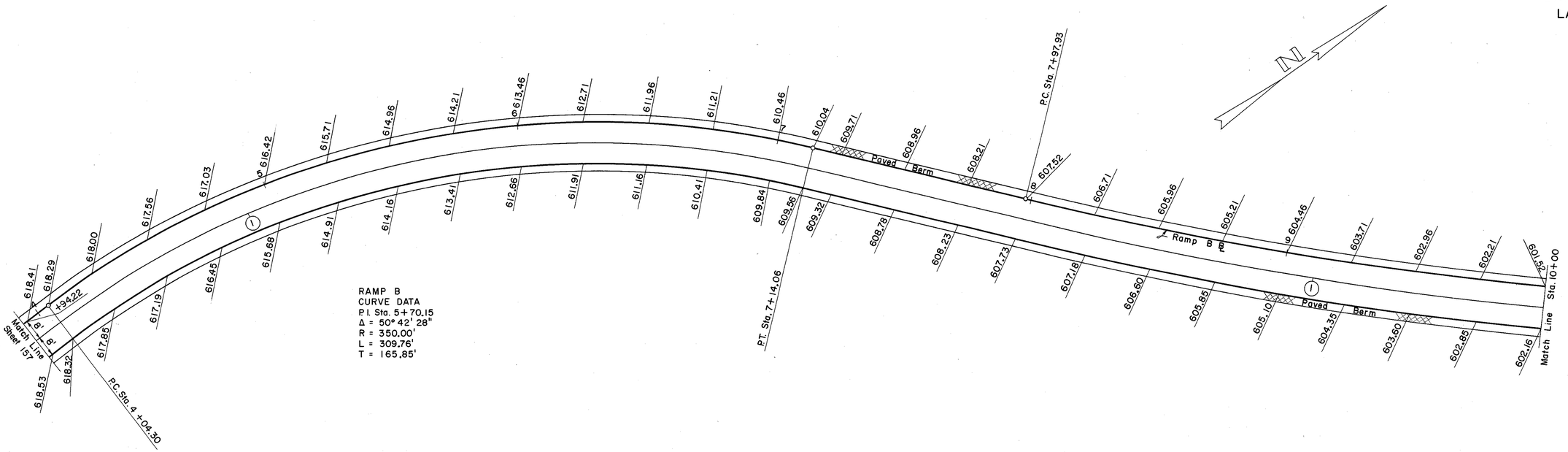
S. R. 283 INTERCHANGE
INTERSECTION DETAILS
RAMP A & RAMP A SPUR

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

158
212

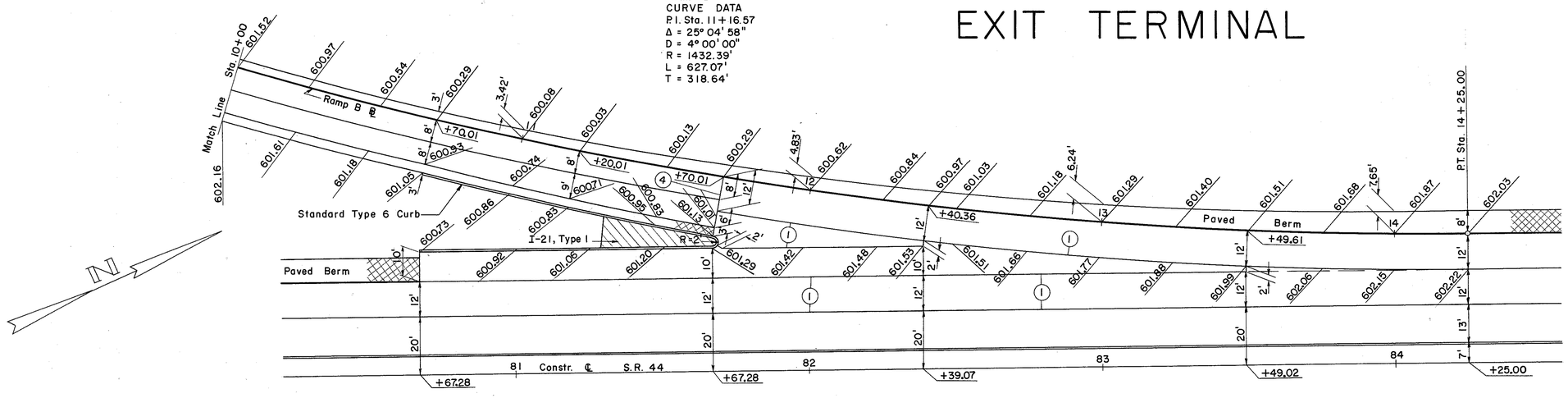
LAKE COUNTY
LAK-44-7.22

RAMP B



FOR NOSE DETAILS SEE SHEET 161

RAMP B
EXIT TERMINAL



CONSTRUCTION JOINT LEGEND

(1) Standard Longitudinal Joint

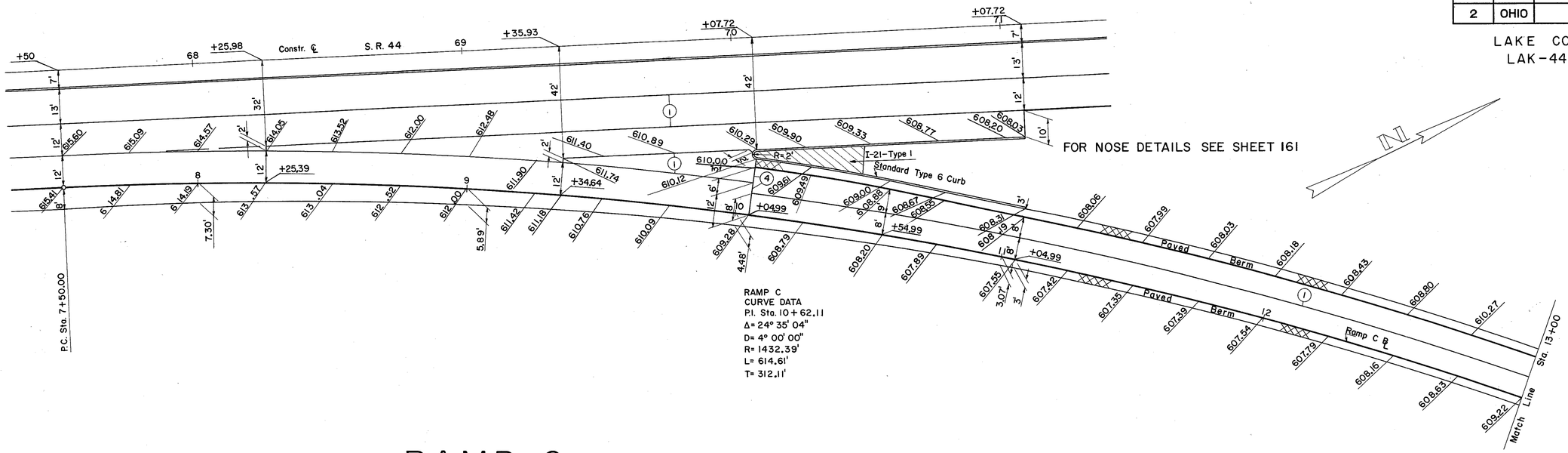
(4) Standard Expansion Joint

S.R. 283 INTERCHANGE
RAMP B

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

159
212

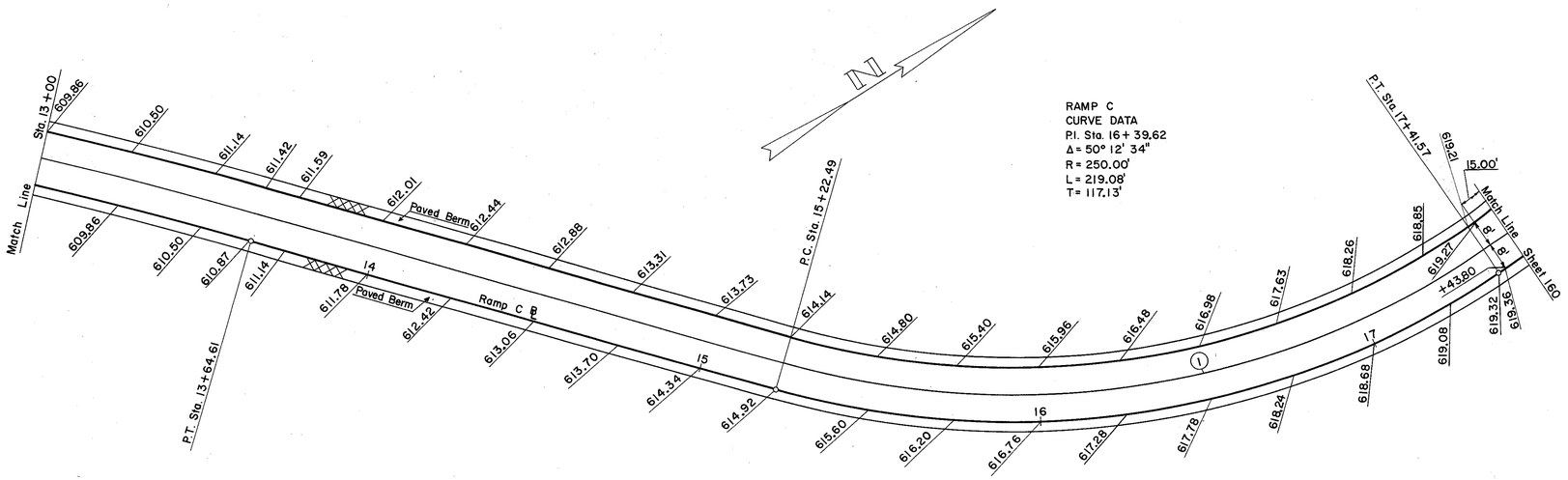
LAKE COUNTY
LAK-44-7.22



RAMP C
EXIT TERMINAL

CONSTRUCTION JOINT LEGEND

(1) Standard Longitudinal Joint
(4) Standard Expansion Joint



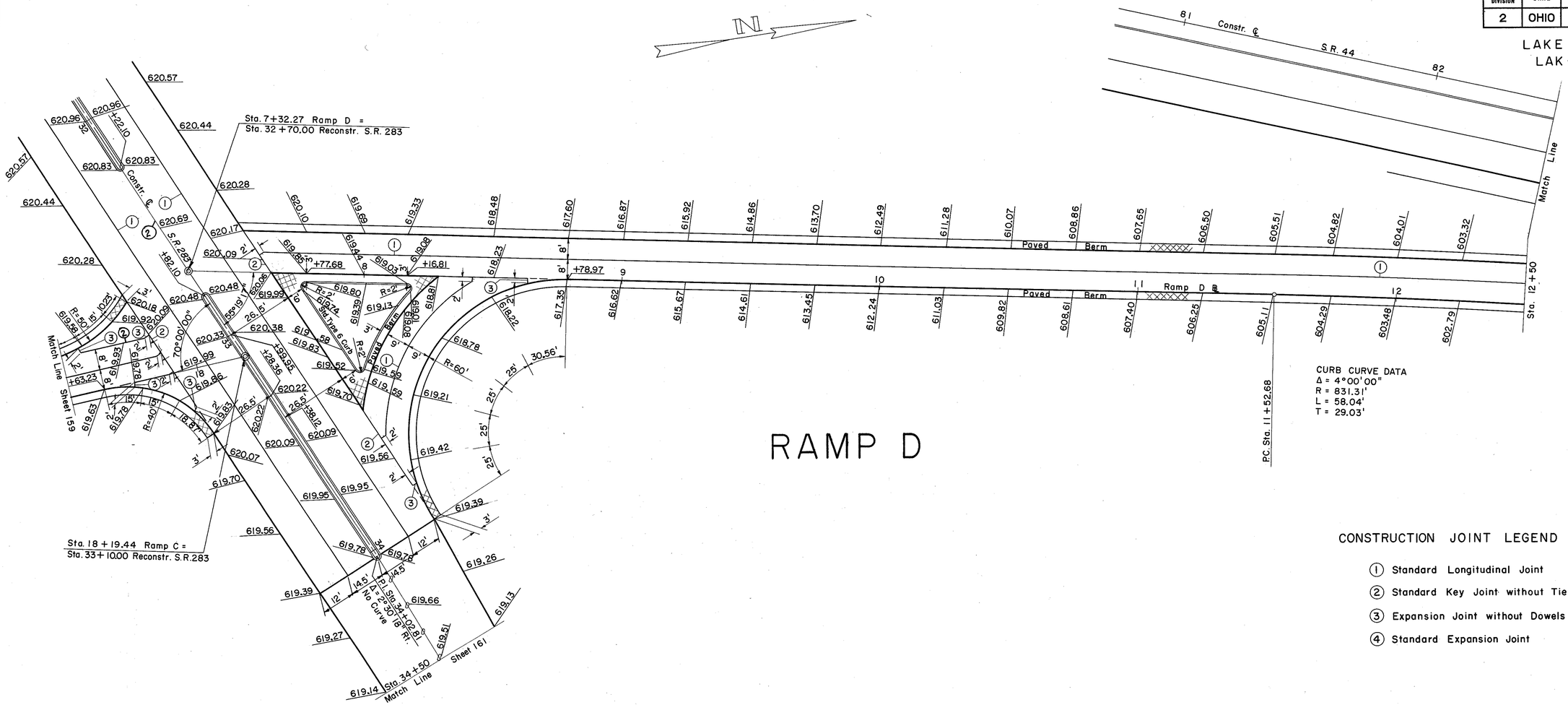
RAMP C

S.R. 283 INTERCHANGE
RAMP C

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

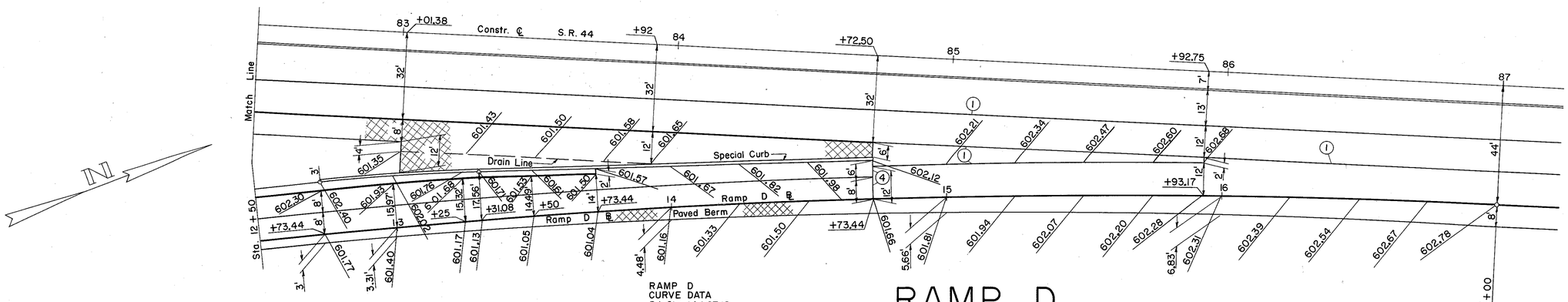
160
212

LAKE COUNTY
LAK-44-7.22



CONSTRUCTION JOINT LEGEND

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



FOR CURB DETAILS SEE SHEET 161

RAMP D
CURVE DATA
P.I. Sta. 14+27.18
Δ = 10° 56' 47"
D = 2° 00' 00"
R = 2864.79'
L = 547.32'
T = 274.50'

RAMP D
ENTRANCE TERMINAL

S.R. 283 INTERCHANGE
INTERSECTION DETAILS
RAMP D

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

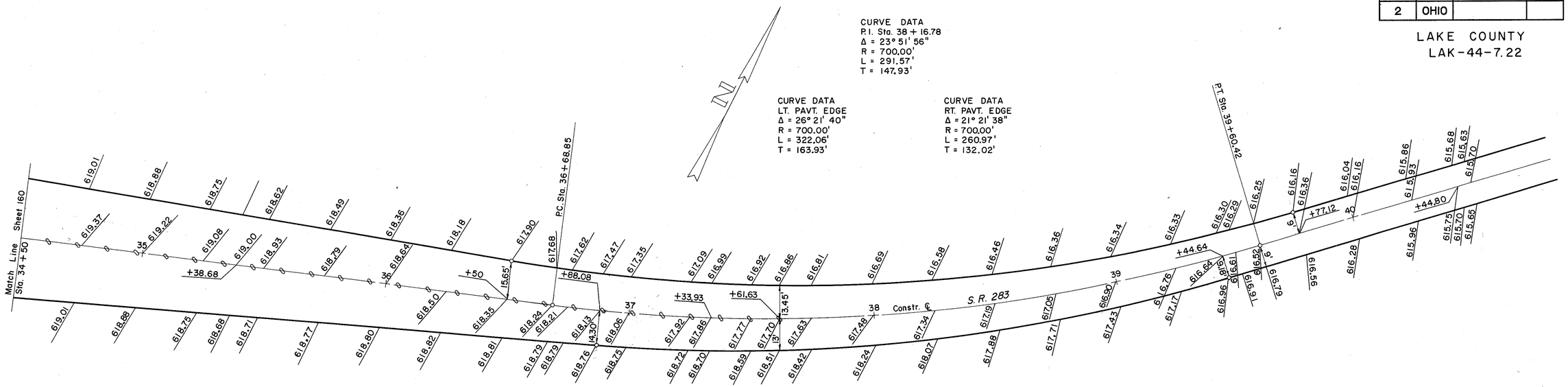
161
212

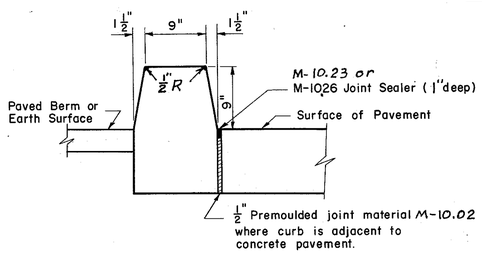
LAKE COUNTY
LAK-44-7.22

CURVE DATA
P.I. Sta. 38 + 16.78
Δ = 23° 51' 56"
R = 700.00'
L = 291.57'
T = 147.93'

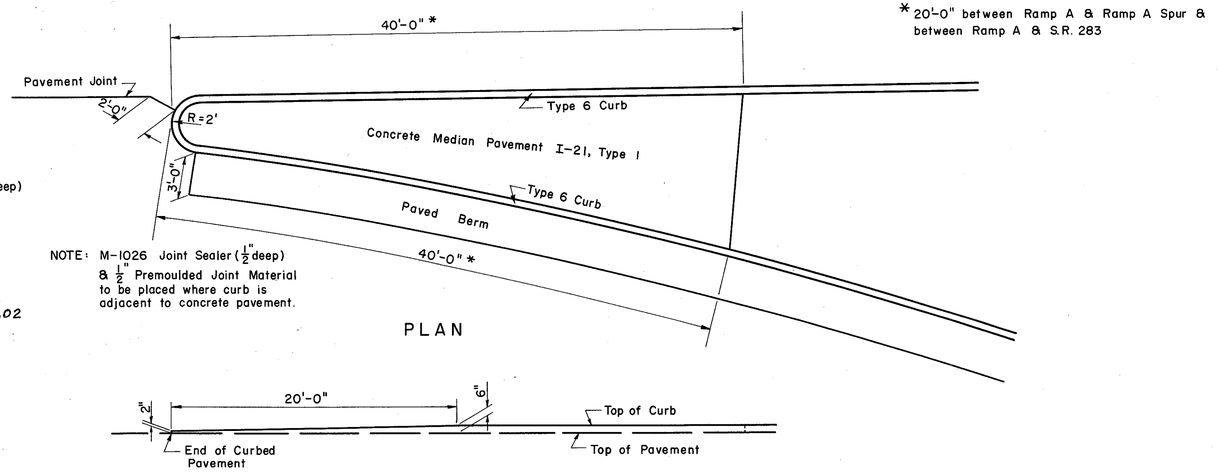
CURVE DATA
LT. PAVT. EDGE
Δ = 26° 21' 40"
R = 700.00'
L = 322.06'
T = 163.93'

CURVE DATA
RT. PAVT. EDGE
Δ = 21° 21' 38"
R = 700.00'
L = 260.97'
T = 132.02'





SPECIAL PORTLAND CEMENT CONCRETE CURB DETAIL



* 20'-0" between Ramp A & Ramp A Spur & between Ramp A & S.R. 283

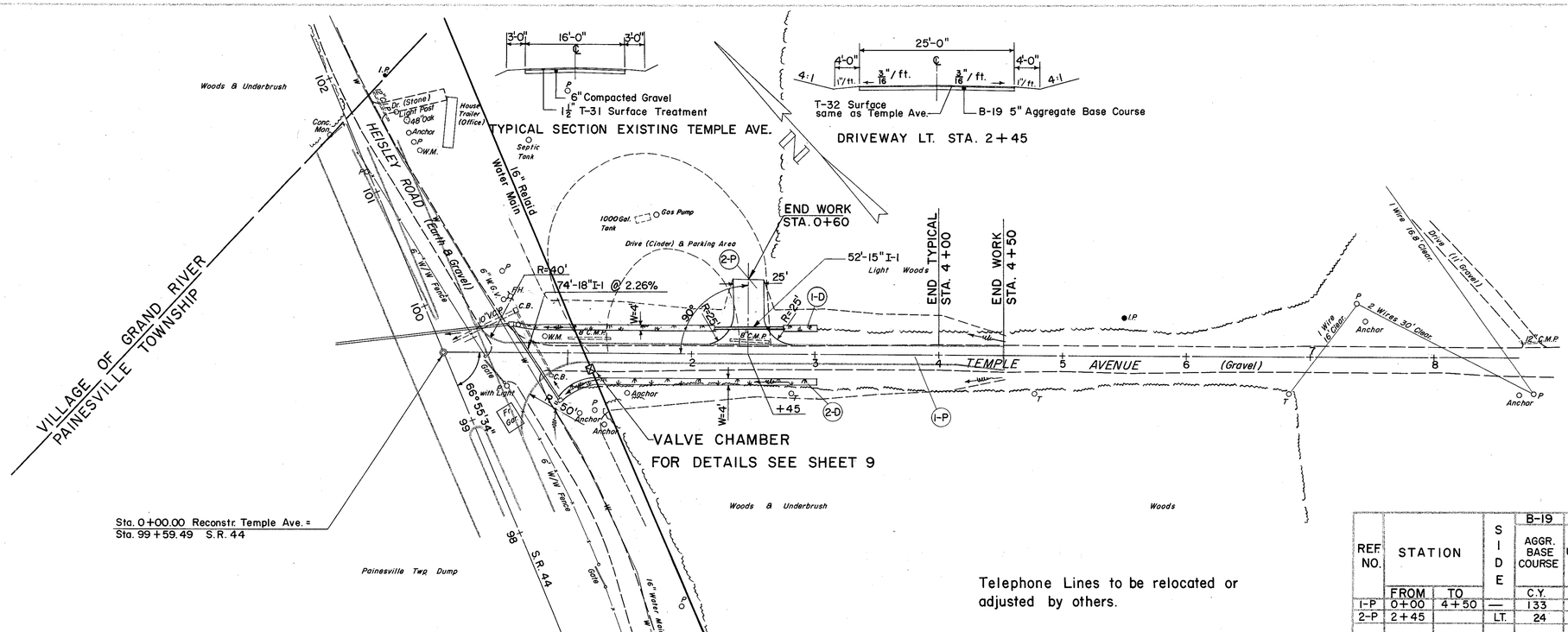
CURBED NOSE DETAIL

S.R. 283 INTERCHANGE
S.R. 283 &
OTHER DETAILS

DIST. NO.	STATE	PROJECT		
2	OHIO			

162
212

LAKE COUNTY
LAK-44-7.22

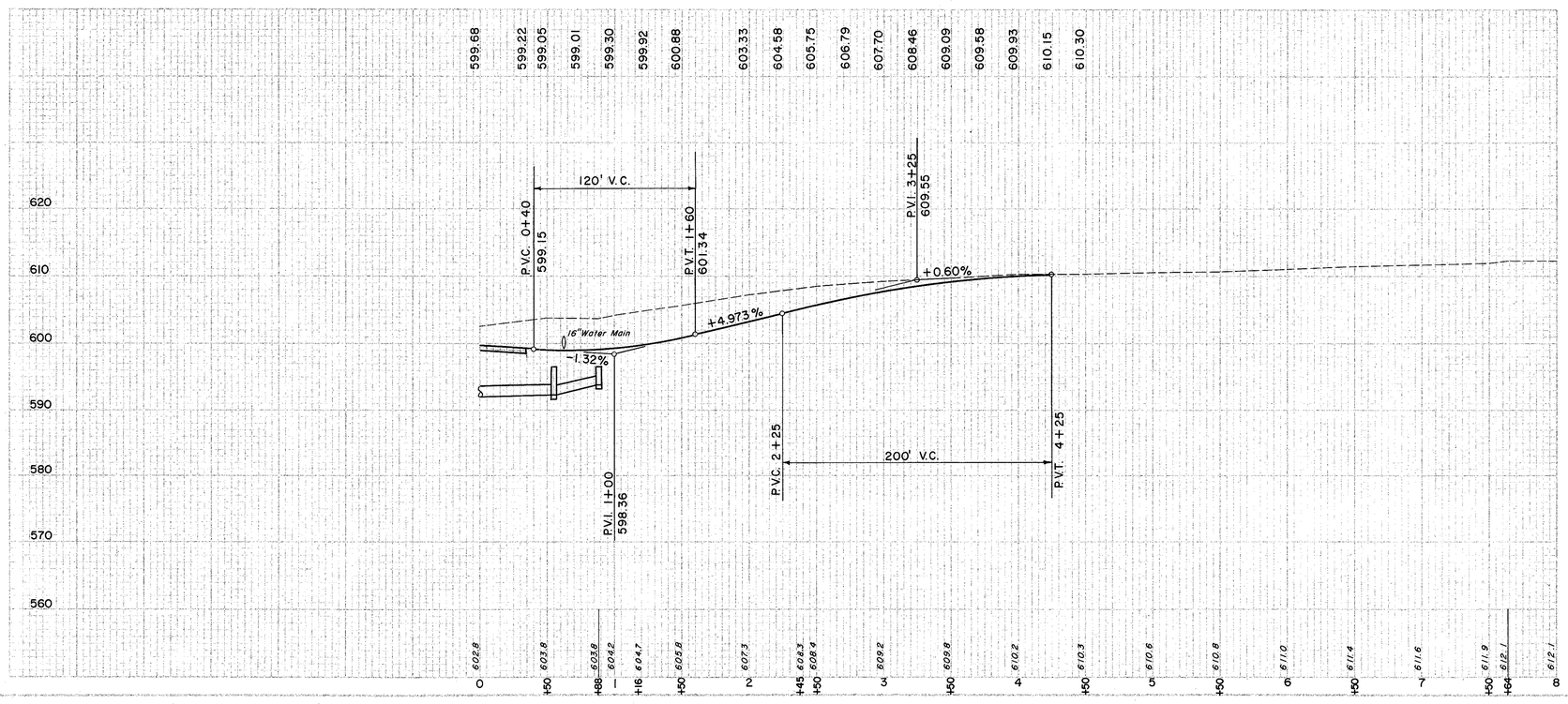


(D) DRAINAGE

REF NO.	STATION FROM	STATION TO	SIDE	I-1 15" PIPE CLASS C-1 M-64(c) L.F.	L-10 SODDING S.Y.
1-D	0+56	3+50	LT.	52	80
2-D	0+85	3+50	RT.		91
TOTAL				52	171

(P) PAVEMENT

REF NO.	STATION FROM	STATION TO	SIDE	B-19 AGGR. BASE COURSE C.Y.	I-9 STONE U-DRAIN NO.2 L.F.	I-22 SUB-BASE C.Y.	T-30 BIT. PRIME COAT GAL.	T-32 BIT. MAT'L. FOR ROAD MIX GAL.	T-32 #46 AGGR. FOR ROAD MIX C.Y.	T-32 #6 AGGR. FOR CHOKE C.Y.	T-32 #6 AGGR. FOR SEAL COAT C.Y.	T-32 BIT. MAT'L FOR SEAL COAT GAL.		
1-P	0+00	4+50	—	133	160	107	365	1003	51.1	3.7	7.3	228		
2-P	2+45		LT.	24			68	187	9.5	0.7	1.4	43		
TOTAL				157	160	107	433	1190	60.6	4.4	8.7	271		



EXCAVATION	=	2,763 C.Y.
EMBANKMENT	=	8 C.Y.
EMBANKMENT @ 20 %	=	10 C.Y.

RECONSTR. TEMPLE AVE. STA. 0+00 TO STA. 8+00

SEEDING	
END WIDTH	SQ. YDS.
86	
	475
85	
	93
54	

60 40 20 ℄ 20 40 60

R/W E.R. E.R. R/W 2:1 2:1 600

G-600.88
1+50
605.8

E.R. 600 Profile Drive Left

16" Relaid Water Main

1+16
604.7

R/W E.R. E.R. 600

G-599.30
1+00
604.2

E'work. Area To Lt. Only

E.R. E.R. E.R. 600

74'-18" I-I @ 2.26%

G-599.12
0+88
603.8

Sta. 0+94 36' Rt. (S.R.44 Sta. 98+88 72' Rt.)
Std. # 2-2-A C.B.
Grate El. 596.50
Window El. (2) 596.00
℄ 18" I-I 593.80

E.R. E. Gar. 600

74'-18" I-I @ 2.26%

G-599.05
0+50
603.8

Sta. 0+56 24' Lt. (S.R.44 Sta. 99+60 60' Rt.)
Std. # 2-2-A C.B.
Grate El. 596.50
Window El. 596.00
℄ 18" I-I 592.10

600

0+00
602.8

60 40 20 ℄ 20 40 60

END AREA		VOLUME		SEEDING	
CUT	FILL	CUT	FILL	END WIDTH	SQ. YDS.
397					
				60	
		741			347
403				65	
		164			381
333				72	
					392
				69	
403					
				76	
450					
				86	

40 20 ℄ 20

R/W E.R. E.R. R/W 3:1 3:1 610

G-609.93
4+00
610.2

R/W E.R. E.R. R/W 600

G-609.09
3+50
609.8

R/W E.R. E.R. R/W 3:1 3:1 600

G-607.70
3+00
609.2

R/W E.R. E.R. R/W 2:1 2:1 600

V.P.I. 0+14
El. 605.24
L.V.C. 12'
M= 0.16

G-605.75
2+50
608.4

V.P.I. 0+50
El. 608.3
L.V.C. 20'
M= 0.21
8.5%
2.08%
15" I-I
600

Profile Drive Left

G-605.53
2+45
608.3

Add for Drive Lt. Sta. 2+45

G-608.3
0+60
Cut 14
600
G-606.6
0+30
Cut 85
600

Cross Sections Drive Lt. Sta. 2+45

R/W E.R. E.R. R/W 600

STA. 1+50

G-603.33
2+00
607.3

STA. 1+50

40 20 ℄ 20 40 60

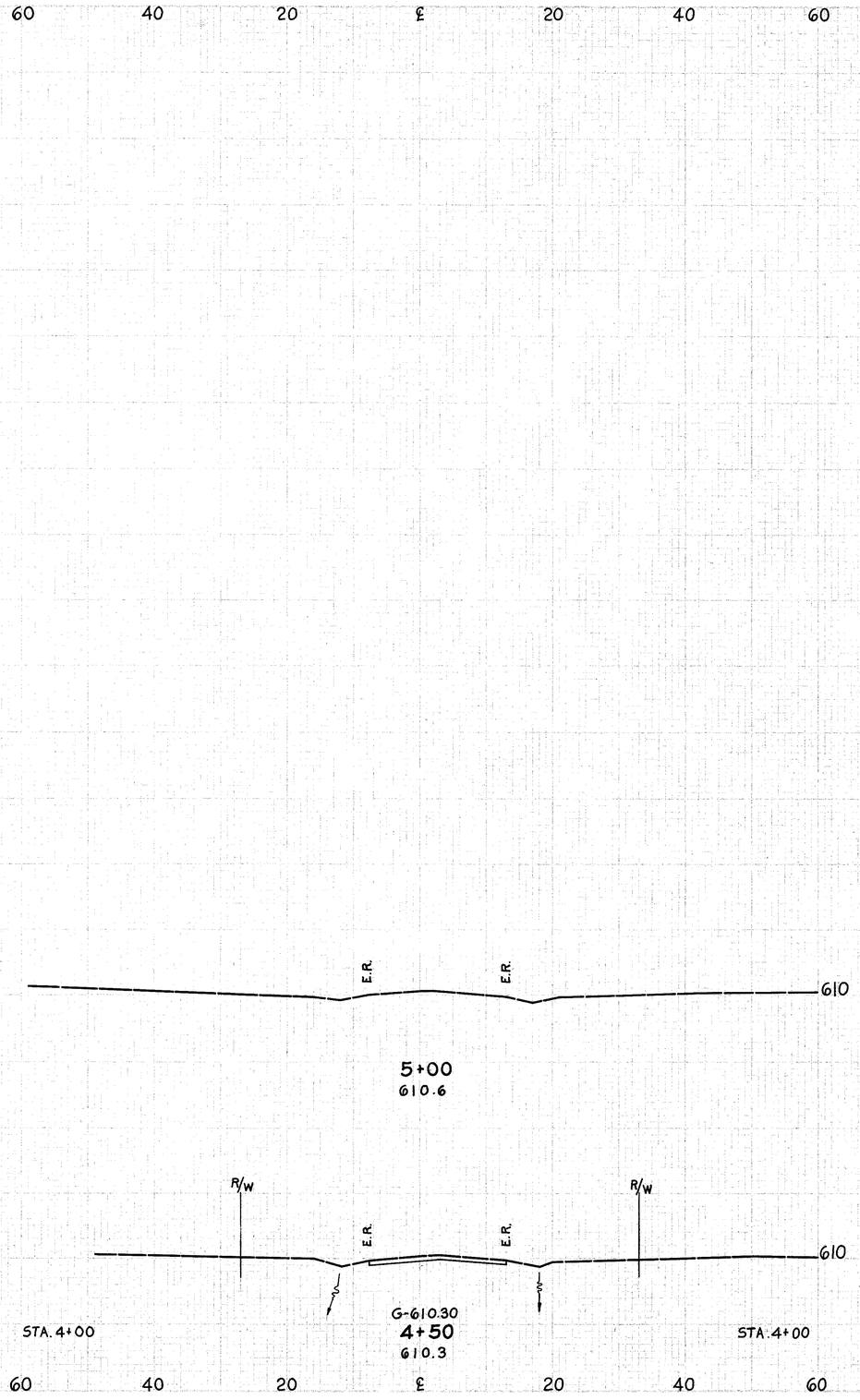
END AREA		VOLUME	
CUT	FILL	CUT	FILL
49	2		
		123	4
84	2		
		218	2
151	0		
			326
		201	
			56
			447
		282	
			629
397			

LAKE COUNTY
LAK-44-7.22

163
212

RECONSTRUCTION TEMPLE AVENUE Sta. 0+00 to 4+00

SEEDING	
END WIDTH	SQ. YDS.
60	167
0	



END AREA		VOLUME	
CUT	FILL	CUT	FILL
15	0		
		59	2
49	2		

LAKE COUNTY
LAK-44-7.22

RECONSTRUCTION TEMPLE AVENUE Sta. 4+50 to 5+00

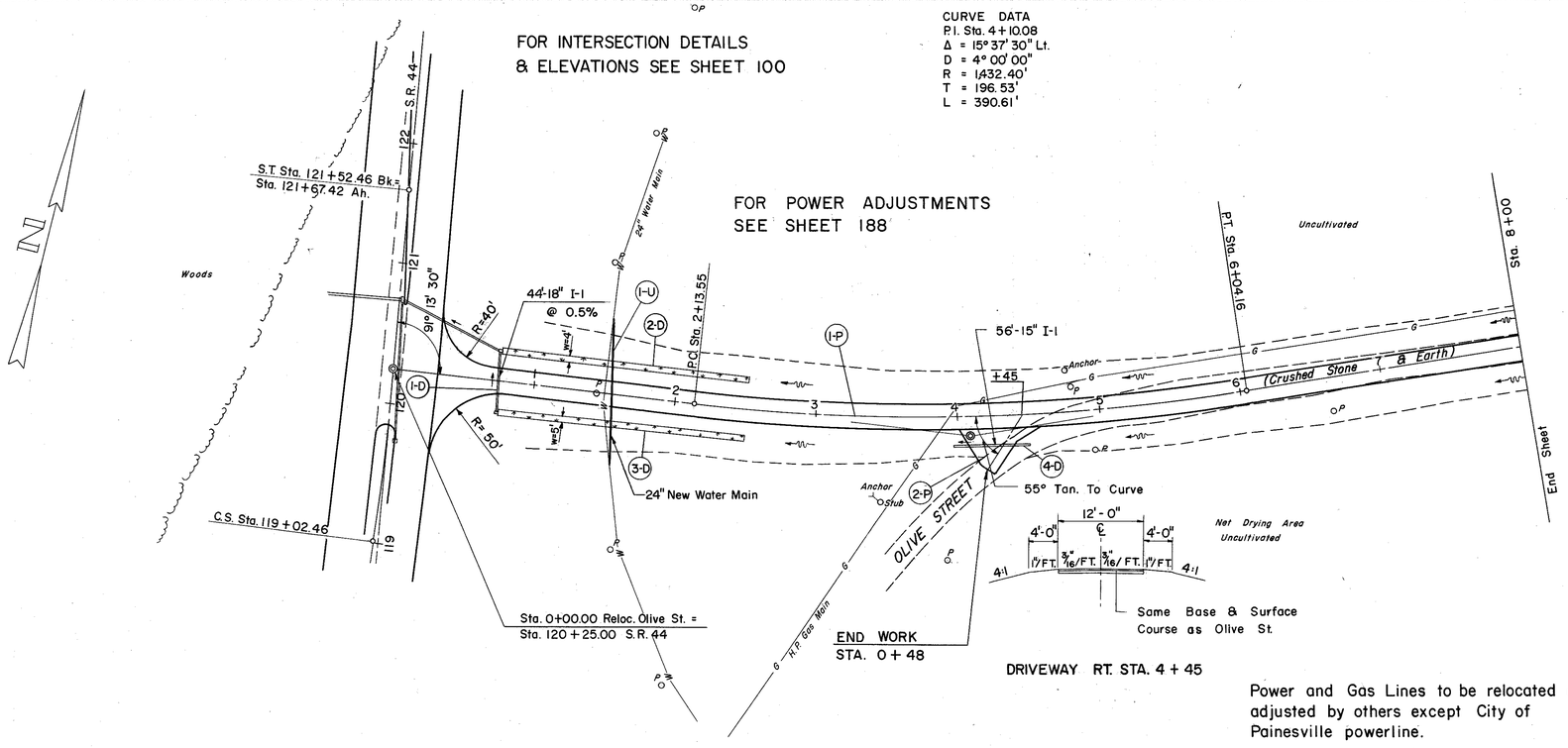
FED. HWY. DIVISION	STATE	PROJECT	
2	OHIO		

165
212

LAKE COUNTY
LAK-44-7.22

FOR INTERSECTION DETAILS
& ELEVATIONS SEE SHEET 100

CURVE DATA
P.I. Sta. 4+10.08
Δ = 15° 37' 30" Lt.
D = 4° 00' 00"
R = 1432.40'
T = 196.53'
L = 390.61'



Power and Gas Lines to be relocated or adjusted by others except City of Painesville powerline.

SUPERELEVATION TABLE

STATION	LT. EDGE	℄	RT. EDGE
0+83			
1+00	594.66	594.91	594.70
+25	595.76	596.01	595.86
+50	597.00	597.25	597.17
+75	598.19	598.44	598.42
2+00	599.27	599.52	599.61
+25	600.24	600.49	600.72
+50	601.02	601.35	601.68
+75	601.76	602.09	602.42
3+00	602.40	602.73	603.06
+25	602.91	603.24	603.57
+50	603.32	603.65	603.98
+75	603.61	603.94	604.27
4+00	603.80	604.13	604.46
+25	603.92	604.25	604.58
+50	604.05	604.38	604.71
+75	604.17	604.50	604.83
5+00	604.30	604.63	604.96
+25	604.42	604.75	605.08
+50	604.55	604.88	605.21
+75	604.67	605.00	605.32
6+00	604.88	605.13	605.32
+25	605.00	605.25	605.30
+50	605.13	605.38	605.34
+75	605.25	605.50	605.40
7+00	605.38	605.63	605.47
+25	605.50	605.75	605.52
+34	605.55	605.80	605.55

(D) DRAINAGE

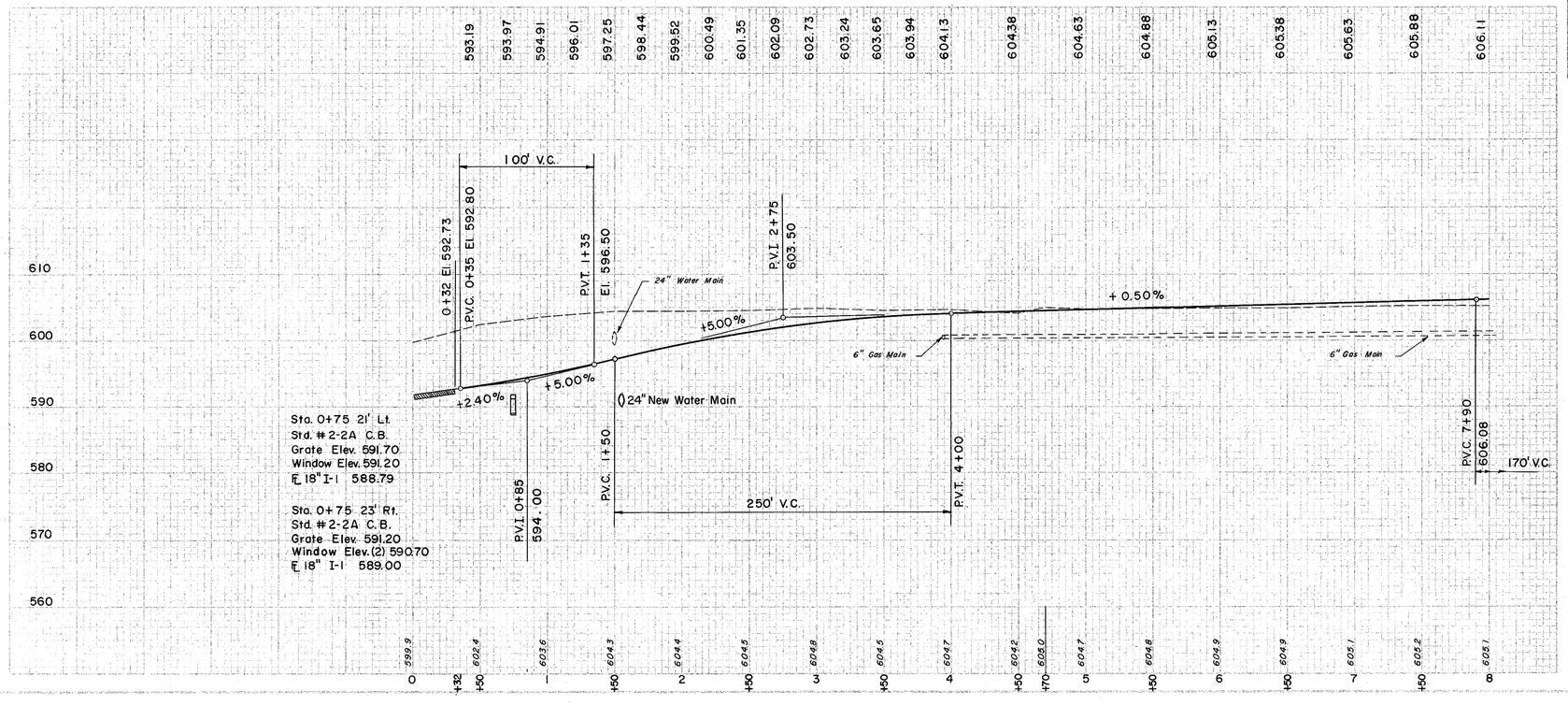
REF NO.	STATION FROM	STATION TO	SIDE	I-1 15" PIPE CLASS C-1 M-6.4(c) L.F.	I-1 18" PIPE CLASS B-1 L.F.	I-8 STD. #2-2A CATCH BASIN EA.	L-10 SODDING S.Y.
1-D	0+75		—		44	2	
2-D	0+75	2+50	LT.				74
3-D	0+75	2+50	RT.				86
4-D	3+96	4+52	RT.	56			
TOTAL				56	44	2	160

(P) PAVEMENT

REF NO.	STATION FROM	STATION TO	SIDE	B-19 AGGR. BASE COURSE C.Y.	I-9 STONE U-DRAIN NO.2 L.F.	I-22 SUB-BASE C.Y.	T-30 BIT. PRIME COAT Gal.	T-32 BIT. MAT'L. FOR ROAD MIX Gal.	T-32 #46 AGGR. FOR ROAD MIX C.Y.	T-32 #6 AGGR. FOR CHOKE C.Y.	T-32 #6 AGGR. FOR SEAL COAT C.Y.	T-32 BIT. MAT'L. FOR SEAL COAT Gal.
1-P	0+32	8+00	—	239	261	191	654	1797	91.5	6.5	13.1	408
2-P	4+45		RT.	13			39	107	5.4	0.4	0.8	24
TOTAL				252	261	191	693	1904	96.9	6.9	13.9	432

(U) UTILITIES

REF NO.	STATION FROM	STATION TO	SIDE	I-124.03 24" WATER MAIN L.F.	I-124.03 24" CAST IRON FITTINGS 1/16 BEND EA.	I-124.03 24" CAST IRON FITTINGS 1/64 BEND EA.
1-U	1+55		℄	80	4	2

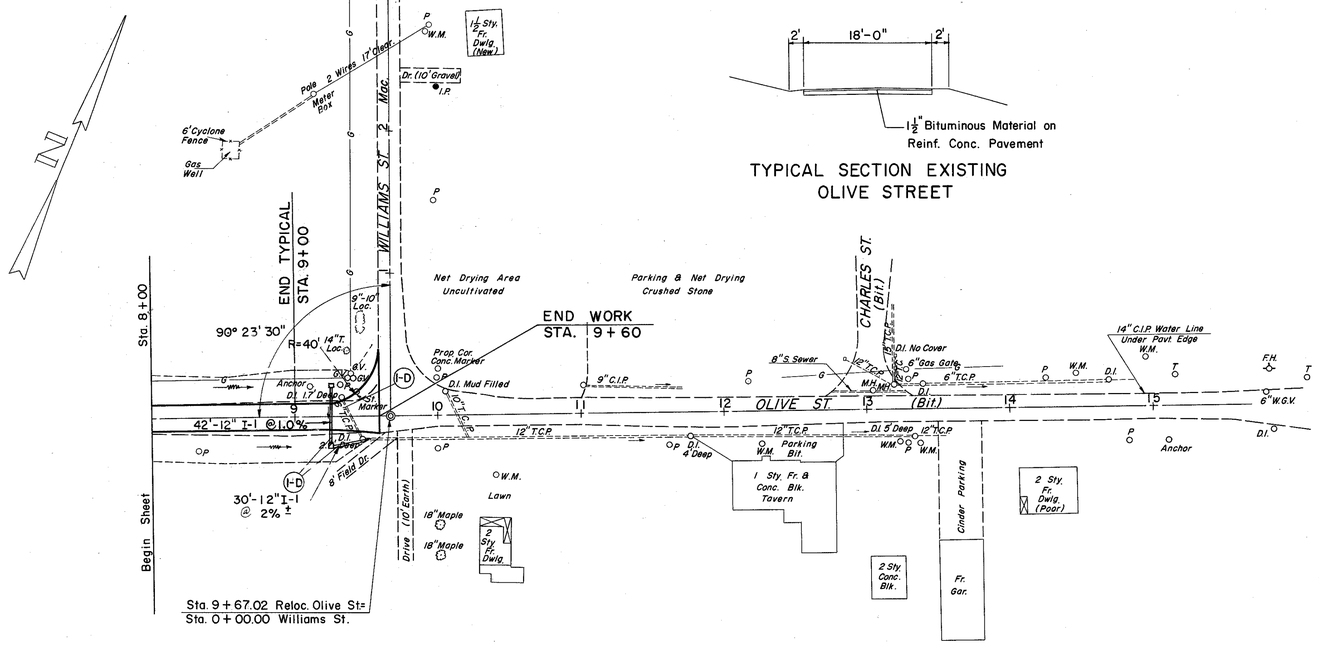


EXCAVATION	=	4,478 C.Y.
EMBANKMENT	=	71 C.Y.
EMBANKMENT x 20%	=	85 C.Y.

RELOCATION OLIVE ST. STA. 0+00 TO STA. 8+00

FED. DIV. NUMBER	STATE	PROJECT		166 212
2	OHIO			

LAKE COUNTY
LAK-44-7.22



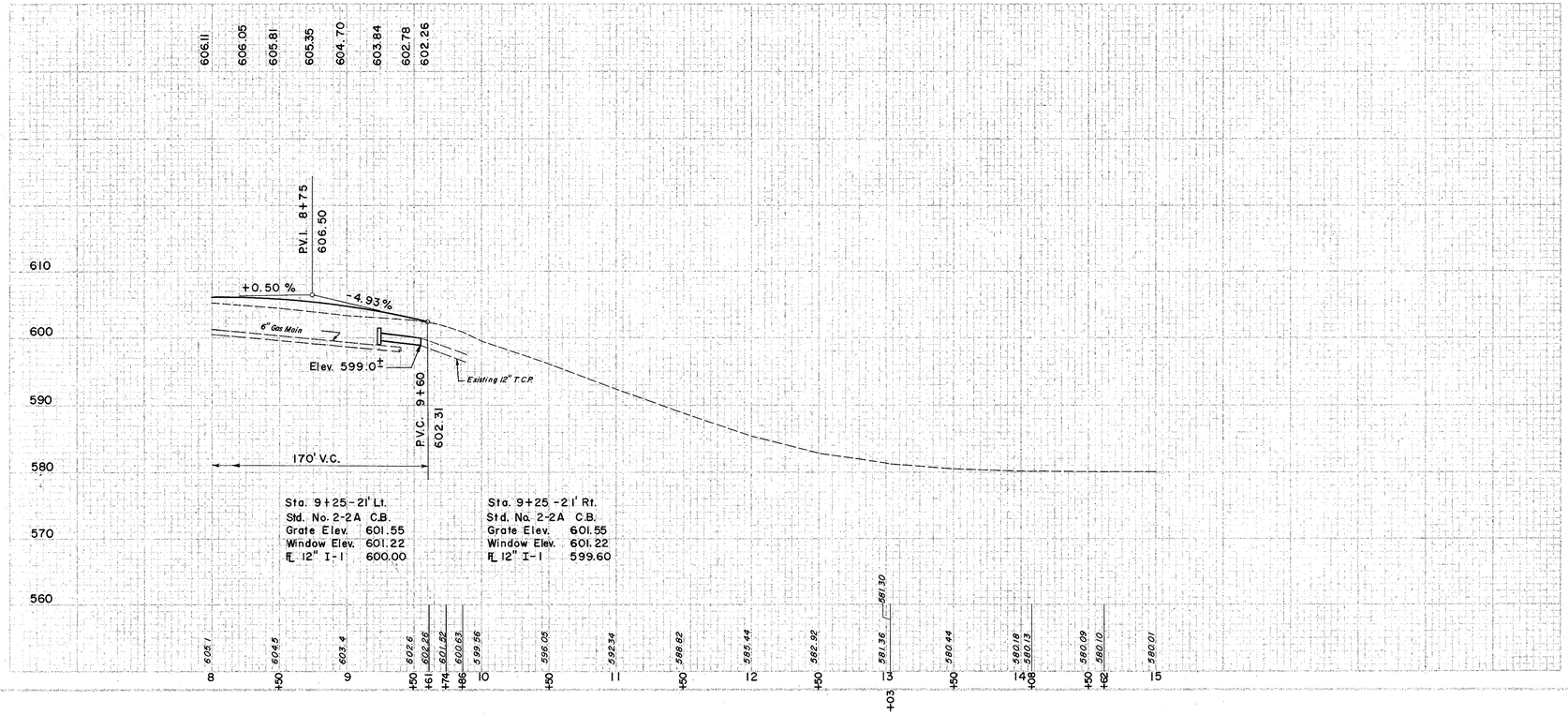
TYPICAL SECTION EXISTING OLIVE STREET

(D) DRAINAGE

REF. NO.	STATION		SIDE	E-12	I-1		I-8
				PIPE REMOVAL 15" & UNDER	12" PIPE CLASS B-1	12" PIPE CLASS E-1	STD. #2-2A CATCH BASIN
	FROM	TO		L.F.	L.F.		EA.
I-D	9+25	9+56	—	35	42	30	2

(P) PAVEMENT

REF. NO.	STATION		SIDE	B-19	I-9	I-22	T-30	T-32				
				AGGR. BASE COURSE	STONE U-DRAIN NO. 2	SUB-BASE	BIT. PRIME COAT	BIT. MAT'L FOR ROAD MIX	#46 AGGR. FOR ROAD MIX	#6 AGGR. FOR CHOKE	#6 AGGR. FOR SEAL COAT	BIT. MAT'L. FOR SEAL COAT
	FROM	TO		C.Y.	L.F.	C.Y.	GAL.	GAL.	C.Y.	C.Y	C.Y	GAL.
I-P	8+00	9+60	—	53	45	42	145	398	20.3	1.5	2.9	91



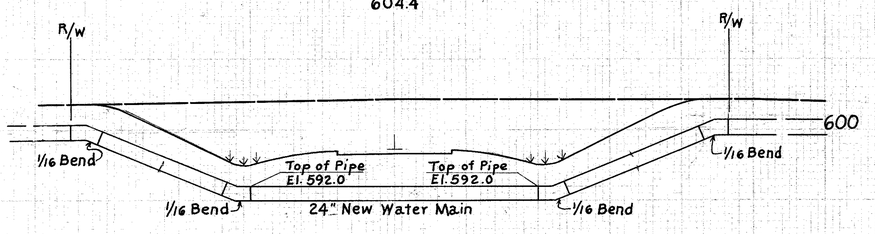
EXCAVATION	=	175 C.Y.
EMBANKMENT	=	95 C.Y.
EXCAVATION @ 20 %	=	114 C.Y.

RELOCATION OLIVE ST. STA. 8+00 TO STA. 15+00

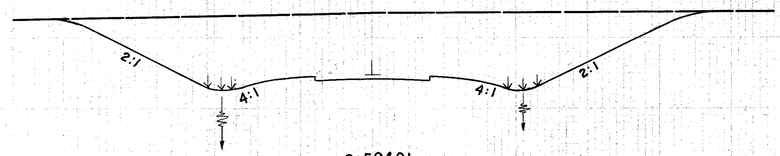
SEEDING	
END WIDTH	SQ. YDS.
80	469
89	514
96	267
96	

60 40 20 ℄ 20 40 60

G-599.52
2+00
604.4



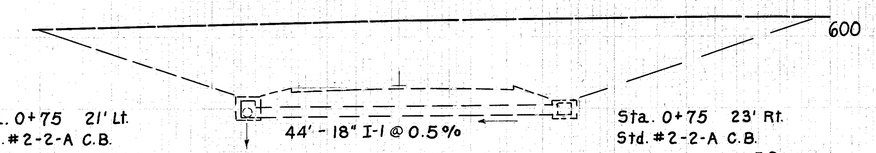
G-597.25
1+50
604.3



G-594.91
1+00
603.6

STA. 0+75
(AREA AS SHOWN ON STA. 1+00)

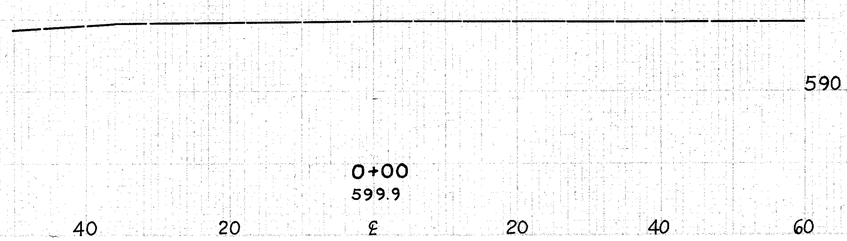
STA. 0+75
(AREA AS SHOWN ON STA. 1+00)



Sta. 0+75 21' Lt.
Std. #2-2-A C.B.
Grate El. 591.70
Window El. (1) 591.20
Ft. 18" I-1 588.79

G-593.19
0+50
602.4

Sta. 0+75 23' Rt.
Std. #2-2-A C.B.
Grate El. 591.20
Window El. (2) 590.70
Ft. 18" I-1 589.00



0+00
599.9

60 40 20 ℄ 20 40 60

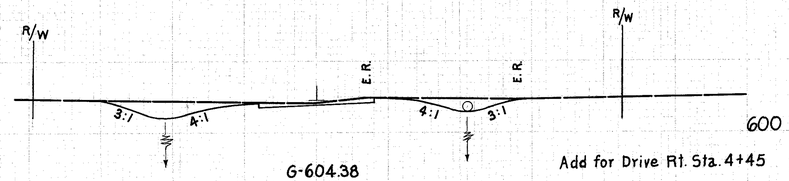
END AREA		VOLUME	
CUT	FILL	CUT	FILL
340			
		789	
512			
		1073	
647			
		599	
647			

SEEDING	
END WIDTH	SQ. YDS.
	63
	356
	65
	369
	68
	400
	76
	433
	80
	444
	80

40 20 ℄ 20

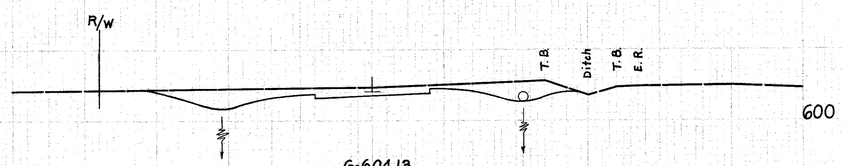
SHEET NO. OF SHEETS	STATE			167 212
2	OHIO			

LAKE COUNTY
LAK-44-7.22



G-604.38
4+50
604.2

Add for Drive Rt. Sta. 4+45



G-604.13
4+00
604.7

G-603.65
3+50
604.5

G-602.73
3+00
604.8

STA. 2+00

G-601.35
2+50
604.5

STA. 2+00

40 20 ℄ 20 40 60

EXTENSION OLIVE STREET

Sta. 0+00 to 4+50

END AREA		VOLUME	
CUT	FILL	CUT	FILL
53			
		5	
		139	
97			
		185	
103			
		262	
180			
		369	
219			
		518	
340			

NO.	DATE	REVISED	PROJECT
2		OHIO	

168
212

LAKE COUNTY
LAK-44-7.22

SEEDING	
56	
	314
57	
	319
58	
	328
60	
	344
64	
	210
62	
	139
63	

60 40 20 ℄ 20 40 60

R/W T.B. Ditch E.R. E.R. Ditch T.B. R/W
603.50
G-605.63
7+00
605.1
600

R/W T.B. Ditch E.R. E.R. Ditch T.B R/W
603.40
G-605.38
6+50
604.9
600

R/W T.B. Ditch E.R. E.R. T.B. Ditch T.B. R/W
603.30
G-605.13
6+00
604.9
600

R/W T.B. Ditch E.R. E.R. Ditch T.B. R/W
603.20
G-604.88
5+50
604.8
600

R/W T.B. Ditch E.R. E.R. Ditch T.B R/W
603.05
G-604.63
5+00
604.7
600

R/W T.B. Ditch T.B. E.R. E.R. Ditch T.B R/W
G-604.48
4+70
605.0
600

STA. 4+50 STA. 4+50

END AREA		VOLUME		SEEDING	
CUT	FILL	CUT	FILL	END WIDTH	SQ. YDS.
43	5				
		77	8		
40	4			0	
		64	9		136
29	6				49
		68	7		
44	2				51
		96	3		
60	1				51
		72	1		
70	0				53
53		46			303
		56			

40 20 ℄ 20

R/W E.Drive E.Drive R/W
G-602.26
9+61
602.26
600

R/W E.R. E.R. E.Drive E.Drive T.B. R/W
G-602.78
9+50
602.6
600

STA. 9+27

R/W T.B. Ditch E.R. E.R. Ditch E.R. R/W
42'-12" I-1 @ 1%
600

Sta. 9+25 21' Lt.
Std. # 2-2-A C.B.
Grate El. 601.55
Window El. 601.22
FL 12" I-1 600.00

Sta. 9+25 21' Rt.
Std. # 2-2-A C.B.
Grate El. 601.55
Window El. 601.22
FL 12" I-1 599.60

G-604.70
9+00
603.4

R/W T.B. Ditch E.R. E.R. E.R. Ditch T.B. R/W
600

G-605.81
8+50
604.5

R/W T.B. Ditch E.R. E.R. E.R. Ditch T.B. R/W
600

G-606.11
8+00
605.1

R/W T.B. Ditch E.R. E.R. E.R. Ditch T.B. R/W
603.58
600

G-605.88
7+50
605.2

STA. 7+00 STA. 7+00

40 20 ℄ 20 40 60

END AREA		VOLUME	
CUT	FILL	CUT	FILL
34			
		11	
21			
		63	
	0		11
47	21		
		62	40
20	22		
		39	44
22	26		
		48	31
30	8		
		68	12
43	5		

EXTENSION OLIVE STREET Sta. 4+70 to 9+61

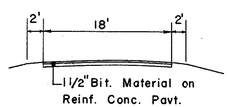
FED. RD. DIVISION	STATE	PROJECT		169
2	OHIO			212

LAKE COUNTY

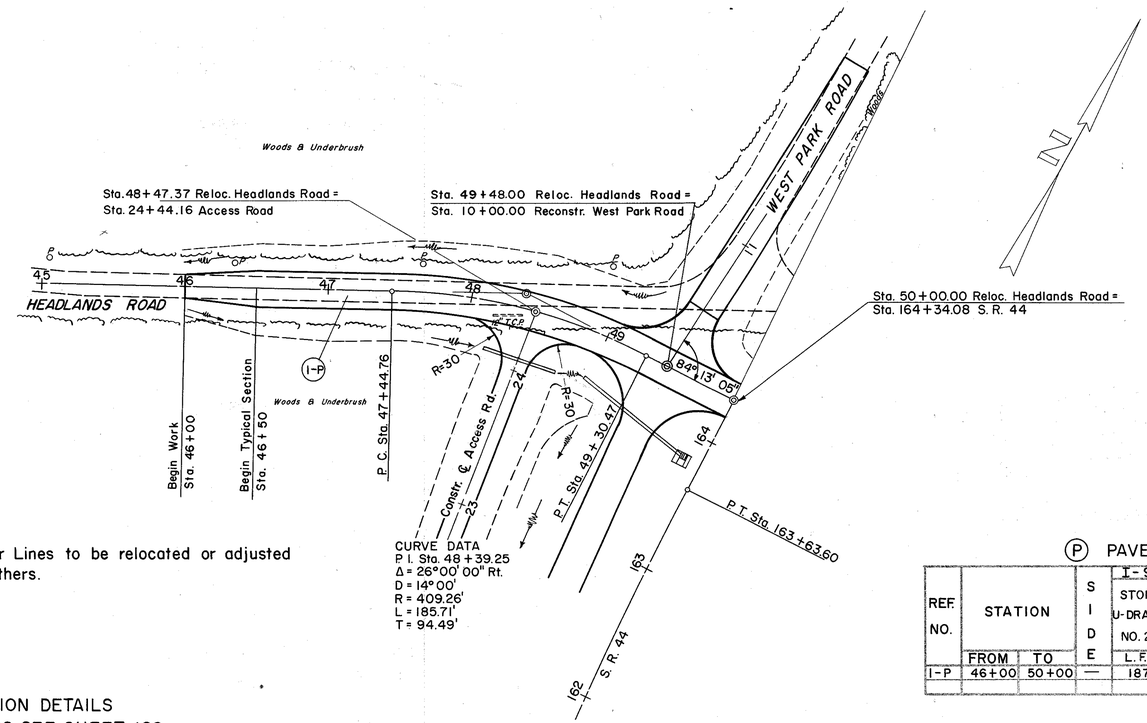
LAK-44-7.22

SUPERELEVATION TABLE

STATION	LT. EDGE	℄	RT. EDGE
46+26.76	578.91	579.10	578.91
+50	579.04	579.17	578.98
+75	579.22	579.29	579.10
47	579.46	579.47	579.28
+25	579.79	579.66	579.47
+50	580.13	579.86	579.59
+75	580.47	580.06	579.65
48	580.74	580.26	579.78
+25	580.90	580.42	579.94
+50	581.02	580.54	580.06
+75	581.08	580.60	580.12
49	581.01	580.60	580.19
+25	580.82	580.55	580.28
+48	580.59	580.45	580.31



TYPICAL SECTION
EXISTING HEADLANDS ROAD



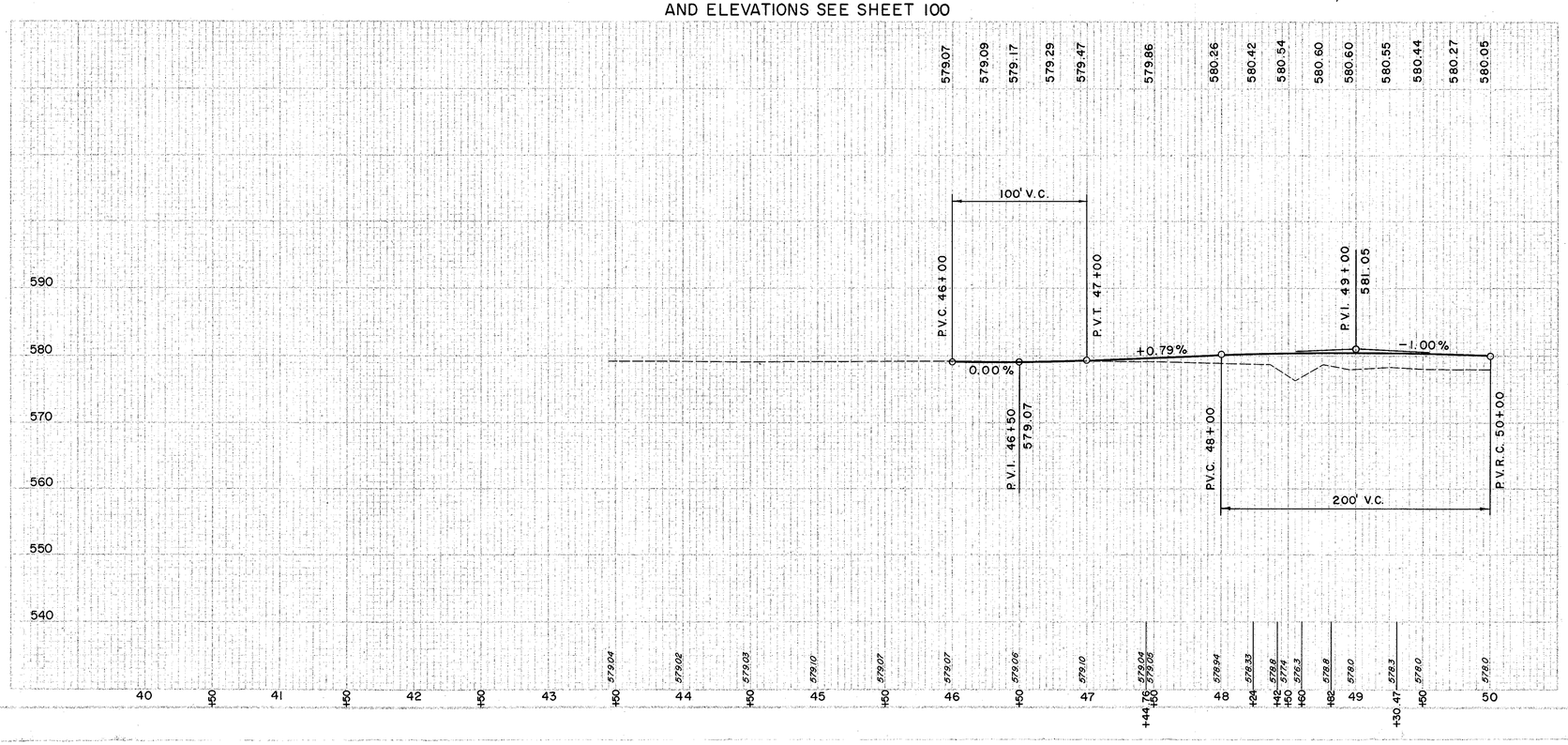
Power Lines to be relocated or adjusted by others.

CURVE DATA
P. I. Sta. 48+39.25
Δ = 26°00' 00" Rt.
D = 14° 00'
R = 409.26'
L = 185.71'
T = 94.49'

FOR INTERSECTION DETAILS
AND ELEVATIONS SEE SHEET 100

Ⓟ PAVEMENT

REF. NO.	STATION FROM	STATION TO	SIDE	I-9 STONE U-DRAIN NO. 2	I-18 STAB. CR. AGGR.	I-22 SUBBASE	T-71 REINF. PORT. CEM. CONC. PAVT. 9"	E-8 PAVT. REMOVAL
				L.F.	C.Y.	C.Y.	S.Y.	S.Y.
I-P	46+00	50+00	—	187	40	174	1045	830



EXCAVATION	=	315 C.Y.
EMBANKMENT	=	635 C.Y.
EMBANKMENT + 20%	=	762 C.Y.

RELOC. HEADLANDS ROAD STA. 40 + 00 TO STA. 50 + 00

FED. RD. DIV.NO.	STATE	PROJECT		
2	OHIO			

170
212

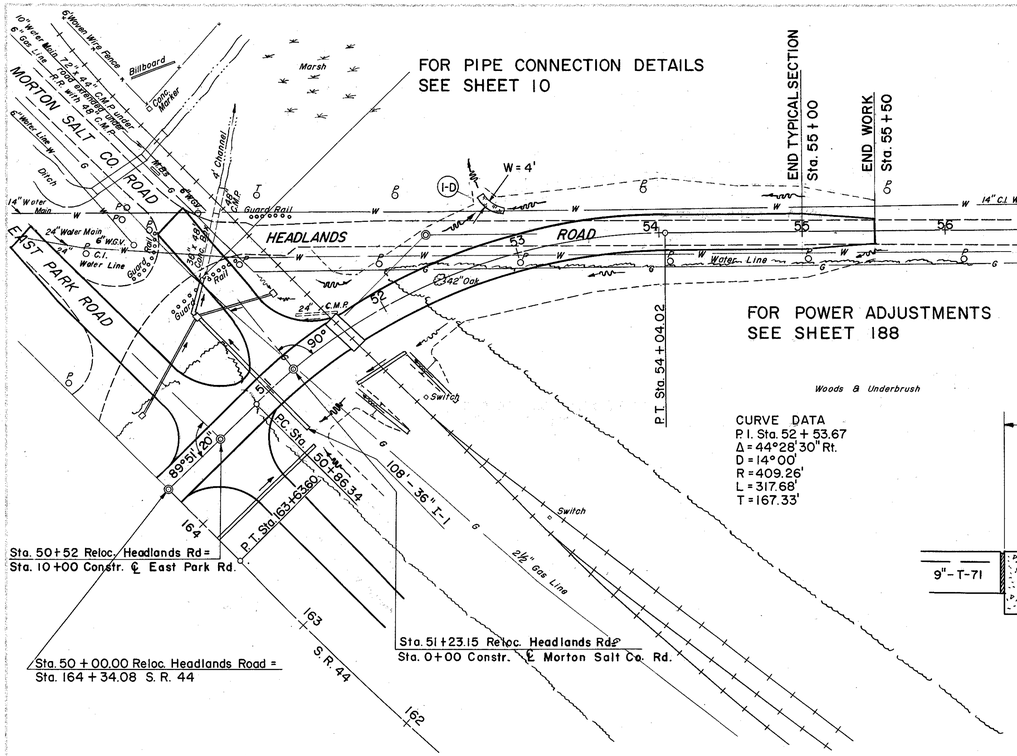
LAKE COUNTY
LAK-44-7.22

FOR PIPE CONNECTION DETAILS
SEE SHEET 10

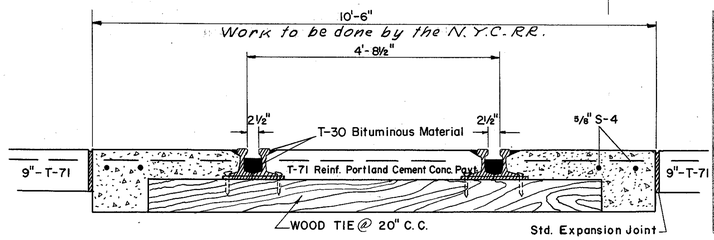
FOR INTERSECTION DETAILS
AND ELEVATIONS SEE SHEET 100

FOR POWER ADJUSTMENTS
SEE SHEET 188

Power, Telephone and Gas Lines to be relocated or adjusted by others except City of Painesville powerline.



CURVE DATA
P.I. Sta. 52+53.67
Δ = 44°28'30" Rt.
D = 14°00'
R = 409.26'
L = 317.68'
T = 167.33'



TYPICAL SECTION CONCRETE GRADE CROSSING

(The crown shall be worked out of the pavement on each side of the railroad crossing in accordance with the Superelevation Table by raising the edge of the pavement to meet the rail elevation.)

The work required to construct the new grade crossing and the removal of the existing crossing when no longer needed to maintain traffic, will be done by the New York Central Railroad Co.

SUPERELEVATION TABLE

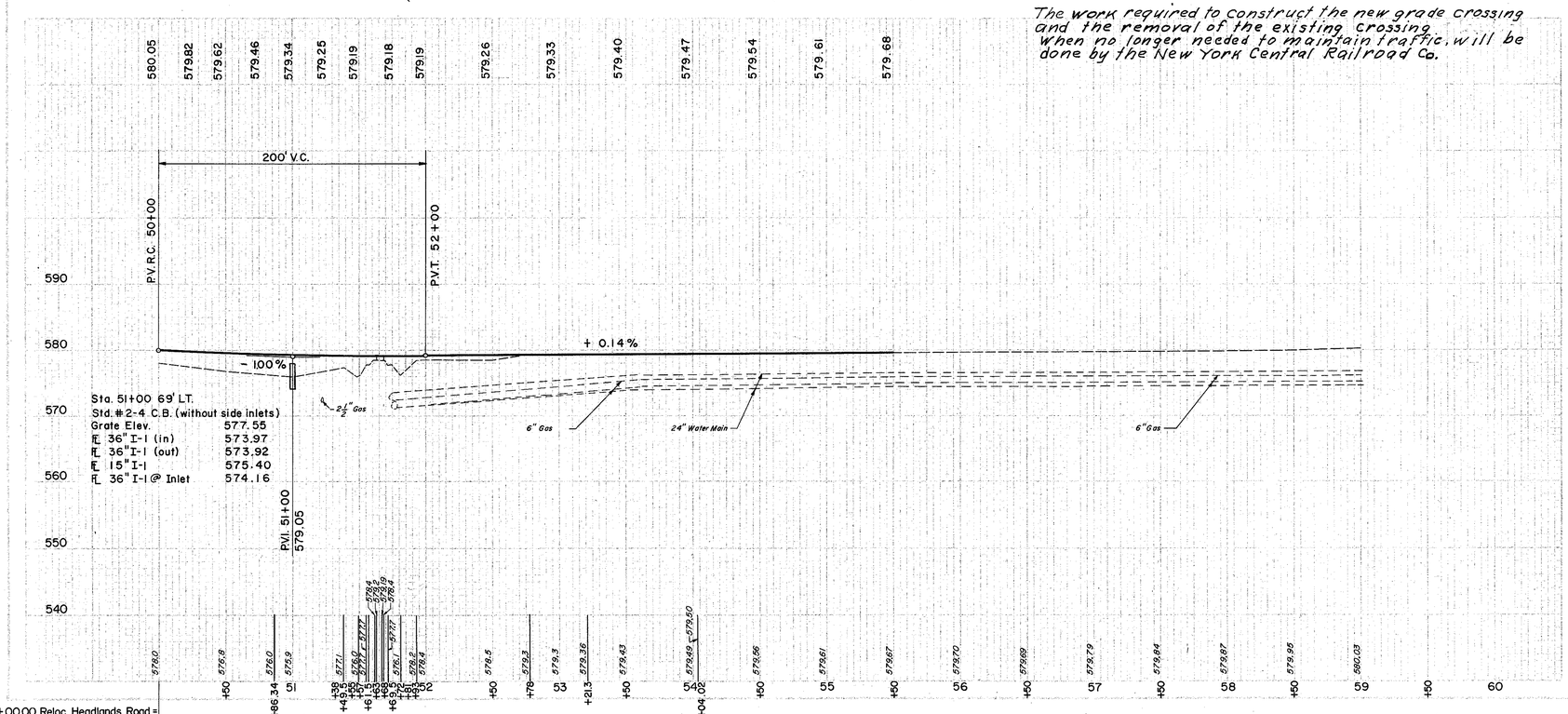
STATION	LT. EDGE	℄	RT. EDGE
52 +00	579.33	579.19	579.05
+25	579.52	579.23	578.94
+50	579.69	579.26	578.83
+75	579.78	579.30	578.82
53 +00	579.81	579.33	578.85
+25	579.85	579.37	578.89
+50	579.88	579.40	578.92
+75	579.85	579.44	579.03
54 +00	579.73	579.47	579.21
+25	579.63	579.51	579.32
+50	579.53	579.54	579.35
+75	579.51	579.58	579.39
55 +00	579.47	579.61	579.42
+22	579.45	579.64	579.45

(D) DRAINAGE

REF. NO.	STATION FROM	STATION TO	SIDE	L-10 SODDING S.Y.
I-D	52+90	53+00	LT.	8

(P) PAVEMENT

REF. NO.	STATION FROM	STATION TO	SIDE	I-9 STONE U-DRAIN NO. 2 L.F.	I-18 STAB. CRUSH. AGGR. 5" C.Y.	I-22 SUBBASE C.Y.	T-71 REINF. PORT. CEM. CONC. PAVT. 9" S.Y.	E-8 PAVT. REMOVAL S.Y.
I-P	50+00	55+50	–	242	65	241	1445	752



EXCAVATION	1,029 C.Y.
EMBANKMENT	918 C.Y.
EMBANKMENT 20 %	1,102 C.Y.

RELOC. HEADLANDS ROAD STA. 50 + 00 TO STA. 60 + 00

SEEDING	
END WIDTH	SQ. YDS.
56	
	300
52	
	272
46	
	128
0	

60 40 20 ℄ 20 40 60

R/W E.P. E.P. R/W 577.1 576.4 570

G-579.86
47+50
579.05

E.P. E.P. 570

47+44.76
579.04

R/W E.P. E.P. R/W 577.0 576.5 570

G-579.47
47+00
579.10

R/W E.P. E.P. R/W 576.9 576.6 570

G-579.17
46+50
579.06

R/W E.P. E.P. R/W 576.8 576.7± 570

G-579.07
46+00
579.07

60 40 20 ℄ 20 40 60

END AREA		VOLUME		SEEDING	
CUT	FILL	CUT	FILL	END WIDTH	SQ. YDS.
23	42				
				68	
		48	62		
29	25				
		60	42		
					358
36	20				
		45	19		
13	0			61	
					325
				56	

40 20 ℄ 20

E.P. E.P. 570

48+60
576.3
℄ Ditch

R/W E.P. E.P. R/W 577.3 576.2 570

G-580.54
48+50
577.4

Sta. 24+00 Access Road

E.P. E.P. 570

G-580.51
48+42
578.8

E.P. 570

48+24
578.93 Profile Field Drive

R/W E.P. E.P. R/W 577.2 576.3 570

G-580.26
48+00
578.94

STA. 47+50 STA. 47+50

40 20 ℄ 20 40 60

END AREA		VOLUME	
CUT	FILL	CUT	FILL
18	66		
		28	114
12	57		
		32	92
23	42		

LAKE COUNTY
LAK-44-7.22

171
212

RELOCATION HEADLANDS ROAD Sta. 46+00 to 48+60

SEEDING	
END WIDTH	SQ. YDS.
36	
	100
36	
48	
	160
48	
72	
	142
70	
	245
68	

60 40 20 ℄ 20 40 60

E'work Area To Lt. Only

577.8

570

G-580.05
50+00
578.0

STA. 49+75 AHEAD
1' Lt. Sta. 10+50
Reconstr. W. Park Road

E'work. Area To Rt. Only

E'work. Area To Lt. Only

48' Lt. Sta. 164+00
S.R. 44

E.P. E.P.

570

G-58044
49+50
578.0

E.P. E.P.

570

STA. 49+30 BACK

49+30.47
578.3

R/W

AHEAD

BACK

Use Full Area Back
Use Area Lt. Of Line Ahead

E.P. E.P.

577.4

576.1

AHEAD

BACK

570

G-580.60
49+00
578.0

R/W

E.P. E.P.

576.13

570

G-580.60
48+82
578.8

STA. 48+50

STA. 48+50

60 40 20 ℄ 20 40 60

END AREA		VOLUME		SEEDING	
CUT	FILL	CUT	FILL	END WIDTH	SQ. YDS.
	2		41		
	12		81		
	11		47		
	30		109		
			48		
	21		71		
	42		71		
					133
	27		43		
	38		58		
	33		73		
					140
	18		66		

40 20 ℄ 20

570

51+49.5
576.0
Profile Along Ditch

570

51+38
577.1

E'work. Area To Rt. Only

E'work. Area To Lt. Only

108'-36" I-1 @ 0.2%

570

Sta. 51+00 69' Lt.
Std. #2-4 C.B. (with outside Inlets)
Grate Elev. 577.55
℄ 36" I-1 (in) 573.97
℄ 36" I-1 (out) 573.92
℄ 15" I-1 575.40

G-579.34
51+00
575.9

Sta. 51+00 -39' Rt.
℄ 36" I-1 574.16

STA. 50+75 AHEAD

570

50+86.34
576.0

1' Lt. Sta. 10+50
Reconstr. E. Park Road

50' Rt. Sta. 164+00
S.R. 44

STA. 50+35 BACK

570

G-579.62
50+50
576.8

STA. 50+00

STA. 50+00

40 20 ℄ 20 40 60

END AREA		VOLUME	
CUT	FILL	CUT	FILL
	206		
	319		
	139		
	167		
	2		41

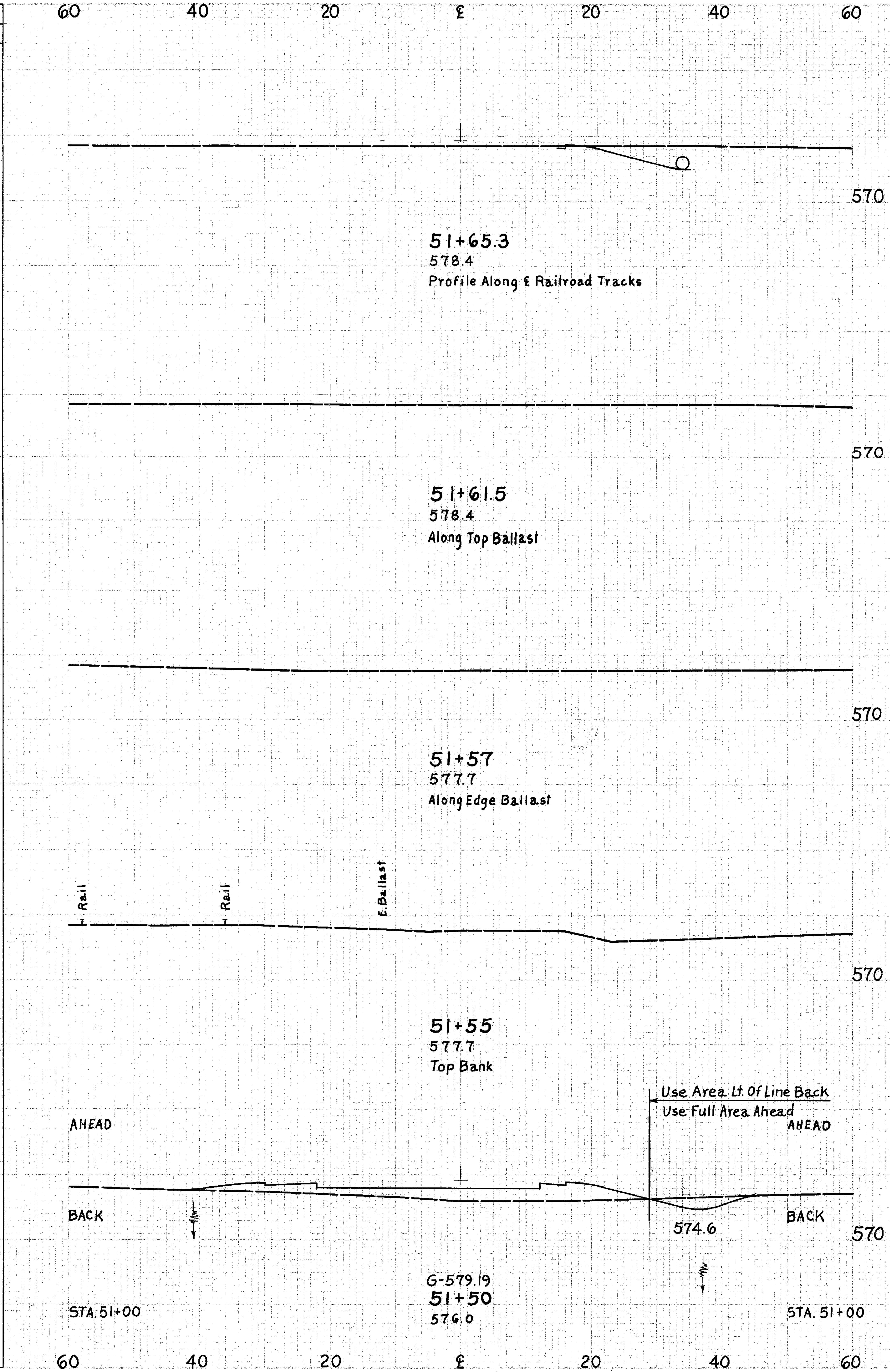
STATE	ROUTE	SHEET NO.	TOTAL SHEETS
OHIO			172 212

LAKE COUNTY
LAK-44-7.22

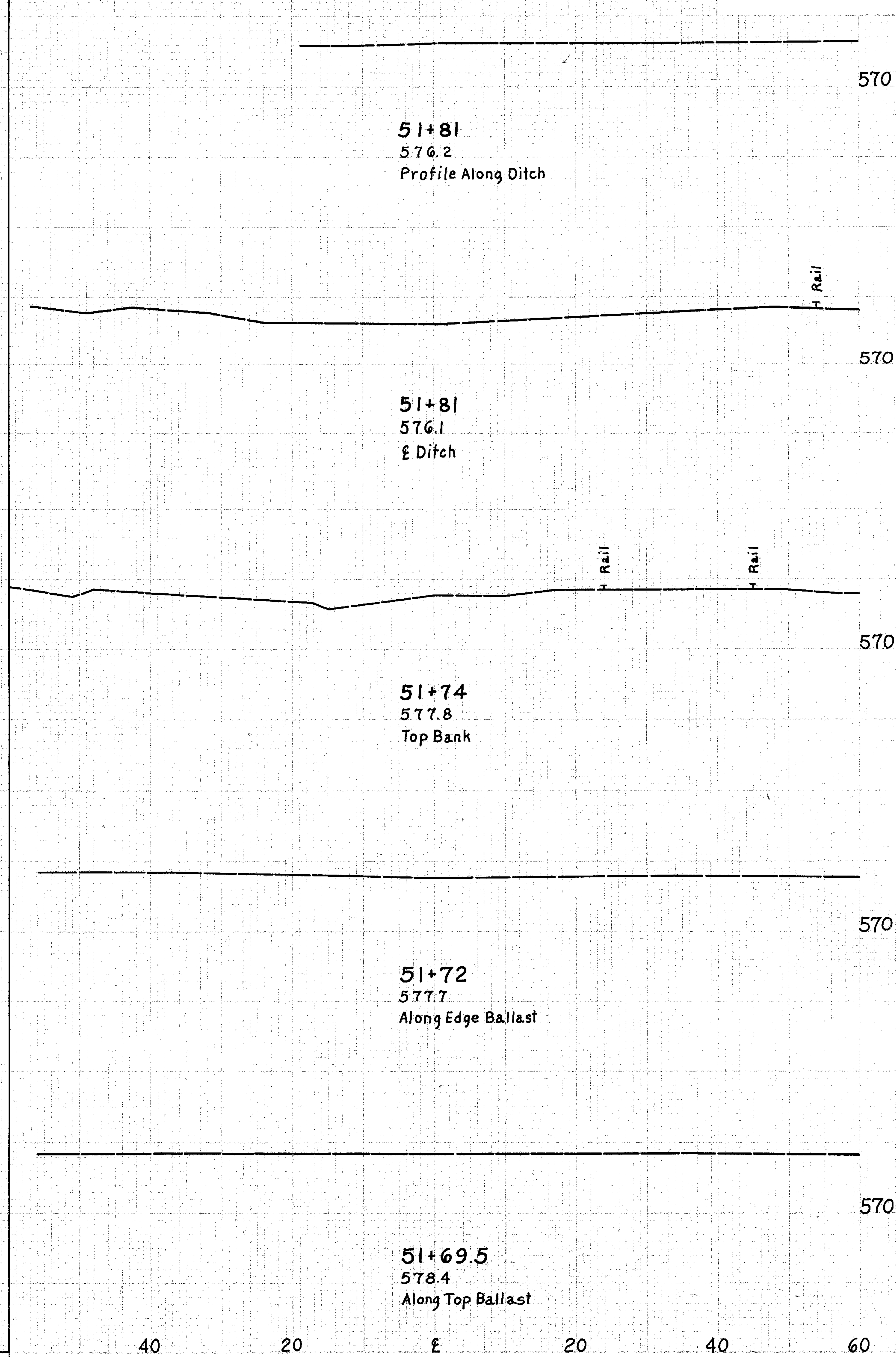
RELOCATION HEADLANDS ROAD Sta. 48+82 to 51+49.5

LAKE COUNTY
LAK-44-7.22

SEEDING	
END WIDTH	SQ. YDS.
58	
33	
	225
48	



END AREA		VOLUME	
CUT	FILL	CUT	FILL
18	100		
	100		
			283
	206		



SEEDING	
END WIDTH	SQ. YDS.
72	
	386
67	
	347
58	

60 40 20 ℄ 20 40 60

E.P. E.P. 4:1 570

52+90
579.7

E.P. E.P. 570

52+78
579.3
Top Bank

R/W R/W E.P. E.P. 3:1 577.4 576.6 570

G-579.26
52+50
578.5

E.P. 577.8 574.9 3:1 570

G-579.19
52+00
578.4

E.P. 570

51+93
578.2
Top Bank

STA. 51+50 STA. 51+50

60 40 20 ℄ 20 40 60

END AREA		VOLUME	
CUT	FILL	CUT	FILL
83	7		
		149	9
78	3		
		89	95
18	100		

SEEDING	
END WIDTH	SQ. YDS.
67	
	367
65	
	367
78	
	386
72	

40 20 ℄ 20

E.P. E.P. 570

54+04.02
579.50

R/W R/W E.P. E.P. 3:1 4:1 577.6 570

G-579.47
54+00
579.49

R/W R/W E.P. E.P. 3:1 4:1 577.4 576.75 570

G-579.40
53+50
579.43

Edge Marsh E.P. E.P. 570

53+21.3
579.36
Edge Pavement

R/W R/W E.P. E.P. 3:1 4:1 577.2 576.68 570

G-579.33
53+00
579.3

STA. 52+50 STA. 52+50

40 20 ℄ 20 40 60

END AREA		VOLUME	
CUT	FILL	CUT	FILL
80	7		
		159	10
92	4		
		178	6
100	2		
		169	8
83	7		

FED. AID PROJECT	DATE	PROJECT		SHEET NO.	TOTAL SHEETS
2	OHIO			174	212

LAKE COUNTY
LAK-44-7.22

RELOCATION HEADLANDS ROAD Sta. 51+93 to 54+04.02

SEEDING	
END WIDTH	SQ. YDS.
0	
139	
50	
294	
56	
342	
67	

60 40 20 ℄ 20 40 60

E.P. E.P.

570

56+00
579.70

R/W R/W E.P. E.P.

570

G-579.68
55+50
579.67

R/W R/W E.P. E.P. 3:1 4:1 4:1 3:1 578.0 577.25

570

G-579.61
55+00
579.61

R/W R/W E.P. E.P. 4:1 3:1 577.8

570

G-579.54
54+50
579.56

STA. 54+00 STA. 54+00

60 40 20 ℄ 20 40 60

END AREA		VOLUME	
CUT	FILL	CUT	FILL
14	0		
		50	4
40	4		
		99	7
67	4		
		136	10
80	7		

FED. AID PROJECT	STATE	NUMBER	
2	ILL.		

175
212

LAKE COUNTY
LAK-44-7.22

RELOCATION HEADLANDS ROAD Sta. 54+50 to 56+00

SEEDING	
END WIDTH	50. YDS.
31	
103	
57	
185	
58	

60 40 20 ℄ 20 40 60

E.P. E.P. E.P. 2:1 3:1 578.0 577.85 E.P.

570

G-580.15
11+00
579.10

E.P.

570

10+90.5
578.0
Top Bank

E.P.

570

10+84.5
576.2
℄ Ditch

E'work. Area To Lt. Only

E.P. 2:1 3:1 577.94 ℄ 578.3

570

G-580.17
10+79
578.4
Top Bank

E'work. Area To Lt. Only

℄ 578.45

78' - 15" I-1 @ 0.3%

570

Sta. 10+50 26' Lt.
Std. # 2-2-B C.B.
Grate El. 577.6
℄ 15" I-1 575.63

G-580.08
10+50
577.6

60 40 20 ℄ 20 40 60

END AREA		VOLUME		SEEDING	
CUT	FILL	CUT	FILL	END WIDTH	50. YDS.
0	8				
56					
135	0				
148	119				
141	43				
206					
31					

40 20 ℄ 20

E.P. E.P.

570

12+50
579.55

Limit Of Work
Sta. 12+00

E.P. E.P.

570

G-579.69
12+00
579.69

End Typical Section
Sta. 11+50

E.P. E.P. 2:1 3:1 578.2 577.68

570

G-579.93
11+50
579.68

STA. 11+00

STA. 11+00

40 20 ℄ 20 40 60

END AREA		VOLUME	
CUT	FILL	CUT	FILL
9			
30			
23	0		
21	7		
0	8		

LAKE COUNTY
LAK-44-7.22

176
212

RECONSTR. EAST PARK ROAD Sta. 10+50 to 12+50

SEEDING	
END WIDTH	SQ. YDS.
43	
	275
56	
	93
56	

60 40 20 ℄ 20 40 60

E.P. E.P. 3:1 2:1

577.6 578.2

570

G-580.72
11+00
579.23

E.P. E.P. 3:1

577.5 578.0

570

G-580.87
10+50
578.98

STA. 10+35
(AREA AS SHOW ON STA. 10+50)

STA. 10+35
(AREA AS SHOWN ON STA. 10+50)

E.P. E.P.

570

10+45
578.8
Top Bank

E.P. E.P.

570

G-580.80
10+38.5
576.3
℄ Ditch

E.P. E.P.

570

10+30
578.9
Top Bank

60 40 20 ℄ 20 40 60

END AREA		VOLUME		SEEDING	
CUT	FILL	CUT	FILL	END WIDTH	SQ. YDS.
4	40				
		12	103		
9	71				0
		5	39		
9	71				114
					41
					225
					40
					231
					43

40 20 ℄ 20

LAKE COUNTY
LAK- 44-7.22

177
212

E.P. E.P.

570

G-579.57
12+50
579.57

E.P. E.P.

577.8 578.4

570

G-579.72
12+00
579.55

E.P. E.P.

570

11+60.17
579.53

E.P. E.P.

577.7 578.3

570

G-580.15
11+50
579.51

STA. 11+00

STA. 11+00

40 20 ℄ 20 40 60

END AREA		VOLUME	
CUT	FILL	CUT	FILL
		10	0
		20	7
		12	8
		15	18
		4	11
		7	47
4	40		

RECONSTR. WEST PARK ROAD Sta. 10+30 to 12+50

SEEDING	
END WIDTH	S.Y. YDS.
0	
	139
38	
	73
31	
	17
31	

60 40 20 ℄ 20 40 60

Limit Of Work
Sta. 1+35

E.R. E.R.

G-579.82
1+35.26
579.82

End Typical Section Sta. 1+00
Taper Shoulders & Pavement
To Meet Existing At Sta. 1+35

Concrete Collar Conn.
(See Detail)

E.R. Rail Rail E.R.

Existing 3'x4' Conc. Box

30'-36" I-I
@ 0.20%

G-579.70
1+00
579.22

STA. 0+85

E'work Area To Rt. Only

Rail Rail

54'-15" I-I
@ 0.30%

Sta. 0+69 25' Lt.
Std. # 2-4 C.B. (Without Side Inlets)
℄ 36" I-I (In) 573.97
℄ 36" I-I (Out) 573.92
℄ 15" I-I 575.40

G-579.59
0+69.26
575.1
℄ Ditch

E'work Area To Rt. Only
℄ 578.5

Rail Rail

54'-15" I-I
@ 0.30%

G-579.52
0+50
576.3

Sta. 0+50 22' Rt.
Std. # 2-2-B C.B.
Grate El. 577.50
℄ 15" I-I 575.55

STA. 0+45
(AREA AS SHOWN ON STA. 0+50)

STA. 0+45
(AREA AS SHOWN ON STA. 0+50)

Rail Rail

0+00
576.5

END AREA		VOLUME	
CUT	FILL	CUT	FILL
22			
			21
10			
		0	7
			23
2	77		
		1	76
1	138		
		0	26
1	138		

570

60 40 20 ℄ 20 40 60

40 20 ℄ 20

178
212

LAKE COUNTY
LAK-44-7.22

E.R. E.R.

3+00
580.31

E.R. E.R.

2+50
580.17

E.R. E.R.

2+00
580.02

E.R. E.R.

1+50
579.83

580

580

580

580

40 20 ℄ 20 40 60

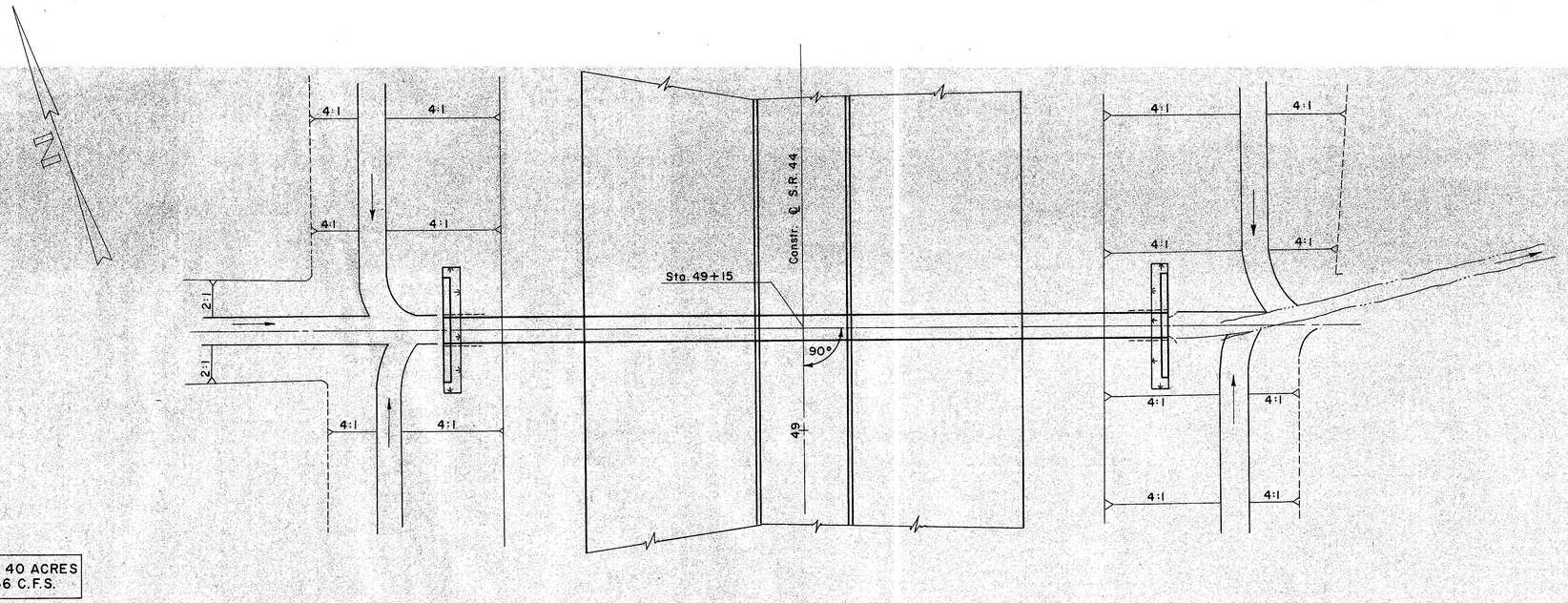
RECONSTR. MORTON SALT CO. ROAD Sta. 0+00 to 3+00

F14

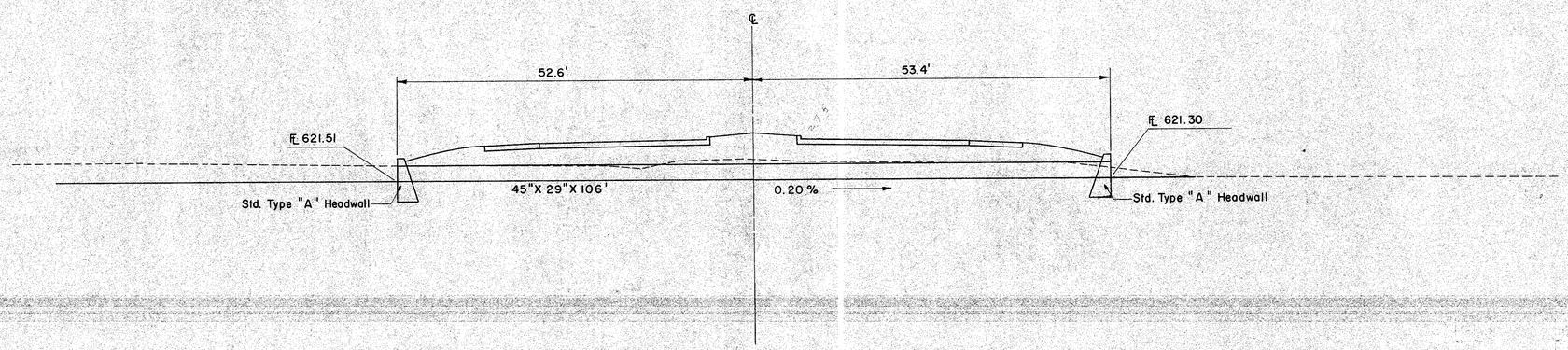
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

179
212

LAKE COUNTY
LAK-44-7.22



AREA = 40 ACRES
Q_{25} = 36 C.F.S.



CULVERT DATA

TYPE: I-1 Pipe Class G-1 Sec. M-6.7(b) with Std. Type "A" Headwalls.

SIZE: 45" x 29" x 106'

WORK REQUIRED: Build a 45" x 29" Pipe Culvert with Std. Type "A" Headwalls Rt. & Lt. Place 18" Sodding behind Headwalls and Excavate Channel Rt. & Lt. as shown.

ESTIMATED QUANTITIES

E-3	Channel Excavation (Right Only)	2* C.Y.
L-10	Sodding	7 S.Y.
I-2	Masonry	14.0 C.Y.
I-1	45"x 29" Pipe Class G-1 Sec. M-6.7(b)	106 L.F

* NOTE:
Channel Excavation on Lt. is shown on Sheet 102

Scale: 1" = 10'

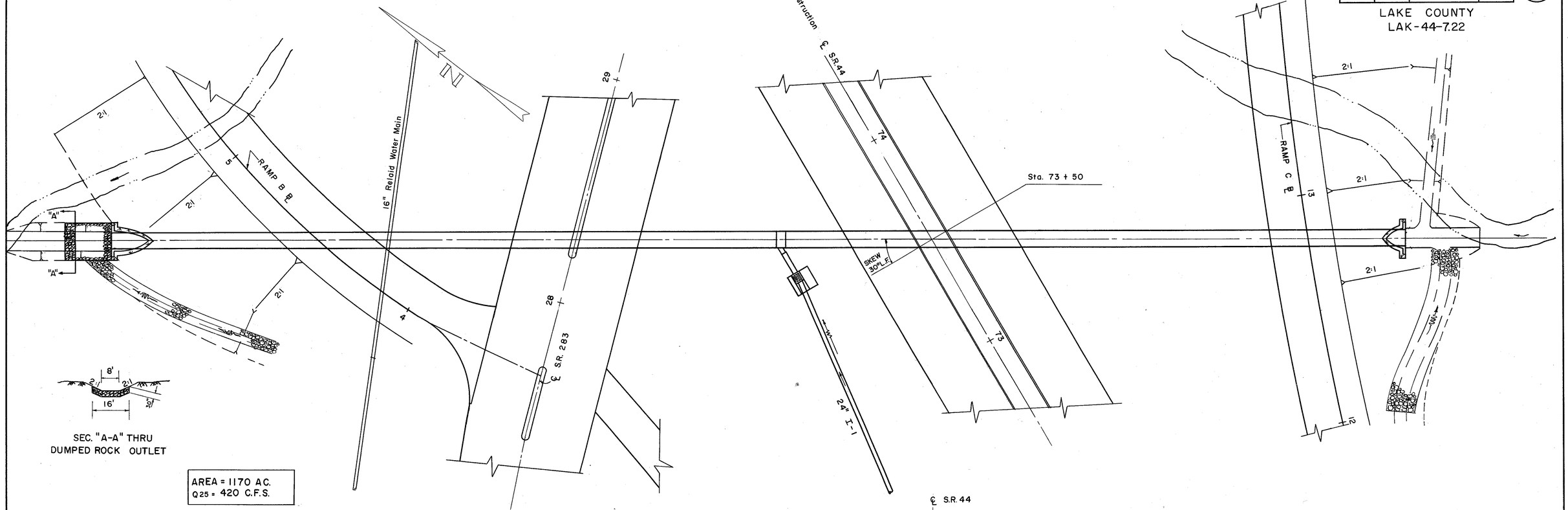
STRUCTURE NO. LAK-44-0745
PIPE CULVERT STA. 49+15

8-H

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

180
212

LAKE COUNTY
LAK-44-7.22



SEC. "A-A" THRU
DUMPED ROCK OUTLET

AREA = 1170 AC.
Q25 = 420 C.F.S.

CULVERT DETAILS

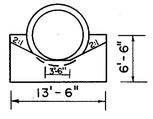
TYPE: I-1 Pipe Class A-1, Sec. M-106.6(d) & M-6.6(b)
S.P. 53 End Walls.

SIZE: 84" x 558'

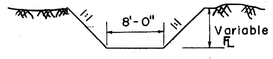
WORK REQUIRED: Build a 84" Pipe Culvert with S.P. 53 End Walls Rt. & Lt. Place 18" Sodding Around End Walls and Excavate Channel Rt. & Lt. Place Dumped Rock at Outlet as Shown.

ESTIMATED QUANTITIES

E-3	Channel Excavation	50 C. Y.
I-10	Dumped Rock Channel Protection	30 C. Y.
L-10	Sodding	11 S.Y.
I-2	Masonry	7.50 C. Y.
I-1	84" Pipe Class A-1, Sec. M-106.6 (d)	286 L.F.
I-1	84" Pipe Class A-1, Sec. M-6.6 (b)	272 L.F.
I-5	Pipe Special 84"x24"- 60° Wye Sec. M-6.6(b)	1 EA.



END VIEW S.P. 53 END WALL
For Further Details See Std. Drwg.
No. S.P. 53



METHOD OF ESTIMATING E-3

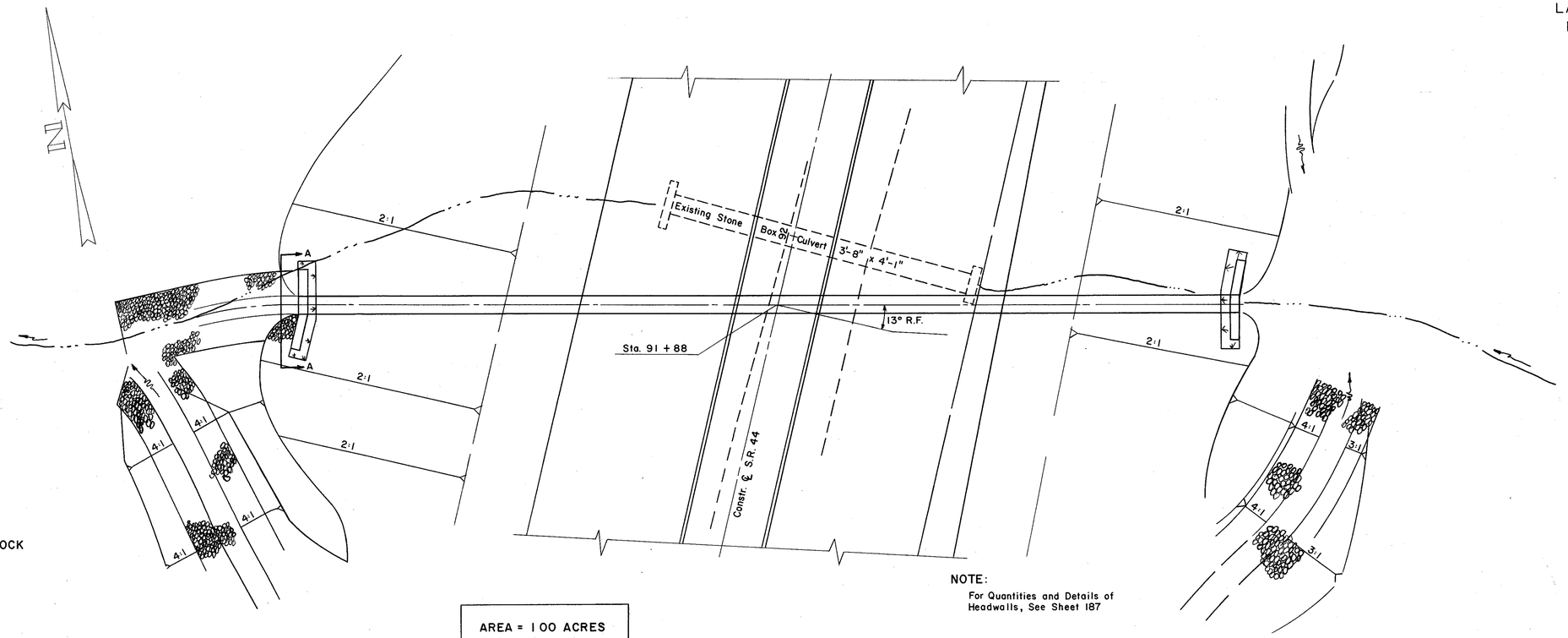
Scale: 1" = 20'

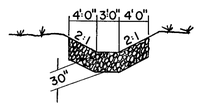
STRUCTURE NO. LAK-44-0791
PIPE CULVERT STA. 73 + 50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

181
212

LAKE COUNTY
LAK-44-7.22

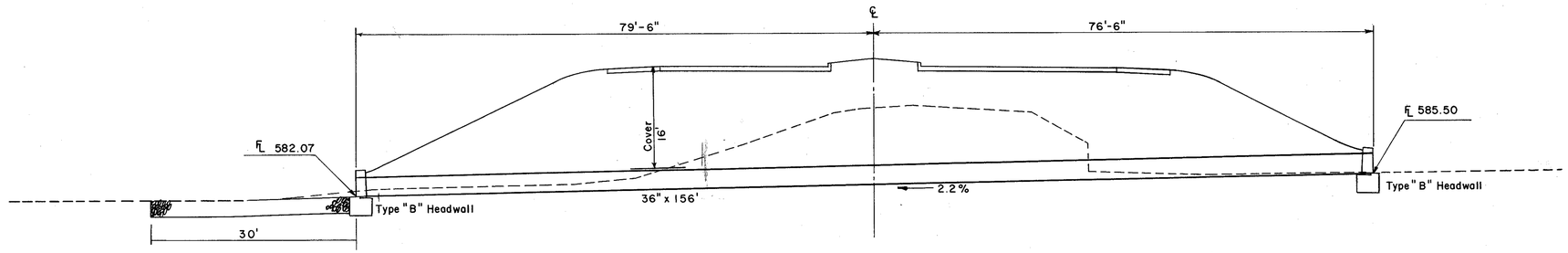




SEC. "A-A" THRU DUMPED ROCK CHANNEL OUTLET

NOTE:
For Quantities and Details of Headwalls, See Sheet 187

AREA = 100 ACRES
Q25 = 80 C.F.S.



CULVERT DATA

TYPE: I-1 Pipe Class A-1, Sec. M-6.6(c), with Type "B" Headwalls.

SIZE: 36" x 156'

WORK REQUIRED: Build a 36" Pipe Culvert with Type "B" Headwalls Rt. & Lt. Place 18" Sodding Behind Headwalls, Excavate Channel Lt. & Place Dumped Rock as Shown.

ESTIMATED QUANTITIES

E-3	Channel Excavation	1 C.Y.
I-10	Dumped Rock Channel Protection	30 C.Y.
L-10	Sodding	6 S.Y.
I-2	Masonry	15.2 C.Y.
I-1	36" Pipe Class A-1 Sec. M-6.6(c)	156 L.F.

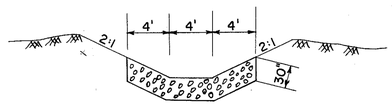
Scale: 1" = 10'

STRUCTURE NO. LAK-44-0826
PIPE CULVERT STA. 91 + 88

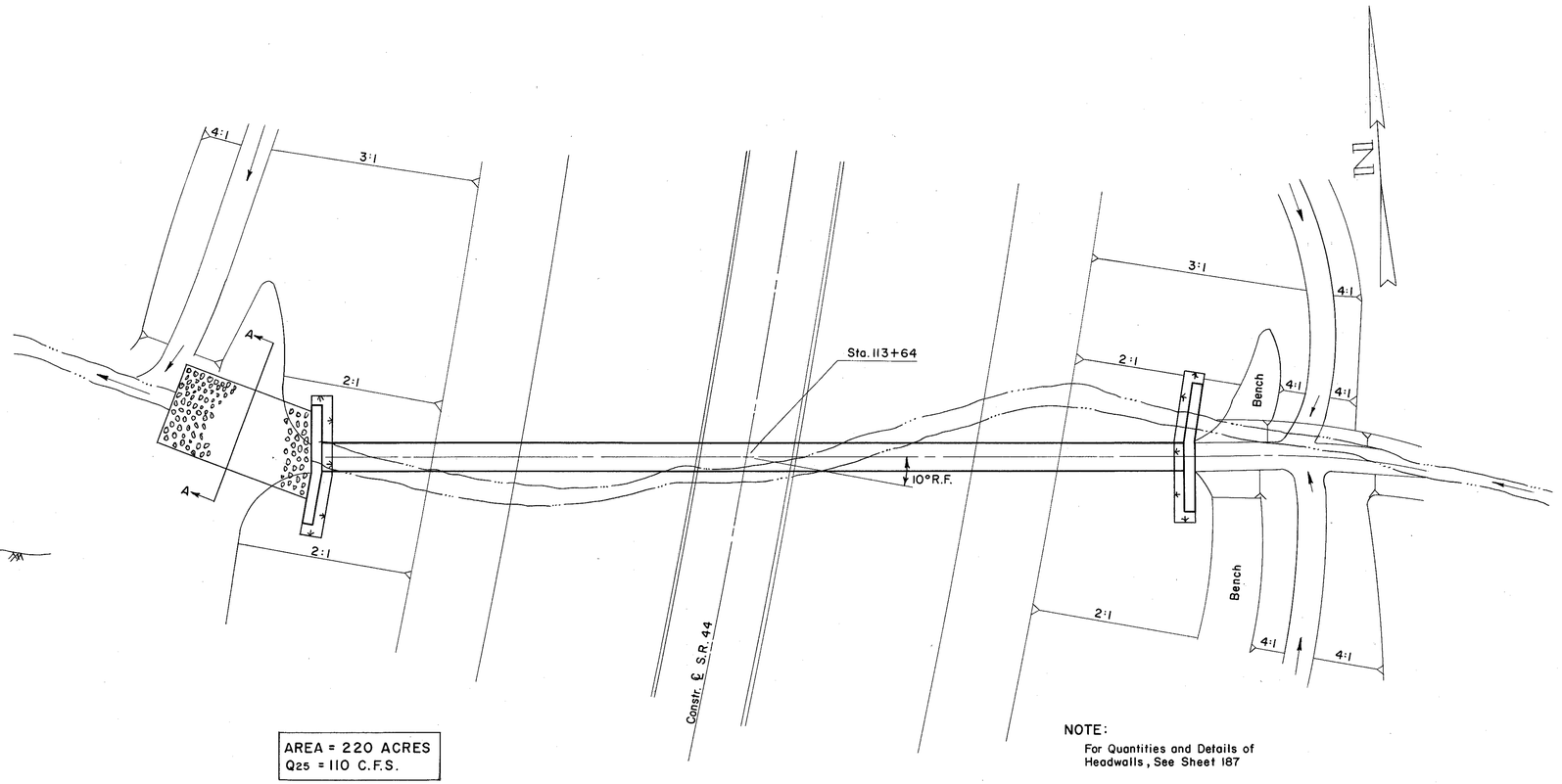
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

182
212

LAKE COUNTY
LAK-44-7.22

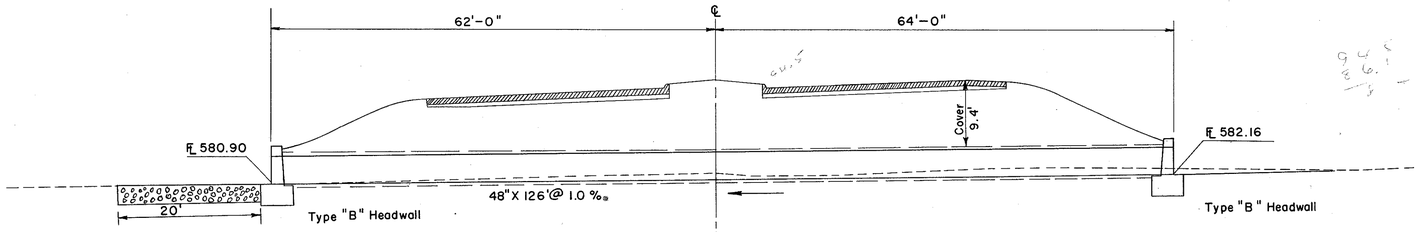


SEC. "A-A" THRU DUMPED ROCK
CHANNEL OUTLET



AREA = 220 ACRES
Q25 = 110 C.F.S.

NOTE:
For Quantities and Details of Headwalls, See Sheet 187



CULVERT DATA

TYPE: I-1 Pipe Class A-1, Sec. M-6.6(b), with Type "B" Headwalls.

SIZE: 48" x 126'

WORK REQUIRED: Build a 48" Pipe Culvert with Type "B" Headwalls Rt. & Lt. Place 18" Sodding Behind Headwalls and Excavate Channel on Rt. as Shown.

ESTIMATED QUANTITIES

E-3	Channel Excavation	2 C.Y.
I-1	48" Pipe Class A-1, Sec. M-6.6 (b)	126 L.F.
I-2	Masonry	25.7 C.Y.
I-10	Dumped Rock Channel Protection	30 C.Y.
L-10	Sodding	8 S.Y.

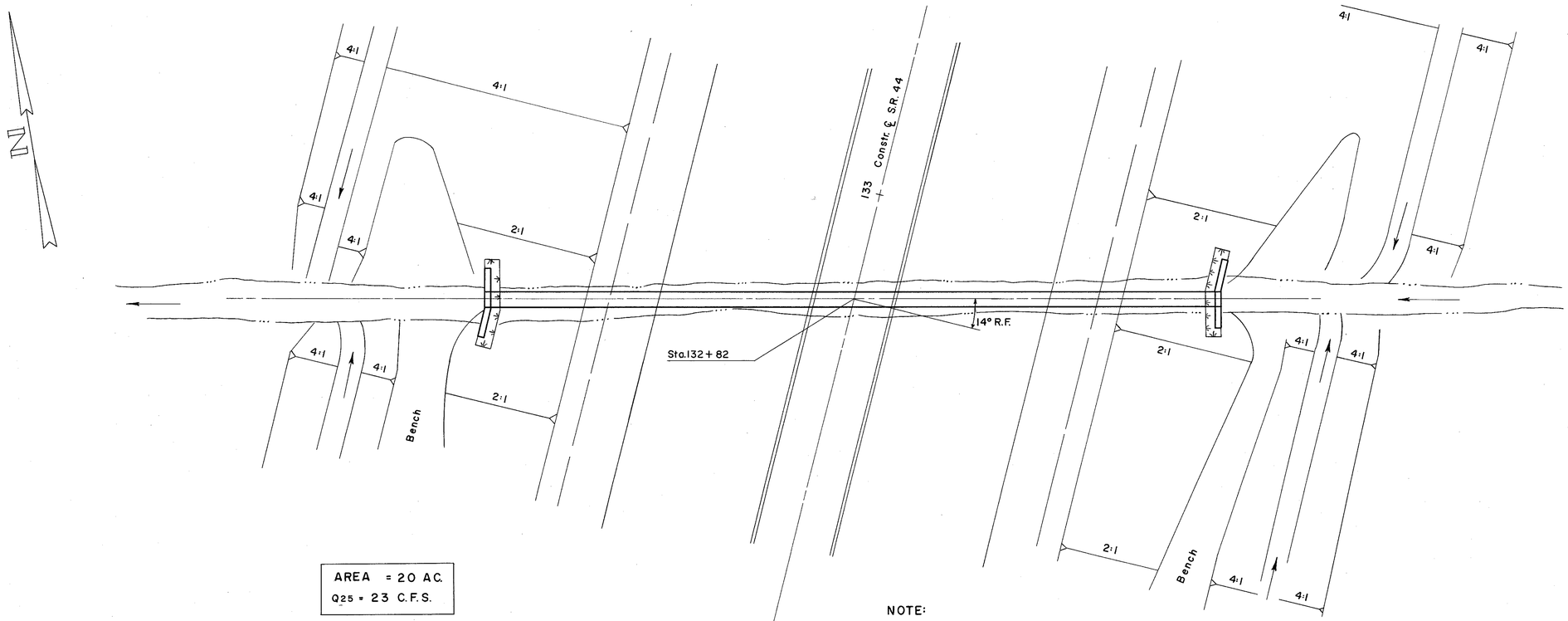
Scale: 1" = 10'

STRUCTURE NO. LAK-44-0867
PIPE CULVERT STA. 113+64

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

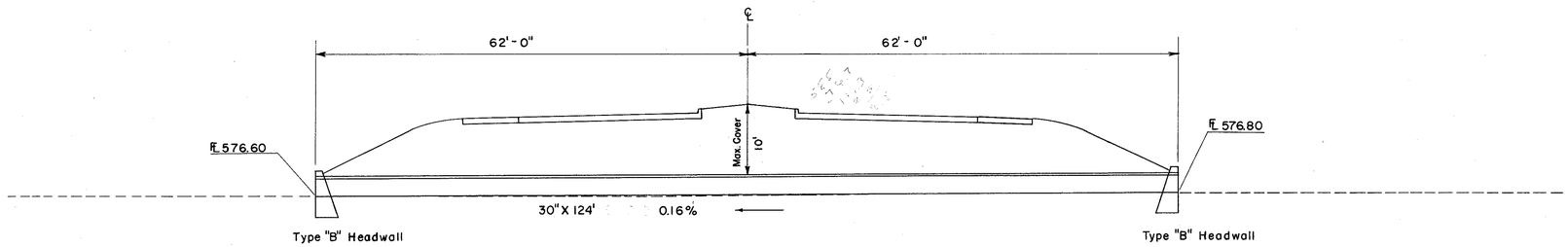
183
212

LAKE COUNTY
LAK- 44 - 7.22



AREA = 20 AC.
Q25 = 23 C.F.S.

NOTE:
For Quantities and Details of Headwalls, See Sheet 187



CULVERT DATA

TYPE: I-1. Pipe Class A-1, Sec. M-6.6(b), or M-6.8(b) with Std. Type "B" Headwalls.

SIZE: 30" X 124'

WORK REQUIRED: Build a Pipe Culvert with Type "B" Headwalls Rt & Lt. Place 18" Sodding Behind Headwalls.

ESTIMATED QUANTITIES

I-1	30" Pipe Class A-1 Sec. M-6.6 (b) or M-6.8 (b)	124 L.F.
I-2	Masonry	10.6 C.Y.
L-10	Sodding	6 S.Y.

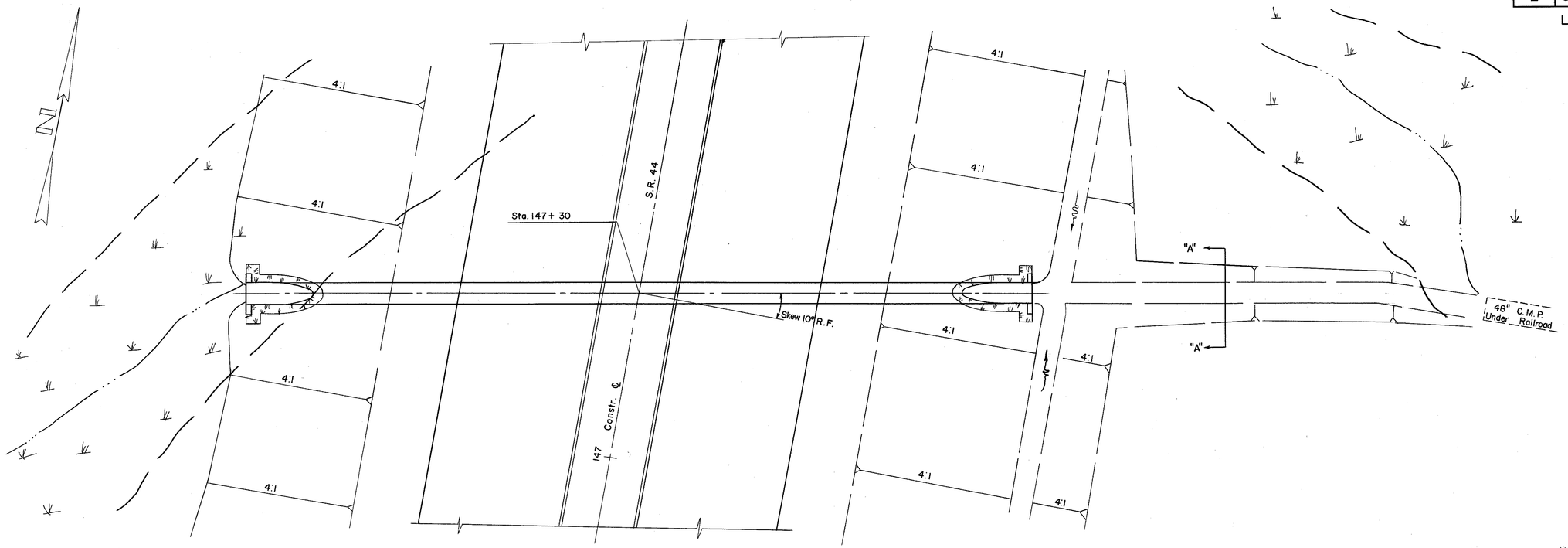
Scale: 1" = 10'

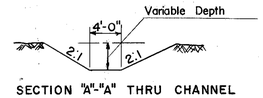
STRUCTURE NO. LAK-44-0903
PIPE CULVERT STA. 132 + 82

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

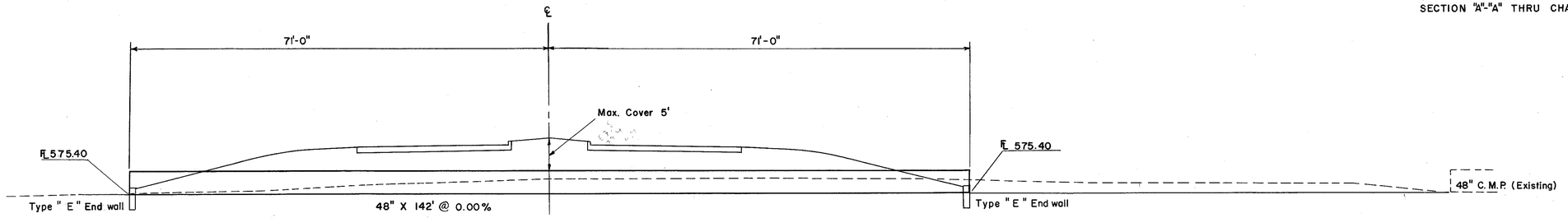
184
212

LAKE COUNTY
LAK-44-7.22





SECTION "A"-"A" THRU CHANNEL



CULVERT DATA

TYPE: I-1 Pipe Class A-1, Sec. M-6.4 (d), with Standard Type "E" End walls

SIZE: 48" X 142'

WORK REQUIRED: Build a 48" Pipe Culvert with Standard Type "E" End walls Lt. & Rt.
Place 18" Sod. at Ends as Shown.

ESTIMATED QUANTITIES

E-3	Channel Excavation	35 C.Y.
I-1	48" Pipe Class A-1 Sec. M-6.4 (d)	142 L.F.
I-2	Masonry	1.72 C.Y.
L-10	Sodding	12 S.Y.

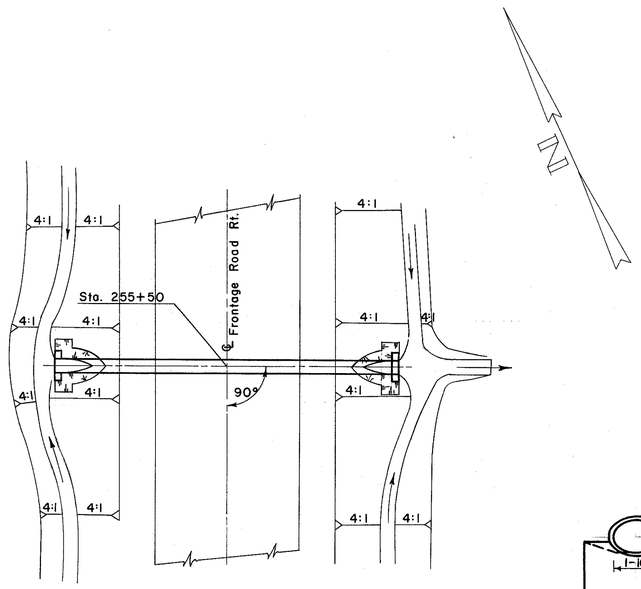
Scale: 1" = 10'

STRUCTURE NO. LAK-44-0931
PIPE CULVERT STA. 147 + 30

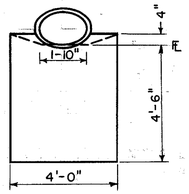
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

185
212

LAKE COUNTY
LAK-44-7.22

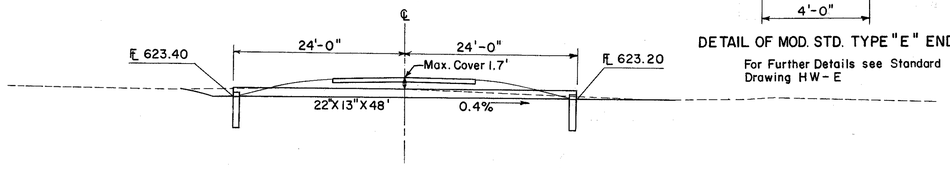


AREA = 1.7 ACRES
Q10 = 4.0 C.F.S.



DETAIL OF MOD. STD. TYPE "E" END WALL

For Further Details see Standard Drawing HW-E



CULVERT DATA

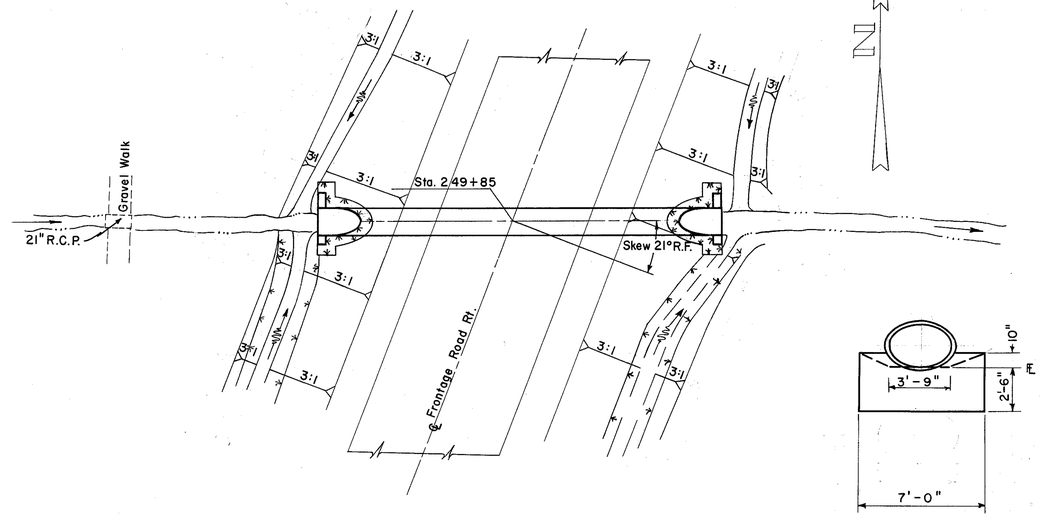
TYPE: I-1 Pipe Class G-1, Sec. M-6.4(i) & (d), with Mod. Std. Type "E" End walls
SIZE: 22"X13"X48'
WORK REQUIRED: Build a 22"X13" Pipe Culvert with Rt. & Lt. Place 18" Sodding Around Endwalls as Shown.

ESTIMATED QUANTITIES

L-10, Sodding	10	S.Y.
I-2 Masonry	1.4	C.Y.
I-1 22"X13" Pipe Class G-1, Sec. M-6.4(i) & (d)	48	L.F.

Scale: 1" = 10'

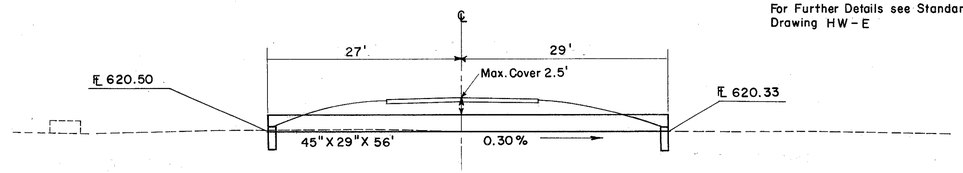
PIPE CULVERT STA. 255+50 FRONTAGE RD. RT.



AREA = 50 ACRES
Q25 = 45 C.F.S.

DETAIL OF MOD. STD. TYPE "E" END WALL

For Further Details see Standard Drawing HW-E



CULVERT DATA

TYPE: I-1 Pipe Class G-1, Sec. M-6.7(b) with Mod. Std. Type "E" End walls
SIZE: 45"X29"X56'
WORK REQUIRED: Build a 45"X29" Pipe Culvert with Mod. Std. Type "E" End walls Rt. & Lt. Place 18" Sodding Around Endwalls as shown.

ESTIMATED QUANTITIES

L-10, Sodding	13	S.Y.
I-2 Masonry	1.5	C.Y.
I-1 45"X29" Pipe Class G-1, Sec. M-6.7(b)	56	L.F.

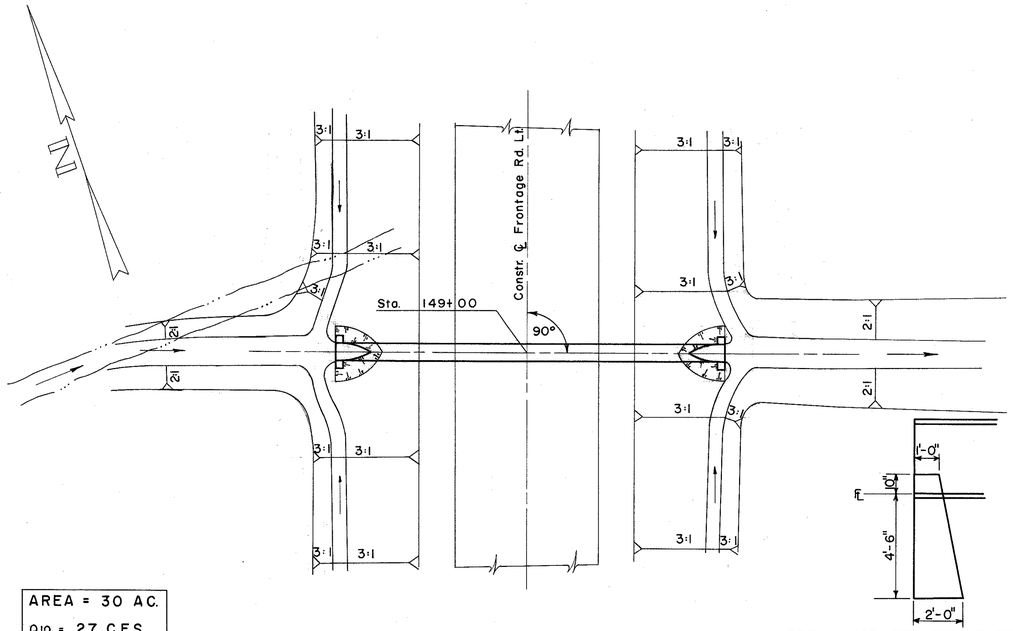
Scale: 1" = 10'

PIPE CULVERT STA. 249+85 FRONTAGE RD. RT.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

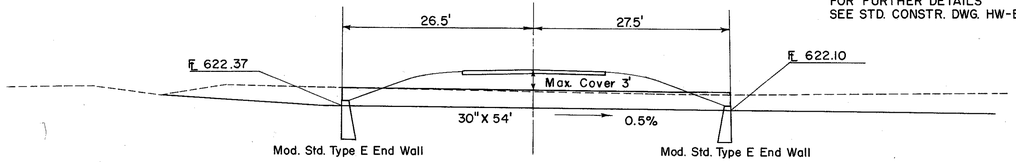
186
212

LAKE COUNTY
LAK-44-7.22



AREA = 30 AC.
Q10 = 27 C.F.S.

DETAIL MOD. STD. TYPE E END WALL
FOR FURTHER DETAILS
SEE STD. CONSTR. DWG. HW-E



CULVERT DATA

TYPE: I-1 Pipe Class A-1 Sec. M-6.6(b) or Sec. M-6.8(b), with Mod. Std. Type E End Walls.

SIZE: 30" x 54'

WORK REQUIRED: Build a 30" Pipe Culvert with Mod. Std. Type E End Walls Lt. & Rt. Place Sodding Around Headwalls and Excavate Channel Lt. & Rt. as Shown.

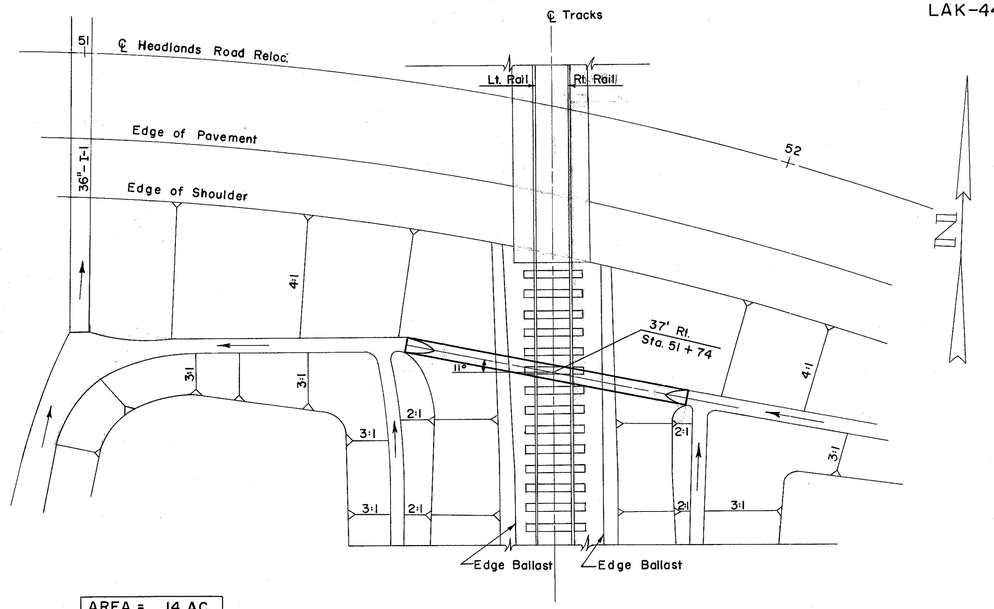
ESTIMATED QUANTITIES

E-3,	Channel Excavation	11 C.Y.*
I-1	30" Pipe Class A-1 Sec. M-6.6(b) or M-6.8(b)	54 L.F.
I-2	Masonry	2.68 C.Y.
L-10	Sodding	7 S.Y.

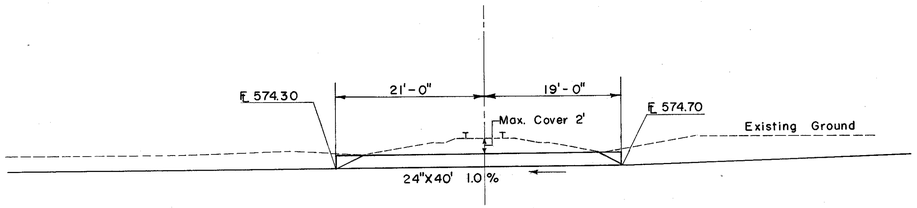
*NOTE:
For Channel Excavation on Rt.
See Sheet 102

Scale: 1" = 10'

PIPE CULVERT STA. 149+00
FRONTAGE ROAD LEFT



AREA = 14 AC.
Q 25 = 18 C.F.S.



CULVERT DATA

TYPE: I-1 Pipe Class A-1 Sec. M-6.4 (d)

SIZE: 24" x 40'

WORK REQUIRED: Build a 24" Pipe Culvert
Deepen Existing Ditch Both Sides of Railroad Embankment to Meet New Ditch Along Right Side of Headlands Road Reloc. Ditch
Transition in 50' to be Paid Under Item E-3 Channel Excavation.

ESTIMATED QUANTITIES

E-3,	Channel Excavation	39 C.Y.
I-1	24" Pipe Class A-1 Sec. M-6.4(d).12 Ga.	40 L.F.

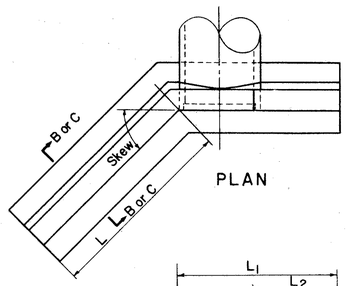
Scale: 1" = 10'

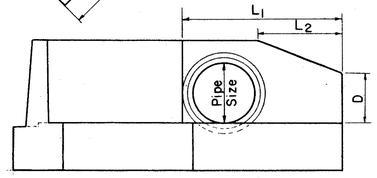
PIPE CULVERT
37' Rt. Sta. 51 + 74 Headlands Rd.

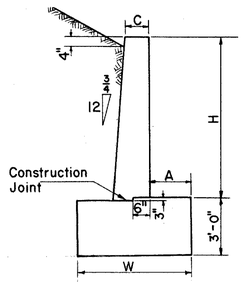
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

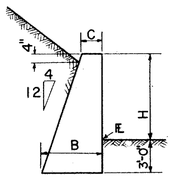
187
212

LAKE COUNTY
LAK-44-7.22







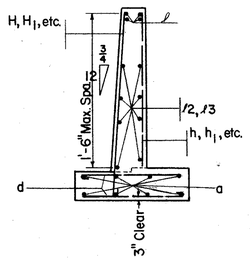


HEADWALL DIMENSIONS

STRUCTURE NO.	STATION	PIPE SIZE	H	L	L_1	L_2	W	A	B	C	D
LAK-44-0826	91 + 88 LT.	36"	4'-0"	5'-4"	7'-10"	4'-6"	3'-6"	1'-0"		1'-6"	3'-3"
LAK-44-0826	91 + 88 RT.	36"		SAME	AS	LEFT	SIDE				
	105+ 92 LT.	21"	2'-6"	4'-0"	5'-0"	3'-0"			2'-11"	1'-0"	2'-1"
LAK-44-0867	113+ 64 LT.	48"	5'-3"	7'-0"	9'-9"	5'-4"	4'-6"	1'-5"		1'-6"	3'-10"
LAK-44-0867	113+ 64 RT.	48"	5'-3"	8'-0"	10'-0"	5'-7"	4'-6"	1'-5"		1'-6"	4'-1"
LAK-44-0903	132+ 82 LT.	30"	3'-6"	5'-0"	6'-6"	3'-9"			3'-2"	1'-0"	2'-8"
LAK-44-0903	132+ 82 RT.	30"		SAME	AS	LEFT	SIDE				

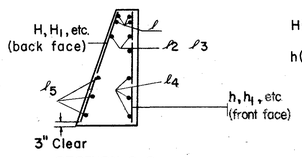
REINFORCING STEEL LIST AND ESTIMATED QUANTITIES

STRUCTURE NO.	STATION	PIPE SIZE	SKEW	MARK a	NO.	MARK b	NO.	MARK d	NO.	MARK ℓ	NO.	MARK ℓ_1	NO.	MARK ℓ_2	NO.	MARK ℓ_3	NO.	MARK ℓ_4	NO.	MARK ℓ_5	NO.	MARK H	NO.	MARK H_1	NO.	MARK H_2	NO.	MARK H_3	NO.	MARK H_4	NO.	MARK h	NO.	MARK h_1	NO.	MARK h_2	NO.	MARK h_3	NO.	MARK h_4	NO.	REINFORCING STEEL LBS.	CLASS "C" CONCRETE CU. YDS.	STRUCTURE DETAILS SHEET NO.
LAK-44-0826	91 + 88 LT.	36"	13°R.F.	5'-5"	8	8'-0"	8	3'-9"	20	8'-4"	4	6'-4"	2	5'-0"	4	3'-10"	6					7'-4"	4	7'-4"	1	6'-11"	1	6'-7"	1			3'-8"	4	3'-8"	1	3'-3"	1	2'-11"	1			360	7.6	
LAK-44-0826	91 + 88 RT.	36"	13°R.F.	5'-5"	8	8'-0"	8	3'-9"	20	8'-4"	4	6'-4"	2	5'-0"	4	3'-10"	6					7'-4"	4	7'-4"	1	6'-11"	1	6'-7"	1			3'-8"	4	3'-8"	1	3'-3"	1	2'-11"	1			360	7.6	
	105 + 92 LT.	21"	17°30'							5'-10"	4	4'-10"	2	3'-8"	2	2'-8"	2	8'-8"	3	9'-1"	3	5'-1"	3	5'-1"	1	4'-10"	1	4'-8"	1			5'-1"	3	5'-1"	1	4'-10"	1	4'-8"	1			165	3.5	
LAK-44-0867	113 + 64 LT.	48"	10°R.F.	7'-1"	8	9'-9"	8	4'-9"	24	11'-3"	4	7'-2"	2	6'-8"	6	5'-0"	6					8'-5"	5	8'-5"	1	8'-2"	1	7'-8"	1	7'-2"	1	4'-11"	5	4'-11"	1	4'-6"	1	4'-0"	1	3'-6"	1			515	12.3	
LAK-44-0867	113 + 64 RT.	48"	10°R.F.	8'-2"	8	10'-0"	8	4'-9"	26	12'-3"	4	7'-5"	2	7'-8"	6	5'-3"	6					8'-5"	5	8'-5"	1	8'-2"	1	7'-9"	1	7'-5"	1	4'-11"	5	4'-11"	1	4'-6"	1	4'-1"	1	3'-9"	1			550	13.4	
LAK-44-0903	132 + 82 LT.	30"	14°R.F.							7'-5"	4	5'-7"	2	4'-8"	4	3'-2"	6	11'-2"	3	11'-8"	3	6'-1"	4	6'-0"	1	5'-8"	1	5'-3"	1			6'-1"	4	6'-0"	1	5'-8"	1	5'-3"	1			240	5.3	
LAK-44-0903	132 + 82 RT.	30"	14°R.F.							7'-5"	4	5'-7"	2	4'-8"	4	3'-2"	6	11'-2"	3	11'-8"	3	6'-1"	4	6'-0"	1	5'-8"	1	5'-3"	1			6'-1"	4	6'-0"	1	5'-8"	1	5'-3"	1			240	5.3	

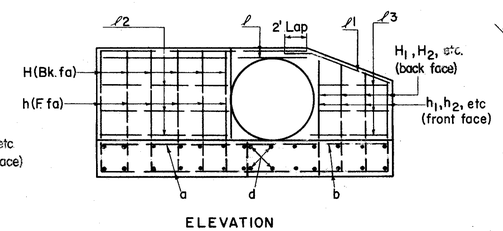


SECTION B-B

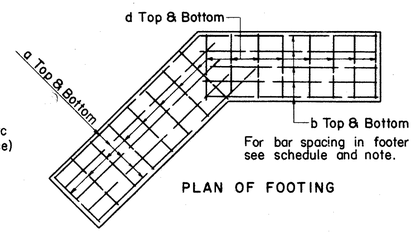
NOTE:
The number of a & b bars shown above shall be equally spaced across the footer.



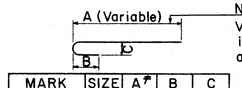
SECTION C-C



ELEVATION



PLAN OF FOOTING



MARK	SIZE	A*	B	C
ALL H BARS	5/8"		4 3/4"	4 1/4"
d	5/8		4 3/4"	4 1/4"

*Varies

NOTE:
Variable length as shown is length of H_1 bar shown above less $7\frac{3}{16}$".

NOTE:
For additional information see Std. Constr. Dwgs. Hdwl. A, B & C.
Mark ℓ_1, ℓ_4 & ℓ_5 bars to be bent in field.

NOTE:
Quantities shown are for one Hdwl.
Vertical Bars spaced @ 2'-0" c-c. Max.
Horizontal Bars spaced @ 1'-6" c-c Max.

Reinforcing shall have 2" clearance unless otherwise indicated.

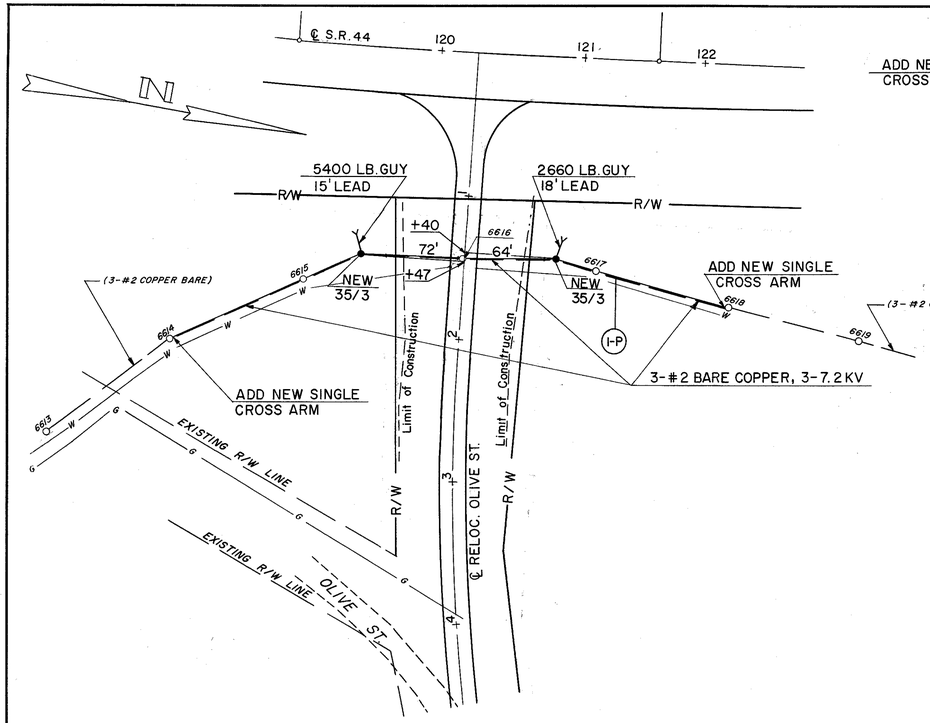
All bars shall be $\frac{5}{8}$" round

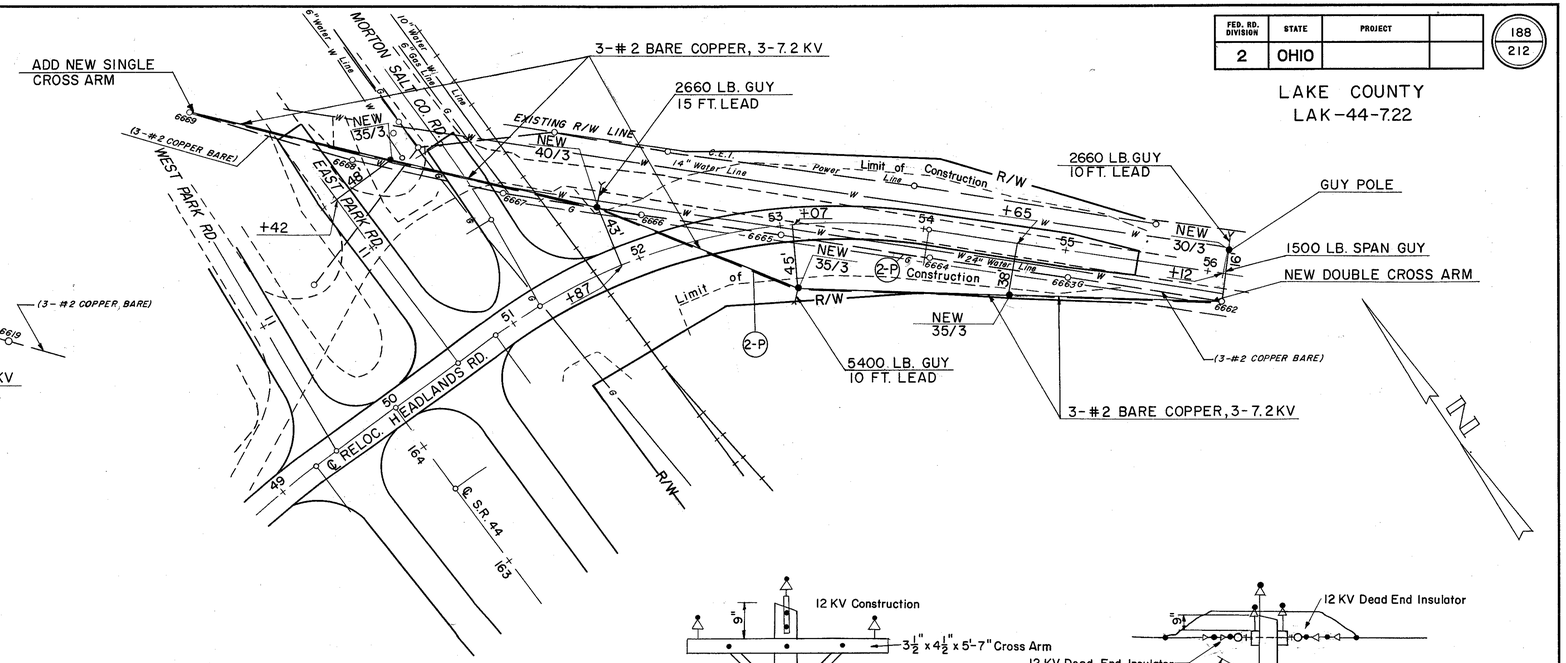
TYPE "B" HEADWALL DETAIL

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

188
212

LAKE COUNTY
LAK-44-7.22





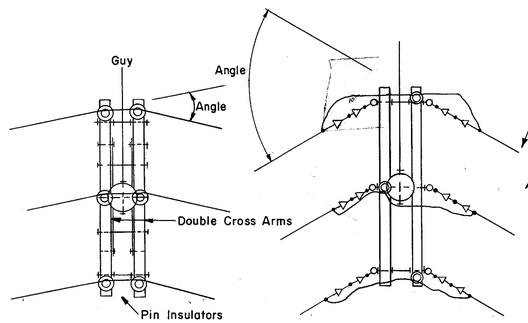
FOR GENERAL NOTES ON POWER ADJUSTMENTS SEE SHEET NO. 15

Ⓟ POWER

S-25

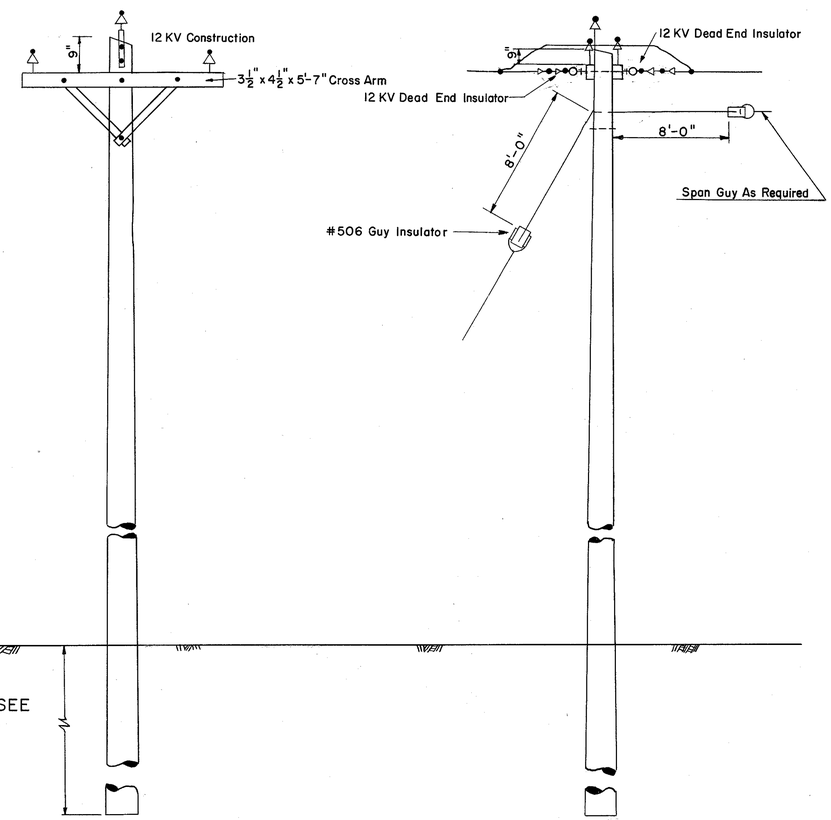
REF. NO.	STATION FROM	STATION TO		POLE 30' CL. 3	POLE 35' CL. 3	POLE 40' CL. 3	CROSS-ARM 5'-9" SNGL	CROSS-ARM 5'-9" DBL	GUY ANCHOR 2660 LB.	GUY ANCHOR 5400 LB.	SPAN 1500 LB.	INSULATOR PIN 12 KV	INSULATOR DEAD-END 12 KV	WIRE #2 BARE COPPER	REMOVE EXISTING POLE
				EA.			EA.		EA.		L.F.	EA.		L.F.	EA.
1-P	11+45 Reloc. Olive St.		*		2		2	2	1	1		6	18	1245	3
2-P	52+35 Reloc. Head. Rd.		#	1	3	1	3	3	2	1	35	15	6	2240	6
	TOTAL			1	5	1	5	5	3	2	35	21	24	3485	9

* These items at normal project participation
\# These items at 100 % City of Painesville Expense



TYPICAL CORNER
6°-12° — #2 BARE COPPER

TYPICAL CORNER
13°-60° — #2 BARE COPPER



POWER ADJUSTMENTS

FED. RD. DIVISION	STATE	PROJECT		
2	OHIO			

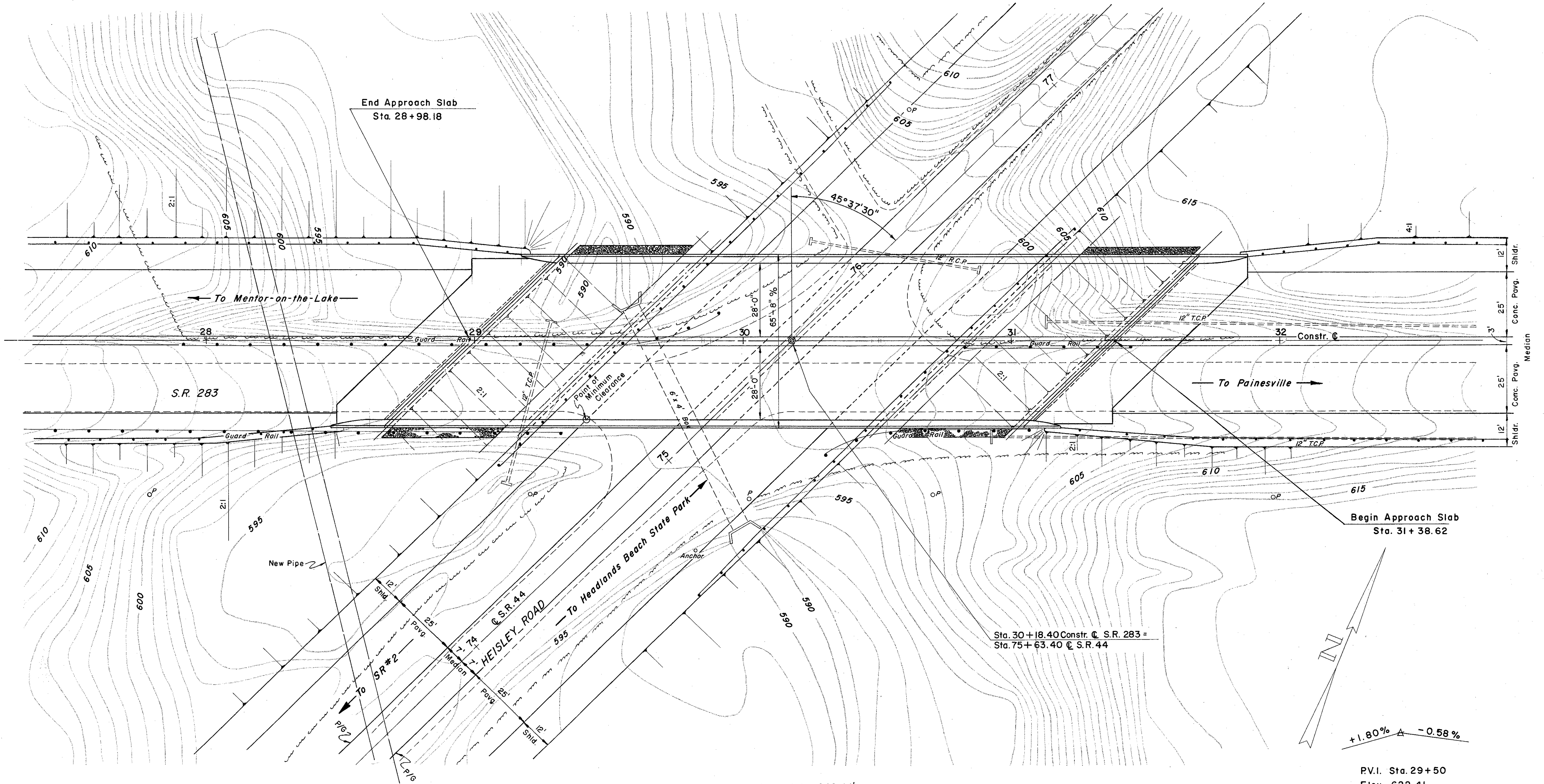
189
212

LAKE COUNTY
LAK-44-7.22

Approximately 2 Miles West of Painesville.

Foundation Soundings:

Foundation design and foundation quantities are based on a study of rod soundings and soil sampling soundings made at the site. This sounding imformation 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.



PROPOSED STRUCTURE

TYPE: 4 Span continuous steel beam with concrete deck and substructure.

SPANS: 52'-0", 65'-0", 65'-0", 52'-0" c/c Brgs.

ROADWAY: 59'-0" f/f 2'-3" Safety curbs.

LOAD FREQUENCY: CF= 400 (57)

SKEW: 45° 37' 30" L.F.

WEARING SURFACE: 1" monolithic concrete

APPROACH SLAB: 25'-0" long (special)

ALIGNMENT: SR#44 & SR#283 tangent

TRAFFIC: 8,490 A.D.T. 1979

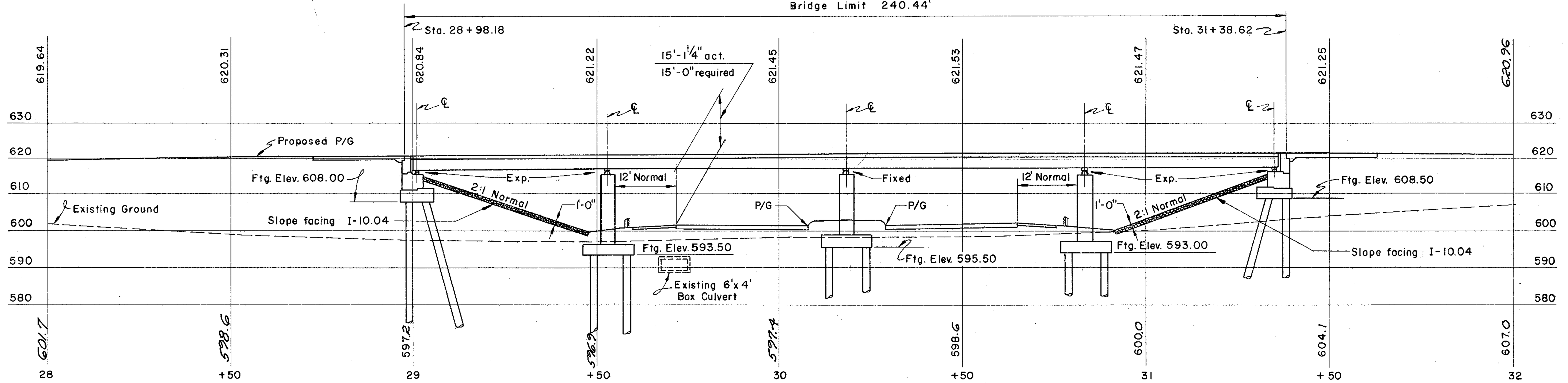
B.M. #5 Lag bolt in base of 10" Elm
90' Rt. of Sta. 78+30
Elevation 616.789

All piles 12 BP53 steel H piling, design load 35 ton per pile at the piers and 40 ton per pile at the abutments. Estimated average pay lengths – abutments 40' & piers 25'.

+1.80% –0.58%

P.V.I. Sta. 29+50
Elev. 622.41
V.C. 400'
M.O. 1.19'

GRADE ON S.R. #283
CONSTRUCTION ℄

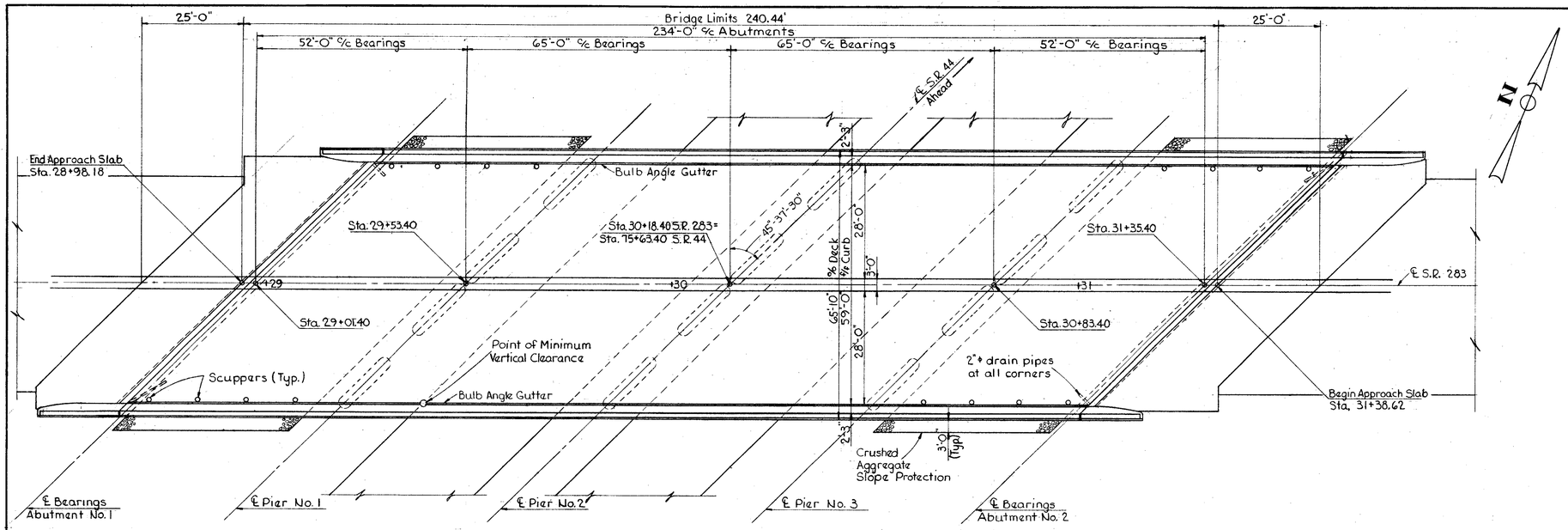


PROFILE ALONG SR #283
CONSTRUCTION ℄

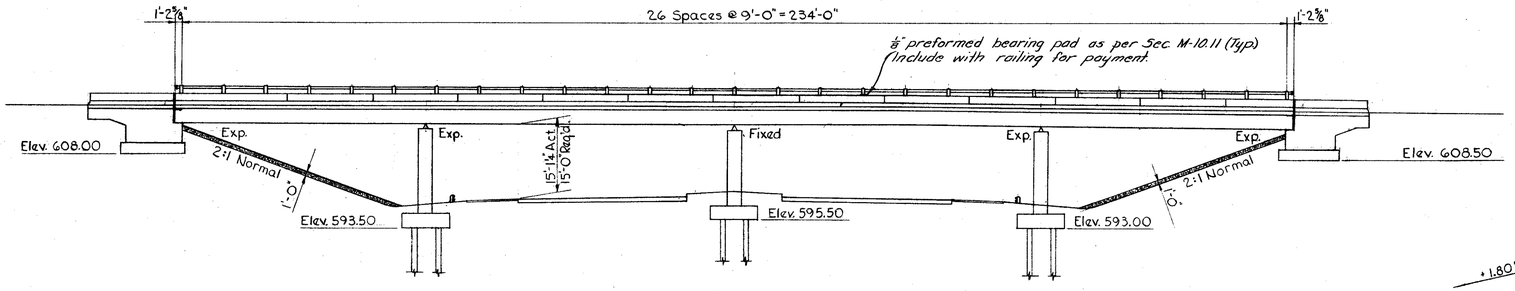
PREPARED BY
CAPITOL ENGINEERING ASSOCIATES, DILLSBURG, PA.
FOR
STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

SITE PLAN
BRIDGE NO. LAK-44-0795
S.R. 44 UNDER S.R. 283
LAKE COUNTY
STA. 75+63.40

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
			McC			



GENERAL PLAN



ELEVATION
ALONG ℄ S.R. 283

P.V.I. Sta = 29+50.00
Elev. = 622.41'
L.V.C. = 400'
M.O. = 1.19'

CURVE DATA

ESTIMATED QUANTITIES

ITEM	TOTAL	UNIT	DESCRIPTION	SUPER.	ABUTS.	PIERS	GENERAL
E-2	1,231	Cu.Yds.	Unclassified Excavation	—	800	431	—
S-1	509	Cu.Yds.	Class "C" Concrete, Superstructure	509	—	—	—
S-1	166	Cu.Yds.	Class "C" Concrete, Pier Caps and Columns	—	—	166	—
S-1	206	Cu.Yds.	Class "E" Concrete, Abutments above Footing	—	206	—	—
S-1	292	Cu.Yds.	Class "E" Concrete, Footings	—	162	130	—
S-3	21	Lin.Ft.	Waterproofing, premolded sealing strip	—	21	—	—
S-4	207,406	Lbs.	Reinforcing Steel	133,270	24,938	49,198	—
S-7	396,900	Lbs.	Structural Steel	396,900	—	—	—
S-8	396,900	Lbs.	Field Painting of Structural Steel	396,900	—	—	—
S-9	56	Sq.Ft.	1" Preformed Expansion Joint Filler (Type II)	—	56	—	—
S-14	543	Lin.Ft.	Railing (aluminum rail and supports, concrete parapets)	473	70	—	—
S-16	Lump	Sum	First Test Pile	—	—	—	Lump
S-18	4,400	Lin.Ft.	Steel Piles, 12 BP 53	—	2,000	2,400	—
S-29	66	Cu.Yds.	Porous Backfill	—	66	—	—
S-29	16	Each	Scuppers	16	—	—	—
I-10	782	Sq.Yds.	Crushed Aggregate Slope Protection	—	—	—	782

Fed. Rd. Division	State	Project	
2	OHIO		

190
212

LAKE COUNTY
LAK-44-7.22

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: shall be made to Standard Drawings RB-1-55, revised 2-2-59, CSB-2-56, sheets 2 and 3 of 6, revised 2-2-59, AR-1-57, revised 12-12-60.

CRUSHED AGGREGATE SLOPE PROTECTION: (I-10.04), one foot thick shall be provided as indicated on the General Plan.

POROUS BACKFILL: shall extend upward to the approach slab. Excavation therefore, 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.

EXCAVATION: Excavation quantity includes the removal of fill material between the surface of the proposed embankment and the bottom of footings

PILES: shall be driven with a hammer of not less than 11,000 Ft. Lbs. per blow to firm contact with shale. If the length of penetration is approximatly equal to the depth to shale according to the bridge foundation investigation report, the firm contact shall be considered as attained when the capacity according to the formula in Sec.-1805 is not less than the following value for a pile hammer of the indicated energy rating.

HAMMER FT. LB.	ABUTMENTS TONS PER PILE	PIERS TONS PER PILE
11,000	50	48
15,000	45	41

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 at the piers and 40 tons per pile at the abutments.

PROCEDURE: the embankment shall be placed and compacted up to the finished spill-thru slope and to the level of the subgrade for a distance of 200 feet back of the abutments, after which excavation shall be made for the abutment. The excavation for Pier #1 and Pier #3 shall not be made until after the embankment is in place.

MACHINE FINISH: The top of the bridge deck slab shall be machine finished, (Sec 511.23).

PREPARED BY
CAPITOL ENGINEERING ASSOCIATES, DILLSBURG, PA.
FOR
STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

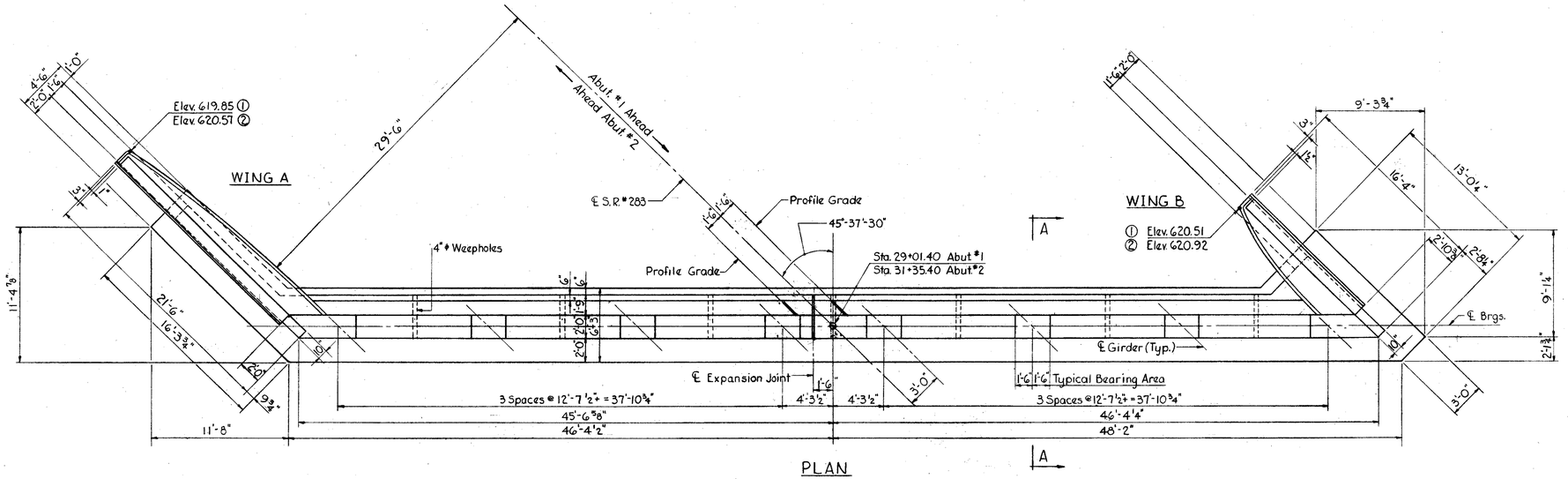
GENERAL PLAN
BRIDGE NO. LAK-44-0795
S.R. 44 UNDER S.R. 283
LAKE COUNTY
STA. 75+63.40

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	J.E.G.				

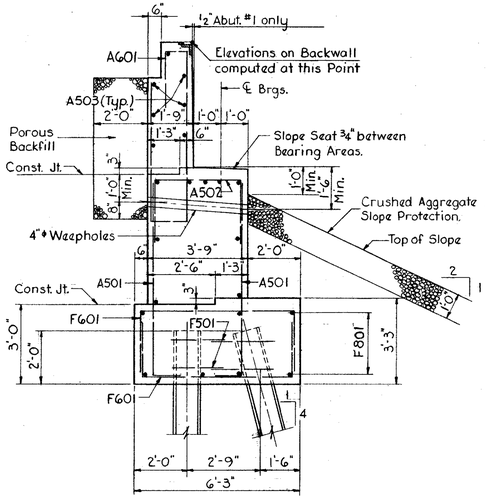
Fed. Rd. Division	State	Project	
2	OHIO		

191
212

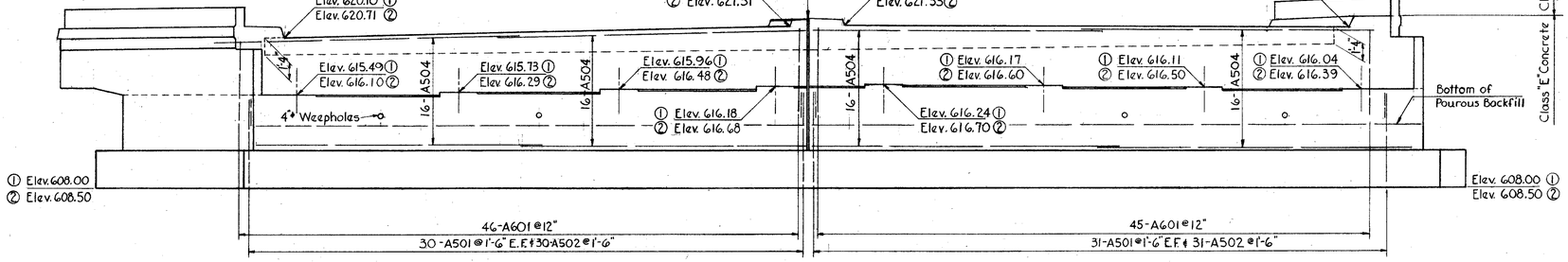
LAKE COUNTY
LAK-44-7.22



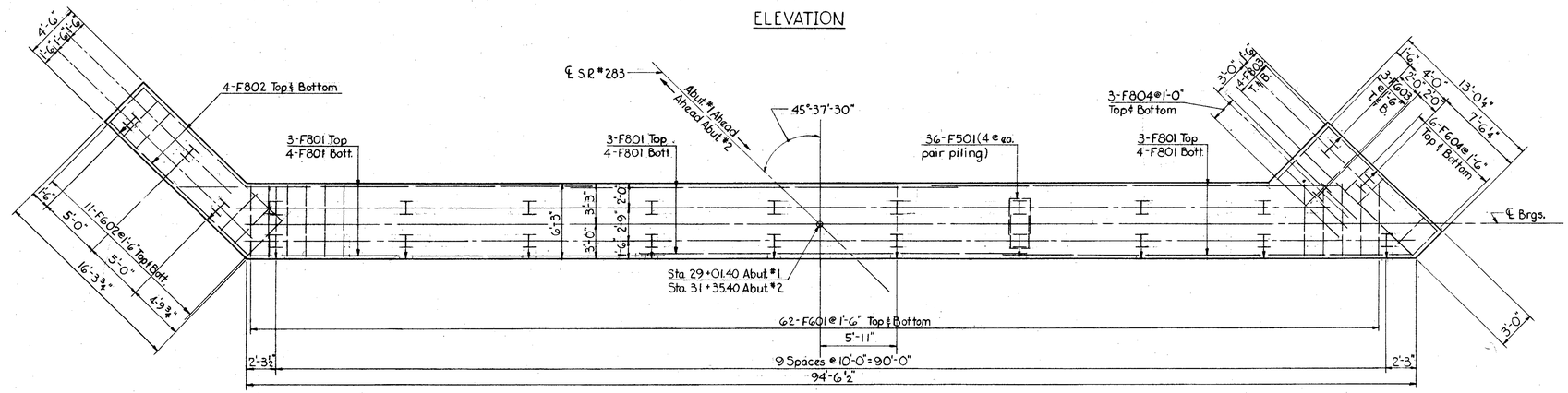
Note:
① - Refers to Abutment #1.
② - Refers to Abutment #2.



SECTION A-A



ELEVATION



PILE LAYOUT - FOOTING REINFORCING

NOTES:
All reinforcing steel shall have 3" of cover in the bottom of the footing and 2" elsewhere.

All piles 12BP53 steel, design load 40/ton per pile.

I - Indicates vertical pile.
I - Indicates battered pile 1:4 and direction of batter.

PREPARED BY
CAPITOL ENGINEERING ASSOCIATES, DILLSBURG, PA.
FOR
STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

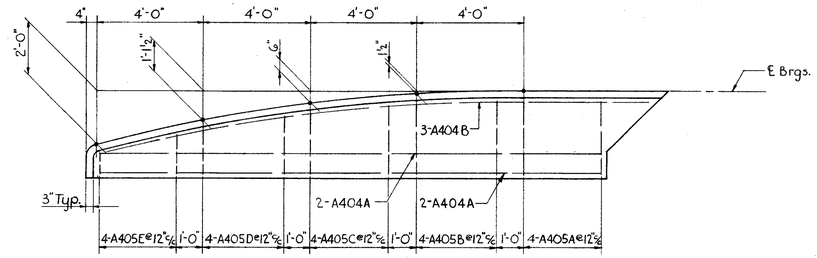
ABUTMENTS
BRIDGE NO. LAK-44-0795
S.R. 44 UNDER S.R. 283
LAKE COUNTY
STA. 75+63.40

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
McC	J.E.G.				

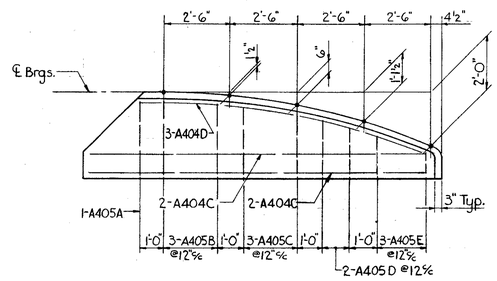
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

192
212

LAKE COUNTY
LAK-44-7.22



CURB DETAILS



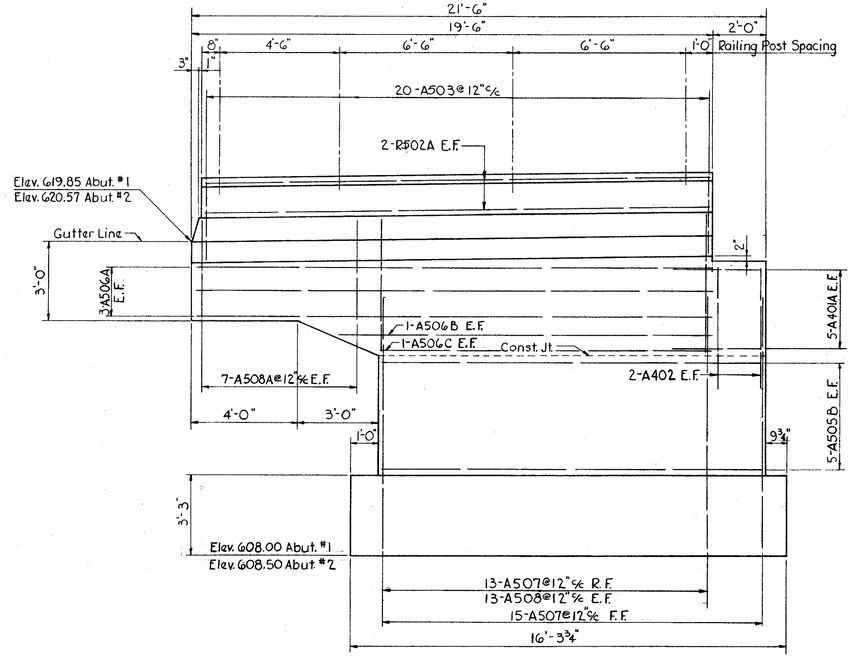
CURB DETAILS

NOTES

All reinforcing steel shall have 3" of cover in the bottom of the footing and 2" elsewhere.

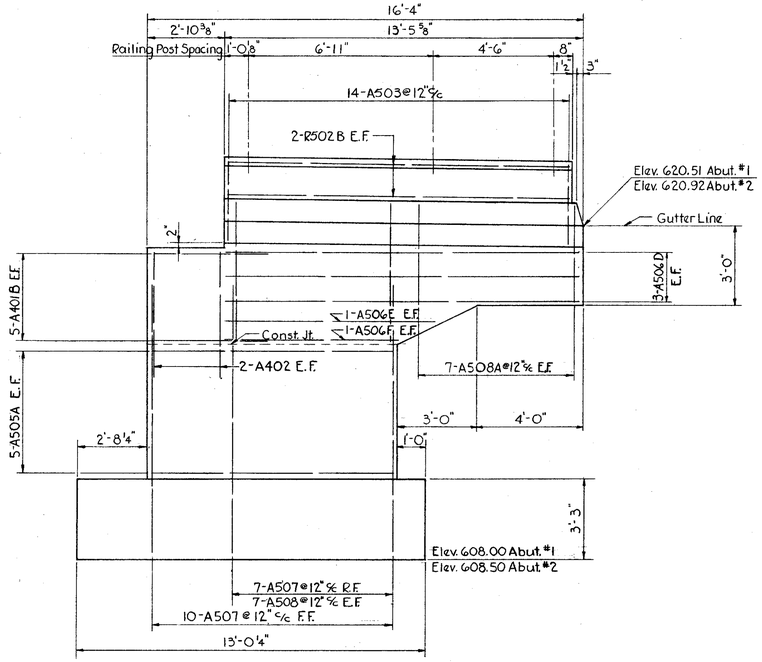
All piles 12 BP 53 steel, design load 40/ton per pile.

All abutment concrete shall be Class "E" except for the railing parapet which shall be Class "C".

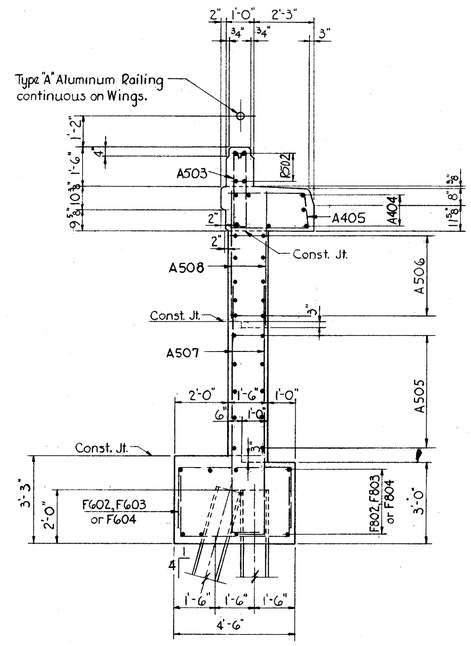


WING A

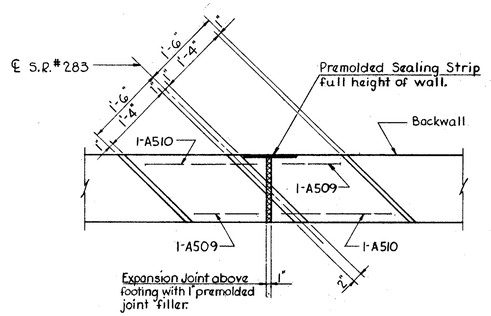
Note:
F.F. indicates Front Face.
R.F. indicates Rear Face.
E.F. indicates Each Face.



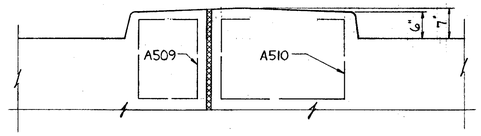
WING B



TYPICAL SECTION



PLAN



ELEVATION

DIVISOR DETAIL @ ABUTMENT BACKWALL

PREPARED BY
CAPITOL ENGINEERING ASSOCIATES, DILLSBURG, PA.
FOR

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

ABUTMENT DETAILS

BRIDGE NO. LAK-44-0795
S.R. 44 UNDER S.R. 283,
LAKE COUNTY

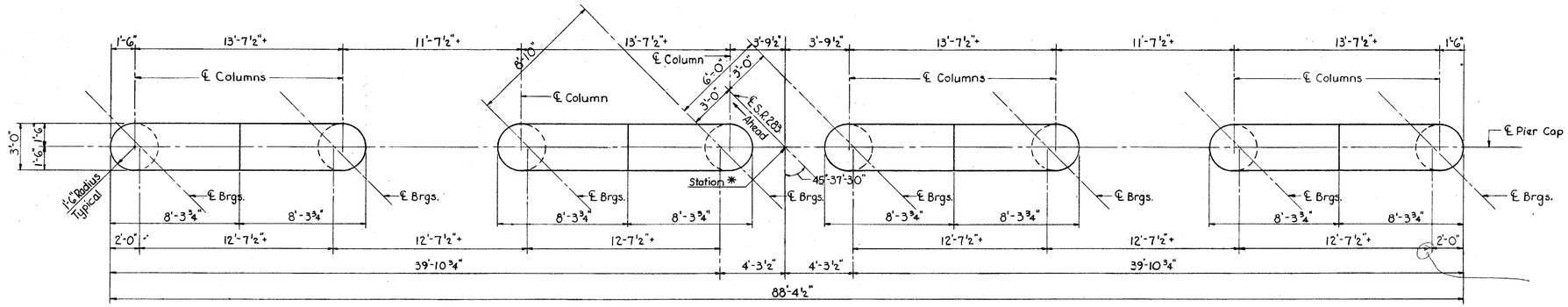
STA. 75+63.40

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
MeC	J.E.G.				

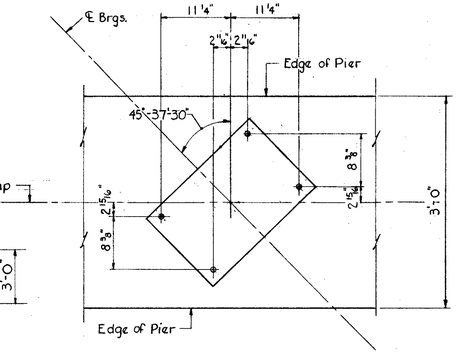
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

193
212

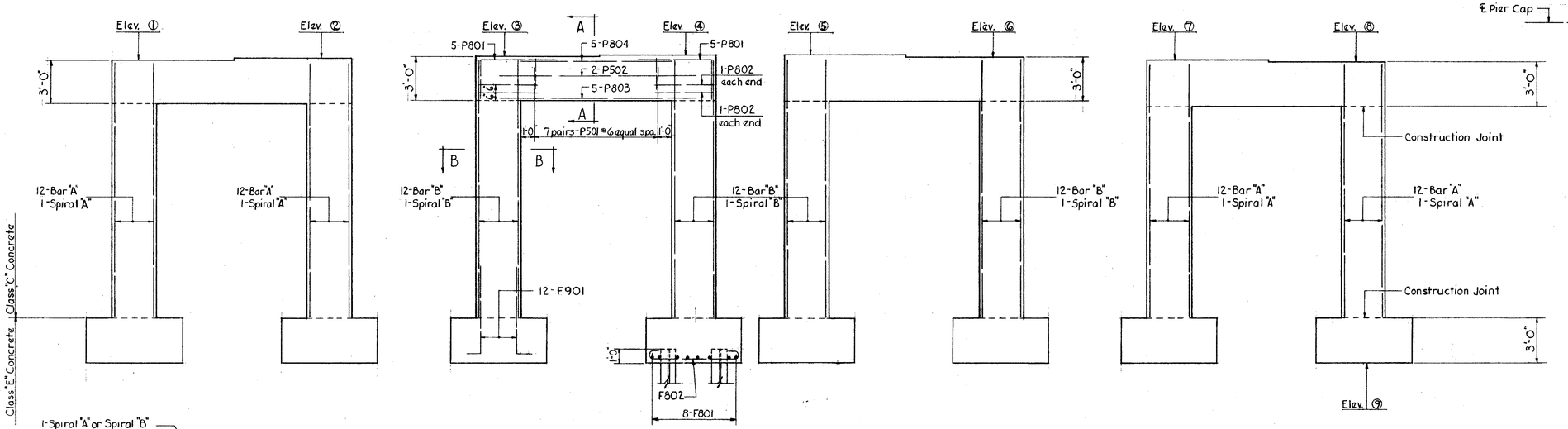
LAKE COUNTY
LAK-44-7.22



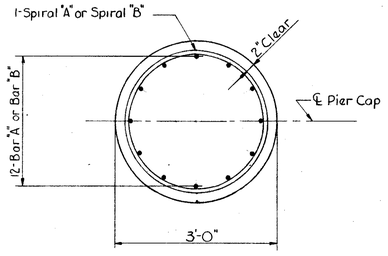
PLAN



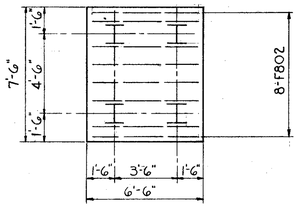
ANCHOR BOLT LAYOUT



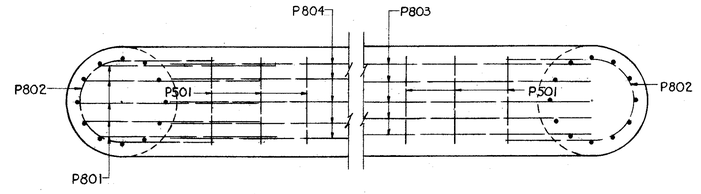
ELEVATION



SECTION B-B

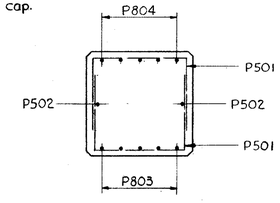


PIER FOOTING PLAN-TYPICAL



PLAN
Steel in top of cap.

PLAN
Steel in bottom of cap.



SECTION A-A

LOCATION	STATION	ELEV.①	ELEV.②	ELEV.③	ELEV.④	ELEV.⑤	ELEV.⑥	ELEV.⑦	ELEV.⑧	ELEV.⑨	BAR "A"	BAR "B"	SPIRAL "A"	SPIRAL "B"
Pier #1	29+53.40	615.82	615.91	616.01	616.09	616.06	615.86	615.66	615.45	593.50	P901	P902	SP401	SP402
Pier #2	30+18.40	615.95	616.09	616.21	616.34	616.33	616.17	616.01	615.83	595.50	P903	P904	SP403	SP404
Pier #3	30+83.40	615.84	616.01	616.18	616.34	616.35	616.23	616.09	615.95	593.00	P905	P906	SP405	SP406

NOTES:

REINFORCING STEEL shall have 3" of cover in the bottom of the footing and 2" elsewhere.

SPECIAL CARE shall be taken in placing the reinforcing steel in the cap on PIER #2 so it does not interfere with the drilling of anchor bolt holes.

ALL PILES 12 BP 53 Steel, design load 35 ton/pile.

ALL PIER CAPS, columns and footings are identical except as otherwise shown.

PREPARED BY
CAPITOL ENGINEERING ASSOCIATES, DILLSBURG, PA.
FOR

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

PIERS

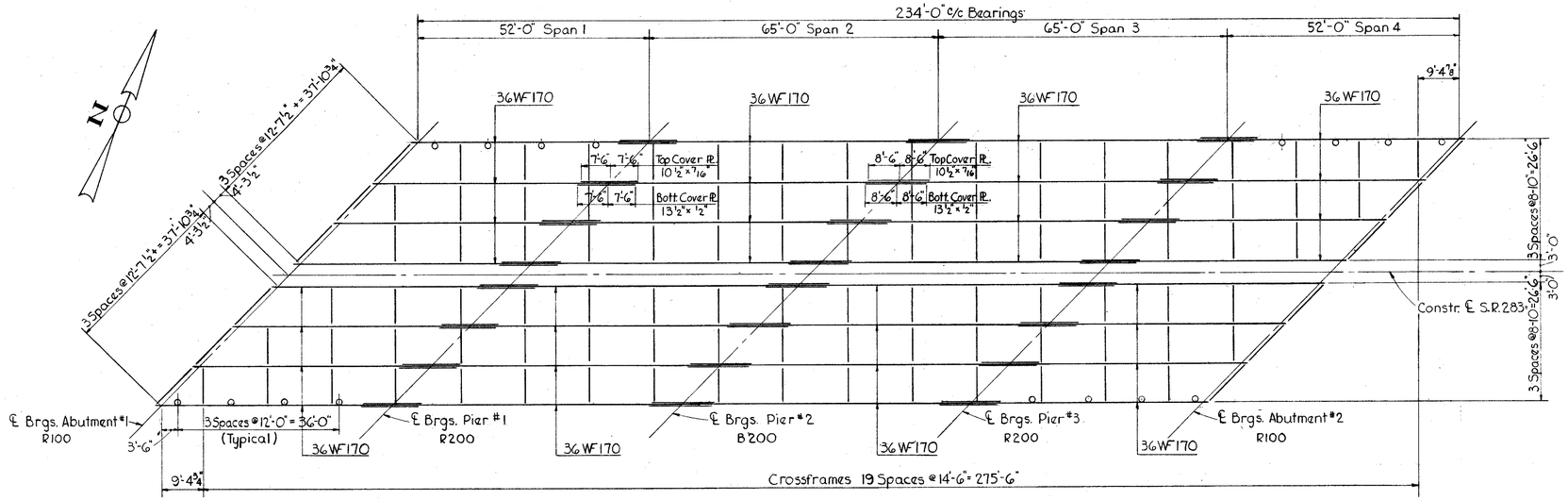
BRIDGE NO. LAK-44-0795
S.R. 44 UNDER S.R. 283
LAKE COUNTY
STA 75+63.40

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
McC	J.E.G.				

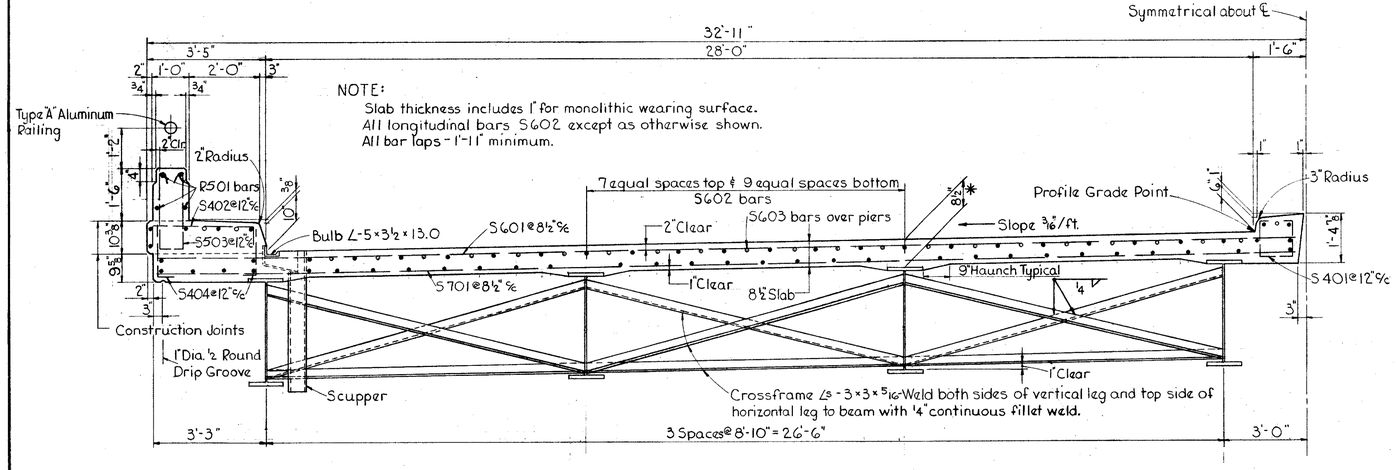
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

194
212

LAKE COUNTY
LAK-44-7.22

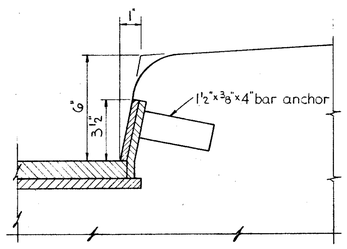


STEEL FRAMING PLAN



NOTE:
Slab thickness includes 1" for monolithic wearing surface.
All longitudinal bars S602 except as otherwise shown.
All bar laps - 1'-11" minimum.

TYPICAL HALF SECTION



DIVISOR PLATE DETAIL

NOTE:
For details not shown, see Curb Plate Detail on Standard Drawing CSB-2-56, Sheet 3, revised 2-2-59.

DEFLECTION AND CAMBER				
	SPAN 1	SPAN 2	SPAN 3	SPAN 4
Deflection due to weight of steel	1/16"	1/16"	1/16"	1/16"
Deflection due to remaining D. L.	1/8"	1/4"	1/4"	1/8"
Convexity of Vertical Curve	1/4"	3/8"	3/8"	1/4"
Total	7/16"	11/16"	11/16"	7/16"
Camber required	0	0	0	0

NOTES

REFERENCE shall be made to Standard Drawing CSB-2-56 sheets 2 & 3 of 6, revised 2-2-59 for details of end dams, gutters, scuppers, pipe drains, curb plates, and crossframes and beam splices.
REFERENCE shall be made to Standard Drawing RB-1-55 revised 2-2-59 for details of rockers and bolsters.
REFERENCE shall be made to Standard Drawing AR-1-57 revised 12-12-60 for details of aluminum railing Type 'A' and concrete parapet details.
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.

✱DECK SLAB DEPTH: 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.
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 tranverse construction joints which are parallel to the transverse reinforcing steel and are located near the center of any span.
CONCRETE shall be Class 'C'.
CONCRETE and reinforcing steel above parapet construction joint included with railing for payment.
REINFORCING steel and premolded expansion joint filler in the Reinforced Concrete Approach Slab are included with Item I-7 for payment.
BEAM SPLICE WELDING PROCEDURE:
1. Raise end of beam at Pier No. 3 - 1½"
2. Butt-weld beam flanges and web at Pier No. 2 using the following sequence: make two passes on each flange then two on the web; repeat, using one pass at each location until welds are completed.
3. Weld top and bottom flange moment plates at Pier No. 2.
4. Lower end of beam at Pier No. 3.
5. Make splices at Piers No. 1 and No. 3 in the same manner, raising the ends of the beams ¾" at Abutments No. 1 and No. 2.

PREPARED BY
CAPITOL ENGINEERING ASSOCIATES, DILLSBURG, PA.
FOR
STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

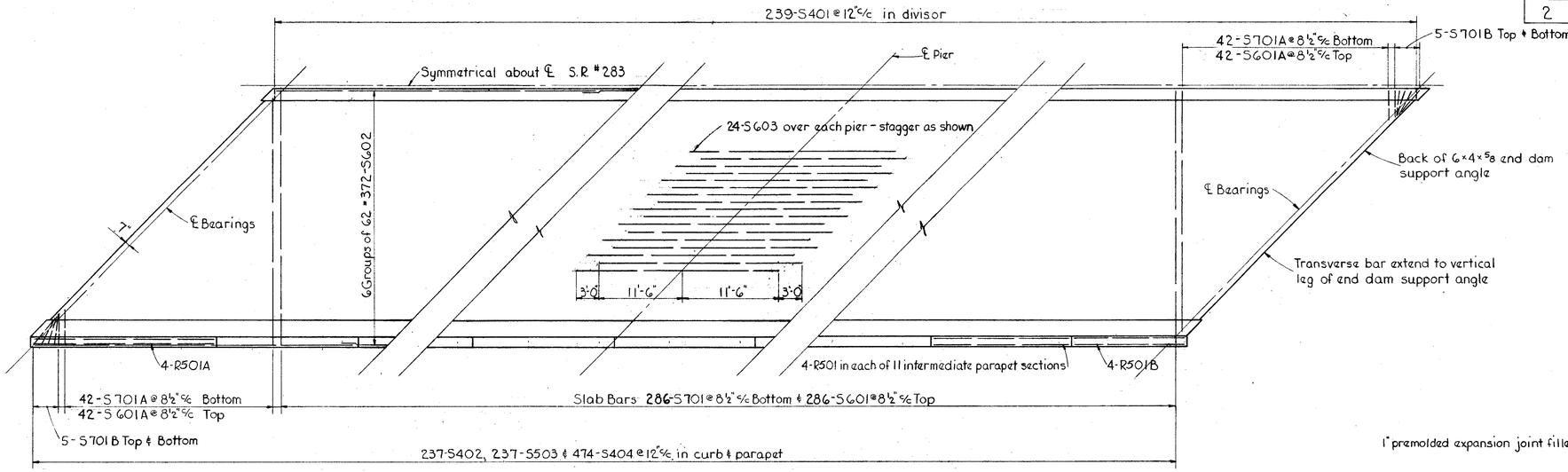
STEEL FRAMING PLAN
BRIDGE NO. LAK-44-0795
S.R. 44 UNDER S.R. 283
LAKE COUNTY
STA. 75+63.40

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
McC	J.E.G.				

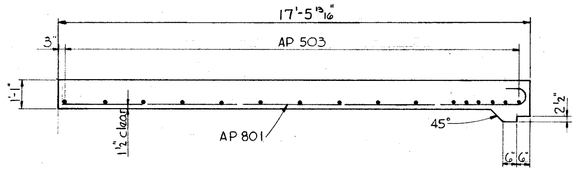
Fed. Rd. Division	State	Project	
2	OHIO		

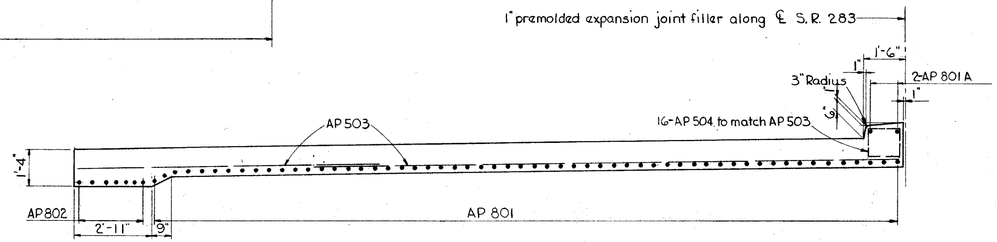
195
212

LAKE COUNTY
LAK-44-7.22

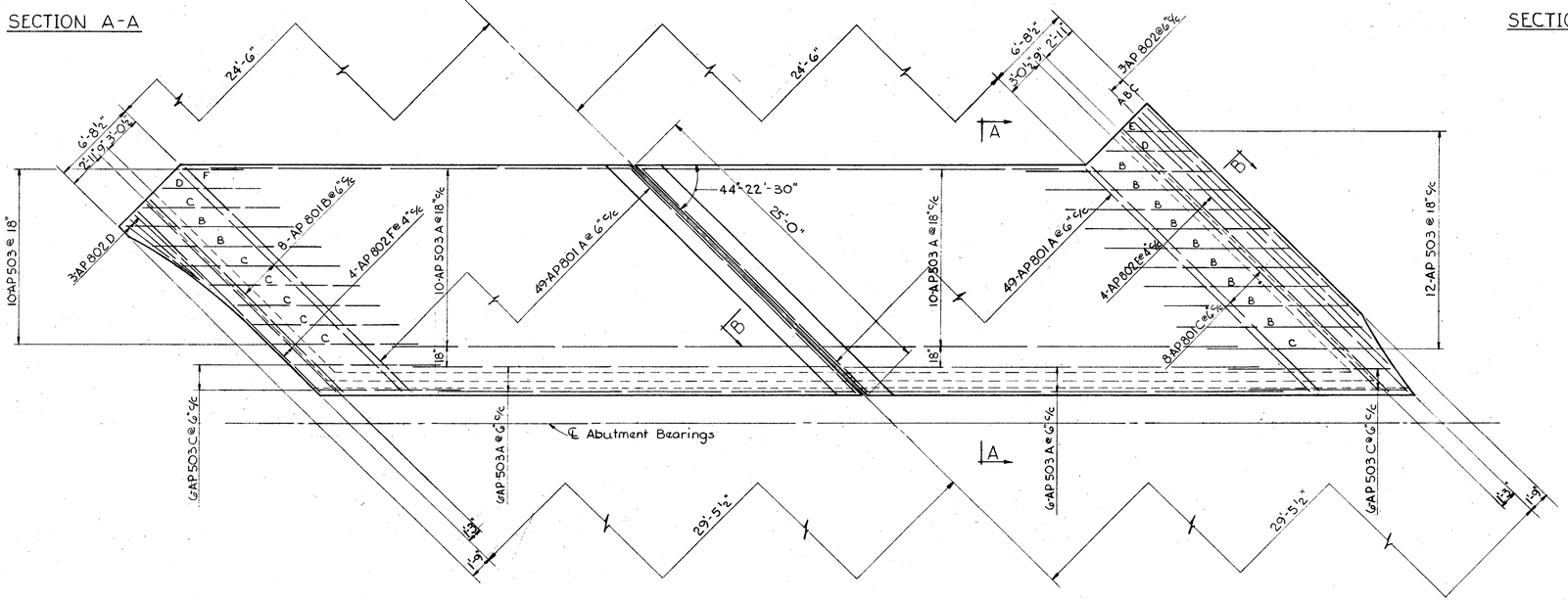


HALF PLAN - DECK REINFORCING





SECTION A-A



SECTION B-B

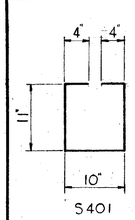
PLAN OF APPROACH SLAB

PREPARED BY
CAPITOL ENGINEERING ASSOCIATES, DILLSBURG, PA.
FOR
STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

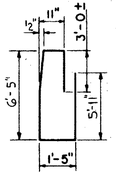
DECK DETAILS

BRIDGE NO. LAK-44-0795
S.R. 44 UNDER S.R. 283
LAKE COUNTY
STA. 75+63.40

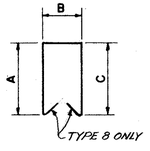
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
M.C.	J.E.G.				



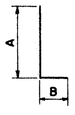
S401



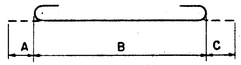
TYPE 7



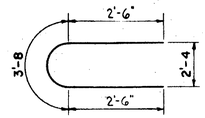
TYPE 1 & 8



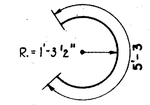
TYPE 2



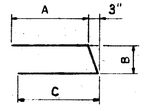
TYPE 3



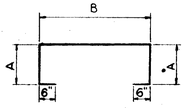
TYPE 4



* RE 401



TYPE 5



TYPE 6

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

196
212

LAKE COUNTY
LAK-44-7.22

REINFORCING STEEL LIST

ABUTMENTS

MARK	ABUT #1	ABUT #2	TOTAL	LENGTH	WEIGHT	TYPE	A	B	C	VARIES BY	No. of Ea.
A401A	10	10	20	3'-6"	47	Str.					
A401B	10	10	20	4'-3"	57	Str.					
A402	8	8	16	4'-9"	51	Str.					
A503	34	34	68	6'-10"	485	#8	2'-10"	6"	2'-10"		
A404A	4	4	8	18'-9"	100	Str.					
A404B	3	3	6	21'-0"	84	Str.					
A404C	4	4	8	12'-9"	68	Str.					
A404D	3	3	6	11'-0"	44	Str.					
A405A	5	5	10	6'-10"	46	#5	2'-9"	1'-3"	3'-0"		
A405B	7	7	14	6'-6"	61	#5	2'-7"	1'-3"	2'-10"		
A405C	7	7	14	5'-10"	55	#5	2'-3"	1'-3"	2'-6"		
A405D	6	6	12	4'-6"	36	#5	1'-7"	1'-3"	1'-10"		
A405E	7	7	14	2'-10"	26	#5	9"	1'-3"	1'-0"		
A501	122	122	244	7'-7"	1,929	#2	6'-9"	1'-0"			
A502	61	61	122	7'-5"	944	#1	2'-3"	3'-3"	2'-3"		
A504	64	64	128	24'-6"	3,271	Str.					
A505A	10	10	20	9'-0"	188	Str.					
A505B	10	10	20	14'-0"	292	Str.					
A506A	6	6	12	19'-0"	238	Str.					
A506B	2	2	4	13'-9"	57	Str.					
A506C	2	2	4	12'-0"	50	Str.					
A506D	6	6	12	13'-0"	163	Str.					
A506E	2	2	4	7'-9"	32	Str.					
A506F	2	2	4	6'-6"	27	Str.					
A507	45	45	90	10'-3"	962	#2	9'-5"	1'-0"			
A508	40	40	80	5'-0"	417	Str.					
A508A	28	28	56	3'-3"	190	Str.					
A509	2	2	4	4'-7"	19	#6	1'-6"	1'-1"			
A510	2	2	4	5'-6"	23	#6	1'-6	2'-0"			
A601	91	91	182	17'-3"	4,716	#7	See	Detail	Above		
F501	36	36	72	6'-10"	513	#1	2'-10"	1'-6"	2'-10"		
F601	124	124	248	9'-11"	3,695	#1	2'-3"	5'-9"	2'-3"		
F602	22	22	44	8'-2"	540	#1	2'-3"	4'-0"	2'-3"		
F603	6	6	12	10'-2"	183	#1	2'-3"	6'-0"	2'-3"		
F604	12	12	24	6'-8"	240	#1	2'-3"	2'-6"	2'-3"		
F801	21	21	42	32'-4"	3,626	Str.					
F802	8	8	16	15'-9"	673	Str.					
F803	8	8	16	12'-6"	534	Str.					
F804	6	6	12	8'-0"	256	Str.					
				TOTAL	24,938						

SUPERSTRUCTURE

MARK	No.	LENGTH	WEIGHT	TYPE	A	B	C	VARIES BY	No. of Ea.
S401	478	2'-11"	932	S401	See	Detail	Above		
S402	474	3'-9"	1,187	#1	1'	2'-9"	1'		
S503	474	5'-3"	2596	#8	2'-0"	6½"	2'-0"		
S404	948	1'-8"	1,058	#2	1'-3"	6"			
S601	572	32'-0"	27,493	Str.					
S601A	168	5'-0" to 31'-9"	4,637	Str.				7"/8"	4
S602	744	41'-0"	45,817	Str.					
S603	144	26'-0"	5,623	Str.					
S701	572	32'-0"	37413	Str.					
S701A	168	5'-0" to 31'-9"	6310	Str.				7"/8"	4
S701B	20	5'-0"	204	Str.					
		TOTAL	133,270						

PIERS

MARK	PIER #1	PIER #2	PIER #3	TOTAL	LENGTH	WEIGHT	TYPE	A	B	C	VARIES BY	No. of Ea.
P501	56	56	56	168	6'-9"	1,183	#1	2'-2"	2'-8"	2'-2"		
P502	8	8	8	24	13'-6"	338	Str.					
P801	40	40	40	120	7'-7"	2429	#2	5'-0"	2'-10"			
P802	16	16	16	48	8'-8"	1,111	#4	See	Detail	Above		
P803	20	20	20	60	13'-6"	2,163	Str.					
P804	20	20	20	60	11'-3"	1,802	Str.					
P901	48			48	18'-9"	3,060	Str.					
P902	48			48	19'-2"	3,129	Str.					
P903		48		48	17'-2	2,802	Str.					
P904		48		48	17'-6"	2,856	Str.					
P905			48	48	19'-7"	3,195	Str.					
P906			48	48	19'-11"	3,251	Str.					
F801	64	64	64	192	9'-2"	4456	#3	1'-1"	7'-0"	1'-1"		
F802	64	64	64	192	8'-2"	4,189	#3	1'-1"	6'-0"	1'-1"		
F901	96	96	96	288	6'-2"	604	#2	5'-5"	1'-0"			
					TOTAL	42,006						

TOTAL	PIERS	42,006
TOTAL	SPIRALS	7,192
TOTAL	OVERALL	49,198

RAILING

R501	88	17'-6"	To be included with Item S-14 for payment	Str.
R501A	8	23'-3"		Str.
R501B	8	14'-3"		Str.
R502A	8	18'-9"		Str.
R502B	8	12'-9"		Str.

NOTE: Railing bars are included with the railing for payment.

REPLACEMENT BARS

MARK	No.	LENGTH	WEIGHT	TYPE
RE 400	1	5'-3		Str.
RE 401	1	5'-3		*
RE 500	1	5'-7		Str.
RE 600	4	5'-11		Str.
RE 700	2	6'-3		Str.
RE 800	1	6'-6		Str.
RE 900	1	6'-10		Str.

SPIRALS

MARK	No.	SIZE	LENGTH	CORE DIA.	PITCH	No. of TURNS	WEIGHT
SP401	4	½"ϕ	16'-3¾"	32"	4½"	47	1,228
SP402	4	½"ϕ	16'-6"	32"	4½"	47	1,228
SP403	4	½"ϕ	14'-5⅝"	32"	4½"	42	1,100
SP404	4	½"ϕ	14'-8½"	32"	4½"	42	1,100
SP405	4	½"ϕ	16'-11⅜"	32"	4½"	48	1,256
SP406	4	½"ϕ	17'-2¾"	32"	4½"	49	1,280
						TOTAL	7,192

APPROACH SLABS

MARK	NO.	LENGTH	WEIGHT	TYPE	A	B	VARIES BY	NO. of Ea.
AP 801A	204	25'-7"	To be included with Item I-7 for payment	#4	1'-1"	24'-6"		
AP 801B	16	20'-10" to 25'-4"		#4	1'-1"	19'-9" to 24'-3"	6"	2
AP 801C	16	25'-10" to 29'-4"		#4	1'-1"	24'-9" to 28'-3"	6"	2
AP 802A	2	27'-0"		Str.				
AP 802B	2	24'-6"		Str.				
AP 802C	2	22'-6"		Str.				
AP 802D	6	7'-0"		Str.				
AP 802E	8	29'-7" to 30'-7"		#4	1'-1"	28'-6" to 29'-6"	4"	2
AP 802F	8	20'-7" to 21'-7"		#4	1'-1"	19'-6" to 20'-6"	4"	2

MARK	NO.	LENGTH	WEIGHT	TYPE	A	B	VARIES BY	NO. of Ea.
AP 503A	64	32'-0"	To be included with Item I-7 for payment	Str.				
AP 503B	22	13'-6"		Str.				
AP 503C	38	11'-6"		Str.				
AP 503D	4	7'-0"		Str.				
AP 503E	2	3'-6"		Str.				
AP 503F	2	4'-6"		Str.				
AP 504	64	3'-8"		#6	1'-2"	1'-0"		

NOTE: Approach Slab bars are included with the approach slab for payment.

NOTES:

All dimensions are out to out of the bar.

Bar Size is indicated in the bar mark. The first digit where three digits are used, and the first two where four are used, indicate the bar size number. For example, A700 is a No. 7 size bar & A1014 is a No. 10 size.

The length shown in the bar list for the spiral bars is the distance from the top of the footing to the bottom of the cap.

The number 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 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 lbs. per lin. ft., shall be provided for each spiral unit. They shall be equally spaced along the periphery of the coil. The number of pounds of spacers, based on 0.68 lbs. per lin. ft., will be paid for as reinforcing steel and is included in the tabulated quantity of spiral bars.

Replacement Bars: If reinforcing bars are fabricated from stock which has previously been tested and approved by the Ohio Testing Laboratory, test samples as provided in Sec. S-4.02 need not be furnished and replacement bars will not be required.

PREPARED BY
CAPITOL ENGINEERING ASSOCIATES, DILLSBURG, PA.
FOR

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

REINFORCING BAR LIST
BRIDGE NO. LAK-44-0795
S.R. 44. UNDER S.R. 283
LAKE COUNTY
STA. 75+63.40

DESIGNED	DRAWN	TRACED	CHECKED	REVISED	DATE	REVISED
	J.E.G.		MGS			