FED. RD.	STATE	PROJECT	
2	OHIO	I-271-6(27)237	

1/313

SUM-271-8.29

STATE OF OHIO
DEPARTMENT OF HIGHWAYS

SUM - 271 - 8.29
SUMMIT COUNTY
SAGAMORE HILLS TWP. - NORTHFIELD CENTER TWP. - BOSTON TWP.
GRADE SEPARATION WITH NEW YORK CENTRAL RAILROAD COMPANY

I-271-6(27)237
LIMITED ACCESS
1967 SPECIFICATIONS

MAR 2 1967
REPRODUCTION

- LIMITED ACCESS -

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

CONVENTIONAL SIGNS

State Line
County Line
Township Line
Section Line
Center Line
Corporation Line
Fence Line
Guard Rail (existing)
Guard Rail (proposed)
Railroad
Power Poles
Telephone Poles
Power or Telephone Poles with guys
Tower Line
Trees or Stumps (existing)
Limited Access — L/A
Right of Way — R/W
Limited Access & Right of Way — L/A R/W

LINE DATA

BEGIN PROJECT SUM 271-8.29 STA. 436+98.25
END PROJECT SUM 271-8.29 STA. 609+81.79
NET LENGTH OF PROJECT = 17,283.54 LIN. FT. = 3.273 MILES
ADD FOR APPROACHES (Sheet No. 12) 4402.43 LIN. FT.
TOTAL LENGTH OF WORK = 21,685.97 LIN. FT. = 4.107 MILES

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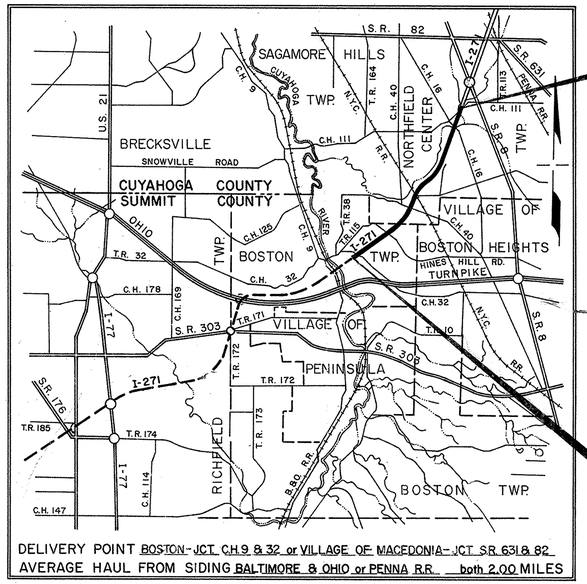
Sheet No. 273 & 276 revised 11-6-68 EBL



END PROJECT STA. 609+81.79

BEGIN PROJECT STA. 436+98.25

DELIVERY POINT BOSTON - JCT. C.H. 9 & 32 or VILLAGE OF MACEDONIA - JCT. S.R. 631 & 82
AVERAGE HAUL FROM SIDING BALTIMORE & OHIO or PENNA R.R. both 2.00 MILES

LOCATION MAP

SCALE OF MILES 0 1 2

PORTION TO BE IMPROVED
STATE ROADS
OTHER ROADS
PROPOSED

SCALE

PLAN — 1" = 50'
PROFILE: HORIZONTAL — 1" = 50'
PROFILE: VERTICAL — 1" = 5' & 1" = 10'
CROSS SECTIONS: HORIZONTAL & VERTICAL — 1" = 10'

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 THESE PLANS AND ESTIMATES.

APPROVED Clifton The Newhard
DATE 11-15-68 DIVISION DEPUTY DIRECTOR

APPROVED C. H. Getwater
DATE 9-12-67 ENGINEER OF BRIDGES

APPROVED R. E. Gallin
DATE 9-27-67 ENGINEER OF LOCATION AND DESIGN

APPROVED R. E. Shaft
DATE 9-27-67 DEPUTY DIRECTOR OF DESIGN AND CONSTRUCTION

APPROVED T. H. Bovard
DATE 10-12-67 DEPUTY DIRECTOR OF RIGHT OF WAY

APPROVED Thomas M. Major
DATE 10-11-67 DEPUTY DIRECTOR OF PLANNING AND PROGRAMMING

APPROVED R. W. Wilson
DATE 10-12-67 FIRST ASSISTANT DIRECTOR

APPROVED P. E. Washington
DATE 10-12-67 DIRECTOR OF HIGHWAYS

DESIGN DESIGNATION
CURRENT A.D.T. 1970 5477
DESIGN YEAR A.D.T. 1990 10,740
D.D.H.V. 889
D. (directional distribution) 55%
T. (percent B. & C. trucks) 4%
V. (design speed) 70

PREPARED AND RECOMMENDED BY
BEISWENGER, HOCH & ARNOLD, CONSULTING ENGINEERS
AKRON OHIO CLEVELAND

FILE NO.	SUMMIT COUNTY SUM-271-8.29
	DATE OF LETTING _____ 196
	CONTRACT NO. _____

SUPPLEMENTAL PRINTS OF STANDARD CONSTRUCTION DRAWINGS

BP-1	6-1-65	F-5	10-1-66	L-2	6-1-65	BR-1-65 Sht 1 — 11-24-65
BP-2	1-10-67	FAC1-1	9-15-67	MC-1	6-1-65	
BP-3	1-10-67	FAC1-2	6-1-65	MC-3	5-1-66	SD-1-65 Sht 2,3,1 — 11-8-65
BP-4	1-10-67	GR-1	1-1-67	MC-4	6-1-65	AS-1-54 — 8-10-65
BP-5	6-1-65			MC-5	6-1-65	RB-1-55 — 2-2-59
BP-6	6-1-65	GR-2A	1-1-67	MH-1	6-1-65	
CB-2-2A & B	6-1-65	GR-5B	6-1-65	MH-1A	8-1-66	
CB-2-3 & 2-4	6-1-65	GR-6	6-1-65	BD-7	1-1-66	
CB-4	6-1-65	HW-1	6-1-65	F-6	10-1-66	CSB-2-63 (Sh 1&2) 12-8-65
CB-5	6-1-65	HW-2	6-1-65	GR-5A	6-1-65	
CB-8	6-1-65	HW-3	6-1-65	SD-53	6-30-66	
F-2	6-1-65	HW-E	6-1-65	MC-7	3-1-66	
F-3	10-1-66	L-1	6-1-65			

SUPPLEMENTAL SPECIFICATIONS

801	1-1-67
806	1-1-67
808	1-13-67
811	1-1-67
825	1-1-67
828	1-1-67
1001	3-21-66

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
BUREAU OF PUBLIC ROADS

APPROVED:

DIVISION ENGINEER _____ DATE _____

FED. RD.	STATE	PROJECT	
2	OHIO	I-271	

2 / 313

SUM - 271 - 8.29

℄ CURVE DATA Nº 6
Δ = 14° 29' 18"
D_c = 1° 00'
R = 5729.58'
T = 728.30'
L = 1448.83'
E = 46.10'
P.I. STA. = 460+53.13

I-271-6(27)237
S.L.M. 8.29

SUM-271- 8.29
BEGIN PROJECT
STA. 436+98.25

STA. 450+23.50 I-271 =
STA. 17+38.60 ℄ R/W EXIST. BOSTON MILLS RD.
STRUCTURE Nº SUM-271-0854 LT. ℄ RT.

℄ RIVER VIEW RD.

℄ B. & O. R.R.

RIVER

CANAL

℄ BOSTON MILLS

BEGIN WORK
STA. 15+50

P.C. STA. 453+24.83

CURVE Nº 6

P.T. STA. 467+73.66

SUM-271-0835
STA. 470+72

N 39° 45' 04" E

STA. 480+00

MATCH LINE

430

440

450

460

470

N 54° 14' 22" E

STA. 427+84.69 I-271 =
STA. 1112+77.21 B. & O. R.R.
STRUCTURE Nº SUM-271-0802 LT. ℄ RT.

SUM-271-0852
STA. 448+50

END WORK
STA. 19+50

℄ CROSS-OVER
STA. 462+50

(C.R. 32)

BEGIN WORK
STA. 436+07.25

I-271-6(20)236
STA. 438+00

CUYAHOGA

OHIO

BEGIN WORK
STA. 42+00

TEMPORARY

S. 9° 05' 54" E

STA. 481+48.78 I-271 =
STA. 50+00 REL. HINES HILL RD.
STRUCTURE Nº SUM-271-0814

BEGIN WORK
57+37.07

STRUCTURE SUM-271-0966
I-271 STA. 509+66.36 =
C.H. 40 STA. 61+75.41

STANFORD RD.

FALLS

TURN AROUND

BRANDYWINE

C.H. 40

C.H. 38

BEGIN WORK
STA. 540+29

SUM-271-0970
STA 510+60

SUM-271-0982
STA. 517+00

W.B.L. STA. 522+30.34 =
E.B.L. STA. 522+16.12 =
℄ STA. 522+23.23

EQUATION
EQUATION

℄ N.Y.C. R.R.

BRANDYWINE CREEK

SUM-271-0993
STA. 523+00

SUM-271-1014
STA. 533+91

T.S. STA. 533+05.79
END 70' MEDIAN

BRANDYWINE CREEK

S.C.

533+05.79

MATCH LINE STA. 480+00

MATCH LINE STA. 540+00

HINES HILL RD. (T.R.118)

TURNAROUND

END WORK
STA. 56+56.39

SUM-271-0932
STA. 491+50

SUM-271-0948
STA. 459+54

490

500

510

520

530

N 39° 45' 04" E

N 50° 18' 35" E

84' MEDIAN

TRANSITION MEDIAN

70' MEDIAN

STA. 522+35.30-I-271
STA. 713+25.24 - ℄ N.Y.C. R.R. (BRIDGE)
BRIDGE Nº. 1346

TRANSITION MEDIAN

END 84' MEDIAN
W.B.L. P.C. STA. 509+17.32
℄ P.C. STA. 509+51.24
E.B.L. P.C. 509+85.96

P.C.

END WORK
STA. 69+00

CURVE DATA Nº 7
Δ = 10° 33' 34"
D_c = 1° 00'
R = 5729.58'
T = 529.47'
L = 1055.94'
E = 24.41'
P.I. STA. = 514+81.11
P.I. STA. = 514+46.73 W.B.L.
P.I. STA. = 515+15.43 E.B.L.

W.B.L. P.T. STA. 519+73.26
E.B.L. P.T. STA. 520+07.58
℄ STA. 520+41.30

70' MEDIAN

BEGIN

SCALE : 1" = 200'

SCHEMATIC PLAN

FED. RD.	STATE	PROJECT	
2	OHIO	I-271	

3/313

SUM - 271 -8.29

MATCH LINE STA. 540+00

RELOC BRANDYWINE CREEK

BRANDYWINE CREEK

TRANSITION MEDIAN

84' MEDIAN

C.S. STA. 552+23.55

ST. STA. 555+23.55

CURVE Nº 8

N 18° 21' 19" E

SUM-271-1080
STA. 568+45

STA. 580+01.60 - I-271
STA. 718+47.19 AKRON-CLEVE RD.
STRUCTURE Nº SUM-271-1117 LT. & RT.

℄ CROSS-OVER
STA. 581+38

SUM-271-1116
STA. 588+67.17

RD. (C.R. 16)

FACI SIGN

END WORK
STA. 722+00

INDIAN CREEK

HIGHLAND RD.
T.R. 111

BEGIN WORK
STA. 716+00

AKRON CLEVE RD.

FACI SIGN

BRANDYWINE CREEK

STA. 501+78.50 - I-271
STRUCTURE Nº SUM-271-1122

MATCH LINE STA. 600+00

℄ CURVE DATA Nº 8

Δ	= 31° 57' 19"
Θ_s	= 3° 00'
D_c	= 2° 00'
R_c	= 2864.79
L_c	= 1297.76
L_s	= 300.00
T_s	= 970.61
E_s	= 116.47
LT	= 200.03
ST	= 100.03
Δ_c	= 25° 57' 19"
T_c	= 660.21
E_c	= 75.09

P.I. STA. = 546+66.40

MATCH LINE STA. 600+00

STA. 609+81.79 BK.
STA. 32+00 AH.
EQUATION

INDIAN CREEK

HIGHLAND RD.
T.R. 111

RAMP R-4

RAMP R-1

RAMP R4a

RAMP R-3

RAMP R-2

INDIAN CREEK

S.R. 8

N 18° 21' 19" E

END WORK
STA. 609+81.79

END PROJECT
SUM-271-8.29

I-271-6(27)237
S.L.M. 8.29

I-IG-271-6(21)239

SCALE: 1" = 200'

SCHEMATIC PLAN

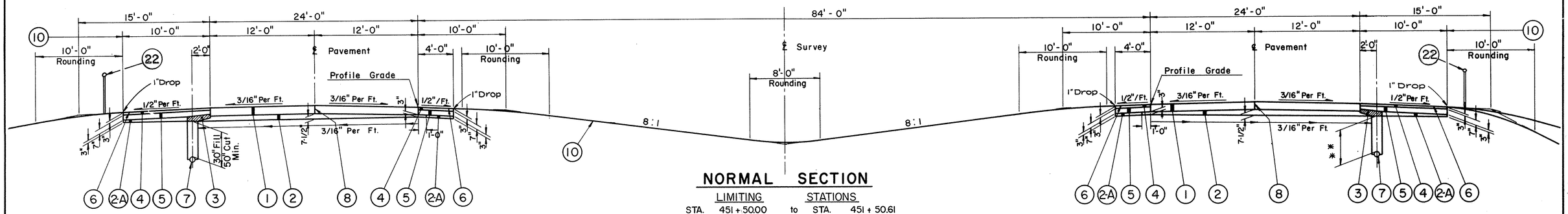
FED. RD.	STATE	PROJECT	
2	OHIO		

4/313

SUM - 271 - 8.29

TYPICAL SECTIONS

TYPE - 451



NORMAL SECTION

LIMITING			STATIONS	
STA.	451+50.00	to	STA.	451+50.61
STA.	469+47.88	to	STA.	483+30.00
STA.	564+50.00	to	STA.	588+34.02
STA.	589+69.18	to	STA.	590+98.18

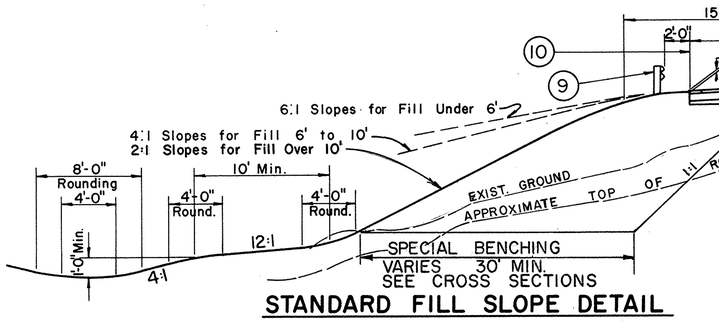
BRIDGE LIMITS

SUM.-271-1117

STA.	588+34.02	to	STA.	589+69.18

SUM.-271-1122

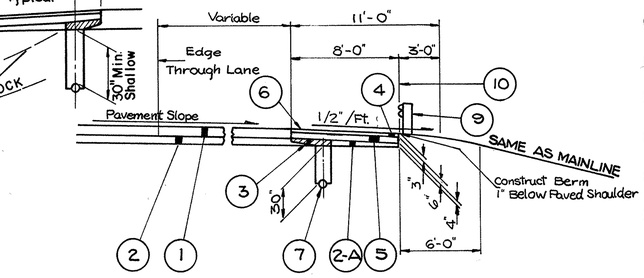
STA.	590+98.18	to	STA.	592+58.82



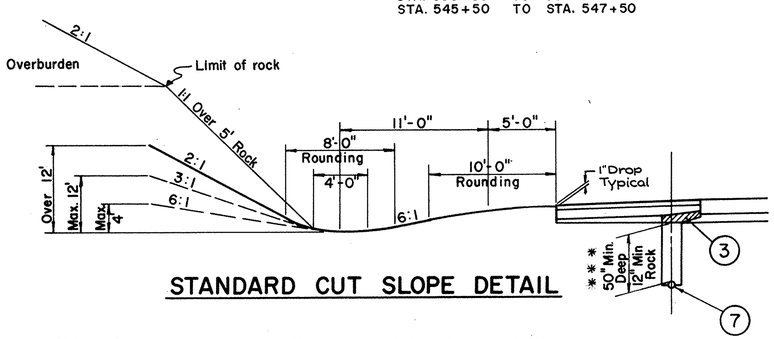
STANDARD FILL SLOPE DETAIL

SPECIAL BENCHING

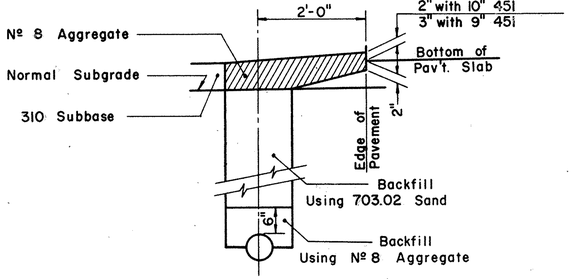
LIMITING			STATION	
STA.	536+50	TO	STA.	537+50
STA.	545+50	TO	STA.	547+50



SPEED CHANGE LANE



STANDARD CUT SLOPE DETAIL



SPECIAL DRAINAGE DETAIL

* * Unless otherwise shown on plans, Underdrains shall be laid parallel to profile grade with 30" of cover from bottom of subbase to crown of pipe. Where deep Underdrains are called for, 50" cover from bottom of subbase to crown of pipe shall be provided.

* * * In rock cuts, Underdrains shall be 6" Item 605 Type 707.06 or 707.12 pipe with 12" of cover from bottom of subbase to crown of pipe. Slopes Typical Unless Otherwise Shown on Cross Sections.

(1) 451 Reinforced Portland Cement Concrete Pavement. (10" Thickness)

(2) 310 Variable Depth Subbase, Grading "A" or "B" Modified as Per General Note.

(2A) 310 Variable Depth Subbase *

(3) Special Drainage Connection, Using № 8 Aggregate. (See Detail This Sheet & Proposal)

(4) 301 3" Bituminous Aggregate Base, as per plan 702.01 (85-100) or 702.09 RT10 (see notes in proposal).

(5) 304 (Variable Depth) Aggregate Base

(6) 409 Seal Coat, Using 0.008 Cu. Yd. № 8 Cover Aggregate Per Sq. Yd. and 0.30 Gal. Bituminous Material Per Sq. Yd. (see note in proposal)

(7) 605 6" Pipe Underdrain (707.06 or 707.12 Shall be used in Rock Cut.) **

(8) Standard Longitudinal Joint

(9) 606 Guard Rail, Type-4, *Modified As Per Plan*

(10) 659 Seeding and Mulching

(22) 620 Delineators Type A-1 Post Mounted. ****

Sequence of Operations: (1) Install pipe underdrain on outside shoulder.

(2) Place Subbase to outside edge of underdrain or to one foot beyond edge of pavement where no underdrain is present. (3) Construct 451. (4) Remove Subbase and any contaminated backfill over drain and replace with № 8 Aggregate as shown. (5) Complete shoulder as shown.

* Subbase under Paved Shoulders shall meet the Grading Requirements of Regular Grading 310, except that in areas requiring extra depth Subbase. The limits for Regular Grading 310 are from the Underdrain Trench (or One Foot beyond the Slab Edge where underdrains are not used) to the edge of Shoulder.

**** For Spacing and Detail of Delineators See Sheet 215.

FED. RD.	STATE	PROJECT	
2	OHIO		

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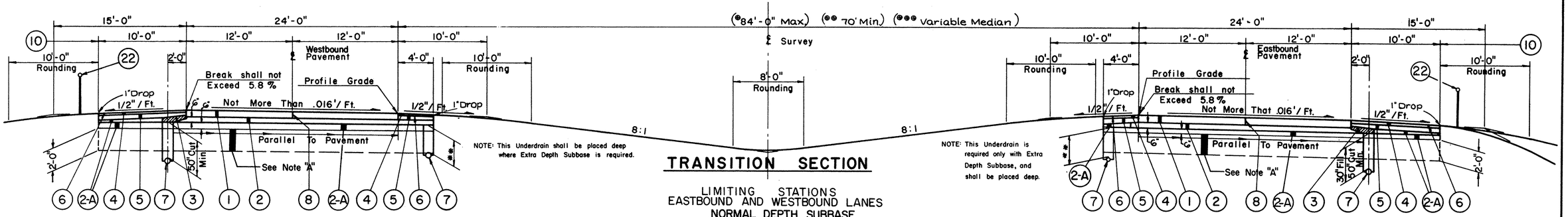
TYPICAL SECTIONS

TYPE 451



TRANSITION SECTION

LIMITING STATIONS
EASTBOUND AND WESTBOUND LANES

NORMAL DEPTH SUBBASE

⊛STA. 467+22.88 to STA. 469+47.88 E.B.L. & W.B.L.
⊛⊛⊛STA. 509+52.00 to STA. 510+36.74 E.B.L.
⊛⊛⊛STA. 519+22.48 to STA. 521+47.48 W.B.L.
⊛⊛⊛STA. 519+91.12 to STA. 522+16.12 E.B.L. = 522+23.23 ℄
⊛⊛⊛STA. 536+20.79 to STA. 535+95.79 E.B.L. & W.B.L.
⊛⊛⊛STA. 552+93.55 to STA. 556+68.55 E.B.L. & W.B.L.

EXTRA DEPTH SUBBASE

⊛STA. 451+50.61 to STA. 453+75.61 E.B.L. & W.B.L.
⊛STA. 507+43.10 to STA. 509+68.10 W.B.L.
⊛STA. 505+11.74 to STA. 509+52.00 E.B.L.

BRIDGE LIMITS
SUM-271-0854

STA. 449+33.68 to STA. 451+24.24 W.B.L.
STA. 449+47.62 to STA. 451+10.16 E.B.L.

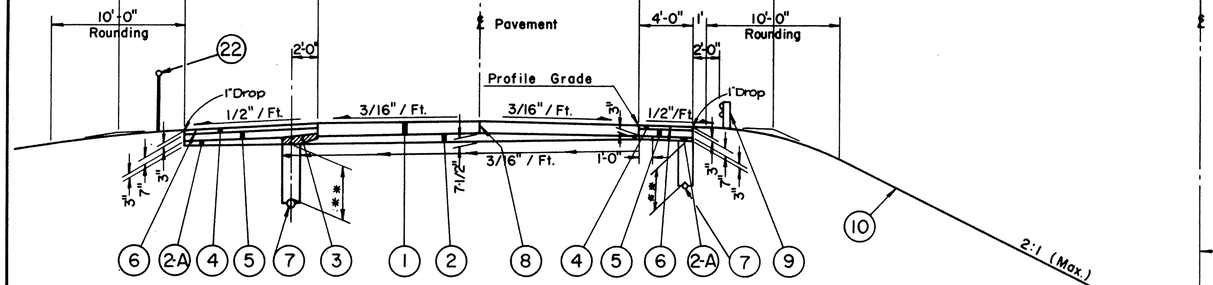
NOTE A:
The Existing Material Shall be Undercut two (2) Feet Below the Bottom of the Subbase and Replaced with Acceptable Embankment Material in Accordance with Section 203 of the Specifications. Limiting Stations Unless Otherwise Shown or Directed by the Engineer are as Follows:

STA. 451+50.61 to STA. 453+75.61 E.B.L. & W.B.L.

* Subbase under Paved Shoulders shall meet the Grading Requirements of Regular Grading 310 , except that in areas requiring extra depth Subbase , Grading "A" or "B" Modified shall be used. The limits for Regular Grading 310 are from the Underdrain Trench (or One Foot beyond the Slab Edge where underdrains are not used) to the edge of Shoulder.

**** For Spacing and Detail of Delineators, See Sheet No. 219 .

(1) 451 Reinforced Portland Cement Concrete Pavement. (10" Thickness)
(2) 310 Variable Depth Subbase , Grading "A" or "B" Modified as Per General Note.
(2A) 310 Variable Depth Subbase *
(3) Special Drainage Connection, Using Nº 8 Aggregate. (See Detail , Sheet Nº 4)
(4) 301 3" Bituminous Aggregate Base, as per plan 702.01 (85-100) or 702.09 RT10 (See note in proposal)
(5) 304 (Variable Depth) Aggregate Base Course
(6) 409 Seal Coat using 0.008 Cu. Yds. Nº. 8 Cover Aggregate per Sq. Yd. and 0.30 Gal. Bituminous Material per Sq. Yd. (see note in proposal)
(7) 605 6" Pipe Underdrain (707.06 or 707.12 shall be used in Rock Cut.) **
(8) Standard Longitudinal Joint
(9) 606 Guard Rail, Type-4, *Modified As Per Plan*
(10) 659 Seeding and Mulching.
(22) 620 Delineators, Type A-1, Post Mounted. ****



NORMAL SECTION CUT AND FILL

* * Unless otherwise shown on plans, Underdrains shall be laid parallel to profile grade with 30" of cover from bottom of subbase to crown of pipe. Where deep Underdrains are called for, 50" cover from bottom of subbase to crown of pipe shall be provided.

In rock cuts, Underdrains shall be 6" Item 605 Type 707.06 or 707.12 pipe with 12" of cover from bottom of subbase to crown of pipe.

For Typical Slopes, Side Ditches and Drainage Details, See Sheet No. 4

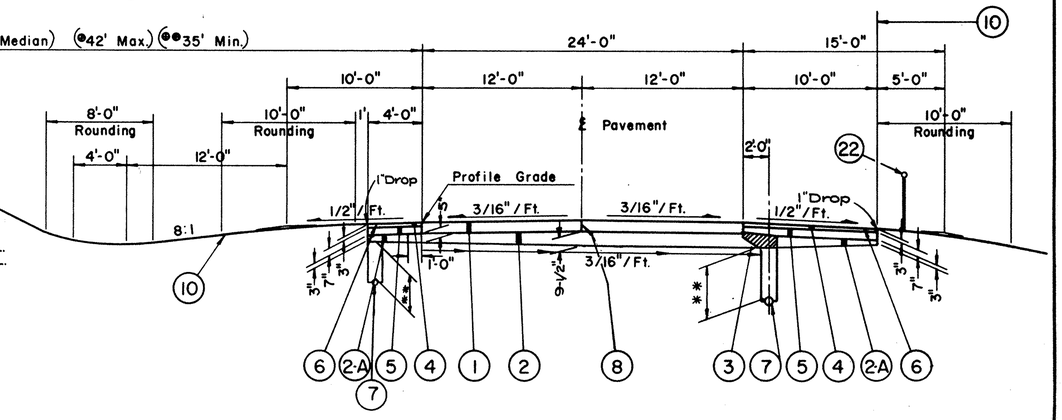
NORMAL SECTION INDEPENDENT GRADE

NORMAL CUT AND FILL

⊛ STA.436+07.25 to 436+98.25 E.B.L.
⊛ STA.445+75.00 to 449+33.68 W.B.L.
⊛ STA.448+40.00 to 449+47.62 E.B.L.
⊛ STA.451+10.16 to 451+50.00 E.B.L.
⊛ STA.451+24.24 to 451+50.00 W.B.L.
⊛ STA.483+30.00 to 500+50.00 W.B.L.
⊛ STA.483+30.00 to 501+50.00 E.B.L.
⊛⊛ STA.521+47.48 W.B.L. to STA.522+30.34 W.B.L. = STA.522+23.23 ℄
⊛⊛ STA.522+16.12 E.B.L. = STA.522+23.23 ℄
⊛⊛ STA.522+30.34 W.B.L. = STA.522+23.23 ℄ to STA.530+00.00
⊛⊛ STA.532+00.00 to 536+20.79 E.B.L. & W.B.L.
⊛ STA.556+68.55 to 564+50.00 E.B.L. & W.B.L.

NORMAL ROCK CUT

⊛⊛ STA. 527+00.00 to 532+00.00 E.B.L.
⊛⊛ STA. 530+00.00 to 532+00.00 W.B.L.



NORMAL SECTION ROCK CUT

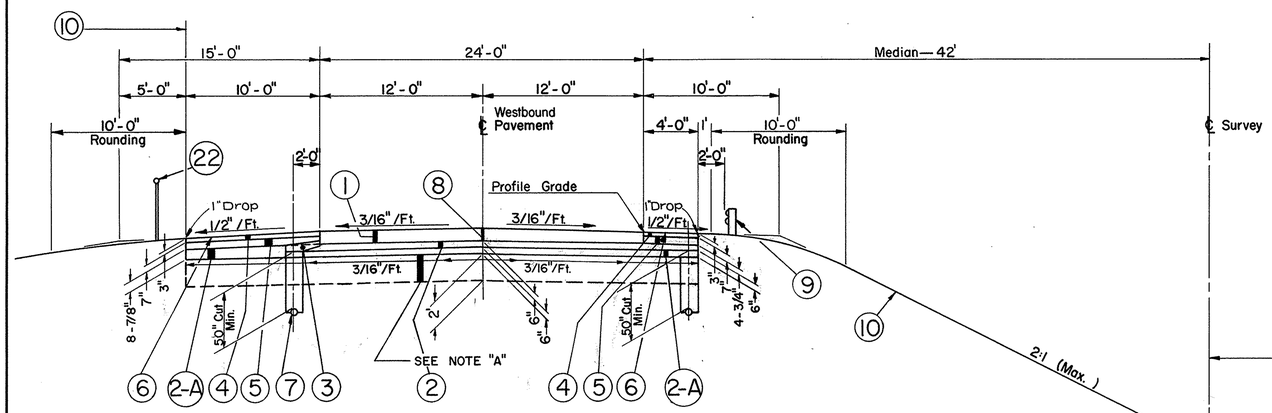
I-271 TYPICAL SECTIONS

TYPICAL SECTIONS

FED. RD.	STATE	PROJECT	
2	OHIO		

6/313

SUM.-271-8.29



(1) 451 Reinforced Portland Cement Concrete Pavement (10" Thickness).

(2) 310 (Variable Depth) Subbase, Grading "A" or "B" Modified as per General Note.

(2A) 310 (Variable Depth) Subbase *

(3) Special Drainage Connection, Using No. 8 Aggregate (See Detail this sheet, and note in proposal).

(4) 301 3" Bituminous Aggregate Base, as per plan 702.01 (85-100) or 702.09 RT10 (See notes in proposal).

(5) 304 (Variable Depth) Aggregate Base.

(6) 409 Seal Coat, Using 0.008 Cu. Yds. No. 8 Cover Aggregate Per Sq. Yd. and 0.30 Gal. Bituminous Material Per Sq. Yd. (see note in proposal)

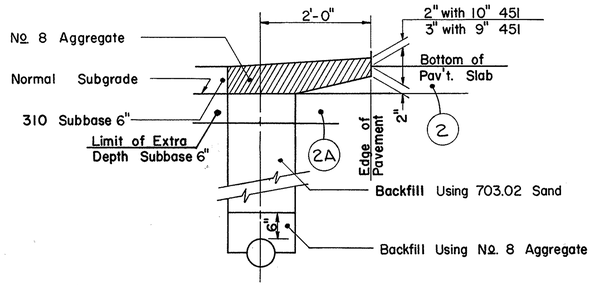
(7) 605 6" Pipe Underdrain (707.06 or 707.12 shall be used in Rock Cut.)**

(8) Standard Longitudinal Joint.

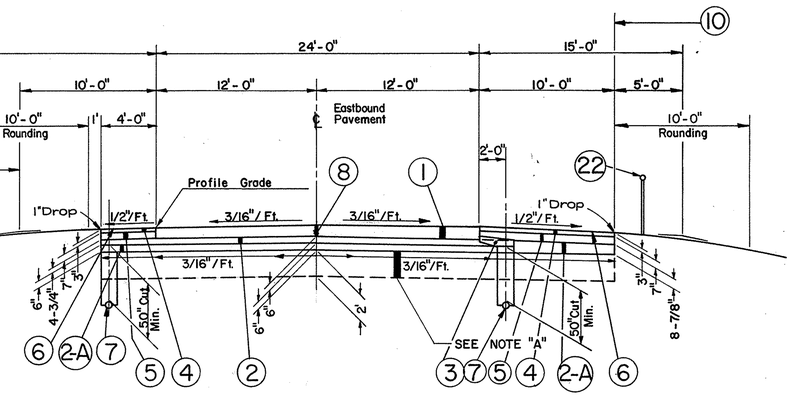
(9) 606 Guard Rail, Type-4, *MODIFIED AS PER PLAN*

(10) 659 Seeding and Mulching

(22) 620 Mono-Directional Delineators, Type A-1, Post Mounted. * * * *



SPECIAL DRAINAGE DETAILS



NORMAL SECTION INDEPENDENT GRADE

WESTBOUND LANE	EASTBOUND LANE
STA. 436+98.25 to STA. 445+75	STA. 436+98.25 to STA. 448+40
STA. 500+50 to STA. 507+43.10	STA. 501+50 to STA. 508+11.74

NOTE A:
THE EXISTING MATERIAL SHALL BE UNDERCUT TWO (2) FEET BELOW THE BOTTOM OF THE SUBBASE AND REPLACED WITH ACCEPTABLE EMBANKMENT MATERIAL IN ACCORDANCE WITH SECTION 203 OF THE SPECIFICATIONS. LIMITING STATIONS UNLESS OTHERWISE SHOWN OR DIRECTED BY THE ENGINEER ARE AS FOLLOWS:

STA. 436+98.25 to STA. 445+75	WESTBOUND
STA. 436+98.25 to STA. 448+40	EASTBOUND

** Unless otherwise shown on plans, Underdrains shall be laid parallel to profile grade with 50" of cover from bottom of subbase to crown of pipe.

Slopes Typical Unless Otherwise Shown on Cross Section.

* * * * For spacing and detail of Delineators, see Sheet No. 219

Sequence of Operations: (1) Install pipe underdrains. (2) Place Subbase to outside edge of underdrain. (3) Construct 451. (4) Remove Subbase and any contaminated backfill over drain and replace with No. 8 Aggregate as shown. (5) Complete shoulder as shown.

* In areas requiring extra depth subbase, four (4) lines of 605 6" pipe underdrains shall be used. The bottom six inch (6") subbase course shall meet item 310, regular grading, and shall be placed through the limits of the paved shoulders. The upper six inch (6") subbase course shall meet item 310, grading "A" or "B" modified, and shall be placed to the outside edge of the outside underdrain trench.

TYPICAL SECTIONS

TYPE 451

FED. RD.	STATE	PROJECT	
2	OHIO		

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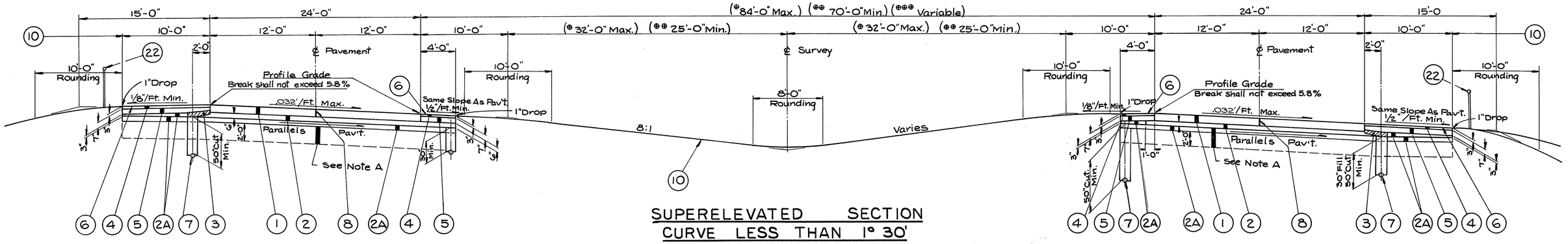
313

SUM - 271 - 8.29



(1) 451 Reinforced Portland Cement Concrete Pavement (10" Thickness)

(2) 310 (Variable Depth) Subbase, Grading "A" or "B" Modified as Per General Note

(2A) 310 (Variable Depth) Subbase *

(3) Special Drainage Connection, Using Nº 8 Aggregate (See Detail, Sheet Nº 4)

(4) 301 3" Bituminous Aggregate Base, as per plan 702.01 (85-100) or 702.09 RT 10 (See Notes in Proposal)

(5) 304 (Variable Depth) Aggregate Base (See Note in Proposal)

(6) 409 Seal Coat, Using 0.008 Cu. Yds. Nº.8 Cover Aggregate Per Sq. Yd. and 0.30 Gal. Bituminous Material Per Sq. Yd. (see note in proposal)

SUPERELEVATED SECTION
CURVE LESS THAN 1° 30'

LIMITING STATIONS
EASTBOUND & WESTBOUND LANES
NORMAL DEPTH SUBBASE

⊕ STA. 461+50.00 to STA. 467+22.88 W.B.L.
⊕ STA. 464+50.00 to STA. 467+22.88 E.B.L.
⊕⊕⊕ STA. 510+36.74 to STA. 519+91.12 E.B.L.
⊕⊕⊕ STA. 510+16.00 to STA. 519+22.48 W.B.L.

EXTRA DEPTH SUBBASE

⊕ STA. 453+75.61 to STA. 461+50.00 W.B.L.
⊕ STA. 453+75.61 to STA. 464+50.00 E.B.L.
⊕⊕⊕ STA. 509+68.10 to STA. 510+16.00 W.B.L.

(7) 605 6" Pipe Underdrain

(8) Standard Longitudinal Joint

(9) 606 Guard Rail, Type-4, *Modified As Per Plan*

(10) 659 Seeding and Mulching

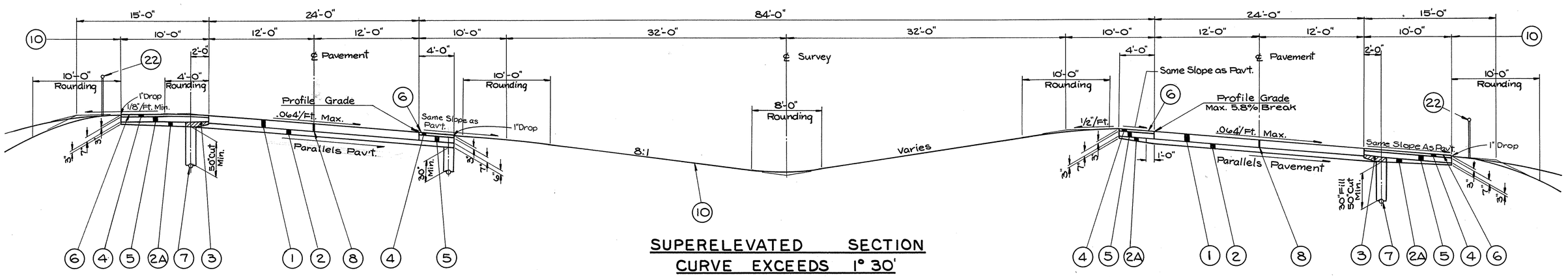
(22) 620 Delineators, Type A-1, Post Mounted * ***

* Subbase under Paved Shoulders shall meet the Grading Requirements of Regular Grading 310, except in areas requiring extra depth Subbase.
The limits for Regular Grading 310 are from the Underdrain Trench (or One Foot beyond the Slab Edge where underdrains are not used) to the Edge of Shoulder.

* * * * For Spacing and Detail of Delineators See Sheet Nº 219

NOTE A:
The existing material shall be undercut two (2) feet below the bottom of the subbase and replaced with acceptable embankment material in accordance with section 203 of the specifications.
Limiting stations, unless otherwise shown or directed by the engineer, are as follows:

STA. 453+75.61 to STA. 461+50.00 W.B.L.
STA. 453+75.61 to STA. 461+50.00 E.B.L.



* * Unless otherwise shown on plans, Underdrains shall be laid parallel to profile grade with 30" of cover from bottom of subbase to crown of pipe. Where deep Underdrains are called for, 50" cover from bottom of subbase to crown of pipe shall be provided.
In rock cuts, Underdrains shall be 6" Item 605 Type 707.06 or 702.12 pipe with 12" of cover from bottom of subbase to crown of pipe.

SUPERELEVATED SECTION
CURVE EXCEEDS 1° 30'

LIMITING STATIONS
EASTBOUND & WESTBOUND LANES
STA. 539+95.79 to STA. 552+93.55

For Typical Slopes, Side Ditches and Drainage Details See Sheet Nº 5

I-271 TYPICAL SECTIONS

K & E - AKRON

TYPICAL SECTIONS

FED. RD.	STATE	PROJECT	
2	OHIO		

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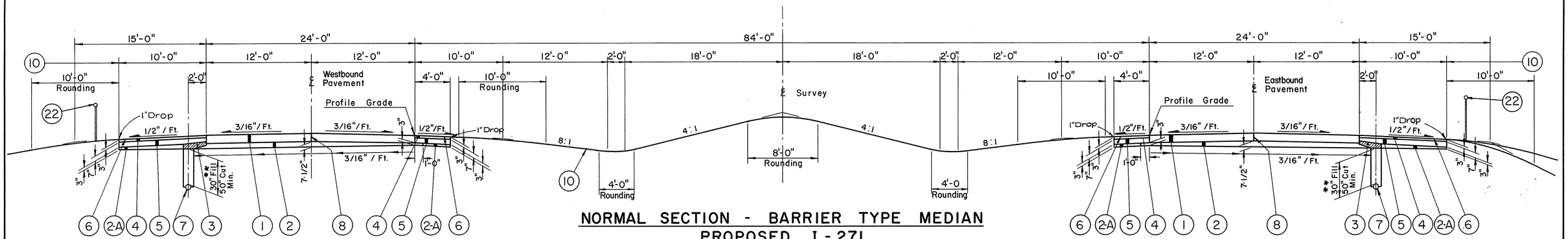
SUM - 271 - 8.29

TYPE 451



NORMAL SECTION - BARRIER TYPE MEDIAN
PROPOSED I - 271

LIMITING STATIONS

STA. 592+58.82 to STA. 609+00.00

(1) 451 Reinforced Portland Cement Concrete Pavement. (10" Thickness)

(2) 310 Variable Depth Subbase, Grading "A" or "B" Modified as Per General Note.

(2A) 310 Variable Depth Subbase*

(3) Special Drainage Connection, Using Nº 8 Aggregate. (See Detail , Sheet Nº 4, and proposal).

(4) 301 3" Bituminous Aggregate Base, as per plan
702.01 (85-100) or 702.09 RT10 *See Notes In Proposal.*

(5) 304 (Variable Depth) Aggregate Base

(6) 409 Seal Coat, Using 0.008 Cu.Yds. Nº.8 Cover Aggregate Per Sq. Yd. and 0.30 Gal. Bituminous Material Per Sq. Yd. (see note in proposal)

(7) 605 6" Pipe Underdrain

(8) Standard Longitudinal Joint

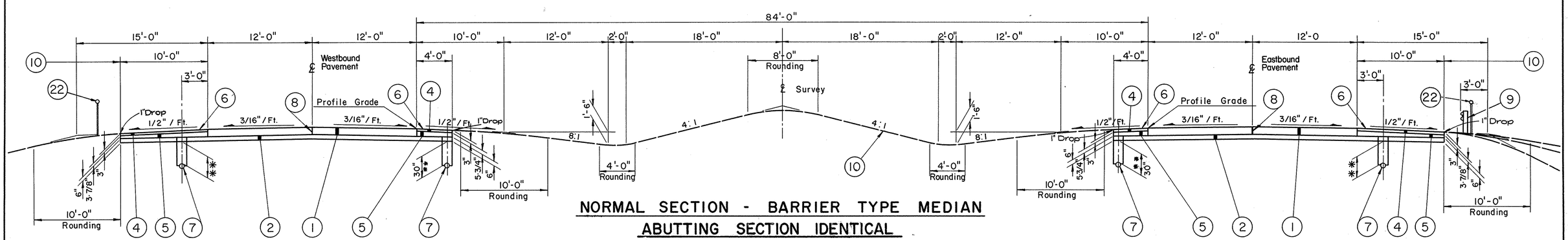
(9) 606 Guard Rail, Type 4, *Modified As Per Plan.*

(10) 659 Seeding and Mulching

(22) 620 Mono-Directional Delineators, Type A-1, Post Mounted (See details, sheet Nº. 219)

* Subbase under Paved Shoulders shall meet the Grading Requirements of Regular Grading 310 except in areas requiring extra depth Subbase. The limits for Regular Grading 310 are from the Underdrain Trench (or One Foot beyond the Slab Edge where underdrains are not used) to the edge of Shoulder.

Subbase shall be transitioned between Sta. 609+00 & 609+81.79 as shown, to avoid any break in subgrade drainage.



NORMAL SECTION - BARRIER TYPE MEDIAN
ABUTTING SECTION IDENTICAL

LIMITING STATIONS
TRANSITION
STA. 609+00.00 to 609+81.79

** Unless otherwise shown on the plans, underdrains shall be laid parallel to profile grade with 30" of cover from bottom of subbase to crown of pipe. Where deep underdrains are called for, 50" cover from bottom of subbase to crown of pipe shall be provided.

In rock cuts, underdrains shall be 605 6" pipe (707.06 or 707.12) with 12" of cover from bottom of subbase to crown of pipe.

I-271 TYPICAL SECTIONS

TYPICAL SECTIONS

TYPE 404

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM - 271 - 8.29

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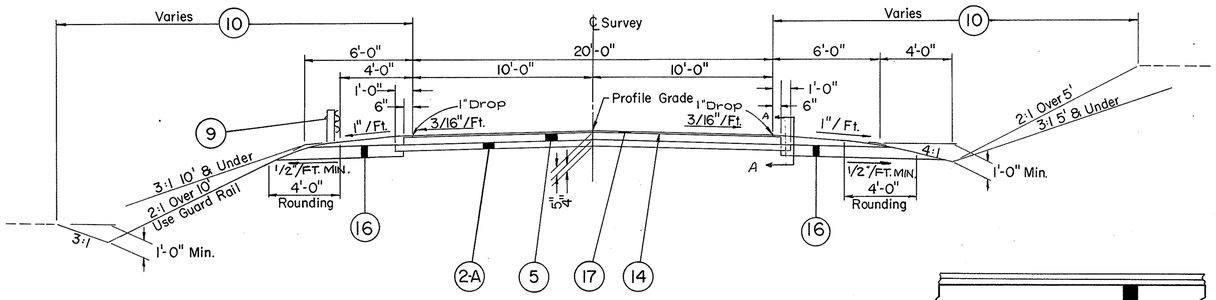
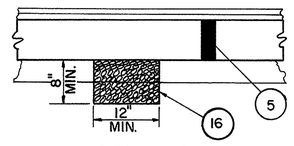


NORMAL SECTION
LIMITING STATIONS
T.R. 38 STANFORD ROAD
STA. 57+37.07 TO STA. 60+99.39

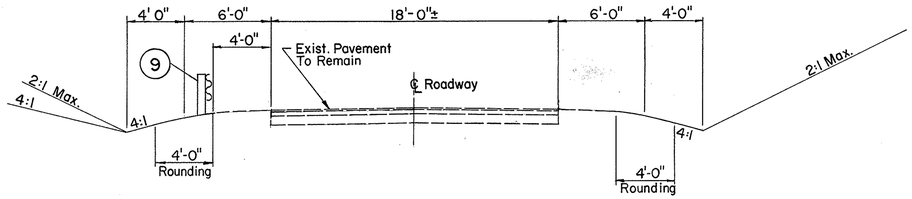


SEC. A-A

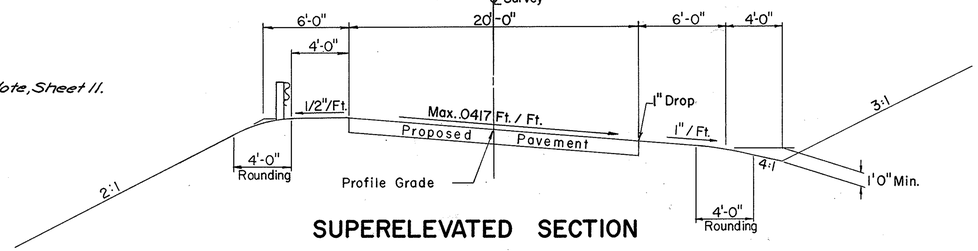
TYPICAL AGGREGATE DRAIN

ITEM 605 AGGREGATE DRAINS SHALL BE PLACED AT 50' INTERVALS EITHER SIDE THROUGHOUT THE EMBANKMENT AND NORMAL CUT SECTIONS. *See Note, Sheet 11.*

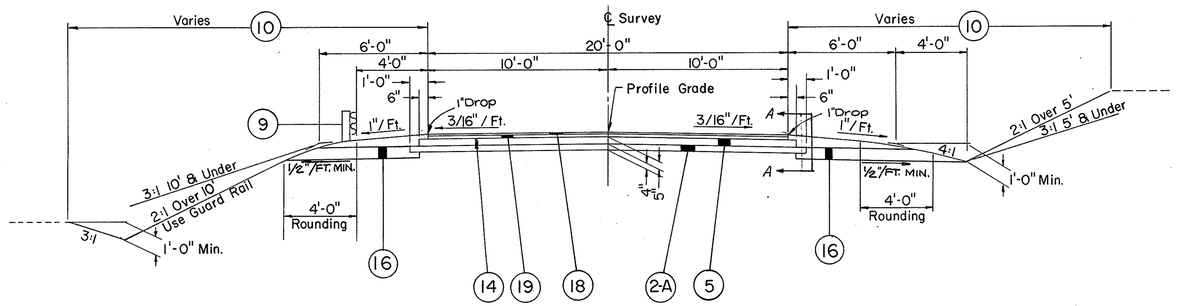
NOTE:
FOR DETAILS NOT SHOWN
SEE STD. DWG. MC-1.



NORMAL SECTION
LIMITING STATIONS
C.R. 32 BOSTON MILLS ROAD
STA. 15+50 TO STA. 19+50



SUPERELEVATED SECTION



NORMAL SECTION
LIMITING STATIONS

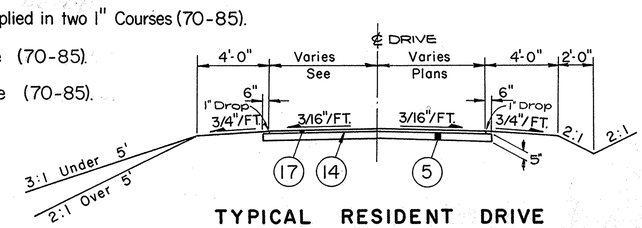
C.H. 40 BRANDYWINE ROAD
STA. 54+75 to STA. 58+04.73
STA. 59+65.27 to STA. 60+56.48
STA. 63+19.31 to STA. 68+50

BRIDGE LIMITS
SUM.-271-0967
STA. 58+04.73 to STA. 59+65.27
SUM.-271-0966
STA. 60+56.48 to STA. 63+19.31

T.R. 115 HINES HILL
STA. 43+00 to STA. 48+56.71
STA. 51+43.29 to STA. 55+00

BRIDGE LIMITS
SUM.-271-0914
STA. 48+56.71 to STA. 51+43.29

2A	310	Variable Depth Subbase, Regular Grading
5	304	Variable Depth, Aggregate Base Course
9	606	Guard Rail, Type 4, *Modified As Per Plan*
10	659	Seeding and Mulching
14	408	Bituminous Prime Coat, 702.09 RT-2 or RT-3, Applied at 0.40 Gal./Sq. Yd.
16	605	Aggregate Drains (See Detail).
17	404	2" Asphalt Concrete Applied in two 1" Courses (70-85).
18	404	1¼" Asphalt Concrete (70-85).
19	302	1¾" Asphalt Concrete (70-85).



TYPICAL RESIDENT DRIVE

TYPICAL SECTIONS CROSS ROADS

K. & E.

FED. RD.	STATE	PROJECT	
2	OHIO		

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GENERAL NOTES

ROUNDING OF CORNERS SHOWN ON CROSS SECTIONS

THE ROUNDED CORNERS SHOWN ON STANDARD DRAWING MC-1, APPLY TO ALL CROSS SECTIONS, EVEN THOUGH OTHERWISE SHOWN ON THESE PLANS.

FIELD OFFICE

THE CONTRACTOR SHALL, IN ADDITION TO THE REQUIREMENTS OF 105.152, PROVIDE A SUITABLE FIELD OFFICE HAVING A MINIMUM OF 400 SQUARE FEET OF FLOOR SPACE. THE CONTRACTOR SHALL HAVE A TELEPHONE INSTALLED AND MAINTAINED IN THIS FIELD OFFICE DURING THE CONSTRUCTION OF THIS PROJECT. THE CONTRACTOR SHALL ALSO PROVIDE AND MAINTAIN SANITARY PROVISIONS AS PER 107.06. ALL THE ABOVE IS INCLUDED IN THE LUMP SUM PRICE BID FOR FIELD OFFICE.

DESIGN SPEED

THE GEOMETRICS FOR THIS PROJECT HAVE BEEN PLANNED FOR A DESIGN SPEED OF 70 MILES PER HOUR.

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 DOES NOT GUARANTEE THEIR ACCURACY OR COMPLETENESS.

ESTIMATED QUANTITIES

SPECIFIC LOCATIONS AND USAGE OF ESTIMATED QUANTITIES SET UP ON THIS PLAN TO BE USED "AS DIRECTED BY THE ENGINEER" SHALL BE MADE A MATTER OF RECORD BY INCORPORATION INTO THE FINAL CHANGE ORDER GOVERNING COMPLETION OF THIS PROJECT.

CONSTRUCTION LAYOUT STAKES

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

RIGHT-OF-WAY FENCE

FOR LOCATION OF RIGHT-OF-WAY FENCE, SEE RIGHT-OF-WAY SHEETS.

ITEM 203 PROOF ROLLING

AN ESTIMATED QUANTITY FOR THIS ITEM HAS BEEN PROVIDED IN THE GENERAL SUMMARY FOR USE IN PROOF ROLLING OF SUBGRADE FOR THE MAINLINE AND RAMP PAVEMENTS, AND FOR PAVED SHOULDERS, IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION 801.

THE FOLLOWING QUANTITY HAS BEEN INCLUDED FOR THIS PURPOSE:

ITEM 203 75 HOURS PROOF ROLLING

DUST CONTROL

THE CONTRACTOR SHALL FURNISH AND APPLY WATER OR CALCIUM CHLORIDE FOR DUST CONTROL PURPOSES AS DIRECTED BY THE ENGINEER.

THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED FOR DUST CONTROL PURPOSES.

ITEM 616 CALCIUM CHLORIDE	10 TONS
ITEM 616 WATER	400 M. GALS.

SPECIAL DITCHES

FOR SPECIAL DITCH GRADES, SEE CROSS SECTIONS.

CENTERLINE REFERENCE MONUMENTS, AS PER PLAN, 604

MONUMENTS SHALL BE CONSTRUCTED OF CLASS "C" CONCRETE, CAST-IN-PLACE IN A CIRCULAR HOLE EIGHT (8) INCHES IN DIAMETER AND FORTY-FOUR (44) INCHES IN DEPTH. TOP OF CONCRETE SHALL BE FINISHED AT A DEPTH OF TWO (2) INCHES BELOW GROUND LEVEL AND THE UPPER SIX (6) INCH PORTION OF THE CONCRETE SHALL BE FORMED. ONE-HALF (1/2) INCH STEEL RODS SIX (6) INCHES LONG SHALL BE EMBEDDED IN THE WET CONCRETE AS DIRECTED BY THE ENGINEER TO MARK THE CENTERLINE AND STATION.

FOR LOCATIONS, SEE SHEETS25 TO 42.

CONTRACTION AND EXPANSION JOINTS

ALTHOUGH SPECIFIC LOCATIONS OF CERTAIN EXPANSION AND CONTRACTION JOINTS HAVE BEEN DETAILED ON THIS PLAN, NO WAIVER OF THE SPECIFICATIONS IS INTENDED. PROVISION OF EXPANSION JOINTS AT ALL MAJOR STRUCTURES AND THE MAXIMUM SPACING BETWEEN CONTRACTION JOINTS SHALL IN ALL CASES BE IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWING BP-4.

ITEM 310 SUBBASE, GRADING "A" OR "B" AS PER PLAN

MATERIAL FOR THIS ITEM SHALL MEET THE REQUIREMENTS OF GRADING "A" OR "B" OF 310.02 EXCEPT THAT FOR EITHER GRADING, NO MORE THAN 10% OF THE MATERIAL SHALL PASS A No. 200 SIEVE AFTER ALL OPERATIONS OF PLACING AND COMPACTING HAVE BEEN COMPLETED.

310 UNDER APPROACH SLABS

THE AREA BETWEEN THE BOTTOM SURFACE OF THE APPROACH SLAB AND THE SUBGRADE SHALL BE BACKFILLED WITH ITEM 310 SUBBASE, GRADING "A" OR "B" AS PER PLAN.

R/W MONUMENTS, FEDERAL PROJECT MARKERS, AND 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 107.12 UNTIL THEY CAN BE WITNESSED, REFERENCED AND RESET BY THE CONTRACTOR.

ELEVATION DATUM

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

REPLACEMENT

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

WELLS

ALL DUG WELLS LOCATED WITHIN THE RIGHT-OF-WAY LIMITS SHALL BE FILLED AS REQUIRED UNDER SEC. 202.06. ALL DRILLED WELLS SHALL HAVE THE CASING REMOVED TO A DEPTH OF THREE (3) FEET BELOW THE PROPOSED SUBGRADE IF LOCATED UNDER THE PROPOSED PAVEMENT OR TO A DEPTH OF THREE (3) FEET BELOW THE PROPOSED FINISHED SURFACE IF LOCATED OUTSIDE THE PROPOSED PAVEMENT AREA. THE CASING SHALL THEN BE CAPPED WITH CLASS "E" CONCRETE OR A STANDARD THREADED PIPE CAP. PAYMENT FOR ABANDONING DRILLED WELLS SHALL BE PAID FOR UNDER ITEM SPECIAL "DRILLED WELLS ABANDONED", AND PAYMENT FOR ABANDONING DUG WELLS SHALL BE PAID FOR UNDER ITEM 203, EXCAVATION INCLUDING EMBANKMENT CONSTRUCTION.

PART-WIDTH CONSTRUCTION

BECAUSE OF THE NECESSITY OF BUILDING PORTIONS OF THIS PROJECT UNDER TRAFFIC AND CONSTRUCTING THE PAVEMENT PART AT A TIME, EXTREME CARE SHALL BE TAKEN TO PREVENT THE CONSTRUCTION OF A BUTT JOINT ON CENTERLINE IN THE 304 AND 310 COURSES.

THIS SHALL BE ACCOMPLISHED BY BUILDING THE 304 AND 310 COURSES PLACED WITH THE FIRST PORTION OF THE PAVEMENT BUILT, AT LEAST EIGHTEEN (18) INCHES BEYOND THE CENTERLINE AND BY SURFACING NO CLOSER THAN EIGHTEEN (18) INCHES TO THIS EDGE OF THE ABOVE COURSES. WHEN THE SECOND PORTION OF THE PAVEMENT IS BUILT, AT LEAST TWELVE (12) INCHES OF THESE PROJECTING COURSES SHALL BE BROKEN DOWN AND THOROUGHLY KEYED IN WITH THE NEWLY PLACED CORRESPONDING COURSES IN THE SECOND PORTION OF THE PAVEMENT BUILT. PAYMENT FOR THIS OPERATION SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE PERTINENT PAVEMENT ITEMS.

MEDIAN PAVEMENT ON APPROACH SLABS

THE WIDTH AND TYPE OF MEDIAN PAVEMENT ON APPROACH SLABS SHALL BE TRANSITIONED FROM THE STANDARD SECTION USED ON THE APPROACH PAVEMENT TO THE SECTION USED ON THE BRIDGE WITHIN THE LIMITS OF THE APPROACH SLAB.

REMOVAL OF TREES AND STUMPS

ALL TREES AND STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE CONSTRUCTION LIMITS OF THIS PROJECT SHALL BE REMOVED UNDER THE LUMP SUM PRICE BID FOR ITEM 201 CLEARING AND GRUBBING, 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
18"	3028	26
30"	236	7
48"	50	5
60"	11	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 201 CLEARING AND GRUBBING.

PAVEMENT REMOVAL OUTSIDE NORMAL CONSTRUCTION LIMITS

AFTER THE EXISTING PAVEMENT AS INDICATED ON THE PLANS HAS BEEN REMOVED, THE OLD ROADWAY SHALL BE GRADED TO THE LEVEL OF THE SURROUNDING GROUND, THE OLD DITCHES FILLED AND THE DISTURBED AREAS SLOPED TO DRAIN AND LEFT IN A NEAT CONDITION READY FOR SEEDING. SEEDING SHALL BE MEASURED AND PAID FOR IN ACCORDANCE WITH ITEM 659 SEEDING AND MULCHING. PAYMENT FOR ALL OTHER WORK REQUIRED SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 203.

EROSION CONTROL AT STANDARD No. 1, 2 AND 3 HEADWALLS

AN EIGHTEEN (18") INCH WIDE SOD STRIP SHALL BE PLACED ALONG THE BACK AND BOTH ENDS OF THE HEADWALLS No. 1, No. 2 AND No. 3 TO PREVENT EROSION. THE QUANTITY OF SODDING REQUIRED IS INCLUDED IN THE "ESTIMATED QUANTITIES" SHOWN ON EACH OF THOSE CULVERT DETAILS WHERE THESE HEADWALLS HAVE BEEN USED.

SEEDING (I-271)

QUANTITIES FOR SEEDING ARE CALCULATED FOR THE SOIL AREAS BETWEEN THE RIGHT-OF-WAY FENCE LINES, BETWEEN THE RIGHT-OF-WAY LINES IN UNFENCED AREAS, AND WITHIN THE WORK LIMITS FOR AREAS OUTSIDE THE RIGHT-OF-WAY LINES COVERED BY WORK AGREEMENT OR SLOPE EASEMENT.

SEEDING (T.R. 115, T.R. 38, C.H. 40 & C.H. 32

QUANTITIES FOR SEEDING ARE CALCULATED FOR THE SOIL AREAS BETWEEN THE WORK LIMITS, AS SHOWN ON THE CROSS-SECTIONS.

SEEDING FORMULA

THE FOLLOWING SEED MIXTURE SHALL, IN LIEU OF THE MIXTURES LISTED IN SECTION 659.09, BE USED THROUGHOUT THE LIMITS OF THIS PROJECT.

70% KENTUCKY 31 FESCUE	5% REDTOP
20% KENTUCKY BLUEGRASS	5% ALSIKE CLOVER

See additional seed formula on sheet 11A, "Topsoil, Calcine-Clay Mixture.

SPECIAL SEEDING PREPARATION AREAS

THE REFERENCES IN THE FIRST PARAGRAPH OF SEC. 659.09 TO PREPARATION OF THE SEED BED IN FRONT OF RESIDENCES, ETC., SHALL, ON THIS PROJECT, BE CONSIDERED TO BE PARTICULARLY APPLICABLE IN THE FOLLOWING AREAS:

C.H. 40	STA. 54+07 TO STA. 58+00 RT.
	STA. 63+50 TO STA. 68+50 RT.

GENERAL NOTES

ITEM 605 AGGREGATE DRAINS

AGGREGATE DRAINS 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, EXCEPT WHERE ITEM 605 PIPE UNDERDRAINS HAVE BEEN PROVIDED.

AN AGGREGATE DRAIN SHALL BE PLACED AT THE LOW POINT OF EACH SAG VERTICAL CURVE.

PAVEMENT INTERSECTIONS

THE ELEVATIONS APPEARING ON THE INTERSECTION DETAILS HAVE BEEN DETERMINDED FROM FIELD SURVEY AND REFLECT THE CALCULATED ELEVATIONS REQUIRED TO PROVIDE A SMOOTH TRANSITION OF INTERSECTING GRADES.

THE CONTRACTOR AT THE DIRECTION OF THE ENGINEER SHALL MAKE MINOR ELEVATION ADJUSTMENTS TO MEET EXISTING FIELD CONDITIONS.

ITEM SPECIAL-CLEANING AND DISPOSAL OF SEPTIC TANKS

THIS ITEM SHALL INCLUDE CLEANING, BACKFILLING, AND REMOVAL OF ALL OR ANY PORTION OF EXISTING SEPTIC TANKS.

ALL SEPTIC TANKS LYING WITHIN THE PROPOSED RIGHT-OF-WAY LIMITS SHALL BE CLEANED AND EMPTIED. MATERIAL REMOVED FROM THESE TANKS SHALL BE CLASSIFIED AS UNSUITABLE AND DISPOSED OF OUTSIDE THE RIGHT-OF-WAY OR EASEMENT LINES.

WHEN THE SEPTIC TANKS ARE LOCATED ABOVE THE FINISHED PAVEMENT OR GROUND LINES, THEY SHALL BE ENTIRELY REMOVED AND DISPOSED OF IN ACCORDANCE WITH ITEM 202.02.

WHEN THE SEPTIC TANKS ARE LOCATED BELOW THE FINISHED PAVEMENT OR GROUND LINES, THE TOPS OF THE TANKS SHALL BE REMOVED, AND THE WALLS SHALL BE REMOVED TO A DEPTH OF 3 FEET BELOW THE FINISHED SUBGRADE OR GROUND LINES. THE REMOVED MATERIAL SHALL BE DISPOSED OF AS EXPLAINED ABOVE. THE TANKS SHALL BE BACKFILLED WITH SUITABLE SOIL OR GRANULAR MATERIAL IN ACCORDANCE WITH ITEM 203.09.

THIS ITEM SHALL BE PAID FOR AT THE UNIT PRICE BID FOR EACH "ITEM SPECIAL-CLEANING AND DISPOSAL OF SEPTIC TANKS", WHICH PRICE AND PAYMENT SHALL CONSTITUTE FULL COMPENSATION FOR CLEANING, REMOVING AND DISPOSING OF EXCESS MATERIALS, BACKFILLING, AND FOR ALL LABOR, TOOLS, EQUIPMENT, AND INCIDENTALS NECESSARY TO COMPLETE THIS ITEM INCLUDING INCIDENTAL EXCAVATION.

EXISTING CONSTRUCTION

WITHIN THE LIMITS OF THIS CONTRACT IT SHALL BECOME THE RESPONSIBILITY OF THE CONTRACTOR TO PERFORM ANY WORK NECESSARY TO PROPERLY JOIN THE NEW AND EXISTING PAVEMENTS. THE PAYMENT FOR THIS ITEM SHALL BE INCLUDED UNDER THE APPLICABLE ITEM.

UTILITY ADJUSTMENT

THE CONTRACTOR SHALL NOTIFY, IN WRITING, AT LEAST TWO (2) WORKING DAYS BEFORE BREAKING GROUND, ALL PUBLIC SERVICE CORPORATIONS HAVING WIRE, POLES, PIPE, CONDUITS, MANHOLES OR OTHER STRUCTURES THAT WILL BE AFFECTED BY THIS OPERATION INCLUDING ALL STRUCTURES WHICH ARE AFFECTED AND NOT SHOWN ON THESE PLANS. 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.

THE FOLLOWING IS A LIST OF THE UTILITIES WITHIN THE LIMITS OF THIS PROJECT:

American Telephone & Telegraph	*Cleveland, Ohio*
EAST OHIO GAS COMPANY	AKRON, OHIO
OHIO EDISON COMPANY	AKRON, OHIO
Buckeye Pipe Line Company	*Lima, Ohio*
OHIO BELL TELEPHONE COMPANY	AKRON, OHIO
WESTERN RESERVE TELEPHONE COMPANY	HUDSON, OHIO
Laurel Pipe Line Company	*Camphill, Pa.*
Inland Corporation	*Indianapolis, Ind.*

ADJACENT CONTRACTS

THE CONTRACTOR FOR THIS PROJECT SHALL COORDINATE HIS OPERATIONS WITH THOSE OF THE CONTRACTORS FOR BOTH OF THE ADJACENT PROJECTS SO AS TO COMPLETE THE PROJECT IN AN ORDERLY FASHION AND WITHOUT ANY UNDUE DELAY OR INTERFERENCE TO THE OTHER CONTRACTORS.

THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE FACT THAT CERTAIN GRADING OPERATIONS WITHIN THIS PROJECT ARE TO BE PERFORMED BY THE CONTRACTOR FOR PROJECT I-271-6(20)236 AND PROJECT I-IG-271-6(21)239.

REMOVAL OF EXISTING PIPE

THE REMOVAL OF ALL EXISTING PIPE DRAINS WHICH WOULD NORMALLY BE REMOVED IN VARIOUS EXCAVATION ITEMS SHALL BE INCLUDED FOR PAYMENT IN THE UNIT PRICE BID FOR THE RESPECTIVE EXCAVATION ITEMS, UNLESS OTHERWISE ITEMIZED IN THE PLANS.

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 LOCATION THE EXISTING PIPE BOTH AS TO LINE AND GRADE BEFORE HE START TO LAY THE PROPOSED PIPE. THE COST OF THIS OPERATION SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE PERTINENT PIPE ITEM.

SPRING DRAINS

REFERENCE IS MADE TO THE DETAILED DRAWING ON SHEET No. 214 SHOWING THE METHOD OF DRAINING ANY SPRING THAT MAY BE SHOWN ON THE PLAN OR ENCOUNTERED DURING CONSTRUCTION AS DETERMINED BY THE ENGINEER. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THIS PURPOSE:

ITEM 605 6" UNCLASSIFIED PIPE UNDERDRAIN, 707.06 OR 707.12, AS PER PLAN 300 L.F.
ITEM 605 AGGREGATE DRAINS FOR SPRINGS, AS PER PLAN L.F.

THE CONTRACTOR SHALL NOT ORDER MATERIALS FOR "SPRING DRAINS" UNTIL AUTHORIZED BY THE ENGINEER AND IN THE EVENT NO SPRINGS ARE ENCOUNTERED, THE ITEM SHALL BE NON-PERFORMED.

FARM DRAINS

ALL FARM DRAINS 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 603 CONDUIT TYPE "B" WITH CLASS "B" BEDDING, *ONE COMMERCIAL SIZE LARGER THAN THE EXISTING.*

EXISTING COLLECTORS AND ISOLATED FARM DRAINS 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 TYPE "E" CONDUIT 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 ON FINAL MEASUREMENTS.

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

ITEM 603	6" CONDUIT TYPE "B" WITH CLASS "B" BEDDING	200 L.F.
ITEM 603	8" CONDUIT TYPE "B" WITH CLASS "B" BEDDING	200 L.F.
ITEM 603	6" CONDUIT TYPE "E"	200 L.F.
ITEM 603	8" CONDUIT TYPE "E"	200 L.F.
ITEM 603	6" CONDUIT TYPE "F"	50 L.F.
ITEM 603	8" CONDUIT TYPE "F"	50 L.F.
ITEM 601	DUMP ROCK CHANNEL PROTECTION	50 C.Y.

THE ABOVE ESTIMATED QUANTITIES SHALL NOT BE ORDERED WITHOUT WRITTEN APPROVAL FROM THE ENGINEER.

DUMPED ROCK CHANNEL PROTECTION

THE DEPTH OF THE DUMPED ROCK CHANNEL PROTECTION, WHEN CALLED FOR IN THE PLANS, SHALL BE AS NOTED BELOW:

LOCATION	DEPTH
ROADWAY DITCHES	18"
CATCH BASIN & SEWER OUTLETS	18"
ROADWAY CULVERTS (PIPE & BOX)	30"
CREEKS AND CHANNELS	30"

MAINTENANCE CROSS OVERS

MAINTENANCE CROSS OVERS SHALL BE CONSTRUCTED AS PER DETAILS SHOWN ON SHEET 217.

MAINTENANCE CROSS OVERS SHALL BE CONSTRUCTED AT THE FOLLOWING LOCATIONS:

462+50
581+38

GUARD RAIL, MODIFIED AS PER PLAN:-

Subsequent to the completion of the plans for this project, several modifications to the design and location details of guard rail have become necessary in order to comply with recently inaugurated safety concepts as follows:

TYPE 4-

(1.) The post spacing for all Type 4 guard rail shall be at 6'-3" intervals with spacer blocks attached between the posts and rail element instead of 12'-6" spacing without spacer blocks as indicated on the plans.

(2.) All approach (entrance) ends of Type 4 guard rail on divided lane highways shall be constructed with the new guard rail approach end assemblies as detailed on plan page No. 221A. Where either end is adjacent to proposed bridges, the new bridge connector assembly will apply (page 221-B) unless otherwise detailed on the plans. The exit (trailing) ends of Type 4 guard rail shall be as detailed on Standard Drawing GR-2A.

(3.) Type 4 guard rail terminals approaching existing bridges shall be located in the field so that the face of the rail will be in alignment with the face of the safety curb on the structure, unless otherwise detailed on the plans. Rail at exit end of existing structures shall be located so that the face of the rail will be in alignment with the bridge parapet, unless otherwise detailed on the plans.

(4.) Type 4 guard rail located on two-lane, two-directional highways shall be constructed with the new guard rail approach end assemblies on both ends, except when one end is adjacent to or continues across a bridges.

TYPE 4 BARRIER DESIGN-

(1.) The post spacing for all Type 4 barrier design rail shall be at 6'-3" intervals with spacer blocks attached between the post and rail elements instead of 12'-6" spacing without spacer blocks as indicated on the plans.

(2.) All approach (entrance) ends of Type 4 barrier design rail shall be constructed with the new guard rail approach end assemblies as detailed on plan page No. 221A. Exceptions to this will occur where the median guard rail consists of a combination of Type 4 and barrier design as shown on Standard Drawing GR-5A and GR-5B.

BASIS of PAYMENT-

Type 4 guard rail with post spacing at 6'-3", spacer blocks and new approach end assemblies will be paid for as 606 Guard Rail, Type 4 Modified As Per Plan, complete in place.

Type 4 barrier design with post spacing at 6'-3", spacer blocks, and new approach end assemblies will be paid for as 606 Guard Rail, Type 4 Barrier Design, Modified As Per Plan, complete in place.

ADJUSTING GUARD RAIL LOCATIONS

Prior to staking the guard rail locations, the Engineer shall make a field inspection and, if necessary, adjust the stations of the end posts to accommodate field conditions and to provide better protection for traffic.

GENERAL NOTES

FED. RD.	STATE	PROJECT	
2	OHIO		

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PROTECTION OF BRANDYWINE CREEK FROM SILTING

THE CONTRACTOR SHALL CONSTRUCT AND MAINTAIN TEMPORARY CONSTRUCTION DITCHES WITH TEMPORARY STILLING BASINS PLACED PERIODICALLY ADJACENT TO AND PARALLEL WITH HIS EARTHWORK OPERATIONS LEFT AND RIGHT FROM STATION 510 + 00 TO STATION 600 + 00.

THE DITCHES SHALL BE CONSTRUCTED TO A MINIMUM DEPTH OF EIGHTEEN (18") INCHES WITH FOUR (4') FOOT BOTTOMS. STILLING BASINS SHALL BE CONSTRUCTED SIMILAR TO THE DETAIL ON SHEET 217 OF THE PLANS OR AS APPROVED BY THE ENGINEER. THE FOLLOWING QUANTITY OF DUMPED ROCK FILL HAS BEEN CARRIED IN THE GENERAL SUMMARY FOR CONSTRUCTION OF TEMPORARY STILLING BASINS. ITEM 601 DUMPED ROCK FILL, AS PER PLAN 160 CU. YDS. SPACING OF TEMPORARY STILLING BASINS SHALL BE AS DIRECTED BY THE ENGINEER.

TEMPORARY DITCHES AND STILLING BASINS SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD. THE DITCHES AND BASINS SHALL BE REMOVED AS DIRECTED BY THE ENGINEER AT THE TERMINATION OF CONSTRUCTION AND THE AREA COMPLETELY RENOVATED AND SEEDED.

PAYMENT FOR TEMPORARY DITCHES SHALL BE INCLUDED IN THE UNIT BID PRICES FOR ITEM 203 *Excavation.*

ITEM *661 CROWN* VETCH

ITEM *661* - CROWN VETCH SHALL BE PLANTED FROM THE TOP TO THE TOE OF FILL SLOPES FROM STA. 532+00 TO STA. 548+00 ON THE LEFT AND FROM STA. 568+00 TO STA. 572+00 ON THE LEFT. THEY SHALL BE PLANTED IN ROWS WITH A SPACING OF FOUR FEET ON CENTERS.

THE ITEM SHALL BE PERFORMED AS PER ITEM 661 PLANTING VINES WITH THE FOLLOWING EXCEPTION. THE PLANTS SHALL BE GROWN IN AND DELIVERED TO THE PROJECT IN *pots or container units of 15 cu in. min. volume. The soil and roots shall remain in a mass when removed from the containers. Each container unit shall have 2 or more plants not less than 8 inches in length. Payment shall be per each pot or container unit planted as herein specified.*

TOP SOIL - CALCINE CLAY MIXTURE

CALCINE CLAY SOIL CONDITIONER SUCH AS LUSOIL, TURFACE, TERRAGREEN OR AN APPROVED EQUAL, SHALL BE THOROUGHLY MIXED WITH THE TOPSOIL FOR PLANTING BACKFILL AT THE RATE OF 1 PART CALCINE CLAY SOIL CONDITIONER TO 3 PARTS TOPSOIL.

THE PARTICLE SIZE GRADATION OF THE CONDITIONER SHALL BE AT LEAST 95 PERCENT PASSING A NO. 6 SIEVE AND NOT MORE THAN 5 PERCENT PASSING A NO. 50 SIEVE.

THE COST OF FURNISHING THE CALCINE CLAY SOIL CONDITIONER, MIXING WITH AND FURNISHING THE TOPSOIL AND INCORPORATING THE MIXTURE IN THE PLANTING OPERATION SHALL BE INCLUDED IN THE PRICE BID FOR THE PERTINENT PLANTING ITEMS.

IN THE DESCRIBED AREAS FOR CROWN VETCH PLANTING THE FOLLOWING SEED MIXTURE SHALL BE USED: 30% PERRENNIAL RYE, 40% CREEPING RED FESCUE, 20% KENTUCKY BLUEGRASS AND 10% WHITE DUTCH CLOVER.

EMBANKMENT CONSTRUCTION STATION 469 + 00 TO STATION 472 + 00 AND STATION 491 + 00 TO STATION 493 + 00

SPECIAL CARE SHALL BE EXERCISED IN THS AREA TO ASSURE STRICT COMPLIANCE WITH COMPACTION REQUIREMENTS OF THE GENERAL SPECIFICATIONS. DURING EMBANKMENT CONSTRUCTION OPERATIONS, THE ROADWAY SECTION SHALL BE MAINTAINED AT ALL TIMES IN SUCH SHAPE THAT NO CONCENTRATION OF SURFACE WATER WILL TAKE PLACE AND BE DISCHARGED IN A CONCENTRATED FLOW OVER THE SLOPES.

THE MOISTURE CONTENT OF ALL EMBANKMENT MATERIAL SHALL BE LESS THAN OPTIMUM AT THE TIME OF COMPACTION. EMBANKMENT MATERIAL PLACED ON FILL CONTAINING OR EXCEEDING OPTIMUM MOISTURE, WHETHER CAUSED BY RAIN OR FROM THE STATE OF THE MATERIAL AS RECEIVED SHALL BE AERATED BY DISCING, OR OTHER APPROVED METHODS FOR THE FULL DEPTH OF THE COURSE TO REDUCE THE MOISTURE CONTENT TO BELOW OPTIMUM AT THE TIME OF COMPACTION.

THE RATE OF EMBANKMENT CONSTRUCTION IN THESE AREAS SHALL ALSO BE LIMITED NOT TO EXCEED FOUR (4') FEET PER WEEK TO ALLOW EXISTING SILT SOILS TIME TO CONSOLIDATE. SETTLEMENT PLATFORMS, PIEZOMETERS AND EMBANKMENT CONTROL STAKES SHALL BE PROVIDED TO ESTABLISH CONTROLLED RATES OF EMBANKMENT CONSTRUCTION. A TWELVE (12) MONTH WAITING PERIOD AFTER EMBANKMENT CONSTRUCTION WILL BE REQUIRED BETWEEN STATION 469 + 00 AND 472 + 00 AND A SIX (6) MONTH WAITING PERIOD BETWEEN STATION 491 + 00 AND 493 + 00.

BORROW AREAS

BORROW AREAS WILL NOT BE APPROVED WITHIN FIVE HUNDRED (500') FEET OF THE PROPOSED LIMITED ACCESS RIGHT-OF-WAY BETWEEN STATION 500 + 00 AND 609 + 81.79.

BENCHING OF FOUNDATION SLOPES

WHERE SPECIAL BENCHING IS SHOWN ON THE PLANS, PAYMENT WILL BE MADE FOR THE ENTIRE WIDTH OF THE EXCAVATED AREA. THE PROVISIONS OF 203.09 SHALL APPLY TO ALL OTHER SLOPING FOUNDATION AREAS.

SPECIAL BENCHING IS REQUIRED AT THE FOLLOWING LOCATIONS:

STATION 536 + 50 TO STATION 537 + 50
STATION 543 + 00 TO STATION 547 + 50

REMOVAL AND REPLACEMENT OF UNSUITABLE FOUNDATION MATERIALS

UNSUITABLE FOUNDATION MATERIALS BETWEEN STATION 447 + 82 AND STATION 451 + 09 SHALL BE REMOVED AND REPLACED WITH SUITABLE SOILS PER 203 EMBANKMENT AS SHOWN ON THE CROSS SECTIONS.

BOSTON MILLS ROAD C.H. 32 SHALL NOT BE DISTURBED AND TRAFFIC SHALL BE MAINTAINED AT ALL TIMES

APPROACH EMBANKMENTS STRUCTURE SUM 271 - 0854

THE APPROACH EMBANKMENTS FOR STRUCTURE SUM 271 - 0854 SHALL BE COMPLETED TO SUBGRADE ELEVATIONS FOR A PERIOD 90 DAYS BEFORE CONSTRUCTING THE REAR ABUTMENTS AND A PERIOD OF 30 DAYS PRIOR TO CONSTRUCTING THE FORWARD ABUTMENTS. PIER CONSTRUCTION SHALL NOT BE STARTED UNTIL THE UNSUITABLE MATERIALS HAVE BEEN REMOVED AND THE EMBANKMENTS ARE BUILT TO SUBGRADE ELEVATIONS.

FEDERAL AID IDENTIFICATION SIGNS

THE CONTRACTOR SHALL FURNISH, ERECT, MAINTAIN AND SUBSEQUENTLY REMOVE FEDERAL AID CONSTRUCTION IDENTIFICATION SIGNS AT EACH OF THE FOLLOWING LOCATIONS:

C. H. 16 (AKRON-CLEVELAND ROAD) STATION 716 + 00 RT.

C. H. 16 (AKRON-CLEVELAND ROAD) STATION 721 + 50 LT.

SIGN DETAILS SHALL BE AS SPECIFIED ON STANDARD DRAWING FACI-1 CODE N- *55(1) 120(2)*

THE SIGNS SHALL BE ERECTED IN ACCORDANCE WITH STANDARD DRAWING FACI-2. ADDITIONAL REQUIREMENTS SHALL BE IN ACCORDANCE WITH NOTES IN THE PROPOSAL.

EMBANKMENT CONTROL DEVICES

THESE DEVICES WHERE CALLED FOR IN THE PLANS OR BY THE ENGINEER CONSIST OF SETTLEMENT PLATFORMS, PIEZOMETERS AND CONTROL STAKES. THE CONTRACTOR SHALL INSTALL AND MAINTAIN THESE CONTROL DEVICES WITH THE UTMOST CARE THROUGHOUT THE DURATION OF CONSTRUCTION.

SETTLEMENT PLATFORMS

SETTLEMENT PLATFORMS SHALL BE IN ACCORDANCE WITH THE PROPOSAL NOTE AND AS DETAILED ON SHEET 221 OF THE PLANS.

PAYMENT WILL BE MADE AT THE CONTRACT UNIT PRICE BID PER EACH FOR "ITEM SPECIAL-SETTLEMENT PLATFORMS,

THE SETTLEMENT PLATFORMS ARE TO BE PLACED ON THE GROUND SURFACE AFTER ALL OPERATIONS OF CLEARING, GRUBBING AND SCALPING HAVE BEEN PERFORMED AND BEFORE EMBANKMENT PLACEMENT IS BEGUN. ELEVATIONS OF THE BASE OF THESE PLATFORMS SHOULD BE DETERMINED AT THE TIME OF PLACEMENT.

SETTLEMENT PLATFORMS ARE TO BE FURNISHED AT THE FOLLOWING LOCATIONS:

STATIONS	CENTERLINE OFFSET
469 + 50	80' LEFT
471 + 00	80' RIGHT
491 + 00	80' LEFT
492 + 00	80' RIGHT

PIEZOMETERS

PIEZOMETERS SHALL BE IN ACCORDANCE WITH THE PROPOSAL NOTE AND AS DETAILED ON SHEET 221 OF THE PLANS.

PAYMENT WILL BE MADE AT THE CONTRACT UNIT PRICE BID PER EACH FOR "ITEM SPECIAL - PIEZOMETERS,

THE PIEZOMETERS (OR PORE PRESSURE MEASURING DEVICES) RECOMMENDED FOR THIS PROJECT UTILIZE A WELL POINT AND A RISER PIPE WHICH WILL BE EXTENDED UP THROUGH THE EMBANKMENT AS IT IS CONSTRUCTED TO PERMIT CONTINUOUS READINGS OF WATER LEVEL DURING CONSTRUCTION. THESE PIEZOMETERS ARE TO BE INSTALLED AT THE FOLLOWING LOCATIONS, HAVING THE TIP ELEVATIONS OF THE WELL POINTS AS INDICATED:

STATION	CENTERLINE OFFSET	TIP ELEVATION
469 + 50	85' LEFT	680'
471 + 00	85' RIGHT	680'
471 + 00	180' RIGHT	660'
491 + 00	85' LEFT	740'
492 + 00	85' RIGHT	740'
492 + 00	180' RIGHT	730'

EMBANKMENT CONTROL STAKES

EMBANKMENT CONTROL STAKES SHALL BE IN ACCORDANCE WITH THE PROPOSAL NOTE AND AS DETAILED ON SHEET 221 OF THE PLANS.

PAYMENT SHALL BE INCLUDED IN THE UNIT BID PRICE FOR "ITEM 203-EXCAVATION.

TWO LINES OF EMBANKMENT CONTROL STAKES SHOULD BE FURNISHED ON THE LEFT AND ON THE RIGHT BETWEEN STATIONS 469 + 00 TO 472 + 00 AND BETWEEN STATIONS 491 + 00 TO 492 + 00. THE FIRST LINE OF CONTROL STAKES ARE TO BE LOCATED 15 FEET BEYOND THE TOE OF THE PROPOSED EMBANKMENT AND THE SECOND LINE 25 FEET BEYOND THE FIRST LINE. THE LONGITUDINAL SPACING SHOULD BE 25 FEET BETWEEN STAKES.

DURING THE EMBANKMENT CONSTRUCTION PERIOD, THE CONTROL DEVICES SHOULD BE READ AND RECORDED BEFORE AND AFTER EACH INCREMENT OF LOADING. FOR THE PROJECT, THE INCREMENT OF LOADING IS NOT TO EXCEED 4 FEET PER WEEK.

RELOCATED BRANDYWINE CREEK

THE CONTRACTOR WILL NOT BE PERMITTED TO OPERATE OR STORE ANY EQUIPMENT OR MATERIALS OTHER THAN THAT WHICH IS ESSENTIAL TO THE ACTUAL CONSTRUCTION OF CHANNEL WORK IN THE AREA OF RELOCATED BRANDYWINE CREEK.

THE CONTRACTOR SHALL PROTECT THE EXISTING NATURAL VEGETATIONAL GROWTH IN THE AREA, REMOVING ONLY THAT PORTION IMMEDIATELY AFFECTED BY THE CHANNEL RELOCATION CONSTRUCTION LIMITS.

MAINTENANCE OF TRAFFIC

FED. RD.	STATE	PROJECT	
2	OHIO		

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MAINTAINING LOCAL TRAFFIC

THE FOLLOWING QUANTITIES ARE INCLUDED FOR MAINTAINING TRAFFIC AND ARE TO BE USED AS DIRECTED BY THE ENGINEER.

ITEM 410 TRAFFIC COMPACTED SURFACE TYPE "A" OR "B" 400 CU. YDS.

ITEM 410 TRAFFIC COMPACTED SURFACE TYPE "C" 400 CU.YDS.
ITEM 614 MAINTAINING TRAFFIC LUMP SUM
ITEM 616 CALCIUM CHLORIDE 16 TONS

THE ABOVE ITEMS INCLUDE QUANTITIES FOR TEMPORARY PAVEMENT FOR RUNAROUND ON C.H. 115 HINES HILL ROAD.

MAINTAINING TRAFFIC

BOSTON MILLS ROAD (C.R. #32)

TWO-WAY TRAFFIC SHALL BE MAINTAINED ON BOSTON MILLS ROAD DURING THE CONSTRUCTION OF I.R. 271 STRUCTURES AND APPROACHES.

HINES HILL ROAD (T.R.115)

TWO-WAY TRAFFIC SHALL BE MAINTAINED ON HINES HILL ROAD (T.R.115) DURING THE CONSTRUCTION OF THE BRIDGE AND IMPROVEMENT OF THE ROADWAY BY MEANS OF A TEMPORARY ROAD USING 410 TRAFFIC COMPACTED SURFACE TYPE *A or B* AS DIRECTED BY THE ENGINEER.

THE TEMPORARY *ROAD* WILL BE BUILT TO THE LINES AND GRADES SHOWN ON SHEET No. 188 AND 189 OF THE PLANS.

COST OF THE ABOVE SHALL BE INCLUDED IN ITEM 615 LUMP SUM, TEMPORARY *Road and Item 410, Traffic Compacted Surface, Type A or B.*

THE RUNAROUND SHALL BE REMOVED IN ACCORDANCE WITH ITEM 615.

BRANDYWINE ROAD (C.H. 40)

TWO WAY TRAFFIC SHALL BE MAINTAINED ON BRANDYWINE ROAD (C.H.40) DURING THE CONSTRUCTION OF THE STRUCTURES AND IMPROVEMENTS OF THE ROADWAY. THIS SHALL BE ACCOMPLISHED BY MEANS OF TEMPORARY RUNAROUND ROADS USING CLASS "B" PAVEMENT AND PART WIDTH CONSTRUCTION BETWEEN STATION 65+00 AND STATION 68+50
THE TEMPORARY RUNAROUNDS SHALL BE BUILT TO THE LINES AND GRADES SHOWN ON SHEETS 194 AND 195 AND CROSS-SECTIONS.

THE TEMPORARY RUNAROUND SHALL BE REMOVED IN ACCORDANCE WITH ITEM 615 EXCEPT FOR THOSE PORTIONS INDICATED ON THE PLANS THAT ARE TO REMAIN AS PERMANENT PAVEMENT FOR A ACCESS DRIVE.

COST OF THE ABOVE SHALL BE INCLUDED IN ITEM 615 TEMPORARY ROAD.
and 615 Temporary Pavement, Class B.

STANFORD ROAD (T.R.38)

TRAFFIC SHALL BE MAINTAINED ON STANFORD ROAD (T.R.38) DURING CONSTRUCTION OF RELOCATED STANFORD ROAD BY MEANS OF PART WIDTH CONSTRUCTION AND BY USING EXISTING BRANDYWINE ROAD. PART WIDTH CONSTRUCTION ON BOTH STANFORD ROAD AND BRANDYWINE ROAD SHALL BE CORRELATED SO AS TO MAINTAIN TRAFFIC AT ALL TIMES.

AKRON-CLEVELAND ROAD (C.R.16)

TWO-WAY TRAFFIC SHALL BE MAINTAINED ON AKRON-CLEVELAND ROAD (C.R. 16) DURING THE CONSTRUCTION OF I.R.271 STRUCTURES AND APPROACHES.

MAINTENANCE OF TRAFFIC

WHERE ANY WORK CALLED FOR UNDER THIS PROJECT NECESSITATES THE TEMPORARY CLOSING OF EXISTING STREETS, THE CONTRACTOR SHALL PROSECUTE TO THE FULLEST EXTENT THE WORK SO AS TO REDUCE TO A MINIMUM THE LENGTH OF TIME THAT THE STREET CONCERNED SHALL BE CLOSED TO TRAFFIC.

ALTERNATE METHODS

IF THE CONTRACTOR SO ELECTS, HE MAY SUBMIT ALTERNATE METHODS FOR THE MAINTENANCE OF TRAFFIC PROVIDED THE INTENT OF THE ABOVE PROVISIONS IS FOLLOWED AND NO ADDITIONAL INCONVENIENCE TO THE TRAVELING PUBLIC RESULTS THEREFROM. NO ALTERNATE PLAN SHALL BE PLACED INTO EFFECT UNTIL APPROVAL HAS BEEN GRANTED, IN WRITING, BY THE DIRECTOR OF HIGHWAYS.

LINE DATA CALCULATIONS FOR ROADS AND APPROACHES

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MAINLINE APPROACHES
BEGIN WORK STATION 436 + 07.25
BEGIN PROJECT STATION 436 + 98.25
APPROACH LENGTH 91.00 LINEAL FEET

END WORK STATION 609 + 81.79
END PROJECT STATION 609 + 81.79
APPROACH LENGTH 0 LINEAL FEET

TOTAL APPROACH LENGTH 91.00 LINEAL FEET

T. R. 115 HINES HILL ROAD

BEGIN WORK STATION 42 + 00.00
END WORK STATION 56 + 56.39
WORK LENGTH 1456.39 LINEAL FEET

C. H. 40 BRANDYWINE ROAD

BEGIN WORK STATION 54 + 07.28
END WORK STATION 69 + 00.00
WORK LENGTH 1492.72 LINEAL FEET

T. R. 38 STANFORD ROAD

BEGIN WORK STATION 57 + 37.07
END WORK STATION 60 + 99.39
WORK LENGTH 362.32 LENEAL FEET

C.H. 32 BOSTON MILLS ROAD

BEGIN WORK STATION	15+50
END WORK STATION	19+50
WORK LENGTH	400 LINEAL FT.

C.H. 16 AKRON-CLEVELAND ROAD

BEGIN WORK STATION 716 + 00
END WORK STATION 722 + 00
WORK LENGTH 600.00 LINEAL FEET

TOTAL LENGTH APPROACHES AND WORK 4402.43 LIN. FEET

COMPUTATIONS

FED. RD.	STATE	PROJECT	
2	OHIO		

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ITEM - 203 EARTHWORK ANALYSIS

LOCATION From	To	Unusable Excav. C.Y.	Usable Excav. C.Y.	Embankment C.Y.	Embankment + 15%
436+07.25	438+00		1,097	636	731
438+00	440+00	54,288	29,232	1,126	1,295
440+00	448+00	389,442	209,699	14,863	17,092
448+00	450+00	19,490	4,676	51,982	59,779
450+00	453+00	9,559	35,768	21,157	24,331
453+00	460+00	202,997	608,991	3,940	4,531
460+00	464+00	35,193	105,580	14,581	16,768
464+00	470+00		6,324	348,557	400,841
470+00	480+00		138,203	339,188	390,066
480+00	490+00		130,983	23,059	26,518
490+00	500+00		22,946	416,273	478,714
500+00	510+00		290,298	14,079	16,191
510+00	520+00		11,311	107,226	123,310
520+00	530+00		28,126	28,656	32,954
530+00	540+00		94,617	106,659	122,658
540+00	550+00		131,511	128,382	147,639
550+00	560+00		154,117	0	0
560+00	570+00		47,595	45,473	52,294
570+00	580+00		1,510	43,559	50,093
580+00	590+00		1,284	67,211	77,293
590+00	600+00		585	65,223	75,006
600+00	609+81.79		3,179	57,736	66,396
Relocated Hines Hill Road (Including Drives)			1,119	819	942
Relocated Brandywine Road (Including Drives)			2,457	21,220	24,403
Relocated Stanford Road			165	8,732	9,467
Boston Mills Road			36	40	46
Akron - Cleveland Road			138	57	66
Brandywine Creek			2,856	0	0
Channel Excavation			707	0	0
TOTALS		710,969	2,065,110	1,930,434	2,219,424

ITEM - 203	C.Y.
EMBANKMENT + 15%	2,219,424
USABLE EXCAVATION	2,065,110
BORROW	154,314

ITEM - 659 SEEDING AND MULCHING

LOCATION		Seeding & Mulching S.Y.	Commercial Fertilizer (0.00009 Tons/S.Y.) TONS (12-12-12)	Agricultural Liming (0.00045 Tons/S.Y.) TONS
436 + 07.25	To 440 + 00	18,014	1.62	8.11
440 + 00	To 450 + 00	55,650	5.01	25.04
450 + 00	To 460 + 00	65,502	5.90	29.48
460 + 00	To 470 + 00	54,299	4.89	24.43
470 + 00	To 480 + 00	45,444	4.09	20.45
480 + 00	To 490 + 00	32,520	2.93	14.63
490 + 00	To 500 + 00	45,409	4.09	20.43
500 + 00	To 510 + 00	36,075	3.25	16.23
510 + 00	To 520 + 00	26,051	2.34	11.72
520 + 00	To 530 + 00	24,176	2.18	10.88
530 + 00	To 540 + 00	31,922	2.87	14.36
540 + 00	To 550 + 00	36,169	3.26	16.28
550 + 00	To 560 + 00	26,402	2.38	11.88
560 + 00	To 570 + 00	26,189	2.36	11.79
570 + 00	To 580 + 00	26,559	2.39	11.95
580 + 00	To 590 + 00	25,478	2.29	11.47
590 + 00	To 600 + 00	25,906	2.33	11.66
600 + 00	To 609 + 81.79	23,148	2.08	10.42
Relocated Hines Hill Road		3,174	0.29	1.43
Relocated Brandywine Road		26,282	2.36	11.83
Relocated Stanford Road		6,816	0.61	3.07
Boston Mills Road		400	0.04	0.18
Akron Cleveland Road		450	0.04	0.20
For Sodding			0.03	0.15
TOTALS		661,984	59.63	298.07

ITEM 620 - DELINEATORS

LOCATION FROM	TO	SIDE	SPACING	TYPE A - 1 POST	TYPE A - 1 BRACKET	TYPE C-2 POST	TYPE C-3 POST
437 + 00	447 + 00	LT. & RT.	200	12			
	449 + 00	LT.	200		1		
	451 + 00	LT.	200	1			
	453 + 00	LT.	200	1			
	449 + 00	RT.	200	1			
	451 + 00	RT.	200		1		
	453 + 00	RT.	200	1			
455 + 00	587 + 00	LT. & RT.	200	134			
	589 + 00	LT. & RT.	200		2		
	591 + 00	LT.	200		1		
	591 + 00	RT.	200	1			
593 + 00	599 + 00	LT. & RT.	200	8			
	600 + 80	LT.	180	1			
	601 + 80	LT.	100				/
602 + 80	609 + 80	LT.	100			8	
	601 + 00	RT.	200	1			
	602 + 35	RT.	135	1			
	603 + 35	RT	100			1	
604 + 35	609 + 35	RT.	100			6	
TOTALS				162	5	15	1

ITEM 621 - TRAFFIC ZONE PAINT MARKING

LOCATION	CALCULATION	MILES
EDGE LINES (4")		
436 + 52.75 to 609 + 81.79	17,329.04 L.F. x 4 x 1/5280	13.15
LANE LINES (6")		
436 + 52.75 to 609 + 81.79	17,329.04 L.F. x 2 x 0.375 x 1/5280	2.46

COMPUTATIONS

FED. RD.	STATE	PROJECT	
2	OHIO		

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SUM-271-8.29

ROADWAY & PAVEMENT

SUM 271 - 8.29 LINE DATA

BEGIN WORK: STA. 436 + 07.25 (STA. 436 + 52.75)

BEGIN PROJECT: STA. 436 + 98.25

END PROJECT: STA. 609 + 81.79

LENGTH OF LINE = ---------- 17,329.04 L.F.

STRUCTURES

BEGIN BRIDGE No. SUM 271 - 0854 (STA. 449 + 40.65)
END BRIDGE No. SUM 271 - 0854 (STA. 451 + 17.20)
---------- 176.55 L.F.

BEGIN BRIDGE No. SUM 271 - 1117 STA. 588 + 34.02
END BRIDGE No. SUM 271 - 1117 STA. 589 + 69.18
---------- 135.16 L.F.

BEGIN BRIDGE No. SUM 271 - 1122 STA. 590 + 98.18
END BRIDGE No. SUM 271 - 1122 STA. 592 + 58.82
---------- 160.64 L.F.

TOTAL LENGTH OF STRUCTURES = 472.35 L.F.

TOTAL LENGTH OF APPROACHES = 175.00 L.F.

LENGTH OF LINE MINUS BRIDGES & APPROACHES = 16,681.69 L.F.

NOTE: ( ) BRACKETS DENOTE AN AVERAGE STATION TO BE USED IN QUANTITY CALCULATIONS

RELOCATED BRANDYWINE ROAD LINE DATA:

BEGIN WORK: STA. 54+75

END WORK: STA. 68+50

LENGTH OF LINE= 1375 L.F.

STRUCTURE NO. SUM 271 - 0966 = 262.83 L.F.

APPROACHES = 50.00 L.F.

STRUCTURE NO. SUM 271 - 0967 = 160.54 L.F.

APPROACHES = 50.00 L.F.

RELOCATED STANFORD ROAD LINE DATA:

BEGIN WORK: STA. 57+37.07

END WORK: STA. 60+99.39

LENGTH OF LINE = 362.32 L.F.

ACCESS DRIVE LINE DATA:

BEGIN WORK: STA. 50+10.00

END WORK: STA. 52+24.99

LENGTH OF LINE = 214.99 L.F.

NOTE: * ASTERISK INDICATES LIMITS OF EXTRA DEPTH ITEM - 310 SUBBASE (DOES NOT INCLUDE ROCK CUT AREAS)

LOCATION	NORMAL SECTION L. F.	TRANSITION SECTION L. F.	SUPEREL. SECTION L. F.
436 + 52.75 To 436 + 98.25	45.50		
* 436 + 98.25 To 447 + 07.50	* 1009.25		
447 + 07.50 To 451 + 50.61	266.56		
* 451 + 50.61 To 453 + 75.61		* 225.00	
* 453 + 75.61 To 463 + 00			* 924.39
463 + 00 To 467 + 22.88			422.88
467 + 22.88 To 469 + 47.88		225.00	
469 + 47.88 To 501 + 00	3152.12		
* 501 + 00 To 507 + 77.42	* 677.42		
* 507 + 77.42 To 509 + 84		* 206.58	
509 + 84 To 510 + 02.42		18.42	
510 + 02.42 To 519 + 56.80			954.38
519 + 56.80 To 521 + 81.80		225.00	
521 + 81.80 To 536 + 20.79	1438.99		
536 + 20.79 To 539 + 95.79		375.00	
539 + 95.79 To 552 + 93.55			1297.76
552 + 93.55 To 556 + 68.55		375.00	
556 + 68.55 To 609 + 81.79	5017.44		
	9920.61	1218.42	2675.02
TOTALS	* 1686.67	* 431.58	* 924.39

LOCATION / MAIN LINE	REMARKS	CALCULATION	ITEM 203 Subgrade Preparation S.Y.	ITEM 301 Bituminous Aggregate Base C.Y.	ITEM 302 Asphalt Concrete (70-85) C.Y.	ITEM 304 Aggregate Base C.Y.		ITEM 310 Subbase Grading "A" or "B" As Per Plan C.Y.	ITEM 310 Subbase C.Y.		ITEM 404 Asphalt Concrete (70-85) C.Y.	ITEM 408 Bituminous Prime Coat GAL.	ITEM 409 Seal Coat Cover Agg. No. 8 (.008 C.Y./S.Y.) C.Y.	ITEM 409 Seal Coat Bituminous Material (0.30 Gal/S.Y.) GAL.	ITEM 451 10" Rein. Portland Cement Concrete Pavement S.Y.	ITEM SPECIAL Drainage Connection Using No. 8 Aggregate C.Y.
SUM 271 - 8.29 (THRU LANES)	(16,681.69 L.F.) (48' WIDTH)	16,681.69 x 48 x 1/9													88,969	
601 + 81.79 To 609 + 81.79 (LT)	(ACC. LANE) (WIDTH VARIES 0' To 16.67')	800.00 x 8.333 x 1/9													741	
603 + 36.51 To 604 + 36.51 (RT)	(DEC. LANE) (WIDTH VARIES 0' To 12')	100.00 x 6 x 1/9													67	
604 + 36.51 To 609 + 81.79 (RT)	(DEC. LANE) (12' WIDTH)	545.28 x 12 x 1/9													727	
CURVED AREA	PLANIMETERED	1713 S.F. x 1/9													190	
END TAPER AREAS	(112.67 L.F.) (2' WIDTH)	112.67 x 2 x 1/9													25	
436 + 52.75 To 602 + 59.15	(16,134.05 L.F.) (28' WIDTH) (3" DEPTH)	16,134.05 x 28 x 0.25 x 1/27		4,183												
602 + 59.15 To 609 + 81.79	(722.64 L.F.) (8' WIDTH) (3" DEPTH)	722.64 x 8 x 0.25 x 1/27		54												
602 + 59.15 To 609 + 81.79	(722.64 L.F.) (16'WIDTH) (3" DEPTH)	722.64 x 16 x 0.25 x 1/27		107												
436 + 52.75 To 602 + 59.15	(16,134.05 L.F.) (END AREA = 15.903 S.F.)	16,134.05 x 15.903 x 1/27				9,503										
602 + 59.15 To 609 + 81.79	(722.64 L.F.) (END AREA = 13.383 S.F.)	722.64 x 13.383 x 1/27				358										
436 + 52.75 To 609 + 81.79	(NORMAL SECTION) (9920.61 L.F.)	9920.61 x 28.365 x 1/27						10,422								
436 + 52.75 To 609 + 81.75	(*NORMAL SECTION) (1686.67 L.F.)	1686.67 x 29.993 x 1/27 + 115 C.Y.**						1,993								
436 + 52.75 To 609 + 81.75	(TRANS. SECTION) (1218.42 L.F.)	1218.42 x 28.667 x 1/27						1,294								
436 + 52.75 To 609 + 81.75	(*TRANS. SECTION) (431.58 L.F.)	431.58 x 29.993 x 1/27						479								
436 + 52.75 To 609 + 81.75	(SUPEREL. SECTION) (2675.02 L.F.)	2675.02 x 28.969 x 1/27						2,870								
436 + 52.75 To 609 + 81.75	(*SUPEREL. SECTION) (924.39 L.F.)	924.39 x 29.993 x 1/27						1,027								
UNDER ACC & DEC. LANES	(1725 S.Y. ITEM 451) (7-1/2" DEPTH)	1725 x 1/4.8						359								
436 + 52.75 To 609 + 81.79	(NORMAL SECTION) (9920.61 L.F.)	9920.61 x 7.491 x 1/27							2,752							
436 + 52.75 To 609 + 81.79	(*NORMAL SECTION) (1686.67 L.F.)	1686.67 x 42.986 x 1/27 + 21 C.Y.**							2,706							
436 + 52.75 To 609 + 81.79	(TRANS. SECTION) (1218.42 L.F.)	1218.42 x 6.924 x 1/27							312							
436 + 52.75 To 609 + 81.79	(*TRANS. SECTION) (431.58 L.F.)	431.58 x 42.986 x 1/27							687							
436 + 52.75 To 609 + 81.79	(SUPEREL. SECTION) (2675.02 L.F.)	2675.02 x 6.356 x 1/27							630							
436 + 52.75 To 609 + 81.79	(*SUPEREL. SECTION) (924.39 L.F.)	924.39 x 42.986 x 1/27							1,472							
436 + 52.75 To 602 + 59.15	(16,134.05 L.F.) (28' WIDTH)	16,134.05 x 28 x 1/9 = 50,195 S.Y.											402	15,059		
602 + 59.15 To 609 + 81.79	(722.64 L.F.) (24'WIDTH)	722.64 x 24 x 1/9 = 1,927 S.Y.											15	578		
436 + 52.75 To 602 + 59.15	(16,134.05 L.F.) (76' WIDTH)	16,134.05 x 76 x 1/9	136,243													
602 + 59.15 To 609 + 81.79	(722.64 L.F.) (72' WIDTH)	722.64 x 72 x 1/9	5,781													
UNDER ACC. & DEC. LANES	(1725 S.Y. ITEM 451)		1,725													
436 + 52.75 To 609 + 81.79	(16,856.69 L.F.) (END AREA = 2.76 S.F.)	16,856.69 x 2.76 x 1/27														1,723
402+50 AND 581+38	TWO CROSSOVERS			84		211			160				8	305		
RELOCATED HINES HILL ROAD																
43 + 00 To 55 + 00	(863.42 L.F.) (20' WIDTH) (1-1/4" DEPTH)	863.42 x 20 x 0.1042 x 1/27									67					
43 + 00 To 55 + 00	(863.42 L.F.) (20.5' WIDTH) (1-1/3" DEPTH)	863.42 x 20.5 x 0.1458 x 1/27			96											
43 + 00 To 55 + 00	(863.42 L.F.) (21' WIDTH) (5" DEPTH)	863.42 x 21 x 0.4167 x 1/27				280										
43 + 00 To 55 + 00	(913.42 L.F.) (22) WIDTH) (4" DEPTH)	913.42 x 22 x 0.3333 x 1/27							248							
43 + 00 To 55 + 00	(863.42 L.F.) (20.5' WIDTH) (0.4 Gal/S.Y.)	863.42 x 20.5 x 1/9 x 0.40										787				
43 + 00 To 55 + 00	(913.42 L.F.) (20' WIDTH)	913.42 x 20 x 1/9	2,030													
RELOCATED BRANDYWINE ROAD																
54 + 75 To 68 + 50	(851.63 L.F.) (20'WIDTH) (1-1/4" DEPTH)	851.63 x 20 x 0.1042 x 1/27									66					
54 + 75 To 68 + 50	(851.63 L.F.) (21'WIDTH) (5" DEPTH)	851.63 x 21 x 0.4167 x 1/27				276										
54 + 75 To 68 + 50	(951.63 L.F.) (22'WIDTH) (4" DEPTH)	951.63 x 22 x 0.3333 x 1/27							259							
54 + 75 To 68 + 50	(851.63 L.F.) (20'WIDTH) (0.4 Gal./S.Y.)	851.63 x 20 x 1/9 x 0.40										757				
54 + 75 To 68 + 50	(951.63 L.F.) (20'WIDTH)	951.63 x 20 x 1/9	2,115													
ACCESS DRIVE																
50 + 10 To 52 + 24.99	(214.99 L.F.) (20'WIDTH)		547			74					30	219				
RELOCATED STANFORD ROAD																
57 + 37.07 To 60 + 99.39	(362.32 L.F.) (20'WIDTH) (2" DEPTH)	362.32 x 20 x 0.1667 x 1/27									45					
RETURNS AT BRANDYWINE	(530 S.F.) (PLANIMETERED)	530 x 0.1667 x 1/27									3.3					
57 + 37.07 To 60 + 99.39	(362.32 L.F.) (21'WIDTH) (5" DEPTH)	362.32 x 21 x 0.4167 x 1/27				117										
RETURNS AT BRANDYWINE	(530 S.F.) (PLANIMETERED)	530 x 0.4167 x 1/27				8										
57 + 37.07 To 60 + 99.39	(362.32 L.F.) (22'WIDTH) (4" DEPTH)	362.32 x 22 x 0.3333 x 1/27							98							
RETURNS AT BRANDYWINE	(530 S.F.) (PLANIMETERED)	530 x 0.3333 x 1/27							7							
57 + 37.07 To 60 + 99.39	(362.32 L.F.) (20'WIDTH) (0.4 Gal./S.Y.)	362.32 x 20 x 1/9 x 0.40										322				
RETURNS AT BRANDYWINE	(530 S.F.) (0.4 GAL/S.Y.)	530 x 1/9 x 0.40										24				
57 + 37.07 To 60 + 99.39	(362.32 L.F.) (20'WIDTH)	362.32 x 20 x 1/9	805													
RETURNS AT BRANDYWINE	(530 S.F.)	530 x 1/9	59													
		TOTALS	149,305	4,428	96	10,827		18,444	9,340		211	2,109	425	15,942	90,719	1,723

END AREAS USED IN CALCULATIONS (BOTH SIDES)			
	NORMAL SECTION	TRANSITION SECTION	SUPEREL SECTION
ITEM 304 (BIT. AGG. BASE)	15.903 S.F.	15.903 S.F.	15.903 S.F.
ITEM 310 (SUBBASE GRADE "A" OR "B" AS PER PLAN)	28.365 S.F. * 29.993 S.F.	28.667 S.F. * 29.993 S.F.	28.969 S.F. * 29.993 S.F.
ITEM - SPECIAL (DRAINAGE CONN. USING No. 8 AGG.)	2.760 S.F.	2.760 S.F.	2.760 S.F
ITEM - 310(SUBBASE)	7.491 S.F. *42.986 S.F.	6.924 S.F. *42.986 S.F.	6.356 S.F. *42.986 S.F.

** ROCK CUT AREAS

LIMITING STATIONS:

STATION 527 + 00 To STATION 532 + 00 EASTBOUND LANES = 500 L.F.
STATION 530 + 00 To STATION 532 + 00 WESTBOUND LANES = 200 L.F.

ADDITIONAL ITEM - 310 SUBBASE, GRADING "A" OR "B", AS PER PLAN

(END AREA = 4.576 S.F.) 4.57 x 700 x 1/27 = 119 C.Y.

ADDITIONAL ITEM - 310 SUBBASE

(END AREA = 0.806 S.F.) 0.806 x 700 x 1/27 = 21 C.Y.

ROADWAY & PAVEMENT COMPUTATIONS

QUANTITY SUMMARY
ROADWAY

FED. RD.	STATE	PROJECT	
	OHIO		

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SUM-271-8.29

CODE TYPE 7221 or as shown.

ITEM	10	11-A	12	13	14	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	183	186	187	188	189	194	195	200	292	SUB TOTAL Y005	BID ITEM	BID QUANTITY	BID UNIT	DESCRIPTION	
201		LUMP																																201	LUMP	LUMP	CLEARING AND GRUBBING	
203				2,776,079																													203	2,776,079	CU. YDS.	EXCAVATION INCLUDING EMBANKMENT CONSTRUCTION, AS PER PLAN	
203				154,314																													203	154,314	CU. YDS.	BORROW	
203					149,305																												203	149,305	SQ. YDS.	SUBGRADE PREPARATION	
203	75																																203	75	HOURS	PROOF ROLLING	
410			400																							567	456						410	1423	CU. YDS.	TRAFFIC COMPACTED SURFACE, TYPE A OR B	
410			400																														410	400	CU. YDS.	TRAFFIC COMPACTED SURFACE, TYPE C	
604						1	1	1	4	1	1	1	2	1	1	3	1	2	2		1	2	1						1	1	2		604	26	EACH	CENTERLINE REFERENCE MONUMENTS, AS PER PLAN	
604																									1	1			1	1	2		604	6	EACH	STANDARD MONUMENT ASSEMBLY	
606						700	800	375	1400	950	675	2000	417.5	2300	1995	1300	750		475	698.5	1482	1632	1287.5	331.5	200	200			445	435	472.5	587.5	606	21,915	LIN. FT.	GUARDRAIL, TYPE 4, MODIFIED AS PER PLAN.	
606								150													150											606	300	LIN. FT.	GUARDRAIL, TYPE 4, BARRIER DESIGN, MODIFIED AS PER PLAN	
607																																31,052	607	31,052	LIN. FT.	FENCE, TYPE 47	
615																													978	221			615	1,199	SQ. YDS.	CLASS-B TEMPORARY PAVEMENT	
615																											LUMP	LUMP	LUMP	LUMP			615	LUMP	LUMP	TEMPORARY ROADS	
616	10		16																														616	26	TONS	CALCIUM CHLORIDE	
616	400																																616	400	M-GALS	WATER	
620				162																													620	162	EACH	MONO-DIRECTIONAL DELINEATORS, TYPE A-1, POST MOUNTED	
620				5																													620	5	EACH	MONO-DIRECTIONAL DELINEATORS, TYPE A-1, BRACKET MOUNTED	
620				15																													620	15	EACH	MONO-DIRECTIONAL DELINEATORS, TYPE C-2, POST MOUNTED	
620				1																													620	1	EACH	MONO-DIRECTIONAL DELINEATORS, TYPE C-3, POST MOUNTED	
621				13.13																													621	13.13	MILES	EDGE LINES	
621				2.46																													621	2.46	MILES	6" LANE LINES	
659				661,984																												661,984	659	661,984	SQ. YDS.	SEEDING AND MULCHING, AS PER PLAN	Y-005
659				59.63																												59.63	659	59.63	TONS	COMMERCIAL FERTILIZER (12-12-12)	Y-005
659				298.07																												298.07	659	298.07	TONS	AGRICULTURAL LIMING	Y-005
660																					109	225										334	660	334	SQ. YDS.	SODDING FOR SPECIAL BERM AND SLOPE PROTECTION	Y-005
661																3,181	6,755		1,586	756												12,292	661	12,292	EACH	CROWN VETCH, AS PER PLAN	Y-005
667						1102	1958	313	325	1001		125	125	616	125	125	250	125		250		500		378									7318	667	7,318	SQ. YDS.	JUTE MATTING	Y-005
SPECIAL							2					1					3	1			1												SPECIAL	8	EACH	DRILLED WELLS ABANDONED	
SPECIAL							1					1					3				2												SPECIAL	7	EACH	CLEANING AND DISPOSING OF SEPTIC TANKS	
SPECIAL		4																															SPECIAL	4	EACH	SETTLEMENT PLATFORMS	
SPECIAL		6																															SPECIAL	6	EACH	PIEZOMETER	

QUANTITY SUMMARY
PAVEMENT

FED.RD.	STATE	PROJECT	
	OHIO		

SUM-271-8.29

16/313

CODE TYPE 7221

ITEM	10	12	14	25	26	27	32	34	36	37	40	41	186	187	194	195
301			4428													
302			96										15		66	46
304			10,827													
310			18,444													
310			9,340													
404			211										6		27	18
408			2,103										44		191	132
409			425													
409			15,942													
451			90,719													
609								60								
611				134	134	134					200	267	56	56	111	111
SPECIAL			1723													
—	LUMP															
—	LUMP															
614		LUMP														
202							LUMP									
202							LUMP									
202							LUMP									
202									LUMP							
202									LUMP							
202									LUMP							
202										LUMP						
202											LUMP					
202											LUMP					

BID ITEM	QUANTITY	UNIT	DESCRIPTION
301	4428	CU. YDS.	BITUMINOUS AGGREGATE BASE, 702.01 (B5-100) or 702.03, RT-10, AS PER PLAN
302	96	CU. YDS.	ASPHALT CONCRETE (70-85)
304	10,954	CU. YDS.	AGGREGATE BASE
310	18,444	CU. YDS.	SUBBASE, GRADING A OR B, AS PER PLAN
310	9,340	CU. YDS.	SUBBASE
404	262	CU. YDS.	ASPHALT CONCRETE (70-85)
408	2,476	GALS	BITUMINOUS PRIME COAT: 702.09 RT-2 OR RT-3
409	425	CU. YDS.	Nº 8 SEAL COAT COVER AGGREGATE
409	15,942	GALS	SEAL COAT, BITUMINOUS MATERIAL, AS PER PLAN
451	90,719	SQ. YDS.	10" REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT
609	60	LIN. FT.	CONCRETE CURB, STANDARD TYPE 6
611	1,203	SQ. YDS.	REINFORCED CONCRETE APPROACH SLABS (T-13")
SPECIAL	1,723	CU. YDS.	DRAINAGE CONNECTION USING Nº 8 AGGREGATE,
—	LUMP	LUMP	FIELD OFFICE
—	LUMP	LUMP	CONSTRUCTION LAYOUT STAKES
614	LUMP	LUMP	MAINTAINING TRAFFIC
			~ BUILDING REMOVALS ~
202	LUMP	LUMP	PARCEL - 67-WL REMOVAL OF ONE 2 STORY FRAME RESIDENCE, ONE FRAME GARAGE, ONE 1½ STORY FRAME BARN, ONE FRAME SHED
202	LUMP	LUMP	PARCEL - 68-WL REMOVAL OF ONE 1½ STORY FRAME RESIDENCE, ONE FRAME SHED, ONE FRAME GARAGE
202	LUMP	LUMP	PARCEL - 70-WL REMOVAL OF ONE 1 STORY FRAME RESIDENCE, ONE FRAME GARAGE
202	LUMP	LUMP	PARCEL - 84-WL REMOVAL OF ONE 1 STORY FRAME RESIDENCE, ONE FRAME GARAGE
202	LUMP	LUMP	PARCEL - 85-WL REMOVAL OF ONE 1 STORY FRAME RESIDENCE ONE FRAME GARAGE, ONE FRAME BARN
202	LUMP	LUMP	PARCEL - 86-WL REMOVAL OF ONE 1 STORY FRAME RESIDENCE, TWO FRAME SHEDS, ONE FRAME GARAGE
202	LUMP	LUMP	PARCEL - 87-WL REMOVAL OF ONE 2 STORY FRAME RESIDENCE, FOUR FRAME SHEDS, ONE 2-CAR GARAGE, ONE CORN CRIB, ONE CHICKEN COOP
202	LUMP	LUMP	PARCEL - 167-WL REMOVAL OF ONE 1½ STORY FRAME RESIDENCE, THREE FRAME SHEDS, ONE FRAME GARAGE
202	LUMP	LUMP	PARCEL - 168-WL REMOVAL OF ONE 1½ STORY BRICK RESIDENCE, ONE 2-CAR BRICK GARAGE

STRUCTURE SUMMARY (OVER 20')

SUM-271-0854 L&R SEE SHEET Nº 228 & 236
SUM-271-0914 SEE SHEET Nº 244
SUM-271-0966 SEE SHEET Nº 251.
SUM-271-1117 L&R SEE SHEET Nº 272
SUM-271-1122 L&R SEE SHEET Nº 281
CH 40 OVER BRANDYWINE CREEK. SEE SHEET Nº 264

RETAINING WALL SUMMARY (AT N.Y.C. R.R.) SEE SHEET. Nº 222.

QUANTITY SUMMARY
DRAINAGE

FED.RD.	STATE	PROJECT	
	OHIO		

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SUM - 271 - 8.29

CODE TYPE 7221

ITEM	11	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	11-A	SUB ITEM	TOTAL QUANTITY	UNIT	DESCRIPTION
202																			LUMP		202	LUMP	LUMP SUM	EXISTING STRUCTURES REMOVED
202																			96		202	96	LIN. FT.	PIPE REMOVED, 15" AND UNDER
601																					601	0	LIN. FT.	PAVED GUTTER STANDARD TYPE 1-2 Y-005
601																					601	0	SQ.YD.	RIPRAP, *Using 6" Reinforced Concrete Slab.* Y-005
601	50		118	174	535	335	5		1			316	428		1		3		26		601	1992	CU. YD.	DUMPED ROCK CHANNEL PROTECTION Y-005
601							64														601	64	LIN. FT.	PAVED GUTTER, STANDARD TYPE 1-4 Y-005
601																				160	601	160	CU. YD.	DUMPED ROCK FILL, AS PER PLAN Y-005
602			0.4	0.3	0.3	0.3	0.3		0.3			0.3	0.3		0.3		0.5	0.2	1.7		602	5.2	CU. YD.	CONCRETE MASONRY
603																					603	0	LIN. FT.	15" CONDUIT, TYPE A WITH CLASS B BEDDING, 706.02 CL. III, OR 706.08
603																					603	0	LIN. FT.	24" CONDUIT, TYPE "A" WITH CLASS "B" BEDDING 706.08 OR 706.02 CL. III
603																					603	0	LIN. FT.	24" CONDUIT, TYPE "A" WITH CLASS "B" BEDDING 707.05 - GAGE 14
603																					603	0	LIN. FT.	24" CONDUIT, TYPE "A" WITH CLASS B BEDDING, 706.02 OR 706.08
603																					603	0	LIN. FT.	27" CONDUIT, TYPE "A" WITH CLASS "B" BEDDING 706.08 OR 706.02 CL. III
603																					603	0	LIN. FT.	30" CONDUIT, TYPE "A" WITH CLASS "B" BEDDING
603																					603	0	LIN. FT.	42" CONDUIT, TYPE "A" WITH CLASS "B" BEDDING 707.05 - GAGE 8, SHOP ELONGATED
603																					603	0	LIN. FT.	54" CONDUIT, TYPE "A" WITH CLASS "B" BEDDING 707.05 GAGE 8, SHOP ELONGATED AND STRUTTED
603																					603	0	LIN. FT.	36" CONDUIT, TYPE "A" WITH CLASS "B" BEDDING 707.05 GAGE 8
603																					603	0	LIN. FT.	60" CONDUIT, TYPE "A" WITH CLASS "B" BEDDING 707.03 GAGE 10-8
603																					603	0	LIN. FT.	84" CONDUIT, TYPE "A" W/CL. "B" BEDDING 707.03 GAGE 1-1 SHOP ELONG. OR FIELD STRUTTED
603																					603	0	LIN. FT.	96" CONDUIT, TYPE "A" W/CL. "B" BEDDING 707.03 GAGE 1-1 SHOP ELONG. OR FIELD STRUTTED
603	200							29			34	35									603	298	LIN. FT.	6" CONDUIT, TYPE "B" WITH CLASS "B" BEDDING
603	200																				603	200	LIN. FT.	8" CONDUIT, TYPE "B" WITH CLASS "B" BEDDING
603																					603	0	LIN. FT.	12" CONDUIT, TYPE "B" WITH CLASS "B" BEDDING
603				113	86	108	72		100			66			108		204		173		603	1030	LIN. FT.	15" CONDUIT, TYPE "B" WITH CLASS "B" BEDDING
603													97								603	97	LIN. FT.	18" CONDUIT, TYPE "B" WITH CLASS "B" BEDDING
603			74																		603	74	LIN. FT.	21" CONDUIT, TYPE "B" WITH CLASS "B" BEDDING
603			115																		603	115	LIN. FT.	24" CONDUIT, TYPE "B" WITH CLASS "B" BEDDING 706.02 CL. III
603																					603	0	LIN. FT.	30" CONDUIT, TYPE "B" WITH CLASS "B" BEDDING
603			18	152														40	76		603	286	LIN. FT.	12" CONDUIT, TYPE "C" WITH CLASS "B" BEDDING
603																					603	0	LIN. FT.	12" CONDUIT, TYPE "D", 707.01 OR 707.02, GAGE 14
603													300	635							603	935	LIN. FT.	15" CONDUIT, TYPE "C" WITH CLASS "B" BEDDING
603																			247		603	247	LIN. FT.	21" CONDUIT, TYPE "C" WITH CLASS "B" BEDDING
603			200																		603	200	LIN. FT.	24" CONDUIT, TYPE "C" WITH CLASS "B" BEDDING
603	200																				603	200	LIN. FT.	6" CONDUIT, TYPE "E"
603	200																				603	200	LIN. FT.	8" CONDUIT, TYPE "E"
603	50		70	70	30		10	25	35	10	20	40	10		20		20	20	40		603	470	LIN. FT.	6" CONDUIT, TYPE "F"
603	50																				603	50	LIN. FT.	8" CONDUIT, TYPE "F"
603																		48			603	48	LIN. FT.	12" CONDUIT, TYPE "F"
603					27		39					96					42				603	204	LIN. FT.	15" CONDUIT, TYPE "F"
603													36								603	36	LIN. FT.	18 CONDUIT, TYPE "F"
604			1																1		604	2	EACH	STANDARD Nº 1 MANHOLES
604																					604	0	EACH	STANDARD Nº 2-3 CATCH BASIN
604																					604	0	EACH	STANDARD Nº 2-2A CATCH BASIN
604					1	1	1								1		2	1			604	7	EACH	STANDARD Nº 4 CATCH BASIN
604			3						1			1	1	2							604	8	EACH	STANDARD Nº 5 CATCH BASIN
604				2															4		604	6	EACH	STANDARD Nº 8 CATCH BASIN
604																					604	0	EACH	STILLING BASIN, AS PER PLAN
605					1315	905	112	1127	16	1671	1523	1084	746		524	2000	1758	1670	1708		605	16159	LIN. FT.	6" SHALLOW PIPE UNDERDRAIN
605		1378	3499	3590	1271	1152	1758	1150	3987	300											605	18125	LIN. FT.	6" DEEP PIPE UNDERDRAIN
605			490	1253	500						750	1404	2261	2594	1521						605	10813	LIN. FT.	6" PIPE UNDERDRAIN, 707.06 OR 707.12
605	300																				605	300	LIN. FT.	6" UNCLASSIFIED PIPE UNDERDRAIN, 707.06 OR 707.12, PER PLAN
605				127	100		100	100		100												527	LIN. FT.	6" UNCLASSIFIED PIPE UNDERDRAIN
605	15																				605	15	LIN. FT.	AGGREGATE DRAINS FOR SPRINGS, AS PER PLAN
605																						0	LIN. FT.	AGGREGATE DRAINS, AS PER PLAN
660			62	62																	660	124	SQ. YDS.	SODDING Y-005

SUB TOTAL

SUMMARY DRAINAGE

QUANTITY SUMMARY
DRAINAGE

FED.RD.	STATE	PROJECT	
	OHIO		

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18/313

CODE TYPE 7221 OR AS SHOWN

ITEM	17	183	186	187	194	195	200	202	205	206	207	208	209	210	210-A	211	212	213	214
202	LUMP																		
202	96	88						238											
601	0					148							29		10	33			
601	0																		
601	1882	3				2	5				39	21	22	12	6	31	23		
601	64																		
601	160																		
602	5.2	0.4	0.2	0.2		0.3	0.5		15.0			16.0	8.6	4.4	6.6	24.6	10.5	0.5	
603	0						79												
603	0														92				
603	0													224					
603	0														70				
603	0												222						
603	0																	225	
603	0								328										
603	0																406		
603	0											442							
603	0															294			
603	0										548								
603	0									1,148									
603	298																		
603	200																		
603	0		64	60															
603	1,030					59													
603	97																		
603	74																		
603	115																		
603	0	70																	
603	286		25	25															
603	0		50			90													
603	935																		
603	247																		
603	200																		
603	200																		
603	470																		
603	50																		
603	48		47	52															
603	204					51	44												
603	36																		
604	2																		
604	0	1																1	
604	0		2	2		1													
604	7																		
604	8												1		1				
604	6																		
604	0																1		
605	16,159																		
605	18,125																		
605	10,813																		
605	300																		
605	527																		
605	15																		
605	0		120	80	60	100	70												
660	124								6	6		7	20	4	4	9	7		

SUB-TOTALS				GRAND TOTAL			
	Normal 7221	Farm Drain Crossing	Y005	ITEM	QUANTITY	UNIT	DESCRIPTION
202				202	LUMP	LUMP SUM	EXISTING STRUCTURES REMOVED
202				202	422	LIN. FT.	PIPE REMOVED, 15" AND UNDER
601			148	601	148	LIN. FT.	PAVED GUTTER, STANDARD TYPE 1-2 Y-005
601			72	601	72	SQ. YDS.	RIPRAP, USING 6" REINFORCED CONCRETE SLAB Y-005
601			2,156	601	2,156	CU. YDS.	DUMPED ROCK CHANNEL PROTECTION Y-005
601			64	601	64	LIN. FT.	PAVED GUTTER, STANDARD TYPE 1-4 Y-005
601			160	601	160	CU. YDS.	DUMPED ROCK FILL, AS PER PLAN Y-005
602				602	93	CU. YDS.	CONCRETE MASONRY
603				603	79	LIN FT.	15" CONDUIT, TYPE A WITH CLASS B BEDDING, 706.08 OR 706.02 CLASS III.
603				603	92	LIN. FT.	24" CONDUIT, TYPE "A" WITH CLASS "B" BEDDING 706.08 OR 706.02 CL III
603				603	224	LIN. FT.	24" CONDUIT, TYPE "A" WITH CLASS "B" BEDDING 707.05 - GAGE 14
603				603	70	LIN. FT.	24" CONDUIT, TYPE A, WITH CLASS B BEDDING, 706.02 OR 706.08
603				603	222	LIN. FT.	27" CONDUIT, TYPE "A" WITH CLASS "B" BEDDING 706.08 OR 706.02 CL. III
603				603	225	LIN. FT.	30" CONDUIT, TYPE "C" WITH CLASS "B" BEDDING
603				603	328	LIN. FT.	42" CONDUIT, TYPE "A" WITH CLASS "B" BEDDING 707.05 - GAGE 8, SHOP ELONGATED
603				603	406	LIN. FT.	54" CONDUIT, TYPE "A" WITH CLASS "B" BEDDING 707.05 - GAGE 8, SHOP ELONGATED AND STRUTTED
603				603	442	LIN. FT.	36" CONDUIT, TYPE "A" WITH CLASS "B" BEDDING 707.05 - GAGE 8
603				603	294	LIN. FT.	60" CONDUIT, TYPE "A" WITH CLASS "B" BEDDING 707.03 - GAGE 10-B
603				603	548	LIN. FT.	84" CONDUIT, TYPE "A" WITH CL. "B" BEDDING 707.03 GAGE 1-1 SHOP ELONG OR FIELD STRUTTED
603				603	1,148	LIN. FT.	96" CONDUIT, TYPE "A" WITH CL. "B" BEDDING 707.03 GAGE 1-1 SHOP ELONG OR FIELD STRUTTED
603	98	200		603	298	LIN. FT.	6" CONDUIT, TYPE "B" WITH CLASS "B" BEDDING
603		200		603	200	LIN. FT.	8" CONDUIT, TYPE "B" WITH CLASS "B" BEDDING
603				603	124	LIN. FT.	12" CONDUIT, TYPE "B" WITH CLASS "B" BEDDING
603				603	1,089	LIN. FT.	15" CONDUIT, TYPE "B" WITH CLASS "B" BEDDING
603				603	97	LIN. FT.	18" CONDUIT, TYPE "B" WITH CLASS "B" BEDDING
603				603	74	LIN. FT.	21" CONDUIT, TYPE "B" WITH CLASS "B" BEDDING
603				603	115	LIN. FT.	24" CONDUIT, TYPE "B" WITH CLASS "B" BEDDING 706.02 CL. III
603				603	70	LIN. FT.	30" CONDUIT, TYPE "B" WITH CLASS "B" BEDDING
603				603	336	LIN. FT.	12" CONDUIT, TYPE "C" WITH CLASS "B" BEDDING
603				603	140	LIN. FT.	12" CONDUIT, TYPE "D", 707.01 OR 707.02, GAGE 14
603				603	935	LIN. FT.	15" CONDUIT, TYPE "C" WITH CLASS "B" BEDDING
603				603	247	LIN. FT.	21" CONDUIT, TYPE "C" WITH CLASS "B" BEDDING
603				603	200	LIN. FT.	24" CONDUIT, TYPE "C" WITH CLASS "B" BEDDING
603				603	200	LIN. FT.	6" CONDUIT, TYPE "E"
603				603	200	LIN. FT.	8" CONDUIT, TYPE "E"
603				603	470	LIN. FT.	6" CONDUIT, TYPE "F"
603				603	50	LIN. FT.	8" CONDUIT, TYPE "F"
603				603	147	LIN. FT.	12" CONDUIT, TYPE "F"
603				603	299	LIN. FT.	15" CONDUIT, TYPE "F"
603				603	36	LIN. FT.	18" CONDUIT, TYPE "F"
604				604	2	EACH	STANDARD Nº 1 MANHOLES
604				604	2	EACH	STANDARD Nº 2-3 CATCH BASIN
604				604	5	EACH	STANDARD Nº 2-2A CATCH BASIN
604				604	7	EACH	STANDARD Nº 4 CATCH BASIN
604				604	10	EACH	STANDARD Nº 5 CATCH BASIN
604				604	6	EACH	STANDARD Nº 8 CATCH BASIN
604				604	1	EACH	STILLING BASIN, AS PER PLAN
605				605	16,159	LIN. FT.	6" SHALLOW PIPE UNDERDRAIN
605				605	18,125	LIN. FT.	6" DEEP PIPE UNDERDRAIN
605				605	10,813	LIN. FT.	6" PIPE UNDERDRAIN, 707.06 OR 707.12
605				605	300	LIN. FT.	6" UNCLASSIFIED PIPE UNDERDRAIN, 707.06 OR 707.12, AS PER PLAN
605				605	527	LIN. FT.	6" UNCLASSIFIED PIPE UNDERDRAIN
605				605	15	LIN. FT.	AGGREGATE DRAINS FOR SPRINGS, AS PER PLAN
605				605	430	LIN. FT.	AGGREGATE DRAINS, AS PER PLAN
660			187	660	187	SQ. YDS.	SODDING Y-005

SUPERELEVATION DIAGRAMS

FED. RD.	STATE	PROJECT	
2	OHIO		

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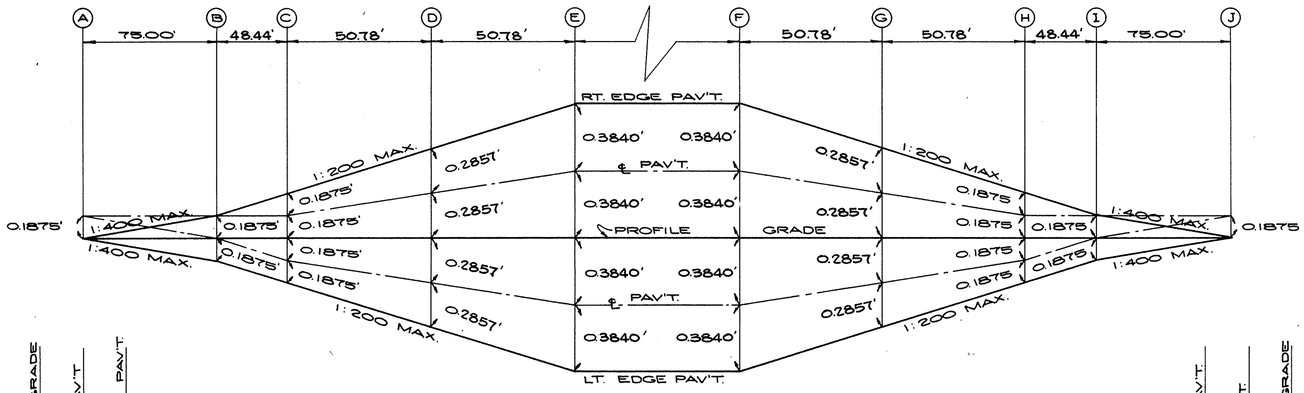
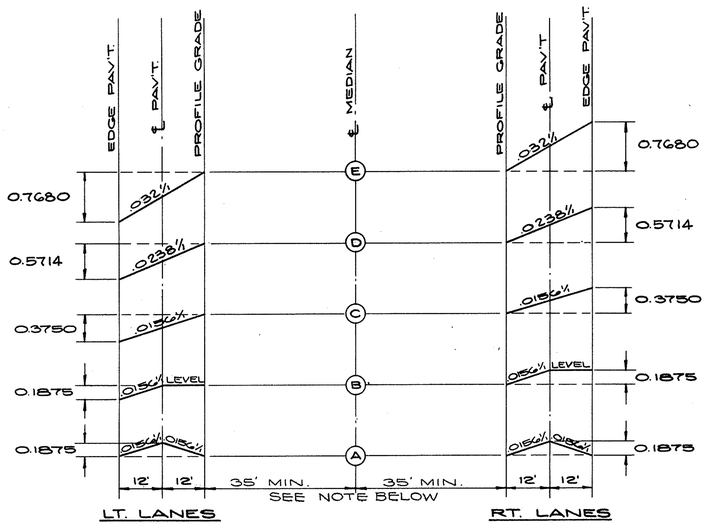
513





NOTE:

DIAGRAMS SHOWN APPLY TO CURVE Nº 6 WHICH IS CURVING TO THE LEFT. THE DIAGRAMS SHALL BE REVERSED FOR CURVE Nº 7

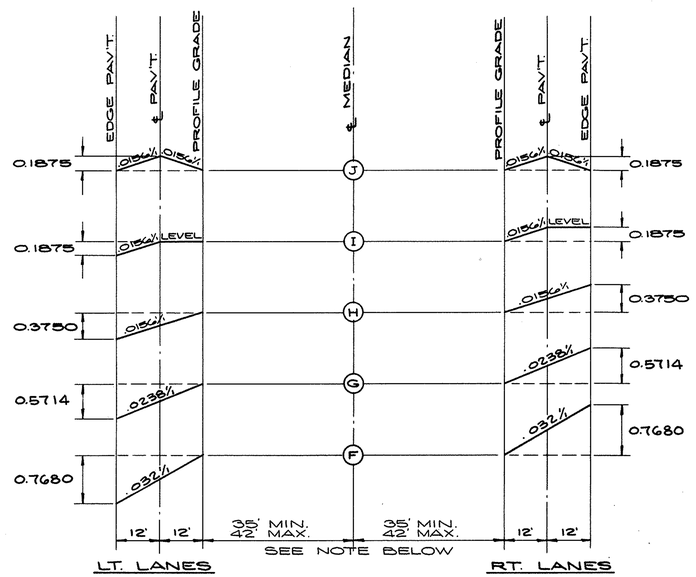
CURVE Nº 6
Δ = 14° 29' 18" (LT.)

(A)	STA. 451+50.61
(B)	STA. 452+25.61
(C)	STA. 452+74.05
(D)	STA. 453+24.83
(E)	STA. 453+75.61
(F)	STA. 467+22.88
(G)	STA. 467+73.66
(H)	STA. 468+24.44
(I)	STA. 468+72.88
(J)	STA. 469+47.88

CURVE Nº 7
Δ = 10° 33' 34" (RT.)

	W.B. LANE	E.B. LANE
(A)	STA. 507+43.10	STA. 508+11.74
(B)	STA. 508+18.10	STA. 508+86.74
(C)	STA. 508+66.54	STA. 509+35.18
(D)	STA. 509+17.32	STA. 509+85.96
(E)	STA. 509+68.10	STA. 510+36.74
(F)	STA. 519+22.48	STA. 519+91.12
(G)	STA. 519+73.26	STA. 520+41.90
(H)	STA. 520+24.04	STA. 520+92.68
(I)	STA. 520+72.48	STA. 521+41.12
(J)	STA. 521+47.48	STA. 522+16.12 = 522+23.23 ℄ SURVEY

NOTE: FROM P.C. STA. 509+17.32 W.B.L. TO PT. STA. 520+41.90 E.B.L. THE MEDIAN TRANSITIONS FROM 84' TO 70'.



SUPERELEVATION DIAGRAMS

SUPERELEVATION DIAGRAMS

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM - 271 - 8.29

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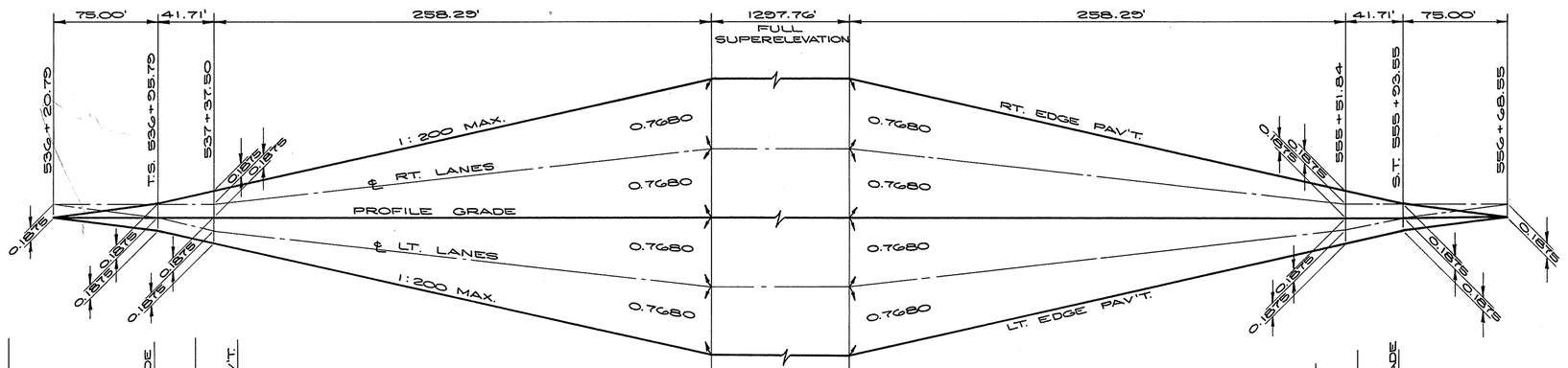

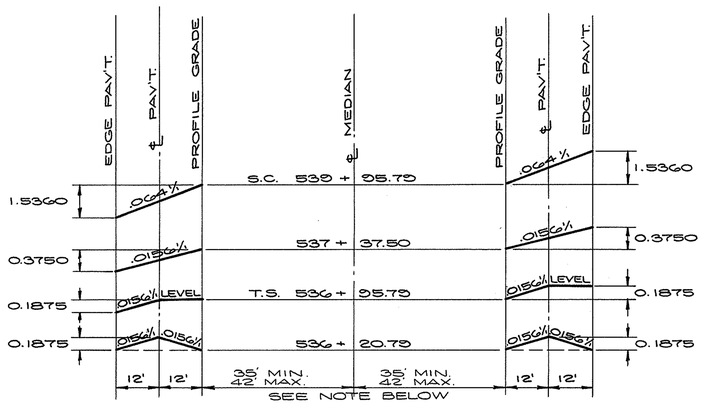

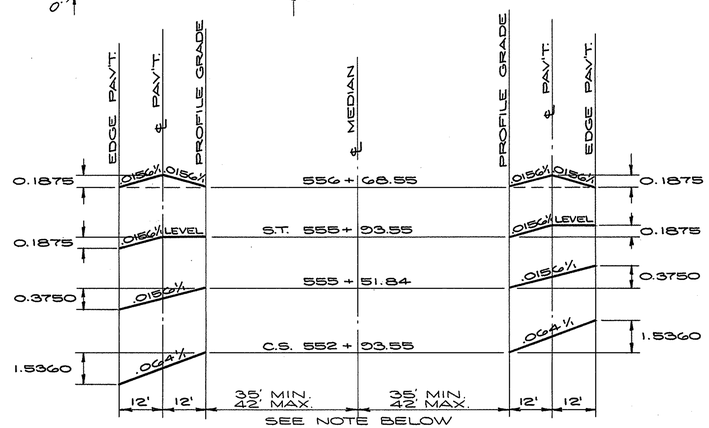

CURVE Nº 8

Δ = 31°57'19" (LT.)
D_c = 2°00'
e = 0.64 1/1

NOTE : FROM T.S. STA. 536 + 95.79 TO S.T. STA. 555 + 93.55 THE MEDIAN TRANSITIONS FROM 70' TO 84'.

K&E

SUPERELEVATION TABLE

CURVE 6

Δ = 14° 29' 18" (LT.)
e = .032 FT. PER FT.

FED. RD.	STATE	PROJECT	
2	OHIO		

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WESTBOUND LANES				EASTBOUND LANES		
LEFT EDGE	CROWN	PROFILE GRADE	STATION	PROFILE GRADE	CROWN	RIGHT EDGE
760.46	760.85	761.23	460 + 25	761.23	761.61	762.00
759.77	760.16	760.54	460 + 00	760.54	760.92	761.31
759.08	759.47	759.85	459 + 75	759.85	760.23	760.62
758.39	758.78	759.16	459 + 50	759.16	759.54	759.93
757.70	758.09 - 9	758.47	459 + 25	758.47	758.85	759.24
757.01	757.40	757.78	459 + 00	757.78	758.16	758.55
756.32	756.71	757.09	458 + 75	757.09	757.47	757.86
755.63	756.02	756.40	458 + 50	756.40	756.78	757.17
754.94	755.33	755.71	458 + 25	755.71	756.09	756.48
754.25	754.64	755.02	458 + 00	755.02	755.40	757.79
753.56	753.95	754.33	457 + 75	754.33	754.71	755.10
752.87	753.26	753.64	457 + 50	753.64	754.02	754.41
752.18	752.57	752.95	457 + 25	752.95	753.33	753.72
751.49	751.88	752.26	457 + 00	752.26	752.64	753.03
750.80	751.19	751.57	456 + 75	751.57	751.95	752.34
750.11	750.50	750.88	456 + 50	750.88	751.26	751.65
749.42	749.81	750.19	456 + 25	750.19	750.57	750.96
748.73	749.12	749.50	456 + 00	749.50	749.88	750.27
748.04	748.43	748.81	455 + 75	748.81	749.19	749.58
747.35	747.74	748.12	455 + 50	748.12	748.50	748.89
746.66	747.05	747.43	455 + 25	747.43	747.81	748.20
745.97	746.36	746.74	455 + 00	746.74	747.12	747.51
745.28	745.67	746.05	454 + 75	746.05	746.43	746.82
744.59	744.98	745.36	454 + 50	745.36	745.74	746.13
743.90	744.29	744.67	454 + 25	744.67	745.05	745.44
743.21	743.60	743.98	454 + 00	743.98	744.36	744.75
742.16	742.93	743.31	453 + 75.61	743.31	743.69	744.08
742.14	742.91	743.29	453 + 75	743.29	743.67	744.06
741.93	742.27	742.60	453 + 50	742.60	743.93	743.27
741.34	741.63	741.91	453 + 25	741.91	742.19	742.48
740.34	740.63	741.91	453 + 24.83	741.91	742.19	742.48
740.74	740.98	741.22	453 + 00	741.22	741.46	741.70
740.15	740.34	740.53	452 + 75	740.53	740.72	740.91
740.12	740.31	740.50	452 + 74.05	740.50	740.69	740.88
739.56	739.75	739.84	452 + 50	739.84	740.03	740.12
738.98	739.17	739.17	452 + 25.61	739.17	739.36	739.36
738.96	739.15	739.15	452 + 25	739.15	739.34	739.34
738.34	738.53	738.46	452 + 00	738.46	738.65	738.58
737.71	737.90	737.77	451 + 75	737.77	737.96	737.83
737.10	737.29	737.10	451 + 50.61	737.10	737.29	737.10
737.08	737.27	737.08	451 + 50	737.08	737.27	737.08

WESTBOUND LANES				EASTBOUND LANES		
LEFT EDGE	CROWN	PROFILE GRADE	STATION	PROFILE GRADE	CROWN	RIGHT EDGE
786.70	786.89	786.70	469 + 47.88	786.70	786.89	786.70
786.01	786.20	786.07	469 + 25	786.07	786.26	786.13
785.26	785.45	785.38	469 + 00	785.38	785.57	785.50
784.51	784.70	784.69	468 + 75	784.69	784.88	784.87
784.44	784.63	784.63	468 + 72.88	784.63	784.82	784.82
783.72	783.91	784.00	468 + 50	784.00	784.19	784.28
782.94	783.13	783.31	468 + 25	783.31	783.50	783.68
782.91	783.10	783.29	468 + 24.44	783.29	783.48	783.67
782.15	782.39	782.62	468 + 00	782.62	782.85	783.09
781.46	781.65	781.93	467 + 75	781.93	782.21	782.50
781.32	781.61	781.89	467 + 73.66	781.89	782.17	782.46
780.58	780.91	781.24	467 + 50	781.24	781.57	782.90
779.79	780.17	780.55	467 + 25	780.55	780.93	781.31
779.72	780.11	780.49	467 + 22.88	780.49	780.87	781.26
779.09	779.48	779.86	467 + 00	779.86	780.24	780.63
778.40	778.79	779.17	466 + 75	779.17	779.55	779.94
777.71	778.10	778.48	466 + 50	778.48	778.86	779.25
777.02	777.41	777.79	466 + 25	777.79	778.17	778.56
776.33	776.72	777.10	466 + 00	777.10	777.48	777.87
775.64	776.03	776.41	465 + 75	776.41	776.79	777.18
774.95	775.34	775.72	465 + 50	775.72	776.10	776.49
774.26	774.65	775.03	465 + 25	775.03	775.41	775.80
773.57	773.96	774.34	465 + 00	774.34	774.72	775.11
772.83	773.27	773.65	464 + 75	773.65	774.03	774.42
772.19	772.58	772.96	464 + 50	772.96	773.34	773.73
771.50	771.89	772.27	464 + 25	772.27	772.65	773.04
770.81	771.20	771.58	464 + 00	771.58	771.96	772.35
770.12	770.51	770.89	463 + 75	770.89	771.27	771.66
769.43	769.82	770.20	463 + 50	770.20	770.58	770.97
768.74	769.13	769.51	463 + 25	769.51	769.89	770.28
768.05	768.44	768.82	463 + 00	768.82	769.20	769.59
767.36	767.75	768.13	462 + 75	768.13	768.51	768.90
766.67	767.06	767.44	462 + 50	767.44	767.89	768.21
765.98	766.37	766.75	462 + 25	766.75	767.13	767.52
765.29	765.68	766.06	462 + 00	766.06	766.44	766.83
764.60	764.99	765.37	461 + 75	765.37	765.75	766.14
763.91	764.30	764.68	461 + 50	764.68	765.06	765.45
763.22	763.61	763.99	461 + 25	763.99	764.37	764.76
762.53	762.92	763.30	461 + 00	763.30	763.68	764.07
761.84	762.23	762.61	460 + 75	762.61	762.99	763.38
761.15	761.54	761.92	460 + 50	761.92	762.30	762.69

SUPERELEVATION TABLE

CURVE 7

Δ = 10°33'34" (RT.)
e = .032 FT. PER FT.

FED. RD.	STATE	PROJECT	
2	OHIO		

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WESTBOUND LANES				EASTBOUND LANES		
LEFT EDGE	CROWN	PROFILE GRADE	STATION	PROFILE GRADE	CROWN	RIGHT EDGE
852.00	851.61	851.23	514 + 75	862.92	862.54	862.15
851.70	851.31	850.93	514 + 50	862.49	862.11	861.72
851.41	851.02	850.64	514 + 25	862.08	861.70	861.31
851.14	850.81	850.37	514 + 00	861.69	861.31	860.92
850.89	850.50	850.12	513 + 75	861.32	860.94	860.55
850.65	850.26	849.88	513 + 50	860.98	860.60	860.21
850.43	850.04	849.66	513 + 25	860.65	860.27	859.88
850.22	849.83	849.45	513 + 00	860.35	859.97	859.58
850.03	849.64	849.26	512 + 75	860.06	859.68	859.29
849.85	849.46	849.08	512 + 50	859.80	859.42	859.03
849.69	849.30	848.92	512 + 25	859.56	859.18	858.79
849.55	849.16	848.78	512 + 00	859.34	858.96	858.57
849.42	849.03	848.65	511 + 75	859.13	858.75	858.36
849.30	848.91	848.53	511 + 50	858.95	858.57	858.18
849.20	848.81	848.43	511 + 25	858.79	858.41	858.02
849.12	848.73	848.35	511 + 00	858.66	858.28	857.89
849.04	848.65	848.27	510 + 75	858.54	858.16	857.77
848.96	848.57	848.19	510 + 50	858.44	858.07	857.70
			510 + 36.74	858.40	858.04	857.68
848.88	848.49	848.11	510 + 25	858.36	858.01	857.66
848.80	848.41	848.03	510 + 00	858.28	857.97	857.65
			509 + 85.96	858.24	857.95	857.67
848.70	848.33	847.95	509 + 75	858.20	857.94	857.67
848.67	848.30	847.93	509 + 68.10			
848.57	848.22	847.87	509 + 50	858.12	857.90	857.69
			509 + 35.18	858.07	857.88	857.69
848.39	848.09	847.79	509 + 25	858.04	857.89	857.70
848.34	848.06	847.77	509 + 17.32			
848.21	847.96	847.71	509 + 00	857.96	857.91	857.72
			508 + 86.74	857.92	857.92	857.73
848.04	847.83	847.63	508 + 75	857.88	857.91	857.72
847.98	847.79	847.60	508 + 66.54			
847.86	847.74	847.55	508 + 50	857.80	857.89	857.70
847.68	847.66	847.47	508 + 25	857.72	857.87	857.68
847.64	847.64	847.45	508 + 18.10			
			508.11.74	857.68	857.85	857.66
847.53	847.58	847.39	508 + 00	857.64	857.82	857.63
847.39	847.50	847.31	507 + 75	857.56	857.75	857.56
847.26	847.42	847.23	507 + 50			
847.23	847.40	847.21	507 + 43.10			
847.15	847.34	847.15	507 + 25			

WESTBOUND LANES				EASTBOUND LANES		
LEFT EDGE	CROWN	PROFILE GRADE	STATION	PROFILE GRADE	CROWN	RIGHT EDGE
			522 + 16.12	882.76	882.94	882.75
			522 + 00	882.28	882.43	882.24
865.95	866.14	865.95	521 + 75	881.54	881.62	881.43
865.22	865.41	865.22	521 + 50	880 + 79	880.81	880.62
865.15	865.34	865.15	521 + 47.48			
			521 + 41.12	880.53	880.53	880.34
864.56	864.69	864.50	521 + 25	880.05	879.99	879.80
863.91	863.98	863.79	521 + 00	879.30	879.14	878.95
			520 + 92.68	879.08	878.89	878.70
863.28	863.29	863.10	520 + 75	878.56	878.34	878.12
863.23	863.23	863.04	520 + 72.48			
862.70	862.62	862.43	520 + 50	877.81	877.54	877.27
			520 + 41.90	877.57	877.28	877.00
862.14	861.96	861.77	520 + 25	877.07	876.75	876.43
862.13	861.94	861.75	520 + 24.04			
861.60	861.36	861.13	520 + 00	876.32	875.95	875.60
			519 + 91.12	876.06	875.68	875.31
861.06	860.78	860.50	519 + 75	875.58	875.20	874.81
861.03	860.75	860.46	519 + 73.26			
860.55	860.22	859.89	519 + 50	874.83	874.45	874.06
860.03	859.65	859.29	519 + 25	874.09	873.71	873.32
859.98	859.60	859.24	519 + 22.48			
859.48	859.09	858.71	519 + 00	873.34	872.96	872.57
858.92	858.53	858.15	518 + 75	872.60	872.22	871.83
858.37	857.98	857.60	518 + 50	871.85	871.47	871.08
857.84	857.45	857.07	518 + 25	871.11	870.73	870.34
857.32	856.93	856.55	518 + 00	870.39	870.01	869.62
856.82	856.43	856.05	517 + 75	869.69	869.31	868.92
856.33	855.94	855.56	517 + 50	869.01	868.63	868.24
855.86	855.47	855.09	517 + 25	868.36	867.98	867.59
855.41	855.02	854.64	517 + 00	867.72	867.34	866.95
854.97	854.58	854.20	516 + 75	867.10	866.72	866.33
854.54	854.15	853.77	516 + 50	866.50	866.12	865.73
854.13	853.74	853.36	516 + 25	865.93	865.55	865.16
853.74	853.35	852.97	516 + 00	865.37	864.99	864.60
853.36	852.97	852.59	515 + 75	864.85	864.47	864.08
853.00	852.61	852.23	515 + 50	864.33	863.95	863.56
852.65	852.26	851.88	515 + 25	863.84	863.46	862.07
852.32	851.93	851.55	515 + 00	863.36	862.98	862.59

SUPERELEVATION TABLE

CURVE 8

$\Delta = 31° 57' 19" (LT.)$

$e = .064$ FT. PER FT.

NOTE: FROM STA. 536 + 95.79 TO STA. 555 + 93.55
MEDIAN WIDTH TRANSITIONS FROM 70' TO 84'

FED. RD.	STATE	PROJECT	
2	OHIO		

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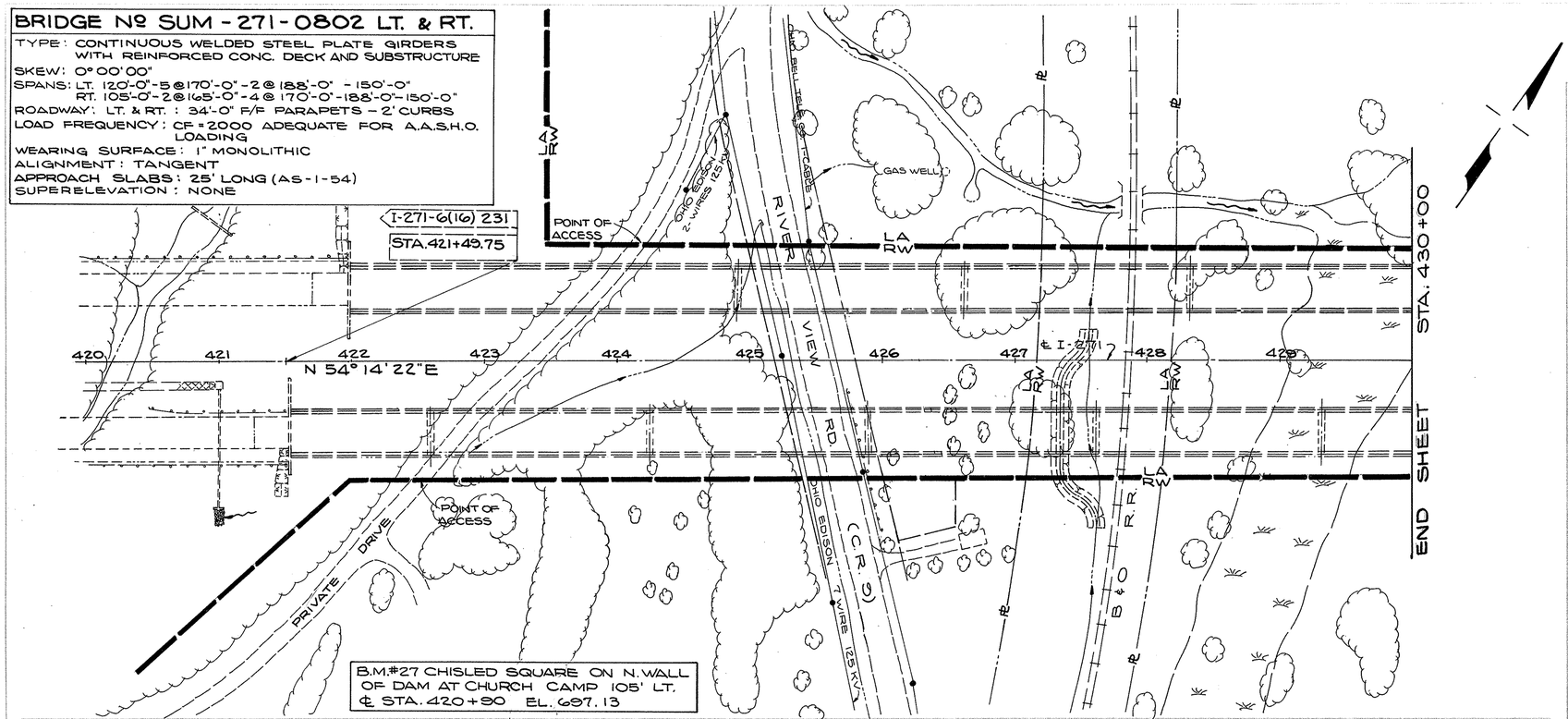
WESTBOUND LANES					EASTBOUND LANES				WESTBOUND LANES					EASTBOUND LANES			
MED. WIDTH FROM ℄ TO EDGE PAV'T.	LEFT EDGE-24	CROWN	PROFILE GRADE	STATION	PROFILE GRADE	CROWN	RIGHT EDGE	MED. WIDTH FROM ℄ TO EDGE PAV'T.	MED. WIDTH FROM ℄ TO EDGE PAV'T.	LEFT EDGE-24	CROWN	PROFILE GRADE	STATION	PROFILE GRADE	CROWN	RIGHT EDGE	MED. WIDTH FROM ℄ TO EDGE PAV'T.
37.04	942.16	942.93	943.70	542 + 50	943.16	943.93	944.70	37.04	39.81	966.45	967.22	967.99	550 + 00	965.33	966.10	966.87	39.81
36.95	941.21	941.98	942.75	542 + 25	942.42	943.19	943.96	36.95	39.72	965.79	966.56	967.33	549 + 75	964.63	965.40	966.17	39.72
36.86	940.26	941.03	941.80	542 + 00	941.67	942.44	943.21	36.86	39.63	965.13	965.90	966.67	549 + 50	963.94	964.71	965.48	39.63
36.77	939.31	940.08	940.85	541 + 75	940.92	941.69	942.46	36.77	39.53	964.45	965.22	965.99	549 + 25	963.23	964.00	964.77	39.53
36.68	938.36	939.13	939.90	541 + 50	940.18	940.95	941.72	36.68	39.44	963.76	964.53	965.30	549 + 00	962.51	963.28	964.05	39.44
36.58	937.41	938.18	938.95	541 + 25	939.44	940.21	940.98	36.58	39.35	963.07	963.84	964.61	548 + 75	961.77	962.54	963.31	39.35
36.49	936.46	937.23	938.00	541 + 00	938.69	939.46	940.23	36.49	39.26	962.36	963.13	963.90	548 + 50	961.04	961.81	962.58	39.26
36.40	935.51	936.28	937.05	540 + 75	937.94	938.71	939.48	36.40	39.17	961.64	962.41	963.18	548 + 25	960.30	961.07	961.84	39.17
36.31	934.56	935.33	936.10	540 + 50	937.20	937.97	938.74	36.31	39.07	960.91	961.68	962.45	548 + 00	959.55	960.32	961.09	39.07
36.21	933.61	934.38	935.15	540 + 25	936.46	937.23	938.00	36.21	38.98	960.17	960.94	961.71	547 + 75	958.80	959.57	960.34	38.98
36.12	932.66	933.43	934.20	540 + 00	935.71	936.48	937.25	36.12	38.89	959.42	960.19	960.96	547 + 50	958.06	958.83	959.60	38.89
36.10	932.50	933.27	934.04	539 + 95.79	935.59	936.36	937.13	36.10	38.80	958.66	959.43	960.20	547 + 25	957.32	958.09	958.86	38.80
36.03	931.77	932.51	933.25	539 + 75	934.96	935.70	936.44	36.03	38.70	957.88	958.65	959.42	547 + 00	956.57	957.34	958.11	38.70
35.94	930.93	931.62	932.30	539 + 50	934.22	934.90	935.59	35.94	38.61	957.10	957.87	958.64	546 + 75	955.82	956.59	957.36	38.61
35.85	930.09	930.72	931.35	539 + 25	933.48	934.11	934.74	35.85	38.52	956.31	957.08	957.85	546 + 50	955.08	955.85	956.62	38.52
35.75	929.26	929.83	930.40	539 + 00	932.73	933.30	933.87	35.75	38.43	955.50	956.27	957.04	546 + 25	954.34	955.11	955.88	38.43
35.66	928.42	928.93	929.45	538 + 75	931.98	932.50	933.02	35.66	38.34	954.69	955.46	956.23	546 + 00	953.59	954.36	955.13	38.34
35.57	927.58	928.04	928.50	538 + 50	931.24	931.70	932.16	35.57	38.24	953.86	954.63	955.40	545 + 75	952.84	953.61	954.38	38.24
35.48	926.75	927.15	927.55	538 + 25	930.50	930.90	931.30	35.48	38.15	953.02	953.79	954.56	545 + 50	952.10	952.87	953.64	38.15
35.38	925.91	926.25	926.60	538 + 00	929.75	930.10	930.44	35.38	38.06	952.17	953.94	953.71	545 + 25	951.36	952.13	952.90	38.06
35.29	925.07	925.36	925.65	537 + 75	929.00	929.29	929.58	35.29	37.97	951.32	952.09	952.86	545 + 00	950.61	951.38	952.15	37.97
35.20	924.23	924.47	924.70	537 + 50	928.26	928.49	928.71	35.20	37.87	950.45	951.22	951.99	544 + 75	949.86	950.63	951.40	37.87
35.16	923.81	924.02	924.22	537 + 37.50	927.89	928.08	928.27	35.16	37.78	949.57	950.34	951.11	544 + 50	949.12	949.89	950.66	37.78
35.11	923.39	923.58	923.75	537 + 25	927.52	927.71	927.85	35.11	37.69	948.68	949.45	950.22	544 + 25	948.38	949.15	949.92	37.69
35.02	922.58	922.77	922.80	537 + 00	926.77	926.96	927.01	35.02	37.60	947.77	948.54	949.31	544 + 00	947.63	948.40	949.17	37.60
35.00	922.45	922.64	922.64	536 + 95.79	926.65	926.84	926.84	35.00	37.51	946.86	947.63	948.40	543 + 75	946.88	947.65	948.42	37.51
35.00	921.71	921.90	921.85	536 + 75	926.02	926.21	926.16	35.00	37.41	945.94	946.71	947.48	543 + 50	946.14	946.91	947.68	37.41
35.00	920.83	921.02	920.90	536 + 50	925.28	925.47	925.35	35.00	37.32	945.00	945.77	946.54	543 + 25	945.40	946.17	946.94	37.32
35.00	919.94	920.13	919.95	536 + 25	924.54	924.73	924.55	35.00	37.23	944.06	945.83	945.60	543 + 00	944.65	945.42	946.19	37.23
35.00	919.79	919.98	919.79	536 + 20.79	924.42	924.61	924.42	35.00	37.14	943.11	943.88	944.65	542 + 75	943.90	944.67	945.44	37.14
42.00	981.51	981.70	981.51	556 + 68.55	979.95	980.14	979.95	42.00	42.00	981.51	981.70	981.51	556 + 68.55	979.95	980.14	979.95	42.00
42.00	981.19	981.38	981.24	556 + 50	979.64	979.83	979.69	42.00	42.00	981.19	981.38	981.24	556 + 50	979.64	979.83	979.69	42.00
42.00	980.75	980.94	980.86	556 + 25	979.22	979.41	979.33	42.00	42.00	980.75	980.94	980.86	556 + 25	979.22	979.41	979.33	42.00
42.00	980.31	980.50	980.48	556 + 00	978.79	978.98	978.96	42.00	42.00	980.31	980.50	980.48	556 + 00	978.79	978.98	978.96	42.00
42.00	980.19	980.38	980.38	555 + 93.55	978.67	978.86	978.86	42.00	42.00	980.19	980.38	980.38	555 + 93.55	978.67	978.86	978.86	42.00
41.93	979.81	980.00	980.08	555 + 75	978.34	978.53	978.61	41.93	41.93	979.81	980.00	980.08	555 + 75	978.34	978.53	978.61	41.93
41.85	979.33	979.52	979.71	555 + 51.84	977.92	978.11	978.30	41.85	41.84	979.29	979.48	979.67	555 + 50	977.89	978.08	978.27	41.84
41.84	979.29	979.48	979.67	555 + 50	977.89	978.08	978.27	41.84	41.75	978.76	979.01	979.26	555 + 25	977.43	977.68	977.93	41.75
41.75	978.76	979.01	979.26	555 + 25	977.43	977.68	977.93	41.75	41.65	978.22	978.53	978.83	555 + 00	976.95	977.25	977.56	41.65
41.65	978.22	978.53	978.83	555 + 00	976.95	977.25	977.56	41.65	41.56	977.67	978.03	978.39	554 + 75	976.46	976.82	977.18	41.56
41.56	977.67	978.03	978.39	554 + 75	976.46	976.82	977.18	41.56	41.47	977.11	977.52	977.94	554 + 50	959.97	976.39	976.80	41.47
41.47	977.11	977.52	977.94	554 + 50	959.97	976.39	976.80	41.47	41.38	976.54	977.01	977.48	554 + 25	975.47	975.94	976.41	41.38
41.38	976.54	977.01	977.48	554 + 25	975.47	975.94	976.41	41.38	41.29	975.94	976.47	977.00	554 + 00	974.95	975.48	976.01	41.29
41.29	975.94	976.47	977.00	554 + 00	974.95	975.48	976.01	41.29	41.19	975.35	975.94	976.52	553 + 75	974.42	975.00	975.59	41.19
41.19	975.35	975.94	976.52	553 + 75	974.42	975.00	975.59	41.19	41.10	974.75	975.39	976.03	553 + 50	973.89	974.53	975.17	41.10
41.10	974.75	975.39	976.03	553 + 50	973.89	974.53	975.17	41.10	41.01	974.13	974.82	975.52	553 + 25	973.35	974.05	974.74	41.01
41.01	974.13	974.82	975.52	553 + 25	973.35	974.05	974.74	41.01	40.92	973.49	974.25	975.01	553 + 00	972.79	973.55	974.31	40.92
40.92	973.49	974.25	975.01	553 + 00	972.79	973.55	974.31	40.92	40.90	973.34	974.11	974.88	552 + 93.55	972.65	973.42	974.19	40.90
40.90	973.34	974.11	974.88	552 + 93.55	972.65	973.42	974.19	40.90	40.83	972.93	973.70	974.47	552 + 75	972.22	972.99	973.76	40.83
40.83	972.93	973.70	974.47	552 + 75	972.22	972.99	973.76	40.83	40.73	972.40	973.17	973.94	552 + 50	971.65	972.42	973.19	40.73
40.73	972.40	973.17	973.94	552 + 50	971.65	972.42	973.19	40.73	40.64	971.85	972.62	973.39	552 + 25	971.07	971.84	972.61	40.64
40.64	971.85	972.62	973.39	552 + 25	971.07	971.84	972.61	40.64	40.55	971.29	972.06	972.83	552 + 00	970.47	971.24	972.01	40.55
40.55	971.29	972.06	972.83	552 + 00	970.47	971.24	972.01	40.55	40.46	970.73	971.50	972.27	551 + 75	969.86	970.63	971.40	40.46
40.46	970.73	971.50	972.27	551 + 75	969.86	970.63	971.40	40.46	40.36	970.15	970.92	971.69	551 + 50	969.24	970.01	970.78	40.36
40.36	970.15	970.92	971.69	551 + 50	969.24	970.01	970.78	40.36	40.27	969.56	970.33	971.10	551 + 25	968.62	969.39	970.16	40.27
40.27	969.56	970.33	971.10	551 + 25	968.62	969.39	970.16	40.27	40.18	968.96	969.73	970.50	551 + 00	967.98	968.75	969.52	40.18
40.18	968.96	969.73	970.50	551 + 00	967.98	968.75	969.52	40.18	40.09	968.35	969.12	969.89	550 + 75	967.33	968.10	968.87	40.09
40.09	968.35	969.12	969.89	550 + 75	967.33	968.10	968.87	40.09	40.00	967.72	968.49	969.26	550 + 50	966.67	967.44	968.21	40.00
40.00	967.72	968.49	969.26	550 + 50	966.67	967.44	968.21	40.00	39.90	967.09	967.86	968.63	550 + 25	966.01	966.78	967.55	39.90
39.90	967.09	967.86	968.63	550 + 25	966.01	966.78	967.55	39.90									

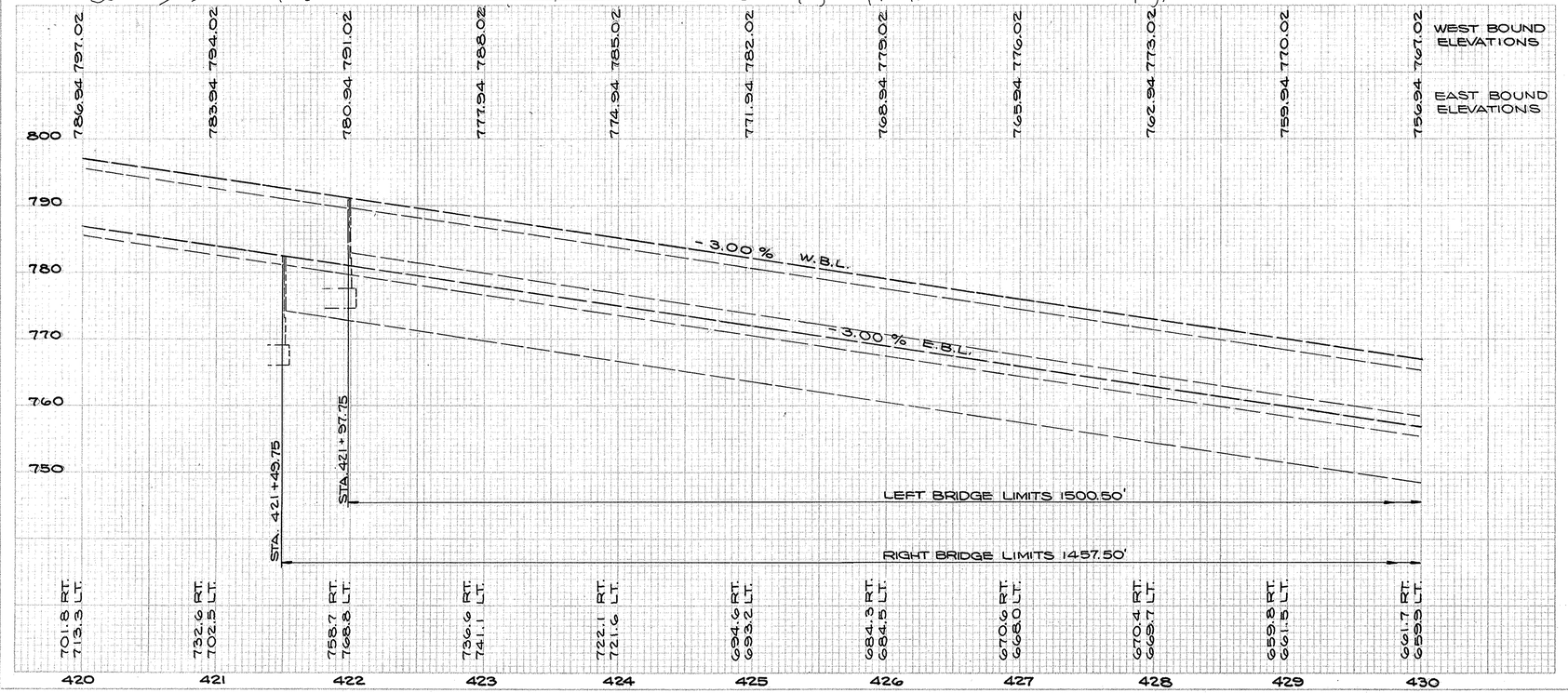
SUPERELEVATION TABLE

BRIDGE Nº SUM - 271 - 0802 LT. & RT.

TYPE: CONTINUOUS WELDED STEEL PLATE GIRDERS WITH REINFORCED CONC. DECK AND SUBSTRUCTURE
SKEW: 0° 00' 00"
SPANS: LT. 120'-0"-5@170'-0"-2@185'-0" - 150'-0"
RT. 105'-0"-2@165'-0"-4@170'-0"-185'-0"-150'-0"
ROADWAY: LT. & RT. : 34'-0" F/F PARAPETS - 2' CURBS
LOAD FREQUENCY: CF = 2000 ADEQUATE FOR A.A.S.H.O. LOADING
WEARING SURFACE: 1" MONOLITHIC
ALIGNMENT: TANGENT
APPROACH SLABS: 25' LONG (AS-1-54)
SUPERELEVATION: NONE



B.M.#27 CHISLED SQUARE ON N. WALL OF DAM AT CHURCH CAMP 105' LT. ℄ STA. 420+90 EL. 697.13

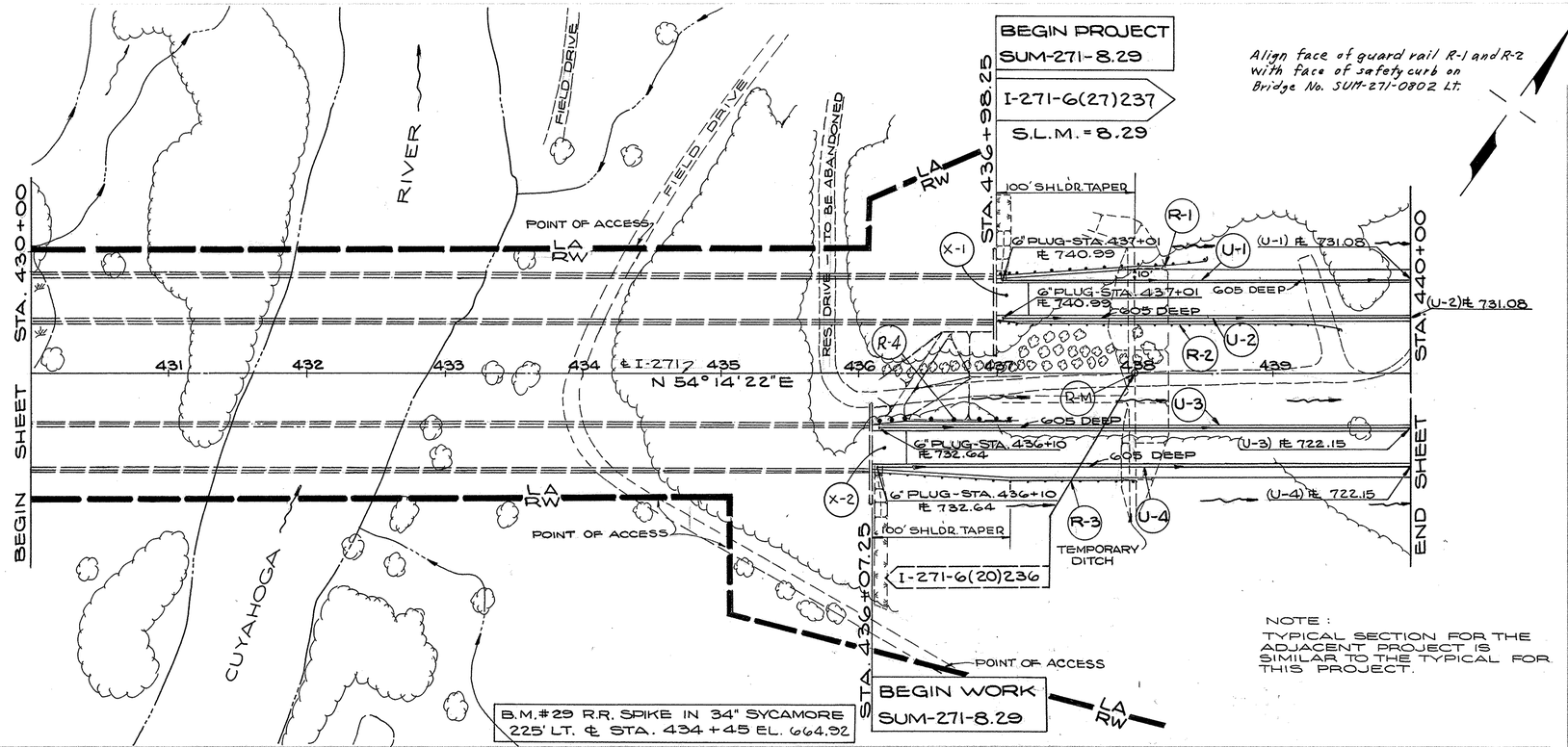


ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE
TOTALS		

SEE SHEET NO.

I-271 STA. 420+00 TO STA. 430+00



ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	606 GUARDRAIL TYPE 4 LIN. FT. STD.	604 ℄ REF. MONUMT. EACH	605 6" U.D. LIN. FT. DEEP
U-1	437+01 440+00	LT.			299
U-2	437+01 440+00	LT.			299
U-3	436+10 440+00	RT.			330
U-4	436+10 440+00	RT.			330
R-1	437+00 438+50	LT.	150		
R-2	437+00 439+50	LT.	250		
R-3	436+08 438+08	RT.	200		
R-4	436+08 437+08	LT.	100		
R-M	438+00	℄		1	
X-1	437+00	LT.			
X-2	436+25	RT.			
TOTALS			700	1	1378

B.M. #30 R.R. SPIKE IN 6" ELM 300' LT. ℄ STA. 448 + 25 EL. 696.30

NAIL & CAP IN 3" W. CHERRY
NAIL & CAP IN 4" MAPLE
NAIL & CAP IN 4" W. CHERRY
NAIL & CAP IN 4" MAPLE
NAIL & CAP IN 12" MAPLE
℄ I-271

CONSTRUCT ℄ REF. MONUMENT STA. 443+98.23

℄ REF. TIE STA. 448+24 (NO MONUMENT)

STRUCTURE Nº SUM-271-0852 SEE SHEET Nº 205

OHIO EDISON & WIRES OHIO BELL CABLE

BOSTON MILLS RD. (C.R. 30)

FOR BOSTON MILLS RD. SEE SHEET Nº 183

CONSTRUCTION LIMITS

BEGIN SHEET STA. 440+00

END SHEET STA. 450+00

N 54° 14' 22" E 441 ℄ I-271

OUTLET ℄ 722.52 TIE STA. 445+75 ℄ 723.05

STA. 447+00 ℄ 723.52

PLUG STA. 448+38 ℄ 725.63

STA. 445+25 ℄ 723.20

60° BEND STA. 445+72 ℄ 721.72

445+25 ℄ 721.87

PLUG STA. 443+96 ℄ 718.36

60° WYE STA. 443+88 ℄ 718.26

60° WYE STA. 444+12 ℄ 718.26

PLUG STA. 449+50 ℄ 725.57

PLUG STA. 449+54 ℄ 725.68

STA. 443+50 ℄ 718.37

PLUG STA. 444+04 ℄ 718.36

STA. 444+50 ℄ 718.37

60° WYE STA. 443+86 ℄ 718.26

60° WYE STA. 444+14 ℄ 718.26

PLUG STA. 443+96 ℄ 718.36

PLUG STA. 444+04 ℄ 718.36

STA. 447+15 ℄ 775.70

STA. 447+05 (291' RT. ℄) 60° BEND - ℄ 776.95

PLUG STA. 442+25 307' RT. ℄ ℄ 781.75

605 707.06 OR 707.12

FRAME BARN

U-1 ℄ 731.08
U-2 ℄ 731.08
U-3 ℄ 722.15
U-4 ℄ 722.15
605 DEEP

A-1 A-2 A-3 A-4 P-1 P-2 P-3 P-4 H-1 R-1 R-2 R-3 E-1 E-2 E-3 E-4 E-5 E-6 E-7 E-8 R-M X-1 X-2 U-1 U-2 U-3 U-4 U-5 U-6 U-7

WEST BOUND ELEVATIONS
728.15 737.08 | 726.47 734.54 | 725.27 732.52 | 724.55 730.96 | 724.31 729.88 | 724.55 729.28 | 725.28 729.16 | 726.47 729.52 | 728.15 730.36 | 730.31 731.68 | 732.54 733.48

EAST BOUND ELEVATIONS
787.4 RT. 792.0 LT. (U-3 & U-4) ℄ 722.15 (U-1 & U-2) ℄ 731.08 | 798.8 RT. 798.0 LT. | 800.3 RT. 798.7 LT. | 802.2 RT. 799.4 LT. | 801.0 RT. 794.0 LT. | 768.8 RT. 775.6 LT. | 730.4 RT. 725.7 LT. | 766.3 RT. 718.1 LT. | 749.8 RT. 718.6 LT. | 707.0 RT. 695.8 LT. | 697.2 RT. 700.8 LT.

(U-7) ℄ 781.75 | (U-7) ℄ 776.95 | (U-7) ℄ 776.50

1200' V.C. @ 1.00%

A-2
STA. 444+00 (18' RT. ℄)
604 Nº 5 CATCH BASIN
GRATE - 721.98
℄ 6" — 718.17
℄ 21" — 716.41
℄ 24" — 716.16

A-3
STA. 446+00 (℄)
604 Nº 1 MANHOLE
COVER - 725.00
℄ 6" - 719.00
℄ 12" - 719.00
℄ 24" - 714.16

P.V.I. STA. 443+75 EL. 715.69
P.V.I. STA. 445+50 EL. 720.52
P.V.T. STA. 449+75 EL. 732.25

(U-3 & U-4) ℄ 718.26
(U-3) ℄ 718.36
(U-4) ℄ 718.26
(U-5 & U-6) ℄ 718.36
(U-5) ℄ 718.26
(U-6) ℄ 718.26
(U-1) ℄ 722.52
(U-1) 723.05
(U-1) ℄ 723.58
U-1 ℄ 723.20
(U-3 & U-4) ℄ 718.37
(U-5 & U-6) ℄ 718.37
(U-6) 725.68
(U-5) 725.57
(U-1) ℄ 725.63

W.B.L. E.B.L. RT. LANE LT. LANE

-3.00 % | -3.00 % | +2.76 % | +2.76 % | @ 0.30% | @ 0.30% | @ 0.3% | @ 0.3%

STA. 449+33.68 | STA. 449+47.62

E.B.L. BRIDGE LIMITS = 162.54'
W.B.L. BRIDGE LIMITS = 190.56'

PROP. 42" CONC. CULVERT ℄ 691.59

200' ± 24" TYPE "C" CONDUIT W/CL "B" BEDDING @ 1.00%

780 770 760 750 740 730 720 710

440 441 442 443 444 445 446 447 448 449 450

OHIO

SUM -271 - 8.29

ESTIMATED QUANTITIES

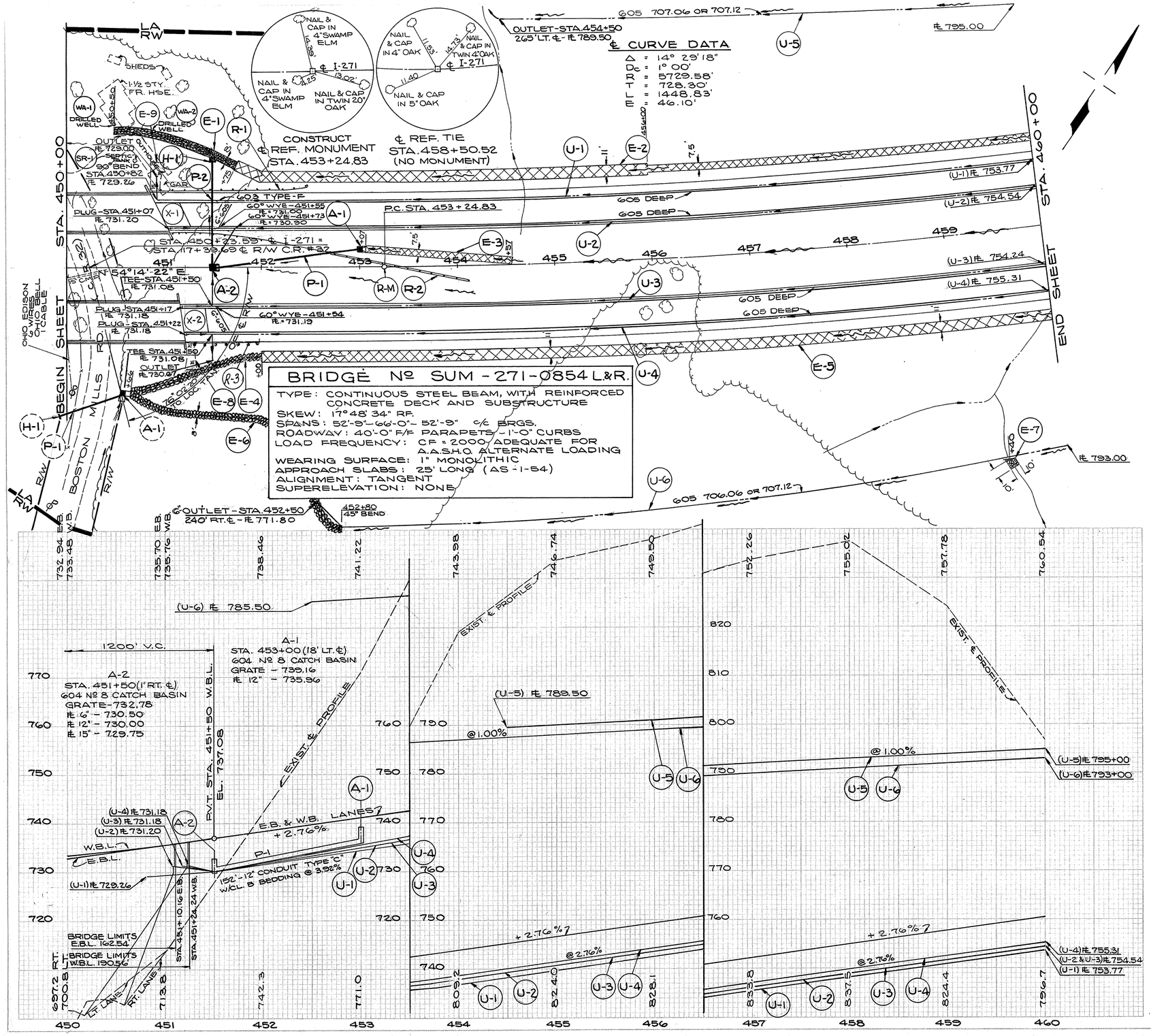
REF. NO.	STATION TO STATION	SIDE	603 CONDUIT - LIN. FT. Type "C" W/CL "B" BEDDING 12" 24"	604 ℄ REF. MONUMT. EACH	606 GUARD RAIL TYPE 4 LIN. FT.	607 REINF. JUTE MATTING SQ. YDS.	608 RIPRAP CLASS A SQ. YDS.	609 DRY RUBBLE MASONRY CHANNEL LINING CU. YDS.	610 CONC. ROCK CHANNEL LINING CU. YDS.	611 CONC. BASE FOR 6" STONE PAVING CU. YDS.	612 PIPE UNDERDRAINS 6" LIN. FT.	660 SOD SQ. YD.	SEE SHEET NO.
U-1	440+00 — 448+98	LT.	10						0.41				56
U-2	440+00 — 446+00	LT.	10										
U-3	440+00 — 444+00	RT.	10										
U-4	440+00 — 444+00	RT.	10										
U-5	444+00 — 449+50	RT.	10						1.3				59
U-6	444+00 — 449+54	RT.	10										
U-7	442+25 — 447+50	RT.											
A-1	444+00 (92' RT. ℄)	RT.											
A-2	444+00 (18' RT. ℄)	℄											
A-3	446+00	℄											
A-4	446+00 (18' RT. ℄)	RT.											
P-1	A-1 TO A-2	RT.	74										31
P-2	A-2 TO A-3	RT.	200										31
P-3	A-3 TO H-1	LT.	115										
P-4	A-3 TO A-4	RT.	18										
H-1	446+00 (115' LT. ℄)												
E-1	445+98 - 446+02	LT.											62
E-2	441+00 - 446+00	LT.											
E-3	442+43 - 445+57	RT.											
E-4	442+43 - 447+57	RT.											
E-5	446+50 - 449+05	RT.											
E-6	442+43 - 443+93	RT.											
R-1	445+43 - 448+93	LT.			350								
R-2	446+51 - 449+51	RT.			300								
R-3	448+05 - 449+55	RT.			150								
R-M	443+98.23	℄		1									
X-1	W.B. SUM-271-0854	LT.						GG-7					
X-2	E.B. SUM-271-0854	RT.						GG-7					
E-7	449+50	RT.											
E-8	449+00	LT.											
TOTALS			70	1	800				1.41				

605 6" U.D. LIN. FT. DEPTH 707.06 707.12
913
633
408
414
558
363
490

605 6" U.D. LIN. FT.
62
1
3
102
118.0
0.41
—
115
200
74
18
24"
12"
10
10
10
10
10
10
10
3499 490

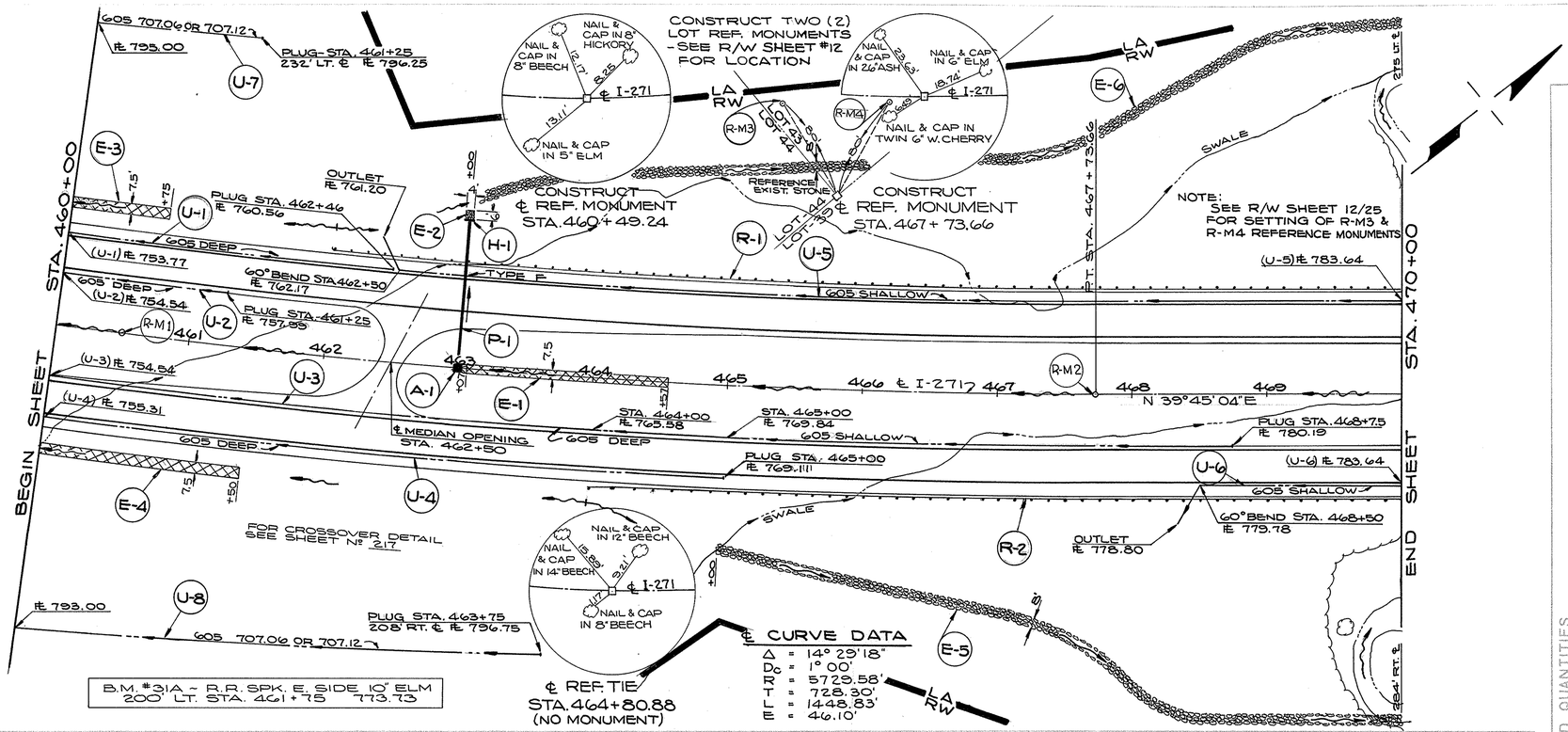
133.4

I-271 STA. 440+00 TO STA. 450+00



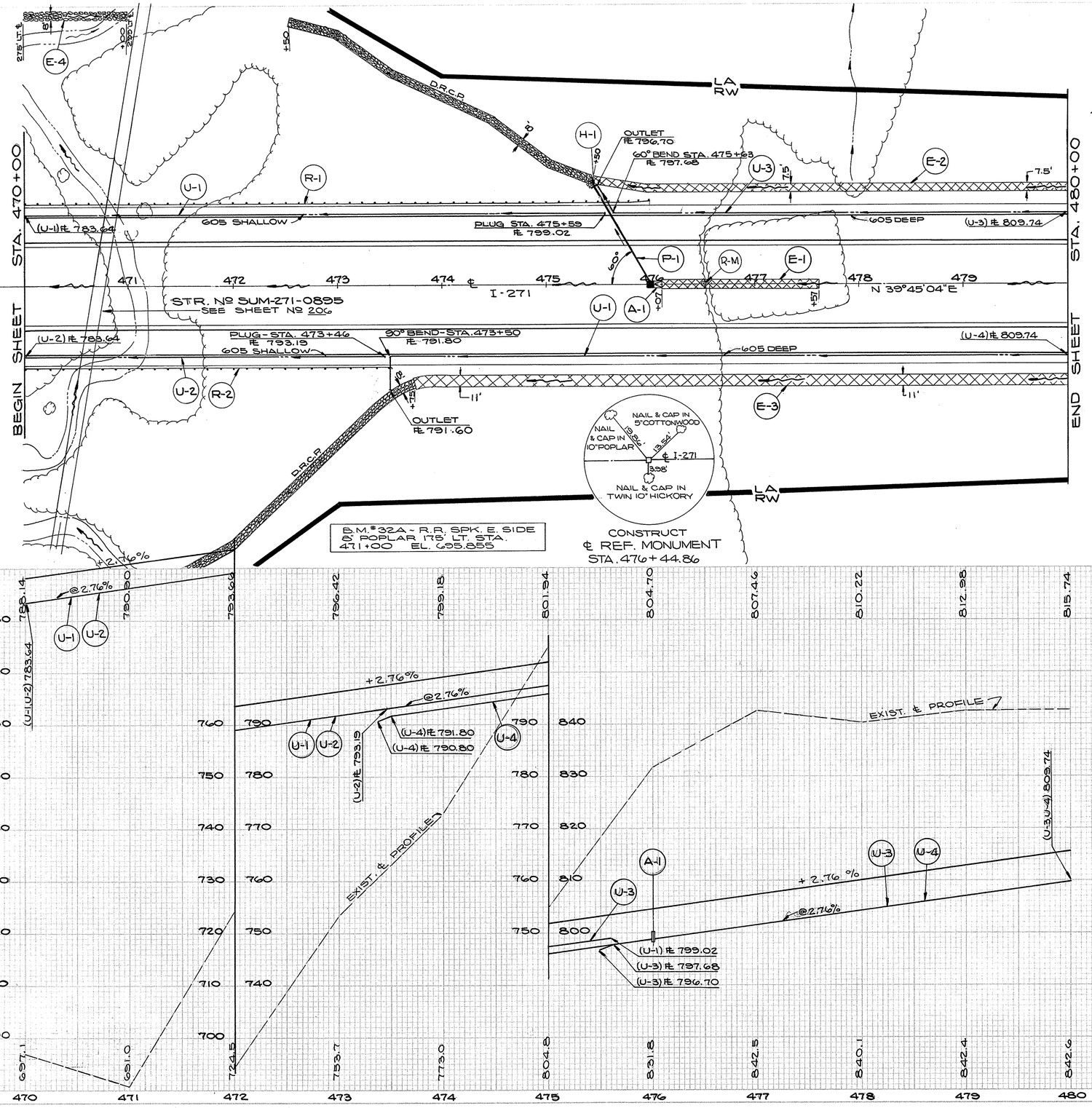
ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	660 SOD SQ. YD.	606 GUARDRAIL TYPE-4 LIN. FT. STD. BARRIER	604 REINF. CONC. APPS. SLAB EACH	604 SQ. YDS.	605 UNDERDRAINS LIN. FT. DEEP 707.06 707.12	603 CONDUIT - LIN. FT. TYPE "C" BEDDING 15"	603 CONDUIT - LIN. FT. TYPE "E" BEDDING 12"	BENDS & BRANCHES EACH	602 CONC. MASONRY CHANNEL CU. YDS.	601 DRY ROCK MATTING CU. YDS. SQ. YDS.	607 DRILLED CASTIN PLACE ABAND. SEPTIC TANK Nº 8 EACH	604 SPECIAL SPECIAL LAND DRILLED DISPOSAL EACH	SEE SHEET NO.
U-1	450+82 460+00	LT.					932								1
U-2	451+07 460+00	LT.					874								2
U-3	451+17 460+00	RT.					817								2
U-4	451+22 460+00	RT.					867								2
U-5	454+80 460+00	LT.					518								2
U-6	452+55 460+00	RT.					775								2
A-1	453+00 (18' LT. ℄)	LT.													
A-2	451+50 (1' RT. ℄)	RT.													
P-1	A-1 TO A-2	LT.						152							
P-2	A-2 TO H-1	℄							113						
H-1	451+50 (112.0' LT. ℄)	LT.													
E-1	450+50 451+75	LT.								1					
E-2	451+75 460+00	LT.													
E-3	453+07 454+57	LT.													
E-4	450+56 452+00	RT.													
E-5	452+00 460+00	RT.													
E-6	450+70 452+80	RT.													
E-7	459+40 131'	LT.													
R-1	450+96 452+46	LT.		150											
R-2	451+13 454+13	LT.		150											
R-3	451+20 451+95	℄		75						1					
R-M	453+24.83	℄													
X-1	W.B. SUM-271-0854	LT.											G&T		
X-2	E.B. SUM-271-0854	RT.											G&T		
WA-1	450+50	LT.													
WA-2	450+50	LT.													
SR-1	450+70	LT.													
E-8	451+25	RT.								3					
E-9	450+90	LT.								3					
TOTALS			62	375	150	1	1334	3590	293	127	113	152	70	174.0	0.26	1958	2	2	1



ESTIMATED QUANTITIES

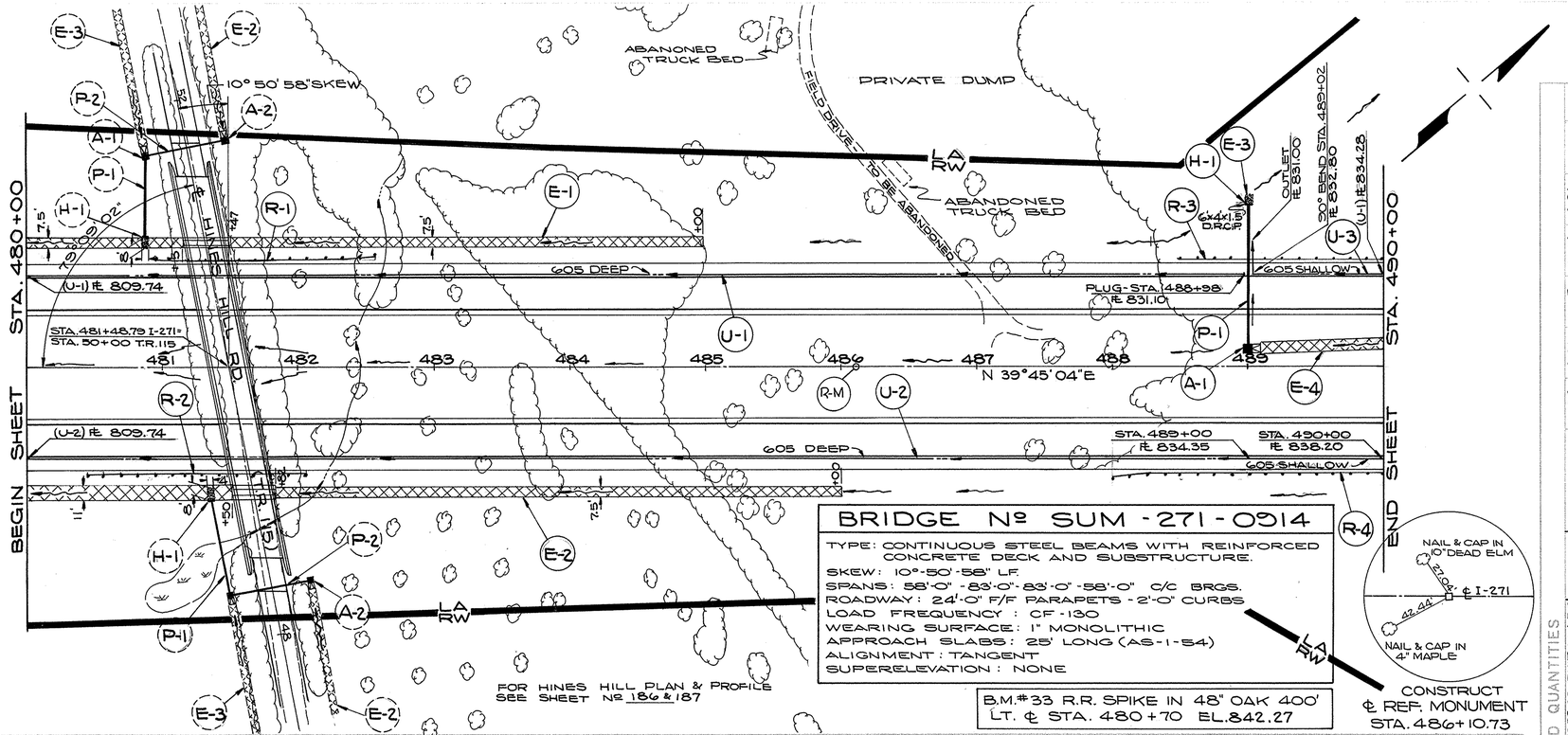
REF. NO.	STATION TO STATION	SIDE	605 UNDERDRAINS W/PIPE 8" LIN. FT.	605 UNCLF. EXCAV. LIN. FT.	605 SHALL. DEEP TOTAL LIN. FT.	603 CONDUIT-LIN. FT. W/TYPE B BEDDING 15"	603 CONDUIT-LIN. FT. TYPE F 15"	603 CONDUIT-LIN. FT. TYPE F 6"	603 BENDS & BRANCHES EACH	602 CONC. DITCH PAVING CU. YDS.	601 GOLD RIP-RAP CU. YDS.	607 JUTE MATTING CU. YDS.	604 CATCH BASIN № 4 EACH	606 GUARD RAIL TYPE-4 LIN. FT.	604 REF. MONUMT EACH
U-1	460+00 462+46	LT.		246				20	1						
U-2	460+00 461+25	LT.		125				10	1						
U-3	460+00 468+75	RT.		375	400										
U-4	460+00 465+00	RT.		100	500										
U-5	462+37 470+00	LT.			767										
U-6	468+33 470+00	RT.			173										
U-7	460+00 461+25	LT.													
U-8	460+00 463+75	RT.													
A-1	463+00 ℄														
P-1	A-1 TO H-1	LT.													
H-1	463+00 (110.5' LT. ℄)	LT.													
E-1	463+07 464+57	℄													
E-2	462+38 463+02	LT.													
E-3	460+00 460+75	LT.													
E-4	460+00 461+50	RT.													
E-5	465+00 470+00	RT.													
E-6	463+00 470+00	LT.													
R-1	462+00 470+00	LT.												800	
R-2	464+00 470+00	RT.												600	
R-M1	460+49.24	℄													1
R-M2	467+73.66	℄													1
RM3	465+35.93 (212.71' LT.)	LT.													1
R-M4	466+19.05 (212.71' LT.)	LT.													1
TOTALS						86	27	30	4	0.26	534.6	313	1	1400	4



ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	605 6" UNDERDRAINS LIN. FT.	603 CONDUIT-LIN.FT. TYPE "B" W/CL "B" BEDDING 15"	606 GUARD RAIL TYPE 4 LIN. FT.	604 ℄ REF. MONUMT EACH
U-1	470+00 — 479+59	LT.	559			
U-2	470+00 — 473+46	RT.	346			
U-3	475+50 — 480+00	LT.	427			
U-4	473+33 — 480+00	RT.	685			
A-1	476+00	℄				
P-1	A-1 TO H-1	LT.		108		
H-1	475+50 (95' LT. ℄)	LT.				
E-1	476+07 — 477+57	℄				
E-2	472+50 — 480+00	LT.				
E-3	470+20 — 480+00	RT.				
E-4	470+00 — 471+00	LT.				
R-1	470+00 — 476+00	LT.			600	
R-2	470+00 — 473+50	RT.			350	
R-M	476+44.86	℄				1
TOTALS			2026	108	950	1

SEE SHEET NO.	601 DUMPED CHANNEL PROT. CU.YDS.	602 CONC. MASONRY CU.YDS.	607 JUTE MATTING SQ.YDS.	604 CATCH BASIN Nº4
101				1
		0.26	125	
			375	
			133	
			158	
			825	
			44	
		0.26	335	1
			1325	1
			9051152	108

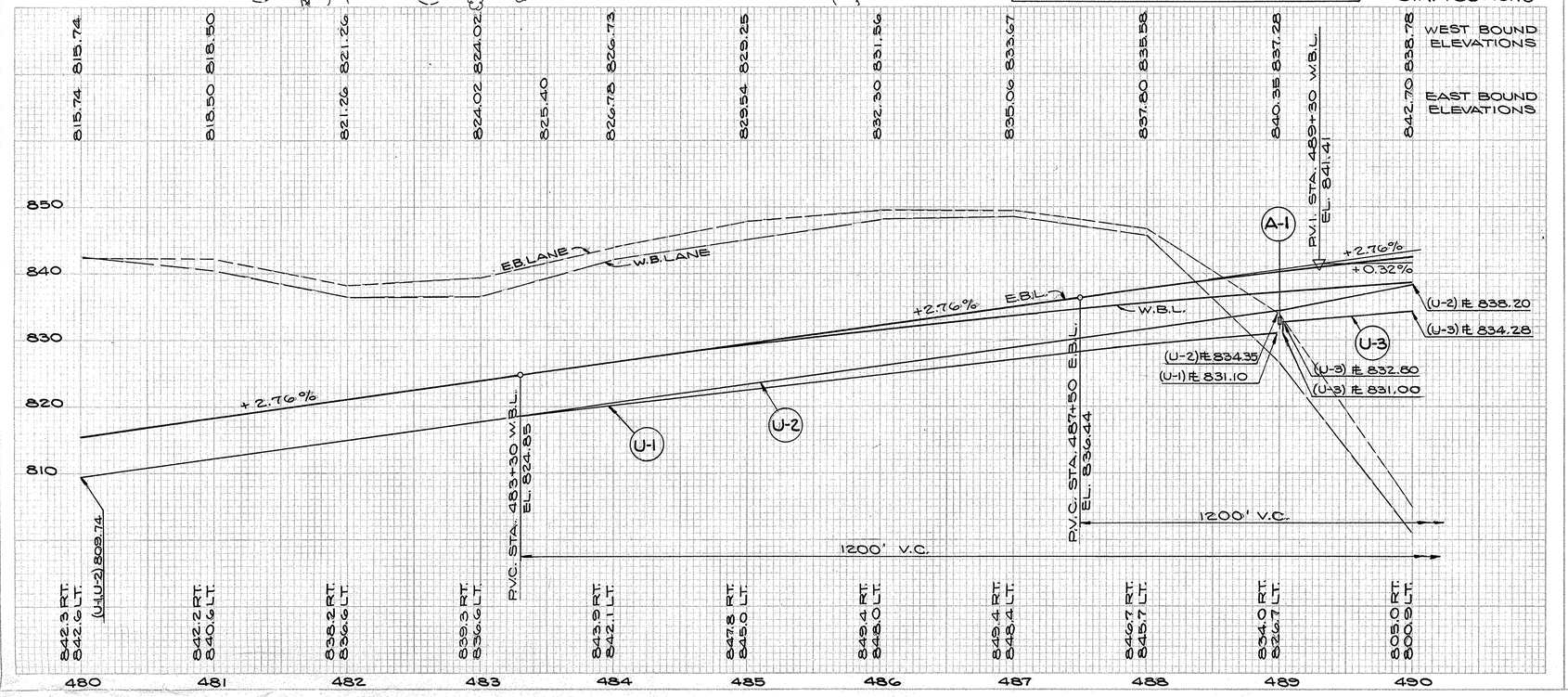


BRIDGE Nº SUM - 271 - 0914

TYPE: CONTINUOUS STEEL BEAMS WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE.
SKEW: 10°-50'-58" LF.
SPANS: 58'-0" - 83'-0" - 83'-0" - 58'-0" C/C BRGS.
ROADWAY: 24'-0" F/F PARAPETS - 2'-0" CURBS
LOAD FREQUENCY : CF-130
WEARING SURFACE: 1" MONOLITHIC
APPROACH SLABS: 25' LONG (AS-1-54)
ALIGNMENT : TANGENT
SUPERELEVATION : NONE

B.M.#33 R.R. SPIKE IN 48" OAK 400' LT. ℄ STA. 480+70 EL. 842.27

CONSTRUCT ℄ REF. MONUMENT STA. 486+10.73



ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	602 CONC. MASONRY CU.YDS.	603 CONDUIT-LIN.FT. TYPE "B" W/CL."B" BEDDING 15"	603 CONDUIT-LIN.FT. TYPE "F" 15"	603 CONDUIT-LIN.FT. TYPE "F" 6"	BENDS & BRANCHES EACH 6" 15"	605 UNDERDRAINS W/CL."B" LIN. FT.	605 SHALLOW DEEP UNCL. 15"	606 GUARD RAIL TYPE-4 LIN.FT.	604 ℄ REF. MONUMT EACH	607 DUMPED ROCK CHANNEL PROT. CU.YDS.	647 JUTE MATTING SQ.YDS.	604 CATCH BASIN Nº 4 STD.	601 PAVED GUTTER STD. LIN. FT.	SEE SHEET NO.
U-1	480+00 488+98	LT.							898					1		
U-2	480+00 490+00	RT.							900					1		
U-3	483+02 490+00	LT.							112					1		
A-1	485+00 (12.25' LT. ℄)	LT.	0.26									1.8	390		32	107
P-1	A-1 TO H-1	LT.										1.8	533		32	
H-1	489+00 (120' LT. ℄)	LT.										1.3	78			
E-1	480+00 485+00	LT.			72		2									
E-2	480+00 486+00	RT.			39											
E-3	488+58 489+02	LT.				10	1									
E-4	483+07 490+00	LT.														
R-1	480+25 482+55	LT.								162.5						
R-2	480+41 482+03.5	RT.								162.5						
R-3	488+50 490+00	LT.								150						
R-4	488+00 490+00	RT.								200						
R-M	486+10.73	℄									1					
TOTALS			0.26		112	10	3		1798	675	1	4.9	1001	1	64	

I-271 STA. 480+00 TO STA. 490+00

FED. ROAD DIVISION	STATE	PROJECT	
2	OHIO		

31
313

SUM -271-8.29

B.M. # 34 R.R. SPIKE IN TWIN 18" MAPLE
350' LT. ℄ STA. 494 + 48 EL. 841.81

NAIL & CAP IN 6" MAPLE
NAIL & CAP IN 8" W. CHERRY
NAIL & CAP IN 10" MAPLE
15.12'
15.12'
15.12'
℄ I-271

CONSTRUCT ℄ REF. MONUMENT STA. 495+58.30

STRUCTURE Nº SUM-271-0948
SEE SHEET Nº 208

STRUCTURE SUM-271-0932
SEE SHEET Nº 207

84" SECT PLATE CULV.

36" C.M.P.

LA RW

BEGIN SHEET STA. 490+00

END SHEET STA. 500+00

R-1 OUTLET ℄ - 835.70

R-2 OUTLET ℄ 845.00

(U-1) ℄ 834.28 — 605 SHALLOW — PLUG-STA. 493+96 ℄ - 838.21 — 6" TEE - STA. 494+00 ℄ - 836.74 — 605 DEEP — STA. 497+00 ℄ 837.87 — STA. 498+00 ℄ 839.65 — TYPE F — 605 SHALLOW — (U-3) ℄ 840.33

90° BEND - STA. 494+00 ℄ 837.00 — 605 DEEP — PLUG - STA. 497+50 ℄ 838.03

(U-2) - 838.20 — 605 SHALLOW — PLUG - STA. 495+46 ℄ - 847.46 — 90° BEND - STA. 495+50 ℄ - 846.01 — 605 DEEP — (U-4) ℄ 848.35

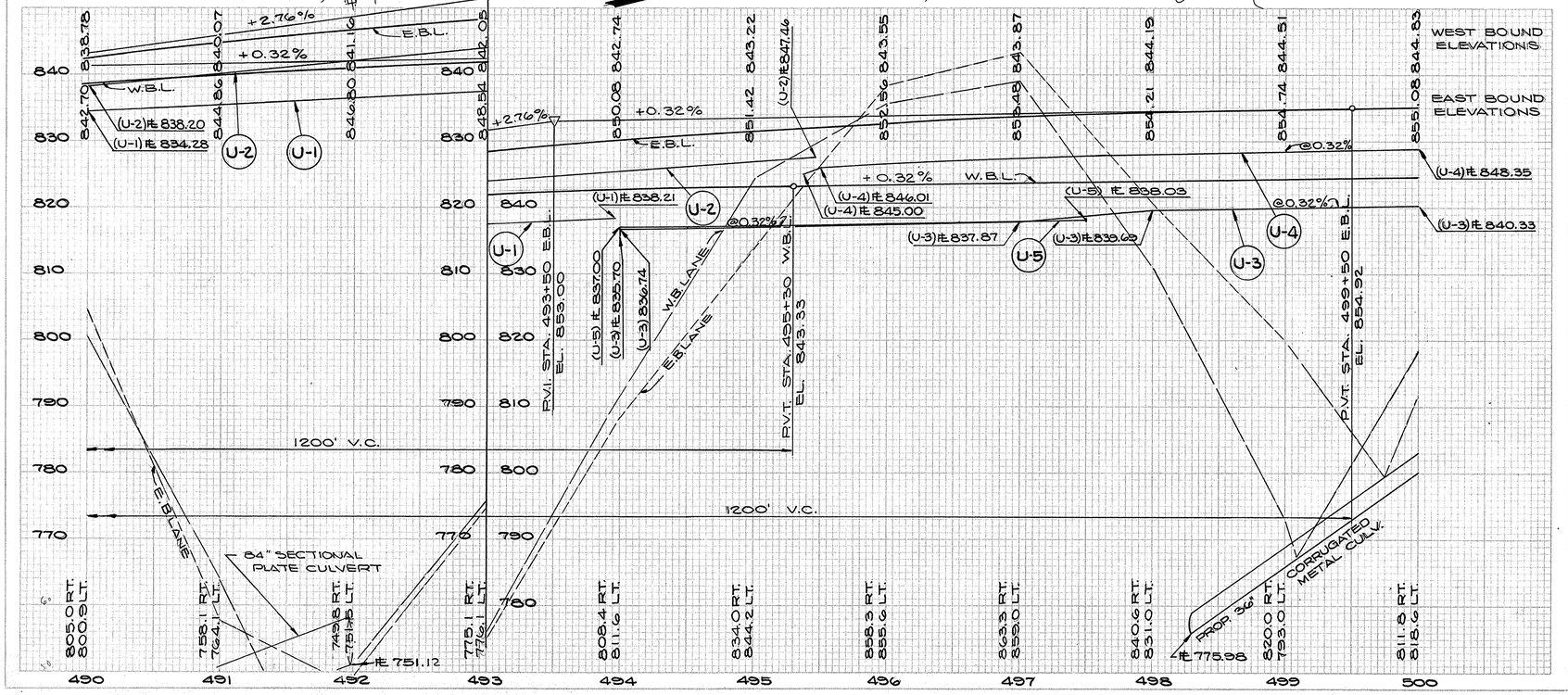
491 492 493 494 ℄ 495 496 497 498 499

I - 271 N 39°45'04" E

U-1 U-2 U-3 U-4 U-5 R-M R-1 R-2

ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	604 QUARD RAIL TYPE-4 LIN. FT.	604 ℄ REF. MONUMT. EACH	605 UNDERDRAINS LIN. FT.	605 CONDUIT TYPE "F" LIN. FT. 6"	605 CONDUIT TYPE "B" LIN. FT. 6"	BENDS & BRANCHES EACH 6"
U-1	490+00 493+96	LT.			396			
U-2	490+00 495+46	RT.			546			
U-3	493+86 500+00	LT.			185	327	100	15
U-4	495+35 500+00	RT.				473		10
U-5	494+00 497+50	LT.				350		
R-1	490+00 500+00	LT.	1000					
R-2	490+00 500+00	RT.	1000					
R-M	495+58.30	℄		1				
TOTALS			2000	1		1127	1150	100 25



I-271 STA. 490+00 TO STA. 500+00

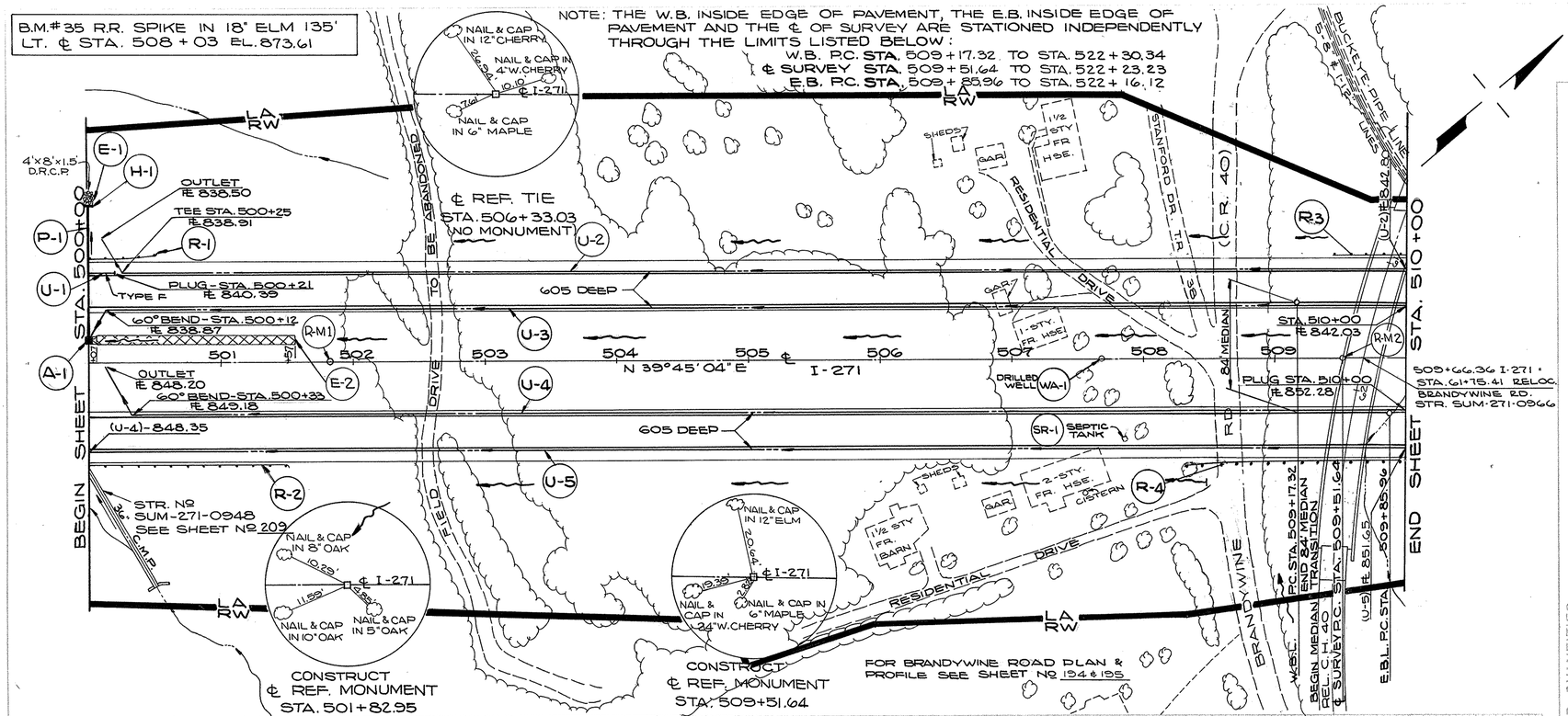
C.H. DIVISION	STATE	PROJECT	
2	OHIO		

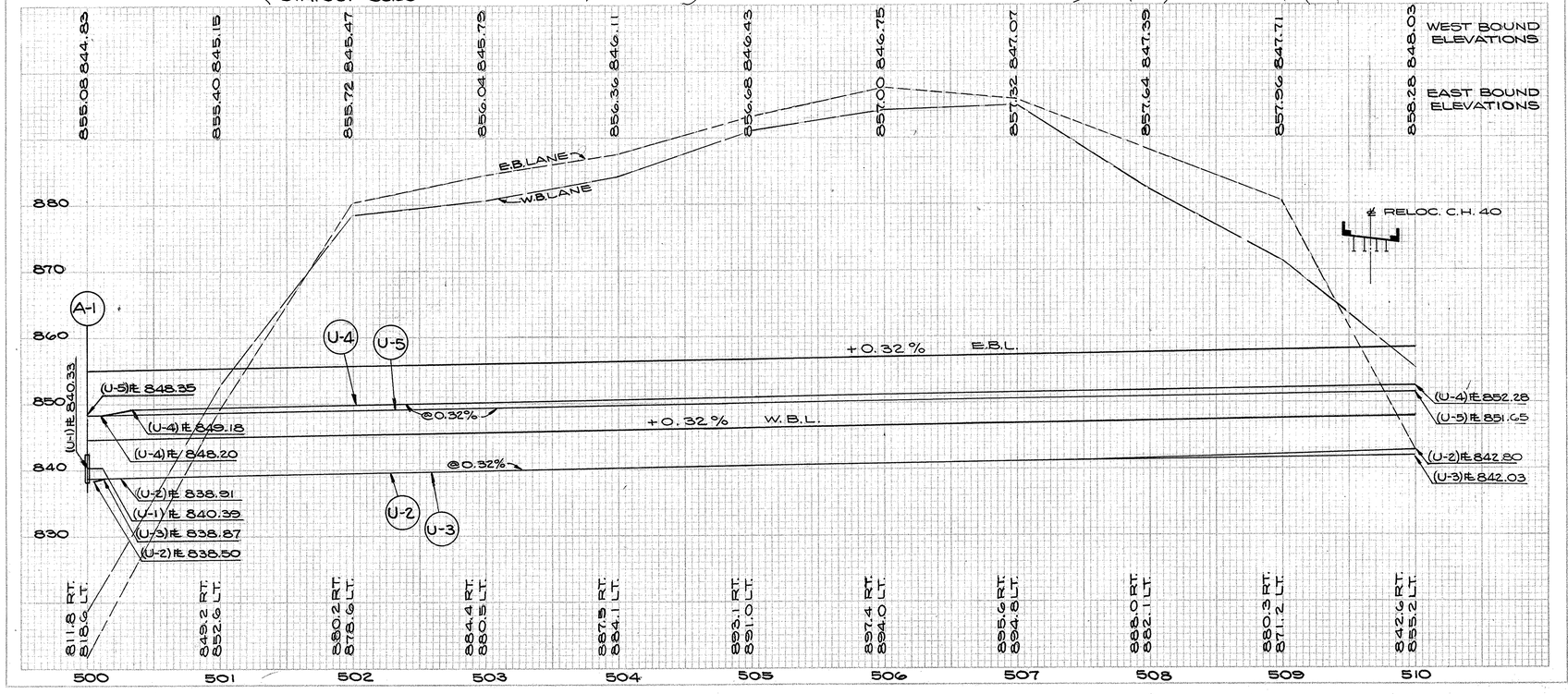
32
33

SUM - 271 - 8.29

B.M.# 35 R.R. SPIKE IN 18" ELM 135' LT. ℄ STA. 508+03 EL. 873.61

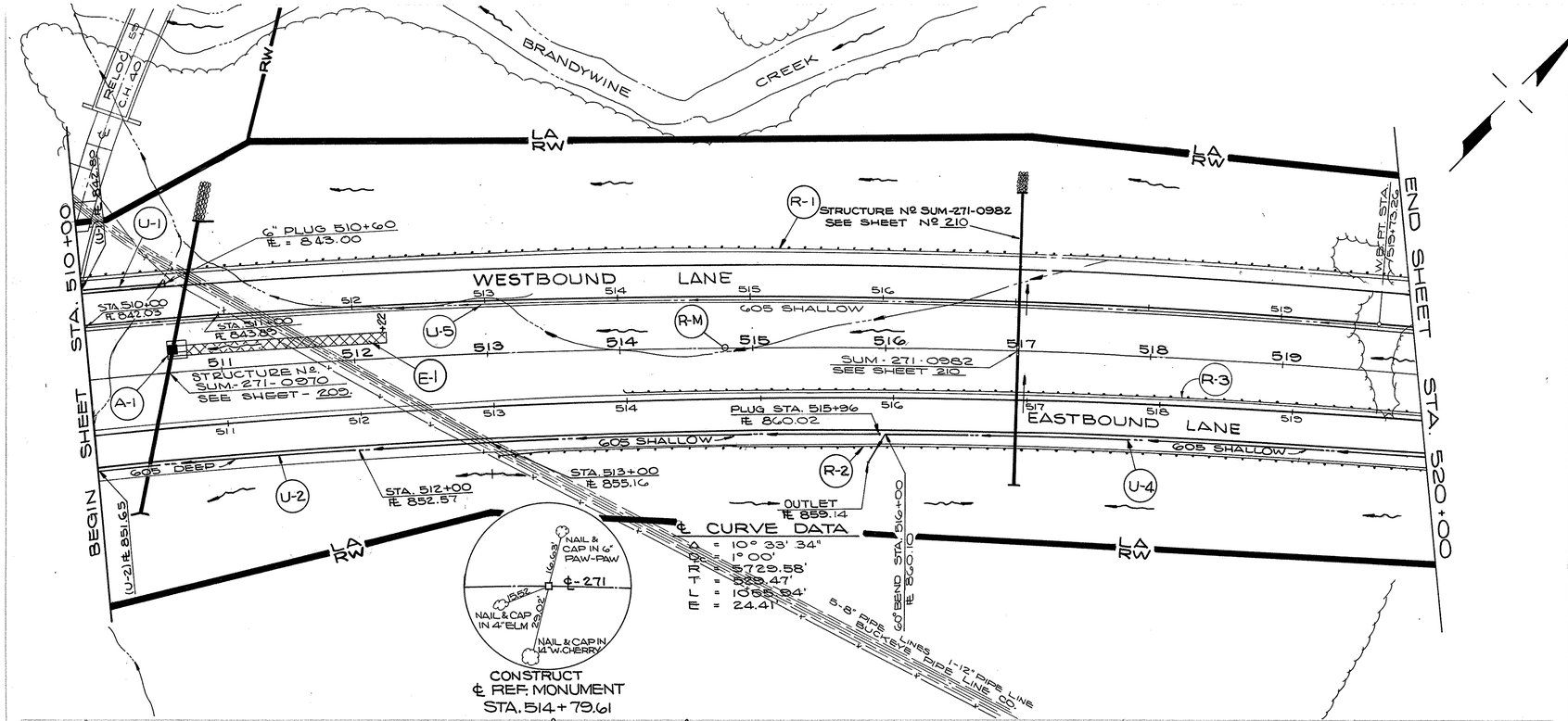
NOTE: THE W.B. INSIDE EDGE OF PAVEMENT, THE E.B. INSIDE EDGE OF PAVEMENT AND THE ℄ OF SURVEY ARE STATIONED INDEPENDENTLY THROUGH THE LIMITS LISTED BELOW:
W.B. P.C. STA. 509+17.32 TO STA. 522+30.34
℄ SURVEY STA. 509+51.64 TO STA. 522+23.23
E.B. P.C. STA. 509+85.96 TO STA. 522+16.12

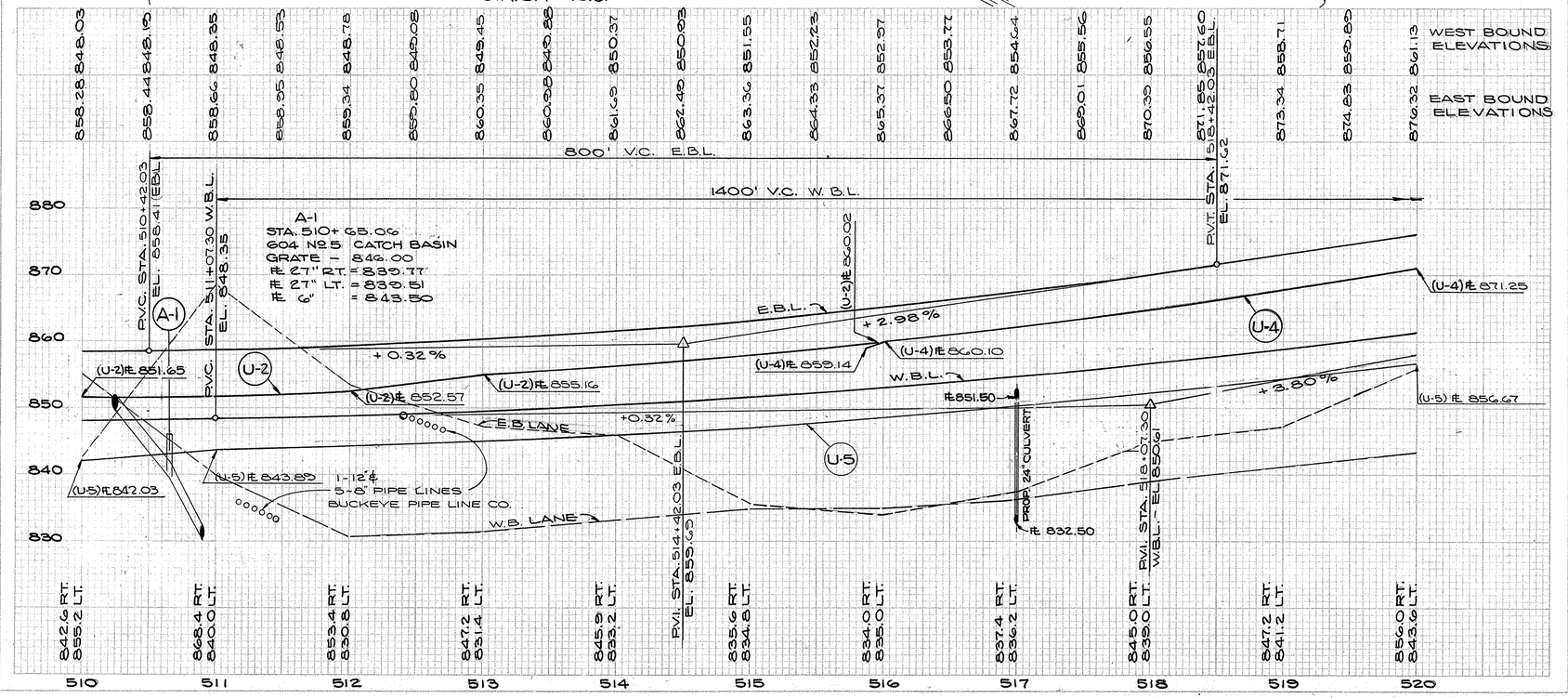




ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	603 CONDUIT-LIN. FT. TYPE "B" TYP. BEDDING 15"	BENDS & BRANCHES EACH 6"	603 CONDUIT-LIN. FT. TYPE "F" 3"	605 UNDERDRAINS LIN. FT. SHAL. DEEP 16	606 GUARD RAIL TYPE 4 LIN. FT.	604 ℄ REF. MONUMENT EACH	607 DRILLED SALTWATER WELL Nº 5 EACH	607 SPECIAL SPECIAL DRILLED WELL DISPOSAL ABAND. SEPTIC TANK EACH	SEE SHEET NO.
U-1	500+00 500+21	LT.			5	955					
U-2	500+10 510+00	LT.			100	1002					
U-3	500+00 510+00	LT.			100	1000					
U-4	500+12 510+00	RT.				990					
U-5	500+00 510+00	RT.									
A-1	500+00 (18' LT. ℄)	LT.									
P-1	A-1 TO H-1	LT.									
H-1	500+00 (107.5 LT. ℄)	LT.									
E-1	499+98 500+02	LT.									
E-2	500+07 501+57	LT.									
			100								
R-1	500+00 500+50	LT.					50				
R-2	500+00 501+50	RT.					150				
R-3	509+45 510+00	RT.					55				
R-4	508+35 509+97.5	RT.					162.5				
R-M1	501+82.95	℄						1			
R-M2	509+51.64							1			
WA-1	507+70	℄							1		
SR-1	507+85	RT.								1	
TOTALS			100	35	1	16	417.5	2			





ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	SEE SHEET NO.	605 UNDERDRAINS LIN. FT. SHAL. DEEP UNCLF	605 CONDUIT-LIN. FT. TYPE F	BENDS & BRANCHES EACH	607 JUTE MATTING SQ. YDS.	604 CASE 1 REF. MONUMENT EACH	GAGE GUARD RAIL TYPE-4 LIN. FT.
U-1	510+00 TO 510+60	LT.		60	6"	6" 15"			
U-2	510+00 TO 515+96	RT.		296 300					
U-4	515+88 TO 520+00	RT.		415					
U-5	510+00 TO 520+00	LT.		900 100					
E-1	510+77 TO 512+27	LT.							
R-1	510+00 TO 520+00	LT.							1000
R-2	513+00 TO 520+00	RT.							700
R-3	514+00 TO 520+00	RT.							600
R-M	514+79.61 ℄							1	
TOTALS				1271	300	100		1	2300

I-271 STA. 510+00 TO STA. 520+00

NOTE: FOR CURBING DETAILS AND RETAINING WALL DETAILS AT N.Y.C. RR., SEE SHEET Nº 222 THRU 225

NAIL & CAP IN 4" ELM
NAIL & CAP IN 12" HICKORY
NAIL & CAP IN 6" MAPLE

CONSTRUCT ℄ REF. MON. STA. 520+07.58

BEGIN SHEET STA. 520+00

PT. STA. 520+07.58

BEGIN TO MEDIAN E.B. PT. STA. 520+41.90

EXIST. AT&T CABLE 2 LINES

PROPOSED AT&T UNDERGROUND PIPE & CABLE

LAUREL PIPE LINE CO. 14" PIPE LINE

PROD. CASING PIPELINE

BRIDGE NO. 13.46

EQUATION STA. 524+69.08 E.B.L. = STA. 525+07.30 W.B.L. = STA. 525+00.15 ℄ SURVEY

SWALE

EAST OHIO GAS CO. GAS LINE - 4 PL. 8"-20"

STA. 530+00 END SHEET

I-271

WESTBOUND LANE

EASTBOUND LANE

LA RW

605 SHALLOW

60° WYE STA. 527+33 ℄ E 881.55

STA. 529+00 ℄ E 887.90

60° BEND STA. 527+50 ℄ E 883.70

STA. 520+50 ℄ PLUG ℄ E 858.24

STA. 520+50 ℄ 30° BEND ℄ E 858.24

STA. 523+04 ℄ PLUG ℄ E 865.60

STA. 523+10 ℄ 30° BEND ℄ E 865.60

6" ℄ E = 865.00

E.T. 27 STA. 522+35.80 N.Y.C. RR. STA. 715+25.24 N.T.

SUM-271-0994 SEE SHEET 210A

(U-1) ℄ E 893.20

(U-2) ℄ E 889.49

(U-2) ℄ E 893.97

(U-2) ℄ E 902.91

(U-3) ℄ E 893.20

605 707.06 OR 707.12

R-1 R-2 R-3 R-4 R-M U-1 U-2 U-3 U-4 C-1 E-2 E-3 E-4

EXISTING N.Y.C.R.R. 1-TRACK COMMUNICATION LINES (4 WIRES)

PRODUCTS PIPE LINE ℄ INLAND CORP.

EBL STA 522+00 +50

EASTBOUND LANE

PAVED SHOULDER 10' 11'

TYPE 6 CURB

EX. PIER GUARDRAIL

A DIT. A DITCH

PLAN

PAVED SHOULDER

TYPE 6 CURB

3/16":1' 1/2":1' 1/2":1'

EXIST. GR.

SECTION A-A NO SCALE

CURBING LIMITS STA 521+90 TO 522+50 (EBL.)

NOTE: STEEL GUARDRAIL POSTS OR SEVEN (7') FT. LONG POSTS AT 6'-3" SPACING SHALL BE PLACED FOR 25' ON THE APPROACH SIDE OF THE RAILROAD COLUMNS.

ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	605 CONDUIT-LIN. FT.	BENDS & TYPE BRANCHES	EACH	605 UNDERDRAINS LIN. FT.	606 GUARD RAIL TYPE 4 LIN. FT.	604 ℄ REF. MONU MT EACH	697 JUTE MATTING SQ. YDS.	608 CURB TYPE 6 LIN. FT.
U-1	520+00 - 530+00	LT.	6"	3	3	813				
U-2	520+00 - 530+00	RT.				100				
U-3	527+33 - 530+00	LT.				400				
U-4	520+00 - 520+50	RT.				250				
						50				
E-2	523+07 - 524+57	LT.								
E-3	523+00 - 527+00	RT.								
E-4	521+25 - 521+90	RT.								
R-1	520+00 - 523+90	LT.					395			
R-2	520+00 - 523+15	RT.					300			
R-3	520+00 - 530+00	RT.					1000			
R-4	527+90 - 524+90	LT. ℄					300			
R-M	520+07.58							1		
C-1	521+90 E.B. - 522+50 E.B.	RT.								
TOTALS			1995	1	3	1523	750	1	125	60
									431	
									60	
									616	60
									34	34 20 4

WEST BOUND ELEVATIONS: 876.32 861.13 | 877.81 862.43 | 879.30 863.79 | 880.79 865.22 | 882.28 866.70 | 883.77 868.25 | 885.26 869.86 | 886.75 871.54 | 888.24 873.27 | 889.73 875.07 | 891.01 876.93 | 893.99 881.00 | 896.97 884.80 | 899.95 888.60 | 902.93 892.40 | 905.91 896.20

EAST BOUND ELEVATIONS: 856.0 RT. 843.6 LT. | 864.4 RT. 855.0 LT. | 873.5 RT. 865.4 LT. | 874.2 RT. 848.6 LT. | 876.4 RT. 872.8 LT. | 879.7 RT. 876.0 LT. | 882.4 RT. 877.0 LT. | 898.5 RT. 884.1 LT. | 910.2 RT. 893.7 LT. | 914.1 RT. 897.2 LT. | 926.0 RT. 918.1 LT.

1400' V.C. W.B.L.

EXISTING N.Y.C.R.R. BRIDGE Nº 13.46

P.V.T. STA 525+07.30 W.B.L. EL. 877.21

+2.98% E.B.L. 605 @ 2.98% 8'0" X 8'0" INLET

4-24" CULVERT ℄ Nº S.C.B. W.B.L.

(U-2) ℄ E 871.01 E.B. LANE

(U-1) ℄ E 865.60 (U-1) ℄ E 865.00 (U-1) ℄ E 865.24

6'X3'6" OUTLET

(U-4) ℄ E 856.47 (U-4) ℄ E 857.37 (U-3) ℄ E 854.00

605 @ 3.80% W.B. LANE

INLAND PIPE LINE 10" PROD. AT&T CONDUIT LAUREL PIPE LINE 14"

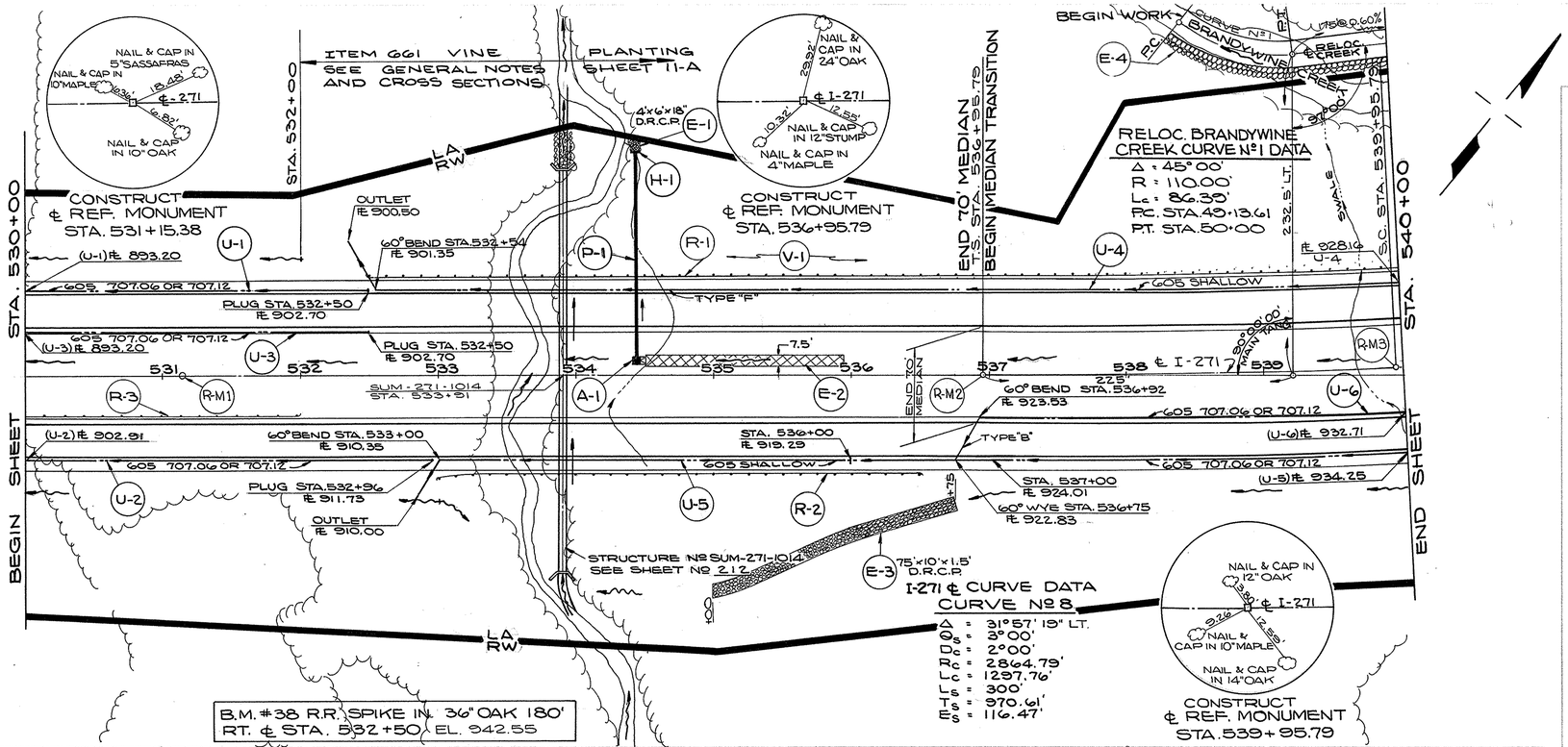
+3.80 W.B.L. 605 @ 3.80%

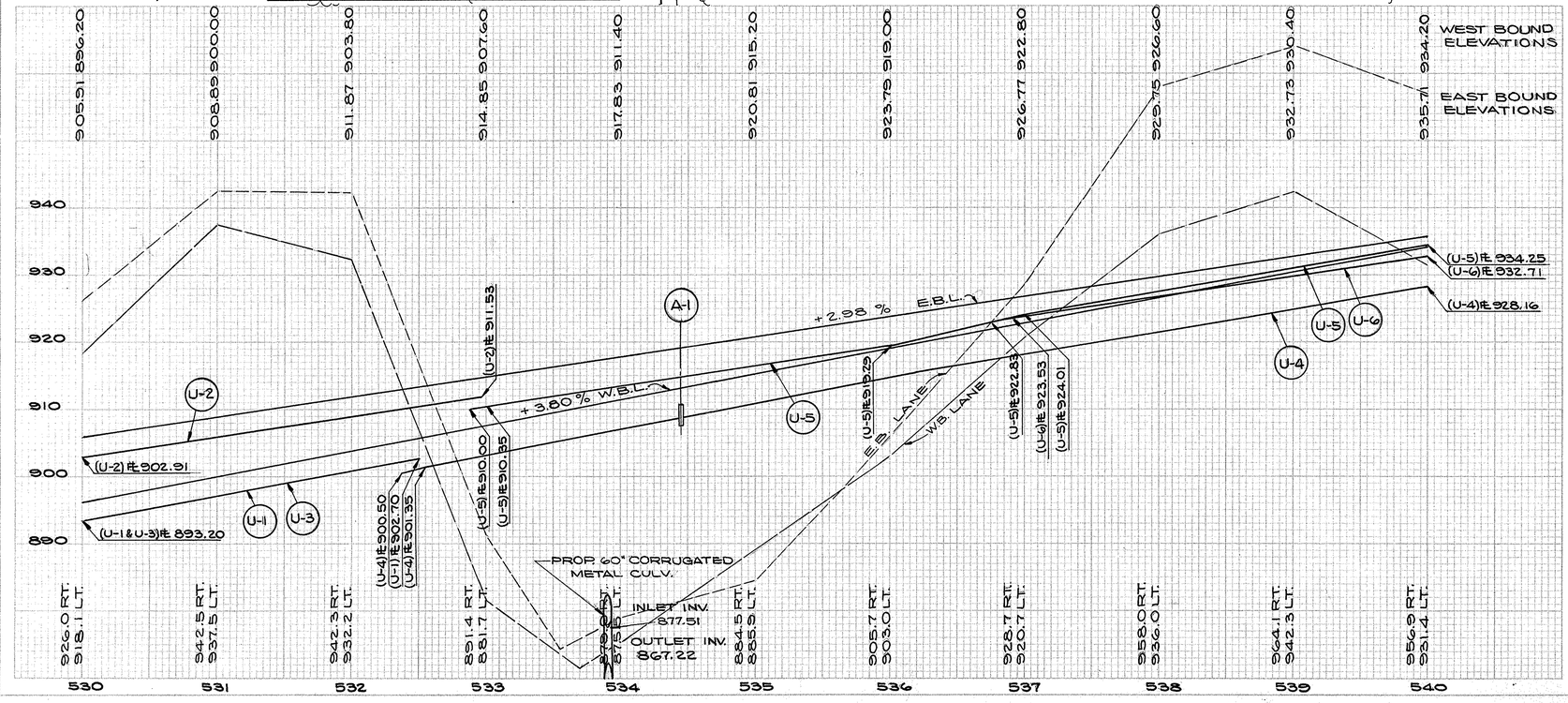
(U-2) ℄ E 893.97 (U-2) ℄ E 889.49 (U-3) ℄ E 883.70 (U-1) ℄ E 881.55 (U-1) ℄ E 887.90 (U-2) ℄ E 902.91 (U-1&U-3) ℄ E 893.20

E.B. LANE E.O.G. LINE W.B. LANE E.O.G. LINE

520 521 522 523 524 525 526 527 528 529 530

I-271 STA. 520+00 TO STA. 530+00





ESTIMATED QUANTITIES

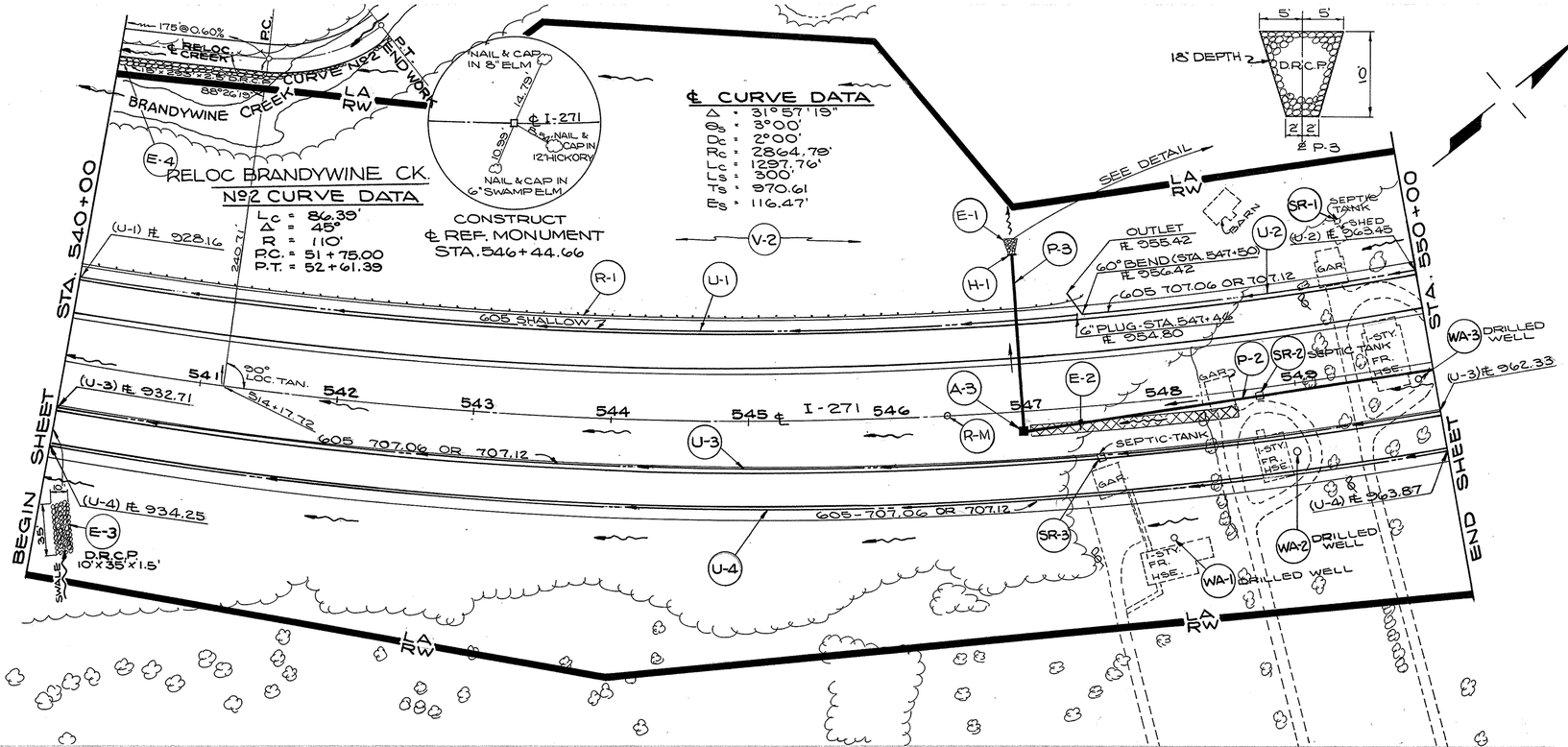
REF. NO.	STATION TO STATION	SIDE	604 ℄ REF. MONUMT. EACH	606 GUARD RAIL TYPE 4 LIN. FT.	605 UNDERDRAINS LIN. FT. SHALL. 707.06 DEEP 707.12	603 CONDUIT-LIN. FT. W/CE. "B" BEDDING 15"	603 CONDUIT-LIN. FT. TYPE "F" 15"	BENDS & BRANCHES EACH	604 PLANTING AS PER PLAN EACH	607 CONC. MATTING BASIN Nº5 SQ. YDS.	608 DUMPED ROCK MASONRY CHANNEL CU. YDS.	609 CU. YDS.	602 CU. YDS.	SEE SHEET NO.
U-1	530+00 532+50	LT.			250		20	1						
U-2	530+00 532+96	RT.			296		10	2						
U-3	530+00 532+50	LT.			250			1						
U-4	532+35 540+00	LT.					35							
U-5	532+86 540+00	RT.			746									
U-6	536+75 540+00	RT.			318	300								
A-1	535+00 (11' LT. ℄)	LT.			298									
P-1	A-1 TO H-1	LT.												147
H-1	535+00 (116' LT. ℄)	LT.				66	96							
E-1	534+98 535+02	LT.												
E-2	535+07 536+57	LT.												
E-3	535+00 536+75	RT.												
E-4	538+30 540+00	LT.												
R-1	532+50 540+00	LT.		750										
R-2	533+00 536+50	RT.		350										
R-3	530+00 532+00	RT.		200										
R-M1	531+15.38	℄	1											
R-M2	536+95.79	℄	1											
R-M3	539+95.79	℄	1											
V-1	532+00 - 540+00	LT.							1					1
TOTALS			3	1300	1084	1404	66	35	40	96	0.26	315.1	125	1

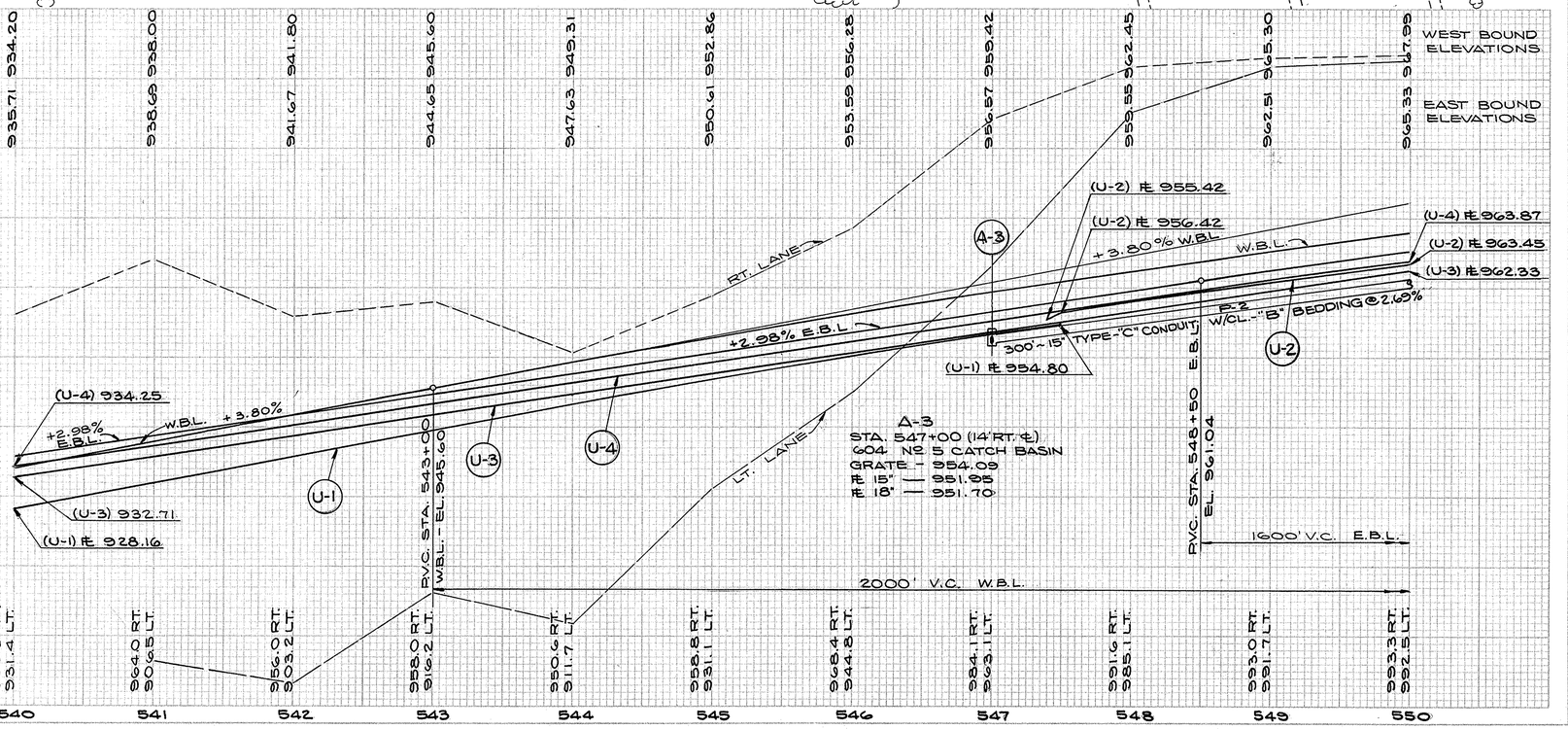
I-271 STA. 530+00 TO STA. 540+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

36
313

SUM - 271 - 8.29





ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	605 CONDUIT-LIN. FT. 18" W/C "B" BEDDING	18" W/C "B" TYPE "C"	BENDS & BRANCHES EACH 6"	602 CONC. MASONRY CU. YDS.	601 DRY RUBBLE ROCK CHANNEL PROT. CU. YDS.	607 JUTE MATTING SQ. YDS.	604 CATCH BASIN NO. S	SPECIAL DRILLED WELLS ABAND. EACH	SPECIAL DRILLED WELL & SEPTIC TANK EACH	SEE SHEET NO.
U-1	540+00 547+46	LT.	97									
U-2	547+40 550+00	LT.			1							
U-3	540+00 550+00	RT.										
U-4	540+00 550+00	RT.										
A-3	547+00 (14' RT. ℄)	RT.		36								
P-2	A-3 TO 550+00	RT.										
P-3	A-3 TO H-1	LT.										
H-1	547+00 (115.5' LT. ℄)	LT.										
E-1	544+98 547+02	LT.										
E-2	547+07 548+57	RT.										
E-3	540+25	RT.										
E-4	540+00 542+30	LT.										
R-1	540+00 547+50	LT.	300	36	10	0.30	1.3	125	1	3	3	300
R-M	546+44.66	℄										
SR-1	549+50	LT.										
SR-2	548+70	RT.										
SR-3	547+50	RT.										
WA-1	548+00	RT.										
WA-2	549+00	RT.										
WA-3	549+90	RT.										
V-2	540+00 - 548+00	LT.										
TOTALS			97	36	10	0.30	19.3	125	1	3	3	300

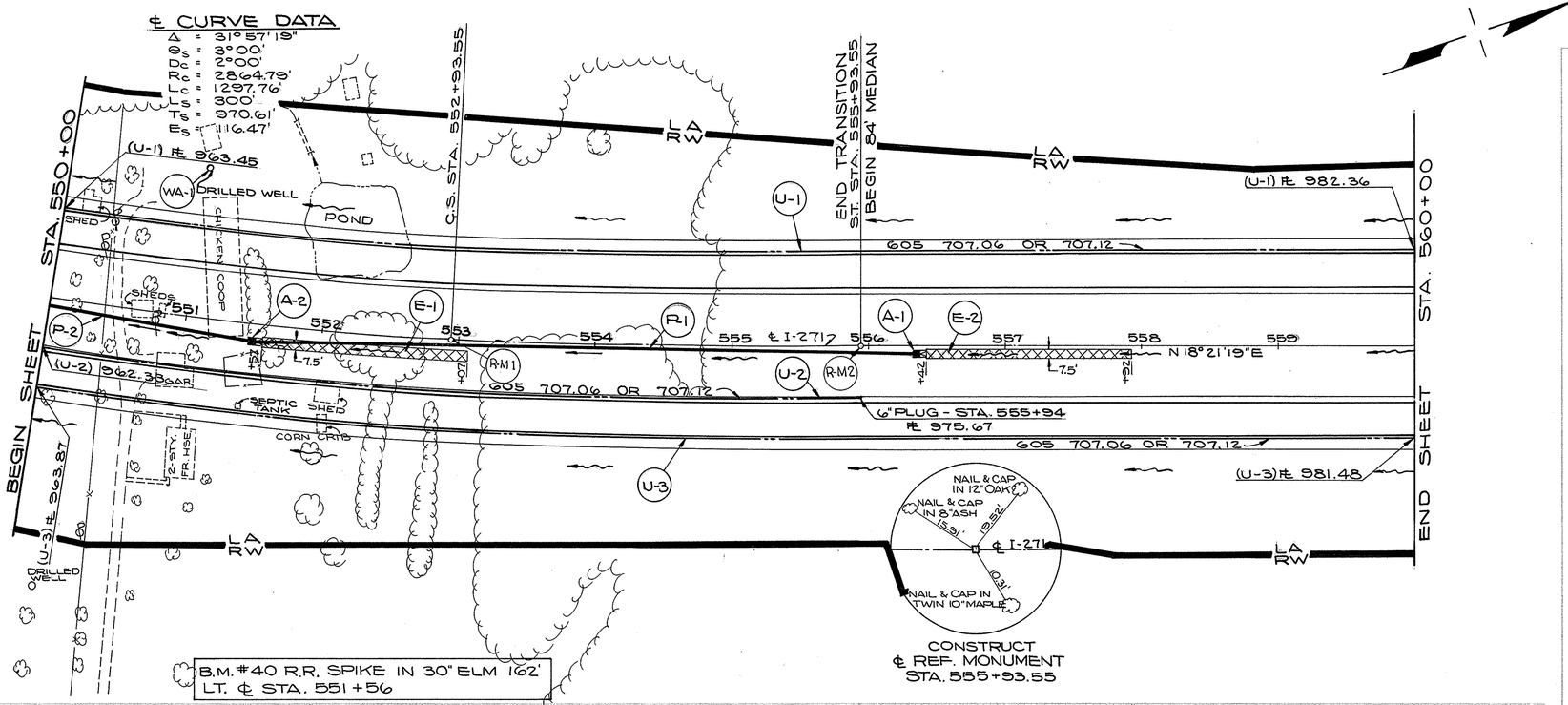
REF. NO.	STATION TO STATION	SIDE	605 CONDUIT-LIN. FT. 18" W/C "B" BEDDING	18" W/C "B" TYPE "C"	BENDS & BRANCHES EACH 6"	602 CONC. MASONRY CU. YDS.	601 DRY RUBBLE ROCK CHANNEL PROT. CU. YDS.	607 JUTE MATTING SQ. YDS.	604 CATCH BASIN NO. S	SPECIAL DRILLED WELLS ABAND. EACH	SPECIAL DRILLED WELL & SEPTIC TANK EACH	SEE SHEET NO.
U-1	540+00 547+46	LT.	97									
U-2	547+40 550+00	LT.			1							
U-3	540+00 550+00	RT.										
U-4	540+00 550+00	RT.										
A-3	547+00 (14' RT. ℄)	RT.		36								
P-2	A-3 TO 550+00	RT.										
P-3	A-3 TO H-1	LT.										
H-1	547+00 (115.5' LT. ℄)	LT.										
E-1	544+98 547+02	LT.										
E-2	547+07 548+57	RT.										
E-3	540+25	RT.										
E-4	540+00 542+30	LT.										
R-1	540+00 547+50	LT.	300	36	10	0.30	1.3	125	1	3	3	300
R-M	546+44.66	℄										
SR-1	549+50	LT.										
SR-2	548+70	RT.										
SR-3	547+50	RT.										
WA-1	548+00	RT.										
WA-2	549+00	RT.										
WA-3	549+90	RT.										
V-2	540+00 - 548+00	LT.										
TOTALS			97	36	10	0.30	19.3	125	1	3	3	300

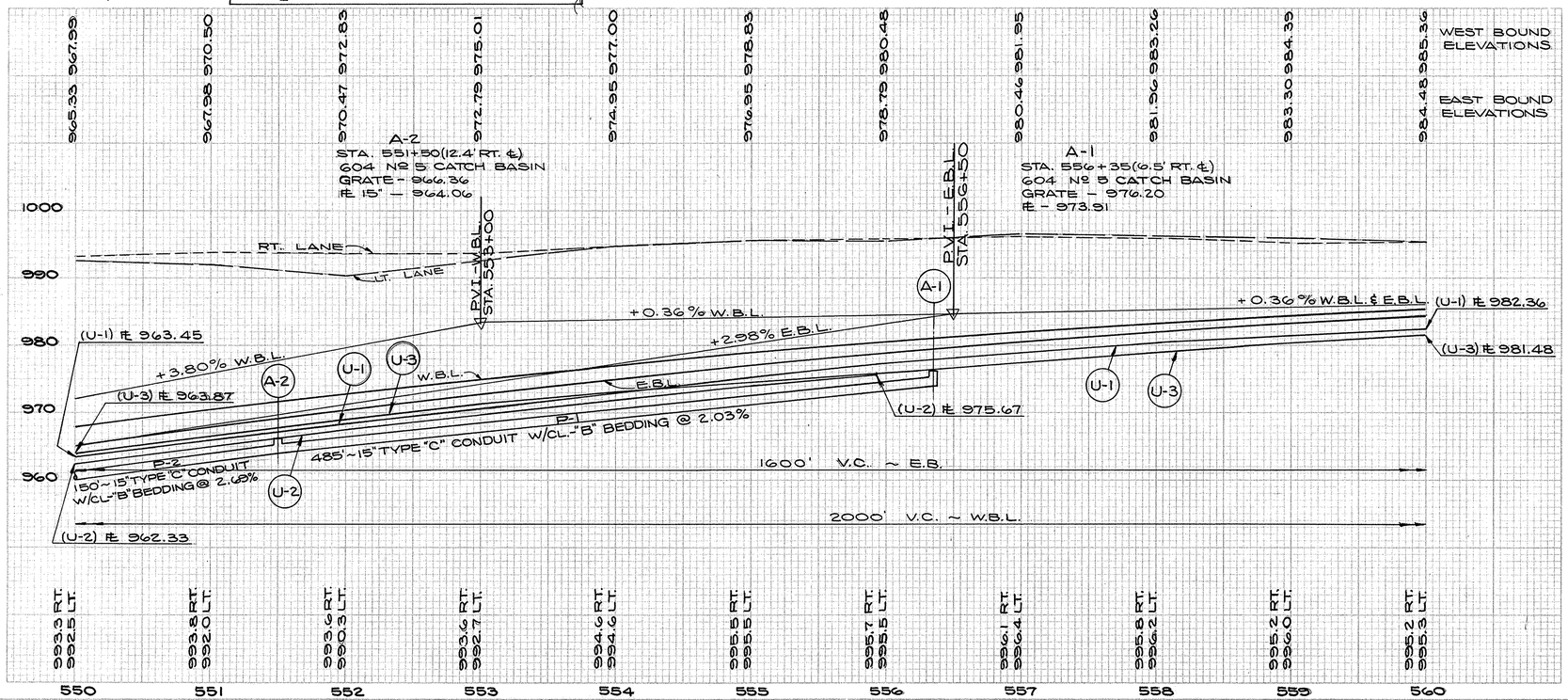
REF. NO.	STATION TO STATION	SIDE	606 GUARD RAIL TYPE 4 LIN. FT.	604 ℄ REF. MONUMT. EACH	661 WINGS AS PER PLAN EACH	605 CONDUIT-LIN. FT. UNDERDRAINS 6" PERF. LIN. FT.	605 CONDUIT-LIN. FT. SHALLOW 707.06 707.12
U-1	540+00 547+46	LT.					
U-2	547+40 550+00	LT.				261	
U-3	540+00 550+00	RT.				1000	
U-4	540+00 550+00	RT.				1000	
A-3	547+00 (14' RT. ℄)	RT.					
P-2	A-3 TO 550+00	RT.					
P-3	A-3 TO H-1	LT.					
H-1	547+00 (115.5' LT. ℄)	LT.					
E-1	544+98 547+02	LT.					
E-2	547+07 548+57	RT.					
E-3	540+25	RT.					
E-4	540+00 542+30	LT.					
R-1	540+00 547+50	LT.	750	1	6755	746	2261
R-M	546+44.66	℄					
SR-1	549+50	LT.					
SR-2	548+70	RT.					
SR-3	547+50	RT.					
WA-1	548+00	RT.					
WA-2	549+00	RT.					
WA-3	549+90	RT.					
V-2	540+00 - 548+00	LT.					
TOTALS			750	1	6755	746	2261

I-271 STA. 540+00 TO STA. 550+00

℄ CURVE DATA

Δ = 31° 57' 19"
θ_s = 3° 00'
D_s = 2° 00'
R_c = 2864.79'
L_c = 1297.76'
L_s = 300'
T_s = 970.61'
E_s = 116.47'

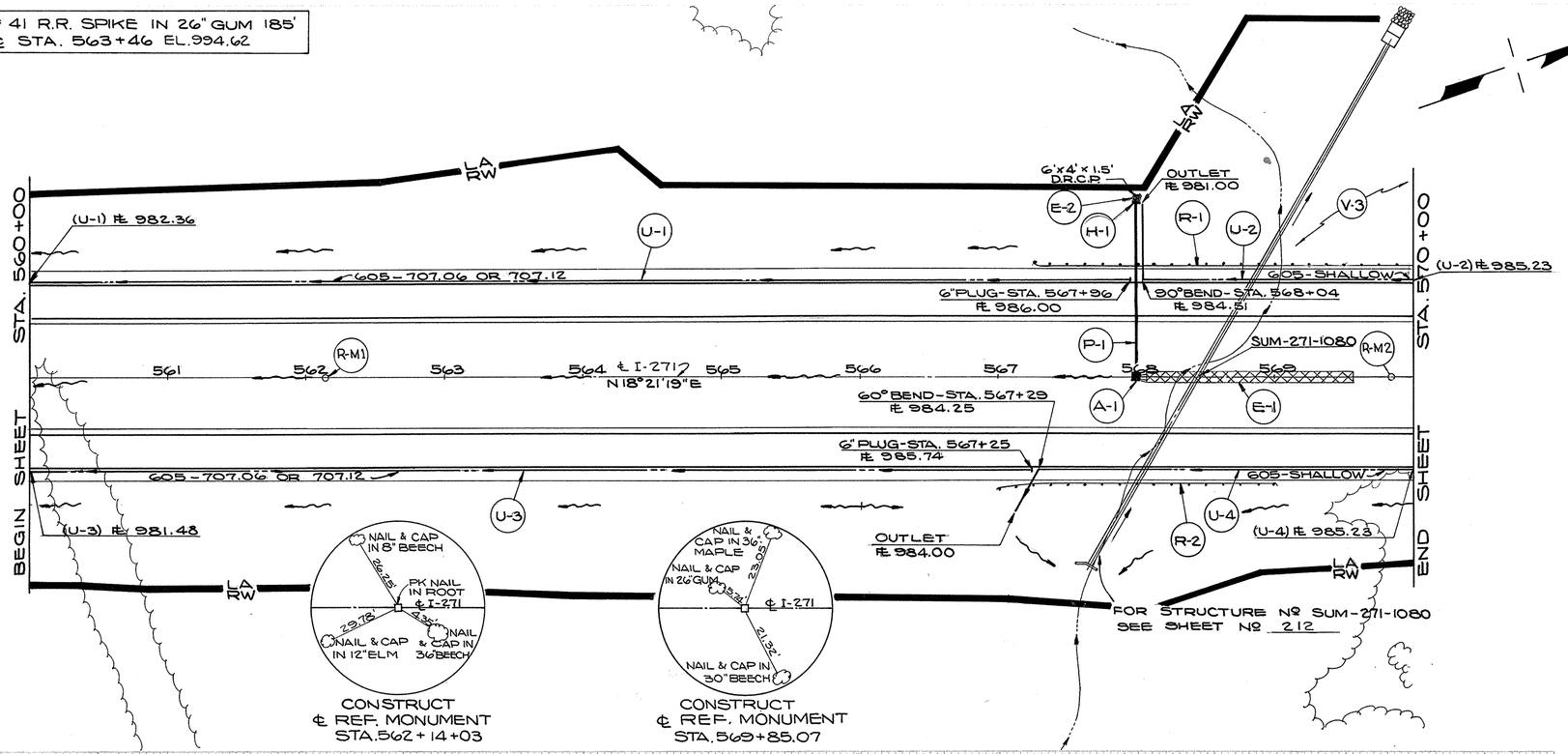


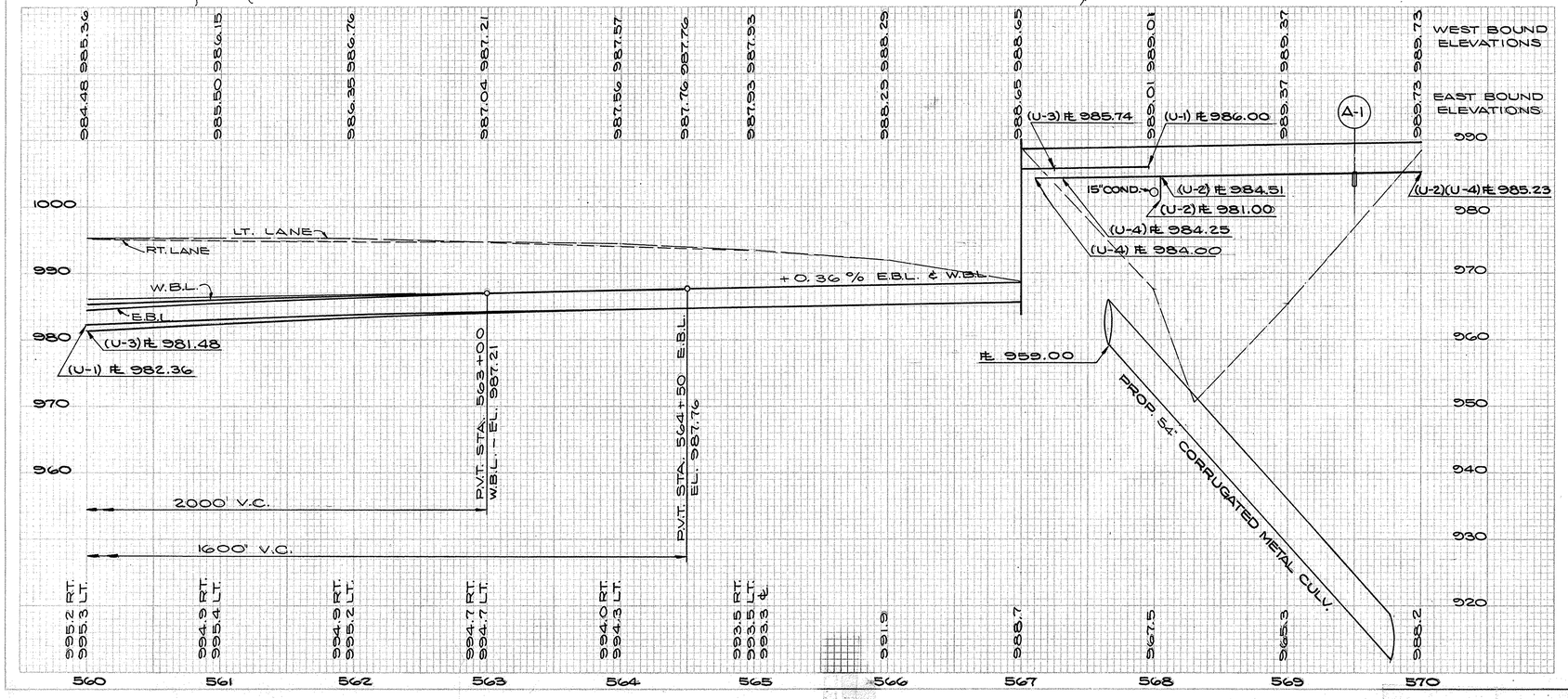


ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	605 UNDERDRAINS LIN. FT.	605 CONDUIT-LIN. FT. W/CL "C" BEDDING 15"	604 ℄ REF MONUMENT EACH	604 CATCH BASIN MATTING SQ. YDS.	607 JUTE MATTING SQ. YDS.	SPECIAL DRILLED WELL ABAND. EACH	SEE SHEET NO.
U-1	550+00 560+00	LT.	707.2						
U-2	550+00 555+94	RT.	1000						
U-3	550+00 560+00	RT.	594						
A-1	556+35 (6.5' RT. ℄)	RT.	1000						
A-2	551+50 (12.4' RT. ℄)	RT.							
P-1	A-2 TO A-1	RT.		485			125		
P-2	550+00 TO A-2			150			125		
E-1	551+57	553+07 RT.							
E-2	556+42	557+92 RT.							
R-M1	552+93.55	℄			1				
R-M2	555+93.55	℄			1				
WA-1	551+00	LT.						1	
TOTALS			2594	635	2	250	250	1	

B.M.# 41 R.R. SPIKE IN 26" GUM 185' LT. ℄ STA. 563+46 EL. 994.62





ESTIMATED QUANTITIES

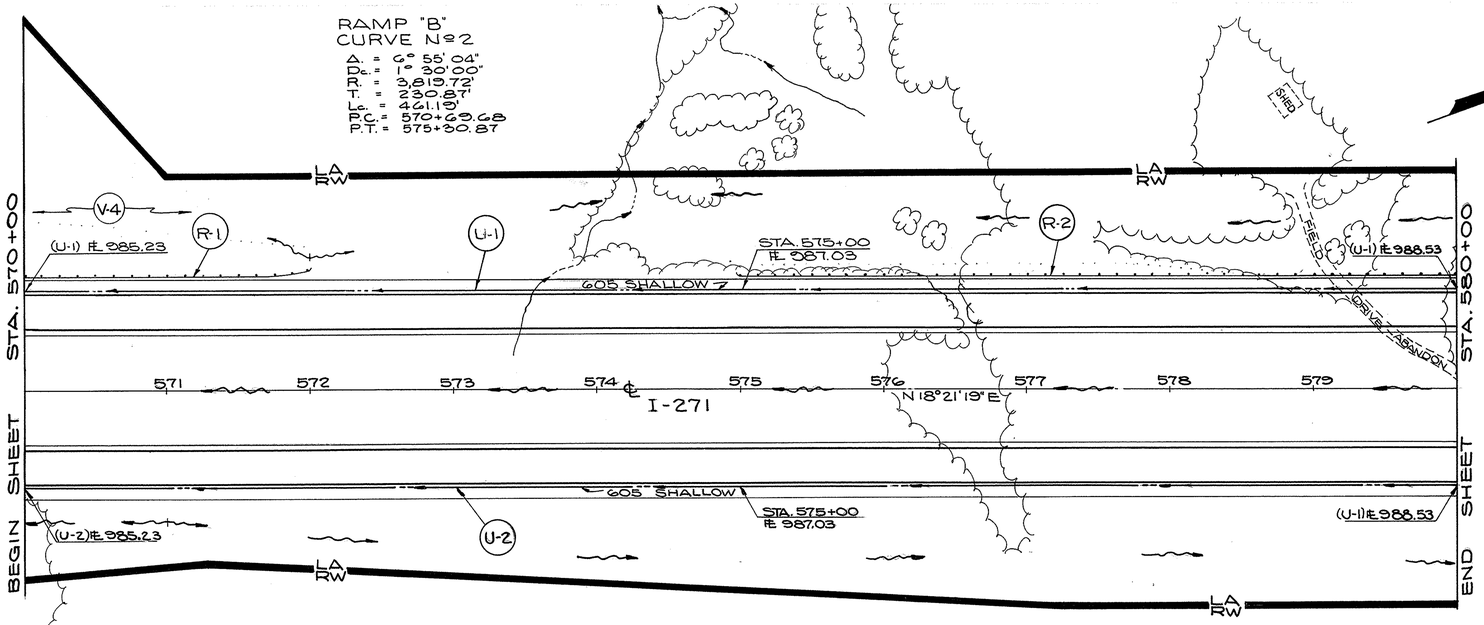
REF. NO.	STATION TO STATION	SIDE	603 CONDUIT-LIN.FT. TYPE "B" BEDDING 15"	603 CONDUIT-LIN.FT. TYPE "F" 6"	BENDS & BRANCHES EACH 6"	605 UNDERDRAINS LIN. FT. SHALLOW TOTAL	605 UNDERDRAINS LIN. FT. LOW TOTAL	607 JUTE MATTING SQ.YDS.	608 CONC. MASONRY BASIN Nº4	609 CONCRETE ROCK CHANNEL PROTECTION CU.YDS.	609 CONCRETE ROCK CHANNEL PROTECTION CU.YDS.	SEE SHEET NO.
U-1	560+00	Lt.				796						
U-2	568+04	Lt.					725					
U-3	560+00	Rt.				796						
U-4	567+12	Rt.					290					
A-1	568+00	℄							1			
P-1	A-1 TO H-1	Lt.		10	1							
E-1	568+07	568+57	℄									
E-2	567+88	568+02	Lt.									
R-1	567+25	570+00	Lt.								0.26	167
R-2	567+00	569+00	Rt.									
R-M1	562+14.03		℄									
R-M2	569+85.07		℄									
H-1	568+00		Lt.							1.3		
V-3	568+00 - 570+00		Lt.					125				
TOTALS			108	20	2	524	1521	125	1	0.26	1.3	

REF. NO.	STATION TO STATION	SIDE	609 CONCRETE RAIL TYPE-4 LIN. FT.	614 ℄ REF. MONU MT. EACH	621 PLANTING VINES AS PER PLAN EACH
U-1	560+00	Lt.			
U-2	568+04	Lt.			
U-3	560+00	Rt.			
U-4	567+12	Rt.			
A-1	568+00	℄			
P-1	A-1 TO H-1	Lt.			
E-1	568+07	568+57	℄		
E-2	567+88	568+02	Lt.		
R-1	567+25	570+00	Lt.	275	
R-2	567+00	569+00	Rt.	200	
R-M1	562+14.03		℄		1
R-M2	569+85.07		℄		1
H-1	568+00		Lt.		
V-3	568+00 - 570+00		Lt.		1536
TOTALS			475	2	1536

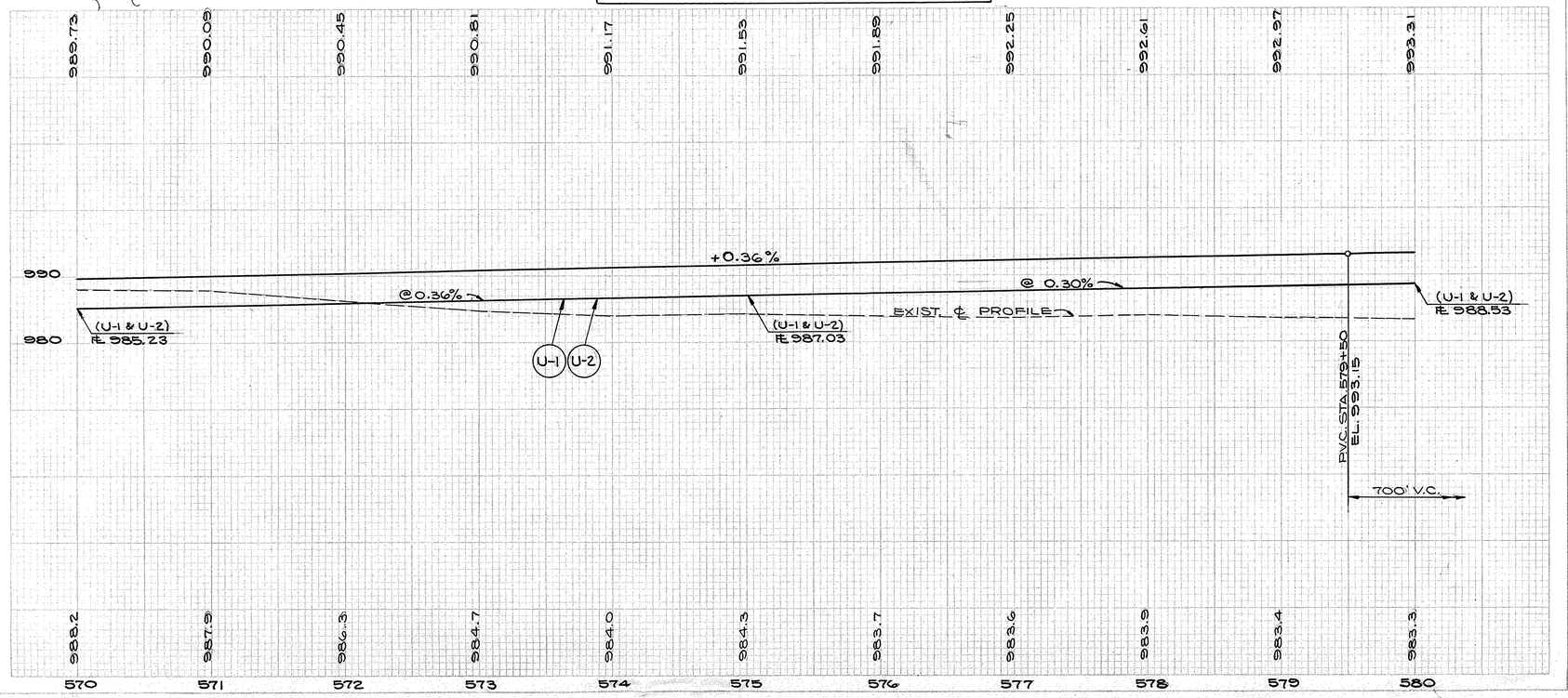
I-271 STA.560+00 TO STA.570+00

SEE SHEET NO.

RAMP "B"
CURVE N≤2
A. = 6° 55' 04"
Dc. = 1° 30' 00"
R. = 3,819.72'
T. = 230.87'
Lc. = 461.19'
P.C. = 570+69.68
P.T. = 575+30.87



B.M. #42 R.R. SPIKE IN 15" TWIN MAPLE
200' LT. ℄ STA. 575+03 EL. 979.72



ESTIMATED QUANTITIES

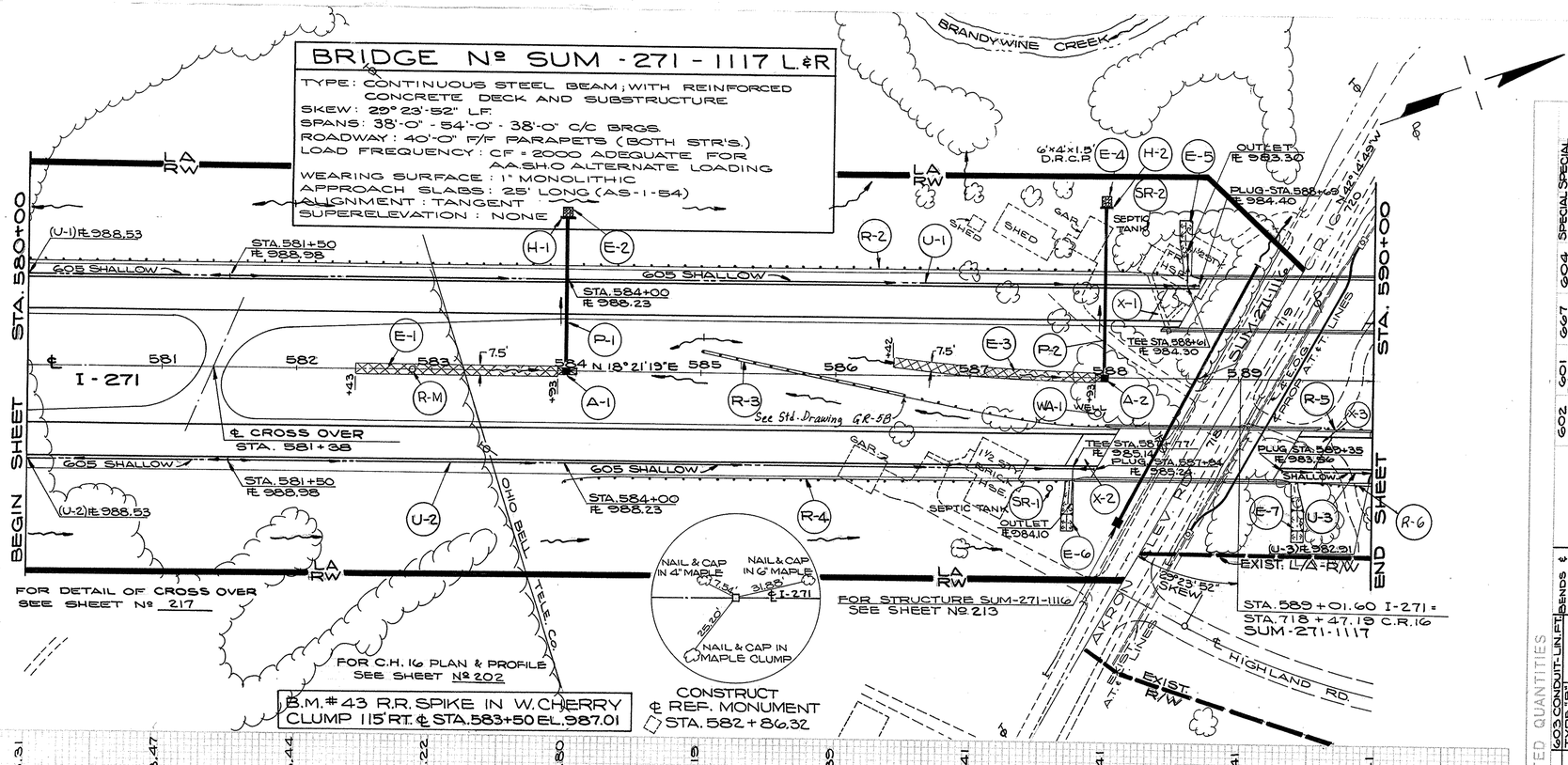
REF. NO.	STATION TO STATION	SIDE	606 GUARD RAIL TYPE-4 LIN. FT.	608 CONCRETE APRONS EACH	609 CURBING LIN. FT.	610 LOCAL PLANTING AS PER PLAN EACH	605 UNDERDRAINS LIN. FT. 8" PVC SLOTTED PIPE
U-1	570+00 580+00	LT.					1000
U-2	570+00 580+00	RT.					1000
R-1	570+00 572+00	LT.	200				
R-2	575+01.5 580+00	LT.	498.5				
V-4	570+00 572+00	LT.				756	
TOTALS			698.5			756	2000

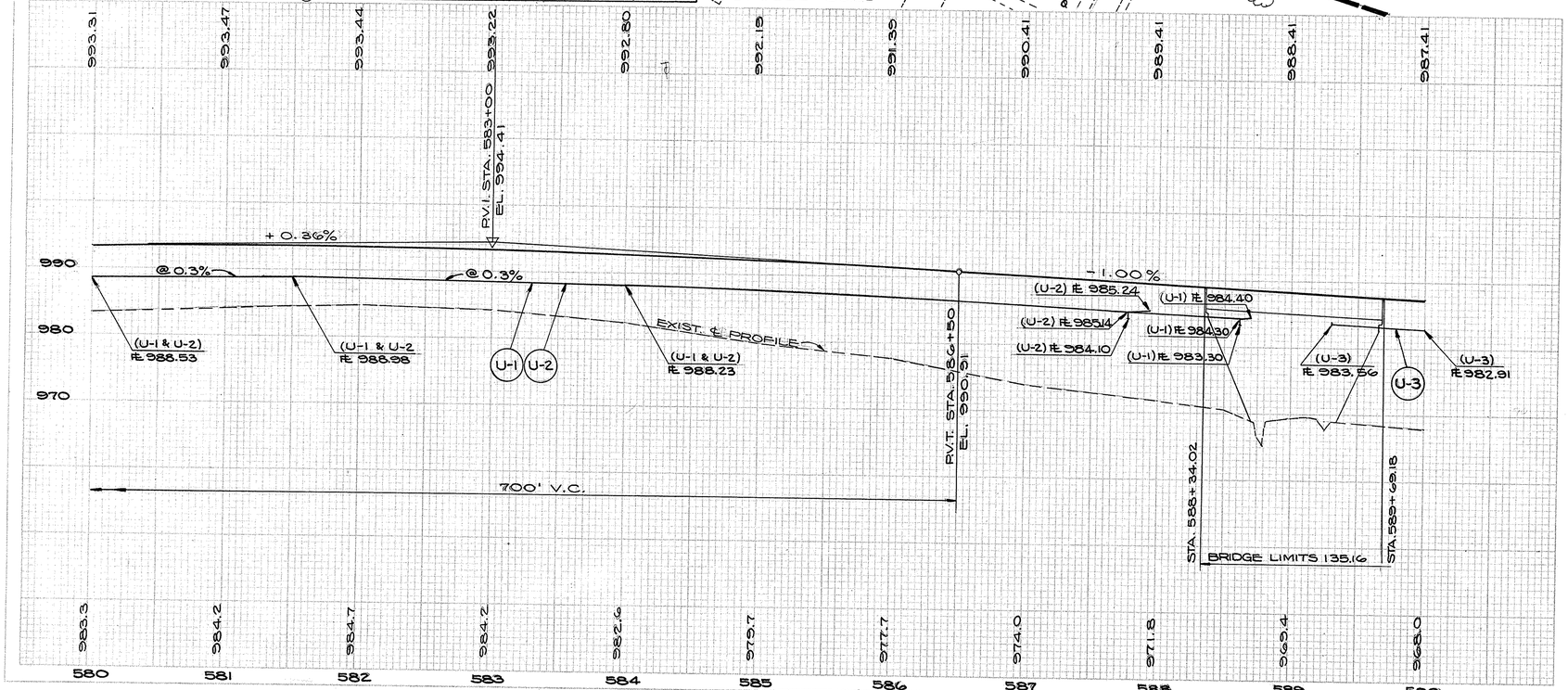
I-271 STA. 570+00 TO STA. 580+00

SUM - 271 - 8.29

BRIDGE Nº SUM - 271 - 1117 L&R

TYPE: CONTINUOUS STEEL BEAM; WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE
SKEW: 29° 23' 52" L.F.
SPANS: 38'-0" - 54'-0" - 38'-0" C/C BRGS.
ROADWAY: 40'-0" F/F PARAPETS (BOTH STR'S.)
LOAD FREQUENCY: CF = 2000 ADEQUATE FOR AASHO ALTERNATE LOADING
WEARING SURFACE: 1" MONOLITHIC
APPROACH SLABS: 25' LONG (AS-1-54)
ALIGNMENT: TANGENT
SUPERELEVATION: NONE

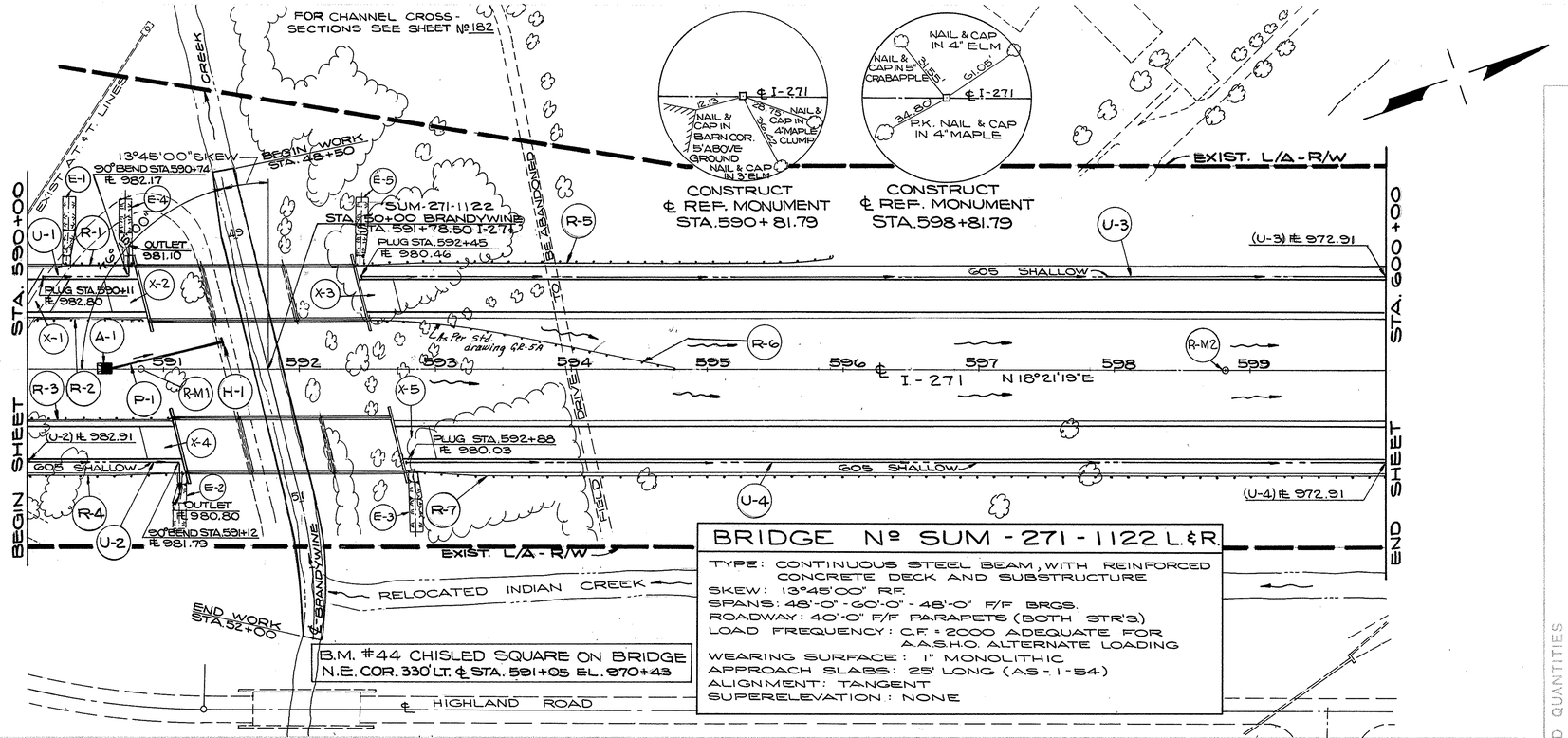




ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	601 CONCRETE CLASS "A"	602 CONCRETE MASONRY	603 CONDUIT-LIN.FT. 6" UNDERDRAINS TYPE "B" W/CL."B" BEDDING	603 CONDUIT-LIN.FT. 6" UNDERDRAINS TYPE "B" W/CL."F" BEDDING	603 CONDUIT-LIN.FT. 15"	604 BENDS & BRANCHES EACH 6"	604 CATCH BASIN	607 CURB & GUTTER	607 ROCK MATTING CHANNEL	609 SPECIAL DITCH PAVING	609 SPECIAL DRILLED WELLS	609 ABAND. SEPTIC TANK Nº 4	SEE SHEET NO.
			CU. YDS.	CU. YDS.	LIN. FT.	LIN. FT.	LIN. FT.	EACH	EACH	SQ. YDS.	SQ. YDS.	SQ. YDS.	EACH	EACH	
U-1	580+00 588+69	LT.													172
U-2	580+00 587+94	RT.													173
U-3	589+35 580+00	RT.													
A-1	584+00 ℄														
A-2	588+00 ℄														
P-1	A-1 TO H-1	LT.													
P-2	A-2 TO H-2	LT.													
H-1	584+00 (115' LT.℄)	LT.													
H-2	588+00 (127' LT.℄)	LT.													
E-1	582+43 583+93	℄													
E-2	583+98 584+02	LT.													
E-3	586+42 587+93	℄													
E-4	587+98 588+02	LT.													
E-5	586+62	LT.													
E-6	587+76	RT.													
E-7	589+43	RT.													
R-2	580+00 588+64	LT.	864												
R-3	585+00 588+00	RT.	190	150											
R-4	584+05 587+80	RT.	375												
R-5	589+67 590+00	RT.	33												
R-6	589+40 590+00	RT.	60												
R-M	582+86.32 ℄							1							
X-1	W.B. SUM-271-1117	LT.													
X-2	E.B. SUM-271-1117	RT.													
X-3	E.B. SUM-271-1117	RT.													
WA-1	587+95	LT.													
SR-1	587+75	RT.													
SR-2	588+25	LT.													
TOTALS			1482	150	1	200	109	1758	204	42	20	0.52	2.6	250	2

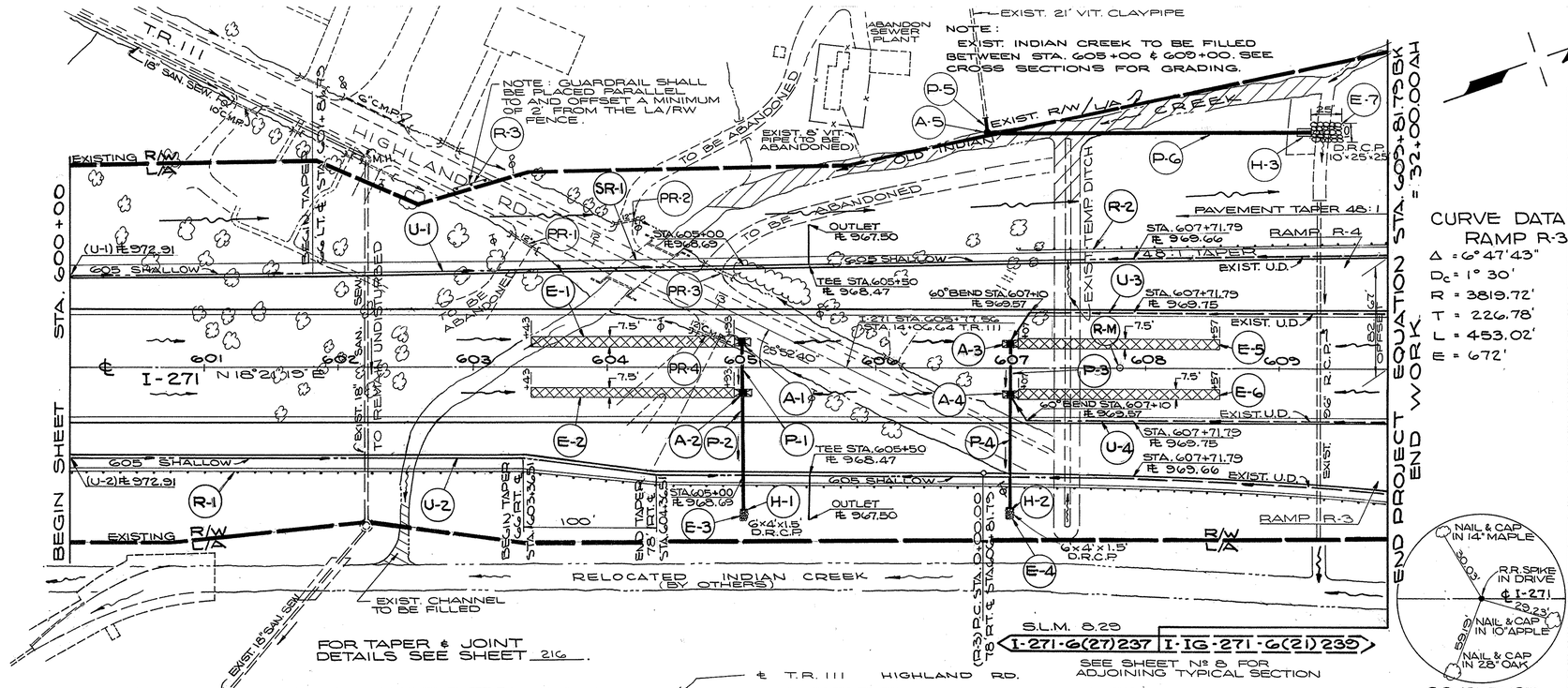
REF. NO.	STATION TO STATION	SIDE	604 REINF. CONC. APP. SLAB SQ.YDS.	611 ℄ REF. MONUMENT EACH	606 GUARDRAIL TYPE 4 LIN.FT. STD. BARRIER	609 SODDING SQ.YDS.	660 SPECIAL SEEDING & MULCH SQ.YDS.	605 UNDERDRAINS LIN.FT. 6" PERME. PIPE SHALLOW	667 ANTI-GLARE SCREEN LIN.FT.	667 REMOVE GUARDRAIL LIN.FT.	667 REMOVE CRASH CUSHION EACH	667 REMOVE GUARDRAIL TERMINAL EACH	667 REMOVE GUARDRAIL TRANSITION EACH
U-1	580+00 588+69	LT.						885					
U-2	580+00 587+94	RT.						810					
U-3	589+35 580+00	RT.						65					
A-1	584+00 ℄												
A-2	588+00 ℄												
P-1	A-1 TO H-1	LT.											
P-2	A-2 TO H-2	LT.											
H-1	584+00 (115' LT.℄)	LT.											
H-2	588+00 (127' LT.℄)	LT.											
E-1	582+43 583+93	℄											
E-2	583+98 584+02	LT.											
E-3	586+42 587+93	℄											
E-4	587+98 588+02	LT.											
E-5	586+62	LT.						35					
E-6	587+76	RT.						31					
E-7	589+43	RT.						43					
R-2	580+00 588+64	LT.											
R-3	585+00 588+00	RT.											
R-4	584+05 587+80	RT.											
R-5	589+67 590+00	RT.											
R-6	589+40 590+00	RT.											
R-M	582+86.32 ℄			1									
X-1	W.B. SUM-271-1117	LT.							GG7				
X-2	E.B. SUM-271-1117	RT.							GG7				
X-3	E.B. SUM-271-1117	RT.							GG7				
WA-1	587+95	LT.											
SR-1	587+75	RT.											
SR-2	588+25	LT.											
TOTALS			1482	1	150	200	109	1758	204	42	20	0.52	2.6

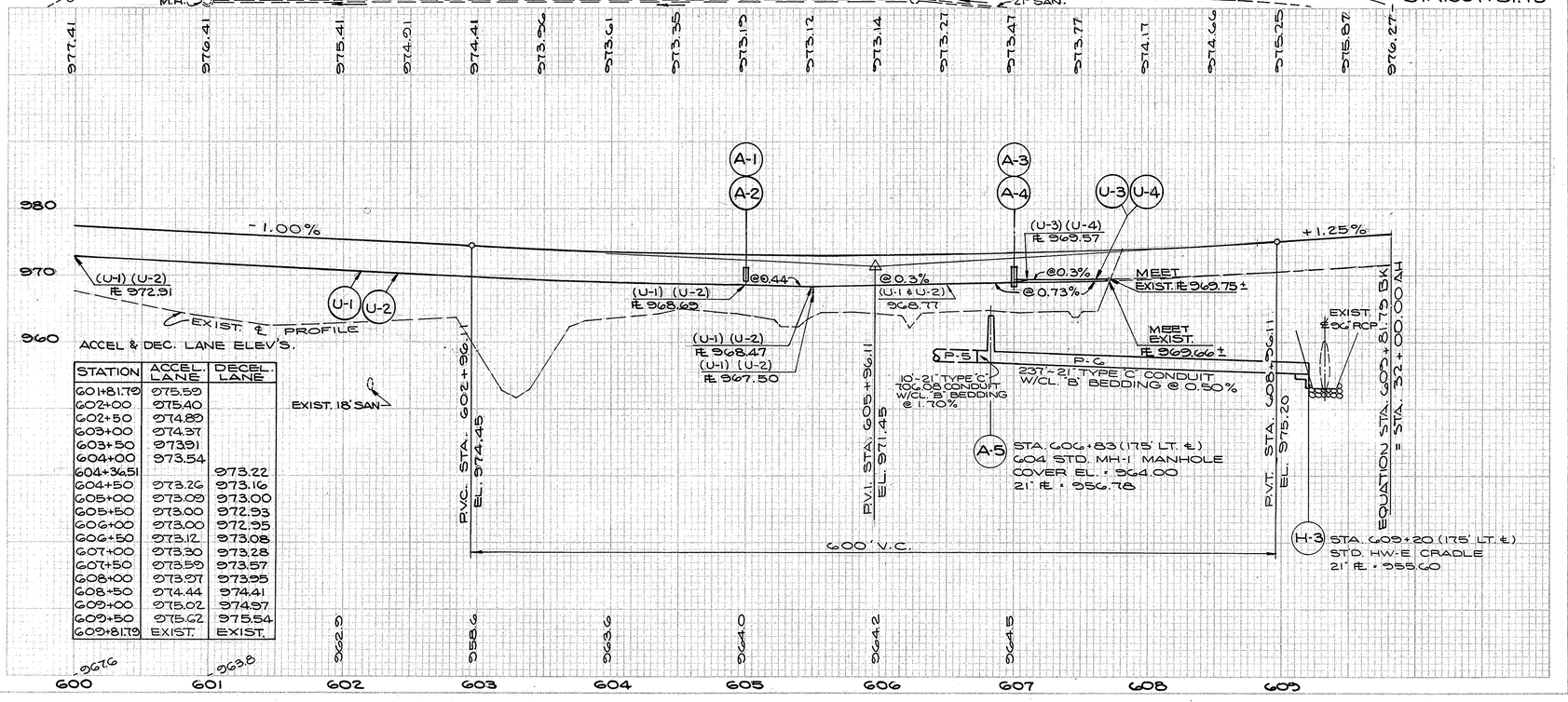


ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	606 GUARDRAIL LIN. FT.	STA.	604 CATCH BASIN Nº 4	602 MASONRY CU. YDS.	603 CONDUIT-LIN. FT. TYPE "C" BEDDING 12"	603 CONDUIT-LIN. FT. TYPE "F" 12"	603 CONDUIT-LIN. FT. TYPE "F" 6"	603 BENDS & BRANCHES EACH 6"	SEE SHEET NO.
U-1	590+11	LT.			1						174
U-2	591+00	RT.									
U-3	592+45	LT.									
U-4	592+88	RT.									
A-1	590+59	℄						40			
P-1	A-1 TO 591+41	℄									
H-1	591+41	℄						45			
E-1	590+29	LT.									
R-1	590+28	LT.		50							
R-2	590+09	LT.		75							
R-3	590+00	RT.		104.5							
R-4	590+00	RT.		115							
R-5	592+41	LT.		350							
R-6	592+51	LT.		225							
R-7	592+87.5	RT.		712.5							
R-M1	590+81.79	℄			1						174
R-M2	598+81.79	℄			1						174
X-1	W.B. SUM-271-1117	LT.									
X-2	W.B. SUM-271-1122	LT.					GG-7				
X-3	W.B. SUM-271-1122	LT.					GG-7				
X-4	E.B. SUM-271-1122	RT.					GG-7				
X-5	E.B. SUM-271-1122	RT.									
E-2	591+11	RT.						45			
E-3	592+64	RT.						45			
E-4	590+70	LT.						45			
E-5	592+44	LT.						45			
TOTALS			1632		2	2648	225	1670	40	48	20
					1				40	48	20
					1					0.23	
					1					0.23	

I-271 STA. 590+00 TO STA. 600+00





STATION	ACCEL. LANE	DECEL. LANE
601+81.79	975.59	
602+00	975.40	
602+50	974.89	
603+00	974.37	
603+50	973.91	
604+00	973.54	
604+36.51		973.22
604+50	973.26	973.16
605+00	973.09	973.00
605+50	973.00	972.93
606+00	973.00	972.95
606+50	973.12	973.08
607+00	973.30	973.28
607+50	973.59	973.57
608+00	973.97	973.95
608+50	974.44	974.41
609+00	975.02	974.97
609+50	975.62	975.54
609+81.79	EXIST.	EXIST.

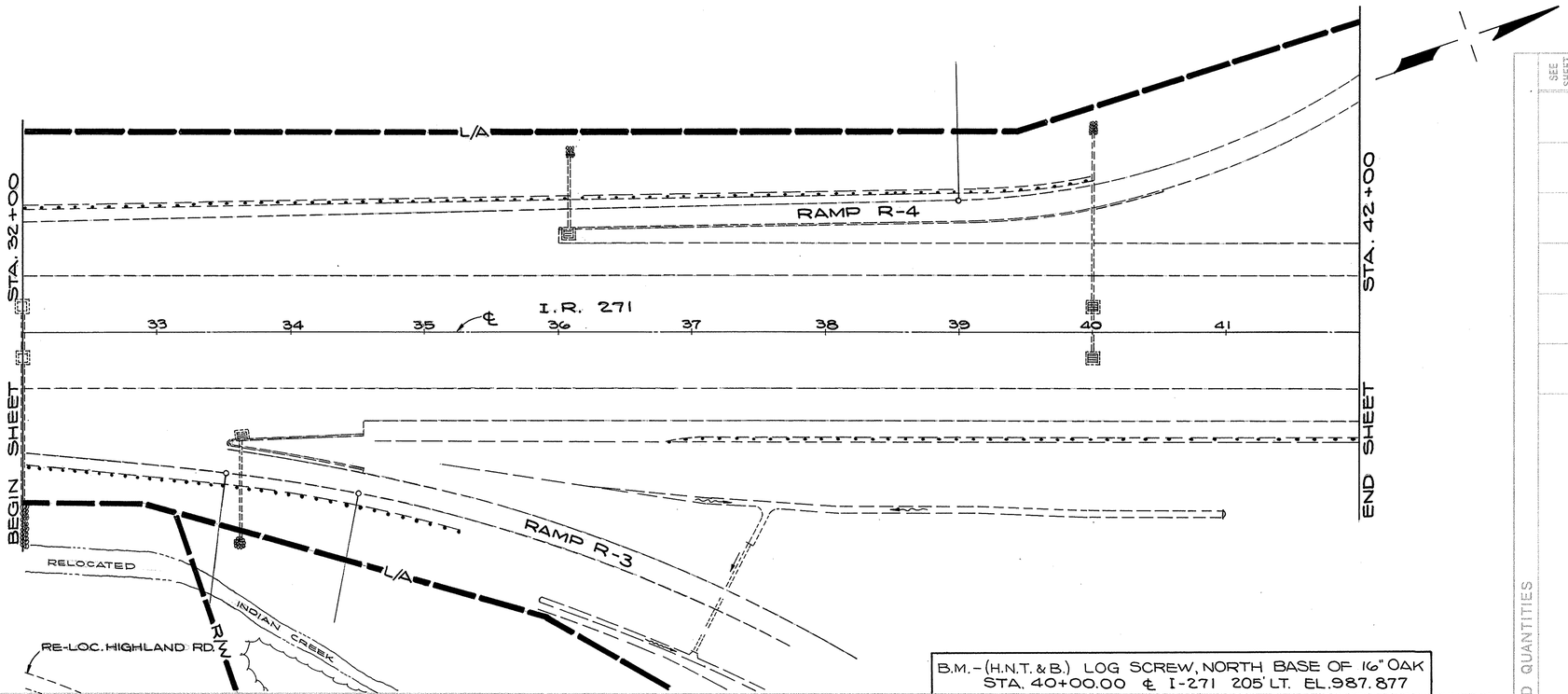
ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	202 REMOVED 15"Ø UNDER LIN. FT.	606 GUARD RAIL TYPE 4 LIN. FT.	604 STD. MH-1 MANH. HOLE EACH	604 ℄ REF. MONUMT EACH	605 6" UNDERDRAINS LIN. FT.	603 CONDUIT-LIN.FT. TYPE "B" W/CL. "B" BEDDING 15"	TYPE "C" W/CL. "B" BEDDING 12"	TYPE "B" W/CL. "B" BEDDING 6"	TYPE "C" W/CL. "B" BEDDING 6"	BENDS & BRANCHES EACH 6"	601 DUMPED MASONRY PROT. CU.YDS.	602 CONC. MASONRY CU.YDS.	667 JUTE MATTING PANEL SQ.YDS.	202 EXIST. CATCH BASIN STRUCT. Nº 18 REMOVED LUMP SUM	SEE SHEET NO.
	SHALLOW						792										
	LOW						762										
							77										
							77										
U-1	600+00 to 607+71.79	LT.									10	1					180
U-2	600+00 to 607+71.79	RT.									10	1					180
U-3	607+00 to 607+71.79	LT.									10	1					180
U-4	607+00 to 607+71.79	RT.									10	1					180
A-1	605+00 (19' LT. ℄)	LT.															180
A-2	605+00 (19' RT. ℄)	RT.															180
A-3	607+00 (19' LT. ℄)	LT.															180
A-4	607+00 (19' RT. ℄)	RT.															180
A-5	606+83 (175' LT. ℄)	LT.			1												
P-1	A-1 TO A-2	℄				1											
P-2	A-2 TO H-1	RT.								87							
P-3	A-3 TO A-4	℄															
P-4	A-4 TO H-2	RT.								86							
H-1	605+00 (106' RT. ℄)	RT.															
H-2	607+00 (105' RT. ℄)	RT.															
H-3	605+20 (175' LT. ℄)	LT.															
E-1	603+43	LT.															
E-2	603+43	RT.															
E-3	604+98	RT.															
E-4	606+98	RT.															
E-5	607+07	LT.															
E-6	607+07	RT.															
E-7	605+30	LT.															
SR-1	604+25	LT.															
R-1	600+00 to 609+81.79	RT.	2875														
R-2	607+97 to 609+81.79	LT.	275														
R-3	602+90 (193 HIGHLAND)	LT.	25														
R-M	607+81.79	℄				1											
P-5	EXIST. 21" TO A-5	LT.							24								
P-6	A-5 TO H-3	LT.							24								
PR-1	603+25	LT.							24								
PR-2	604+00	LT.							24								
PR-3	604+75	LT.							24								
PR-4	604+75	RT.							24								
TOTALS			2875	1	1	1	1708		173				96	1.74	256	500	4 LUMP

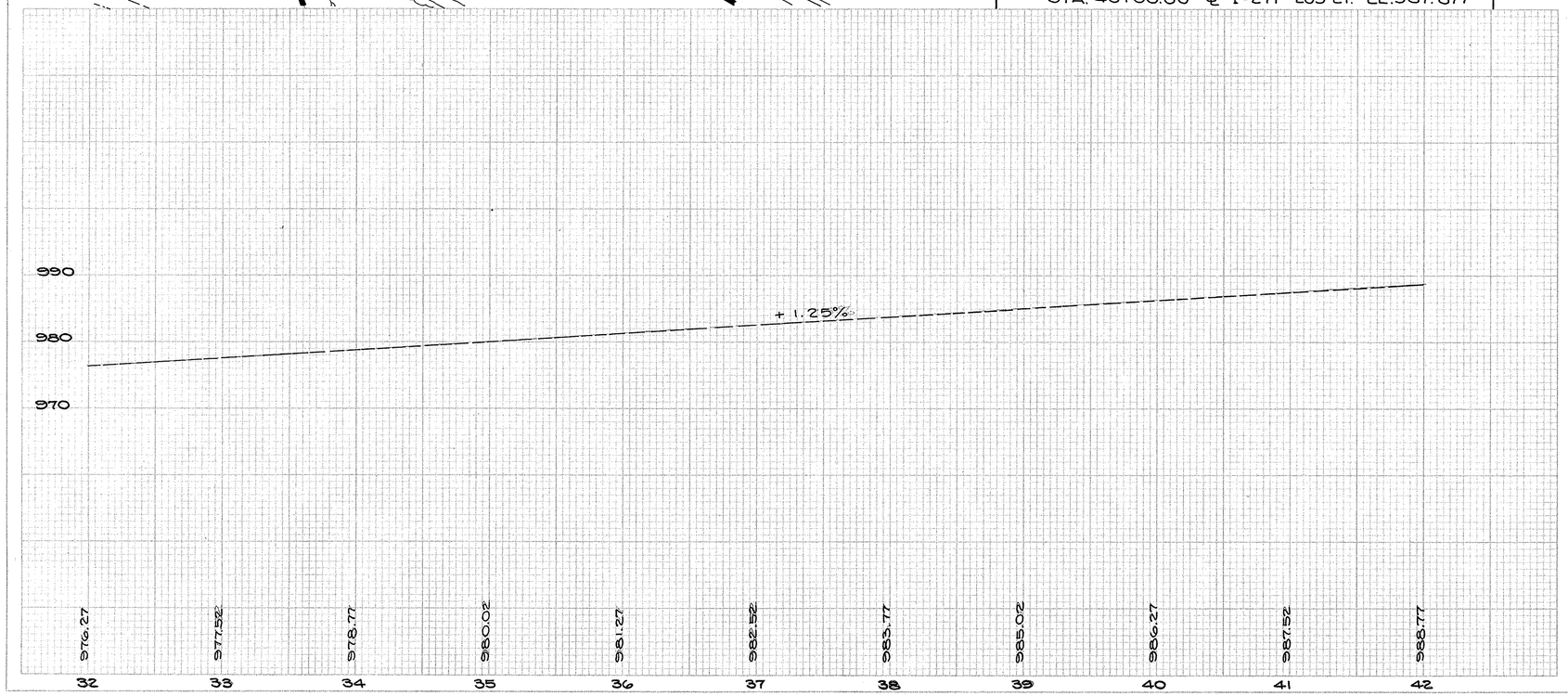
FED. NO. DIVISION	STATE	PROJECT
2	OHIO	

43
313

SUM - 271 - 8.29



B.M. - (H.N.T. & B.) LOG SCREW, NORTH BASE OF 16" OAK
STA. 40+00.00 ℄ I-271 205' LT. EL. 987.877



ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

SUM-271-8.29

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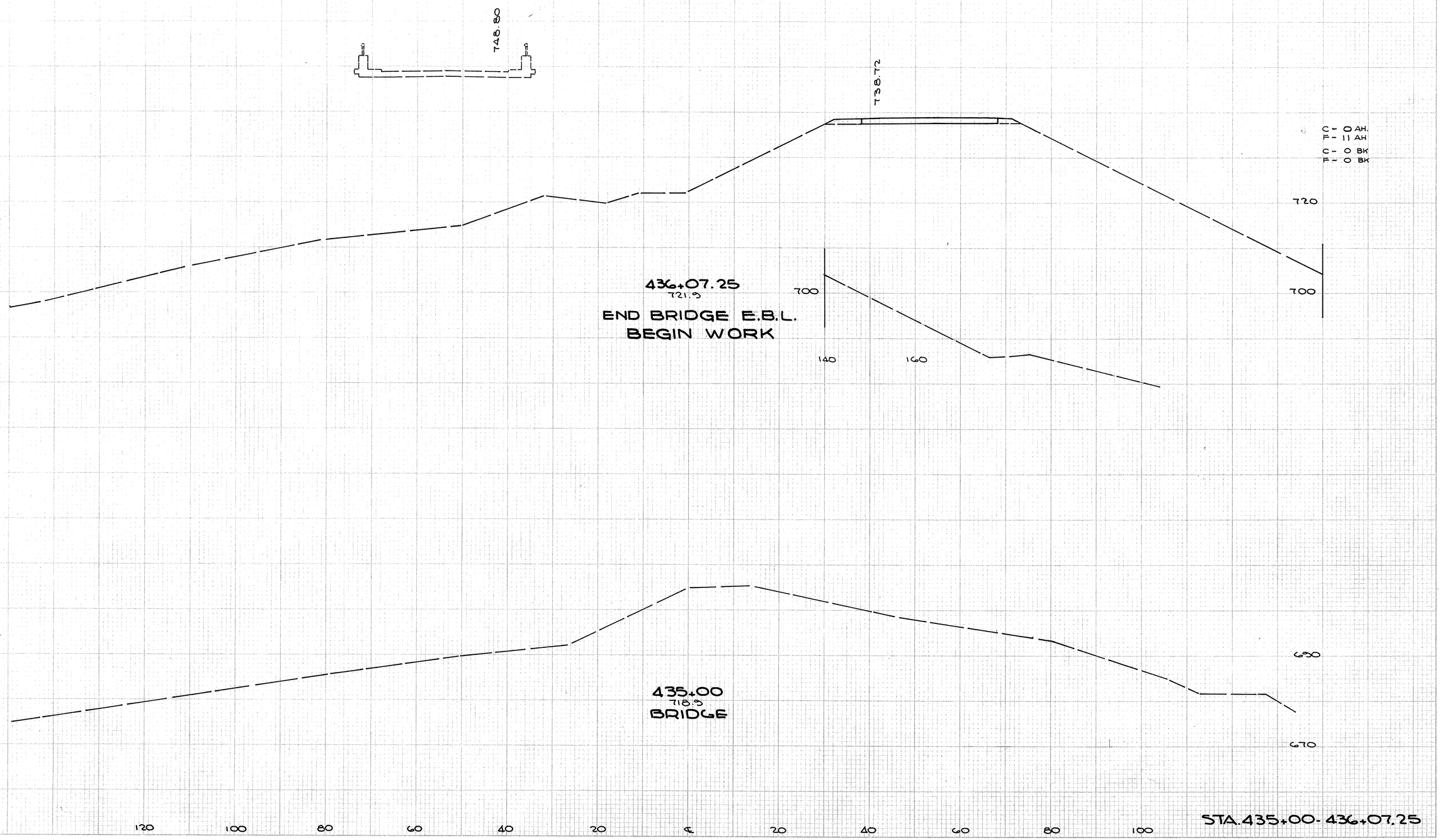

STA. 435+00 - 436+07.25

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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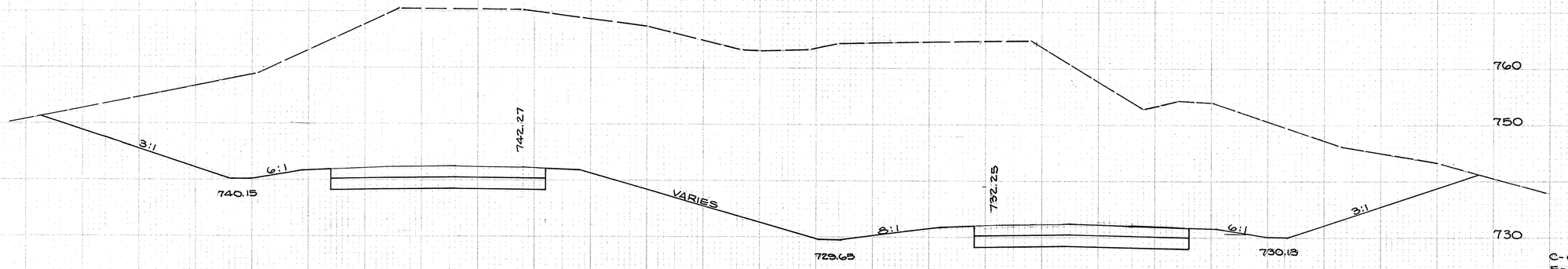
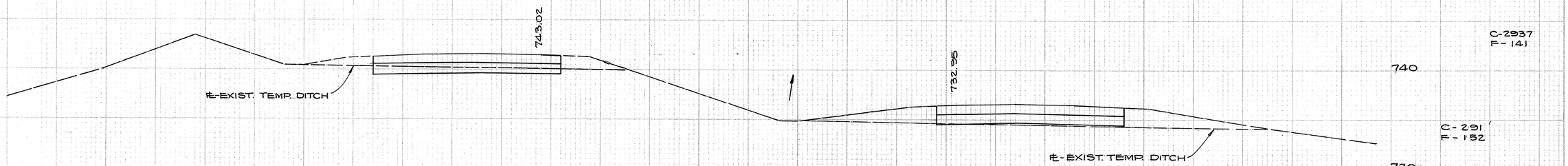
SUM-271-8.29

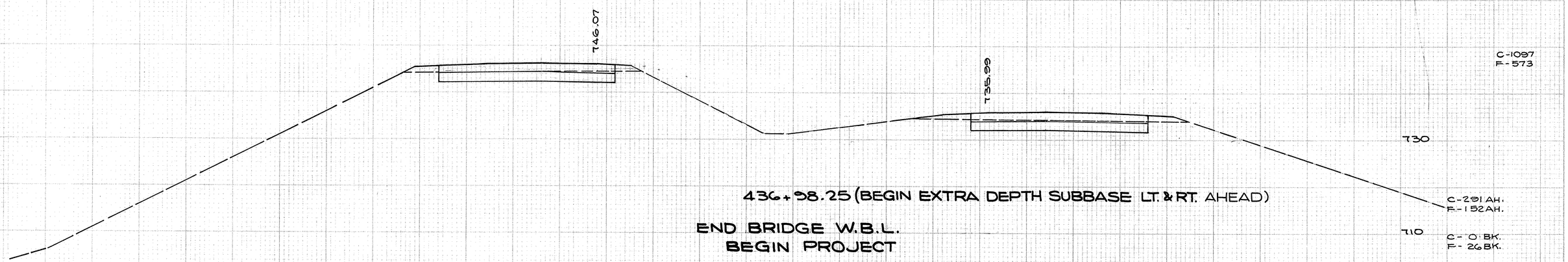
END AREA CU. YDS



438 + 25



438+00



436+98.25 (BEGIN EXTRA DEPTH SUBBASE LT. & RT. AHEAD)

END BRIDGE W.B.L.
BEGIN PROJECT

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

STA. 436+98.25-438+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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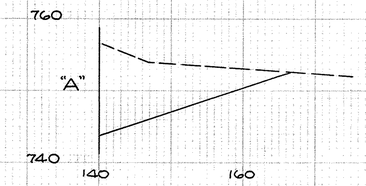
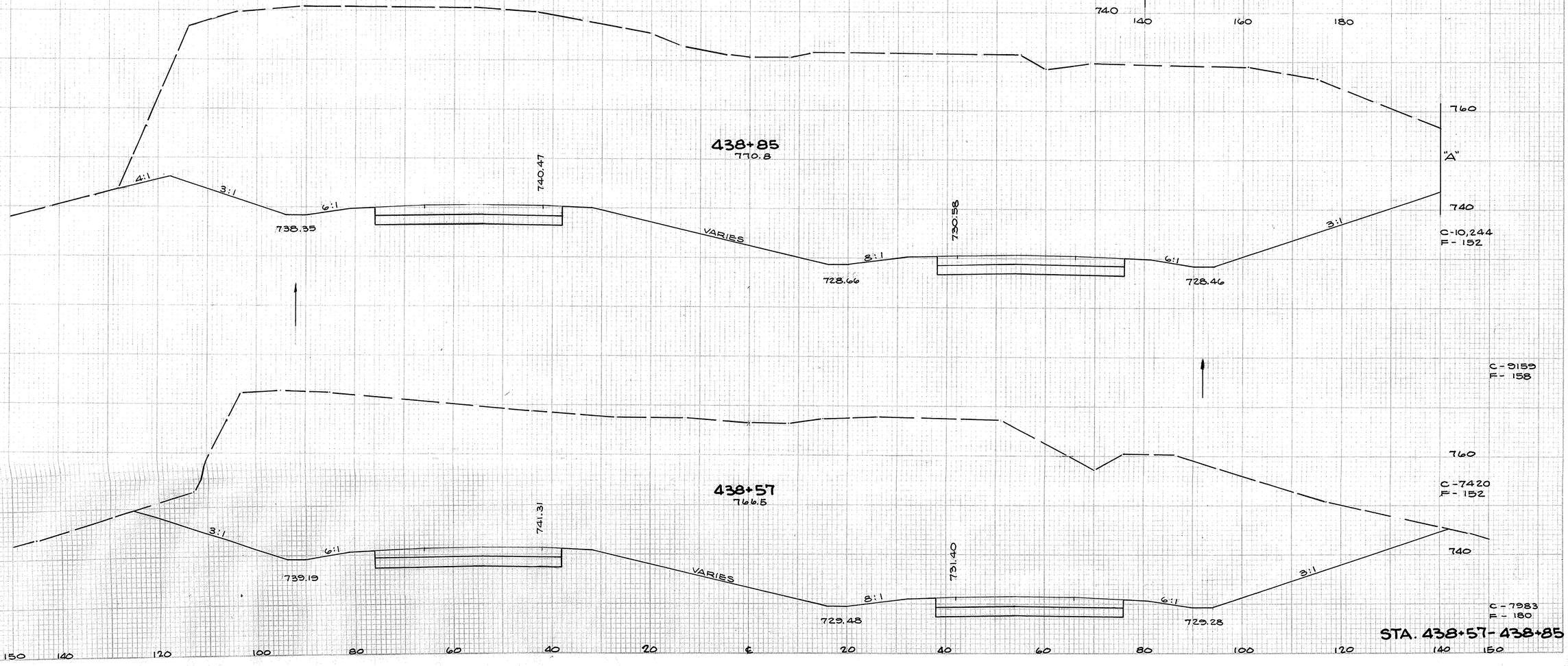
SUM-271-8.29

END AREA CU. YDS.





STA. 438+57-438+85

FED. AID DIVISION	STATE	PROJECT	
2	OHIO		

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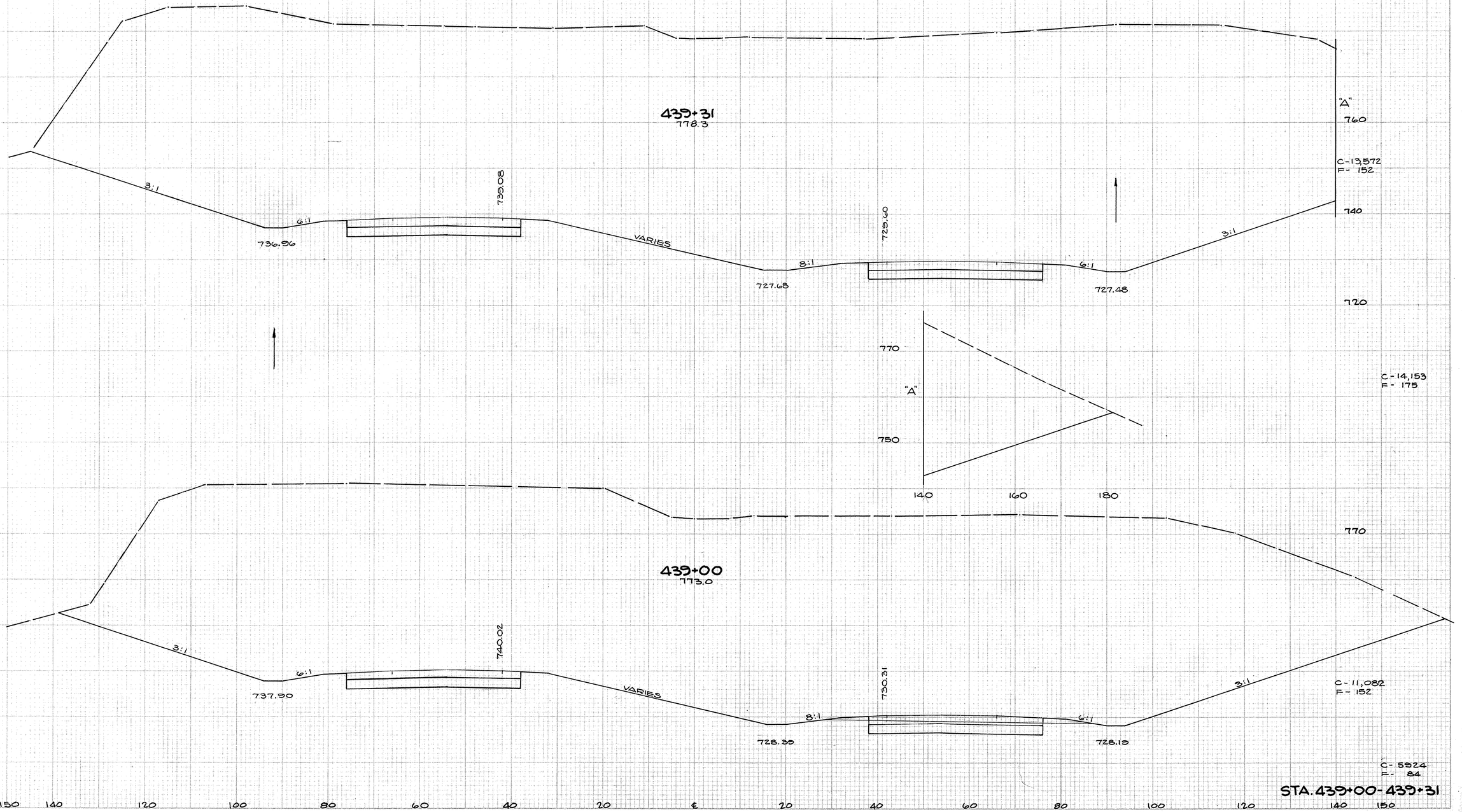
SUM·271·8.29

END AREA CU.YDS.



STA. 439+00-439+31

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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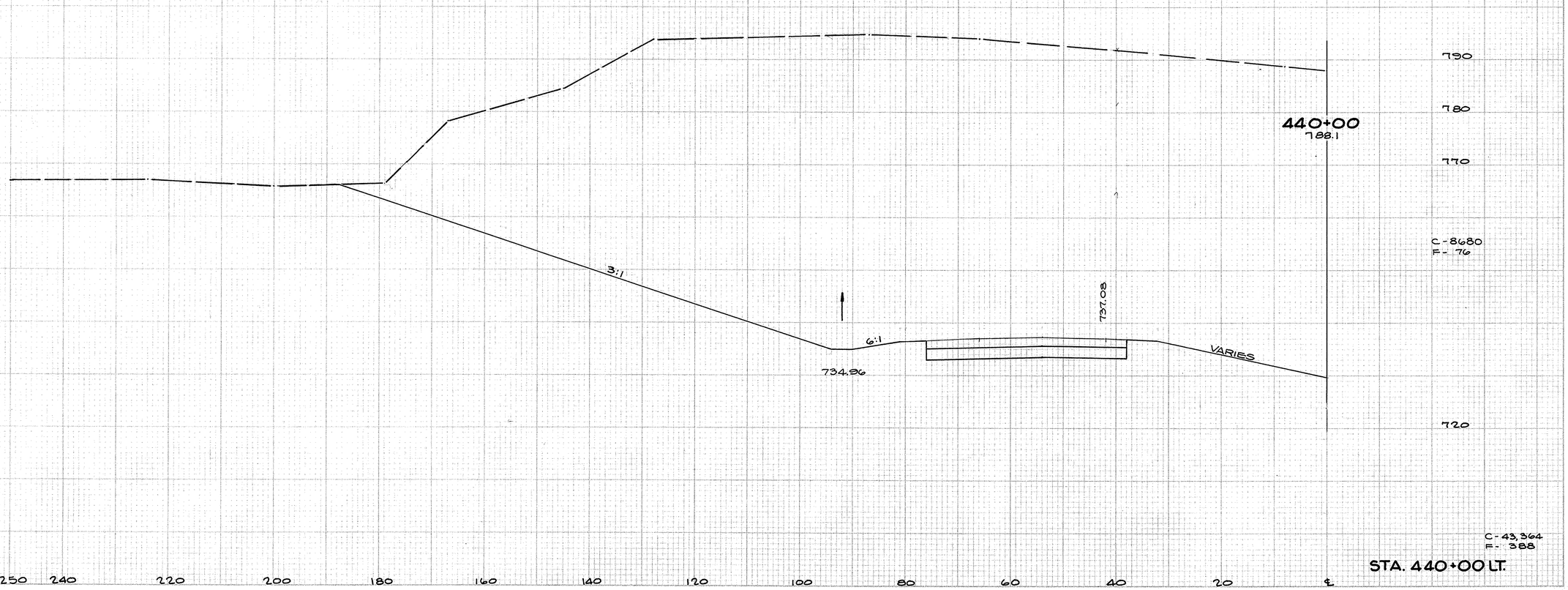
SUM-271-8.29

END AREA C.U.YDS.



STA. 440+00 LT.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

SUM-271-8.29

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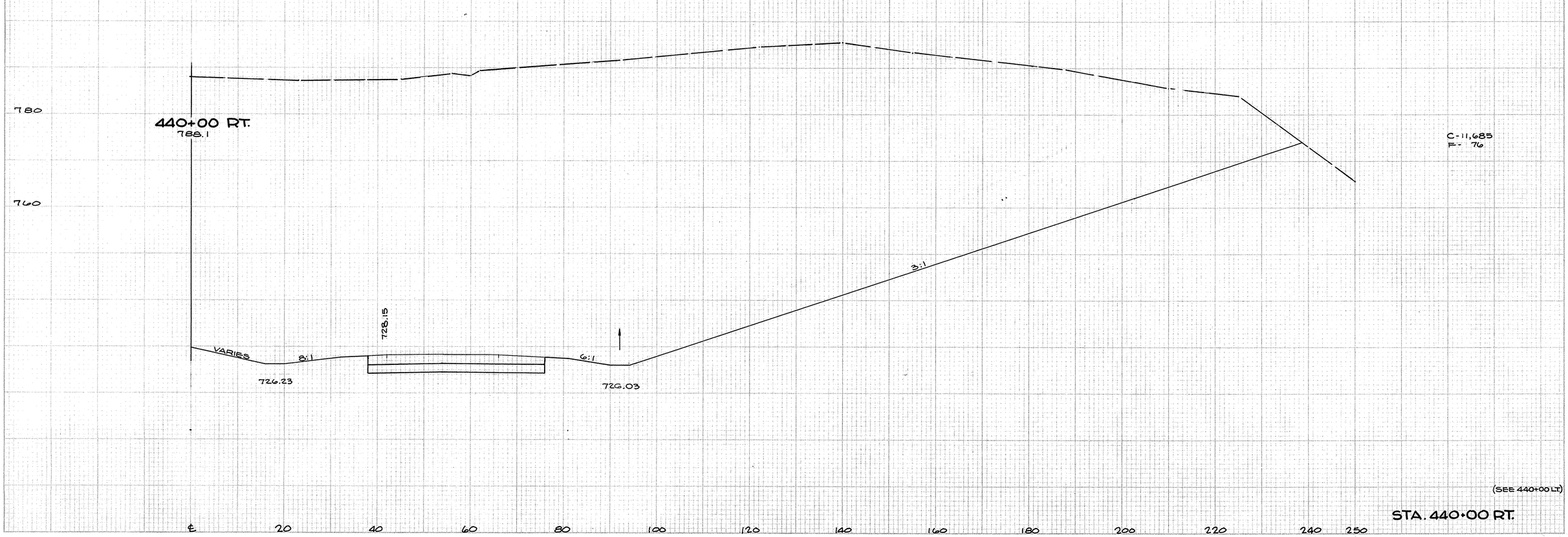
END AREA CU. YDS.



FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

50
313

SUM-271-8.29

END AREA CU. YDS.

800

790

441+00 LT.
798.5

C - 12,680
F - 76

740

3:1

6:1

734.86

732.44

VARIES

C - 89,087
F - 563

250 240 220 200 180 160 140 120 100 80 60 40 20 ℄

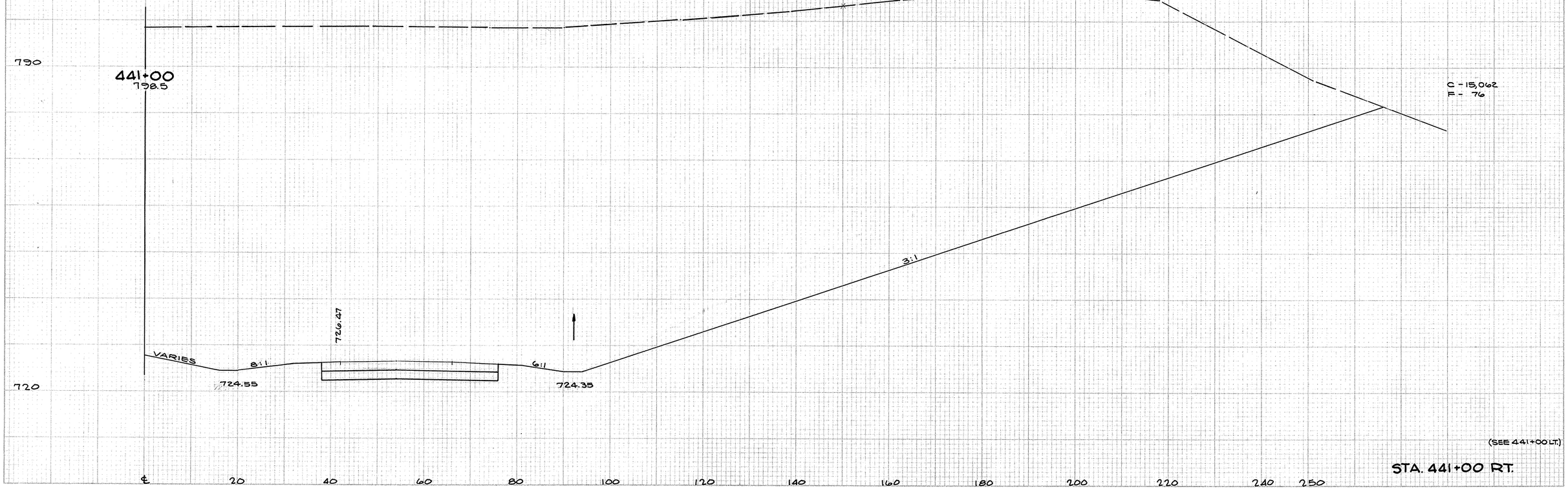
STA. 441+00 LT.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

51
313

SUM-271-8.29

END AREA CU. YDS.



(SEE 441+00 LT.)

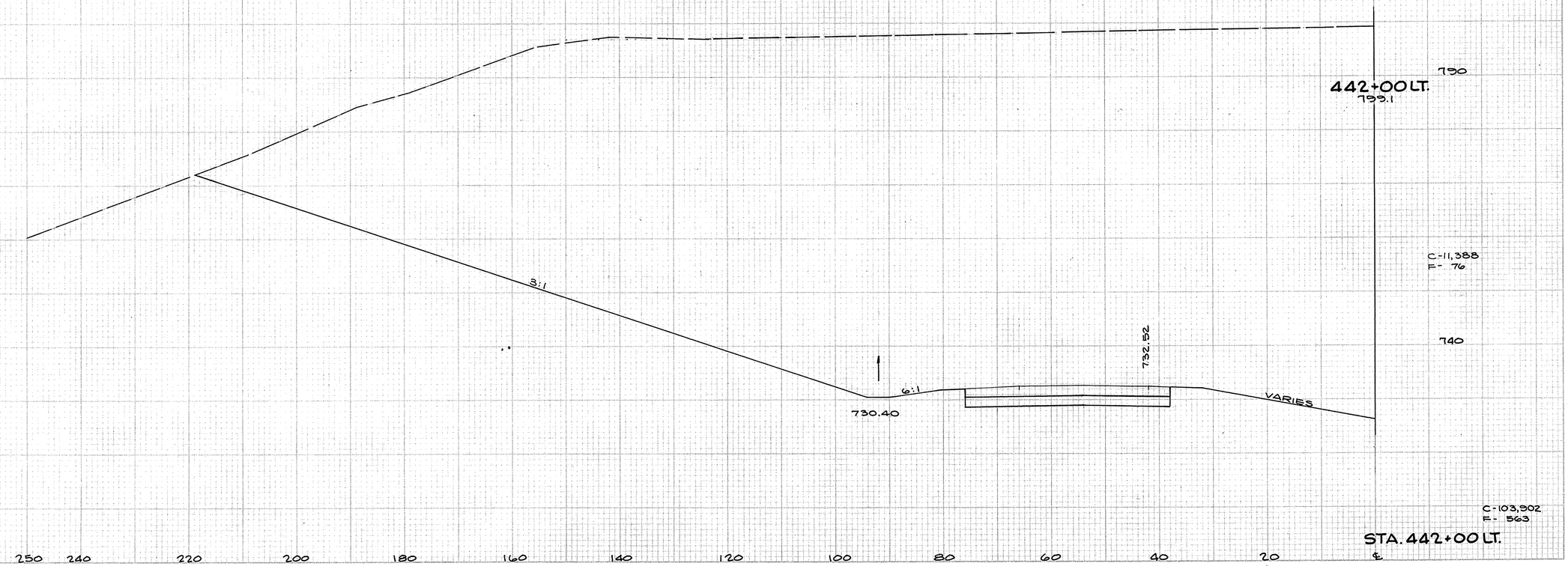
STA. 441+00 RT.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

52
313

SUM-271-8.29

END AREA CU. YDS.

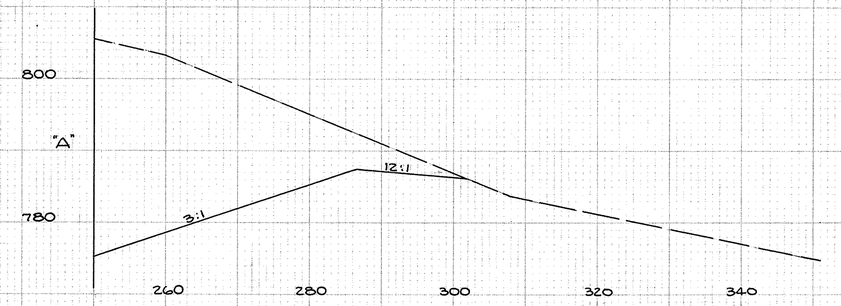


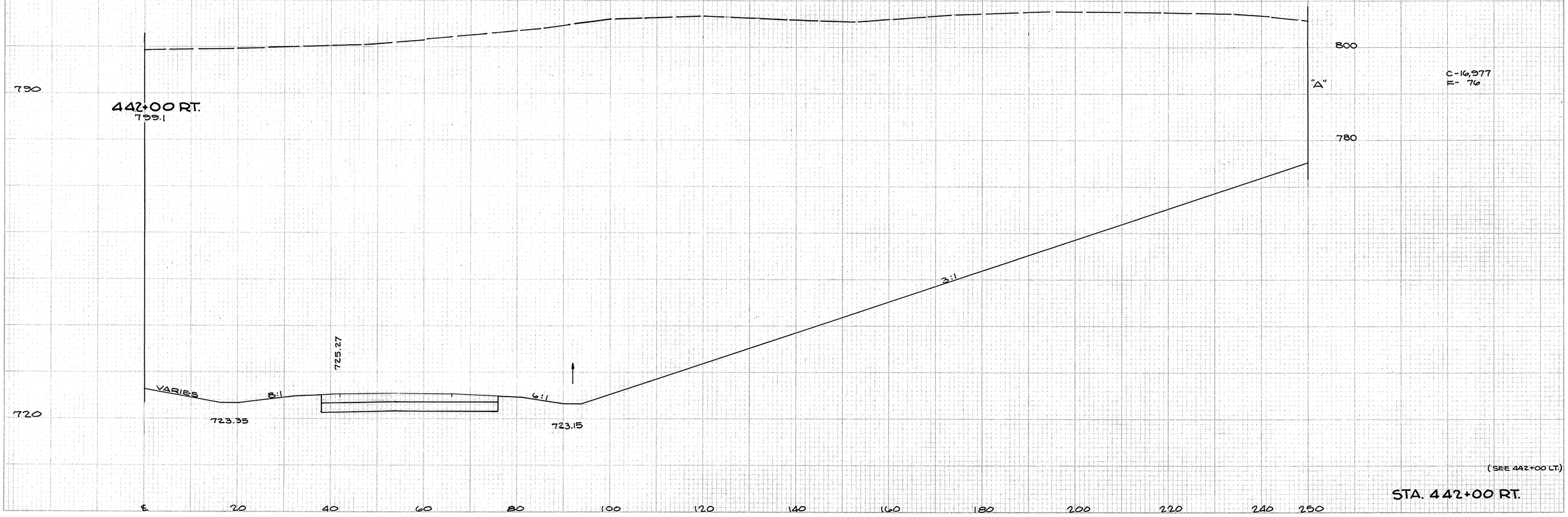
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

53
313

SUM-271-8.29

END AREA CU. YDS.





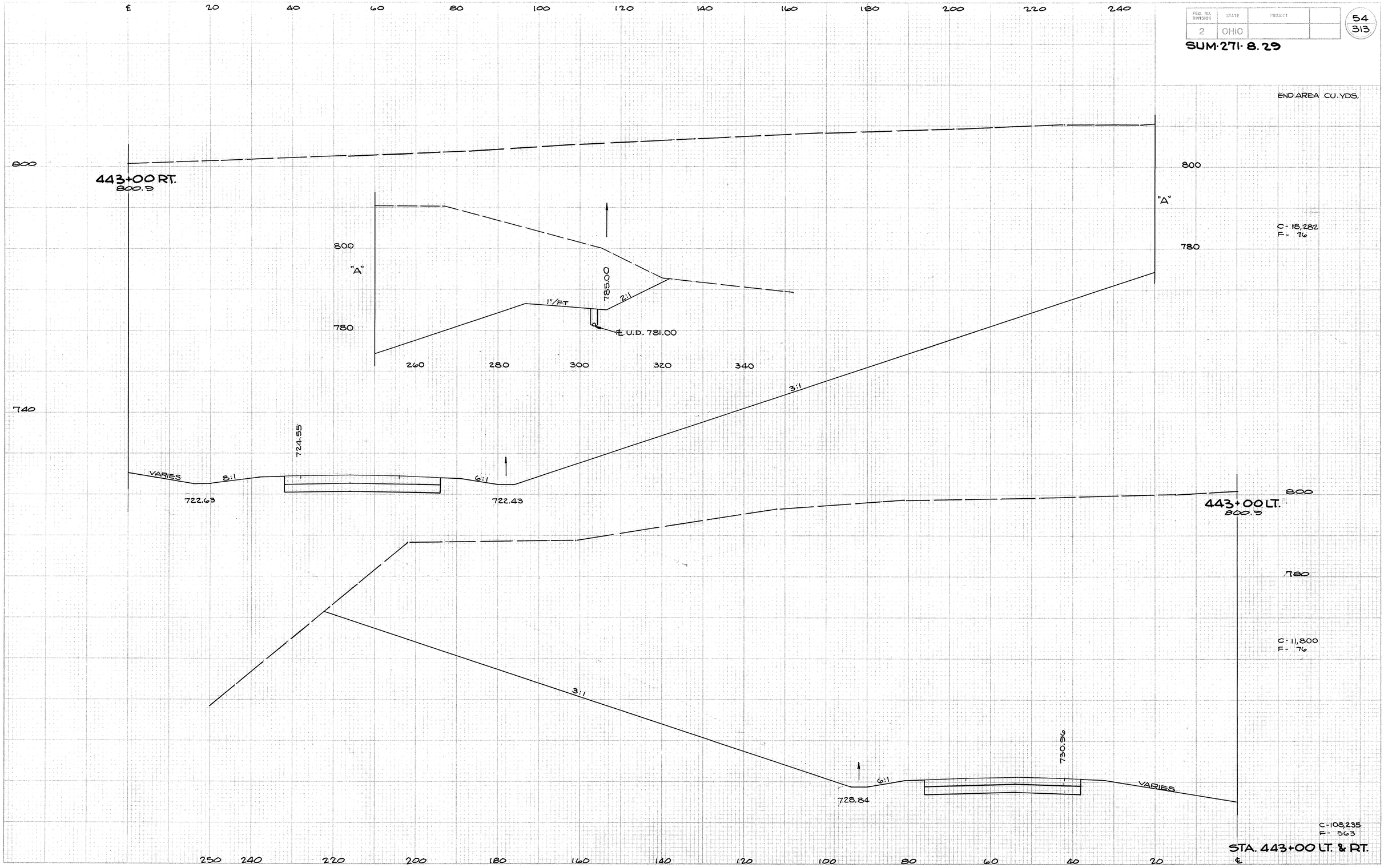
STA. 442+00 RT.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

54
313

SUM-271-8.29

END AREA CU. YDS.



FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

55
313

SUM-271-8.29

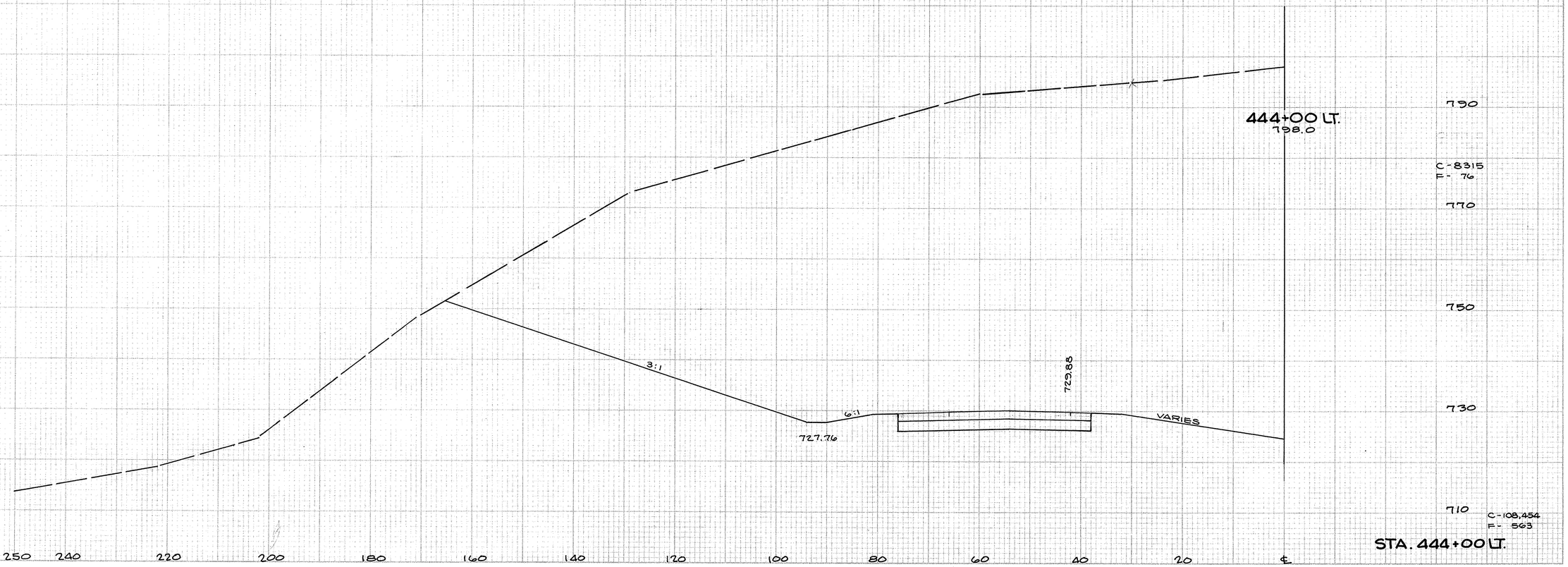
END AREA CU.YDS.

444+00 LT.
798.0

C-8315
F- 76

C-108,454
F- 563

STA. 444+00 LT.

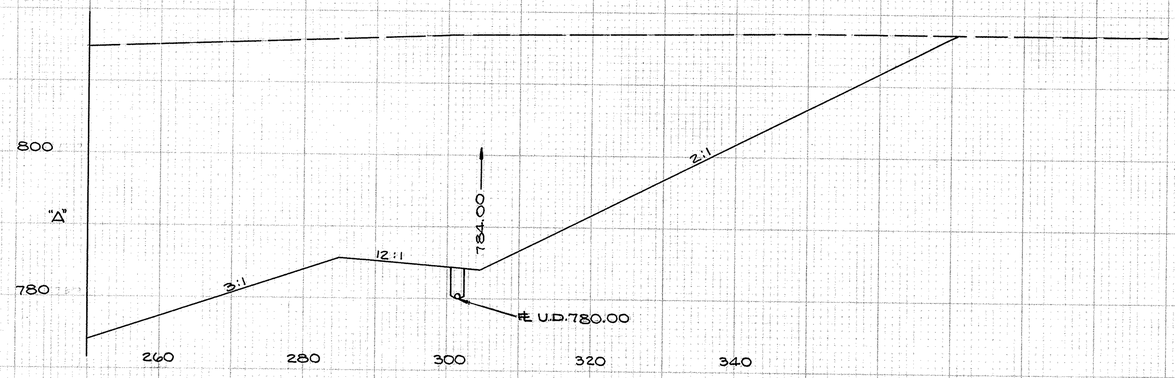


FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

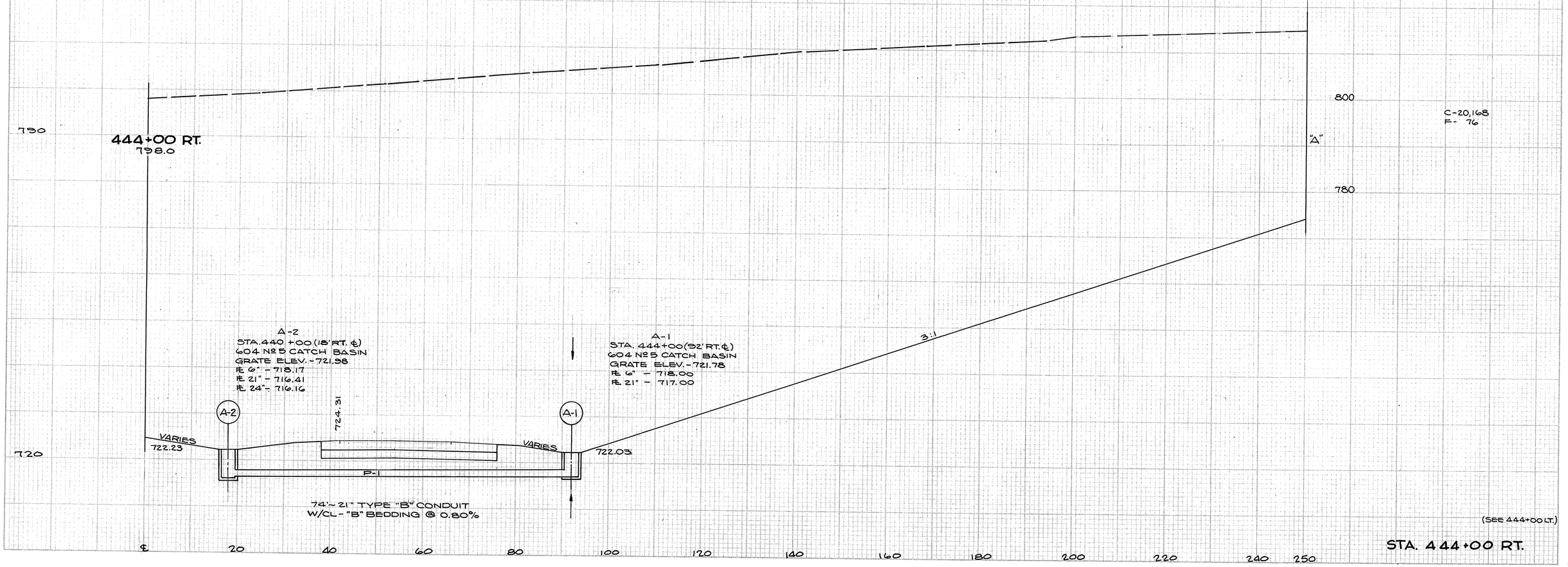
56
313

SUM·271·8.29

END AREA CU. YDS.



C-20,168
F- 76



(SEE 444+00 LT.)

STA. 444+00 RT.

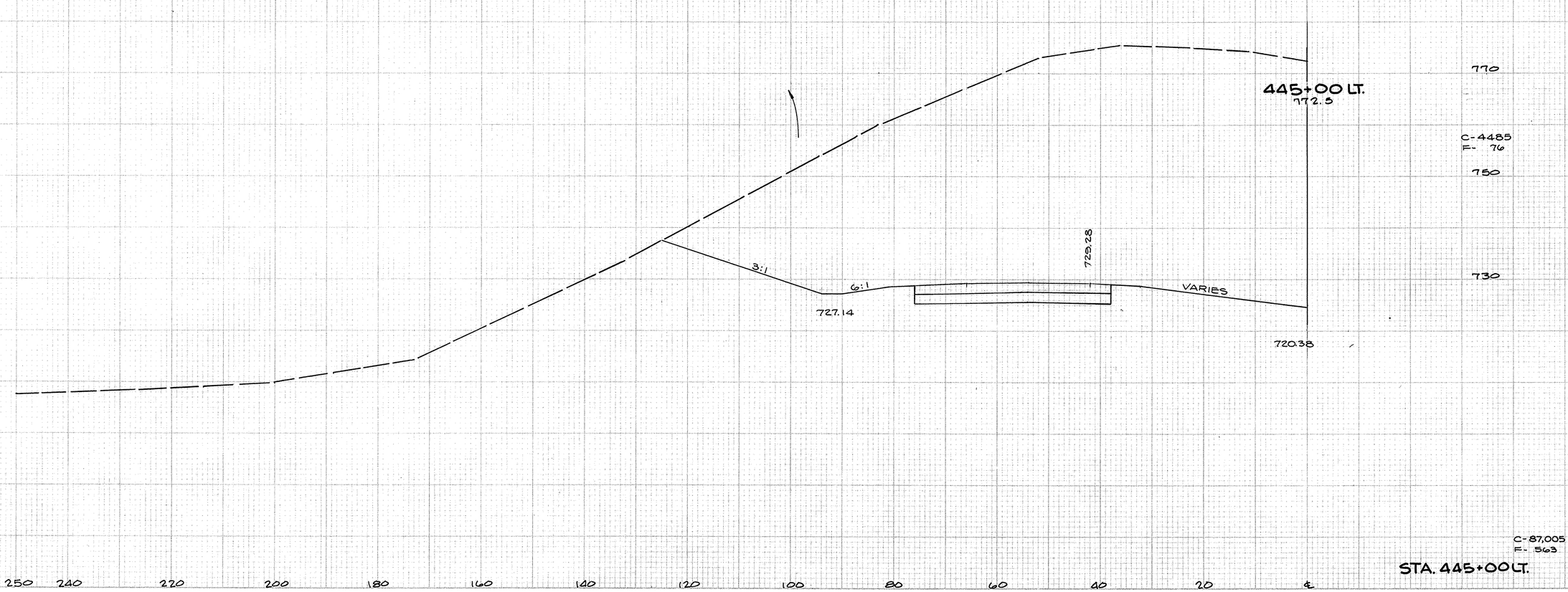
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

57
313

SUM: 271 · 8.29

END AREA CU. YDS.

END EXTRA DEPTH
SUB-BASE STA. 445+75 LT.



C-87,005
F- 563

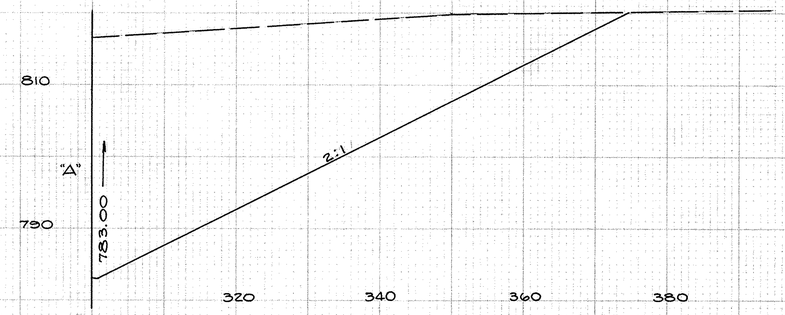
STA. 445+00 LT.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

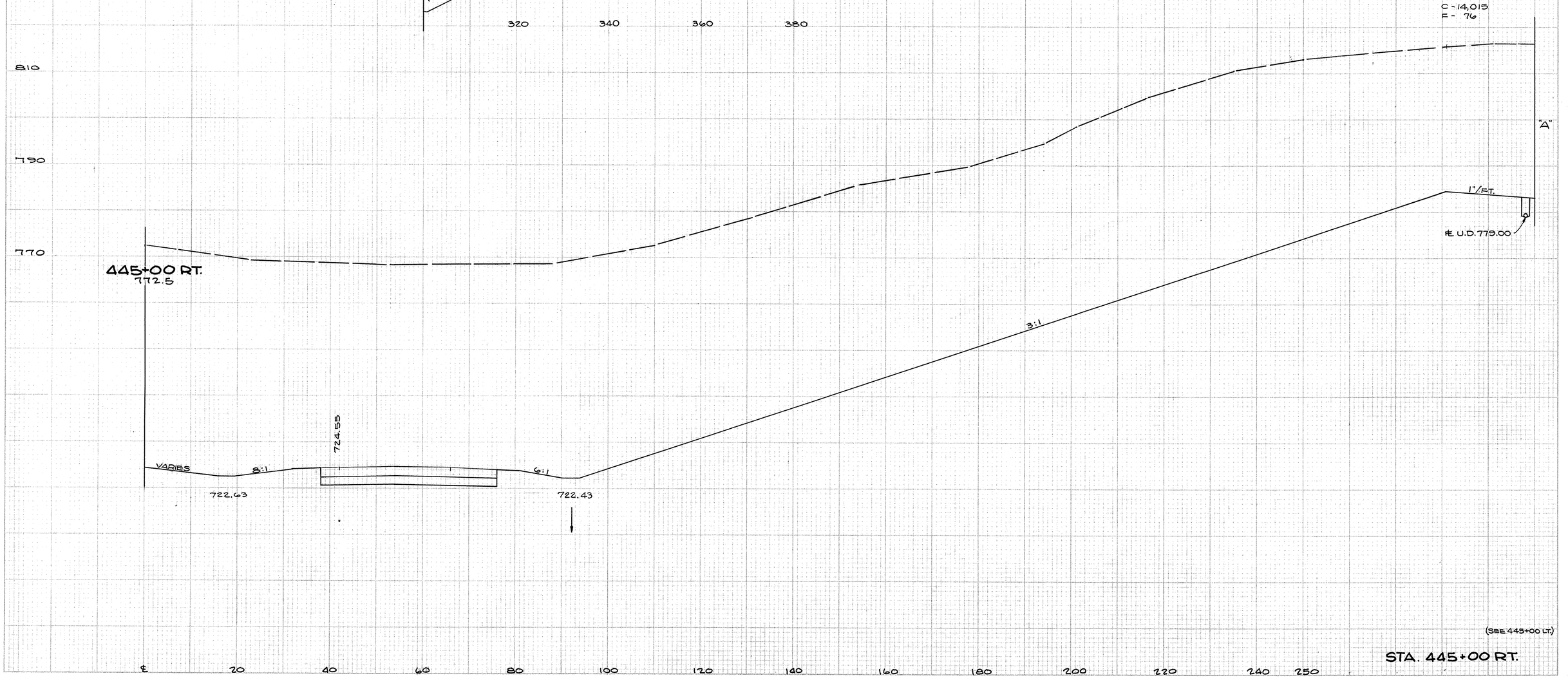
58
318

SUM-271-8.25

END AREA CU. YDS.



C - 14,015
F - 76



(SEE 445+00 LT.)

STA. 445+00 RT.

FED. NO. DIVISION	STATE	PROJECT	
2	OHIO		

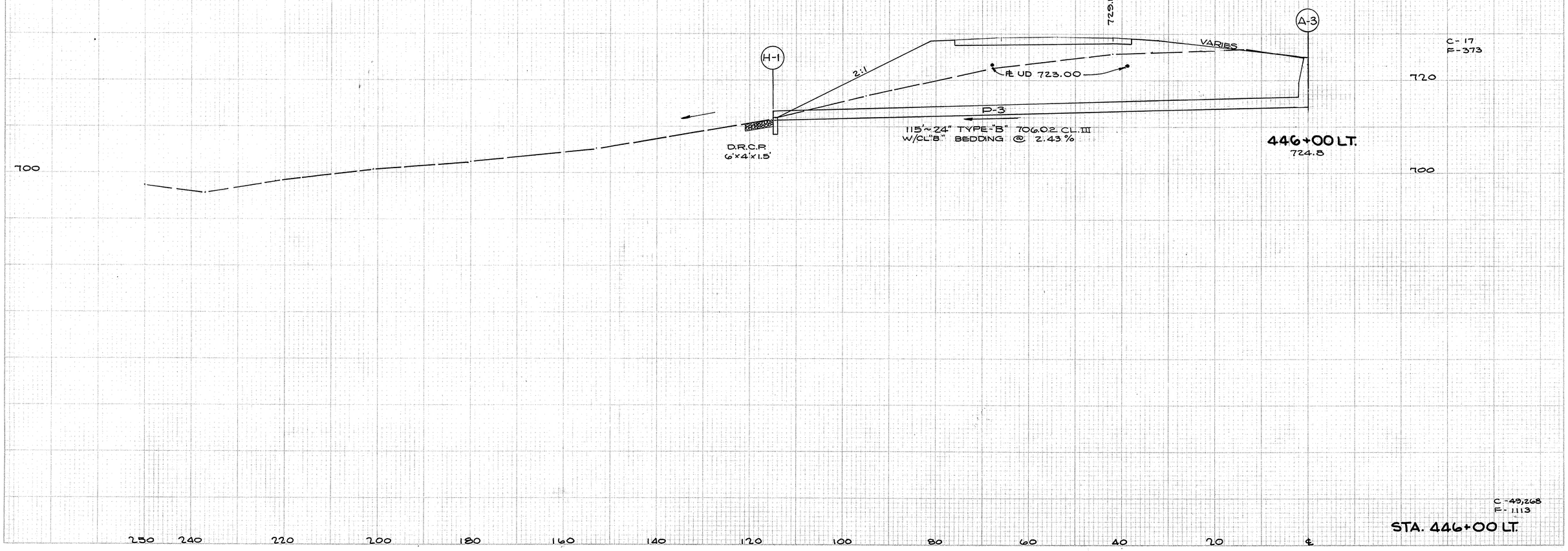
59
313

SUM-271-8.29

END AREA CU. YDS.

H-1
STA. 446+00 (115' LT. ℄)
HW-E HEADWALL
℄ 24" - 711.37

A-3
STA. 446+00(℄)
604 №1 MANHOLE
COVER - 725.00
℄ 6" - 719.00
℄ 12" - 719.00
℄ 24" - 714.16



C - 49,268
F - 1113

STA. 446+00 LT.

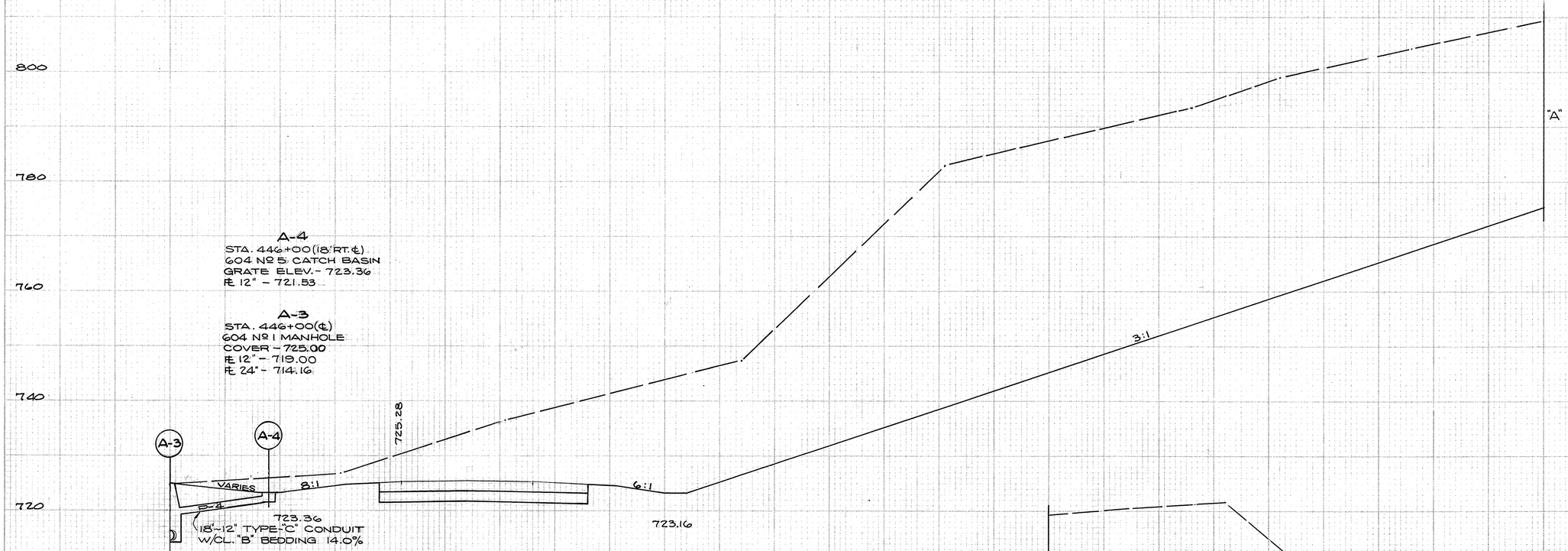
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

60
313

SUM. 271 · 8.29

END AREA CU. YDS.

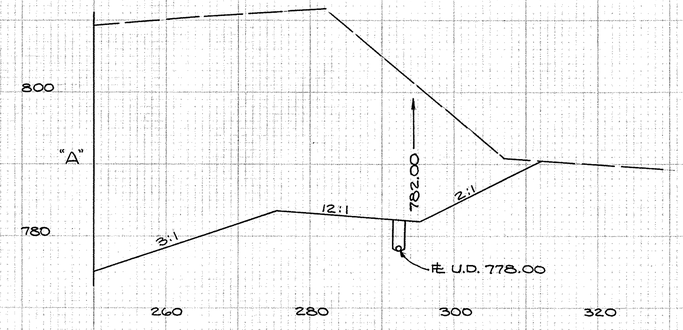
C-8088
F- 76



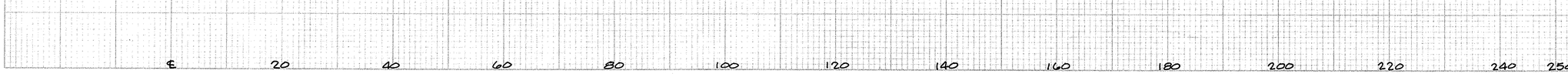
A-4
STA. 446+00 (18' RT. ℄)
604 Nº 5 CATCH BASIN
GRATE ELEV. - 723.36
℄ 12" - 721.53

A-3
STA. 446+00 (℄)
604 Nº 1 MANHOLE
COVER - 725.00
℄ 12" - 719.00
℄ 24" - 714.16

446+00 RT.
724.8



(SEE 446+00 LT.)



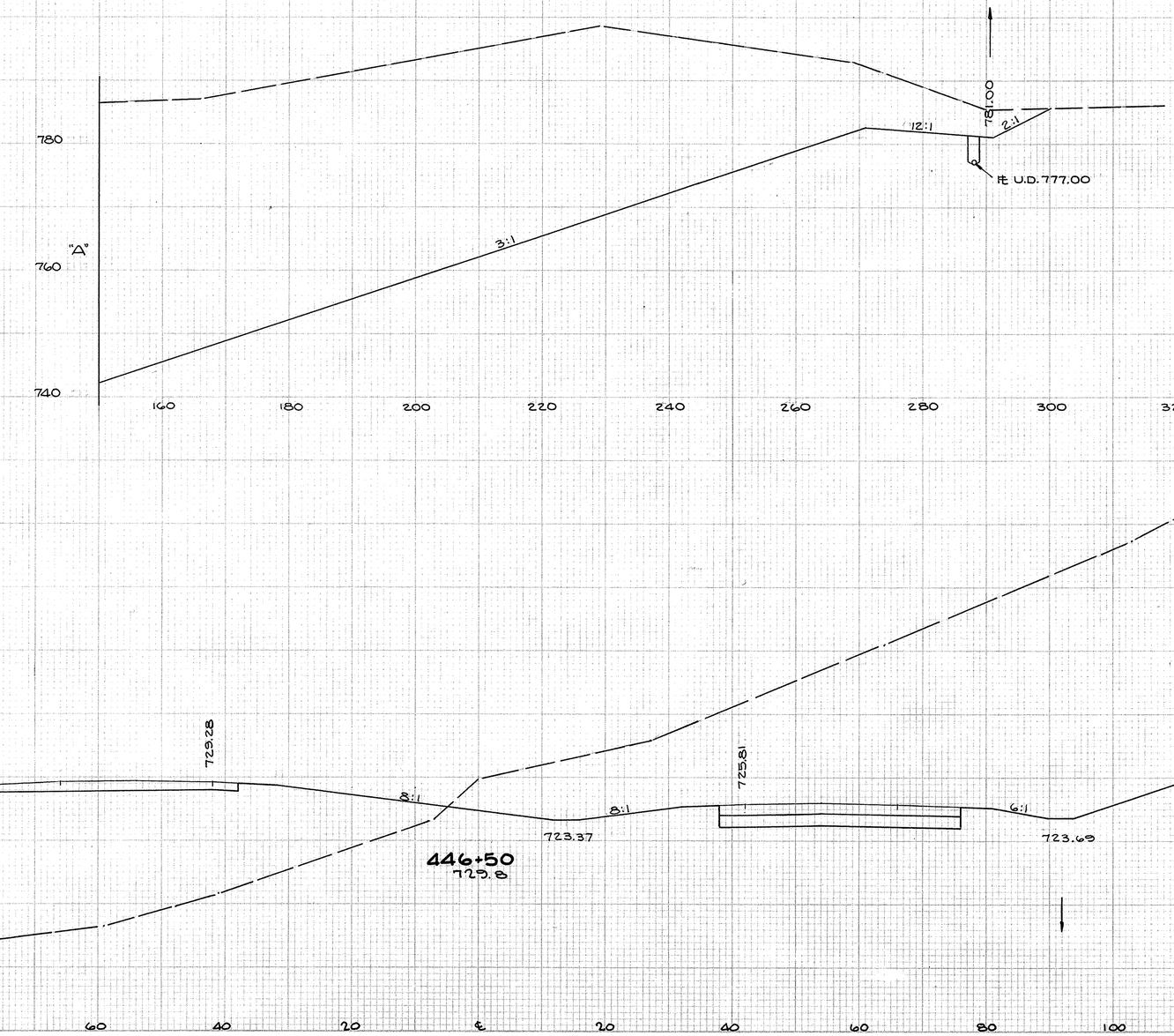
STA. 446+00 RT.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

61
313

SUM-271-8.29

END AREA CU. YDS.



C-8330
F-1888

C-15,218
F-2164

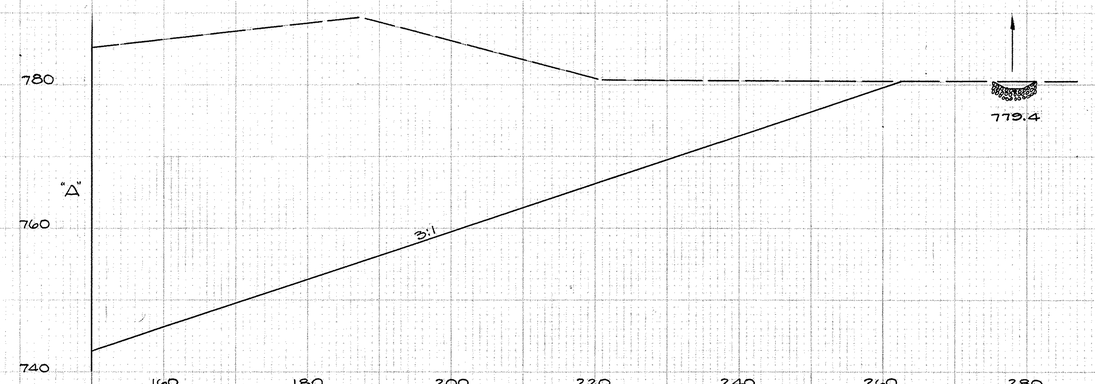
STA. 446+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

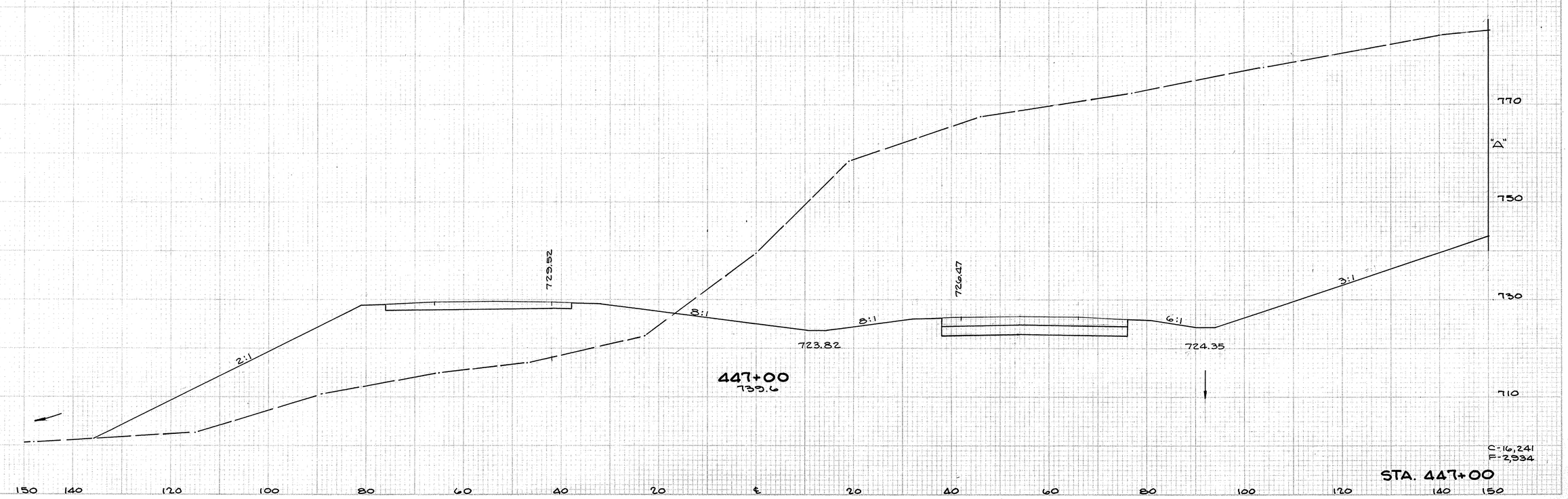
62
313

SUM-271- 8.29

END AREA CU. YDS.



C-9210
F-1281



C-16,241
F-2,934

STA. 447+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

63
313

SUM-271-8.29

BEGIN BRIDGE
STA. 449+33.68
WESTBOUND LANE

BEGIN BRIDGE
STA. 449+47.62
EASTBOUND LANE

END AREA CU. YDS.

731.68

730.31

8:1

8:1

726.83

2:1

2:1

C-0
F-6306
UM-3944

720

700

449+00
704.5

1:1

1:1

REMOVE & REPLACE W/ SUITABLE 203 EMBANKMENT

END EXTRA DEPTH
SUB-BASE STA. 448+40 RT.

C-4676
F-15,143
UM-8224

"A"

740

742.6

150

180

"A"

740

736.36

728.15

8:1

6:1

3:1

725.08

726.03

C-2525
F-1871
UM-497

720

448+00
740.9

700

REMOVE & REPLACE
W/SUITABLE 203
EMBANKMENT

1:1

1:1

BEGIN SPECIAL FOUNDATION EXCAVATION
BENEATH REAR APPROACH EMBANKMENT
STATION 447+82 ~ 165' LT.

UM-166

680

C-21,731
F-5,837

STA. 448+00-449+00

150 140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140 150

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

64
313

SUM-271-8.29

END SPECIAL FOUNDATION EXCAVATION
BENEATH THE REAR APPROACH EMBANKMENT
STATION 450+16 ~ 120' RT.

END AREA CU. YDS.

ZERO STA. 450+13

C - 0
F - 0

732.94

C - 0
F - 295

733.48

C - 0
F - 1225
UM-1106

700

1:1

450+00
699.5

1:1

REMOVE & REPLACE W/SUITABLE 203 EMBANKMENT

C - 0
F - 6322
UM-4236

732.52

731.57

BRIDGE SLOPE

C - 0
F - 5603
UM-3469

690

1:1

449+50
689.8

1:1

REMOVE & REPLACE W/SUITABLE 203 EMBANKMENT

C - 0
F - 11,027
UM-6864

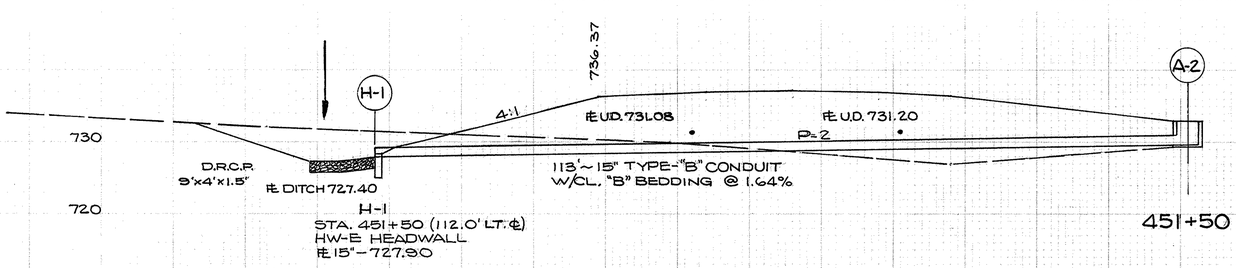
STA. 449+50-450

150 140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140 150

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

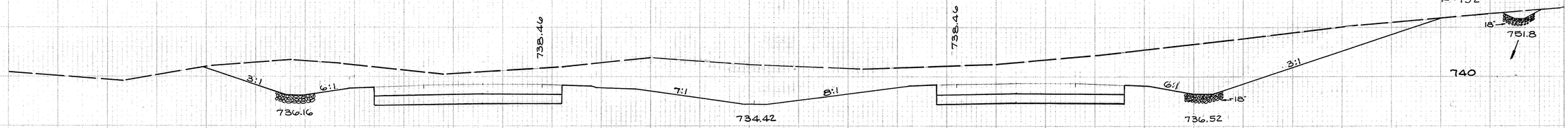
65
3/3

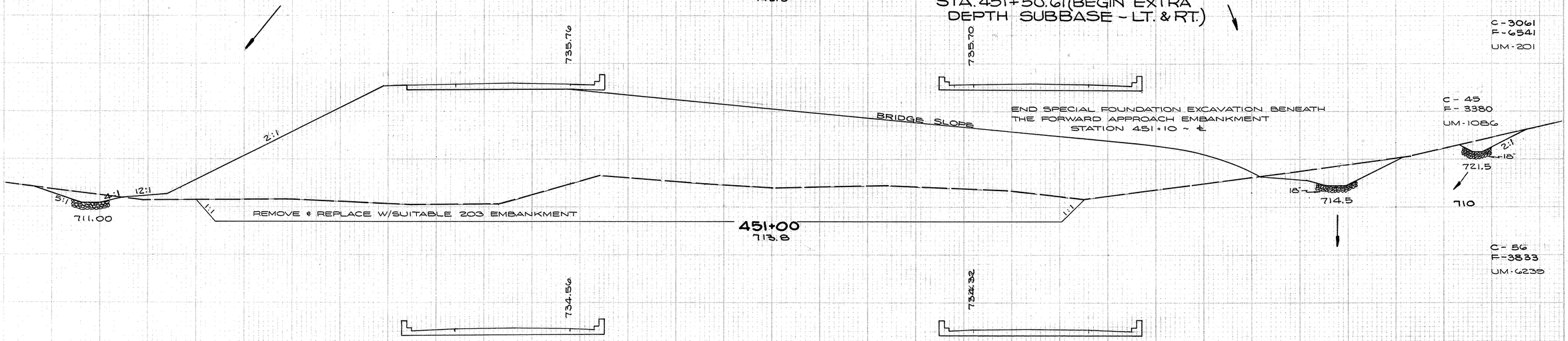
SUM-271-8.29



A-2
STA. 451+50 (1' RT. ℄)
604 Nº 8 CATCH BASIN
GRATE ELEV. - 732.78
℄ 6" - 730.50
℄ 15" - 729.75
℄ 12" - 730.00

END AREA CU. YDS.



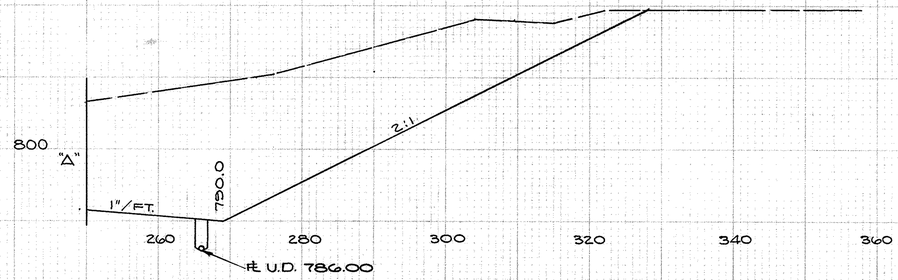


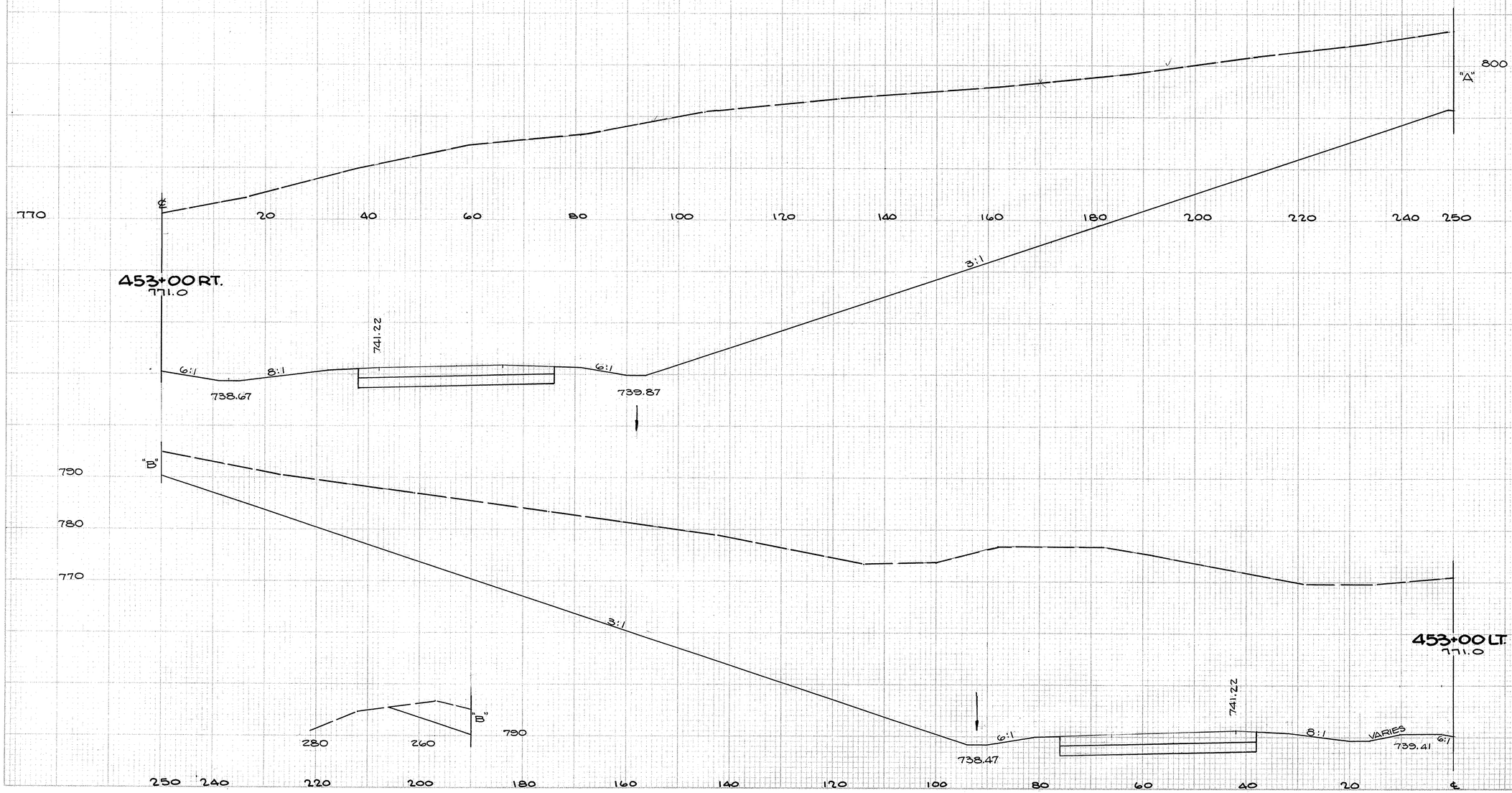
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

66
313

SUM-271-8.29

END AREA CU. YDS.





C-16,020
F-152

C-32,644
F-563

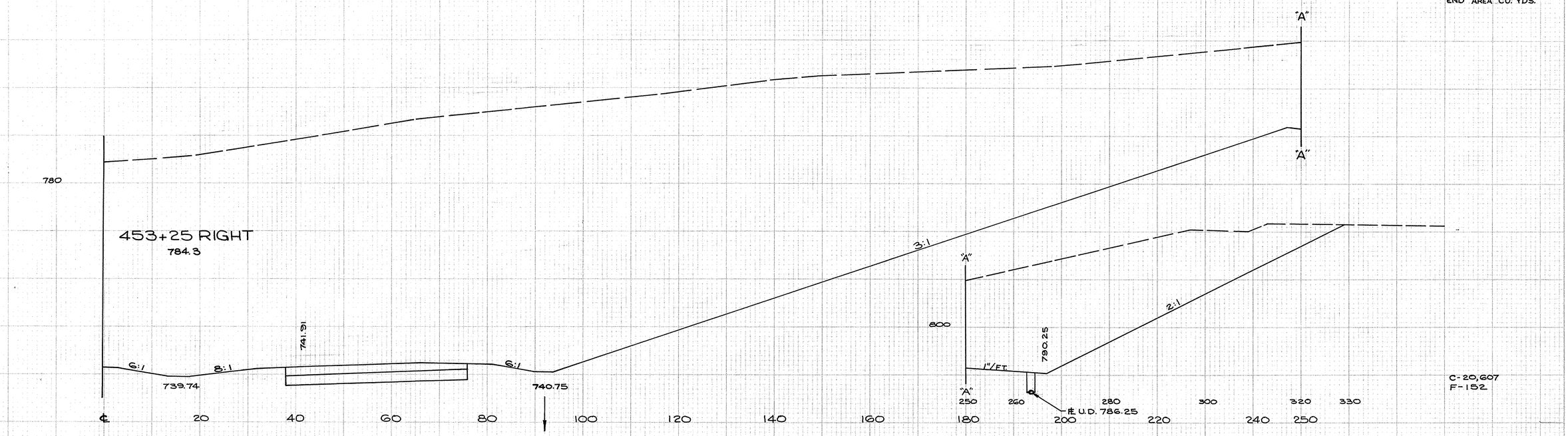
STA. 453+00 LT. & RT.

FED. AD. DIVISION	STATE	PROJECT	
2	OHIO		

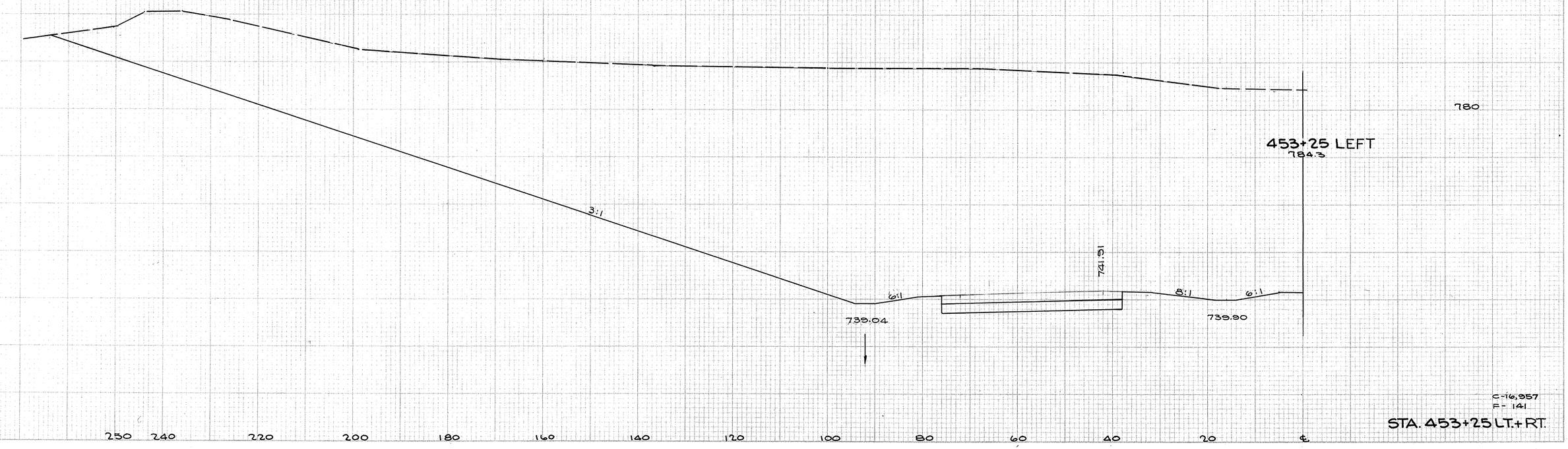
SUM-271-8.29

67
313

END AREA CU. YDS.



C-20,607
F-152



C-16,957
F-141

STA. 453+25 LT.+RT.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

68
313

SUM-271-8.29

END AREA CU. YDS.

800

780

760

740

454+00 LT.
803.2

743.38

3:1

6:1

740.68

8:1

6:1

741.11

250 240 220 200 180 160 140 120 100 80 60 40 20 ℄

C - 12,995
F - 76

C - 71,131
F - 422

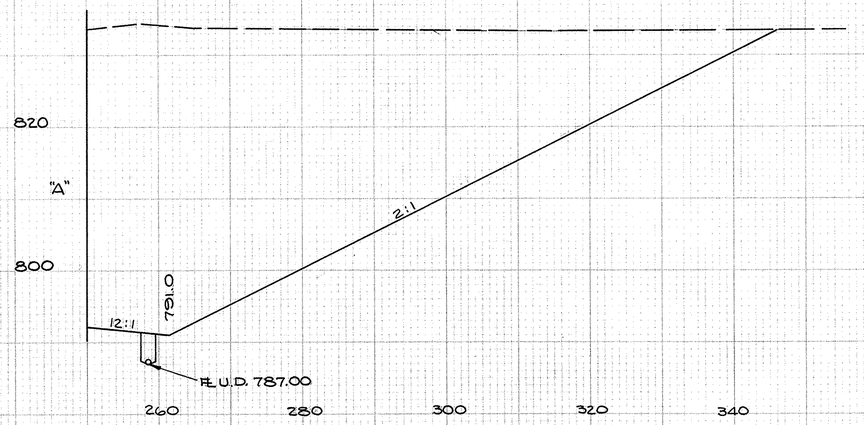
STA. 454+00 LT.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

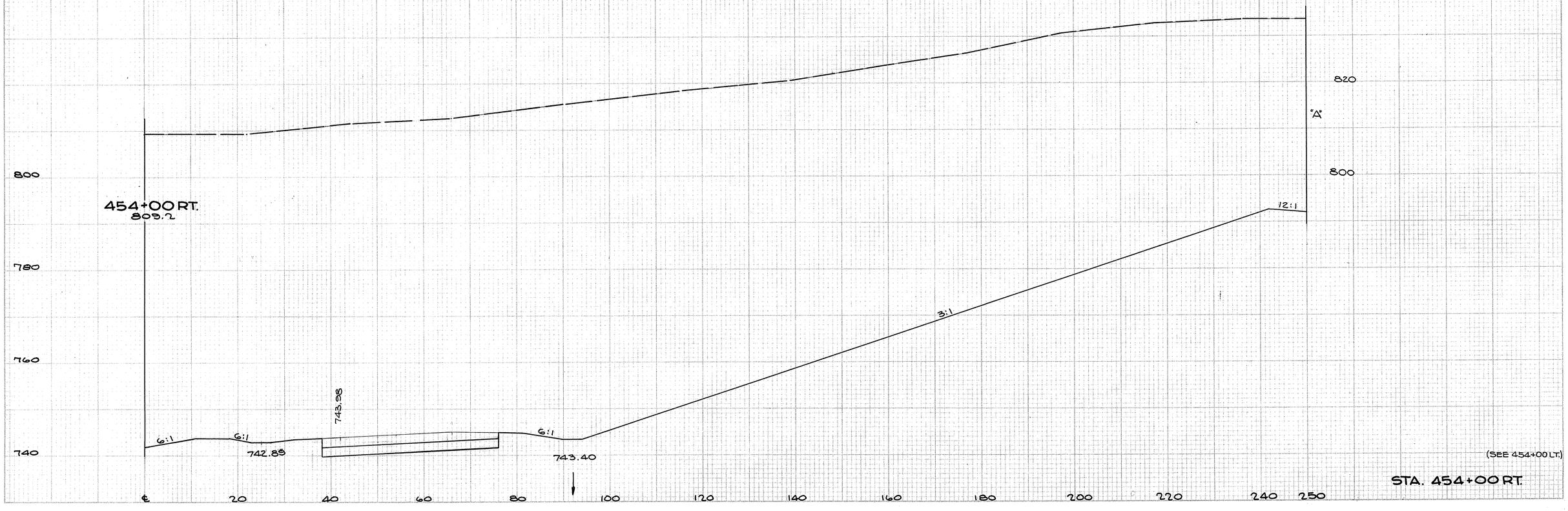
69
313

SUM-271-8.29

END AREA CU. YDS.



C-17,612
F- 76



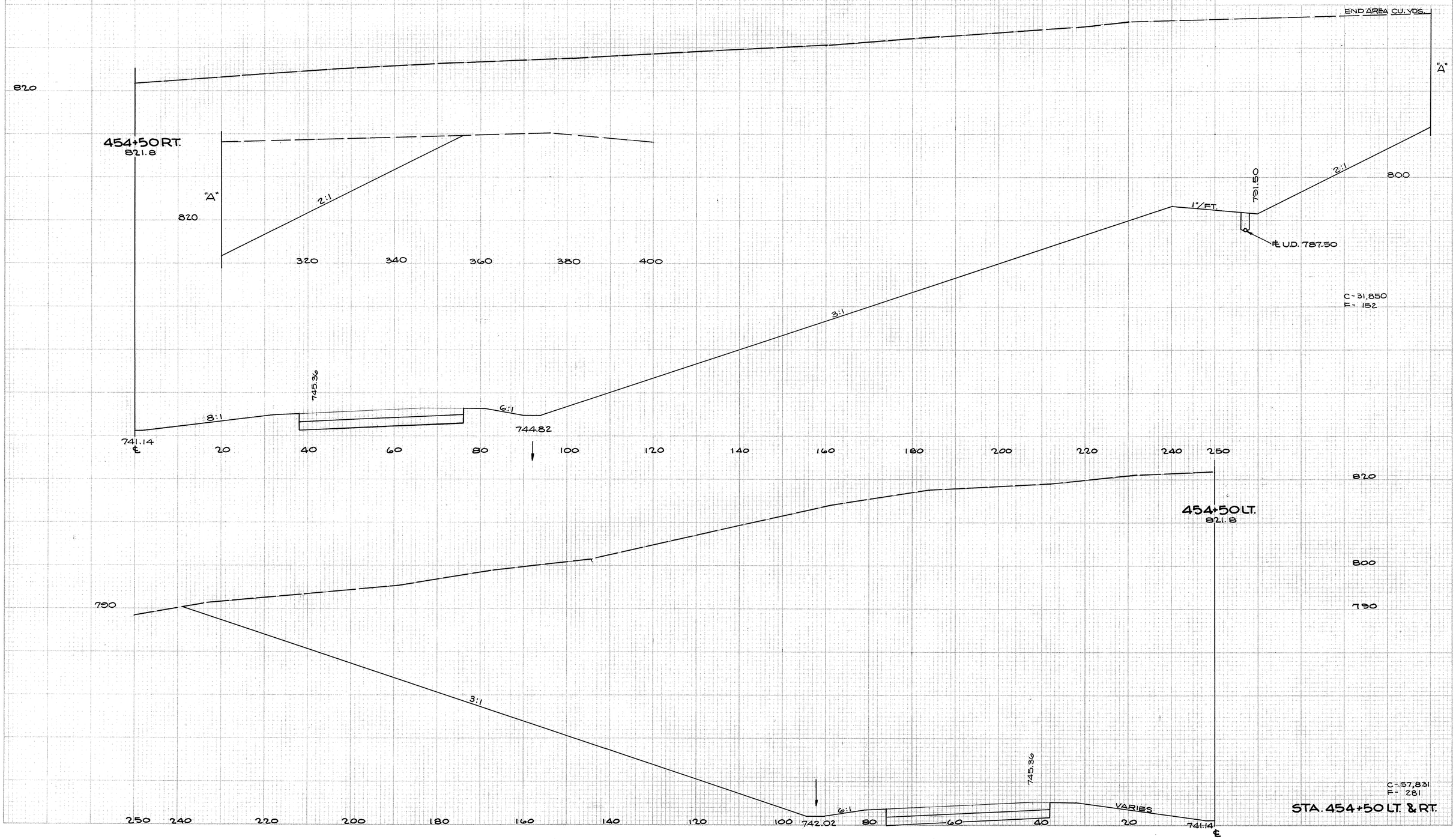
(SEE 454+00 LT.)

STA. 454+00 RT.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

70
313

SUM: 271-8.29

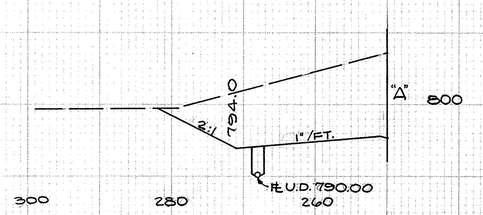


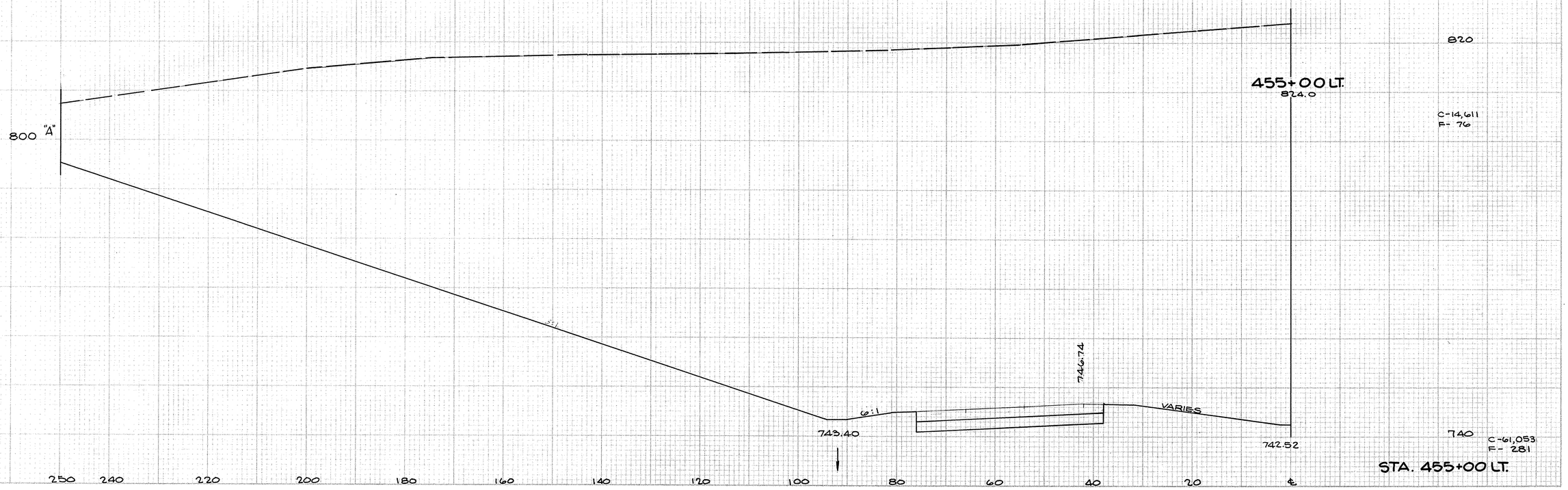
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

71
313

SUM-271-8.29

END AREA CU. YDS.



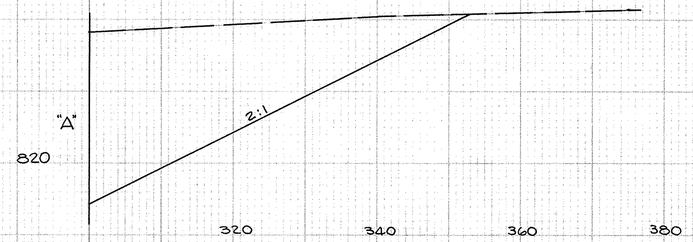


FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

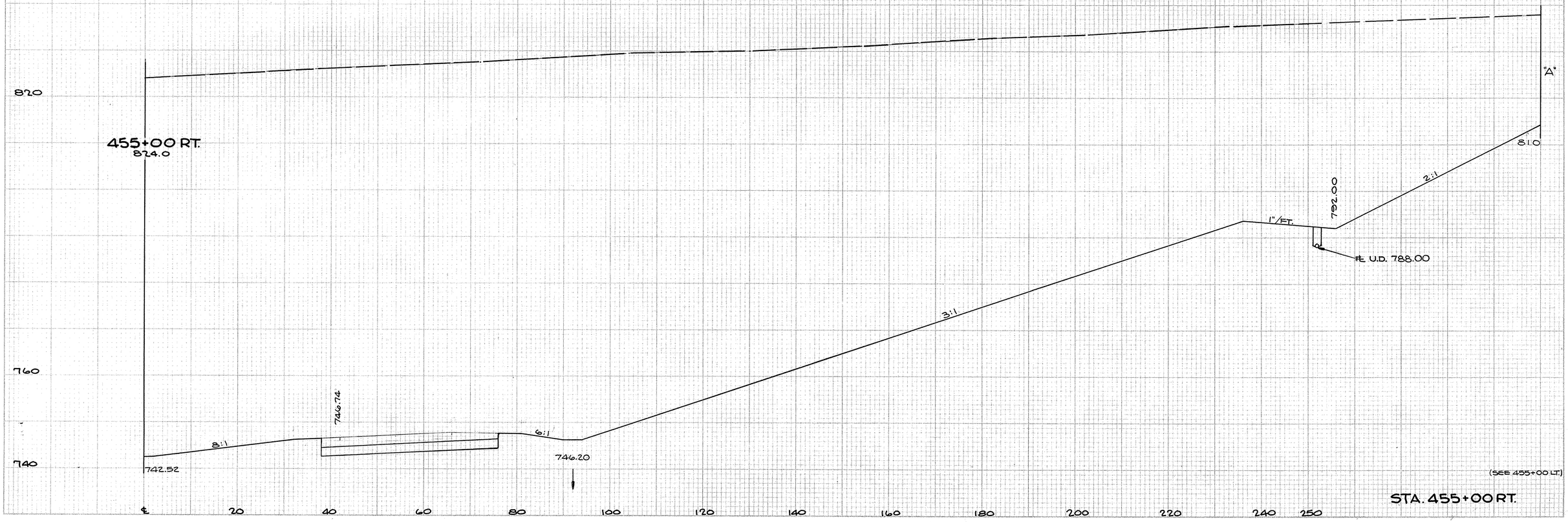
72
313

SUM-271-8.29

END AREA CU. YDS.



C-19,476
F- 76



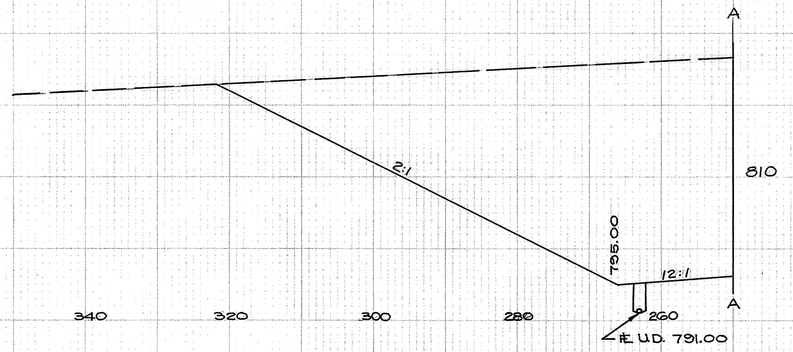
STA. 455+00 RT.

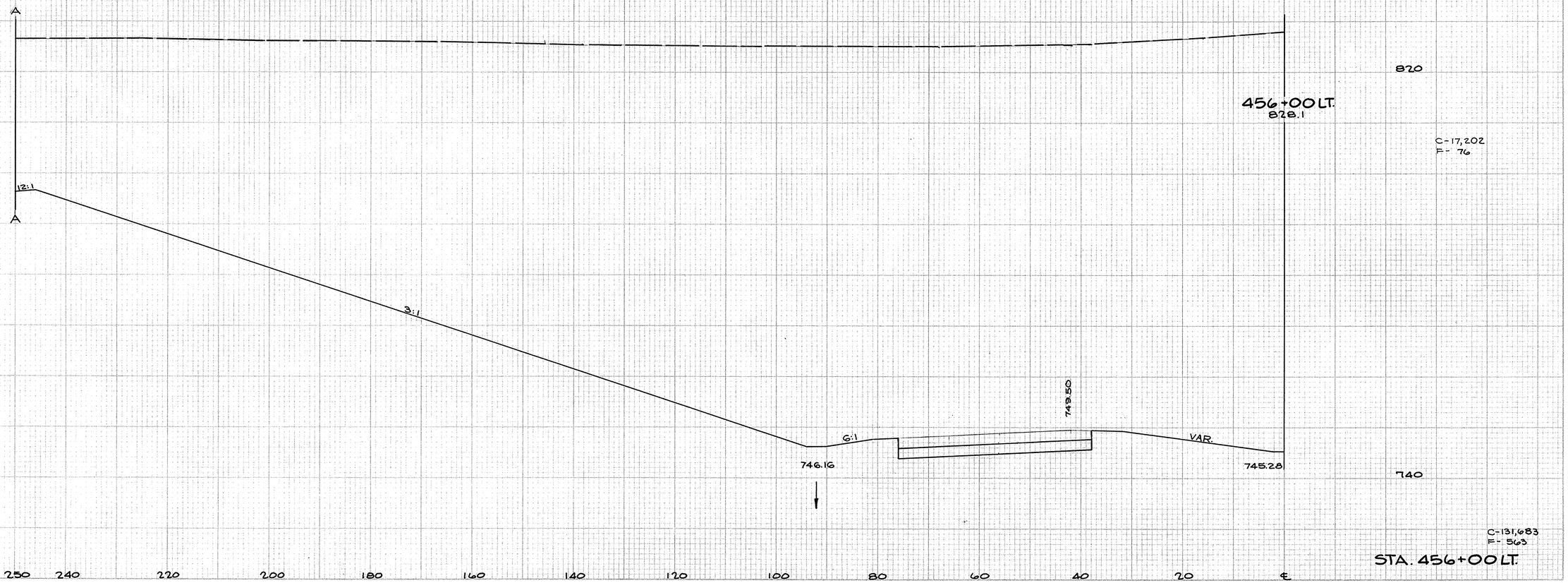
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

73
313

SUM-271-8.29

END AREA CU. YDS.





STA. 456+00 LT.

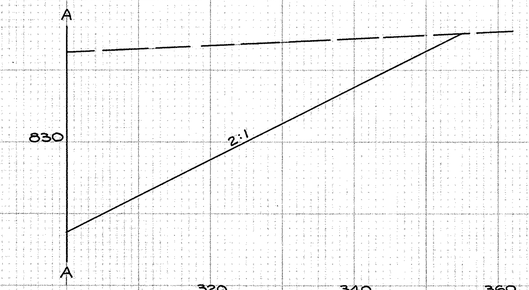
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

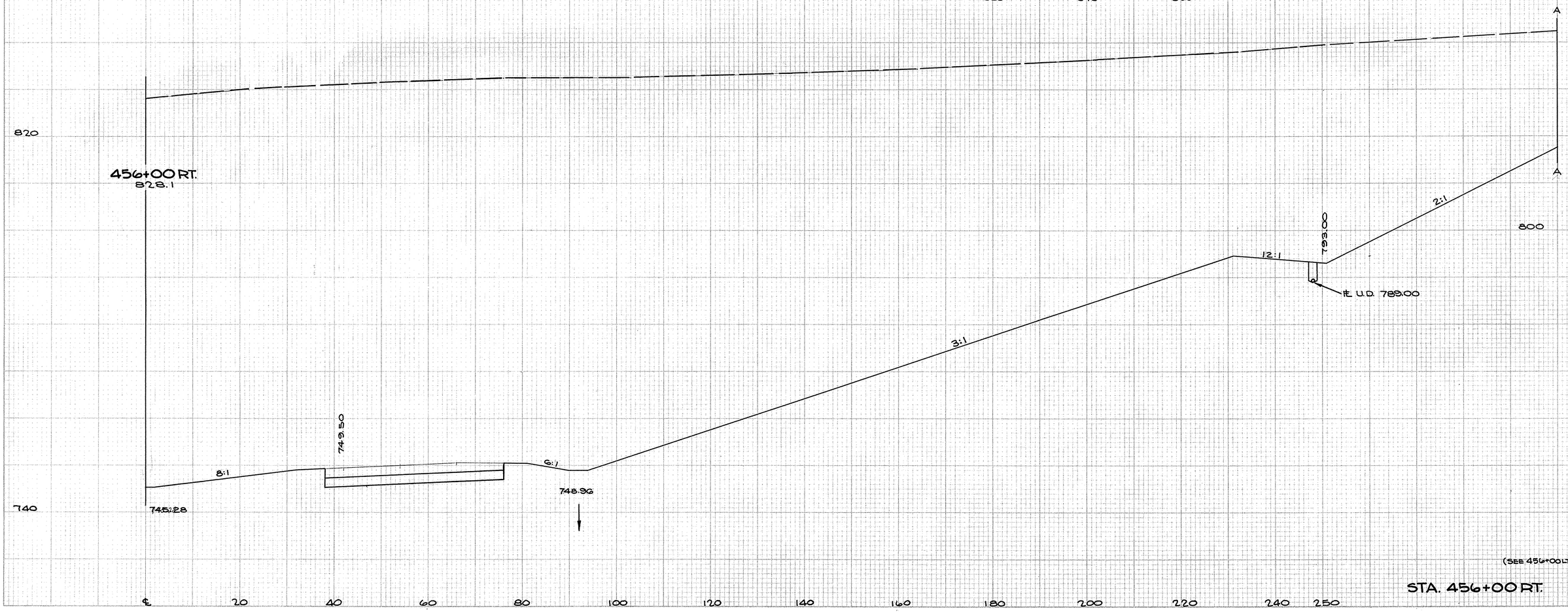
74
313

SUM-271-8.29

END AREA CU. YDS.

C-19,820
F- 76





(SEE 456+00 LT.)

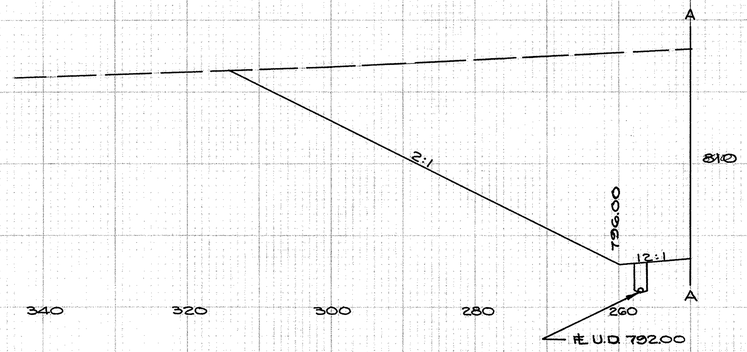
STA. 456+00 RT.

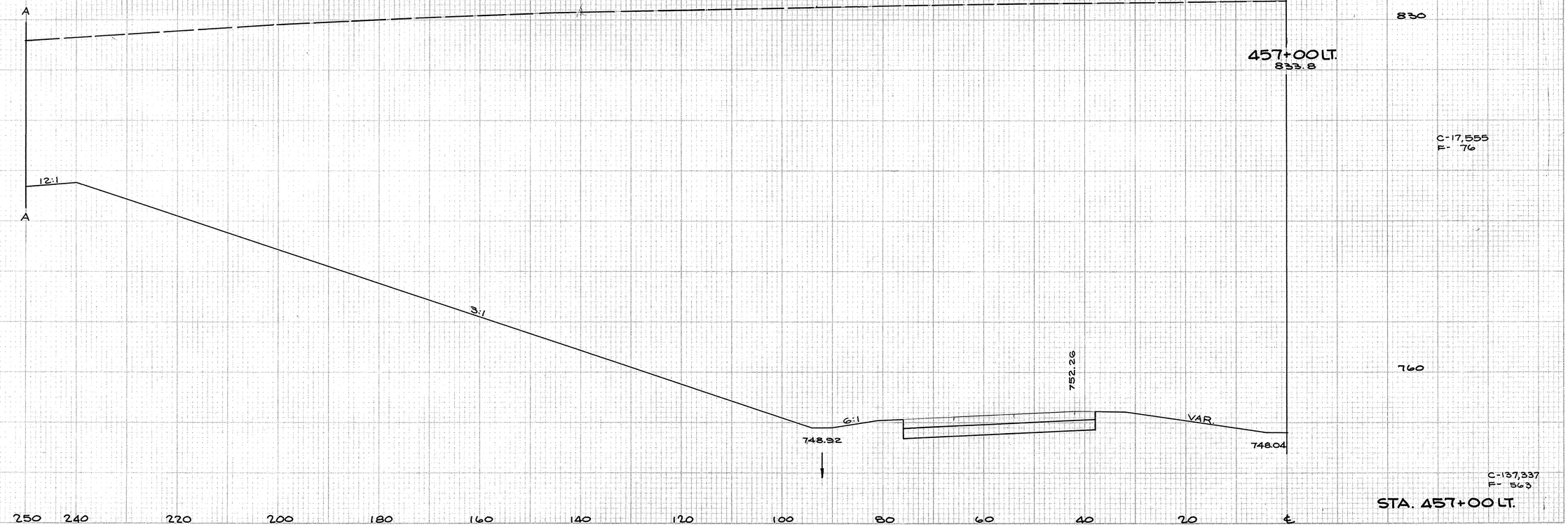
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

75
313

SUM-271-8.29

END AREA CU. YDS.





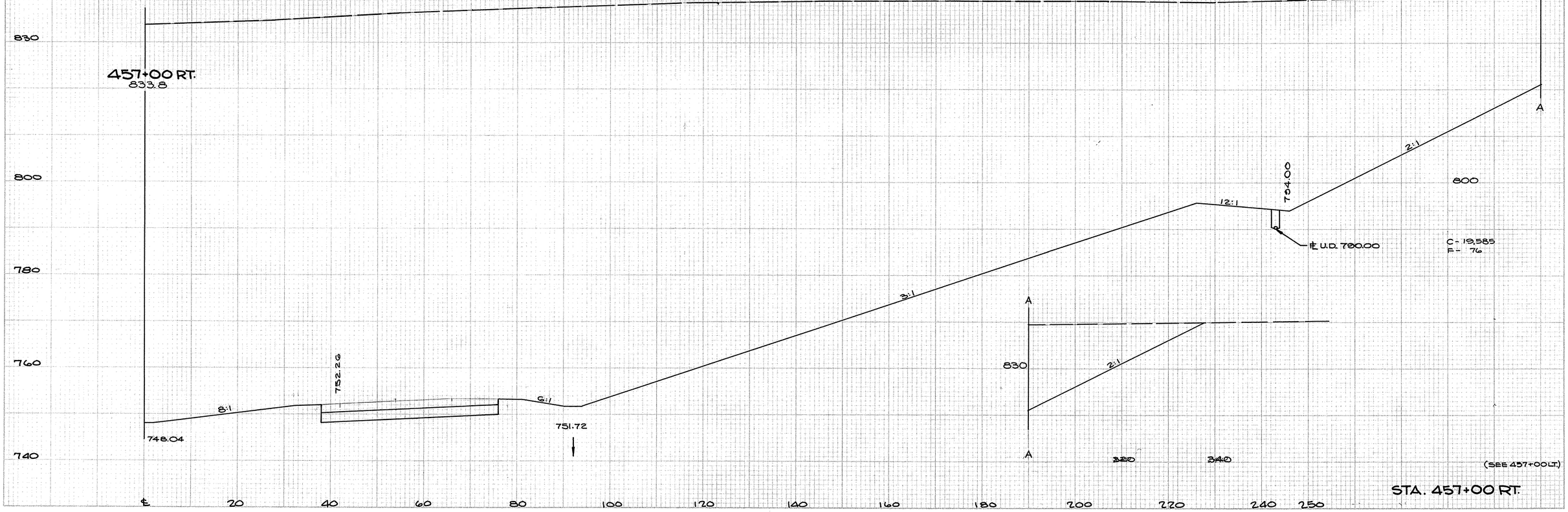
STA. 457+00 LT.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

76
313

SUM-271-8.29

END AREA CU. YDS.



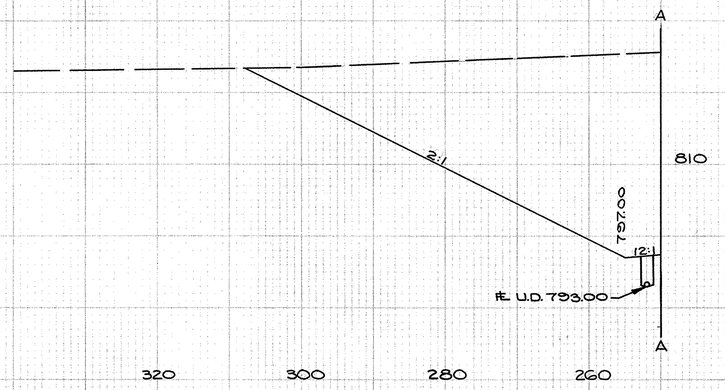
STA. 457+00 RT.

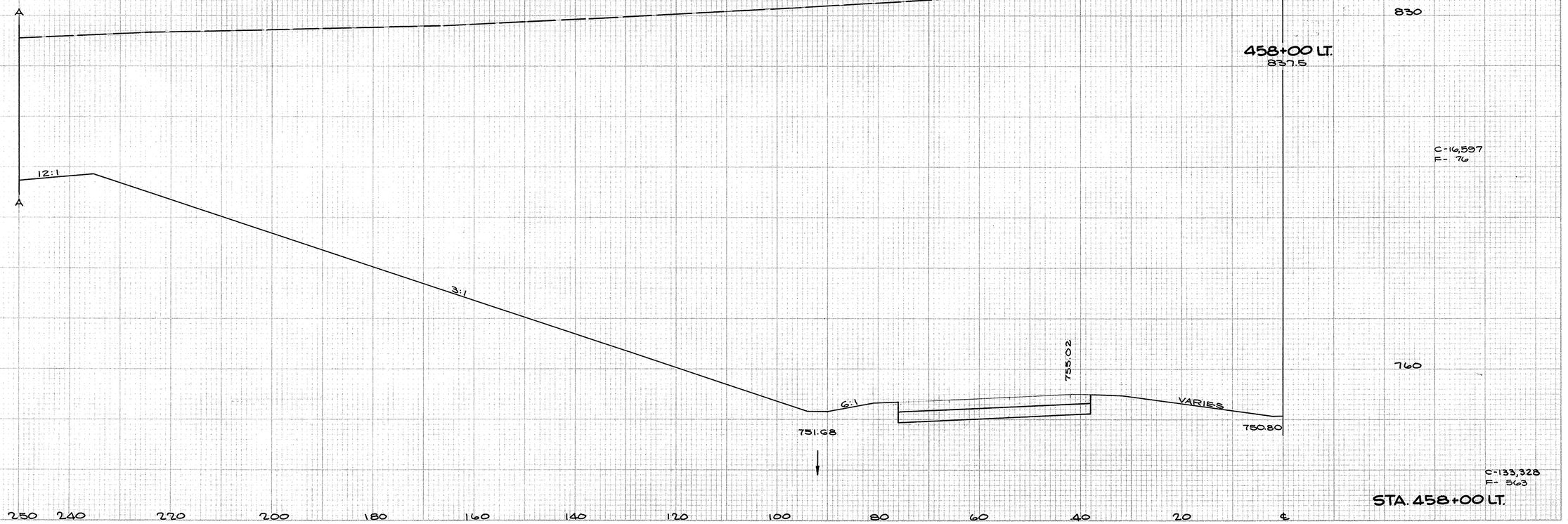
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

77
313

SUM·271·8.29

END AREA CU. YDS.



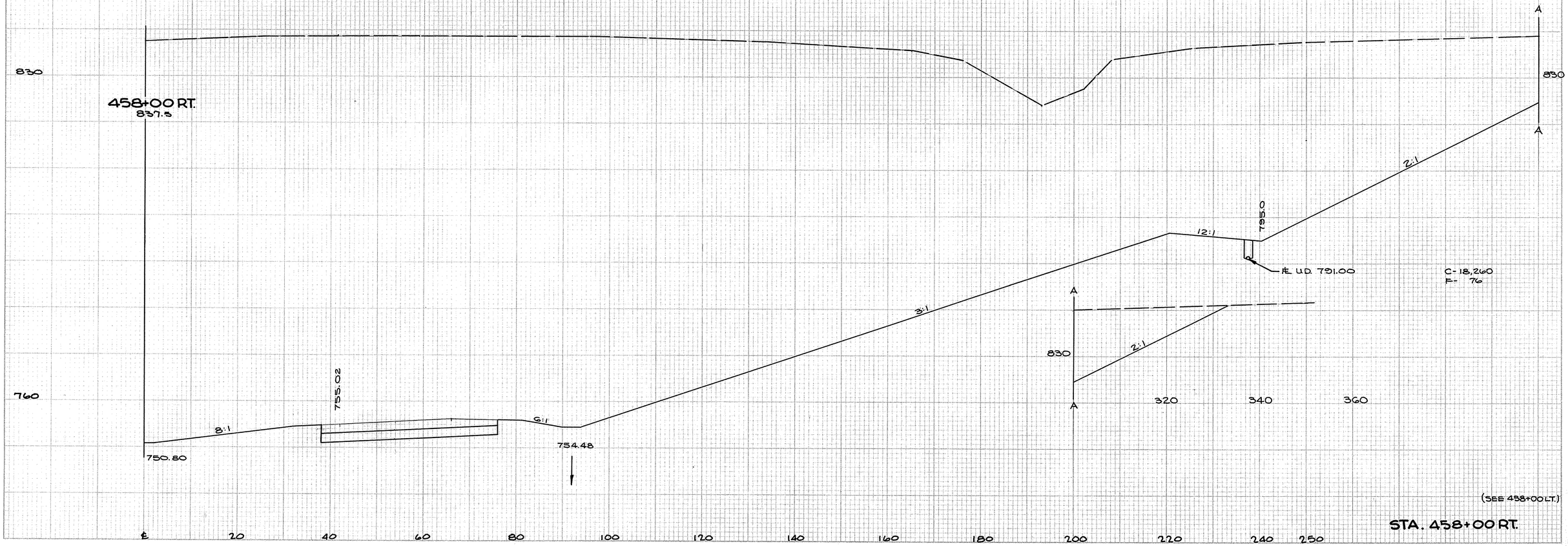


FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

78
313

SUM-271-8.29

END AREA CU. YDS.



(SEE 458+00 LT.)

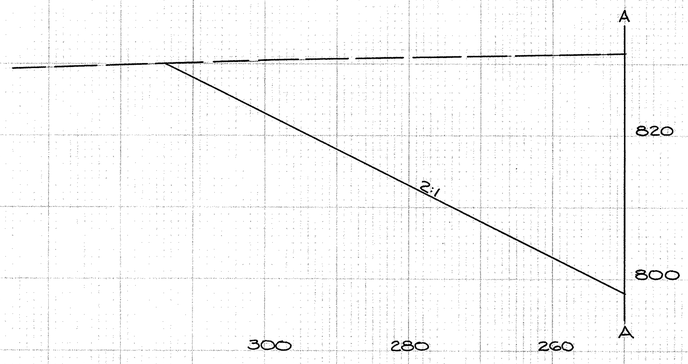
STA. 458+00 RT.

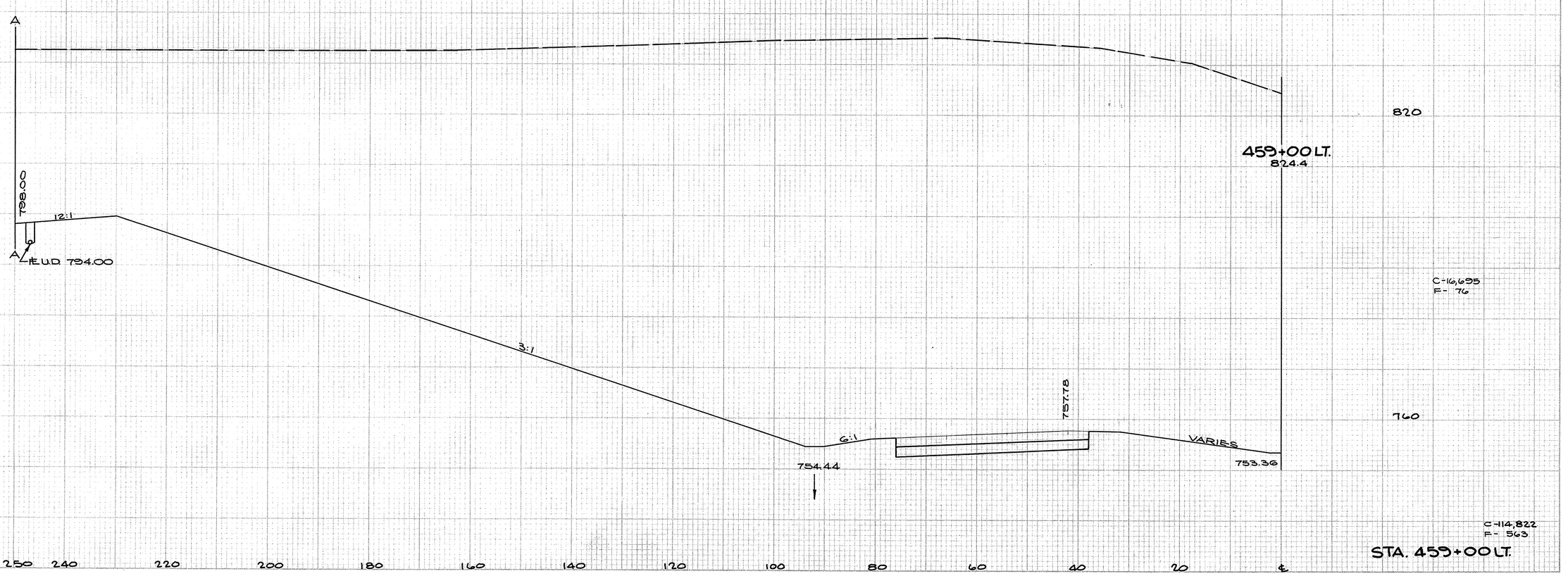
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

79
313

SUM-271-8.29

END AREA CU. YDS.





FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

80
313

SUM-271-8.29

END AREA CU. YDS.

459+00 RT.
824.4

800

760

757.78

8:1

753.56

6:1

757.24

3:1

12:1

72'-0"

FE. U.D. 792.00

A

A

C-10,452
F- 76

810

2:1

260

280

300

℄ 20 40 60 80 100 120 140 160 180 200 220 240 250

(SEE 459+00LT.)

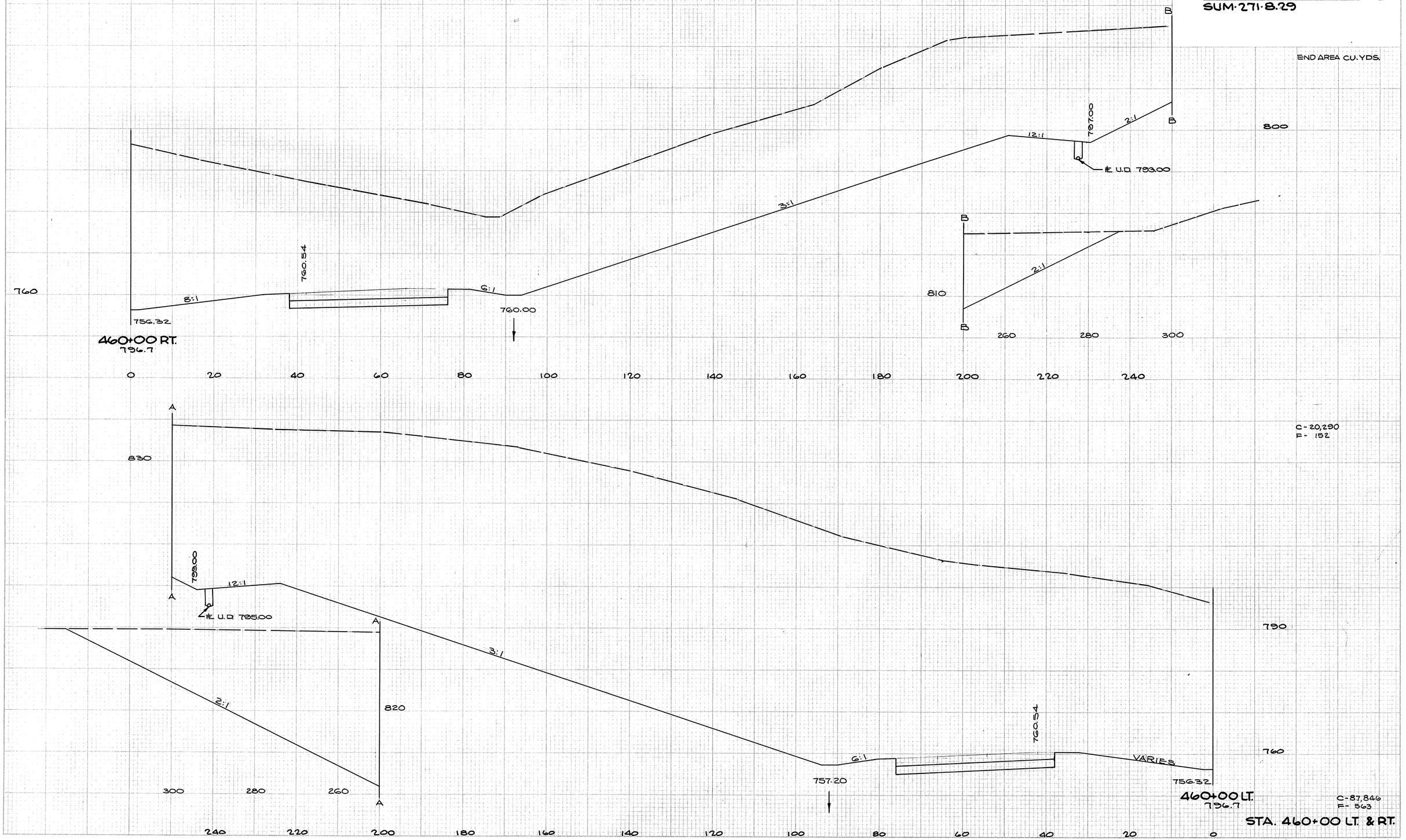
STA. 459+00 RT.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

81
313

SUM-271-8.29

END AREA CU. YDS.



C-20,290
F- 152

C-87,846
F- 563

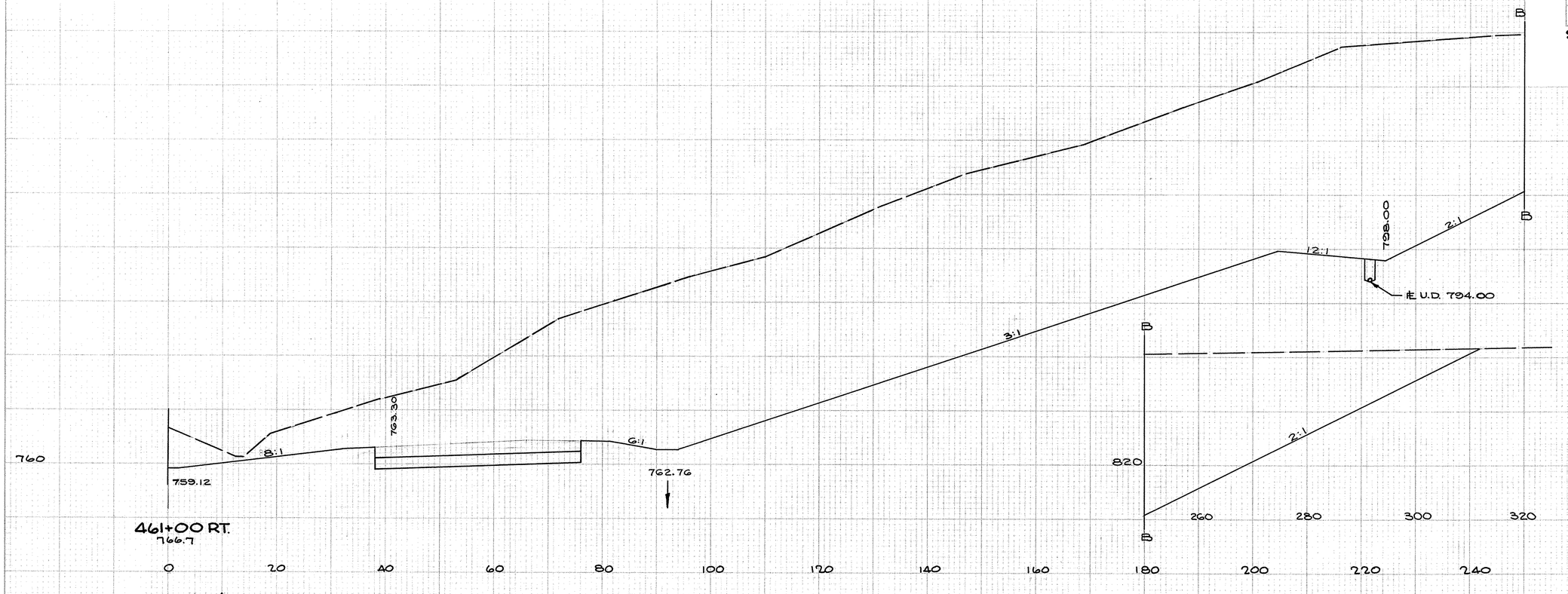
STA. 460+00 LT. & RT.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

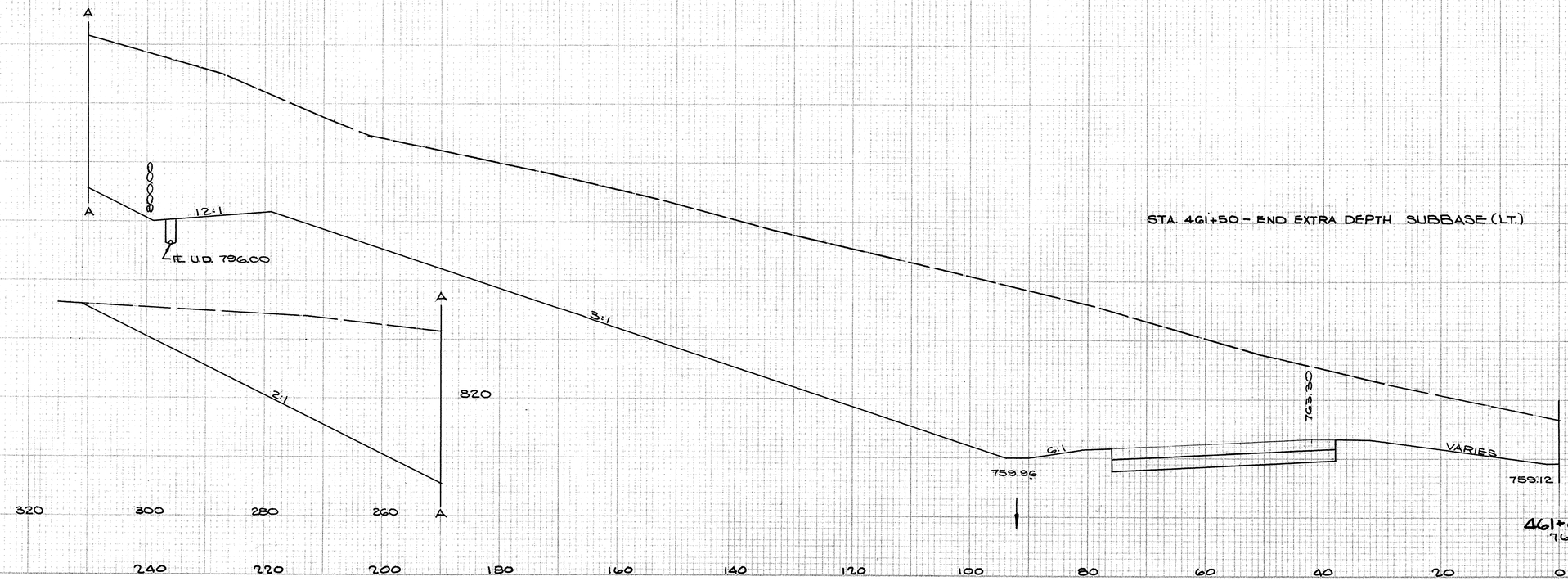
82
313

SUM· 271· 8.29

END AREA CU. YDS.



C-13,656
F- 152



STA. 461+50 – END EXTRA DEPTH SUBBASE (LT.)

461+00 LT.
766.7

C-62,863
F- 563

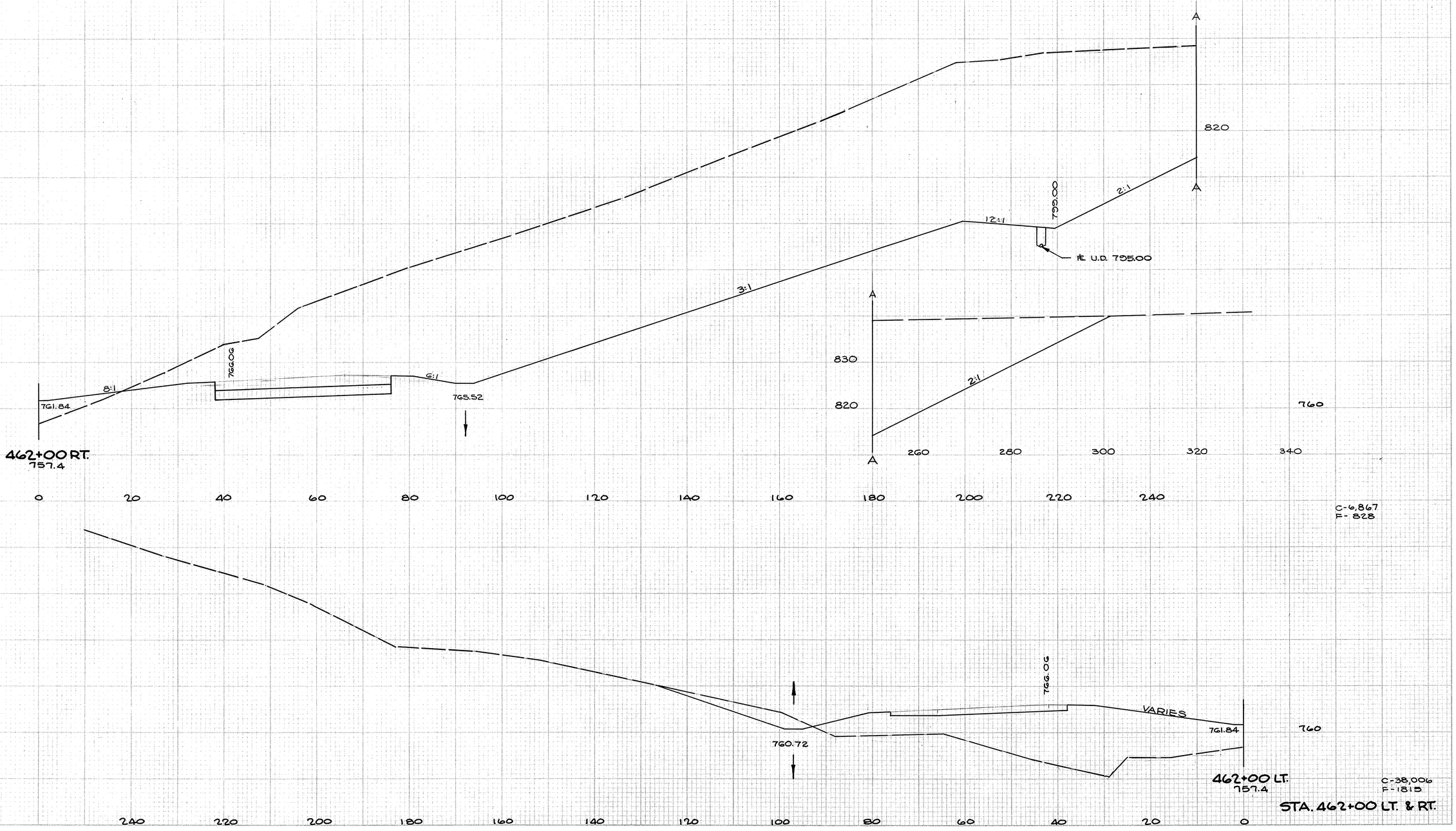
STA. 461+00 LT. & RT.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

83
313

SUM-271-8.29

END AREA CU. YDS.



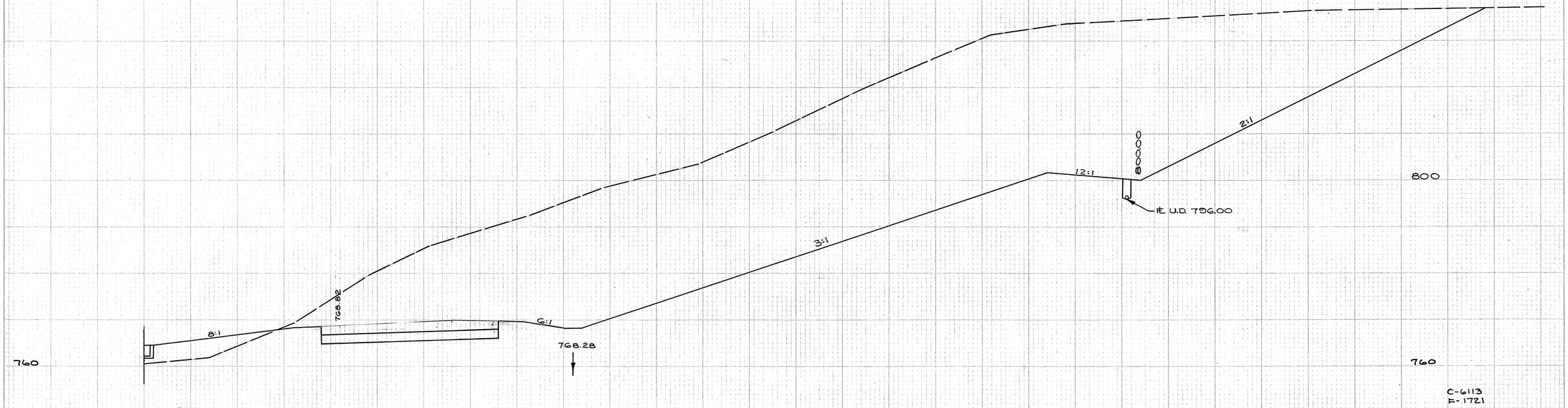
STA. 462+00 LT. & RT.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

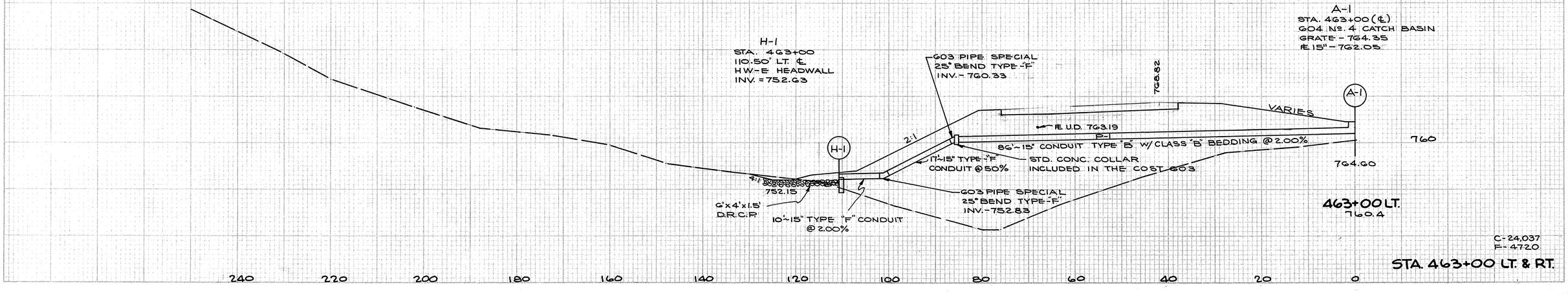
84
313

SUM-271-8.29

END AREA CU. YDS.



C-6113
F-1721



C-24,037
F-4720

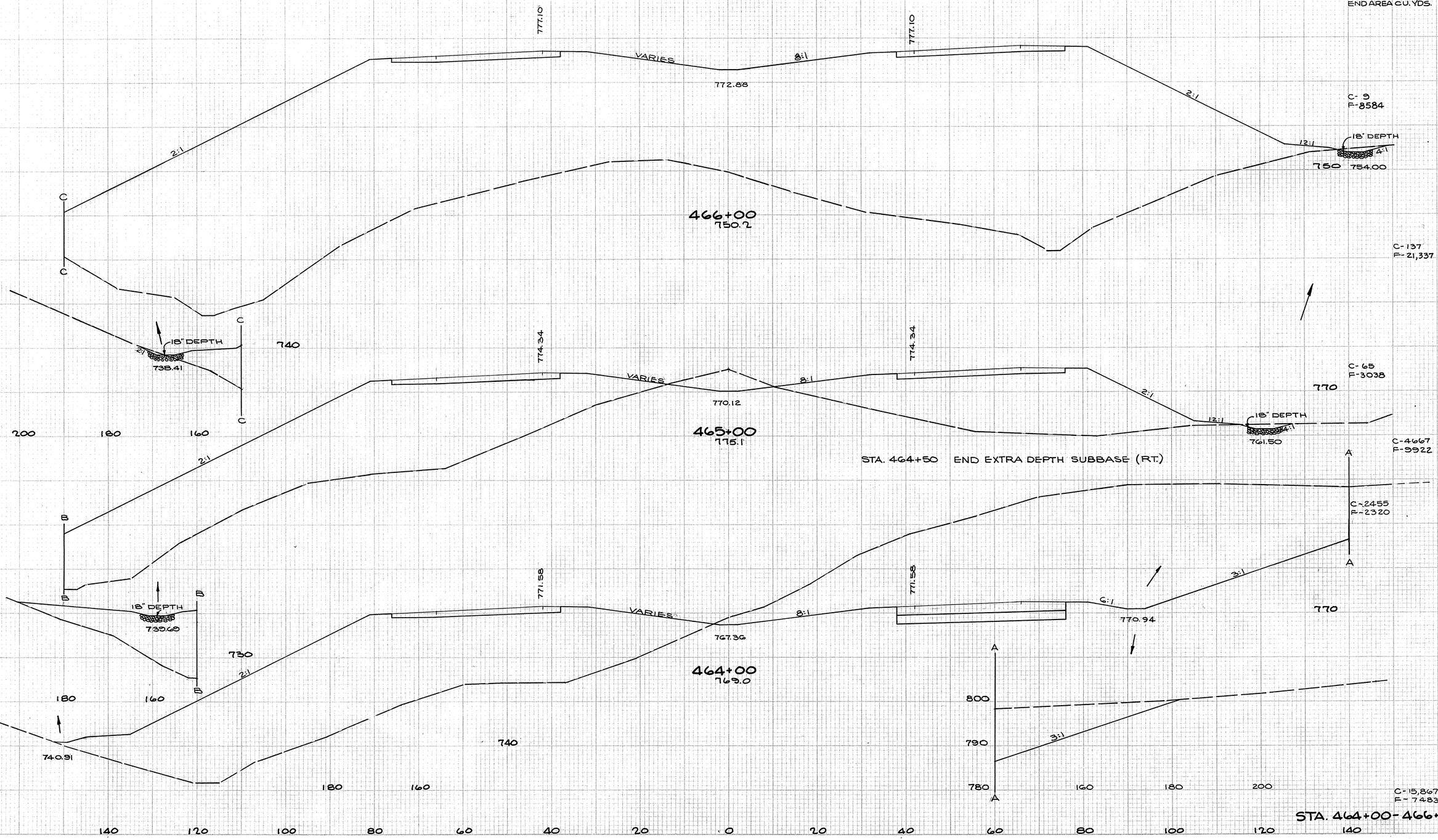
STA. 463+00 LT. & RT.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

85
313

SUM-271-8.29

END AREA C.U. YDS.



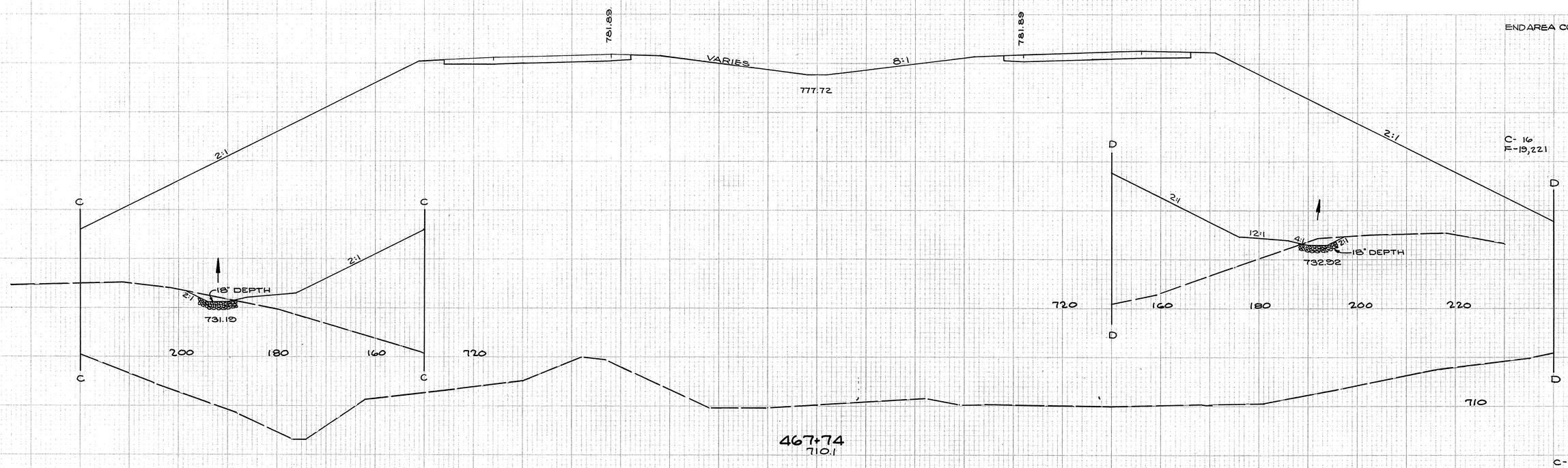
STA. 464+00-466+00

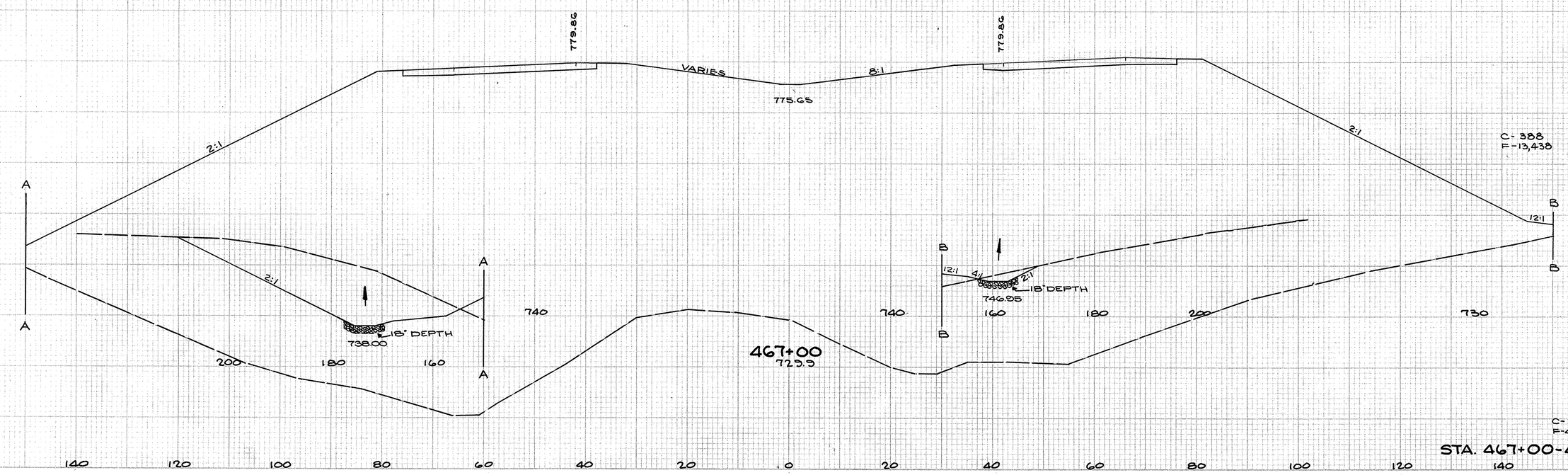
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

86
313

SUM-271-8.29

END AREA CU. YDS.





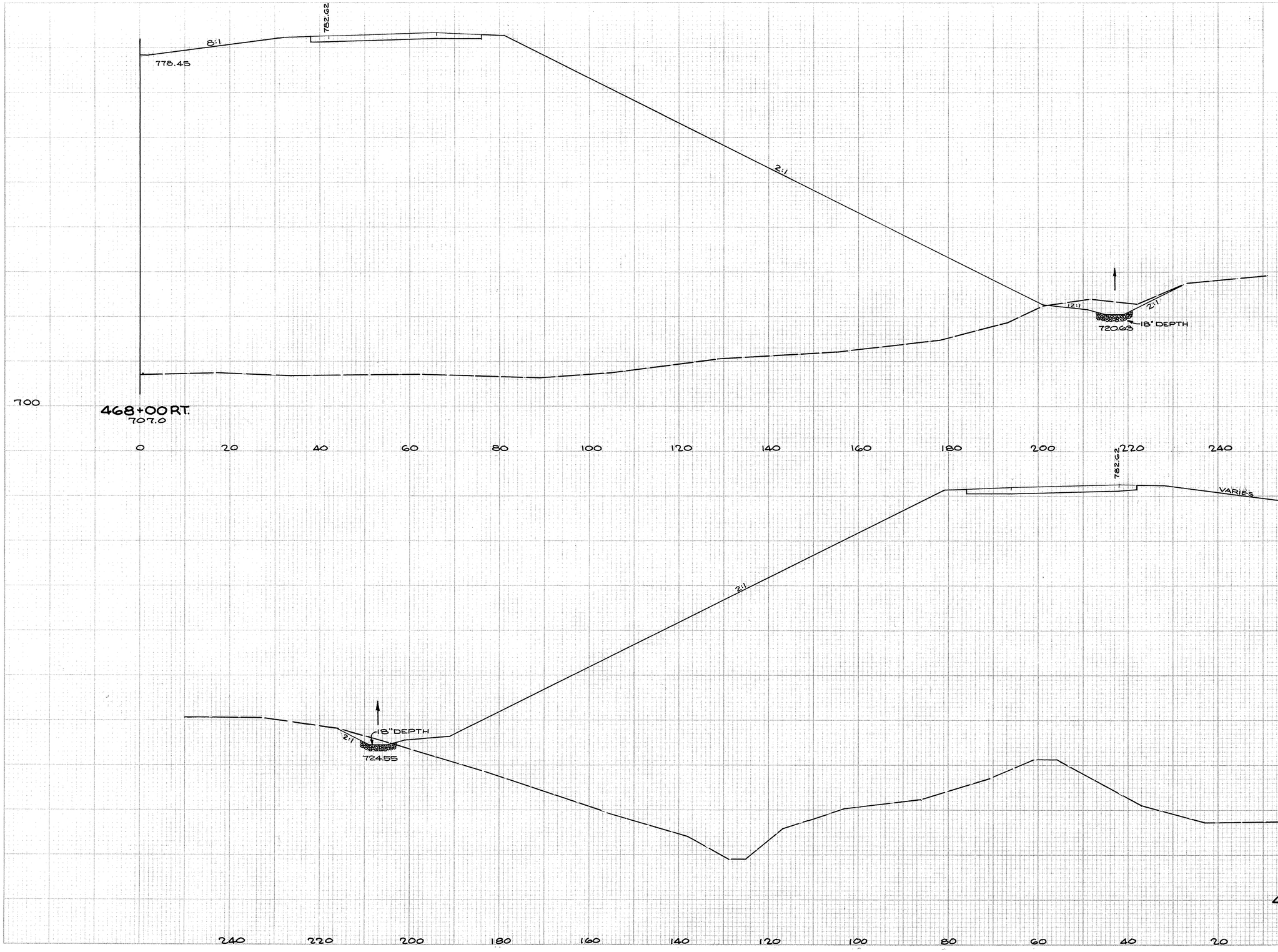
STA. 467+00-467+74

FED. NO. DIVISION	STATE	PROJECT	
2	OHIO		

87
313

SUM·271·8.29

ENDAREA CU. YDS.



C-47
F-21,501

C-30
F-19,607

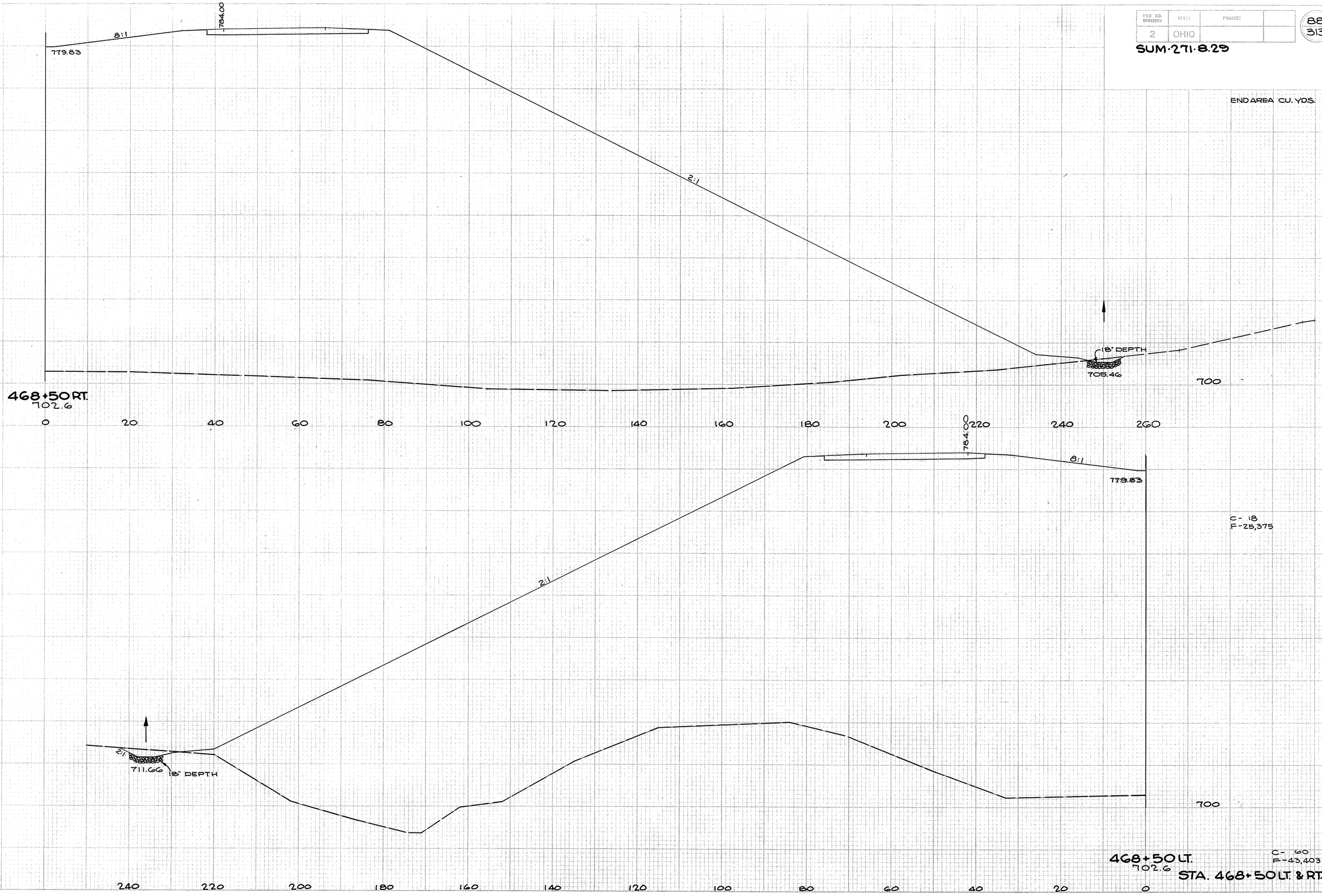
STA. 468+00 LT. & RT.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

88
313

SUM-271-8.29

END AREA CU. YDS.

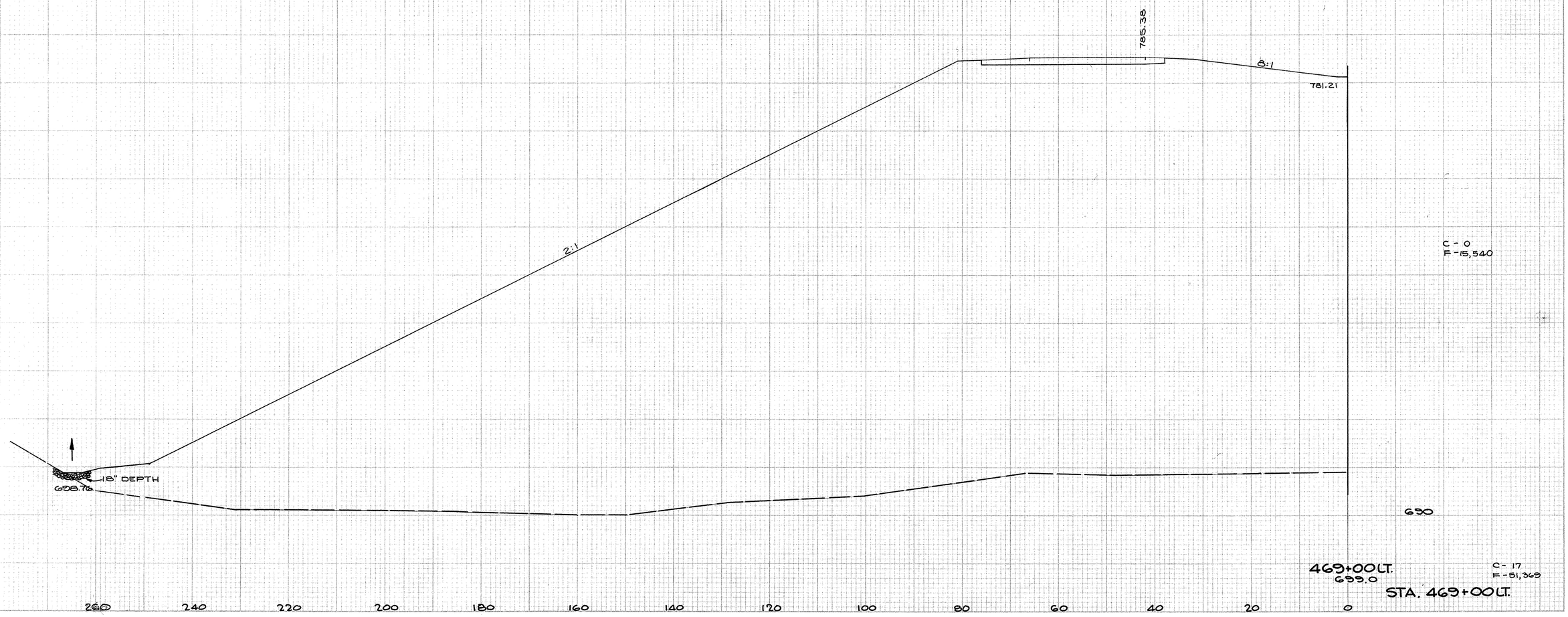


FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

89
313

SUM-271-8.29

END AREA CU. YDS.

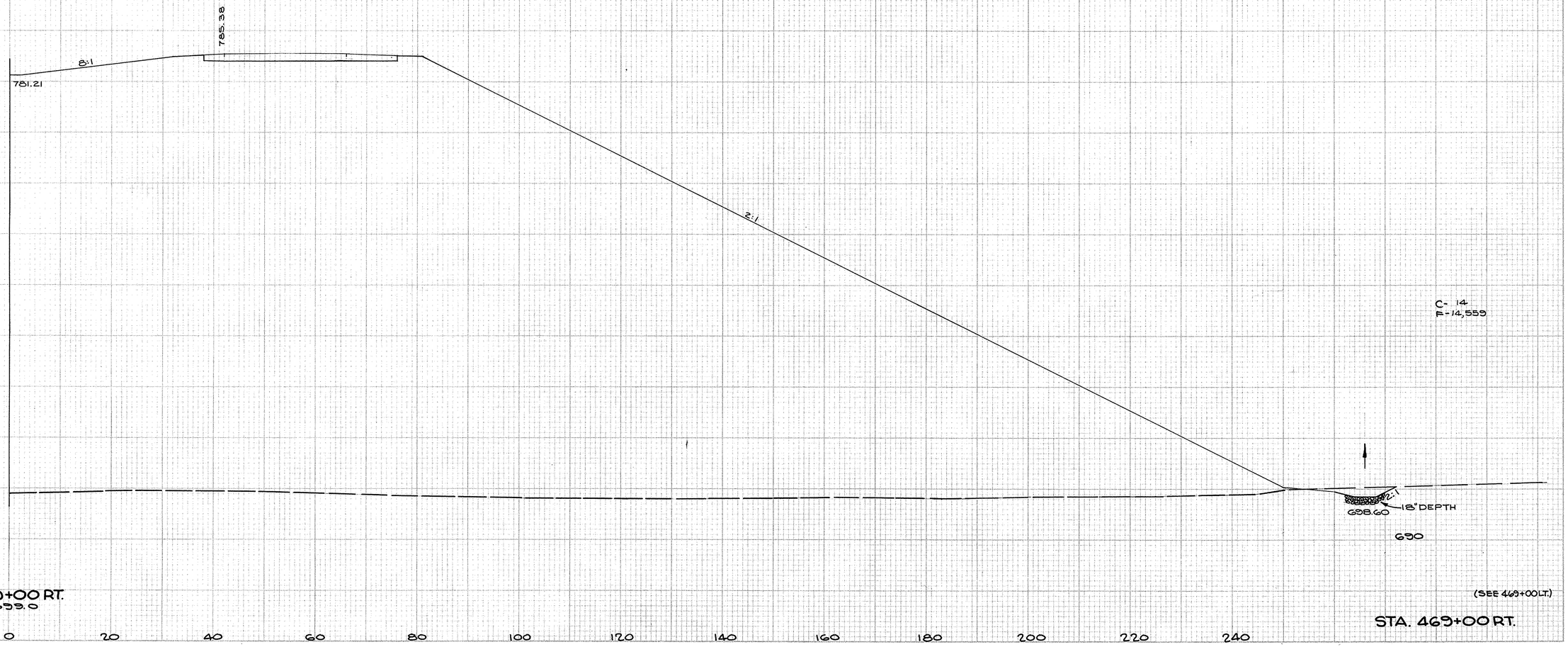


FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

SUM-271-8.29

90
313

END AREA CU. YDS.



(SEE 469+00 LT.)

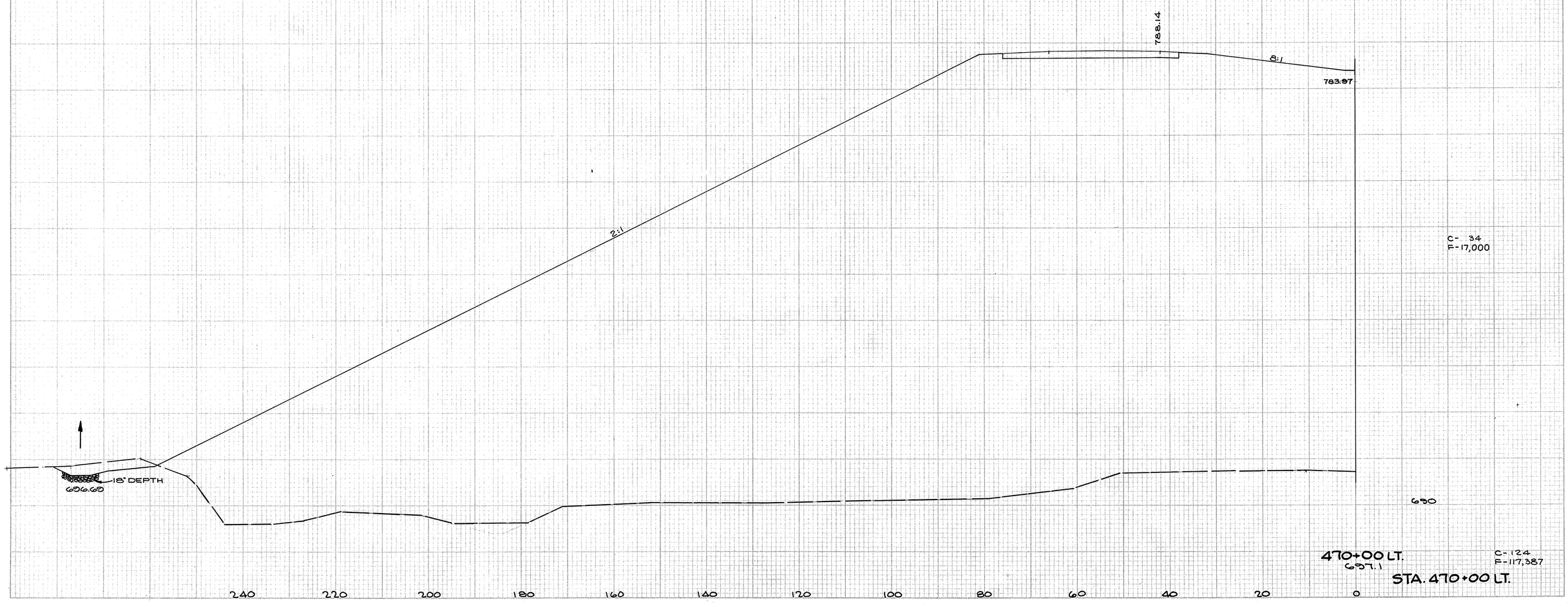
STA. 469+00 RT.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

SUM-271-8.29

91
313

END AREA CU. YDS.



C- 34
F-17,000

C-124
F-117,387

470+00 LT.
657.1

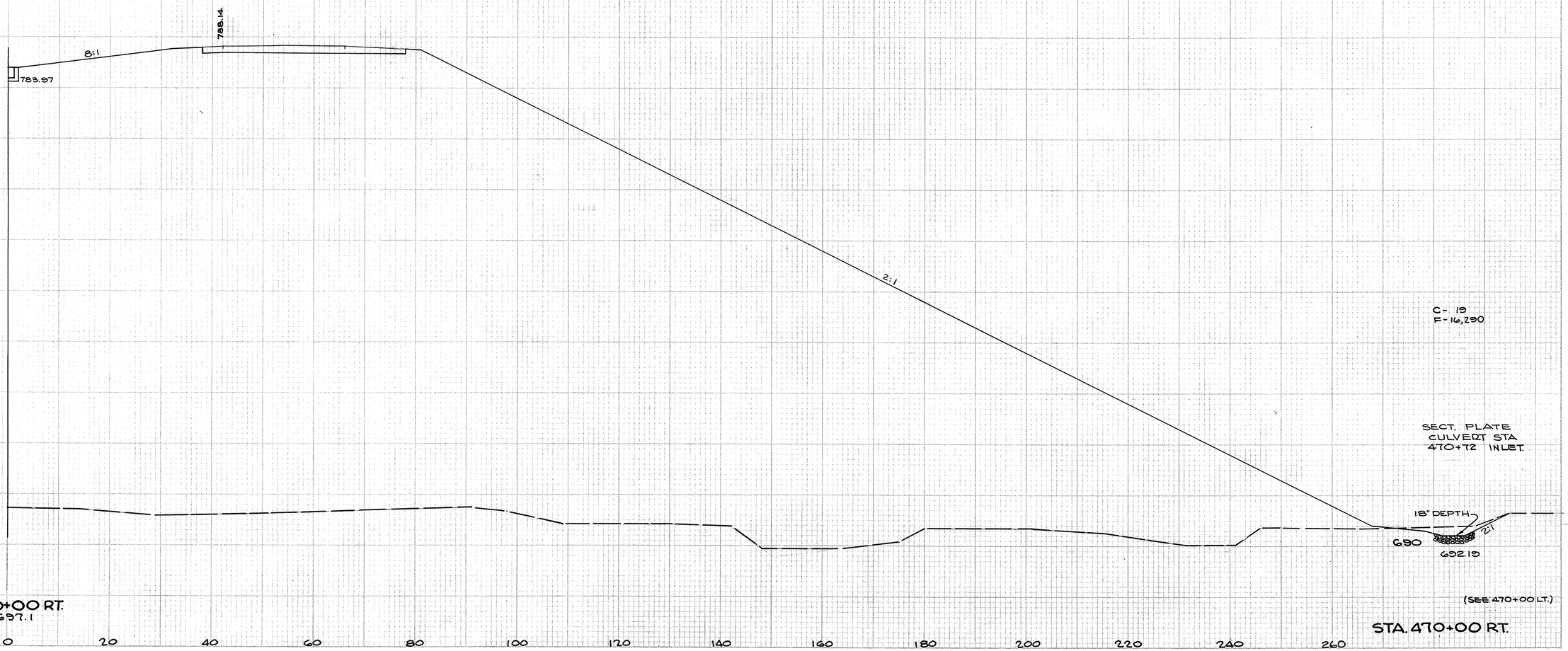
STA. 470+00 LT.

FED. RD DIVISION	STATE	PROJECT	
2	OHIO		

32
313

SUM·271·8.29

END AREA CU. YDS.

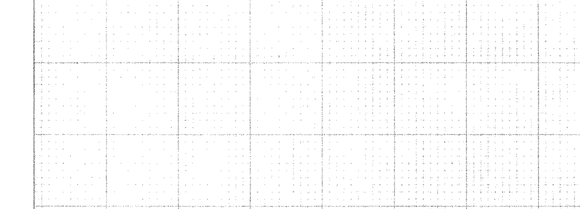


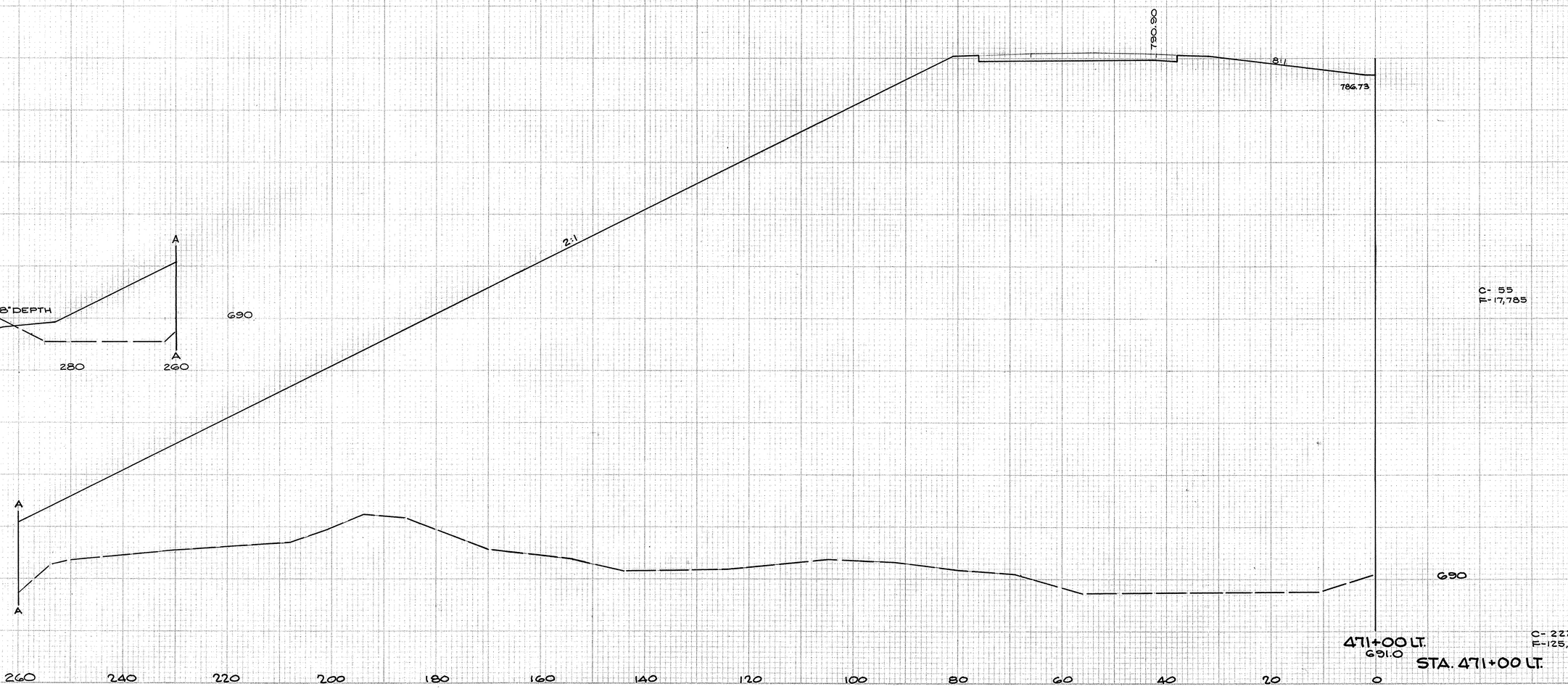
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

93
313

SUM-271-8.29

END AREA CU. YDS.





C- 55
F- 17,785

C- 222
F- 125,074

471+00 LT.
691.0

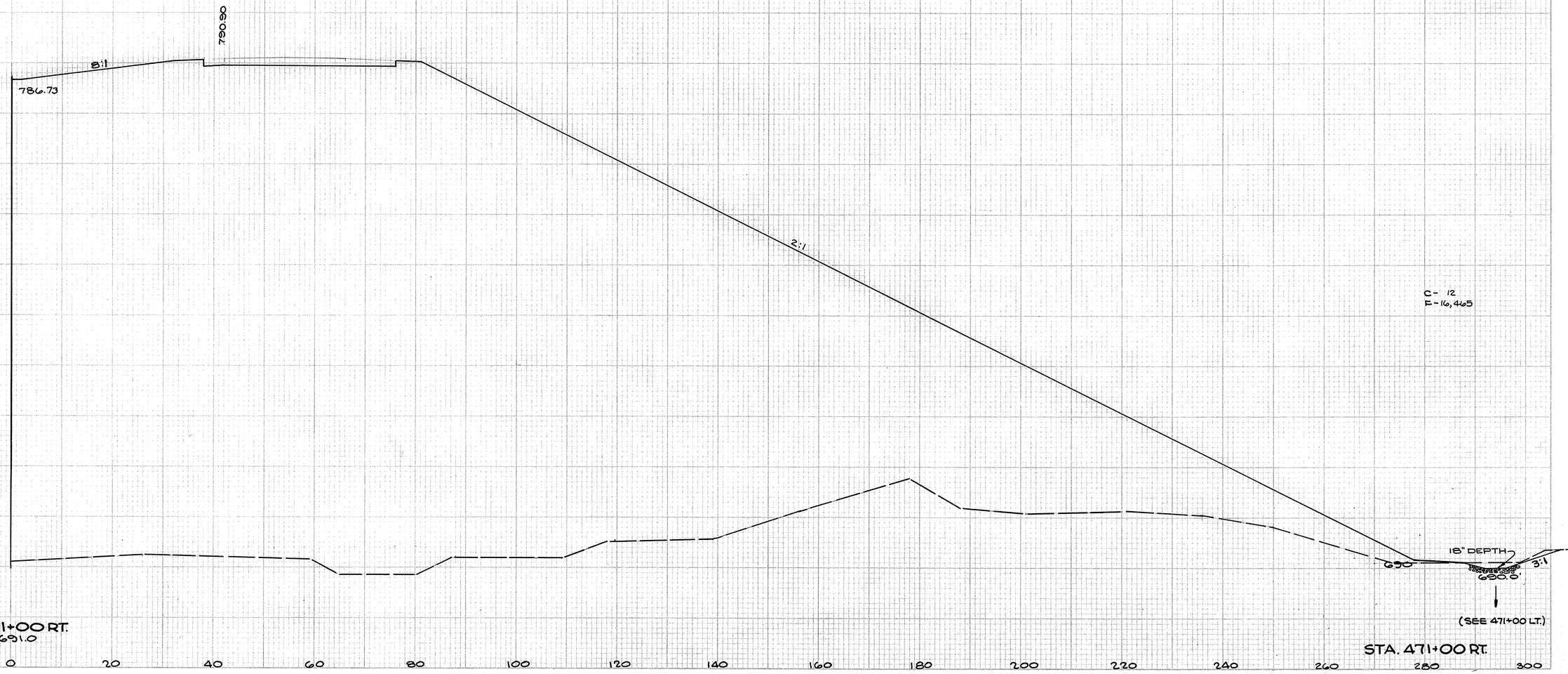
STA. 471+00 LT.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

94
313

SUM-271-8.29

END AREA CU. YDS.



FED. NO. DIVISION	STATE	PROJECT	
2	OHIO		

SUM-271-8.29

35
313

END AREA CU. YDS.



C- 0
F-15,920

C- 62
F-60,625

471+50 LT.
698.4

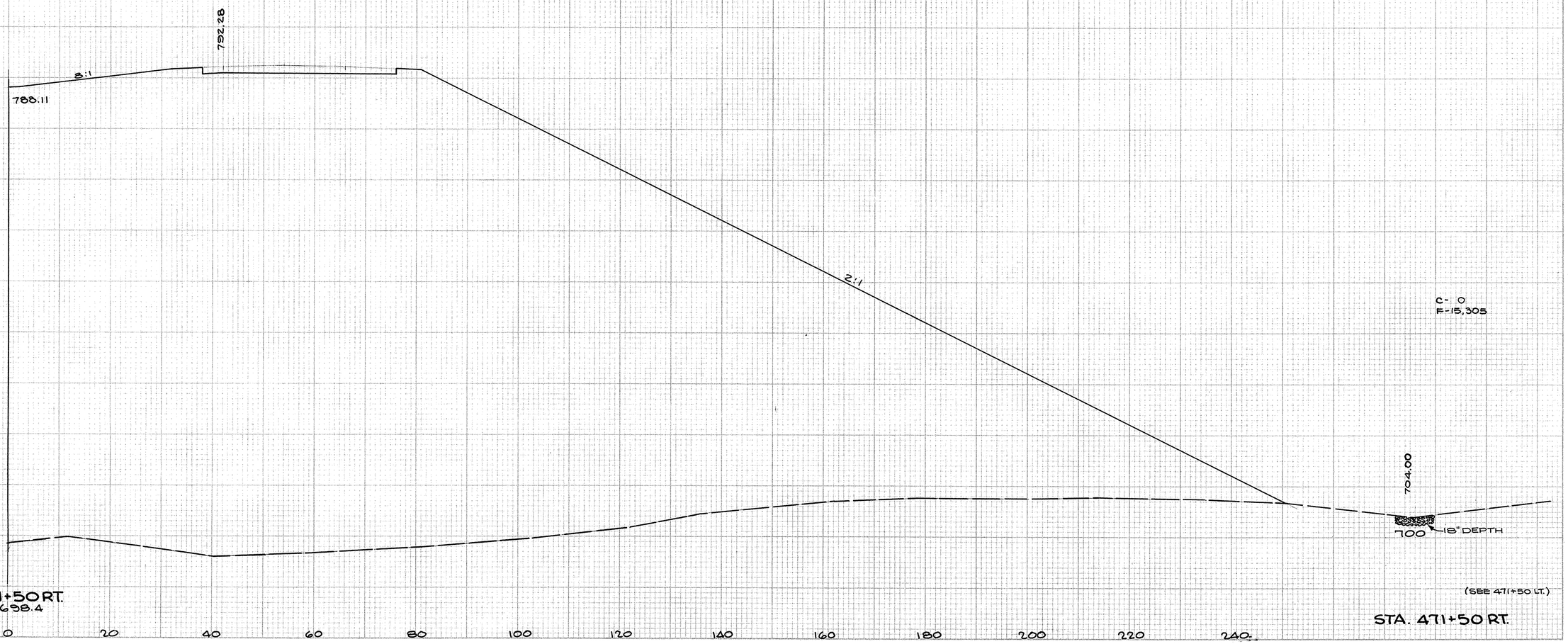
STA. 471+50 LT.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

96
313

SUM·271·8.29

END AREA CU. YDS.

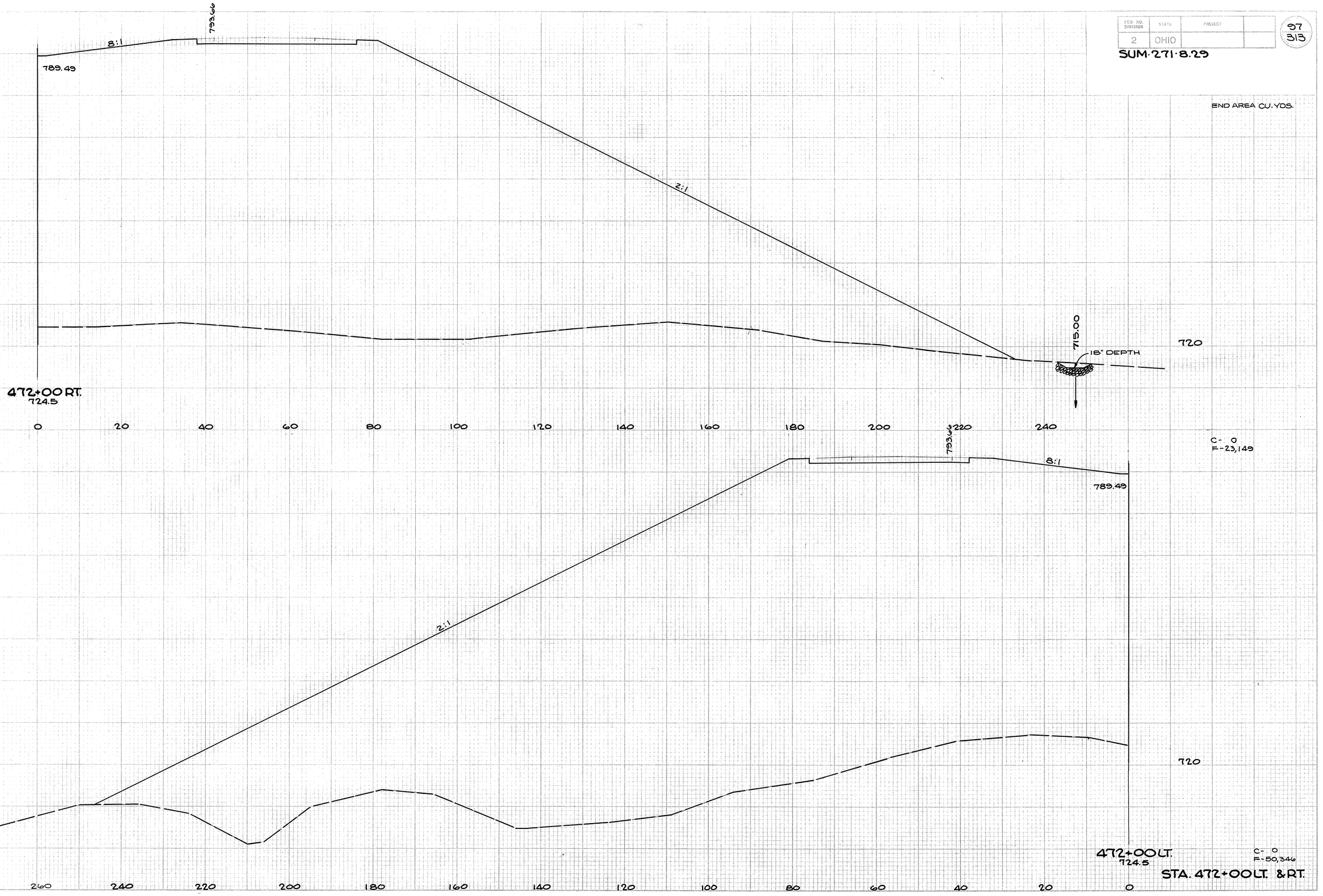


FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

SUM-271-8.29

37
313

END AREA CU. YDS.



C- 0
F-23,149

C- 0
F-50,346

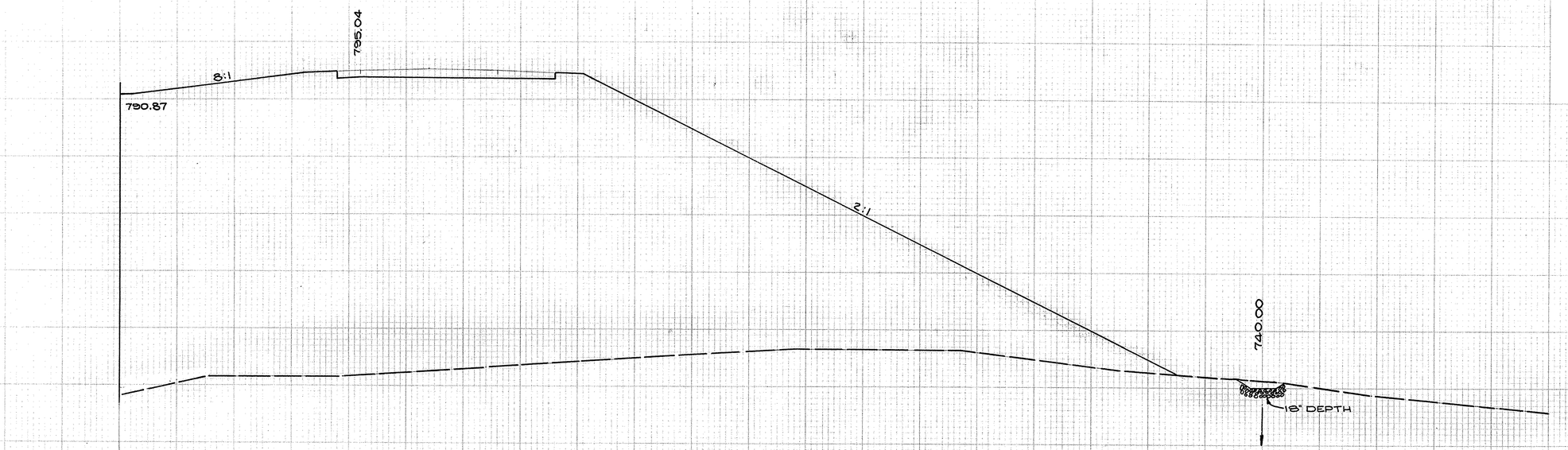
STA. 472+00 LT. & RT.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

SUM-271-8.29

98
313

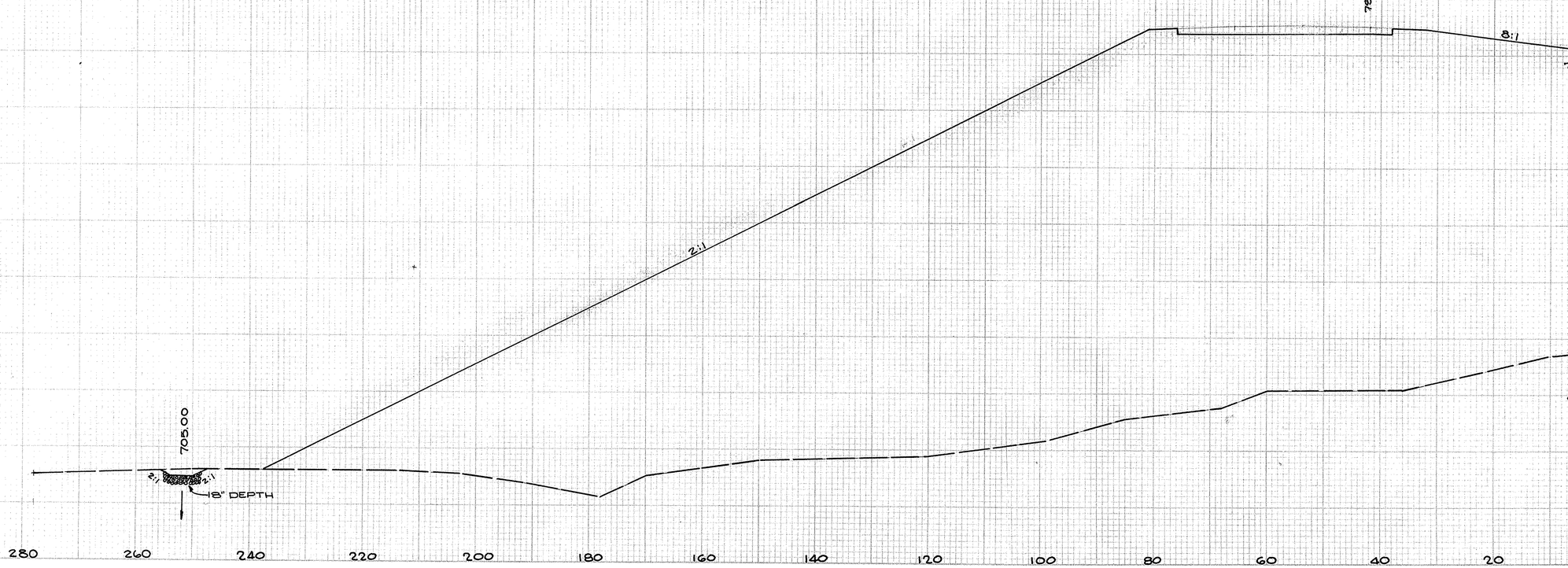
END AREA CU. YDS.



472+50 RT.
738.1

0 20 40 60 80 100 120 140 160 180 200 220 240

C- 0
F-17,637



C- 0
F-37,765

280 260 240 220 200 180 160 140 120 100 80 60 40 20 0

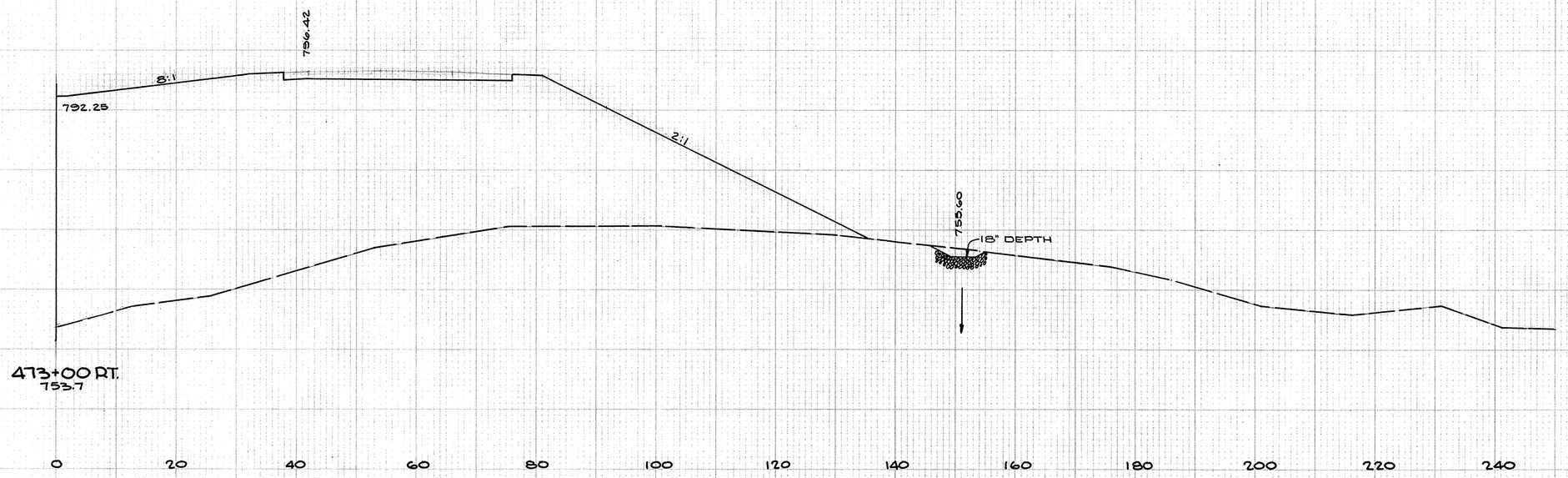
STA. 472+50 LT. & RT.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

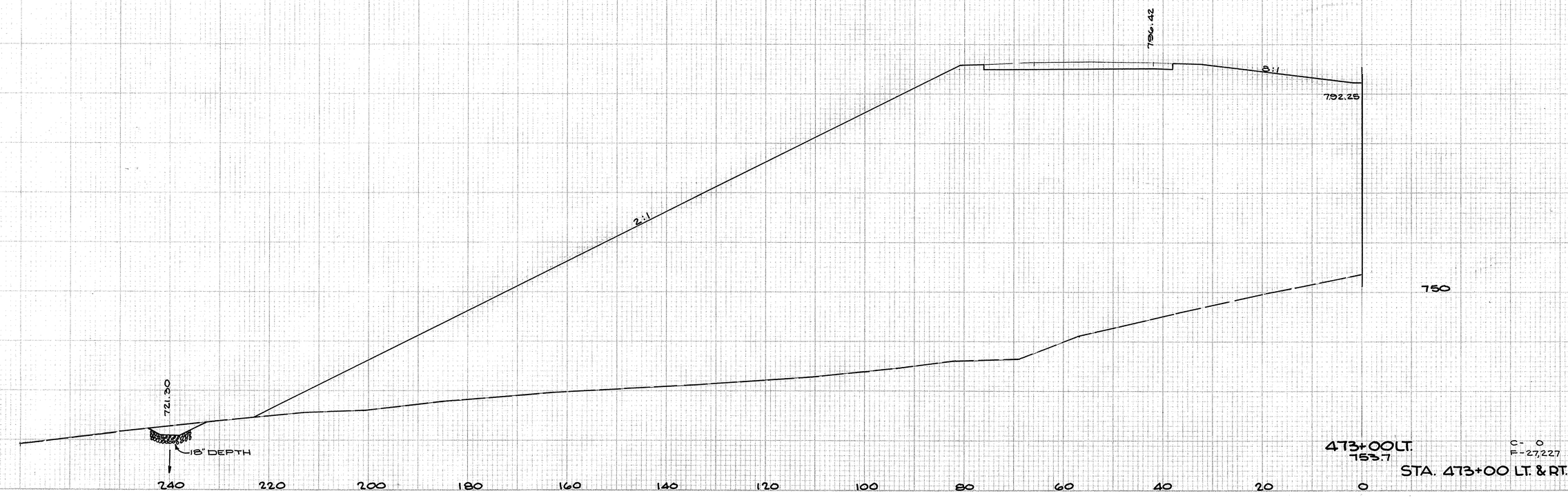
99
313

SUM. 271.8.29

END AREA CU. YDS.



C- 0
F-11,768



473+00 LT.
753.7

C- 0
F-27,227

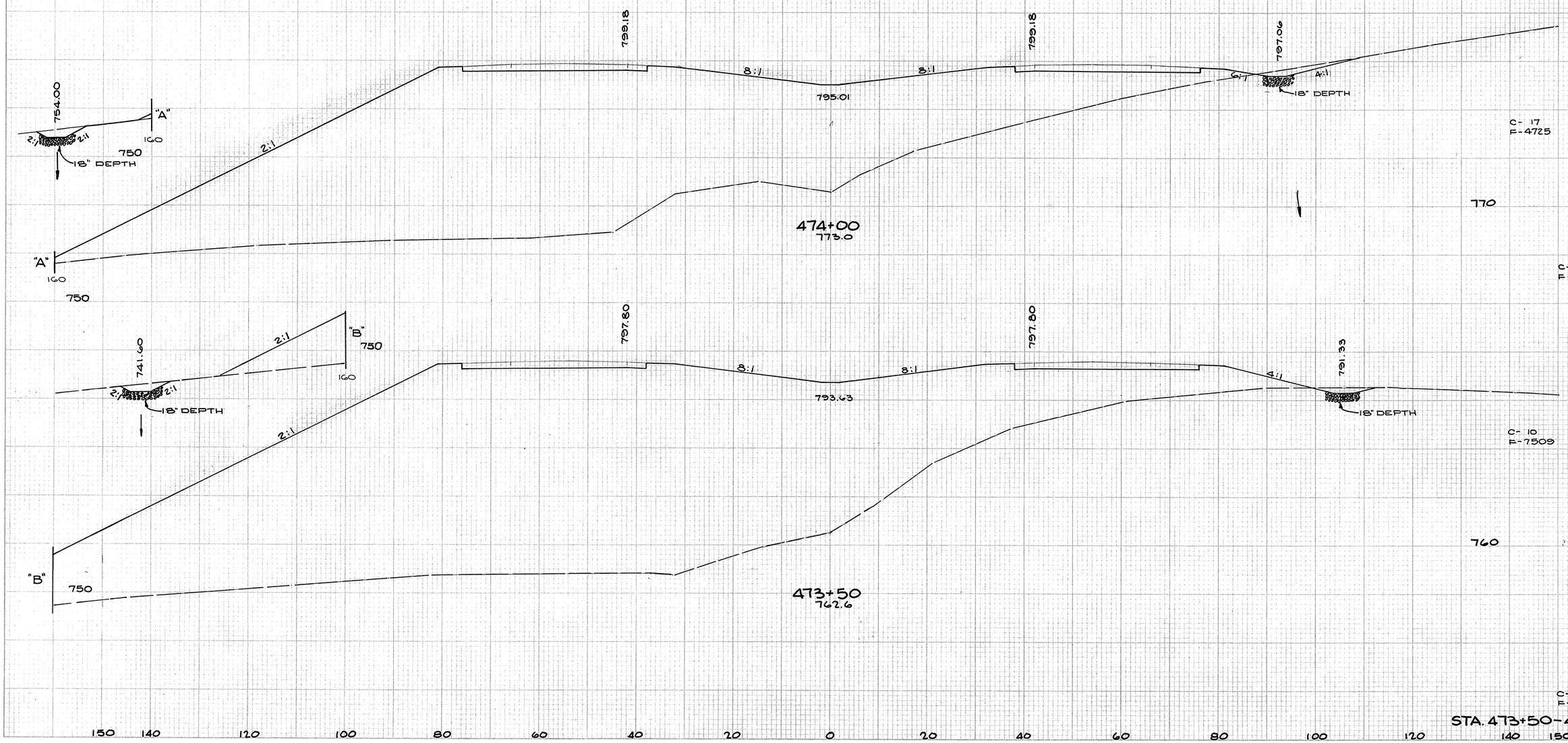
STA. 473+00 LT. & RT.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

100
313

SUM-271-8.29

END AREA CU. YDS.



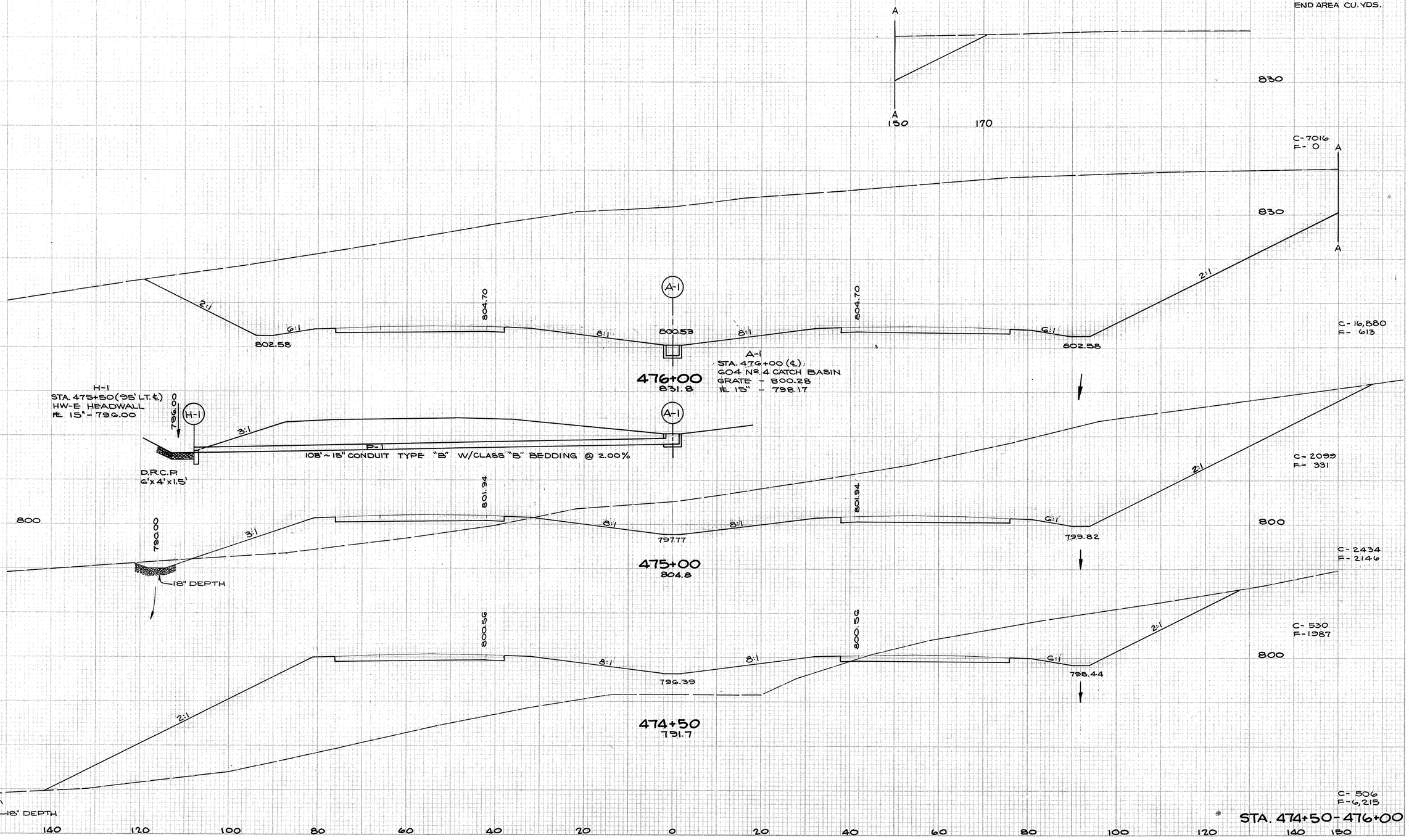
STA. 473+50-474+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

101
313

SUM-271-8.29

END AREA CU. YDS.



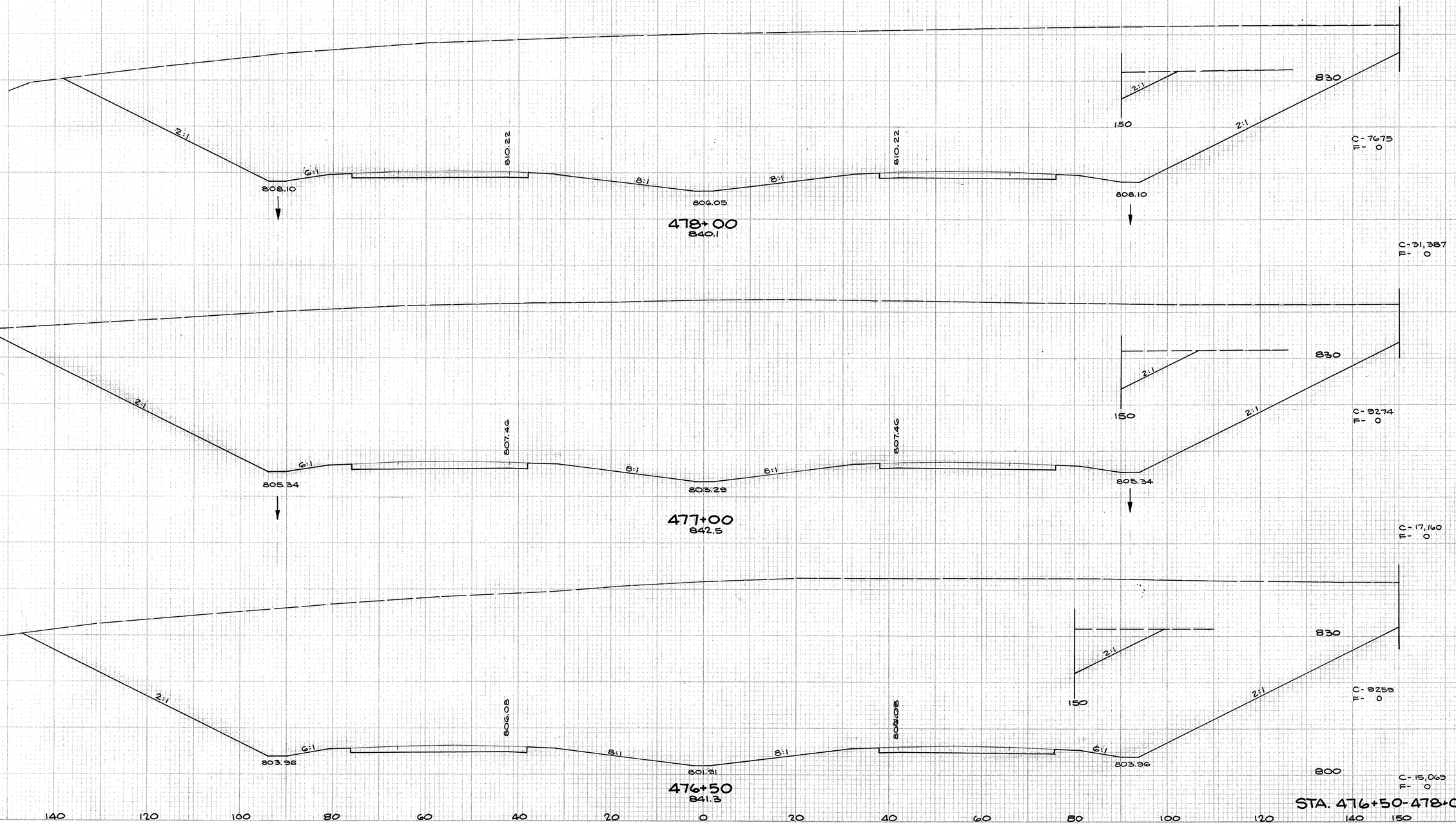
STA. 474+50 - 476+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

102
318

SUM-271-8.29

END AREA CU. YDS.

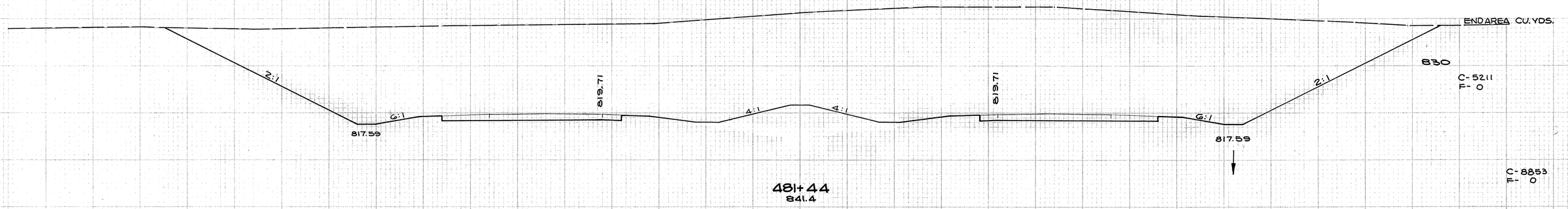


STA. 476+50-478+00

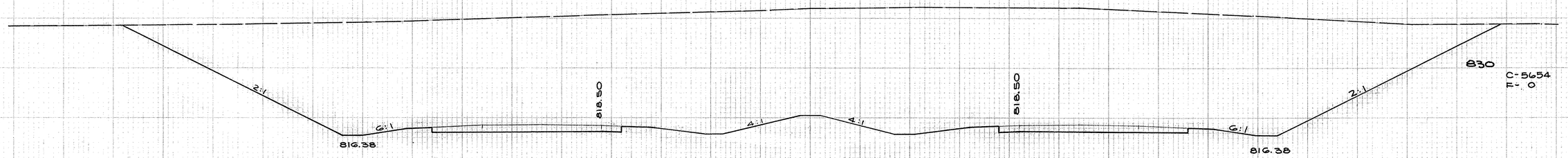
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

103
313

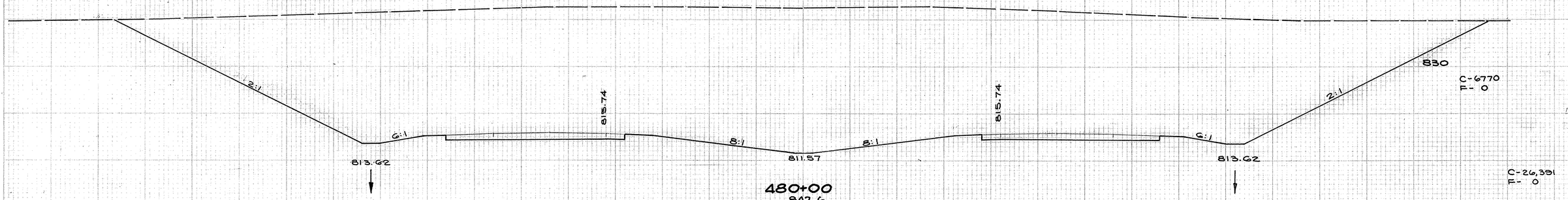
SUM-271-8.29



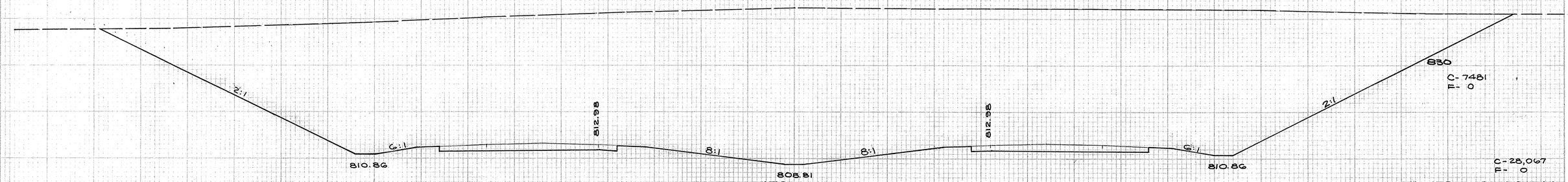
481+44
841.4



481+00
841.5



480+00
842.6



479+00
842.4

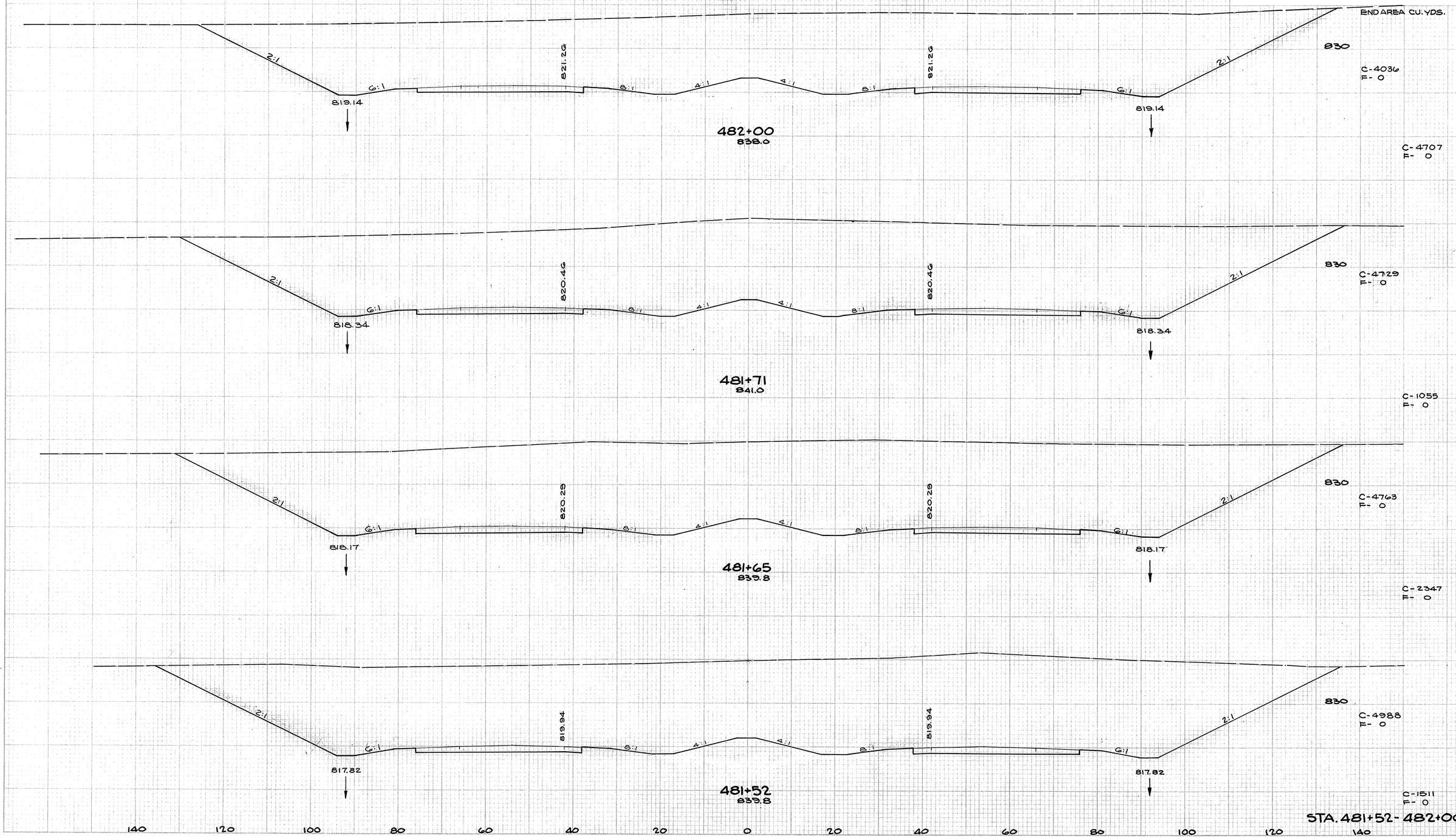
140 120 100 80 60 40 20 0 20 40 60 80 100 120 140

STA. 479+00-481+44

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

104
313

SUM-271-8.29



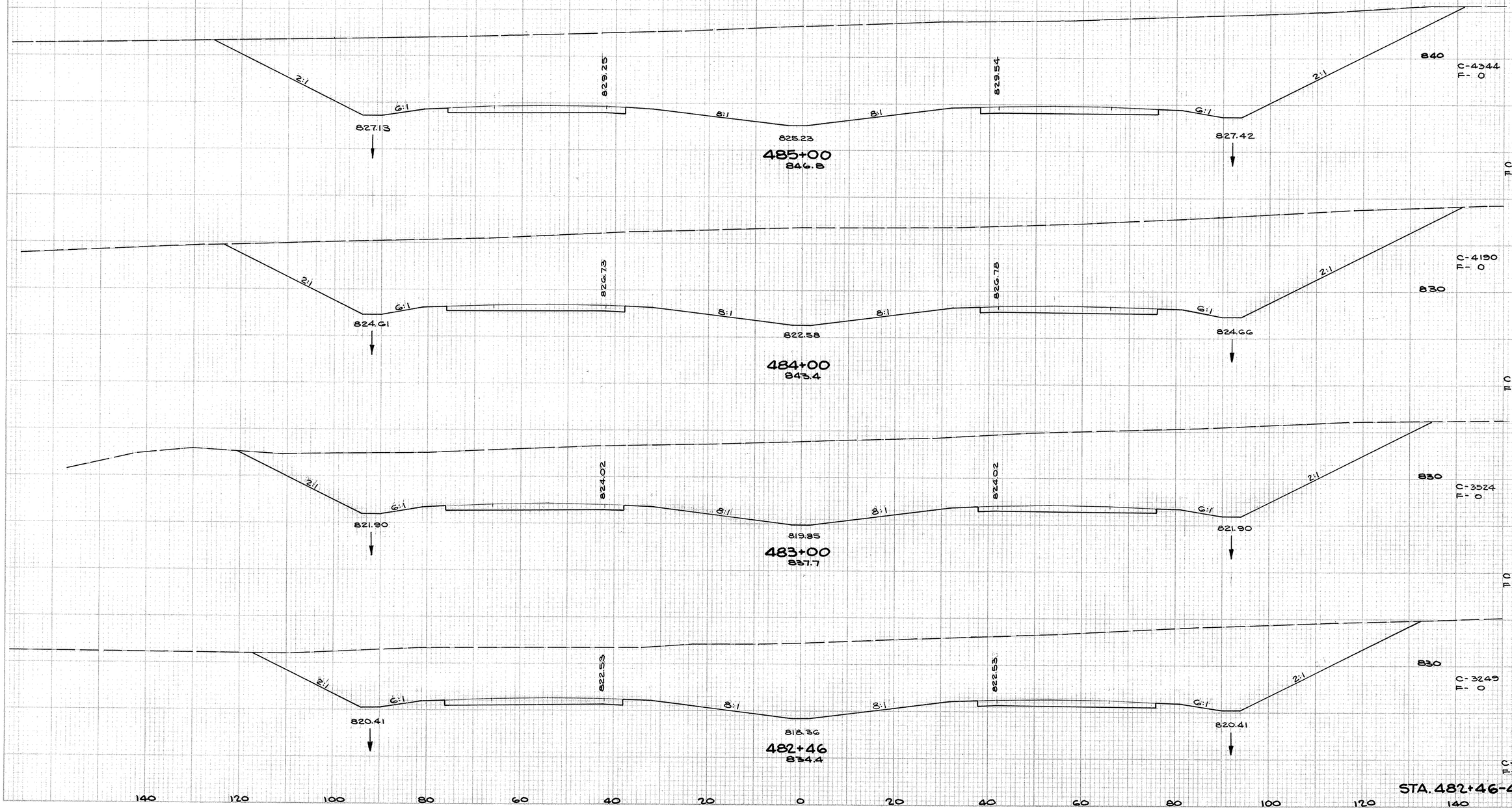
STA. 481+52 - 482+00

FED. HIG. DIVISION	STATE	PROJECT	
2	OHIO		

105
313

SUM·271·8.29

END AREA CU. YDS.



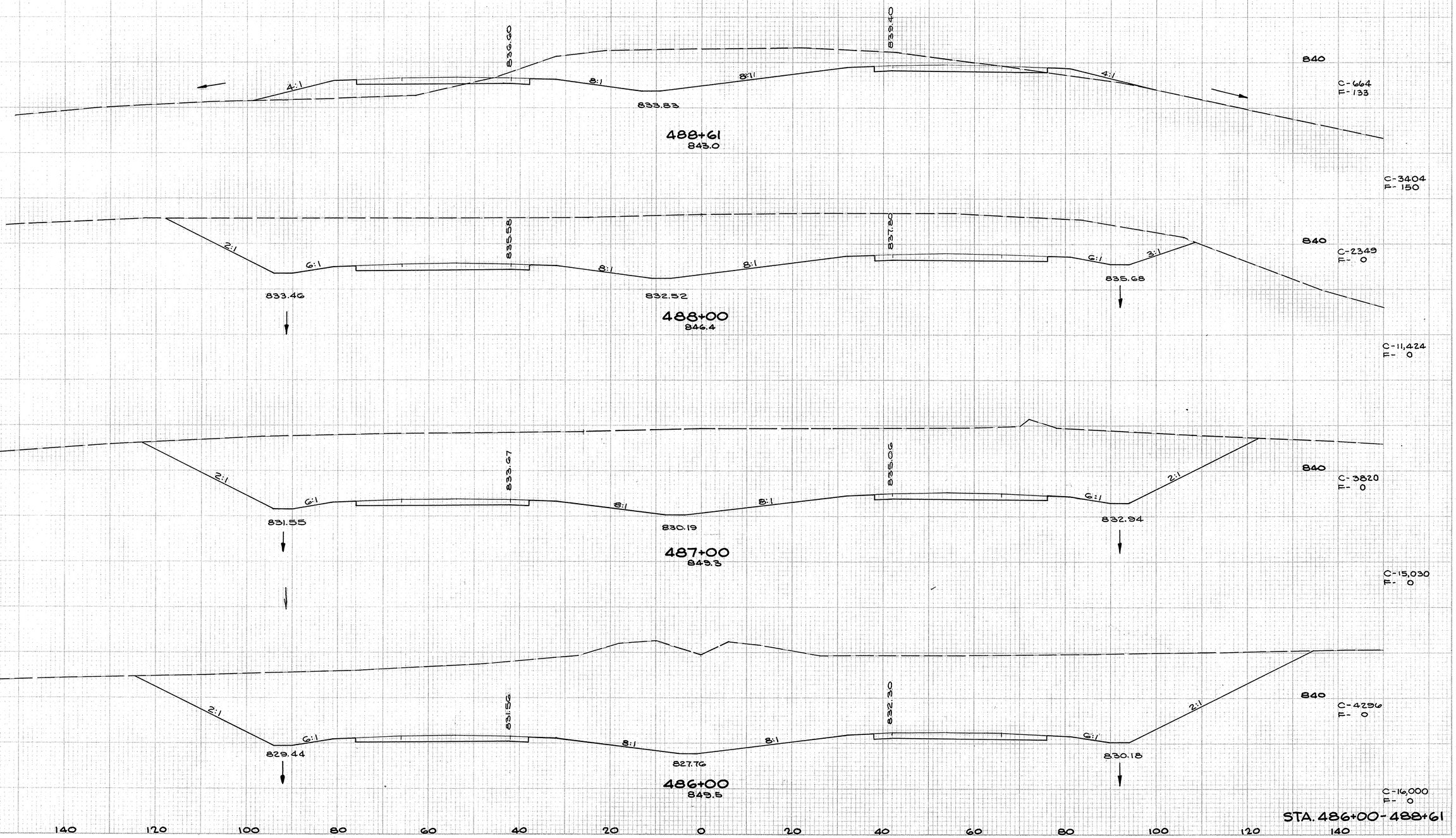
STA. 482+46-485+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

106
313

SUM-271-8.29

END AREA CU. YDS.



STA. 486+00 - 488+61

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

107
313

SUM·271·8.29

END AREA CU. YDS.

842.70

8:1

2:1

490+00 RT.
808.1

800

0 20 40 60 80 100 120 140 160 180 200 220 240

838.78

8:1

8:1

836.57

C- 15
F- 10,177

2:1

800
490+00 LT.
808.1

4:1

780.33

240 220 200 180 160 140 A-1 120 100 80 60 40 20 0

C- 78
F- 21,700

H-1
STA. 489+00 (120' LT. ℄)
HW-E HEADWALL
℄ 15" - 817.17

STD. CONC. COLLAR INCLUDED IN THE COST 603

837.28

A-1

STA. 489+00 (12.25' LT. ℄)
604 No. 4 CATCH BASIN
GRATE - 834.40
℄ 15" - 832.29

840.35

603 PIPE
25° BEND TYPE "F"
℄ - 817.35

2:1

8:1

8:1

H-1

P-1

72'-15" TYPE - "B" CONDUIT W/CL-"B" BEDDING @ 2.00%

834.65

3:1

30'-18" TYPE-"F" CONDUIT @ 50%

489+00
834.7

C- 27
F- 1541

817.00

D.R.C.P.
6'x4'x1.5'

9'-15" TYPE-"F" CONDUIT
@ 2.00%

603 PIPE
25° BEND TYPE "F"
℄ - 830.85

810

C- 499
F- 1209

STA 489+00-490+00

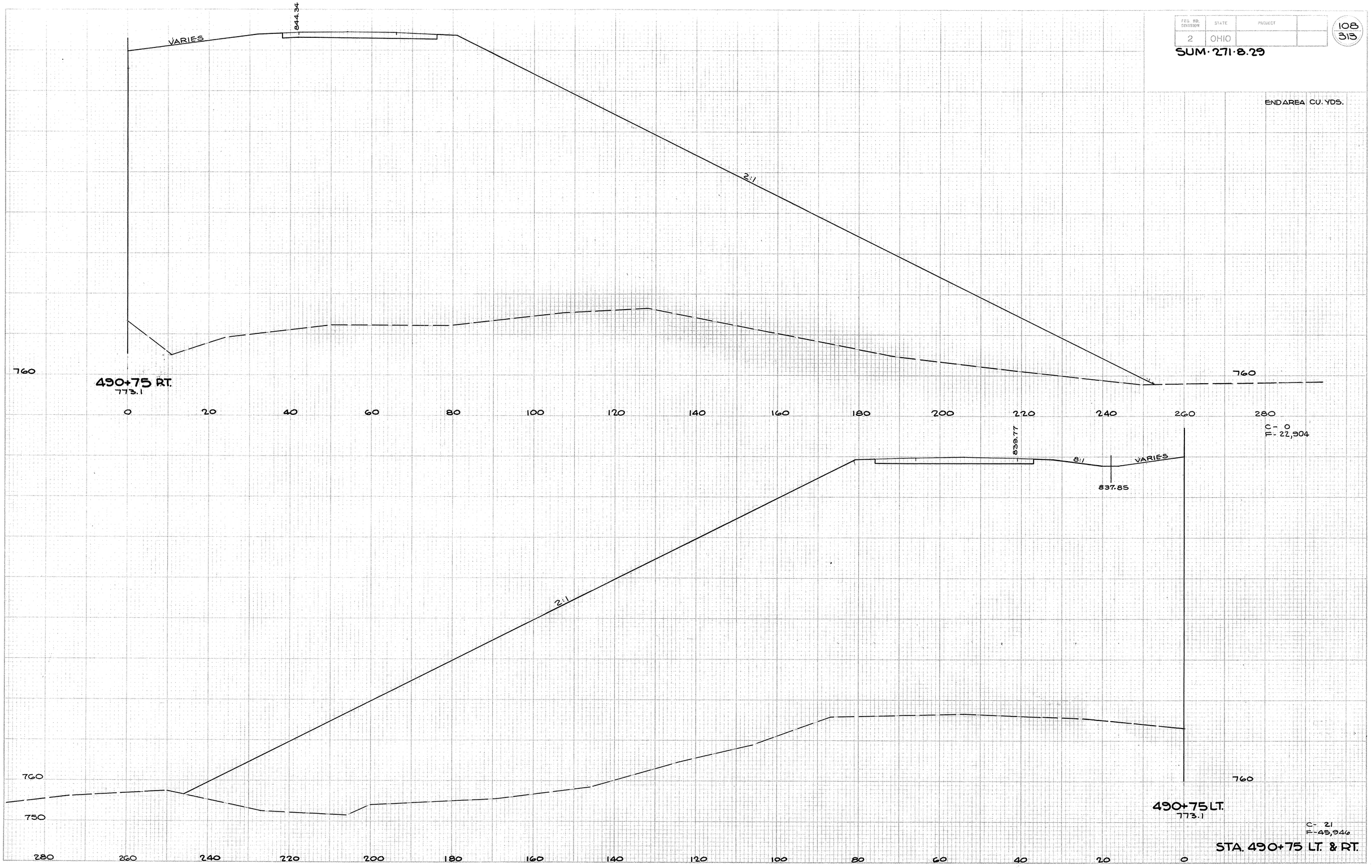
140 120 100 80 60 40 20 0 20 40 60 80 100 120 140

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

108
313

SUM-271-8.29

END AREA CU. YDS.



STA. 490+75 LT. & RT.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

109
313

SUM-271-8.29

END AREA CU. YDS.

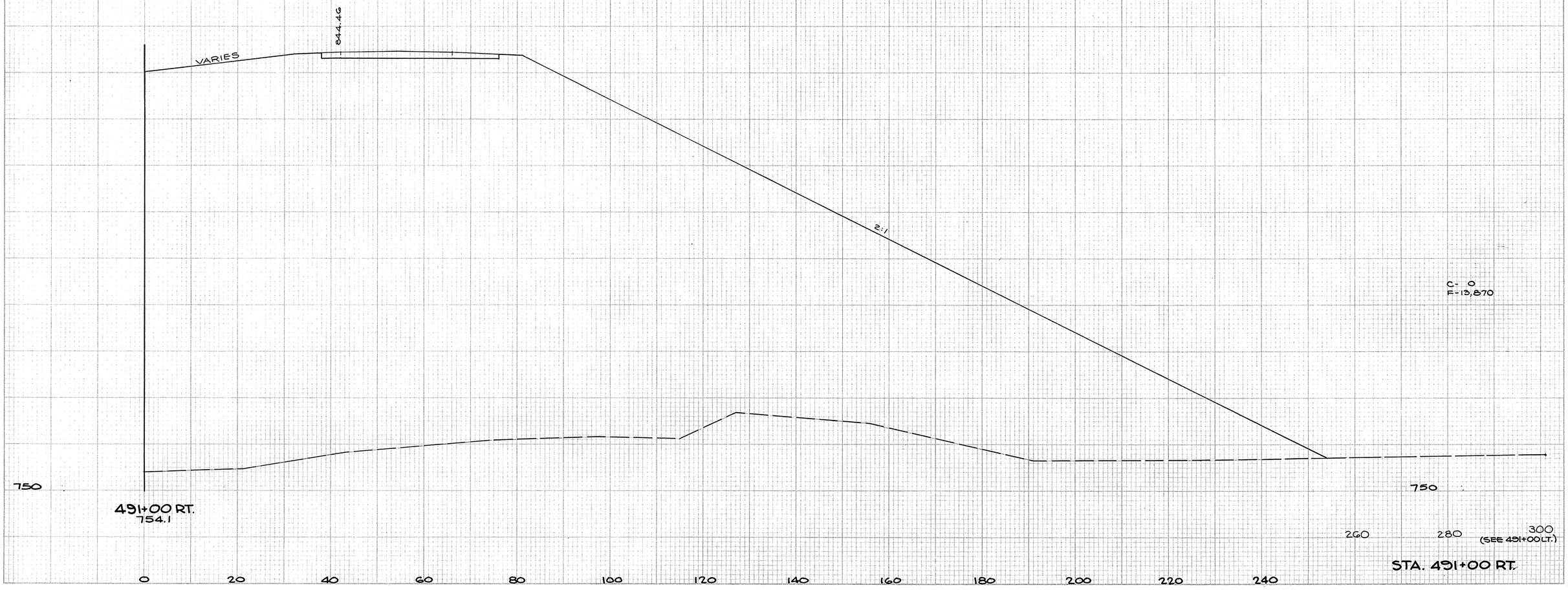


FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

110
313

SUM-271-8.29

END AREA CU.YDS.

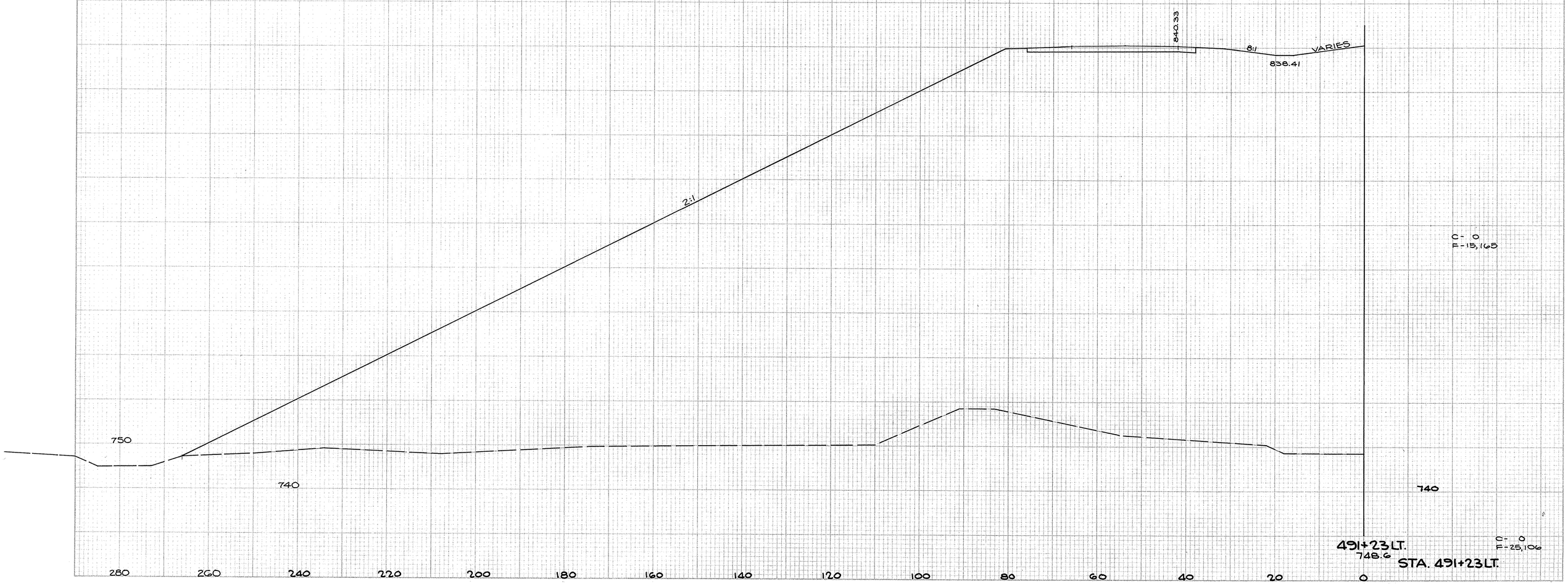


FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

111
313

SUM-271-8.29

END AREA CU. YDS.

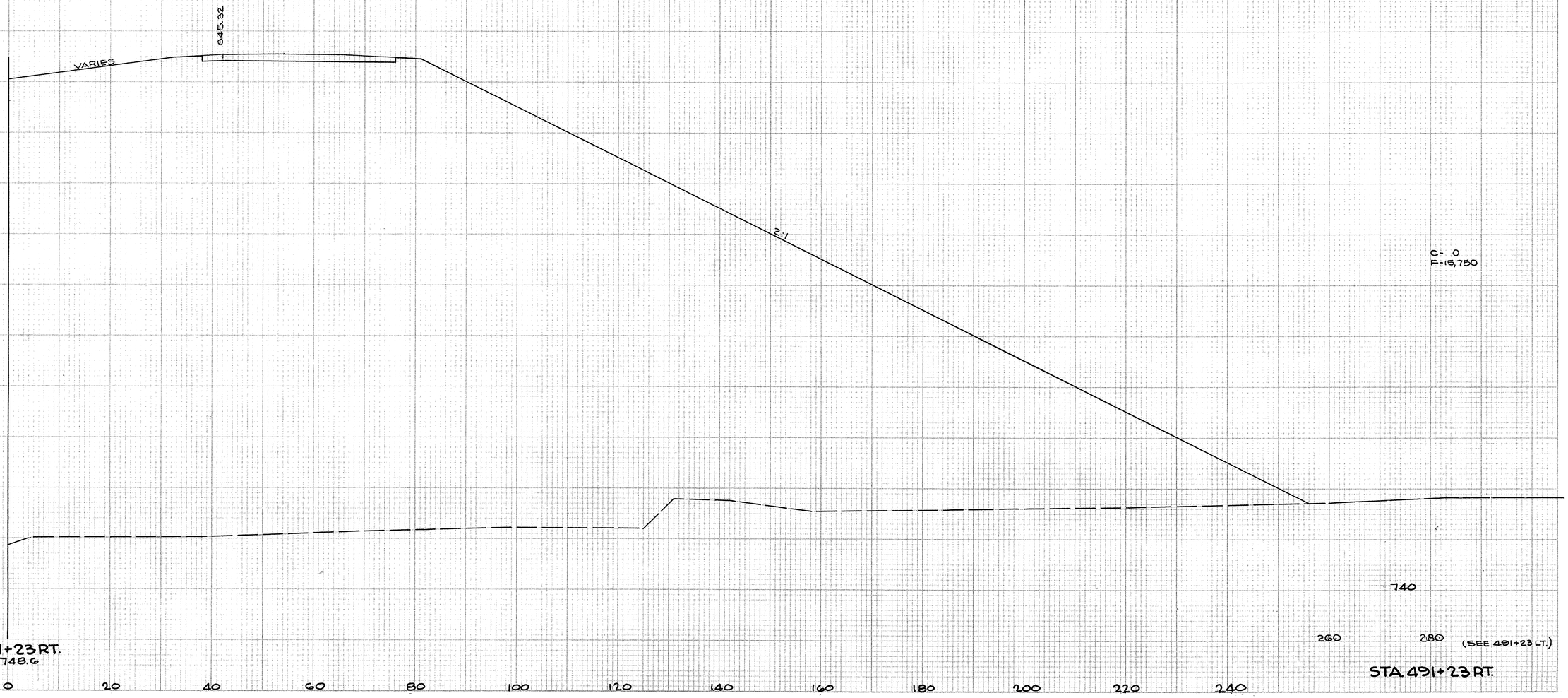


FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

112
313

SUM-271-8.29

END AREA CU. YDS.

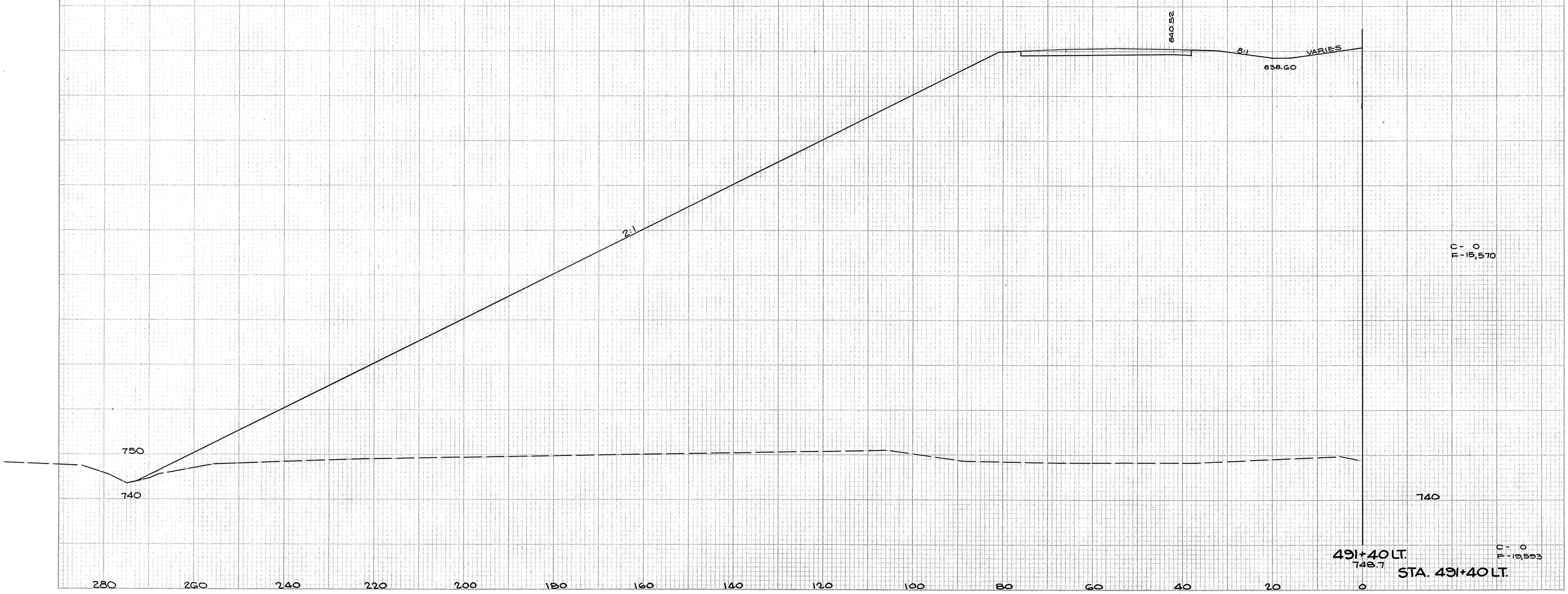


FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

113
313

SUM-271-8.29

END AREA CU.YDS.

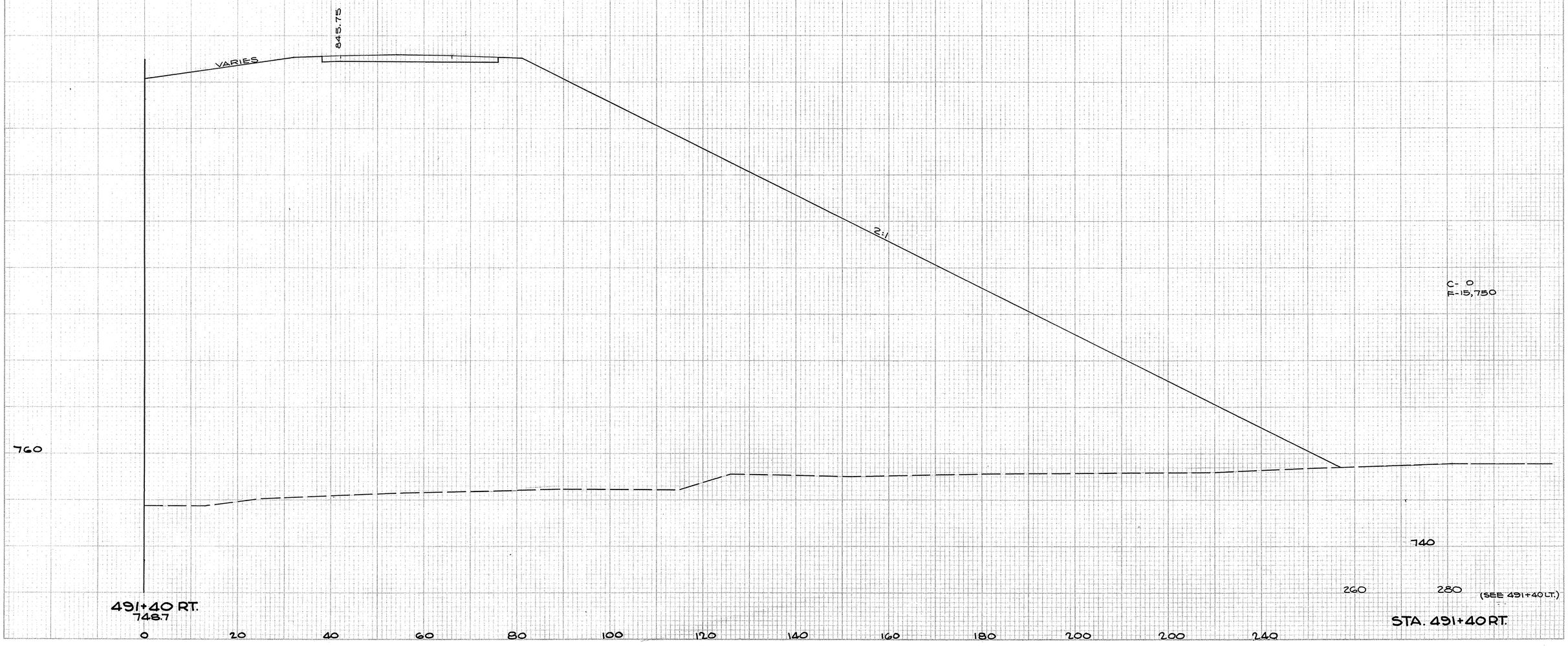


FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

114
313

SUM-271-8.29

END AREA CU. YDS.

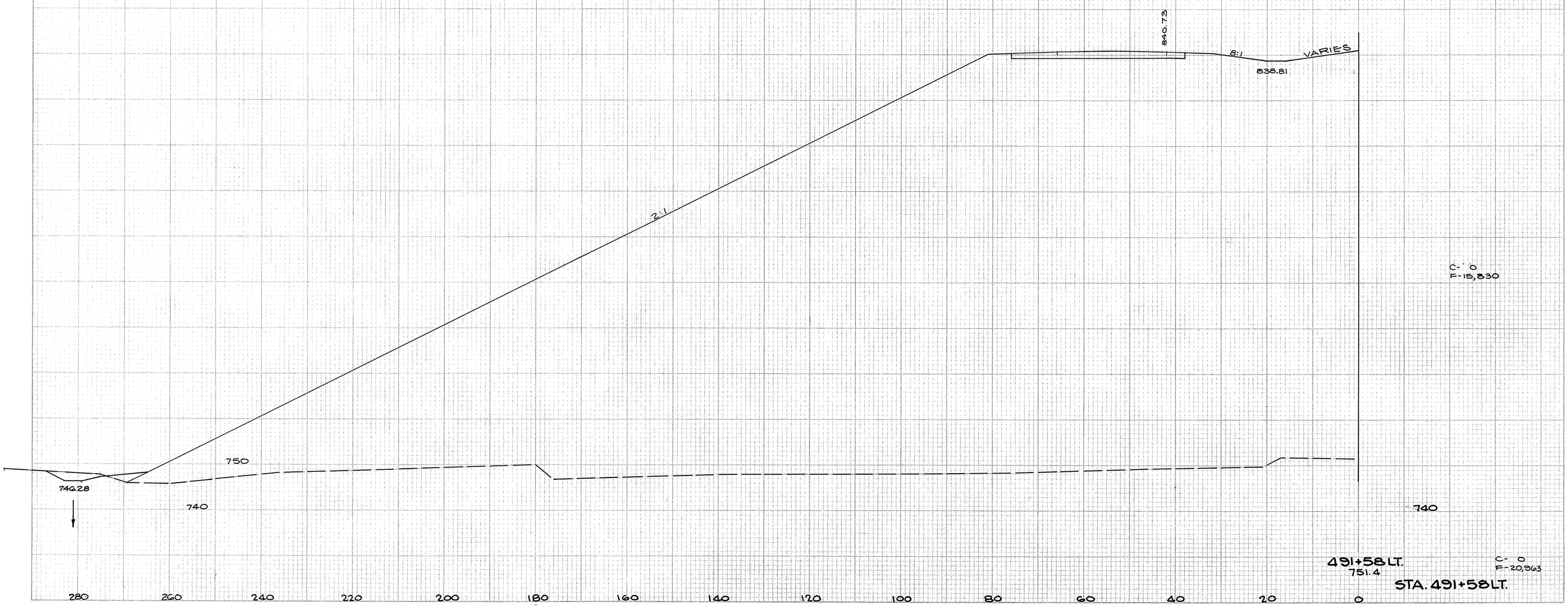


FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

115
313

SUM-271-8.29

END AREA CU. YDS.

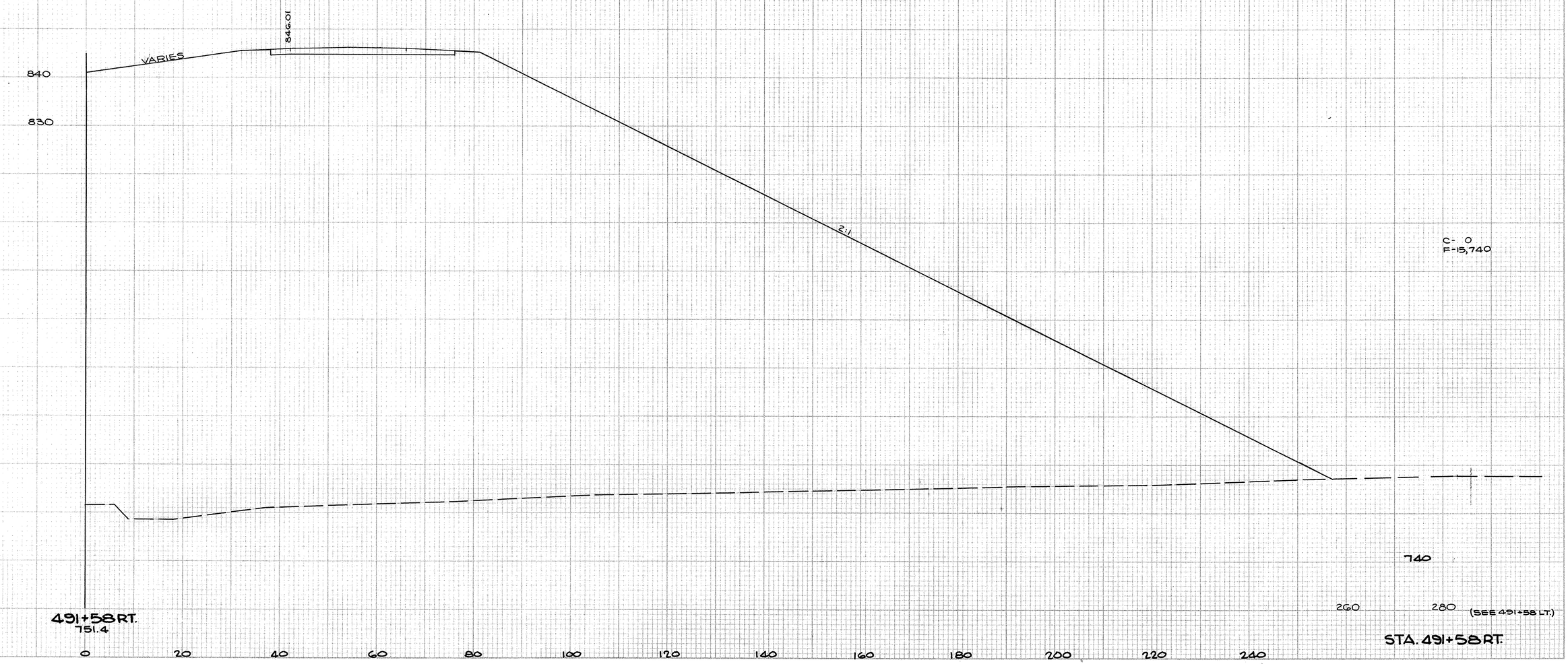


FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

116
313

SUM-271-8.29

END AREA CU. YDS.

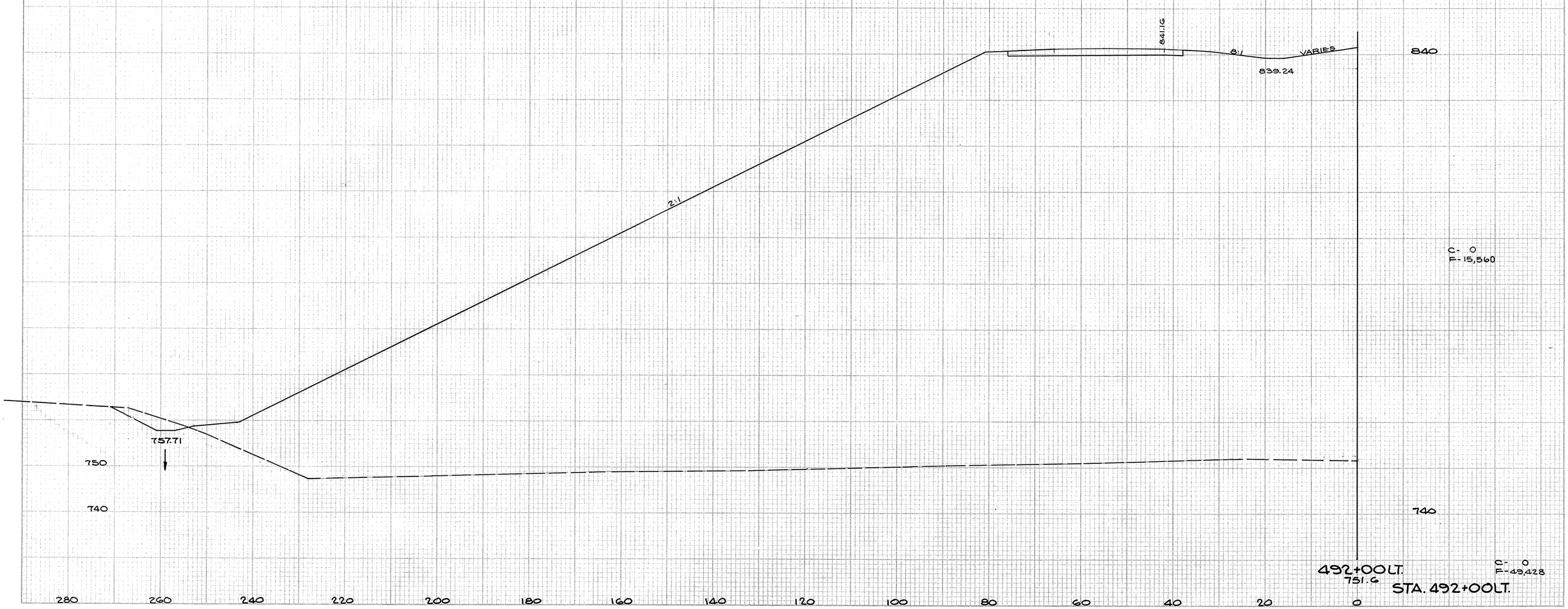


FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

117
313

SUM-271-8.29

END AREA CU. YDS.



FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

118
313

SUM-271-8.29

END AREA CU. YDS.

850

84G-80

VARIES

2:1

C - 0
F - 16,420

CHANNEL @0.25%

INLET 84" CULVERT
INV. = 751.12

740

492+00 RT.
751.6

(SEE 492+00 LT.)

STA. 492+00 RT.

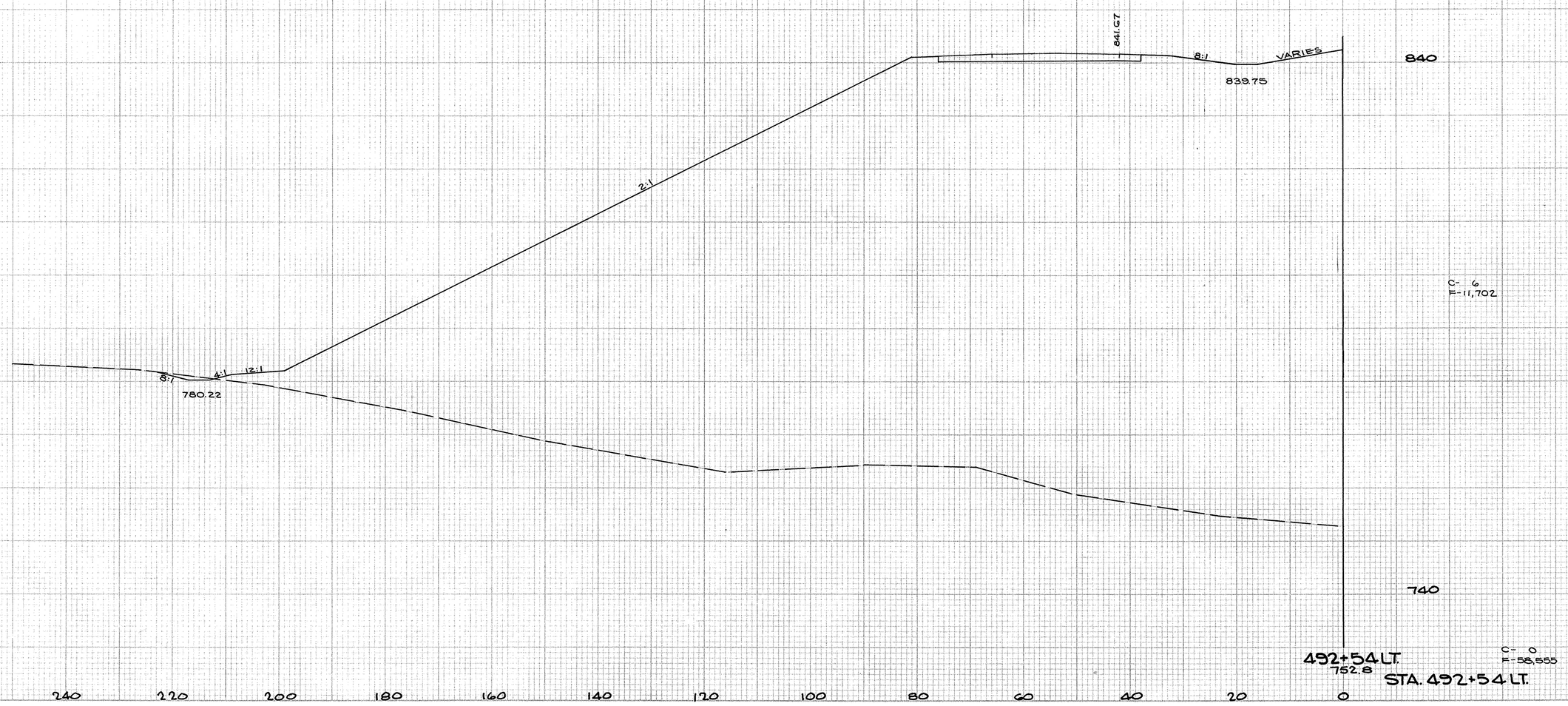
0 20 40 60 80 100 120 140 160 180 200 220 240

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

119
313

SUM-271-8.29

END AREA CU. YDS.

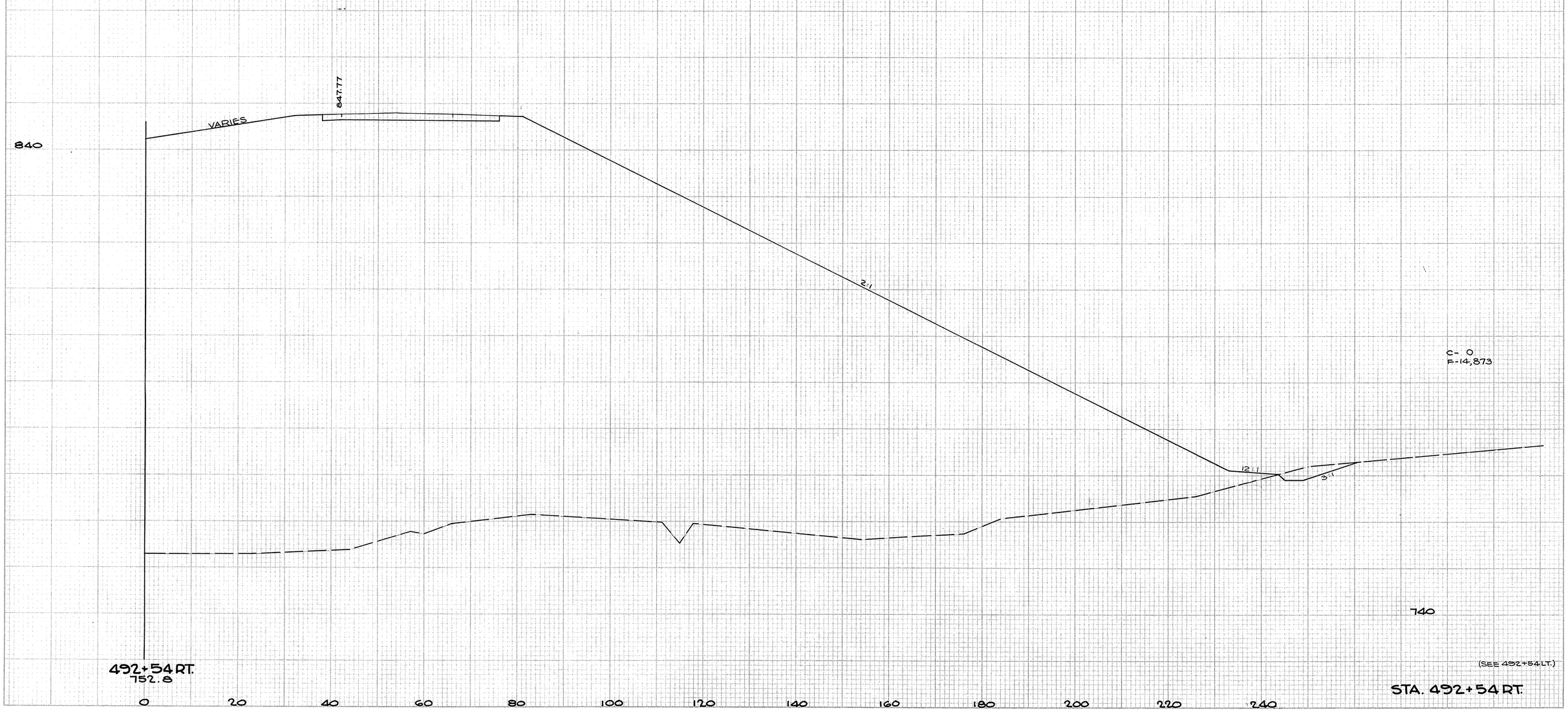


FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

120
313

SUM-271-8.29

END AREA CU. YDS.



(SEE 492+54 LT.)

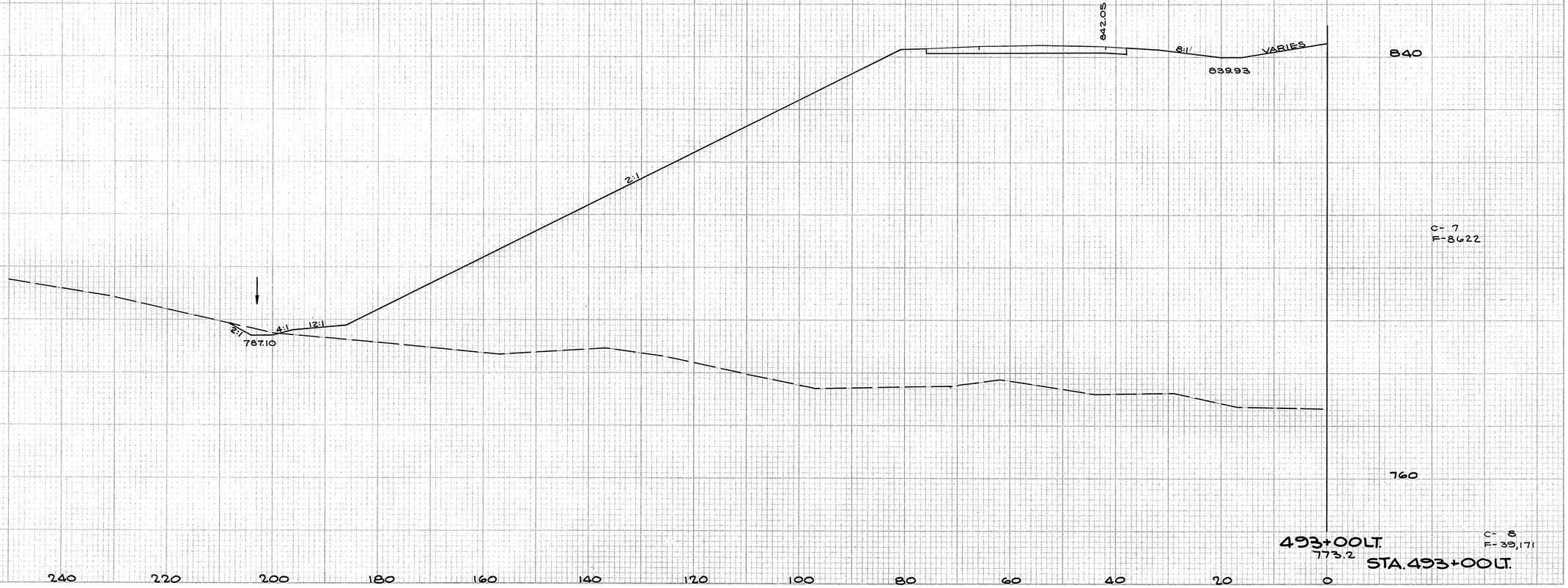
STA. 492+54 RT.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

121
313

SUM-271-8.29

END AREA | CU. YDS.

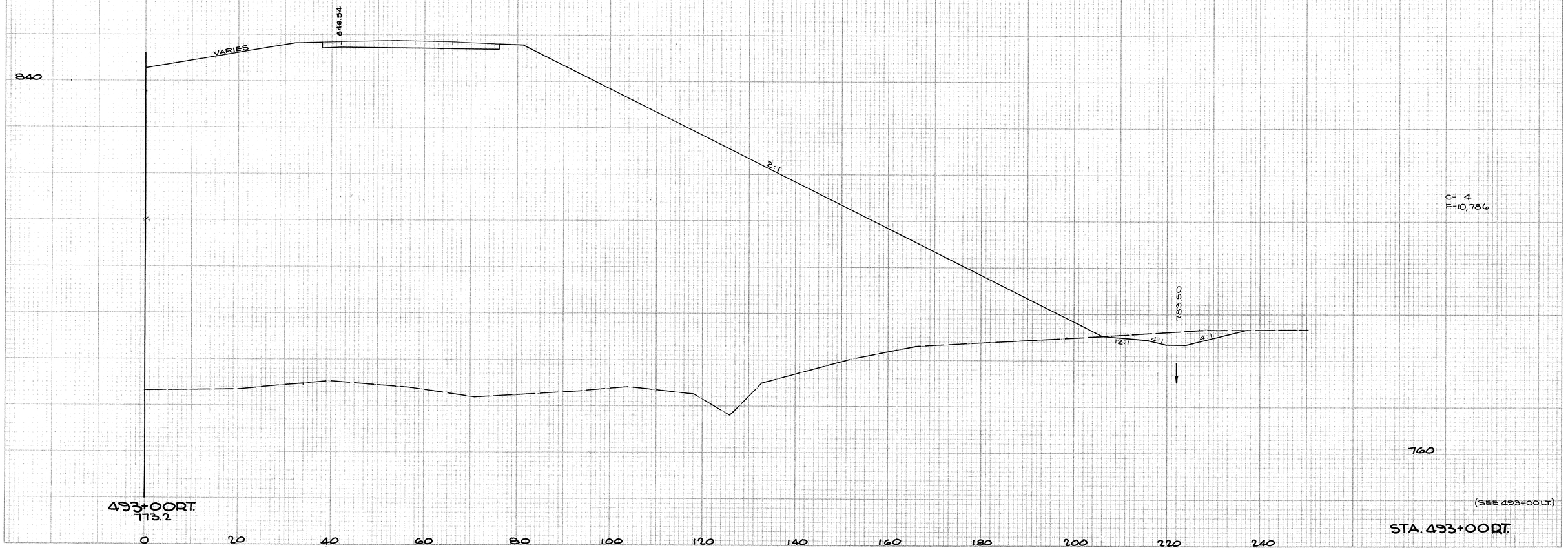


FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

122
313

SUM-271-8.29

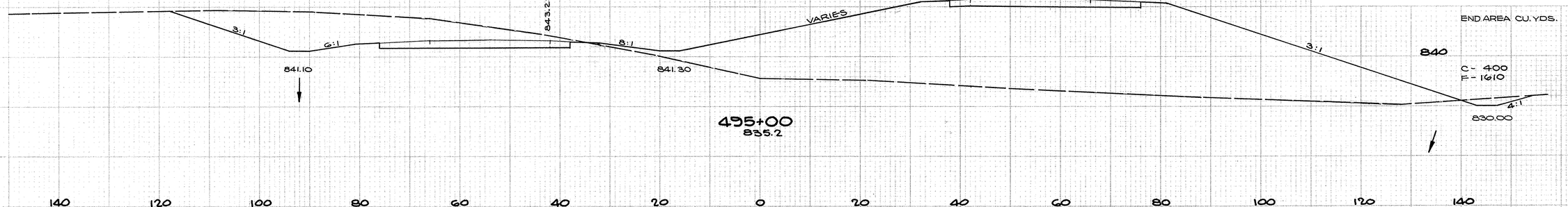
END AREA CU. YDS.

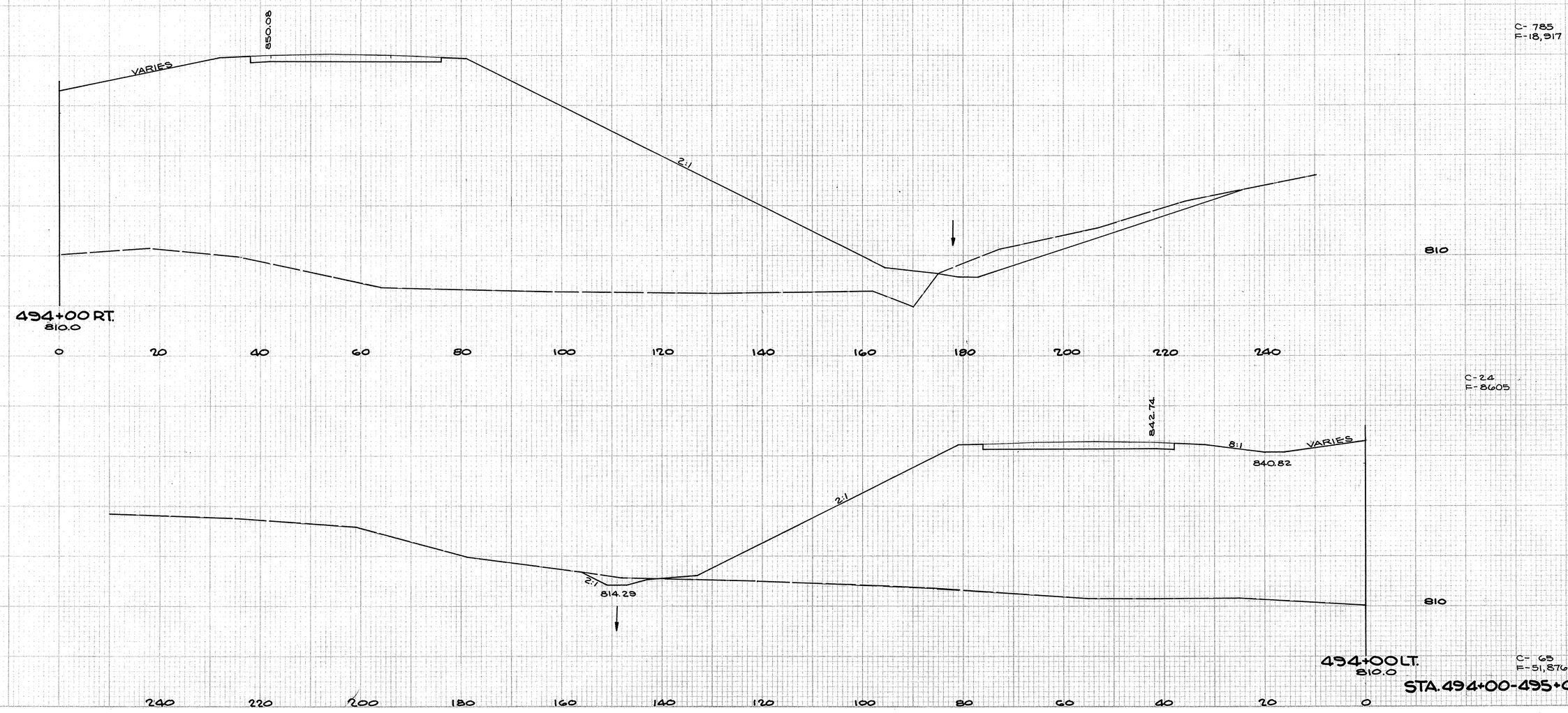


FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

123
313

SUM-271-8.29





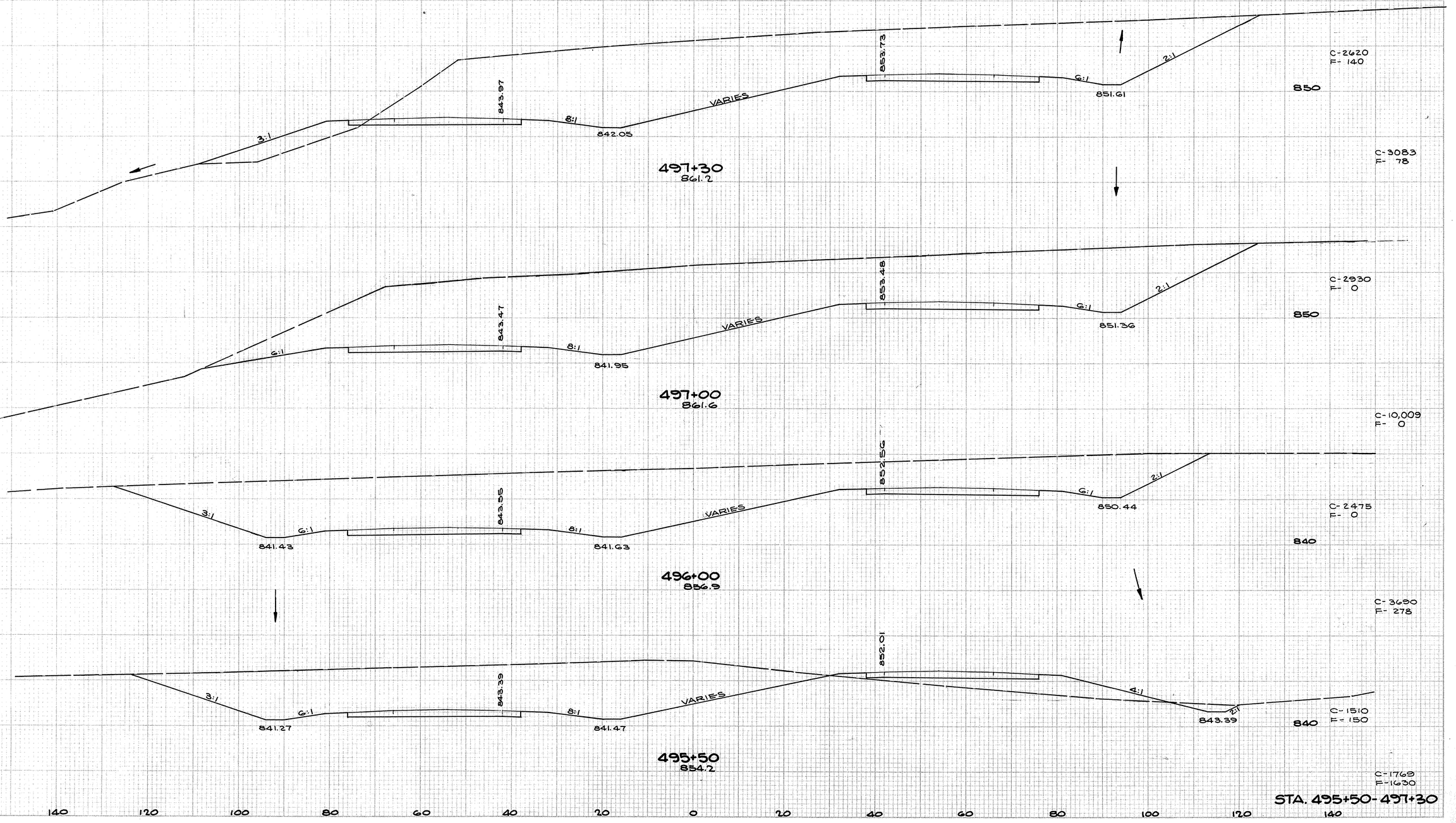
STA. 494+00-495+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

124
313

SUM-271-8.29

END AREA CU.YDS.



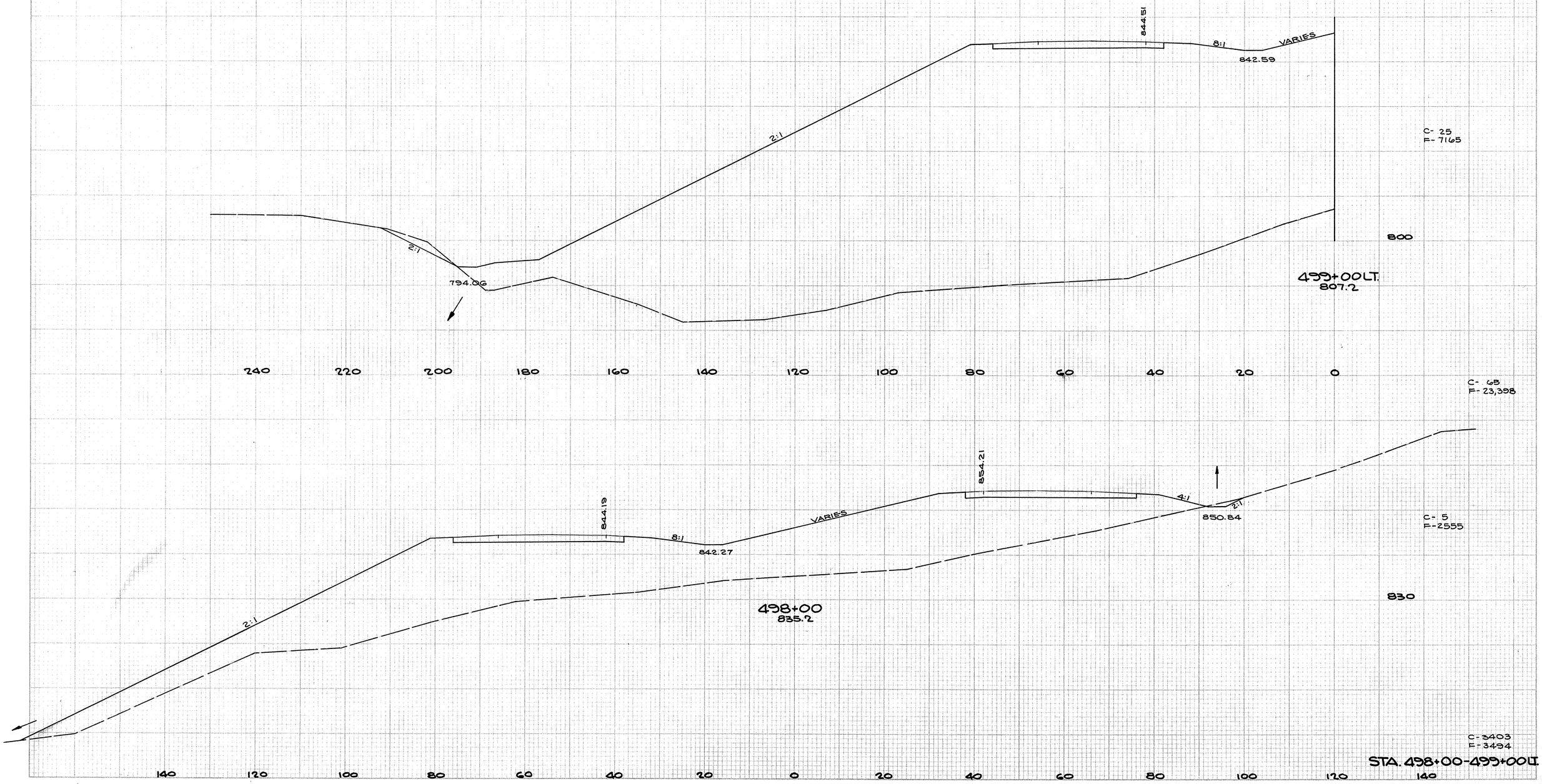
STA. 495+50-497+30

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

125
313

SUM-271-8.29

END AREA CU. YDS.



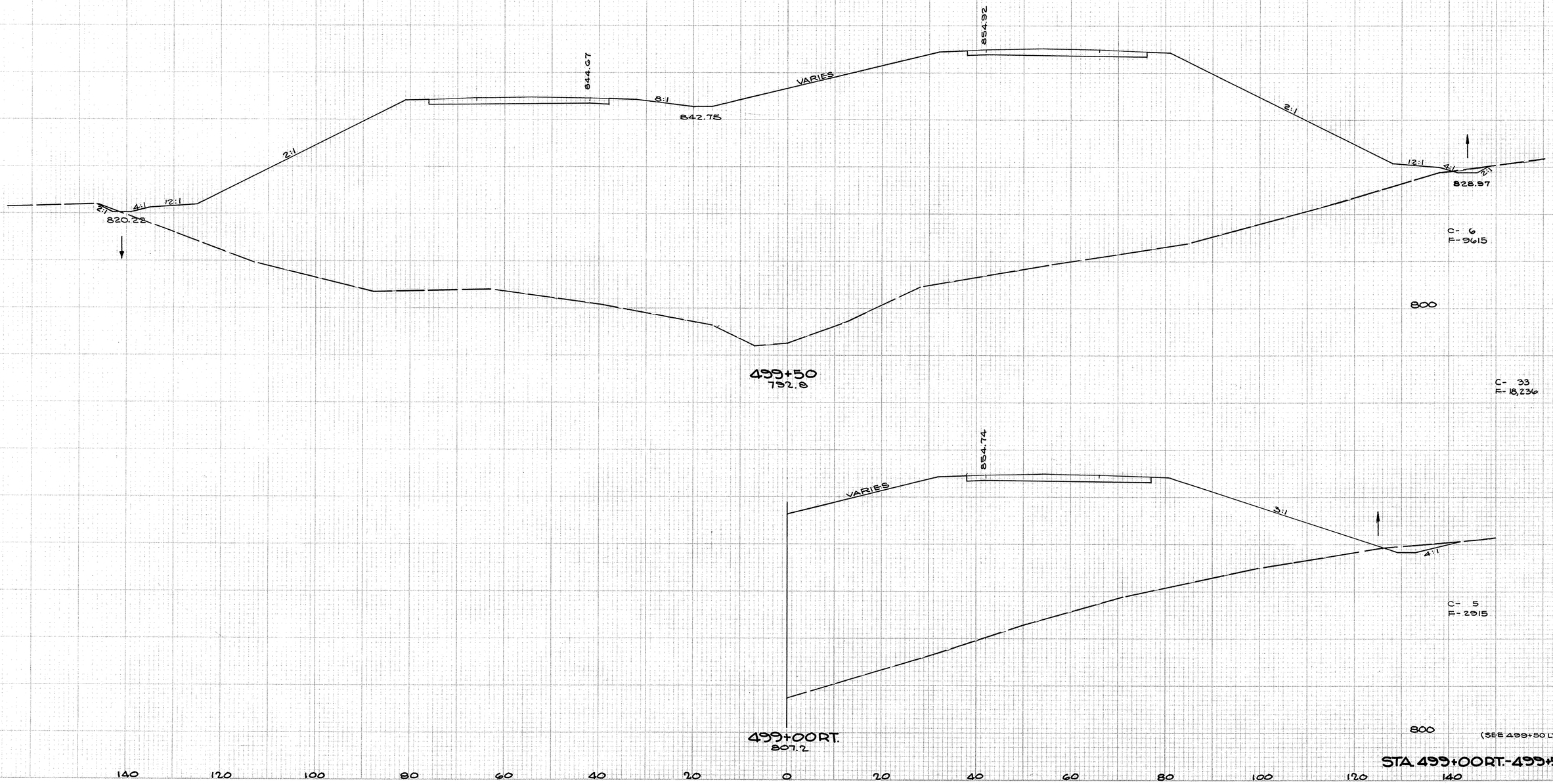
STA. 498+00-499+00 LT.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

126
313

SUM-271-8.29

END AREA CU. YDS.



STA. 499+00 RT.-499+50

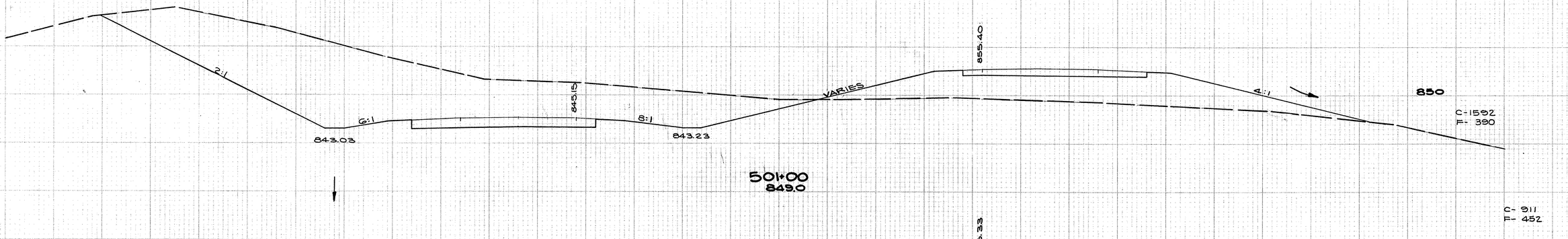
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

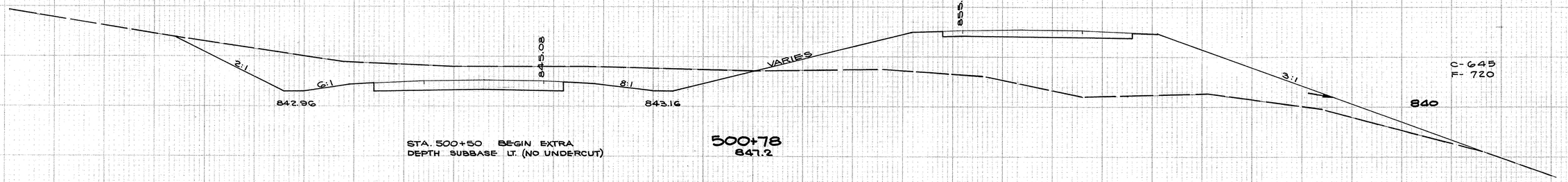
127
313

SUM-271-8.29

END AREA CU. YDS.

STA. 501+50 BEGIN EXTRA DEPTH SUBBASE RT. (UNDERCUT)





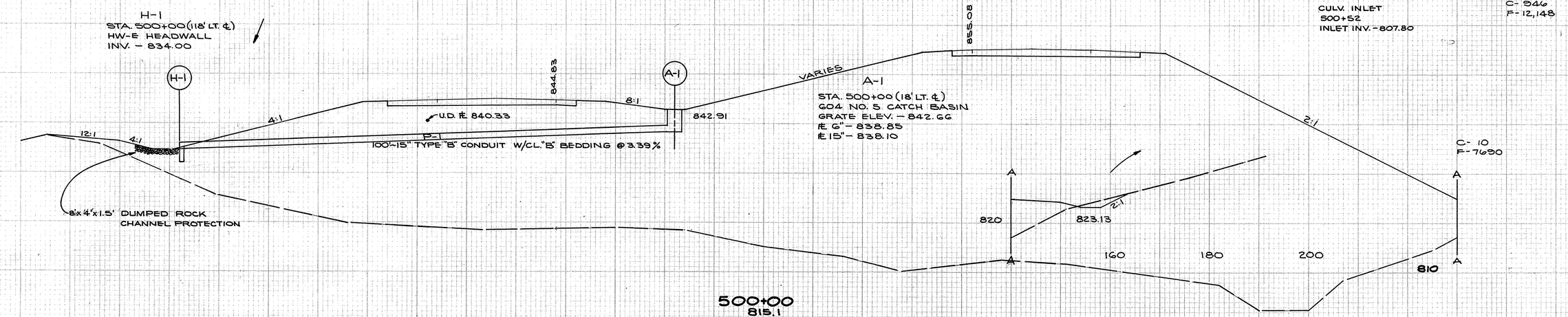
STA. 500+50 BEGIN EXTRA DEPTH SUBBASE LT. (NO UNDERCUT)

500+78
847.2

H-1
STA. 500+00 (118' LT. ℄)
HW-E HEADWALL
INV. - 834.00

CULV. INLET
500+52
INLET INV. - 807.80

C- 546
F- 12,148



500+00
815.1

140 120 100 80 60 40 20 0 20 40 60 80 100 120 140

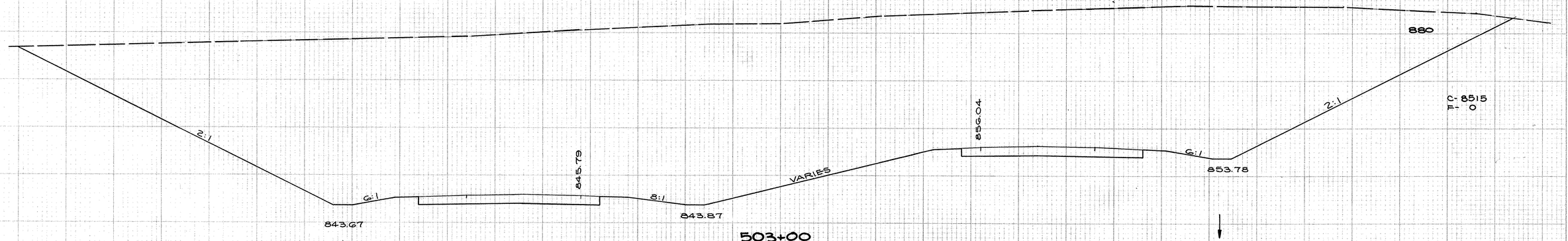
STA. 500+00-501+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

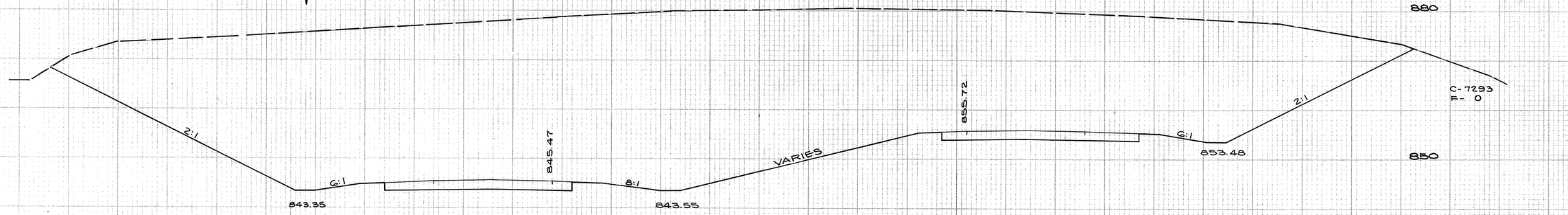
128
313

SUM-271-8.29

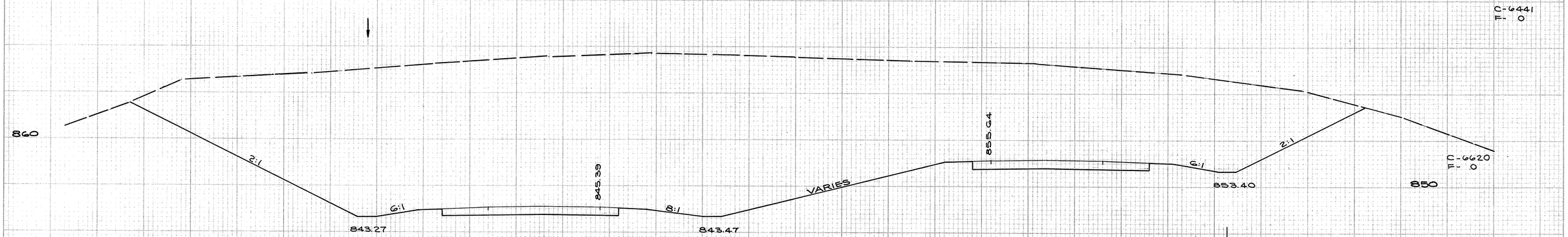
END AREA CU. YDS.



503+00
882.0



502+00
880.1



501+75
877.7

C-11,406
F- 542

STA. 501+75 - 503+00

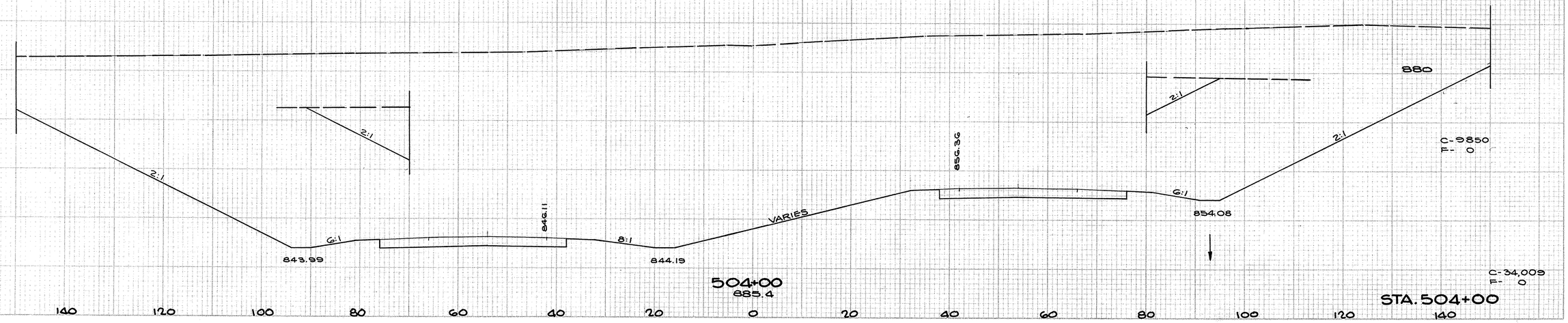
140 120 100 80 60 40 20 0 20 40 60 80 100 120 140

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

129
313

SUM-271-8.29

END AREA CU.YDS.

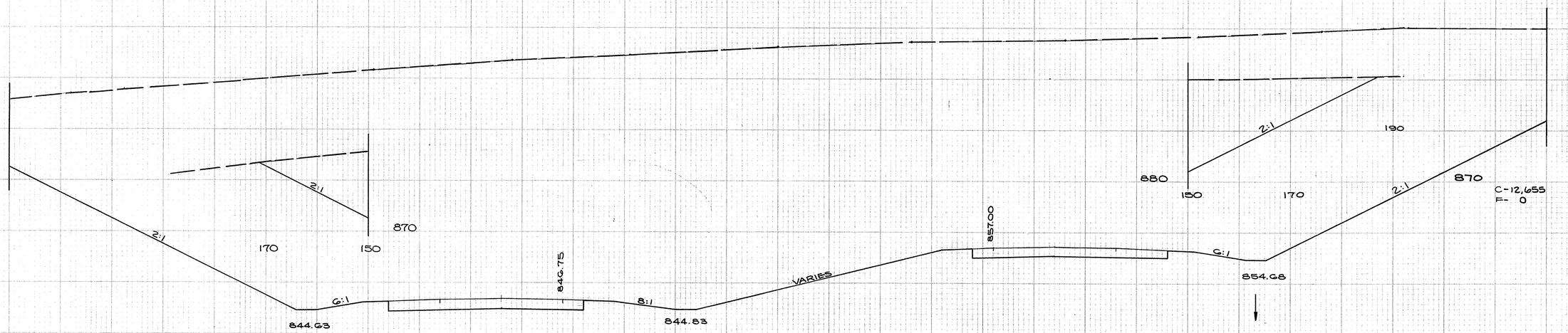


FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

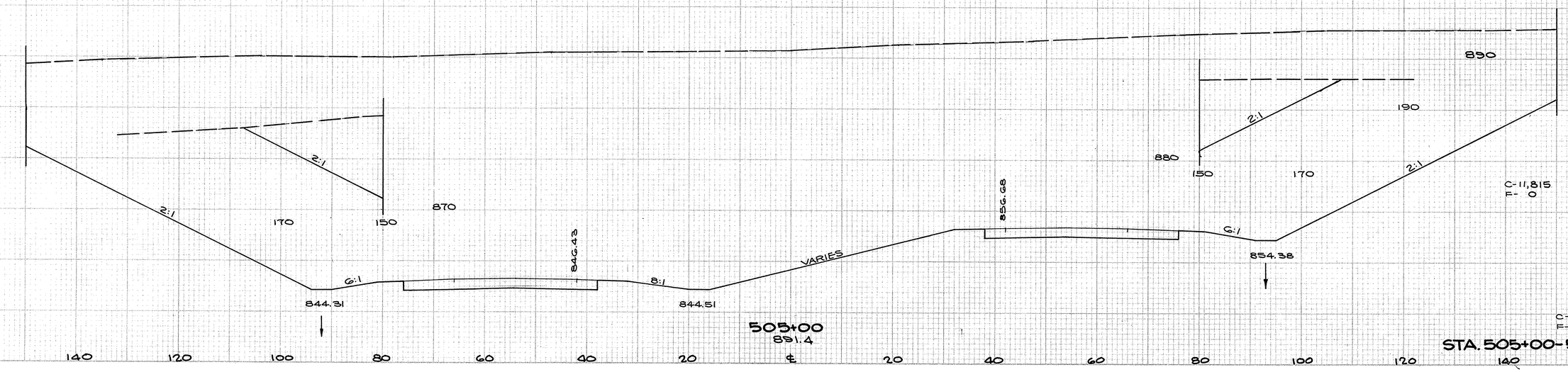
130
313

SUM: 271·8.29

END AREA CU.YDS.



506+00
896.1



505+00
891.4

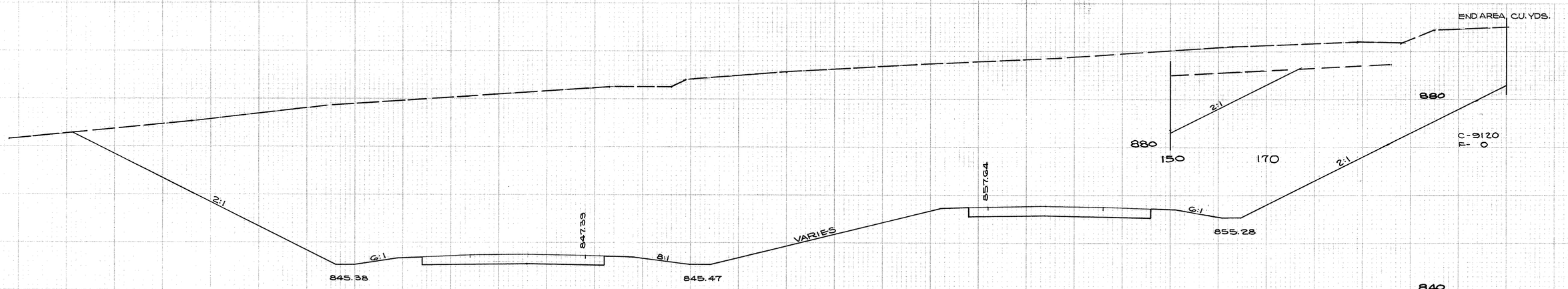
140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

STA. 505+00-506+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

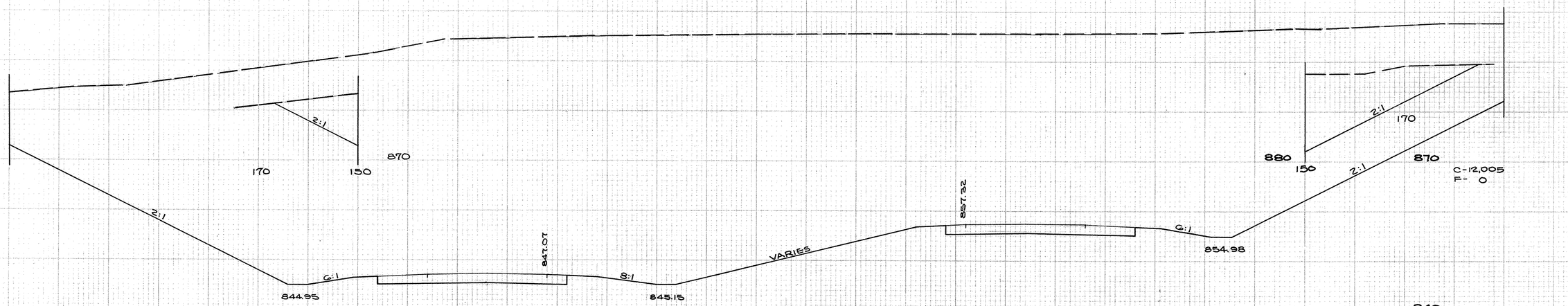
131
313

SUM-271-8.29



508+00
885.6

C-39,120
F- 0



507+00
885.4

C-45,667
F- 0

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

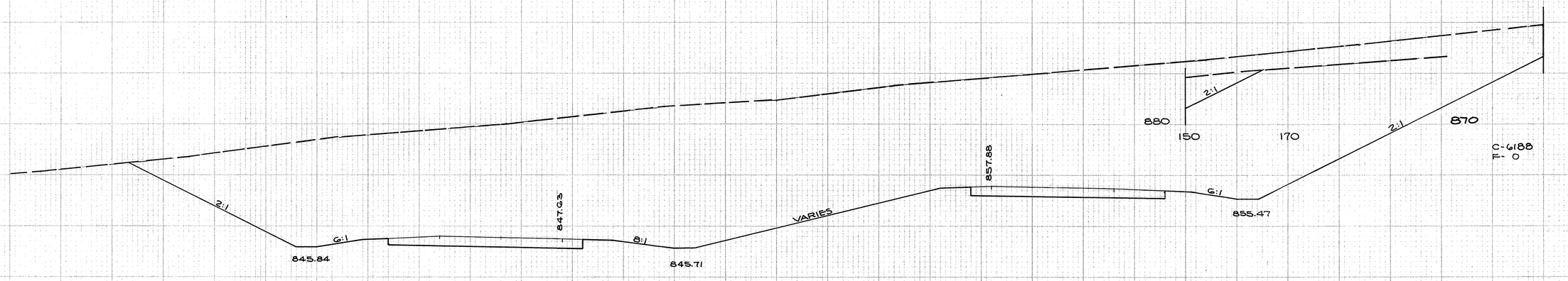
STA. 507+00-508+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

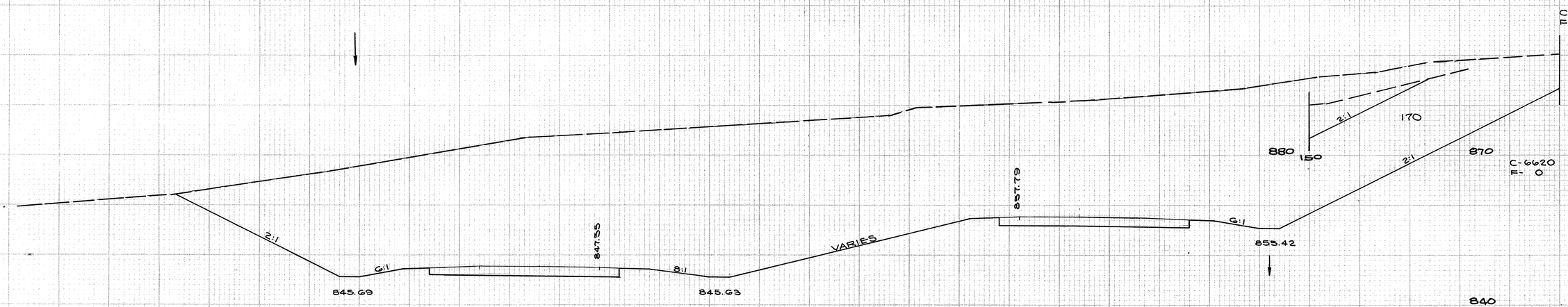
132
313

SUM-271-8.29

END AREA CU. YDS.



508+75
874.7



508+47
877.0

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

C-13,700
F- 0

STA. 508+47-508+75

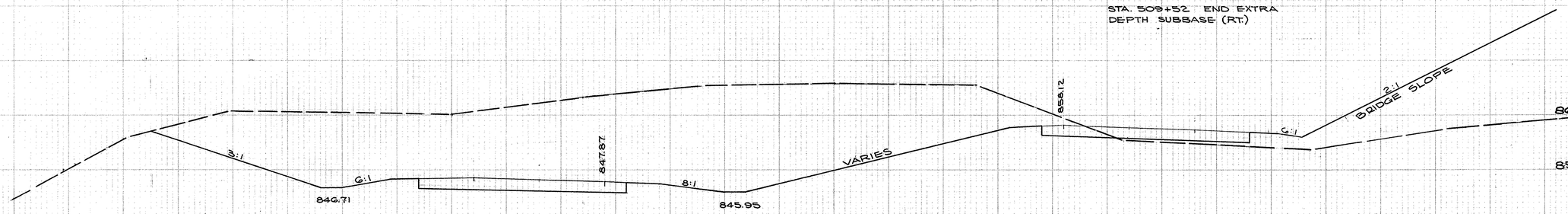
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

133
313

SUM-271-8.29

END AREA CU. YDS.

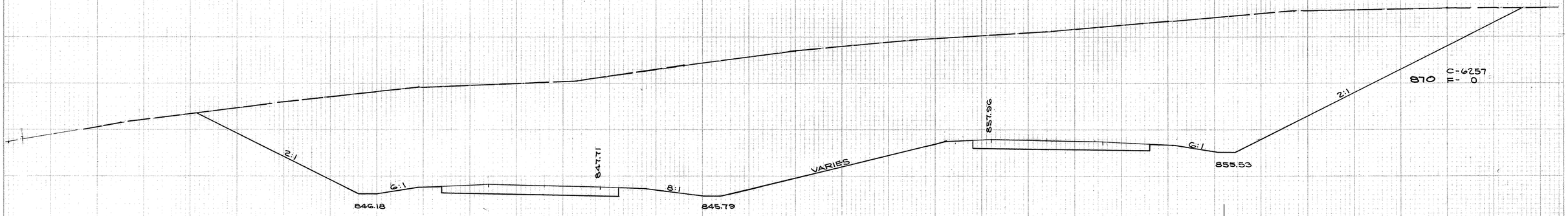
STA. 509+52 END EXTRA DEPTH SUBBASE (RT.)



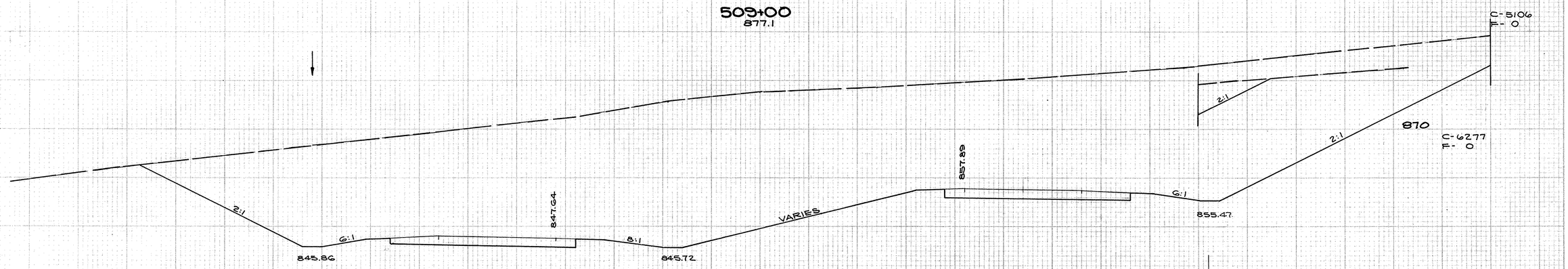
509+52
866.5

END 84' MEDIAN
STA. 509+51.64
BEGIN TRANSITION

C- 8356
F- 53



509+00
877.1



508+78
877.7

STA. 508+78-509+52

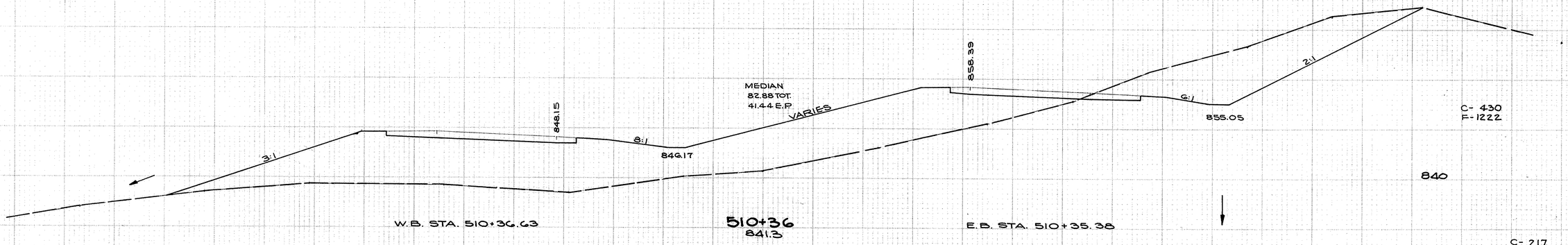
140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

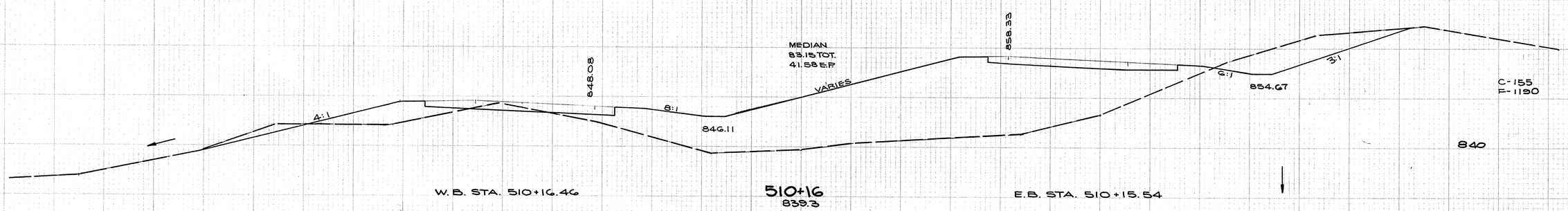
134
313

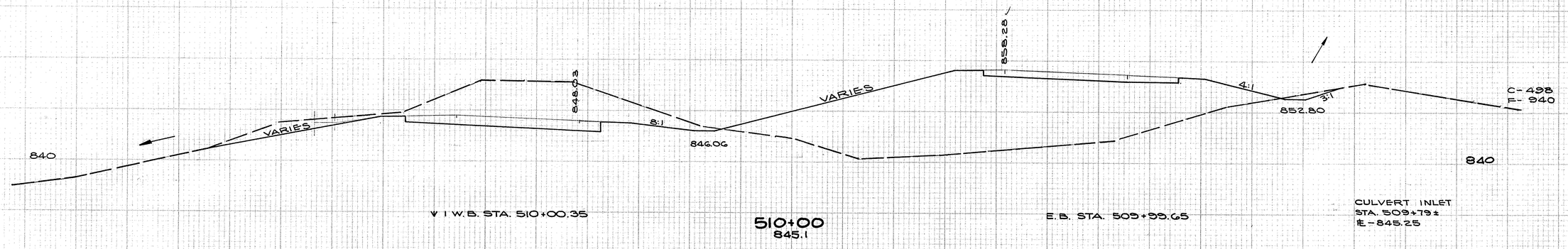
SUM-271-8.29

END AREA CU. YDS.



STA. 510+16 END EXTRA DEPTH SUBBASE (LT.)





STA. 510+00 - 510+36

FED. HWY. DIVISION	STATE	PROJECT	
2	OHIO		

135
313

SUM-271-8.29

END AREA CU.YDS.

C-490
F-1705

840

MEDIAN
80.71 TOT.
40.36 E.P

848.79

859.32

VARIES

8:1

840.81

2:1

6:1

855.95

2:1

2:1

4:1

12:1

830.52

W.B. STA. 512+01.79

512+00
840.8

E.B. STA. 511+98.21

C-4917
F-4957

MEDIAN
82.03 TOT.
41.02 E.P

858.69

848.35

VARIES

8:1

2:1

6:1

855.30

2:1

C-2165
F-972

860

2:1

511+00
863.5

E.B. STA. 510+98.02

830.22

W.B. STA. 511+01.07

C-2403
F-1009

C-2160
F-845

860

858.51

848.26

VARIES

8:1

2:1

6:1

855.17

2:1

BRIDGE SLOPE

TO RELOC. C.H. 40
SIDE DITCH

510+70
861.4

W.B. STA. 510+70.85

E.B. STA. 510+69.15

C-1631
F-1301

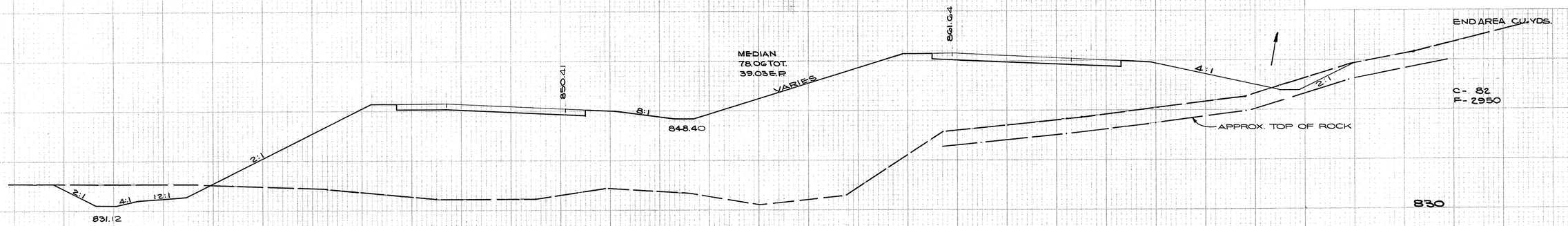
STA. 510+70 - 512+00

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

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

136
313

SUM-271-8.29

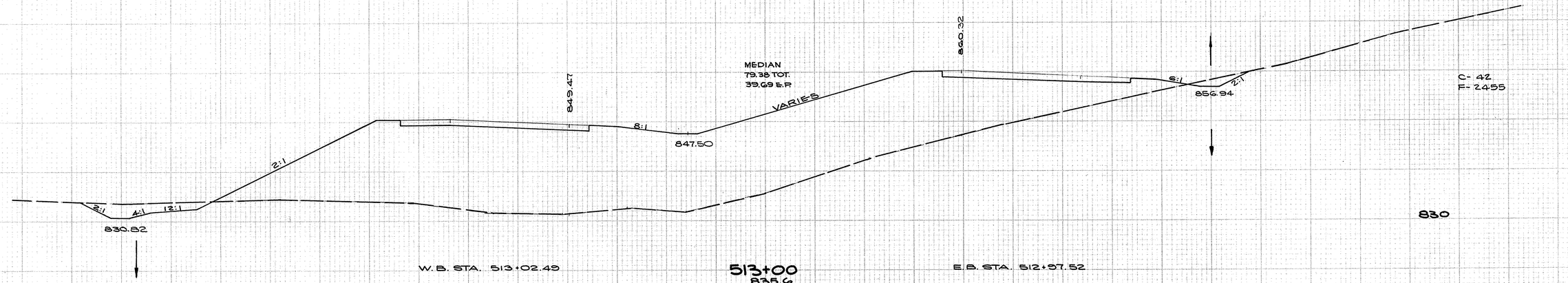


W.B. STA. 514+03.18

514+00
831.2

E.B. STA. 513+96.82

C- 230
F- 10,009



W.B. STA. 513+02.49

513+00
835.6

E.B. STA. 512+97.52

C- 985
F- 7704

STA. 513+00-514+00

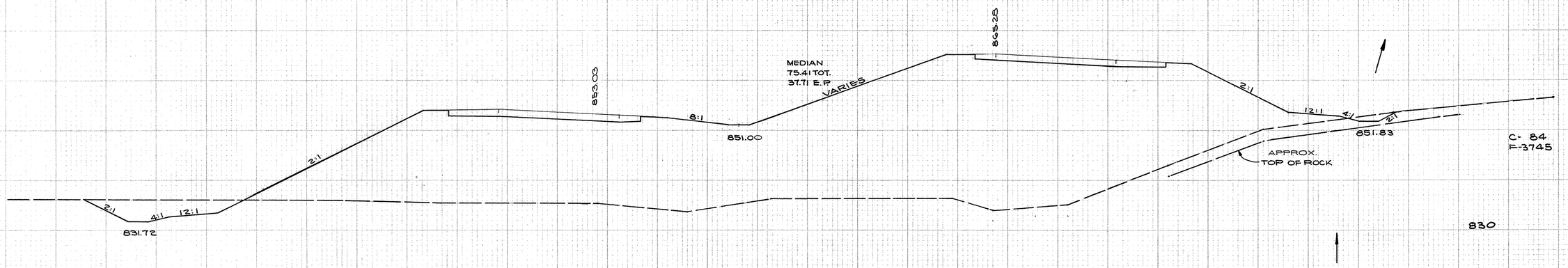
140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

137
313

SUM-271-8.29

END AREA CU. YDS.



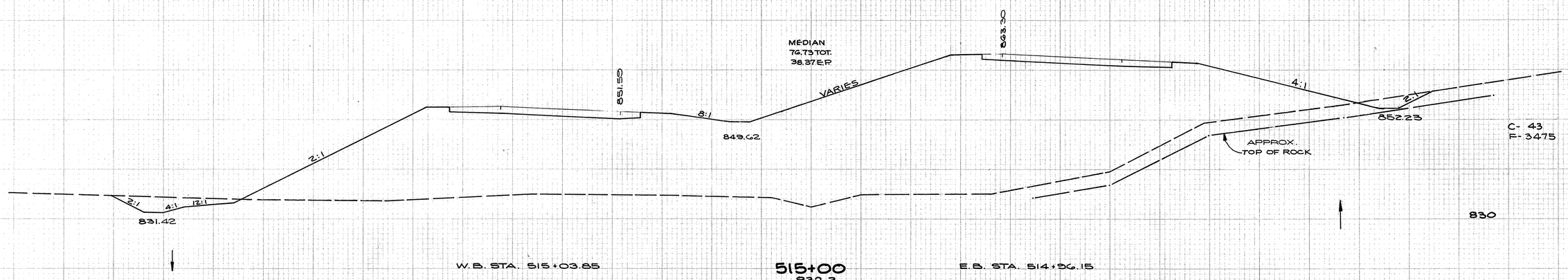
C- 84
F-3745

W.B. STA. 516+04.51

516+00
836.3

E.B. STA. 515+95.49

C- 235
F- 13,370



C- 43
F- 3475

W.B. STA. 515+03.85

515+00
832.3

E.B. STA. 514+96.15

C- 231
F- 11,898

STA. 515+00 - 516+00

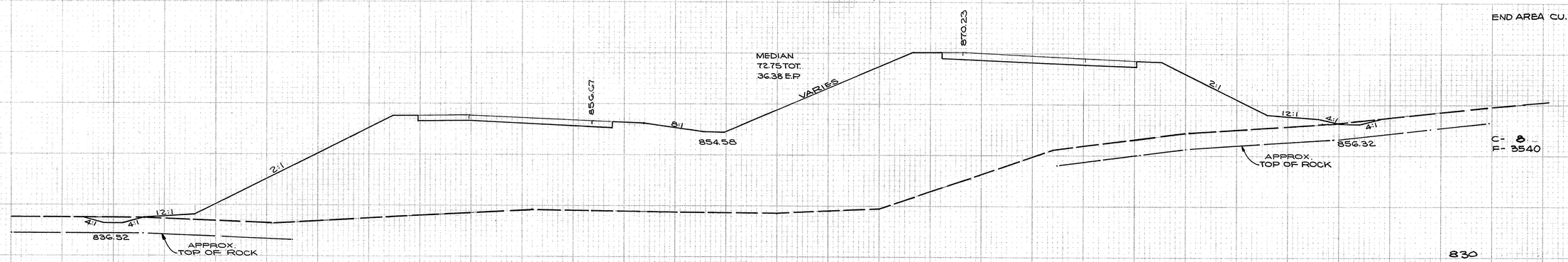
140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

138
313

SUM-271-8.29

END AREA CU. YDS.

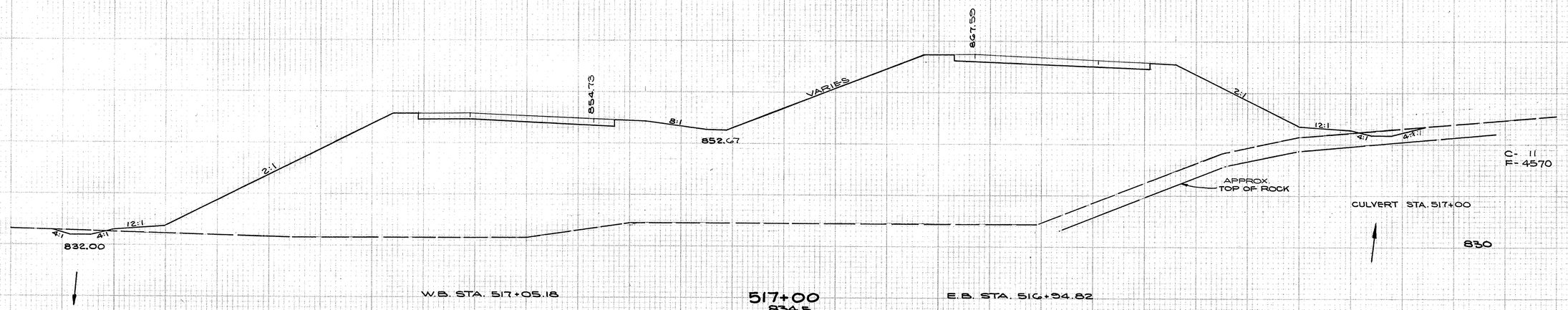


W.B. STA. 518+05.82

518+00
838.7

E.B. STA. 517+94.18

C- 35
F- 15,019



W.B. STA. 517+05.18

517+00
834.5

E.B. STA. 516+94.82

C- 176
F- 15,398

STA. 517+00 - 518+00

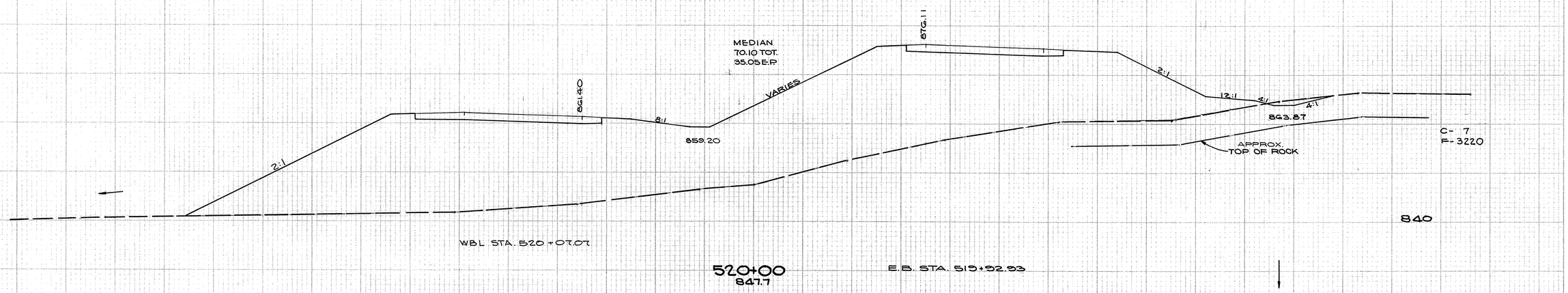
140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

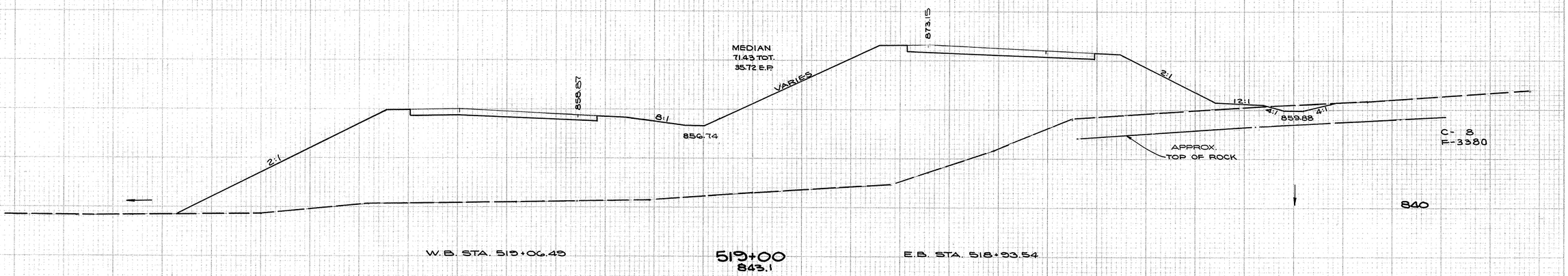
139
313

SUM-271-8.29

END AREA CU.YDS.



C- 28
F-12,222



C- 30
F-12,815

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

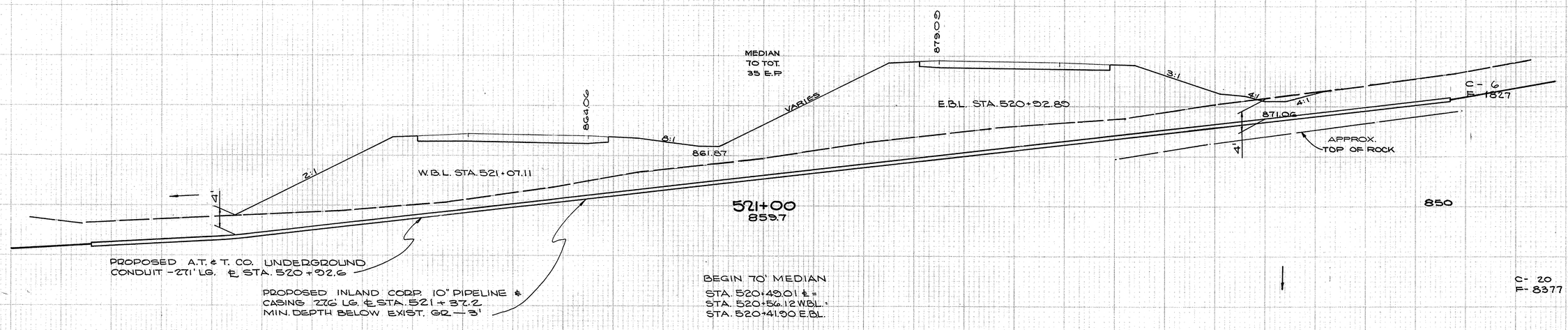
STA. 519+00 - 520+00

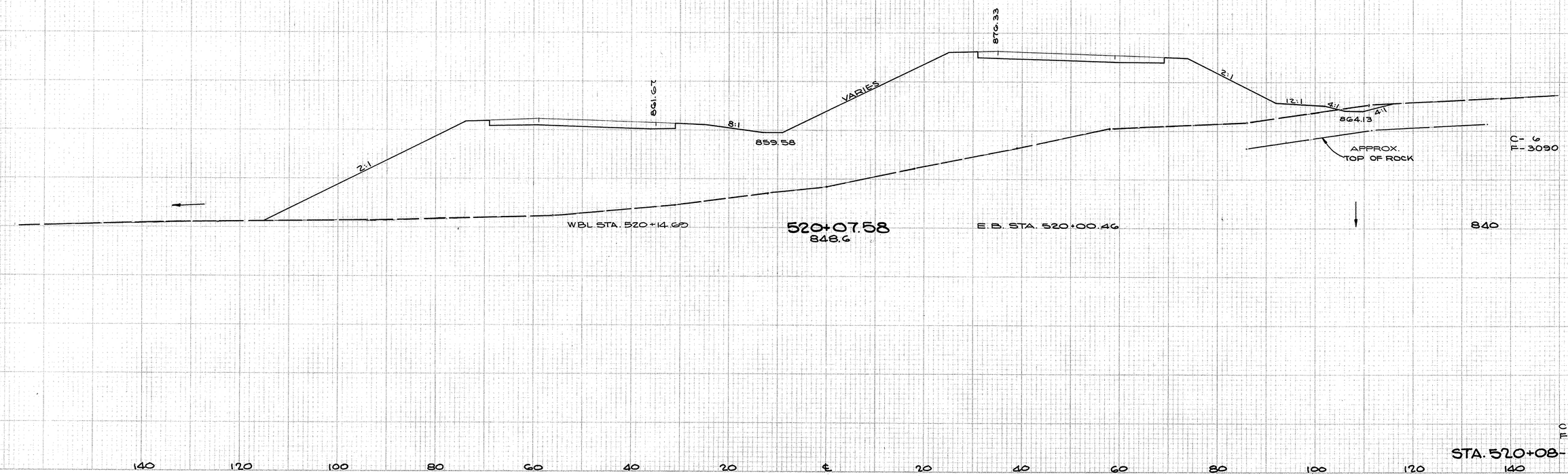
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

140
313

SUM-271-8.29

END AREA CU. YDS.





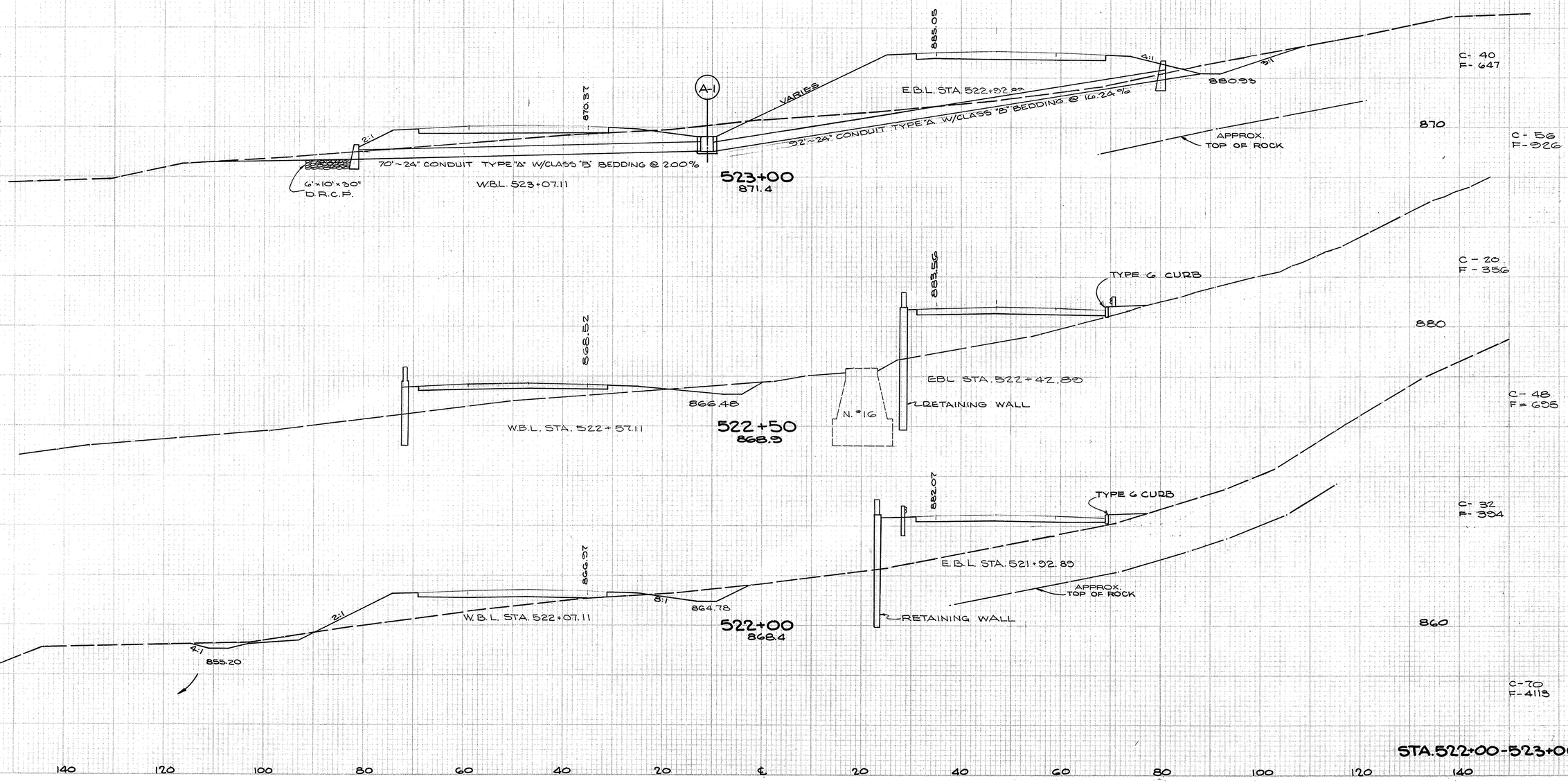
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

141
313

SUM-271-8.29

END AREA CU. YDS.

A-1
STA. 523+00 (11' LT. ℄)
G04 No. 5 CATCH BASIN
GRATE - 867.93
℄ 24" - 865.01



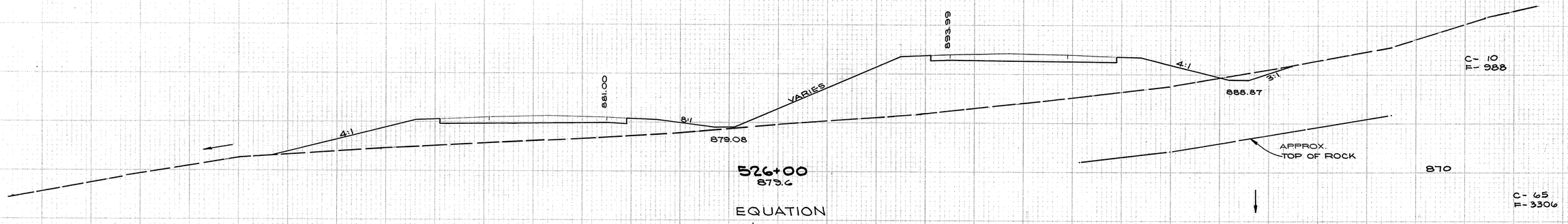
STA. 522+00-523+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

142
313

SUM-271-8.29

END AREA CU. YDS.



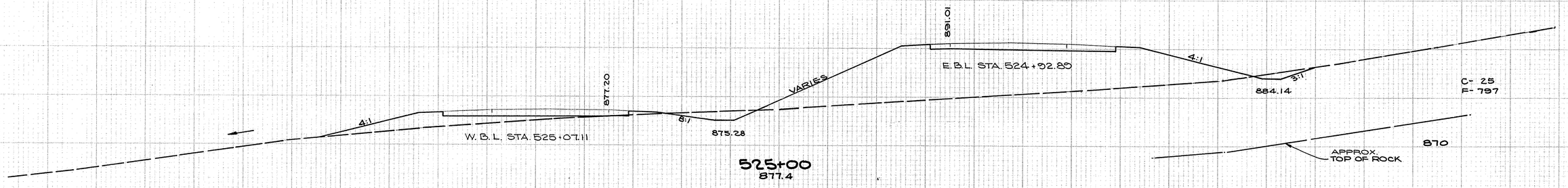
526+00
879.6

C- 10
F- 988

C- 65
F- 3306

EQUATION

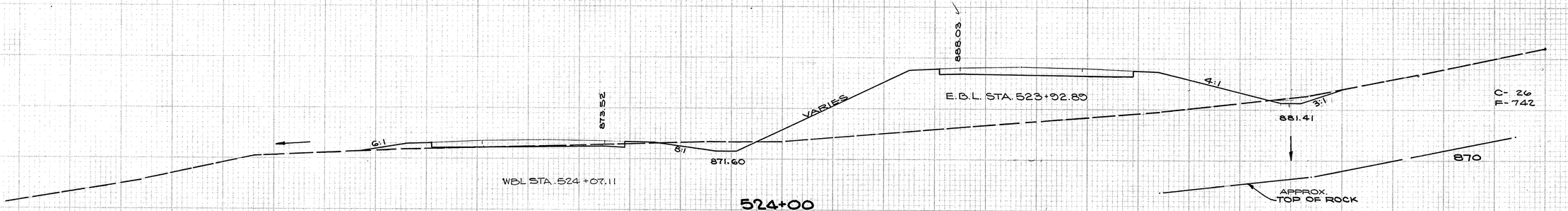
W.B.L. & E.B.L. TO ℄ SURVEY
℄ SURVEY STA. 525+00.15 =
W.B.L. STA. 525+07.30 &
E.B.L. STA. 524+93.08



525+00
877.4

C- 25
F- 797

C- 94
F- 2850



524+00
873.5

C- 26
F- 742

C- 122
F- 2572

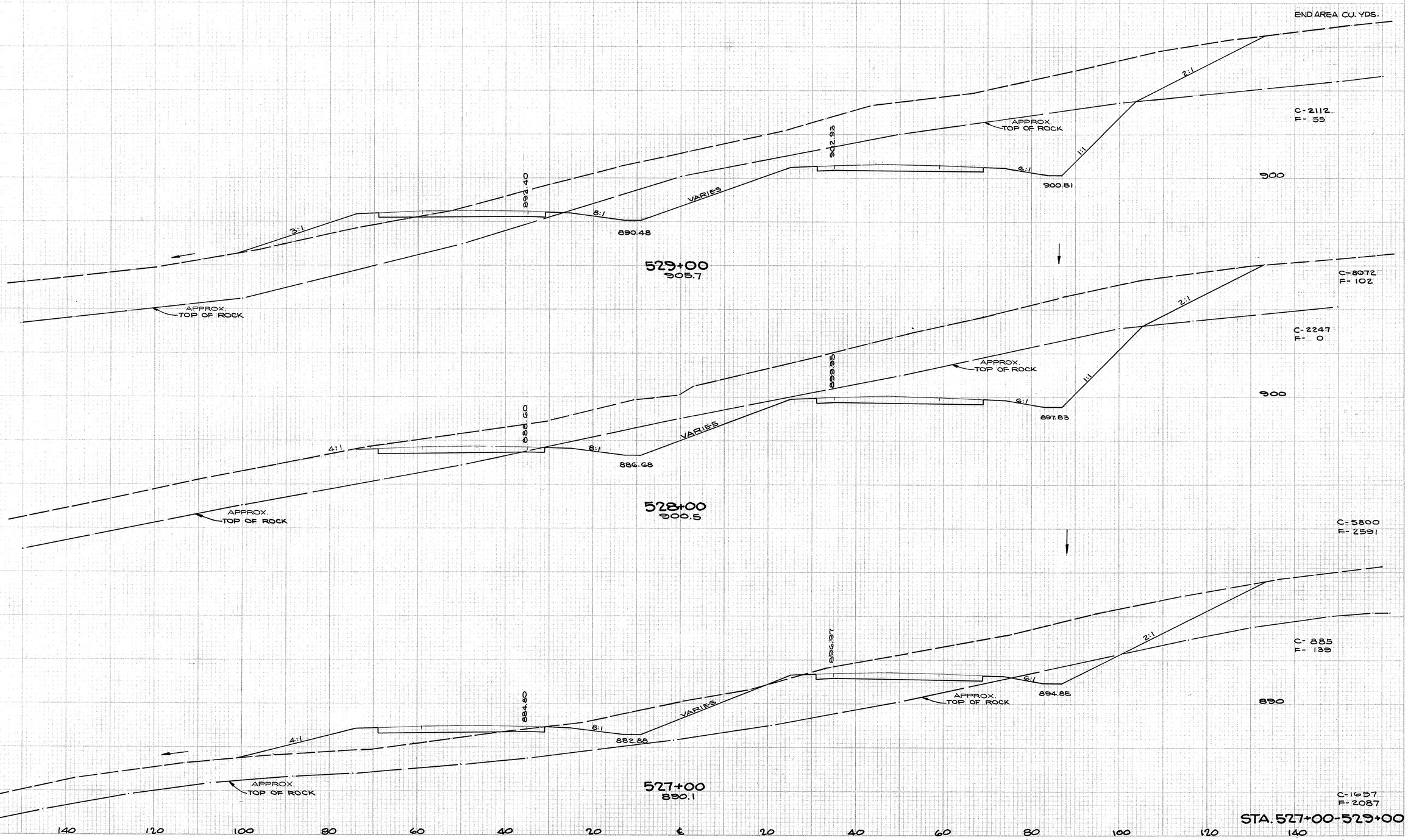
STA. 524+00-526+00

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

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

143
313

SUM-271-8.29

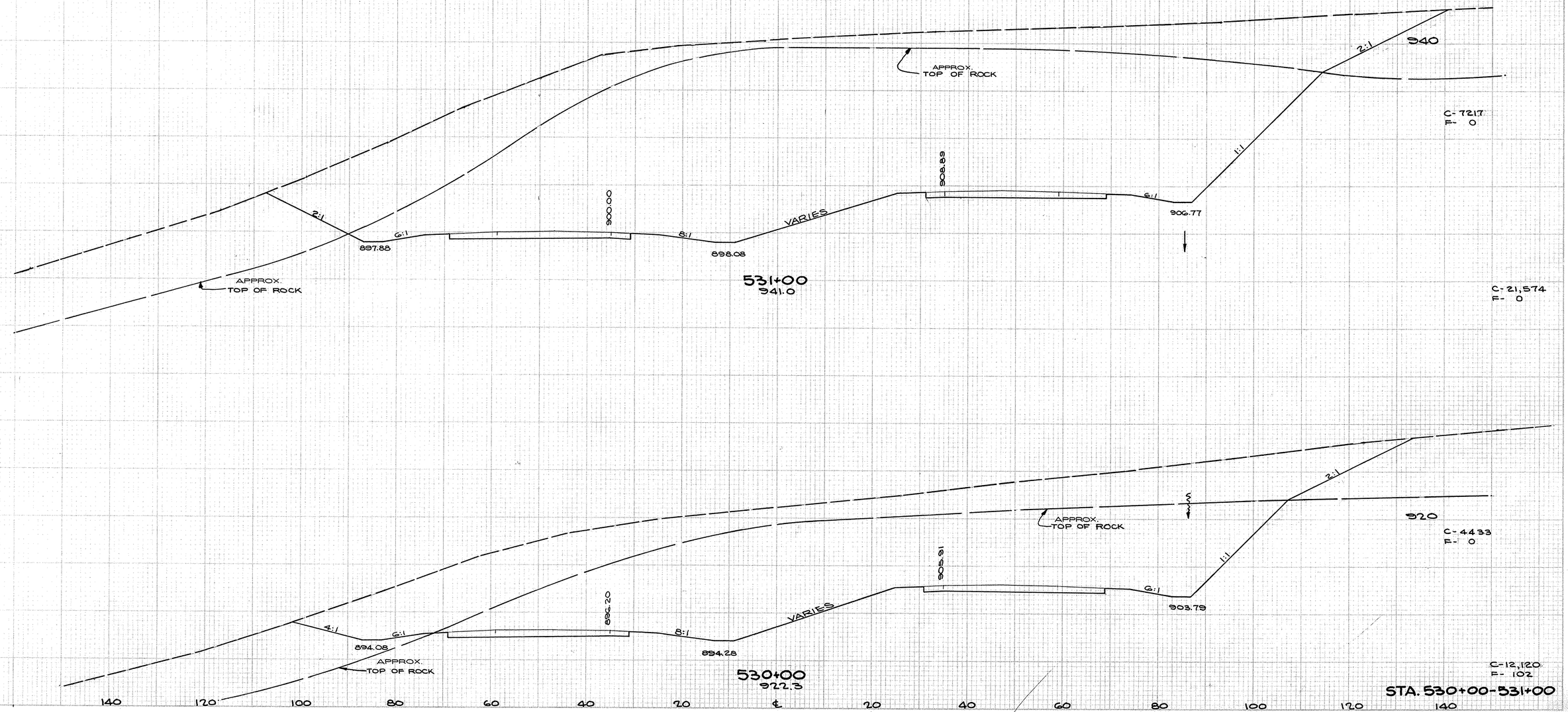


FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

144
313

SUM-271-8.29

END AREA CU.YDS.



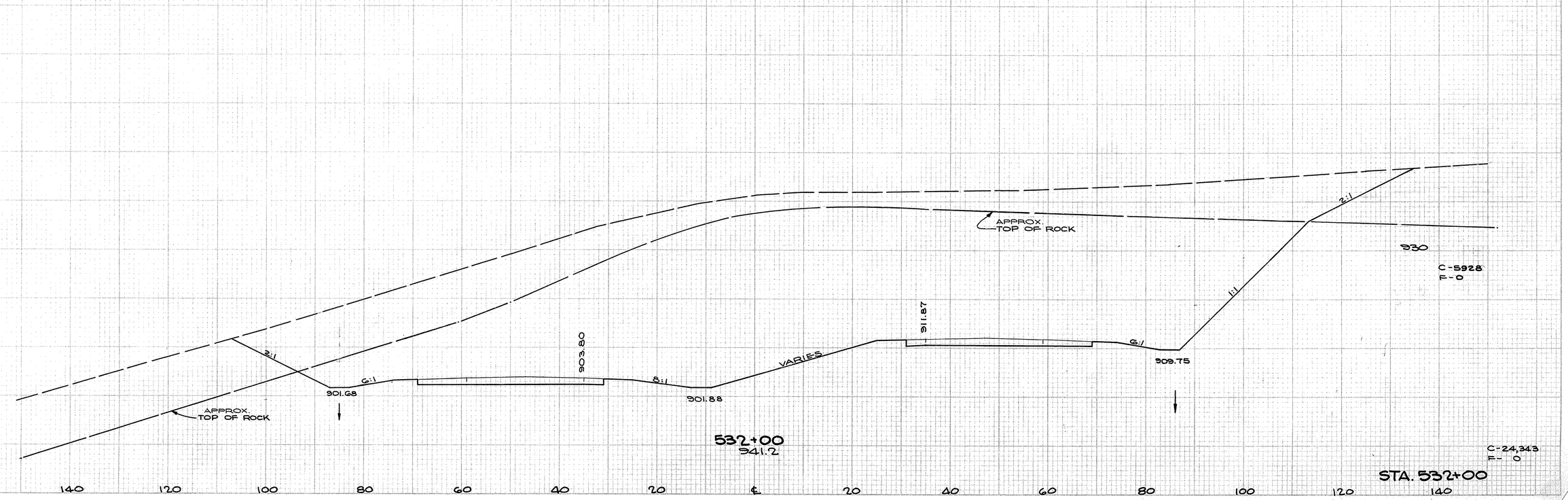
STA. 530+00-531+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

145
313

SUM-271-8.29

END AREA CU. YDS.



C-5928
F-0

532+00
541.2

C-24,343
F-0

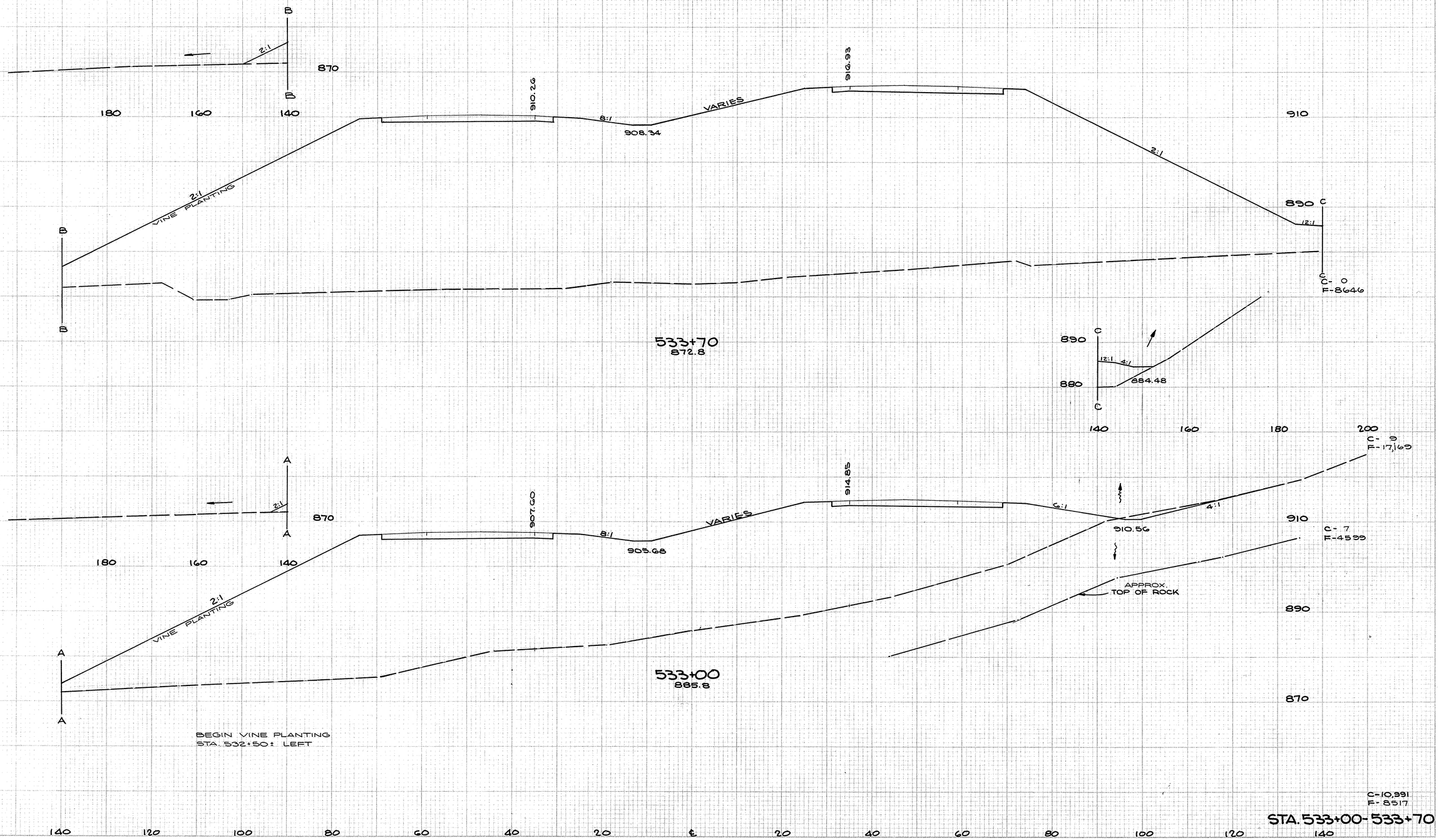
STA. 532+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

SUM-271-8.29

146
313

END AREA CU. YDS.



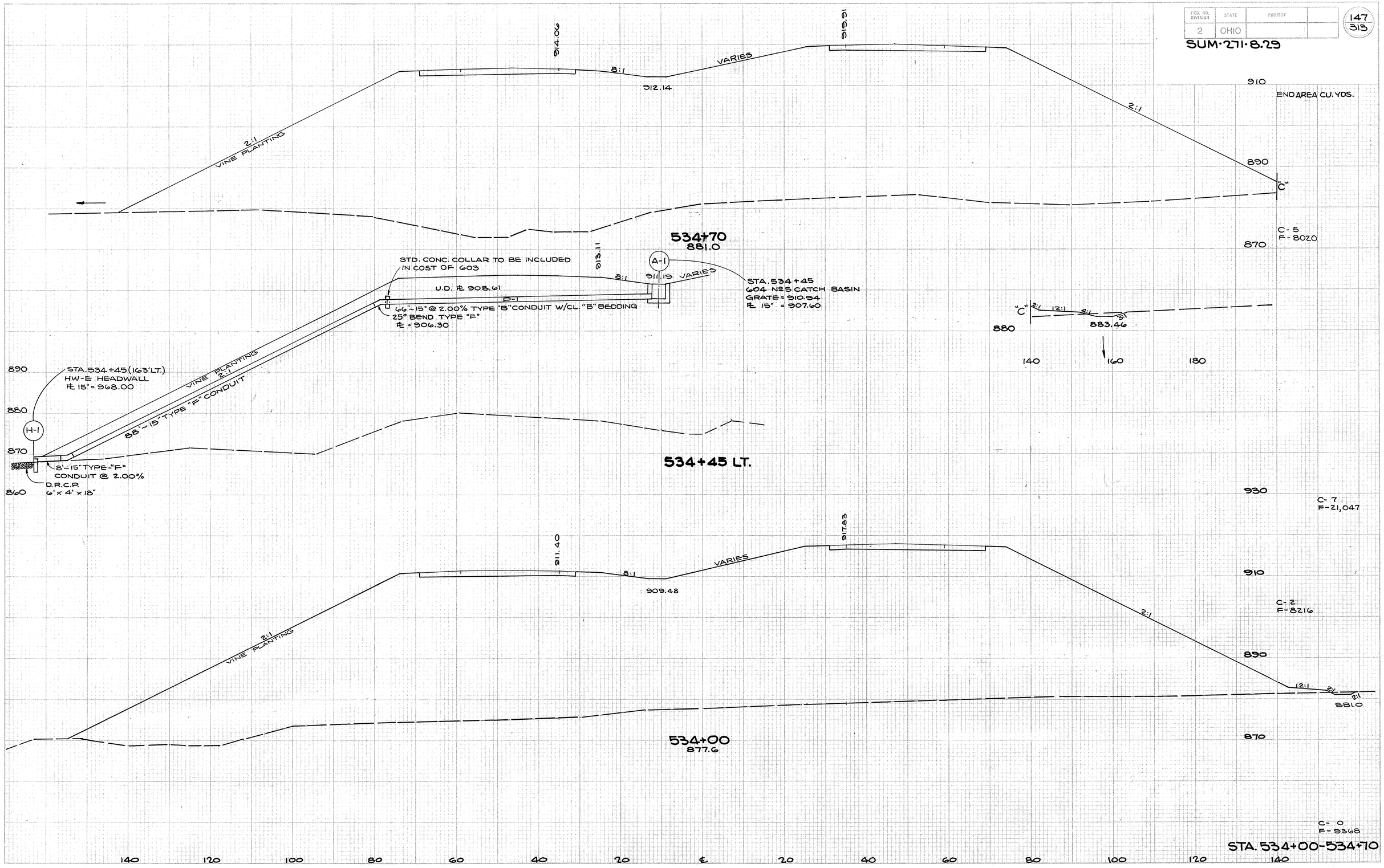
C-10,991
F- 8517

STA. 533+00-533+70

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

147/313

SUM-271-8.29

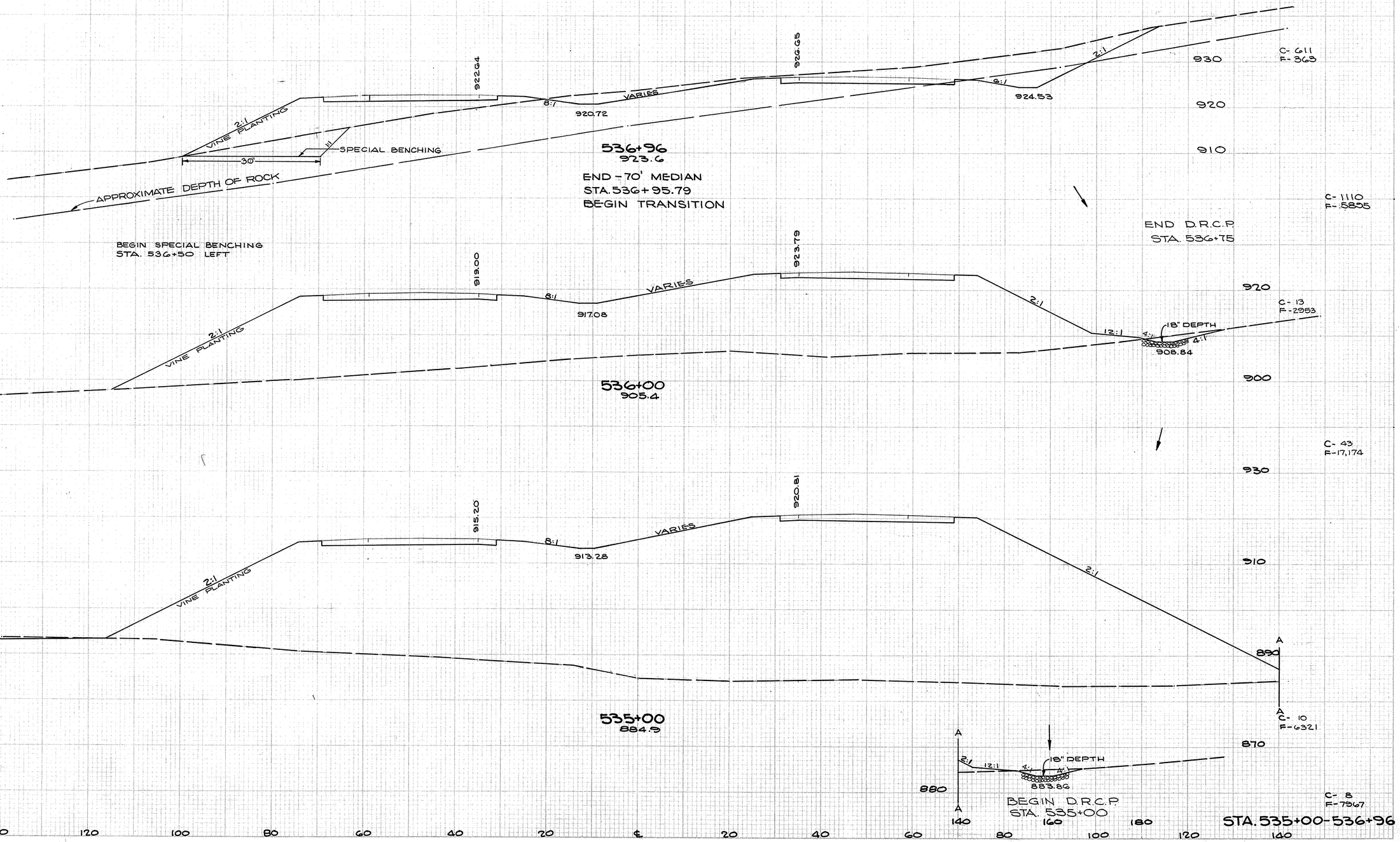


FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

148
313

SUM-271-8.29

END AREA CU. YDS.



SYS. NO. DIVISION	STATE	PROJECT	
2	OHIO		

149
313

SUM-271-8.29

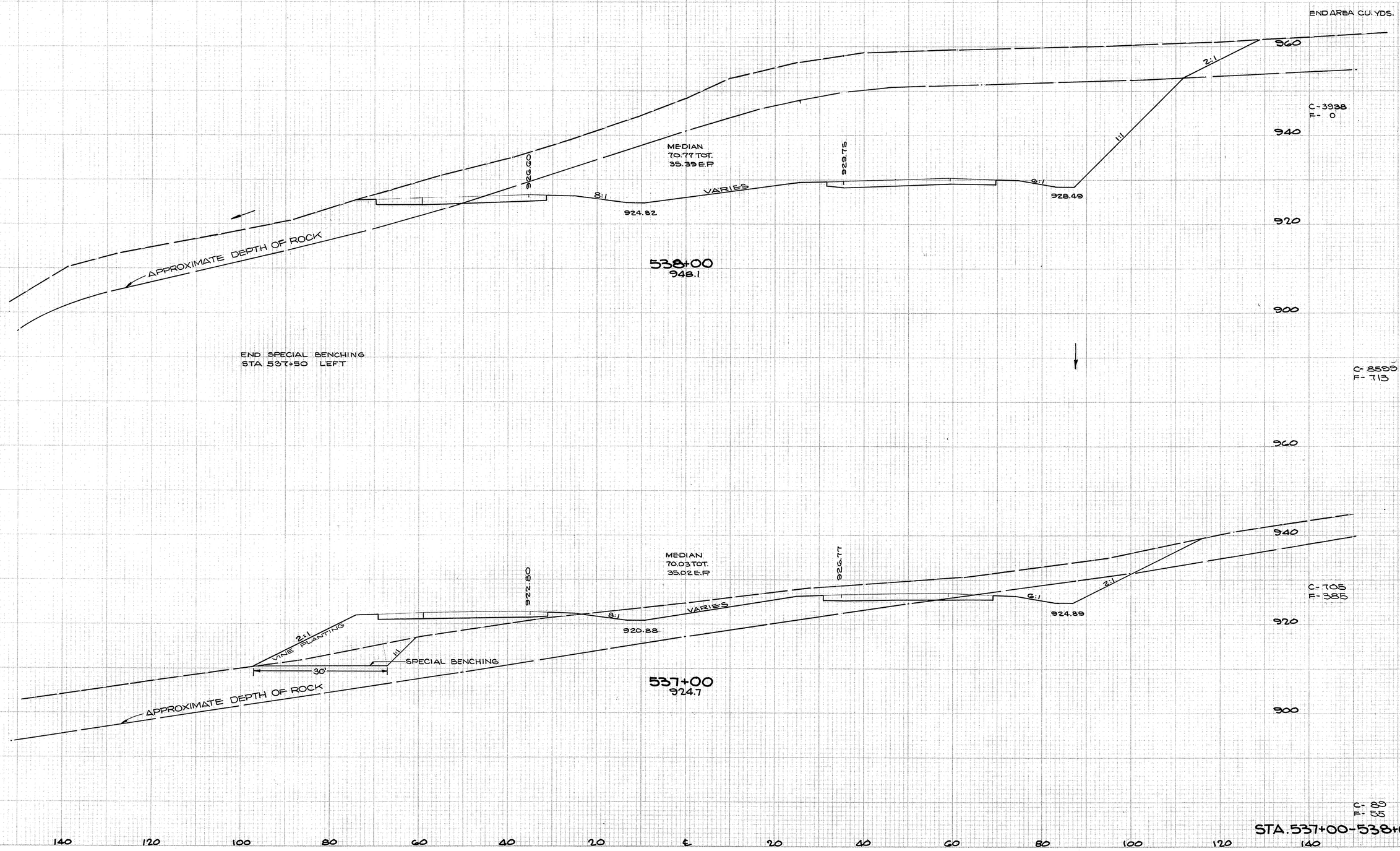
END AREA CU. YDS.

C-3938
F- 0

C-8599
F-713

C-705
F-385

C- 89
F- 85



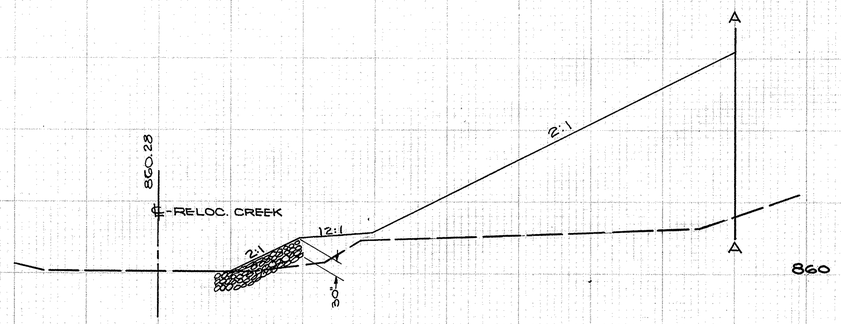
STA. 537+00-538+00

FED. NO. DIVISION	STATE	PROJECT	
2	OHIO		

150
313

SUM·271·8.29

END AREA CU. YDS.



C-4276
F-2602

C-15,211
F-4,819

STA. 539+00

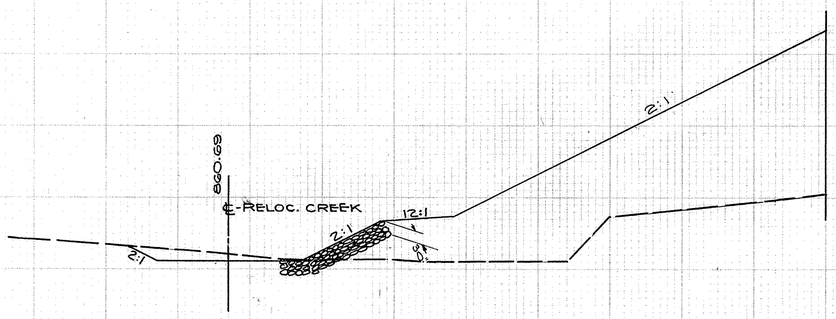
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

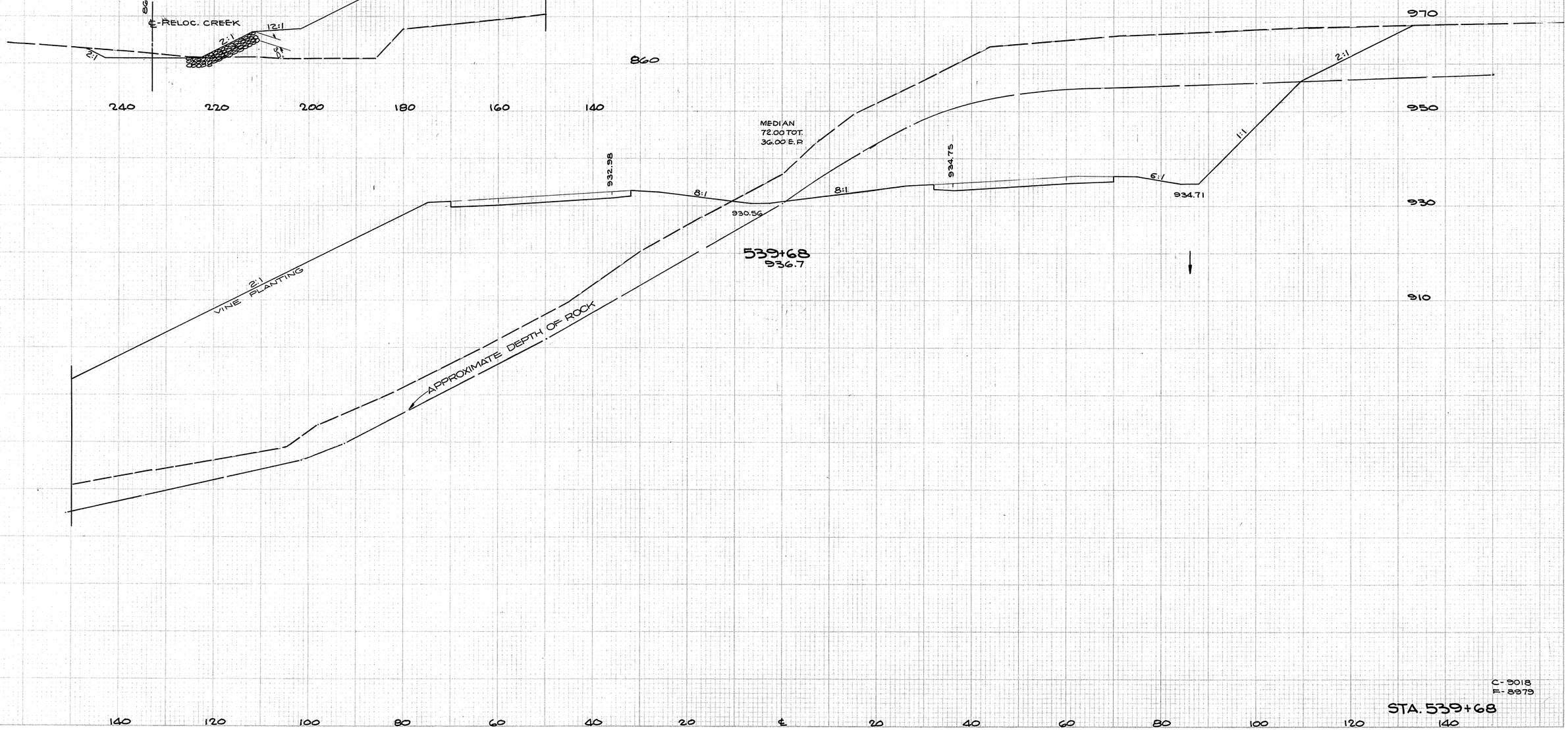
151
313

SUM-271-8.29

END AREA CU. YDS.

C-2885
F-4528





C-9018
F-8979

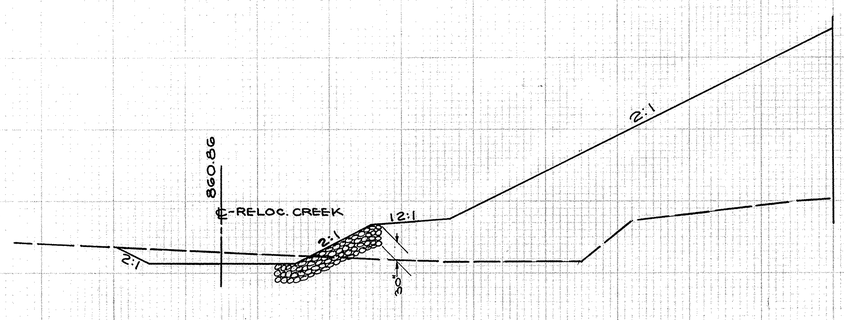
STA. 539+68

FED. NO. DIVISION	STATE	PROJECT	
2	OHIO		

152
313

SUM-271-8.29

END AREA CU. YDS.



240 220 200 180 160 140

860

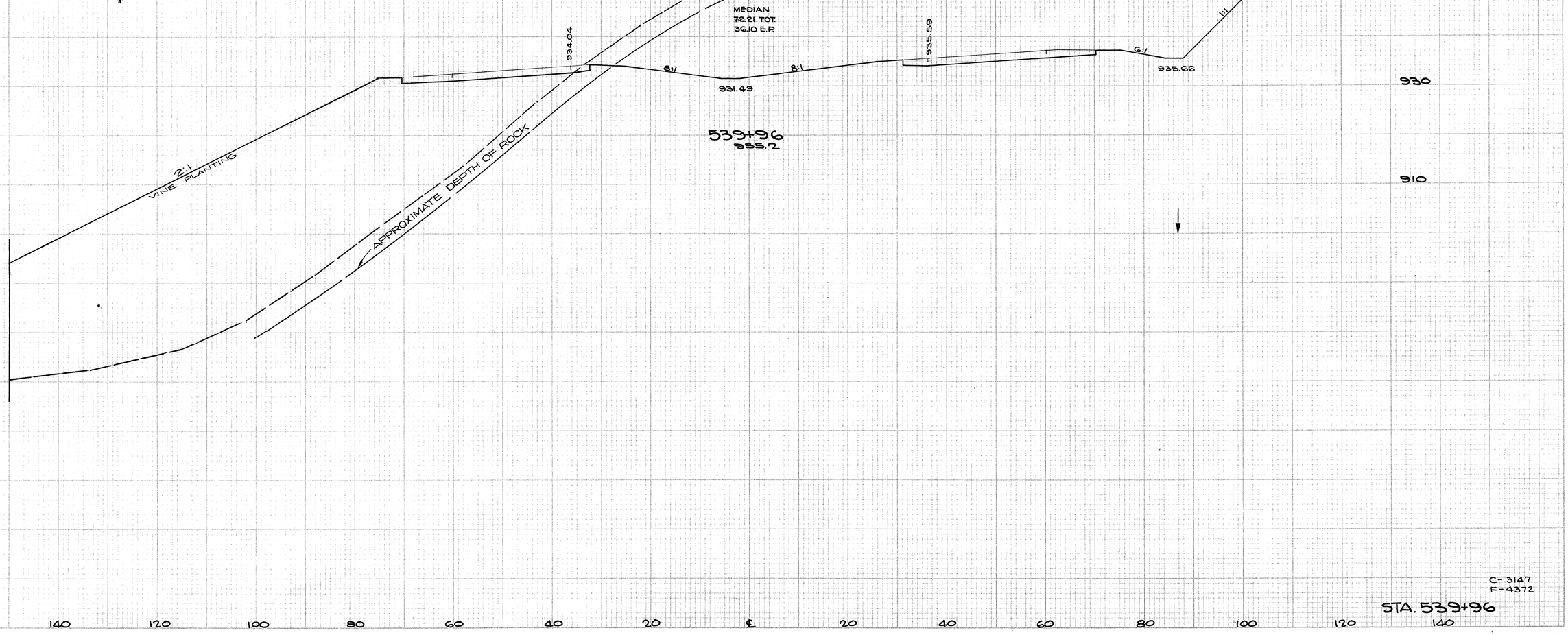
970

950

930

910

C-3184
F-3903



C-3147
F-4372

STA. 539+96

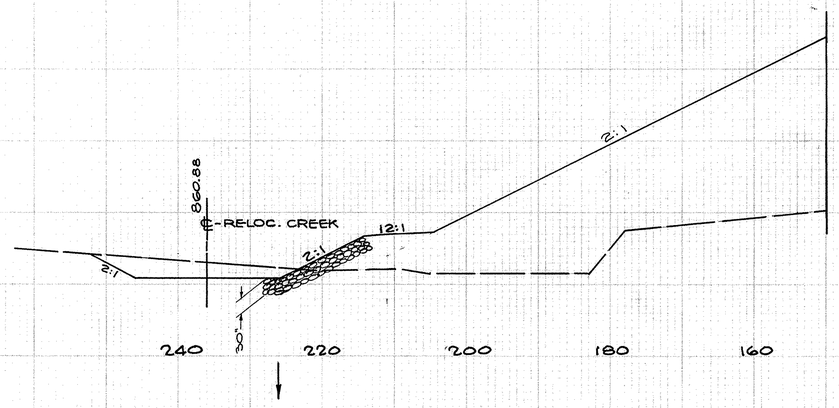
140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

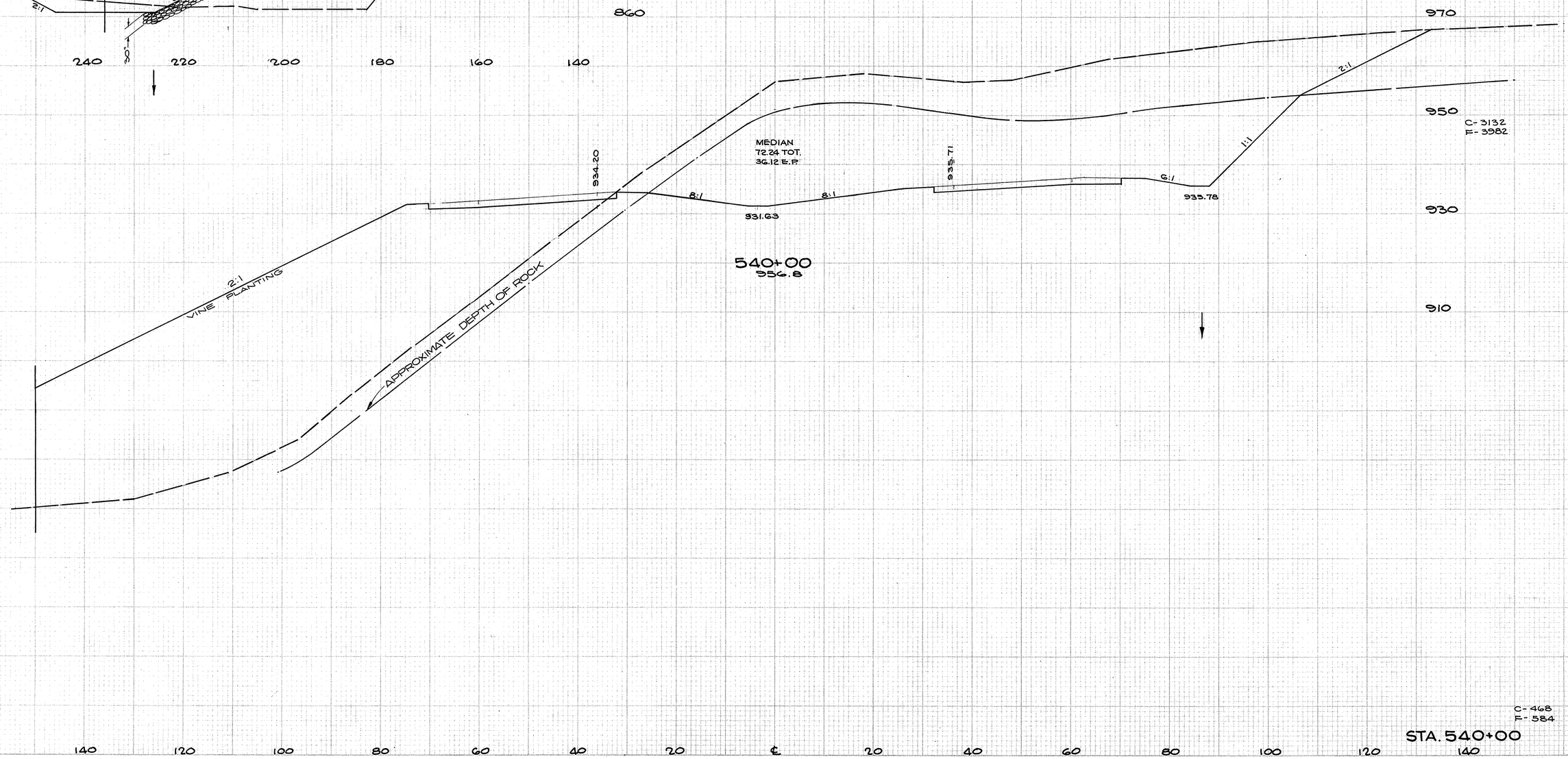
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

153
313

SUM-271-8.29

END AREA CU. YDS.



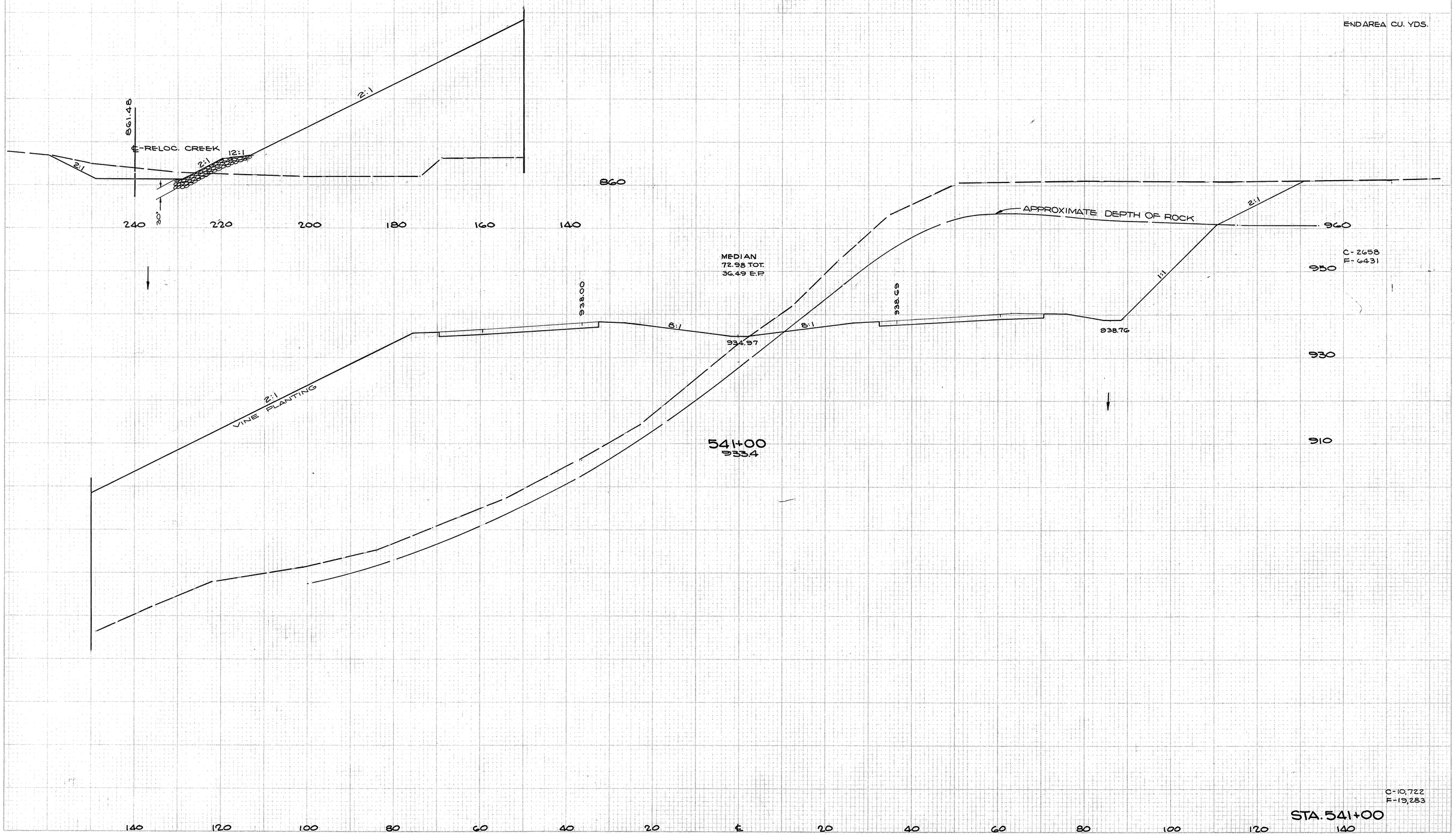


FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

154
313

SUM-271-8.29

END AREA CU. YDS.



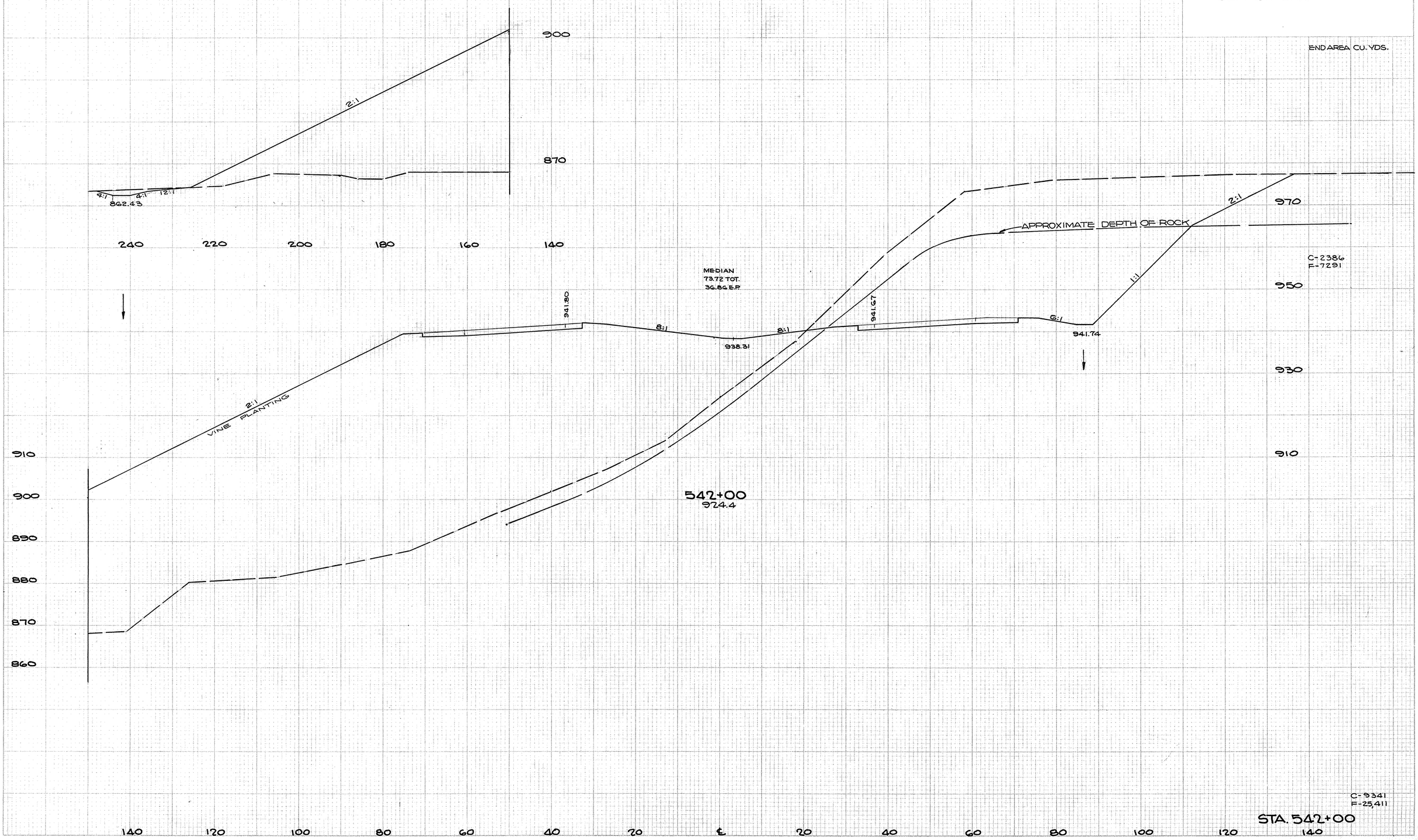
STA. 541+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

155
313

SUM-271-8.29

END AREA CU. YDS.



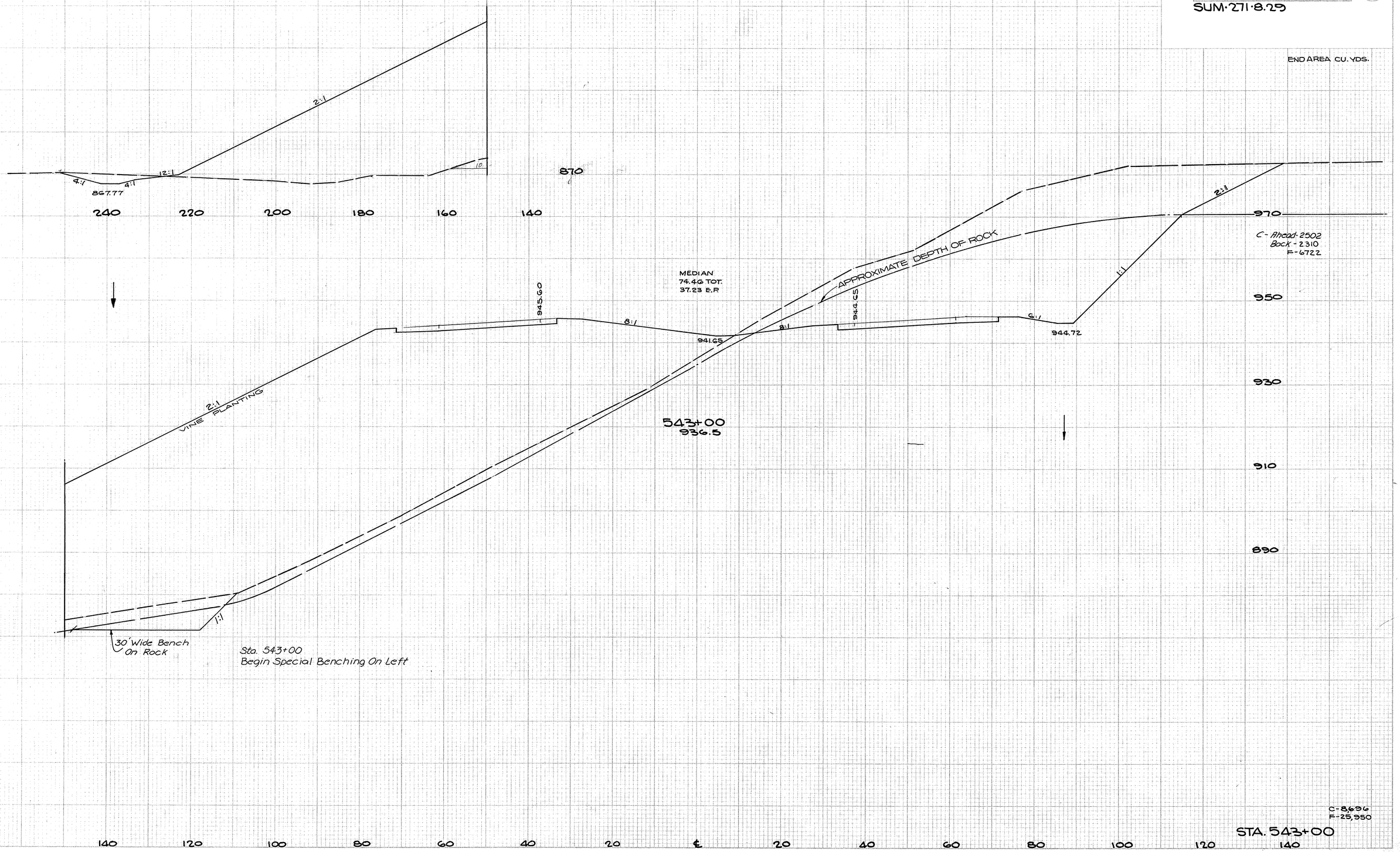
STA. 542+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

156
313

SUM-271-8.29

END AREA CU. YDS.

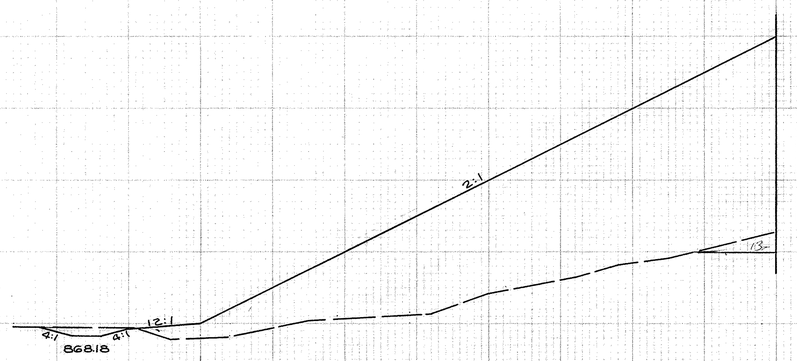


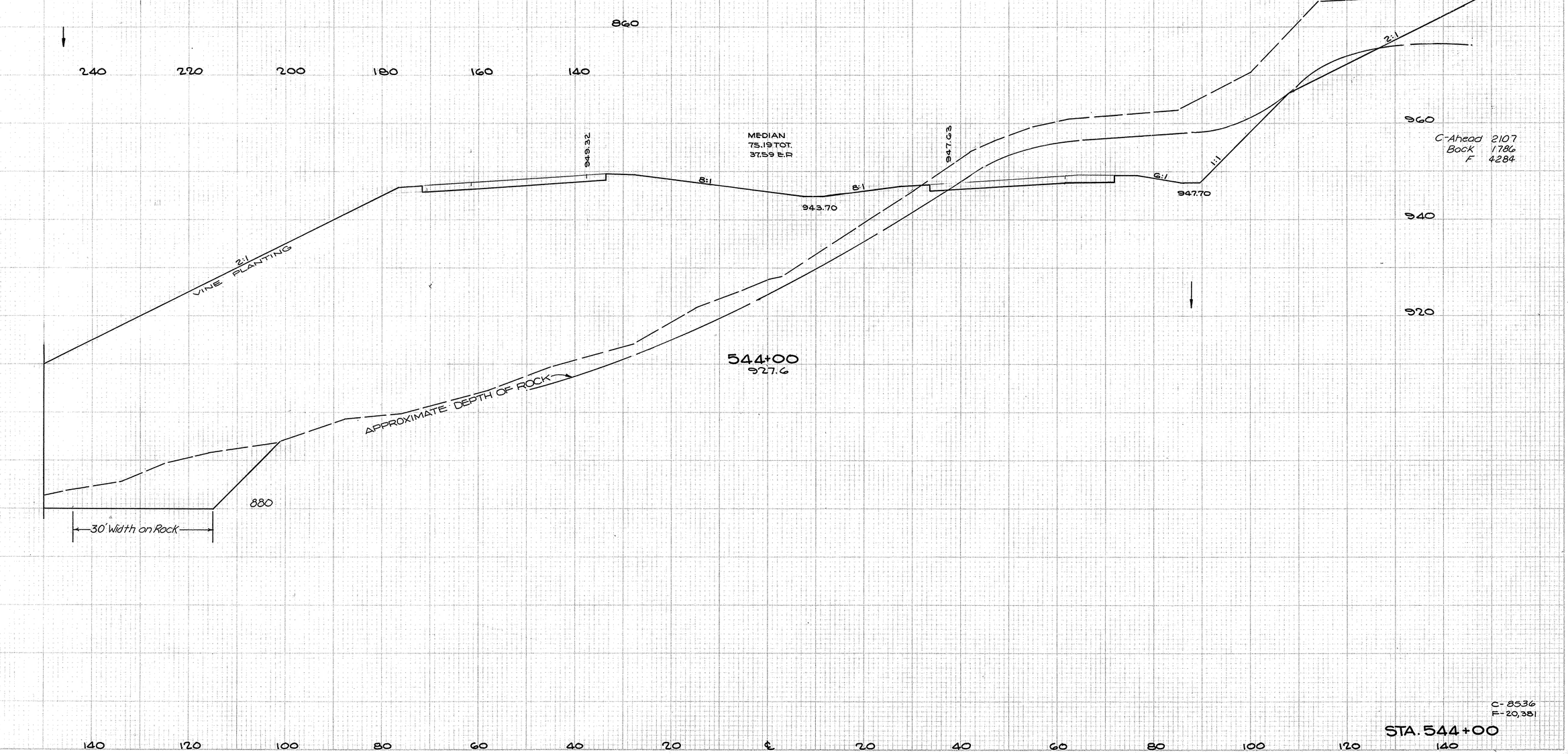
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

SUM-271-8.29

157
313

END AREA CU. YDS.





C-Ahead 2107
Book 1786
F 4284

C-8536
F-20,381

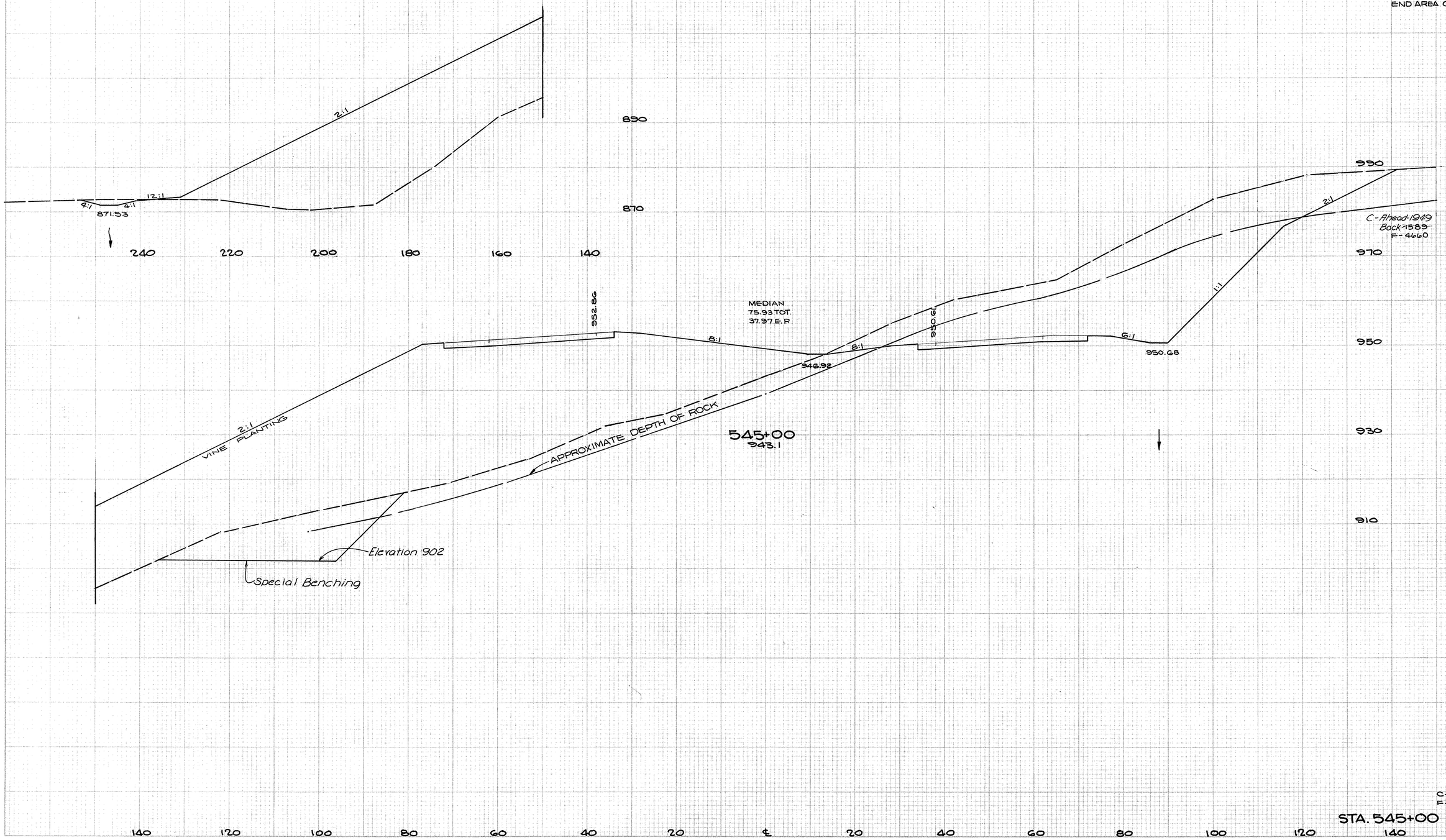
STA. 544+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

158
313

SUM-271-8.29

END AREA CU. YDS.

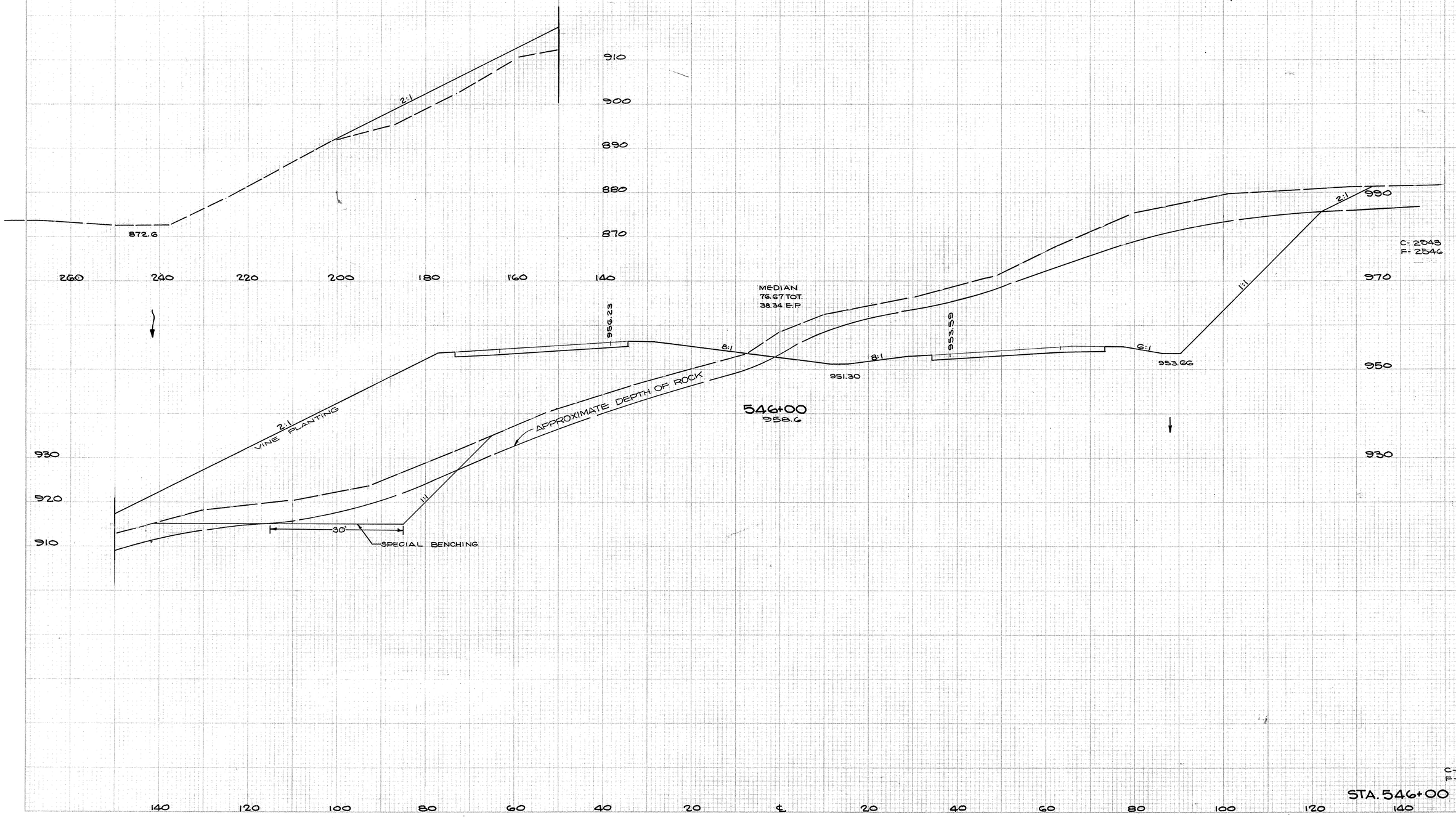


FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

159
313

SUM-271-8.29

END AREA CU. YDS.

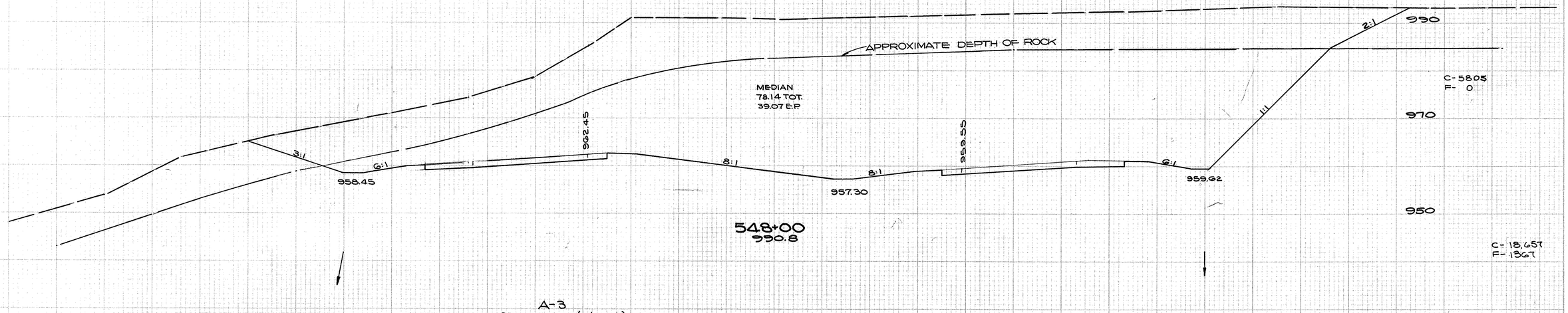


FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

160
313

SUM-271-8.29

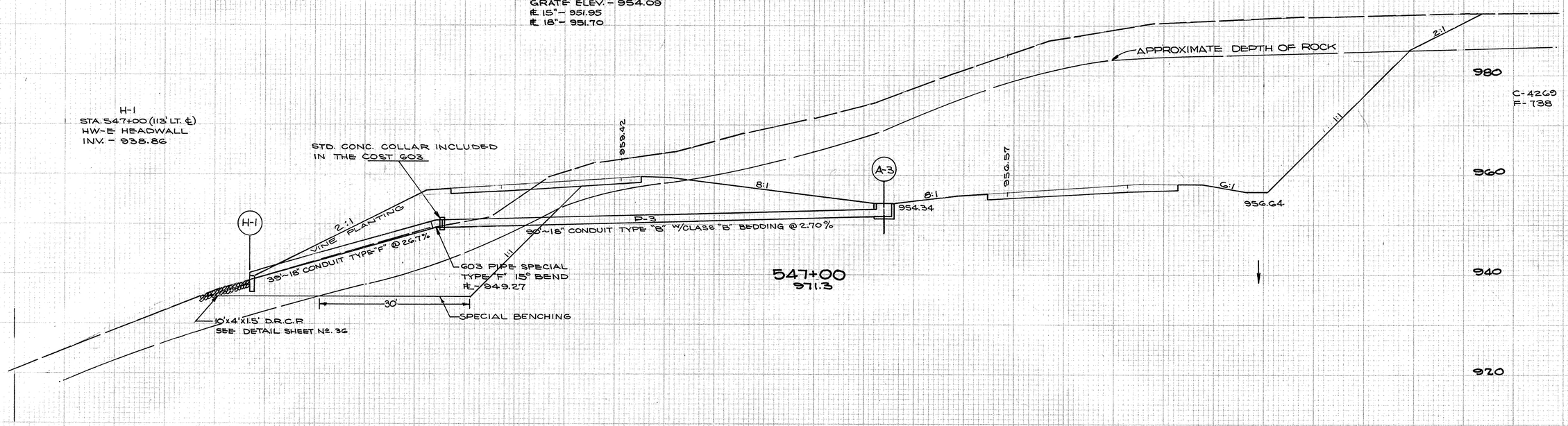
END AREA CU. YDS.



A-3
STA. 547+00 (14' RT. ℄)
604 No. 5 CATCH BASIN
GRATE ELEV. - 954.09
℄ 15" - 951.95
℄ 18" - 951.70

END SPECIAL BENCHING & VINE PLANTING
STA. 547+50± LEFT

H-1
STA. 547+00 (113' LT. ℄)
HW-E HEADWALL
INV. - 938.86



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

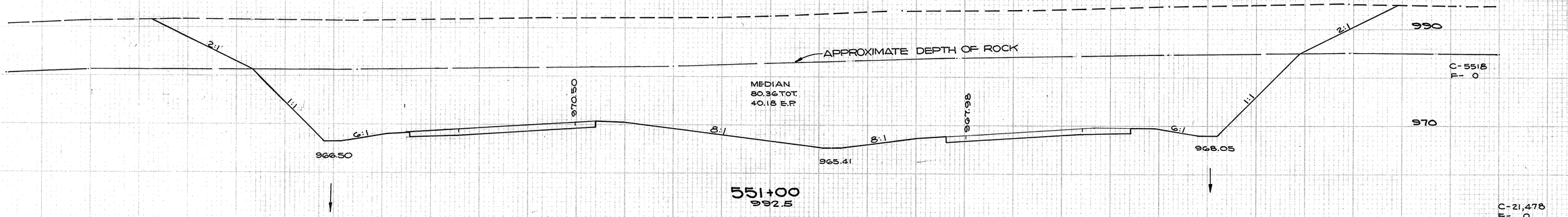
STA. 547+00-548+00

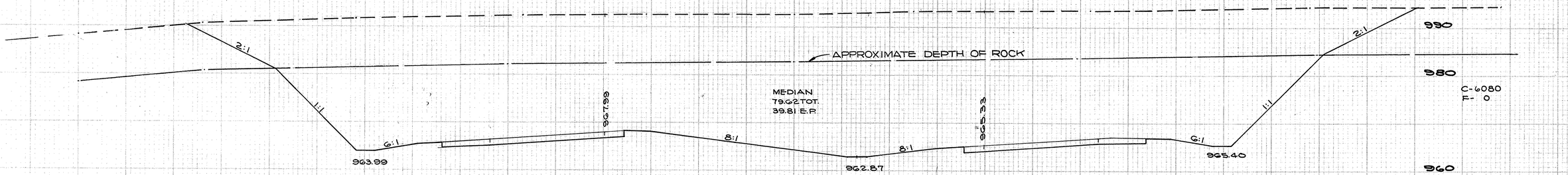
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

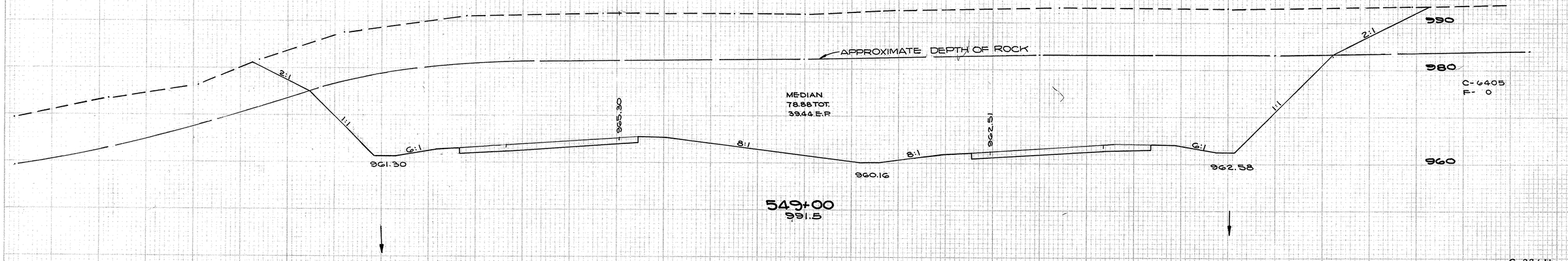
161
313

SUM-271-8.79

END AREA CU. YDS.







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

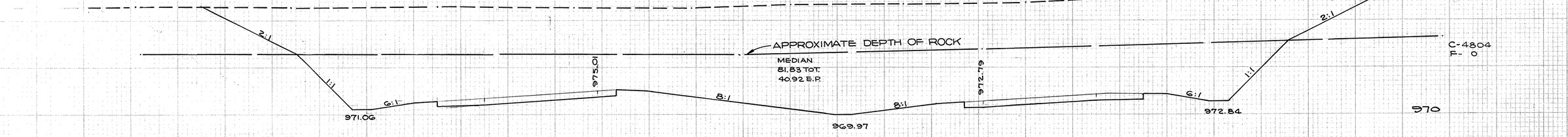
STA. 549+00-551+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

162
313

SUM-271-8.29

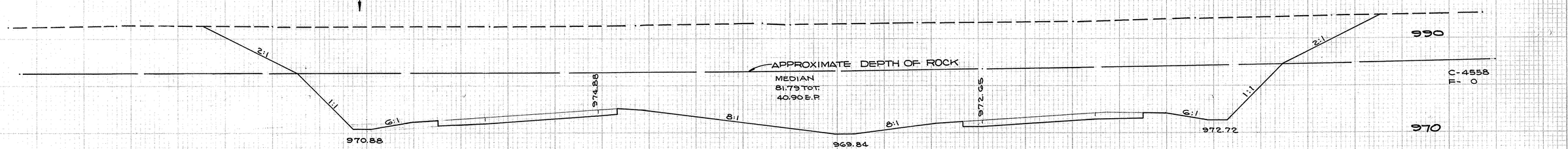
END AREA CU. YDS.



553+00
993.4

C-4804
F- 0

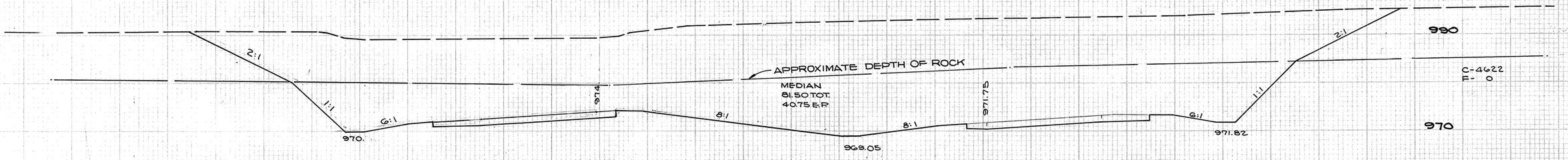
C-1040
F- 0



552+94
993.0

C-4558
F- 0

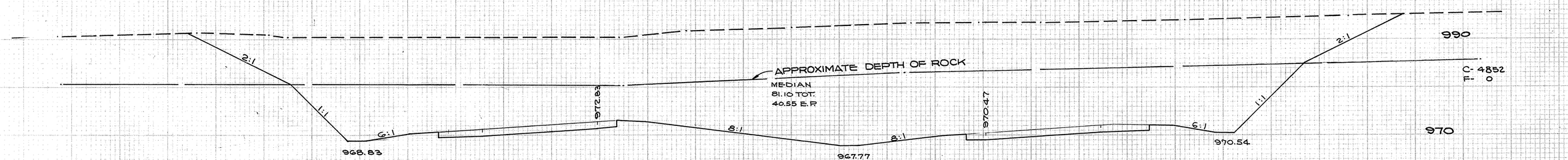
C-6800
F- 0



552+54
992.6

C-4622
F- 0

C-9474
F- 0



552+00
992.5

C-4852
F- 0

C-19,204
F- 0

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

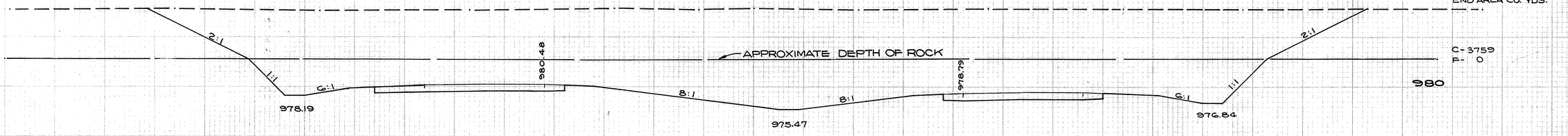
STA. 552+00-553+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

163
313

SUM-271-8.29

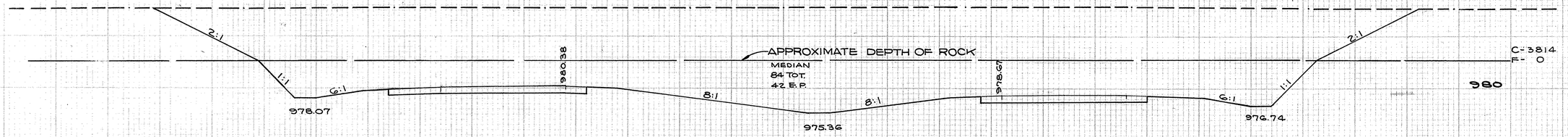
END AREA CU. YDS.



556+00
995.7

C-841
F- 0

1000

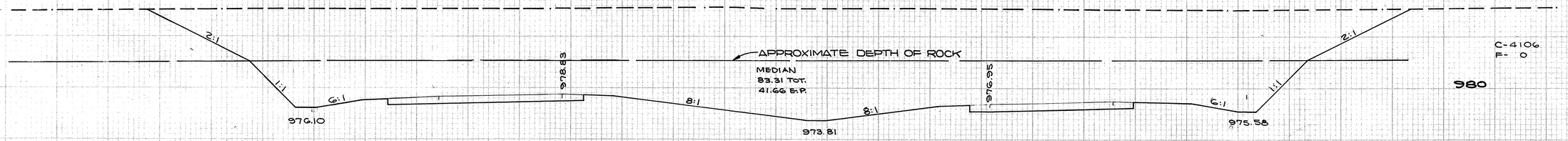


555+94
995.5

C-13,787
F- 0

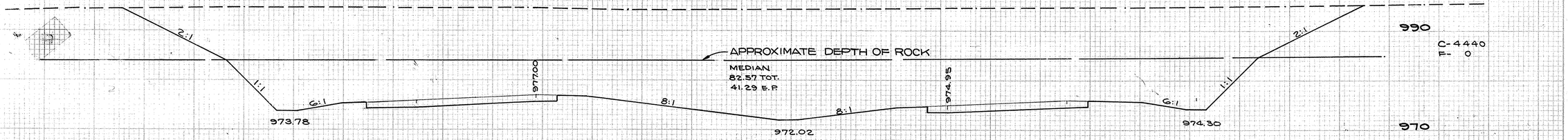
BEGIN 84' MEDIAN
STA. 555+93.55
END TRANSITION

1000



555+00
995.3

C-15,826
F- 0



554+00
994.2

C-17,119
F- 0

STA. 554+00-556+00

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

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

164
313

SUM-271-8.29

END AREA CU. YDS.

4:1

2:1 G:1 983.24 985.36 APPROXIMATE DEPTH OF ROCK 8:1 980.75 8:1 984.48 G:1 2:1 982.36

980

C-2661
F- 0

560+00
994.9

C-10,480
F- 0

1000

4:1

2:1 G:1 982.27 984.39 APPROXIMATE DEPTH OF ROCK 8:1 979.67 8:1 983.30 G:1 2:1 981.18

980

C-2998
F- 0

559+00
995.5

C-11,733
F- 0

1000

2:1 1:1 G:1 979.83 983.26 981.95 APPROXIMATE DEPTH OF ROCK 8:1 977.03 8:1 980.45 G:1 1:1 2:1 978.34

980

C-3338
F- 0

558+00
996.2

C-12,778
F- 0

1000

2:1 1:1 G:1 979.83 983.26 981.95 APPROXIMATE DEPTH OF ROCK 8:1 977.03 8:1 980.45 G:1 1:1 2:1 978.34

980

C-3562
F- 0

557+00
996.8

C-13,557
F- 0

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

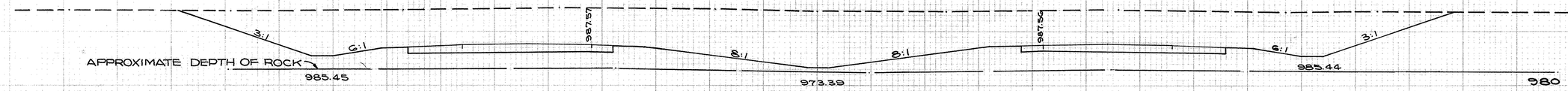
STA. 557+00-560+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

SUM-271-8.29

165
313

END AREA CU. YDS.

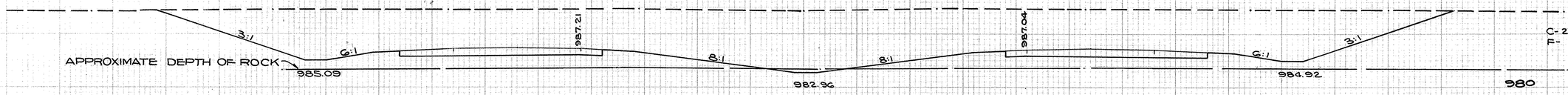


564+00
993.8

C-1765
F- 0

C-7050
F- 0

1000

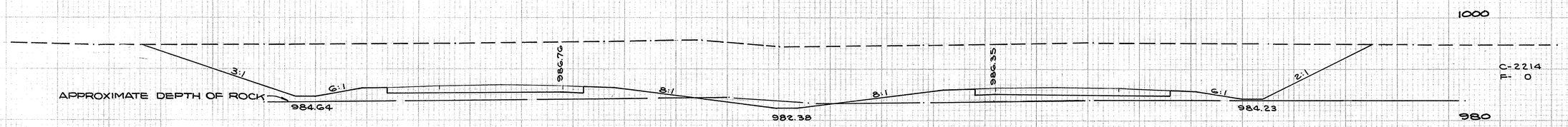


563+00
994.3

C-2042
F- 0

C-7881
F- 0

1000

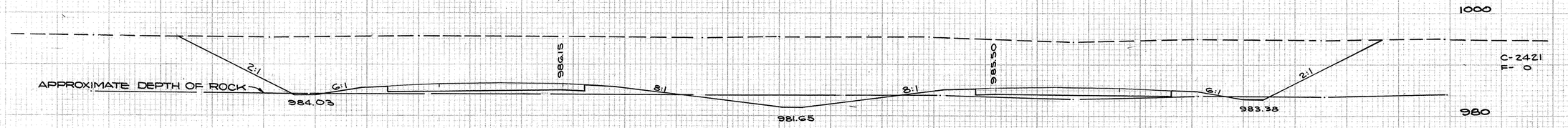


562+00
994.4

C-2214
F- 0

C-8583
F- 0

1000



561+00
995.2

C-2421
F- 0

C-9411
F- 0

STA. 561+00-564+00

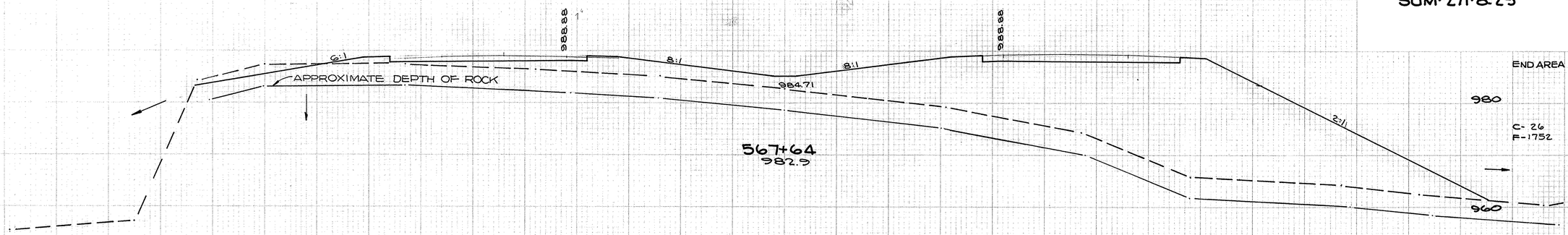
140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

FED. RD DIVISION	STATE	PROJECT	
2	OHIO		

1666
313

SUM-271-8.29

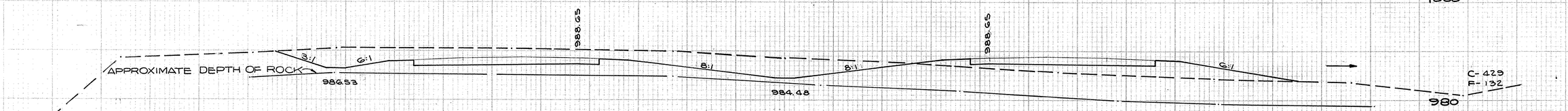
END AREA CU. YDS.

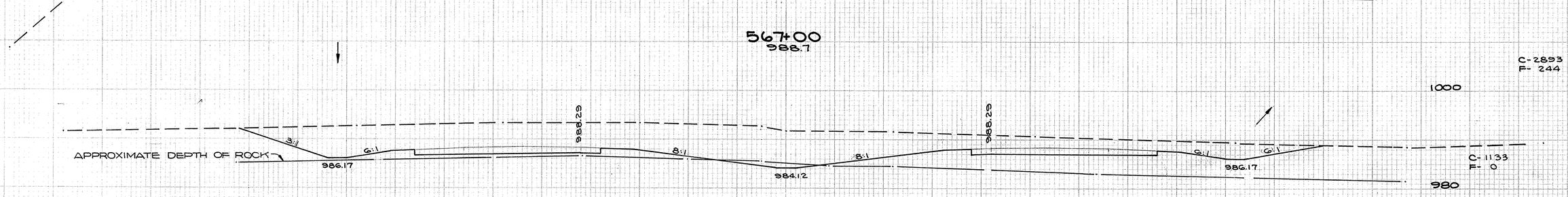


940

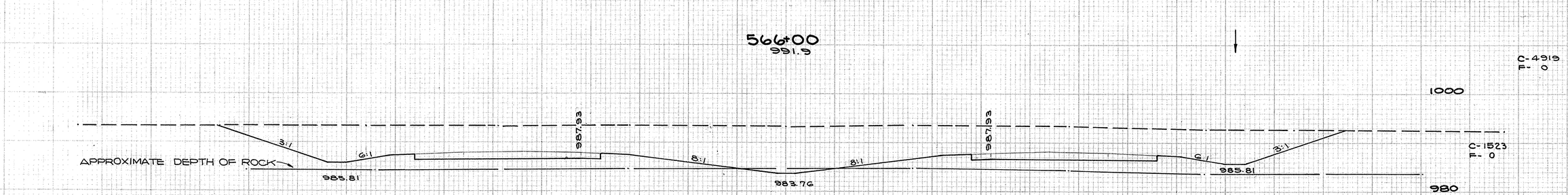
C- 535
F- 2233

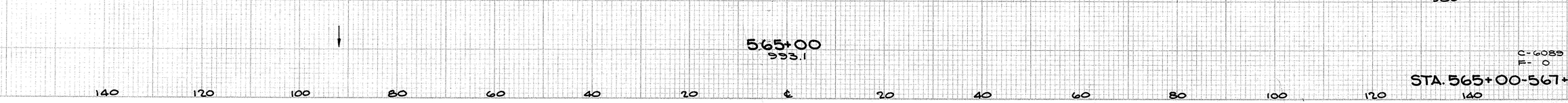
1000





1000





STA. 565+00-567+64

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

167
313

SUM-271-8.29

END AREA CU. YDS.

989.37

8:1

985.20

8:1

989.37

6:1

6:1

987.25

990

970

950

930

2:1 VINE PLANTING

"A"

569+00
965.3

220 200 180 160

2:1

"A"

950

920

C- 9
F-8891

C- 32
F-17,074

989.11

8:1

984.94

8:1

989.11

3:1

4:1

981.54

980

960

C- 15
F-3739

H-1

STA. 568+00, 108' LT. ℄
HW-E HEADWALL
℄ 15" = 981.00

989.01

568+27
950.7

A-1

STA. 568+00, ℄ 604 No 4
CATCH BASIN, GRATE = 984.59
DITCH ℄ = 984.84
15" ℄ = 982.50

989.01

4:1 VINE PLANTING

8:1

8:1

2:1

6'x4'x18" D.R.C.P.

P-1

108'-15" CONDUIT, TYPE "B" W/CL "B" BEDDING @ 1.39%

984.84

980

960

C- 11
F-3620

C- 8
F-3501

4:1

969.56

BEGIN VINE PLANTING
STA. 568+00 LEFT

568+00
967.5

APPROX.
TOP OF ROCK

C- 23
F-3502

STA. 568+00-569+00

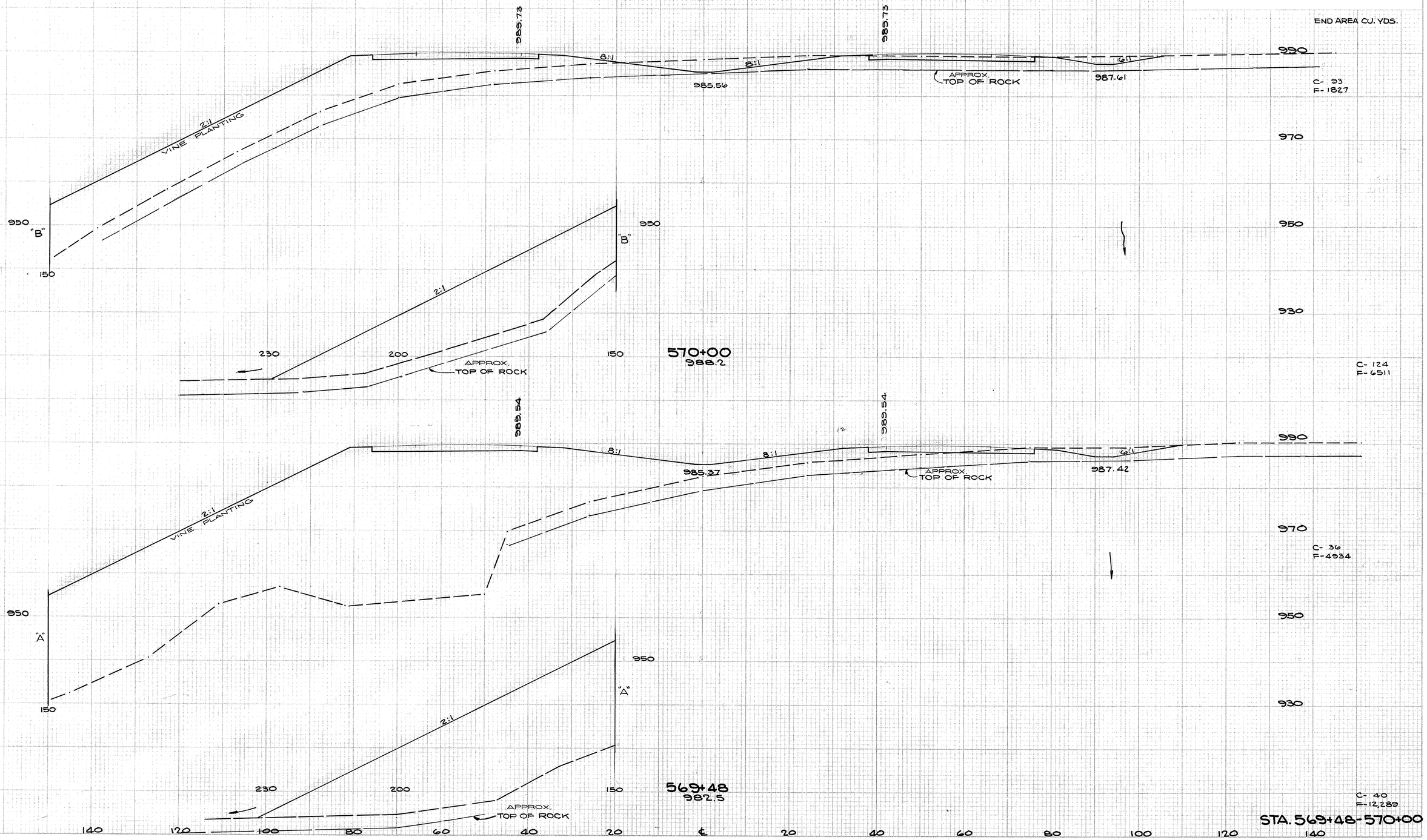
140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

168
313

SUM-271-8.29

END AREA CU. YDS.

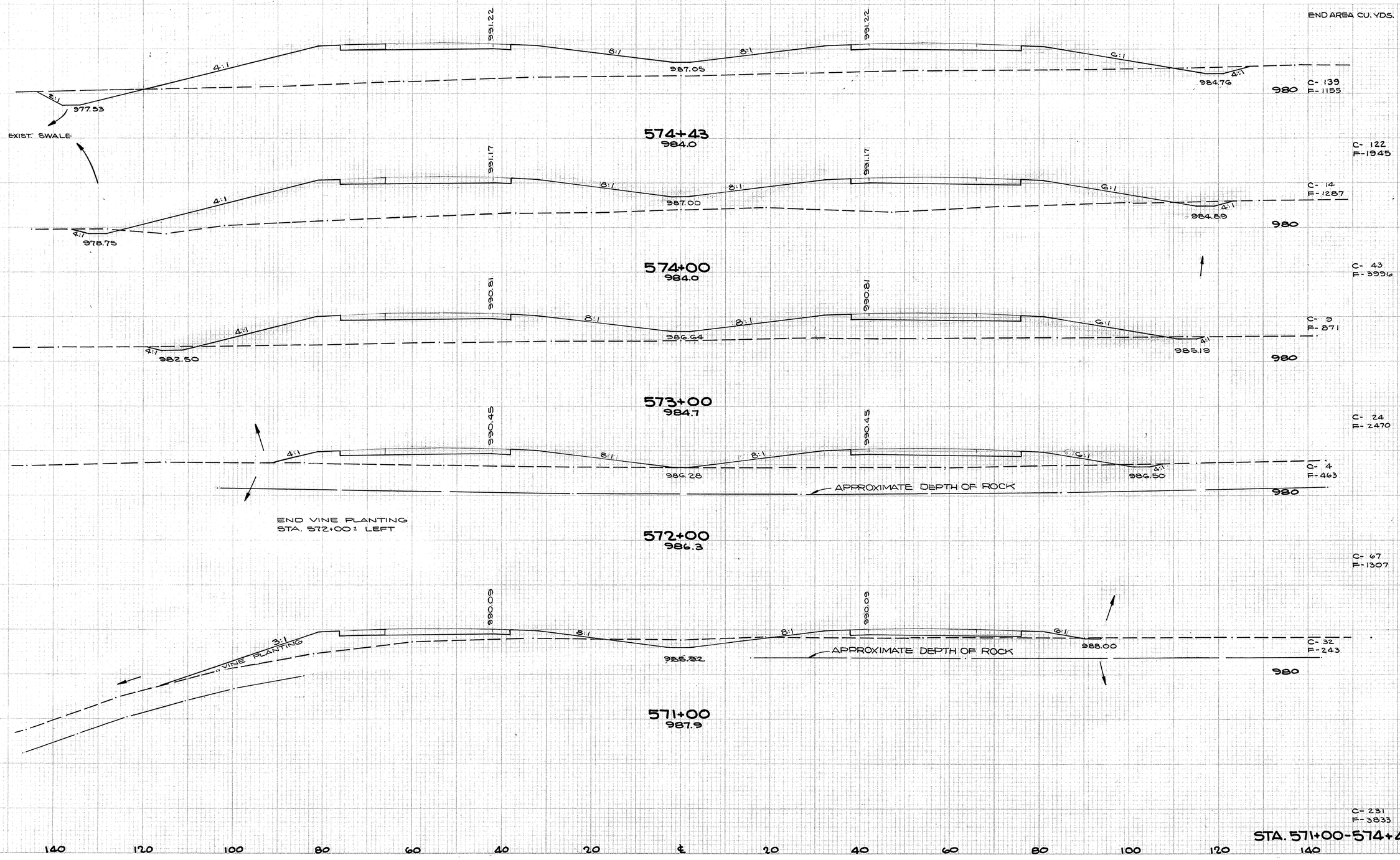


FED. NO. DIVISION	STATE	PROJECT	
2	OHIO		

169
313

SUM-271-8.29

END AREA CU. YDS.



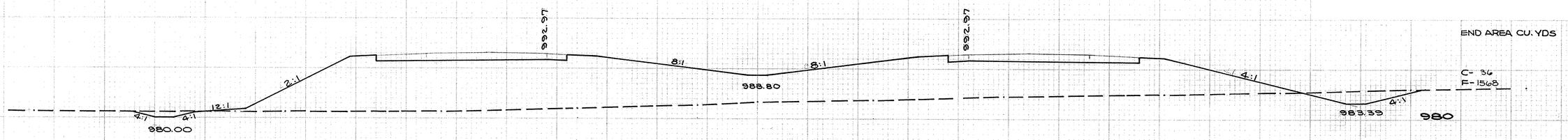
STA. 571+00-574+43

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

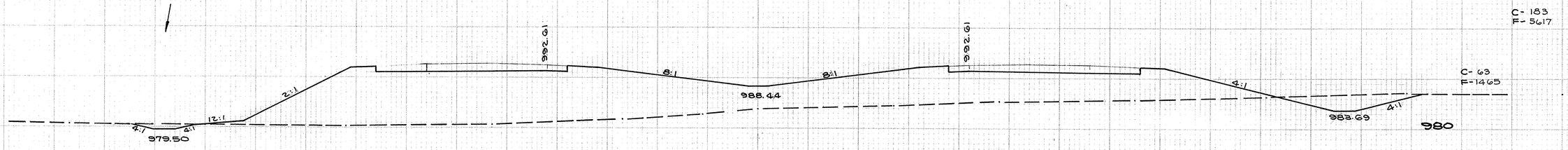
170
313

SUM-271-8.29

END AREA CU. YDS



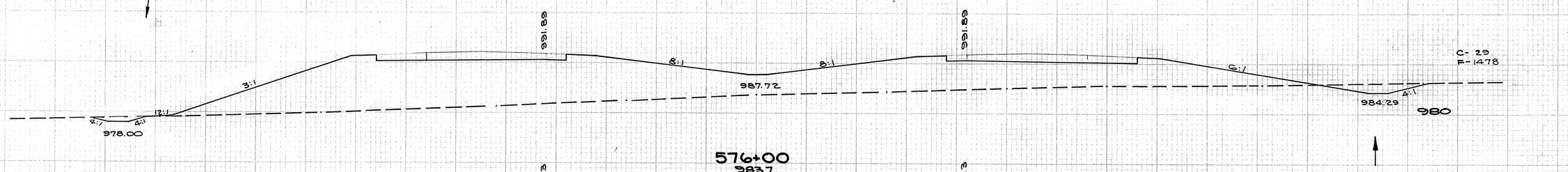
579+00
983.4



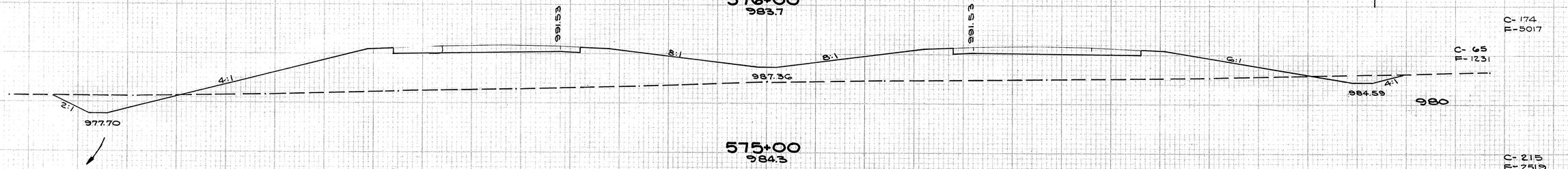
578+00
983.9



577+00
983.6



576+00
983.7



575+00
984.3

C- 215
F- 2519

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

STA. 575+00-579+00

REG RD DIVISION	STATE	PROJECT	
2	OHIO		

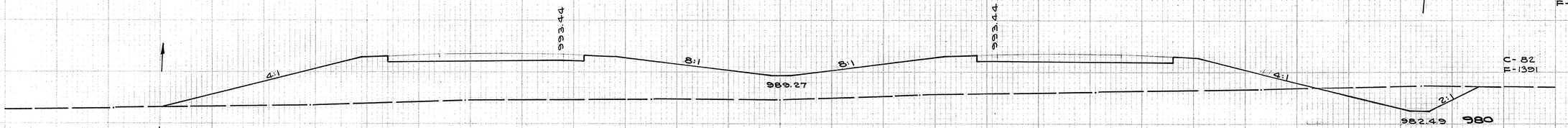
171
313

SUM-271-8.29

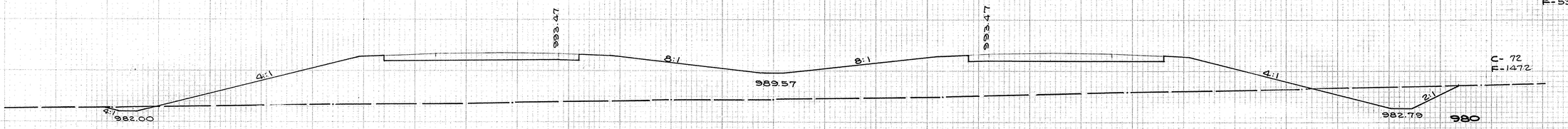
END AREA CU. YDS.



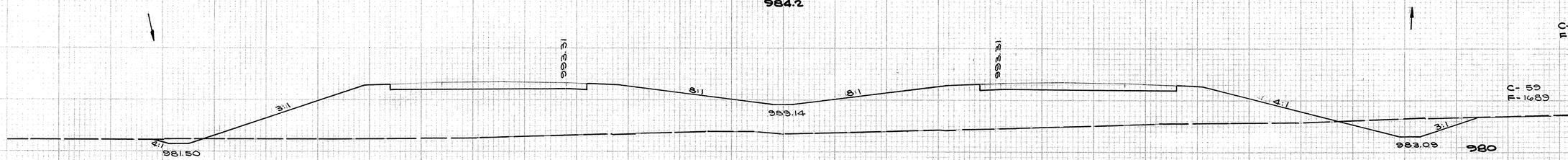
583+00
984.2



582+00
984.7



581+00
984.2



580+00
983.3

C- 176
F- 6031

STA. 580+00-583+00

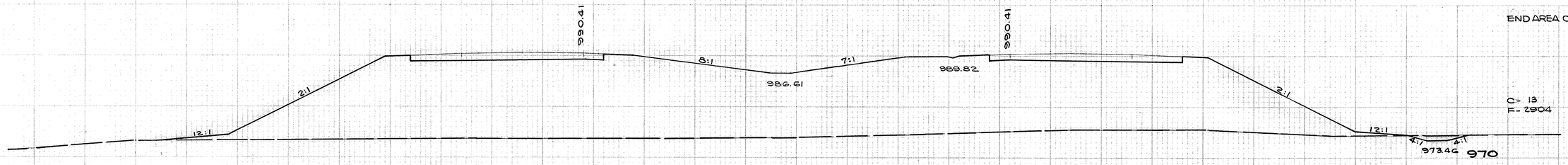
150 140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140 150

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

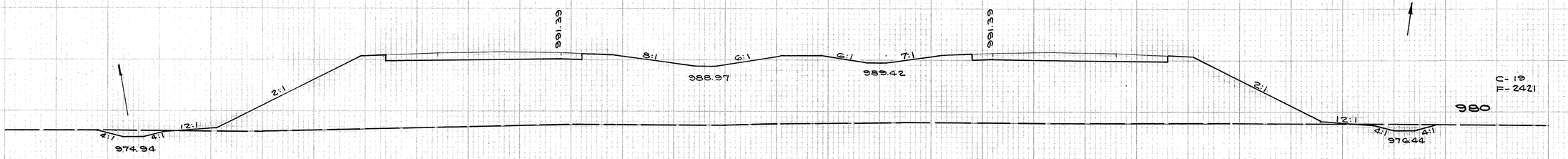
172
313

SUM-271-8.29

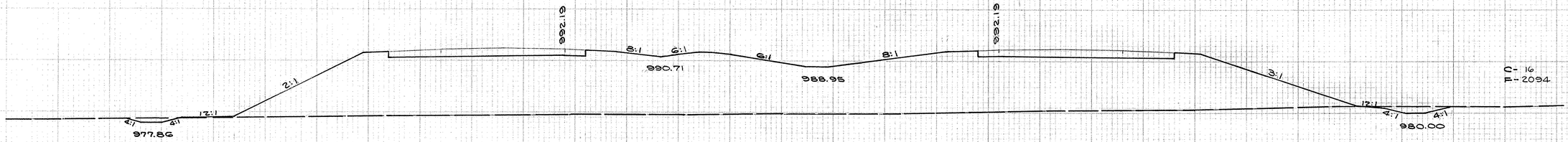
END AREA CU. YDS.



587+00
974.0



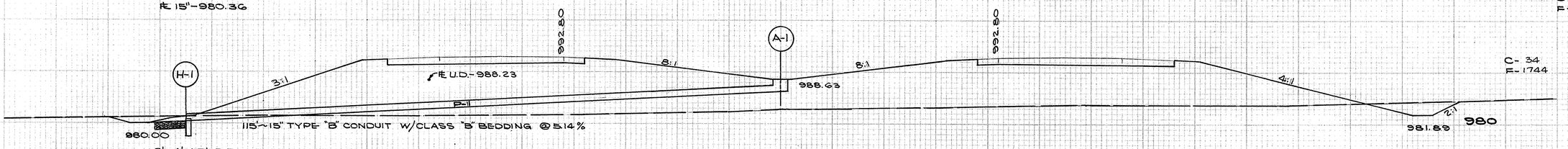
586+00
977.7



585+00
979.7

H-1
STA. 584+00 (115' LT. ℄)
HW-E HEADWALL
℄ 15" - 980.36

A-1
STA. 584+00 (℄)
604 Nº. 4 CATCH BASIN
GRATE ELEV. - 988.38
℄ 15" - 986.27



584+00
982.6

C- 207
F- 5850

STA. 584+00-587+00

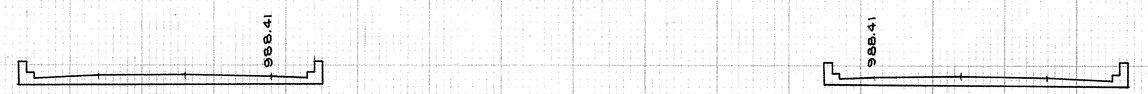
150 140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140 150

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

173
313

SUM-271-8.29

END AREA CU. YDS.



C- 0
F- 0

589+00
969.4

960

C- 0
F- 0

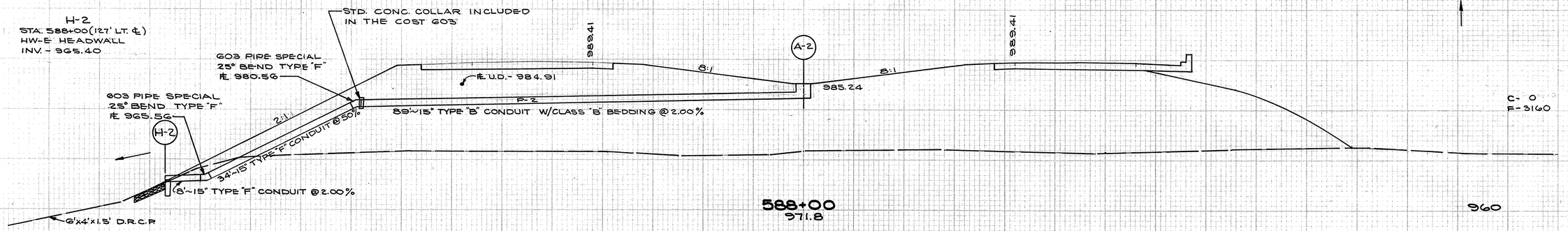
C- 0
F- 0

ZERO STA. 588+72

C- 0
F-4213

BEGIN BRIDGE
STA. 588+34.02

A-2
STA. 588+00 (℄)
604 No. 4 CATCH BASIN
GRATE E-LEV. - 984.99
℄ 15" — 982.34



588+00
971.8

960

C- 0
F- 3160

C- 24
F- 11,230

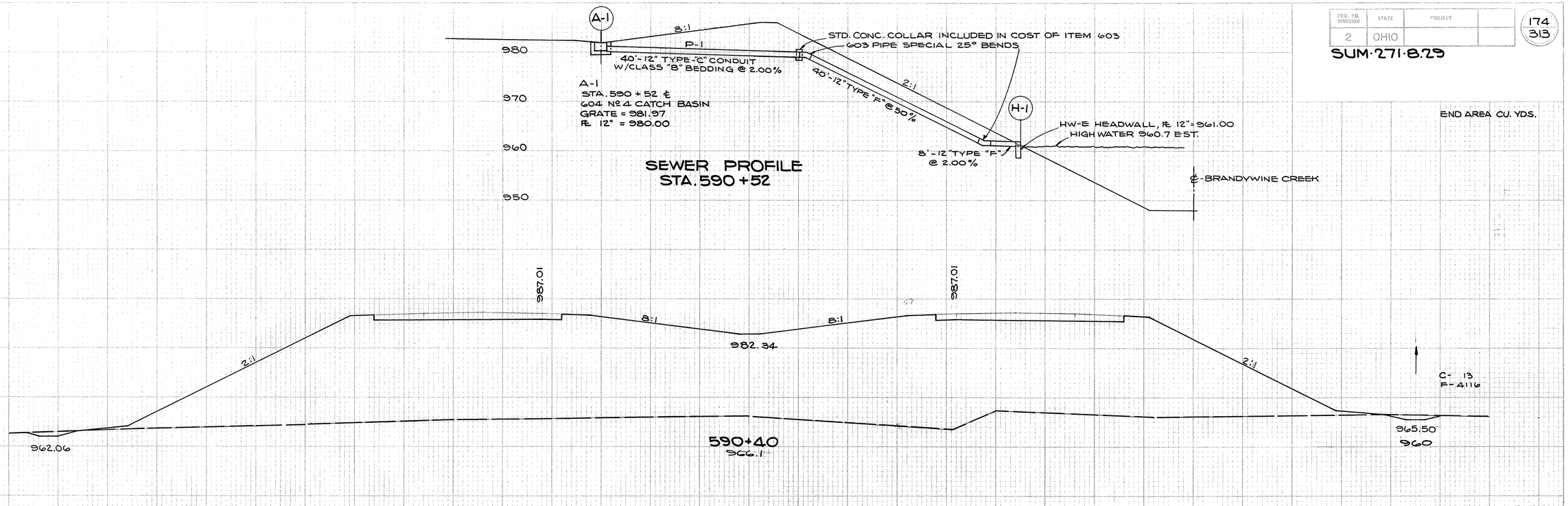
STA. 588+00-588+92

150 140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140 150

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

174
313

SUM-271-8.29



FED. AID DIVISION	STATE	PROJECT	
2	OHIO		

175
313

SUM-271-8.29

END AREA CU. YDS.

985.56

985.56

C- 0
F- 0

985.72

591+85
949.2

985.72

950

C- 0
F- 0

C- 0
F- 0

591+69
951.5

ZERO STA. 591+44

C- 0
F- 0

984.41

984.41

C- 7
F- 2563

2:1

C- 8
F- 3145

970

12:1

4:1

4:1

963.46

591+00
964.9

BEGIN BRIDGE STA. 590+98.18

C- 23
F- 8068

STA. 591+00-591+85

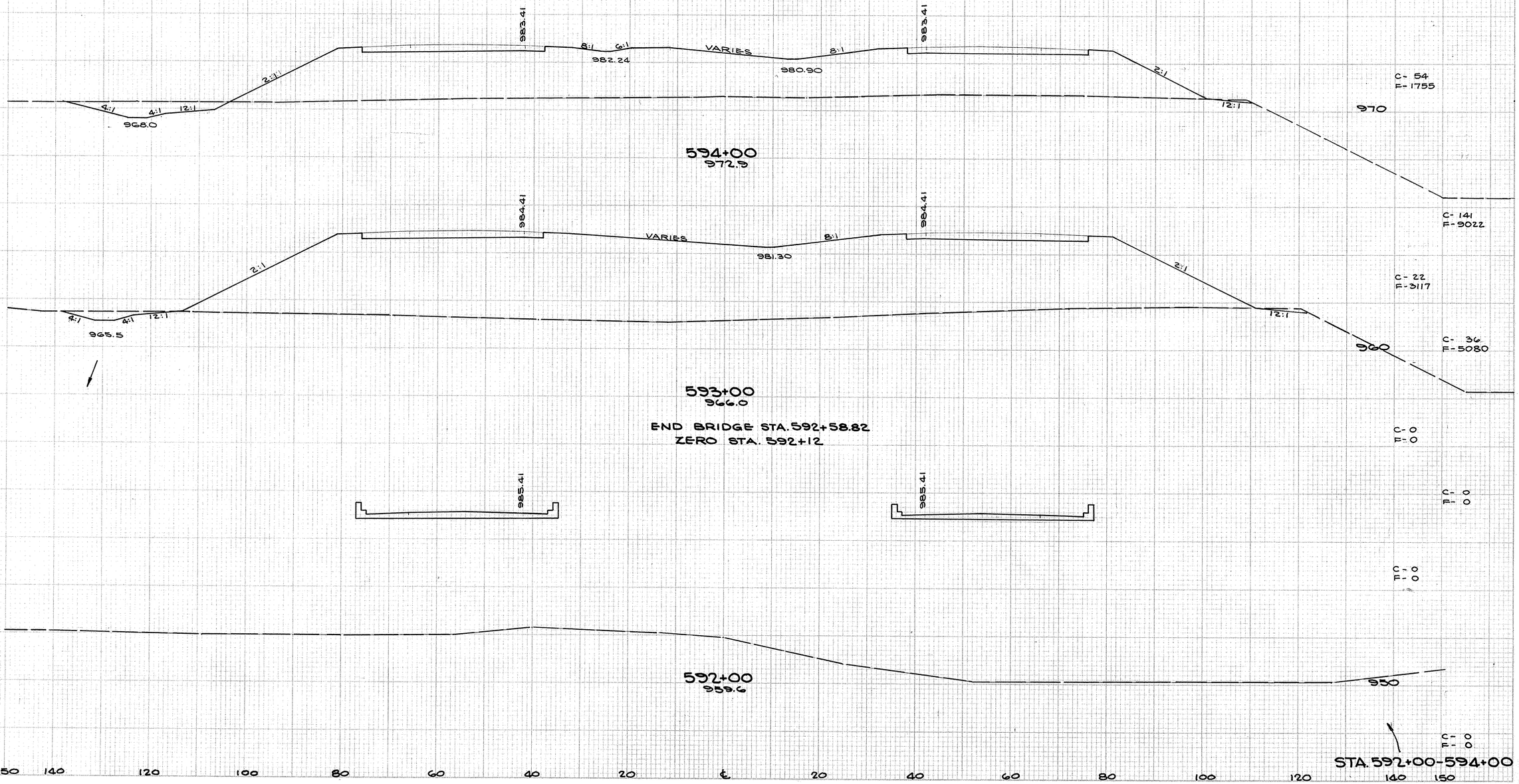
150 140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140 150

FED. RO. DIVISION	STATE	PROJECT	
2	OHIO		

176
313

SUM-271-8.29

END AREA CU. YDS.

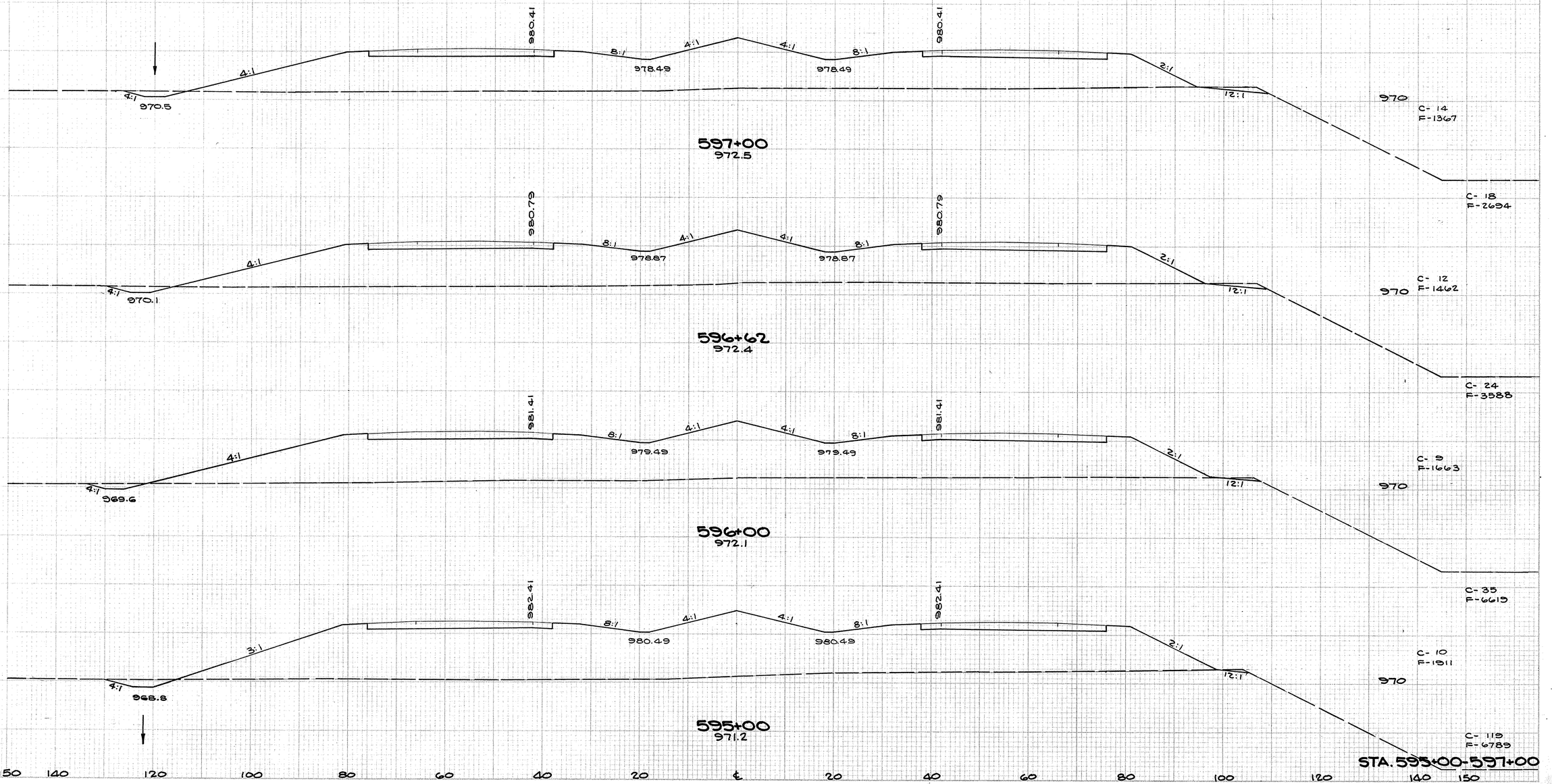


FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

177
313

SUM-271-8.29

END AREA CU. YDS.



STA. 595+00-597+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

178
313

SUM-271-8.29

END AREA CU. YDS.

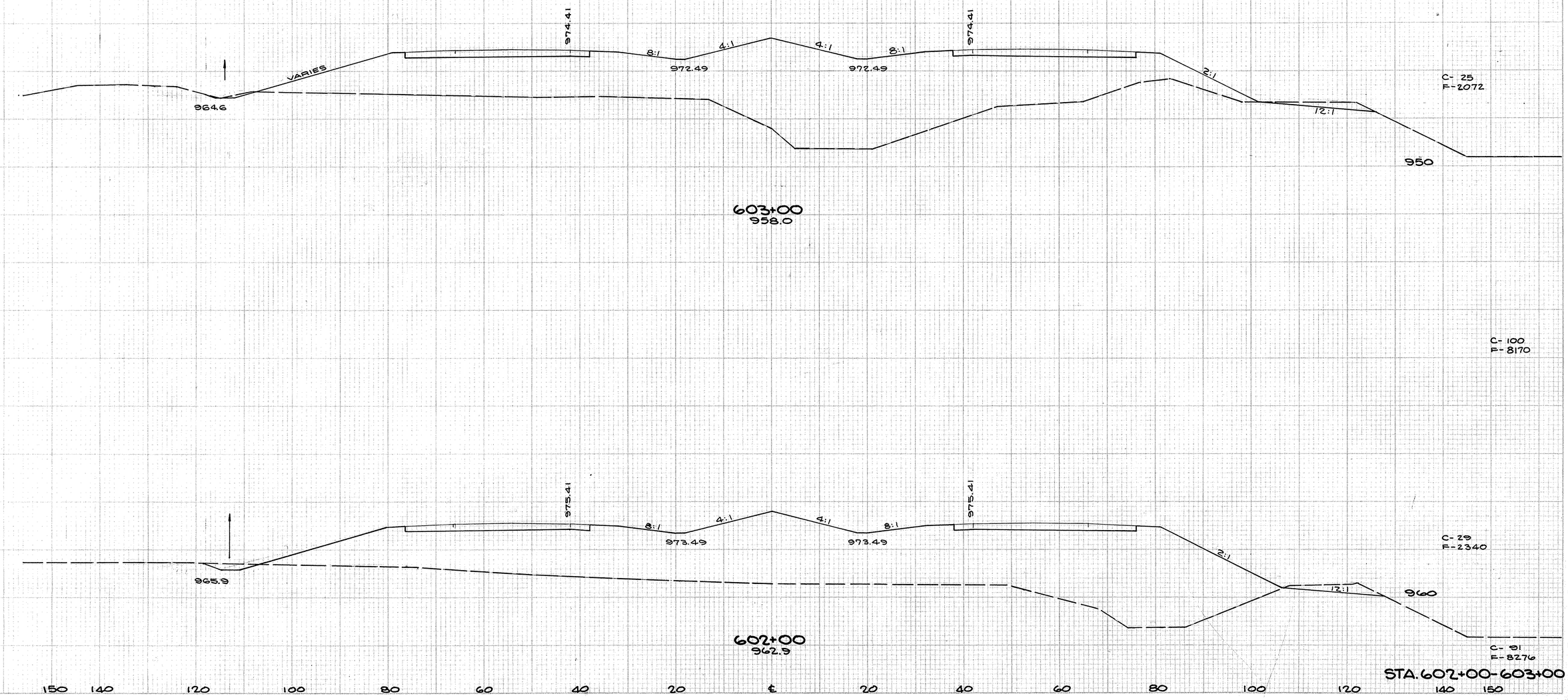
STA. 598+00-601+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

179
313

SUM-271-8.29

END AREA CU. YDS.

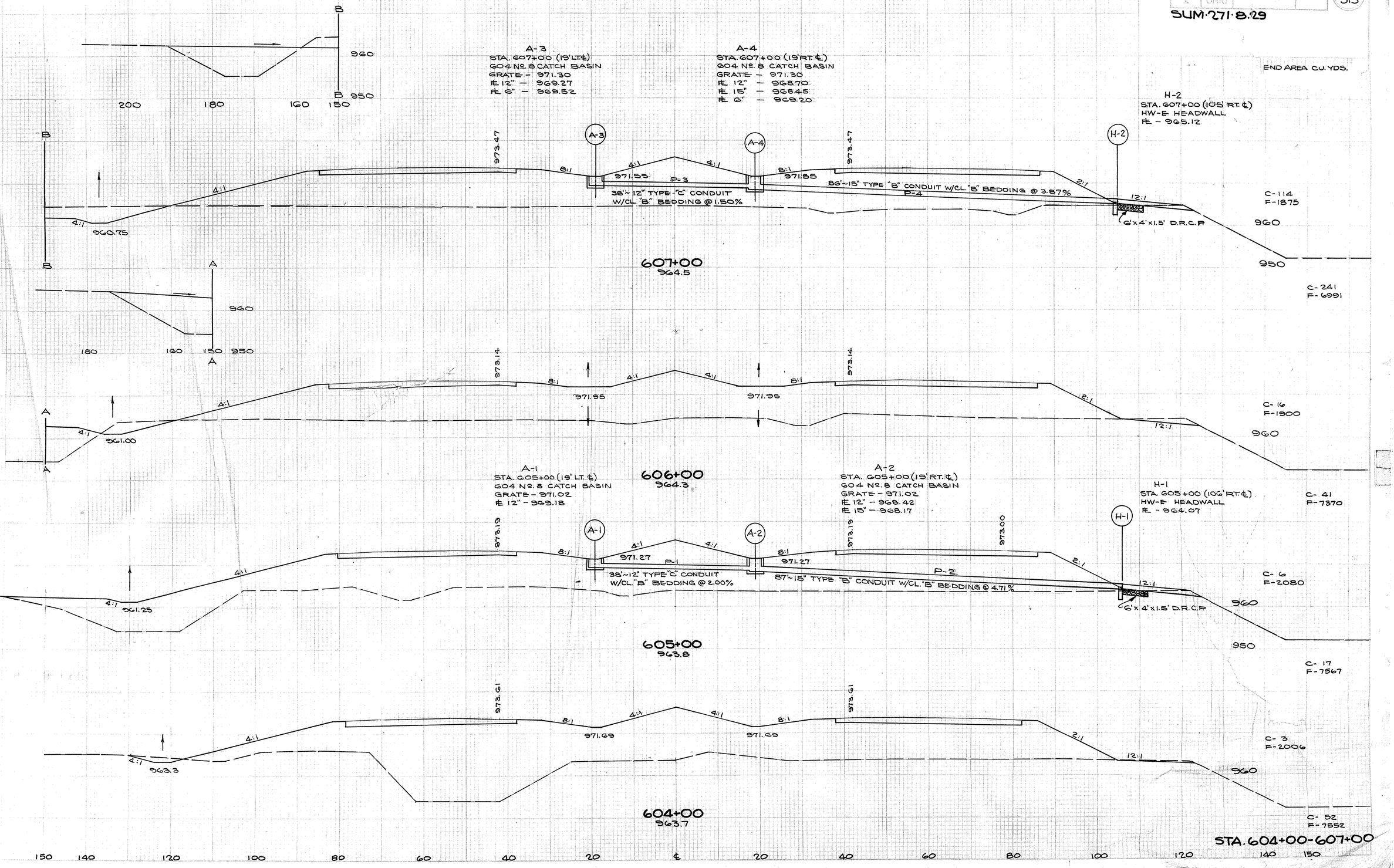


NO. DIVISION	STATE	PROJECT	
2	OHIO		

180
313

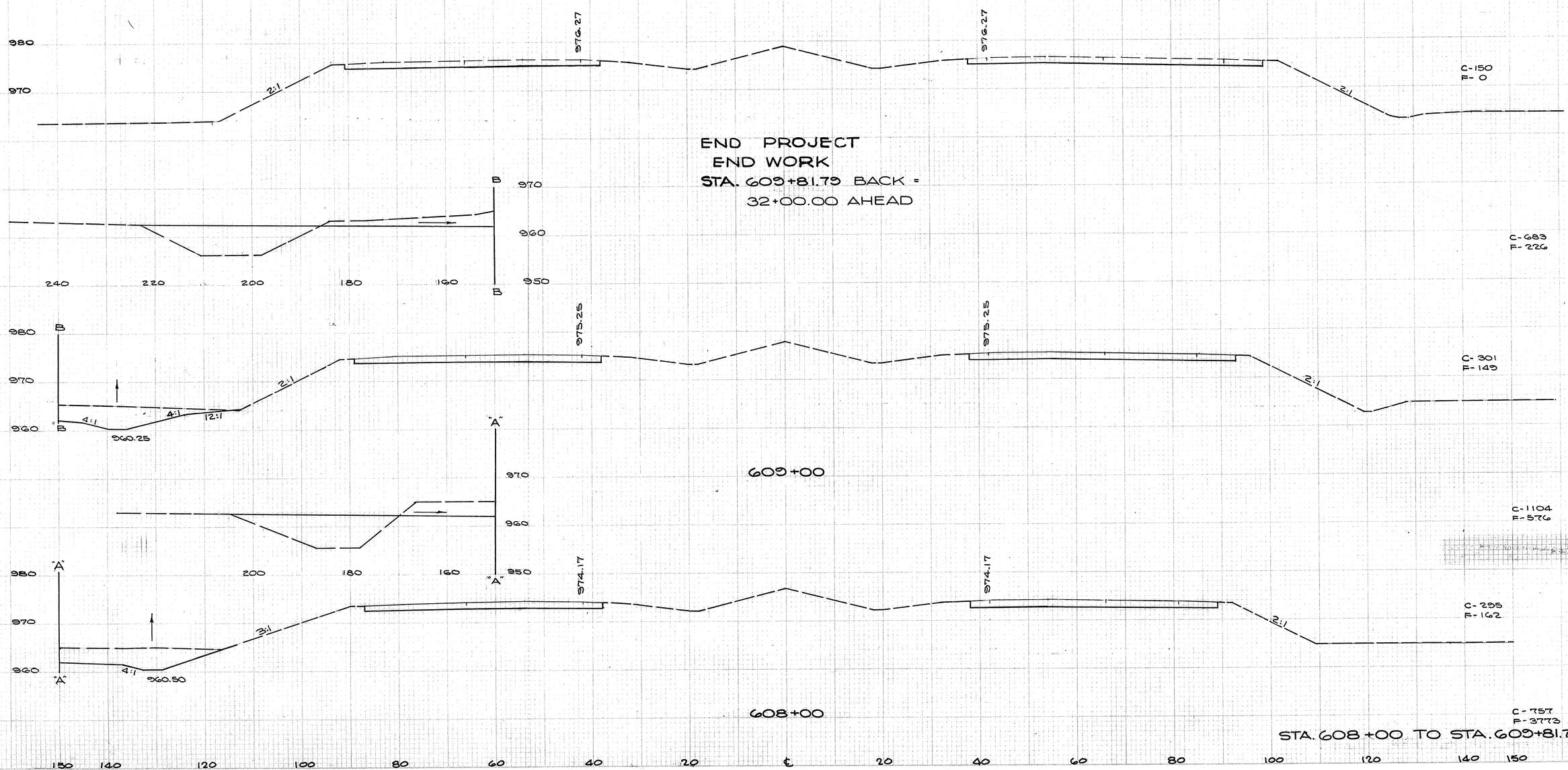
SUM-271-8.29

END AREA CU. YDS.



STA. 604+00-607+00

END AREA CU. YDS



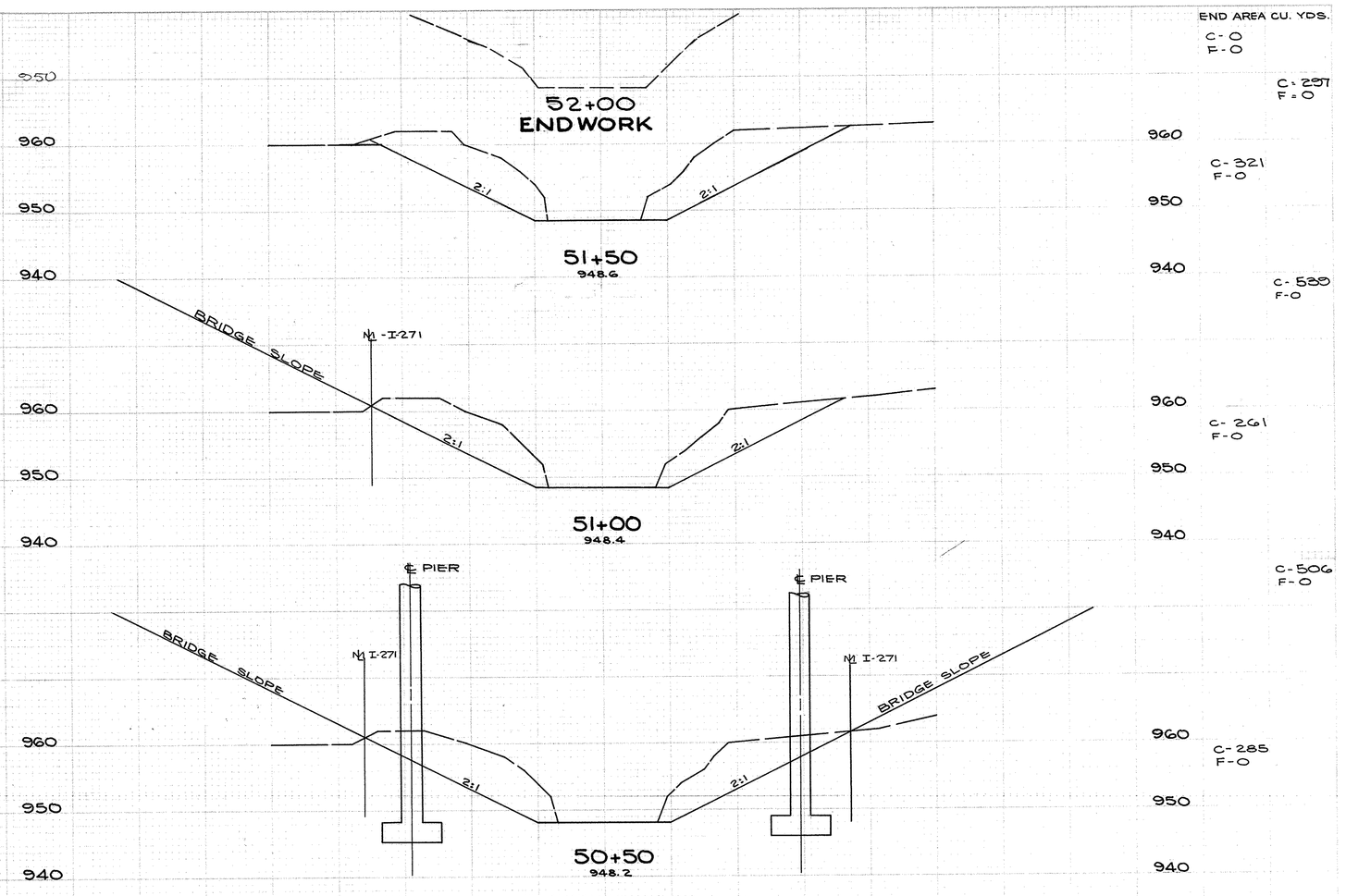
END PROJECT
END WORK
STA. 609+81.79 BACK =
32+00.00 AHEAD

609+00

608+00

STA. 608+00 TO STA. 609+81.79

END AREA CU. YDS.



960 950 940

C-0 F-0
C-297 F-0
C-321 F-0
C-529 F-0
C-261 F-0
C-506 F-0
C-285 F-0
C-495 F-0
C-250 F-0
C-421 F-0
C-205 F-0
C-394 F-0
C-220 F-0
C-204 F-0
C-0 F-0

50 10 ℄ 10 30 50

STA. 48+50 to STA. 51+50
BRANDYWINE CREEK SECTIONS

OHIO | 2 | SHEET NO. OF SHEETS

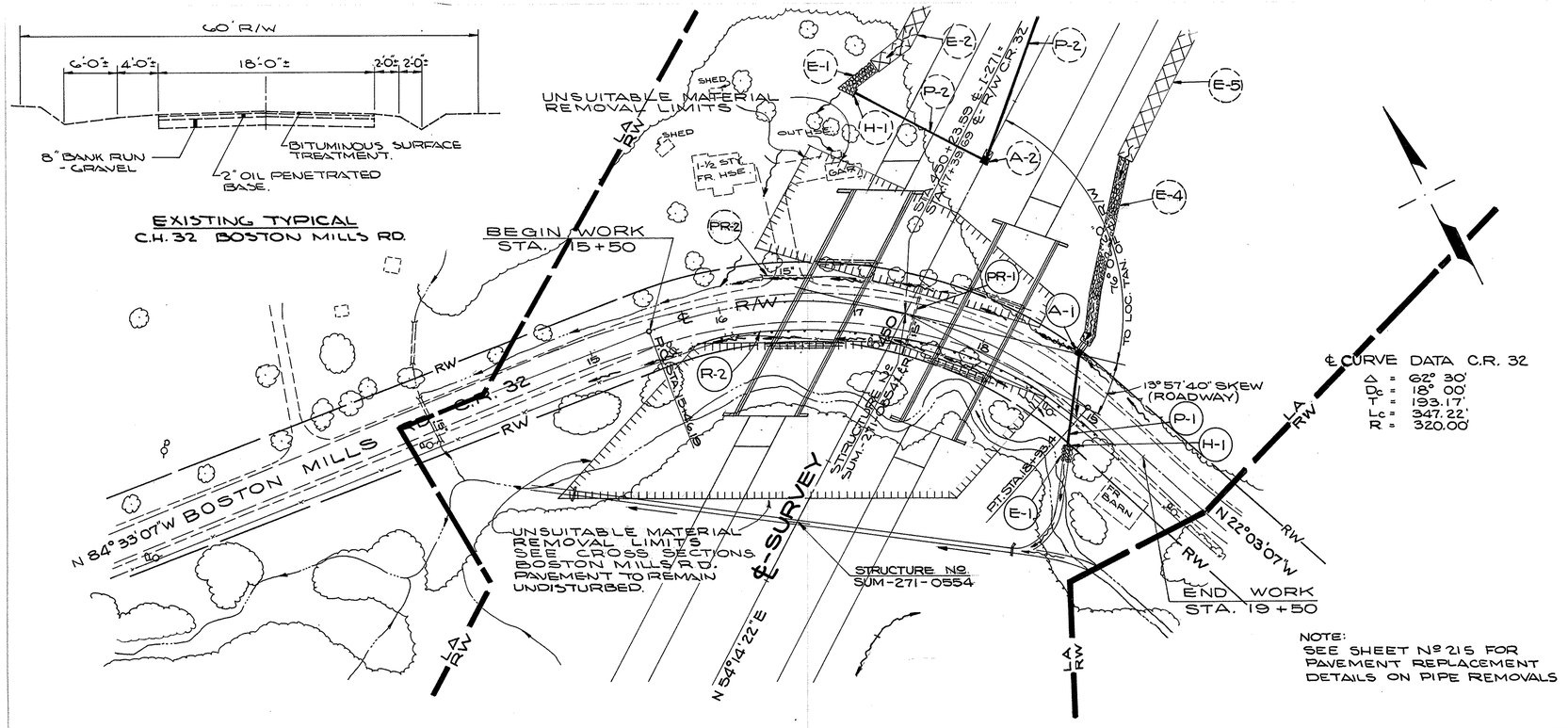
SUM-271-8.29

182
313

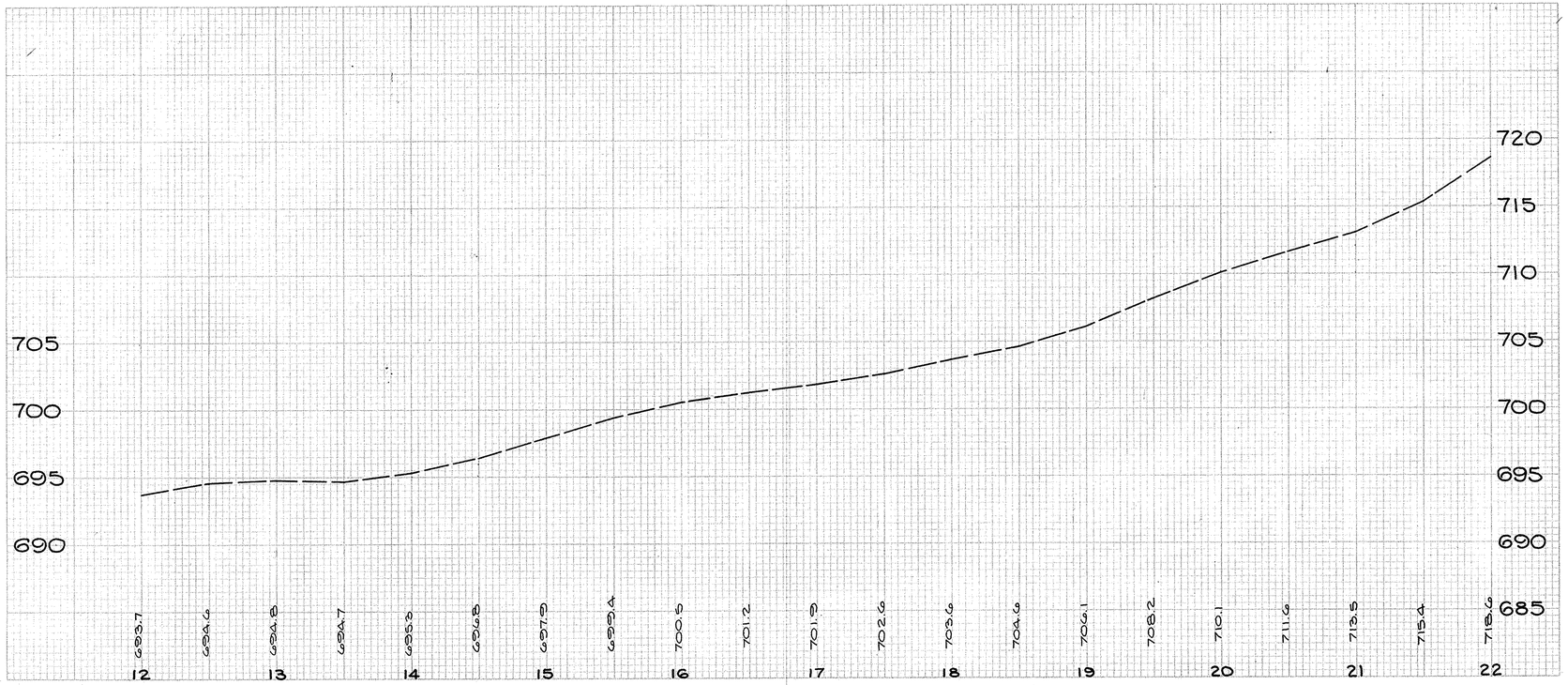
DIST. NO.	STATE	PROJECT
2	OHIO	I-271

SUM-271-8.29

183
313



NOTE:
SEE SHEET Nº 215 FOR PAVEMENT REPLACEMENT DETAILS ON PIPE REMOVALS



ESTIMATED QUANTITIES

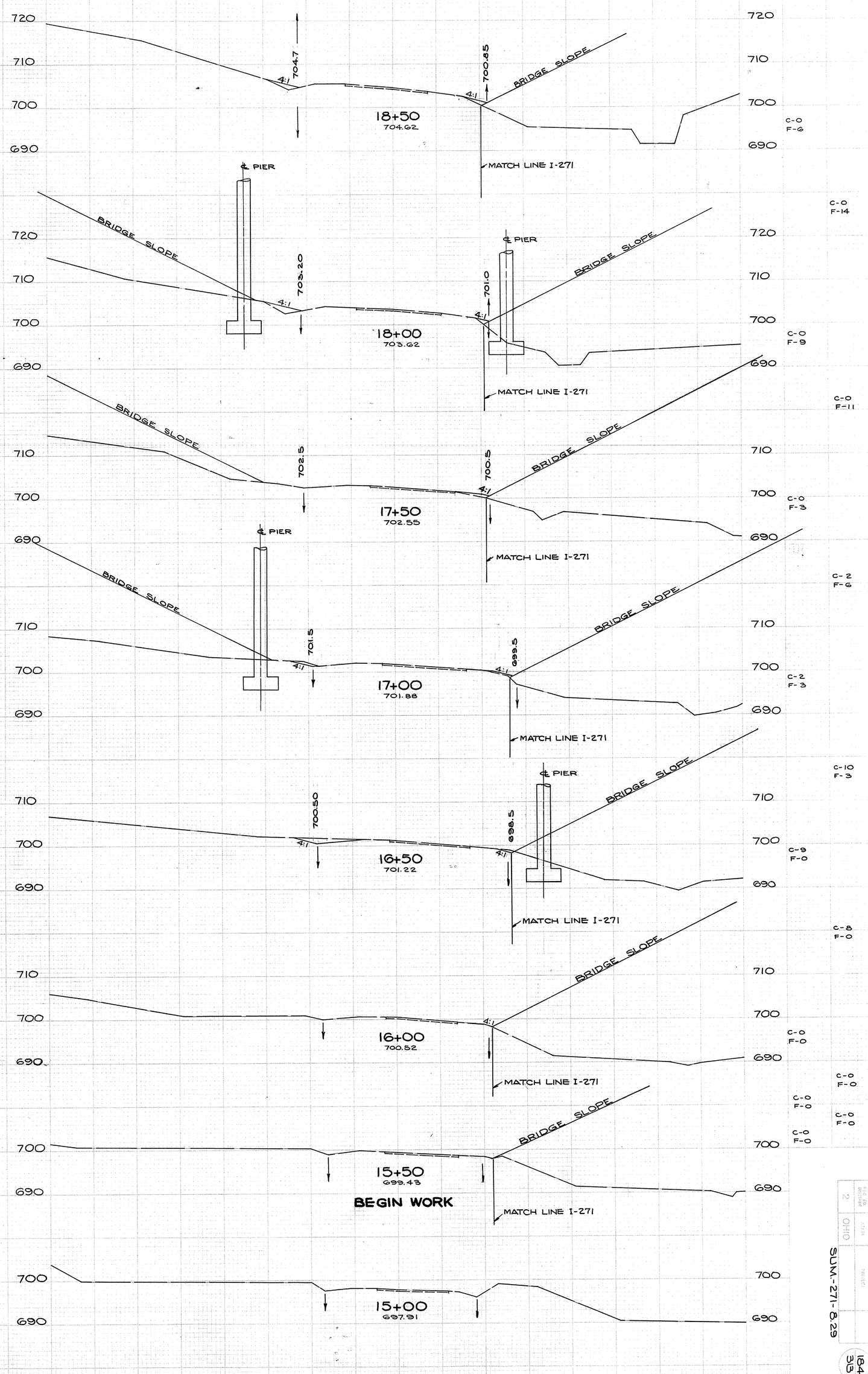
REF. NO.	STATION TO STATION	SIDE	202 PIPE REMOVED 15" & UNDER LIN. FT.	602 GUARD DUMPED ROCK CONCRETE RAIL CHANNEL PROTECT MASONRY TYPE-4 LIN. FT.	CU. YDS.	CU. YDS.	603 CONDUIT LIN. FT. TYPE B w/CL. B BEDDING 30"		604 CATCH BASIN
P-1	A-1 H-1	RT&LT.					70		
A-1	18+65 (29' LT.)								
H-1	19+00 (32 RT.)				0.41				
E-1	19+00	RT.				3.3			
R-1	15+70 19+07.5	RT.				337.5			
PR-1	17+46	RT&LT.	52						
PR-2	16+50	LT.	36						
TOTALS			88			337.5	3.3	0.41	70

SEE SHEET NO.

1 — 2-3 — 1 — 1

BOSTON MILLS RD. C.R.32

END AREA CU. YDS.



STA. 15+00 to STA. 18+50
BOSTON MILLS ROAD - C.H. 32

SUM-271-8.29

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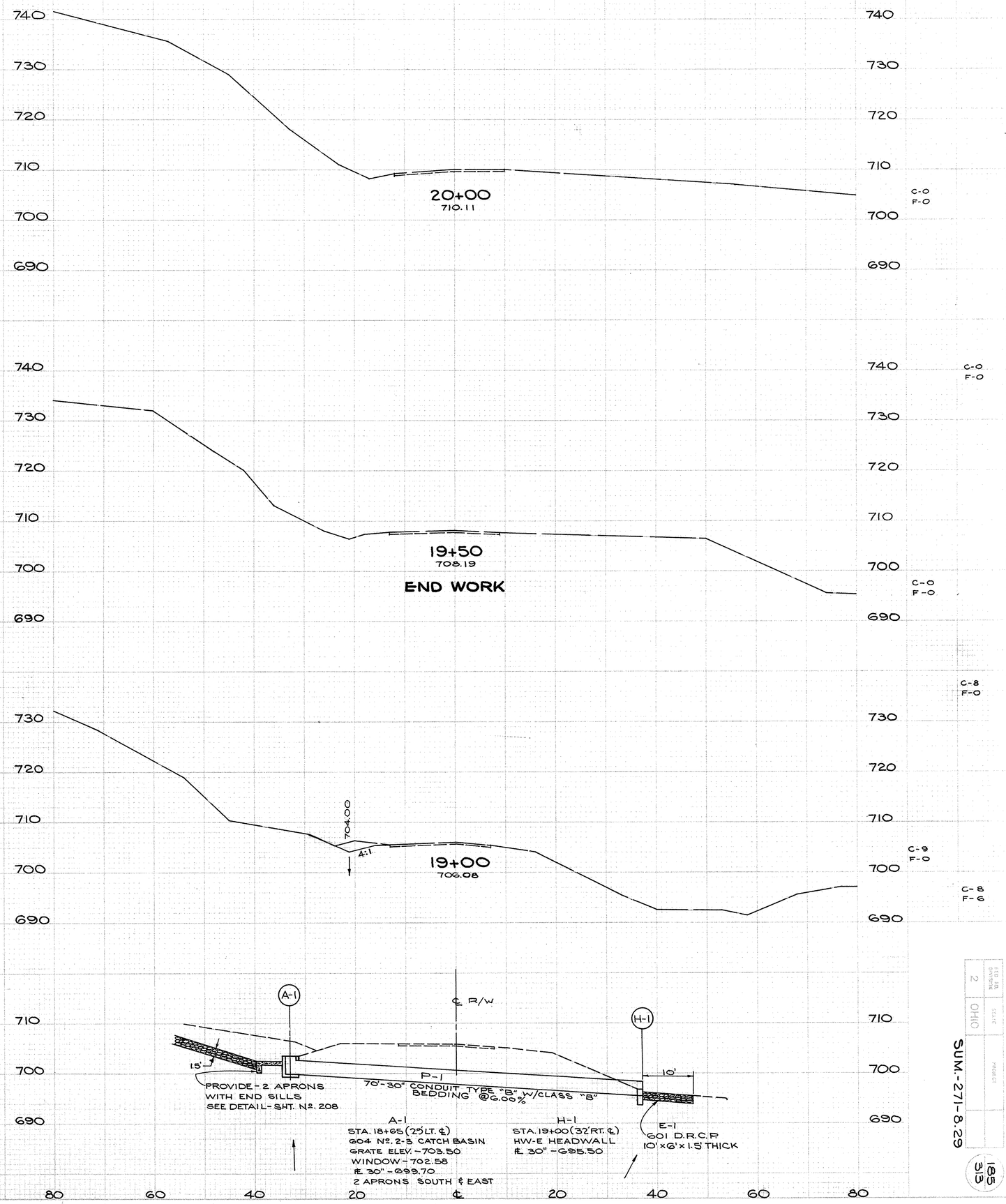
313



STA. 19+00 to STA. 20+00
BOSTON MILLS ROAD-C.H. 32

2	OHIO			

SUM-271-8.29

185
313

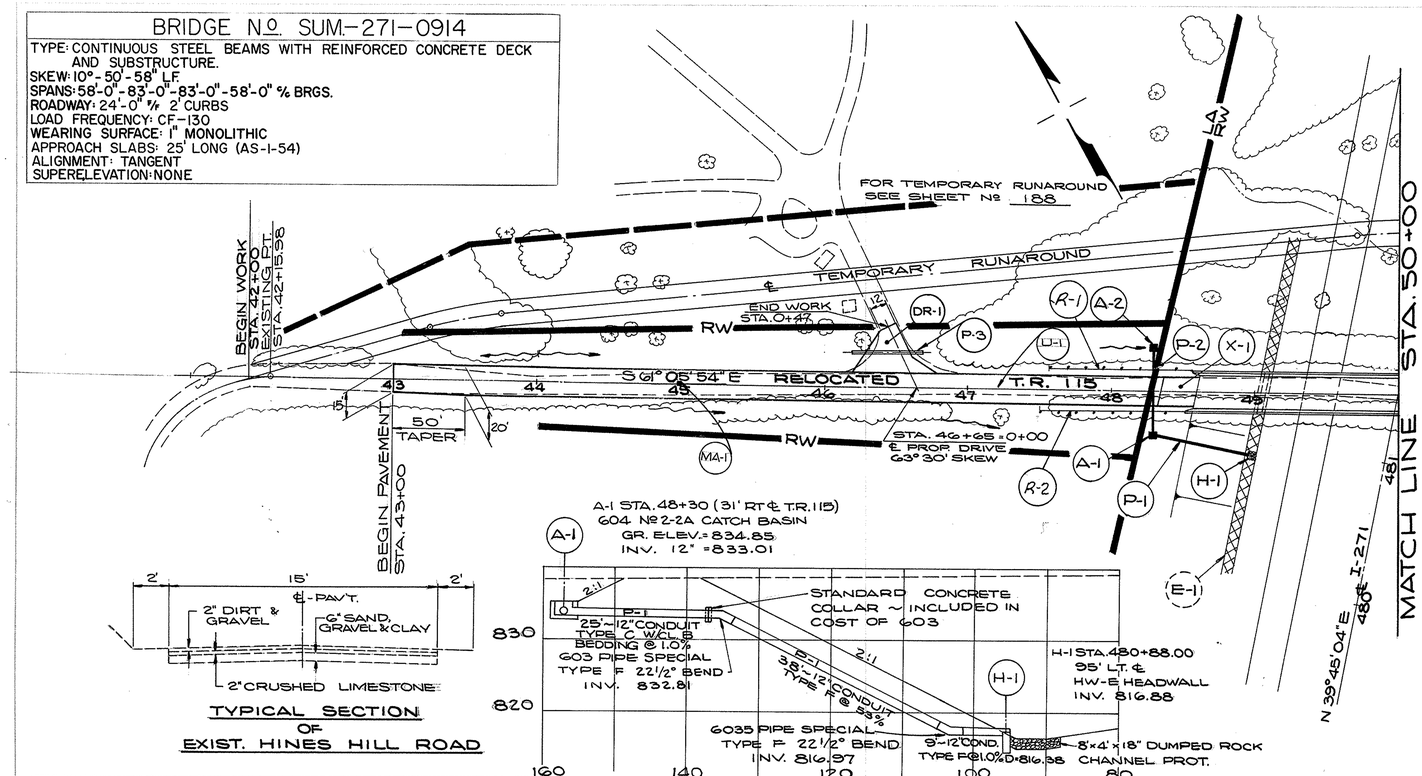
FED. NO. DIVISION	STATE	PROJECT	
2	OHIO		

SUM-271-8.29

186
313

BRIDGE No. SUM.-271-0914

TYPE: CONTINUOUS STEEL BEAMS WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE.
SKEW: 10°-50'-58" L.F.
SPANS: 58'-0"-83'-0"-83'-0"-58'-0" % BRGS.
ROADWAY: 24'-0" % 2' CURBS
LOAD FREQUENCY: CF-130
WEARING SURFACE: 1" MONOLITHIC
APPROACH SLABS: 25' LONG (AS-1-54)
ALIGNMENT: TANGENT
SUPERELEVATION: NONE



ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	408 PRIME COAT GAL./SQ.YD	404 ASPHALTIC CONC. CU.YDS.	304 AGG. BASE VARIABLE DEPTH CU.YDS.	605 UNDERDRAINS AS PER STD. LINEAR LIN.FT.	603 12" CONDUIT TYPE C W.C.B 8'-8ad. LIN.FT.	603 TYPE F 22½° BEND 7'-0" or MENT 707.02 1484-12" ASSEMBLIES LIN.FT.	604 CONCRETE COLLAR FOR MANHOLE EACH	603 CONDUIT-LIN.FT. TYPE B BEDDING 12"	603 CONDUIT-LIN.FT. TYPE F 12"	BENDS & BRANCHES
A-1	48+35(31' RT. ℄ T.R. 115)	RT.									12"	
A-2	48+35(29' LT. ℄ T.R. 115)	LT.										
P-1	A-1 TO H-1	RT.				2.5						47
P-2	A-1 TO H-2	℄										
P-3	46+13 TO 46+63	LT.								64		
H-1	480+88.00(95' LT. ℄ I-271)	LT.					50					
DR-1	46+65	LT.	44	6.1	15.2							
X-1	48+31.71-48+56.71	℄										
MA-1	45+00	℄							1			
U-1	45+00-48+56.71	LT. & RT.				120						
R-1	47+47-48+17	LT.										
R-2	47+42-48+42	RT.										
TOTALS			44	6.1	15.2	120	25	50	1	64		47

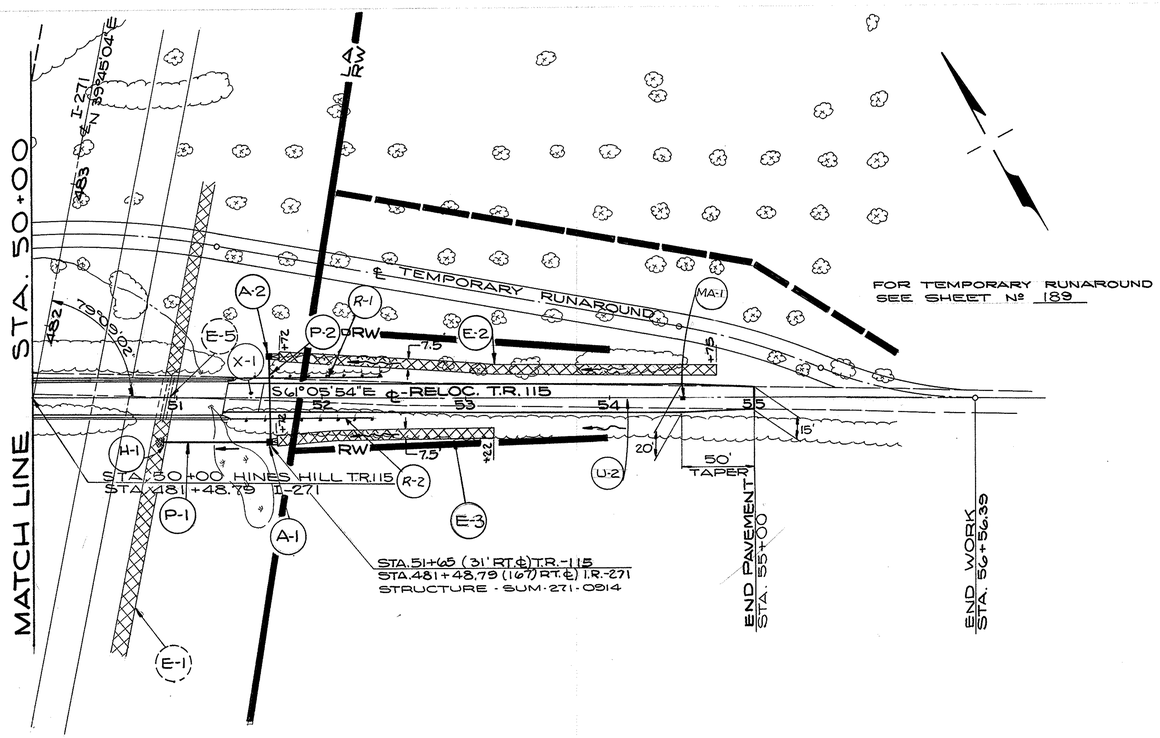
SEE SHEET NO.	611 6" REINF. CONC. APP. SLAB SQ.YDS.	606 GUARD RAIL TYPE 4 LIN.FT.	604 CONC. CATCH BASIN MASONRY 2-2A No	602 CONC. CATCH BASIN MASONRY 2-2A CU.YDS.
				1
				1
	55.5			0.23
		100		
		100		
	55.5	200		0.23
	2			2

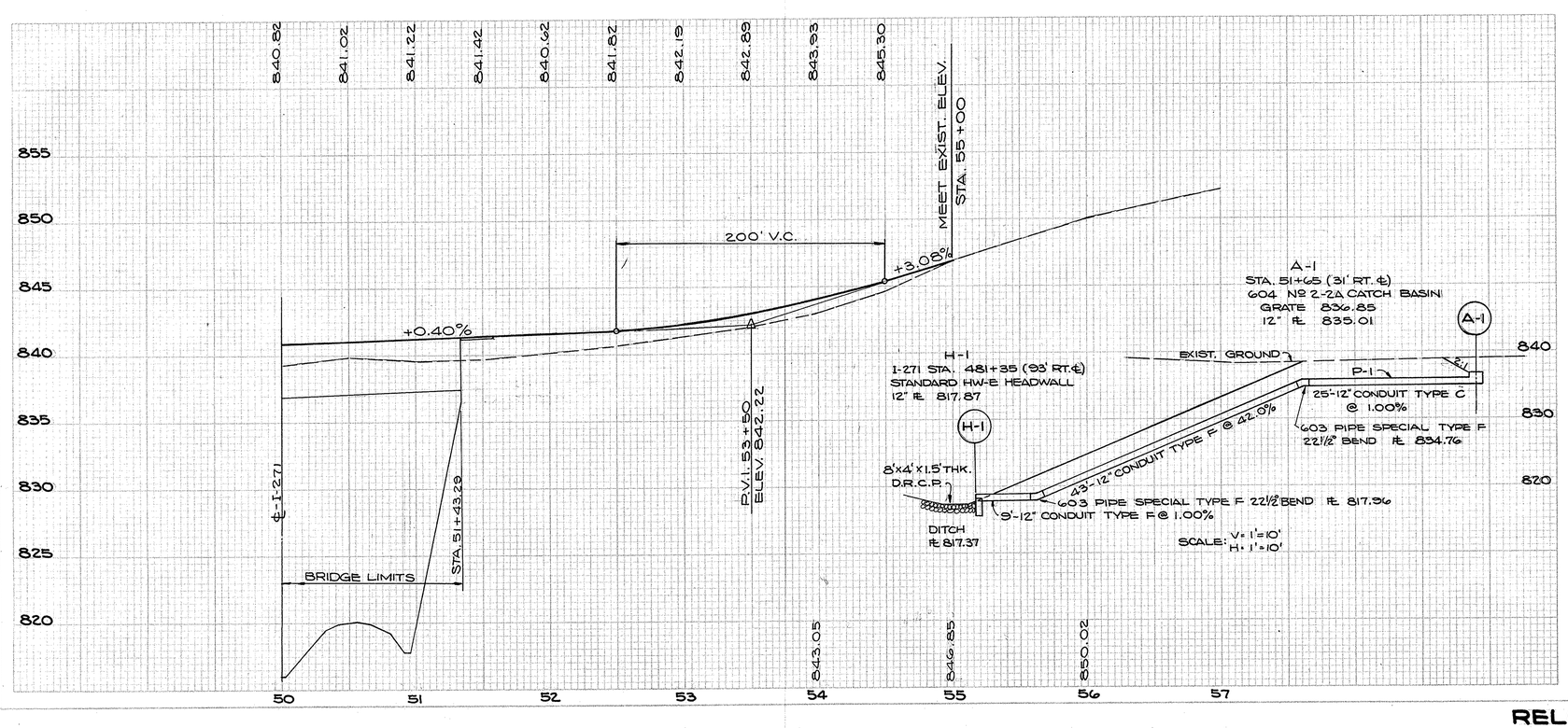
RELOCATED T.R. 115 HINES HILL ROAD

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

SUM-271-8.29

187
313





ESTIMATED QUANTITIES

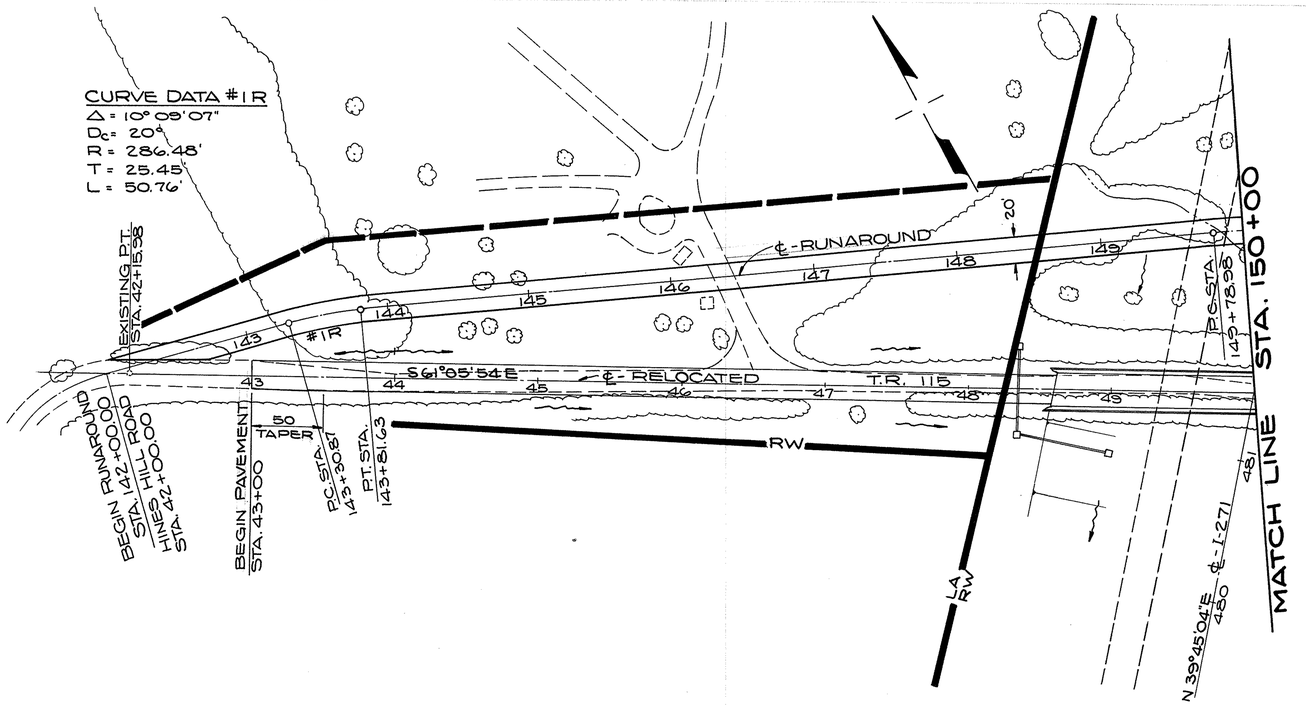
REF. NO.	STATION TO STATION	SIDE	604 MONUMENT BETWEEN EACH	605 AGG. DRAINS AS PER PLAN LIN. FT	603 CONDUIT-LIN. FT. TYPE "B" W/CL. "B" BEDDING 12"	603 CONDUIT-LIN. FT. TYPE C 12"	603 CONDUIT-LIN. FT. TYPE F 12"	BENDS & BRANCHES	606 GUARD RAIL TYPE 4 LIN. FT.	611 REINF. CONC. PIPE SLAB SQ.YDS.	607 JUTE MATTING SQ.YDS.	604 CATCH BASIN Nº 2-2A	602 CONC. MASONRY C.U.YDS.	SEE SHEET NO.
A-1	51+65 (31' RT. ℄ T.R. 115)	RT.										1		
A-2	51+65 (29' LT. ℄ T.R. 115)	LT.										1		
P-1	A-1 TO H-1	RT.											0.23	
P-2	A-1 TO A-2	℄				60		52 25' 2			253			
H-1	481+35 (93' RT. ℄ I-271)	RT.									125			
E-2	51+72 TO 54+75	LT.								55.5				
E-3	51+72 TO 53+22	RT.												
X-1	51+43.29 - 51+68.29	℄												
MA-1	54+50	℄	1						100					
U-2	51+43.29 - 55+00	LT & RT		80					100					
R-1	51+58 - 52+58	LT.												
R-2	51+53 - 51+53	RT.												
TOTALS			1	80	60	52 25'				55.5	378	2	0.23	200

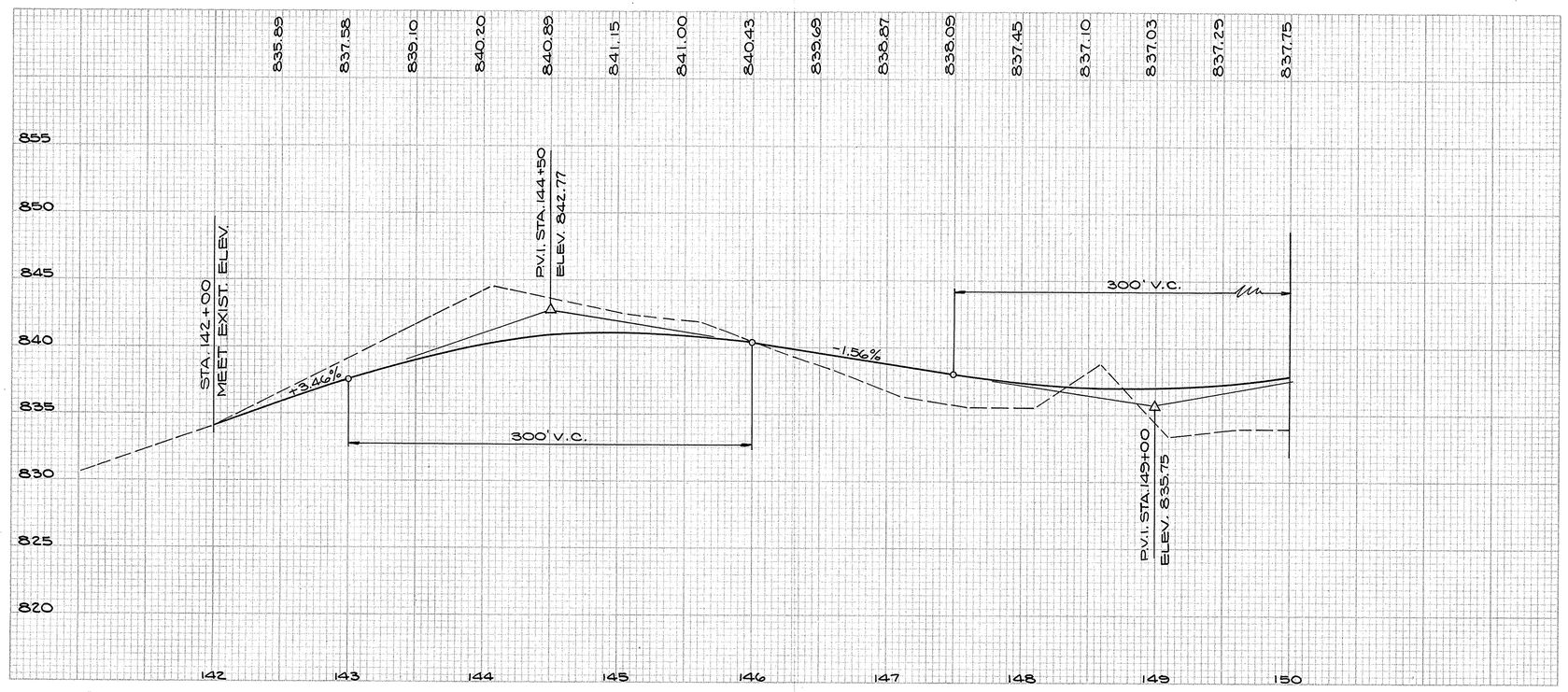
RELOCATED T.R. 115 HINES HILL ROAD

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

188
313

SUM-271-8.29





ESTIMATED QUANTITIES

SEE SHEET NO.

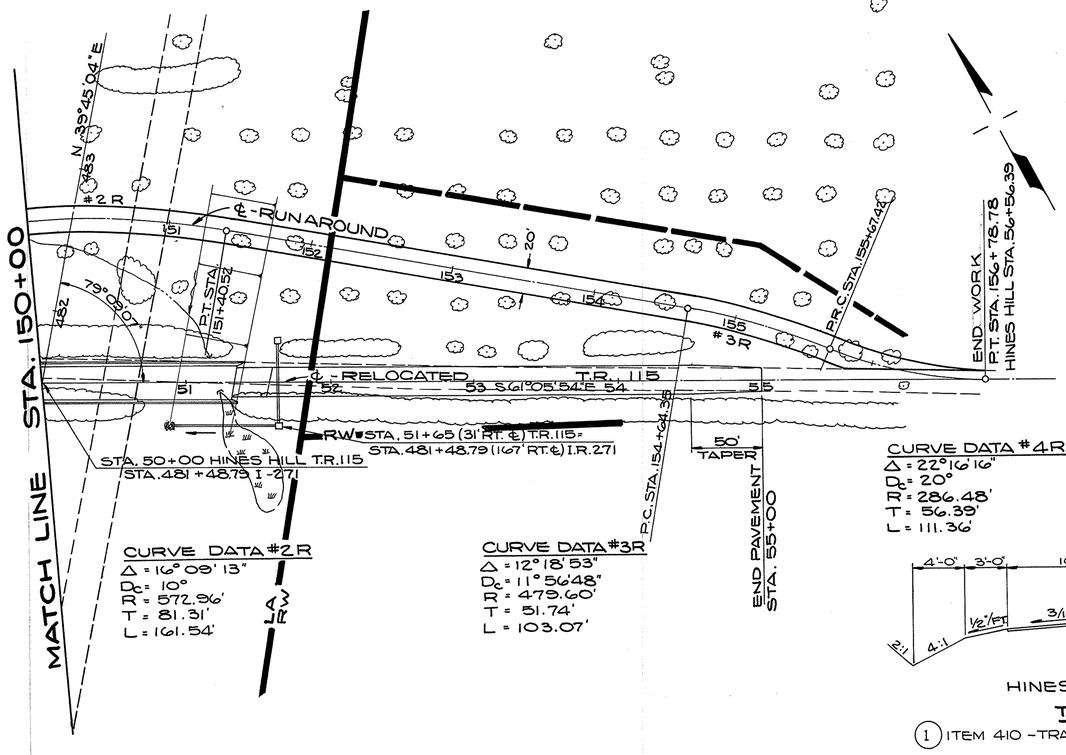
REF. NO.	STATION TO STATION	SIDE	615 TEMP. ROADS	410 TRAFFIC CONTROL SURFACE A & B CU. YDS.
T-1	142+00 - 150+00		LUMP	567
TOTALS			LUMP	567

RELOCATED T.R. 115 HINES HILL ROAD (RUNAROUND)

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

SUM-271-8.29

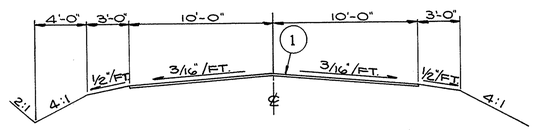
189
318



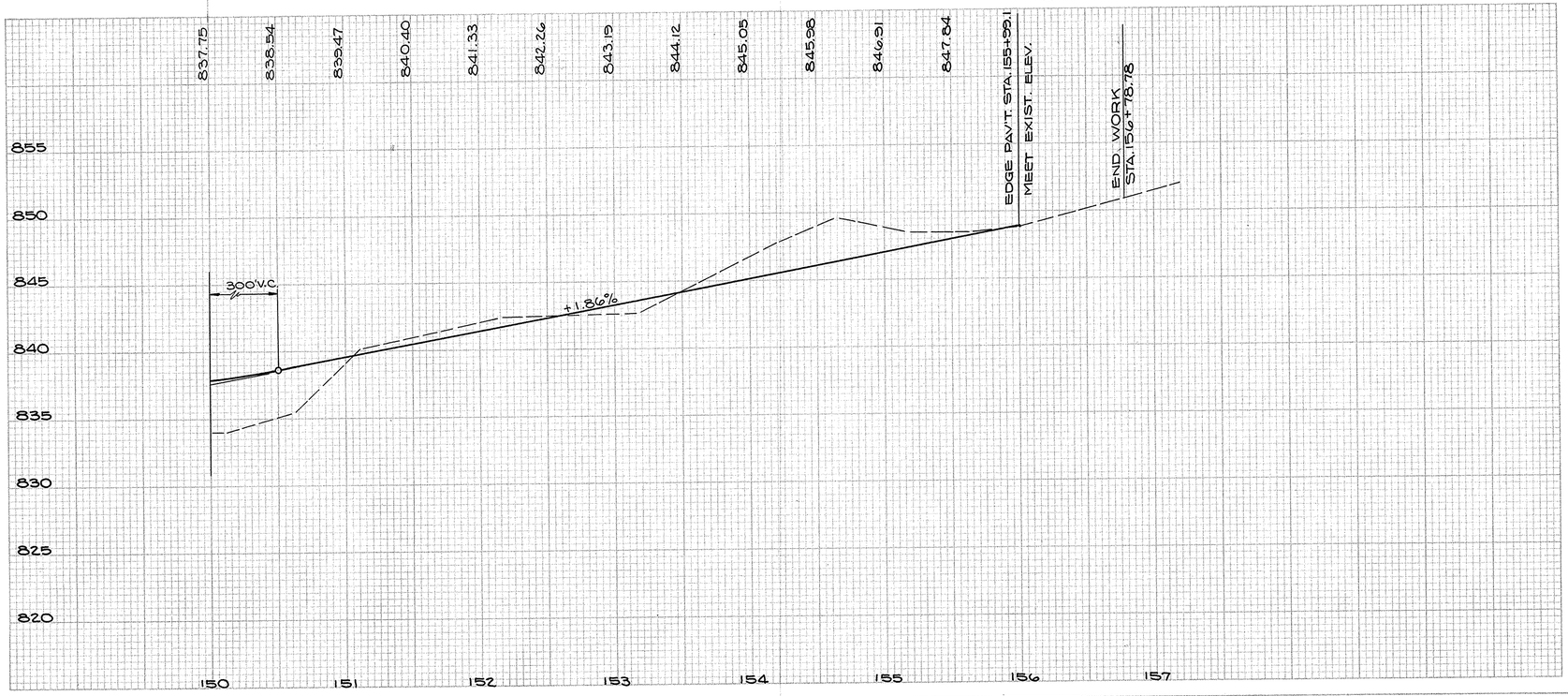
CURVE DATA #2 R
Δ = 16°09'13"
D_c = 10°
R = 572.96'
T = 81.31'
L = 161.54'

CURVE DATA #3 R
Δ = 12°18'53"
D_c = 11°56'48"
R = 479.60'
T = 51.74'
L = 103.07'

CURVE DATA #4 R
Δ = 22°16'16"
D_c = 20°
R = 286.48'
T = 56.39'
L = 111.36'



HINES HILL RD. RUNAROUND
TYPICAL SECTION
(1) ITEM 410 - TRAFFIC COMPACTED SURFACE, TYPE A OR B



ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	615 TEMP ROADS	410 TRAFFIC COMPACT SURFACE, TYPE A OR B
T-1	150+00 - 156+00		LUMP	LUMP
TOTALS			LUMP	456

SEE SHEET NO.

RELOCATED T.R. 115 HINES HILL ROAD (RUNAROUND)

BEGIN BRIDGE STA. 48+56.71

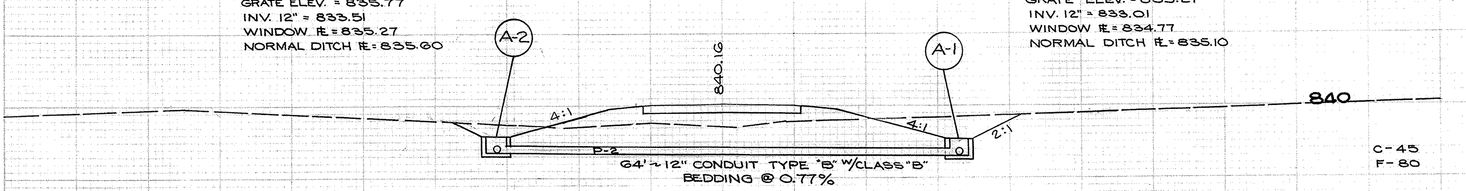
STA. 48+50

C-0
F-28

A-2
STA. 48+30 (29.00' LT. ℄)
604 No. 2-2A CATCH BASIN
GRATE ELEV. = 835.77
INV. 12" = 833.51
WINDOW ℄ = 835.27
NORMAL DITCH ℄ = 835.60

A-1
STA. 48+30 (31.00' RT. ℄)
604 No. 2-2A CATCH BASIN
GRATE ELEV. = 835.27
INV. 12" = 833.01
WINDOW ℄ = 834.77
NORMAL DITCH ℄ = 835.10

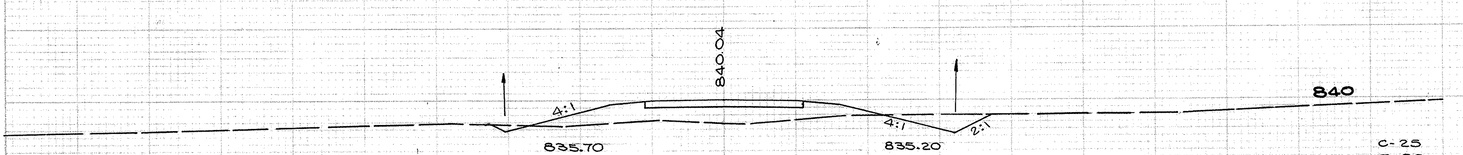
C-12
F-30



C-45
F-80

48+35
837.1

C-45
F-104

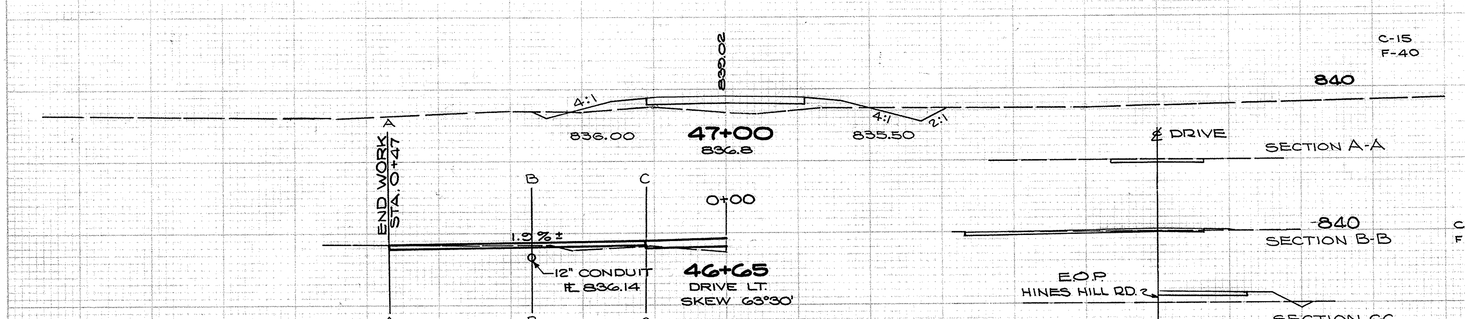


C-25
F-80

48+00
836.8

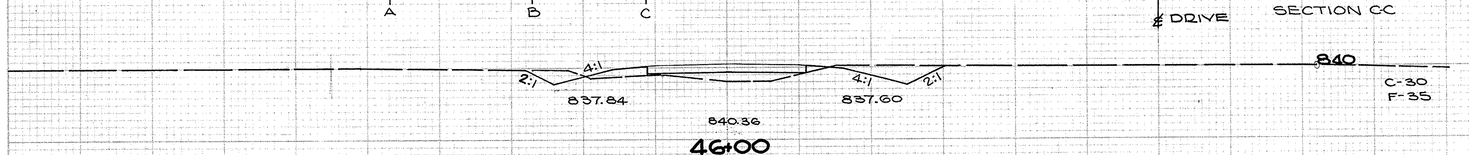
C-74
F-222

C-15
F-40



47+00
836.8

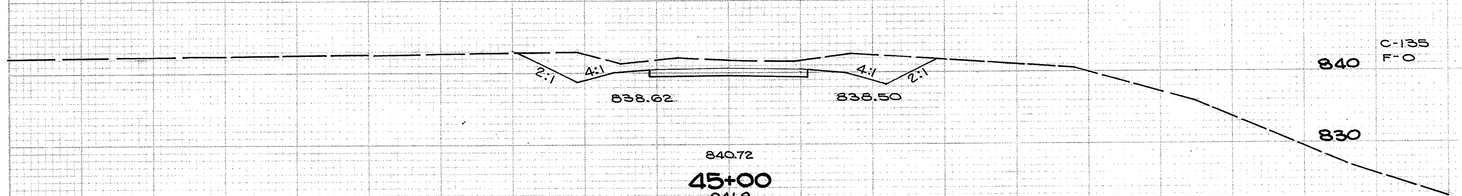
C-83
F-139



840.36
46+00
838.1

C-30
F-35

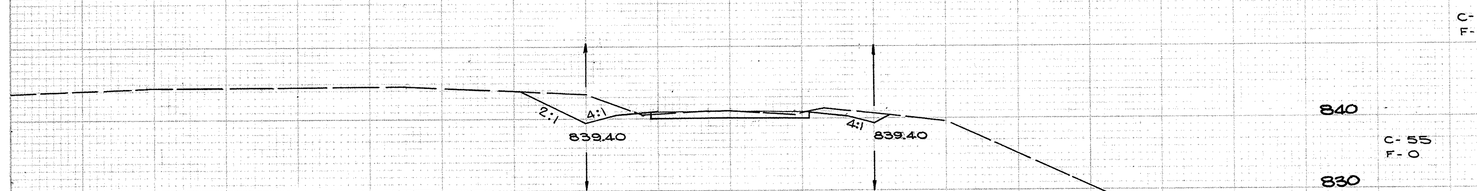
C-306
F-65



840.72
45+00
841.8

C-135
F-0

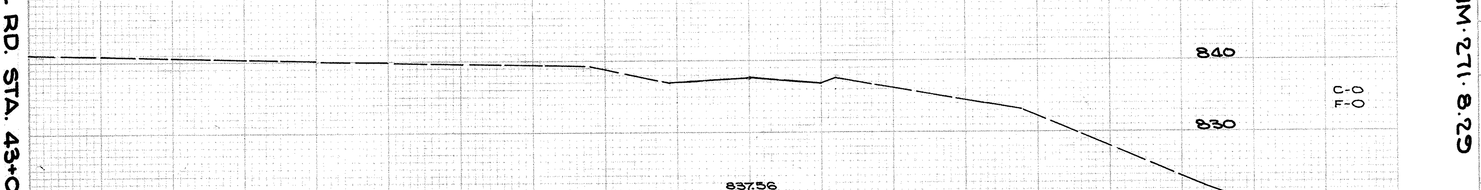
C-352
F-0



840.11
44+00
841.1

C-55
F-0

C-102
F-0



837.56
43+00
837.6

C-0
F-0

80 60 40 20 ℄ 20 40 60 80

RELOC. HINES HILL RD. STA. 43+00 - 48+50

SUM. 271. 8.29

				FED. DIV.
				2
				OHIO
				STATE
				PROJECT

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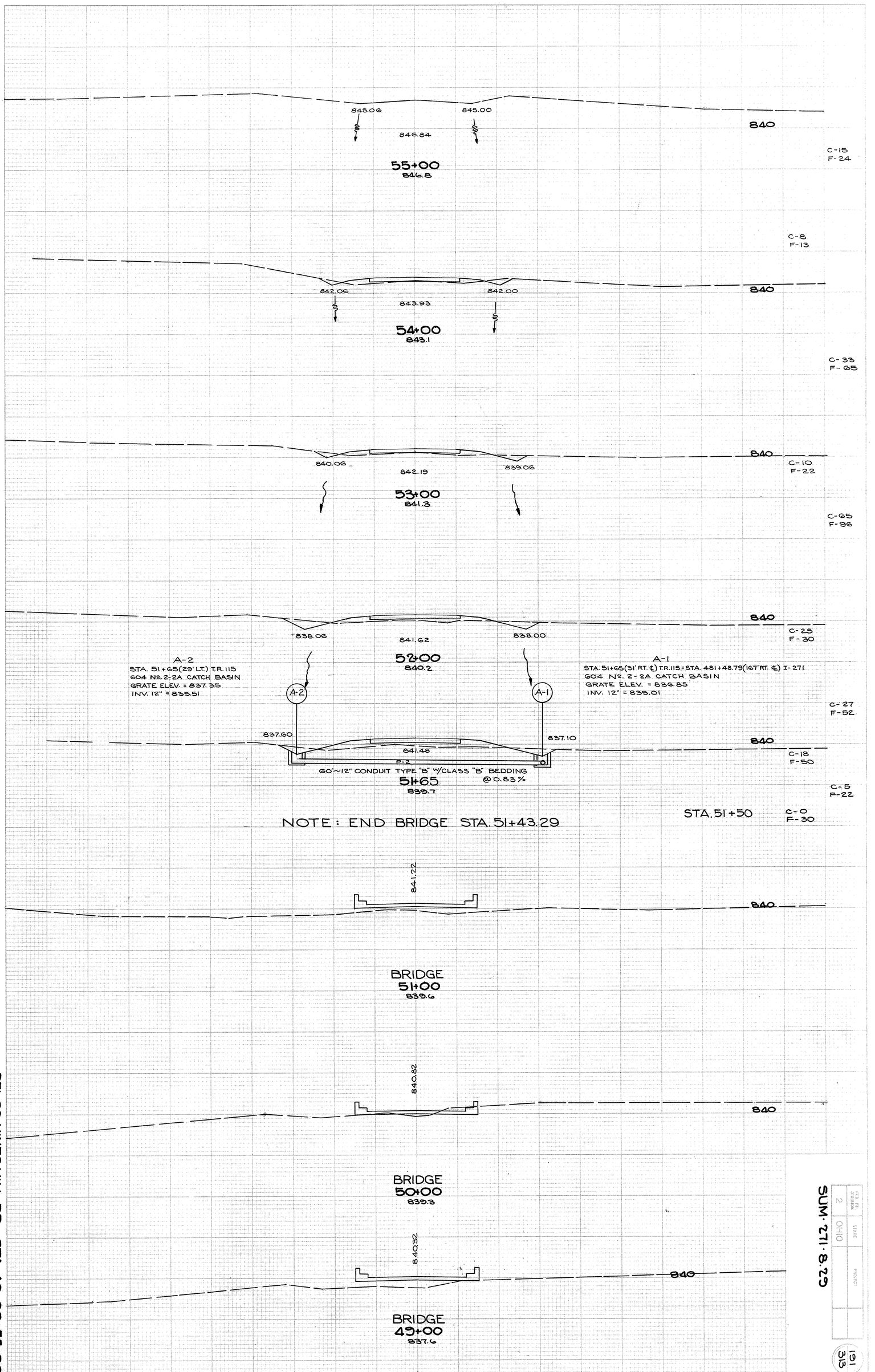


RELOC. HINES HILL RD. STA. 49+00-55+00

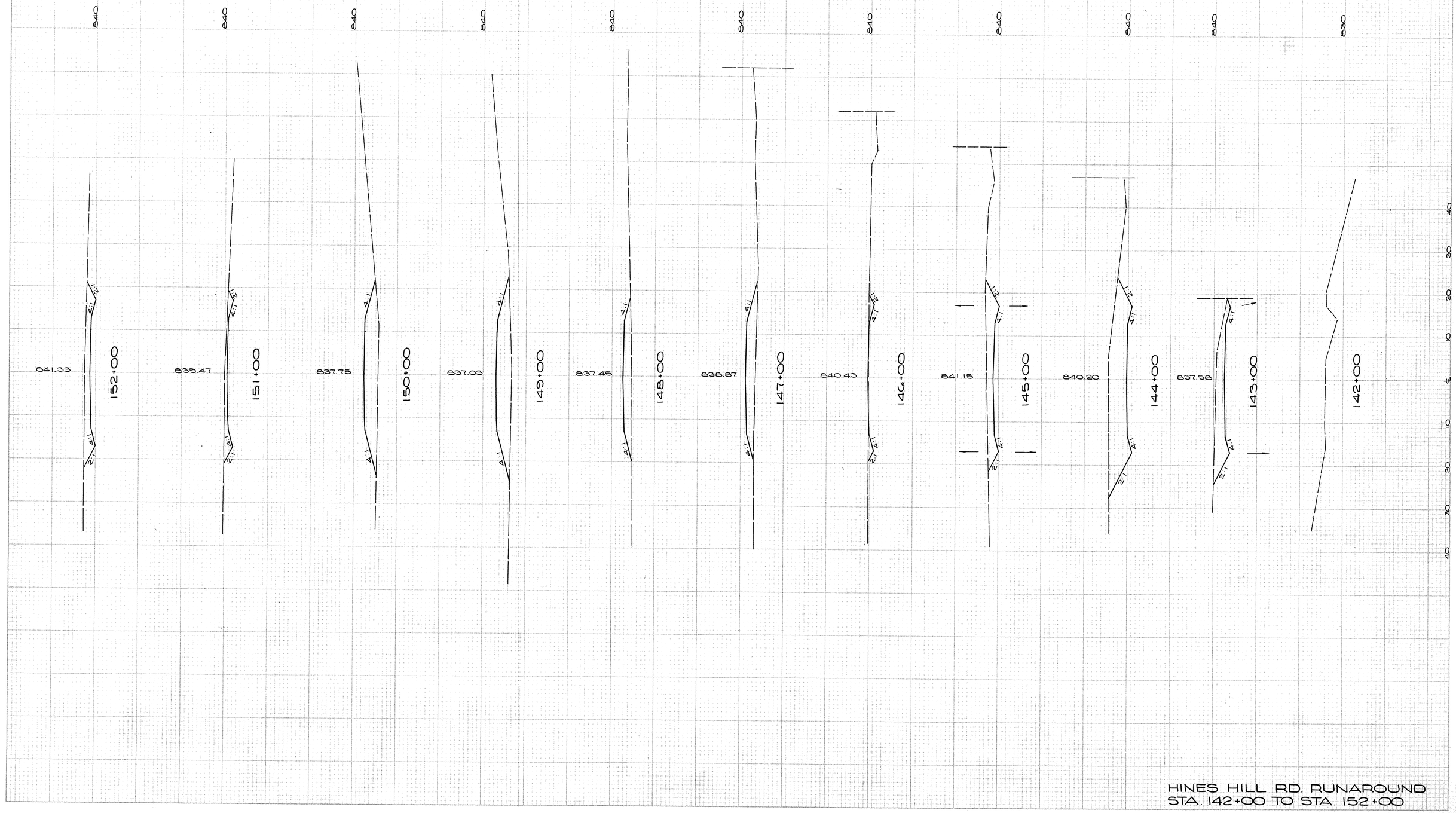
SUM-271-8.79

SHEET NO.	STATE	PROJECT
2	OHIO	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

182
313

SUM-271-8.29



HINES HILL RD. RUNAROUND
STA. 142+00 TO STA. 152+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

193
313

SUM-271-8.29

HINES HILL RD. RUNAROUND
STA. 153+00 TO STA. 156+00

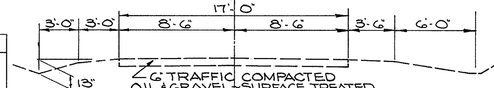
SEQ. NO. DIVISION	STATE	PROJECT	
2	OHIO		

194
313

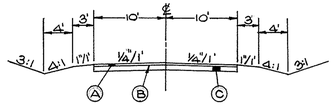
SUM - 271 - 8.29

BRIDGE Nº SUM - 271 - 0967

TYPE: CONTINUOUS STEEL BEAMS WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE.
SKEW: 0°-00'-00" TO LOCAL TANGENT
SPANS: 45'-0"-@4'-0"-45'-0" c/c BRGS.
ROADWAY: 24'-0" F/F 2'-0" SAFETY CURBS
LOADING FREQUENCY: CF = 130
WEARING SURFACE: 1" MONOLITHIC
APPROACH SLABS: 25' LONG (AS-1-54)
ALIGNMENT: 6°00'00" CURVE LEFT
SUPERELEVATION: .042'/FT.
SLOPE PROTECTION: CRUSHED AGGREGATE AND DUMPED ROCK.

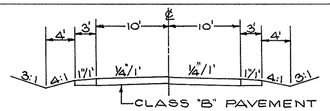


RELOC. BRANDYWINE RD. CURVE DATA
Δ = 71°22'23" LT.
D = 6°00'
R = 954.93'
T = 686.06'
L = 1189.55'
E = 220.90'
P.I. STA. 62+37.55

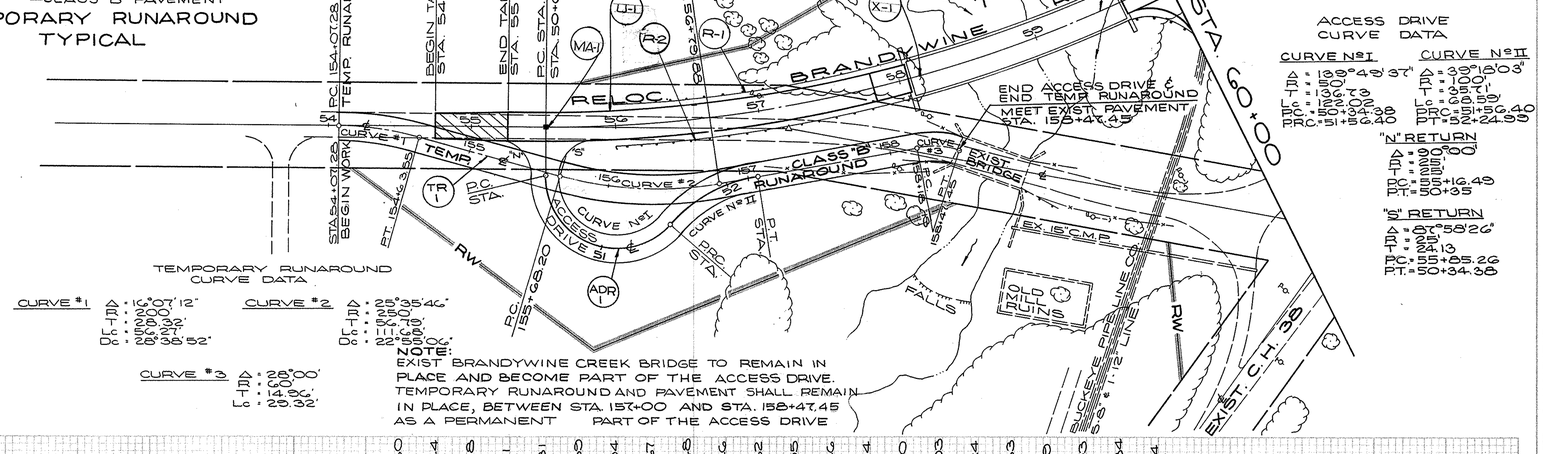


ACCESS DRIVE TYPICAL

Ⓐ 404 2" ASPHALT CONCRETE APPLIED IN TWO 1" COURSES (70-85)
Ⓑ 408 BITUMINOUS PRIME COAT, 702.09. RT-2 OR RT-3, APPLIED AT 0.40 GAL/SQ.YD.
Ⓒ 304 VARIABLE DEPTH; AGGREGATE BASE COURSE



TEMPORARY RUNAROUND TYPICAL



TEMPORARY RUNAROUND CURVE DATA

CURVE #1: Δ = 16°07'12", T = 200', R = 1000', L = 281.38', Lc = 281.27', D = 5°43'52"
CURVE #2: Δ = 25°35'46", T = 200', R = 550', L = 245.69', Lc = 243.66', D = 10°25'06"
CURVE #3: Δ = 28°00', T = 30', R = 120', L = 58.64', Lc = 58.04', D = 47°45'49"

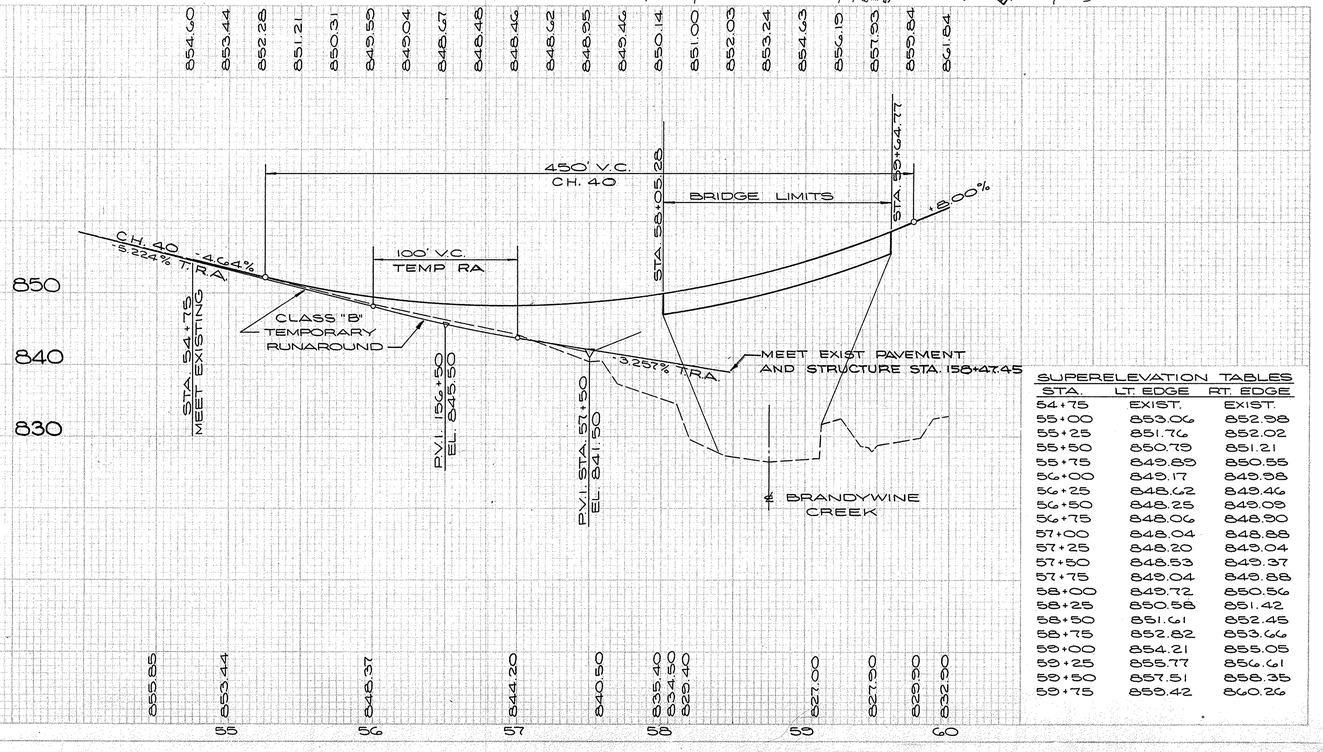
"N" RETURN
Δ = 90°00'00"
D = 22°55'
R = 250'
T = 250'
PC. = 55+16.49
PT. = 50+35

"S" RETURN
Δ = 61°59'26"
D = 22°55'
R = 250'
T = 154.13
PC. = 55+95.26
PT. = 50+34.38

ACCESS DRIVE CURVE DATA

CURVE N°I		CURVE N°II	
Δ =	139°49'37"	Δ =	39°15'03"
D =	50°	D =	100°
R =	114.59'	R =	57.31'
T =	1357.73	T =	21.71'
Lc =	1120.02	Lc =	39.59'
PC. =	50+34.38	PRC =	55+51+50.40
PRC. =	51+54.40	PT. =	52+24.99

NOTE:
EXIST BRANDYWINE CREEK BRIDGE TO REMAIN IN PLACE AND BECOME PART OF THE ACCESS DRIVE. TEMPORARY RUNAROUND AND PAVEMENT SHALL REMAIN IN PLACE, BETWEEN STA. 157+00 AND STA. 158+47.45 AS A PERMANENT PART OF THE ACCESS DRIVE



SUPERELEVATION TABLES

STA.	LT. EDGE	RT. EDGE
54+75	EXIST.	EXIST.
55+00	853.06	852.98
55+25	851.76	852.02
55+50	850.79	851.21
55+75	849.85	850.55
56+00	849.17	849.98
56+25	848.62	849.46
56+50	848.25	849.09
56+75	848.06	848.90
57+00	848.04	848.88
57+25	848.20	849.04
57+50	848.53	849.37
57+75	849.04	849.88
58+00	849.72	850.56
58+25	850.58	851.42
58+50	851.61	852.45
58+75	852.82	853.66
59+00	854.21	855.05
59+25	855.77	856.61
59+50	857.51	858.35
59+75	859.42	860.26

SEE SHEET NO.

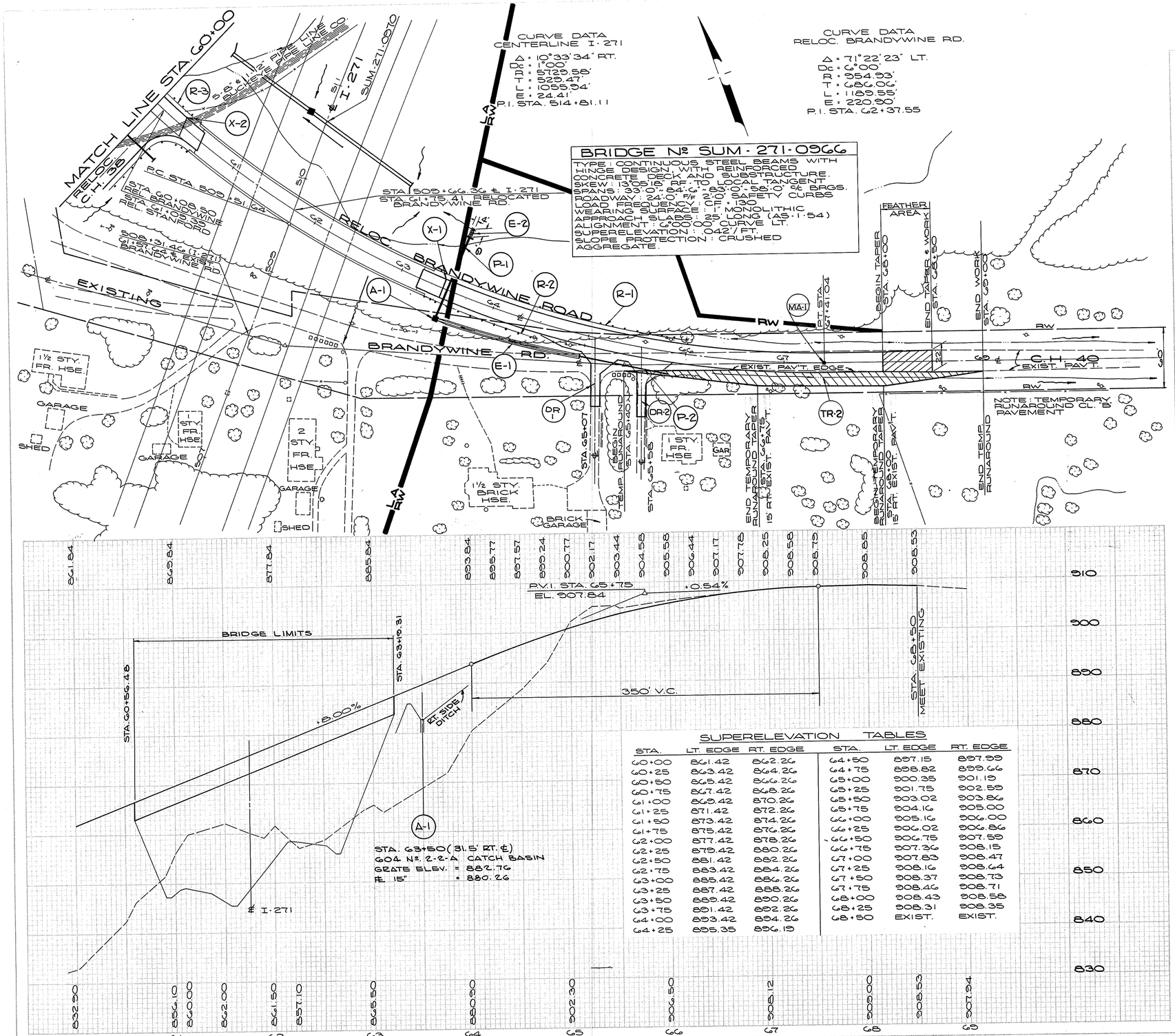
202 GUARD RAIL TYPE 4 LIN. FT.	445
615 TEMP ROAD PAVT. SQ. YDS.	LUMP
615 CLASS 'B' DEPTH BASE CU. YDS.	378
304 VARI. ASPH. CONC. CU. YDS.	663
404 ASPH. PRIME COAT 400 GAL.	26.5
408 BIT. PRIME COAT 400 GAL.	191.1
511 REINF. MONUMENT CONC. ENCASE. PLAN SLAB (IN FT. SQ. YD. EACH	

ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	202 GUARD RAIL TYPE 4 LIN. FT.	615 TEMP ROAD PAVT. SQ. YDS.	615 CLASS 'B' DEPTH BASE CU. YDS.	304 VARI. ASPH. CONC. CU. YDS.	404 ASPH. PRIME COAT 400 GAL.	408 BIT. PRIME COAT 400 GAL.	511 REINF. MONUMENT CONC. ENCASE. PLAN SLAB (IN FT. SQ. YD. EACH
R-1	54+00 - BRIDGE	LT.	205						
R-2	54+00 - BRIDGE	RT.	205						
R-3	BRIDGE - 60+00	LT.	35						
TR-1	154+07.28 - 158+47.45	RT.		LUMP	378				
ADR-1	50+10 - 52+24.99	RT.				663	26.5	191.1	
U-1	55+25 - 58+05	LT.							
X-1	57+80.88 - 58+05.28	℄							
X-2	59+64.77 - 59+89.77	℄							
MA-1	59+51.49	℄							
TOTALS			445	LUMP	378	663	26.5	191.1	

RELOCATED BRANDYWINE RD. C.H. 40

SUM - 271 - 8.29



SUPERELEVATION TABLES

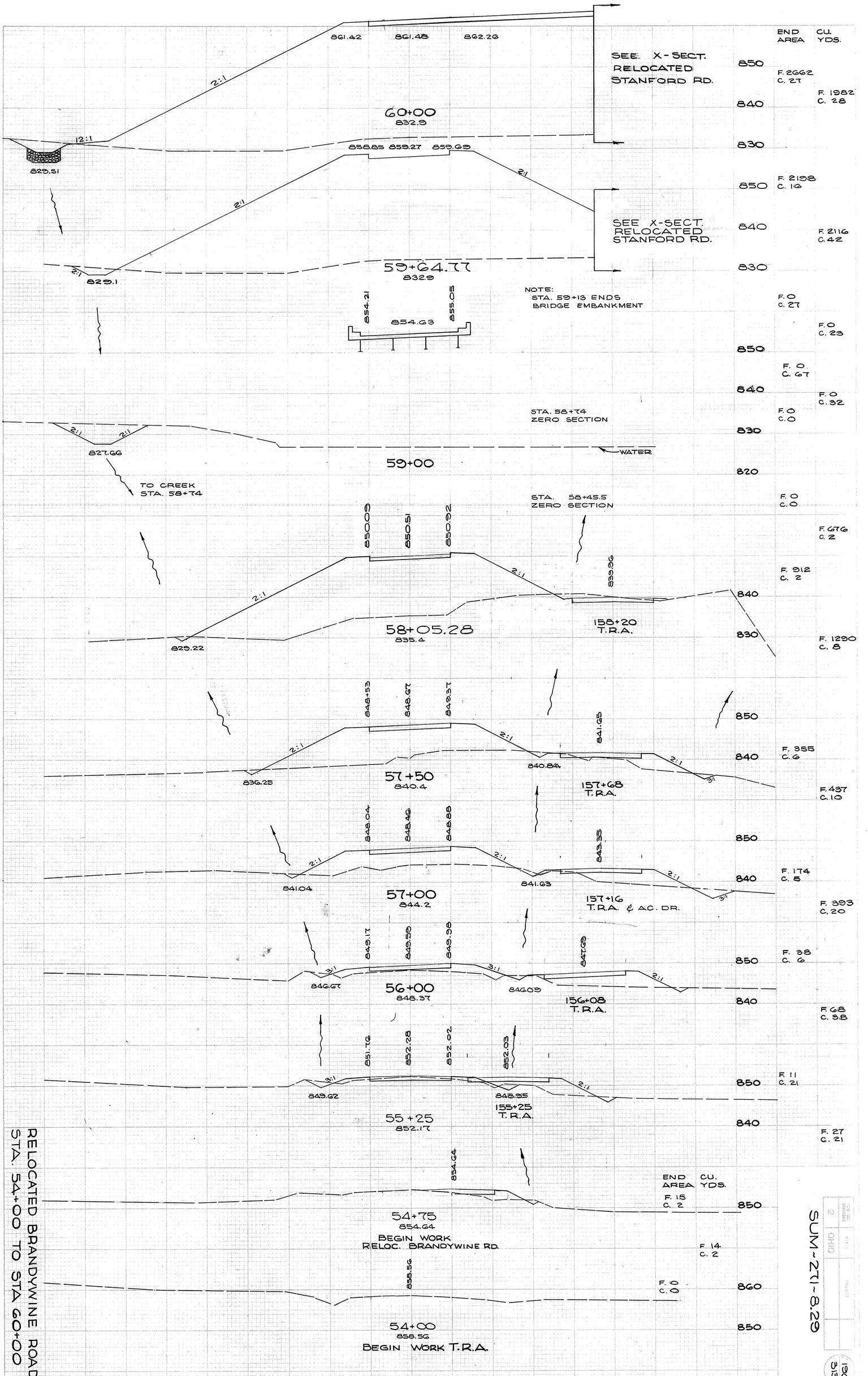
STA.	LT. EDGE	RT. EDGE	STA.	LT. EDGE	RT. EDGE
60+00	861.42	862.26	64+50	897.15	897.99
60+25	863.42	864.26	64+75	898.82	899.66
60+50	865.42	866.26	65+00	900.35	901.15
60+75	867.42	868.26	65+25	901.75	902.58
61+00	869.42	870.26	65+50	903.02	903.86
61+25	871.42	872.26	65+75	904.16	905.00
61+50	873.42	874.26	66+00	905.16	906.00
61+75	875.42	876.26	66+25	906.02	906.86
62+00	877.42	878.26	66+50	906.75	907.59
62+25	879.42	880.26	66+75	907.36	908.15
62+50	881.42	882.26	67+00	907.83	908.47
62+75	883.42	884.26	67+25	908.16	908.44
63+00	885.42	886.26	67+50	908.37	908.73
63+25	887.42	888.26	67+75	908.46	908.71
63+50	889.42	890.26	68+00	908.43	908.58
63+75	891.42	892.26	68+25	908.31	908.35
64+00	893.42	894.26	68+50	EXIST.	EXIST.
64+25	895.35	896.15			

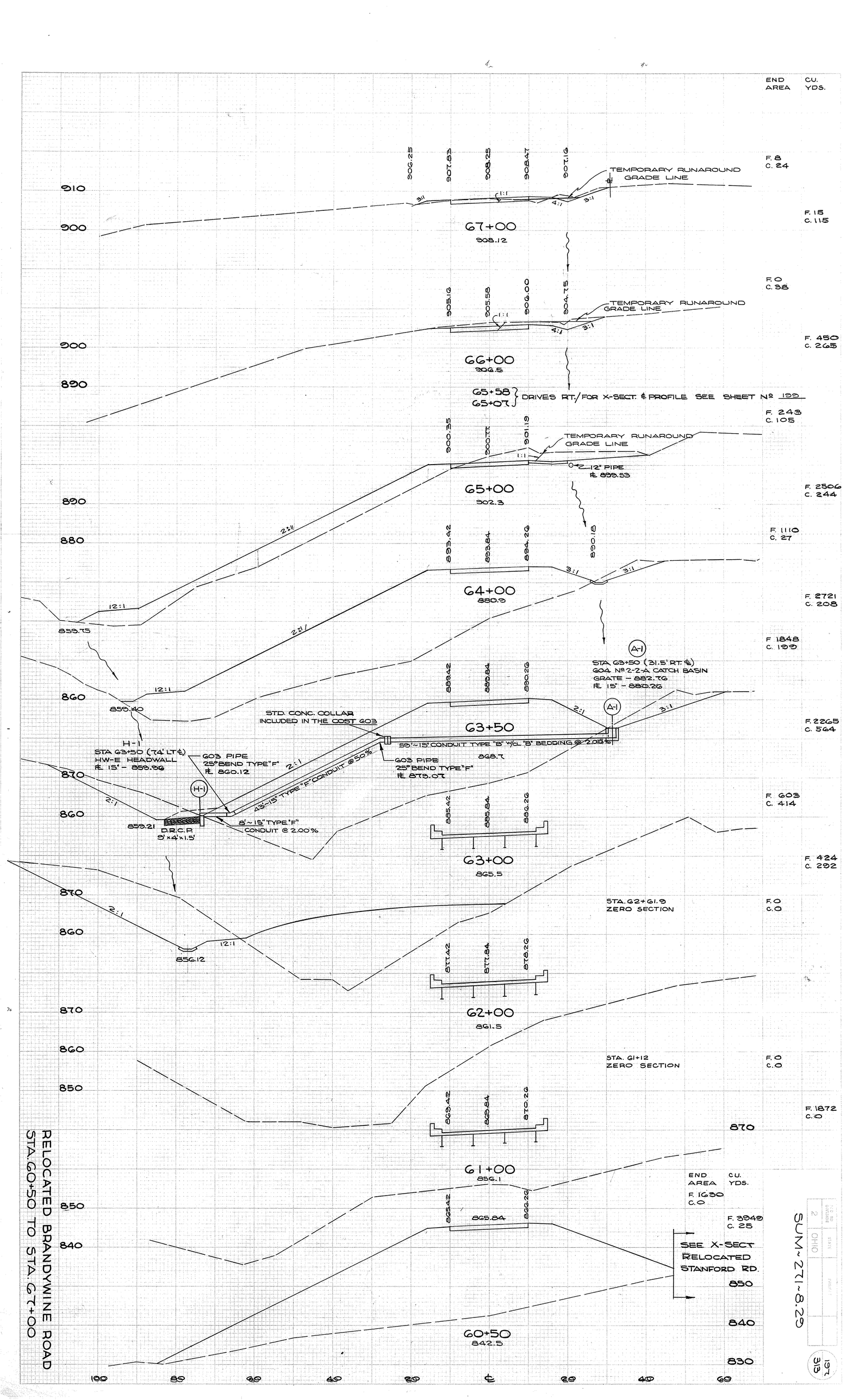
ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	304 VARI. DEPTH BASE CUTOS CU.YDS.	404 ASPH. CONC. 9.5M64 CU.YDS.	408 MEMB. PRIME ASSEM. 70-90 GAL.	604 MONU-MENTS BUILT EACH	901 D2.C.P. PAVED GUTTER TYPE 2 CU.YDS.	601 PAVED GUTTER CONC. TYPE 2 LIN.FT.	602 MASON-RY CU.YDS.	603 PIPE CULVERTS, STORM SEWERS & DRAINS TYPE 1 LIN.FT.	603 BENDS 22½° 45° BRANCHES EACH	603 15"	603 12" 14 GAGE
A-1	63+50	℄											
E-1	63+52 - 64+95	RT.											
E-2	63+50	LT.											
P-1	63+50	LT&RT.											
P-2	64+95 - 65+85	RT.											
R-1	63+31 - 66+06	LT.					2	148	0.26	51	59		
R-2	63+33 - 64+58	RT.											
R-3	60+00 - 60+35	LT.											
X-1	60+31.48-60+56.48	℄											
X-2	63+19.31-63+41.31	℄											
—	63+19.31 - 68+00	LT.											
D-1	65+07		25.6	10.3	73.8								
D-2	65+58		20.2	8.0	58.1								
TR-2	65+40 - 68+00	RT.				1							
MA-1	67+41.04	℄											
TOTALS			45.8	18.3	131.9	1	2	148	0.26	51	59		

604 CATCH BASIN 2-2-A	605 AGGRE-GATE	606 GUARD RAIL	611 REIN. CONC. APPROAD SLAB	615 TEMP. PAVT. LUMP SQ.YDS.	615 CL. 'B' PAVT. LUMP SQ.YDS.								
EACH	LIN. FT.	LIN. FT.	SQ.YDS.										
1		275			LUMP 221								
		125											
		95											
			85.5										
			55.5										
				100									
1		100	435	111	LUMP 221								

RELOCATED BRANDYWINE RD. C.H. 40


END CU. AREA YDS.
SEE X-SECT. RELOCATED STANFORD RD.
861.42
861.48
862.26
2:1
12:1
60+00
832.9
858.85 859.27 859.69
829.51
SEE X-SECT. RELOCATED STANFORD RD.
59+64.77
832.9
829.1
854.21
854.63
855.05
NOTE: STA. 59+13 ENDS BRIDGE EMBANKMENT
STA. 58+74 ZERO SECTION
827.66
WATER
59+00
TO CREEK STA. 58+74
STA. 58+45.5 ZERO SECTION
850.09
850.51
850.92
839.36
58+05.28
835.4
829.22
158+20 T.R.A.
848.53
848.97
849.37
841.65
836.25
840.84
57+50
840.4
157+68 T.R.A.
848.04
848.46
848.88
843.35
841.04
841.63
57+00
844.2
157+16 T.R.A. & AC. DR.
849.17
849.59
849.98
847.89
846.67
846.09
56+00
848.37
156+08 T.R.A.
851.76
852.28
852.92
852.03
849.62
848.35
55+25
852.17
155+25 T.R.A.
854.64
END CU. AREA YDS.
54+75
854.64
BEGIN WORK RELOC. BRANDYWINE RD.
858.56
54+00
858.56
BEGIN WORK T.R.A.
RELOCATED BRANDYWINE ROAD
STA. 54+00 TO STA 60+00
60 40 20 ℄ 20 40 60
F. 2662 C. 27
F. 1982 C. 28
F. 2198 C. 16
F. 2116 C. 42
F. 0 C. 27
F. 0 C. 23
F. 0 C. 67
F. 0 C. 32
F. 0 C. 0
F. 0 C. 0
F. 676 C. 2
F. 912 C. 2
F. 1290 C. 8
F. 355 C. 6
F. 437 C. 10
F. 174 C. 5
F. 393 C. 20
F. 38 C. 6
F. 68 C. 38
F. 11 C. 21
F. 27 C. 21
F. 15 C. 2
F. 14 C. 2
F. 0 C. 0
SUM-271-8.29
OHIO
2



RELOCATED BRANDYWINE ROAD
STA. 60+50 TO STA. 67+00

SUM-271-8.29

				2
			OHIO	

313
191

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

198
313

SUM~271~8.29

END WORK
69+00
907.06

68+50
MEET EXISTING
908.50

68+00
908.85

67+50
908.80

TEMPORARY RUNAROUND
GRADE LINE

907.14
908.58
908.85
908.43
908.68

907.36
908.73
908.79
908.37
908.79

1:5
3:1
1:5.2
4:1
1:5
3:1
1:1
4:1
1:5
3:1

END AREA CU. YDS
F. 0.0 C. 0.0
F. 0.0 C. 0.0
F. 2 C. 56
F. 4 C. 97

END AREA CU YDS.
F. 2 C. 41
F. 2 C. 44
F. 2 C. 63

910
900

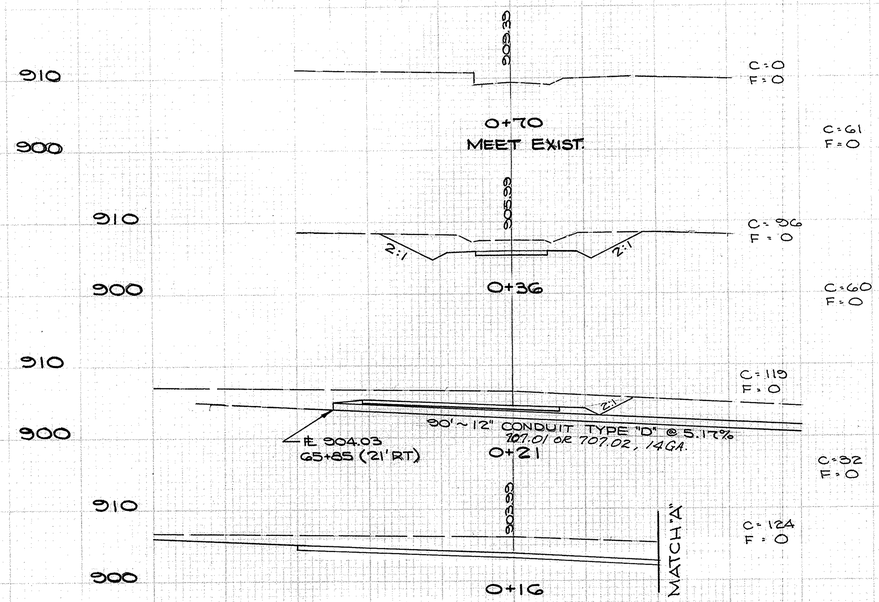
60
40
20
0
20
40
60

RELOCATED BRANDYWINE ROAD
STA. 67+50 TO STA. 69+00

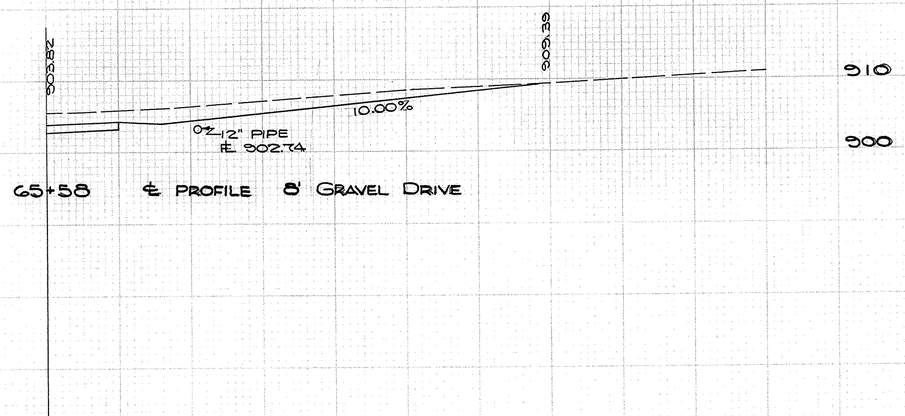
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

199
313

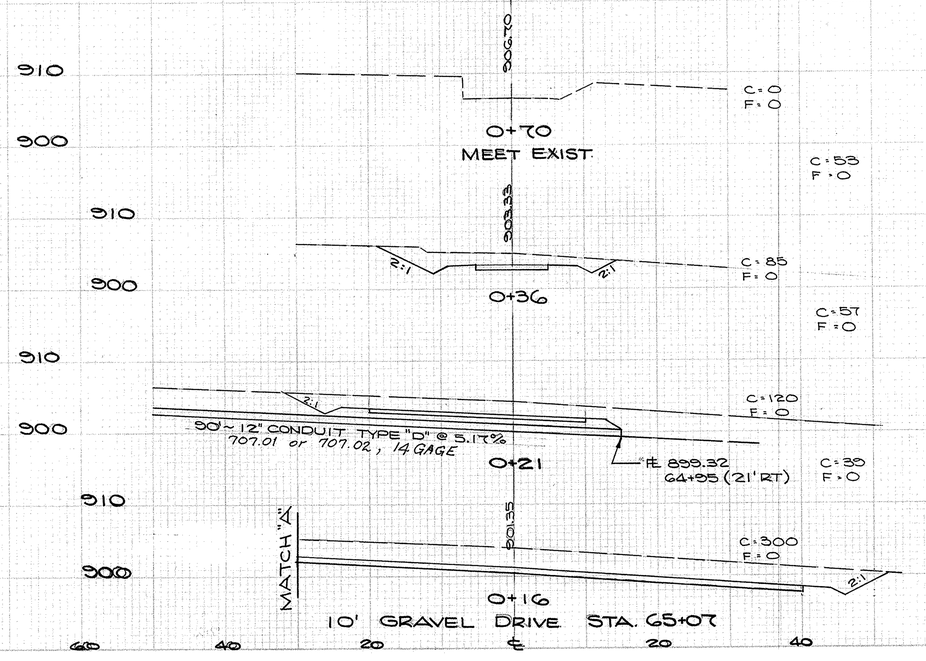
SUM-271-8.29



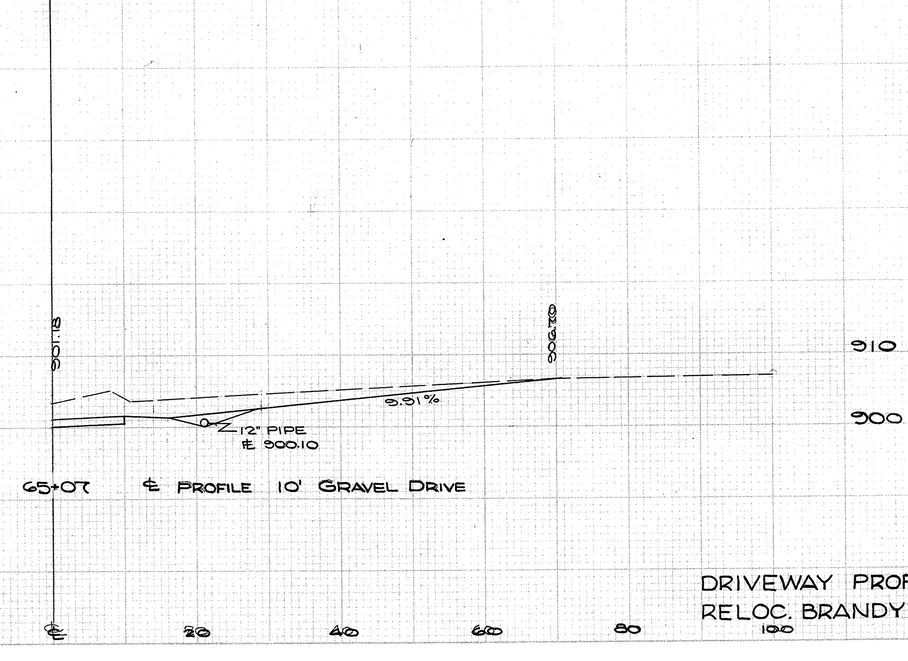
8' GRAVEL DRIVE STA. 65+58



65+58 ℄ PROFILE 8' GRAVEL DRIVE

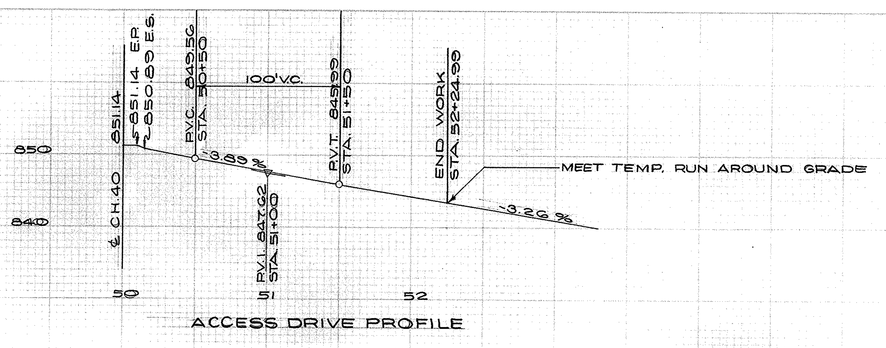


10' GRAVEL DRIVE STA. 65+07



65+07 ℄ PROFILE 10' GRAVEL DRIVE

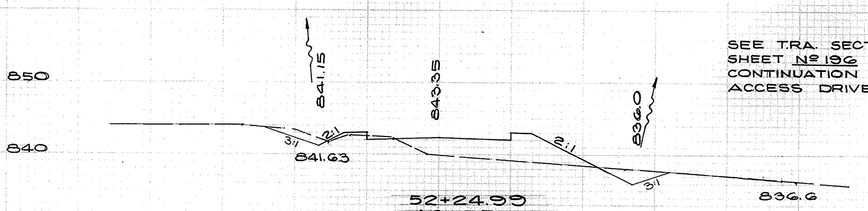
DRIVEWAY PROFILE & X-SECTIONS
RELOC. BRANDYWINE RD. (C.H. 40)



ACCESS DRIVE PROFILE

END AREA CU. YDS.

SEE T.R.A. SECTION SHEET Nº 196 FOR CONTINUATION OF ACCESS DRIVE.

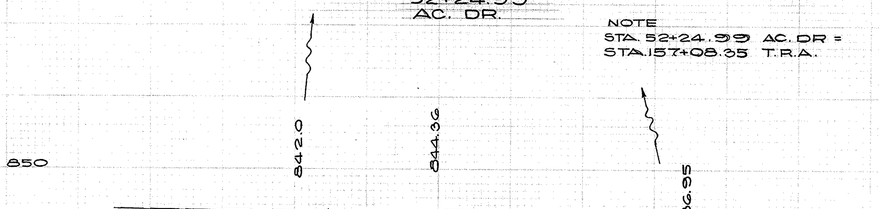


52+24.99
AC. DR.

F. 70
C. 19

NOTE
STA. 52+24.99 AC. DR. =
STA. 157+08.35 T.R.A.

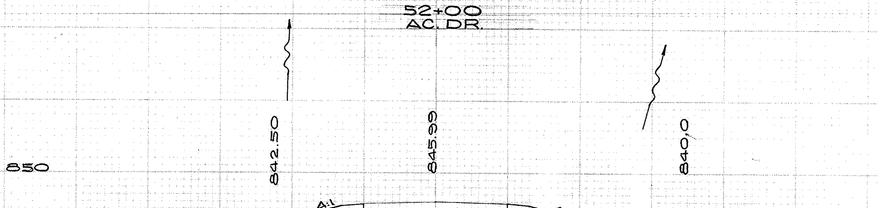
F. 146
C. 28



52+00
AC. DR.

F. 89
C. 11

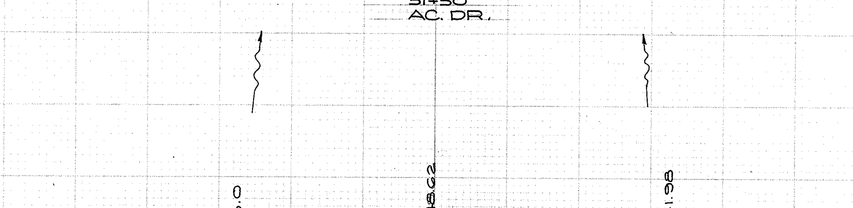
F. 118
C. 53



51+50
AC. DR.

F. 39
C. 47

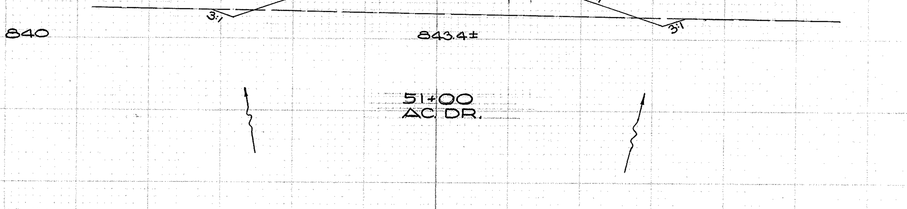
F. 187
C. 49



51+00
AC. DR.

F. 164
C. 6

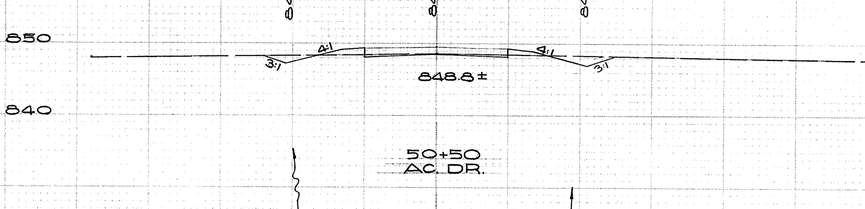
F. 157
C. 17



50+50
AC. DR.

F. 7
C. 12

F. 4
C. 89



50+34.38
AC. DR.

END AREA CU. YDS.

F. 0
C. 129

ACCESS DRIVE
STA. 50+34.38 TO STA 52+24.99

SUM-271-829

NO.	REVISIONS	BY	DATE
2			
1			

313 196A

40 20 0 20 40

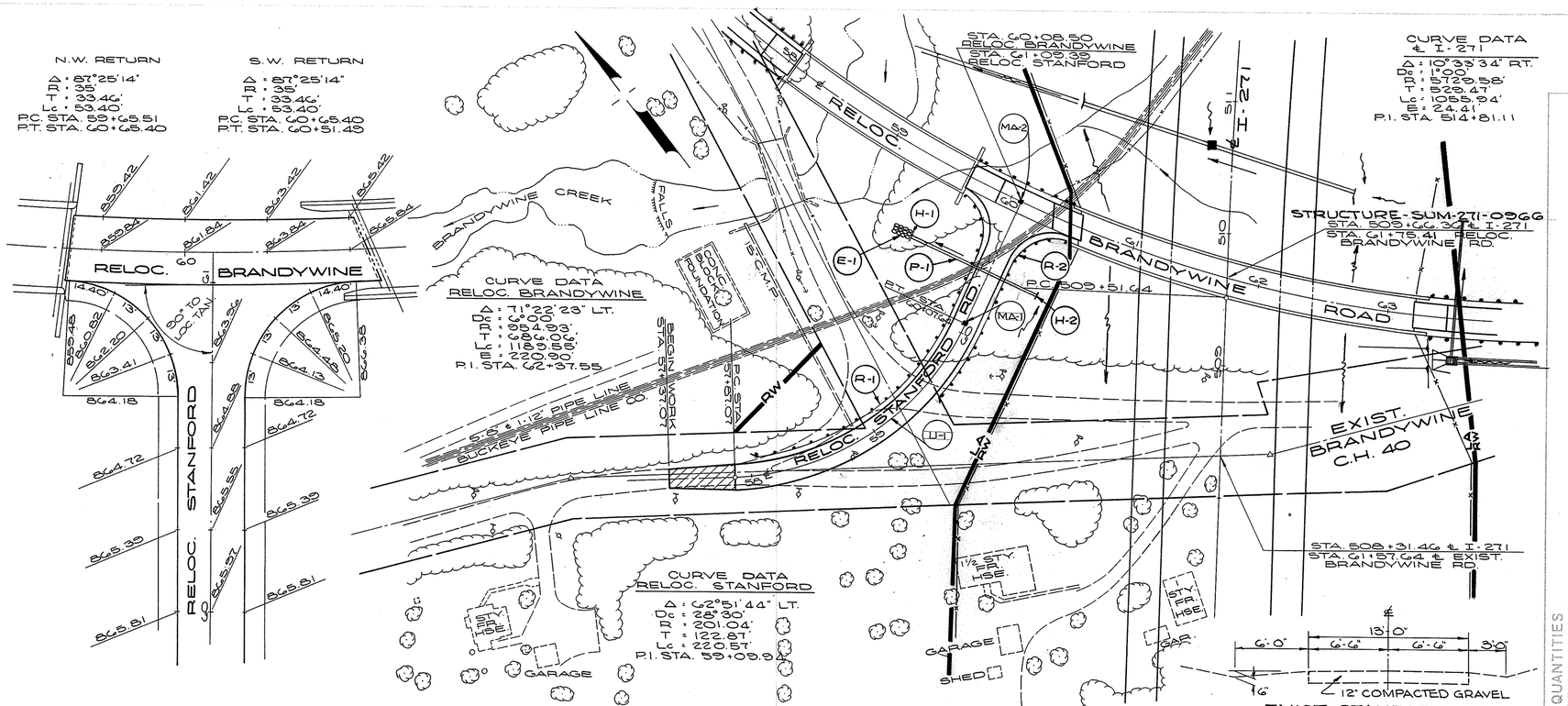
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

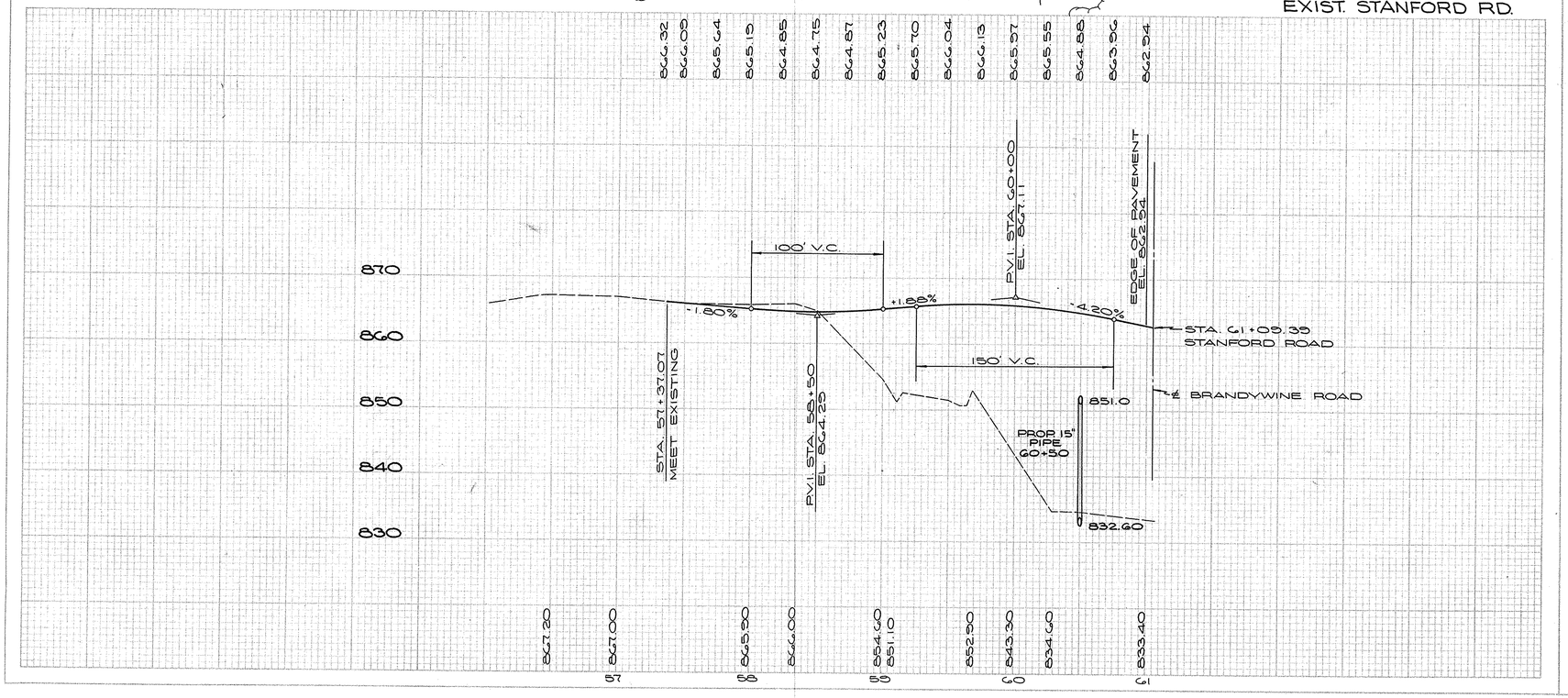
200
313

SUM-271-8.29

N.W. RETURN
Δ = 87°25'14"
R = 35'
T = 33.46'
Lc = 53.40'
P.C. STA. 59+65.51
P.T. STA. 60+65.40

S.W. RETURN
Δ = 87°25'14"
R = 35'
T = 33.46'
Lc = 53.40'
P.C. STA. 60+65.40
P.T. STA. 60+51.49



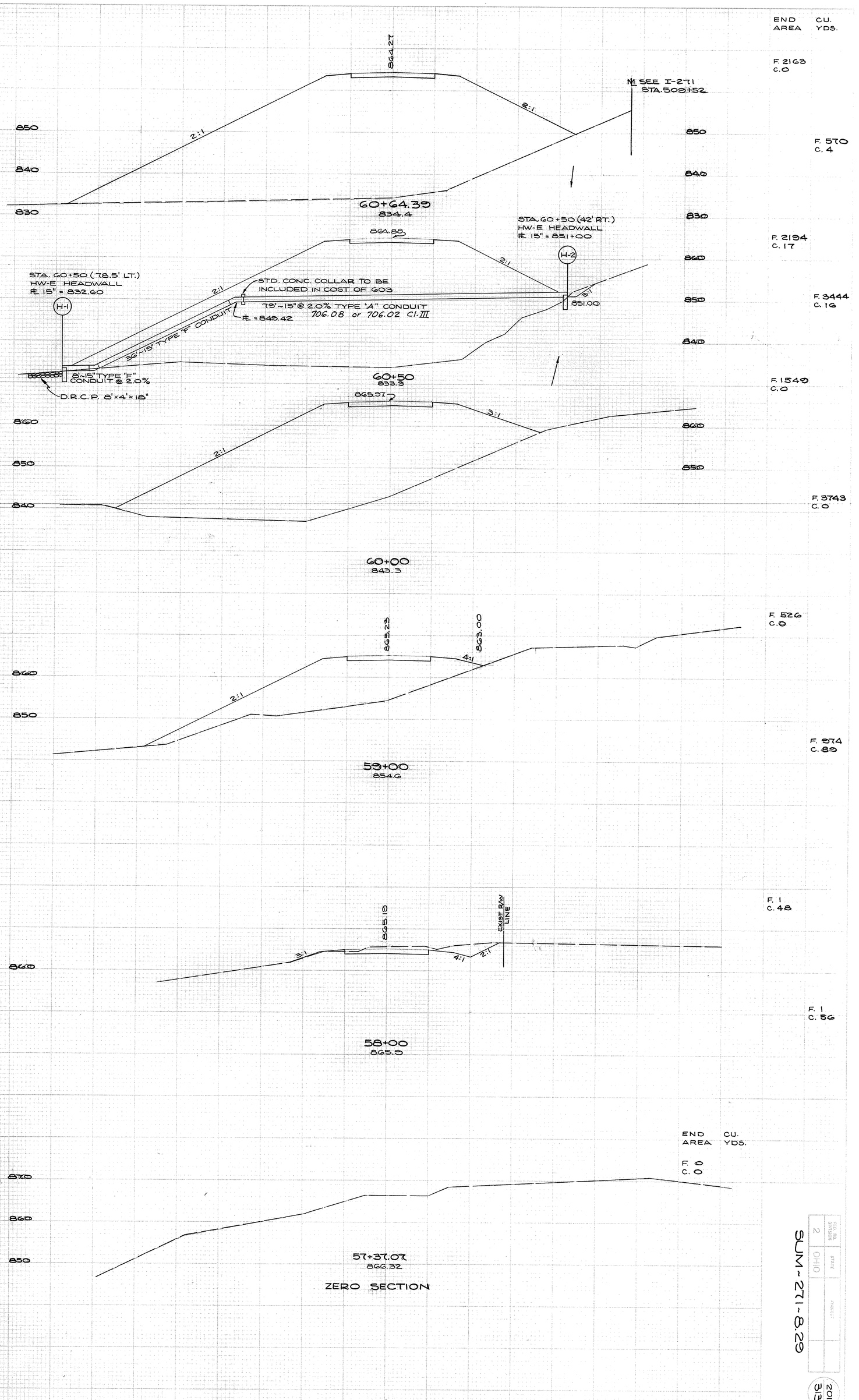


ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	602 CONC. MASONRY CU. YD.	601 DRESSED ROCK MASONRY CU. YD.	605 DRAINAGE AS PER ASSEMBLY PLANS LIN. FT.	604 MONUMENT EACH	603 CONDUIT TYPE A w/ B End TYPE "F" 104.08, 104.02 LIN. FT. 15"	606 GUARD RAIL TYPE 4 LIN. FT.
R-1	58+00 ~ BRIDGE	LT.						310
R-2	59+50 ~ BRIDGE	RT.						162.5
P-1	H-1 ~ H-2	℄					79	
E-1	60+50 (78.5' LT. ℄)	LT.		5.3				
H-1	60+50 (78.5' LT. ℄)	LT.			0.26			
H-2	60+50 (42.0' RT. ℄)	RT.			0.26			
MA-1	60+07.64	℄				1		
MA-2	61+05.39	℄				1		
U-1	57+87.07 TO 59+98.50	LT.			70			
TOTALS			472.5	0.52	5.3	70	2	79

44
44

RELOCATED STANFORD RD. C.H. 38



RELOC. STANFORD RD. T.R. 38
STA. 57+37.07 TO STA. 60+64.39

SUM-271-8.29

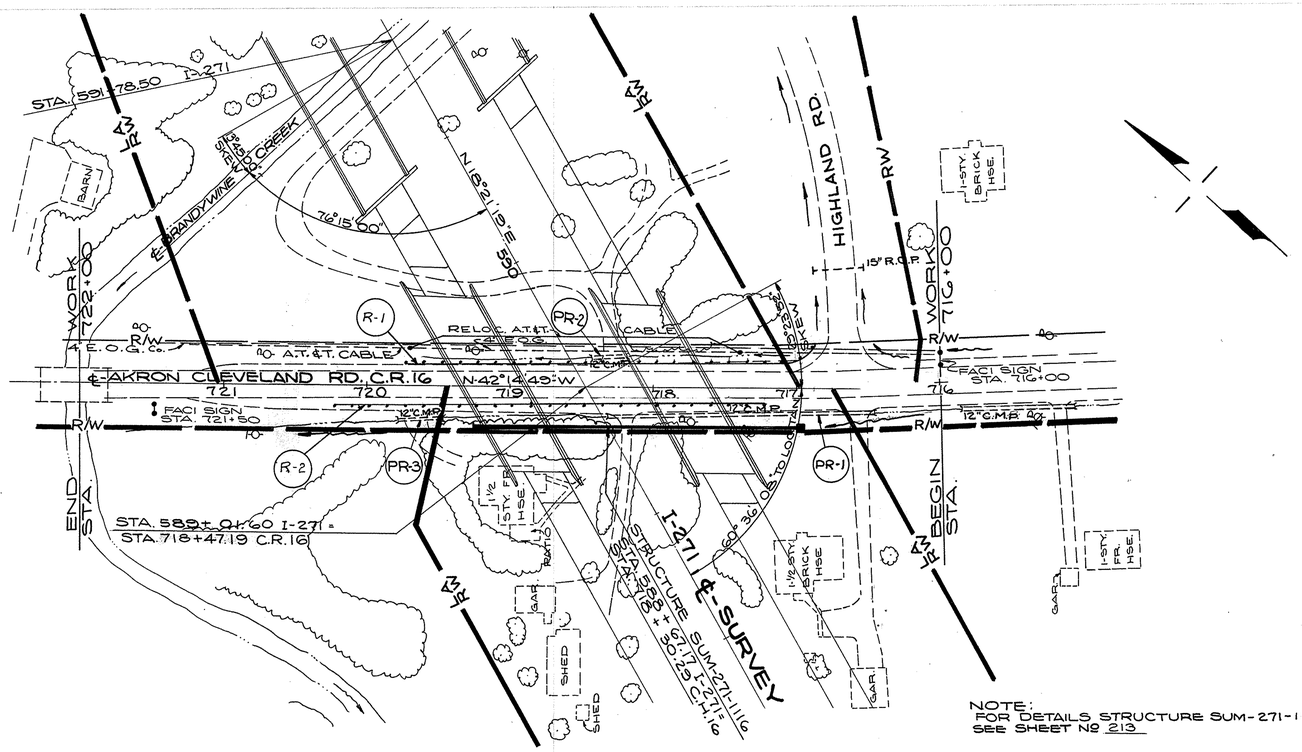
		OHIO	2
		STATE	SHEET NO.

313 201

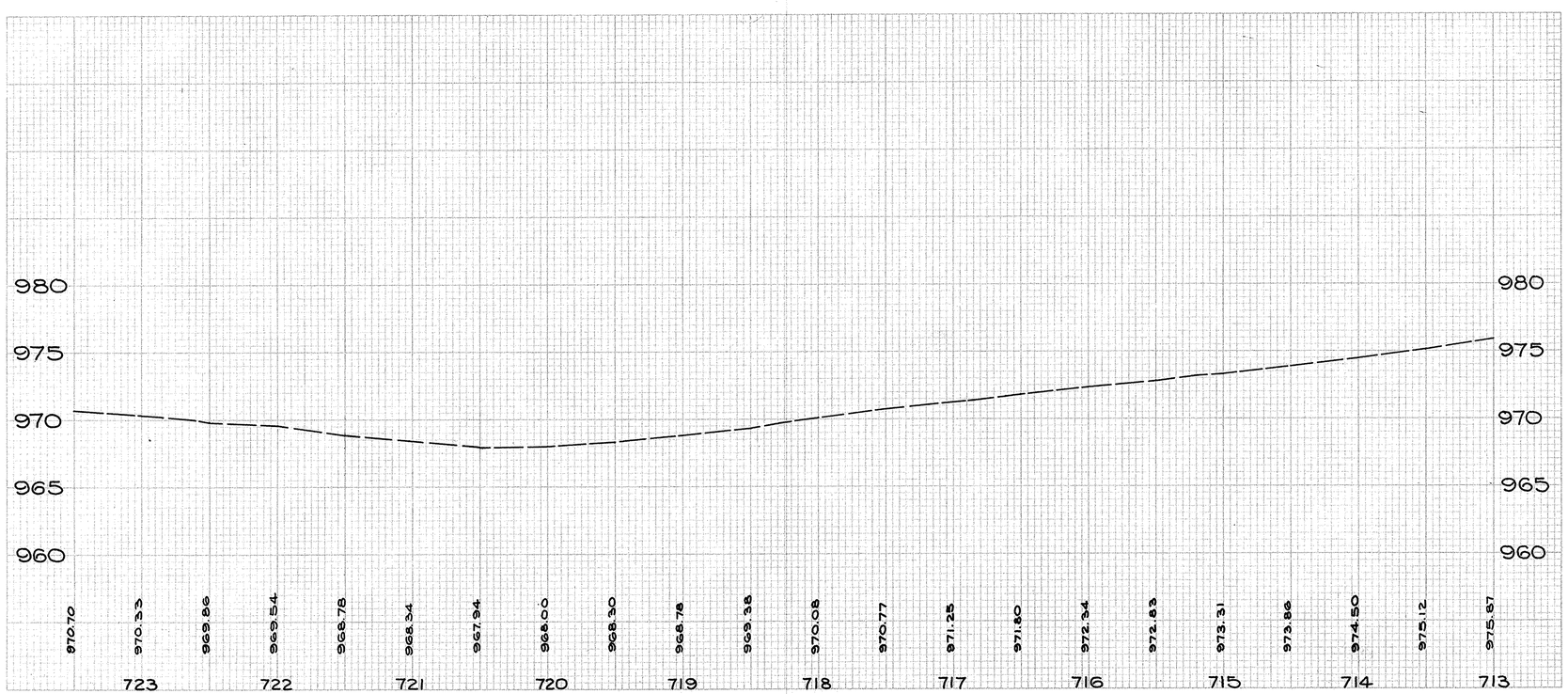
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271	

SUM-271-8.29

202
313



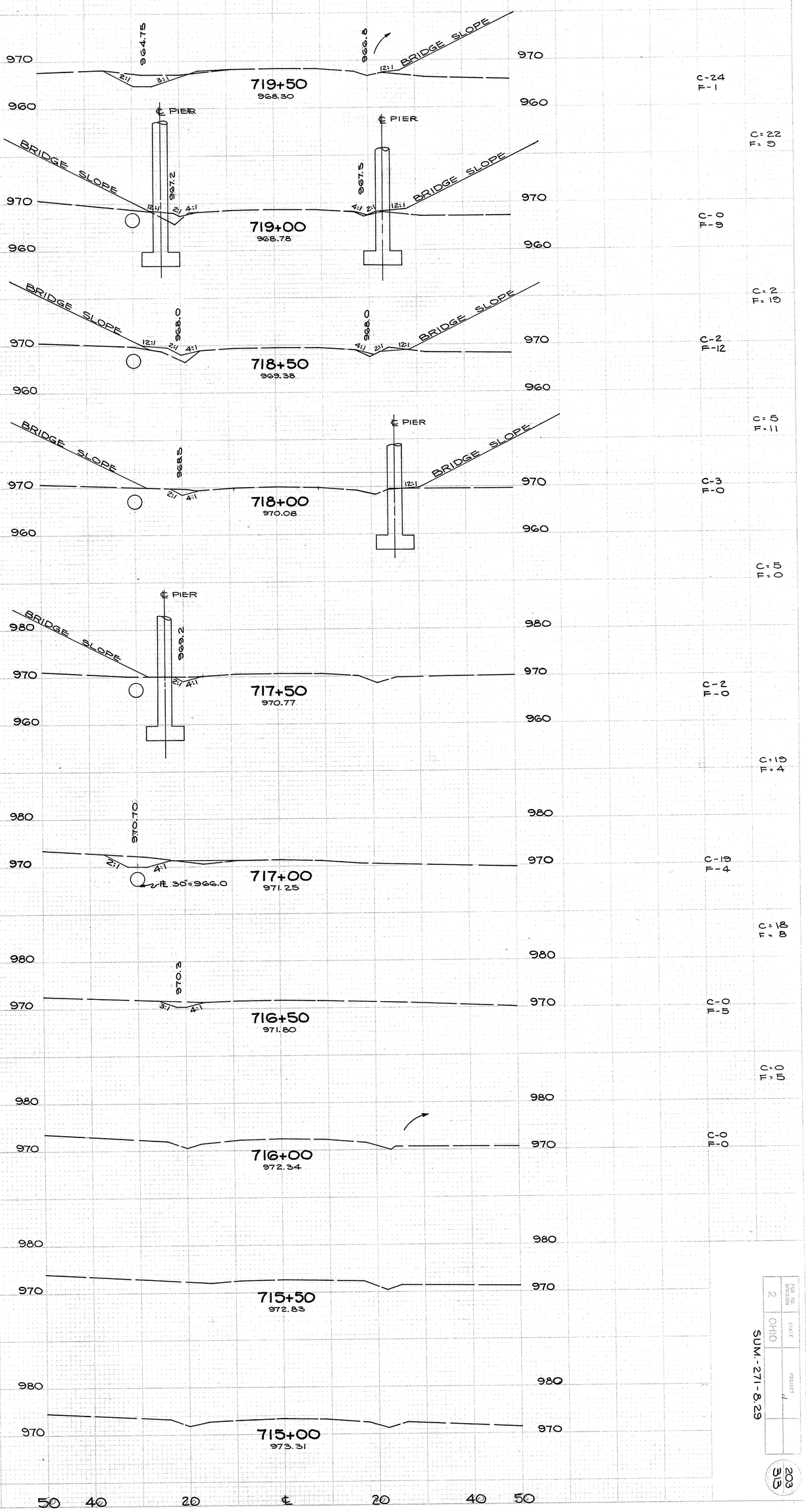
NOTE:
FOR DETAILS STRUCTURE SUM-271-1116
SEE SHEET Nº 213



ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	202 PIPE REMOVED 15" & UNDER LIN.FT.	606 GUARD RAIL TYPE 4 LIN.FT.
PR-1	715+45	LT.	178	
PR-2	717+18	RT.	25	
PR-3	719+45	LT	35	
R-1	716+88	Rt.		287.5
R-2	717+22	Lt		300
TOTALS			238	587.5

AKRON CLEVELAND RD. C.R. 16



C-24 F-1

C=22 F=9

C-0 F-9

C=2 F=19

C-2 F-12

C=5 F=11

C-3 F-0

C=5 F=0

C-2 F-0

C=19 F=4

C-19 F-4

C=18 F=8

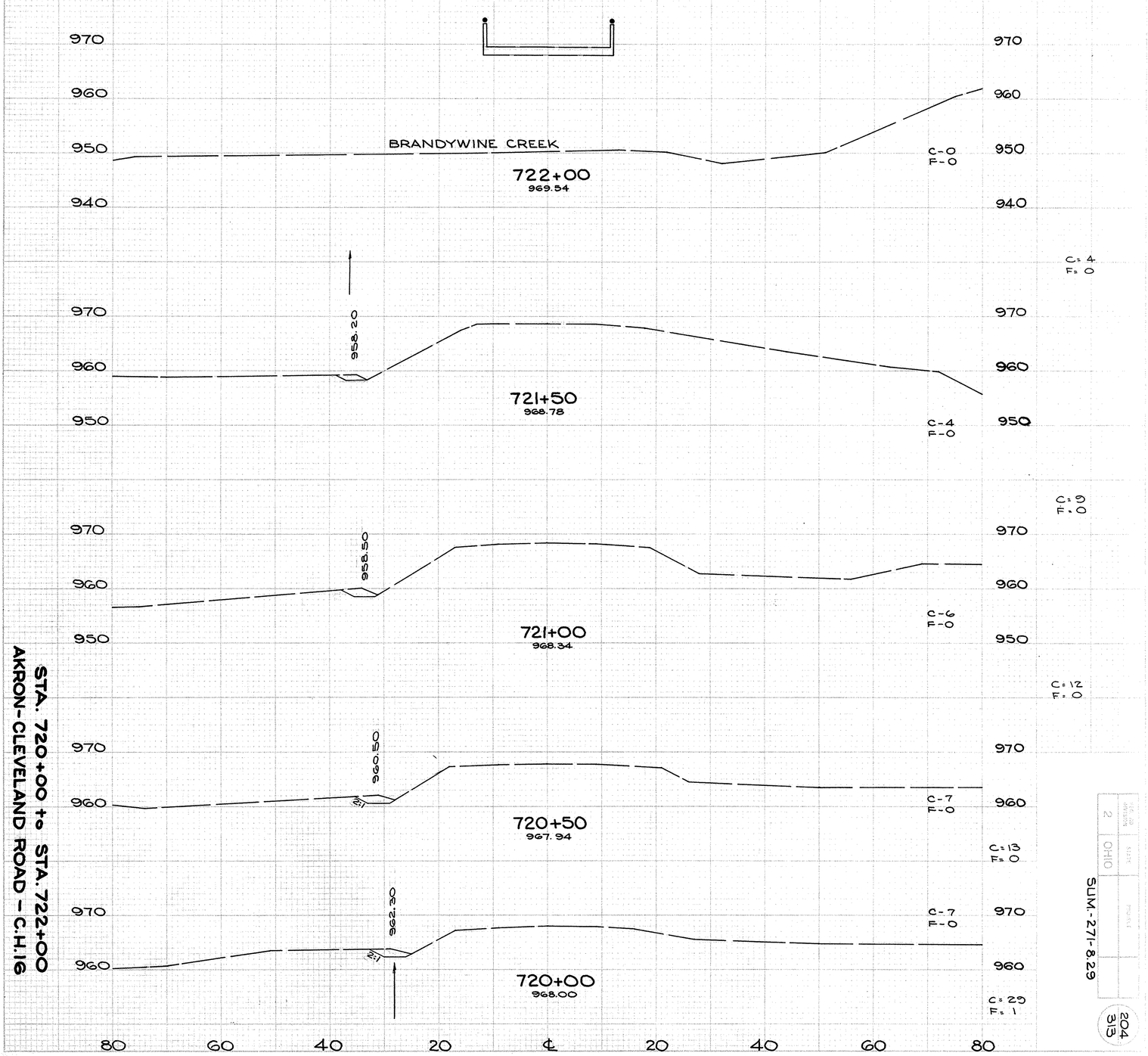
C-0 F-5

C=0 F=5

C-0 F-0

STA. 715+00 to STA. 719+50
AKRON - CLEVELAND RD. - CR.16

FED. ROAD DIVISION	STATE	PROJECT
2	OHIO	SUM-271-8.29



STA. 720+00 to STA. 722+00
AKRON-CLEVELAND ROAD – C.H.16

SUM-271-8.29

OHIO

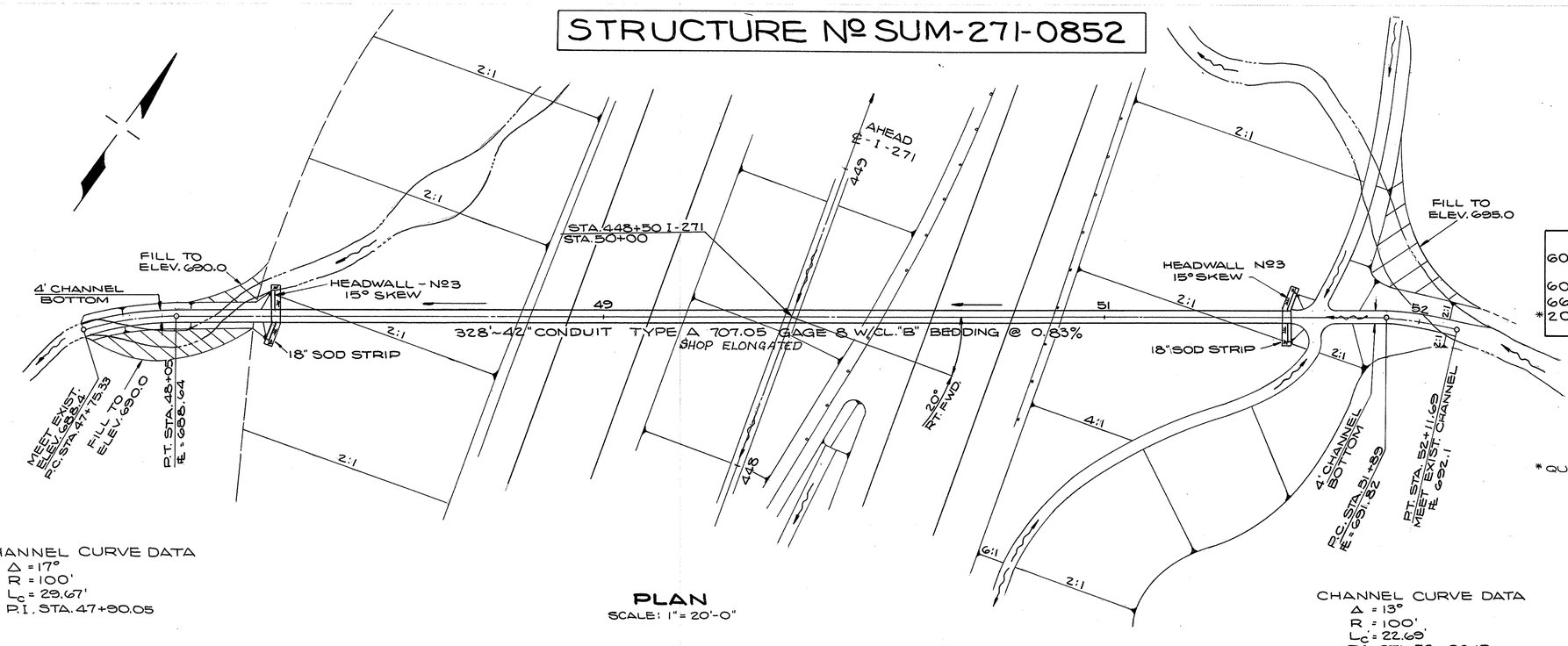
204
313

STRUCTURE Nº SUM-271-0852

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

SUM - 271 - 8.29

205
313



PLAN
SCALE: 1" = 20'-0"

CHANNEL CURVE DATA
Δ = 17°
R = 100'
L_c = 29.67'
P.I. STA. 47+90.05

CHANNEL CURVE DATA
Δ = 13°
R = 100'
L_c = 22.69
P.I. STA. 52+02.17

AREA	= 1.02 ACRES
Q_{50}	= 8.3 C.F.S.

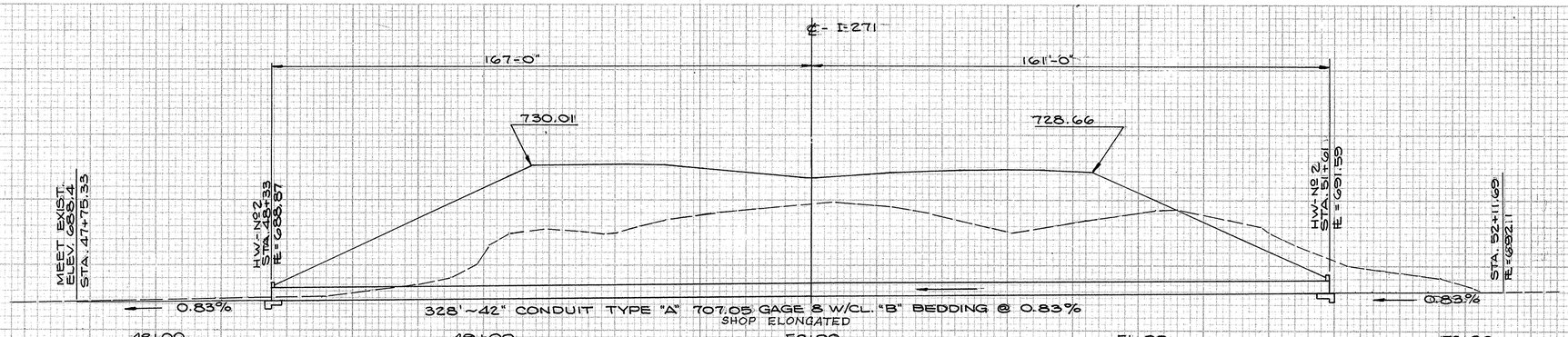
ESTIMATED QUANTITIES

603	42" CONDUIT - TYPE "A" 707.05 GAGE & W/CL. "B" BEDDING	= 328 LIN. FT.
602	CONCRETE MASONRY	= 14.6 CU. YDS.
660	SODDING	= 6 SQ. YDS.
*203	EXCAVATION INCL. EMBANKMENT CONSTRUCTION	= 266 CU. YDS.

CULVERT DATA

TYPE - 603 CONDUIT TYPE A - 707.05 GAGE & W/CL. "B" BEDDING, SHOP ELONGATED
SIZE - 42" x 328'
SKEW - 20° RT. F'WD.
WORK REQ'D. - BUILD NEW 42" DIA. 603 PIPE CULVERT AS SHOWN

*QUANTITY INCLUDED IN EARTHWORK TABULATION



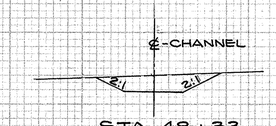
PROFILE
SCALE: 1" = 20'-0"

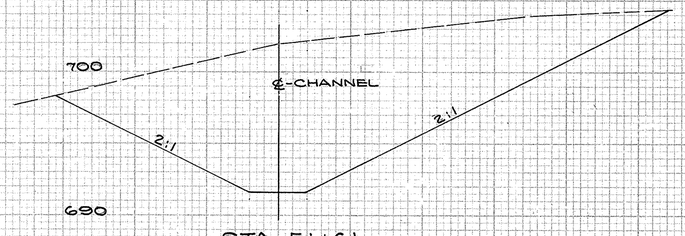
ITEM 203 ~ EXCAV.

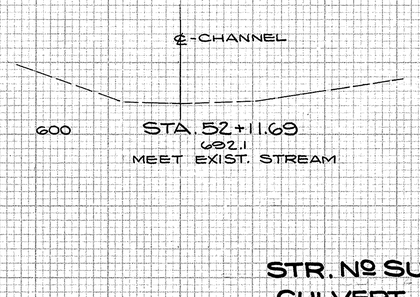
STA.	ENDAREA	CU. YDS.
47+75.33	0	
		8
48+33	7	
51+61	240	
		258
52+25.64	0	
TOTAL		266

CHANNEL SECTIONS
SCALE: 1" = 5'-0"









STR. Nº SUM-271-0852
CULVERT DETAILS
STA. 448+50 I-271

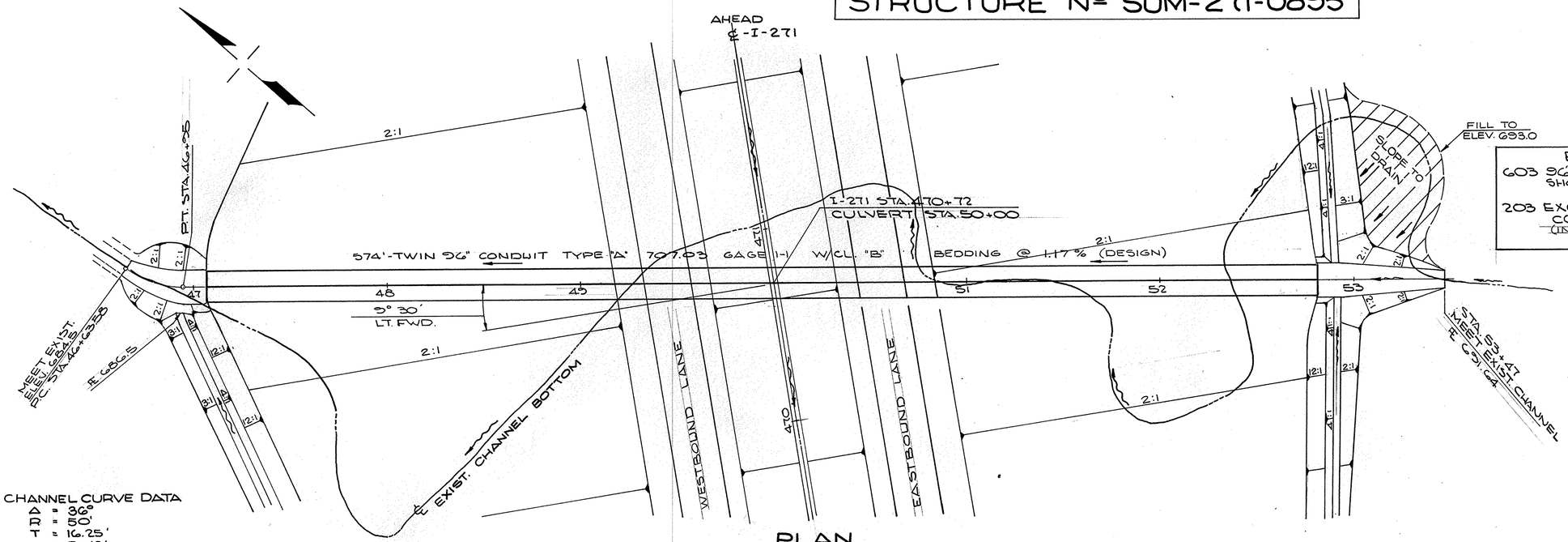
PLATE 4 CROSS SECTION O. P. R. & R. E. STANDARD
EUGENE DIETZGEN CO. - CHICAGO

FED.RD. DIVISION	STATE	PROJECT	
2	OHIO		

SUM - 271 - 8.29

206
313

STRUCTURE Nº SUM-271-0895



PLAN
SCALE: 1"=30'-0"

ESTIMATED QUANTITIES

603 96" TWIN CONDUIT TYPE "A" 707.03 GAGE 1-1 SHOPELONGATED ⊗ OR FIELD STRUTTED ⊗ W/CL "B" BEDDING = 1148' LIN. FT.

203 EXCAVATION INCL. EMBANKMENT* CONSTRUCTION = 235 CU. YDS.
(INCLUDED IN EARTHWORK QUANTITIES)

CULVERT DATA

TYPE - 603 CONDUIT TYPE "A" 707.03 GAGE 1-1 SHOPELONGATED ⊗ OR FIELD STRUTTED PER MANUFACTURES SPECIFICATIONS.
SIZE - 96" TWIN x 574'
SKEW - 10° LT. FWD
WORK REQ'D - BUILD NEW 96" DIA. 603 TWIN PIPE CULVERT AS SHOWN.

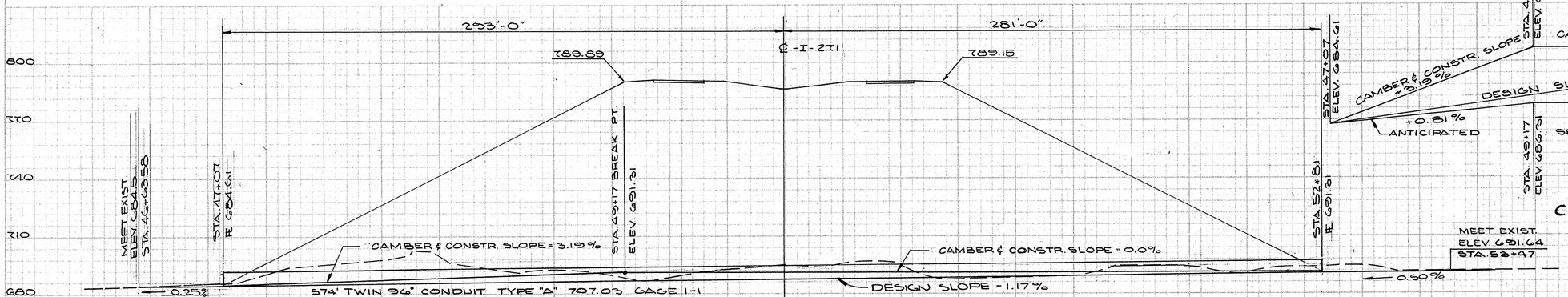
AREA	= 1174 ACRES
Q_{50}	= 712 C.F.S.

*QUANTITY INCLUDED IN EARTHWORK TABULATION

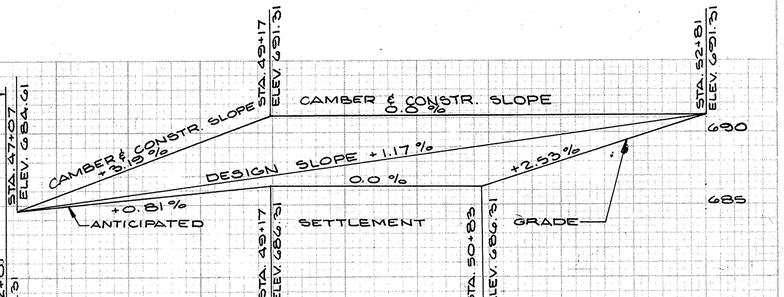
⊗ See note on std. drawing SP-53 for shop elongation, field strutting, and extra bolts.

CHANNEL CURVE DATA

Δ = 36°
D = 50'
T = 16.25'
L_c = 31.42'
P.I. STA. 46+79.83



PROFILE
SCALE: 1"=30'-0"

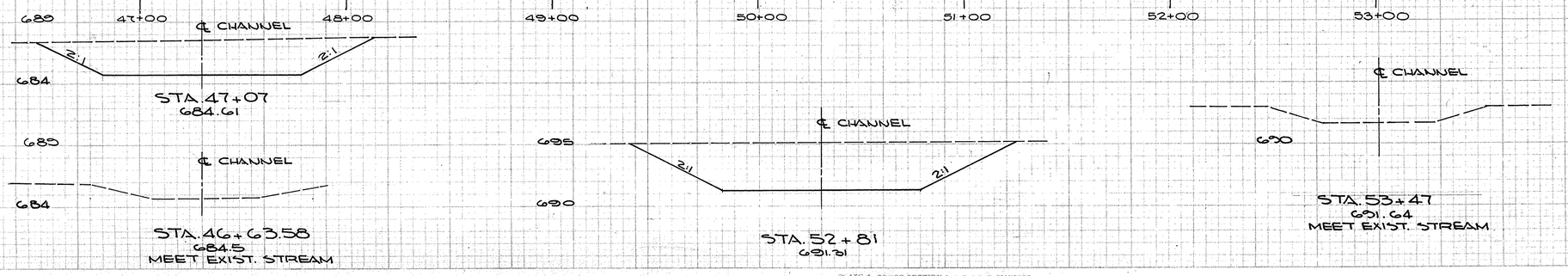


CAMBER DIAGRAM

ITEM 203 ~ EXCAV.

STA.	END AREA	CU. YDS.
46+63.58	0	
47+07	51	94
52+81	76	141
53+47	0	
TOTAL	127	235

CHANNEL SECTIONS



STR. Nº SUM-271-0895
CULVERT DETAILS
STA. 470+72 I-271

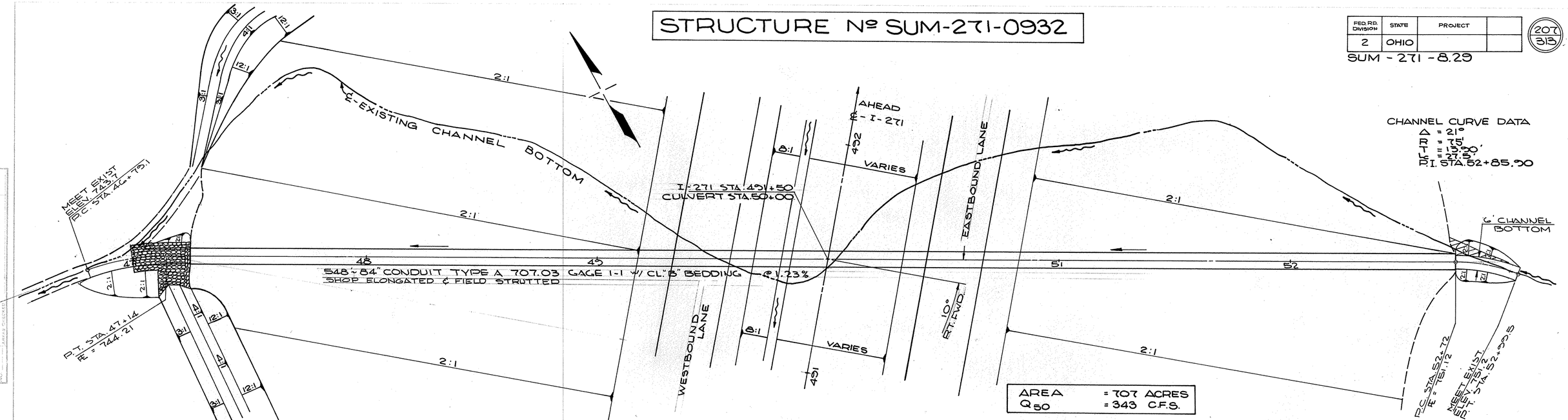
PLATE A - CROSS SECTION O. P. R. & P. L. STANDARD
NATIONAL TRACING PAPER DIVISION

STRUCTURE Nº SUM-271-0932

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

SUM - 271 - 8.29

207
315



PLAN
SCALE: 1" = 20'-0"

CHANNEL CURVE DATA
Δ = 20°
R = 100
T = 17.63'
L = 34.9
P.I. STA. 46+96.73

AREA	= 707 ACRES
Q_{50}	= 343 C.F.S.

ESTIMATED QUANTITIES

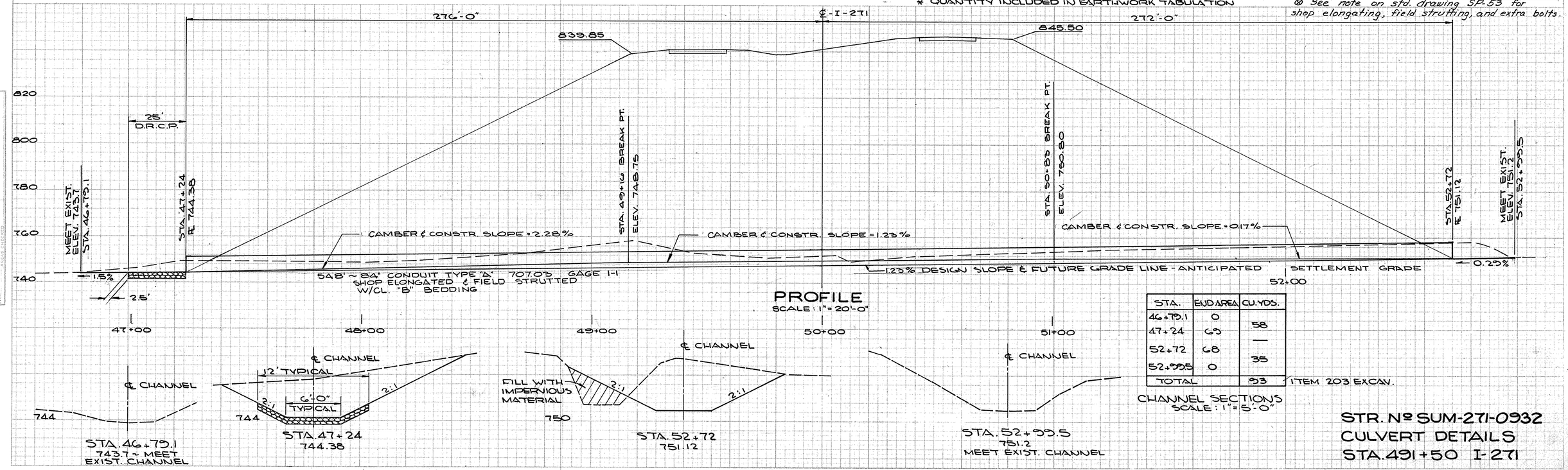
603	84" CONDUIT - TYPE "A" 707.03 GAGE 1-1 W/ CL "B" BEDDING - SHOP ELONGATED ⊗ FIELD STRUTTED	= 548 LIN. FT.
601	DUMP ROCK CHANNEL PROT.	= 38.8 CU. YDS.
* 203	EXCAVATION INCL. EMBANKMENT CONSTRUCTION	= 93 CU. YDS.

* QUANTITY INCLUDED IN EARTHWORK TABULATION

CULVERT DATA

TYPE - 603 CONDUIT TYPE A - 707.03 GAGE 1-1 SHOP ELONGATED & FIELD STRUTTED PER MFG. SPEC. ⊗
SIZE - 84" x 548'
SKEW - 10° RT. FWD
WORK REQ'D. - BUILD NEW 84" DIA. 603 PIPE CULVERT TO CAMBER AND CONSTR. SLOPE, AS SHOWN

⊗ See note on std. drawing SP-53 for shop elongating, field strutting, and extra bolts.



PROFILE
SCALE: 1" = 20'-0"

STA.	END AREA	CU. YDS.
46+79.1	0	58
47+24	69	—
52+72	68	35
52+99.5	0	
TOTAL		93 ITEM 203 EXCAV.

CHANNEL SECTIONS
SCALE: 1" = 5'-0"

STR. Nº SUM-271-0932
CULVERT DETAILS
STA. 491+50 I-271

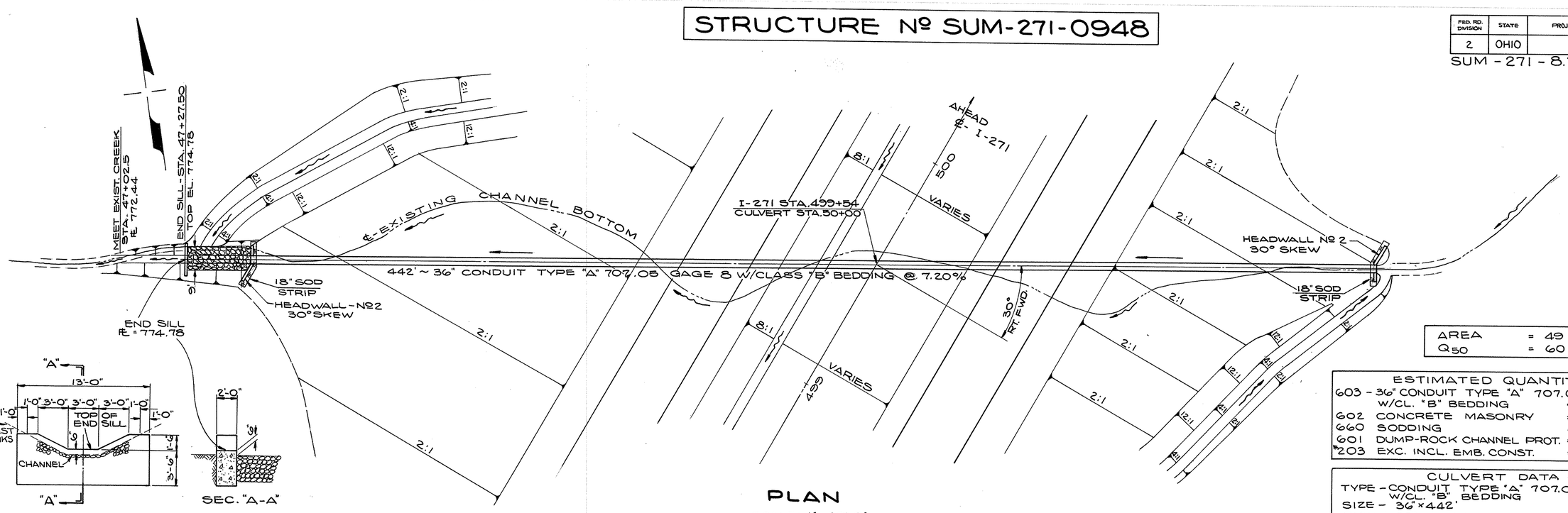
PLATE 4 - CROSS SECTION O. P. R. S. E. STANDARD
NATIONAL TRACING PAPER DIVISION
J. F. P. A. L. CO., INC. INDIANAPOLIS, INDIANA

STRUCTURE Nº SUM-271-0948

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

SUM - 271 - 8.29

208
318



PLAN

SCALE: 1" = 20'-0"

END SILL DETAIL

SCALE: 1" = 5'-0"

602 CONCRETE MASONRY = 4.2 CU. YDS.

AREA	=	49 ACRES
Q_{50}	=	60 C.F.S.

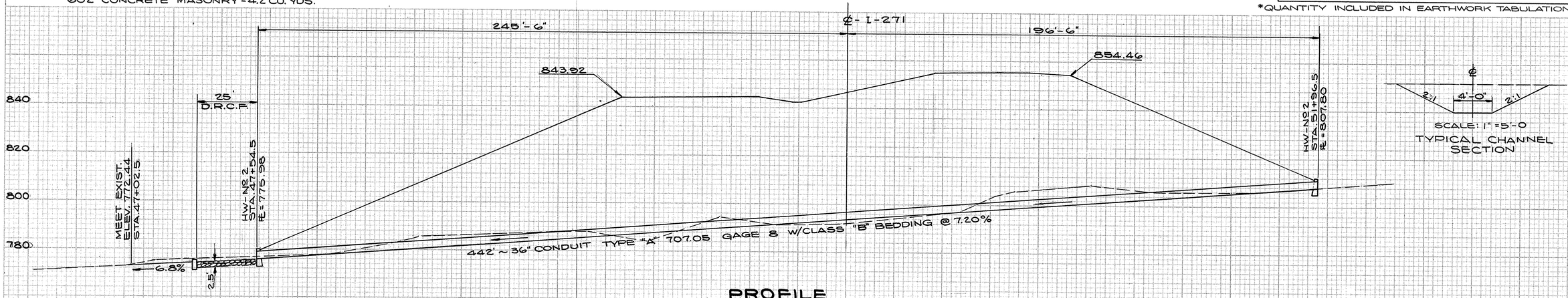
ESTIMATED QUANTITIES

603	36" CONDUIT TYPE "A" 707.05 GAGE 8 W/CL. "B" BEDDING	=	442 LIN. FT.
602	CONCRETE MASONRY	=	15.8 CU. YDS.
660	SODDING	=	7 SQ. YDS.
601	DUMP-ROCK CHANNEL PROT.	=	21 CU. YDS.
*203	EXC. INCL. EMB. CONST.	=	22 CU. YDS.

CULVERT DATA

TYPE - CONDUIT TYPE "A" 707.05 GAGE 8 W/CL. "B" BEDDING
SIZE - 36" × 442'
SKEW - 30° RT. FWD.
WORK REQ'D. - BUILD NEW 36" DIA. 603 PIPE CULVERT AS SHOWN

*QUANTITY INCLUDED IN EARTHWORK TABULATION



PROFILE

SCALE: 1" = 20'-0"

SCALE: 1" = 5'-0

TYPICAL CHANNEL SECTION

STR. Nº SUM-271-0948
CULVERT DETAILS
STA. 499+54 I-271

PLATE 4 CROSS SECTION O. P. B. & R. E. STANDARD
EUGENE DIETZGEN CO. - CHICAGO

STRUCTURE Nº SUM-271-0970

SUM.-271-8.29

FED. RD DIVISION	STATE	PROJECT	
2	OHIO		

205
313

ESTIMATED QUANTITIES

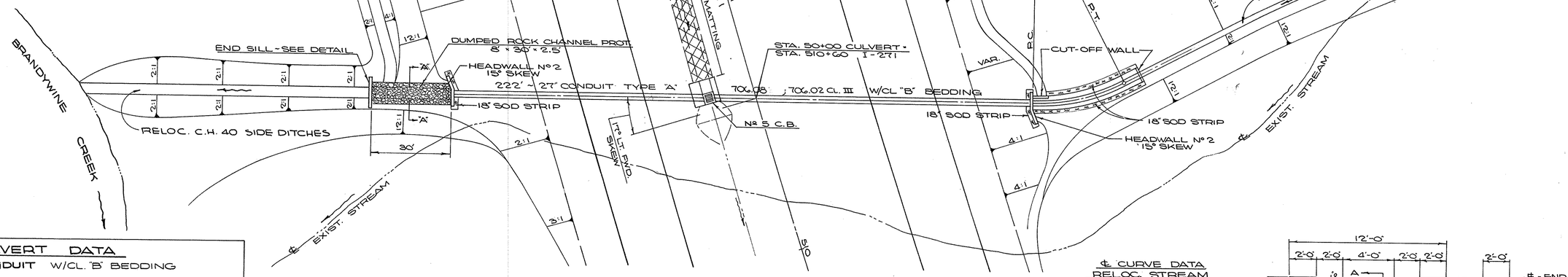
601	DUMPED ROCK CHANNEL PROT.	=	22.2 CU.YDS.
601	RIPRAP	=	28.7 SQ.YDS.
602	CONCRETE MASONRY	=	8.6 CU.YDS.
603	- 27" CONDUIT TYPE "A" 706.08 ; 706.02 CL.III W/CL "B" BEDDING	=	222 LIN. FT.
604	Nº 5 CATCH BASIN	=	1 EACH
660	SODDING	=	19.8 SQ.YDS.

CULVERT DATA

TYPE "A" CONDUIT W/CL. "B" BEDDING

SIZE = 27" DIA.
SKEW = 17° LT. FWD.
WORK REQ'D. - BUILD NEW 27" DIA. CONDUIT AND HEADWALLS AS SHOWN

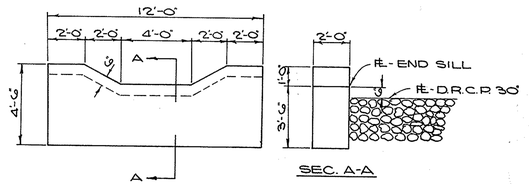
AREA	=	27 ACRES
Q50	=	30 C.F.S.



PLAN
SCALE 1" = 20'-0"

℄ CURVE DATA RELOC. STREAM

Δ = 27° 30'
R = 75'
T = 18.35'
L = 36.00'
P.C. STA. 51+06.00
P.T. STA. 51+42.00



END SILL DETAIL



SCALE: 1"=5'-0"
SECTION A-A

PROFILE
SCALE 1" = 20'-0"

STR. Nº SUM.-271-0970
CULVERT DETAILS
STA. 510+60 I-271

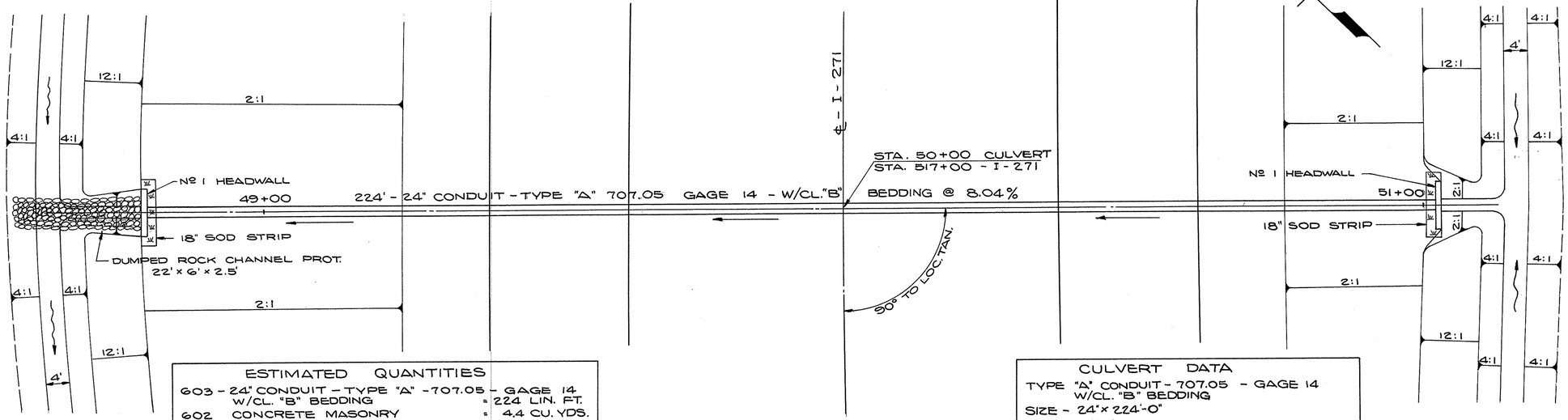
PLATE 4 - CROSS SECTION O. F. B. B. R. L. STANDARD
NATIONAL TRACING PAPER DIVISION

STRUCTURE Nº SUM-271-0982

FED. RD DIVISION	STATE	PROJECT	
2	OHIO		

210/313

SUM -271 -8.29



ESTIMATED QUANTITIES

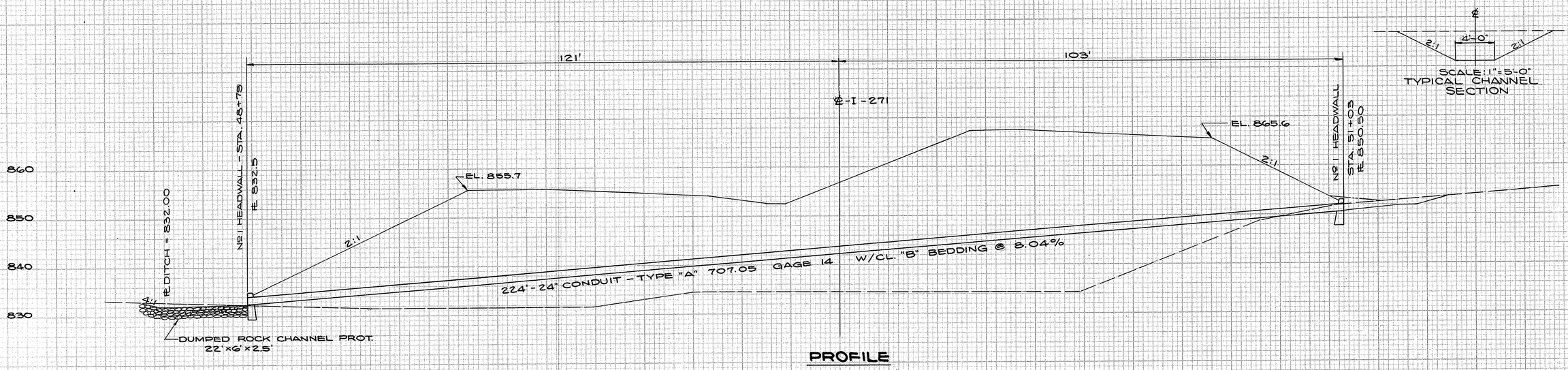
603	24" CONDUIT - TYPE "A" - 707.05 - GAGE 14 W/CL. "B" BEDDING	= 224 LIN. FT.
602	CONCRETE MASONRY	= 4.4 CU. YDS.
660	SODDING	= 4.0 SQ. YDS.
601	DUMPED ROCK CHANNEL PROT.	= 12.0 CU. YDS.

PLAN
SCALE: 1"=10'-0"

CULVERT DATA

TYPE "A" CONDUIT - 707.05 - GAGE 14
W/CL. "B" BEDDING
SIZE - 24" x 224'-0"
SKEW - NONE
WORK REQ'D. - BUILD NEW 24" DIA. CONDUIT AS SHOWN

AREA	=	18 ACRES
Q 50	=	18 C.F.S.



PROFILE
SCALE: 1"=10'-0"

SCALE: 1"=5'-0"
TYPICAL CHANNEL SECTION

STR. Nº SUM-271-0982
CULVERT DETAILS
STA. 517+00 I-271

PLATE 4-CROSS SECTION O. P. R. & R. E. STANDARD
EUGENE DIETZGEN CO. - CHICAGO

STRUCTURE Nº SUM-271-0994

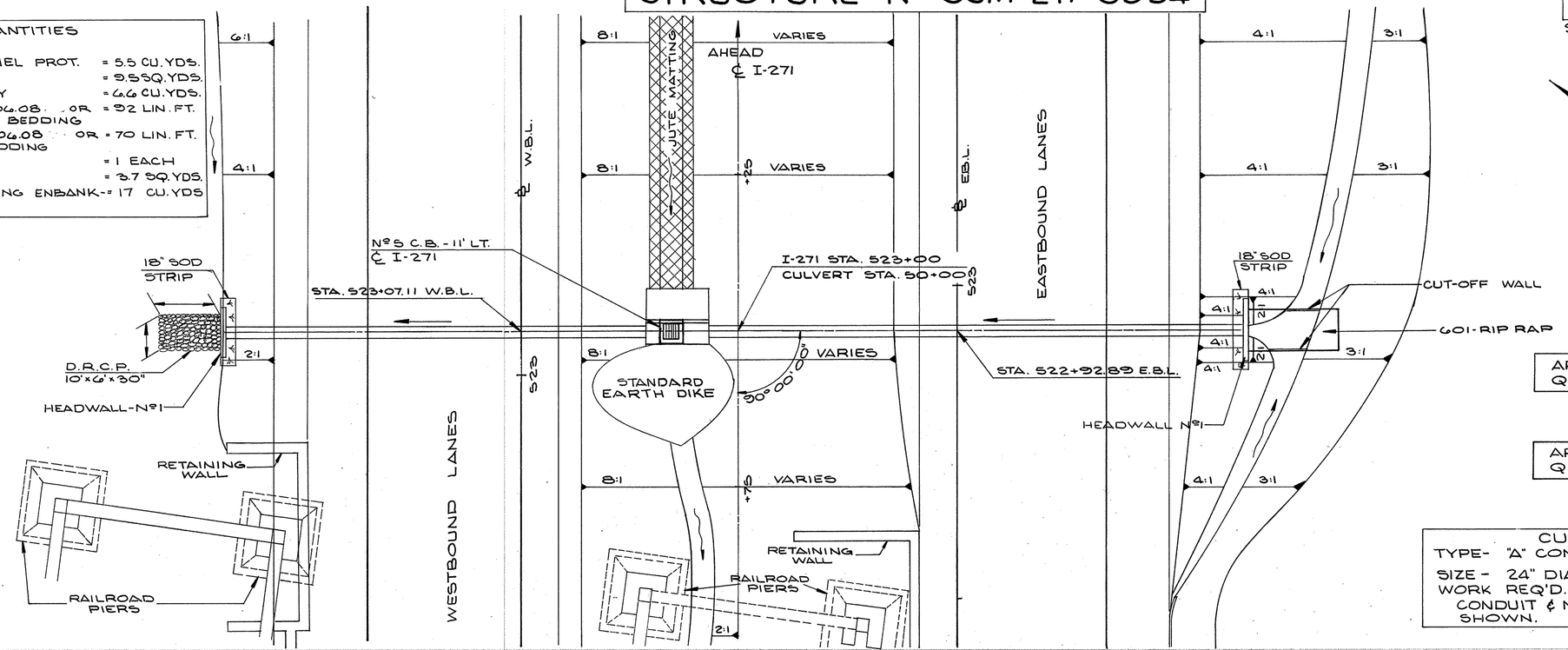
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

SUM - 271 - 8.29

210A 313

ESTIMATED QUANTITIES

601 - DUMPED ROCK CHANNEL PROT.	= 5.5 CU.YDS.
601 - RIP RAP	= 9.5SQ.YDS.
602 - CONCRETE MASONRY	= 6.6 CU.YDS.
603 - 24" CONDUIT TYPE "A" 706.08 OR 706.02 W/CL "B" BEDDING	= 92 LIN. FT.
603 - 24" CONDUIT TYPE "A" 706.08 OR 706.02 W/CL "B" BEDDING	= 70 LIN. FT.
604 - Nº 5 CATCH BASIN	= 1 EACH
660 - SODDING	= 3.7 SQ.YDS.
203 - EXCAVATION INCLUDING ENBANKMENT CONSTR.	= 17 CU.YDS



PLAN
SCALE: 1"=10'-0"

AREA (MEDIAN) = 10.5 ACRES
Q50 = 23 C.F.S.

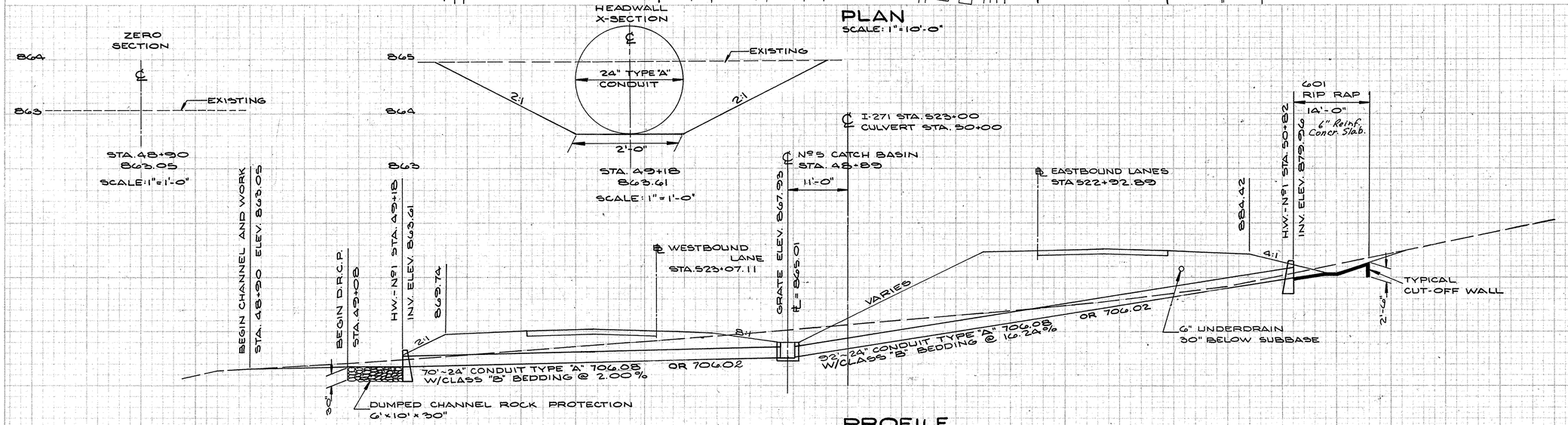
AREA (RIGHT) = 8 ACRES
Q50 = 18 C.F.S.

CULVERT DATA

TYPE- "A" CONDUIT

SIZE - 24" DIA.

WORK REQ'D. - BUILD NEW 24" DIA CONDUIT & Nº 5 CATCH BASIN, AS SHOWN.



PROFILE
SCALE: 1" = 10'-0"

STR. Nº SUM-271-0994
CULVERT DETAILS
STA. 523+00

PLATE 4 - CROSS SECTION O. P. R. & R. T. STANDARD
NATIONAL TRACING PAPER DIVISION
H. P. A. L. CO., INC. INDIANAPOLIS, INDIANA

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

SUM - 271 - 8.29

211
313

STRUCTURE Nº SUM-271-1014

ESTIMATED QUANTITIES

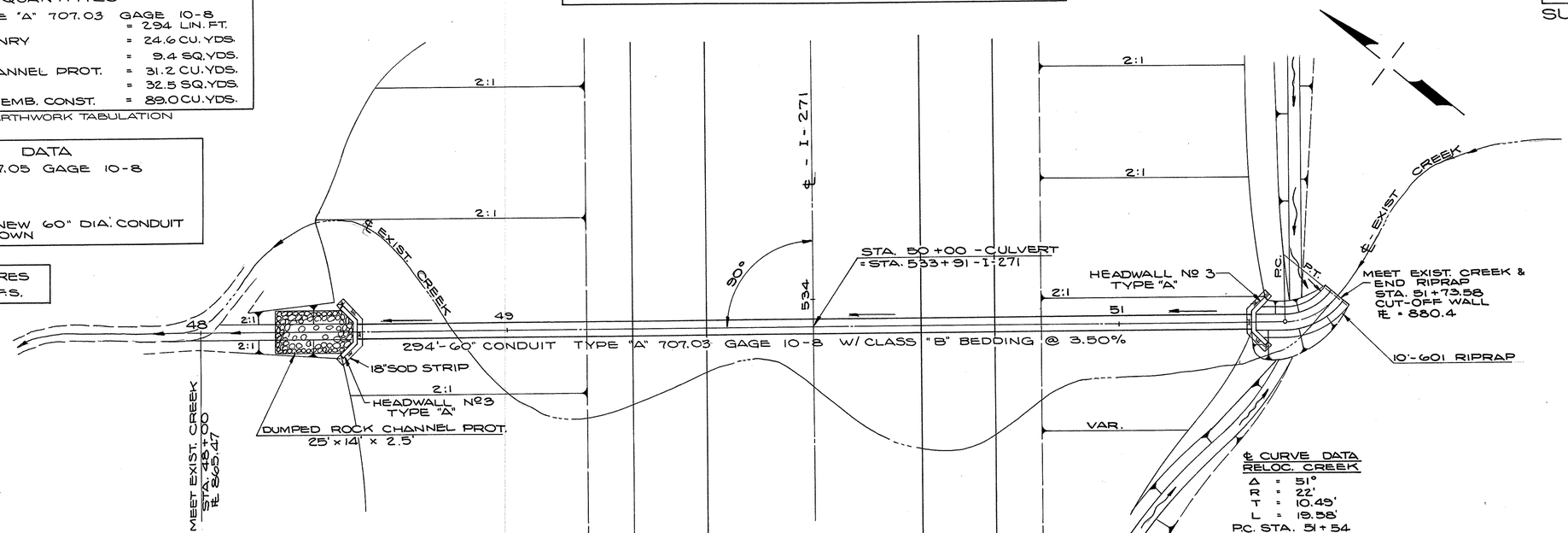
603	60" CONDUIT TYPE "A" 707.03 GAGE 10-8 W/CL. "B" BEDDING	=	294 LIN. FT.
602	CONCRETE MASONRY	=	24.6 CU. YDS.
660	SODDING	=	9.4 SQ. YDS.
601	DUMPED ROCK CHANNEL PROT.	=	31.2 CU. YDS.
601	RIPRAP	=	32.5 SQ. YDS.
*203	EXCAVATION INCL. EMB. CONST.	=	89.0 CU. YDS.

*QUANTITY INCLUDED IN EARTHWORK TABULATION

CULVERT DATA

TYPE "A" CONDUIT 707.05 GAGE 10-8
W/CL. "B" BEDDING
SIZE: 60" DIA.
SKEW: NONE
WORK REQ'D. - BUILD NEW 60" DIA. CONDUIT AS SHOWN

AREA	=	338 ACRES
Q_{50}	=	208 C.F.S.

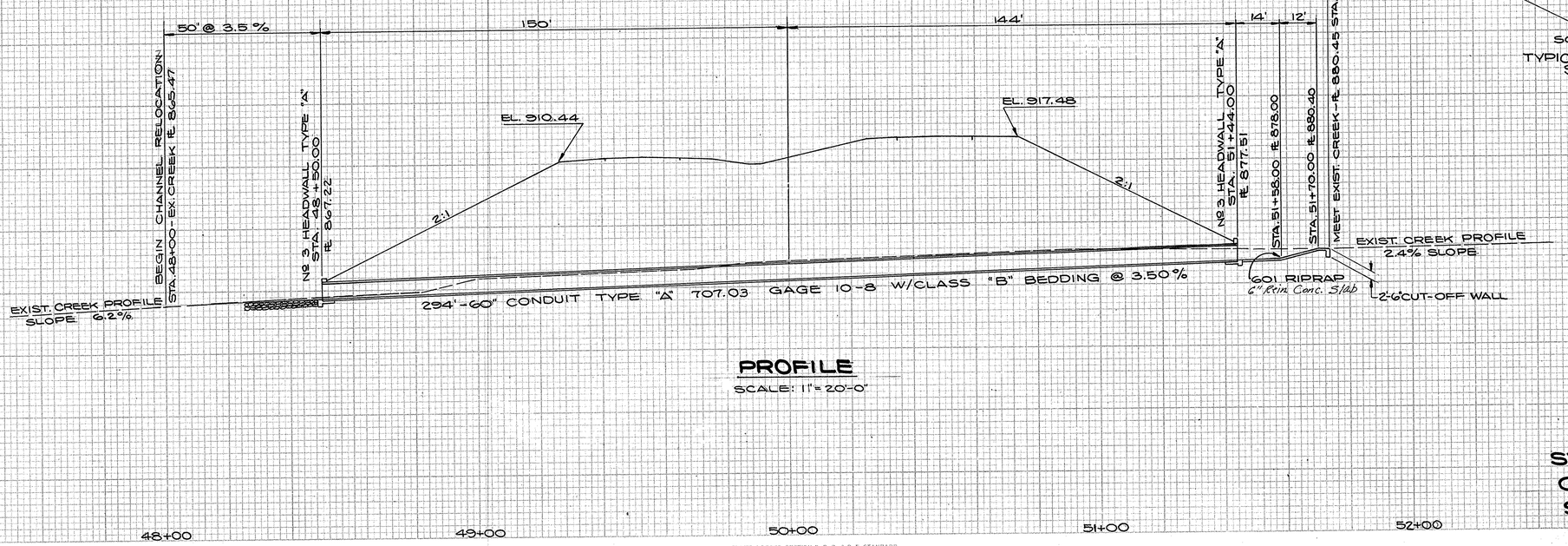


℄ CURVE DATA
RELOC. CREEK

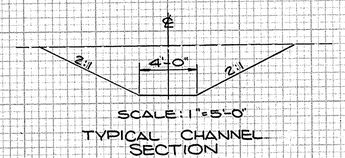
Δ	=	51°
R	=	22'
T	=	10.49'
L	=	19.58'

P.C. STA. 51+54
P.T. STA. 51+73.58

PLAN
SCALE: 1"=20'-0"



PROFILE
SCALE: 1"=20'-0"



SCALE: 1"=5'-0"
TYPICAL CHANNEL SECTION

STR. Nº SUM-271-1014
CULVERT DETAILS
STA. 533+91 I-271

PLATE 4-CROSS SECTION O. P. R. & R. E. STANDARD
EUGENE DIETZGEN CO. - CHICAGO

STRUCTURE Nº SUM-271-1080

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

212/313

SUM - 271 - 8.29

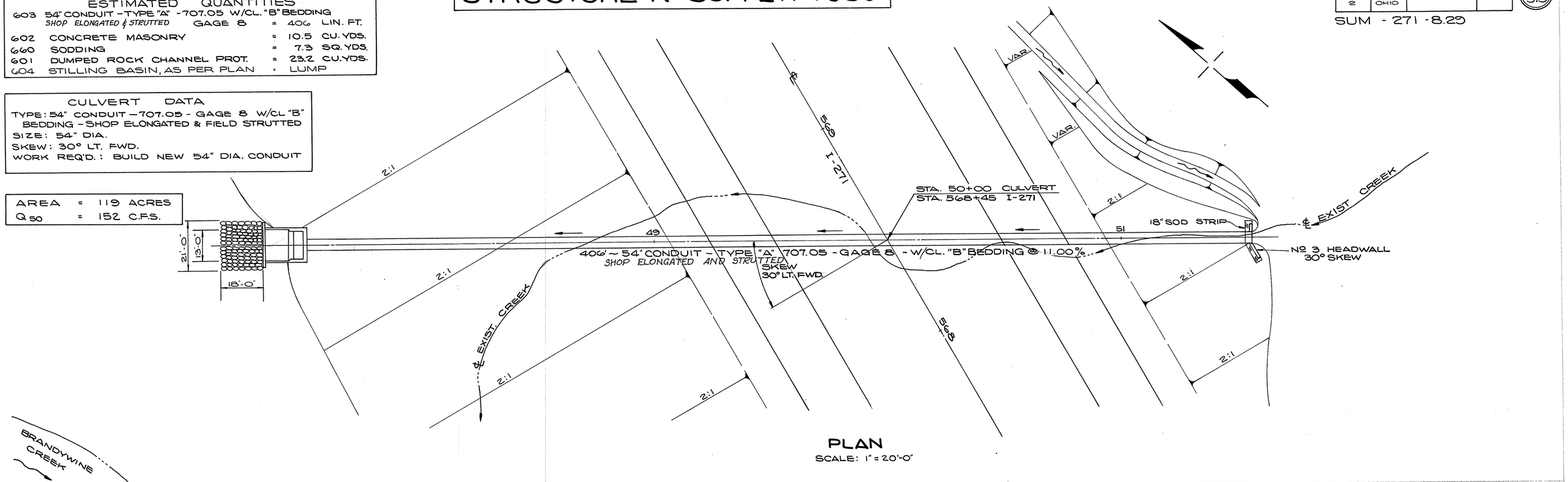
ESTIMATED QUANTITIES

603	54" CONDUIT - TYPE "A" - 707.05 W/CL. "B" BEDDING SHOP ELONGATED & STRUTTED	GAGE 8	=	406 LIN. FT.
602	CONCRETE MASONRY		=	10.5 CU. YDS.
660	SODDING		=	7.3 SQ. YDS.
601	DUMPED ROCK CHANNEL PROT.		=	23.2 CU. YDS.
604	STILLING BASIN, AS PER PLAN		=	LUMP

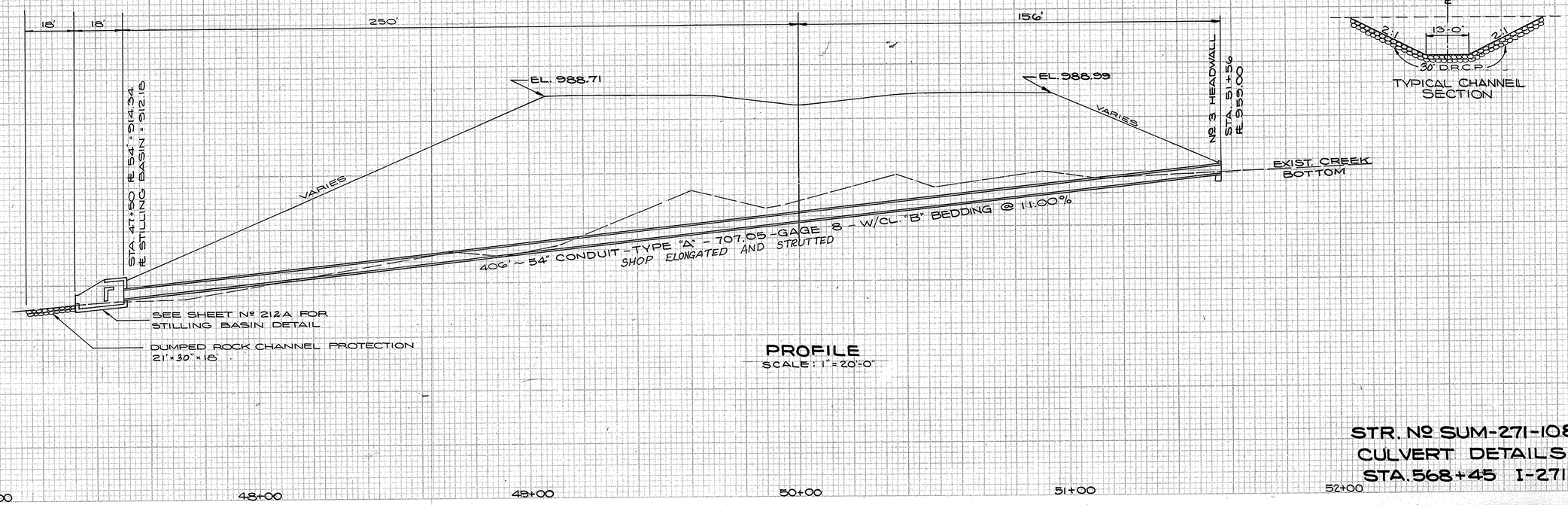
CULVERT DATA

TYPE: 54" CONDUIT - 707.05 - GAGE 8 W/CL "B" BEDDING - SHOP ELONGATED & FIELD STRUTTED
SIZE: 54" DIA.
SKEW: 30° LT. FWD.
WORK REQ'D.: BUILD NEW 54" DIA. CONDUIT

AREA	=	119 ACRES
Q 50	=	152 C.F.S.



PLAN
SCALE: 1" = 20'-0"



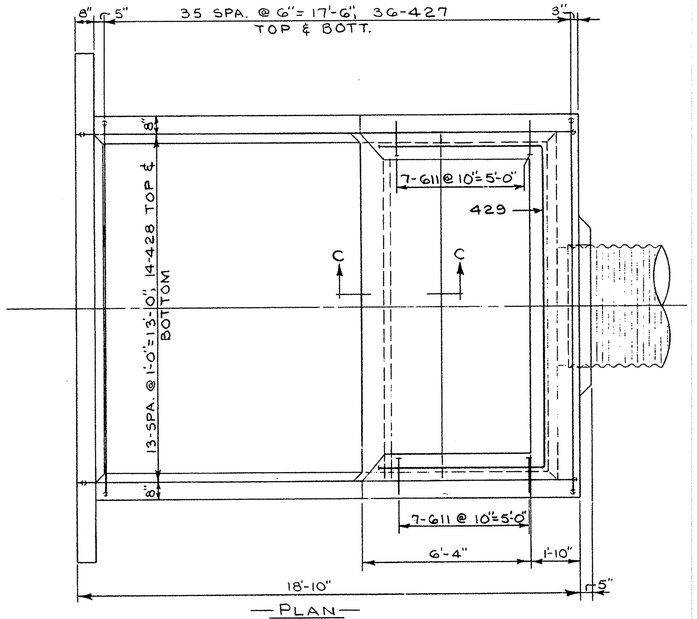
PROFILE
SCALE: 1" = 20'-0"

TYPICAL CHANNEL SECTION

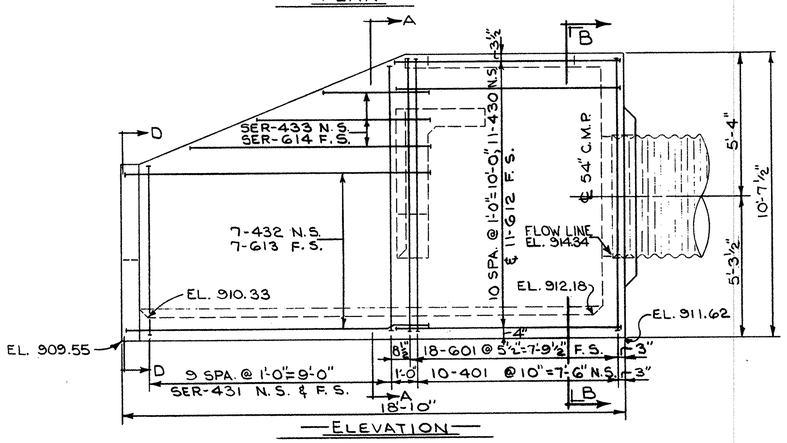
STR. Nº SUM-271-1080
CULVERT DETAILS
STA. 568+45 I-271

PLATE 4-CROSS SECTION O. P. R. & R. E. STANDARD
EUGENE DIETZGEN CO. - CHICAGO

FED. RD.	STATE	PROJECT		212-A 313
2	OHIO			



— PLAN —



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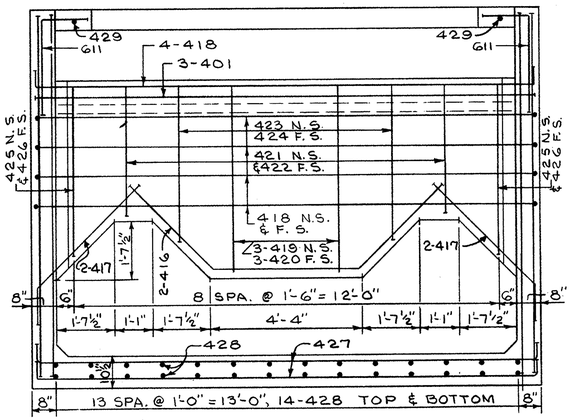
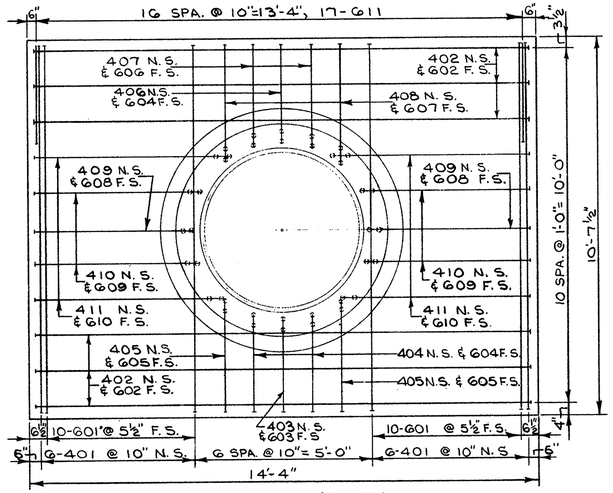
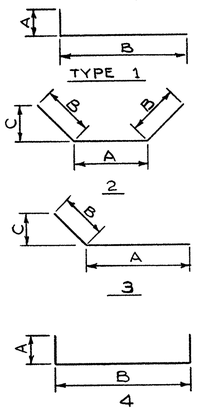
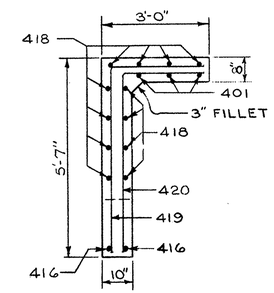


— SECTION "A-A" —

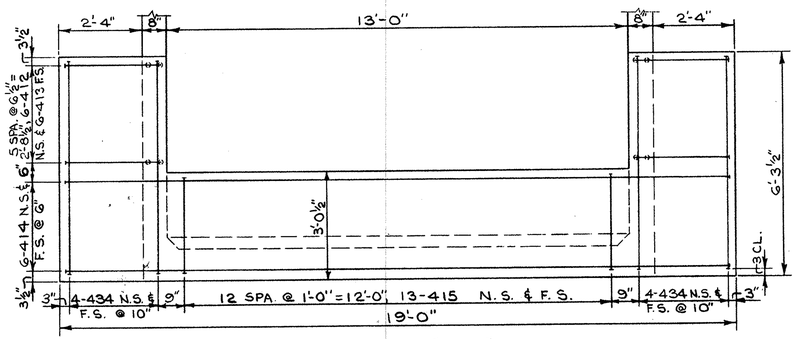


— SECTION "B-B" —





— SECTION "C-C" —



— SECTION "D-D" —

REINFORCING STEEL SCHEDULE

MARK	NO. REQ'D.	LENGTH	TYPE	DIMENSIONS A	B	C	D	SERIES INCR.	WEIGHT LBS.
401	35	10'-2"	ST.						204
402	6	14'-0"	ST.						56
403	1	2'-5"	1	4"	2'-2"				2
404	2	2'-7"	1	4"	2'-4"				3
405	2	3'-0"	1	4"	2'-9"				4
406	1	2'-8"	1	4"	2'-5"				2
407	2	2'-10"	1	4"	2'-7"				4
408	2	3'-3"	1	4"	3'-0"				4
409	2	4'-5"	1	4"	4'-2"				6
410	4	4'-8"	1	4"	4'-5"				12
411	4	5'-3"	1	4"	5'-0"				14
412	12	4'-0"	1	1'-7"	2'-4"				32
413	12	4'-0"	1	1'-3"	2'-10"				32
414	12	18'-8"	ST.						150
415	13	2'-8"	ST.						23
416	2	7'-6"	2	4'-2½"	3'-4"	2'-4½"			10
417	4	5'-0"	3	4'-0"	1'-0"	8½"			13
418	12	14'-11"	4	6"	14'-0"				120
419	3	7'-9"	1	2'-7"	5'-3"				16
420	3	7'-2"	1	2'-3"	5'-0"				14
421	2	6'-2"	1	2'-7"	3'-8"				8
422	2	5'-7"	1	2'-3"	3'-5"				8
423	2	6'-11"	1	2'-7"	4'-5"				9
424	2	6'-4"	1	2'-3"	4'-2"				8
425	2	7'-3"	1	2'-7"	4'-9"				10
426	2	6'-8"	1	2'-3"	4'-6"				9
427	72	14'-10"	4	6"	14'-0"				713
428	38	19'-4"	4	6"	18'-6"				362
429	1	24'-4"	4	6'-3"	12'-0"				16
430	22	8'-5"	ST.						124
SER-431	4 SETS OF 10 = 40	9'-11¼" TO 6'-0"	ST.					5¼"	213
432	14	11'-5"							107
SER-433	2 SETS OF 3 = 6	9'-0" TO 4'-0"	ST.					2'-6"	26
434	16	5'-10"	ST.						63
601	56	10'-2"	ST.						855
602	6	14'-0"	ST.						126
603	1	3'-0"	1	7"	2'-6"				5
604	3	3'-2"	1	7"	2'-8"				14
605	2	3'-7"	1	7"	3'-1"				11
606	2	3'-3"	1	7"	2'-9"				10
607	2	3'-10"	1	7"	3'-4"				12
608	2	5'-0"	1	7"	4'-6"				15
609	4	5'-4"	1	7"	4'-9"				32
610	4	5'-10"	1	7"	5'-4"				35
611	31	4'-0"	1	1'-4"	2'-9"				186
612	22	8'-5"	ST.						278
613	14	12'-0"	ST.						252
SER-614	2 SETS OF 3 = 6	9'-8" TO 4'-8"	ST.					2'-6"	65

TOTAL WEIGHT = 4,293 LBS.

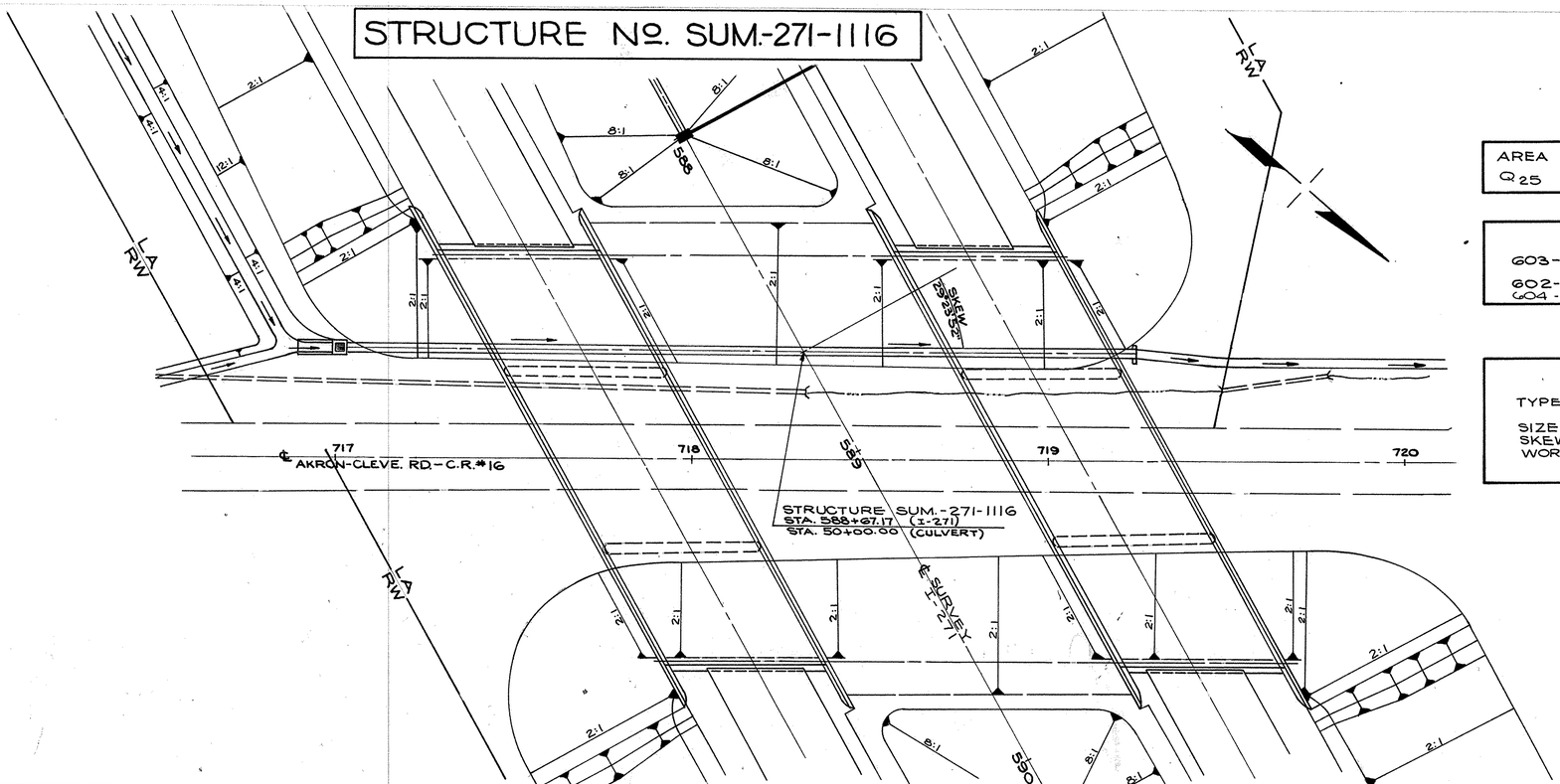
STR. NO SUM-271-1080
STILLING BASIN DETAILS
STA. 568+45 I-271

STRUCTURE No. SUM-271-1116

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

213/313

SUM.-271-8.29



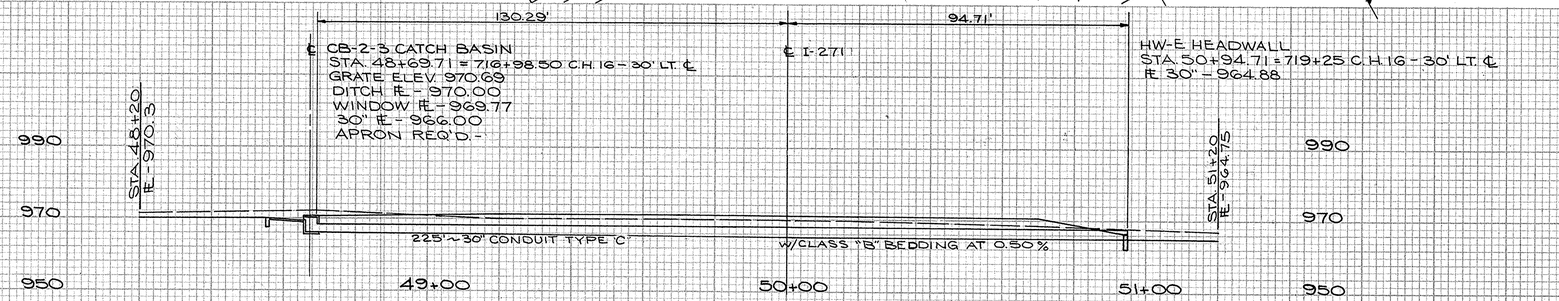
AREA	= 45 ACRES
Q_{25}	= 44 C.F.S.

ESTIMATED QUANTITIES

603-30" CONDUIT-TYPE C w/CLASS "B" BEDDING	=225 LIN. FT.
602-CONCRETE MASONRY	=.51 CU. YDS.
604-CATCH BASIN Nº 2-3	= 1 EACH

CULVERT DATA

TYPE - 603 CONDUIT TYPE "A" w/CLASS "B" BEDDING
SIZE - 30" x 225'
SKEW - 29°-23'-52" LT. FRW'D.
WORK REQUIRED - BUILD NEW 30" DIA. 603 PIPE CULVERT AS SHOWN.



PROFILE

SCALE: 1"=20'-0"

STR. Nº. SUM.-271-1116
CULVERT DETAILS
STA. 588+67.17 I-271

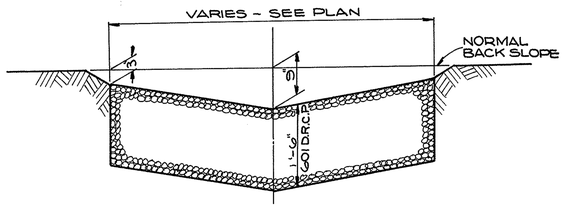
ORIGINAL SURVEY — SURVEYED BY, PLOTTED FROM, NOTE BOOK, NO., AREAS, AREAS CHECKED, DATE

FINAL SURVEY — SURVEYED BY, PLOTTED FROM, NOTE BOOK, NO., AREAS, AREAS CHECKED, DATE

FED. RD.	STATE	PROJECT	
2	OHIO		

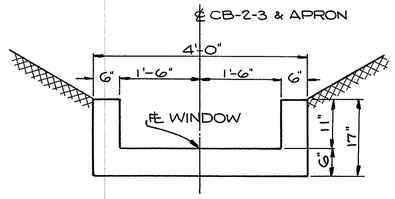
214
913

SUM-271-8.29



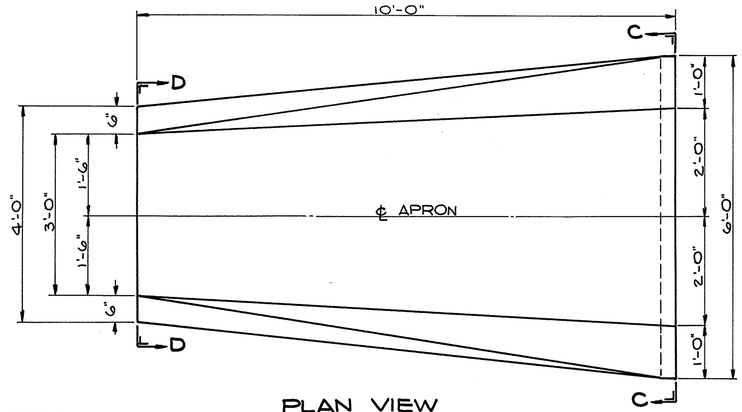
TYPICAL SEC.

BACK SLOPE PROTECTION



DOWNSTREAM VIEW

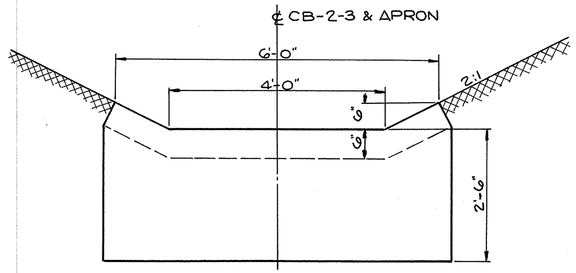
D-D



PLAN VIEW

(CONCRETE APRON FOR CB-2-3)

CONCRETE SHALL BE CLASS "C"

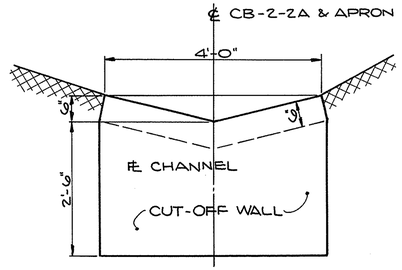


UPSTREAM VIEW

(CONCRETE APRON FOR CB-2-3)

APRON TO BE INCLUDED IN UNIT PRICE BID FOR ITEM 602 MASONRY

C-C

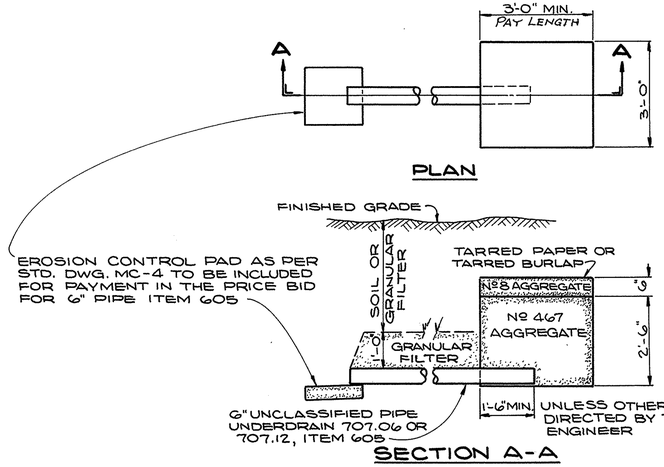


UPSTREAM VIEW

(CONCRETE APRON FOR CB-2-2A)

APRON TO BE INCLUDED IN UNIT PRICE BID FOR ITEM 602 MASONRY

E-E



PLAN

SECTION A-A

NOTE:

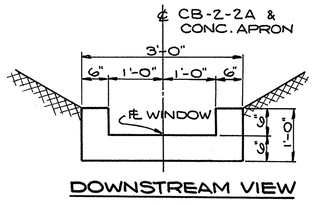
AGGREGATES, TARRED PAPER OR TARRED BURLAP, AND NECESSARY EXCAVATION FOR SPRING DRAINS SHALL BE INCLUDED FOR PAYMENT IN THE UNIT PRICE BID PER LIN. FT. FOR "ITEM 605, AGGREGATE DRAINS FOR SPRINGS, AS PER PLAN."

THE 6" PIPE 707.06 OR 707.12 SHALL BE COVERED WITH GRANULAR FILTER MATERIAL [605.03 (c)] TO A HEIGHT OF ONE (1) FOOT ABOVE THE TOP OF THE PIPE. THE REMAINDER OF THE BACKFILL FOR THIS ITEM SHALL BE SOIL OR GRANULAR FILTER BACKFILL PLACED IN ACCORDANCE WITH 603.08.

SPRING DRAINS SHALL BE BUILT IN REASONABLY CLOSE CONFORMITY WITH THE DETAIL SHOWN ABOVE. THE LENGTHS AND EXACT LOCATION OF THE DRAINS SHALL BE DETERMINED BY THE ENGINEER.

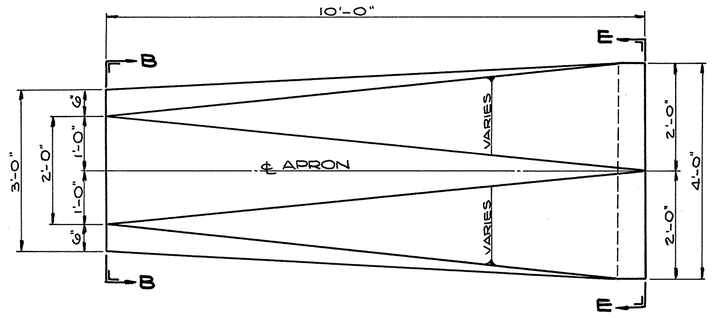
SEE NOTE ON SHEET № 11

SPRING DRAIN DETAIL



DOWNSTREAM VIEW

B-B



PLAN VIEW

(CONCRETE APRON FOR CB-2-2A)

CONCRETE SHALL BE CLASS "C"

DRAINAGE DETAILS

K&E

TYPICAL DETAILS OF UNDERDRAIN OUTLETS

FED. RD.	STATE	PROJECT	
2	OHIO		

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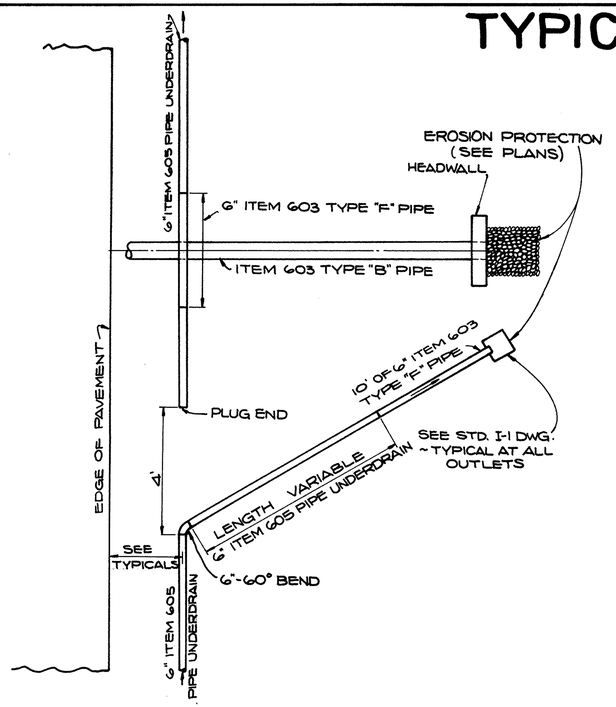
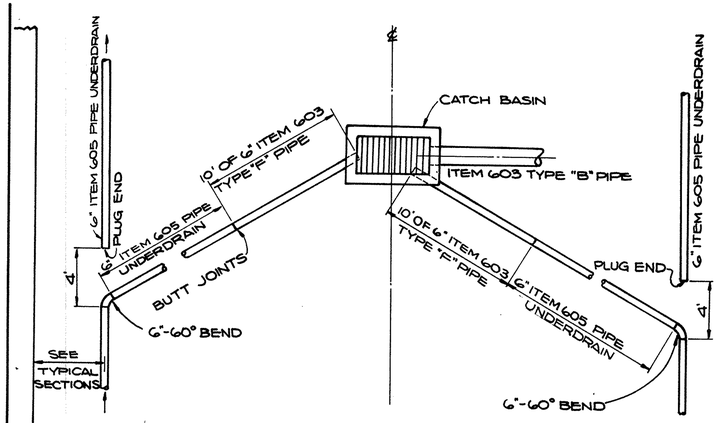
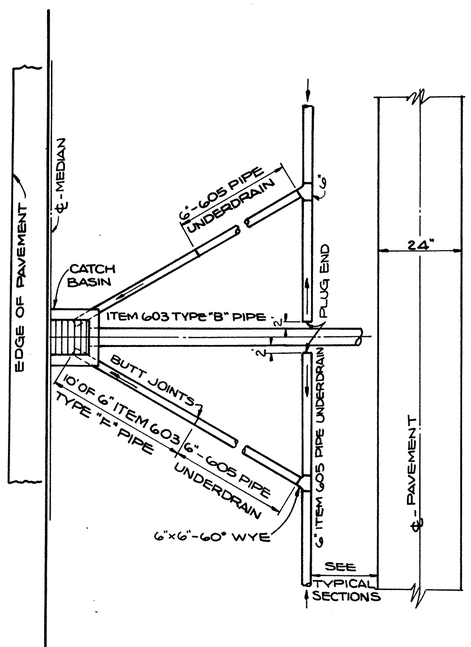
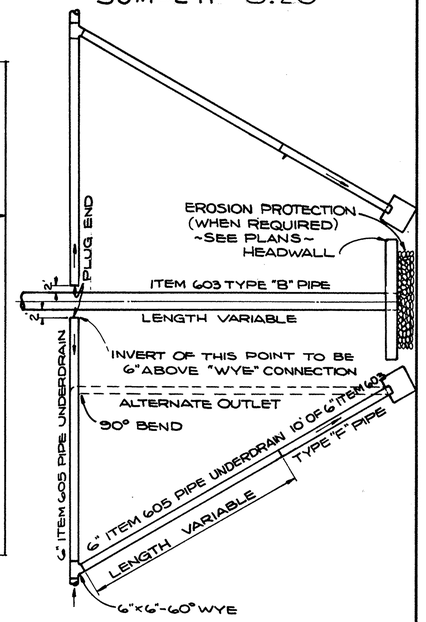


UNDERDRAIN OUTLET - DETAIL "A"

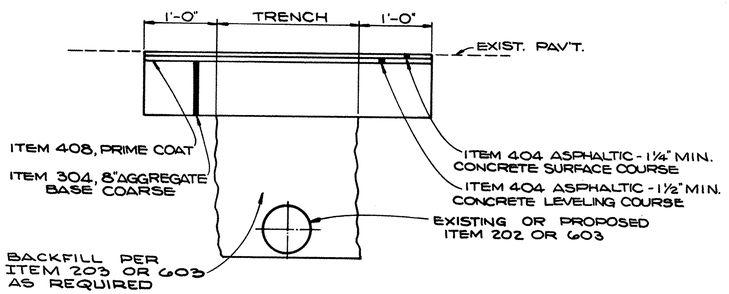


UNDERDRAIN OUTLET - DETAIL "B"



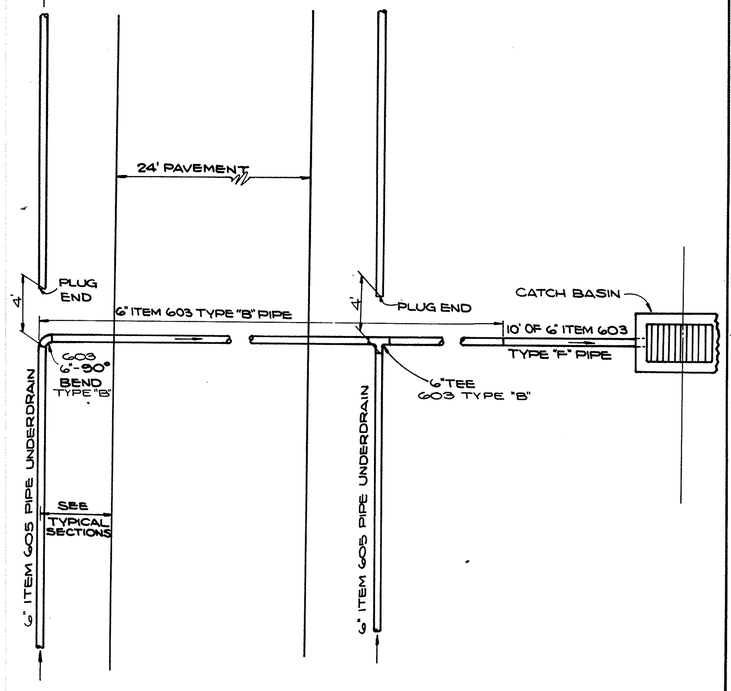


UNDERDRAIN OUTLET - DETAIL "C"

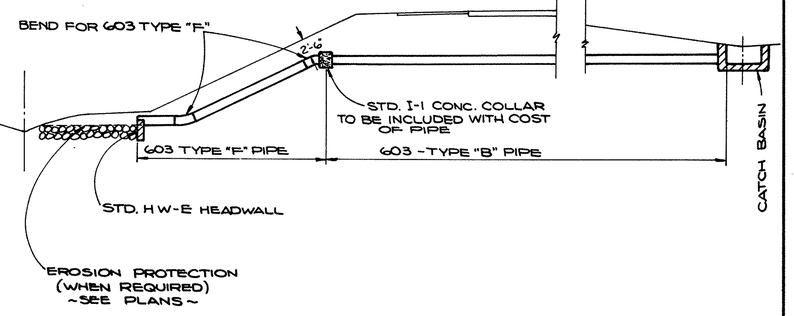


PAVEMENT REPLACEMENT DETAIL FOR ITEM 603 & 202

COST OF RESTORATION OF EXISTING PAVEMENT SHALL BE INCLUDED IN THE UNIT BID PRICE FOR ITEM 603 OR ITEM 202



UNDERDRAIN OUTLET - DETAIL "D"



NOTES

WHEN 601 DUMPED ROCK CHANNEL PROTECTION IS CALLED FOR IN THE PLANS, IT SHALL BE PLACED A MINIMUM OF 18" IN DEPTH.

PIPE BENDS, WYES, TEES, ETC. WITHOUT PERFORATIONS WILL BE PERMITTED FOR ALL 605 ITEM FITTINGS.

MEDIAN OUTLET DETAIL IN HIGH FILL

FED. RD.	STATE	PROJECT	
2	OHIO		

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313

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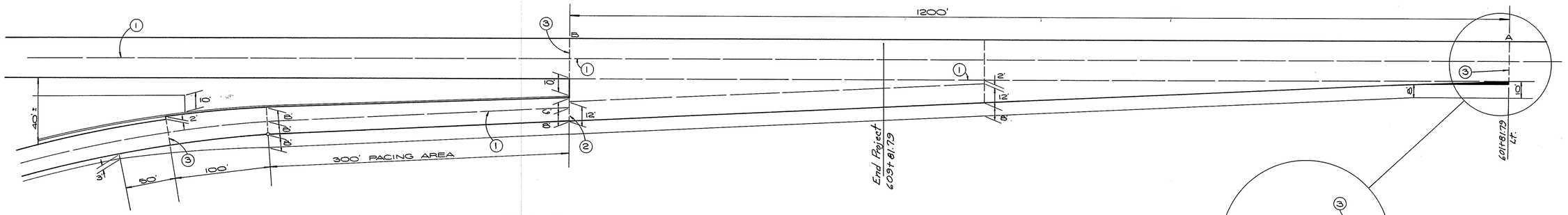
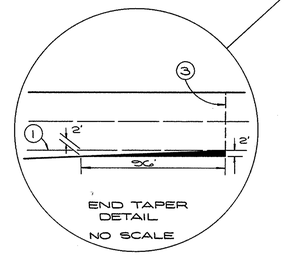


TYPICAL ACCELERATION LANE

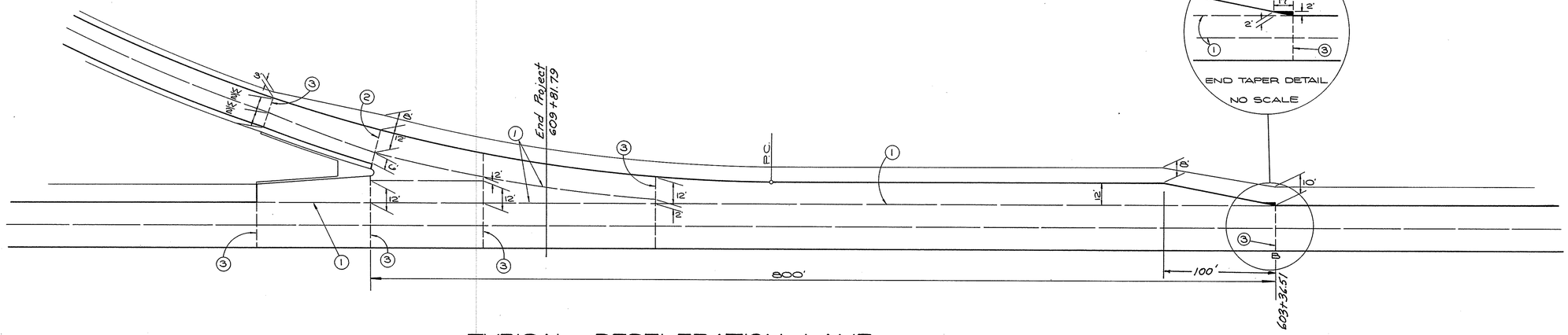


JOINT LEGEND

1. STANDARD LONGITUDINAL JOINT
2. STANDARD EXPANSION JOINT
3. STANDARD CONTRACTION JOINT

NOTE : END TAPER DETAILS

THE SHADED AREA SHOWN IN THE END TAPER DETAILS SHALL BE CONSTRUCTED OF CONCRETE PAVEMENT TO AN ELEVATION ONE HALF INCH LOWER THAN THE ADJACENT PAVEMENT AND SURFACED WITH ITEM 409 USING N° 8 AGGREGATE AS THE MAXIMUM SIZE. THE SHADED AREA SHALL BE PAID FOR AS FULL DEPTH ITEM 451 AND THE SURFACE TREATMENT SHALL BE PAID FOR AS ITEM 409.



TYPICAL DECELERATION LANE

SPEED CHANGE LANE DETAILS

K & E - AKRON

FED. RD.	STATE	PROJECT	
2	OHIO		

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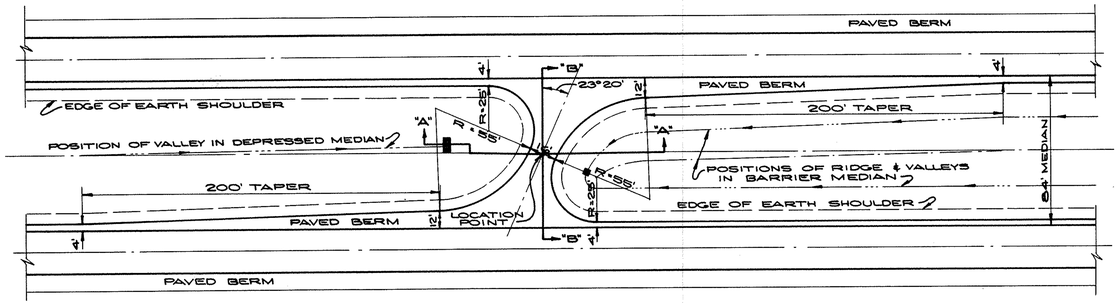
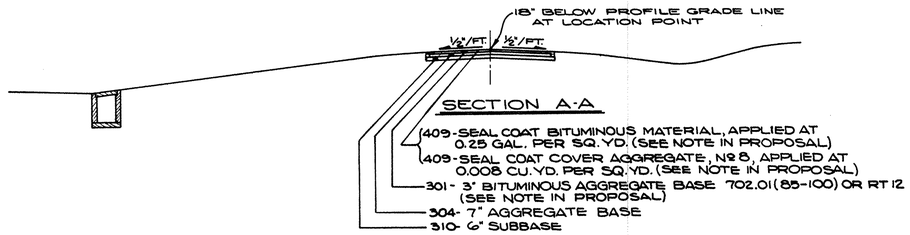
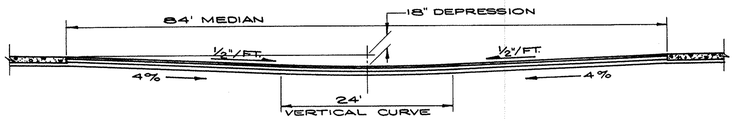


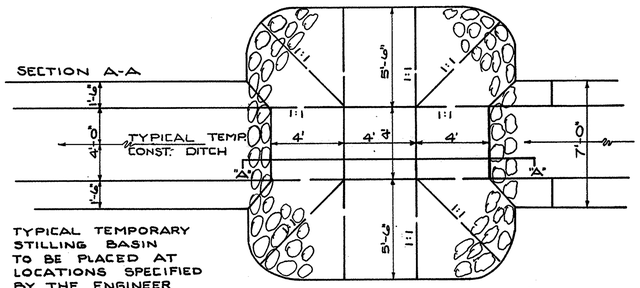
TYPICAL CROSSOVER



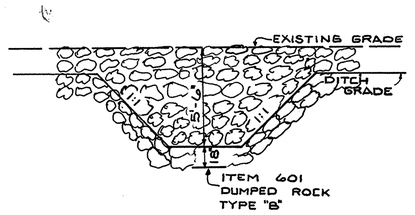
SECTION A-A



SECTION B-B



TYPICAL TEMPORARY STILLING BASIN TO BE PLACED AT LOCATIONS SPECIFIED BY THE ENGINEER
SEE NOTE ON SH. 11A.



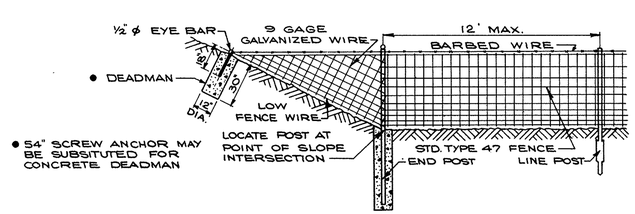
TEMPORARY DITCH & STILLING BASIN DETAILS

FENCE NOTES

SPECIAL TERMINALS SHALL BE PROVIDED AT THE BEGINNING AND END OF EACH FENCE OPENING AS SHOWN ON THE ATTACHED TYPICAL DETAILS. WHERE FENCE IS DISCONTINUED BECAUSE OF DEPTH OF CUT OR HEIGHT OF FILL, AN END ASSEMBLY SHALL BE PROVIDED IN THE FENCE LINE AND FROM THE END POST FENCING SHALL BE CONSTRUCTED PERPENDICULAR TO THE CENTER LINE OF THE HIGHWAY, TERMINATING IN THE FILL SLOPE OR AT THE TOP OF THE CUT SLOPE. WHERE FENCE IS TO BE DISCONTINUED BECAUSE OF THE INCLINATION OF THE EXISTING GROUND, TERMINALS MAY BE CONSTRUCTED AS PROVIDED ABOVE IF ROADSIDE SLOPE IS AT LEAST ONE ON TWO IN CUT OR FILL, OR SIMILAR TERMINALS MAY BE CONSTRUCTED IN THE FENCE LINE, SUBSTITUTING FULL END ANCHOR ASSEMBLIES FOR END POSTS.

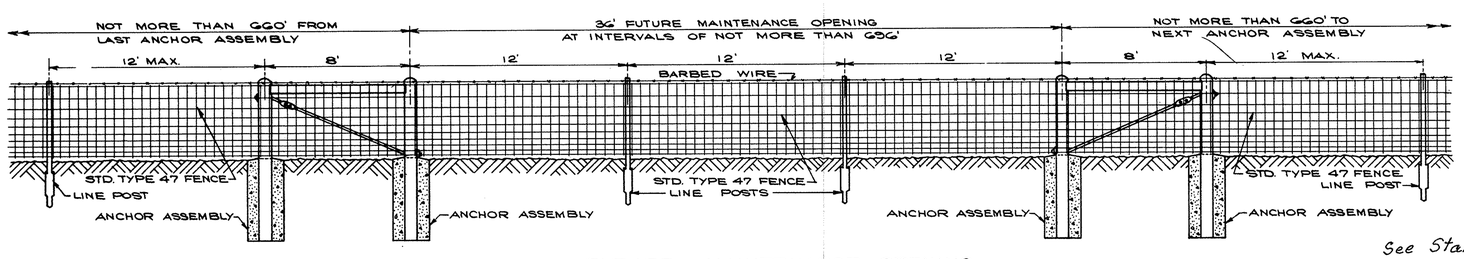
TERMINALS FOR THE PERPENDICULAR CLOSURES DESCRIBED SHALL CONSIST OF AN ENCASED END POST AT EACH END. CLOSURES OR FREE ENDS OCCURRING IN THE MAIN FENCE LINES SHALL TERMINATE IN STANDARD END ANCHOR ASSEMBLIES.

WHERE DEEP CHANNELS ARE LOCATED PARALLEL TO FREEWAY, THE FENCE SHALL BE LOCATED ON THE BENCH BETWEEN THE MAIN FACILITY AND THE CHANNEL. DEEP CHANNEL IS DEFINED AS A DITCH DEEPER THAN THREE FEET BELOW THE EDGE OF THE SHOULDER IN CUT; OR IF LOCATED AT THE TOE OF A FILL SLOPE WHICH DOES NOT OTHERWISE REQUIRE GUARD RAIL, DEEPER THAN THREE FEET IN EXISTING GROUND MEASURED FROM FLOW LINE TO TOP OF BACKSLOPE. AT LEAST ONE FUTURE MAINTENANCE OPENING SHALL BE PROVIDED IN THE FENCE AND WHERE THE LENGTH OF FENCE EXCEEDS 1800 FEET, FUTURE MAINTENANCE OPENINGS SHALL BE PROVIDED AT INTERVALS NOT IN EXCESS OF 696 FEET.



NOTE:
BARBED WIRE SHALL NOT BE INSTALLED BELOW FENCE FABRIC

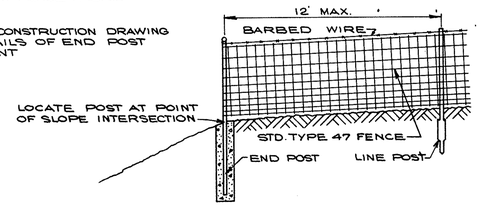
FENCE TERMINAL AT TOE OF DEEP FILL SLOPE



FUTURE MAINTENANCE OPENING

AT LOCATIONS WHERE CHANNELS ARE LOCATED IN CHANNEL EASEMENTS, AND FENCING IS PROVIDED BETWEEN THE CHANNEL AND A FREEWAY, AT LEAST ONE MAINTENANCE OPENING SHALL BE PROVIDED AS INDICATED ABOVE, AND OTHERS AT INTERVALS OF 696 FEET IF THE LENGTH OF THE PARALLEL CHANNEL EXCEEDS 1800 FEET.

See Standard Drawing F-6



FENCE TERMINAL AT TOE OF DEEP CUT SLOPE

ROADWAY DETAILS

FED. RD.	STATE	PROJECT	
2	OHIO		

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SPECIAL BERM AND SLOPE PROTECTION

PRIOR TO PLACEMENT OF SOD IN THE BERM & 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 & BOTTOM WITH STAKES AT FOUR FOOT INTERVALS & ALTERNATED IN ROWS FOUR FEET APART.

STAKES SHALL BE 1"×1"×8" WOOD STAKES AND SHALL BE PERPENDICULAR TO THE GROUND & FLUSH WITH THE FINISHED GRADE.

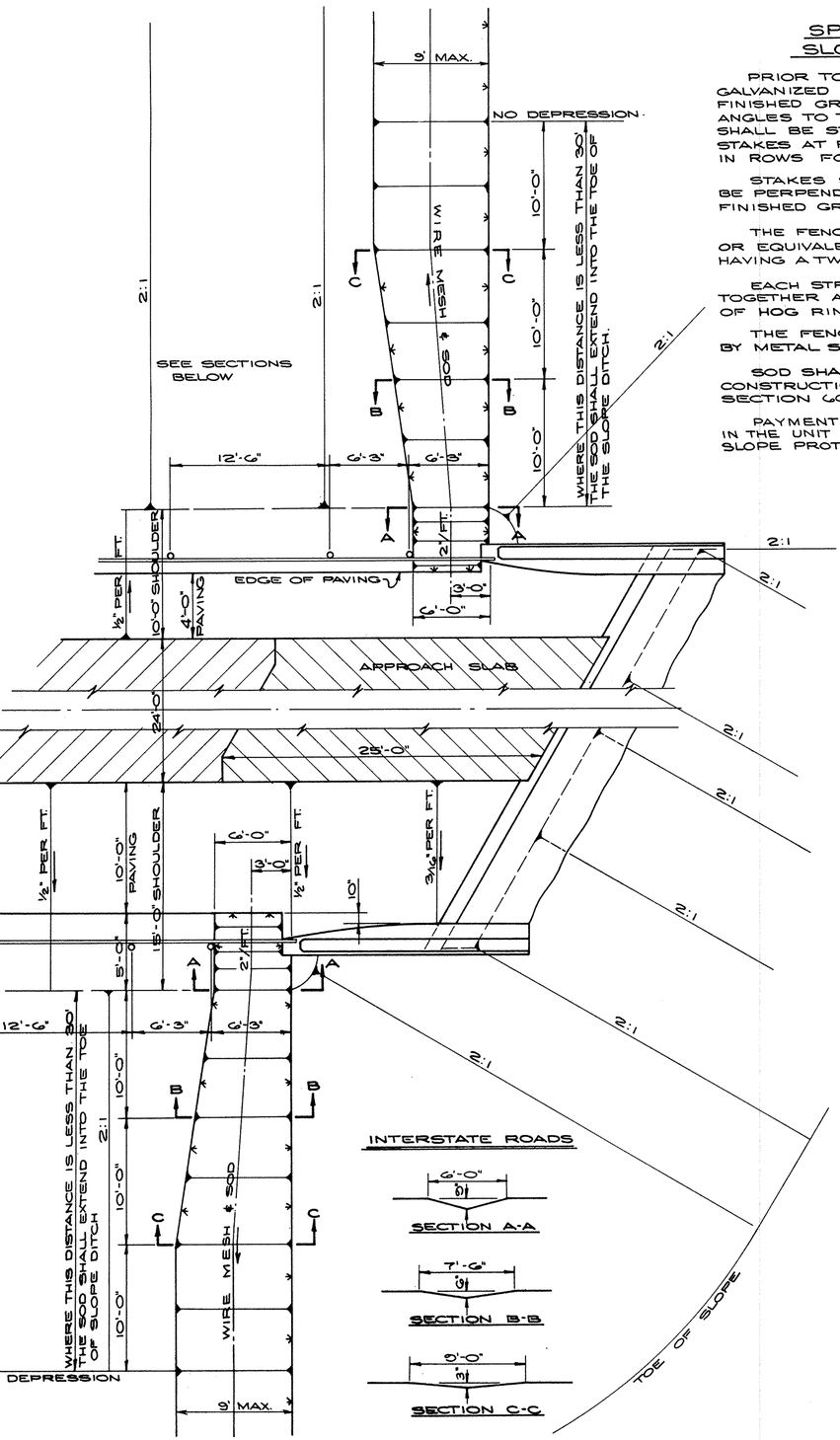
THE FENCE SHALL BE STRAIGHT LINE POULTRY FENCE OR EQUIVALENT WITH STRAND WIDTH OF FOUR FEET HAVING A TWO INCH MESH AND ALL WIRES Nº 20 GAUGE.

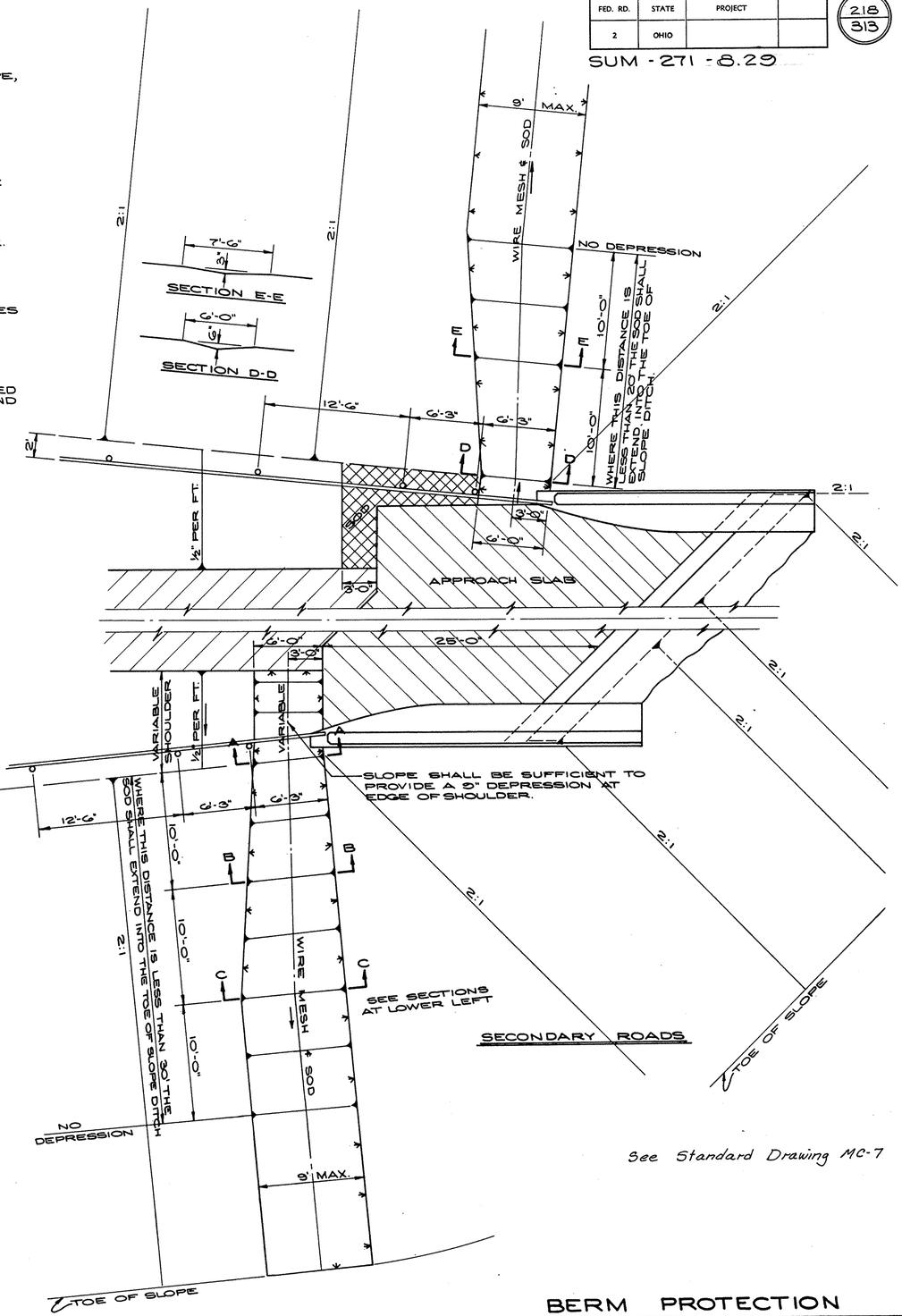
EACH STRAND OF FENCING SHALL BE FASTENED TOGETHER AT TWELVE INCH INTERVALS BY MEANS OF HOG RINGS.

THE FENCE SHALL BE SECURED TO THE WOOD STAKES BY METAL STAPLETS.

SOD SHALL BE LAID IN ACCORDANCE WITH CONSTRUCTION & MATERIALS SPECIFICATIONS SECTION 660.06.

PAYMENT FOR ALL OF THE ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 660, SOD, SPECIAL BERM AND SLOPE PROTECTION.





See Standard Drawing MC-7

BERM PROTECTION

FED. RD. DIVISION	STATE	PROJECT	
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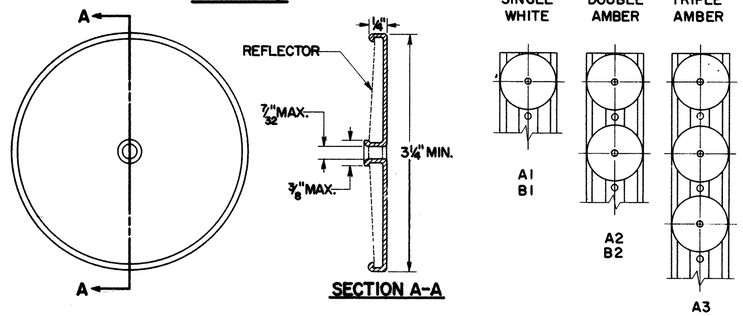
TYPE A



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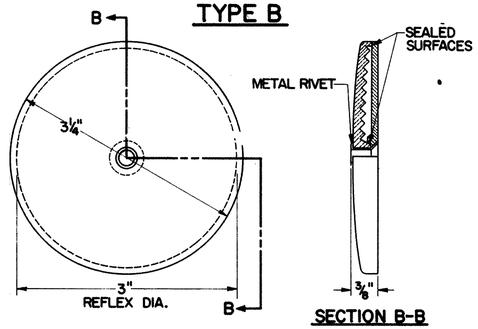

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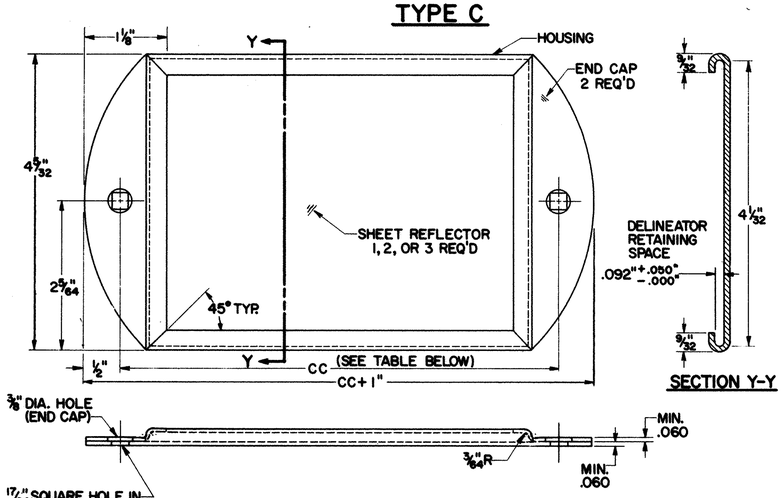
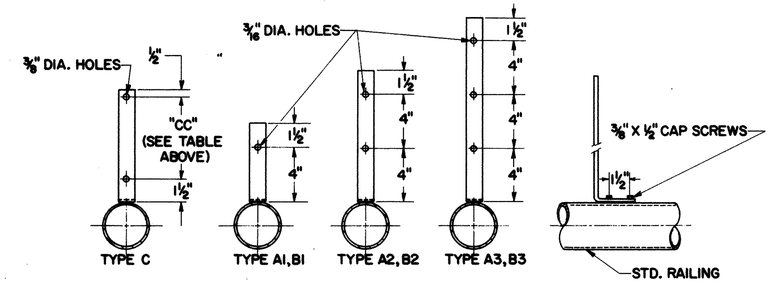
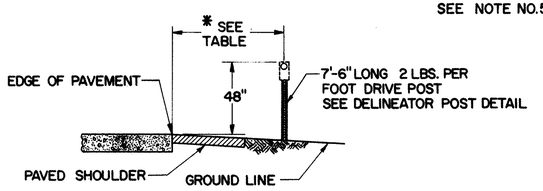


TYPE	DIM. CC
C1-SINGLE WHITE	6"
C2-DOUBLE AMBER	11"
C3-TRIPLE AMBER	16"

ALL BRACKETS 1/4" X 1 1/4" STAINLESS STEEL



BRIDGE RAIL BRACKET

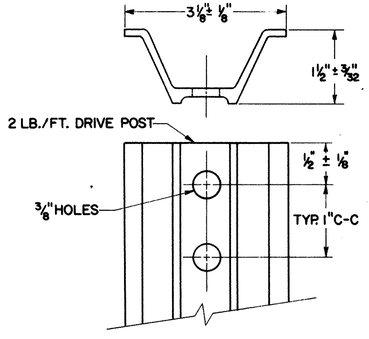


LATERAL PLACEMENT OF DELINEATORS

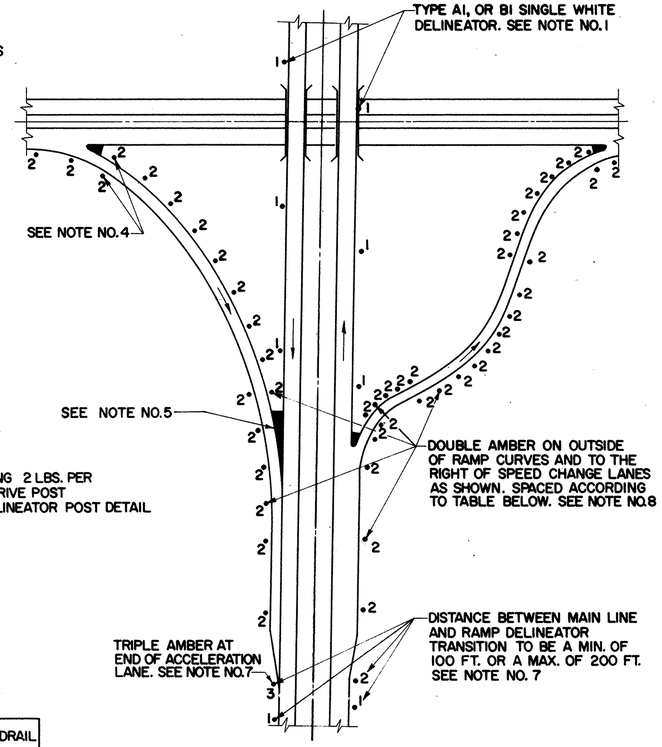
* TABLE

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

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



DELINEATOR POST



TYPICAL DELINEATOR PLACEMENT

DELINEATOR SPACING ON RAMP HORIZONTAL CURVES

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

* SUCH AS 40' TO 70' TO 100' OR 100' TO 80' TO 50' OR ANY OTHER COMBINATION SHOWN ABOVE.

NOTES

1. TYPE A1 OR B1 DELINEATORS ON THE RIGHT OF THE THROUGH ROADWAY ARE TO BE SPACED AT 200 FT. INTERVALS THROUGHOUT, REGARDLESS OF CURVES, BEGINNING AT STA. +00, +25, +50, OR +75.
2. DELINEATORS SHALL BE FURNISHED AND ERECTED IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION NO. 620
3. PAYMENT FOR SUPPORTS (DRIVEPOST OR BRACKET) SHALL BE INCLUDED IN THE UNIT PRICE BID PER EACH FOR "ITEM 620 DELINEATORS".
4. WHEN CROSSING FROM LEFT TO RIGHT OR FROM RIGHT TO LEFT ON THE RAMPS THE DELINEATORS AT THE POINT OF CROSSOVER ARE TO BE AT THE SAME STATION ON EACH SIDE.
5. NO DELINEATORS ARE TO BE PLACED IN PAVED BERM
6. WHEN RADII OF CURVE ON RAMPS REQUIRE 100' SPACING THE DELINEATORS SHALL BE PLACED ON THE RIGHT IN RELATION TO THE FLOW OF TRAFFIC.
7. RAMP DELINEATOR AT END OF ACCELERATION & BEGINNING OF DECELERATION LANES TO BE A MAXIMUM OF 5' FROM POINT OF TANGENCY AT MAIN LINE.
8. ALL RAMP DELINEATORS SHALL BE PLACED TO THE NEAREST 5' INCREMENTS, SUCH AS +05, +10, +15. +20 AND SO ON.

BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

DELINEATOR DETAILS	620	DATE 9-25-62 10-2-63

APPROVED Robert L. Conner
ENGINEER OF TRAFFIC

DELINEATOR DETAILS

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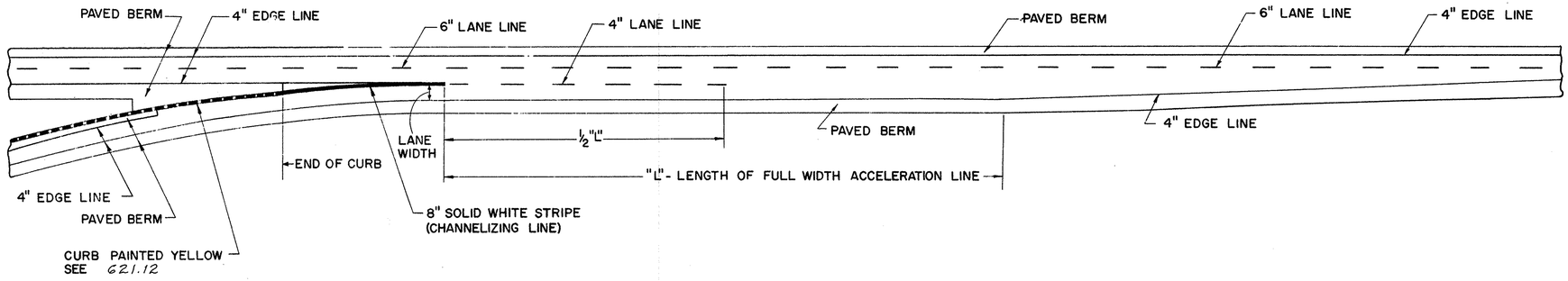
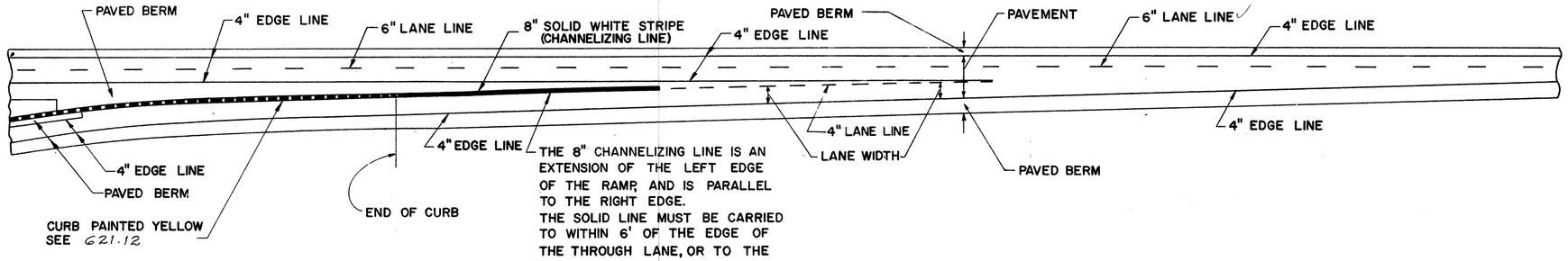
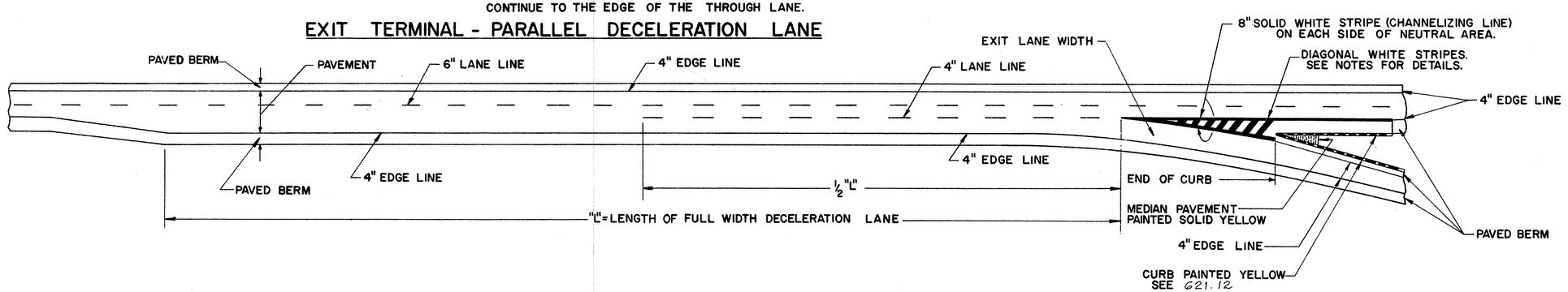
ENTRANCE TERMINAL - PARALLEL ACCELERATION LANE



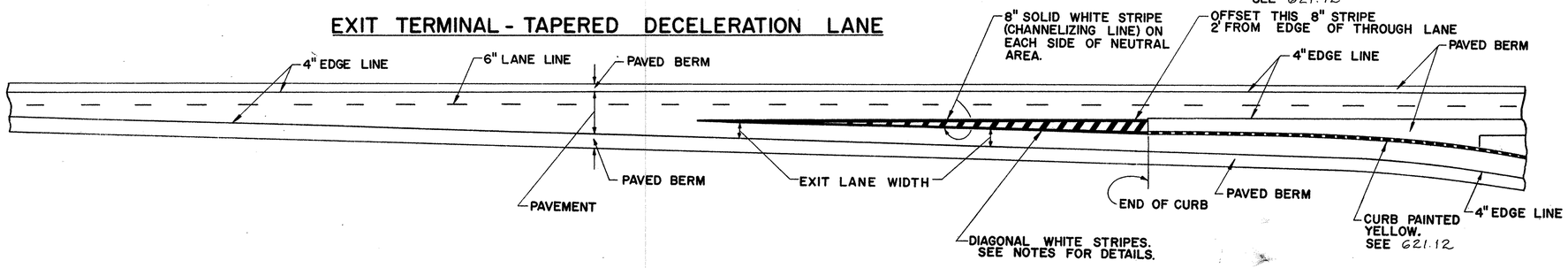
ENTRANCE TERMINAL - TAPERED ACCELERATION LANE



EXIT TERMINAL - PARALLEL DECELERATION LANE



EXIT TERMINAL - TAPERED DECELERATION LANE



NOTES

EDGE LINES SHALL BE PLACED IN THE LOCATIONS AS SHOWN TO CONFORM TO No. 621 AND DEFINED IN SECTION 621.06

LANE LINES SHALL BE PLACED IN THE LOCATIONS AS SHOWN TO CONFORM TO 621 AND DEFINED IN SECTION 621.07

CHANNELIZING LINES SHALL BE CONTINUOUS WHITE BEADED STRIPES 8" IN WIDTH PLACED IN THE LOCATIONS AS SHOWN TO CONFORM TO 621 AND DEFINED IN SECTION 621.09

DIAGONAL STRIPES IN EXIT RAMP MARKINGS SHALL BE 2' WIDE WHITE BEADED STRIPES SET AT A 45° ANGLE TO THE CENTER LINE OF THE THROUGH PAVEMENT AND SLANTED IN THE DIRECTION OF THE FLOW OF TRAFFIC ON SAID PAVEMENT. SPACE BETWEEN THE 2' DIAGONAL STRIPES SHALL BE 6' AS MEASURED PARALLEL TO THE CENTER LINE OF THE THROUGH PAVEMENT. PAINT ON THE DIAGONAL STRIPES SHALL BE APPLIED AT THE RATE OF ONE GALLON TO EACH 100 SQUARE FEET AND GLASS BEADS SHALL BE APPLIED AT THE RATE OF SIX POUNDS PER GALLON OF PAINT. DIAGONAL WHITE STRIPES SHALL BE PLACED BETWEEN THE TWO 8" WHITE CHANNELIZING LINES AT EXIT RAMPS AS SHOWN TO CONFORM TO 621 AND DEFINED IN 621.11

BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

PAVEMENT MARKING	621	DATE 7-17-61 4-6-62

APPROVED Robert E. Lower
ENGINEER OF TRAFFIC

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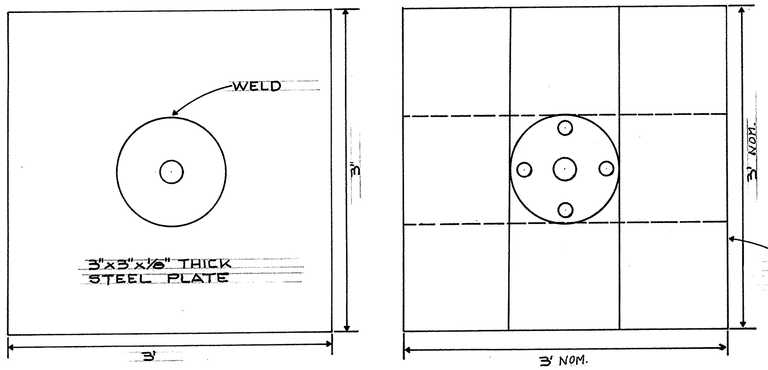
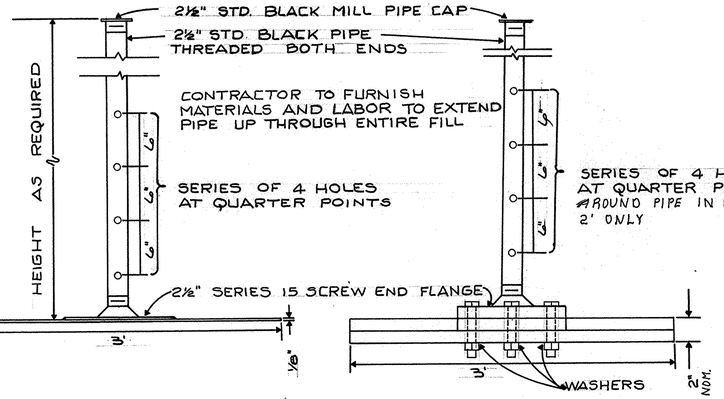
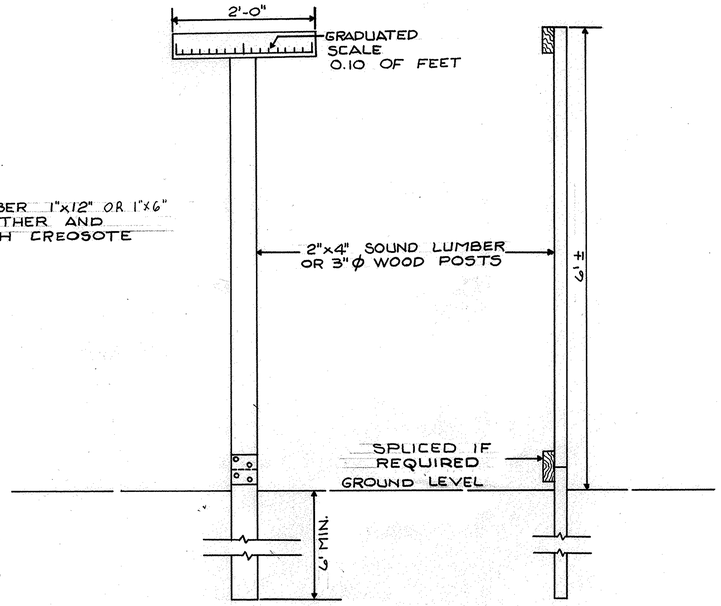
CONTRACTOR HAS OPTION OF USING EITHER STEEL OR WOOD PLATFORM BASE.

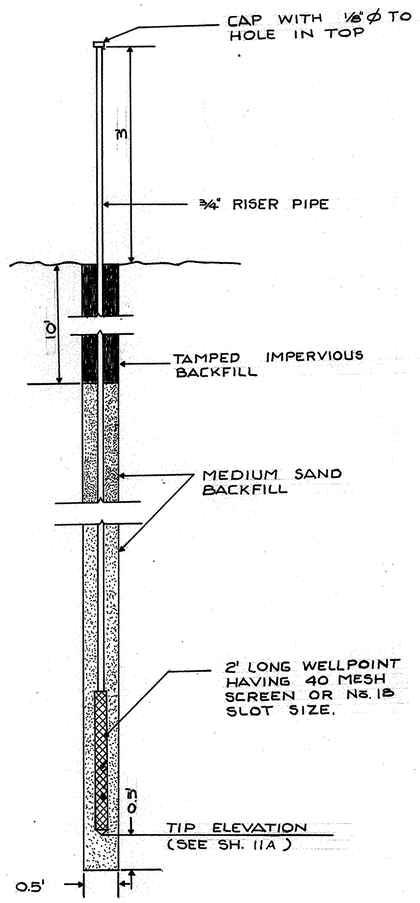




DETAILS OF SETTLEMENT PLATFORMS



EMBANKMENT CONTROL STAKE DETAIL



PIEZOMETER DETAIL

EMBANKMENT CONTROL DETAILS

K & E - AKRON

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2	OHIO		

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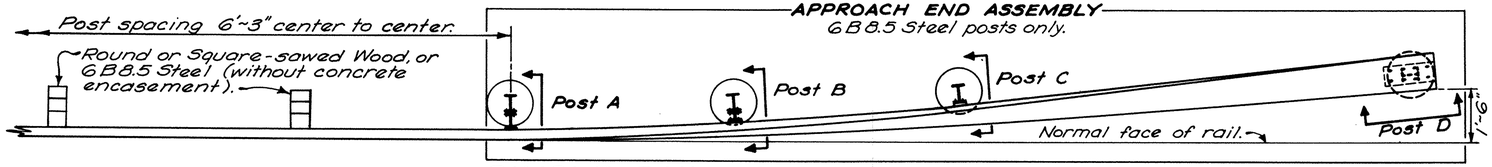
NOTES

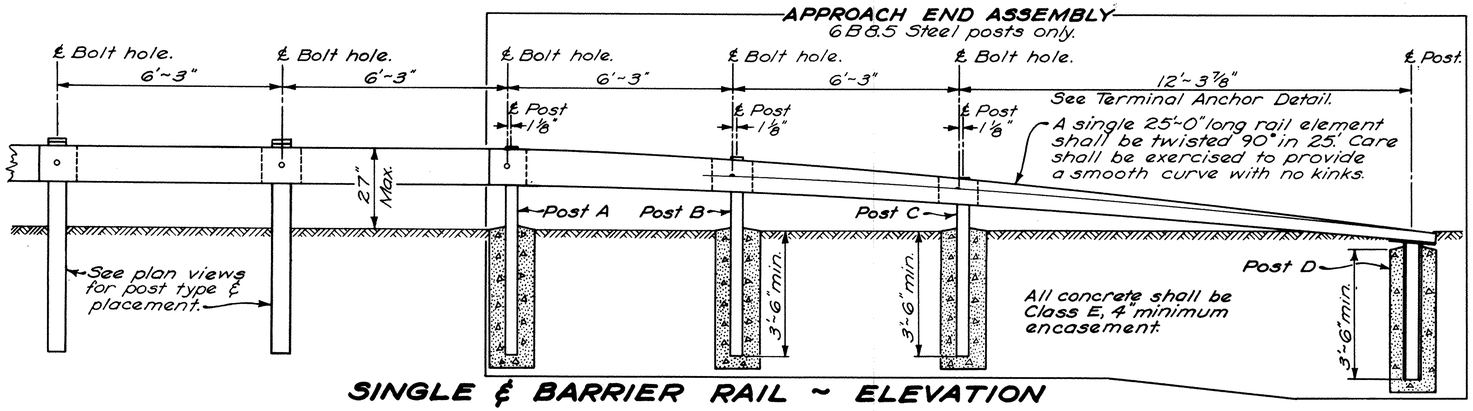
For details not shown, see Standard Drawings GR-1 and GR-2A.

All steel parts shall be galvanized in accordance with ASTM A123, A153 or A525, whichever may apply.

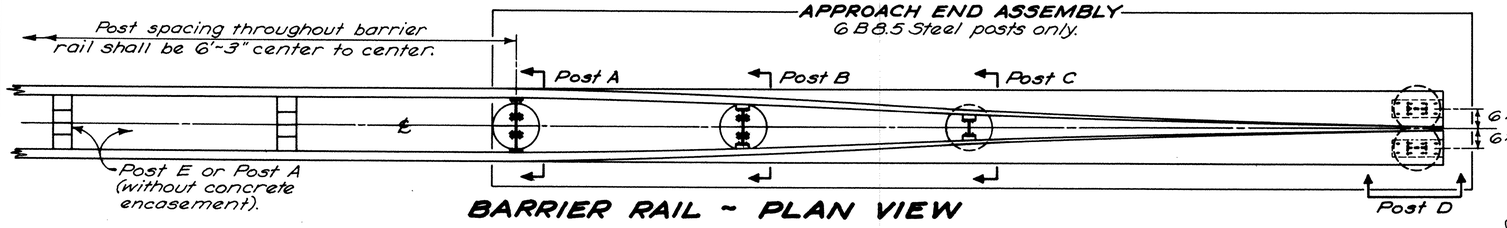
This drawing shall govern where a conflict arises.



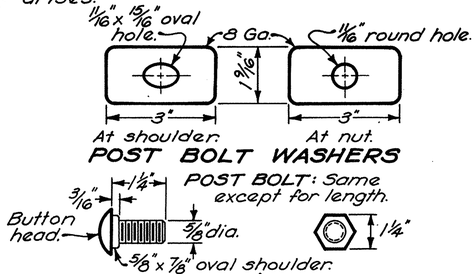
SINGLE RAIL ~ PLAN VIEW



SINGLE & BARRIER RAIL ~ ELEVATION

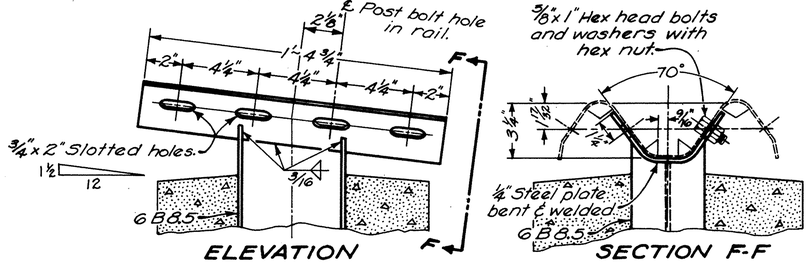


BARRIER RAIL ~ PLAN VIEW

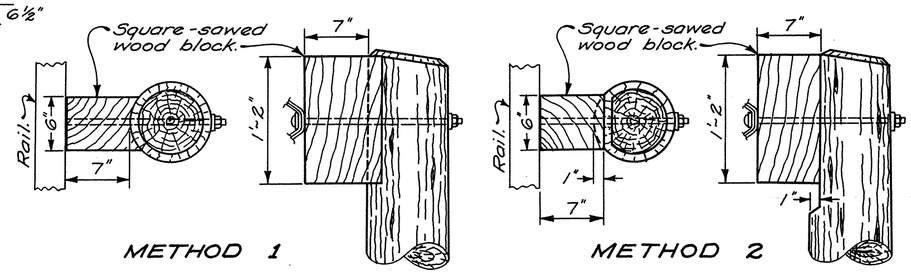


POST BOLT WASHERS

SPLICE BOLT & NUT

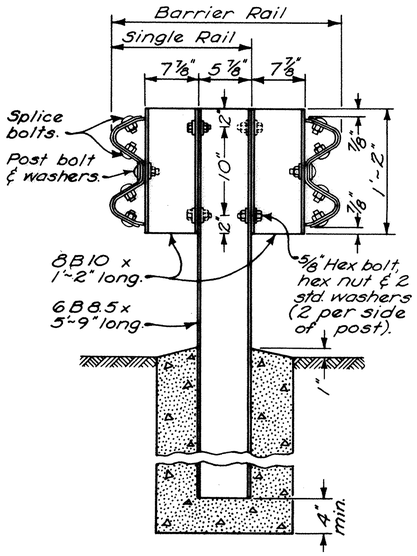


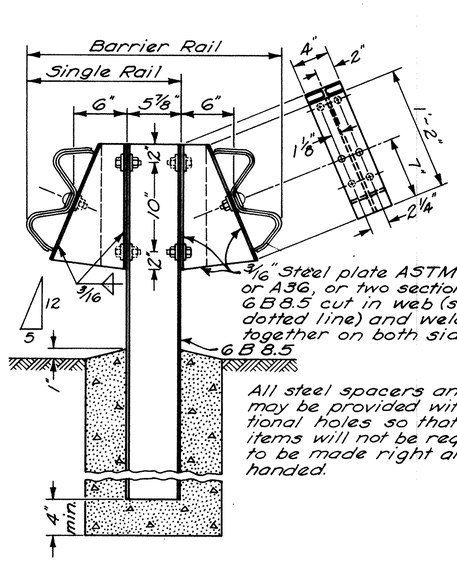
TERMINAL ANCHOR DETAIL

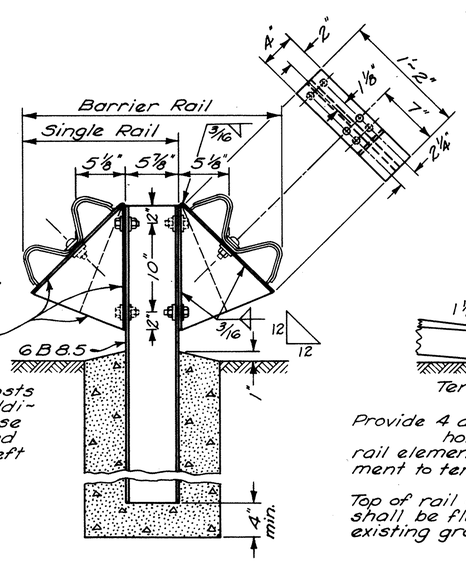


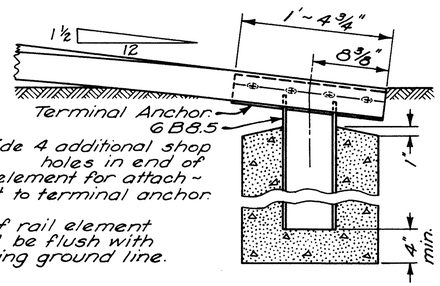
ROUND WOOD POSTS *

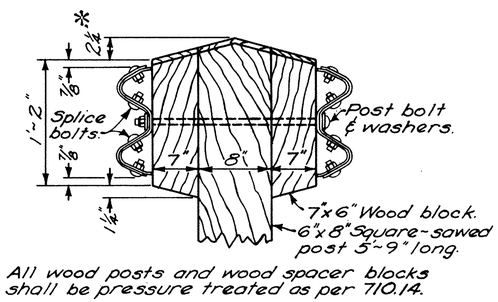
Alternate methods of placing the spacer blocks on the round posts may be submitted for consideration and approval by the Engineer.











* Tops of driven posts need not be trimmed.

GUARD RAIL ~ APPROACH END ASSEMBLY

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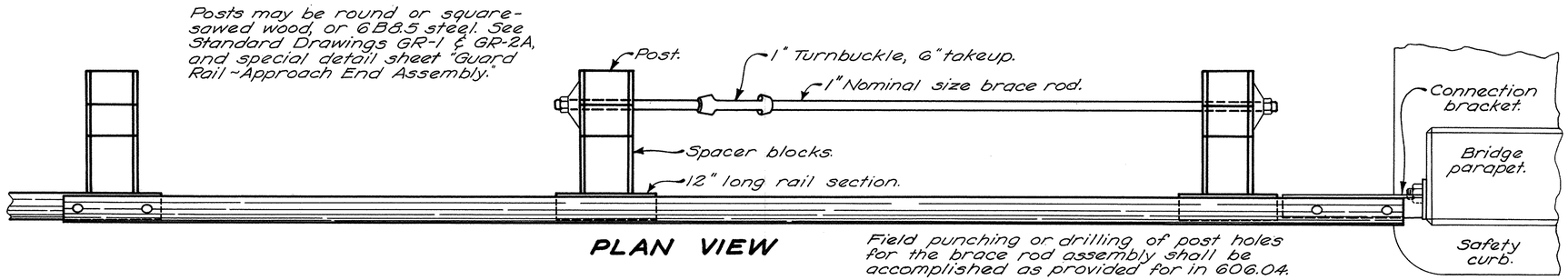
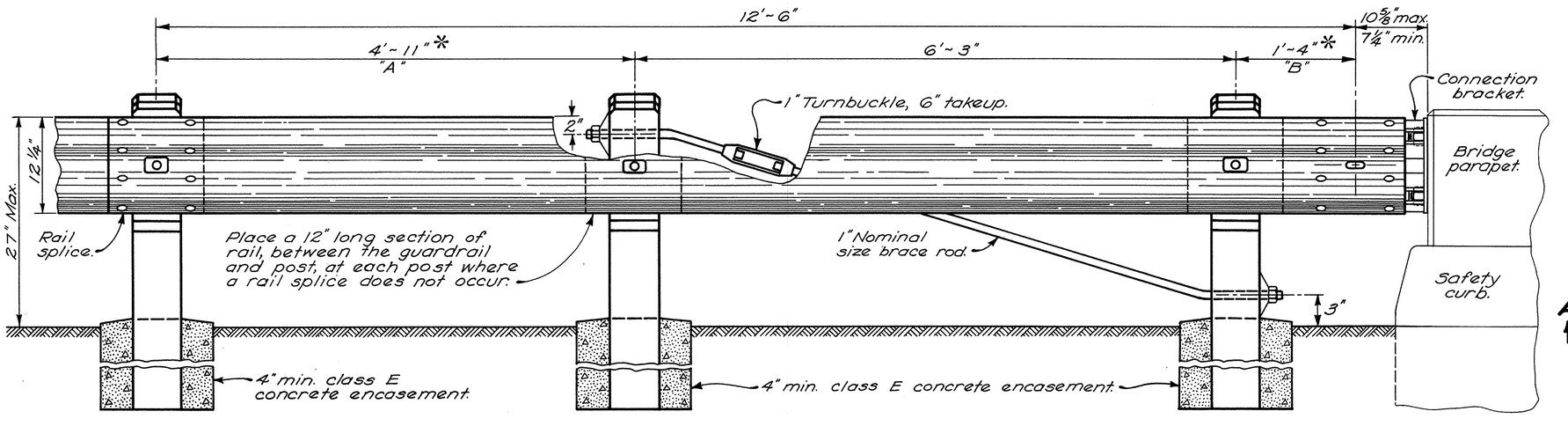
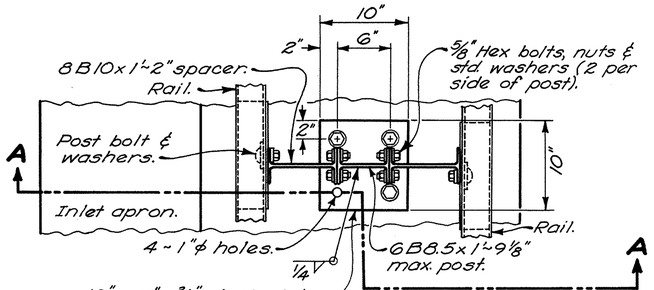


PLAN VIEW

Field punching or drilling of post holes for the brace rod assembly shall be accomplished as provided for in 606.04.



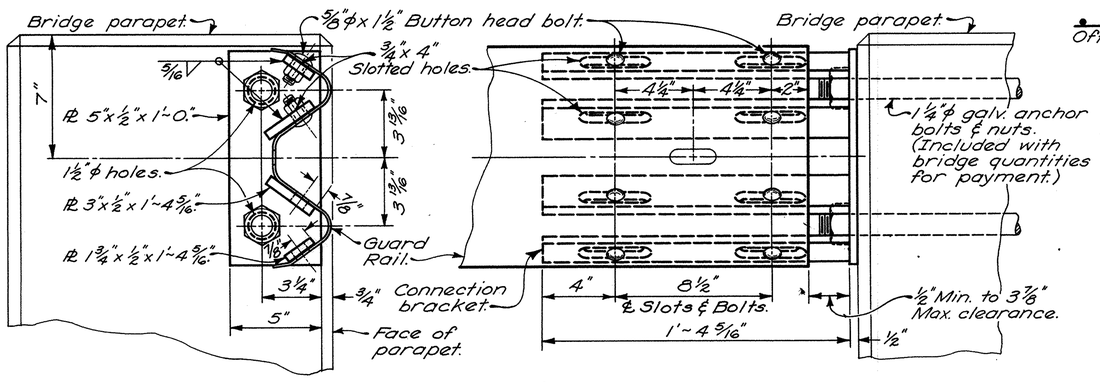
ELEVATION



PLAN VIEW

GUARDRAIL TERMINAL AT BRIDGE

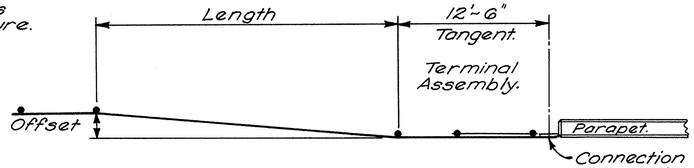
* Dimension "A" shall decrease as dimension "B" increases to accommodate interference by the bridge substructure.



CONNECTION BRACKET DETAIL

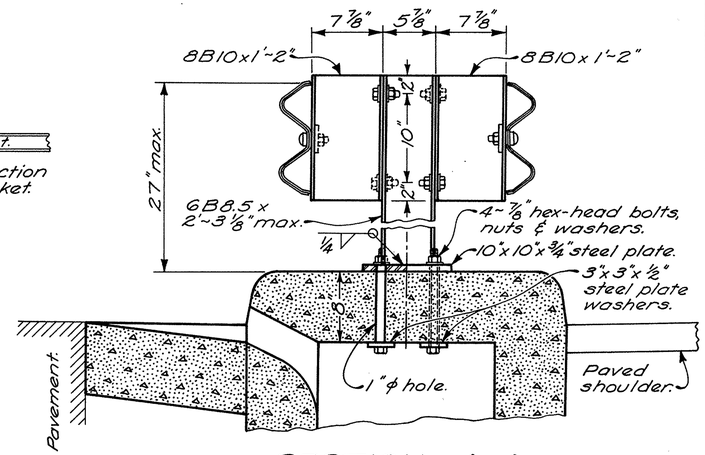
GUARDRAIL ~ BRIDGE CONNECTION

The connection bracket shall be galvanized after welding and shall be included with guardrail for payment.



Offset	Length	Offset	Length
1'~0"	25.00'	5'~0"	100.00'
2'~0"	50.00'	6'~0"	100.00'
4'~0"	100.00'	7'~0"	100.00'

GUARDRAIL OFFSET DETAIL



SECTION A-A

BARRIER RAIL MOUNTED ON MEDIAN INLET

This design shall be used for posts located over inlets regardless of the type of post used on the approaches.

BRIDGE TERMINAL ASSEMBLY

FED. RD.	STATE	PROJECT	
2	OHIO		

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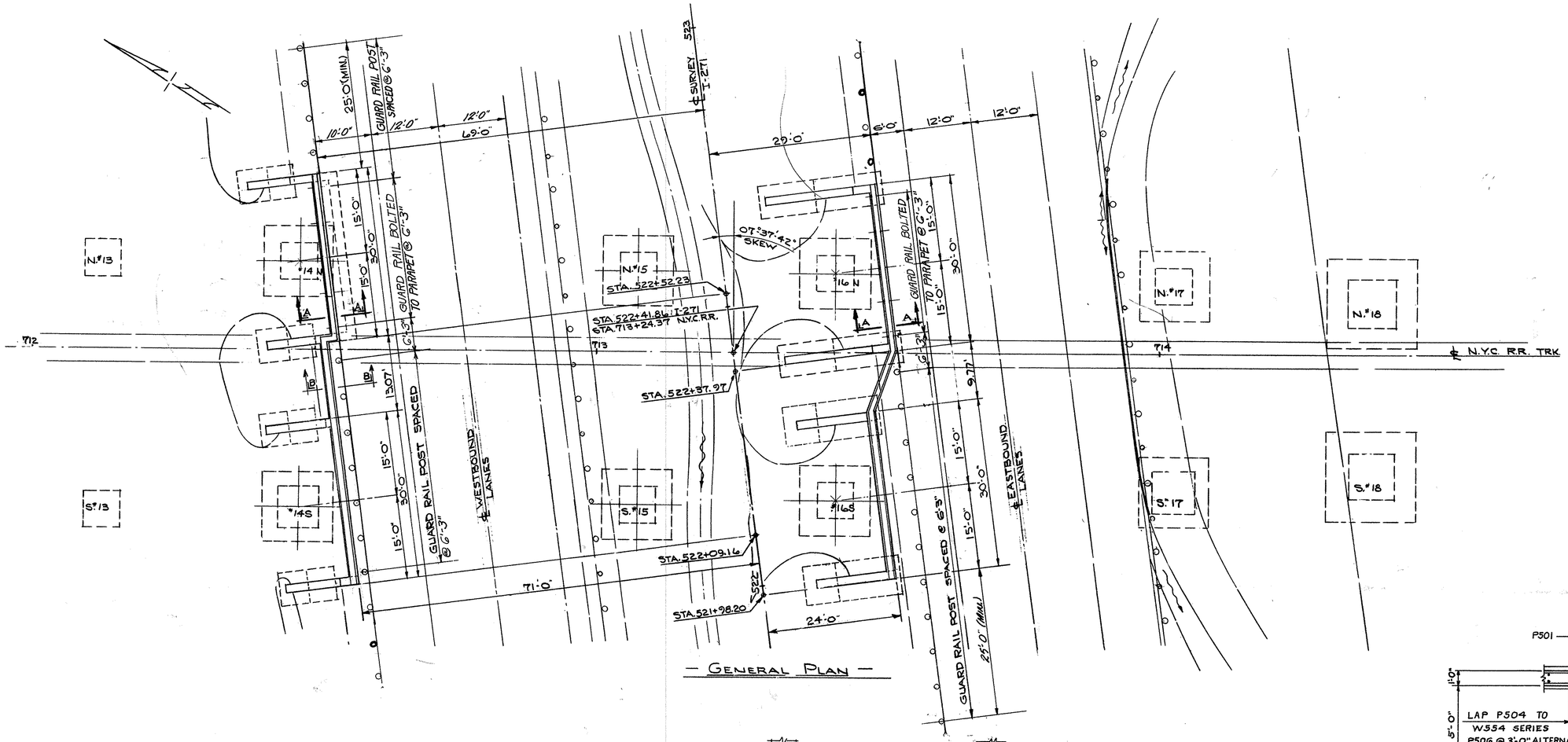
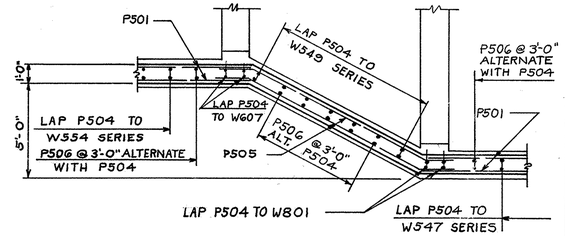


— GENERAL PLAN —

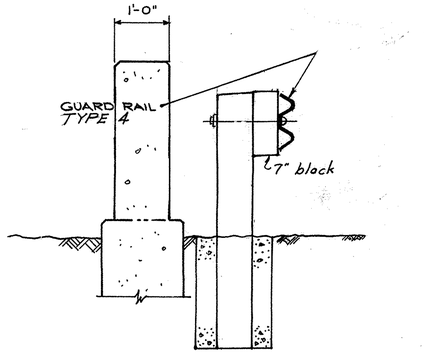


PARAPET DETAIL
AT WALL SECTION C-C
PAGE 224

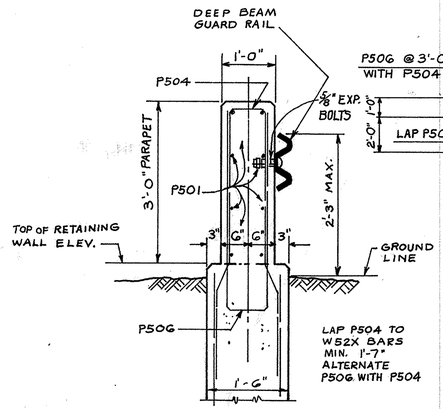
Note:

MAX. SOIL PRESSURE 4 TON/SQ FT.

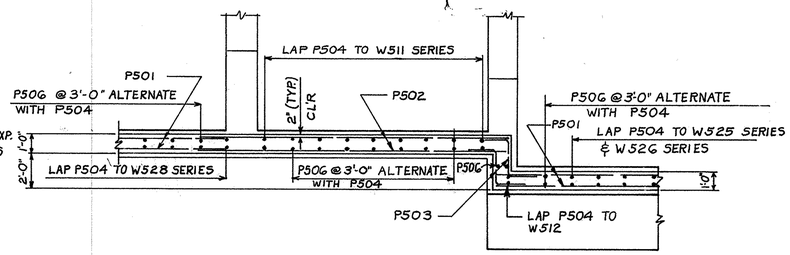
GUARD RAIL & POST TO BE INCLUDED WITH ROADWAY ITEM 606 FOR PAYMENT.



— GUARD RAIL DETAIL —
— SECTION B B



PARAPET DETAIL
SECTION A-A



PARAPET DETAIL
AT WALL SECTION C-C
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ESTIMATED QUANTITIES

ITEM	TOTAL	UNIT	DESCRIPTION
503	LUMP-	SUM	COFFERDAMS, CRIBS & SHEETING
503	152	CU.YDS.	SHALE EXCAVATION
503	530	CU.YDS.	UNCLASSIFIED EXCAVATION
509	30,639	LBS.	REINFORCING STEEL
511	16	CU.YDS.	Class "C" conc. parapet
511	234	CU.YDS.	CLASS "C" CONC. WALLS ABOVE FTG'S.
511	73	CU.YDS.	CLASS "E" CONC. WALL FOOTINGS.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

GENERAL PLAN
RETAINING WALLS @
N.Y.C. R.R. TRESTLE
SUMMIT COUNTY
STA. 521+98.20 To STA. 522+82.23

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
BMG.	JNP		9-7-66	GDW	9-14-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

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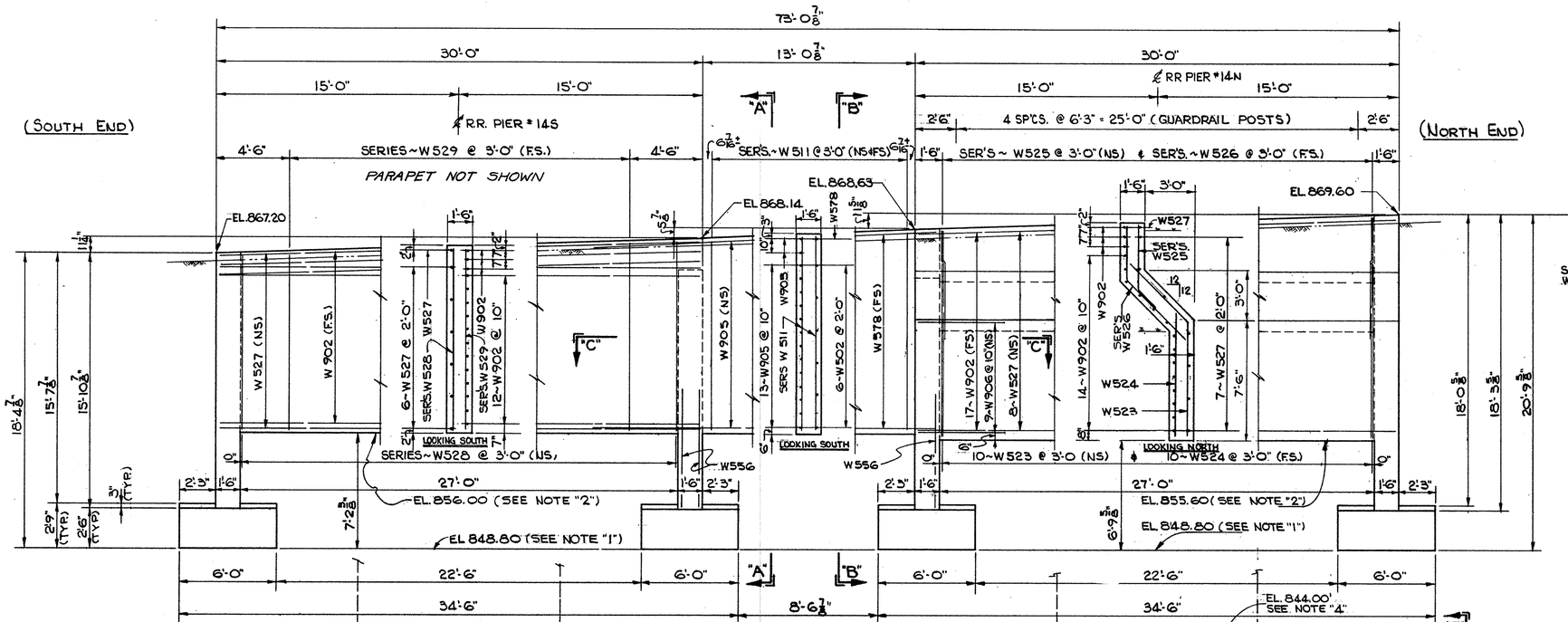
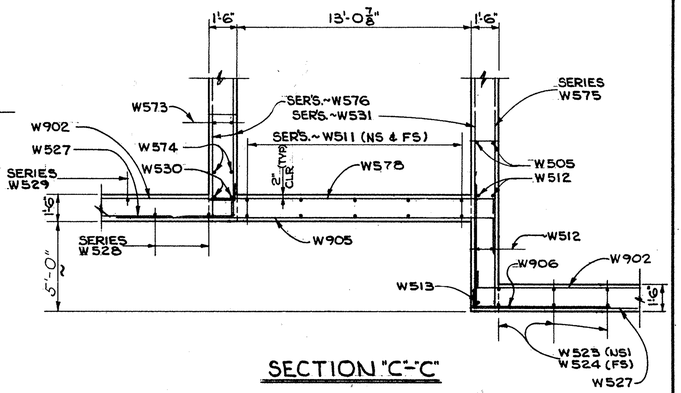
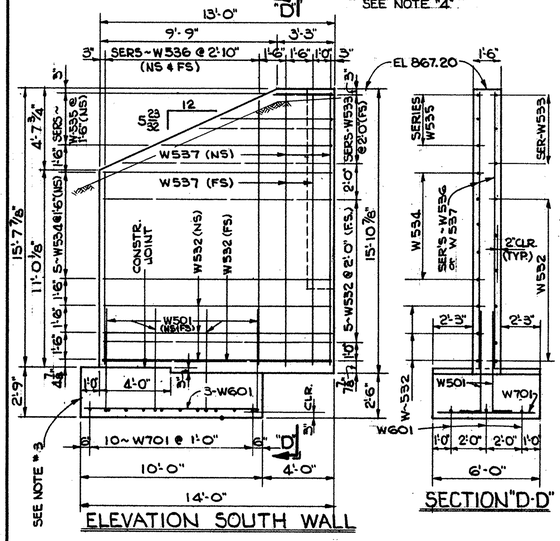


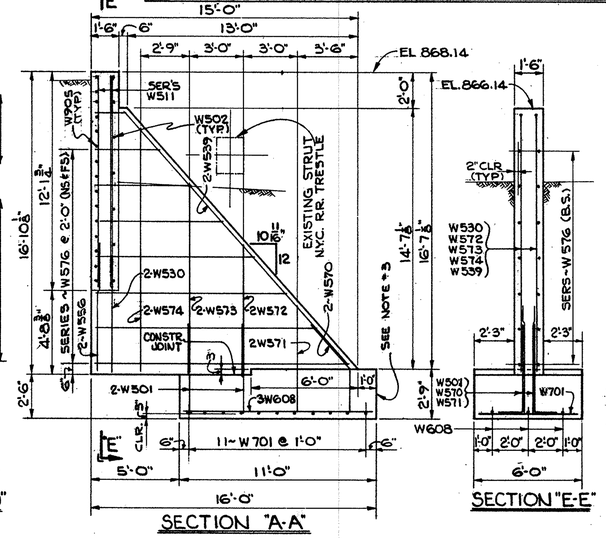
ELEVATION ~ RETAINING WALL @ PEDESTALS Nº 14N & Nº 14S



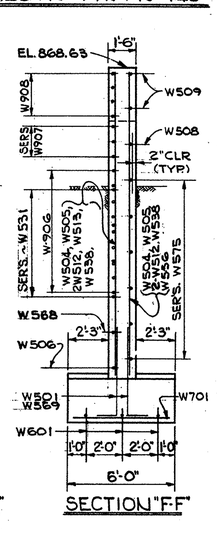
SECTION "C"-"C"



ELEVATION SOUTH WALL



SECTION "A-A"



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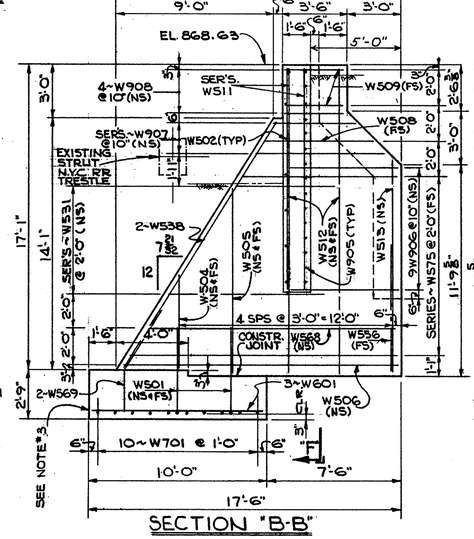

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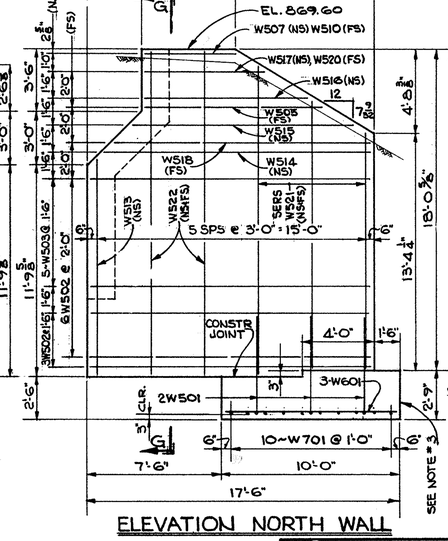
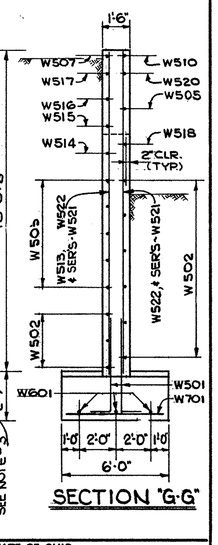


ELEVATION NORTH WALL



SECTION "G-G"

Notes:

1. THE BOTTOM OF FOOTING MUST BE 1'-0" MIN. BELOW THE TOP OF FIRM SHALE AND NOT MORE THAN 4'-0" ABOVE BOTTOM OF EXISTING R.R. PIER FOOTINGS.
2. THE BOTTOM OF WALL MUST BE 0'-3" MIN. BELOW TOP OF SHALE.
3. THIS EDGE MUST BE POURED AGAINST UNDISTURBED SHALE.
4. ESTIMATED ELEVATION OF EXISTING FOOTING TO BE TO BE VARIFIED BY CONTRACTOR.
5. *SEE PAGE 222 FOR PARAPET WALL DETAILS.*

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

RETAINING WALL DETAILS

RETAINING WALLS @
N.Y.C. R.R. TRESTLE
SUMMIT COUNTY
STA. 521+98.20 TO STA. 522+82.23

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
BHC	ALH		BHC	RDH	9-14-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

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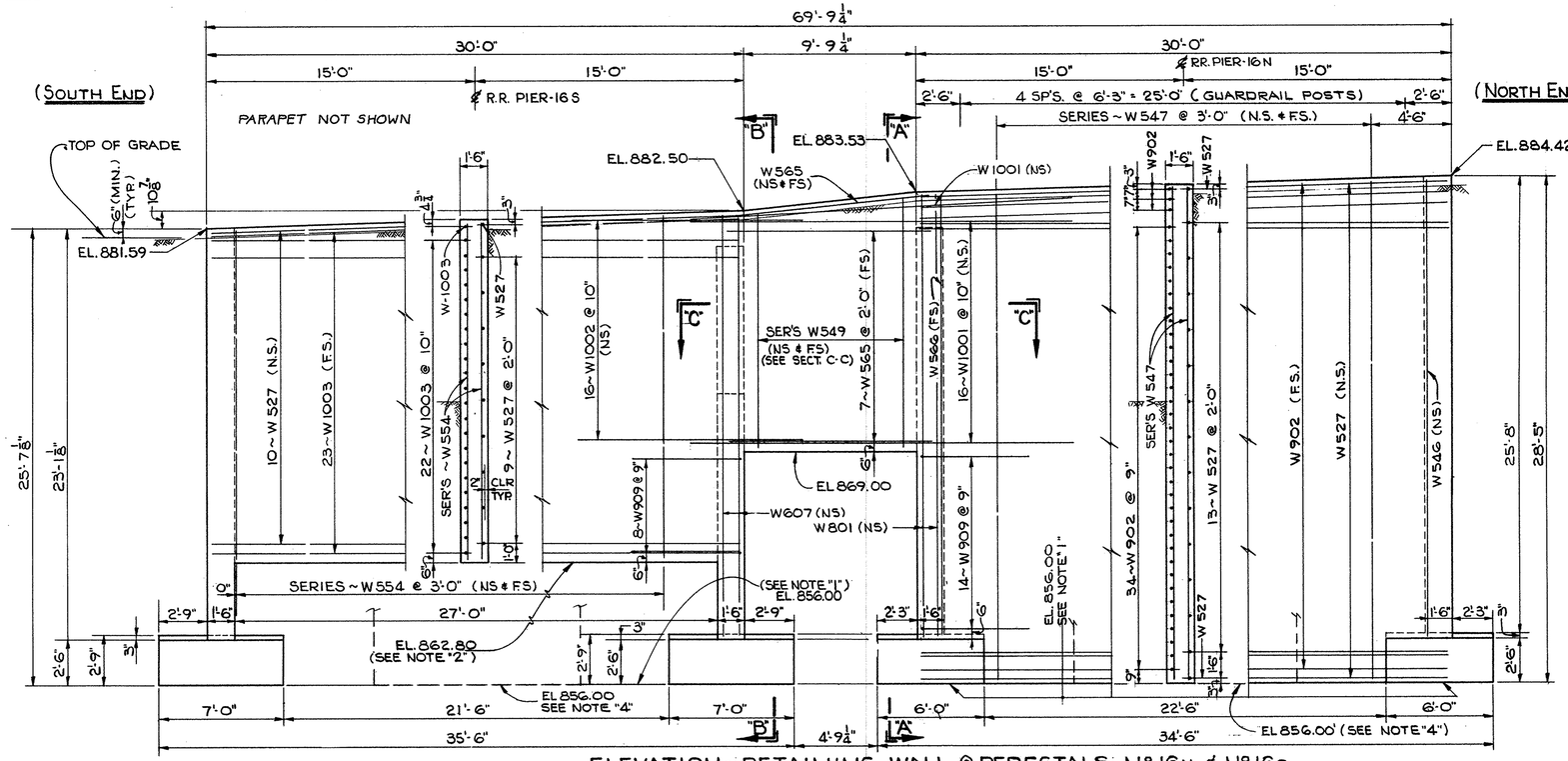
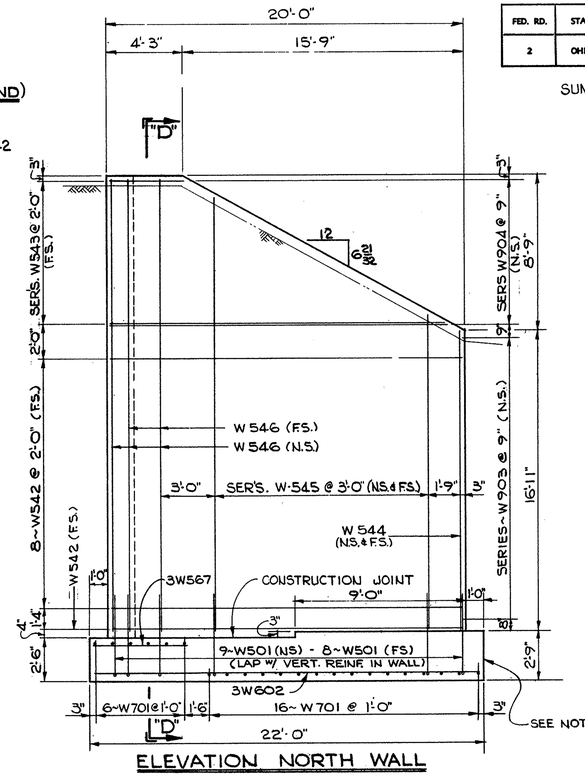
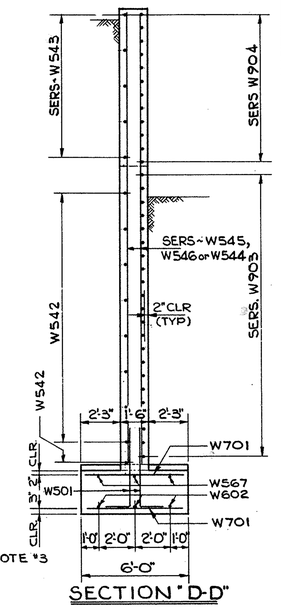


ELEVATION ~ RETAINING WALL @ PEDESTALS Nº 16N & Nº 16S



ELEVATION NORTH WALL



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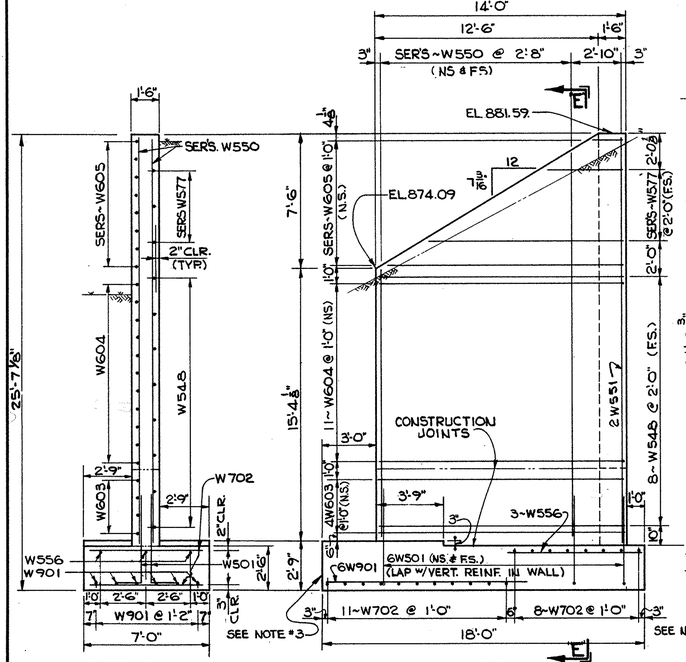
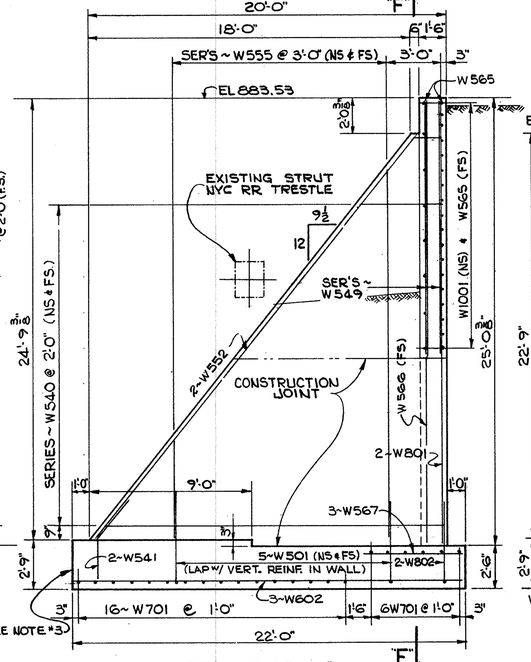


SECTION "E-E"

ELEVATION SOUTH WALL



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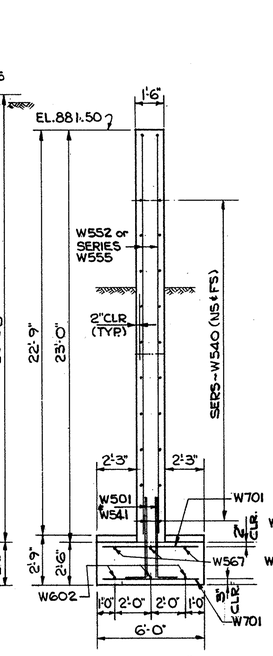

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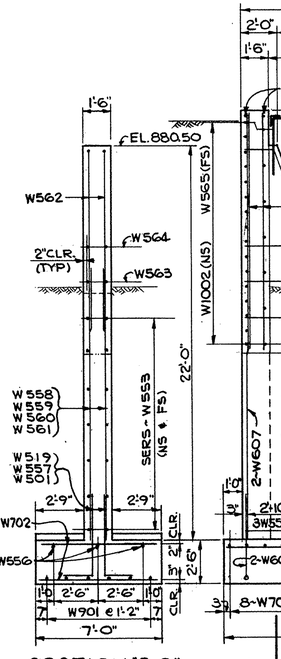

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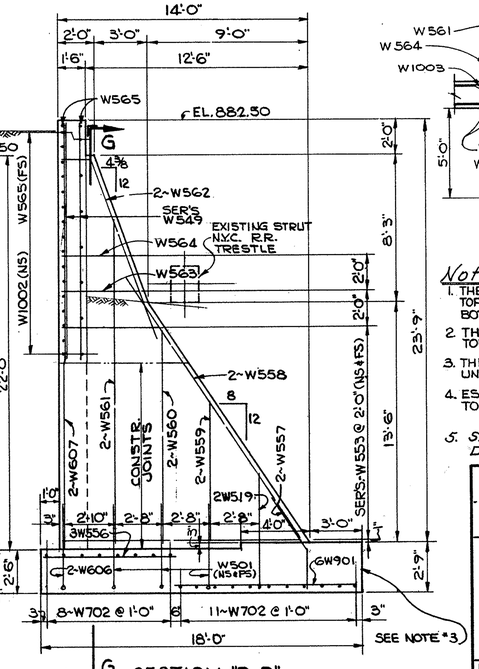
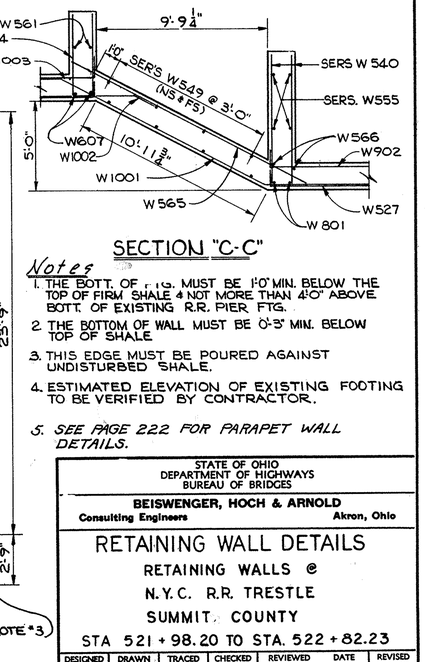


SECTION "B-B"



SECTION "C-C"

Notes

1. THE BOTT. OF FTG. MUST BE 1'-0" MIN. BELOW THE TOP OF FIRM SHALE & NOT MORE THAN 4'-0" ABOVE BOTT. OF EXISTING R.R. PIER FTG.
2. THE BOTTOM OF WALL MUST BE 0'-3" MIN. BELOW TOP OF SHALE.
3. THIS EDGE MUST BE POURED AGAINST UNDISTURBED SHALE.
4. ESTIMATED ELEVATION OF EXISTING FOOTING TO BE VERIFIED BY CONTRACTOR.
5. *SEE PAGE 222 FOR PARAPET WALL DETAILS.*

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

RETAINING WALL DETAILS

RETAINING WALLS @
N.Y.C. R.R. TRESTLE
SUMMIT COUNTY
STA 521 + 98.20 TO STA. 522 + 82.23

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
[illegible]	ALH		[illegible]	EDH	9-14-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

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MARK	NO. REQ'D.	LENGTH	TYPE	DIMENSIONS A	B	C	D	SERIES INCR.	WEIGHT LBS.
W-501	67	5'-0"	1	1'-0"	4'-1"				349
W-502	9	15'-8"	ST.						147
W-503	5	19'-7"	1	4'-0"	13'-8"				102
W-504	2	5'-5"	ST.						11
W-505	3	10'-0"	ST.						31
W-506	1	15'-4"	ST						16
W-507	1	9'-0"	1	4'-0"	5'-1"				9
W-508	1	6'-3"	ST.						6
W-509	2	3'-2"	ST.						6
W-510	1	5'-0"	ST.						5
SERIES OF W-511	2 SETS OF 5 BARS	11'-9" TO 12'-2½"	ST.					1⅜"	125
W-512	4	17'-0"	ST.						71
W-513	2	11'-10"	ST.						25
W-514	1	18'-9"	1	4'-0"	14'-10"				20
W-515	1	16'-2"	1	4'-0"	12'-3"				17
W-516	1	13'-2"	1	4'-0"	9'-3"				14
W-517	1	10'-8"	1	4'-0"	6'-9"				11
W-518	1	14'-3"	ST.						15
W-519	2	7'-6	1	6'-7"	1'-0"				16
W-520	1	6'-8"	ST.						7
SERIES OF W-521	2 SETS OF 3 BARS	13'-5" TO 17'-0"	ST.					1'-9½"	95
W-522	4	17'-11"	ST.						75
W-523	10	13'-1"	12	7'-3"	5'-11"	4'-0¾"			136
W-524	10	8'-0"	ST.						83
SERIES OF W-525	1 SET OF 10 BARS	5'-0½" TO 5'-11¾"	12	4'-1½" TO 5'-0¾"	1'-0"	8½"		1¼"	57
SERIES OF W-526	1 SET OF 10 BARS	8'-10½" TO 9'-7¾"	12	2'-10½" TO 3'-9¾"	5'-11"	3'-10½"		1¼"	96
W-527	40	31'-11"	3	29'-8"	1'-3"				1332
SERIES OF W-528	1 SET OF 10 BARS	10'-10¾" TO 11'-9½"	ST.					1¼"	118
SERIES OF W-529	1 SET OF 8 BARS	10'-11½" TO 11'-8¼"	ST.					1¼"	94
W-530	2	16'-6"	ST.						34
SERIES OF W-531	1 SET OF 4 BARS	4'-0" TO 8'-0"	ST.					1'-4"	25
W-532	9	12'-8"	ST.						119
SERIES OF W-533	1 SET OF 3 BARS	3'-2" TO 11'-6"	ST.					4'-2"	23
W-534	5	16'-7	1	4'-0"	12'-8"				86
SERIES OF W-535	1 SETS OF 3 BARS	7'-2" TO 13'-6"	1	4'-0"	3'-3" TO 9'-7"			3'-2"	32
SERIES OF W-536	2 SETS OF 4 BARS	10'-10" TO 14'-10"	ST.					1'-4"	107
W-537	4	15'-6"	ST.						65
W-538	2	18'-3"	12	16'-4"	2'-0"	1'-8¼"			38
W 539	2	20'-7"	12	19'-0"	1'-8"	1'-3"			43
SERIES OF W-540	2 SETS OF 10 BARS	5'-0" TO 19'-3"	ST.					1'-7"	253
W-541	2	4'-1"	12	2'-6"	1'-7	11 3/16"			9
W-542	9	19'-7"	ST.						184
SERIES OF W-543	1 SET OF 5 BARS	4'-1" TO 18'-5"	ST.					3'-7"	59
W-544	2	16'-10"	ST.						35
SERIES OF W-545	2 SETS OF 5 BARS	17'-9" TO 24'-6"	ST.					1'-8¼"	220
W-546	5	25'-9"	ST.						134
SERIES OF W-547	2 SETS OF 8 BARS	27'-3⅛" TO 27'-11⅜"	ST.					1⅛"	461
W-548	8	13'-7"	ST.						113
SERIES OF W-549	2 SETS OF 4 BARS	13'-3" TO 14'-0¾"	ST.					3½"	114
SERIES OF W-550	2 SETS OF 5 BARS	15'-5" TO 21'-11"	ST					1'-7½"	194
W-551	2	22'-9"	ST.						47
W-552	2	30'-2"	12	28'-6"	1'-8"	1'-3⅝"			63
SERIES OF W-553	2 SETS OF 7 BARS	5'-7 TO 13'-7"	ST.					1'-4"	140
SERIES OF W-554	2SETS OF 9 BARS	18'-5½" TO 19'-2½"	ST.					1⅛	354
SERIES OF W-555	2 SET OF 5 BARS	5'-6" TO 20'-6"	ST.					3'-9"	136
W 556	9	7'-0	ST						66
W 557	2	4'-1	12	2'-6	1'-7	10½"			9

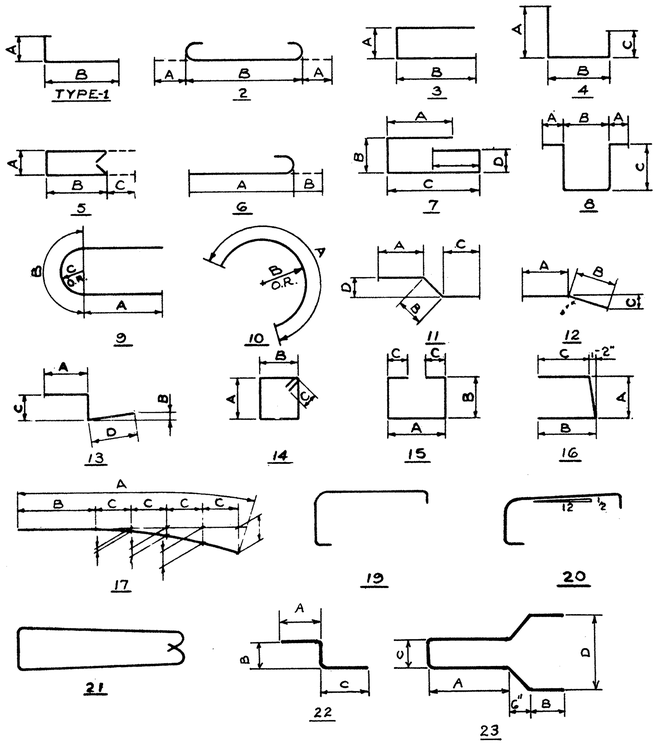
MARK	NO. REQ'D.	LENGTH	TYPE	DIMENSIONS A	B	C	D	SERIES INCR.	WEIGHT LBS.
W558	2	18'-6"	ST						39
W559	2	8'-3"	ST						17
W 560	2	12'-3"	ST						26
W 561	2	18'-3"	ST						38
W 562	2	12'-2"	12	10'-6"	1'-8"	1'-4¾"			26
W 563	1	9'-9"	3	1'-2"	4'-5"				10
W 564	1	8'-3"	3	1'-2"	3'-8"				9
W 565	9	14'-0"	ST.						131
W 566	1	24'-10"	ST.						25
W 567	6	6'-0"	ST.						38
W 568	1	14'-3"	ST.						15
W 569	2	4'-1"	12	2'-6"	1'-7"	10⅛"			9
W 570	2	4'-1"	12	2'-6"	1'-7"	1'-0⅜"			9
W 571	2	7'-1"	1	6'-2"	1'-0"				15
W 572	2	7'-3"	ST						15
W 573	2	10'-7"	ST						22
W 574	2	13'-11"	ST						29
SERIES OF W 575	1 SET OF 6 BARS	8'-9⅜" TO 15'-2"	ST					1'-3¼"	75
SERIES OF W 576	2 SETS OF 7 = 14 BARS	5'-9⅜" TO 14'-6"	ST.					1'-9⅜"	134
SERIES OF W 577	1 SET OF 3 BARS	4'-1 TO 10'-10"	ST					3'-4½	23
W 578	7	16'-4"	2	6"	15'-11"				119
W601	9	9'-6"	ST.						128
W602	6	21'-6"	ST.						194
W603	4	13'-8"	ST.						82
W604	11	17'-7"	1	4'-0"	13'-8"				291
SERIES OF W605	1 SET OF 8 = 8 BARS	5'-9" TO 17'-7"	1	4'-0"	1'-10⅛" TO 13'-8"			1'-8¼"	140
W606	2	5'-2"	1	1'-0"	4'-3"				16
W607	2	23'-10"	ST.						72
W608	3	10'-8"	ST.						47
W701	85	5'-6"	ST						956
W702	38	6'-6"	ST						505
W 801	2	24'-10	ST.						133
W 802	2	5'-10"	1	1'-0"	5'-0"				31
W-901	12	11'-0"	ST.						449
W-902	59	53'-10	3	29'-8"	2'-4"				6789
W-903	22	27'-6"	1	8'-0"	19'-8"				2057
SERIES OF W-904	1 SET OF 12 = 12 BARS	10'-2⅛" TO 25'-1"	1	6'-4"	4'-1¼" TO 19'-0"			1'-4¼"	721
W-905	15	22'-3"	1	2'-0"	20'-6"				1134
W 906	9	14'-9"	1	7'-6"	7'-6"				451
SERIES OF W-907	1 SET OF 3 = 3 BARS	11'-9" TO 14'-9"	1	4'-6" TO 7'-6"	7'-6"			1'-6"	135
W 908	4	10'-5	1	3'-2	7'-6"				142
W 909	22	11'-9"	1	6'-0"	6'-0"				879
W1001	17	23'-3"	11	1'-0"	13'-6"	8'-9"	6'-4"		1701
W1002	16	13'-0	12	1'-0"	12'-0	5½"			895
W1003	23	34'-3"	3	29'-8"	2'-7"				3390

MARK	NO. REQ'D.	LENGTH	TYPE	DIMENSIONS A	B	C	D	SERIES INCR.	WEIGHT LBS.
P501	32	29'-8"	ST.						990
P502	8	16'-2"	ST.						135
P503	8	4'-11"	22	1'-7"	2'-0"	1'-7"			41
P504	51	10'-3"	23	2'-10"	1'-7"	8"	1'-2"		545
P505	8	14'-2"	11	1'-7"	11'-0"	1'-7"	5'-0"		118
P506	49	7'-3"	3	8"	3'-8"				396

REPLACEMENT BARS

RE-401	—	5'-3"		
RE-501	1	5'-6"	ST.	
RE-601	1	6'-0"	ST.	
RE-701	1	6'-3"	ST.	
RE-801	1	6'-6"	ST.	
RE-901	1	6'-10"	ST	
RE-1001	1	7'-3"	ST	
RE-1101	—	7'-8"		

GRAND TOTAL 30639 LBS.



REINFORCING NOTES

BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST DIGIT WHERE THREE DIGITS ARE USED AND THE FIRST TWO DIGITS WHERE FOUR DIGITS ARE USED INDICATE THE BAR SIZE NUMBER. A-601 IS A NO. 6 SIZE BAR AND P-1001 IS A NO. 10 SIZE BAR.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

REINFORCING SCHEDULE

RETAINING WALLS @
N.Y.C. R.R. TRESTLE
SUMMIT COUNTY
STA. 521+98.20 To STA. 522+82.23

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
BH	JP		BH	RDH	9-19-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

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STRUCTURAL GENERAL NOTES

REFERENCE

REFERENCE SHALL BE MADE TO STANDARD DRAWINGS:

			BRIDGE
			BRANDYWINE ROAD
CSB-2-63	SHEETS 1 & 2 REVISED	12/8/65	OVER BRANDYWINE CREEK
BR-1-65	SHEET 1 REVISED	11/24/65	ALL BUT ABOVE
RB-1-55	REVISED	2/2/59	ALL
SD-1-65	SHEETS 1, 2, & 3 DATED	11/8/65	ALL
AS-1-54	REVISED	8/10/65	ALL
808	SUPPLEMENTAL SPEC. DATED	1/13/67	ALL
811	SUPPLEMENTAL SPEC. DATED	1/1/67	ALL
825	SUPPLEMENTAL SPEC. DATED	1/1/67	ALL
828	SUPPLEMENTAL SPEC. DATED	1/1/67	ALL

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.

DESIGN LOADING - SEE SITE PLANS

CONCRETE CLASS C	BASIC UNIT STRESS 1,333 p.s.i.
CONCRETE CLASS E	BASIC UNIT STRESS 1,133 p.s.i.
STRUCTURAL STEEL	ALL STRUCTURAL STEEL SHALL BE ASTM A 36, ASTM A 36-BASIC UNIT STRESS 20,000 p.s.i.
REINFORCING STEEL	ASTM A 15, A 16, A 160, DEFORMED, INTERMEDIATE OR HARD GRADE. BASIC UNIT STRESS 20,000 p.s.i. EXCEPT, SPIRAL REINFORCEMENT MAY BE PLAIN, STRUCTURAL GRADE WITH BASIC UNIT STRESS OF 18,000 p.s.i.

EXCAVATION QUANTITY - ALL BRIDGES EXCEPT SUM - 271 - 0914

EXCAVATION QUANTITY INCLUDES THE REMOVAL OF FILL MATERIAL REQUIRED FOR CONSTRUCTION OF THE ABUTMENTS.

PILES TO ROCK

BRIDGES
BRANDYWINE ROAD OVER BRANDYWINE CREEK
SUM 271-0966
SUM 271-1117 L & R
SUM 271-1122 L & R

PILES SHALL BE DRIVEN TO FIRM CONTACT WITH ROCK. IF THE LENGTH OF PENETRATION IS APPROXIMATELY EQUAL TO THE DEPTH TO ROCK ACCORDING TO THE BRIDGE FOUNDATION INVESTIGATION REPORT, THE FIRM CONTACT SHALL BE CONSIDERED AS ATTAINED WHEN THE CAPACITY ACCORDING TO THE FORMULA IN SEC. 507.05 IS NOT LESS THAN THE FOLLOWING VALUE FOR A PILE HAMMER OF THE INDICATED ENERGY RATING.

55 TONS PER PILE USING A 7,000 FT. LB. HAMMER
50 TONS PER PILE USING AN 11,000 FT. LB. HAMMER
45 TONS PER PILE USING A 15,000 FT. LB. HAMMER OR GREATER

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.

FOOTINGS TO ROCK

FOOTINGS SHALL EXTEND A MINIMUM OF 3" INTO UNDISTURBED ROCK OR TO THE ELEVATION SHOWN, WHICHEVER IS LOWER, FOR THE FOLLOWING SUBSTRUCTURES.

BRANDYWINE ROAD OVER BRANDYWINE CREEK	ABUT NO. 1 & PIERS
SUM 271-0966	PIERS
SUM 271-1117 L/R	PIERS
SUM 271-1122 L/R	PIERS

FOUNDATION BEARING PRESSURE

FOOTINGS ARE DESIGNED FOR A MAXIMUM BEARING PRESSURE OF "A" TONS PER SQ. FT.

BRIDGE	A	
	ABUTS	PIERS
SUM 271-0854 L/R	1.5	-----
SUM 271-0914	2.5	2.5
BRANDYWINE ROAD OVER BRANDYWINE CREEK	No. 1 Only 5	6
SUM 271-0966	------	4
SUM 271-1117 L/R	------	6
SUM 271-1122 L/R	------	6

MACHINE FINISH

THE CONCRETE BRIDGE DECK SHALL BE FINISHED BY THE USE OF A FINISHING MACHINE.

UTILITY LINES

ALL EXPENSE INVOLVED IN RELOCATING THE AFFECTED UTILITY LINES SHALL BE BORNE BY THE OWNERS. THE CONTRACTOR AND OWNERS ARE REQUESTED TO COOPERATE BY ARRANGING THEIR WORK IN SUCH A MANNER THAT INCONVENIENCE WILL BE HELD TO A MINIMUM.

EMBANKMENT PROCEDURE - SUM 271-0966, SUM 271-1117 L/R, SUM 271-1122 L/R

THE EMBANKMENT SHALL BE PLACED AND COMPACTED UP TO THE FINISHED SPILL-THROUGH 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 ABUTMENTS AND FOR PIERS THAT ARE SET IN THE FILLED AREA, AND PILES DRIVEN.

BRIDGE SEAT REINFORCING

SPECIAL CARE SHALL BE TAKEN IN PLACING REINFORCING STEEL IN THE VICINITY OF THE BRIDGE SEAT TO AVOID INTERFERENCE WITH THE DRILLING OF ANCHOR BAR HOLES.

SLAB THICKNESS

SLAB THICKNESS SHOWN INCLUDES 1" FOR MONOLITHIC WEARING SURFACE.

DECK SLAB HAUNCH

A TYPICAL HAUNCH WIDTH OF 9" SHALL BE USED FOR COMPUTING QUANTITY OF CONCRETE. HOWEVER, THE HAUNCH WIDTH MAY VARY BETWEEN 6" AND 12" PROVIDED THAT THE SLOPE SHALL BE NOT MORE THAN 1:4 FOR A HAUNCH LESS THAN 9" IN WIDTH.

SLAB DEPTH OVER BEAMS

THE DIMENSION SHOWN FROM THE TOP OF THE DECK SLAB TO THE TOP FLANGE OF THE BEAMS IS THE NOMINAL DIMENSION. THE QUANTITY OF DECK CONCRETE TO BE PAID FOR SHALL BE BASED UPON 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. DEDUCTION SHALL BE MADE FOR VOLUME OF ENCASED STEEL, AS PER ITEM 511.19 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS.

RAILING: Anchor bolts for fastening guardrail connector brackets to bridge parapets are shown on sheet 221B and are to be included for payment in the unit price bid for Item 517, railing, Type 1.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER & HOCH, Consulting Engineers
AKRON, OHIO

STRUCTURAL GENERAL NOTES

SUM-271-8.29

SUMMIT COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
		L.S.	R.D.H.	RDH	2-21-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

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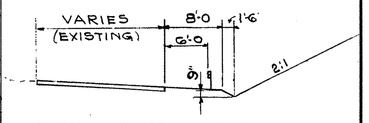
SUM-271-8.29

CURVE DATA

℄ R/W C.R. # 32

P.C. STA. 15+46.19
Δ = 62°-30'-00"
Dc = 18°-00'-00"
R = 318.31'
T = 193.17'
Lc = 347.22'



TYPICAL SECTION THRU
CR. # 32

VERTICAL CLEARANCE
REQUIRED 14'-6"
ACTUAL - 25.96'

HORIZONTAL CLEARANCE (8'-0" REQUIRED)	
A	ACTUAL - 16.46'
B	ACTUAL - 12.92'
C	ACTUAL - 24.88'
D	ACTUAL - 25.50'

PROPOSED STRUCTURE

TYPE: CONTINUOUS STEEL BEAM, WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE.
SKEW: 27°00 R.F. LEFT STRUCTURE
7° 30' R.F. RIGHT STRUCTURE
SPANS: LEFT STRUC. 57'0"-71'6"-57'0" ℄ BRG.
RIGHT STRUC. 48'6"-61'0"-48'6" ℄ BRG
ROADWAY: 40'0" F/F PARAPETS, 1'0 CURBS
LOAD FREQUENCY: CF=2000 ADEQUATE FOR A.A.S.H.O. ALTERNATE LOADING.
WEARING SURFACE: 1" MONOLITHIC
APPROACH SLABS: 25'0" LONG (AS-1-54)
ALIGNMENT: TANGENT
SUPERELEVATION: NONE
SLOPE PROTECTION: CRUSHED AGGREGATE

TRAFFIC: 15,080 - 1975 A.D.T. I-271
400 - 1975 A.D.T. CR 32

AVERAGE ESTIMATED PAY LENGTH OF 12" ϕ CAST IN PLACE CONCRETE PILES
FWD. ABUTMENT - 85'
PIERS - 65'

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

SITE PLAN

BRIDGE NO SUM-271-0854 L&R
I-271 OVER C.R # 32
SUMMIT COUNTY
STA. 449+33.68 TO STA. 451+24.24 - L
STA. 449+47.62 TO STA. 451+10.16 - R

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
KSJ	ROSE			BWA	10-19-66	

EL 700.62
EL 701.29
EL 702.00
EL 702.97
EL 703.92
EL 705.35
EXISTING PROFILE LEFT EDGE OF PAVEMENT
⊗ INDICATE EXISTING EL AT LEFT EDGE OF EXISTING PAVEMENT
EXISTING BOSTON MILLS RD. (C.R. #32)
13°-57'-40" SKEW TO ℄ R.W.
STA. 150+3.59 ℄ I-271
STA 17+39.65 ℄ R.W. C.R. #32
76°02'-20" TO LOC. TAN.
57'-0"
71'-6"
SLOPE PROTECTION
℄ HINGE
40'0" F/F PARAPETS
℄ WESTBOUND LANES
END APPROACH SLAB STA. 449+33.68 WESTBOUND LANE
24'-0" MEDIAN
END APPROACH SLAB STA. 449+47.62 EASTBOUND LANE
VARY
BEGIN APPROACH SLAB STA. 451+24.24 WESTBOUND LANE
℄ SURVEY I-271
BEGIN APPROACH SLAB STA. 451+10.16 EAST BOUND LANE
℄ EASTBOUND LANES
27°
30'-4 9/16"
25'-2 3/8"
63°
15" CMP
7°30'
VARIES
48'-6"
61'-0"
48'-6"
PROPOSED 48" C.M.P.
℄ R.W.
30"ϕ
PT. OF MIN. VERTICAL CLEARANCE

EL. 731.68
EL. 732.52
EL. 733.48
EL. 734.56
EL. 735.76
P.V.I. STA. 445+50.00
EL. 720.52
-3.00%
+2.76%
190.56' BRIDGE LIMITS
1200' V.C. L. STRUC.
BRIDGE RAILING TYPE 1
PROPOSED PROFILE GRADE
EL. 718.68
EL. 725.83 ℄ HINGE
2:1 NORMAL
EL. 729.40
VARIES
EL. 723.37
EL. 694.45
EXISTING PROFILE ℄ E.W.B. LANE
EL. 698.81
449+00
450+00
451+00
ELEVATION LEFT STRUCTURE

P.V.I. STA. 443+75.00
EL. 715.69
-3.00%
+2.76%
EL. 731.57
P.V.T. STA. 449+75
EL. 732.25
EL. 732.94
EL. 734.32
EL. 735.70
EL. 737.08
1200' V.C. R. STRUC.
162.54' BRIDGE LIMITS
BRIDGE RAILING TYPE 1
EL. 718.83
EL. 725.98 ℄ HINGE
2:1 NORMAL
EL. 730.18
EL. 724.15
EXISTING PROFILE ℄ E.B. LANE
EL. 696.04
EL. 700.93
48"ϕ C.M.P.
730
710
690
450+00
451+00
ELEVATION RIGHT STRUCTURE

FED. RD.	STATE	PROJECT	
2	OHIO		

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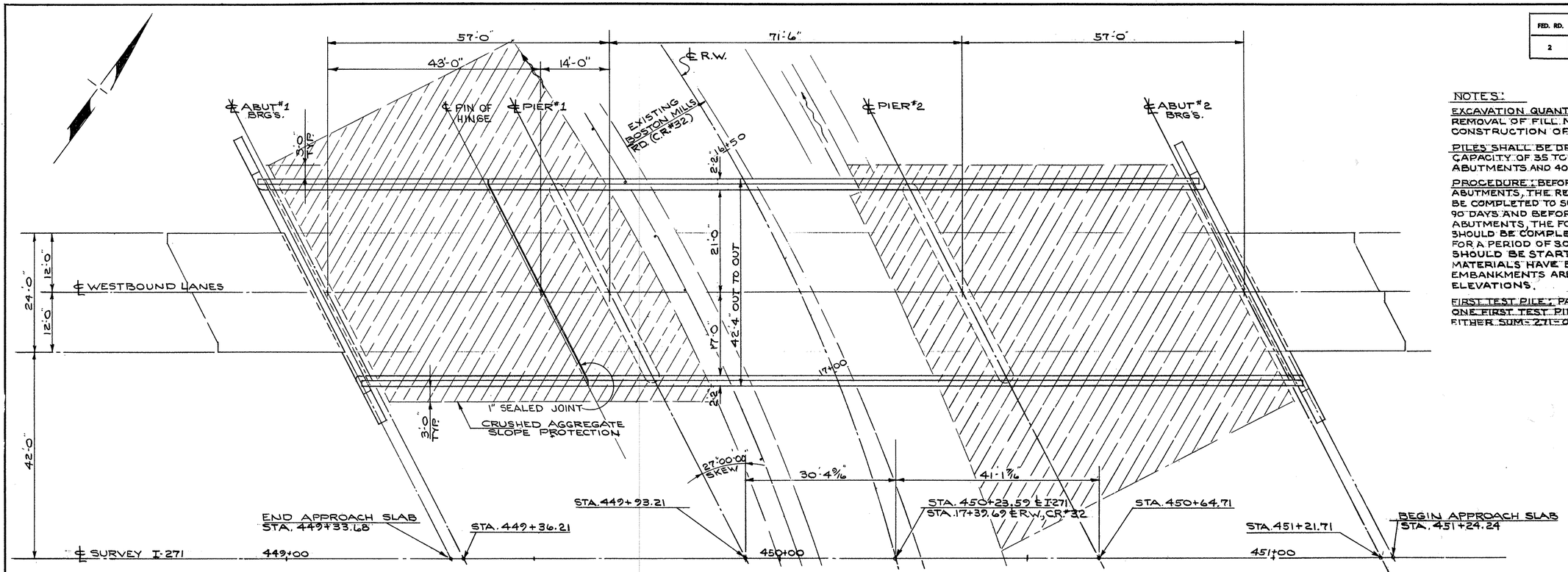
NOTES:

EXCAVATION QUANTITY FOR THE PIERS INCLUDES THE REMOVAL OF FILL MATERIAL REQUIRED FOR CONSTRUCTION OF THE PIERS.

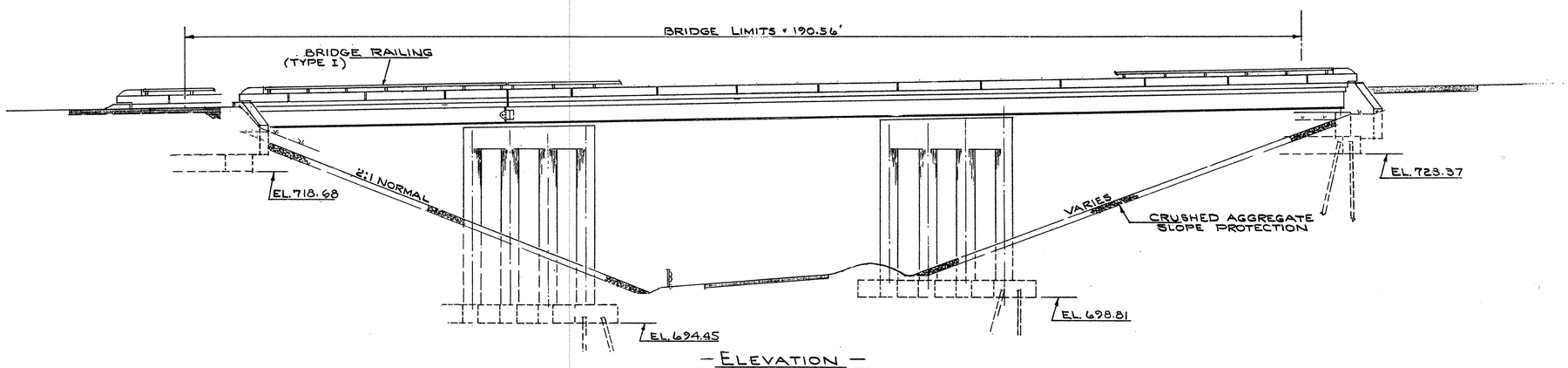
PILES SHALL BE DRIVEN TO A MINIMUM BEARING CAPACITY OF 35 TONS PER PILE FOR THE FORWARD ABUTMENTS AND 40 TONS PER PILE FOR THE PIERS.

PROCEDURE: BEFORE CONSTRUCTING THE REAR ABUTMENTS, THE REAR APPROACH EMBANKMENT SHOULD BE COMPLETED TO SUBGRADE ELEVATIONS FOR A PERIOD OF 90 DAYS AND BEFORE CONSTRUCTING THE FORWARD ABUTMENTS, THE FORWARD APPROACH EMBANKMENT SHOULD BE COMPLETED TO SUBGRADE ELEVATIONS FOR A PERIOD OF 30 DAYS. NO PIER CONSTRUCTION SHOULD BE STARTED UNTIL THE UNSUITABLE MATERIALS HAVE BEEN REMOVED AND THE EMBANKMENTS ARE BUILT TO SUBGRADE ELEVATIONS.

FIRST TEST PILE: PAYMENT WILL BE MADE FOR ONLY ONE FIRST TEST PILE, ITEM 505, IT MAY BE DRIVEN AT EITHER SUM-271-0854 L OR SUM-271-0854 R.



— PLAN —



— ELEVATION —

— ESTIMATED QUANTITIES —

ITEM	TOTAL	UNIT	DESCRIPTION	SUPER	ABUTS.	PIERS	GEN.
503	371	CU.YD.	UNCLASSIFIED EXCAVATION		259	112	
505	LUMP	SUM	FIRST TEST PILE				L.S.
507	3780	LIN.FT.	12"ϕ CAST-IN-PLACE REINF. CONC. PILES		920	2860	
509	107,871	LBS	REINFORCING STEEL	70,302	10,409	27,160	
511	248	CU.YD.	CLASS "C" CONC. SUPERSTUCTURE	248			
511	121	CU.YD.	CLASS "E" CONC. ABUTS. ABOVE FOOTINGS		121		
511	89	CU.YD.	CLASS "C" CONC. PIERS ABOVE FOOTINGS			89	

ITEM	TOTAL	UNIT	DESCRIPTION	SUPER	ABUTS.	PIERS	GEN.
511	119	CU.YD	CLASS "E" CONC. PIER & ABUT. FOOTINGS		66	53	
512	18	LIN.FT.	PREMOLDED SEALING STRIP		18		
513	245,400	LBS	STRUCTURAL STEEL	245,400			
514	245,400	LBS	FIELD PAINTING OF STRUCT. STEEL	245,400			
516	47	LIN.FT.	PREFORMED ELASTIC JOINT SEALER AND LUBRICATING ADHESIVE	47			
517	381.17	LIN.FT.	BRIDGE RAILING. (TYPE "1")	381.17			
518	71	CU.YD	POROUS BACKFILL		71		
518	7	EACH	SCUPPER (INCLUDING SUPPORTS)	7			

ITEM	TOTAL	UNIT	DESCRIPTION	SUPER	ABUTS.	PIERS	GEN.
518	92	LIN.FT.	6"ϕ PERFORATED HELICAL C.M.P. 707.06, INCLUDING SPECIALS		92		
518	76	LIN.FT.	6"ϕ NON-PERF. HELICAL C.M.P. 707.06		76		
601	1110	SQ.YD.	CRUSHED AGGREGATE SLOPE PROTECTION		1110		
808	248	UNITS	WATER REDUCING SET RETARDING ADMIXTURE	248			
825	990	SQ.YD.	CONCRETE SURFACE TREATMENT				990
828	86	LIN.FT.	JOINT SEALER		86		

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

GENERAL PLAN & ELEVATION

BRIDGE Nº SUM-271-0854 L.
I-271 OVER CR. Nº 32
SUMMIT COUNTY
STA. 449+33.68 TO STA. 451+24.24 - L

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
KSJ	LNP		10-14-66	RDH	10-14-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

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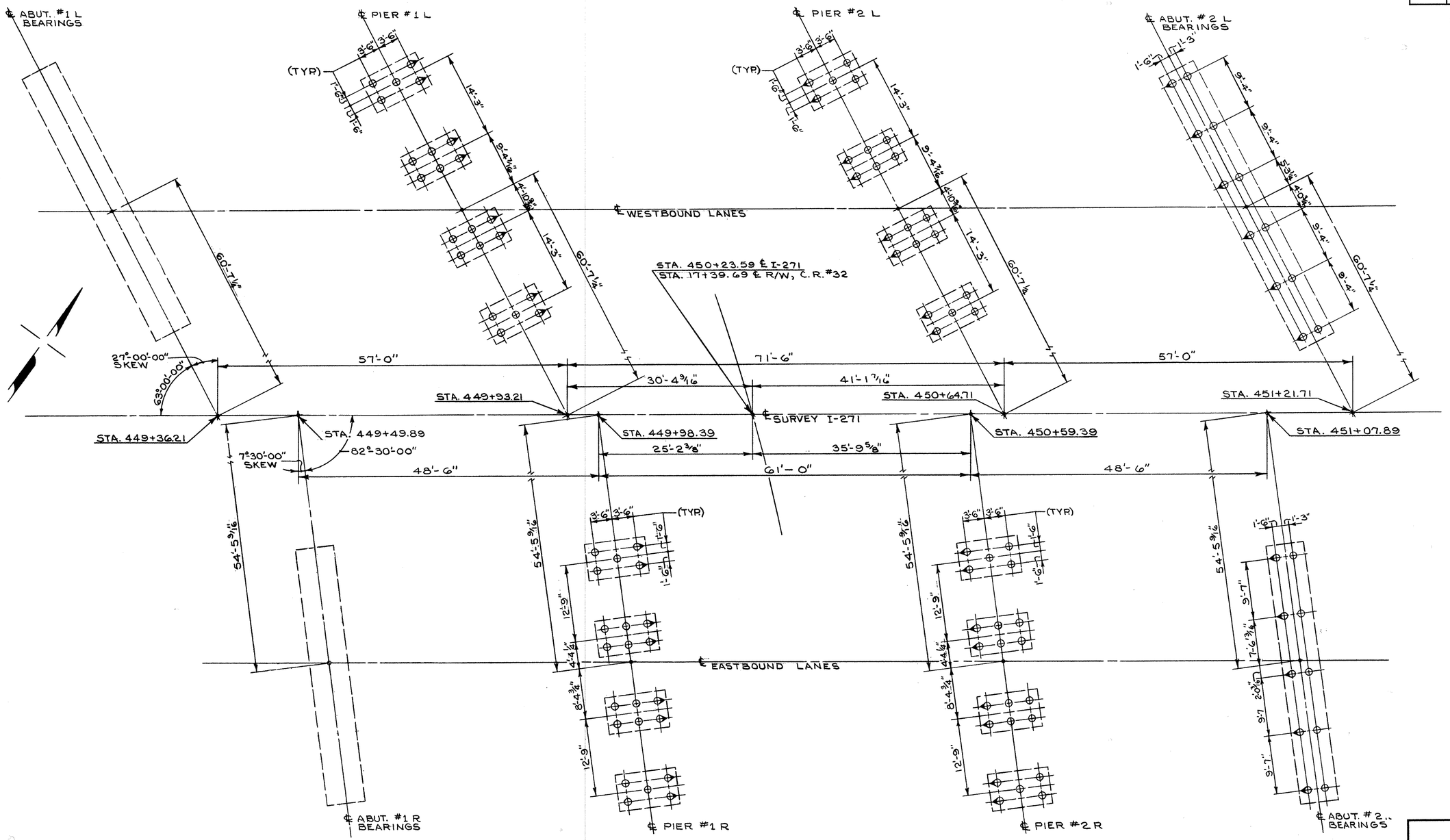
SUM-271-8.29



—PILING PLAN—

◁O-INDICATES DIRECTION OF 1:4 BATTER OF PILES—

—ALL PILES TO BE 12" DIA. CAST-IN-PLACE REINFORCED CONCRETE PILES—

PILE CUT-OFF ELEVATIONS		
LOCATION	LEFT STRUCT.	RIGHT STRUCT.
PIER #1	695.45	697.04
PIER #2	699.81	701.93
ABUT #2	725.37	726.15

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

PILING PLAN
LEFT & RIGHT STRUCTURES

BRIDGE Nº SUM-271-0854 L. & R.
I-271 OVER CR. Nº 32
SUMMIT COUNTY
STA. 449+33.68 TO STA. 451+24.24 - L
STA. 449+47.62 TO STA. 451+10.16 - R

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
KSJ	BMR		RBH	RBH	10-18-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

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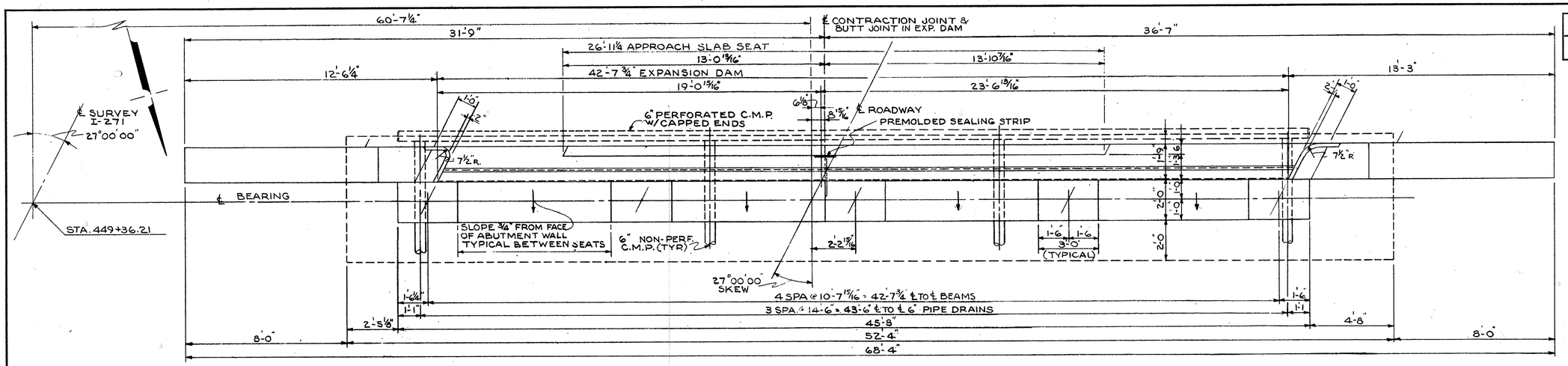
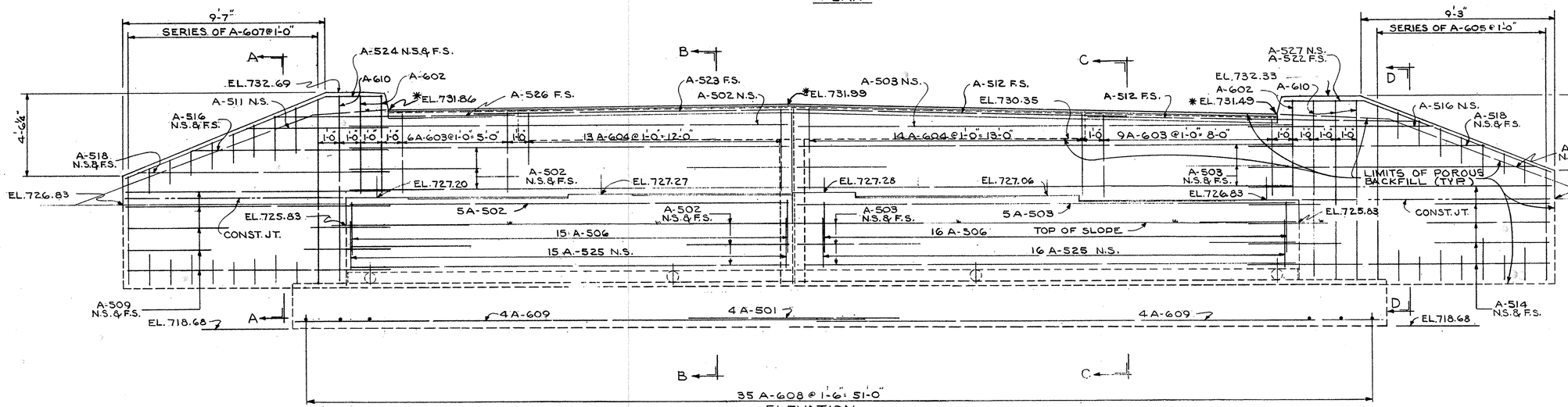
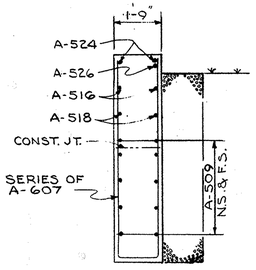
SUM.- 271- 8.29



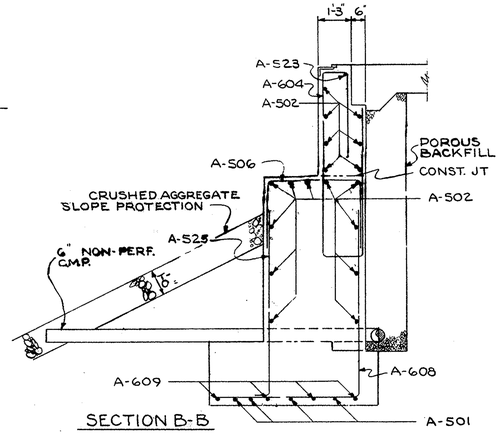
PLAN



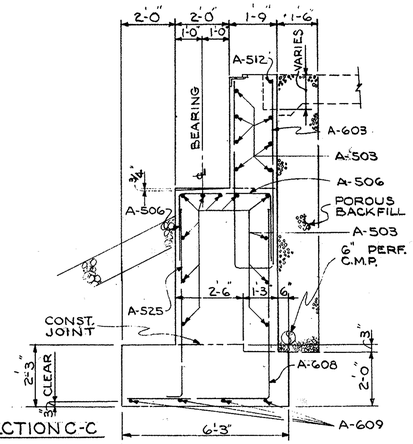
ELEVATION



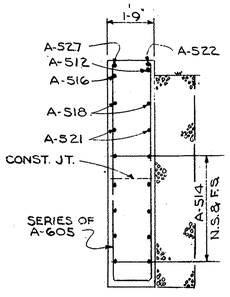
SECTION A-A



SECTION B-B



SECTION C-C



SECTION D-D

POROUS BACKFILL 1'-6" THICK SHALL EXTEND FROM THE TOP OF THE FOOTING UPWARD TO THE UNDERSIDE OF THE APPROCH SLAB AND TO THE EARTH SHOULDERS, AND OUTWARD TO THE EMBANKMENT SLOPES. EXCAVATION, THEREFORE, IN EXCESS OF THAT REQ'D. FOR CONST. OF THE ABUT., SHALL BE CONSIDERED AS PAID FOR IN THE BID PRICES PER CU. YD. PAID FOR POROUS BACKFILL.

* INDICATES FINISHED PAVEMENT ELEVATIONS AT FACE OF BACKWALL.

SEE ABUTMENT #1 RIGHT STRUCTURE FOR CONTRACTION JOINT DETAILS.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

ABUTMENT Nº1

BRIDGE Nº SUM-271-0854 L.
I-271 OVER C.R. Nº32
SUMMIT COUNTY
STA. 449+33.68 TO STA. 451+24.24 - L

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
KSJ	JLH			RDH	10-14-66	

K&E

FED. RD.	STATE	PROJECT	
2	OHIO		

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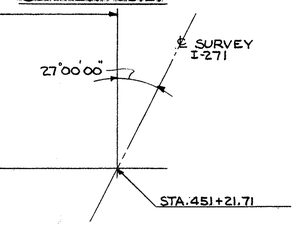
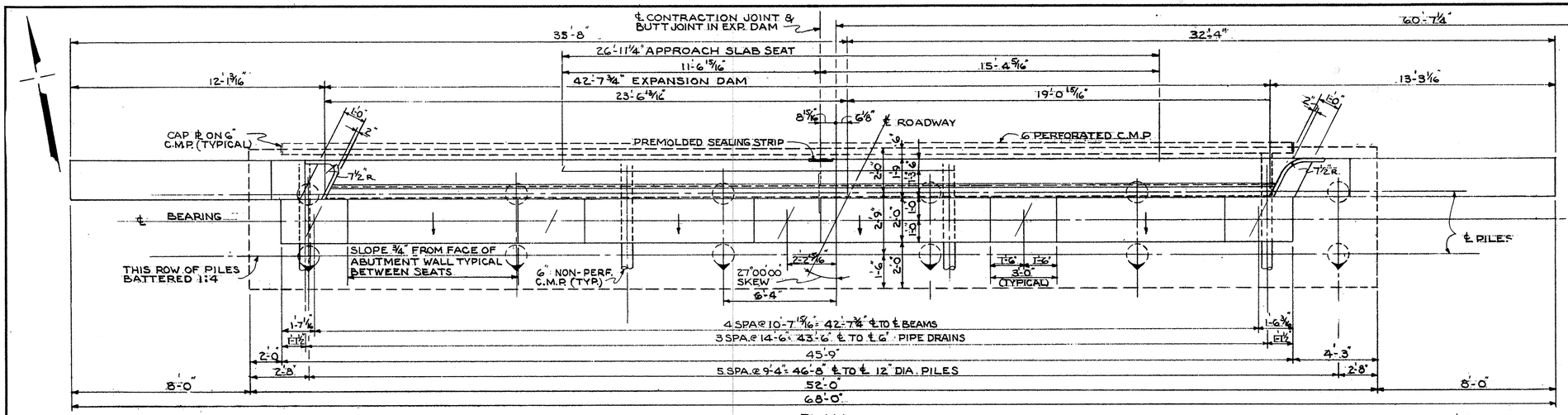
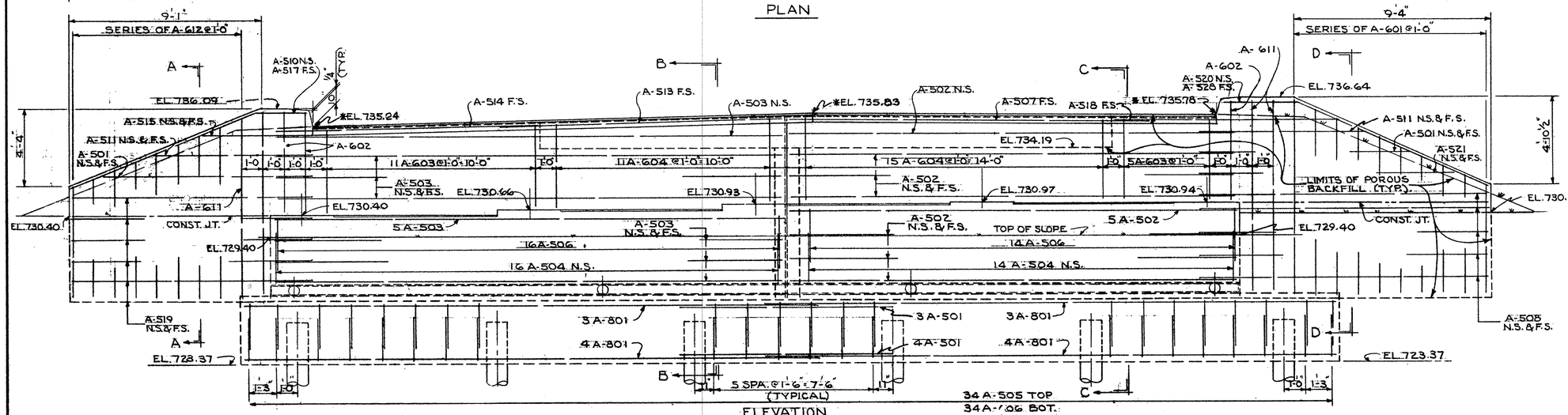
SUM.-271-08.29

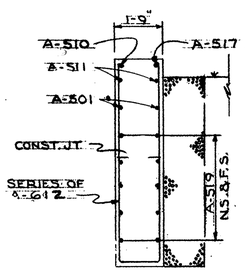




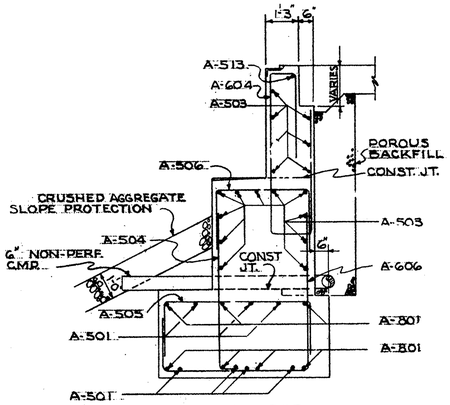
PLAN



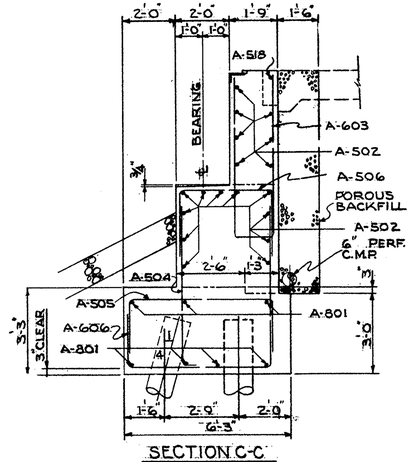
ELEVATION



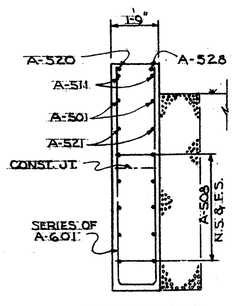
SECTION A-A



SECTION B-B



SECTION C-C



SECTION D-D

SEE SHT. # 230 FOR POROUS BACKFILL NOTE.

* INDICATES FINISHED PAVEMENT ELEVS. AT FACE OF BACKWALL.

SEE ABUT. 1 RIGHT STRUCTURE FOR CONTRACTION JOINT DETAILS

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

ABUTMENT Nº2

BRIDGE Nº SUM-271-0854 L.
I-271 OVER CR. Nº32
SUMMIT COUNTY
STA. 449+33.68 TO STA. 451+24.24 - L

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
KSJ	JLH			RSH	10-18-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

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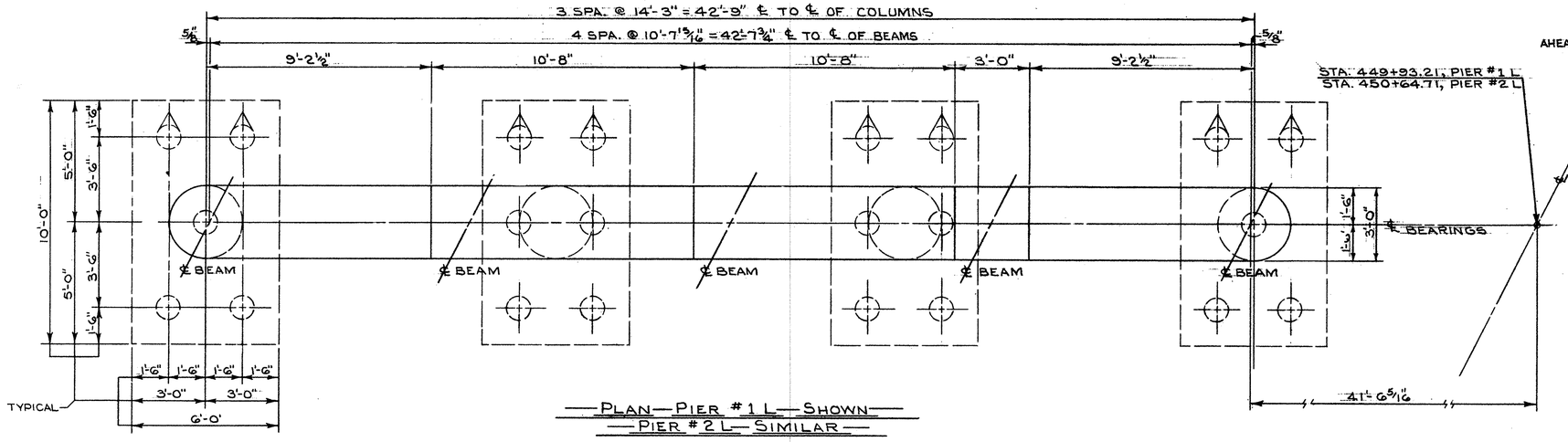
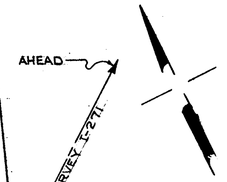
SUM-271-8.29

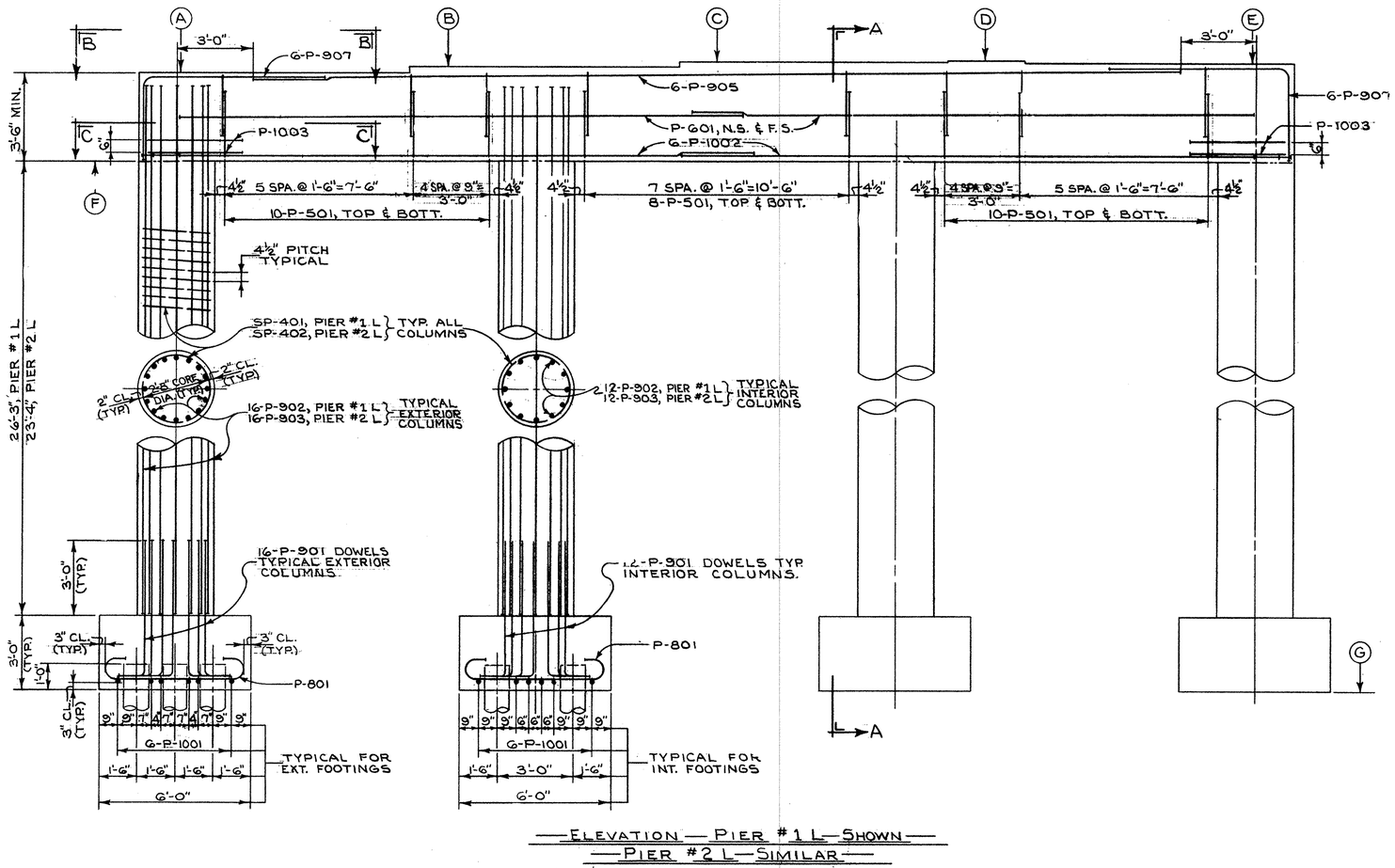




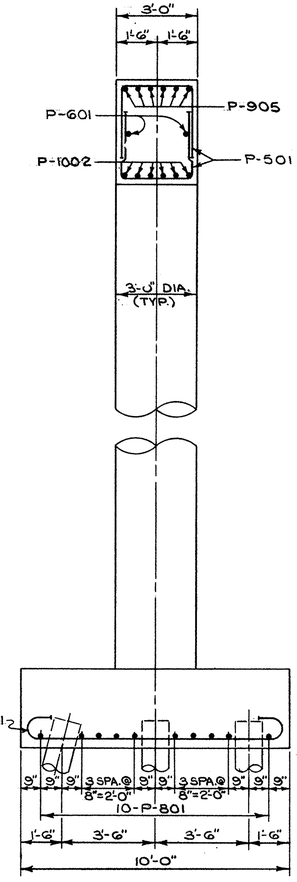
—PLAN— PIER #1 L —SHOWN—
—PIER #2 L— SIMILAR

—ELEVATION TABLE—

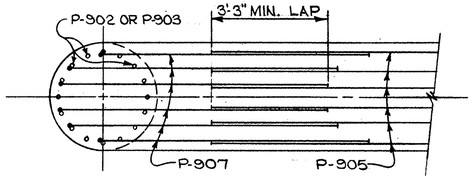
	A	B	C	D	E	F	G
PIER #1L	727.23	727.47	727.70	727.71	727.65	723.71	694.45
PIER #2L	728.63	728.88	729.13	729.16	729.12	725.13	698.81



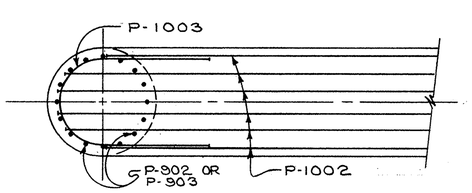
—ELEVATION— PIER #1 L —SHOWN—
—PIER #2 L— SIMILAR



—SECTION "A-A"—



—VIEW "B-B"—



—SECTION "C-C"—

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

PIERS

BRIDGE Nº SUM-271-0854 L.
I-271 OVER CR. Nº 32
SUMMIT COUNTY
STA. 449+33.68 TO STA. 451+24.24 - L

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
KSJ	BMR			RBH	10-18-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

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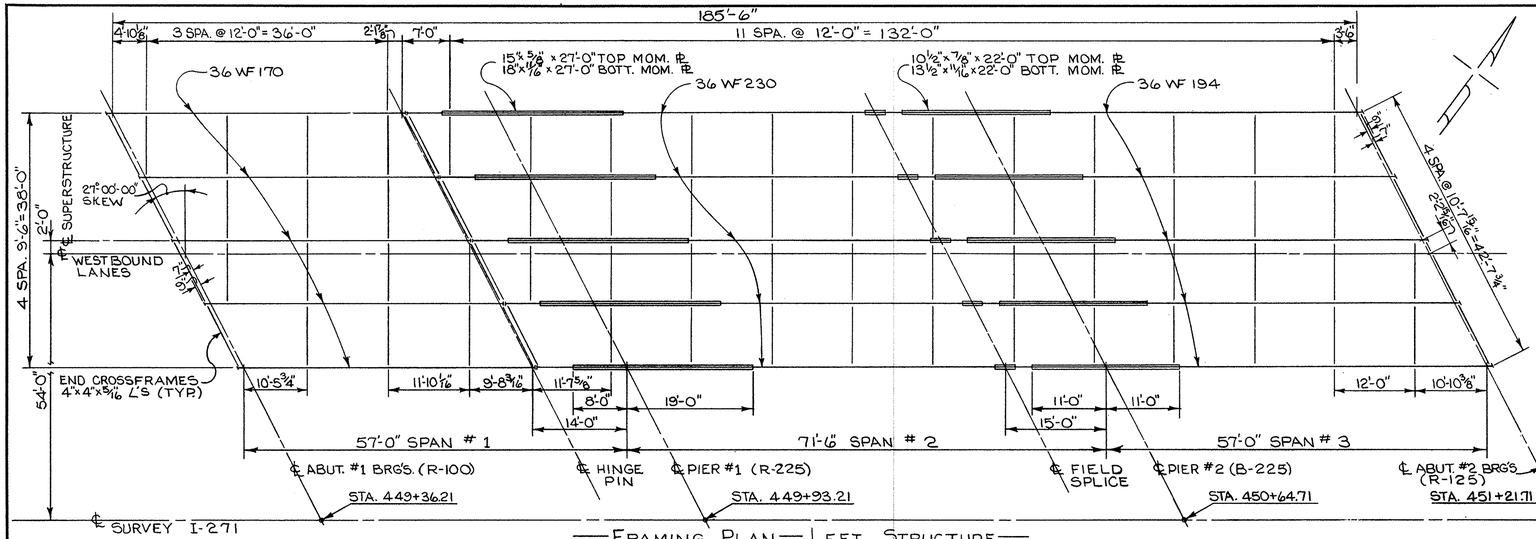
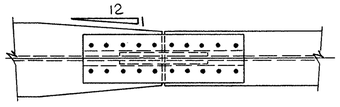
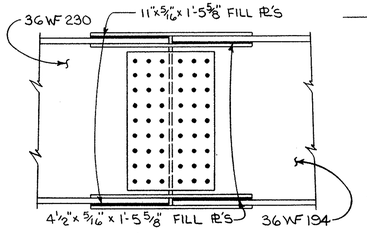
SUM-271-8.29



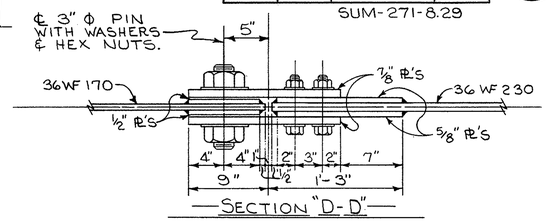
—FRAMING PLAN— LEFT STRUCTURE



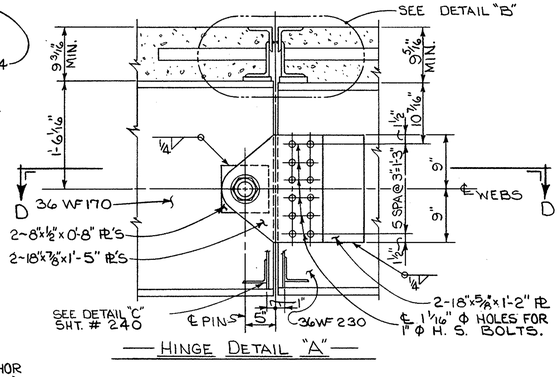


—SPLICE—

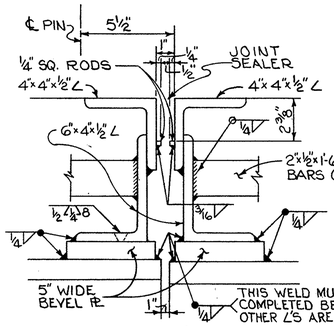
FOR DIM. & DETAILS NOT SHOWN SEE STD. DWG. SD-1-65



—SECTION "D-D"—



—HINGE DETAIL "A"—



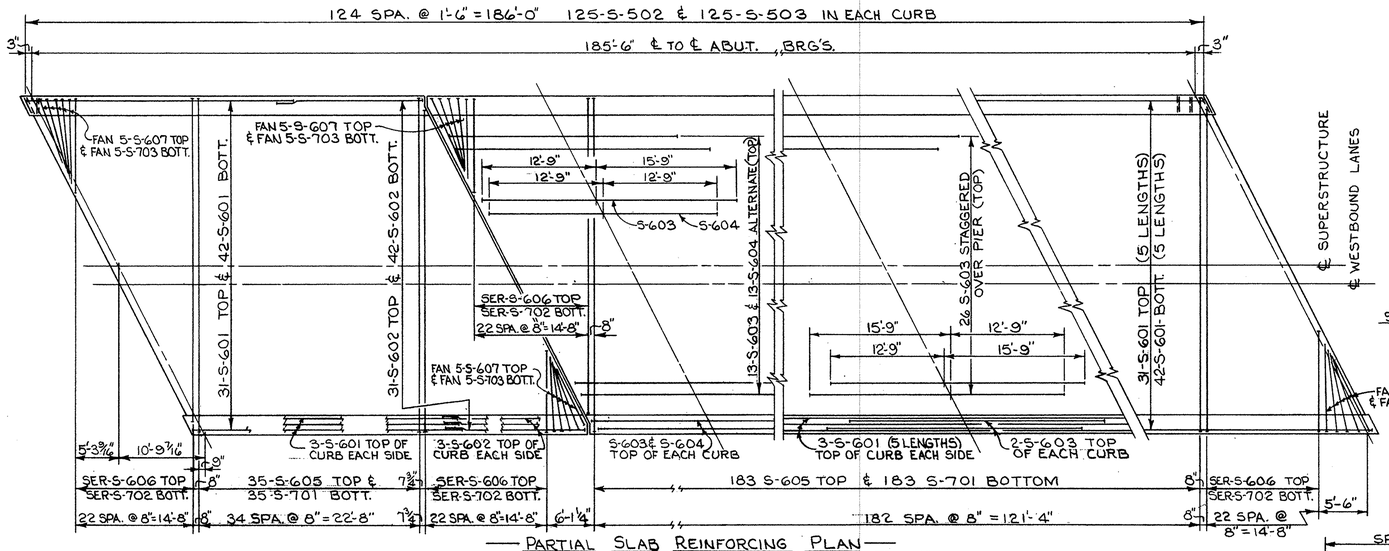
—DETAIL "B"—

SEE STD. DWG. SD-1-65, SH. #1 FOR WELDING OF L'S

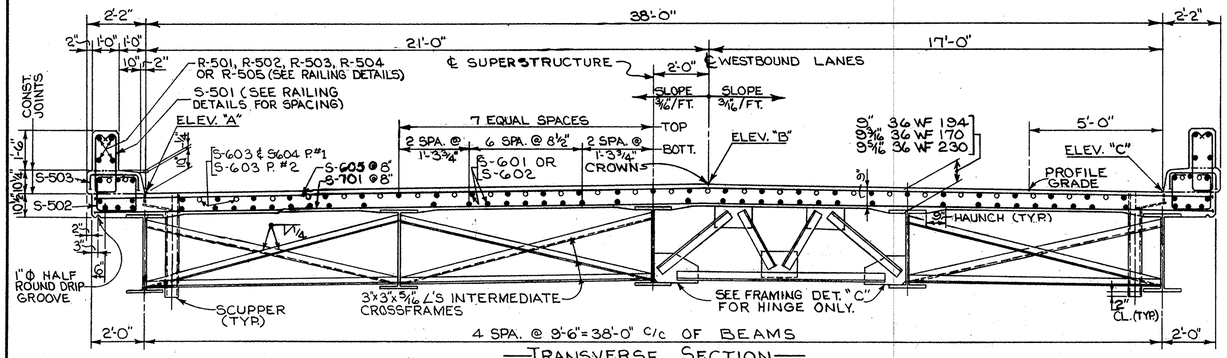
—ELEVATION TABLE—

STA.	49+00	49+25	49+50	49+75	50+00	50+25	50+50	50+75	51+00
EL. "A"	731.54	731.95	732.38	732.84	732.34	733.86	734.43	735.00	——
EL. "B"	——	732.27	732.71	733.18	733.67	734.19	734.75	735.34	——
EL. "C"	——	732.00	732.44	732.90	733.40	733.92	734.48	735.07	735.68

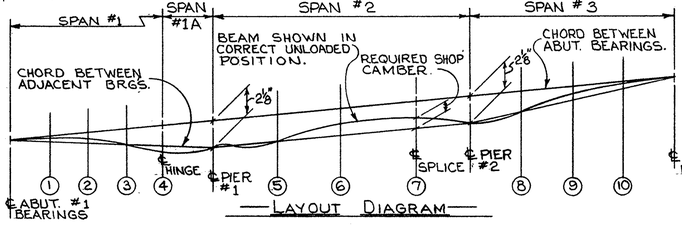
THE ELEVATIONS SHOWN ARE THOSE WHICH ARE REQ'D. BEFORE THE CONCRETE DECK IS POURED. PROPER ALLOWANCE HAS BEEN MADE FOR THE DEAD LOAD DEFLECTIONS CAUSED BY THE WEIGHT OF THE CONCRETE.



—PARTIAL SLAB REINFORCING PLAN—



—TRANSVERSE SECTION—



—LAYOUT DIAGRAM—

SEE SHEET No. 240 FOR DETAILS NOT SHOWN.

—DEFLECTION & CAMBER—

LOCATION	SPAN #1			SPAN #1A	SPAN #2			SPAN # 3		
	¼ PT. ①	½ PT. ②	¾ PT. ③	HINGE ④	¼ PT. ⑤	½ PT. ⑥	SPLICE ⑦	¼ PT. ⑧	½ PT. ⑨	¾ PT. ⑩
DEFLECTION DUE TO WEIGHT OF STEEL	.057"	.052"	.037"	.026"	.049"	.081"	.064"	.029"	.066"	.057"
DEFLECTION DUE TO REMAINING DEAD LOAD	.191"	.270"	.191"	.103"	.197"	.326"	.258"	.115"	.269"	.231"
ADJUSTMENT REQUIRED FOR VERTICAL CURVE	-.143"	-.221"	-.230"	-.173"	-.276"	-.368"	-.243"	-.175"	-.234"	-.175"
REQUIRED SHOP CAMBER	1/16"	1/8"	0	-1/16"	0	1/16"	1/16"	0	1/8"	1/8"

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

FRAMING PLAN

BRIDGE No SUM-271-0854 L.
I-271 OVER C.R. No 32
SUMMIT COUNTY
STA. 449+33.68 TO STA. 451+24.24-L.

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
KSJ	BMR			DDH	10-18-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

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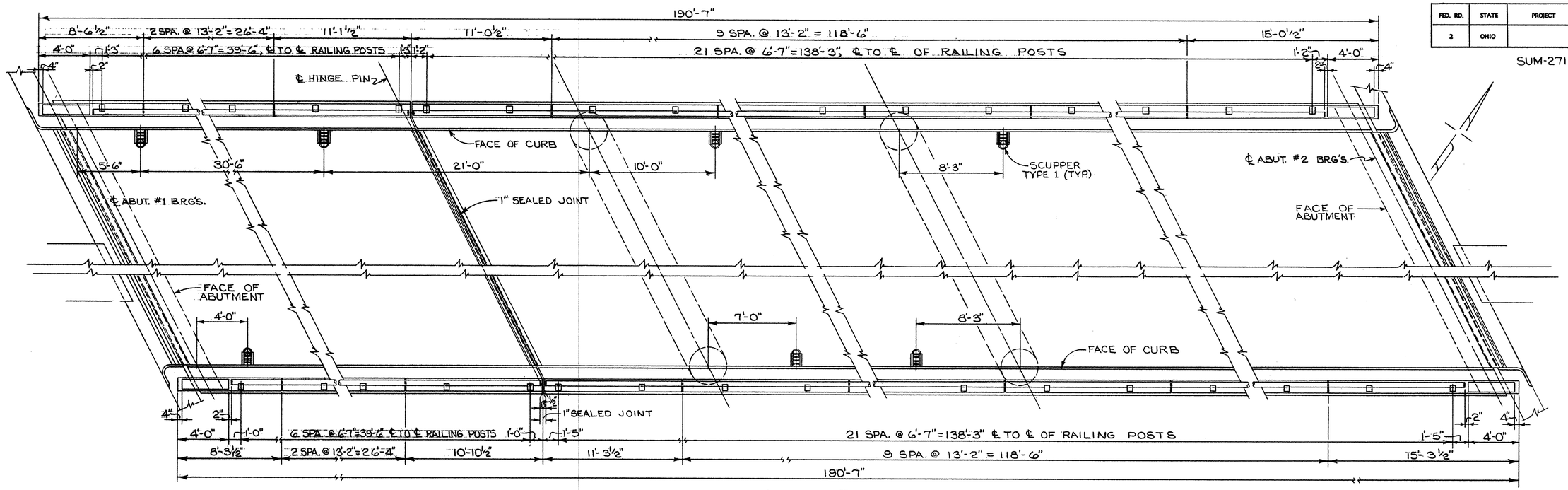
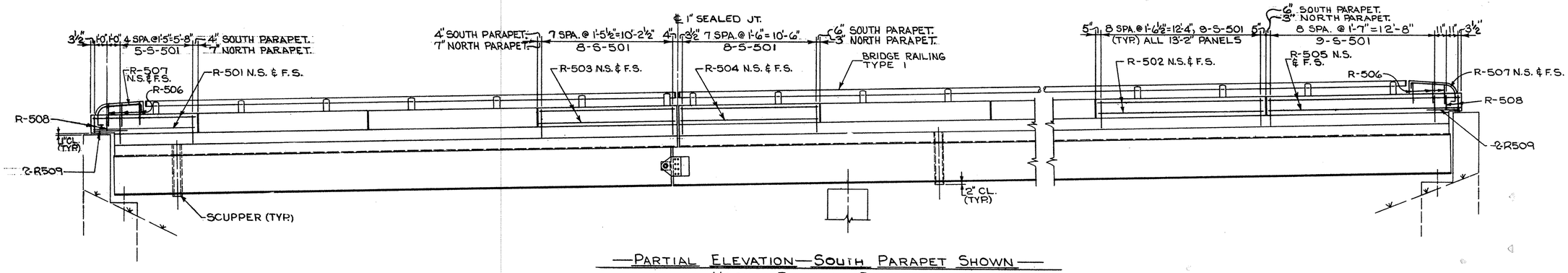
SUM-271-8.29



—PARTIAL PLAN—



—PARTIAL ELEVATION—SOUTH PARAPET SHOWN—
—NORTH PARAPET—SIMILAR—
—EXCEPT AS SHOWN OR NOTED—

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

RAILING & DRAINAGE DETAILS

BRIDGE Nº SUM-271-0854 L.
I-271 OVER C.R. Nº 32
SUMMIT COUNTY
STA. 449+33.68 TO STA. 451+24.24 = L.

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
KSJ	BMR			RDH	10-19-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

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SUM-271-8.29

MARK	NO. REQ'D	LENGTH	TYPE	DIMENSIONS A	B	C	D	SERIES INCREMENTS	WEIGHT LBS.
ABUTMENTS #1 L & #2 L									
A-501	15	10'-0"	ST.						156
A-502	36	21'-0"	ST.						789
A-503	36	24'-0"	ST.						901
A-504	30	6'-5"	1	6"	6'-0"				201
A-505	34	9'-2"	3	5'-5"	2'-0"				325
A-506	61	8'-2"	3	3'-5"	2'-6"				520
A-507	1	17'-3"	ST.						18
A-508	10	13'-10"	ST.						144
A-509	10	11'-11"	ST.						124
A-510	1	12'-5"	12	9'-8"	2'-9"	1'-2"			13
A-511	5	7'-3"	ST.						38
A-512	2	15'-10"	ST.						33
A-513	1	13'-0"	ST.						14
A-514	11	13'-9"	ST.						158
A-515	2	4'-2"	ST.						9
A-516	3	8'-0"	ST.						25
A-517	1	12'-11"	12	9'-8"	3'-3"	1'-5"			13
A-518	5	10'-5"	ST.						54
A-519	10	11'-5"	ST.						119
A-520	1	13'-9"	12	10'-6"	3'-3"	1'-6"			14
A-521	4	12'-9"	ST.						53
A-522	1	12'-0"	12	9'-6"	2'-6"	1'-1"			13
A-523	1	14'-10"	ST.						15
A-524	2	10'-7"	12	8'-2"	2'-6"	1'-1"			22
A-525	31	7'-8"	1	6"	7'-3"				248
A-526	1	11'-2"	ST.						12
A-527	1	13'-0"	12	9'-6"	3'-6"	2'-6"			14
A-528	1	12'-9"	12	10'-6"	2'-3"	1'-1"			13
SERIES OF A-601	1 SETS OF 10 BARS	20'-6" TO 11'-6"	3	1'-5"	5'-8" TO 5'-2" @ INC. OF 6"			1'-0"	240
A-602	6	17'-6"	3	1'-5"	8'-2"				158
A-603	31	15'-10"	3	1'-5"	7'-4"				737
A-604	53	19'-0"	7	5'-9"	1'-5"	7'-3"	11"		1,513
SERIES OF A-605	1 SET OF 9 BARS	22'-2" TO 14'-2"	3	1'-5"	10'-6" TO 6'-6" @ INC. OF 6"			1'-0"	246
A-606	34	13'-9"	4	6'-7"	5'-5"	2'-0"			702
SERIES OF A-607	1 SET OF 10 BARS	23'-6" TO 14'-6"	3	1'-5"	11'-2" TO 6'-6" @ INC. OF 6"			1'-0"	285
A-608	35	13'-1"	1	5'-5"	7'-9"				688
A-609	8	27'-0"	ST.						324
A-610	4	24'-2"	3	1'-5"	11'-6"				145
A-611	3	20'-2"	3	1'-5"	9'-6"				91
SERIES OF A-612	1 SET OF 9 BARS	19'-6" TO 11'-6"	3	1'-5"	9'-2" TO 5'-2" @ INC. OF 6"			1'-0"	210
A-801	14	27'-1"	ST.						1,012
ABUTMENTS #1 L & #2 L TOTAL = 10,409 LBS									
PIERS #1 L & #2 L									
P-501	112	7'-7"	3	2'-8"	2'-7"				886
P-601	8	22'-4"	ST.						268
P-801	80	7'-8"	2	1'-1"	5'-6"				1,638
P-901	112	6'-5"	1	1'-0"	5'-8"				2,443
P-902	56	29'-3"	ST.						5,569
P-903	56	26'-4"	ST.						5,014
P-905	12	36'-9"	ST.						1,499
P-907	24	10'-6"	1	3'-2"	7'-7"				857
P-1001	48	12'-4"	2	1'-5"	9'-6"				2,547
P-1002	24	24'-3"	ST.						2,504
P-1003	8	10'-0¾"	9	3'-2"	3'-8¾"	1'-2¼"			346
SPIRALS — — — 3,589									
PIERS #1 L #2 L TOTAL = 27,160 LBS.									

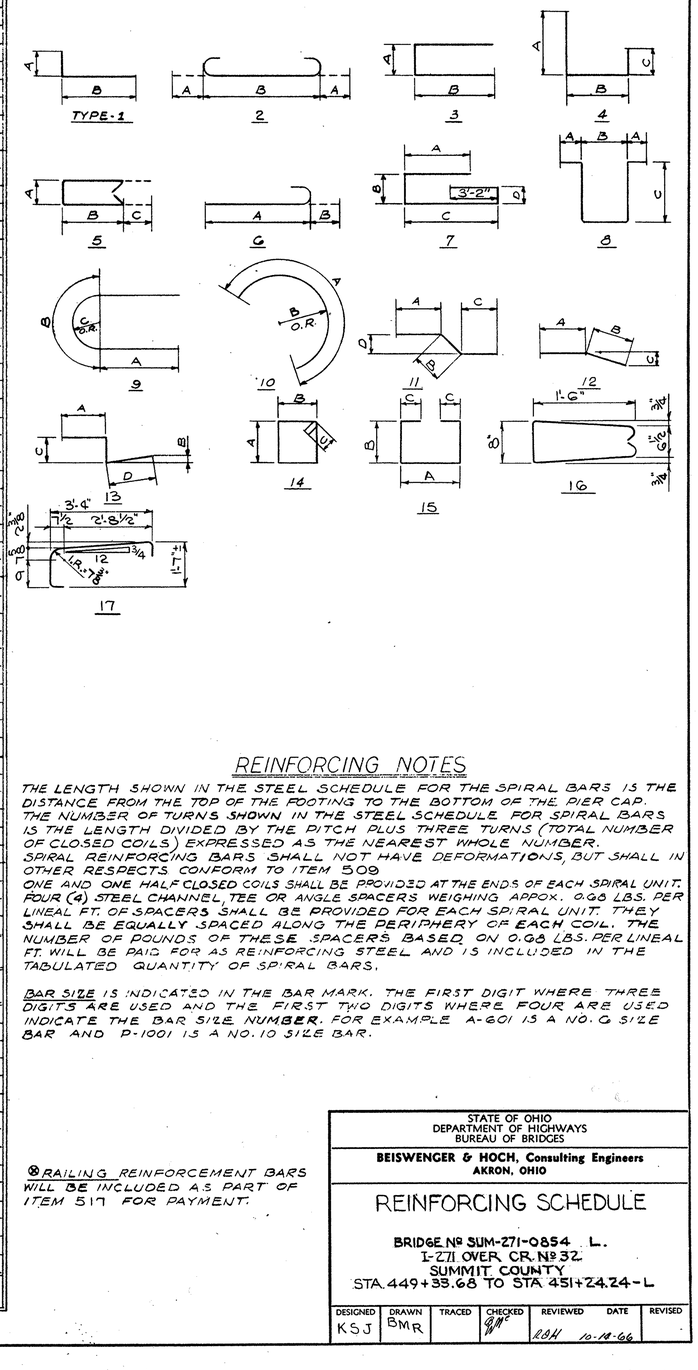
MARK	NO. REQ'D	LENGTH	TYPE	DIMENSIONS A	B	C	D	SERIES INCREMENTS	WEIGHT LBS.
SLAB									
S-501	258	5'-7"	5	8"	2'-2"	5"			1,502
S-502	250	4'-8"	15	1'-6"	1'-4"	6"			1,217
S-503	250	2'-3"	3	1'-6"	6"				587
S-601	474	30'-0"	ST.						21,358
S-602	79	15'-6"	ST.						1,839
S-603	45	28'-6"	ST.						1,926
S-604	15	25'-6"	ST.						575
S-605	218	41'-8"	ST.						13,643
SERIES OF S-606	4 SETS OF 23 = 92 BARS	40'-1½" TO 11'-3"	ST.					1'-3¾"	3,550
S-607	20	10'-0"	ST.						300
S-701	218	41'-8"	ST.						18,566
SERIES OF S-702	4 SETS OF 23 = 92 BARS	40'-1½" TO 11'-3"	ST.					1'-3¾"	4,830
S-703	20	10'-0"	ST.						409
SLAB TOTAL = 70,302 LBS.									

MARK	NO. REQ'D	LENGTH	TYPE	DIMENSIONS A	B	C	D	SERIES INCREMENTS	WEIGHT LBS.
RAILING®									
R501	8	8'-0"	ST						
R502	88	12'-10"	ST						
R503	8	10'-7"	ST						
R504	8	10'-9"	ST						
R505	8	14'-9"	ST						
R506	12	4'-2"	16						
R507	8	5'-4"	17						
R508	8	3'-5"	5	8"	1'-1"	5"			
R509	8	3'-0"	ST						
REPLACEMENT BARS									
RE-401	1	5'-3"	10	5'-3"	1'-4"				
RE-501	1	5'-6"	ST.						
RE-601	3	6'-0"	ST.						
RE-701	2	6'-3"	ST.						
RE-801	1	6'-6"	ST.						
RE-901	1	6'-10"	ST.						
RE-1001	1	7'-3"	ST.						
RE-1101	—	7'-9"							

SPIRAL REINFORCING SCHEDULE

MARK	NO. REQ'D	CORE DIA. OF SPIRAL	LENGTH OF SPIRAL	PITCH	NO. OF TURNS	WEIGHT LBS.
SP-401	4	2'-8"	26'-3"	4½"	73	1,613
SP-402	4	2'-8"	23'-4"	4½"	65	1,436
SPACERS	32					540
TOTAL SPIRALS						3,589 LBS.

GRAND TOTAL 107,871 LBS



REINFORCING NOTES

THE LENGTH SHOWN IN THE STEEL SCHEDULE FOR THE SPIRAL BARS IS THE DISTANCE FROM THE TOP OF THE FOOTING TO THE BOTTOM OF THE PIER CAP. THE NUMBER OF TURNS SHOWN IN THE STEEL SCHEDULE FOR SPIRAL BARS IS THE LENGTH DIVIDED BY THE PITCH PLUS THREE TURNS (TOTAL NUMBER OF CLOSED COILS) EXPRESSED AS THE NEAREST WHOLE NUMBER. SPIRAL REINFORCING BARS SHALL NOT HAVE DEFORMATIONS, BUT SHALL IN OTHER RESPECTS CONFORM TO ITEM 509. ONE AND ONE HALF CLOSED COILS SHALL BE PROVIDED AT THE ENDS OF EACH SPIRAL UNIT. FOUR (4) STEEL CHANNEL, TEE OR ANGLE SPACERS WEIGHING APPOX. 0.68 LBS. PER LINEAL FT. OF SPACERS SHALL BE PROVIDED FOR EACH SPIRAL UNIT. THEY SHALL BE EQUALLY SPACED ALONG THE PERIPHERY OF EACH COIL. THE NUMBER OF POUNDS OF THESE SPACERS BASED ON 0.68 LBS. PER LINEAL FT. WILL BE PAID FOR AS REINFORCING STEEL AND IS INCLUDED IN THE TABULATED QUANTITY OF SPIRAL BARS.

BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST DIGIT WHERE THREE DIGITS ARE USED AND THE FIRST TWO DIGITS WHERE FOUR ARE USED INDICATE THE BAR SIZE NUMBER. FOR EXAMPLE A-601 IS A NO. 6 SIZE BAR AND P-1001 IS A NO. 10 SIZE BAR.

®RAILING REINFORCEMENT BARS WILL BE INCLUDED AS PART OF ITEM 517 FOR PAYMENT.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER & HOCH, Consulting Engineers
AKRON, OHIO

REINFORCING SCHEDULE

BRIDGE Nº SUM-271-0854 L.
I-271 OVER CR. Nº 32
SUMMIT COUNTY
STA. 449+33.68 TO STA 451+24.24-L

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
KSJ	BMR			RBH	10-11-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

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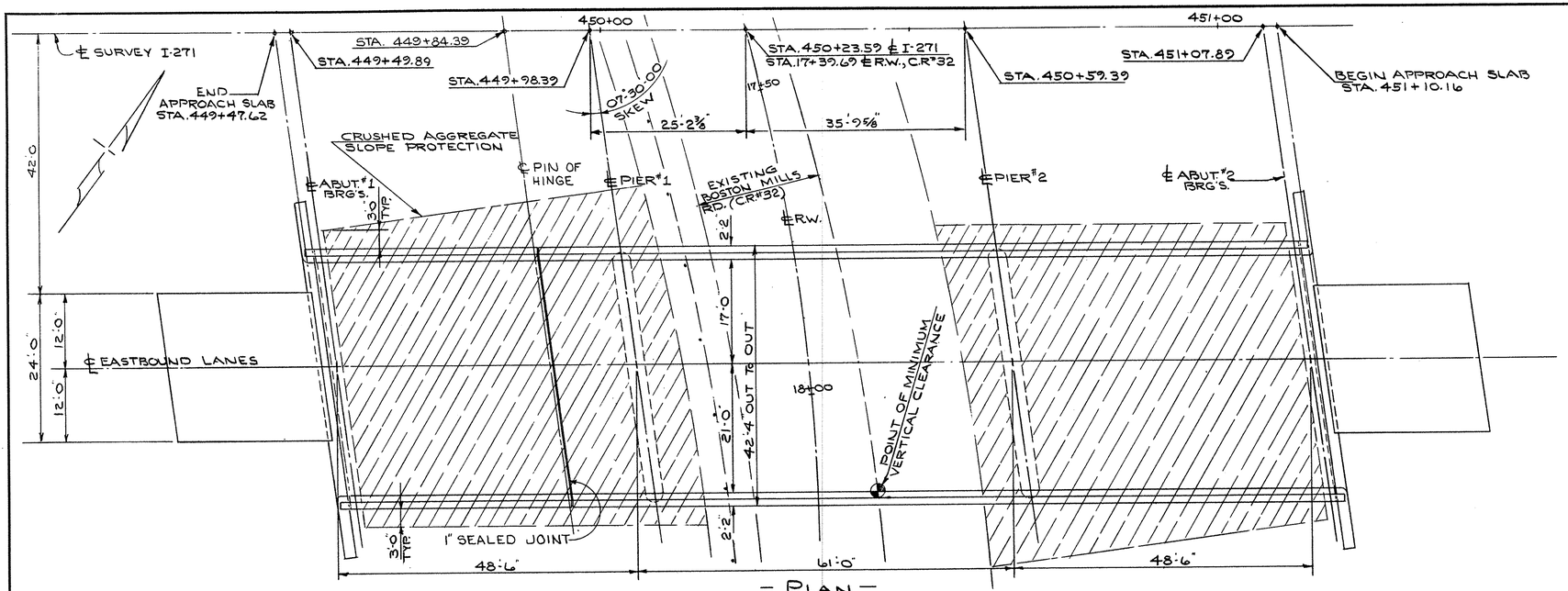
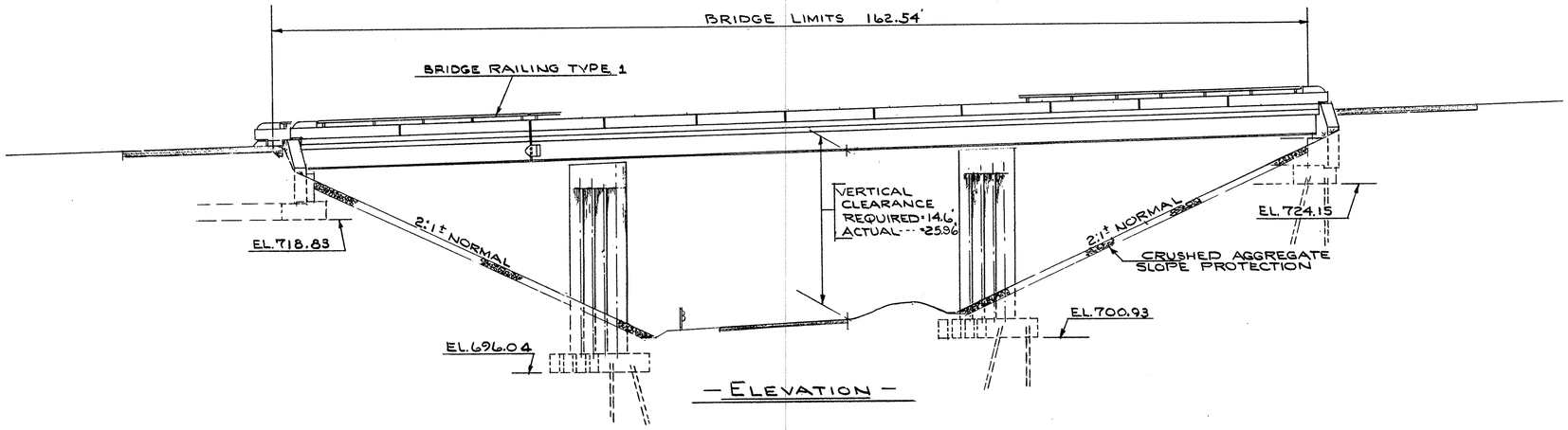
SUM - 271 - 8.29



— PLAN —



— ELEVATION —

NOTES :

FIRST TEST PILE, ITEM 505 IN THE ESTIMATED QUANTITIES FOR SUM-271-0854 L, MAY BE DRIVEN AT EITHOR SUM-271-0854 L OR SUM-271-0854 R.

FOR ADDITIONAL NOTES SEE SH. # 228

— ESTIMATED QUANTITIES —

ITEM	TOTAL	UNIT	DESCRIPTION	SUPER	ABUTS.	PIERS	GEN.
503	414	CU.YD.	UNCLASSIFIED EXCAVATION		221	128	
507	2280	LIN.FT.	12"ϕ CAST-IN-PLACE REINF. CONC PILES		850	2860	
509	95,969	LBS	REINFORCING STEEL	61,215	8,796	25,958	
511	2.11	CU.YD.	CLASS "C" CONC. SUPERSTRUCTURE	211			
511	95	CU.YD.	CLASS "E" CONC. ABUTS ABOVE FOOTINGS		95		
511	81	CU.YD.	CLASS "C" CONC. PIERS ABOVE FOOTINGS			81	

ITEM	TOTAL	UNIT	DESCRIPTION	SUPER	ABUTS	PIERS	GEN.
511	108	CU.YD.	CLASS "E" CONC. PIER & ABUT FOOTINGS		55	53	
512	18	LIN.FT	PREMOLDED SEALING STRIP		18		
513	177,600	LBS	STRUCTURAL STEEL	177,600			
514	177,600	LBS	FIELD PAINTING OF STRUCTURAL STEEL	177,600			
516	44	LIN.FT	PREFORMED ELASTIC JOINT SEALER AND LUBRICANT ADHESIVE	44			
517	325.59	LIN.FT.	BRIDGE RAILING TYPE 1	325.59			
518	63	CU.YD.	POROUS BACKFILL		63		
518	7	EACH	SCUPPERS (INCLUDING SPECIALS)	7			

ITEM	TOTAL	UNIT	DESCRIPTION	SUPER	ABUTS.	PIERS	GEN.
518	83	LIN.FT.	6" PERFORATED HELICAL C.M.P. 707.06 (INCLUDING SPECIALS)		83		
518	75	LIN.FT.	6" NON-PERF. HELICAL C.M.P. 707.06		75		
601	716	SQ.YD.	CRUSHED AGGREGATE SLOPE PROTECTION		716		
808	211	UNITS	WATER REDUCING SET RETARDING ADMIXTURE	211			
825	864	SQ YD	CONCRETE SURFACE TREATMENT				864
828	77	LIN.FT.	JOINT SEALER	77			

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

GENERAL PLAN & ELEVATION

BRIDGE № SUM-271-0854 R.
I-271 OVER CR. № 32
SUMMIT COUNTY

STA. 449+47.62 TO STA. 451+10.16 - R

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
KSJ	LNP		10-11-66	10-14-66		

FED. RD.	STATE	PROJECT	
2	OHIO		

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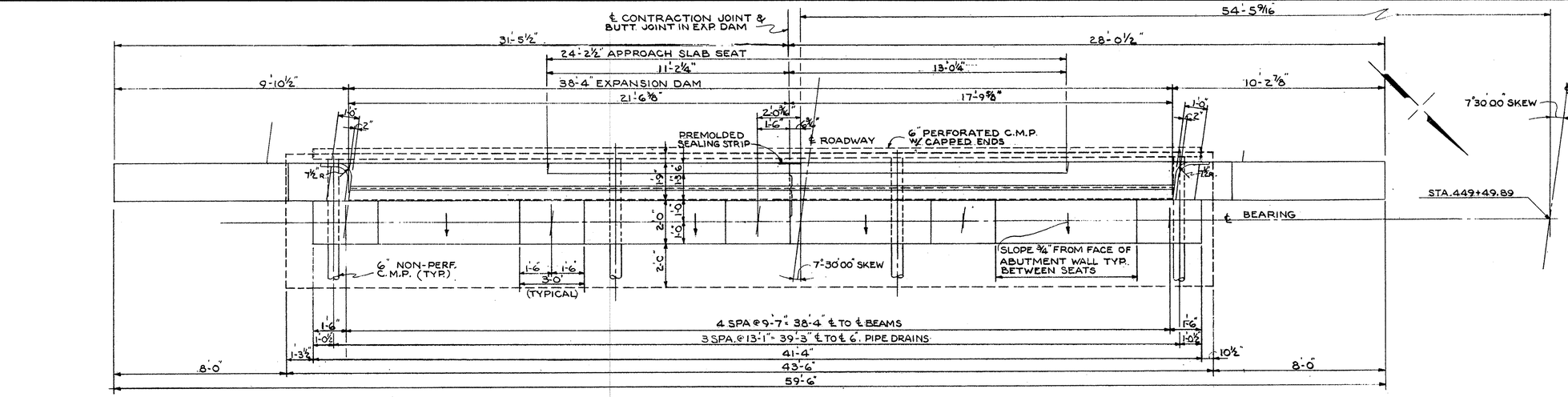
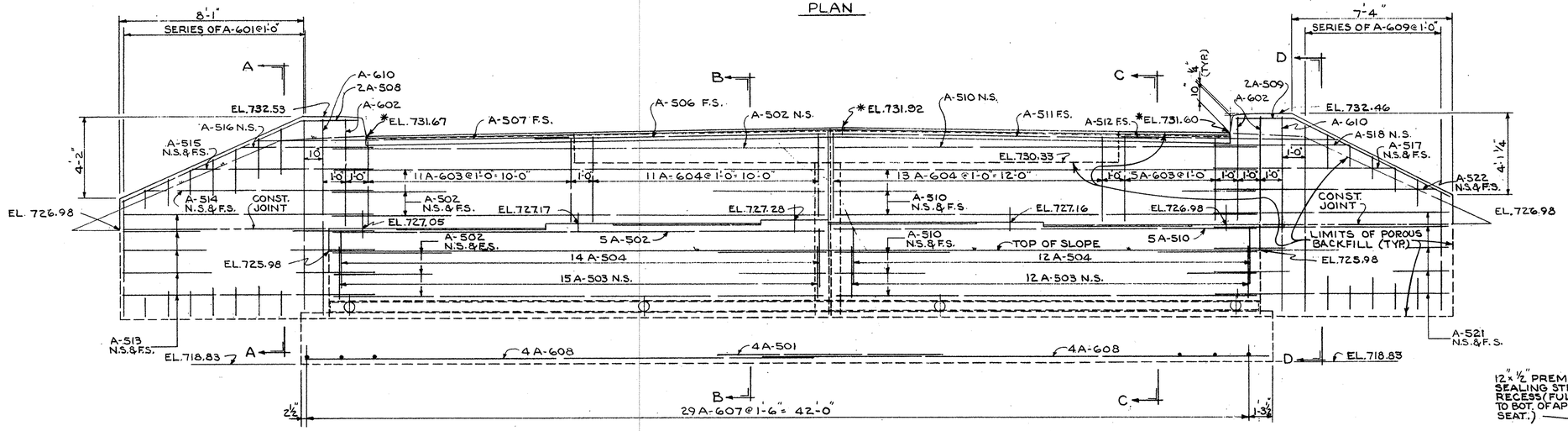
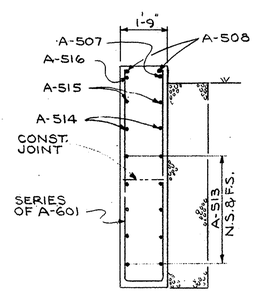
SUM.-271- 8.29



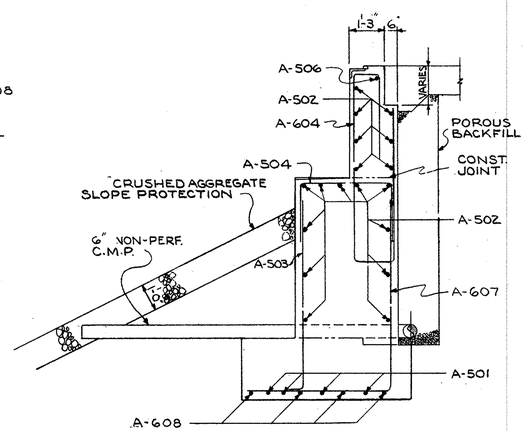
PLAN



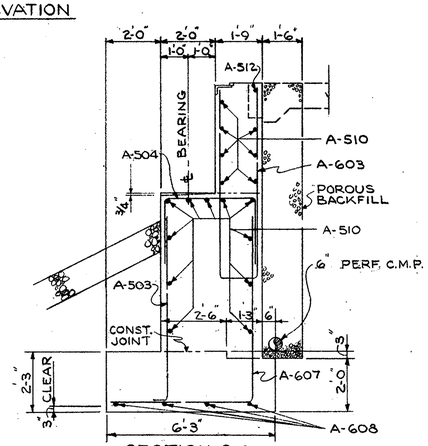
ELEVATION



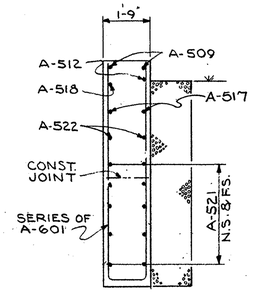
SECTION A-A



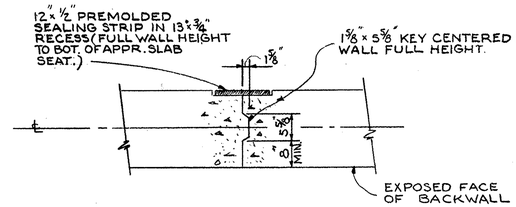
SECTION B-B



SECTION C-C



SECTION D-D



CONTRACTION JOINT DETAIL

SEE SHT. No. 230 FOR POROUS BACKFILL NOTE.

*INDICATES FINISHED PAVEMENT ELEVATIONS AT FACE OF BACKWALL.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

ABUTMENT No 1

BRIDGE No SUM-271-0854 R.
I-271 OVER CR. No 32
SUMMIT COUNTY

STA. 449+47.62 TO STA. 451+10.16 - R

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
KSJ	JLH			RDH	10-14-66	

KAB

FED. RD.	STATE	PROJECT	
2	OHIO		

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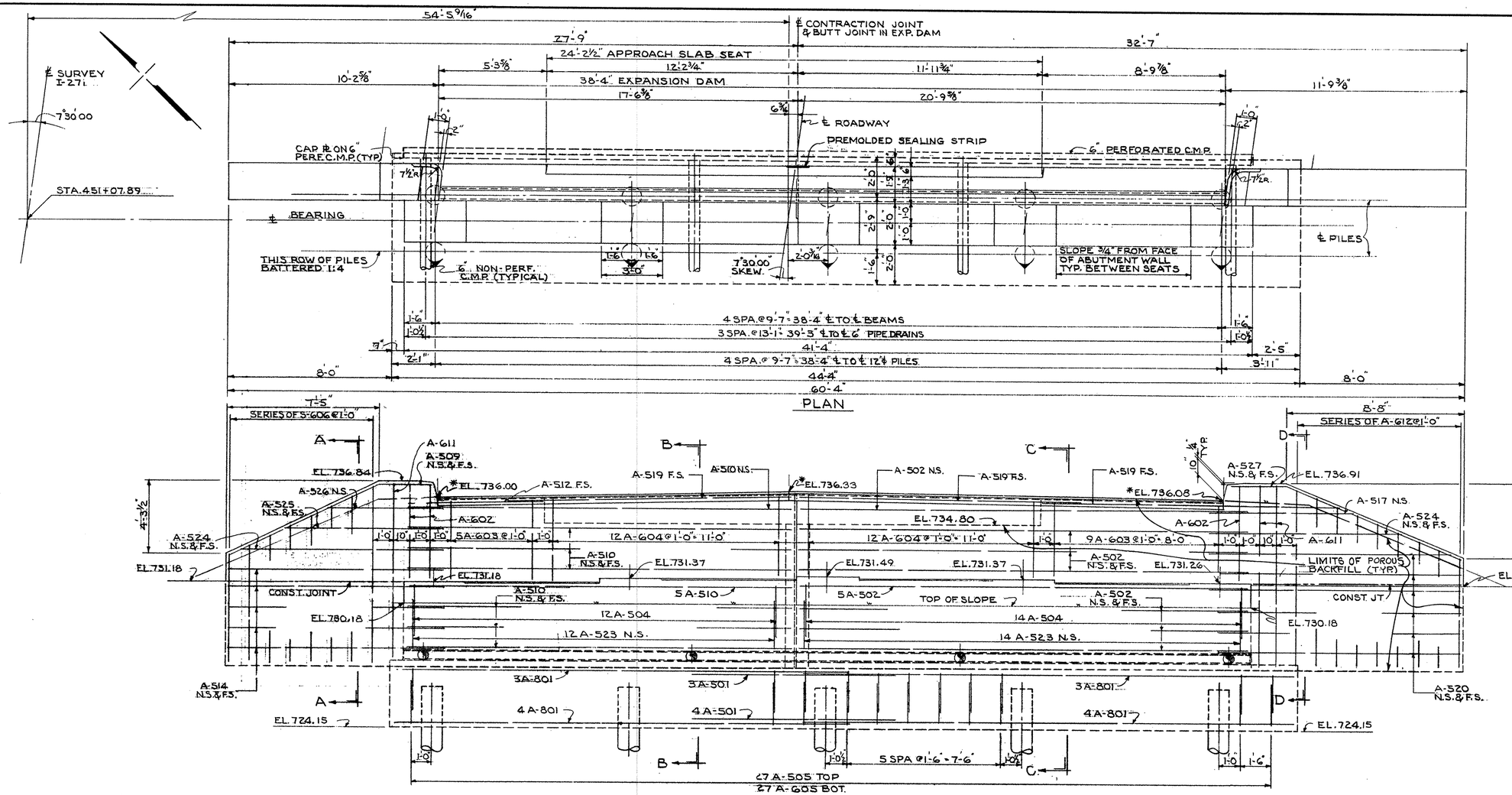

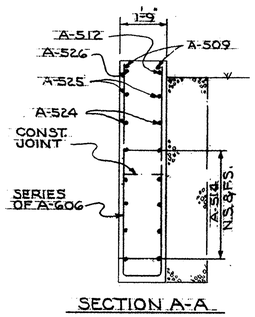

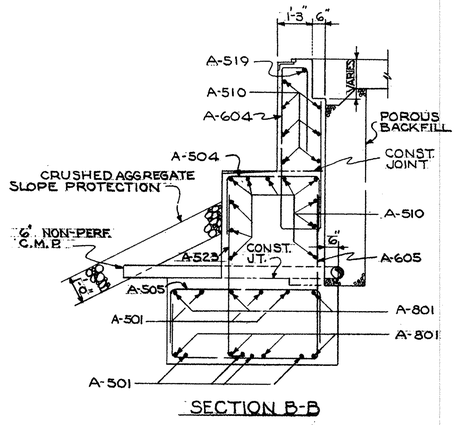

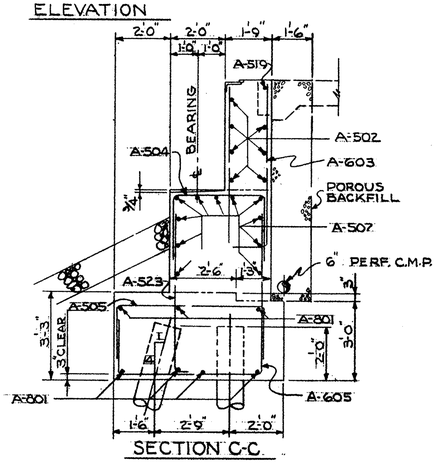

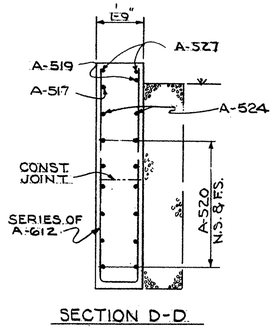

SEE SH'T. No. 230 FOR POROUS BACKFILL NOTE.

* INDICATES FINISHED PAVEMENT ELEVATIONS AT FACE OF BACKWALL.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

ABUTMENT Nº2

BRIDGE Nº SUM-271-0854 R.
I-271 OVER C.R. Nº32
SUMMIT COUNTY

STA. 449+47.62 TO STA. 451+10.16 - R.

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
KSJ	JLH			RBH	10-19-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

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AHEAD

℄ SURVEY I-271

℄ BEARINGS

STA. 449+98.39 PIER #1 R
STA. 450+59.38 PIER #2 R

37'-3 13/16"

4 SPA. @ 9'-7" = 38'-4" ℄ TO ℄ OF BEAMS

8'-0½" | 9'-7" | 3'-0" | 9'-7" | 8'-0½"

3 SPA. @ 12'-9" = 38'-3" ℄ TO ℄ OF COLUMNS

½" | ½"

BEAM SEATS

℄ BEAM ×5

1'-6" | 3'-6" | 5'-0" | 10'-0"

1'-6" | 1'-6" | 1'-6" | 1'-6"

3'-0" | 3'-0"

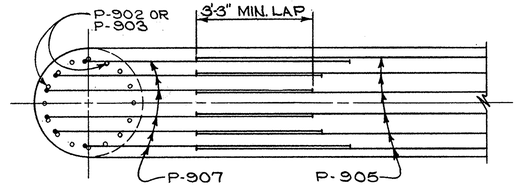
6'-0"

TYPICAL

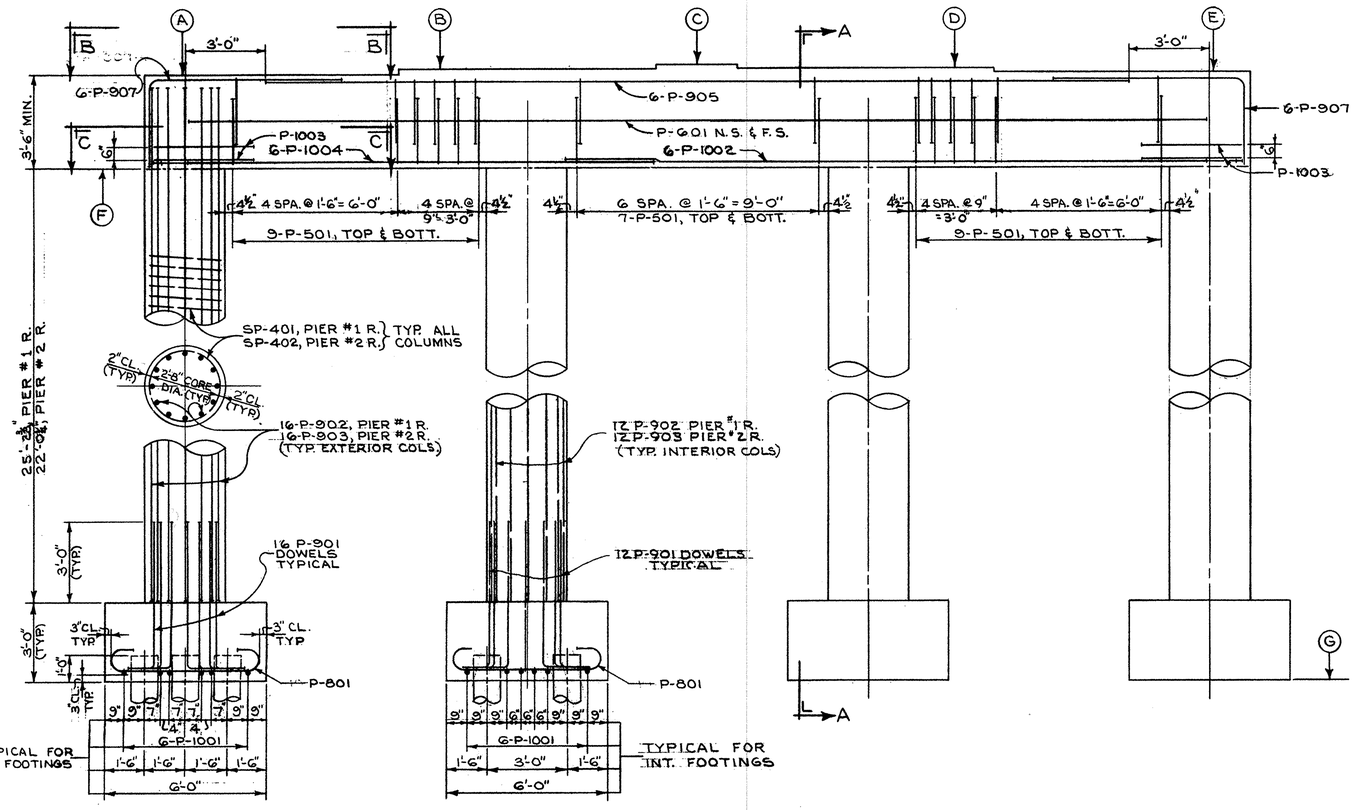
PLAN — PIER #1R SHOWN
PIER #2R SIMILAR

ELEVATION TABLE

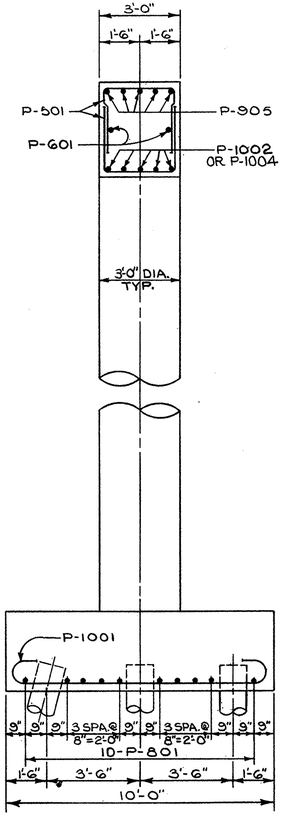
	A	B	C	D	E	F	G
PIER #1R	727.74	727.93	728.05	727.93	727.82	724.24	696.04
PIER #2R	729.45	729.63	729.75	729.64	729.52	725.97	700.93



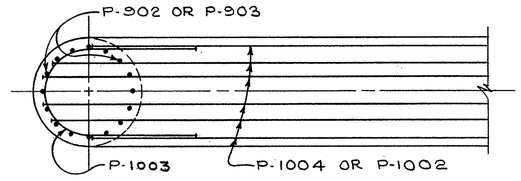
VIEW "B-B"



ELEVATION — PIER #1 R SHOWN
PIER #2 R SIMILAR



SECTION "A-A"



SECTION "C-C"

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

PIER'S

BRIDGE Nº SUM-271-0854 R.
I-271 OVER CR. Nº32
SUMMIT COUNTY

STA. 449+47.62 TO STA. 451+10.16 - R

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
KSJ	BMR			RAH	10-18-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

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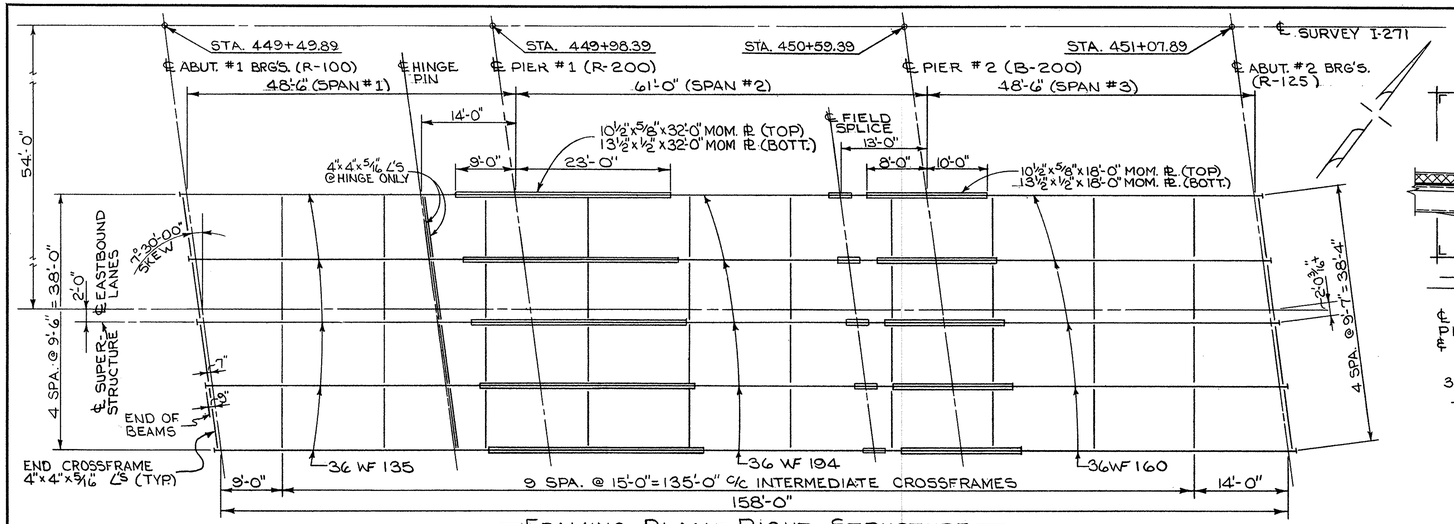
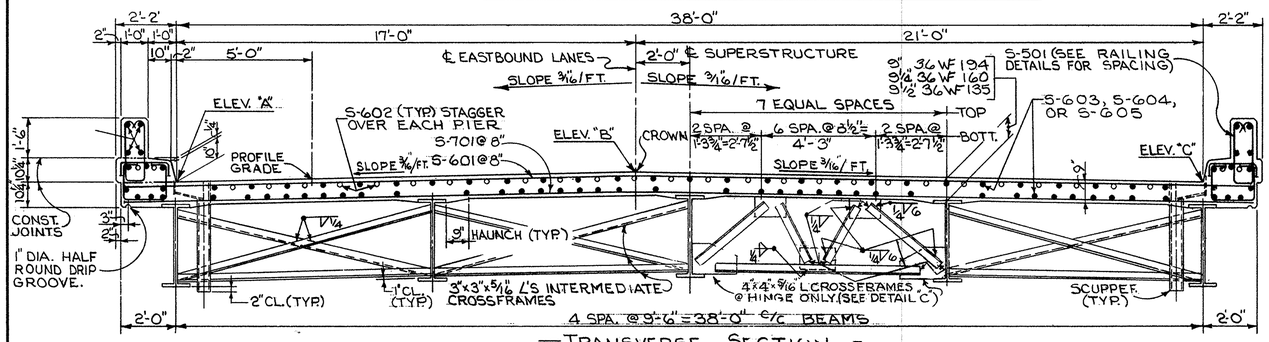
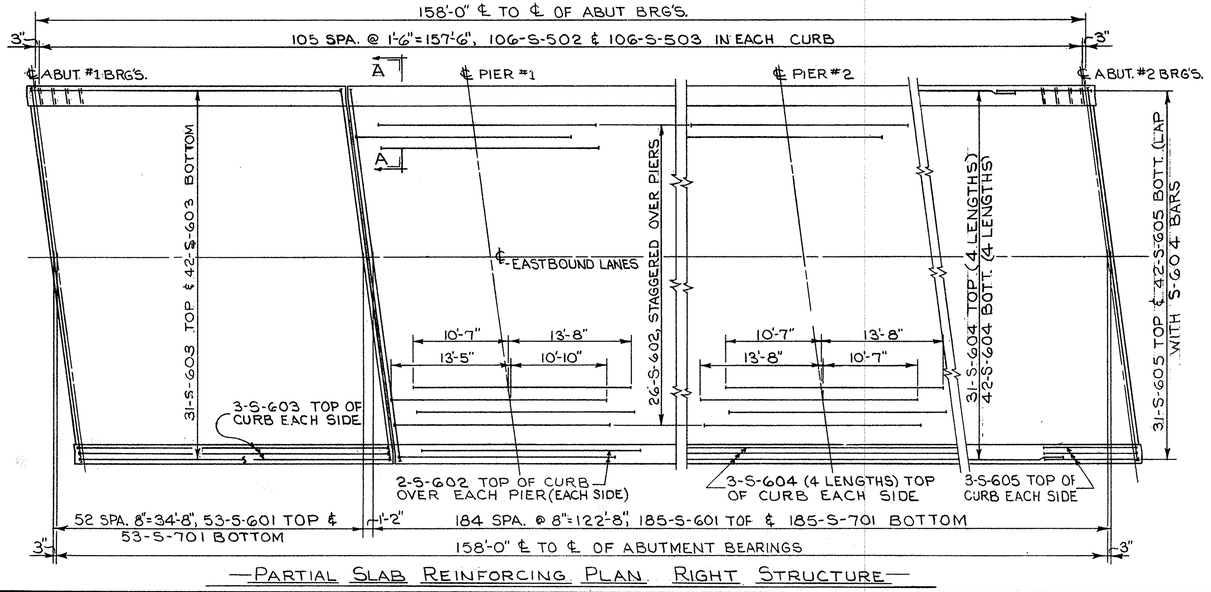


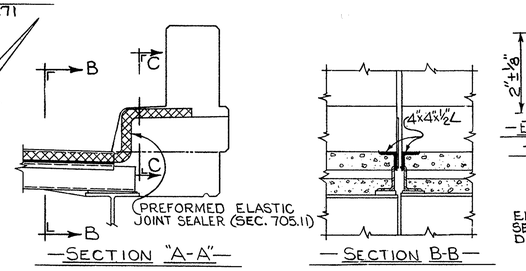
—FRAMING PLAN- RIGHT STRUCTURE—



—TRANSVERSE SECTION -

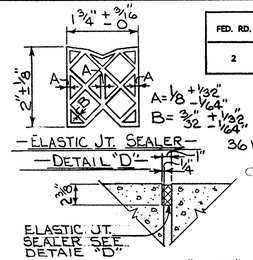


—PARTIAL SLAB REINFORCING PLAN. RIGHT STRUCTURE—



—SECTION "A-A"—

—SECTION B-B—



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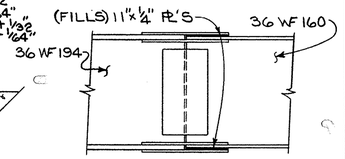
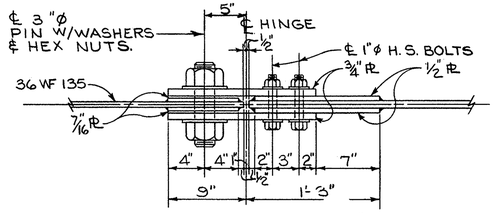


—SPLICE—

FOR DIM. & DETAILS NOT SHOWN SEE STD. DWG. SD-1-65



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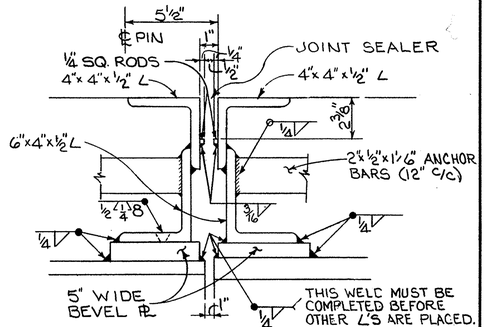
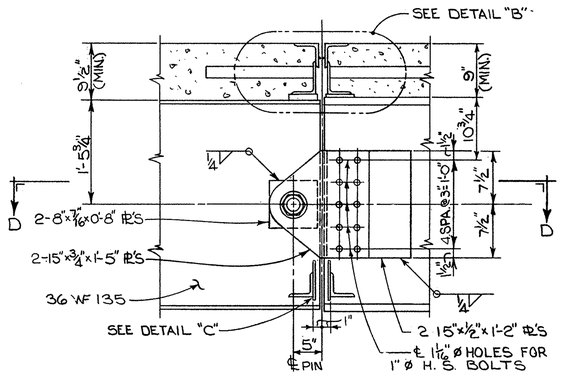
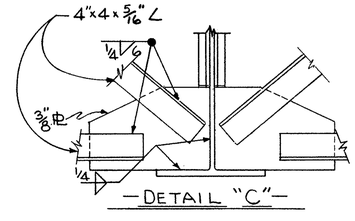


—DETAIL "B"—

SEE STD. DWG. SD-1-65, SH. #1 FOR WELDING OF L'S



—HINGE DETAIL "A"—



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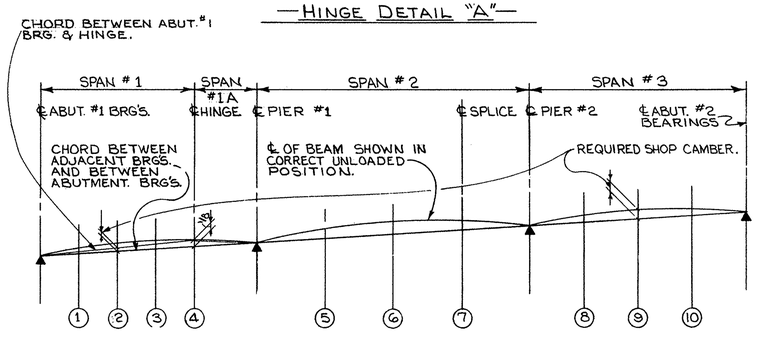

—LAYOUT DIAGRAM—

STA.	449+75	450+00	450+25	450+50	450+75	451+00
EL. "A"	732.13	732.81	733.50	734.20	734.87	735.58
EL. "B"	732.45	733.13	733.83	734.52	735.20	735.91
EL. "C"	732.18	732.86	733.57	734.25	734.94	735.64

THE ELEV'S. SHOWN ARE THOSE REQ'D. BEFORE THE CONC. DECK IS POURED. PROPER ALLOWANCE HAS BEEN MADE FOR THE DEAD LOAD DEFLECTION CAUSED BY THE WEIGHT OF THE CONCRETE.

—DEFLECTION & CAMBER—

LOCATION	SPAN # 1				SPAN # 2				SPAN # 3		
	¼ PT. ①	½ PT. ②	¾ PT. ③	HINGE ④	¼ PT. ⑤	½ PT. ⑥	SPLICE ⑦	¼ PT. ⑧	½ PT. ⑨	¾ PT. ⑩
DEFLECTION DUE TO WEIGHT OF STEEL	.016"	.023"	.016"	.021"	.016"	.033"	.019"	.017"	.036"	.031"
DEFLECTION DUE TO REMAINING DEAD LOAD	.113"	.159"	.113"	.107"	.086"	.173"	.100"	.090"	.190"	.159"
ADJUSTMENT REQUIRED FOR VERTICAL CURVE	—	—	—	—	—	—	—	—	—	—
REQUIRED SHOP CAMBER	1/8"	3/16"	1/8"	1/8"	1/8"	3/16"	1/8"	1/8"	1/4"	3/16"

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

FRAMING PLAN

BRIDGE Nº SUM-271-0854-R.
I-271 OVER C.R. Nº 32
SUMMIT COUNTY

STA. 449+47.62 TO STA. 451+10.16 - R.

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
KSJ	BMR		WJC	EOH	10-19-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

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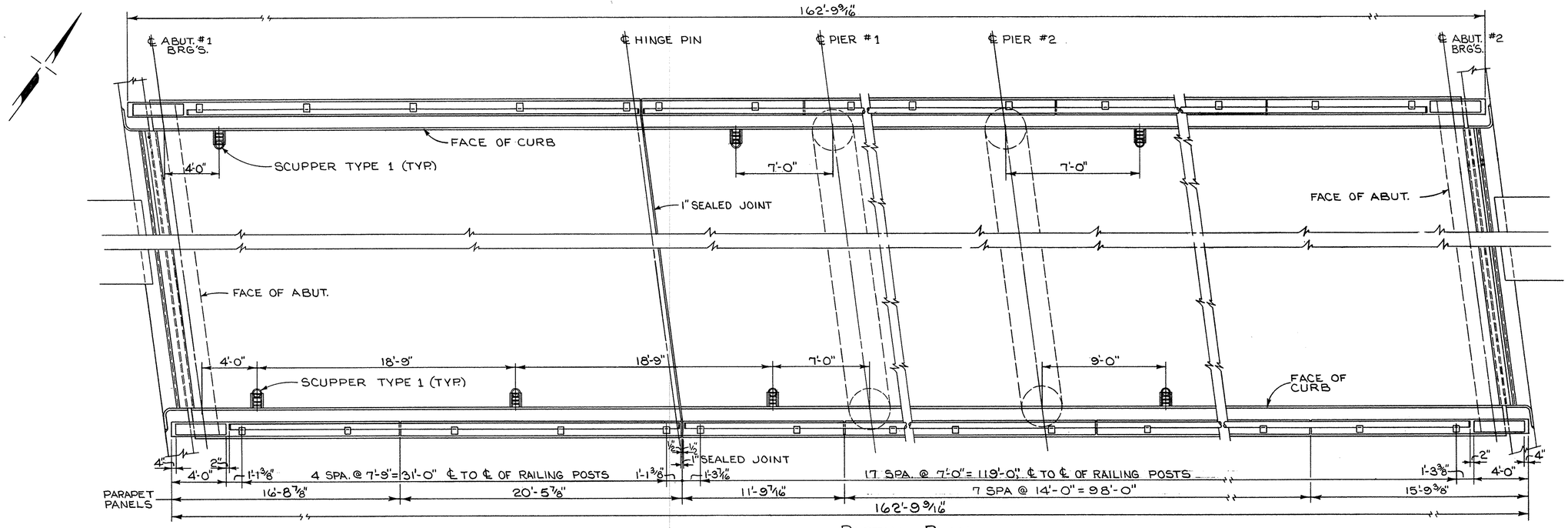
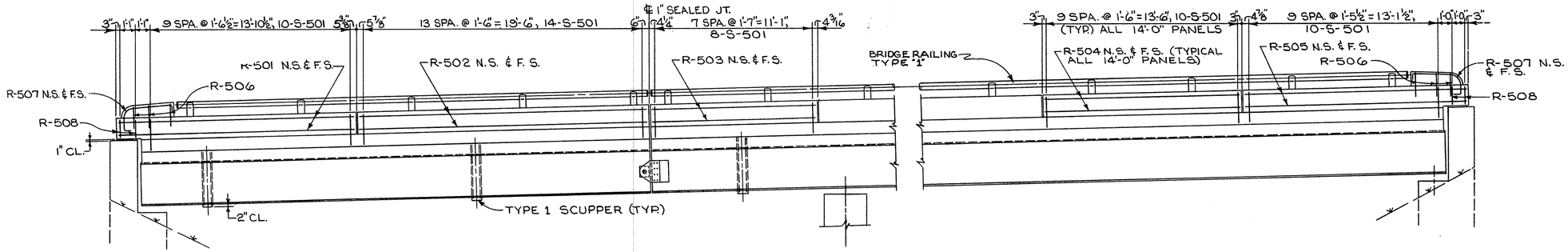


—PARTIAL PLAN—



—PARTIAL ELEVATION ~ SOUTH PARAPET SHOWN—
—NORTH PARAPET SIMILAR—

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

RAILING & DRAINAGE DETAILS

BRIDGE Nº SUM-271-0854 R.
I-271 OVER C.R. Nº 32
SUMMIT COUNTY

STA. 449+47.62 TO STA. 451+10.16-R.

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
KSJ	BMR			RDH	10-12-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

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MARK	NO. REQ'D	LENGTH	TYPE	DIMENSIONS A	B	C	D	SERIES INCREMENTS	WEIGHT LBS.
ABUTMENTS #1R & #2R									
A-501	11	10'-0"	ST.						115
A-502	36	21'-10"	ST.						820
A-503	27	7'-7"	1	6"	7'-2"				214
A-504	52	8'-2"	3	3'-5	2'-6"				443
A-505	27	9'-2"	3	5'-5"	2'-0"				258
A-506	1	12'-8"	ST.						13
A-507	1	13'-7"	ST.						14
A-508	2	11'-1"	12	8'-8"	2'-6"	1'-2"			23
A-509	4	10'-7"	12	3'-2	2'-4	1'-2"			44
A-510	36	18'-10"	ST.						707
A-511	1	14'-3"	ST.						15
A-512	2	9'-6"	ST.						20
A-513	10	10'-1	ST.						114
A-514	12	9'-10"	ST.						125
A-515	2	7'-8"	ST.						16
A-516	1	5'-8"	ST.						6
A-517	3	7'-9"	ST.						24
A-518	1	5'-10"	ST.						6
A-519	3	13'-6"	ST.						42
A-520	10	11'-6"	ST.						120
A-521	10	10'-9"	ST						112
A-522	2	9'-3"	ST						19
A-523	26	6'-5"	1	6"	6'-0"				174
A-524	4	8'-7"	ST						36
A-525	2	6'-7"	ST						14
A-526	1	4'-7"	ST						5
A-527	2	13'-8"	12	9'-4"	2'-4"	1'-1"			29
SERIES OF A-601	1 SET OF 9 = 9 BARS	21'-8" TO 13'-4"	3	1'-5"	11'-4" TO 7'-0"			1'-1"	237
A-602	6	16'-10"	3	1'-5"	7'-10"				152
A-603	30	15'-2"	3	1'-5"	7'-0"				683
A-604	48	17'-6"	7	5'-6"	1'-5"	7'-0"	11"		1262
A-605	27	13'-2"	4	6'-0"	5'-5"	2'-0"			534
SERIES OF A-606	1 SET OF 8 = 8 BARS	19'-4" TO 11'-2"	3	1'-5"	9'-1" TO 5'-0"			1'-2"	183
A-607	29	12'-6"	2	7'-2"	5'-5"				544
A-608	8	22'-6"	ST						270
SERIES OF A-609	1 SET OF 7 = 7 BARS	15'-6" TO 22'-6"	3	1'-5"	7'-2" TO 10'-8"			1'-2"	200
A-610	2	23'-8"	3	1'-5"	11'-3"				71
A-611	3	19'-10"	3	1'-5"	9'-4"				89
SERIES OF A-612	1 SET OF 8 = 8 BARS	18'-2" TO 11'-2"	3	1'-5"	8'-6" TO 5'-0"			1'-0"	176
A-801	14	25'-3"	ST						869
ABUTMENTS #1R & #2R TOTAL= 8,796 LBS.									
PIERS #1R & #2R									
P-501	100	7'-3"	3	2'-8"	2'-5"				756
P-601	4	38'-3"	ST.						230
P-801	80	7'-8"	2	1'-1"	5'-6"				1,638
P-901	112	6'-5"	1	1'-0"	5'-8"				2443
P-902	56	28'-2"	ST.						5363
P-903	56	25'-0"	ST.						4760
P-904		OPEN							
P-905	12	32'-3"	ST.						1316
P-906		OPEN							
P-907	24	10'-6"	1	3'-2"	7'-7"				857
P-1001	48	12'-4"	2	1'-5"	9'-6"				2,547
P-1002	12	25'-5"	ST.						1,312
P-1003	8	10'-0 5/8"	9	3'-2"	3'-8 5/8"	1'-2 1/4"			346
P-1004	12	18'-9"	ST.						968
SPIRALS - - - 3,422									
PIERS #1R & #2R TOTAL=25,958 LBS.									

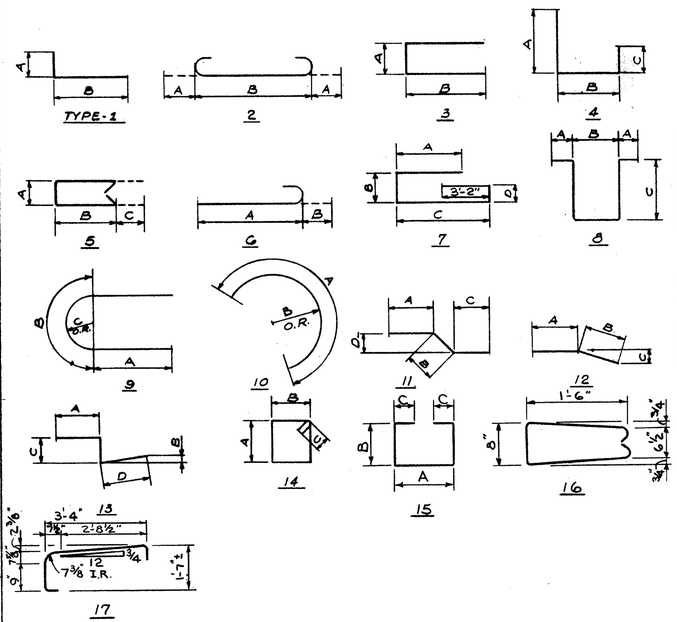
MARK	NO. REQ'D	LENGTH	TYPE	DIMENSIONS A	B	C	D	SERIES INCREMENTS	WEIGHT LBS.
SLAB									
S-501	384	5'-7"	5	8"	2'-2"	5"			2236
S-502	212	4'-11"	15	1'-6"	1'-4"	6"			1087
S-503	212	2'-6"	3	1'-6"	7½"				553
S-601	238	42'-1"	ST.						15,044
S-602	60	24'-3"	ST.						2,185
S-603	79	35'-0"	ST.						4,153
S-604	316	30'-0"	ST.						14,239
S-605	79	10'-6"	ST.						1,246
S-701	238	42'-1"	ST.						20,472
SLAB TOTAL = 61,215 LBS.									

MARK	NO. REQ'D	LENGTH	TYPE	DIMENSIONS A	B	C	D	SERIES INCREMENTS	WEIGHT LBS.
RAILING ●									
R-501	8	16'-4"	ST.						
R-502	8	20'-1"	ST.						
R-503	8	11'-5"	ST.						
R-504	112	13'-8"	ST.						
R-505	8	15'-5"	ST.						
R-506	12	4'-2"	16						
R-507	8	5'-4"	17						
R-508	8	3'-5	5	8"	1'-1"	5"			
REPLACEMENT BARS									
RE-401	1	5'-3"	10	5'-3"	1'-4"				
RE-501	1	5'-6"	ST.						
RE-601	3	6'-0"	ST.						
RE-701	2	6'-3"	ST.						
RE-801	1	6'-6"	ST.						
RE-901	1	6'-10"	ST.						
RE-1001	1	7'-3"	ST.						
RE-1101	—	7'-9"							

SPIRAL REINFORCING SCHEDULE

MARK	NO. REQ'D	CORE DIA. OF SPIRAL	LENGTH OF SPIRAL	PITCH	NO. OF TURNS	WEIGHT LBS.
SP-401	4	2'-8"	25'-2"	4½"	70	1542
SP-402	4	2'-8"	22'-0"	4½"	62	1366
SPACERS	32					514
TOTAL SPIRALS						3,422 LBS.

GRAND TOTAL 95,969 LBS



REINFORCING NOTES

THE LENGTH SHOWN IN THE STEEL SCHEDULE FOR THE SPIRAL BARS IS THE DISTANCE FROM THE TOP OF THE FOOTING TO THE BOTTOM OF THE PIER CAP. THE NUMBER OF TURNS SHOWN IN THE STEEL SCHEDULE FOR SPIRAL BARS IS THE LENGTH DIVIDED BY THE PITCH PLUS THREE TURNS (TOTAL NUMBER OF CLOSED COILS) EXPRESSED AS THE NEAREST WHOLE NUMBER. SPIRAL REINFORCING BARS SHALL NOT HAVE DEFORMATIONS, BUT SHALL IN OTHER RESPECTS CONFORM TO ITEM 509.
ONE AND ONE HALF CLOSED COILS SHALL BE PROVIDED AT THE ENDS OF EACH SPIRAL UNIT. FOUR (4) STEEL CHANNEL, TEE OR ANGLE SPACERS WEIGHING APPOX. 0.68 LBS. PER LINEAL FT. OF SPACERS SHALL BE PROVIDED FOR EACH SPIRAL UNIT. THEY SHALL BE EQUALLY SPACED ALONG THE PERIPHERY OF EACH COIL. THE NUMBER OF POUNDS OF THESE SPACERS BASED ON 0.68 LBS. PER LINEAL FT. WILL BE PAID FOR AS REINFORCING STEEL AND IS INCLUDED IN THE TABULATED QUANTITY OF SPIRAL BARS.

BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST DIGIT WHERE THREE DIGITS ARE USED AND THE FIRST TWO DIGITS WHERE FOUR ARE USED INDICATE THE BAR SIZE NUMBER. FOR EXAMPLE A-601 IS A NO. 6 SIZE BAR AND P-1001 IS A NO. 10 SIZE BAR.

● RAILING REINFORCEMENT BARS WILL BE INCLUDED AS PART OF ITEM 517 FOR PAYMENT.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER & HOCH, Consulting Engineers
AKRON, OHIO

REINFORCING SCHEDULE

BRIDGE No SUM-271-0854 R.
I-271 OVER CR. No 32
SUMMIT COUNTY

STA. 449+47.62 TO STA. 451+10.16 -R.

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
KSJ	BMR			RBH	10-19-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

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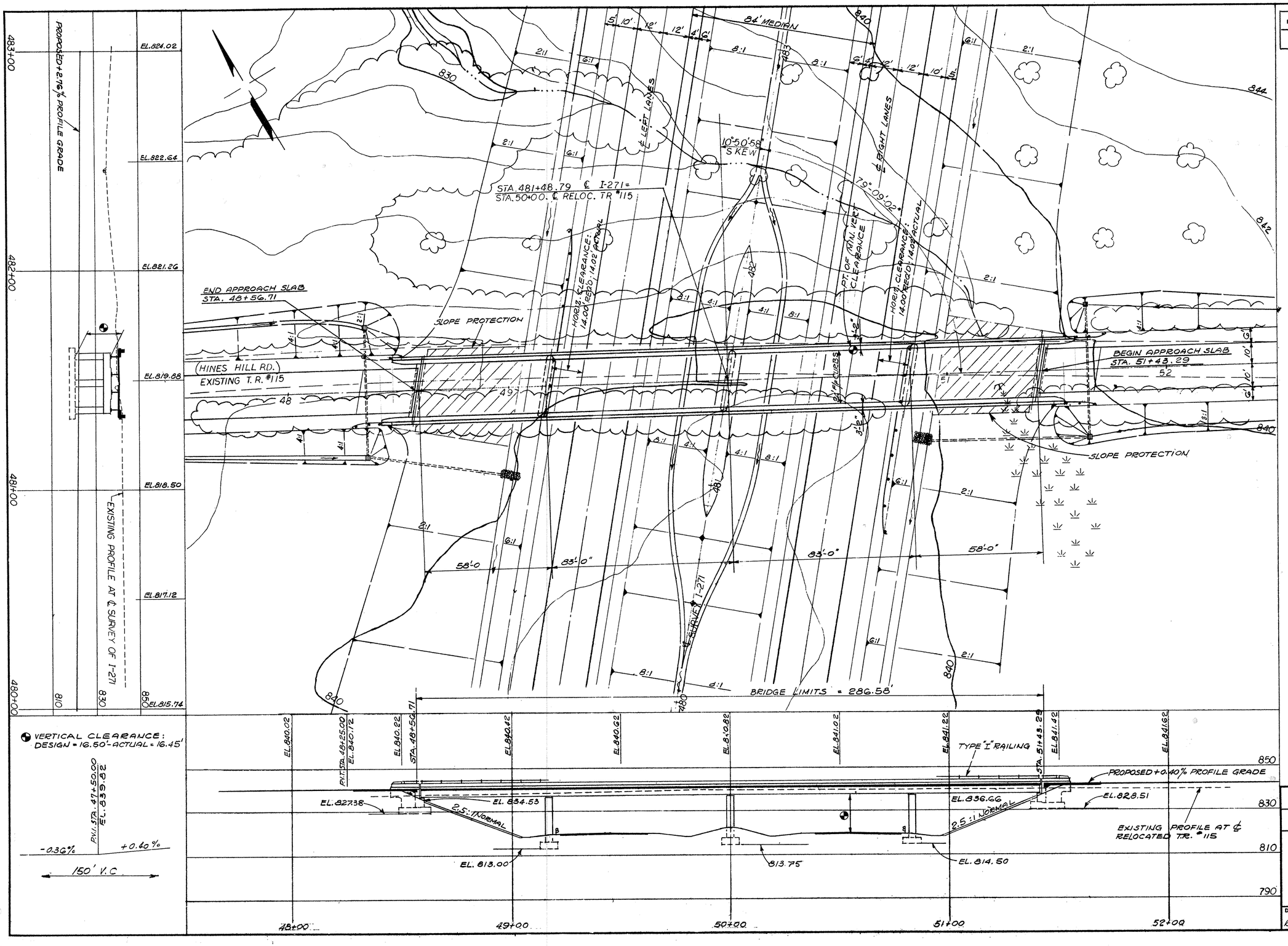


PROPOSED STRUCTURE

TYPE: CONTINUOUS STEEL BEAMS WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE.
SKEW: 10°-50'-58" LF.
SPANS: 58'-0"-83'-0"-83'-0"-58'-0" C to BRGS.
ROADWAY: 24'-0" F. F. 2' CURBS
LOAD FREQUENCY: CF-130

WEARING SURFACE: 1" MONOLITHIC.
APPROACH SLABS: 25' LONG (AS-1-54)
ALIGNMENT: TANGENT
SUPERELEVATION: NONE.
SLOPE PROTECTION: CRUSHED AGGREGATE.

TRAFFIC: 200 - 1975 ADT. T.R. #115

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

SITE PLAN

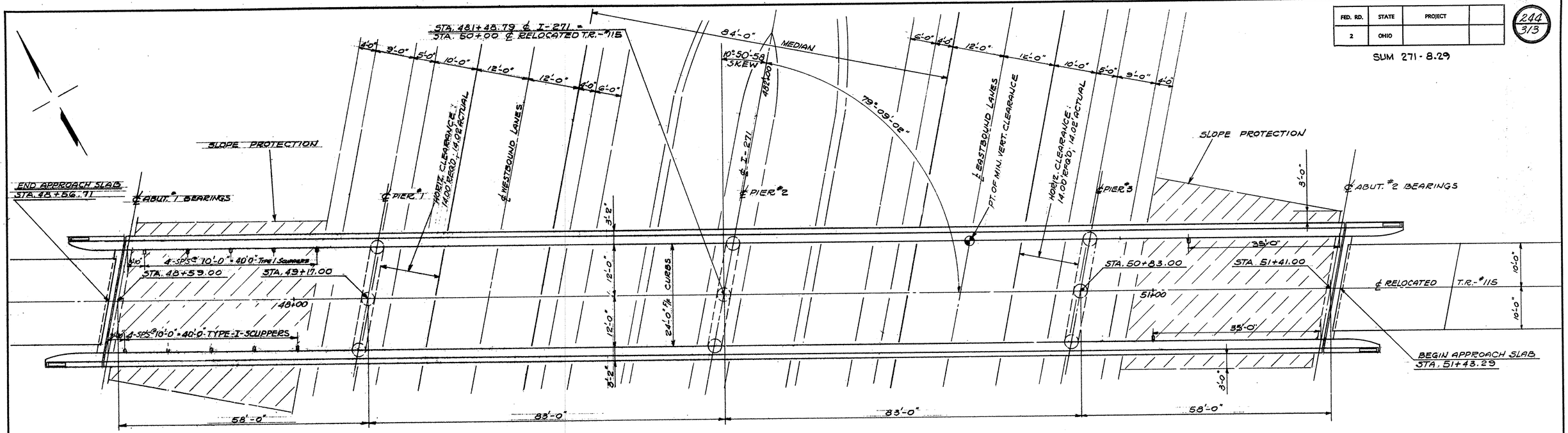
BRIDGE NO. SUM-271-0914
I-271 UNDER T.R. #115
SUMMIT COUNTY
STA. 481+48.79

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
K.S.J.	ROSE Konessy		JH	RBH	4-20-66	

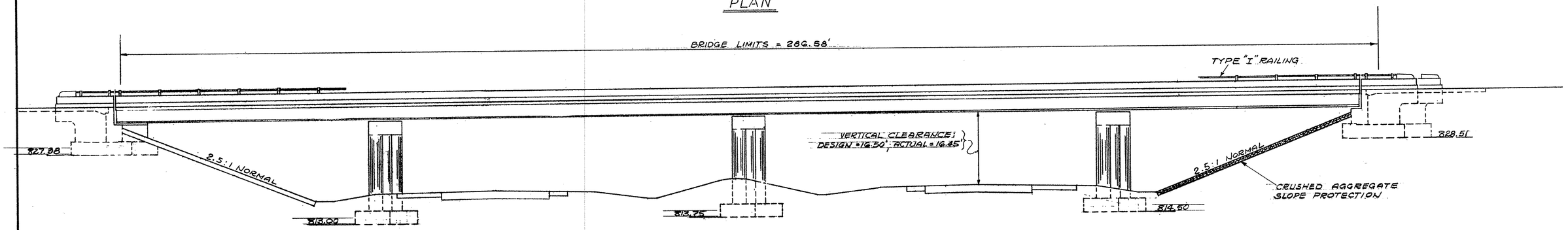
FED. RD.	STATE	PROJECT	
2	OHIO		

SUM 271 - 8.29

244
3/3



PLAN



ELEVATION

ESTIMATED QUANTITIES

ITEM	TOTAL	UNIT	DESCRIPTION	SUPER	ABUT'S	PIERS	GEN.
503	408	CU.YDS.	UNCLASSIFIED EXCAVATION		209	199	
509	100,177	LBS.	REINFORCING STEEL.	67,142	7,410	25,625	
511	266	CU.YDS.	CLASS "C" CONCRETE SUPERSTRUCTURE	266			
511	96	CU.YDS.	CLASS "E" CONCRETE ABUTS ABOVE FOOTINGS.		96		
511	68	CU.YDS.	CLASS "C" CONCRETE PIERS ABOVE FOOTINGS.			68	
511	119	CU.YDS.	CLASS "E" CONCRETE PIER & ABUT. FOOTINGS.		38	81	
513	214,300	LBS.	STRUCTURAL STEEL	214,300			
514	214,300	LBS.	FIELD PAINTING OF STRUCTURAL STEEL	214,300			
517	620.57	LIN.FT.	BRIDGE RAILING (TYPE-1)	566.90	53.67		
518	25	CU.YDS.	POROUS BACKFILL		25		
518	12	EACH	SCUPPERS, INCLUDING SUPPORTS	12			
518	46	LIN.FT.	6" PERFORATED HELICAL C.M.P. 707.06 INCLUDING SPECIALS.		46		
518	52	LIN.FT.	6" HELICAL C.M.P. 707.06 NON PERFORATED.		52		
661	435	SQ.YDS.	CRUSHED AGGREGATE SLOPE PROTECTION		435		
808	266	UNITS	WATER REDUCING, SET RETARDING ADMIXTURE.	266			
825	1,132	SQ.YDS.	CONCRETE SURFACE TREATMENT.				1132
828	49	LIN.FT.	JOINT SEALER		49		

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

GENERAL PLAN & ELEVATION

BRIDGE NO SUM 271-0914
I-271 UNDER TR #115
SUMMIT COUNTY
STA 481 + 48.79

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
K.S.J.	JK		9-8-66	RBH	9-20-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

245
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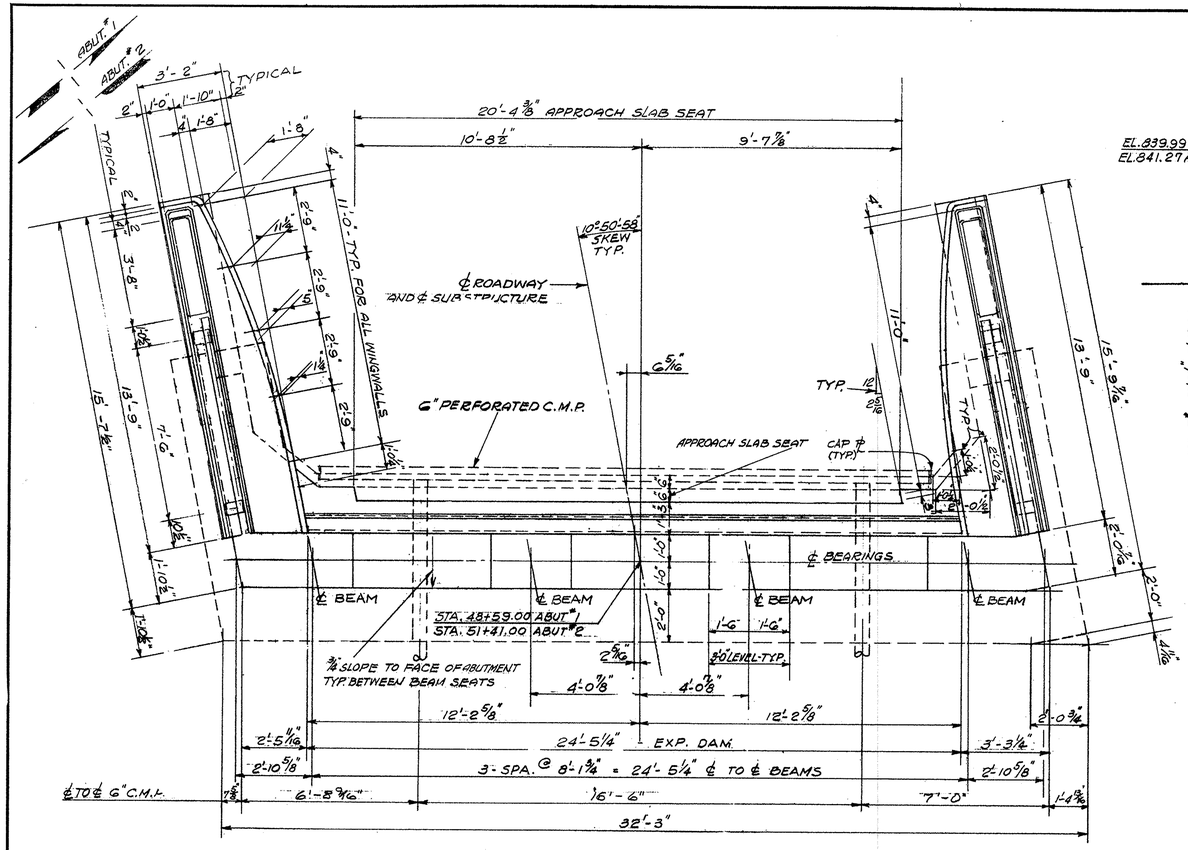
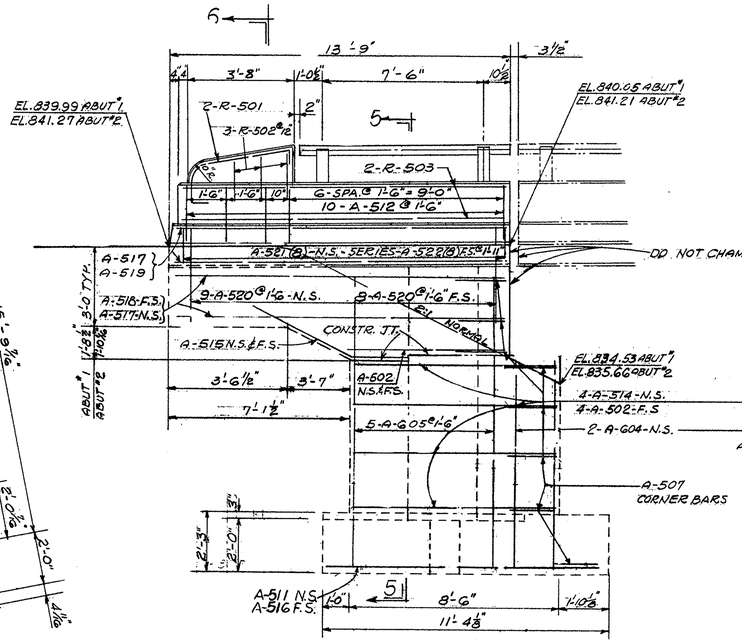
SUM 271-8.29

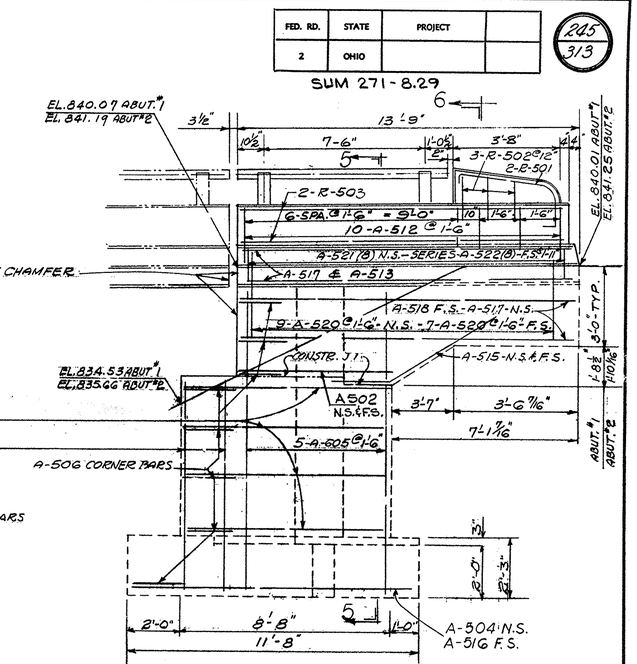


PLAN OF ABUTMENT #1 AS SHOWN

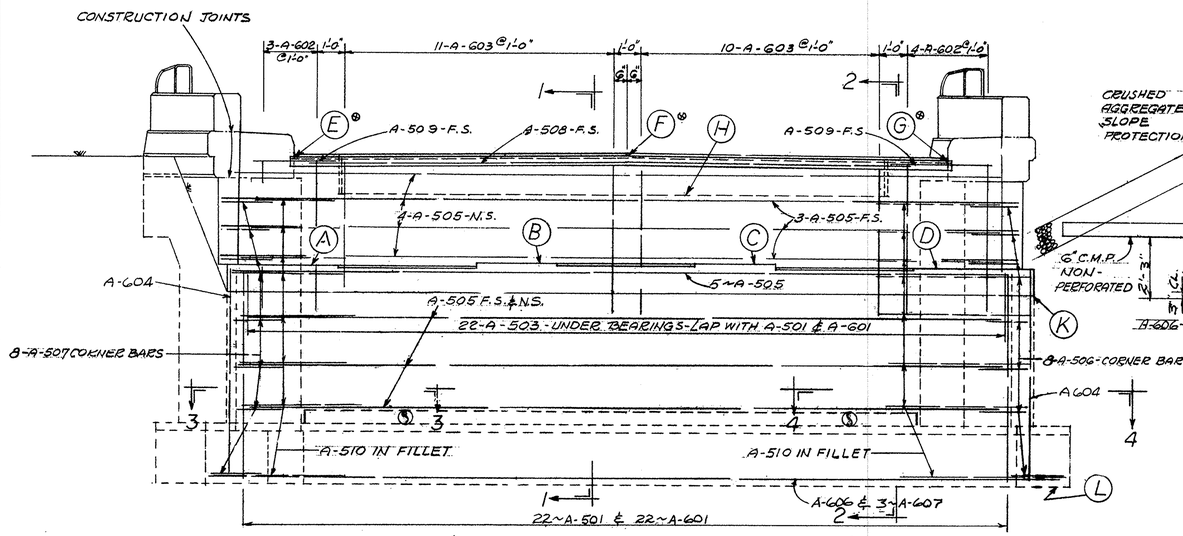
PLAN OF ABUTMENT #2 SIMILAR



ELEVATION OF SOUTH WINGWALL ABUT. #1 AS SHOWN.
ELEVATION OF NORTH WINGWALL ABUT. #2 AS NOTED.

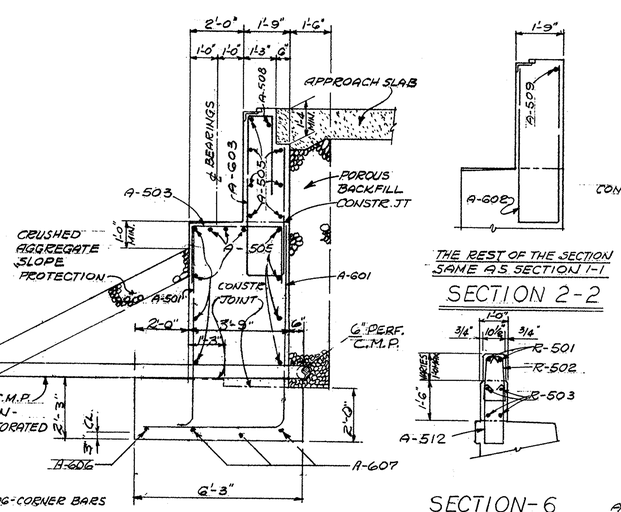


ELEVATION OF SOUTH WINGWALL ABUT. #2 AS SHOWN.
ELEVATION OF NORTH WINGWALL ABUT. #1 AS NOTED.



ELEVATION OF ABUT. #1 SHOWN.

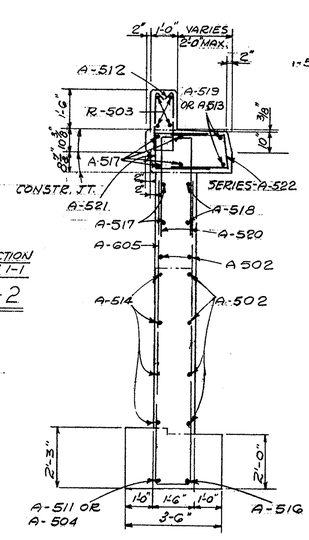
ELEVATION OF ABUT. #2 SIMILAR



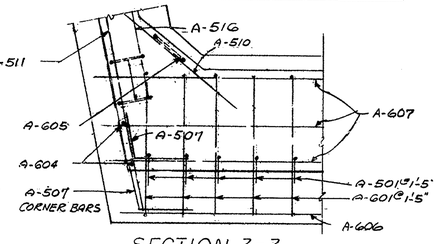
SECTION 1-1

SECTION 2-2

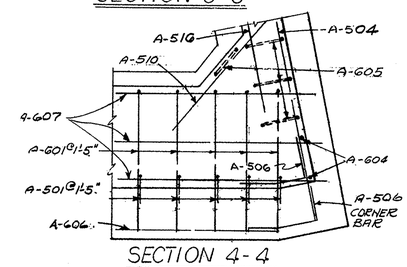
SECTION-6



SECTION 5-5



SECTION 3-3



SECTION 4-4

ELEVATION TABLE

	A	B	C	D	E ⊗	F ⊗	G ⊗	H	K	L
ABUT. #1	835.53	835.66	835.67	835.55	840.07	840.27	840.09	838.75	834.53	827.38
ABUT. #2	836.68	836.80	836.79	836.66	841.23	841.41	841.21	839.90	835.66	828.51

⊗ INDICATES FINISHED PAVEMENT ELEVATIONS AT FACE OF BACKWALL

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

ABUTMENT DETAILS

BRIDGE NO. SUM 271-0914
1-271 UNDER TR #115
SUMMIT COUNTY
STA. 481 + 48.79

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
K.S.J.	J.K.		JPH	RDH	9-20-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM 271-8.29

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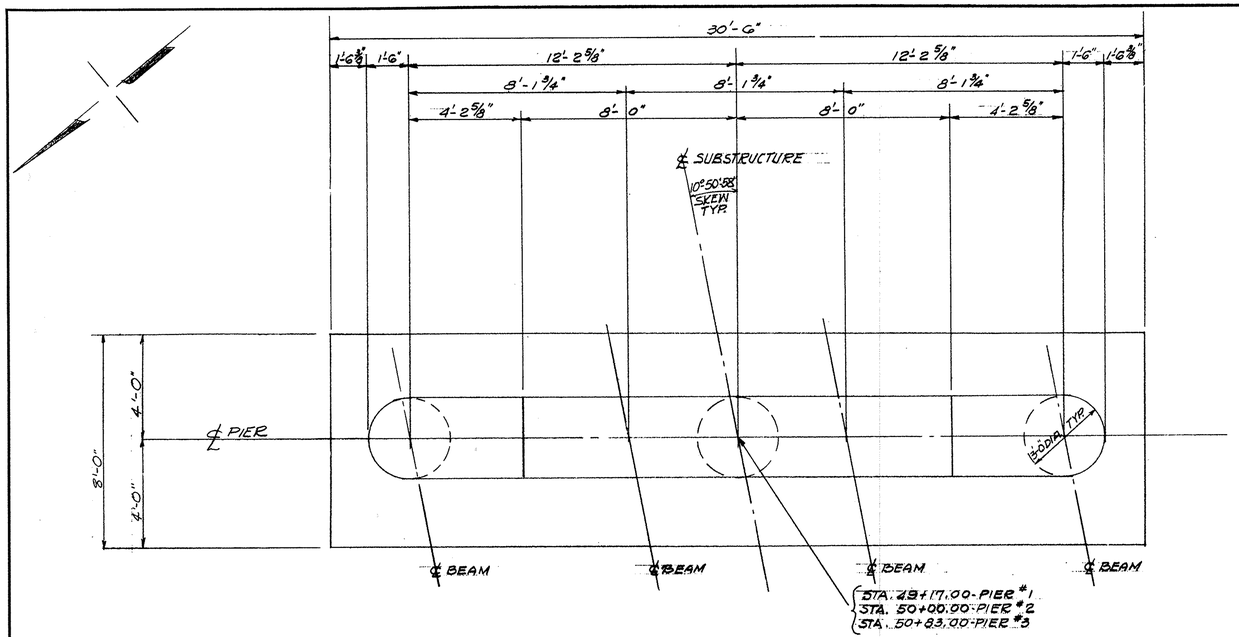
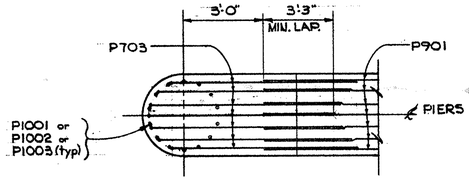
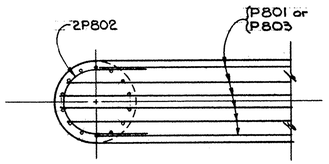


ELEVATION TABLE

	A	B	C	D	E
PIER #1	835.35	835.47	835.47	835.33	813.00
PIER #2	835.56	835.69	835.67	835.54	813.75
PIER #3	836.02	836.14	836.13	836.00	814.50

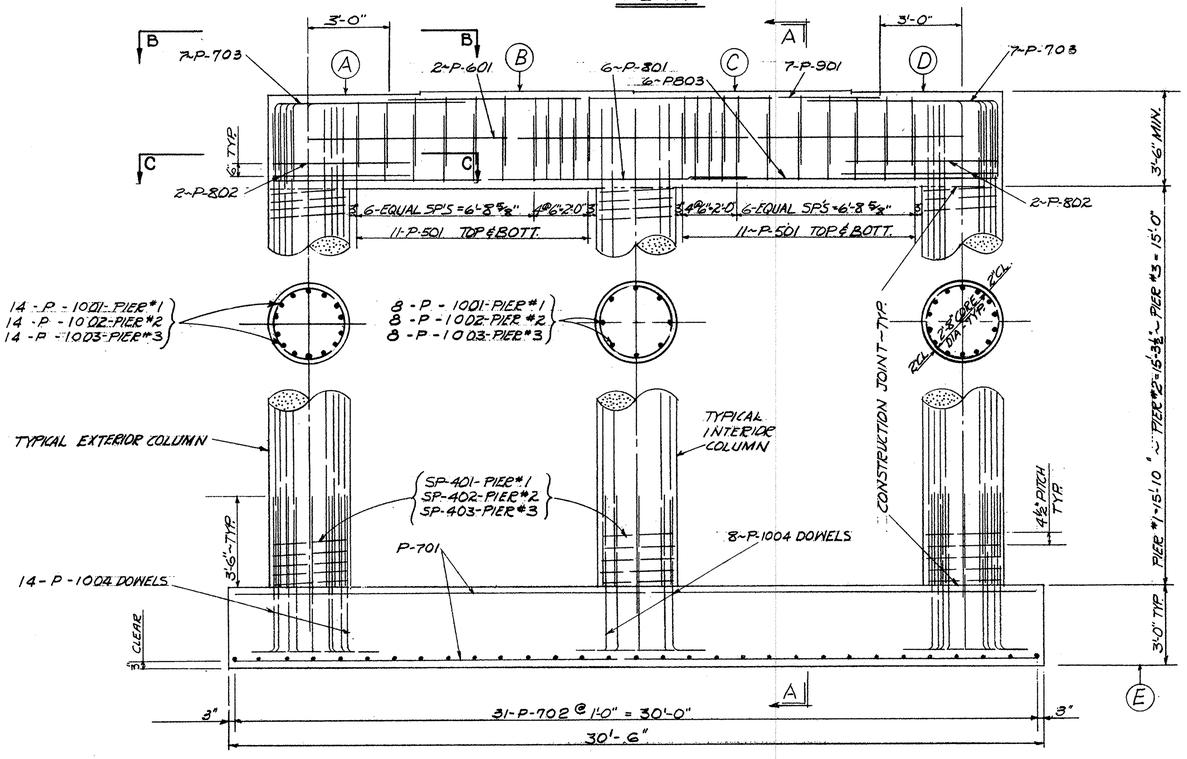


SECTION B-B

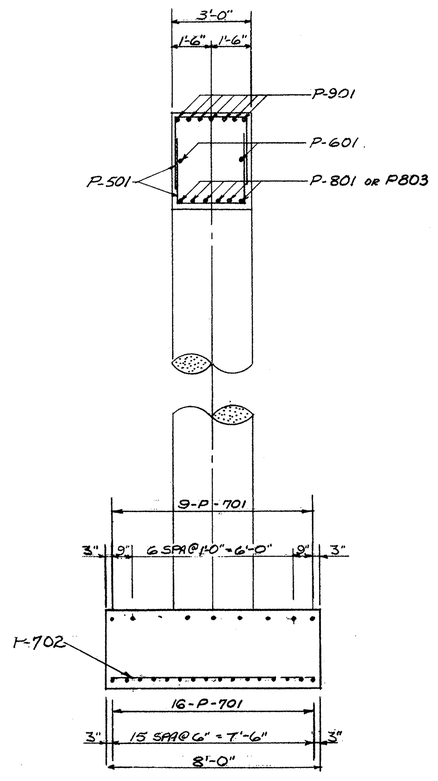


SECTION "C-C"

PLAN



ELEVATION



SECTION A-A

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

PIER DETAILS

BRIDGE Nº SUM 271-0914
1-271 UNDER TR*115
SUMMIT COUNTY
STA. 481 + 48.79

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
KSJ	NPW		SEH	RBA	9-20-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

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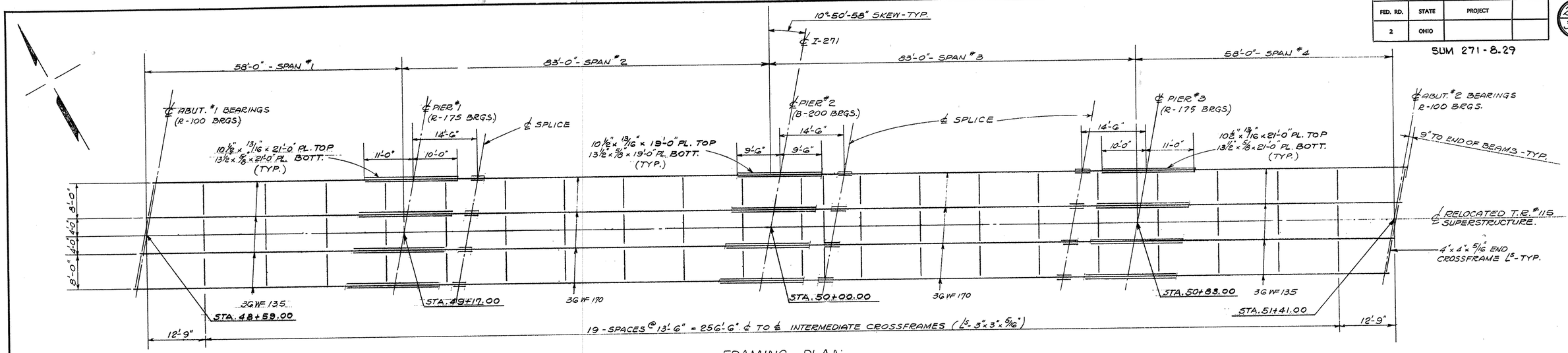
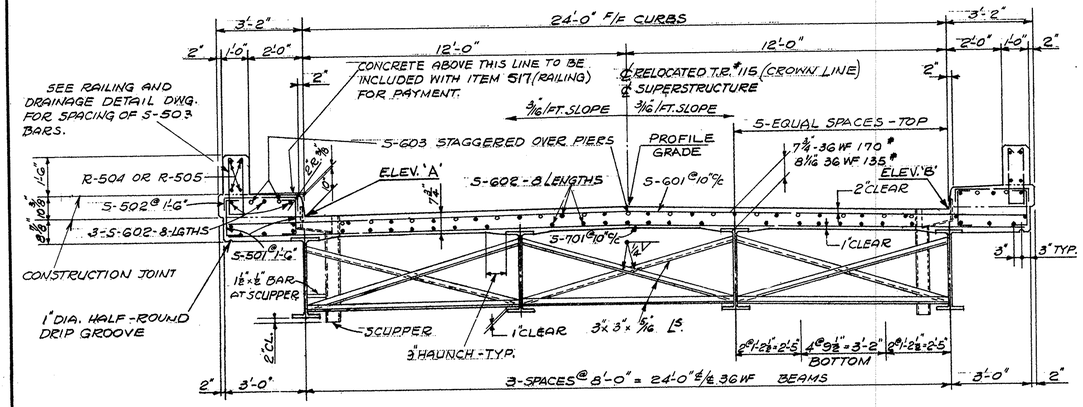
3/3

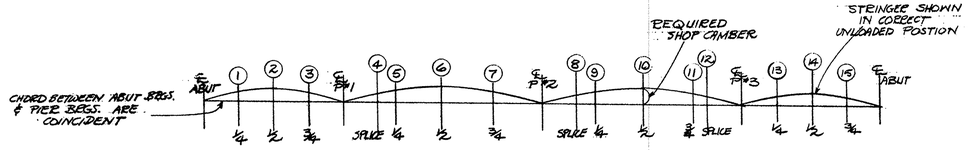
SUM 271-8.29



FRAMING PLAN

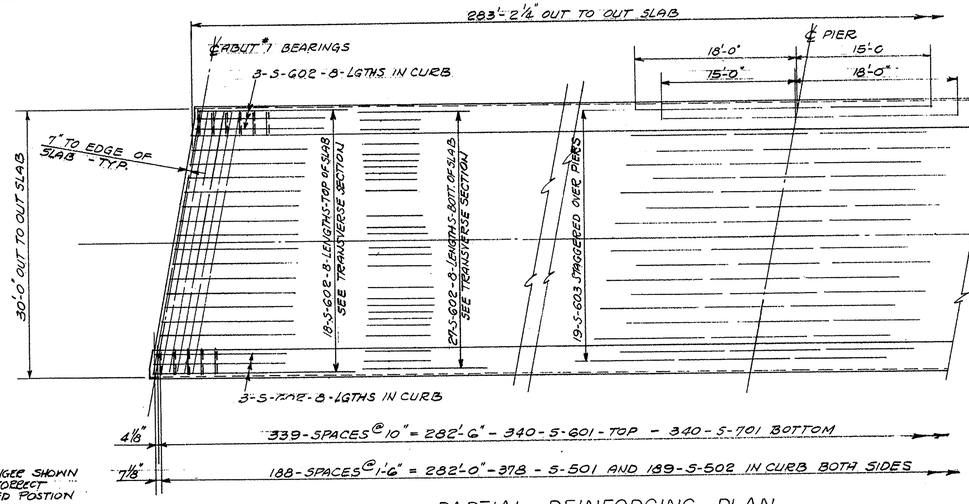


TRANSVERSE SECTION

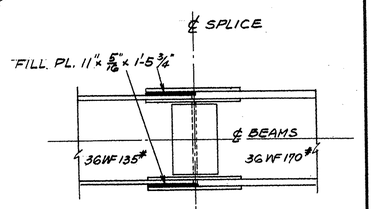


DEFLECTION & CAMBER

SPAN	SPAN #1						SPAN #2								SPAN #3										SPAN #4					
LOCATION	¼ PT. (1)		½ PT. (2)		¾ PT. (3)		SPLICE (4)		¼ PT (5)		½ PT (6)		¾ PT (7)		SPLICE (8)		¼ PT (9)		½ PT (10)		¾ PT (11)		SPLICE (12)		¼ PT (13)		½ PT (14)		¾ PT (15)	
BEAM	FACIA	INT.	FACIA	INT.	FACIA	INT.	FACIA	INT.	FACIA	INT.	FACIA	INT.	FACIA	INT.	FACIA	INT.	FACIA	INT.	FACIA	INT.	FACIA	INT.	FACIA	INT.	FACIA	INT.	FACIA	INT.	FACIA	INT.
DEFLECTION DUE TO WT. OF STEEL	1/16	1/16	1/16	1/16	0	0	1/16	1/16	1/8	1/8	1/8	3/16	1/8	1/8	3/16	3/16	1/8	1/8	1/8	3/16	1/8	1/8	1/16	1/16	0	0	1/16	1/16	1/16	1/16
DEFLECTION DUE TO REMAINING D.L.	1/4	1/4	5/16	1/4	1/8	1/8	5/16	1/4	7/16	3/8	3/4	5/8	3/8	5/16	3/4	5/8	3/8	5/16	3/4	5/8	7/16	3/8	5/16	1/4	1/8	1/8	5/16	1/4	1/4	1/4
ADJUSTMENT REQ. FOR V.C.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
REQ. SHOP CAMBER	5/16	5/16	3/8	5/16	1/8	1/8	3/8	1/16	9/16	1/2	7/8	13/16	1/2	7/16	15/16	13/16	1/2	7/16	1/8	13/16	9/16	1/2	3/8	5/16	1/8	1/8	3/8	5/16	5/16	5/16



PARTIAL REINFORCING PLAN



SPLICE DETAIL

SEE STD. DWG. SD. 1-65 FOR DIMENSIONS AND SIZES NOT SHOWN.

ELEVATION TABLE

STATION	ELEV. 'A'	PROFILE GRADE	ELEV. 'B'
48+75	840.16	840.32	840.16
49+00	840.24	840.42	840.25
+25	840.33	840.52	840.35
+50	840.50	840.62	840.50
+75	840.58	840.72	840.58
50+00	840.63	840.82	840.63
+25	840.78	840.92	840.78
+50	840.90	841.02	840.90
+75	840.95	841.12	840.93
51+00	841.04	841.22	841.05
+25	841.16	841.32	841.16

PROFILE GRADE IS FINISHED PAVEMENT ELEVATION.

ELEVATIONS A & B. ARE THOSE WHICH ARE REQUIRED BEFORE CONCRETE DECK IS POURED. PROPER ALLOWANCE HAS BEEN MADE FOR THE DEAD LOAD DEFLECTIONS CAUSED BY THE WEIGHT OF THE CONCRETE.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

FRAMING PLAN & SLAB DETAILS

BRIDGE Nº SUM-271-0914
I-271 UNDER TR #115
SUMMIT COUNTY
STA 481 + 48.79

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
K.S.J.	J.K.		J.P.H.	R.B.H.	9-20-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

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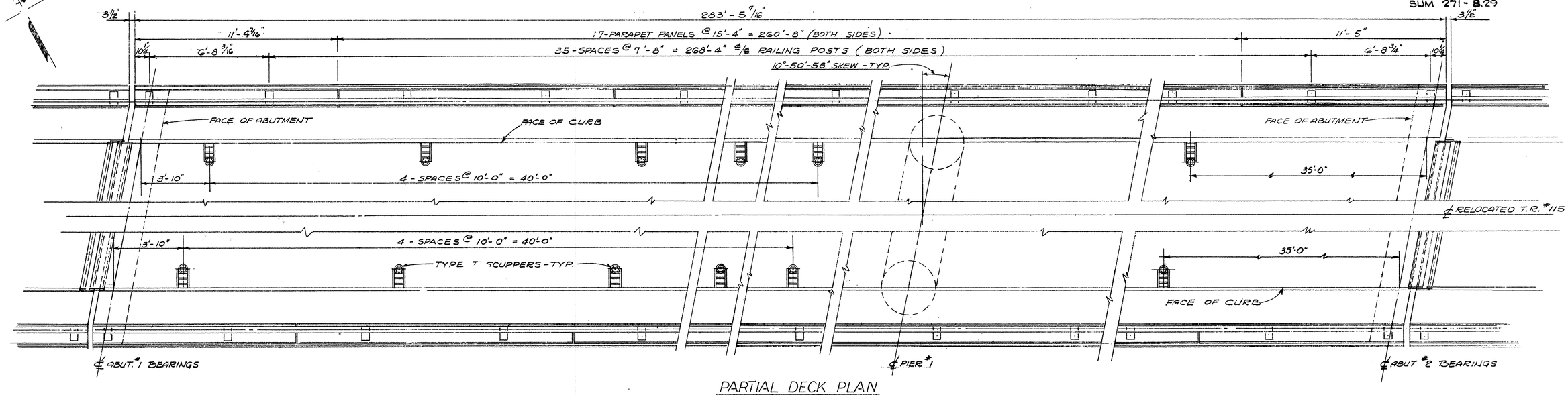
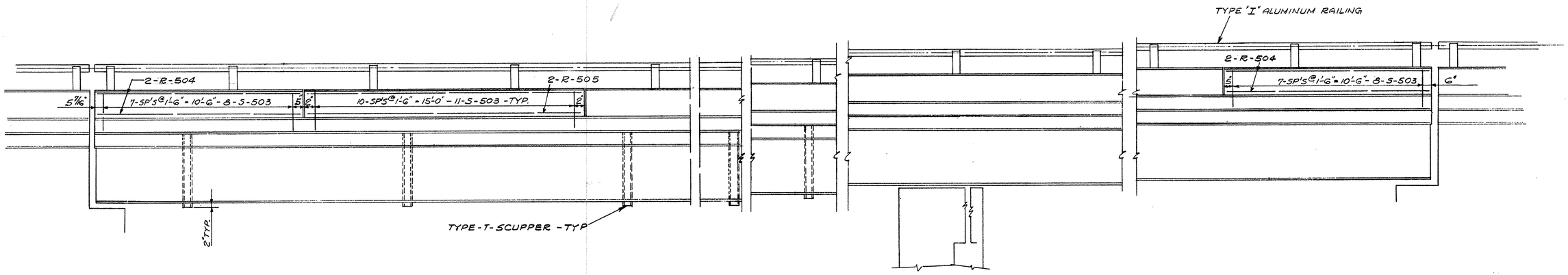
SUM 271-8.29



PARTIAL DECK PLAN



SOUTH ELEVATION SHOWN
NORTH ELEVATION SIMILAR

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

RAILING & DRAINAGE

BRIDGE Nº SUM 271-0914
I-271 UNDER TR #115
SUMMIT COUNTY
STA 481 + 48.79

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
K.S.J	JK		JH	RBH	9-20-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

249
313

SUM 271 - 8.29

MARK	NO. REQ'D	LENGTH	TYPE	DIMENSIONS A	B	C	D	INCREMENTS	WEIGHT LBS.
ABUTMENT # 1 AND # 2									
A-501	44	7'-11"	1	6"	7'-6"				363
A-502	24	6'-2"	ST.						154
A-503	44	7'-8"	3	3'-5"	2'-3"				352
A-504	2	11'-4"	ST.						24
A-505	36	29'-10"	ST.						1120
A-506	16	4'-7"	15	2'-0"	10"	1⅞"			76
A-507	16	3'-10"	16	2'-0"	4½"				64
A-508	2	24'-4"	ST.						51
A-509	4	4'-0"	ST.						17
A-510	32	5'-0"	ST.						167
A-511	2	11'-0"	ST.						23
A-512	40	5'-7"	5	8"	2'-2"	5"			233
A-513	4	12'-10"	17	11'-0"	1'-10"				54
A-514	16	8'-2"	ST.						136
A-515	8	7'-0"	12	5'-0"	2'-0"	1'-0"			58
A-516	4	6'-10"	ST.						29
A-517	24	13'-3"	ST.						332
A-518	8	10'-9"	ST.						90
A-519	4	13'-6"	17	11'-0"	2'-6"				56
A-520	66	3'-8"	1	6"	3'-3"				252
A-521	32	3'-0"	3	1'-3"	1'-0"				100
SERIES OF A-522	4 SETS OF 8 = 32 BARS	VARIES 3'-1 TO 6'-3"	18	VARIES 1'-0"-2'-7"	1'-3"	2"	VARIES 10"-8'-5"	5½"	156
A-601	44	18'-10"	1	7'-6"	5'-5"				848
A-602	14	14'-2"	3	1'-5"	6'-6"				298
A-603	42	16'-6"	7	5'-0"	1'-5"	6'-6"	11"		1041
A-604	8	8'-1"	1	6"	7'-8"				98
A-605	24	23'-4"	3	1'-2"	11'-4"				841
A-606	2	29'-10"	ST.						90
A-607	6	31'-10"	ST.						287
TOTAL ABUTMENTS #1 & #2									7,410
PIERS									
P-501	132	7'-5"	3	2'-8"	2'-6"				1021
P-601	6	24'-4"	ST.						219
P-701	75	30'-0"	ST.						4599
P-702	93	7'-6"	ST.						1426
P-703	42	10'-11"	1	3'-4"	7'-7"				937
P-801	18	17'-8"	ST.						849
P-802	12	11'-4 7/8"	9	8'-10"	8'-8 3/4"	1'-2 1/4"			365
P-803	18	12'-0"	SH.						577
P-901	21	18'-4"	ST.						1309
P-1001	36	18'-9"	ST.						2904
P-1002	36	18'-8"	ST.						2827
P-1003	36	17'-9"	ST.						2750
P-1004	108	7'-0"	1	1'-0"	6'-3"				3253
SPIRALS									2589
TOTAL PIERS INCLUDING SPIRALS									25,625

MARK	NO. REQ'D	LENGTH	TYPE	DIMENSIONS A	B	C	D	WEIGHT LBS.
SUPERSTRUCTURE								
S-501	756	2'-0"	3	1'-3"	6"			1577
S-502	378	3'-3"	3	2'-6"	6"			1281
S-503	406	5'-7"	5	8"	2'-2"	5"		2364
S-601	340	30'-2"	ST.					15,405
S-602	408	37'-1"	ST.					22,727
S-603	57	33'-0"	ST.					2,825
S-701	340	30'-2"	ST.					20,965
TOTAL SUPERSTRUCTURE :								67,142

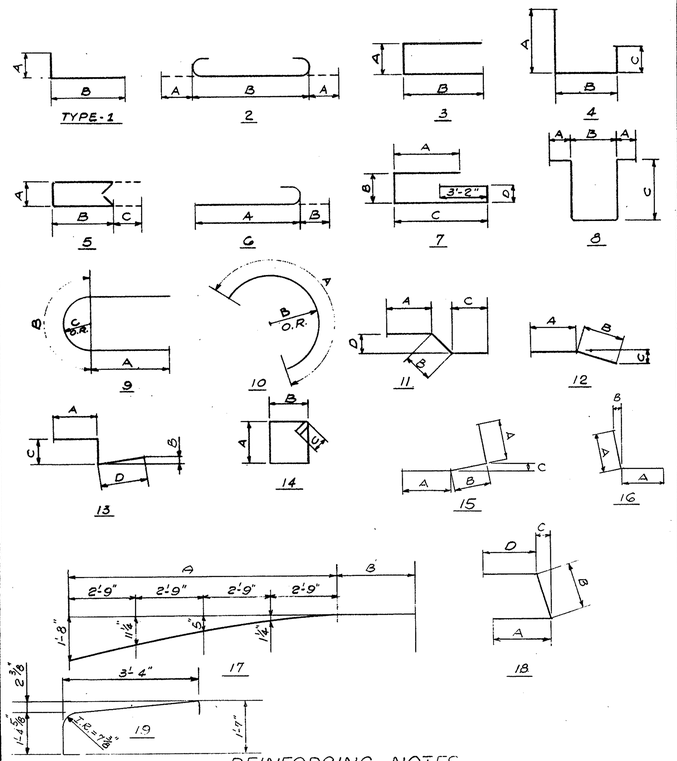
MARK	NO. REQ'D	LENGTH	TYPE	DIMENSIONS A	B	C	D	WEIGHT LBS.
RAILING®								
R-501	8	5'-4"	19					
R-502	12	3'-3"	5	8"	1'-1"	5"		
R-503	16	13'-1"	ST.					
R-504	16	11'-0"	ST.					
R-505	136	15'-0"	ST.					
REPLACEMENT BARS								
RE-401	1	5'-3"	10	5'-3"	14"			
RE-501	1	5'-6"						
RE-601	3	6'-0"						
RE-701	2	6'-3"						
RE-801	1	6'-6"						
RE-901	1	6'-10"						
RE-1001	1	7'-3"						
RE-1101		7'-9"						

SPIRAL REINFORCING SCHEDULE

MARK	NO. REQ'D	CORE DIA. OF SPIRAL	LENGTH OF SPIRAL	PITCH	NO. OF TURNS	WEIGHT LBS.
SP-401	3	2'-8"	15'-10"	4½"	45	755
SP-402	3	2'-8"	15'-3½"	4½"	44	738
SP-403	3	2'-8"	15'-0"	4½"	43	721
SPACERS	36					375
TOTAL SPIRALS						2589

GRAND TOTAL 100,177 LBS

®RAILING REINFORCEMENT BARS WILL BE INCLUDED AS PART OF ITEM 517 FOR PAYMENT.



REINFORCING NOTES

THE LENGTH SHOWN IN THE STEEL SCHEDULE FOR THE SPIRAL BARS IS THE DISTANCE FROM THE TOP OF THE FOOTING TO THE BOTTOM OF THE PIER CAP. THE NUMBER OF TURNS SHOWN IN THE STEEL SCHEDULE FOR SPIRAL BARS IS THE LENGTH DIVIDED BY THE PITCH PLUS THREE TURNS (TOTAL NUMBER OF CLOSED COILS) EXPRESSED AS THE NEAREST WHOLE NUMBER. SPIRAL REINFORCING BARS SHALL NOT HAVE DEFORMATIONS, BUT SHALL IN OTHER RESPECTS CONFORM TO ITEM 509. ONE AND ONE HALF CLOSED COILS SHALL BE PROVIDED AT THE ENDS OF EACH SPIRAL UNIT. FOUR (4) STEEL CHANNEL, TEE OR ANGLE SPACERS WEIGHING APPOX. 0.66 LBS. PER LINEAL FT. OF SPACERS SHALL BE PROVIDED FOR EACH SPIRAL UNIT. THEY SHALL BE EQUALLY SPACED ALONG THE PERIPHERY OF EACH COIL. THE NUMBER OF POUNDS OF THESE SPACERS BASED ON 0.66 LBS. PER LINEAL FT. WILL BE PAID FOR AS REINFORCING STEEL AND IS INCLUDED IN THE TABULATED QUANTITY OF SPIRAL BARS.

BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST DIGIT WHERE THREE DIGITS ARE USED AND THE FIRST TWO DIGITS WHERE FOUR ARE USED INDICATE THE BAR SIZE NUMBER. FOR EXAMPLE A-601 IS A NO. 6 SIZE BAR AND P-1001 IS A NO. 10 SIZE BAR.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER & HOCH, Consulting Engineers
AKRON, OHIO

REINFORCING SCHEDULE

BRIDGE Nº SUM 271-0914
1-271 UNDER TR # 115
SUMMIT COUNTY
STA. 481 + 48.79

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
K.S.J.	J.K.		SPH	BBH	9-20-66	

FED. RD.	STATE	PROJECT	
4	OHIO		

250
313

SUM-271-8.29

CURVE DATA

I-271

$\Delta = 10°-33'-34"$
$D_c = 1°-00'-00"$
$R = 5729.58'$
$T = 529.47'$
$L = 1055.94'$
} COMMON CURVE DATA (ALL THREE CURVES)

℄ RELOCATED C.H-40

P.C. STA. 55+51.49
$\Delta = 71°-22'-23"$
$D_c = 6°-00'-00"$
$R = 954.93'$
$T = 636.06'$
$L = 1189.55'$

PROPOSED STRUCTURE

TYPE: CONTINUOUS STEEL BEAMS, WITH HINGE DESIGN, WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE.
SKEW: 13°-05'-18" R.F. - TO LOCAL TANGENT.
SPANS: 33'-0" - 84'-6" - 83'-0" - 58'-0" @ BRGS.
ROADWAY: 24'-0" F/F 2'-0" SAFETY CURBS
LOAD FREQUENCY: CF = 130
WEARING SURFACE: 1" MONOLITHIC
APPROACH SLABS: 25' LONG (45-1-54)
ALIGNMENT: 6°-00'-00" CURVE LT.
SUPERELEVATION: .0417' / FT.
SLOPE PROTECTION: CRUSHED AGGREGATE.

TRAFFIC: I-271 - 15,080 - ADT. - 1975
C.H-40 - 2GO - ADT. - 1975

VERTICAL CLEARANCE:
WESTBOUND LANES:
DESIGN = 16.50'; ACTUAL = 16.72'
EASTBOUND LANES:
DESIGN = 16.50'; ACTUAL = 16.51'

ESTIMATED AVERAGE PAY LENGTH FOR FOR 10 BP 42 PILES:
ABUT. #1 = 20'
ABUT. #2 = 35'

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

SITE PLAN

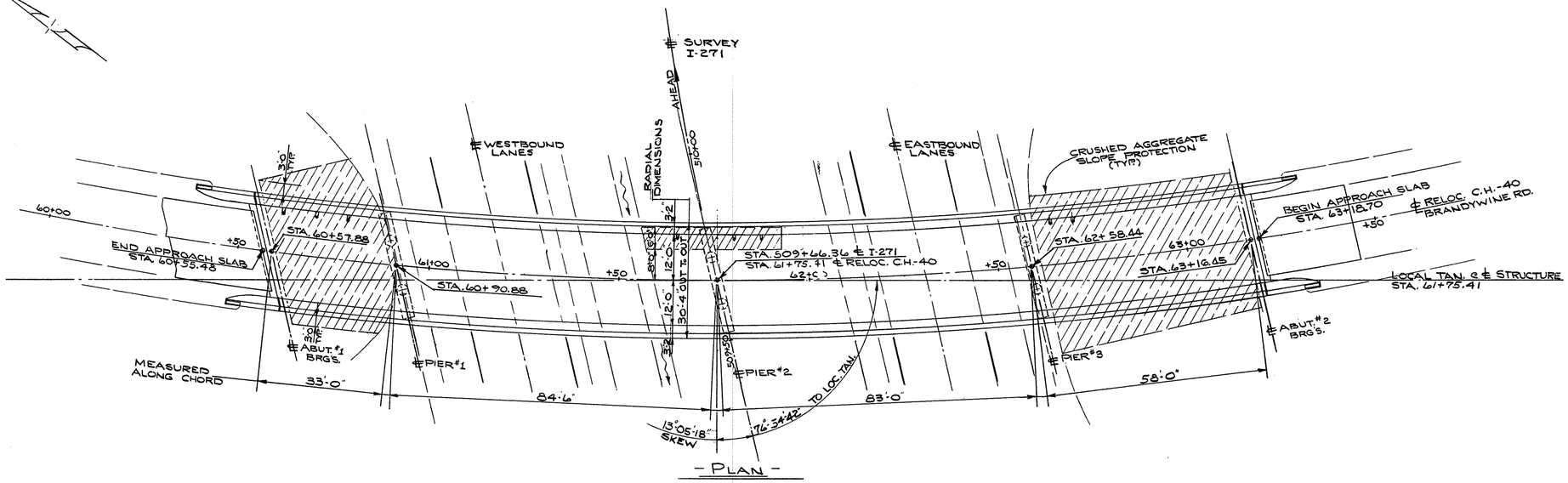
BRIDGE NO SUM-271-0966
I-271 UNDER CH-40
SUMMIT COUNTY
STA. 509+66.36

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
KJJ	VENESSY		CGS	RSH	9-22-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM-271-8.29

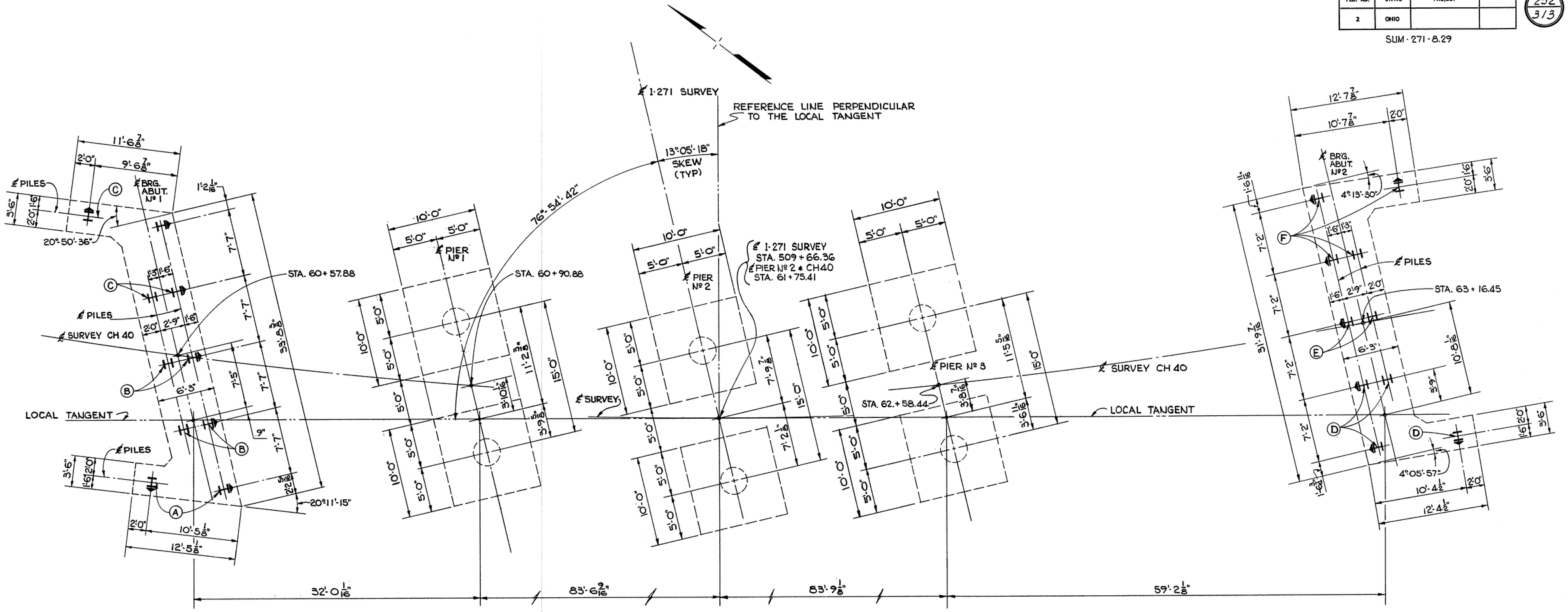
251/313


℄ SURVEY I-271
AHEAD
RADIAL DIMENSIONS
510'-00
℄ WESTBOUND LANES
℄ EASTBOUND LANES
CRUSHED AGGREGATE SLOPE PROTECTION (TYP.)
60+00
+50
END APPROACH SLAB STA. 60+35.40
STA. 60+57.88
61+00
STA. 60+90.88
+50
STA. 509+66.36 ℄ I-271
STA. 61+75.41 ℄ RELOC. C.H.-40
62+00
+50
STA. 62+58.44
63+00
STA. 63+10.45
BEGIN APPROACH SLAB STA. 63+18.70
+50
℄ RELOC. C.H.-40 BRANDYWINE RD.
LOCAL TAN. ℄ STRUCTURE STA. 61+75.41
30'-0" OUT TO OUT
12'-0"
12'-0"
3.2
3.2
3.2
3.2
2:1
2:1
2:1

FED. RD.	STATE	PROJECT	
2	OHIO		

252
313

SUM-271-8.29



PILING PLAN

PILING CUT-OFF ELEVATIONS		
LOCATION	MARK	ELEVATION
ABUT. Nº 1	Ⓐ	EL. 857.25
ABUT. Nº 1	Ⓑ	EL. 856.25
ABUT. Nº 1	Ⓒ	EL. 855.25
ABUT. Nº 2	Ⓓ	EL. 877.50
ABUT. Nº 2	Ⓔ	EL. 877.00
ABUT. Nº 2	Ⓕ	EL. 876.50

NOTE:

⊢◗ INDICATES DIRECTION OF 4:1 BATTER OF PILES

ALL PILES (10 BP 42) ABUTMENTS

ESTIMATED PILE LENGTHS AS FOLLOWS:
ABUTMENT Nº 1 . . . . . 20'-0"
ABUTMENT Nº 2 . . . . . 35'-0"

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

PILING PLAN

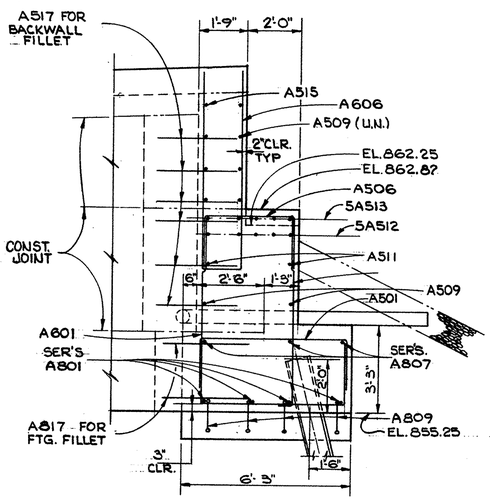
BRIDGE Nº SUM 271-0966
I-271 UNDER RELOCATED CH-40
SUMMIT COUNTY
STA. 509+66.36

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
KSJ	ALH		CDS	EBA	9-22-66	

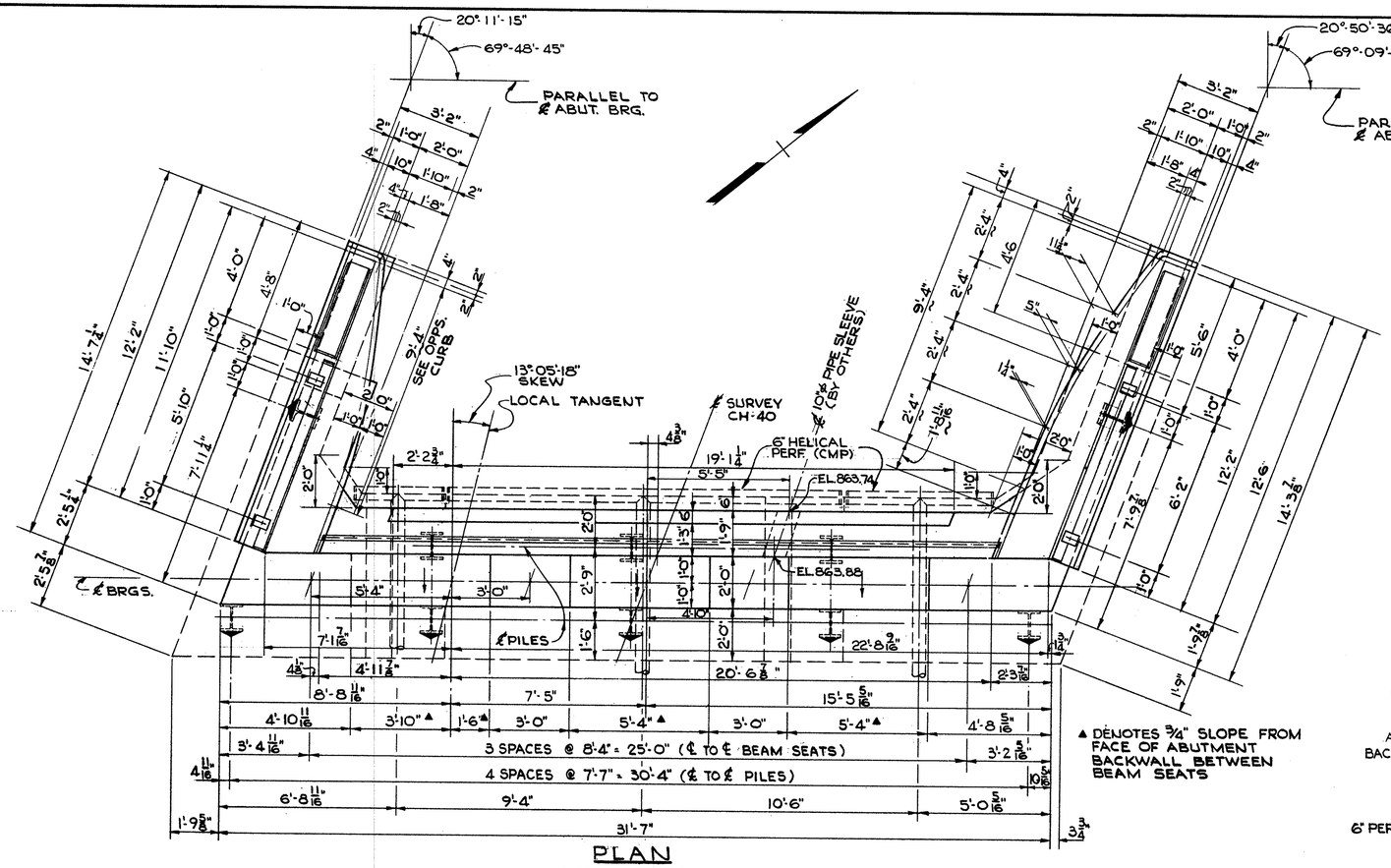
FED. RD.	STATE	PROJECT	
2	OHIO		

253
313

SUM.-271-8.29

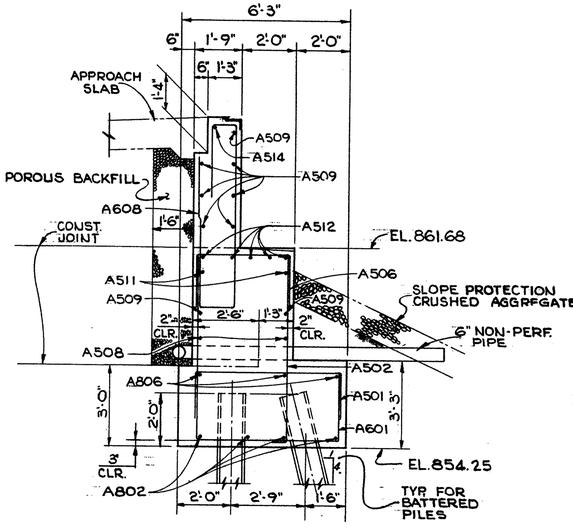


SECTION "B-B"

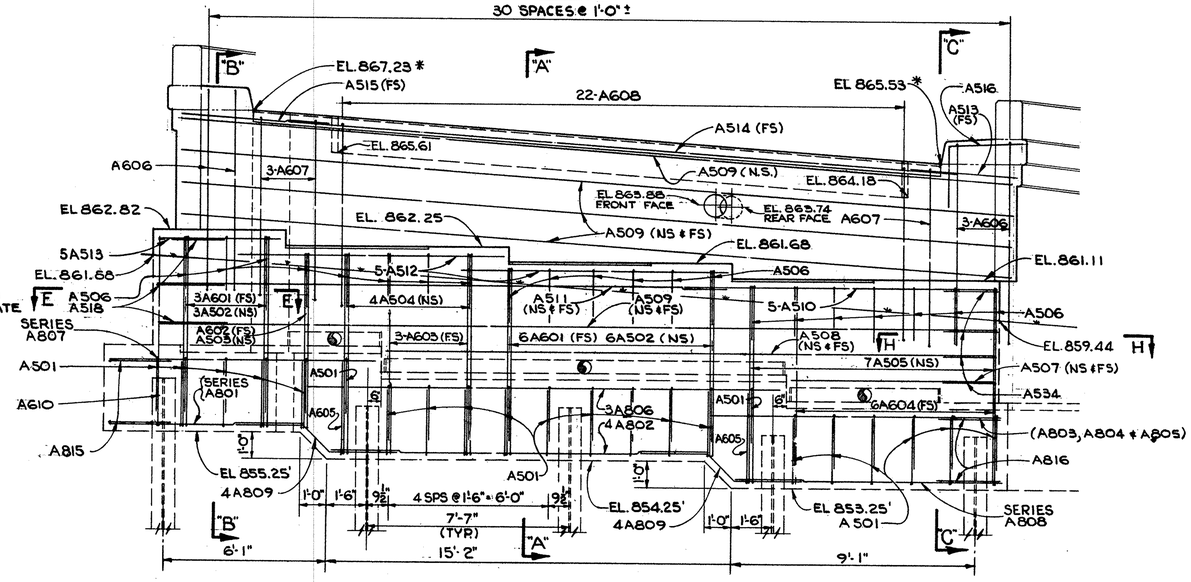


▲ DENOTES ¾" SLOPE FROM FACE OF ABUTMENT BACKWALL BETWEEN BEAM SEATS

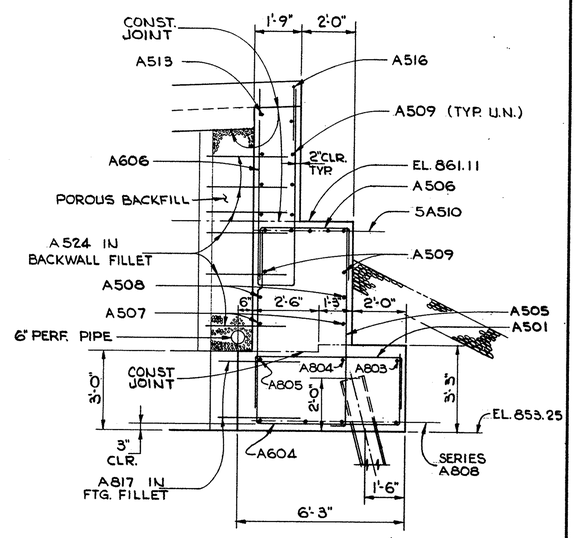
PLAN



SECTION A-A



ELEVATION



SECTION C-C

UN DENOTES UNLESS NOTED
FS. DENOTES FAR SIDE
NS. DENOTES NEAR SIDE
* DENOTES FINISHED PAVEMENT ELEV'S. AT THE FACE OF BACKWALL
FOR SECTIONS E-E & H-H SEE SHEET Nº 254

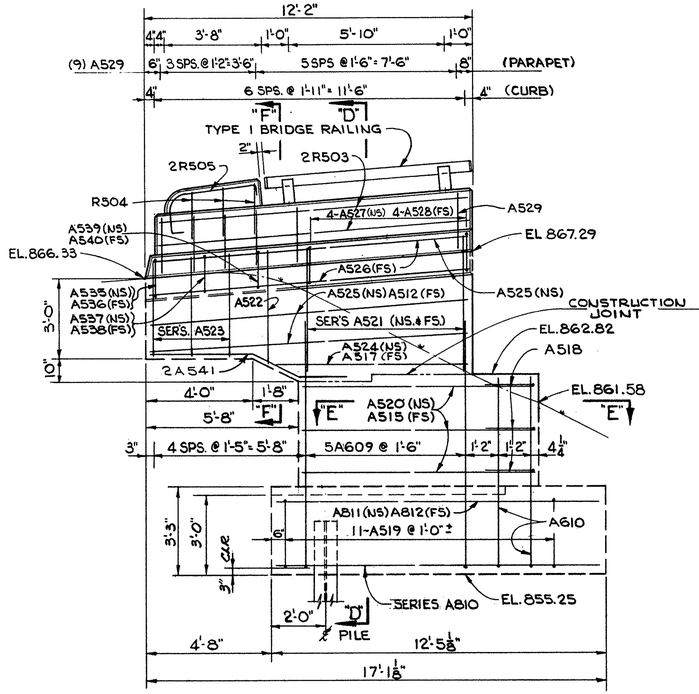
STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

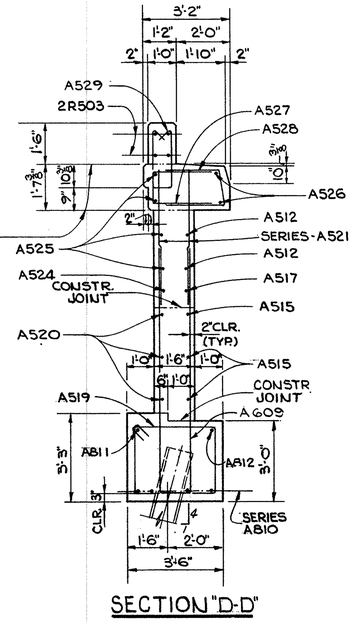
ABUTMENT Nº1 DETAILS

BRIDGE Nº SUM.-271-0966
I-271 UNDER C.H.-40
SUMMIT COUNTY
STA. 509+66.36

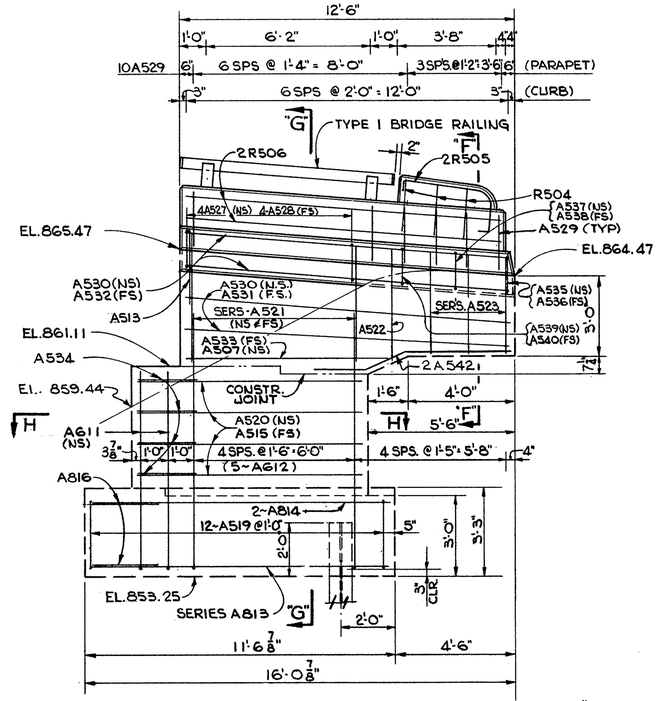
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
KSJ	ALH		CES	RDH	9-22-66	



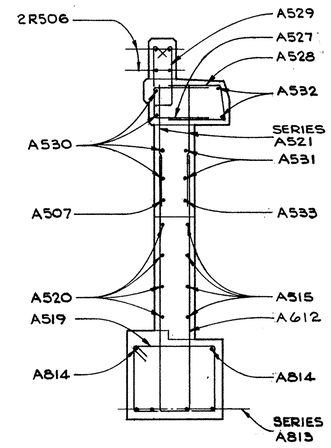
DETAIL WEST WING WALL ABUTMENT #1



SECTION "D-D"

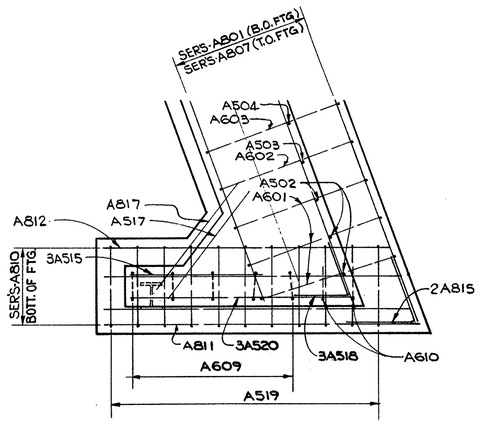


DETAIL EAST WING WALL ABUTMENT #1

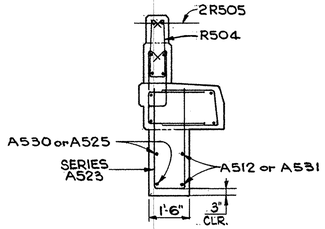


SECTION "G-G"

FOR FORMING DIMENSIONS SEE SECTION "D-D" THIS SHEET

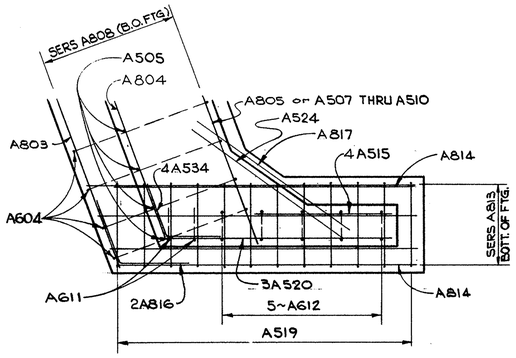


SECTION "E-E"



SECTION F-F

SEE SECTIONS "D-D" & "G-G" FOR ITEMS NOT SHOWN



SECTION "H-H"

FED. RD.	STATE	PROJECT	
2	OHIO		

254
3/3

SUM 271-8.29

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

WING WALL DETAILS ABUT. #1

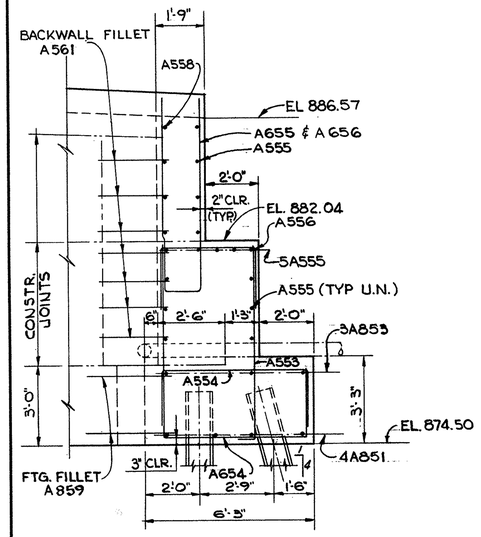
BRIDGE NO SUM 271-0966
I-271 UNDER CH-40
SUMMIT COUNTY
STA 509+6636

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
KSJ	ALH			RDH	9-22-66	

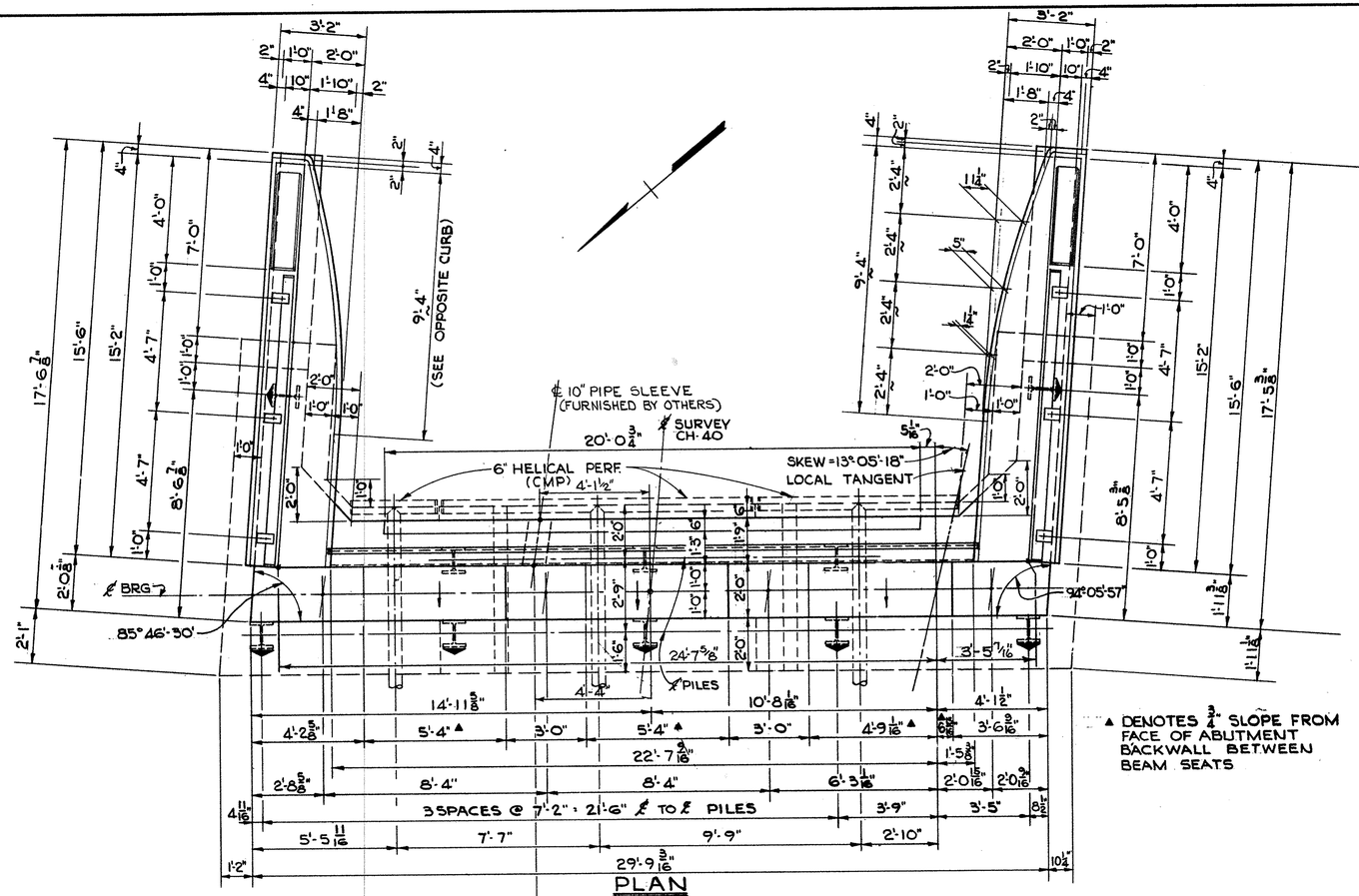
FED. RD.	STATE	PROJECT	
2	OHIO		

255
313

SUM.- 271 - 8.29

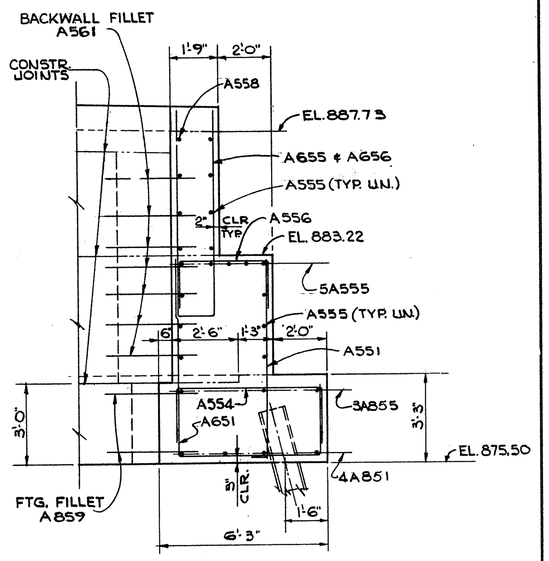


SECTION K-K

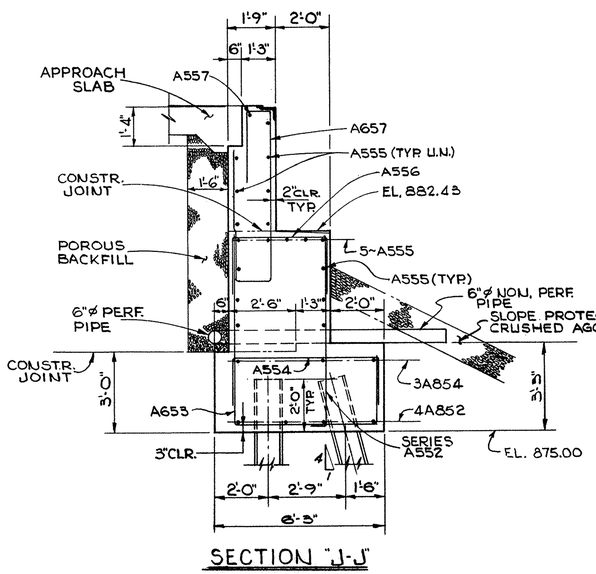


PLAN

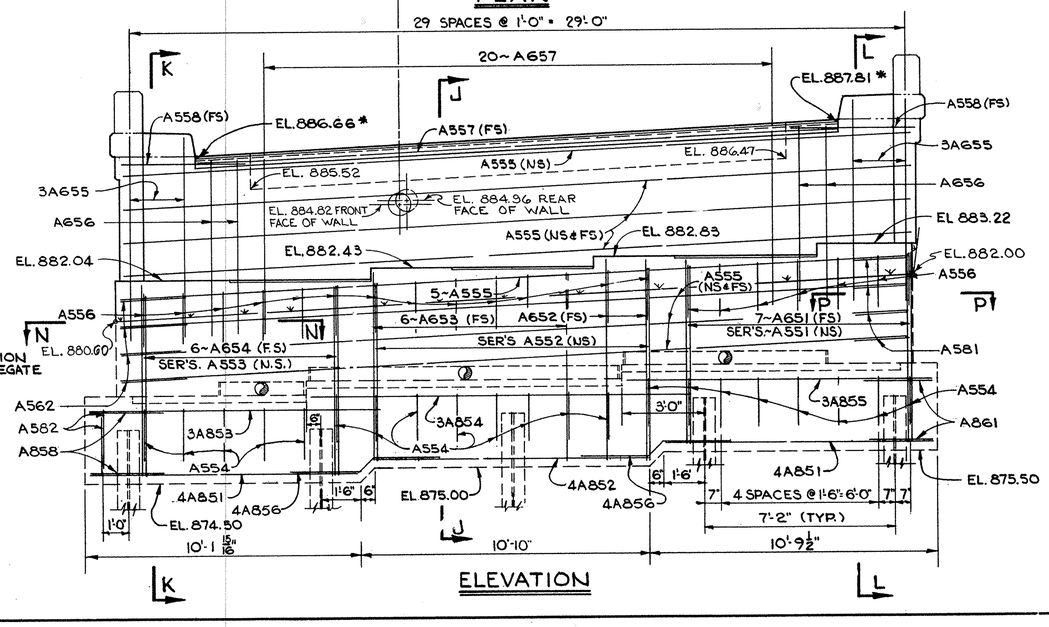
▲ DENOTES ¾" SLOPE FROM FACE OF ABUTMENT BACKWALL BETWEEN BEAM SEATS



SECTION L-L



SECTION "J-J"



ELEVATION

(UN) DENOTES UNLESS NOTED
(FS) DENOTES FAR SIDE
(NS) DENOTES NEAR SIDE
* DENOTES FINISHED PAVEMENT ELEVATIONS AT THE FACE OF BACKWALL FOR SECTIONS "N-N" & "P-P" SEE SHEET № 256

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

ABUTMENT № 2 DETAILS

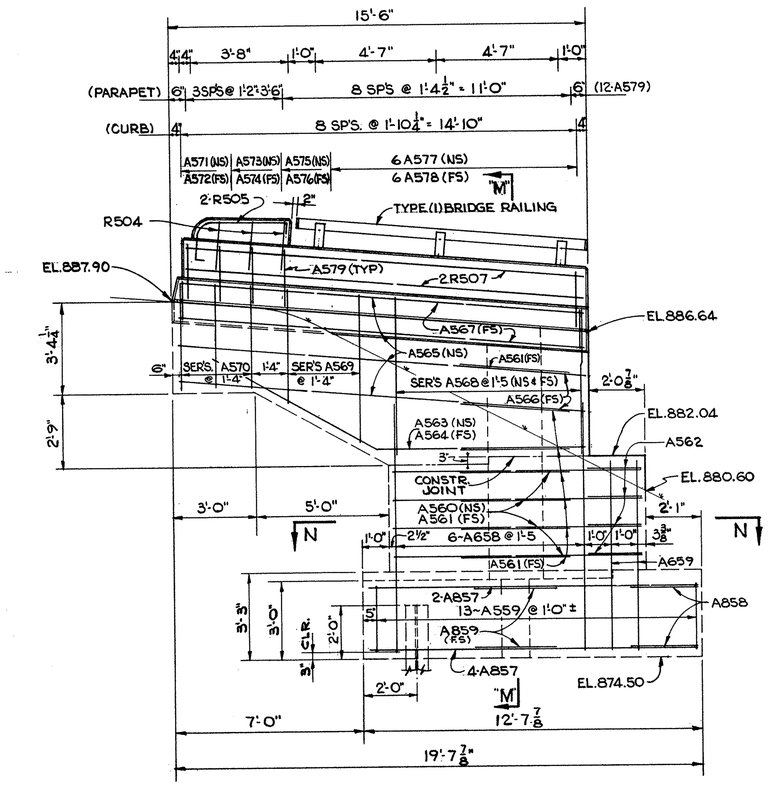
BRIDGE № SUM-271-0966
I-271-UNDER-C.H. 40
SUMMIT COUNTY
STA. 509+66.36

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
KSJ	ALH		CLS	RDH	9-22-66	

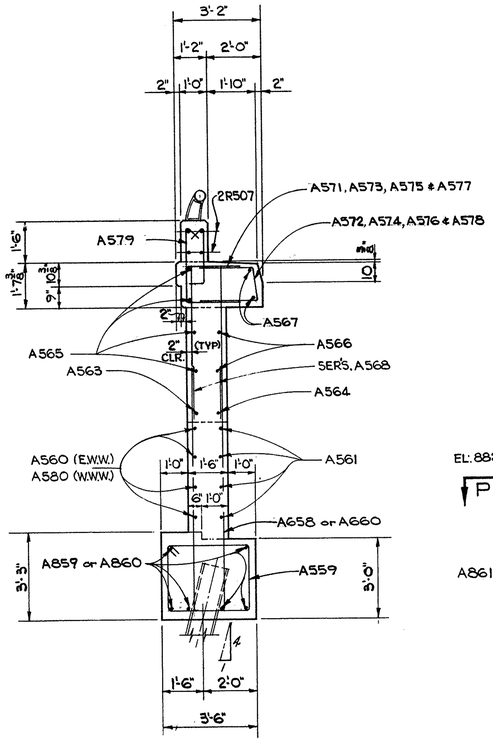
FED. RD.	STATE	PROJECT	
2	OHIO		

256
313

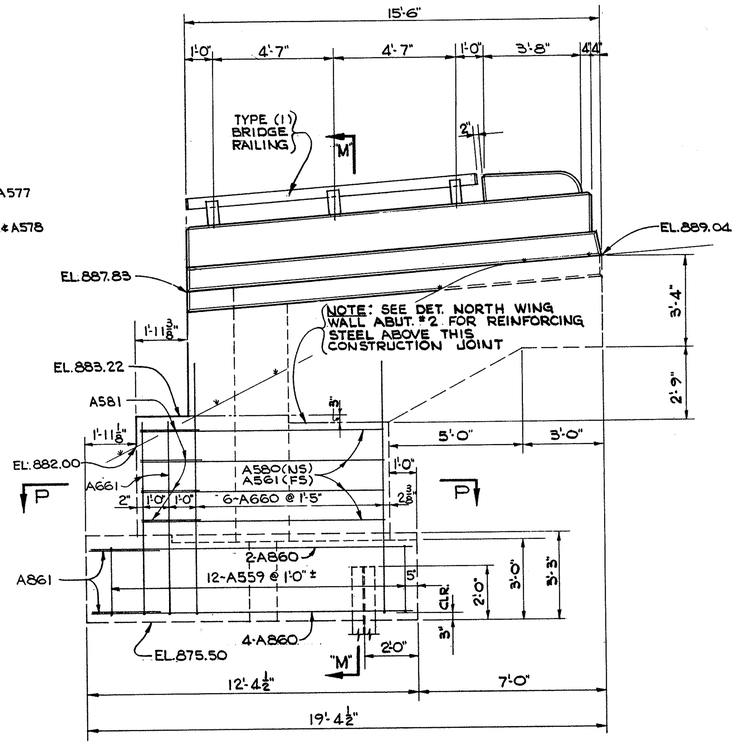
SUM 271 - 8.29



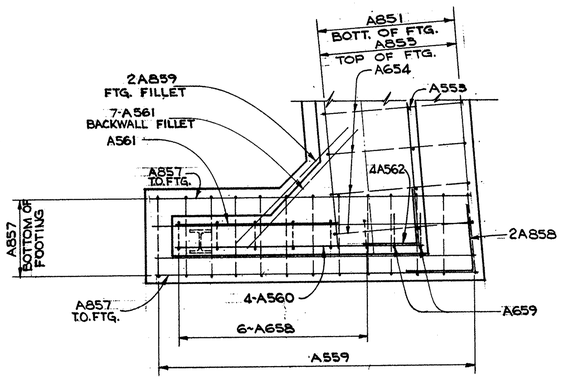
DETAIL EAST WING WALL ABUTMENT #2



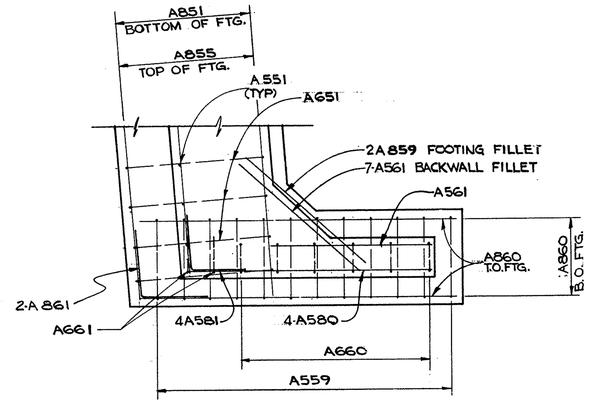
SECTION M-M



DETAIL WEST WING WALL ABUTMENT #2



SECTION "N-N"



SECTION "P-P"

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

WING WALL DETAILS ABUT. #2

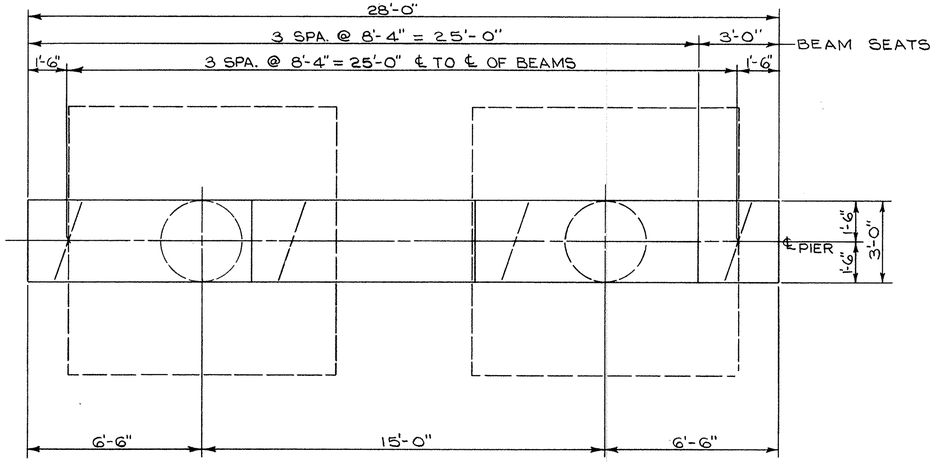
BRIDGE NO SUM 271-0956
I-271 UNDER CH-40
SUMMIT COUNTY
STA 509 + 66.36

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
KSJ	ALH		CES	RDH	9-21-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

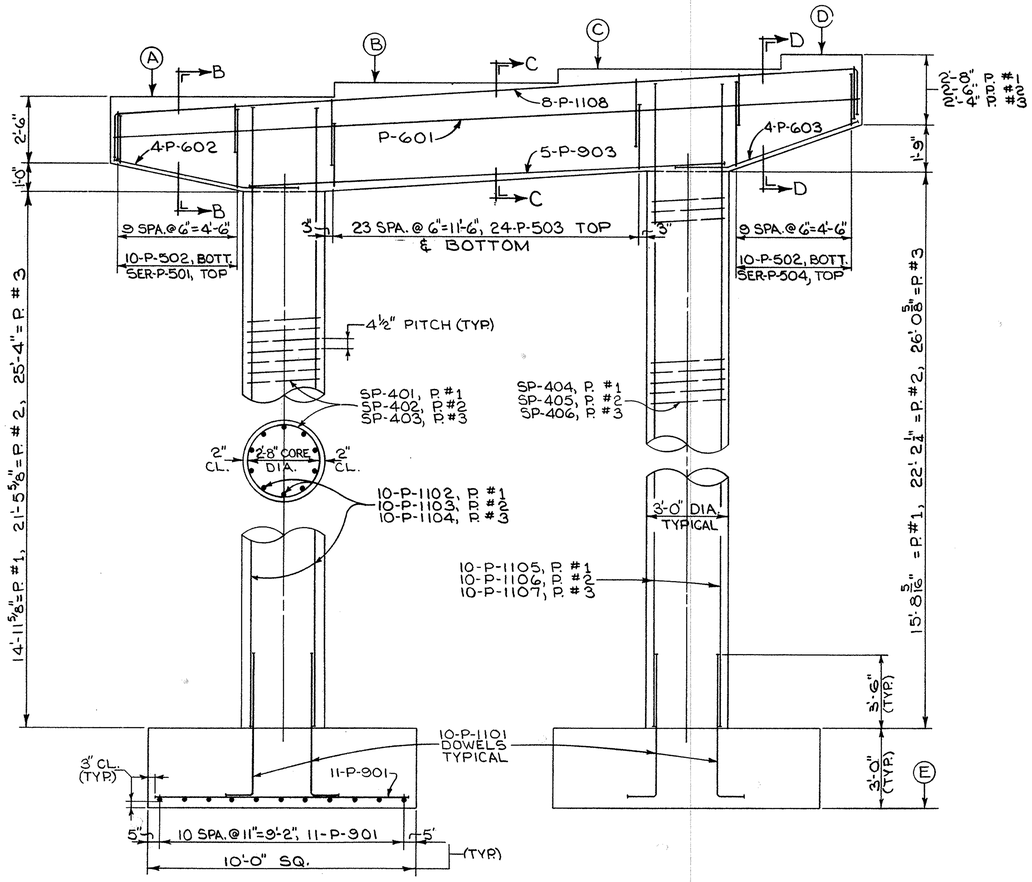
257
313

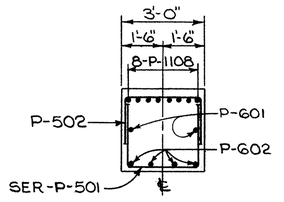
SUM.-271-8.29



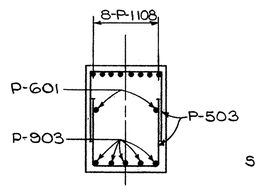
— PLAN ~ PIER #1 SHOWN —

— PIER #2 & PIER #3 SIMILAR EXCEPT AS SHOWN OR NOTED —

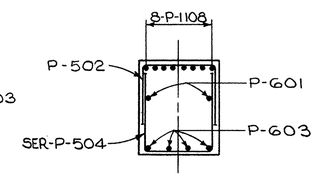




— SECTION "B-B" —



— SECTION "C-C" —



— SECTION "D-D" —

— ELEVATION TABLE —

	A	B	C	D	E
PIER #1	863.47	864.02	864.57	865.11	842.00
PIER #2	869.97	870.46	870.95	871.44	842.00
PIER #3	876.83	877.27	877.70	878.13	845.00

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

PIER DETAILS

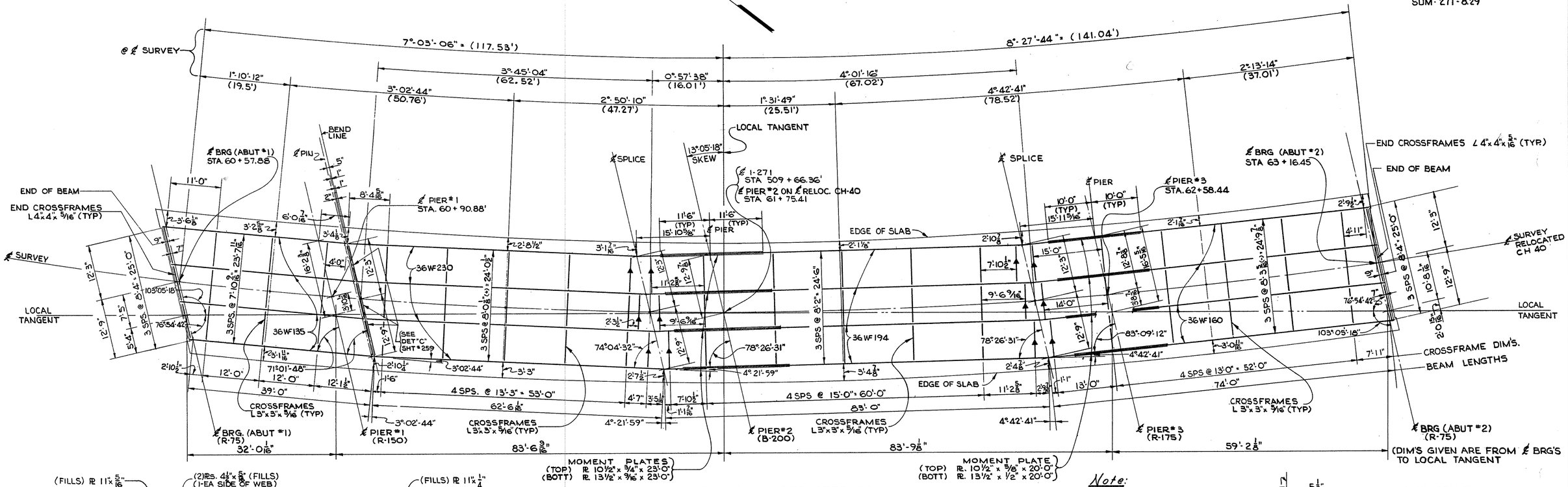
BRIDGE Nº SUM-271-0966
I-271 UNDER CH.40
SUMMIT COUNTY
STA. 509+66.36

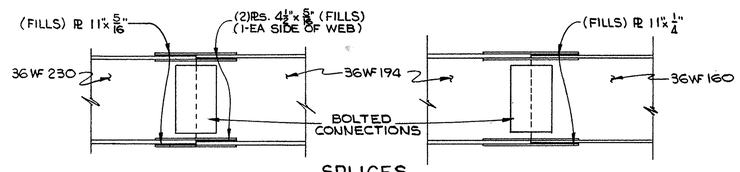
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
KSJ	BMR		CLS	RDH	9-8-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

258
313

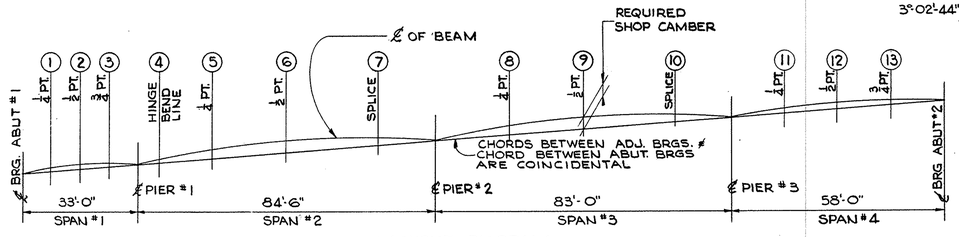
SUM-271-8.29





SPLICES

FOR DIMENSIONS & SIZES NOT SHOWN SEE STD. DWG SD-1-65-SHT Nº 3

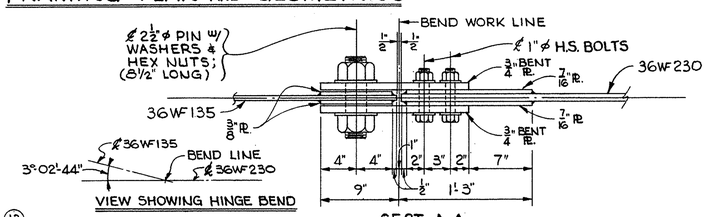


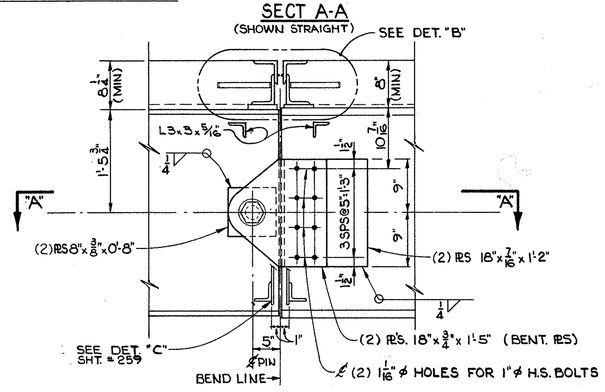
LAYOUT DIAGRAM

DEFLECTION & CAMBER

SPAN	SPAN #1			SPAN #2				SPAN #3			SPAN #4		
LOCATION	1/4 PT (1)	1/2 PT (2)	3/4 PT (3)	HINGE BEND LINE (4)	1/4 PT (5)	1/2 PT. (6)	SPLICE (7)	1/4 PT (8)	1/2 PT (9)	SPLICE (10)	1/4 PT. (11)	1/2 PT. (12)	3/4 PT. (13)
DEFLECTION DUE TO WEIGHT OF STEEL	.006	.005	.000	.004	.178	.220	.109	.061	.136	.079	.026	.069	.061
DEFLECTION DUE TO REMAINING DEAD LOAD	.020	.019	.000	.013	.663	.816	.406	.227	.504	.293	.096	.258	.226
ADJUSTMENT REQUIRED FOR VERTICAL CURVE	—	—	—	—	—	—	—	—	—	—	—	—	—
REQUIRED SHOP CAMBER	0"	0"	0"	0"	13/16"	1 1/16"	1/2"	5/16"	5/8"	3/8"	1/8"	5/16"	5/16"

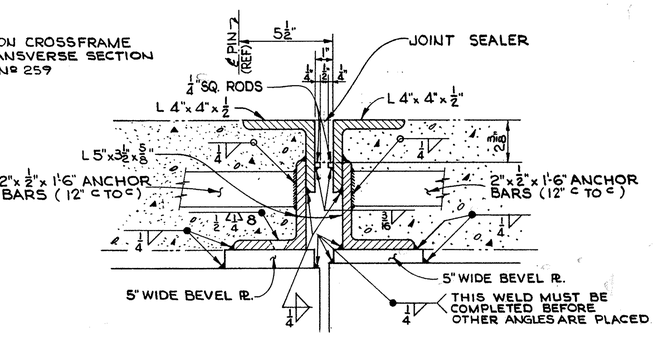
FRAMING PLAN AND GEOMETRICS





HINGE DETAIL "A"

Note:
FOR ▲ ON CROSSFRAME SEE TRANSVERSE SECTION "SHEET Nº 259



DETAIL "B"

SEE STD. DWG. SD-1-65-SHT #1, FOR WELDING OF ANGLES

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

FRAMING PLAN & GEOMETRICS

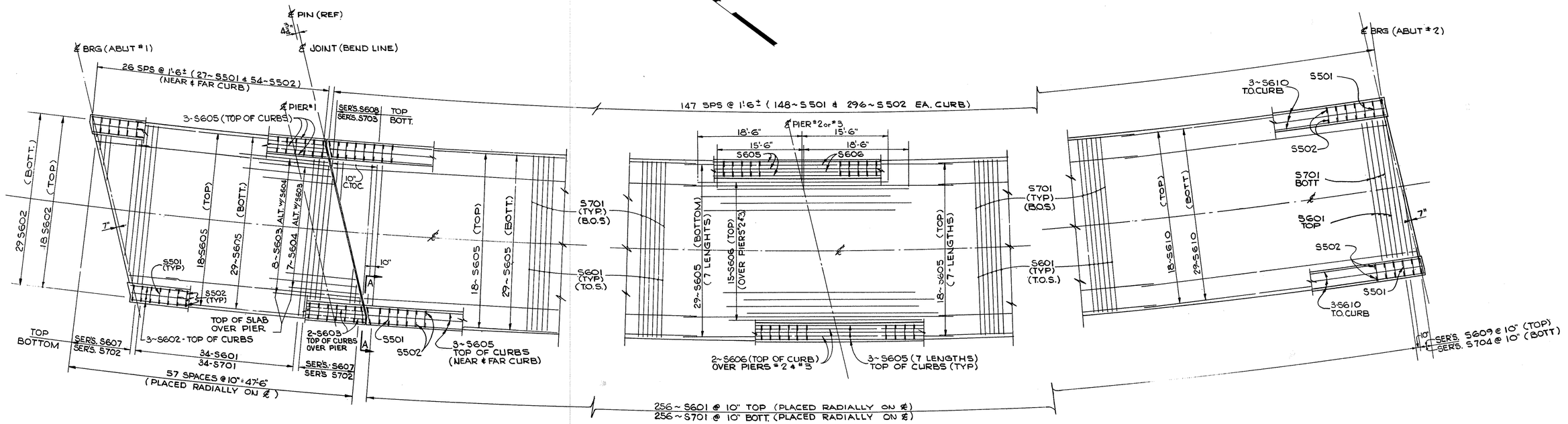
BRIDGE Nº SUM 271-0966
1-271 UNDER RELOCATED CH-40
SUMMIT COUNTY
STA. 509 + 66.36

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
KSJ	ALH		CBS	ZDH	9-21-66	

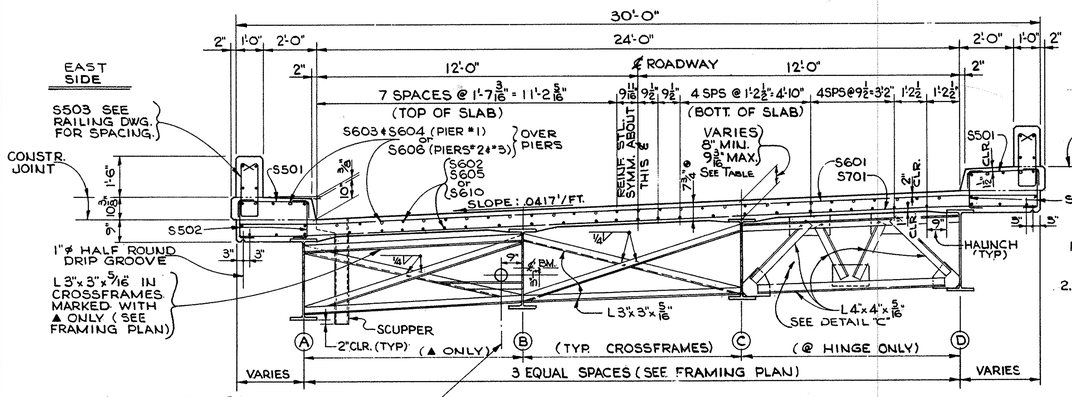
FED. RD.	STATE	PROJECT	
2	OHIO		

259
313

SUM 271 - 8.29

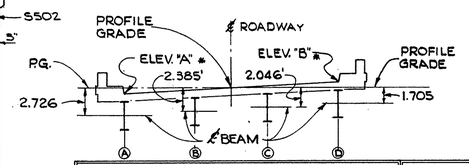


SLAB REINFORCING PLAN



TRANSVERSE SECTION

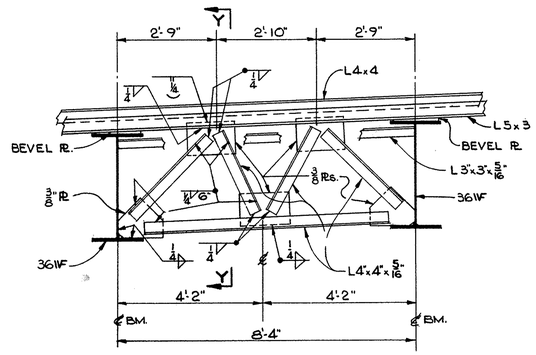
(℄ INCLUDING 1" MONOLITHIC WEARING SURFACE)



ELEVATIONS @ 25' INTERVALS			
STATION	ELEV. "A" *	ELEV. "B" *	PROFILE GRADE
60 + 75	867.34	868.34	867.84
61 + 00	869.37	870.34	869.84
+ 25	871.41	872.39	871.84
+ 50	873.39	874.39	873.84
+ 75	875.34	876.34	875.84
62 + 00	877.37	878.36	877.84
+ 25	879.38	880.38	879.84
+ 50	881.35	882.35	881.84
+ 75	883.35	884.35	883.84
63 + 00	885.36	886.36	885.84

MIN. SLAB THICKNESS @ ℄ BEAM	
BEAM	SLAB THICKNESS
36WF 135	8 1/2"
36WF 160	8 1/4"
36WF 194	8"
36WF 230	8 5/16

* THE ELEVATIONS SHOWN AT THE FACE OF THE CURBS ARE THOSE WHICH ARE REQ'D BEFORE THE CONCRETE DECK IS POURED. PROPER ALLOWANCE HAS BEEN MADE FOR THE DEAD LOAD DEFLECTIONS CAUSED BY THE WEIGHT OF THE CONCRETE



DETAIL "C"

WELDS SYMMETRICAL ABOUT ℄

END CROSSFRAME @ HINGE - DETAILS

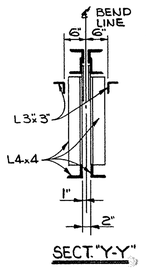
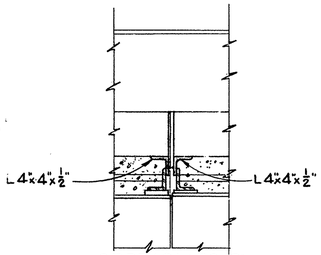


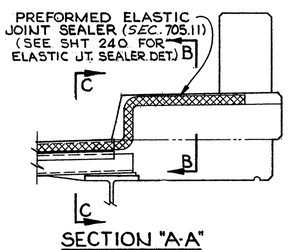
TABLE OF SLAB THICKNESS @ ℄ BEAMS

LOCATION	BEAMS A	B	C	D
ABUT. #1	9 3/16"	9 1/8"	8 7/8"	8 3/4"
*SPAN #1	9 1/8"	9"	8 3/4"	8 1/2"
PIER #1	9 1/8"	9"	8 7/8"	8 3/4"
* SPAN #2	8 5/8"	8 5/8"	8 1/2"	8 5/16"
PIER #2	8 1/4"	8 1/4"	8 1/4"	8 1/4"
*SPAN #3	8"	8"	8 1/8"	8 1/8"
PIER #3	8 3/8"	8 3/8"	8 1/2"	8 5/8"
*SPAN #4	8 1/4"	8 3/4"	8 3/8"	8 3/8"
ABUT. #2	8 5/8"	8 3/4"	8 3/4"	8 7/8"

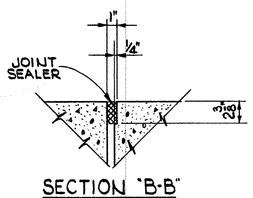
* SLAB THICKNESS GIVEN AT SAME LOC. THAT OVERHANGS ARE SHOWN ON FRAMING PLAN.



SECTION "C-C"



SECTION "A-A"



SECTION "B-B"

CURB PLATE & JOINT SEALER DETAILS

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

SLAB

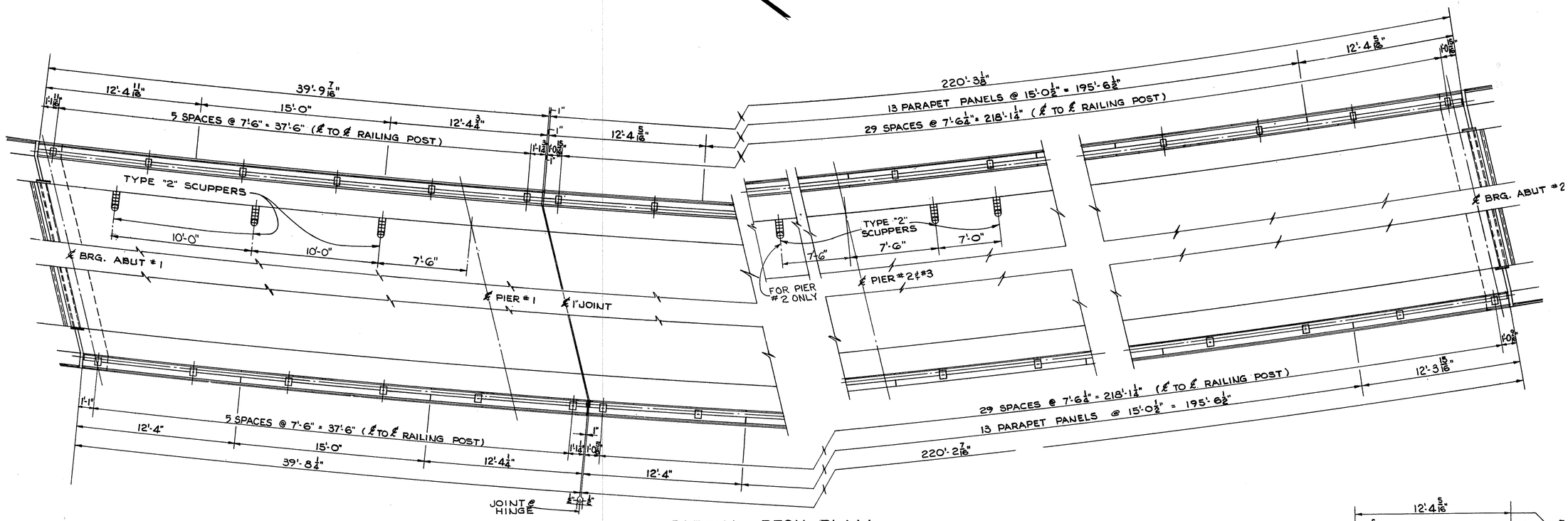
BRIDGE Nº SUM 271-0966
I-271 UNDER RELOCATED CH"40
SUMMIT COUNTY
STA 509+66.36

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
KSJ	ALH		CBS	RBH	9-22-66	

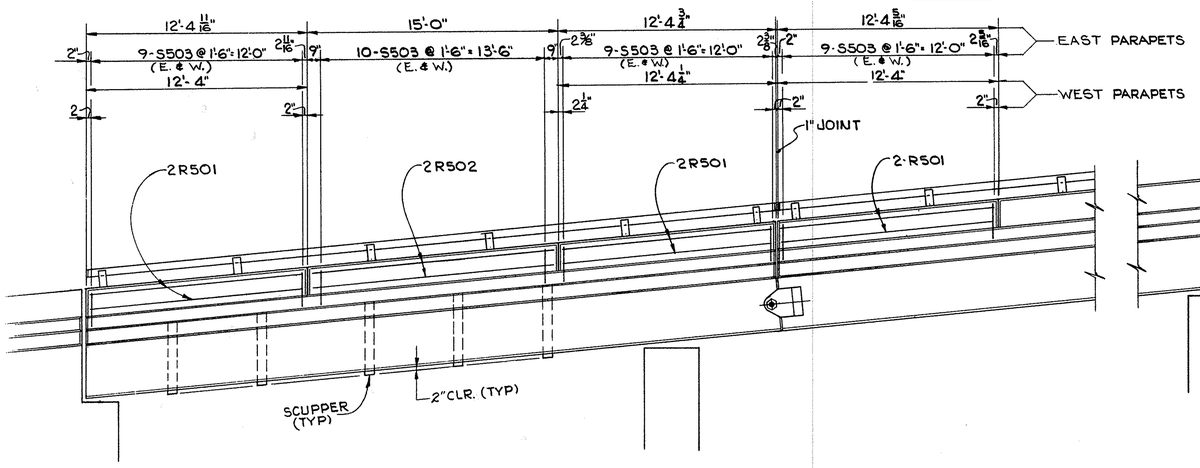
FED. RD.	STATE	PROJECT	
2	OHIO		

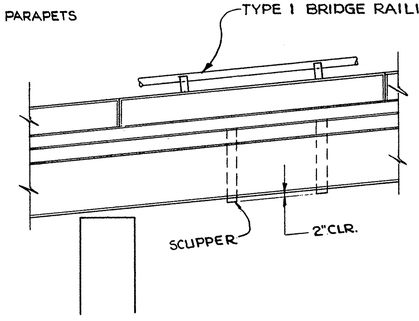
260
313

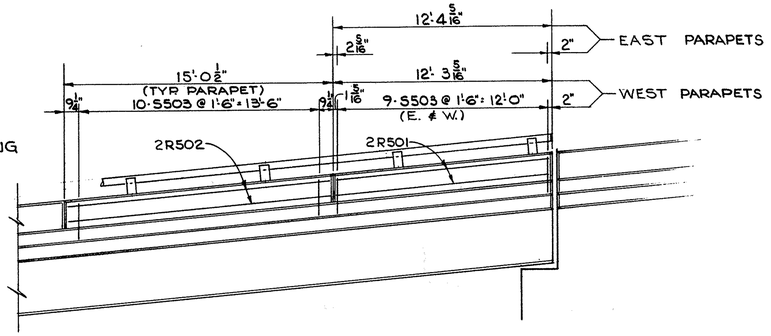
SUM - 271 - 8.29



PARTIAL DECK PLAN







ELEVATION

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

RAILING & DRAINAGE

BRIDGE Nº SUM 271-0966
1-271 UNDER RELOCATED CH-40
SUMMIT COUNTY
STA 509 + 66.36

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
KSJ	ALH		CES	ROH	9-22-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

261/313

SUM 271-8.29

ABUTMENT Nº 1

MARK	NO. REQ'D.	LENGTH	TYPE	DIMENSIONS A	B	C	D	SERIES INCR.	WEIGHT LBS.
A501	22	8'-5"	3	5'-4"	1'-8"				193
A502	9	7'-5"	1	7'-0"	6"				67
A503	1	6'-11"	1	6'-6"	6"				7
A504	4	8'-0"	1	7'-7"	6"				33
A505	7	7'-10"	1	7'-5"	6"				57
A506	21	6'-8"	3	3'-5"	1'-9"				146
A507	3	7'-6"	ST.						24
A508	2	22'-8"	ST.						47
A509	9	31'-3"	ST.						293
A510	5	12'-0"	ST.						63
A511	2	21'-0"	ST.						44
A512	12	10'-3"	ST.						128
A513	6	4'-6"	ST.						28
A514	1	25'-0"	ST.						26
A515	8	5'-0"	ST.						42
A516	1	5'-0"	1	3'-0"	2'-1½"				5
A517	7	5'-6"	ST						40
A518	3	4'-0"	22	2'-0"	2'-0"	7½"			13
A519	23	11'-4"	14	2'-7"	3'-0"	4"			272
A520	7	8'-6"	ST.						62
SERIES A521	(4) SETS - 5 BARS = 20 BARS	6'-0" TO 5'-8"	ST.					1"	122
A522	2	9'-1"	3	1'-2"	4'-1"				19
SERIES A523	(2) SETS - 3 BARS = 6 BARS	8'-5" TO 7'-11"	3	1'-2"	3'-8" TO 5'-6" @ 1" INCR.			1"	51
A524	7	7'-0"	ST.						51
A525	4	11'-10"	ST.						49
A526	2	12'-0"	17	12'-0"	2'-8"	2'-4"			25
A527	8	5'-4"	3	1'-3"	2'-2"				45
A528	8	5'-2"	16	1'-3"	2'-2"	2'-0"			44
A529	19	5'-7"	5	8"	2'-2"	5"			111
A530	4	12'-2"	ST.						51
A531	2	10'-5"	ST.						22
A532	2	12'-8"	17	12'-8"	3'-3"	2'-4"			26
A533	1	6'-0"	ST.						6
A534	4	4'-0"	12	2'-0"	2'-0"	1'-10½"			17
A535	2	2'-7"	3	1'-3"	9"				5
A536	2	2'-9"	16	1'-3"	11"	9"			6
A537	2	3'-5"	3	1'-3"	1'-2"				7
A538	2	3'-7"	16	1'-3"	1'-4"	1'-2"			7
A539	2	4'-3"	3	1'-3"	1'-7"				9
A540	2	4'-5"	16	1'-3"	1'-9"	1'-7"			9
A541	2	7'-9"	11	3'-10"	1'-10"	2'-1"	10½"		16
A542	2	7'-3"	11	3'-10"	1'-9"	1'-8"	8"		15
A601	9	14'-7"	4	7'-0"	5'-4"	2'-6"			197
A602	1	14'-1"	4	6'-6"	5'-4"	2'-6"			21
A603	4	15'-2"	4	7'-7"	5'-4"	2'-6"			91
A604	7	15'-0"	4	7'-5"	5'-4"	2'-6"			158
A605	2	16'-2"	4	7'-7"	5'-4"	3'-6"			48
A606	6	16'-2"	3	1'-5"	7'-6"				146
A607	4	14'-8"	3	1'-5"	6'-9"				88
A608	22	16'-9"	7	5'-6"	1'-5"	6'-9"	11"		553
A609	5	19'-3"	3	1'-2"	9'-2"				145
A610	2	8'-3"	1	1'-3"	7'-1"				25
A611	2	8'-7"	1	1'-5"	7'-5"				26
A612	5	19'-11"	3	1'-2"	9'-6"				150
SERIES A801	(1) SET OF 4 BARS = 4 BARS	5'-0" TO 7'-0"	ST.					8"	64
A802	4	14'-0"	ST.						150
A803	2	10'-6"	ST.						56
A804	2	11'-0"	ST.						59
A805	2	11'-6"	ST.						61
A806	3	17'-0"	ST.						136
SERIES A807	(1) SET OF 3 BARS = 3 BARS	7'-11" TO 9'-11"	ST.					1'-0"	71
			FOR CONTINUATION OF ABUT. #1 SEE NEXT COLUMN						

(CONTINUATION FOR ABUTMENT Nº 1)

MARK	NO. REQ'D.	LENGTH	TYPE	DIMENSIONS A	B	C	D	SERIES INCR.	WEIGHT LBS.
SERIES A808	(1) SET OF 4 BARS = 4 BARS	12'-0" TO 10'-0"	ST.					8"	118
A809	8	6'-6"	11	2'-6"	1'-6"	2'-6"	1'-1"		139
SERIES A810	(1) SET OF 4 BARS = 4 BARS	11'-9" TO 10'-9"	ST.					4"	120
A811	1	11'-9"	ST.						31
A812	1	10'-9"	ST.						29
SERIES A813	(1) SET OF 4 BARS = 4 BARS	11'-2" TO 12'-2"	ST.					4"	125
A814	2	11'-2"	ST.						59
A815	2	5'-2"	22	2'-7"	2'-7"	11"			28
A816	2	5'-2"	23	2'-7"	2'-7"	11"			28
A817	4	7'-0"	ST.						74

TOTAL ABUTMENT Nº 1 5,199 LBS

ABUTMENT Nº 2

MARK	NO. REQ'D.	LENGTH	TYPE	DIMENSIONS A	B	C	D	SERIES INCR.	WEIGHT LBS.
SERIES A551	(1) SET OF 7 BARS = 7 BARS	7'-1" TO 7'-7"	1	6'-8" TO 7'-2	6"			1"	54
SERIES A552	(1) SET OF 8 BARS = 8 BARS	7'-0" TO 7'-7"	1	6'-7" TO 7'-2"	6"			1"	61
SERIES A553	(1) SET OF 6 BARS = 6 BARS	7'-1" TO 7'-6"	1	6'-8" TO 7'-1"	6"			1"	46
A554	21	8'-5"		5'-4"	1'-8"				185
A555	18	29'-6"	ST						554
A556	21	6'-8"	3	3'-5"	1'-9"				146
A557	1	24'-0"	ST						25
A558	2	4'-6"	ST						10
A559	25	11'-4"	14	2'-7"	3'-0"	4"			296
A560	4	9'-3"	ST.						39
A561	28	6'-0"	ST.						175
A562	4	4'-0"	22	2'-0"	2'-0"	2"			17
A563	2	14'-6"	12	7'-9"	6'-9"	3'-3"			30
A564	2	12'-6"	12	5'-9"	6'-9"	3'-3"			26
A565	8	15'-2"	ST						127
A566	4	13'-10"	ST						58
A567	4	15'-0"	17	15'-0"	5'-6"	2'-4"			63
SERIES A568	(4) SETS OF 6 BARS = 24 BARS	5'-3" TO 5'-8"	ST					1"	137
SERIES A569	(2) SETS OF 3 BARS = 6 BARS	9'-7" TO 12'-1"	3	1'-2"	4'-4" TO 5'-7" @ 7½" INCR.			1'-3"	68
SERIES A570	(2) SETS OF 3 BARS = 6 BARS	8'-10½ TO 5'-5"	3	1'-2"	3'-11¾ TO 5'-9" @ 1⅜ INCR.			2¾"	54
A571	2	2'-7"	3	1'-3"	9"				5
A572	2	2'-9"	16	1'-3"	11"	9"			6
A573	2	3'-5"	3	1'-3"	1'-2"				7
A574	2	3'-7"	16	1'-3"	1'-4"	1'-2"			7
A575	2	4'-3"	3	1'-3"	1'-7"				9
A576	2	4'-5"	16	1'-3"	1'-9"	1'-7"			9
A577	12	5'-0"	3	1'-3"	2'-0"				64
A578	12	5'-2"	16	1'-3"	2'-2"	2'-0"			66
A579	24	5'-7"	5	8"	2'-2"	5"			140
A580	4	9'-1"	ST						38
A581	4	4'-0"	23	2'-0"	2'-0"	2"			17
A582	2	3'-1"	3	5'-4"	2'-0"				19
A651	7	14'-5"	4	6'-10"	5'-4"	2'-6"			152
A652	2	15'-3"	4	7'-5"	5'-4"	2'-9"			46
A653	6	14'-7"	4	7'-0"	5'-4"	2'-6"			131
A654	6	14'-8"	4	7'-1"	5'-4"	2'-6"			132
A655	6	16'-2"	3	1'-5"	7'-6"				146
A656	4	14'-2"	3	1'-5"	6'-6"				85
A657	20	16'-4"	7	5'-3"	1'-5"	6'-7"	11"		492
A658	6	19'-5"	3	1'-2"	9'-3"				175
A659	2	8'-5"	1	1'-6"	7'-0"				25
A660	6	19'-9"	3	1'-2"	9'-5"				178
A661	2	8'-7"	1	1'-6"	7'-2"				26
			FOR CONTINUATION OF ABUT #2 SEE NEXT COLUMN						

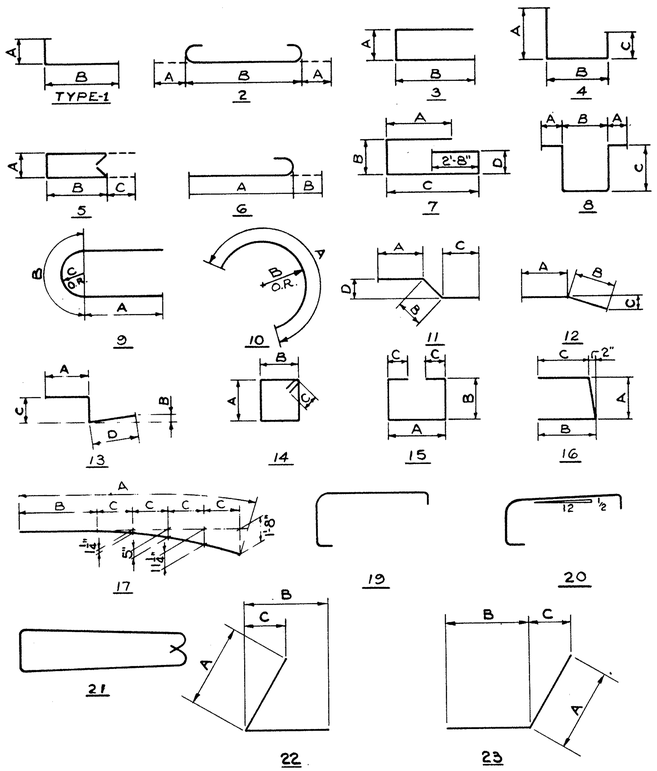
(CONTINUATION FOR ABUTMENT Nº 2)

MARK	NO. REQ'D.	LENGTH	TYPE	DIMENSIONS A	B	C	D	SERIES INCR.	WEIGHT LBS.
A851	8	10'-0"	ST.						214
A852	4	10'-3"	ST.						109
A853	3	10'-10"	ST.						87
A854	3	14'-3"	ST.						114
A855	3	11'-5"	ST.						91
A856	8	5'-9"	11	2'-6"	9"	2'-6"	7		123
A857	6	12'-4"	ST.						198
A858	2	5'-0"	22	2'-6"	2'-6"	2"			27
A859	4	6'-6"	ST.						64
A860	6	12'-0"	ST.						192
A861	2	5'-0"	23	2'-6"	2'-6"	2"			27

TOTAL ABUTMENT Nº 2 5,391 LBS

FOR SUPERSTRUCTURE & PIERS SEE SHEET Nº 262

TOTAL THIS SHEET 10,590 LBS



REINFORCING NOTES

BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST DIGIT WHERE THREE DIGITS ARE USED AND THE FIRST TWO DIGITS WHERE FOUR DIGITS ARE USED INDICATE THE BAR SIZE NUMBER. A-601 IS A NO. 6 SIZE BAR AND P-1001 IS A NO. 10 SIZE BAR.

⊗RAILING REINFORCEMENT BARS WILL BE INCLUDED AS PART OF ITEM 517 FOR PAYMENT.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

REINFORCING SCHEDULE

BRIDGE Nº SUM-271-0966
I-271 UNDER CH-40
SUMMIT COUNTY
STA. 509 + 66.36

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
KSJ	ALH		CS	RDH	9-8-66	

MARK	NO. REQ'D.	LENGTH	TYPE	DIMENSIONS A	B	C	D	SERIES INCR.	WEIGHT LBS.
SUPERSTRUCTURE									
S-501	350	3'-3"	3	2'-6"	6"				1187
S-502	700	1'-11"	3	1'-2"	6"				1399
S-503	352	5'-7"	5	8"	2'-2"	5"			2050
S-601	290	29'-8"	ST.						12921
S-602	53	11'-2"	ST.						888
S-603	12	15'-6"	ST.						279
S-604	7	12'-6"	ST.						131
S-605	424	30'-0"	ST.						19105
S-606	38	34'-0"	ST.						1941
SERIES OF S-607	2 SETS OF 12 24 BARS	3'-1" TO 29'-8"	ST.					2'-5"	590
SERIES OF S-608	1 SET OF 11 BARS	3'-0" TO 29'-8"	ST.					2'-8"	270
SERIES OF S-609	1 SET OF 3 BARS	7'-2" TO 29'-8"	ST					11'-3"	83
S-610	53	24'-0"	ST.						1911
S-701	290	29'-8"	ST.						17588
SERIES OF S-702	2 SETS OF 12 24 BARS	3'-1" TO 29'-8"	ST					2'-5"	803
SERIES OF S-703	1 SET OF 11 BARS	3'-0" TO 29'-8"	ST.					2'-8"	374
SERIES OF S-704	1 SET OF 3 BARS	7'-2" TO 29'-8"	ST					11'-3"	113
SUPERSTRUCTURE TOTAL = 61,630 LBS.									
PIERS #1, 2 & 3									
SERIES OF P-501	3 SETS OF 10 30 BARS	5'-11" TO 8'-2"	3	2'-8"	1'-9" TO 2'-10½"			1½"	220
P-502	60	6'-1"	3	2'-8"	1'-10"				381
P-503	144	7'-5"	3	2'-8"	2'-6"				1114
SERIES OF P-504	3 SETS OF 10 30 BARS	6'-5" TO 8'-8"	3	2'-8"	2'-0" TO 3'-1½"			1½"	236
P-601	6	27'-8"	ST.						249
P-602	12	6'-11"	12	5'-0"	2'-0"	1'-0"			125
P-603	12	7'-1"	12	5'-2"	2'-0"	1'-9"			128
P-901	132	9'-6"	ST.						4264
P-903	15	17'-9"	ST.						905
P-1101	60	7'-0"	1	1'-0"	6'-3"				2231
P-1102	10	17'-10"	ST.						947
PIERS (CONT'D.)									
P-1103	10	24'-5"	ST.						1298
P-1104	10	28'-3"	ST.						1502
P-1105	10	19'-1"	ST.						1014
P-1106	10	25'-5"	ST.						1351
P-1107	10	29'-3"	ST.						1554
P-1108	24	30'-4"	22	27'-7"	1'-8"	1"			3858
SPIRALS									2297
PIERS #1, 2 & 3 TOTAL = 23,674 LBS.									

ABUTMENTS Nº 1 & Nº 2 (SHT. 261)	10,590 LBS
SUPERSTRUCTURE (THIS SHEET)	61,630 LBS
PIERS Nº 1, Nº 2 & Nº 3 (THIS SHEET)	23,674 LBS
GRAND TOTAL (BOTH SHEETS)	95,894 LBS

MARK	NO. REQ'D.	LENGTH	TYPE	DIMENSIONS A	B	C	D	SERIES INCR.	WEIGHT LBS.
RAILING ⊛									
R-501	32	12'-0"	ST.						
R-502	112	14'-8"	ST.						
R-503	4	11'-6"	ST						
R-504	12	4'-2"	21						
R-505	8	5'-4"	20						
R-506	4	11'-10"	ST						
R-507	8	14'-10"	ST						
REPLACEMENT BARS									
RE-401	1	5'-3"							
RE-501	2	5'-6"							
RE-601	1	6'-0"							
RE-701	1	6'-3"							
RE-801	1	6'-6"							
RE-901	1	6'-10"							
RE-1001		7'-3"							
RE-1101	1	7'-6"							

SPIRAL REINFORCING SCHEDULE

MARK	NO. REQ'D.	CORE DIA. OF SPIRAL	LENGTH OF SPIRAL	PITCH	NO. OF TURNS	WEIGHT LBS.
SP-401	1	2'-8"	14'-11⅝"	4½"	43	237
SP-402	1	2'-8"	21'-5⅝"	4½"	60	330
SP-403	1	2'-8"	25'-4"	4½"	71	391
SP-404	1	2'-8"	15'-8⅝"	4½"	45	248
SP-405	1	2'-8"	22'-2¼"	4½"	63	347
SP-406	1	2'-8"	26'-0⅝"	4½"	73	402
SPACERS	24					342
TOTAL SPIRALS						2297 LBS

⊛RAILING REINFORCEMENT BARS WILL BE INCLUDED AS PART OF ITEM 517 FOR PAYMENT.

FED. RD.	STATE	PROJECT	
2	OHIO		

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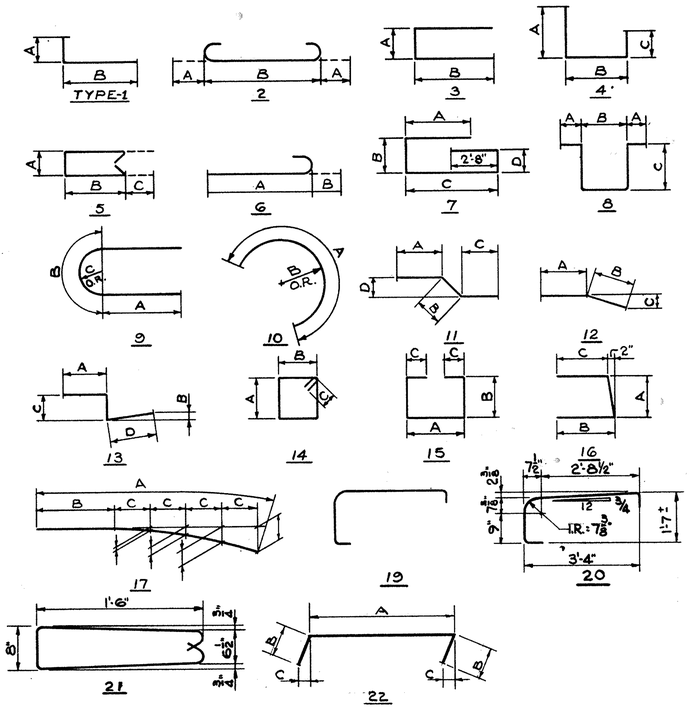

REINFORCING NOTES

THE LENGTH SHOWN IN THE STEEL SCHEDULE FOR THE SPIRAL BARS IS THE DISTANCE FROM THE TOP OF THE FOOTING TO THE BOTTOM OF THE PIER CAP. THE NUMBER OF TURNS SHOWN IN THE STEEL SCHEDULE FOR SPIRAL BARS IS THE LENGTH DIVIDED BY THE PITCH PLUS THREE TURNS (TOTAL NUMBER OF CLOSED COILS) EXPRESSED AS THE NEAREST WHOLE NUMBER. SPIRAL REINFORCING BARS SHALL NOT HAVE DEFORMATIONS, BUT SHALL IN OTHER RESPECTS CONFORM TO ITEM 509. ONE AND ONE HALF CLOSED COILS SHALL BE PROVIDED AT THE ENDS OF EACH SPIRAL UNIT. FOUR (4) STEEL CHANNEL, TEE OR ANGLE SPACERS WEIGHING APPROX. 0.68 LBS. PER LINEAL FT. OF SPACERS SHALL BE PROVIDED FOR EACH SPIRAL UNIT. THEY SHALL BE EQUALLY SPACED ALONG THE PERIPHERY OF EACH COIL. THE NUMBER OF POUNDS OF THESE SPACERS BASED ON 0.68 LBS. PER LINEAL FT. WILL BE PAID FOR AS REINFORCING STEEL AND IS INCLUDED IN THE TABULATED QUANTITY OF SPIRAL BARS.

BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST DIGIT WHERE THREE DIGITS ARE USED AND THE FIRST TWO DIGITS WHERE FOUR DIGITS ARE USED INDICATE THE BAR SIZE NUMBER. A-601 IS A NO. 6 SIZE BAR AND P-1001 IS A NO. 10 SIZE BAR.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

REINFORCING SCHEDULE

BRIDGE Nº SUM.-271-0966
I-271 UNDER CH.-40
SUMMIT COUNTY
STA. 509+66.36

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
KSJ	JNF		CLS	RBH	9-22-66	

FED. RL.	STATE	PROJ.	
2	OHIO		

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CURVE DATA

℄ RELOCATED C.H-40

P.C. STA. 55+51.49
Δ = 71°-22'-23"
D_c = 6°-00'-00"
R = 954.93'
T = 606.06'
L = 1189.55'

EXISTING STRUCTURE DATA

LOCATION: 85' DOWNSTREAM FROM PROPOSED STRUCTURE.
TYPE: STONE ABUTMENTS, WITH REINFORCED CONCRETE BEAMS AND REINFORCED CONCRETE DECK.
SPAN: 54'-6"
HEIGHT: 10.3'
OPENING: 54.5'×10.3'
OPENIG PROVIDED: 561.4 SQ. FT.
OBSERVED HIGH WATER: NOT AVAILABLE.

DRAINAGE DATA

AREA: 25.46 SQ. MILES
WATERWAY OPENING REQ'D: 545 SQ. FT.
WATERWAY OPENING PROVIDED: 545 SQ. FT.
50YR. FREQUENCY: 5,843 C.F.S
EST. 50YR HIGHWATER EL. 833.8 ±

PROPOSED STRUCTURE

TYPE: CONTINUOUS STEEL BEAMS, WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE.
SKEW: 0°00'-00" TO LOCAL TANGENT.
SPANS: 48'-0"-60'-0"-48'-0" C/C BRGS.
ROADWAY 24'-0" F/F = 2'-0" SAFETY CURBS
LOADING FREQUENCY: CF = 180
WEARING SURFACE: 1" MONOLITHIC.
APPROACH SLABS: 25' LONG (RS-1-54)
ALIGNMENT: 6°-00'-00" CURVE LT.
SUPERELEVATION: .042'/FT.
SLOPE PROTECTION: CRUSHED AGGREGATE AND DUMPED ROCK.

TRAFFIC: C.H.-40 - 260 A.D.T. - 1975.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

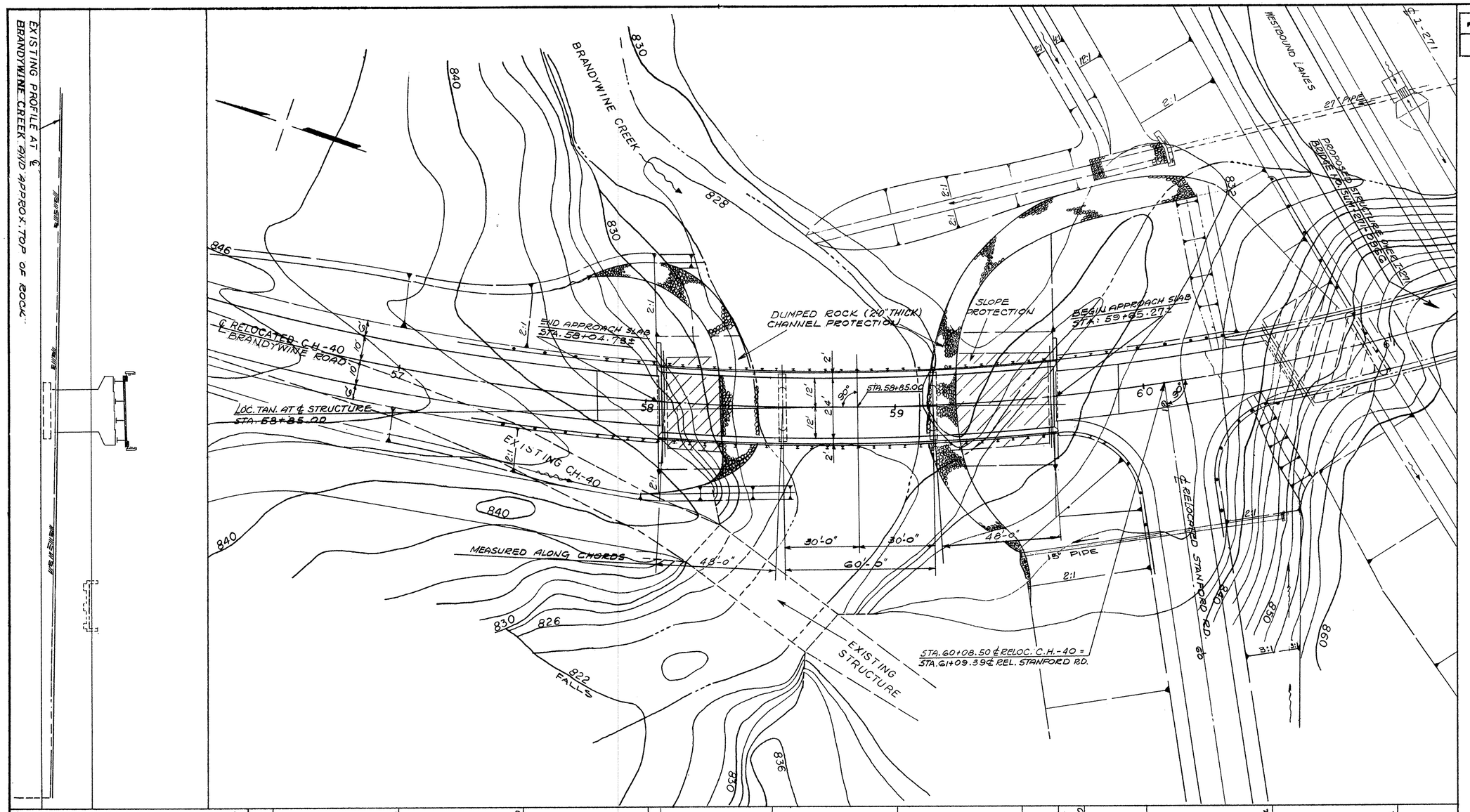
SITE PLAN

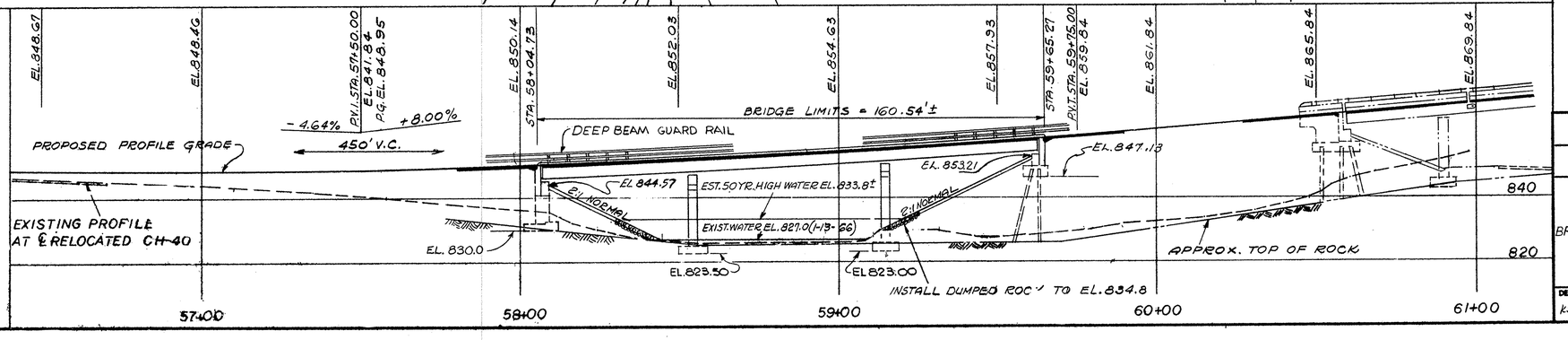
BRANDYWINE ROAD OVER BRANDYWINE CREEK
SUMMIT COUNTY
STA. 58+04.73 TO STA. 59+65.27

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
KJJ	WENGESST		CEL	RDM	10-13-1976	

EXISTING PROFILE AT ℄ BRANDYWINE CREEK AND APPROX. TOP OF ROCK

ESTIMATED AVERAGE PAY LENGTH FOR 10 BP 42 PILES: ABUT #2 = 23'





FED. RD.	STATE	PROJECT	
2	OHIO		

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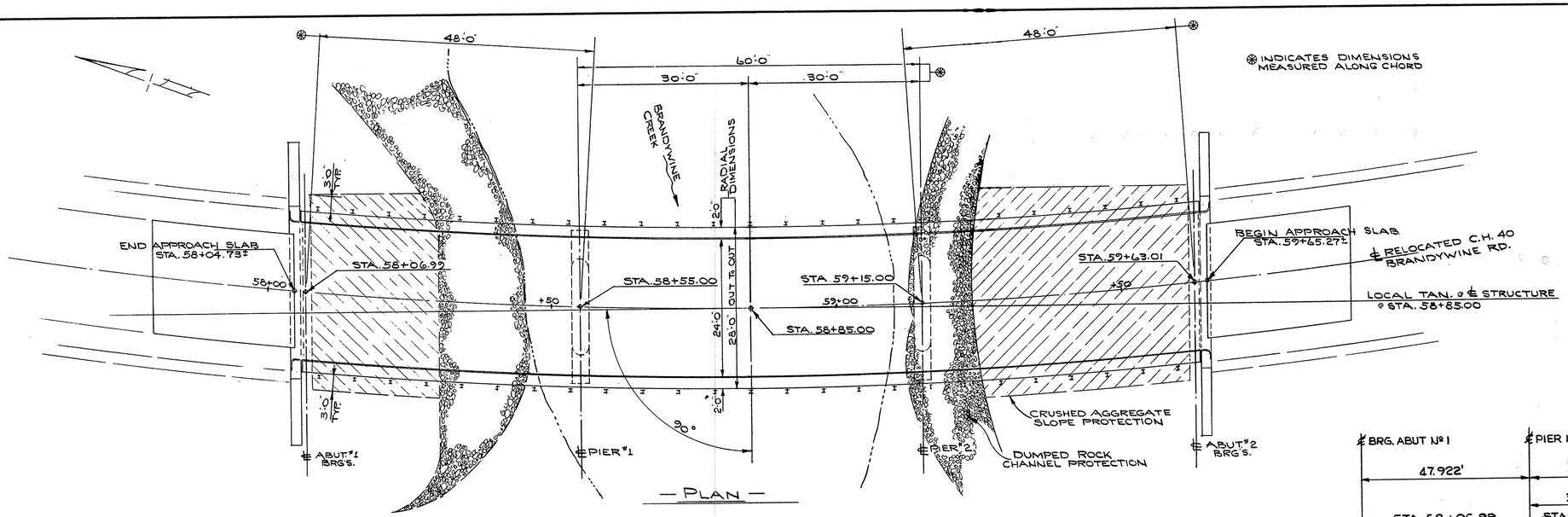
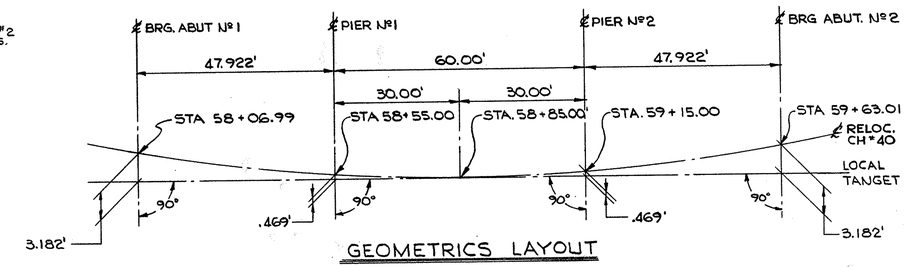
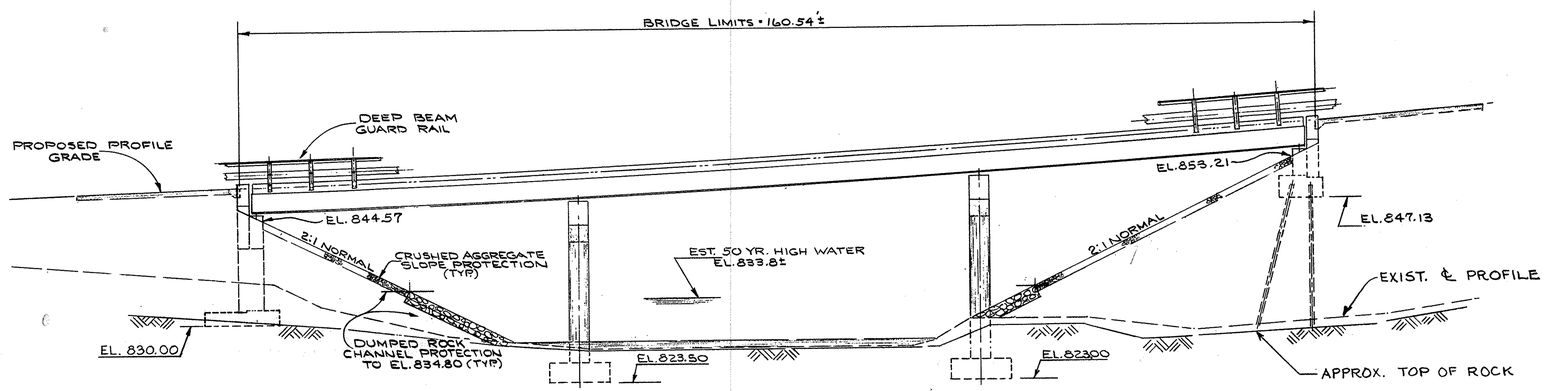


— PLAN —



GEOMETRICS LAYOUT



— ELEVATION —

— Estimated Quantities —

ITEM	TOTAL	UNIT	DESCRIPTION	SUPER.	ABUTS.	PIERS	GEN.			ITEM	TOTAL	UNIT	DESCRIPTION	SUPER.	ABUTS.	PIERS	GEN.		
503	LUMP	SUM	COFFERDAMS, CRIBS & SHEETING				LUMP												
503	256	CU.YDS.	UNCLASSIFIED EXCAVATION		224	32				513	*91,000	LBS.	STRUCTURAL STEEL	91,000					
503	99	CU. YDS.	ROCK EXCAVATION		9	90				514	*91,000	LBS.	FIELD PAINTING OF STRUCTURAL STEEL	91,000					
505	LUMP	SUM	FIRST TEST PILE				LUMP												
507	230	LIN.FT.	10 BP 42 STEEL H PILES		230					517	321.08	LIN.FT.	"RAILING" (DEEP BEAM RAIL WITH STL. POSTS, BOLTS, AND HANDRAIL)	321.08					
509	51,376	LBS.	REINFORCING STEEL	33,648	9,201	8,527													
511	129	CU.YDS.	CLASS "C" CONC. SUPERSTRUCTURE	129						518	40	CU.YDS.	POROUS BACKFILL		40				
511	84	CU.YDS.	CLASS "E" CONC. ABUT'S. ABOVE FTG'S.		84					518	5	EACH	SCUPPERS, INCLUDING SUPPORTS	5					
511	71	CU.YDS.	CLASS "C" CONC. PIERS ABOVE FTG'S.			71				518	58	LIN.FT.	6" PERFORATED HELICAL C.M.P. (707.06) INCLUDING SPECIALS		58				
511	66	CU.YDS.	CLASS "E" CONC. PIER & ABUT. FTG'S.		42	24													

ITEM	TOTAL	UNIT	DESCRIPTION	SUPER.	ABUTS.	PIERS	GEN.		
518	30	LIN.FT.	6" HELICAL CM.P (707.06) NON-PERFORATED		30				
601	309	CU.YDS.	DUMPED ROCK CHANNEL PROTECTION				309		
601	260	SQ.YDS.	CRUSHED AGGREGATE SLOPE PROTECTION				260		
808	129	UNITS	WATER-REDUCING SET RETARDING ADMIXTURE	129					
825	558	SQ.YDS.	CONCRETE SURFACE TREATMENT	558					
828	49	LIN.FT.	JOINT SEALER		49				

* STRUCTURAL STEEL QUANTITY INCLUDEDS 200 LBS OF ANGLE SUPPORTS (FOR THE GAS LINE SUPPORTS) TO BE PAID FOR BY EAST OHIO GAS Co.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

GENERAL PLAN & ELEVATION

BRANDYWINE RD. OVER BRANDYWINE CRK.
SUMMIT COUNTY
STA 58+04.73 TO STA 59+65.27

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
KSJ	LNP		CRS 10-3-66	RBH	10-13-66	

KAB

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM.-271-8.29

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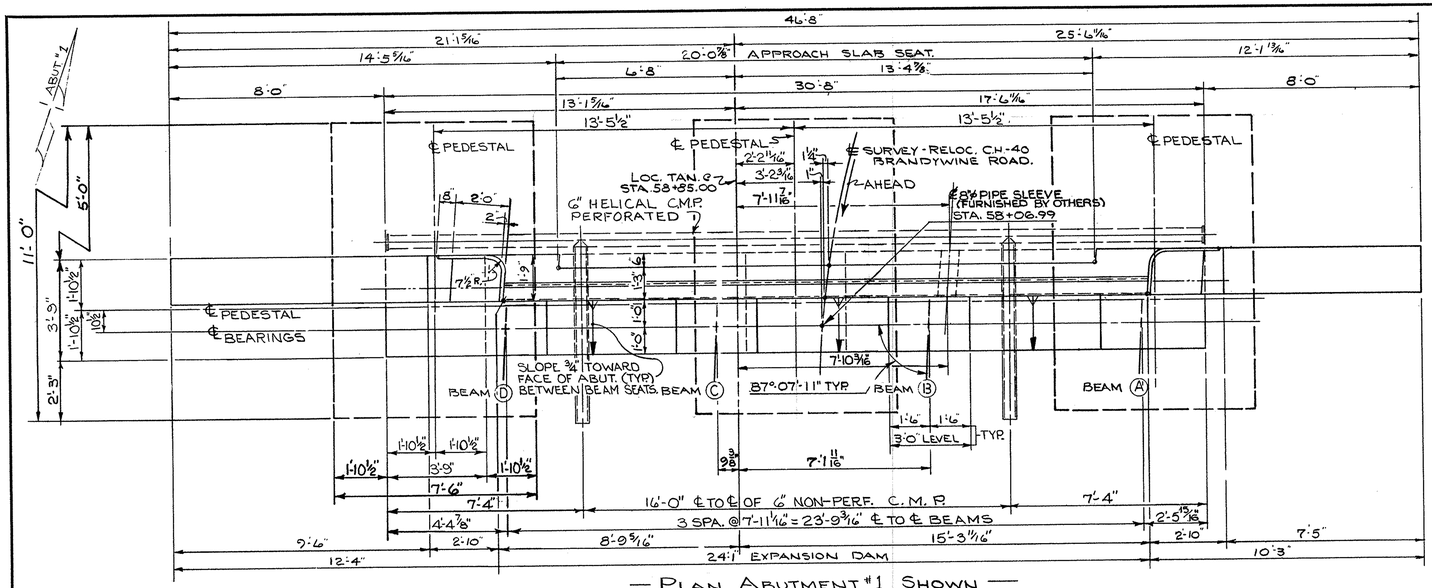
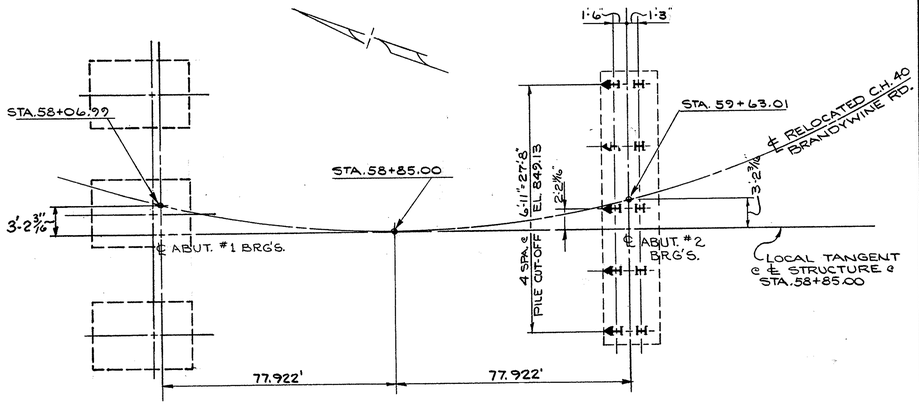
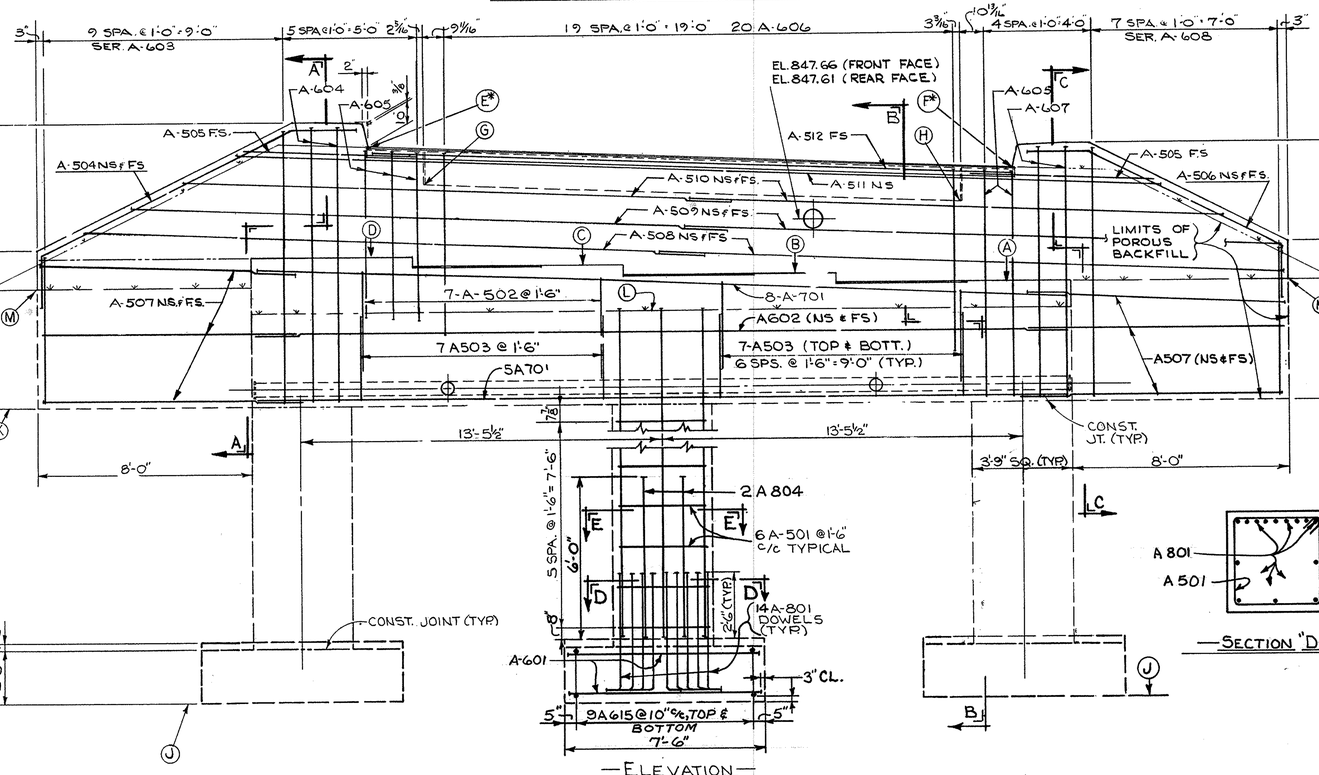


— PLAN ABUTMENT #1 SHOWN —
— ABUTMENT #2 OPPOSITE HAND —



— PILING PLAN —

➡ INDICATES DIRECTION OF 1:4 BATTER OF PILES.
ALL PILES TO BE 10-BP-42 STEEL "H" PILES.

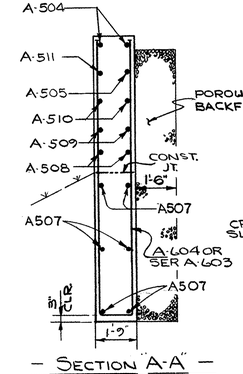


— ELEVATION —

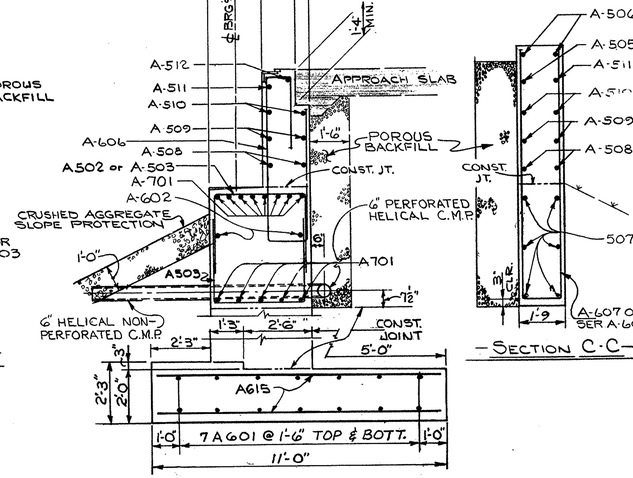
— ELEVATION TABLE —

A	B	C	D	E *	F *	G	H	J	K	L	M		
845.57	845.92	846.27	846.62	850.86	849.80	849.38	848.50	830.00	841.07	844.57	845.57		

*INDICATES FINISHED PAYMENT ELEVATIONS AT FACE OF BACKWALL



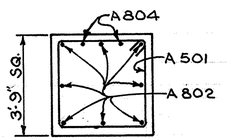
— SECTION "A-A" —



— SECTION "B-B" —

— SECTION C-C —

— SECTION "D-D" —



— SECTION "E-E" —

POROUS BACKFILL 1'-6" THICK SHALL EXTEND FROM THE BOTTOM OF THE CROSSBEAM UPWARD TO THE UNDERSIDE OF THE APPROACH SLAB AND TO THE EARTH SHOULDERS, AND OUTWARD TO THE EMBANKMENT SLOPES. EXCAVATION, THEREFORE, IN EXCESS OF THAT REQ'D FOR CONST. OF THE ABUT SHALL BE CONSIDERED AS PAID FOR IN THE BID PRICES PER CU. YD. PAID FOR POROUS BACKFILL.

PROCEDURE: AFTER THE PEDESTALS HAVE BEEN CONSTRUCTED THE EARTH FILL SHALL BE PLACED AND COMPACTED UP TO THE HEIGHT OF THE FINISHED SPILL-THRU SLOPE AND TO THE LEVEL OF THE SUBGRADE, AFTER WHICH EXCAVATION SHALL BE MADE FOR THE CROSSBEAM.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

ABUTMENT Nº1 DETAILS

BRANDYWINE RD. OVER BRANDYWINE CRK.
SUMMIT COUNTY
STA 58 + 04.73 TO STA 59 + 65.27

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
KSJ	BMR		CDS	RBH	10-13-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

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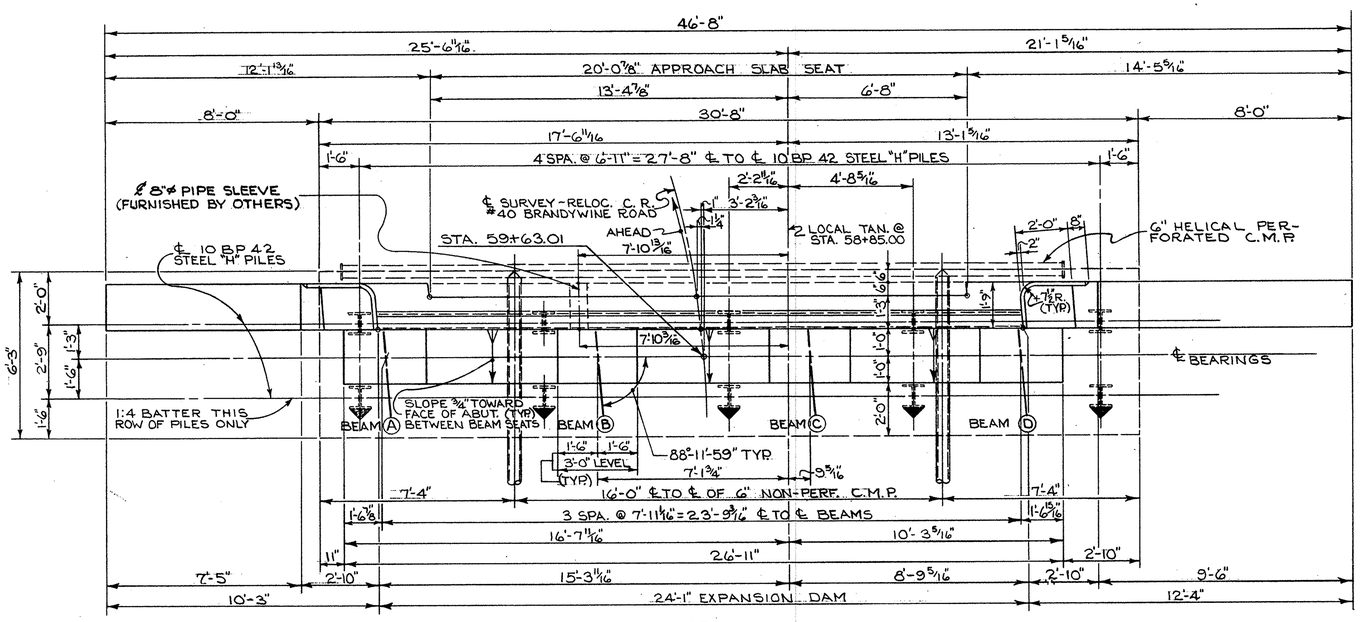
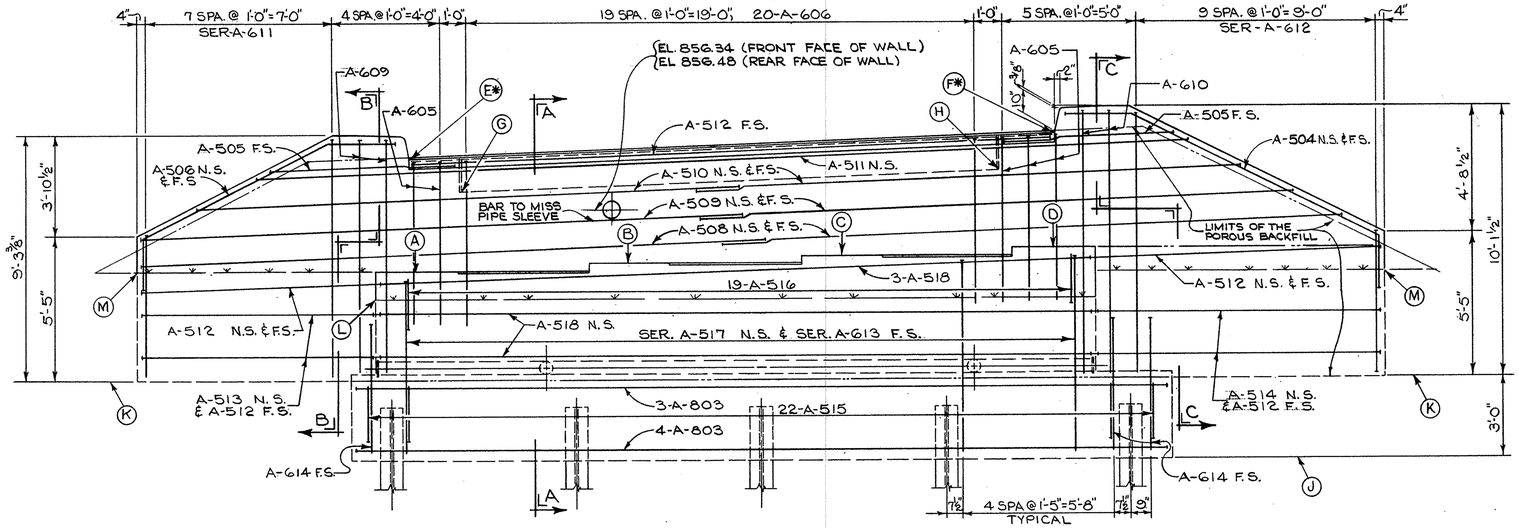


—PLAN—

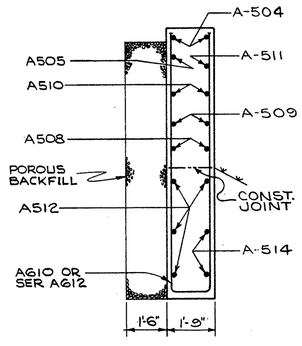


—ELEVATION—

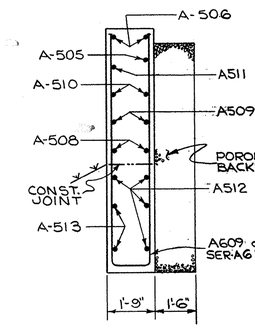
—ELEVATION TABLE—

A	B	C	D	E*	F*	G	H	J	K	L	M		
854.21	854.49	854.77	855.05	858.56	859.40	857.39	858.09	847.13	850.13	853.21	854.21		

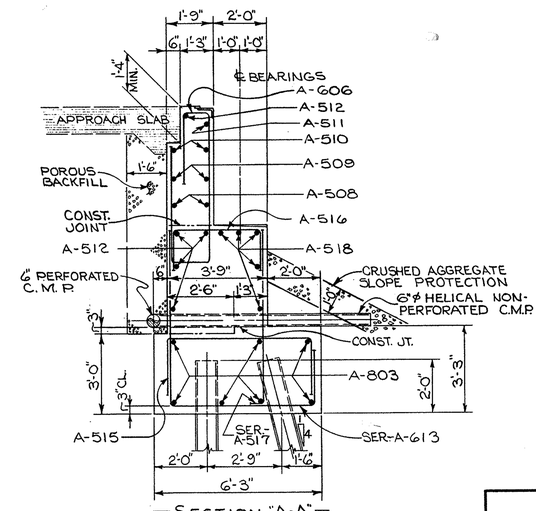
* INDICATES FINISHED PAVEMENT ELEVATIONS AT THE FACE OF BACKWALL.



—SECTION "C-C"—



—SECTION "B-B"—



—SECTION "A-A"—

POROUS BACKFILL 1'6" THICK SHALL EXTEND FROM THE TOP OF THE FOOTING UPWARD TO THE UNDERSIDE OF THE APPROACH SLAB & TO THE EARTH SHOULDERS, & OUTWARD TO THE EMBANKMENT SLOPES. EXCAVATION THEREFORE IN EXCESS OF THAT REQUIRED FOR CONSTRUCTION OF THE ABUTMENT SHALL BE CONSIDERED AS PAID FOR IN THE BID PRICES PER CU YD. PAID FOR POROUS BACKFILL

PROCEDURE: THE EMBANKMENT SHALL BE PLACED AND COMPACTED UP TO THE FINISHED SPILL-THRU SLOPE AND TO THE LEVEL OF THE SUBGRADE BETWEEN THIS ABUT. AND ABUT. Nº 1 OF BRIDGE Nº SUM-271-0966, AFTER WHICH EXCAVATION SHALL BE MADE FOR THE ABUTMENT AND FOR THE PIER THAT IS SET IN THE FILLED AREA.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

ABUTMENT Nº 2 DETAILS

BRIDGE Nº SUM-271-
BRANDYWINE RD. OVER BRANDYWINE CREEK
SUMMIT COUNTY
STA. 58+04.73 TO STA. 59+65.27

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
KSJ	BMR		CLS	EBH	10-13-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

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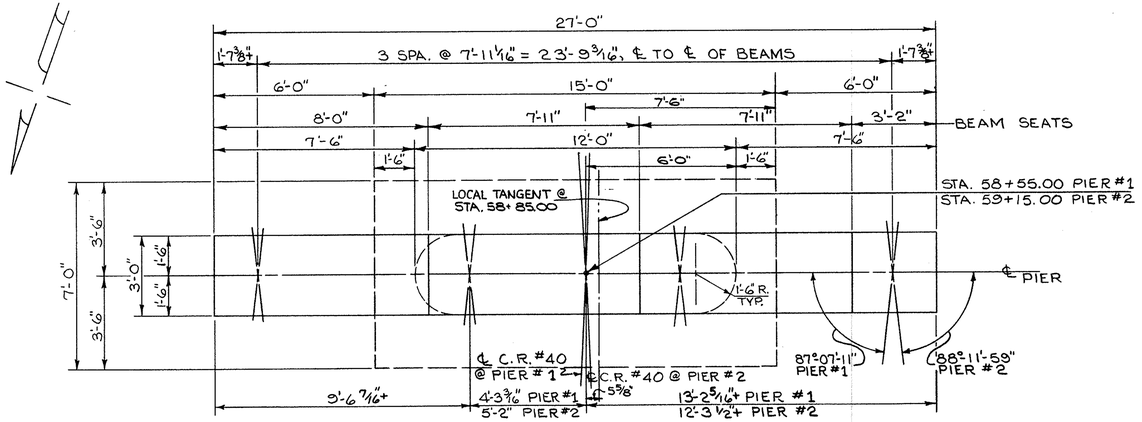
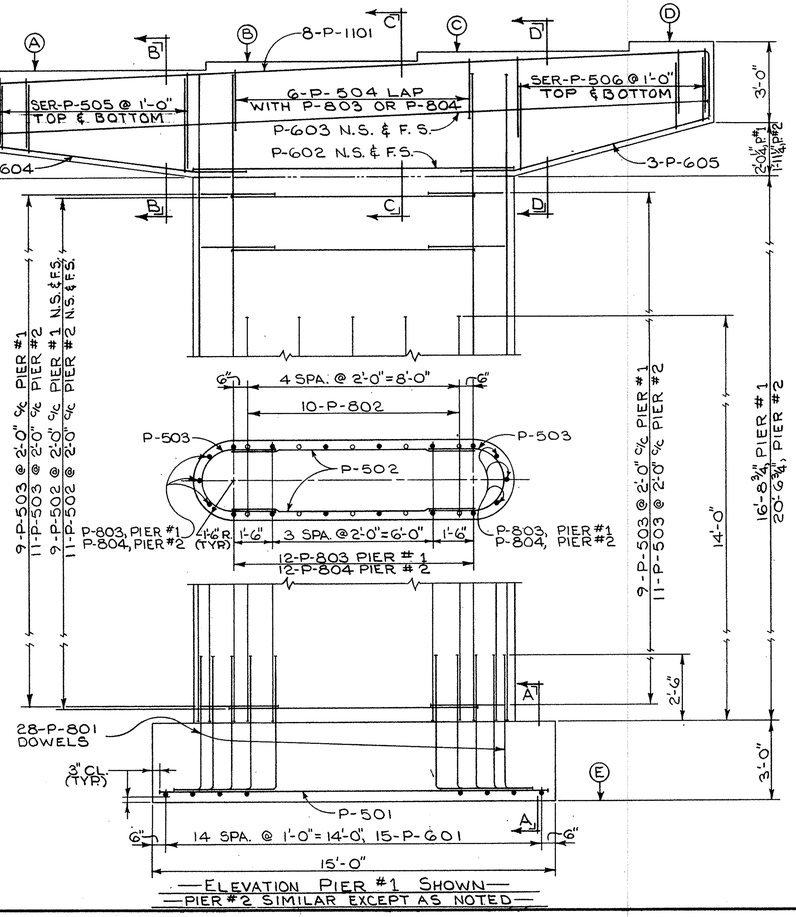
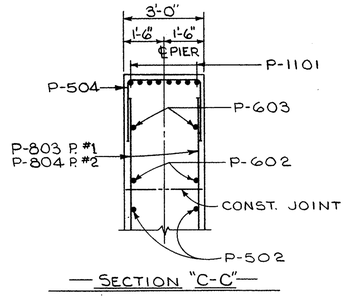
SUM 271-8.29



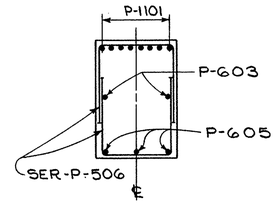
— PLAN — PIER #1 SHOWN —
— PIER #2 SIMILAR EXCEPT AS SHOWN OR NOTED —



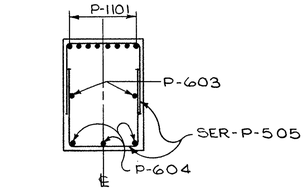
— ELEVATION PIER #1 SHOWN —
— PIER #2 SIMILAR EXCEPT AS NOTED —



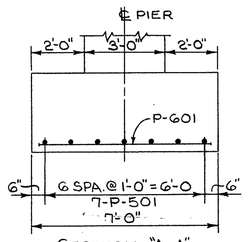
— SECTION "C-C" —



— SECTION "D-D" —



— SECTION "B-B" —



— SECTION "A-A" —

ELEVATION TABLE					
	A	B	C	D	E
PIER #1	847.23	847.57	847.91	848.25	823.50
PIER #2	850.56	850.87	851.19	851.50	823.00

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

PIER DETAILS

BRANDYWINE RD. OVER BRANDYWINE CRK.
SUMMIT COUNTY
STA. 58 + 04.73 TO STA 59 + 65.27

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
KSJ	BMR		CBS	RBH	10-13-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

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DUM. 271-8.29

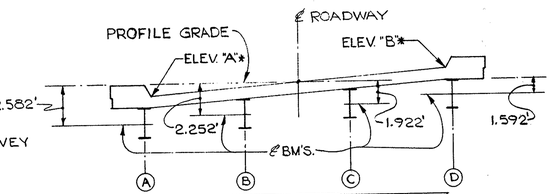
LINEAR DIMENSIONS ARE MEASURED ON ℄ OF SURVEY.

4°-40'-50" (78.01')
1°48'-01" (30.005')
2°52'-49" (48.005')
1°04'48" (18.00')
1°26'24.5" (24.003')

10"x⅞"x11'-4" TOP } MOMENT
13"x½"x11'-4" BOTT } PLATES

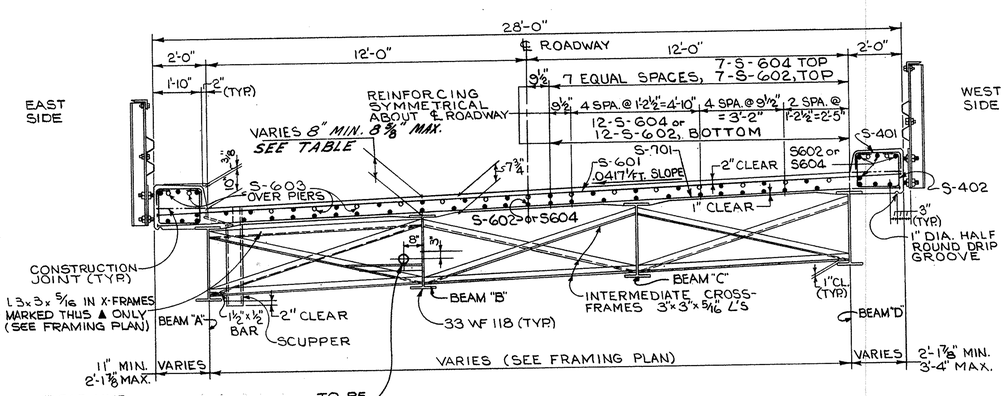
33 WF 118
℄ SPLICE & BEND POINT
SLAB FASCIA
STA. 58+85.00
STA 58+0699
STA 59+63.01
℄ SPLICE 1'-2 13/16"
℄ SURVEY
℄ LOCAL TANGENT
4"x4"x5/16" L'S, END CROSSFRAMES (TYP.)
BM. LENGTHS ℄TR TO ℄TR BRG.
NORMAL TO BEAMS
ON ℄ BRG'S.
3 SPA. @ 7'-10 15/16" = 23'-8 13/16"
3 SPA. @ 7'-11 1/16" = 23'-9 3/16"
3 SPA. @ 7'-11 1/16" = 23'-9 3/16"
11'-10 2/16"
11'-10 5/16"
9 2/16"
5'-8"
12'-0"
11' MIN.
MAX. 2'-1 7/8"
1'-7 15/16"
1'-9 7/8"
1'-4 5/8"
2'-1 7/16"
1'-5" (TYP.)
1'-2" (TYP.)
5 5/8"
8°-07'-11"
88°-11'-59"
3'-2 3/16"
2'-1 7/8"
2'-7 1/4"
2'-5 7/8"
2'-1 7/16" MIN.
2'-10 1/4"
3'-4" MAX.
3'-0 1/2"
95'-11 5/8"
60'-0"
12'-7 13/16"
2 SPA. @ 15'-0" = 30'-0" ℄ TO ℄ OF INTERMEDIATE X-FRAMES
17'-4 3/16"
15'-5 15/16"
5 SPA. @ 13'-7" = 67'-11", ℄ TO ℄ OF INTERMEDIATE CROSSFRAMES
12'-6 1/16"
℄ ABUT. #1, BRG'S (R-75)
47'-11 1/16"
℄ PIER #1 (R-125)
30'-0"
℄ PIER #2 (R-125)
℄ ABUT. #2, BRG'S. (R-75)

FRAMING PLAN



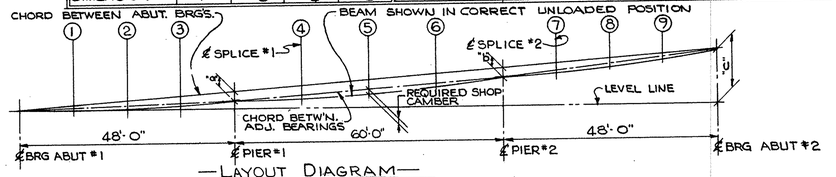
ELEVATIONS @ 25' INTERVALS			
STATION	ELEV. "A"*	ELEV. "B"*	PROFILE GRADE
58 + 25	850.52	851.52	851.00
+ 50	851.54	852.54	852.03
+ 75	852.77	853.77	853.24
59 + 00	854.14	855.14	854.63
+ 25	855.69	856.69	856.19
+ 50	857.44	858.44	857.93

* THE ELEVATIONS SHOWN AT THE FACE OF THE CURBS ARE THOSE WHICH ARE REQUIRED BEFORE THE CONCRETE DECK IS POURED. PROPER ALLOWANCE HAS BEEN MADE FOR THE DEAD LOAD DEFLECTIONS CAUSED BY THE WEIGHT OF THE CONCRETE



TRANSVERSE SECTION

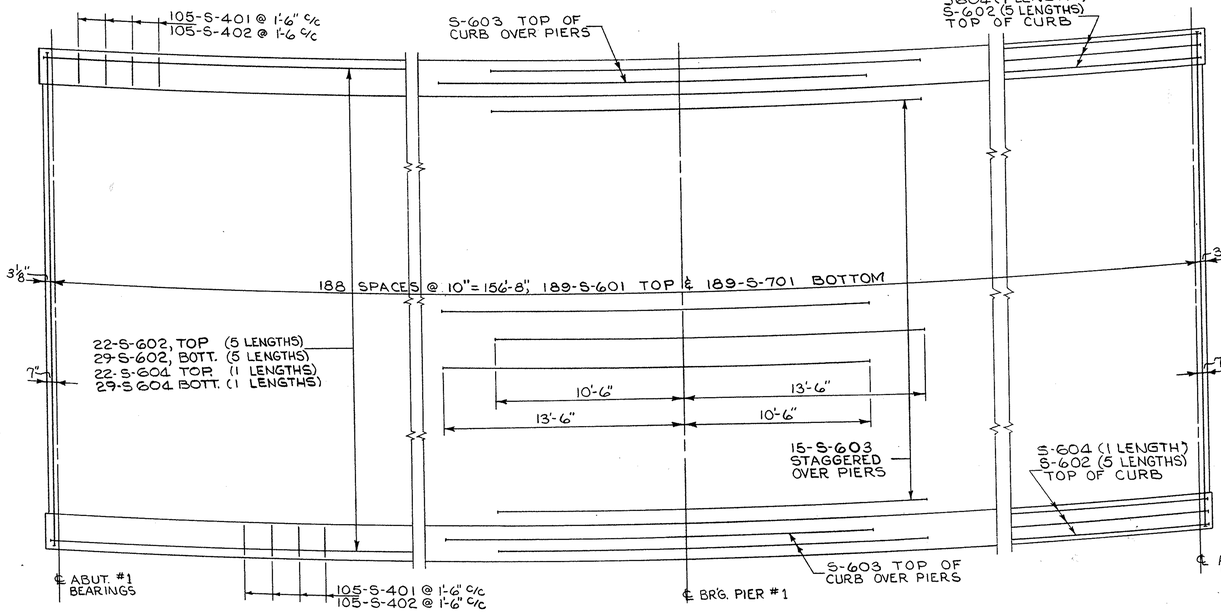
DIMENSION	"a"				"b"				"c"			
BEAM	A	B	C	D	A	B	C	D	A	B	C	D
DIMENSION	9"	8 7/8"	8 3/4"	8 5/8"	8 3/8"	8 1/4"	8 1/8"	8"	8'-7 1/16"	8'-6 7/8"	8'-6"	8'-5 1/8"



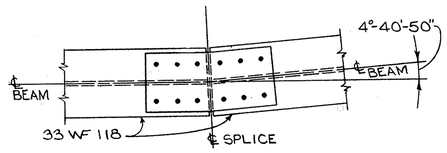
LAYOUT DIAGRAM

DEFLECTION & CAMBER TABLE

LOCATION	SPAN № 1			SPAN № 2			SPAN № 3		
	¼ PT. ①	½ PT. ②	¾ PT. ③	SPLICE #1 ④	½ PT. ⑤	¾ PT ⑥	SPLICE #2 ⑦	½ PT. ⑧	¾ PT. ⑨
DEFLECTION DUE TO WEIGHT OF STEEL	.033"	.038"	.018"	.022"	.053"	.029"	.020"	.038"	.033"
DEFLECTION DUE TO REMAINING DEAD LOAD	.180"	.208"	.096"	.118"	.287"	.160"	.123"	.208"	.180"
ADJUSTMENT REQUIRED FOR VERTICAL CURVE	−.730"	−.970"	−.730"	−.972"	−1.517"	−1.137"	−.730"	−.970"	−.730"
REQUIRED SHOP CAMBER	−½"	−¾"	−⅝"	−13/16"	−1 3/16"	−15/16"	−9/16"	−¾"	−½"



SLAB REINFORCING PLAN



SPLICE #1 DETAIL

FOR DETAILS & DIM. NOT SHOWN SEE STANDARD DRAWING SD-1-65 - SHT. № 3

TABLE OF SLAB THICKNESS @ ℄ OF BEAMS

LOCATION	THICK.
ABUT. #1	8 5/8"
SPAN #1	8 3/8"
PIER #1	8 1/2"
SPLICE	8 5/8"
SPAN #2	8 1/4"
PIER #2	8"
SPAN #3	8 1/2"
ABUT. #2	8 5/8"

SLAB THICKNESS GIVEN AT SAME LOCATION THAT OVERHANGS ARE SHOWN ON FRAMING PLAN

NOTE: FOR DETAILS NOT SHOWN SEE STD. DWG. № CSB-2-63, REV. 12-8-65, SHS. 1 & 2

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

FRAMING PLAN & SLAB DETAILS

BRANDYWINE ROAD OVER BRANDYWINE CREEK
SUMMIT COUNTY
STA. 58 + 04.73 TO STA. 59 + 65.27

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
KSS	BMR		CLS	RBH	10-13-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

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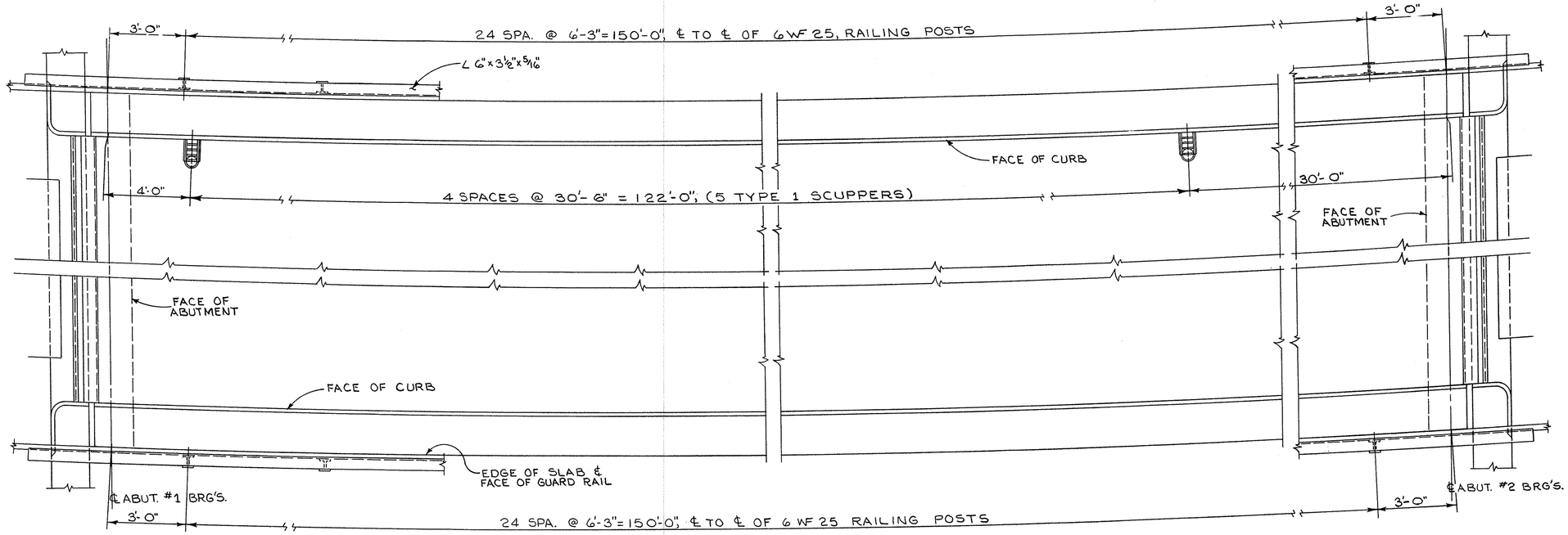
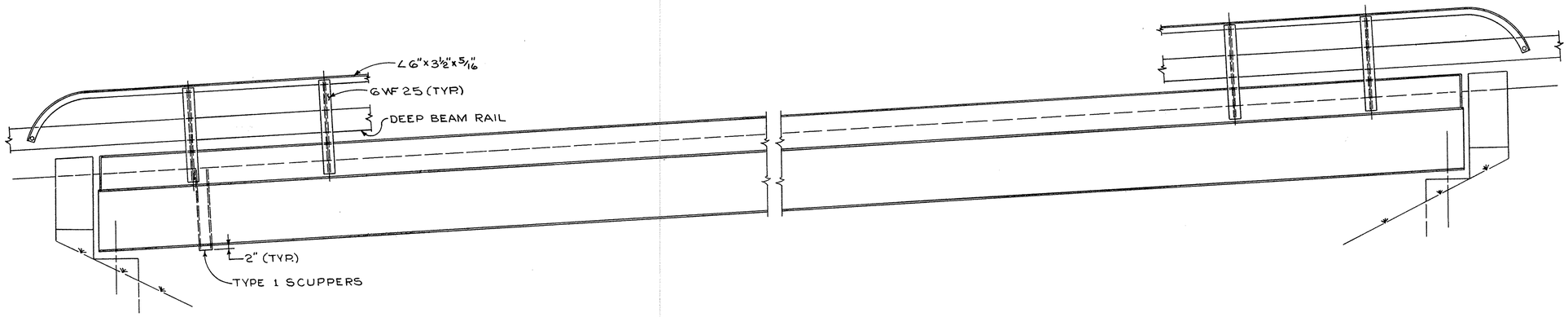
SUM 271-8.29



PARTIAL DECK PLAN



ELEVATION

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

RAILING & DRAINAGE

BRANDYWINE RD. OVER BRANDYWINE CRK.
SUMMIT COUNTY
STA 58 + 04.73 TO STA. 59 + 65.27

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
KSJ	BMR		CES	RBH	10-13-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

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SUM 271-8.29

MARK	NO. REQ'D.	LENGTH	TYPE	DIMENSIONS A	B	C	D	SERIES INCR.	WEIGHT LBS.
ABUTMENTS									
A-501	21	14'-0"	14	3'-5"	3'-5"	5"			307
A-502	7	9'-10"	3	3'-5"	3'-3"				72
A-503	21	9'-2"	3	3'-5"	3'-0"				201
A-504	4	14'-9"	22	4'-8"	9'-4"	10'-5"			62
A-505	4	6'-8"	ST.						28
A-506	4	12'-5"	22	3'-9"	7'-2"	8'-1"			52
A-507	12	9'-5"	ST						118
A-508	8	23'-6"	ST						196
A-509	8	22'-6"	ST						188
A-510	8	20'-6"	ST						171
A-511	2	34'-0"	ST						73
A-512	10	24'-2"	ST						252
A-513	2	10'-5"	ST.						22
A-514	2	12'-3"	ST.						26
A-515	22	9'-6"	3	5'-5"	2'-2"				218
A-516	19	7'-2"	3	3'-5"	2'-0"				142
SERIES OF A-517	1 SET OF 19 =19 BARS	6'-8" TO 7'-5"	1	6"	6'-5" TO 7'-2"			1/2"	140
A-518	5	26'-7"	ST.						139
A-601	42	7'-0"	ST.						442
A-602	2	30'-4"	ST.						91
SERIES OF A-603	1 SET OF 10 =10 BARS	12'-4" TO 21'-6"	3	1'-5"	5'-7" TO 10'-2" @ INCR. OF 6"			1'-0 1/4"	254
A 604	2	21'-6"	3	1'-5"	10'-2"				65
A-605	10	13'-8"	3	1'-5"	6'-3"				205
A-606	40	15'-3"	7	4'-9"	1'-5"	6'-0"	11"		916
A-607	2	19'-6"	3	1'-5"	9'-2"				59
SERIES OF A-608	1 SET OF 8 =8 BARS	12'-2" TO 19'-2"	3	1'-5"	5'-6" TO 9'-0" @ INCR. OF 6"			1'-0"	188
A-609	2	18'-10"	3	1'-5"	8'-10"				56
A-610	2	20'-6"	3	1'-5"	9'-8"				62
SERIES OF A-611	1 SET OF 8 =8 BARS	11'-4" TO 18'-8"	3	1'-5"	5'-1" TO 8'-9" @ INCR. OF 6"			1'-0 1/2"	174
SERIES OF A-612	1 SET OF 10 =10 BARS	11'-4" TO 20'-4"	3	1'-5"	5'-1" TO 9'-7" @ INCR. OF 6"			1'-0"	237
SERIES OF A-613	1 SET OF 13 =13 BARS	13'-9" TO 14'-6"	4	6'-5" TO 7'-2"	5'-5"	2'-2"		1/2"	403
A-614	3	12'-5"	4	5'-0"	5'-5"	2'-2"			56
A-615	54	10'-6"	ST.						852
A-701	13	30'-4"	ST.						806
A-801	42	4'-10"	1	6"	4'-6"				542
A-802	24	11'-4"	ST.						726
A-803	7	30'-2"	ST.						564
A-804	6	6'-0"	ST.						96
ABUTMENTS TOTAL= 9201 LBS.									
SUPERSTRUCTURE									
S-401	210	2'-4"	3	1'-6"	6"				327
S-402	210	4'-8"	15	1'-6"	1'-3"	6"			655
S-601	189	27'-8"	ST.						7854
S-602	255	30'-0"	ST						11490
S-603	38	24'-0"	ST						1370
S-604	51	16'-6"	ST.						1264
S-701	189	27'-8"	ST.						10688
SUPERSTRUCTURE TOTAL 33,648 LBS.									

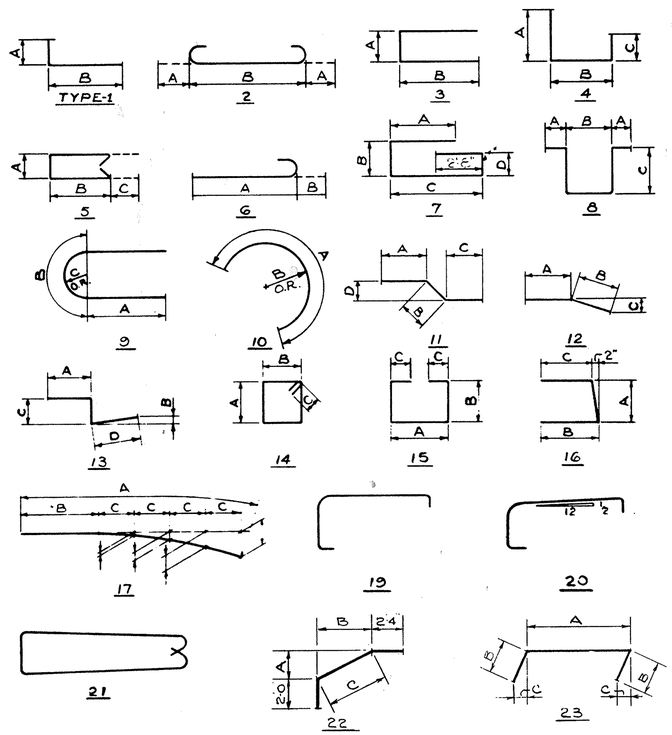
MARK	NO. REQ'D.	LENGTH	TYPE	DIMENSIONS A	B	C	D	SERIES INCR.	WEIGHT LBS.
PIERS									
P-501	14	14'-6"	ST.						212
P-502	40	9'-0"	ST						413
P-503	40	7'-1"	9	1'-7"	3'-11"	1'-3"			326
P-504	12	6'-11"	3	2'-8"	2'-3"				87
SERIES OF 8 P-505	4 SETS OF 8 32 BARS	6'-9 1/2" TO 7'-8"	3	2'-8"	2'-2 1/2" TO 2'-7 1/2" @ INCR OF 3/4"			1 1/2"	243
SERIES OF 8 P-506	4 SETS OF 8 32 BARS	6'-6" TO 8'-3"	3	2'-8"	2'-0 1/2" TO 2'-11" @ INCR. OF 1 1/2"			3"	250
P 601	30	6'-6"	ST.						293
P 602	4	12'-0"	ST						72
P-603	4	26'-8"	ST.						160
P604	6	9'-6"	12	7'-6"	2'-0"	3 1/2"			86
P 605	6	9'-6"	12	7'-6"	2'-0"	6"			86
P-801	56	6'-0"	1	1'-0"	5'-2"				897
P-802	20	14'-0"	ST						748
P-803	18	20'-3"	ST						973
P 804	18	24'-0"	ST.						1153
P1101	16	30'-7"	23	26'-6"	2'-4"	1"			2600
PIERS TOTAL= 8527 LBS.									

MARK	NO. REQ'D.	LENGTH	TYPE	DIMENSIONS A	B	C	D	SERIES INCR.	WEIGHT LBS.

REPLACEMENT BARS

RE-401	1	5'-3"	ST
RE-501	1	5'-6"	ST
RE-601	2	6'-0"	ST.
RE-701	1	6'-3"	ST.
RE-801	1	6'-6"	ST
RE-901	—	6'-10"	—
RE-1001	—	7'-3"	—
RE-1101	1	7'-9"	ST.

GRAND TOTAL 51,376 LBS.



REINFORCING NOTES

BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST DIGIT WHERE THREE DIGITS ARE USED AND THE FIRST TWO DIGITS WHERE FOUR DIGITS ARE USED INDICATE THE BAR SIZE NUMBER. A-601 IS A NO. 6 SIZE BAR AND P-1001 IS A NO. 10 SIZE BAR.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

REINFORCING SCHEDULE

BRANDYWINE RD OVER BRANDYWINE CRK.
SUMMIT COUNTY
STA 58 + 04.73 TO STA 59 + 65.27

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
KSJ	LNP		CBS	RBH	10-13-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

271/313

SUM-271-8.29

CURVE DATA ℄ C.R. #16

PC STA. 716+01.59
PT STA. 717+77.43
Δ = 2°-38'-15"
D = 1°-30'-00"
T = 87.85'
L_c = 175.85'
R = 3819.72'

PROPOSED STRUCTURE

TYPE: CONTINUOUS STEEL BEAM WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE.
SKEW: 29°-23'-52" LF.
SPANS: 38'-0" 54'-0" 38'-0" ℄ BRGS.
ROADWAY: 40'-0" F/F PARAPETS (BOTH STR'S)
LOAD FREQUENCY: CF = 2.000 ADEQUATE FOR A.A.S.H.O. ALTERNATE LOADING.
WEARING SURFACE: 1" MONOLITHIC.
APPROACH SLABS: 25' LONG (15-1-54)
ALIGNMENT: TANGENT
SUPERELEVATION: NONE
SLOPE PROTECTION: CRUSHED AGGREGATE.

TRAFFIC: 15,080 A.D.T. - 1975 - I-271
4,760 A.D.T. - 1975 - C.R. #16

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

SITE PLAN

BRIDGE NO. SUM-271-1117 L. & R.
I-271 OVER C.R. #16
SUMMIT COUNTY
STA. 588+34.02 TO STA. 589+69.18.

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
NPW	ROSE J.K.		CDS 6-22-66	RBH	9-21-66	

EXISTING PROFILE ℄ C.R. #16
⊗ INDICATE EXISTING GRADE AT ℄ C.R. #16
⊗ EL. 968.30
⊗ EL. 968.78
⊗ EL. 969.38
⊗ EL. 970.08
⊗ EL. 970.77
⊗ EL. 971.25
719+00
718+00
717+00
096
086

℄ WESTBOUND LANES
℄ EASTBOUND LANES
℄ SURVEY I-271
84' MEDIAN
END APPROACH SLABS STA. 588+34.02
BEGIN APPROACH SLABS STA. 589+69.18
STA. 589+01.60 I-271
STA. 718+47.19 C.R. #16
BRIDGE NO SUM-271-1122
15" PIPE
30" PIPE
EXIST. 60' R/W
EXIST HI. R/W
EXIST. CONDUIT
NEW M.H.
NEW M.H.
HORIZ. CLEARANCE 9.00 FEET 7.62 RADIAL
29°-23'-52" SKEW
70'-0" LONG
60'-0" SPAN
PROP. 9 DUCT CONDUIT (BY OTHERS)
PT. STA. 717+77.43
PT. OF MIN. VERTICAL CLEARANCE
℄ AKRON-CLEVE. RD. (C.R. #16)
SLOPE PROTECTION
587
588
589
590
591
960
970
980
2:1
8:1
4:1
1:1

VERTICAL CLEARANCE:
DESIGN = 14.50'
ACTUAL = 14.54

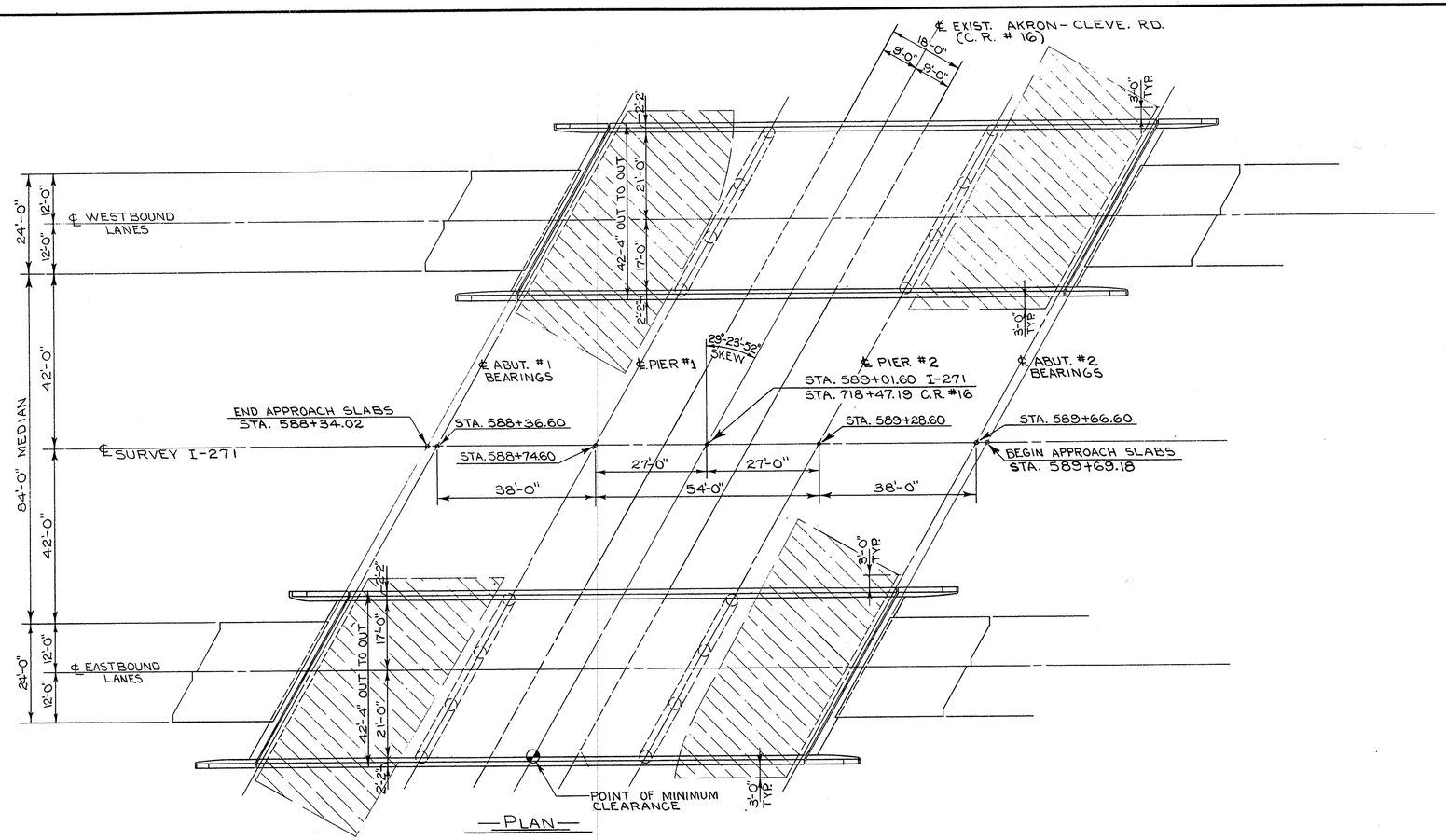
AVERAGE ESTIMATED PAY LENGTH FOR ABUTMENTS = 20 FT. 10BP42 STEEL "H" PILES

EL. 990.41
EL. 989.91
EL. 989.41
STA. 588+34.02
EL. 988.91
EL. 988.41
EL. 987.91
STA. 589+69.18
EL. 987.41
EL. 986.91
EL. 986.41
BRIDGE LIMITS = 135.16'
EL. WB. 983.1
EB. 983.8
TYPE "I" RAILING
EL. WB. 981.8
EB. 982.5
PROPOSED - 1.00% PROFILE GRADE
EL. WB. 977.04
EB. 977.73
2:1 NORMAL
EL. IB. 975.74
EB. 976.43
EXISTING PROFILE ℄ SURVEY I-271
30" PIPE
EXIST. CONDUIT
PROPOSED 9 DUCT CONDUIT
W.B. & E.B. EL. 959.75
587+00
588+00
589+00
590+00
591+00

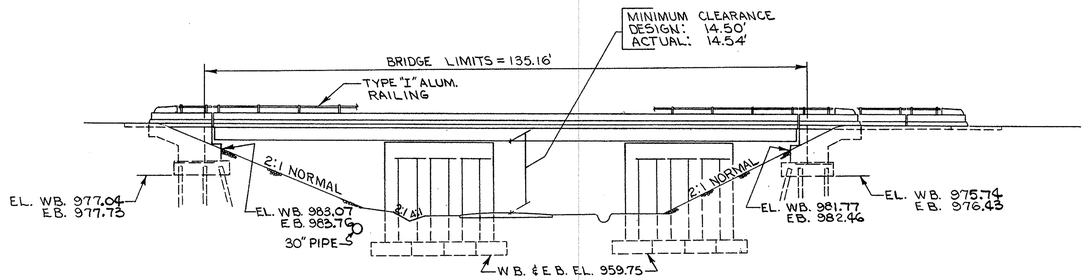
FED. RD.	STATE	PROJECT	
2	OHIO		

272/313

SUM-271-8.29



—PLAN—



—ELEVATION—

—ESTIMATED QUANTITIES (2 BRIDGES)—

ITEM	TOTAL	UNIT	DESCRIPTION	SUPER	ABUTS.	PIERS	GEN.
503	891	CU. YDS.	UNCLASSIFIED EXCAVATION		550	341	
503	20	CU. YDS.	ROCK EXCAVATION			20	
505	LUMP	SUM	FIRST TEST PILE				
507	1120	LIN. FT.	10BP42 STEEL "H" PILES		1120		
509	160,610	LBS.	REINFORCING STEEL	98,613	25,275	36,722	
511	345	CU. YDS.	CLASS "C" CONC. SUPERSTRUCTURE	345			
511	205	CU. YDS.	CLASS "E" CONC. ABUTS. ABOVE FTG'S		205		
511	149	CU. YDS.	CLASS "C" CONC. PIERS ABOVE FTG'S			149	
511	250	CU. YDS.	CLASS "E" CONC. PIER & ABUT. FTG'S		165	85	
512	29	LIN. FT.	WATERPROOF PREMOLDED SEALING STRIP		29		
513	251,290	LBS.	STRUCTURAL STEEL	251,290			
514	251,290	LBS.	FIELD PAINTING OF STRUCTURAL STEEL	251,290			
517	635.16	LIN. FT.	BRIDGE RAILING (TYPE "I")	526.83	108.33		
518	73	CU. YDS.	POROUS BACKFILL		73		
518	14	EACH	SCUPPERS (INCLUDING SUPPORTS)	14			
518	169	LIN. FT.	6" PERFORATED HELICAL C.M.P. 707.06, INCLUDING SPECIALS		169		
518	105	LIN. FT.	6" HELICAL C.M.P. 707.06, NON-PERFORATED		105		
601	924	SQ. YDS.	CRUSHED AGGREGATE SLOPE PROTECTION				924
808	345	UNITS	WATER REDUCING SET RET. ADMIXTURE	345			
825	1461	SQ. YDS.	CONCRETE SURFACE TREATMENT				1461
828	175	LIN. FT.	JOINT SEALER	175			

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

GENERAL PLAN & ELEVATION

BRIDGE NO. SUM-271-1117 L. & R.
I-271 OVER C.R. #16
SUMMIT COUNTY
STA. 588+34.02 TO STA. 589+69.18

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
NPW	BMR		CH 6-29-66	RBH	9-21-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM-271-8.29

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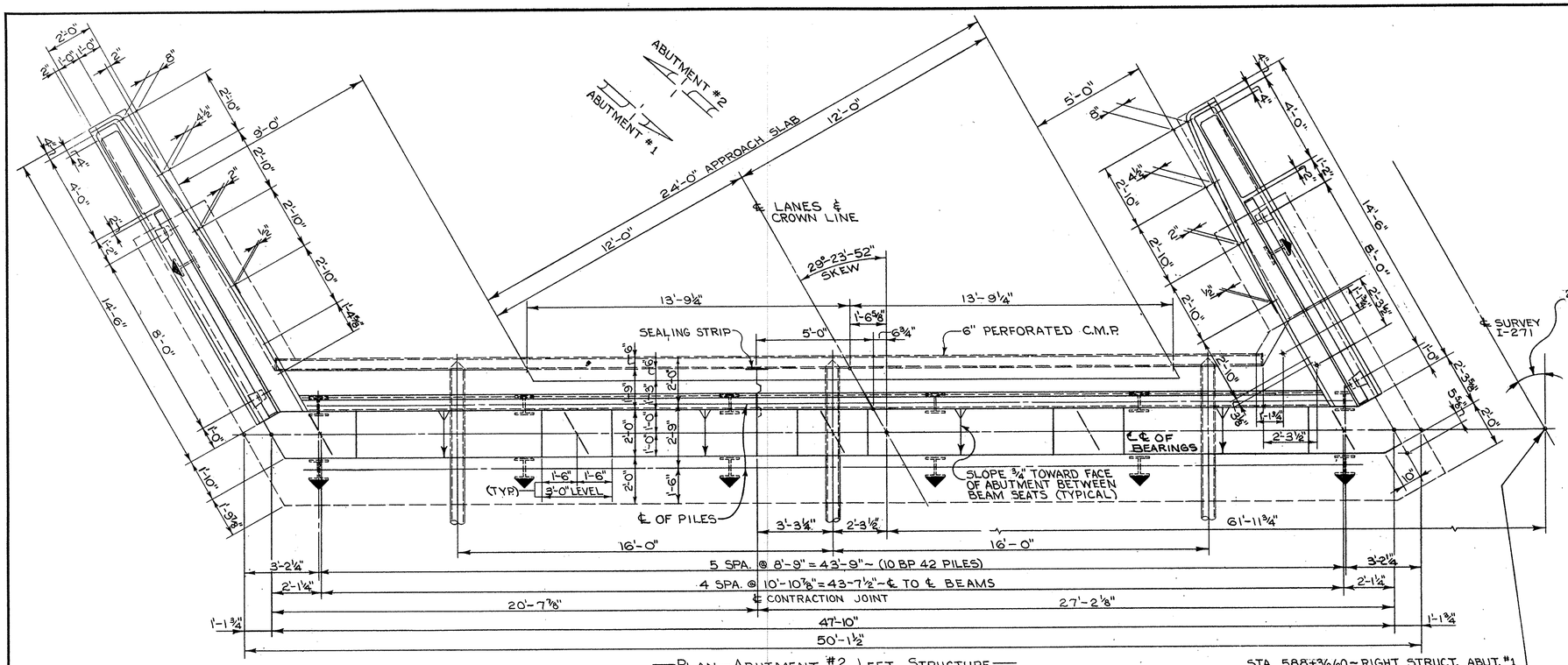
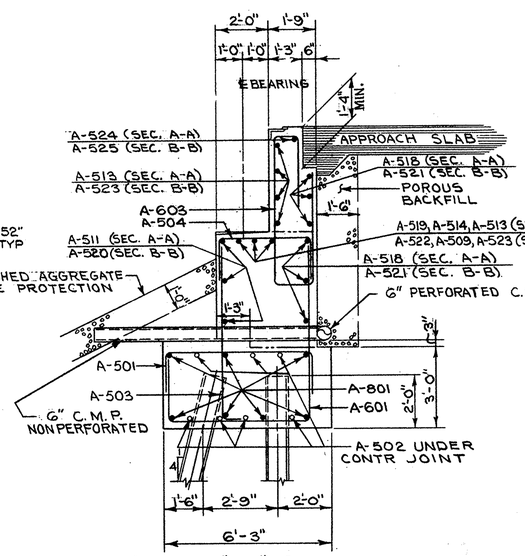
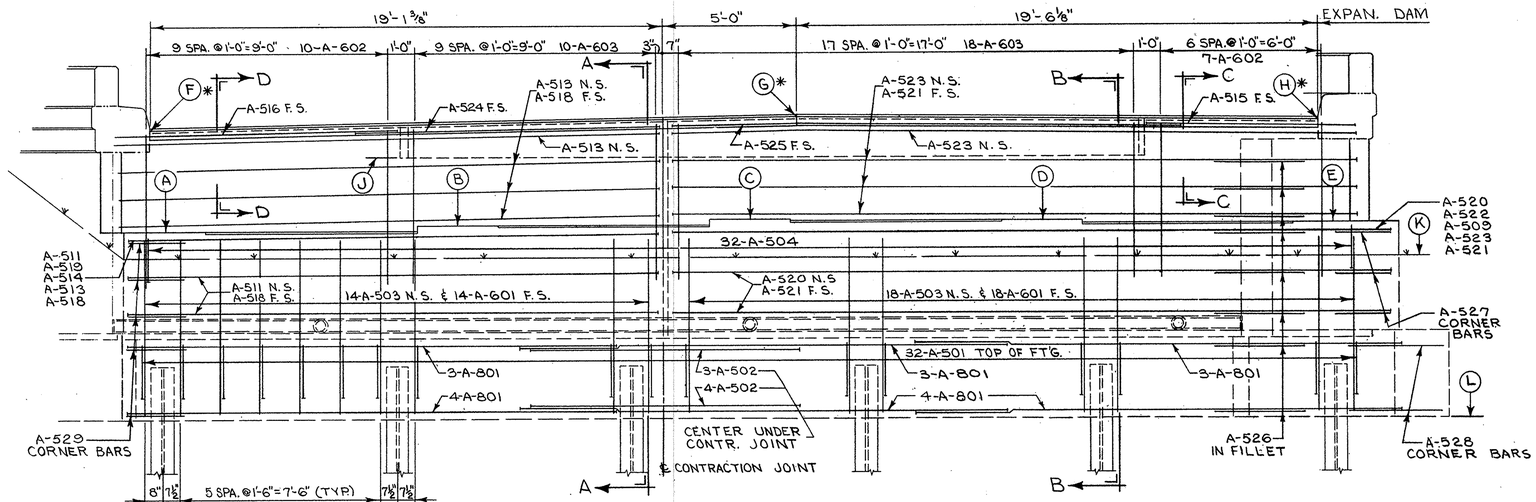


—PLAN—ABUTMENT #2 LEFT STRUCTURE—
—PLAN—ABUTMENT #1 RIGHT STRUCTURE—



SECTION "A-A" SHOWN
SECTION "B-B" SIMILAR EXCEPT AS NOTED



—ELEVATION—ABUTMENT #2 LEFT STRUCTURE—
—ELEVATION—ABUTMENT #1 RIGHT STRUCTURE—

ELEVATION TABLE

	A	B	C	D	E	F*	G*	H*	J	K	L
ABUTMENT # 2 LEFT STRUCTURE	982.76	982.96	983.17	983.13	983.04	987.17	987.62	987.45	986.01	981.77	975.74
ABUTMENT # 1 RIGHT STRUCTURE	984.91	985.00	985.10	984.96	984.76	989.34	989.55	989.19	987.97	983.76	977.73

SEE SH. NO. 274 FOR SECTIONS "C-C" & "D-D"

* INDICATES FINISHED PAVEMENT ELEVATIONS AT FACE OF BACKWALL

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

ABUTMENT DETAILS

BRIDGE NO. SUM-271-1117 L. & R.
I-271 OVER C. R. #16
SUMMIT COUNTY
STA. 588+34.02 TO STA. 589+69.18

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
NPW	BMR		CAA 8-22-66	ROA	9-21-66	11-6-68

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM-271-8.29

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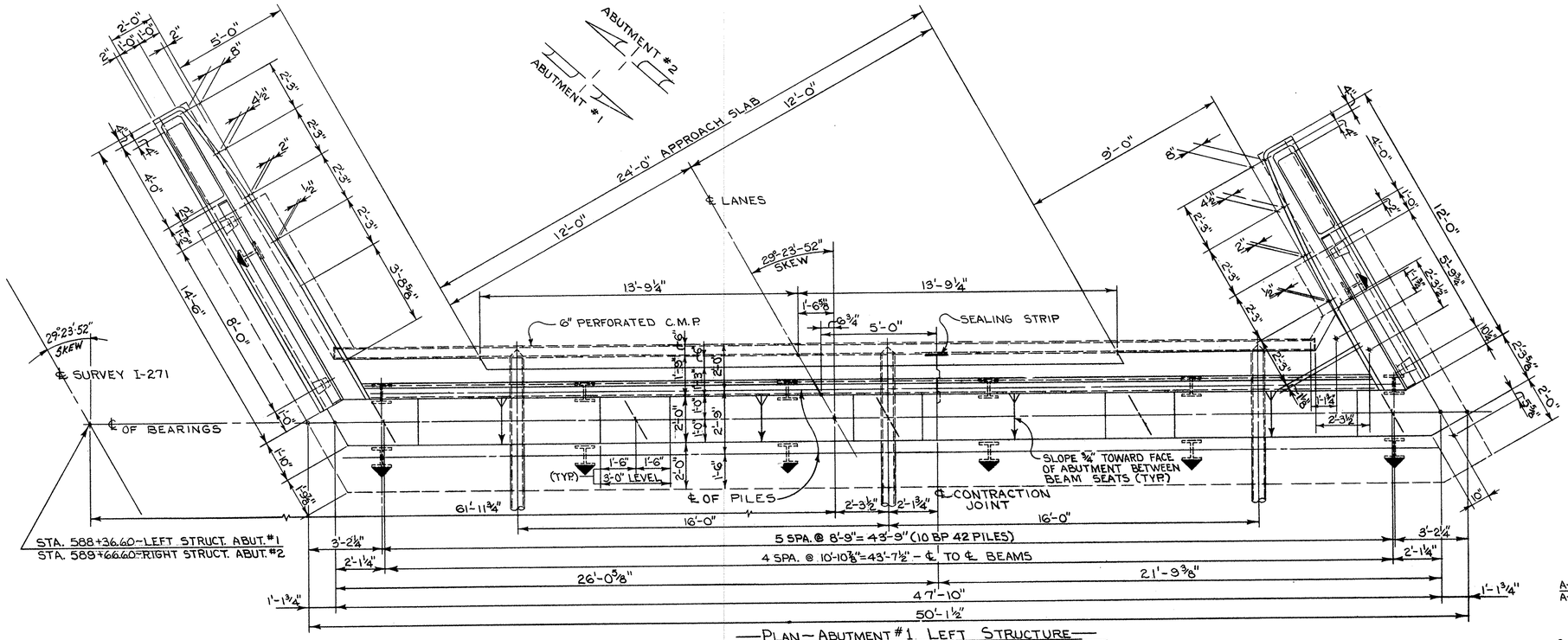
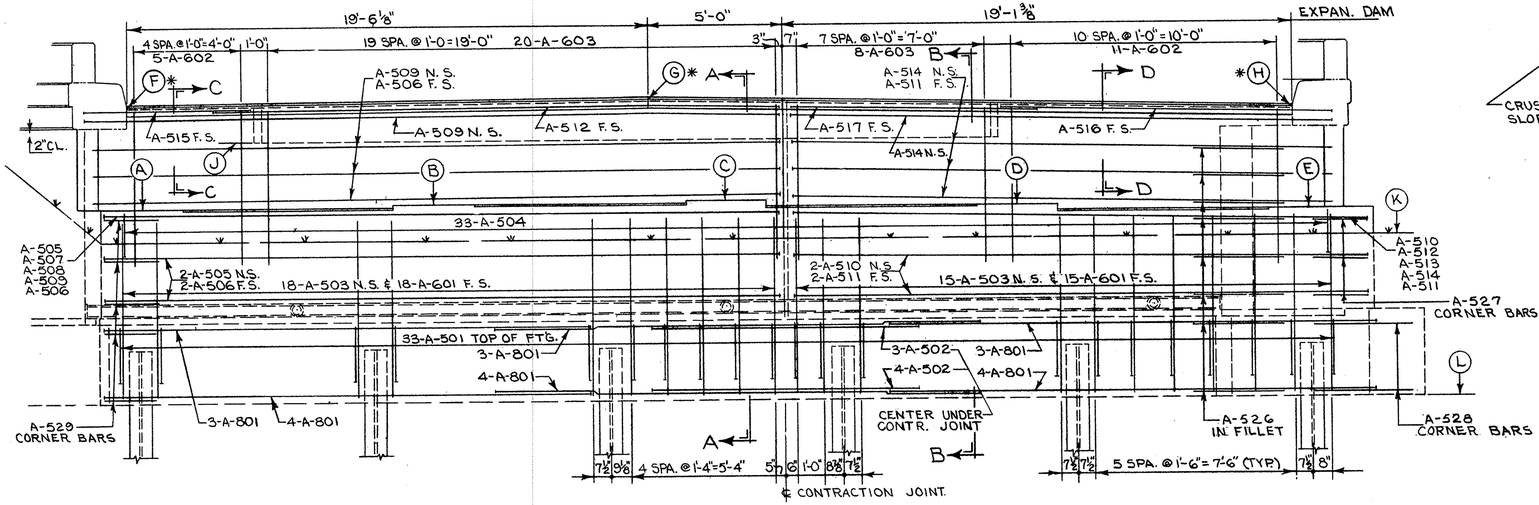


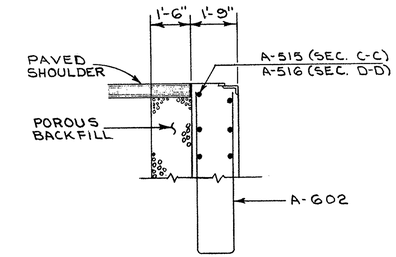
PLAN - ABUTMENT #1 LEFT STRUCTURE
PLAN - ABUTMENT #2 RIGHT STRUCTURE



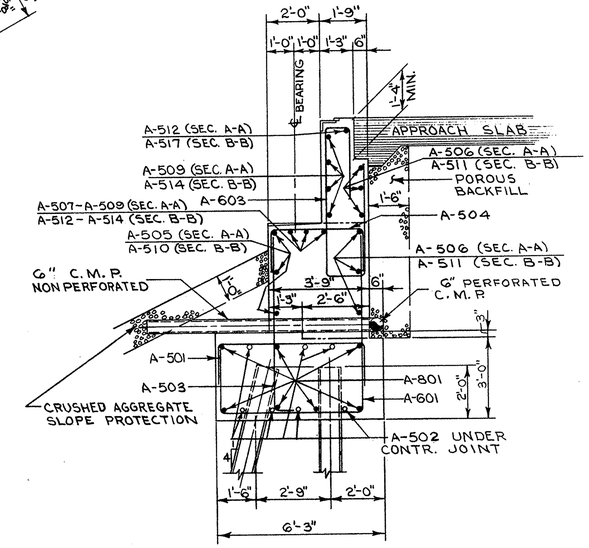
ELEVATION - ABUTMENT #1 LEFT STRUCTURE
ELEVATION - ABUTMENT #2 RIGHT STRUCTURE

	ELEVATION TABLE										
	A	B	C	D	E	F *	G *	H *	J	K	L
ABUTMENT # 1 LEFT STRUCTURE	984.34	984.43	984.47	984.26	984.06	988.77	988.94	988.49	987.37	983.07	977.04
ABUTMENT # 2 RIGHT STRUCTURE	983.46	983.66	983.80	983.70	983.61	987.86	988.22	988.01	986.62	982.46	976.43

* INDICATES FINISHED PAVEMENT ELEVATIONS AT FACE OF BACKWALL



SECTION "C-C" SHOWN
SECTION "D-D" SIMILAR EXCEPT AS NOTED



SECTION "A-A" SHOWN
SECTION "B-B" SIMILAR EXCEPT AS NOTED

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

ABUTMENT DETAILS

BRIDGE NO. SUM-271-1117 L. & R.
I-271 OVER C. R. # 16
SUMMIT COUNTY
STA. 588+34.02 TO STA. 589+69.18

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
NPW	BMR		CEJ 6-22-66	RDH	7-21-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM-271-8.29

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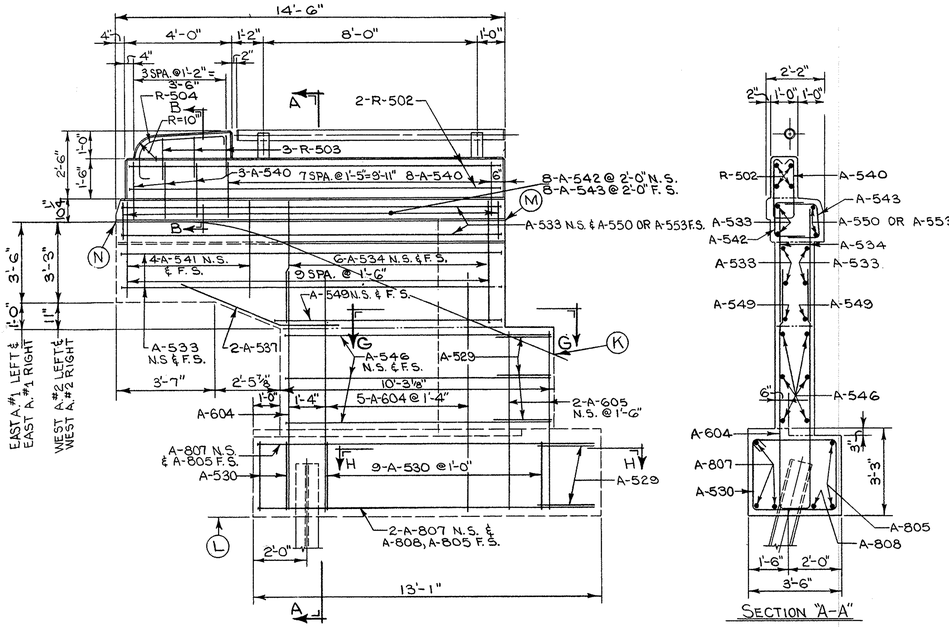
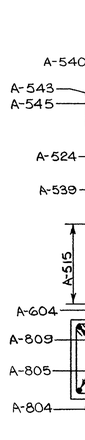
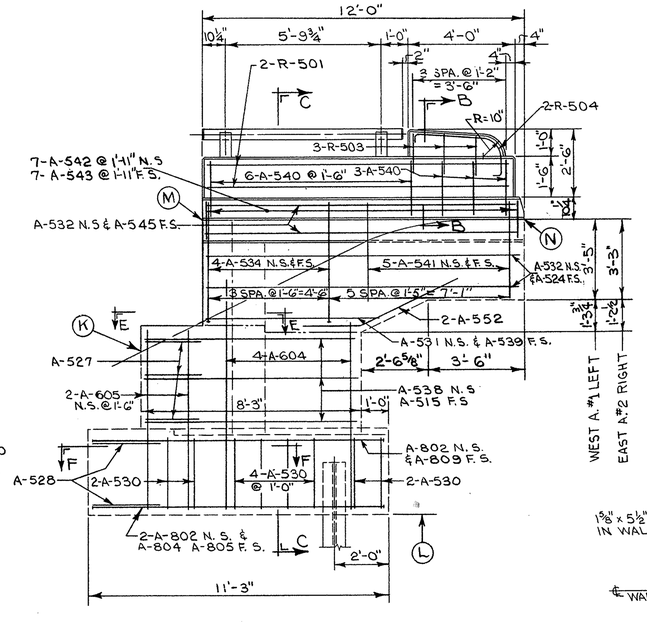


SECTION "A-A"

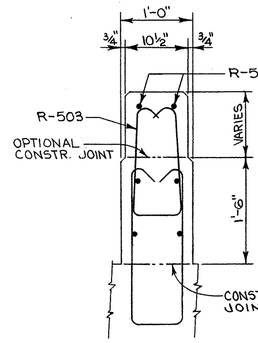
ELEVATION—EAST WINGWALL ABUT. #1 LEFT & RIGHT STRUCTURES—SHOWN—
WEST WINGWALL ABUT. #2 LEFT & RIGHT STRUCTURES—SIMILAR—EXCEPT AS NOTED—



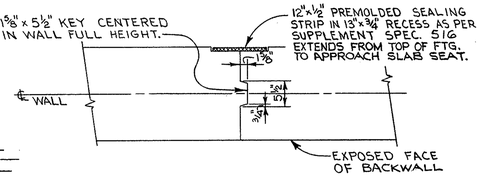
SECTION "C-C"



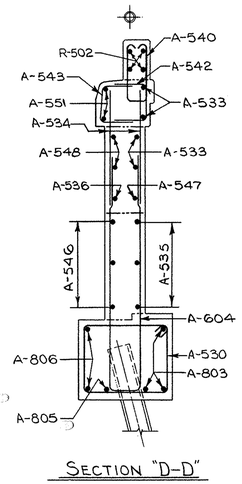
ELEVATION—WEST WINGWALL ABUT. #1 LEFT STRUCTURE—SHOWN—
EAST WINGWALL ABUT. #2 RIGHT STRUCTURE—SIMILAR—EXCEPT AS NOTED—



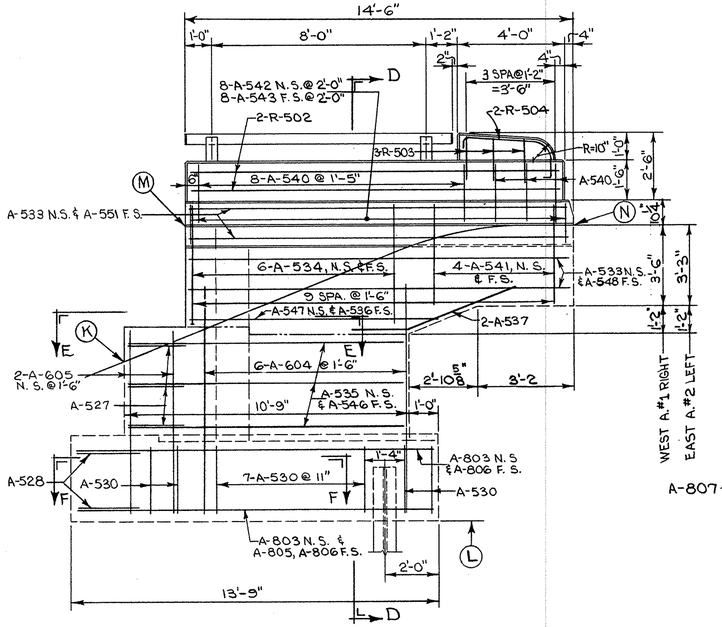
SECTION "B-B"



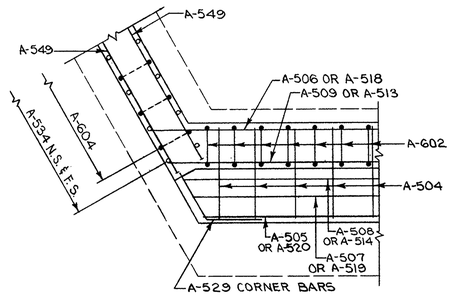
CONTRACTION JOINT DETAIL



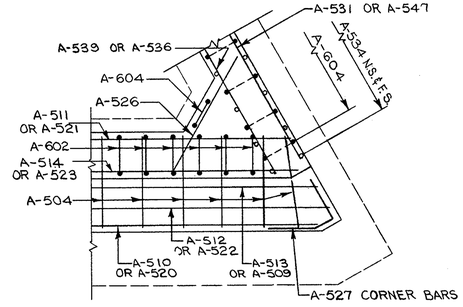
SECTION "D-D"



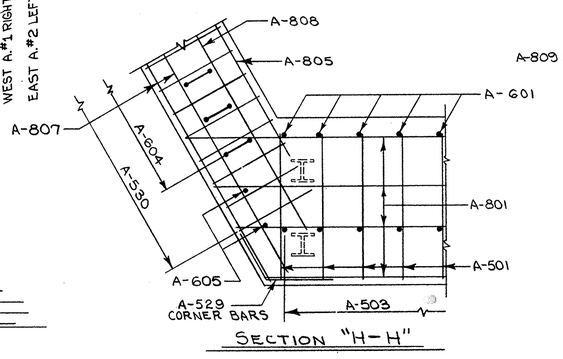
ELEVATION WEST WINGWALL ABUT. #1 RIGHT STRUCTURE—SHOWN—
EAST WINGWALL ABUT. #2 LEFT STRUCTURE—SIMILAR—EXCEPT AS NOTED



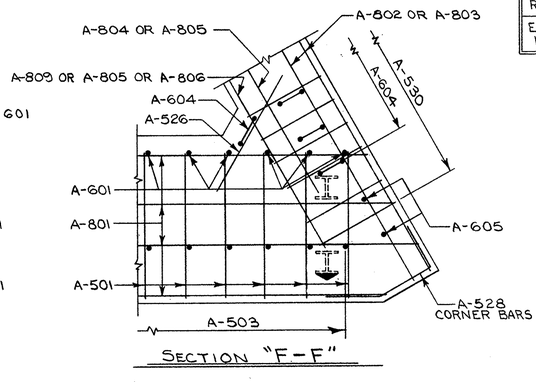
SECTION "G-G"



SECTION "E-E"



SECTION "H-H"



SECTION "F-F"

	ELEVATION TABLE			
	K	L	M	N
EAST W. W. ABUT. #1 LEFT STRUCTURE	983.07	977.04	988.77	988.92
WEST W. W. ABUT. #2 RIGHT STRUCTURE	982.46	976.43	987.85	987.71
EAST W. W. ABUT. #1 RIGHT STRUCTURE	983.76	977.73	989.34	989.49
WEST W. W. ABUT #2 LEFT STRUCTURE	981.77	975.74	987.17	987.02
WEST W. W. ABUT. #1 LEFT STRUCTURE	983.07	977.04	988.49	988.61
EAST W. W. ABUT. #2 RIGHT STRUCTURE	982.46	976.43	988.01	987.89
WEST W. W. ABUT. #1 RIGHT STRUCTURE	983.76	977.73	989.18	989.33
EAST W. W. ABUT. #2 LEFT STRUCTURE	981.77	975.74	987.44	987.29

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

ABUTMENT DETAILS

BRIDGE NO. SUM-271-1117 L. & R.
I-271 OVER C. R. #16
SUMMIT COUNTY
STA. 588+34.02 TO STA. 589+69.18

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
NPW	BMR		CH 6-28-66	EDH	9-21-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

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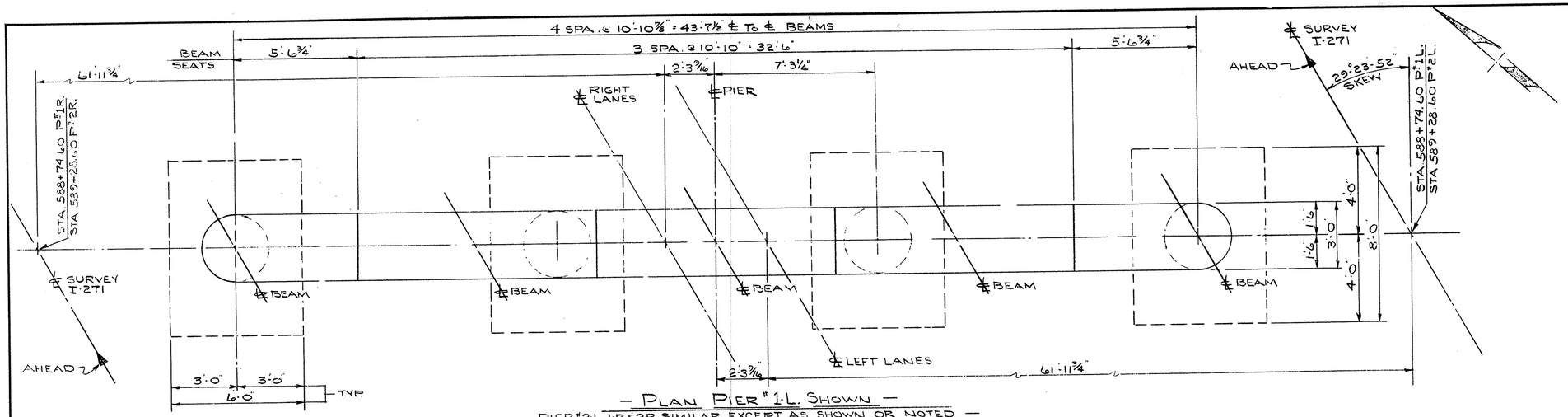
— ELEVATION —

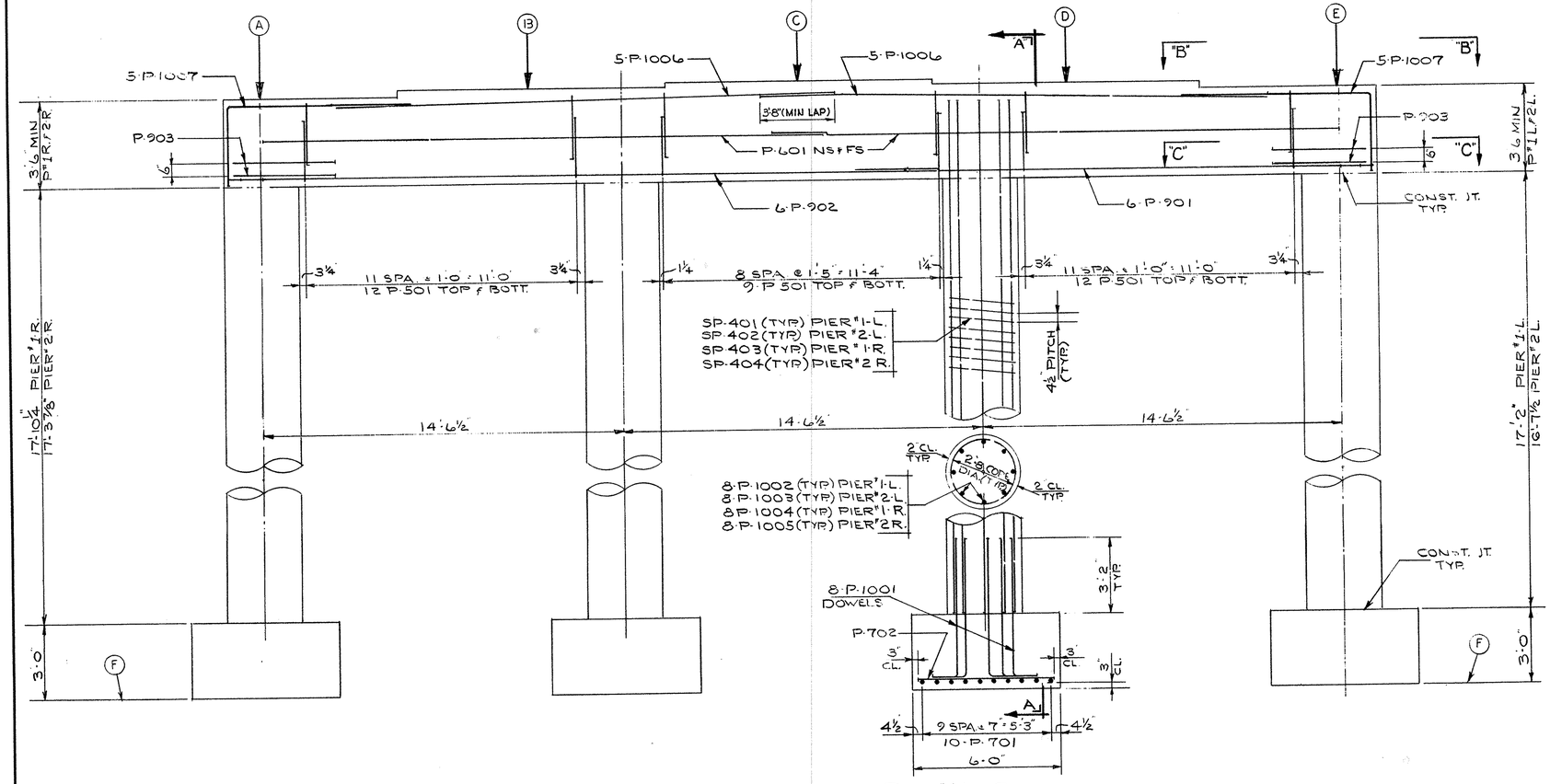
	PIER Nº 1-L	PIER Nº 2-L	PIER Nº 1-R	PIER Nº 2-R
A	983.41	982.87	984.11	983.57
B	983.61	983.07	984.31	983.77
C	983.82	983.28	984.45	983.91
D	983.73	983.24	984.35	983.81
E	983.69	983.15	984.26	983.72
F	959.75	959.75	959.75	959.75

983.78



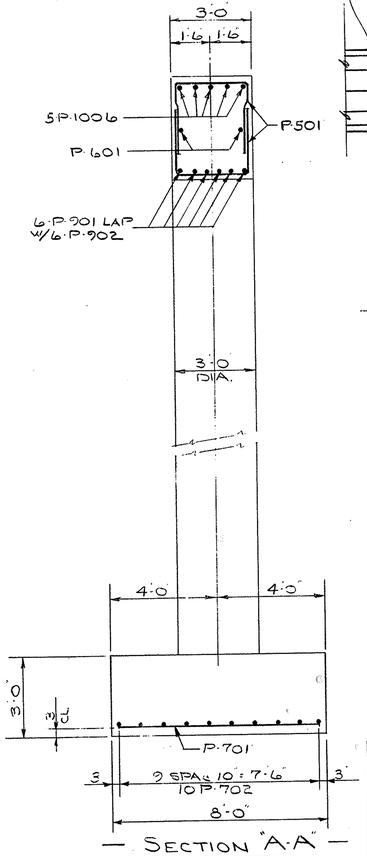
— PLAN PIER #1-L. SHOWN —

— PIER #2-L, 1-R & 2R SIMILAR EXCEPT AS SHOWN OR NOTED —

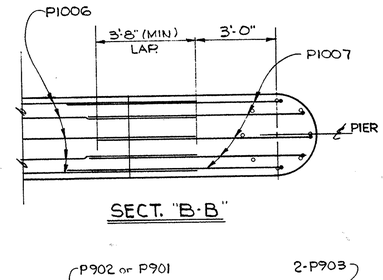


— ELEVATION PIER #1-L. SHOWN —

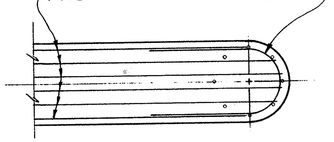
— PIER #2-L, 1-R & 2R SIMILAR EXCEPT AS SHOWN OR NOTED —



— SECTION "A-A" —



SECT. "B-B"



SECT. "C-C"

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

PIER DETAILS

BRIDGE NO. SUM-271-1117 L. & R.
I-271 OVER C. R. #16
SUMMIT COUNTY
STA. 588+34.02 TO STA. 589+69.18

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
NPW	JN		[illegible]	RHH	9-21-66	11-6-68

FED. RD.	STATE	PROJECT	
2	OHIO		

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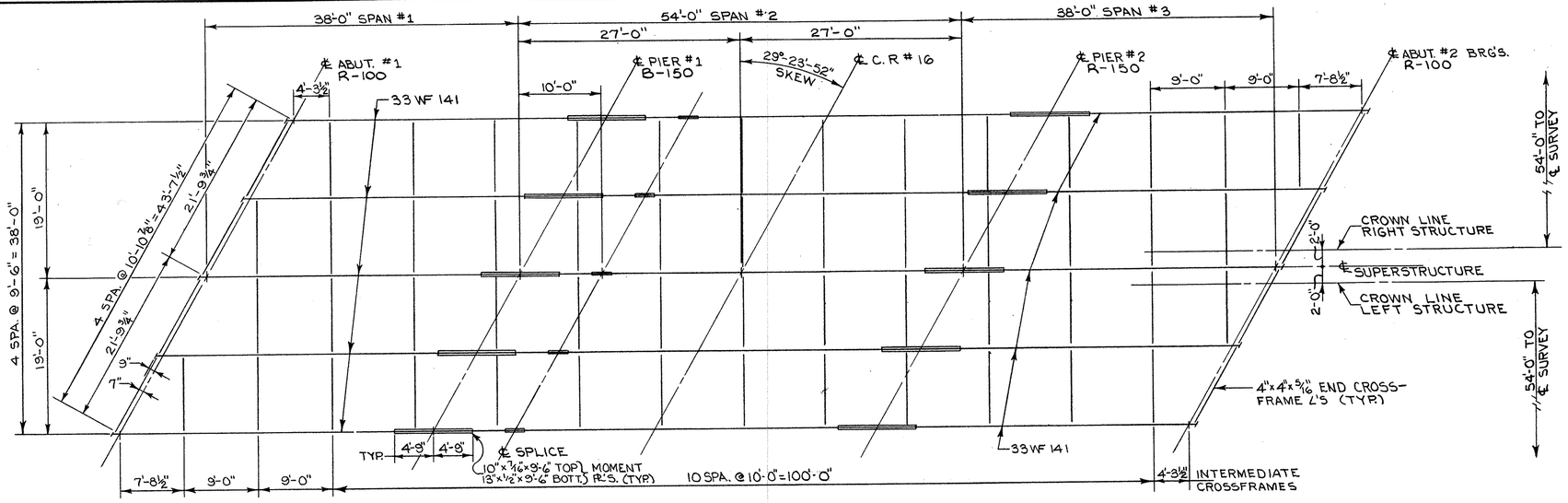
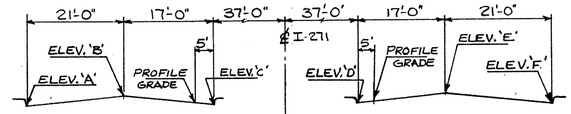


—FRAMING PLAN — LEFT STRUCTURE SHOWN —
—RIGHT STRUCTURE SIMILAR —

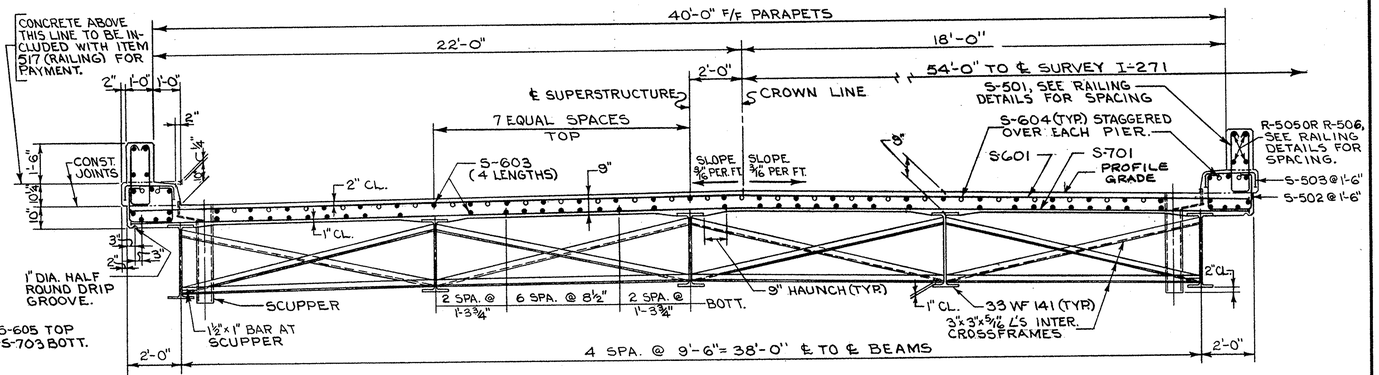
—ELEVATION TABLE—
LEFT STRUCTURE — RIGHT STRUCTURE

STATION	PROFILE GRADE	ELEV. 'A'	ELEV. 'B'	ELEV. 'C'	ELEV. 'D'	ELEV. 'E'	ELEV. 'F'
588+00	989.41				989.33	989.60	989.27
+25	989.16				989.08	989.35	989.02
+50	988.91				988.83	989.10	988.78
+75	988.66	988.52	988.85	988.58	988.60	988.87	988.53
589+00	988.41	988.27	988.60	988.33	988.34	988.60	988.27
+25	988.16	988.03	988.37	988.10	988.08	988.35	988.02
+50	987.91	987.79	988.12	987.83	987.83	988.10	987.77
+75	987.66	987.52	987.85	987.58			
590+00	987.41	987.27	987.60	987.33			

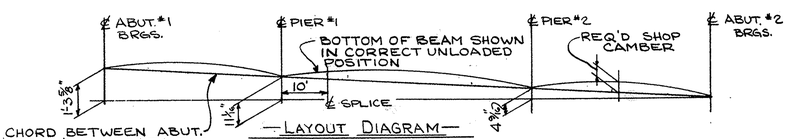


PROFILE GRADE IS FINISHED PAVEMENT ELEVATION.
ELEVATIONS A THRU F ARE THOSE WHICH ARE REQUIRED BEFORE THE CONCRETE DECK IS PLACED. PROPER ALLOWANCE HAS BEEN MADE FOR THE DEAD LOAD DEFLECTIONS CAUSED BY THE WEIGHT OF THE CONCRETE.

—PARTIAL SLAB—REINFORCING PLAN—



—TRANVERSE SECTION—LEFT STRUCTURE SHOWN—
—RIGHT STRUCTURE OPPOSITE HAND—



—LAYOUT DIAGRAM—

—DEFLECTION & CAMBER—

LOCATION	SPAN #1			SPAN #2				SPAN #3		
	¼ PT.	½ PT.	¾ PT.	SPLICE	¼ PT.	½ PT.	¾ PT.	¼ PT.	½ PT.	¾ PT.
DEFLECTION DUE TO WEIGHT OF STEEL	.007"	.009"	0 "	.011"	.016"	.039"	.016"	0	.009"	.007"
DEFLECTION DUE TO REMAINING D.L.	.046"	.056"	.002"	.066"	.100"	.245"	.100"	.002"	.056"	.046"
ADJUSTMENT REQ'D FOR VERT. CURVE	–	–	–	–	–	–	–	–	–	–
REQ'D. SHOP CAMBER	.053"	.065"	.002"	.077"	.116"	.284"	.116"	.002"	.065"	.053"

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

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Consulting Engineers — Akron, Ohio

FRAMING PLAN & SLAB DETAILS

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I-271 OVER C. R. #16
SUMMIT COUNTY
STA. 588+34.02 TO STA. 589+69.18

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
NPW	BMR		CLS 6-23-66	RDH 9-21-66		

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM-271-8.29

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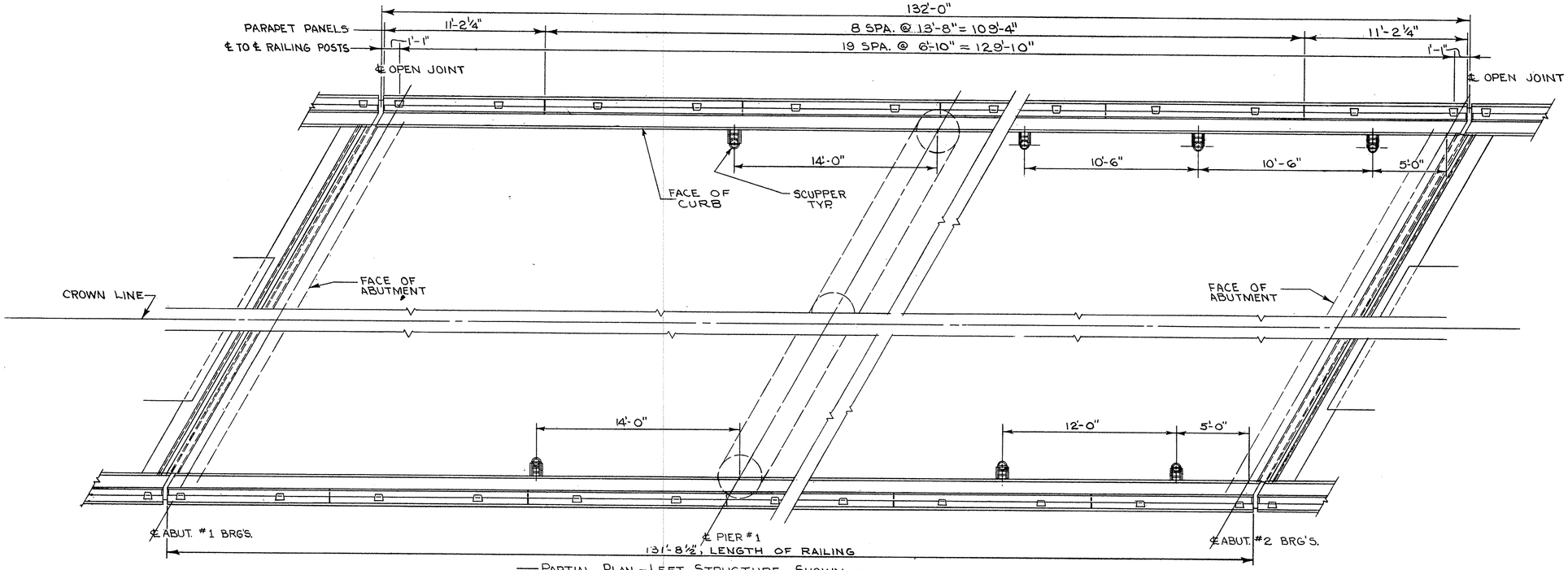
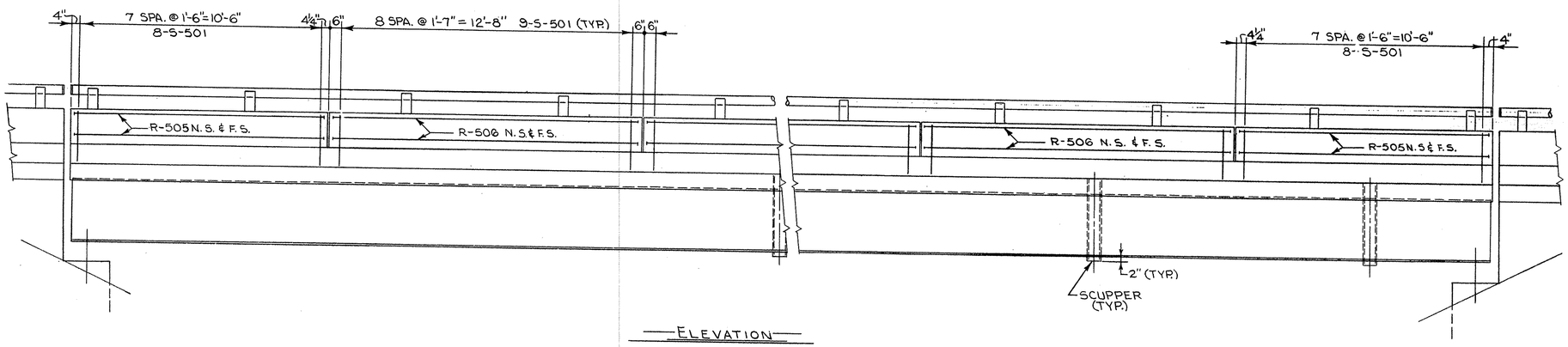


—PARTIAL PLAN - LEFT STRUCTURE SHOWN—
RIGHT STRUCTURE SIMILAR - EXCEPT SCUPPERS TO BE OPPOSITE HAND ABOUT CROWN LINE



—ELEVATION—

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

RAILING & DRAINAGE

BRIDGE NO. SUM-271-1117 L. & R.
I-271 OVER C. R. #16
SUMMIT COUNTY
STA. 588+34.02 TO STA. 589+69.18

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
NPW	BMR		CLS 6-23-66	LDH	9-21-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

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SUM-271-8.29

MARK	NO. REQ'D	LENGTH	TYPE	DIMENSIONS A	B	C	D	SERIES INCREMENTS	WEIGHT LBS.
PIERS #1-L, 2-L, 1-R & 2R.									
P-501	264	7'-7"	3	2'-8"	2'-7"				2088
P-601	16	22'-10"	ST.						549
P-701	160	7'-6"	ST.						2453
P-702	160	5'-6"	ST.						1799
P-901	24	21'-3"	ST.						1734
P-902	24	27'-7"	ST.						2251
P-903	16	9'-4"	9	2'-10"	3'-8"	1'-2"			508
P-1001	128	6'-7"	1	1'-0"	5'-10"				3626
P-1002	32	20'-2"	ST.						2777
P-1003	32	19'-8"	ST.						2708
P-1004	32	20'-11"	ST.						2880
P-1005	32	20'-4"	ST.						2800
P-1006	40	20'-7"	ST.						3542
P-1007	40	11'-0"	1	3'-3"	8'-0"				1893
SPIRAL - - - - - - -									5114
PIER #1-L, 2-L, 1-R & 2-R TOTAL = 36,722 LBS.									
SLAB - LEFT & RIGHT STRUCTURE									
S-501	352	5'-7"	5	8"	2'-2"	5"			2050
S-502	352	4'-11"	15	1'-6"	1'-4"	6"			1805
S-503	352	2'-5"	3	1'-8"	6"				888
S-601	324	41'-8"	ST.						20,277
SERIES OF S-602	4 SETS OF 30 120 BARS	5-2 3/4" TO 40'-3"	ST.					1-2 1/4"	4151
S-603	632	34'-3"	ST.						32,512
S-604	120	19'-0"	ST.						3424
S-605	16	4'-8"	ST.						112
S-701	324	41'-8"	ST.						27,594
SERIES OF S-702	4 SETS OF 30 120 BARS	5-2 3/4" TO 40'-3"	ST.					1-2 1/4"	5648
S-703	16	4'-8"	ST.						152
SLAB - LEFT & RIGHT STRUCTURE - TOTAL = 98,613 LBS.									
ABUTMENTS #1-L, 1-R, 2-L & 2-R									
A-501	130	8'-6"	3	5'-5"	1'-8"				1,153
A-502	28	10'-0"	ST.						292
A-503	130	7'-0"	1	6"	6'-7"				949
A-504	130	7'-2"	3	3'-5"	2'-0"				972
A-505	6	25'-2"	ST.						157
A-506	12	27'-0"	ST.						338
A-507	2	25'-7"	ST.						53
A-508	2	25'-11"	ST.						54
A-509	12	26'-4"	ST.						330
A-510	6	21'-3"	ST.						133

MARK	NO. REQ'D	LENGTH	TYPE	DIMENSIONS A	B	C	D	SERIES INCREMENTS	WEIGHT LBS.
ABUTMENTS - CONTD.									
A-511	18	19'-10"	ST.						372
A-512	4	21'-5"	ST.						89
A-513	12	21'-0"	ST.						263
A-514	12	20'-7"	ST.						258
A-515	10	7'-4"	ST.						76
A-516	4	12'-0"	ST.						50
A-517	2	9'-3"	ST.						19
A-518	12	21'-8"	ST.						271
A-519	2	20'-2"	ST.						42
A-520	6	26'-8"	ST.						167
A-521	12	25'-4"	ST.						317
A-522	2	26'-10"	ST.						56
A-523	10	26'-0"	ST.						271
A-524	6	11'-4"	ST.						71
A-525	2	19'-3"	ST.						40
A-526	32	5'-0"	ST.						167
A-527	12	4'-5"	16	7"	1'-0"	2'-0"	2'-0"		55
A-528	8	5'-11"	16	2'-1"	1'-0"	2'-0"	2'-0"		49
A-529	20	3'-11"	12	2'-0"	2'-0"	1'-9"			82
A-530	82	11'-8"	14	2'-7"	3'-2"	4"			998
A-531	2	6'-4"	ST.						13
A-532	8	11'-8"	ST.						97
A-533	40	14'-2"	ST.						592
A-534	88	4'-10"	ST.						443
A-535	6	10'-5"	ST.						65
A-536	2	8'-7"	ST.						18
A-537	12	5'-11"	12	2'-0"	4'-0"	1'-9"			74
A-538	6	7'-11"	ST.						50
A-539	2	6'-1"	ST.						13
A-540	84	5'-7"	5	8"	2'-2"	5"			489
A-541	68	3'-9"	ST.						266
A-542	62	3'-1"	3	1'-4"	1'-0"				199
A-543	62	2'-11"	18	1'-4"	1'-0"	10"	2"		189
A-544		OPEN							
A-545	4	10'-11"	17	10'-11"	1'-11"	2'-3"			46
A-546	30	9'-10"	ST.						308
A-547	2	8'-10"	ST.						19
A-548	4	13'-11"	ST.						58
A-549	8	8'-4"	ST.						70
A-550	4	14'-4"	17	14'-4	3'-0	2'-10"			60
A-551	4	13'-5"	17	13'-5"	2'-1"	2'-10"			56
A-552	4	5'-11"	12	2'-0"	4'-0"	2'-0"			25
A-553	4	14'-3"	17	14'-3"	5'-3"	2'-3"			59
A-601	130	14'-4"	4	6'-7"	5'-5"	2'-7"			2,799
A-602	66	14'-2"	3	1'-5"	6'-6"				1,404
A-603	112	15'-6"	7	4'-11"	1'-5"	6'-6"	11"		2,608
A-604	44	19'-0"	3	1'-2"	9'-0"				1,256
A-605	16	6'-7"	ST.						158
A-801	84	18'-2"	ST.						4074
A-802	6	10'-11"	ST.						175
A-803	6	13'-5"	ST.						215
A-804	2	6'-4"	ST.						34
A-805	12	8'-10"	ST.						283
A-806	4	11'-4"	ST.						121
A-807	12	12'-8"	ST.						406
A-808	4	11'-8"	ST.						125
A-809	2	10'-2"	ST.						54
ABUTMENT #1-L, 1-R, 2-L & 2-R TOTAL = 25,275 LBS									

MARK	NO. REQ'D	LENGTH	TYPE	DIMENSIONS A	B	C	D	SERIES INCREMENTS	WEIGHT LBS.
RAILING●									
R-501	8	11'-4"	ST.						
R-502	24	13'-10"	ST.						
R-503	24	4'-2"	19	8"	1'-6"	3/4"	6 1/2"		
R-504	16	5'-4"	20						
R-505	32	10'-10"	ST.						
R-506	128	13'-4"	ST.						

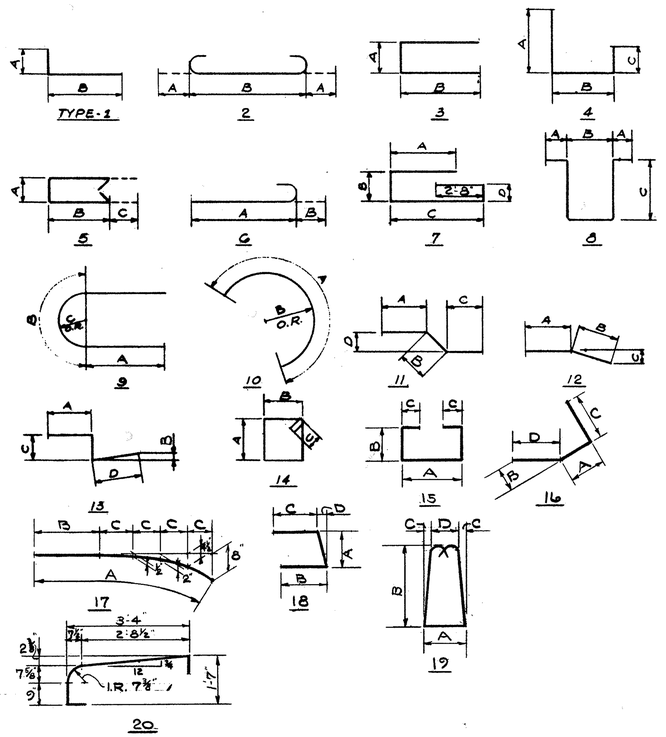
REPLACEMENT BARS									
RE-401	1	5'-3"	10	5'-3"	1'-1"				
RE-501	1	5'-6"							
RE-601	4	6'-0"							
RE-701	2	6'-3"							
RE-801	1	6'-6"							
RE-901	1	6'-10"							
RE-1001	1	7'-3"							

SPIRAL REINFORCING SCHEDULE

MARK	NO. REQ'D	CORE DIA. OF SPIRAL	LENGTH OF SPIRAL	PITCH	NO. OF TURNS	WEIGHT LBS.
SP-401	4	2'-8"	17'-2"	4 1/2"	49	1080
SP-402	4	2'-8"	16'-7 1/2"	4 1/2"	48	1058
SP-403	4	2'-8"	17'-10 1/4"	4 1/2"	51	1124
SP-404	4	2'-8"	17'-3 3/8"	4 1/2"	50	1102
SPACERS	64					750
TOTAL SPIRALS						5,114 LBS.

GRAND TOTAL 160,610 LBS.

●RAILING REINFORCEMENT BARS WILL BE INCLUDED AS PART OF ITEM 517 FOR PAYMENT.



REINFORCING NOTES

THE LENGTH SHOWN IN THE STEEL SCHEDULE FOR THE SPIRAL BARS IS THE DISTANCE FROM THE TOP OF THE FOOTING TO THE BOTTOM OF THE PIER CAP. THE NUMBER OF TURNS SHOWN IN THE STEEL SCHEDULE FOR SPIRAL BARS IS THE LENGTH DIVIDED BY THE PITCH PLUS THREE TURNS (TOTAL NUMBER OF CLOSED COILS) EXPRESSED AS THE NEAREST WHOLE NUMBER. SPIRAL REINFORCING BARS SHALL NOT HAVE DEFORMATIONS, BUT SHALL IN OTHER RESPECTS CONFORM TO ITEM 509.

ONE AND ONE HALF CLOSED COILS SHALL BE PROVIDED AT THE ENDS OF EACH SPIRAL UNIT. FOUR (4) STEEL CHANNEL, TEE OR ANGLE SPACERS WEIGHING APPROX. 0.98 LBS. PER LINEAL FT. OF SPACERS SHALL BE PROVIDED FOR EACH SPIRAL UNIT. THEY SHALL BE EQUALLY SPACED ALONG THE PERIPHERY OF EACH COIL. THE NUMBER OF POUNDS OF THESE SPACERS BASED ON 0.98 LBS. PER LINEAL FT. WILL BE PAID FOR AS REINFORCING STEEL AND IS INCLUDED IN THE TABULATED QUANTITY OF SPIRAL BARS.

BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST DIGIT WHERE THREE DIGITS ARE USED AND THE FIRST TWO DIGITS WHERE FOUR ARE USED INDICATE THE BAR SIZE NUMBER. FOR EXAMPLE A-601 IS A NO. 6 SIZE BAR AND P-1001 IS A NO. 10 SIZE BAR.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER & HOCH, Consulting Engineers
AKRON, OHIO

REINFORCING SCHEDULE

BRIDGE NO. SUM-271-1117 L. & R.
I-271 OVER C. R. #16
SUMMIT COUNTY
STA. 588+34.02 TO STA. 589+69.18

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
NPW	JNP		CLS 6-22-66	RBH 9-21-66		

FED. RD.	STATE	PROJECT	
2	OHIO		

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SUM-271-8.29

EXISTING STRUCTURE DATA

BRANDYWINE CREEK
2,600' UPSTREAM.

TYPE: TWIN CONTINUOUS, REINFORCED CONC. SLAB BRIDGE.
SPANS: 22'-0" - 27'-6" - 22'-0"
HEIGHT FROM GRADE TO STREAM BED: 17.1'
STREAM BED EL. 960.0
10 YR. HIGHWATER DEPTH: 2.6'
SKEW: 22°00'-00"
DRAINAGE AREA: 18 SQ. MI. (DOES NOT INCLUDE INDIAN CREEK.)

CLEVELAND - MASSILLON RD
330' DOWN STREAM.

TYPE: STONE ARCH WITH CONC. EXTENSION ON RIGHT.
SPAN: 24'-10" CLEAR
SKEW: 0°-00'-00"
HEIGHT FROM GRADE TO STREAM BED: 18'
HIGH WATER DEPTH: 10'±
DRAINAGE AREA: 24 SQ. MI.

DRAINAGE DATA

DRAINAGE AREA: 15,161 ACRES (23.69 SQ MI)
EST. 50 YR. FREQUENCY: 3597.9 c.f.s.
EST. 50 YR. HIGHWATER: 960.7
OPENING REQUIRED: 578 SQ. FT.
OPENING PROVIDED: 578. SQ. FT.

PROPOSED STRUCTURE

TYPE: CONTINUOUS STEEL BEAM, WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE.
SKEW: 13°-45'-00" R.F.
SPANS: 48'0"-60'0"-48'0" ℄ BRGS.
ROADWAY: 40'-0" ℄ PARAPETS (BOTH STR'S)
LOAD FREQUENCY: C F = 2000 ADEQUATE FOR A.A.S.H.O. ALTERNATE LOADING.
WEARING SURFACE: 1" MONOLITHIC
APPROACH SLABS: 25' LONG (AS-1-54)
ALIGNMENT: TANGENT
SUPERELEVATION: NONE
SLOPE PROTECTION: CRUSHED AGGREGATE

TRAFFIC: 15,080 - 1975 A.D.

AVERAGE ESTIMATED PAY LENGTH FOR 10 BP 42 STEEL PILES
ABUTMENTS = 15 FT.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

SITE PLAN

BRIDGE NO. SUM-271-1122 L. & R.
I-271 OVER BRANDYWINE CREEK
SUMMIT COUNTY
STA. 590+98.18 TO STA. 592+58.82

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
K.S.J	ROSE J.K.		H.G.H.	R.B.H	4-21-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

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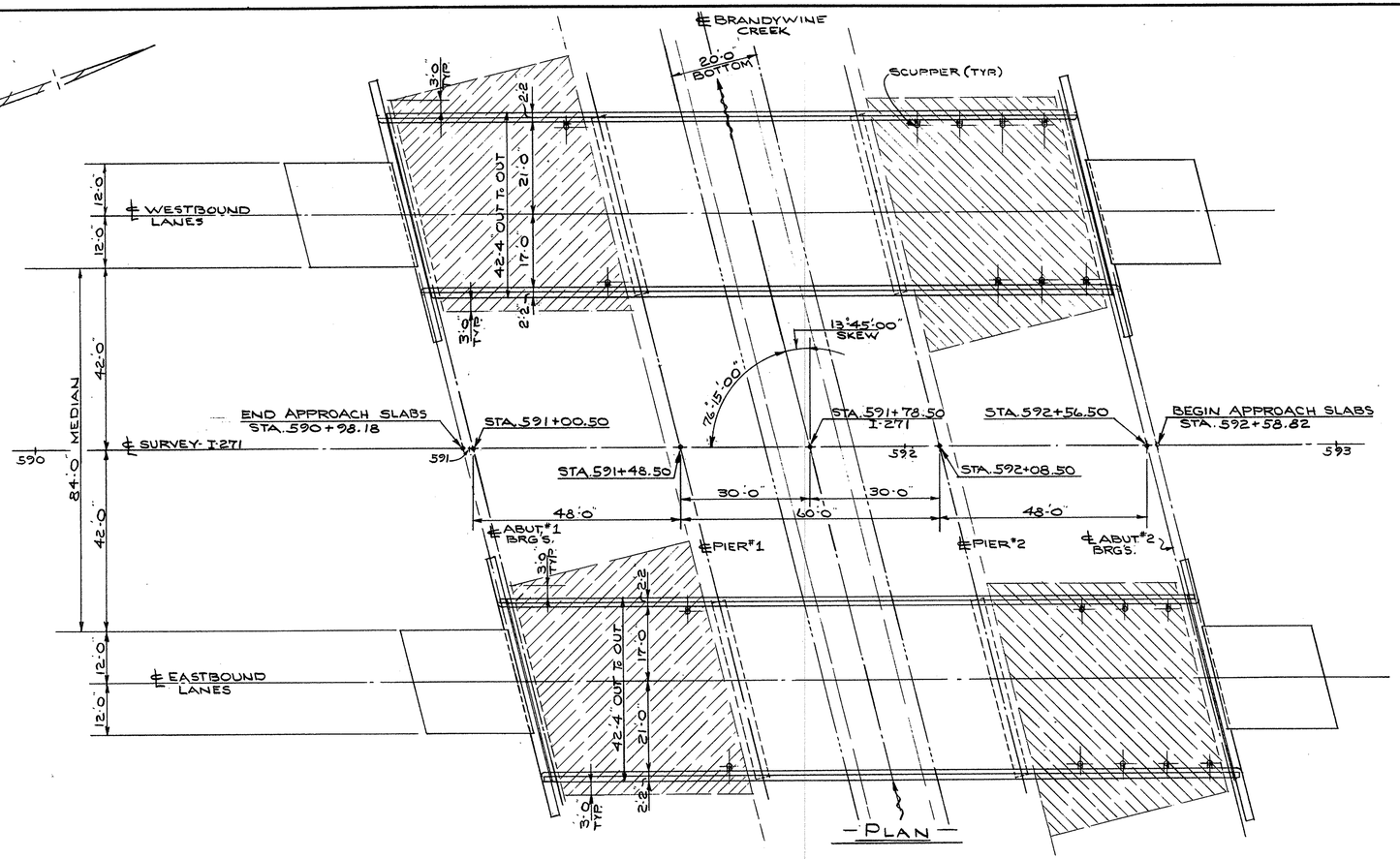
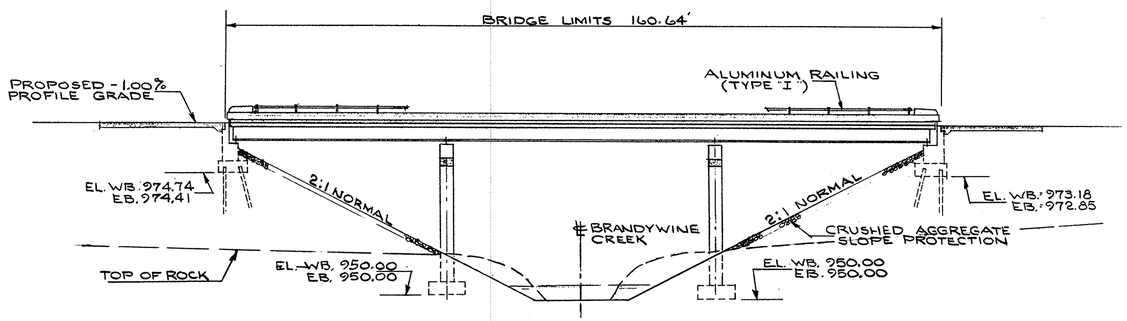
SUM -271-8,29



— PLAN —



— ELEVATION —

— ESTIMATED QUANTITIES (2 BRIDGES) —

ITEM	TOTAL	UNIT	DESCRIPTION	SUPER	ABUTS	PIERS	GEN.
503	269	CU.YDS.	ROCK EXCAVATION			269	
503	566	CU.YDS.	UNCLASSIFIED EXCAVATION		415	151	
505	LUMP	SUM	FIRST TEST PILE				
507	600	LIN.FT.	10 BP42 STEEL 'H' PILES		600		
509	173,328	LBS.	REINFORCING STEEL	120,765	19,203	33,360	
511	414	CU.YDS.	CLASS 'C' CONC. SUPERSTRUCTURE	414			
511	176	CU.YDS.	CLASS 'E' CONC. ABUT'S ABOVE FOOTINGS		176		
511	305	CU.YDS.	CLASS 'C' CONC. PIERS ABOVE FOOTINGS			305	

ITEM	TOTAL	UNIT	DESCRIPTION	SUPER	ABUTS	PIERS	GEN.
511	242	CU.YDS.	CLASS 'E' CONC. PIER & ABUT. FOOTINGS		132	110	
513	325,830	LBS.	STRUCTURAL STEEL	325,830			
514	325,830	LBS.	FIELD PAINTING OF STRUCT. STEEL	325,830			
517	642.83	LIN.FT.	BRIDGE RAILING (TYPE 1)	642.83			
518	69	CU.YDS.	POROUS BACKFILL		69		
518	18	EACH	SCUPPERS (INCLUDING SUPPORTS)	18			

ITEM	TOTAL	UNIT	DESCRIPTION	SUPER	ABUTS	PIERS	GEN.
518	169	LIN. FT.	6"ϕ PERFORATED HELICAL C.M.P. 707.06, INCLUDING SPECIALS		169		
518	170	LIN.FT.	6"ϕ HELICAL C.M.P. 707.06 NON-PERF.		170		
601	1163	SQ.YDS.	CRUSHED AGGREGATE SLOPE PROTECTION		1163		
808	414	UNITS	WATER RED. SET RET. ADMIXTURE	414			
825	1,544	SQ.YDS.	CONCRETE SURFACE TREATMENT				1,544
828	157	LIN.FT.	JOINT SEALER	157			

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

GENERAL PLAN & ELEVATION

BRIDGE Nº SUM-271-1122 L.& R.
I-271 OVER BRANDYWINE CREEK
SUMMIT COUNTY
STA. 590+98.18 To STA. 592+58.82

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
K.S.J.	LNP		M.G.H. 8-31-66	EBH	9-21-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM-271-8,29

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ELEVATIONS

	ABUT. # 1-L	ABUT #2-R
A	981.77	980.03
B	981.94	980.16
C	982.05	980.22
D	981.93	980.05
E	981.80	979.88
F*	986.43	984.67
G*	986.73	984.89
H*	986.67	984.80
J*	986.46	984.51
K	985.20	983.33
L	980.77	978.88
M	981.77	979.88
N	974.74	972.85
O	977.74	975.85

* = INDICATES FINISHED PAVEMENT ELEVATIONS AT FACE OF BACKWALL

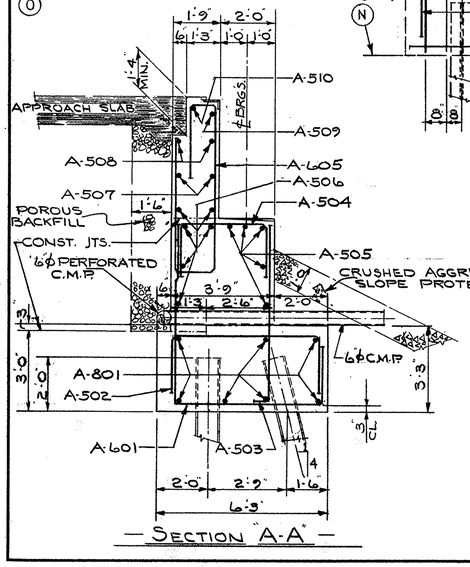
STA. 591+00.50 ABUT # 1-L
STA. 592+56.50 ABUT # 2-R
℄ SURVEY I-271
ABUT # 1-L
ABUT # 2-R
13° 45'-00" SKEW (TYP.)
AHEAD-A'1-L
AHEAD-A'2R
59'-11½"
15'-6⅞" 24'-8½" 19'-8⅛"
10'-5⅛" 5'-1¾" 16'-11⅛" 7'-9⅜" 9'-3¼" 10'-4⅞"
54'-0"
3" 5'-0" CONTRACTION JOINT
13°-45'-00" SKEW
CROWN LINE
SLOPE ¾" TOWARD FACE OF ABUT. TYP.
#BEAM BETWEEN BEAM SEATS
1'-6" 1'-6"
3'-0" LEVEL TYP.
#BEAM
#BEAM
#BEAM
℄ BEAM
2'-0¾" 3'-2¼"
24'-3"
55'-7⅛"
8'-3"
7'-9"
6"
1'-6"
2'-1¼"
4 SPA. @ 9'-9⅜" = 39'-1½" ℄ TO ℄ BEAMS
42'-1½"
4 SPA. @ 10'-0" = 40'-0" ℄ TO ℄ 10 BP 42 STEEL "H" PILES & 6" ϕ C.M.P. DRAINS
A'1-L
17'-10½"
9'-7"
1'-7"
8'-0"
2'-1¼"
℄ PILES
℄ BEARINGS
℄ PILES
2'-0"
1'-3"
2'-9"
6'-3"
1'-6"
BATTER 1:4 THIS ROW ONLY

— PLAN - ABUTMENT # 1-L SHOWN —
— ABUT. # 2-R SIMILAR EXCEPT AS SHOWN —

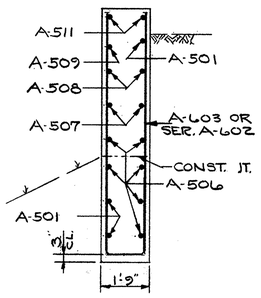
10'-0" 39'-1½" (EXPANSION ANGLE) 10'-10"
6'-10" 3'-2" 17'-6" 21'-7½" 4'-2" 6'-8"
3" 6 SPA. @ 1'-0" SER. A-602 9 3 A-603 @ 1'-0" 1'-0" 6 A-604 @ 1'-0" 1'-0" 25 A-605 @ 1'-0" 1'-0" 9 A-604 @ 1'-0" 1¾" 4 A-603 @ 1'-0" 6" 6 SPA. @ 1'-0" SER. A-602 2¼"
EAST A'-1-L
WEST A'-2-R
WEST A'-1-L
EAST A'-2-R
A-511 NS & FS.
A-501 F.S.
A-510 F.S.
A-501 F.S.
A-517 F.S.
A-518 NS & FS.
CROWN
A-509 NS.
A-508 NS & FS.
A-506 NS & FS.
A-507 NS & FS.
A-516 NS
A-515 NS & FS.
A-514 NS & FS.
A-513 NS & FS.
LIMITS OF POROUS BACKFILL
3 A-505 & 2 A-506
30 A-504
3 A-512 & 2 A-513
A-501 NS.
A-505 NS & A-506 F.S.
30 A-503 NS & 30 A-601 F.S.
A-512 NS & A-513 F.S.
A-601 F.S.
A-519 NS
3 A-801
3 A-501 CENTER UNDER CONTR. JT.
32 A-502
3 A-801
4 A-801
4 A-501 CENTER UNDER CONTR. JT.
6 SPA. @ 1'-5" = 8'-6" TYP.
9"
8"
1¼"
4"
A'1-L = 9'-6"
A'2-R = 9'-6"
A'1-L = 4'-1⅛"
A'2-R = 4'-3⅜"
A'2-R = 9'-6"
A'1-L = 4'-2"
A'2-R = 4'-1¼"
A'1-L = 9'-6"
5'-4⅞"
5'-4⅞"

POROUS BACKFILL 1'-6" THICK SHALL EXTEND FROM THE TOP OF THE FOOTING UPWARD TO THE UNDERSIDE OF THE APPROACH SLAB AND TO THE EARTH SHOULDERS, AND OUTWARD TO THE EMBANKMENT SLOPES. EXCAVATION THEREFORE IN EXCESS OF THAT REQUIRED FOR CONSTRUCTION OF THE ABUTMENT, SHALL BE CONSIDERED AS PAID FOR IN THE BID PRICES PER CU. YD. PAID FOR POROUS BACKFILL.

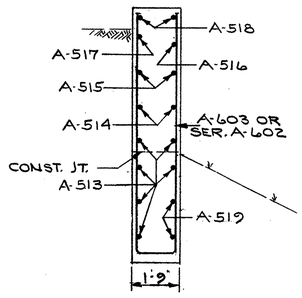
SEE SHT # 237 FOR CONTRACTION JOINT DETAIL



— SECTION "A-A" —



— SECTION "C-C" —



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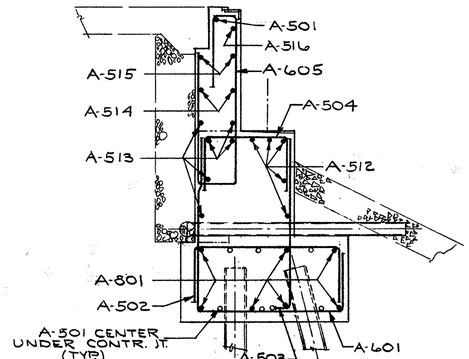

— SECTION "B-B" —
— SEE SECTION A-A FOR DIMENSIONS & DETAILS —

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

ABUTMENT DETAILS

BRIDGE № SUM-271-1122 L. & R.
I-271 OVER BRANDYWINE CREEK
SUMMIT COUNTY
STA. 590+98.18 To STA. 592+58.82

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
K.S.J.	J.N.P.		H.G.H.	R.B.H.	9-21-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM-271-829

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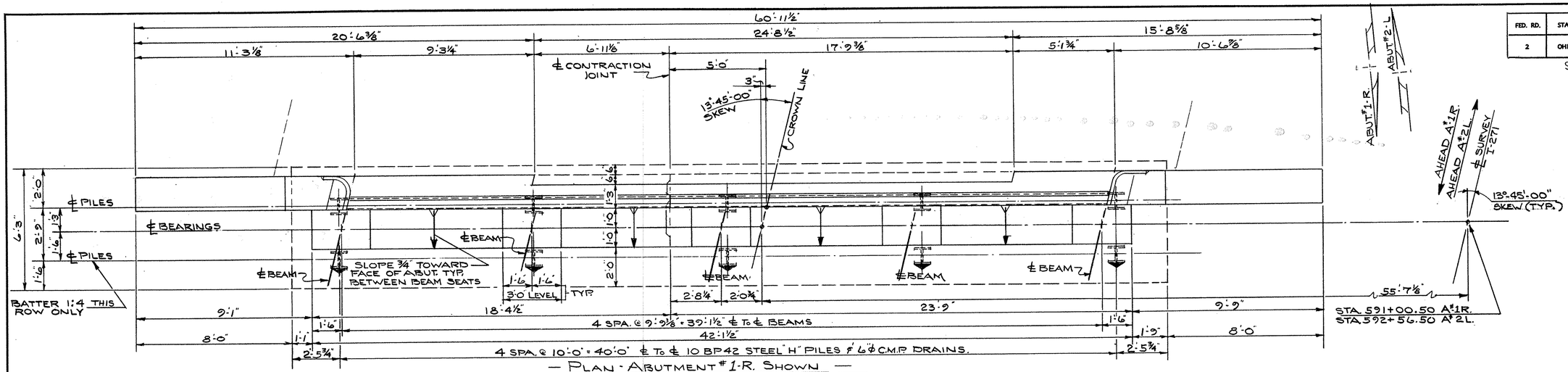
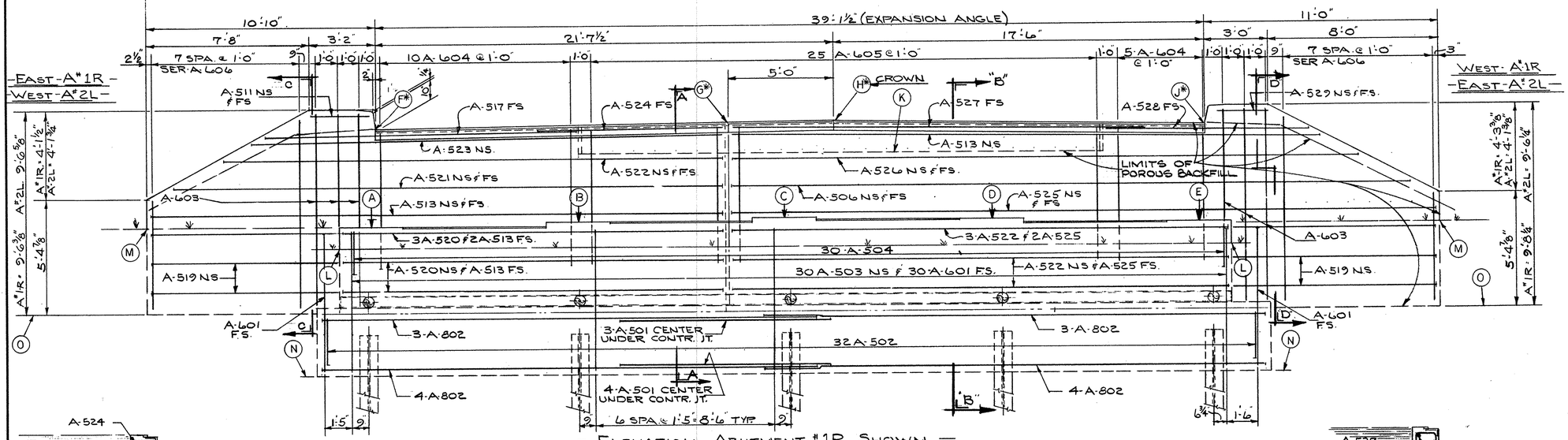
— ELEVATIONS —

	ABUT.# 1-R	ABUT.# 2-L
A	981.44	980.24
B	981.61	980.37
C	981.78	980.49
D	981.72	980.38
E	981.59	980.21
F*	986.09	984.88
G*	986.38	985.09
H*	986.47	985.15
J*	986.25	984.85
K	984.93	983.59
L	980.44	979.21
M	981.44	980.21
N	974.41	973.18
O	977.41	976.18

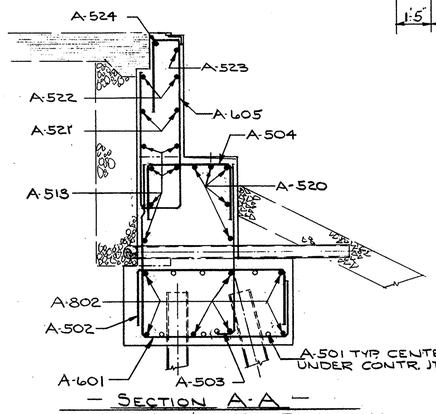
* = INDICATES FINISHED PAVEMENT ELEVATIONS AT FACE OF BACKWALL



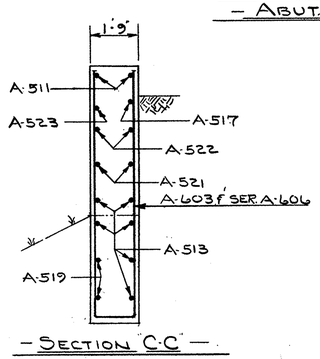
— PLAN - ABUTMENT #1-R. SHOWN —
— ABUT. #2-L SIMILAR EXCEPT AS SHOWN —



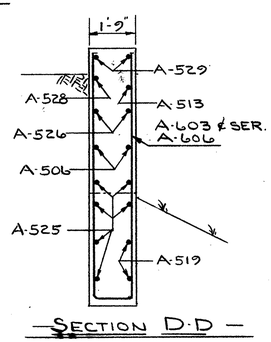
— ELEVATION ABUTMENT #1R SHOWN —
— ABUT. #2-L SIMILAR EXCEPT AS SHOWN —



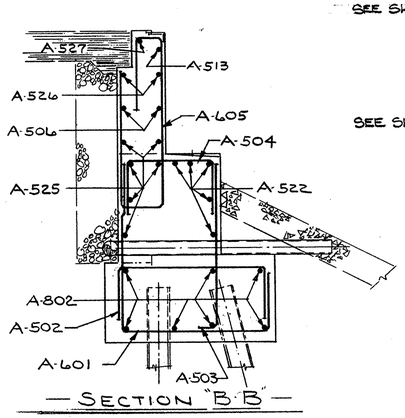
— SECTION A-A —
SEE ABUT. #1-L & 2-R FOR DIMENSIONS AND DETAILS NOT SHOWN



— SECTION C-C —



— SECTION D-D —



— SECTION "B-B" —

SEE SHT. #282 FOR POROUS BACKFILL NOTE

SEE SHT. #237 FOR CONTRACTION JOINT DETAIL

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

ABUTMENT DETAILS

BRIDGE № SUM-271-1122 L. & R.
I-271 OVER BRANDYWINE CREEK
SUMMIT COUNTY
STA. 590+98.18 To STA. 592+58.82

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
K.S.J.	J.P.		H.G.H.	RBH	9-21-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM-271-829

284
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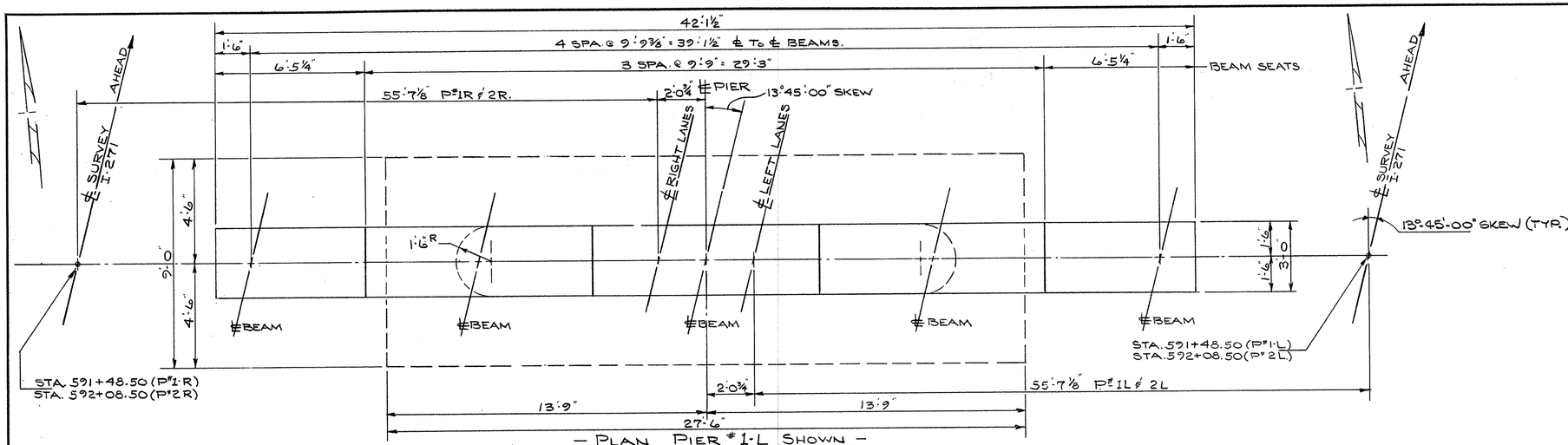
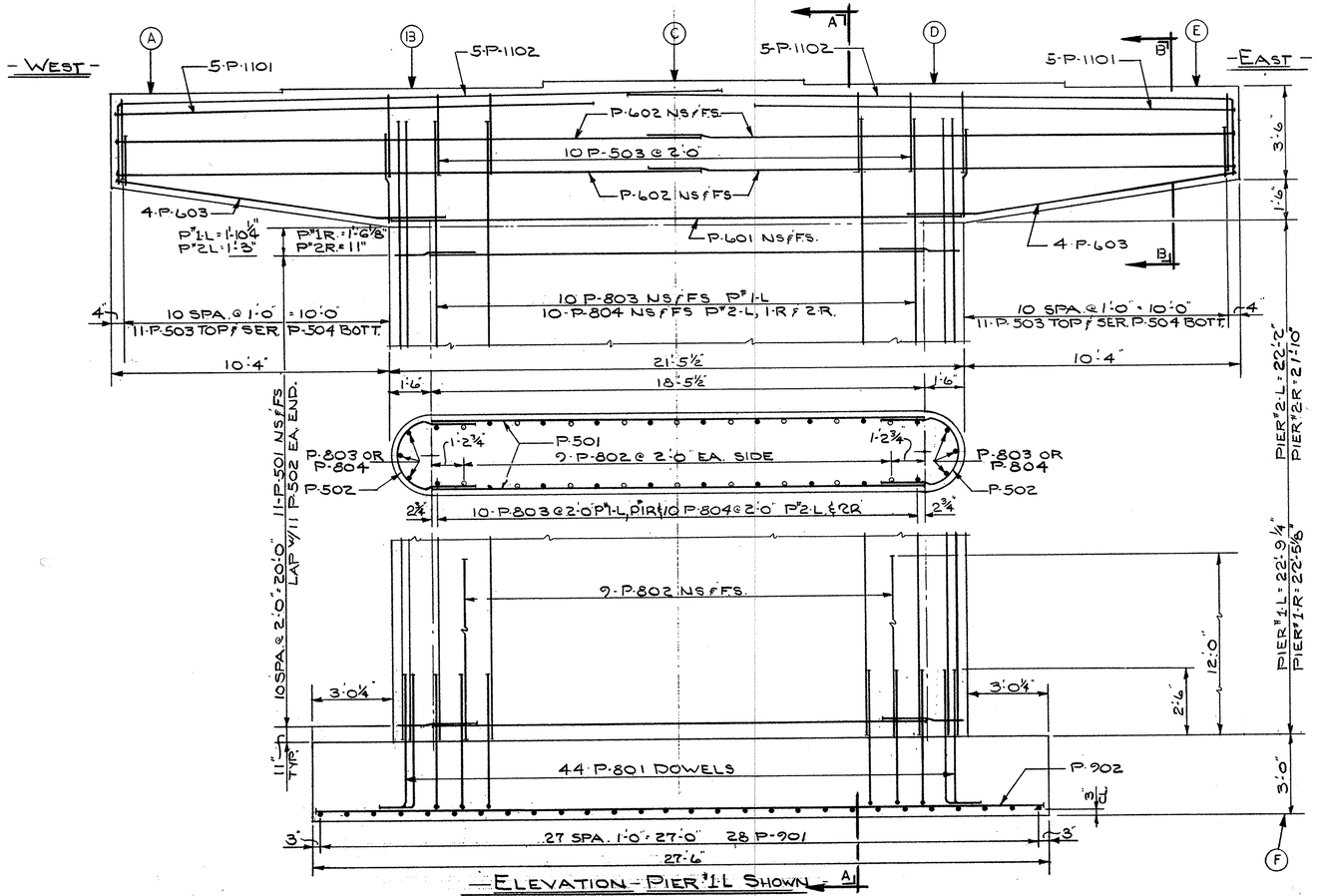


— PLAN PIER #1-L SHOWN —

— PIER #2-L, 1-R & 2-R SIMILAR EXCEPT AS NOTED —

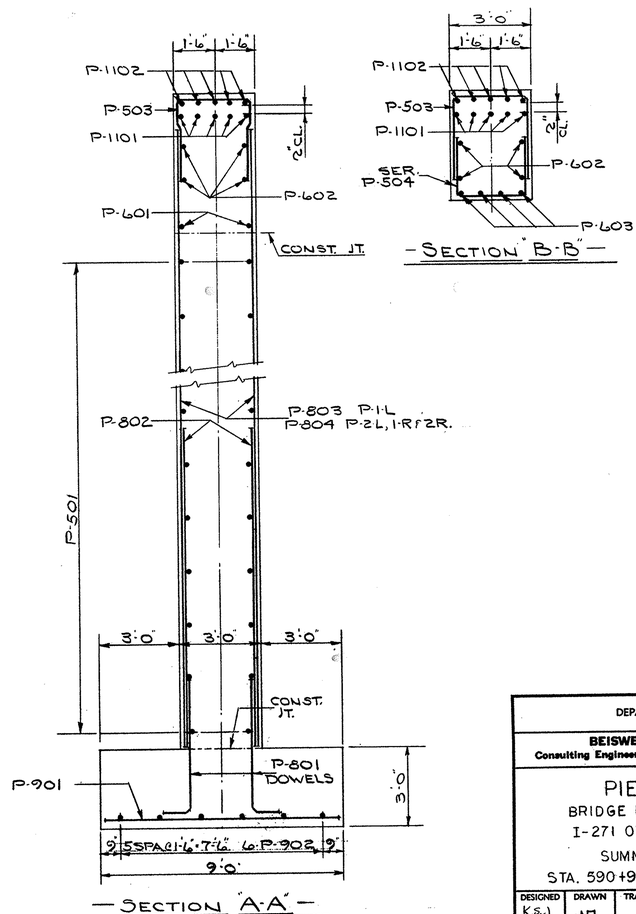
— ELEVATIONS —

	PIER #1-L	PIER #2-L	PIER #1-R	PIER #2-R
A	980.80	980.20	980.59	979.99
B	980.93	980.33	980.71	980.11
C	981.05	980.45	980.78	980.18
D	980.94	980.34	980.61	980.01
E	980.77	980.17	980.43	979.83
F	950.00	950.00	950.00	950.00



— ELEVATION - PIER #1-L SHOWN —

— PIER 2L, 1-R & 2R SIMILAR EXCEPT AS NOTED —



— SECTION "A-A" —

— SECTION "B-B" —

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

PIER DETAILS

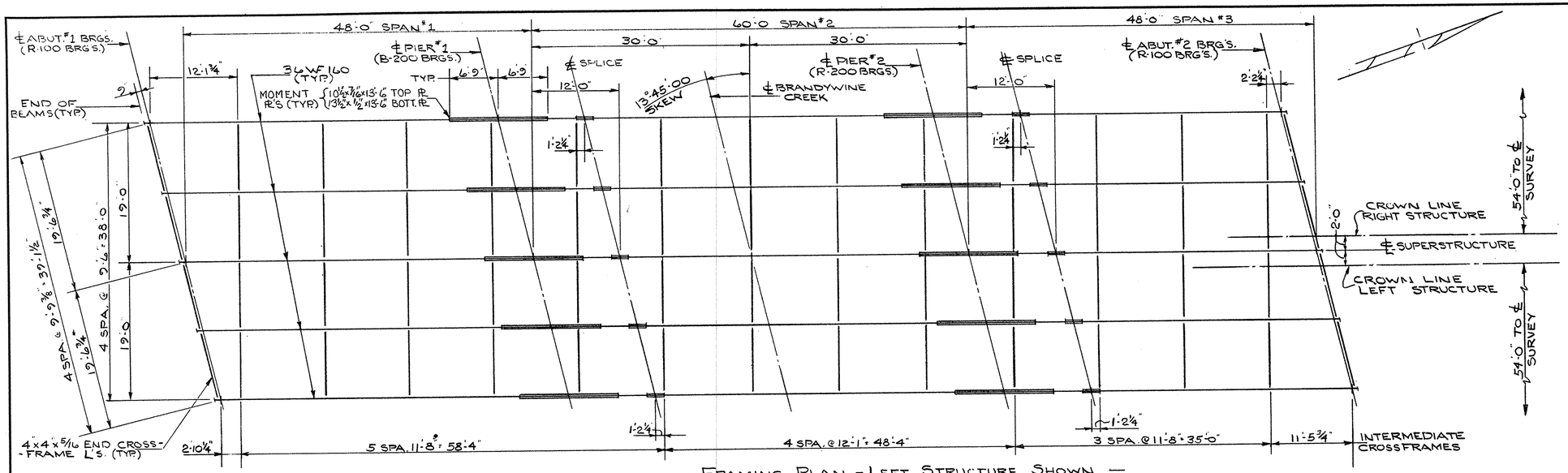
BRIDGE № SUM.-271-1122 L & R.
I-271 OVER BRANDYWINE CREEK
SUMMIT COUNTY
STA. 590+98.18 To STA. 592+58.82

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
K.S.J.	J.N.S.		H.G.H.	R.D.H.	9-21-66	

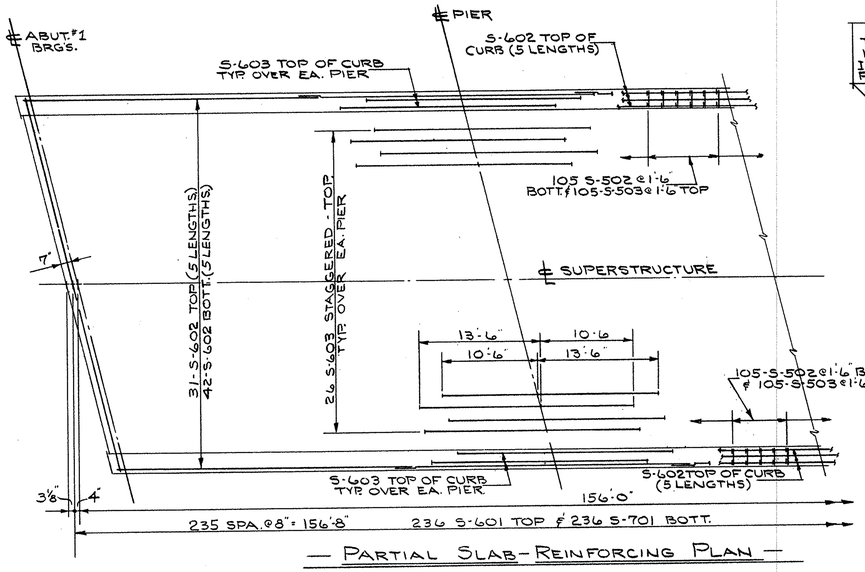
FED. RD.	STATE	PROJECT	
2	OHIO		

285/313

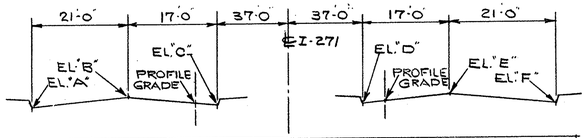
SUM-271-8.29



— FRAMING PLAN - LEFT STRUCTURE SHOWN —
— RIGHT STRUCTURE SIMILAR —

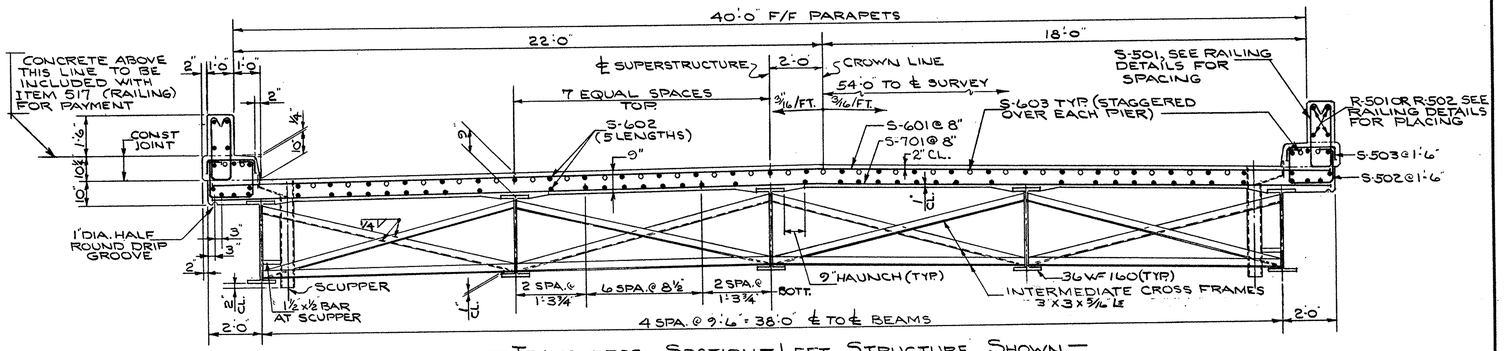


— PARTIAL SLAB - REINFORCING PLAN —

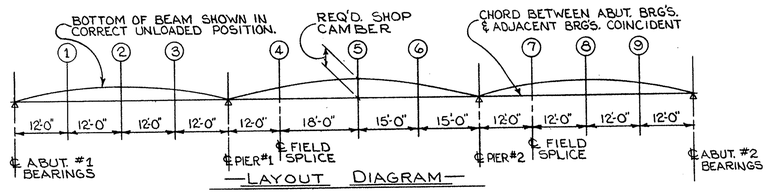


STATION	A *	B *	C *	PG.	D *	E *	F *
591+00	986.28	986.61	986.33	986.41	—	—	—
+25	986.02	986.36	986.09	986.16	986.09	986.36	986.02
+50	985.78	986.11	985.84	985.91	985.83	986.11	985.78
+75	985.53	985.86	985.60	985.66	985.59	985.86	985.52
592+00	985.27	985.60	985.33	985.41	985.34	985.62	985.29
+25	985.02	985.36	985.10	985.16	985.08	985.35	985.02
+50				984.91	984.84	985.12	984.79

PROFILE GRADE IS FINISHED CONCRETE ELEVATION.
* ELEVATIONS SHOWN ARE THOSE WHICH ARE REQUIRED BEFORE THE CONCRETE DECK IS POURED. PROPER ALLOWANCE HAS BEEN MADE FOR THE DEAD LOAD DEFLECTIONS CAUSED BY THE WEIGHT OF THE CONCRETE.



— TRANSVERSE SECTION - LEFT STRUCTURE SHOWN —
— RIGHT STRUCTURE OPPOSITE HAND —



— LAYOUT DIAGRAM —

— DEFLECTION & CAMBER (L & R BRIDGE) —

LOCATION	① ⑨	② ⑧	③ ⑦	④	⑤	⑥
DEFLECTION DUE TO WEIGHT OF STEEL	.027"	.031"	.015"	.018"	.044"	.025"
DEFLECTION DUE TO REMAINING DEAD LOAD	.138"	.162"	.076"	.095"	.224"	.127"
CONVEXITY REQUIRED FOR VERTICAL CURVE	0	0	0	0	0	0
REQUIRED SHOP CAMBER	3/16"	1/4"	1/16"	1/8"	1/4"	1/8"

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

FRAMING & SLAB DETAILS

BRIDGE Nº SUM-271-1122 L & R.
I-271 OVER BRANDYWINE CREEK
SUMMIT COUNTY
STA. 590+98.18 To STA. 592+58.82

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
K.S.J	J.N.J		H.G.H.	R.D.H.	9-21-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM-271-8.29

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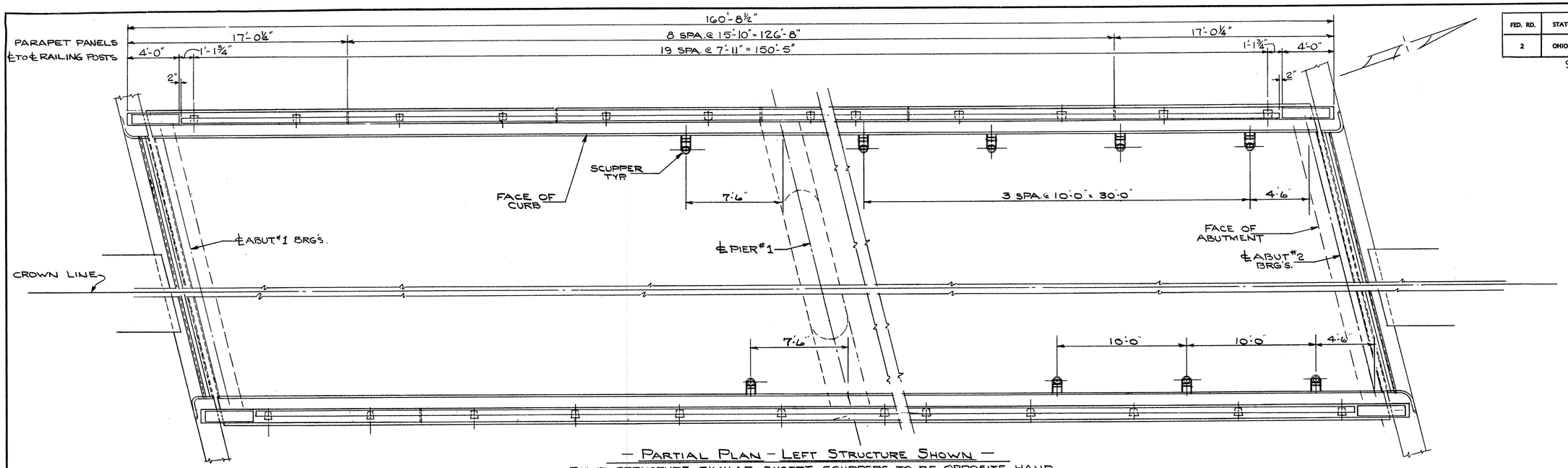
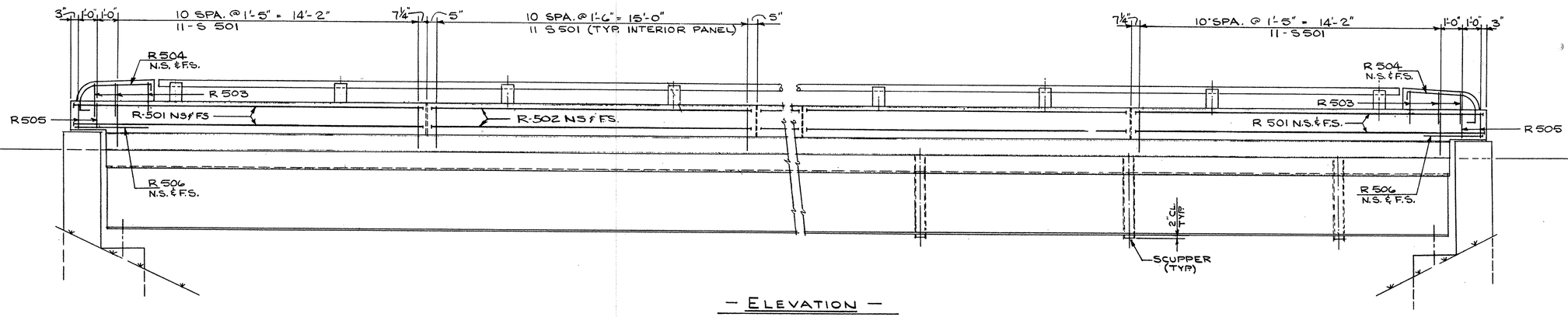


— PARTIAL PLAN — LEFT STRUCTURE SHOWN —
— RIGHT STRUCTURE SIMILAR - EXCEPT SCUPPERS TO BE OPPOSITE HAND ABOUT CROWN LINE —



— ELEVATION —

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

RAILING & DRAINAGE DETAILS

BRIDGE Nº SUM-271-1122 L.& R.
I-271-OVER BRANDYWINE CREEK
SUMMIT COUNTY
STA. 590+98.18 To STA. 592+58.82

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
K.S.J.	LNF		H.G.H.	RDH	9-21-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

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SUM-271 - 8.29

MARK	NO. REQ'D	LENGTH	TYPE	DIMENSIONS A	B	C	D	SERIES INCREMENTS	WEIGHT LBS.
ABUTMENTS									
A-501	36	10'-0"	ST.						375
A-502	128	9'-6"	3	5'-5"	2'-2"				1268
A-503	120	6'-11"	1	6"	6'-6"				866
A-504	120	7'-2"	3	3'-5"	2'-0"				897
A-505	10	23'-11"	ST.						249
A-506	16	32'-2"	ST.						537
A-507	4	31'-2"	ST.						130
A-508	4	29'-0"	ST.						121
A-509	2	27'-6"	ST.						57
A-510	2	18'-9"	ST.						39
A-511	8	2'-10"	ST.						24
A-512	10	17'-6"	ST.						183
A-513	26	27'-1"	ST.						734
A-514	4	26'-3"	ST.						110
A-515	4	24'-2"	ST.						101
A-516	2	22'-6"	ST.						47
A-517	4	14'-3"	ST.						59
A-518	4	3'-3"	ST.						14
A-519	12	11'-4"	ST.						142
A-520	10	18'-0"	ST.						188
A-521	4	26'-0"	ST.						108
A-522	14	23'-5"	ST.						342
A-523	2	22'-3"	ST.						46
A-524	2	8'-9"	ST.						18
A-525	12	33'-2"	ST.						415
A-526	4	29'-10"	ST.						124
A-527	2	19'-3"	ST.						40
A-528	2	9'-6"	ST.						20
A-529	4	2'-4"	ST.						10
A-601	128	13'-10"	4	6'-6"	5'-5"	2'-2"			2660
SERIES OF A-602	4 SETS OF 7 = 28 BARS	11'-2" TO 18'-8"	3	1'-5"	5'-0" TO 8'-9" @ 7½ INC.			1'-3"	627
A-603	26	19'-3"	3	1'-5"	9'-1"				752
A-604	60	14'-2"	3	1'-5"	6'-6"				1277
A-605	100	16'-0"	7	5'-0"	1'-5"	6'-6"	11"	1'-1"	2403
SERIES OF A-606	4 SETS OF 8 = 32 BARS	11'-2" TO 18'-9"	3	1'-5"	5'-0" TO 8'-9½ @ 6½ INC.				719
A-801	28	23'-3"	ST.						1738
A-802	28	23'-7"	ST.						1763
ABUTMENT TOTAL 19,203 LBS.									
PIERS									
P-501	88	18'-6"	ST.						1698
P-502	88	7'-4"	9	1'-7"	4'-2"	1'-4"			673
P-503	128	8'-3"	3	2'-8"	2'-11"				1102
SERIES OF P-504	8 SETS OF 11 = 88 BARS	6'-3" TO 9'-1"	3	2'-8"	1'-10½ TO 3'-4 @ 13¼ INC.				704
P-601	8	21'-6"	ST.						258
P-602	32	21'-10"	ST.						1049
P-603	32	12'-3"	12	10'-3"	2'-0"	3½"			589

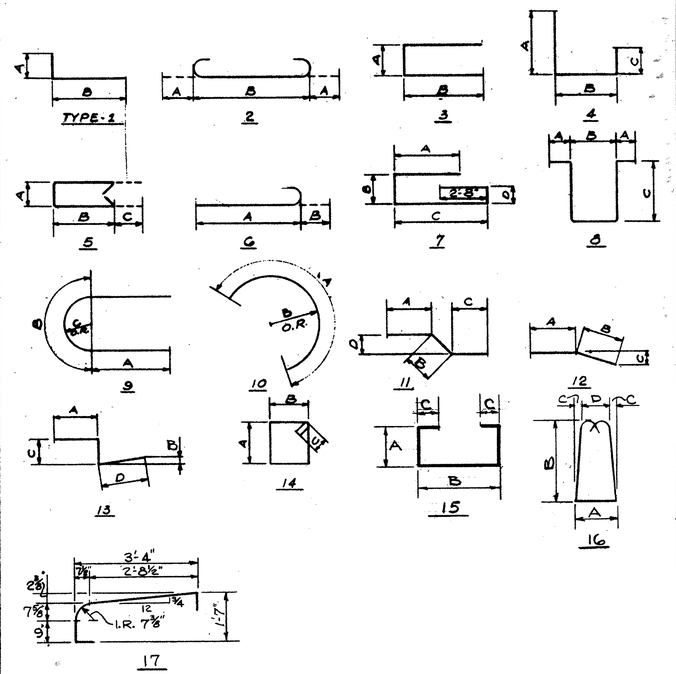
MARK	NO. REQ'D	LENGTH	TYPE	DIMENSIONS A	B	C	D	SERIES INCREMENTS	WEIGHT LBS.
PIERS (CONT'D.)									
P-801	176	6'-0"	1	1'-0"	5'-2"				2820
P-802	72	12'-0"	ST.						2307
P-803	52	27'-1"	ST.						3,760
P-804	52	26'-4"	ST.						3656
P-901	112	8'-8"	ST.						3300
P-902	24	27'-2"	ST.						2217
P-1101	40	18'-0"	ST						3825
P-1102	40	25'-5"	1	3'-0"	22'-8"				5402
PIERS TOTAL = 33,360 LBS									
SLAB									
S-501	440	5'-7"	5	8"	2'-2"	5"			2562
S-502	420	4'-8"	15	1'-4"	1'-6"	6"			8044
S-503	420	2'-3"	3	1'-6"	6"				986
S-601	472	42'-10"	ST.						30,366
S-602	790	33'-0"	ST.						39,157
S-603	120	24'-0"	ST.						4326
S-701	472	42'-10"	ST.						41,324
SLAB TOTAL = 120,765 LBS									

MARK	NO. REQ'D	LENGTH	TYPE	DIMENSIONS A	B	C	D	SERIES INCREMENTS	WEIGHT LBS.

RAILING ⊛								
R-501	32	16'-8"	ST.					
R-502	128	15'-6"	ST.					
R-503	24	4'-2"	16	8"	1'-6"	¾"	6½"	
R-504	16	5'-4"	17	SEE DIAGRAM				
R-505	16	3'-3"	5	8"	1'-1"	4"		
R-506	16	3'-0"	ST.					

REPLACEMENT BARS			
RE-501	1	5'-6"	ST.
RE-601	5	6'-0"	ST.
RE-701	3	6'-3"	ST.
RE-801	1	6'-6"	ST.
RE-901	1	6'-10"	ST.
RE-1101	1	7'-9"	ST.

GRAND TOTAL 173,328 LBS



BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST DIGIT WHERE THREE DIGITS ARE USED AND THE FIRST TWO DIGITS WHERE FOUR ARE USED INDICATE THE BAR SIZE NUMBER. FOR EXAMPLE A-601 IS A NO. 6 SIZE BAR AND P-1001 IS A NO. 10 SIZE BAR.

⊛ RAILING REINFORCEMENT BARS WILL BE INCLUDED AS PART OF ITEM 517 FOR PAYMENT

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER & HOCH, Consulting Engineers
AKRON, OHIO

REINFORCING SCHEDULE

BRIDGE No. SUM-271-1122 L.& R.
I-271 OVER BRANDYWINE CREEK
SUMMIT COUNTY
STA. 590+98.18 To STA. 592+58.82

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
K.S.J.	J.N.P.		H.G.H.	E.D.H.	9-21-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

288 / 313

SUM-271 - 8.29
RIGHT OF WAY SHEET 1 / 25

CENTER LINE SURVEY PLAT

SUMMIT - 271 - 8.29

SUMMIT COUNTY, OHIO

(BILLING SECTION 2.98)

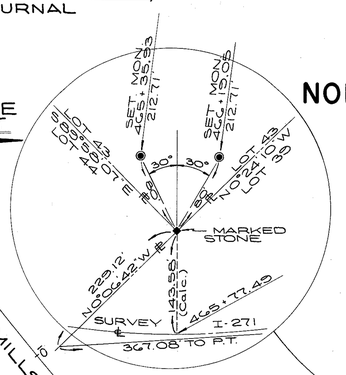
~ LIMITED ACCESS ~

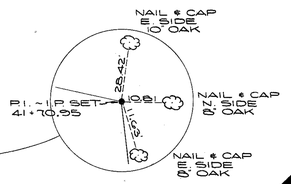
THIS IMPROVEMENT HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY FROM STATION 436+98.25 TO STATION 609+81.79 BY ACTION OF THE DIRECTOR OF HIGHWAYS AND RECORDED IN VOLUME 47, PAGE 952, OF THE DIRECTORS JOURNAL PURSUANT TO LAW.

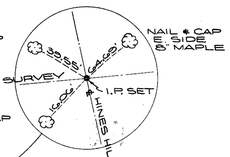
TWN 3/7/67

BOSTON TOWNSHIP - LOTS 39, 43, 44, & 45
NORTHFIELD CENTER TWP. - LOT 40 - (FORMERLY BOSTON TWP.)
NORTHFIELD CENTER TWP. LOTS 38, 39, 40, & 50
SAGAMORE HILLS TWP. LOT 50 (FORMERLY NORTHFIELD TWP.)
SAGAMORE HILLS TWP. LOT 40 (FORMERLY BOSTON TWP.)

DETAIL OF REFERENCE MONUMENTS TO BE SET



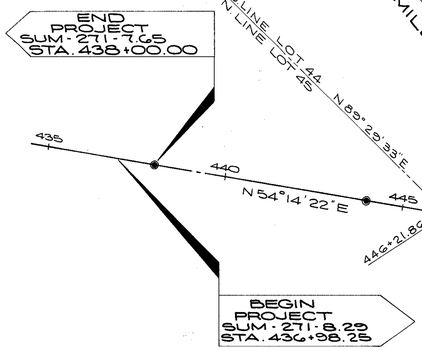




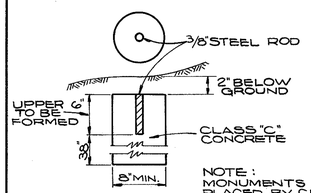
0 100 200 400 600 800
SCALE IN FEET

CENTERLINE SURVEY CURVE DATA
Δ = 14°29'18" LT.
Dc = 1°00'
R = 5729.58'
L = 1448.83'
T = 728.30'
E = 46.10'
P.I. = 460+53.13

HINES HILL ROAD CURVE DATA
Δ = 63°04'56" RT.
Dc = 6°2'
R = 955.37'
T = 596.72'
Lc = 101.75'
P.C. 41+14.23
P.T. 42+15.98
P.I. 41+70.95



MONUMENT ASSEMBLIES TO BE SET
HINES HILL ROAD
P.O.T. STA. 45+00
P.O.T. STA. 54+50



NOTE:
MONUMENTS TO BE PLACED BY CONTRACTOR

DETAIL OF CENTERLINE REFERENCE MONUMENTS (NOT TO SCALE)

NOTES:
MONUMENTS TO BE PLACED ON CENTER LINE SURVEY
MONUMENTS TO BE PLACED DURING OR AFTER CONSTRUCTION
IRON PIN REFERENCE POINTS TO BE PLACED BEFORE CONSTRUCTION
ALL IRON PIN REFERENCE POINTS ARE TO BE SET AT THE DISCRETION OF THE FIELD ENGINEER AND OUTSIDE OF THE CONSTRUCTION LIMITS

CENTERLINE REFERENCE MONUMENTS TO BE SET (THIS SHEET)

P.O.T. STA. 438+00.00
P.O.T. STA. 443+98.23
P.C. STA. 453+24.83
P.O.C. STA. 460+49.24 - MIDDLE ORDINATE
P.T. STA. 467+73.66
P.O.T. STA. 476+44.86
P.O.T. STA. 486+10.73 STA. 465+35.93 (212.71' LT.)
P.O.T. STA. 495+58.30 STA. 466+19.05 (212.71' LT.)

ROAD PLANS CURVE DATA
Δ = 6°2'30" RT.
R = 1833.17'
Dc = 1°0'
P = 318.31'
Lc = 347.22'
P.C. 15+46.19
P.T. 18+93.41
P.I. 17+35.36
CORROBORATED BY CONSULTANTS SURVEY

DETAIL OF BOSTON MILLS ROAD
(NO SCALE)

HINES HILL ROAD CURVE DATA
Δ = 27°34'26" RT.
Dc = 10°
R = 140.60'
Lc = 275.74'
P.C. 56+86.73
P.T. 59+62.47
P.I. 58+27.33

460850

RECEIVED FOR RECORD
MARCH 17 1967
At 1:45 o'clock P. M.
Recorded March 21 1967
Vol. 70 Page 16 TO 23 INC.
Ray R. Butt
Recorder Summit County, Ohio
Fee $34.80

TRANSFER NOT NECESSARY
MAR 17 1967
C. L. Bower, County Auditor

F FIELD MEASUREMENT
OBS. OBSERVED (FIELD ANGLES)
REC RECORD MEASUREMENT
■ EXISTING MONUMENTS
◉ MONUMENTS TO BE SET
▣ MONUMENT ASSEMBLIES TO BE SET

I HEREBY CERTIFY THAT THIS PLAT IS A TRUE DELINEATION OF A SURVEY MADE FOR THE OHIO DEPARTMENT OF HIGHWAYS.
BY Bryan E. McCoy
DATE: 2-28-67

RECEIVED FOR RECORD _____ 1965 _____
RECORDED : VOL. _____, PAGE _____, OF THE SUMMIT COUNTY RECORDS
_____ RECORDER

CERTIFICATE OF APPROVAL
SIGNED BY Clifton M. Newhall
CLIFTON M. NEWHALL
DATE 2-28-67 DIVISION DEPUTY DIRECTOR

PRELIMINARY SUBMITTAL: SEPT. 9, 1965
RIGHT OF WAY COMPLETION DATE: JAN. 25, 1967

SURVEYORS SEAL

CENTERLINE SURVEY PLAT 1 OF 4

Ohio Highway Dept. Div. 4
N. Engr. & Admin. Sect.
Ravenna, Ohio
Jan 30 1967
Logged
Bill Bk.

FED. RD.	STATE	PROJECT	
2	OHIO		

285/313

SUM-271-8.29
RIGHT OF WAY SHEET 2/25

~ LIMITED ACCESS ~

THIS IMPROVEMENT HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY FROM STATION 436+98.25 TO STATION 609+81.79 BY ACTION OF THE DIRECTOR OF HIGHWAYS AND RECORDED IN VOLUME 47, PAGE 1125, OF THE DIRECTORS JOURNAL 952 PURSUANT TO LAW.

CENTER LINE SURVEY PLAT

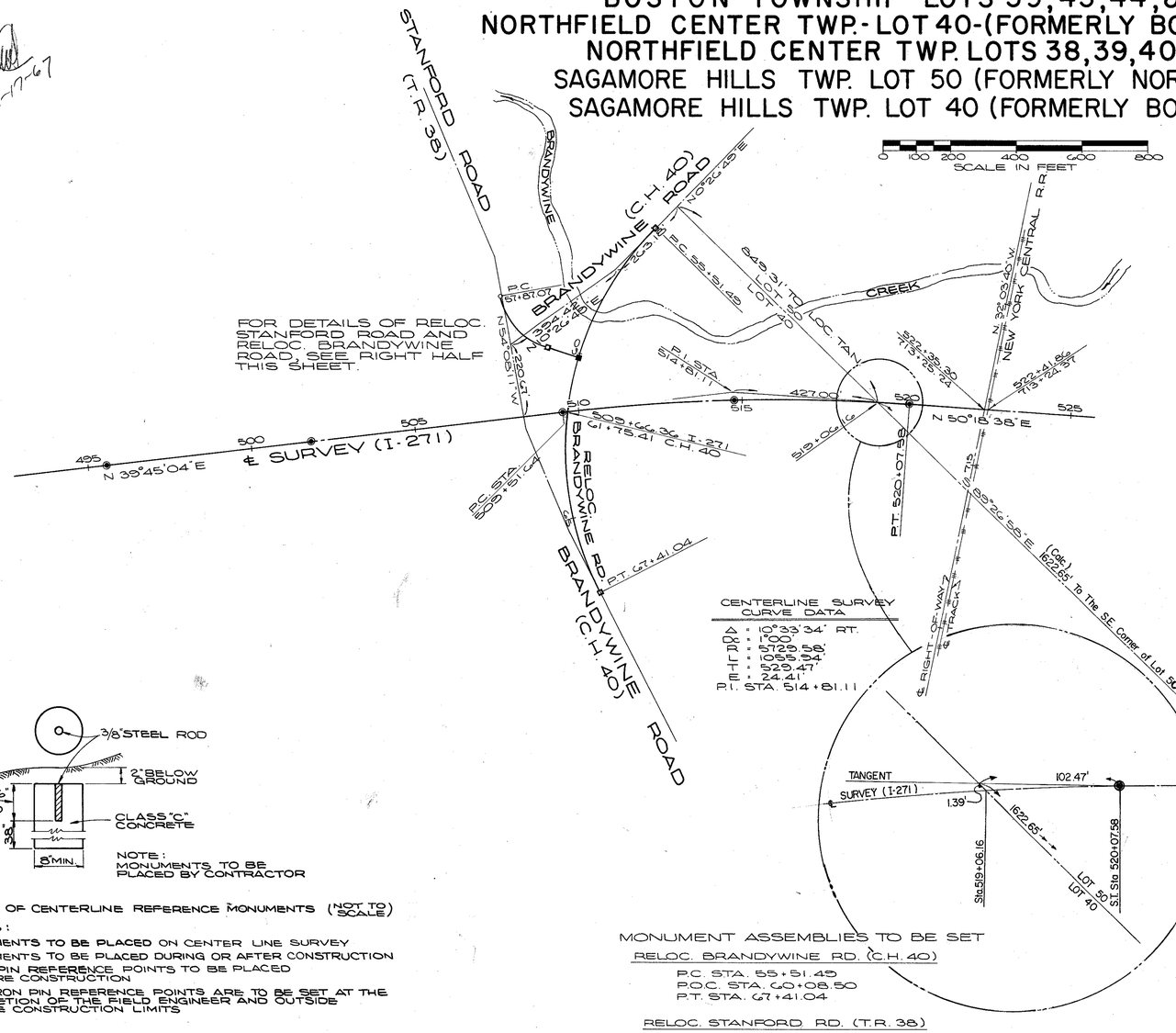
SUMMIT - 271 - 8.29

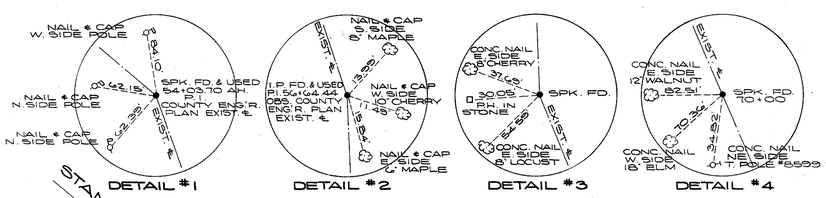
SUMMIT COUNTY, OHIO

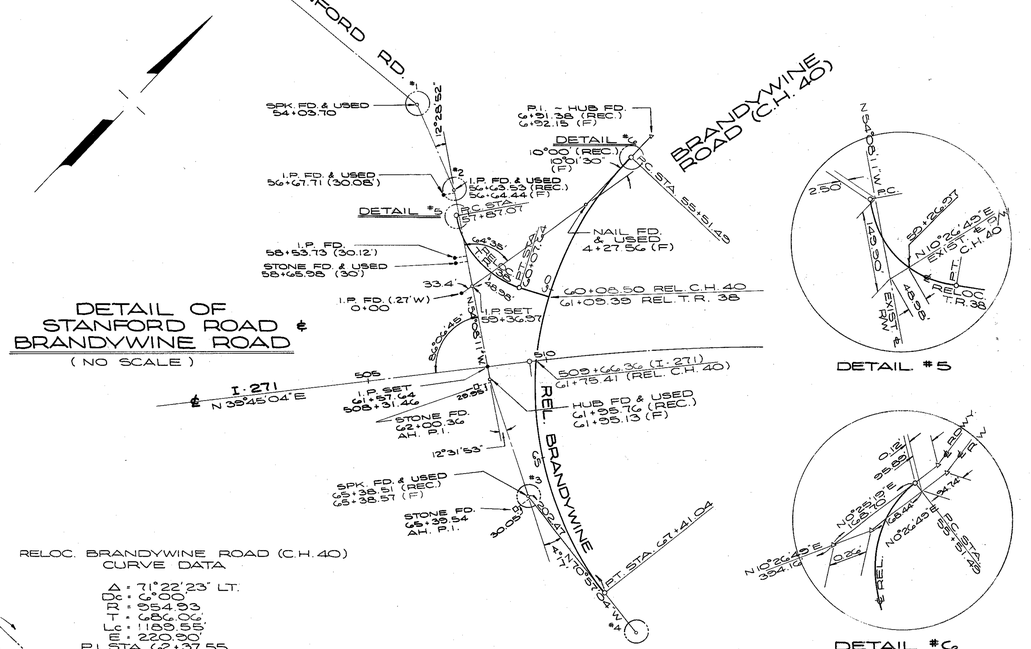
(BILLING SECTION 2.98)

BOSTON TOWNSHIP - LOTS 39, 43, 44, & 45
NORTHFIELD CENTER TWP. - LOT 40 - (FORMERLY BOSTON TWP.)
NORTHFIELD CENTER TWP. LOTS 38, 39, 40, & 50
SAGAMORE HILLS TWP. LOT 50 (FORMERLY NORTHFIELD TWP.)
SAGAMORE HILLS TWP. LOT 40 (FORMERLY BOSTON TWP.)

TMW 3-17-67







NOTES:
MONUMENTS TO BE PLACED ON CENTER LINE SURVEY
MONUMENTS TO BE PLACED DURING OR AFTER CONSTRUCTION
IRON PIN REFERENCE POINTS TO BE PLACED BEFORE CONSTRUCTION
ALL IRON PIN REFERENCE POINTS ARE TO BE SET AT THE DISCRETION OF THE FIELD ENGINEER AND OUTSIDE OF THE CONSTRUCTION LIMITS

MONUMENTS TO BE SET (THIS SHEET)

P.O.T. STA. 455+58.30 (MONUMENT DUPLICATED ON CENTERLINE SURVEY PLAT 1 OF 4)
P.O.T. STA. 501+82.95
P.C. STA. 509+51.64
P.O.C. STA. 514+79.61 - MIDDLE ORDINATE
P.T. STA. 520+07.58

CENTERLINE SURVEY CURVE DATA
Δ = 10°33'34" RT.
D = 1°00'
R = 5729.58'
L = 1055.54'
T = 529.47'
E = 24.41'
P.I. STA. 514+81.11

RELOC. BRANDYWINE ROAD (C.H. 40) CURVE DATA
Δ = 71°22'23" LT.
D = 6°00'
R = 954.93'
T = 686.03'
L = 1189.55'
E = 220.90'
P.I. STA. 62+37.55

RELOC. STANFORD ROAD (T.R. 38) CURVE DATA
Δ = 62°51'44" LT.
D = 28°30'
R = 201.04'
T = 122.87'
L = 220.57'
P.I. STA. 59+09.94

MONUMENT ASSEMBLIES TO BE SET

RELOC. BRANDYWINE RD. (C.H. 40)
P.C. STA. 55+51.49
P.O.C. STA. 60+08.50
P.T. STA. 67+41.04

RELOC. STANFORD RD. (T.R. 38)
P.T. STA. 60+07.64
P.O.T. STA. 61+09.39 (MONUMENT DUPLICATED AT STATION 60+08.50 C.H. 40)

DENOTES REFERENCE TIES

F FIELD MEASUREMENT
OBS OBSERVED (FIELD ANGLES)
REC RECORD MEASUREMENT
■ EXISTING MONUMENTS
◉ MONUMENTS TO BE SET
▣ MONUMENT ASSEMBLIES TO BE SET

TRANSFER NOT NECESSARY
MAR 7 1967
R.I. Shaver, County Auditor

I HEREBY CERTIFY THAT THIS PLAT IS A TRUE DELINEATION OF A SURVEY MADE FOR THE OHIO DEPARTMENT OF HIGHWAYS.
BY Bryan E. Mulvey
DATE: 2-23-67

RECEIVED FOR RECORD _____ 1965
RECORDED: VOL. ____, PAGE ____, OF THE SUMMIT COUNTY RECORDS
RECORDER

CERTIFICATE OF APPROVAL
SIGNED BY Clifton M. Newhall
CLIFTON M. NEWHALL
DATE 2-23-67 DIVISION DEPUTY DIRECTOR

PRELIMINARY SUBMITTAL: SEPT. 9, 1965
RIGHT OF WAY COMPLETION DATE: JAN. 25, 1967

SURVEYORS SEAL

CENTERLINE SURVEY PLAT 2 OF 4

State Highway Dept. Civ. & R/W Engr. & Admin. Sect. Review Prin. JAN 30 1967
Logged Bill Sh.
Cnds.
K.&E.

FED. RD.	STATE	PROJECT	
2	OHIO		

290/313

SUM-271-8.29
RIGHT OF WAY SHEET 3/25

~ LIMITED ACCESS ~

THIS IMPROVEMENT HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY FROM STATION 436+98.25 TO STATION 609+81.79 BY ACTION OF THE DIRECTOR OF HIGHWAYS AND RECORDED IN VOLUME 47, PAGE 332/1125, OF THE DIRECTORS JOURNAL PURSUANT TO LAW.

TWN OK MWD 3-17-67

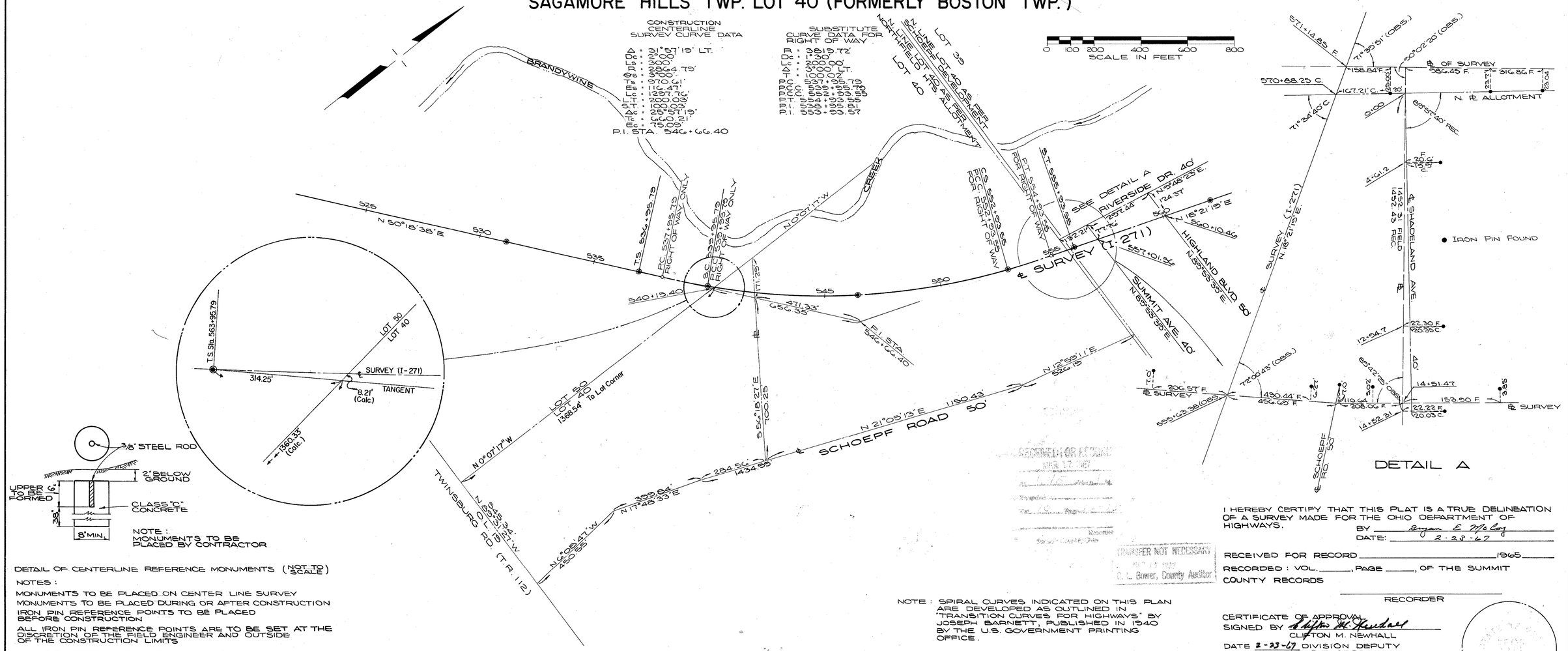
CENTER LINE SURVEY PLAT

SUMMIT - 271 - 8.29

SUMMIT COUNTY, OHIO

(BILLING SECTION 2.98)

BOSTON TOWNSHIP - LOTS 39, 43, 44, & 45
NORTHFIELD CENTER TWP. - LOT 40 - (FORMERLY BOSTON TWP.)
NORTHFIELD CENTER TWP. LOTS 38, 39, 40, & 50
SAGAMORE HILLS TWP. LOT 50 (FORMERLY NORTHFIELD TWP.)
SAGAMORE HILLS TWP. LOT 40 (FORMERLY BOSTON TWP.)



NOTE: MONUMENTS TO BE PLACED BY CONTRACTOR

DETAIL OF CENTERLINE REFERENCE MONUMENTS (NOT TO SCALE)

NOTES:

MONUMENTS TO BE PLACED ON CENTER LINE SURVEY
MONUMENTS TO BE PLACED DURING OR AFTER CONSTRUCTION
IRON PIN REFERENCE POINTS TO BE PLACED BEFORE CONSTRUCTION
ALL IRON PIN REFERENCE POINTS ARE TO BE SET AT THE DISCRETION OF THE FIELD ENGINEER AND OUTSIDE OF THE CONSTRUCTION LIMITS

CENTERLINE REFERENCE MONUMENTS TO BE SET (THIS SHEET)

P.O.T. STA. 531 + 15.38
T.S. STA. 536 + 95.79
S.C. STA. 539 + 95.79
P.O.C. STA. 546 + 44.66 - MIDDLE ORDINATE
C.S. STA. 552 + 93.55
S.T. STA. 555 + 93.55
P.O.T. STA. 562 + 14.03

NOTE: SPIRAL CURVES INDICATED ON THIS PLAN ARE DEVELOPED AS OUTLINED IN "TRANSITION CURVES FOR HIGHWAYS" BY JOSEPH BARNETT, PUBLISHED IN 1940 BY THE U.S. GOVERNMENT PRINTING OFFICE.

F FIELD MEASUREMENT
OBS OBSERVED (FIELD ANGLES)
REC RECORD MEASUREMENT
■ EXISTING MONUMENTS
◉ MONUMENTS TO BE SET

RECEIVED FOR RECORD MAR 13 '67
TRANSFER NOT NECESSARY
C. L. Brewer, County Auditor

I HEREBY CERTIFY THAT THIS PLAT IS A TRUE DELINEATION OF A SURVEY MADE FOR THE OHIO DEPARTMENT OF HIGHWAYS.
BY Roger E McCoy
DATE: 2-28-67

RECEIVED FOR RECORD _____ 1965

RECORDED: VOL. ____, PAGE ____, OF THE SUMMIT COUNTY RECORDS

RECORDER

CERTIFICATE OF APPROVAL
SIGNED BY Clifton M. Newhall
CLIFTON M. NEWHALL
DATE 2-23-67 DIVISION DEPUTY DIRECTOR

PRELIMINARY SUBMITTAL: SEPT. 9, 1965
RIGHT OF WAY COMPLETION DATE: JAN. 25, 1967

SURVEYOR'S SEAL

CENTERLINE SURVEY PLAT 3 OF 4

State Highway Dept. Div. 4
Right & Admin Sect.
Jan 6th 1967
LOGGED
Date

FED. RD.	STATE	PROJECT	
2	OHIO		

291 / 313

SUM-271-8.29
RIGHT OF WAY SHEET 4 / 25

~ LIMITED ACCESS ~

THIS IMPROVEMENT HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY FROM STATION 436+98.25 TO STATION 609+81.79 BY ACTION OF THE DIRECTOR OF HIGHWAYS AND RECORDED IN VOLUME 47, PAGE 952 1125, OF THE DIRECTORS JOURNAL PURSUANT TO LAW.

TUN OK 3-17-67

CENTER LINE SURVEY PLAT

SUMMIT - 271 - 8.29

SUMMIT COUNTY, OHIO

(BILLING SECTION 2.98)

BOSTON TOWNSHIP - LOTS 39, 43, 44, & 45
NORTHFIELD CENTER TWP. - LOT 40 - (FORMERLY BOSTON TWP.)
NORTHFIELD CENTER TWP. LOTS 38, 39, 40, & 50
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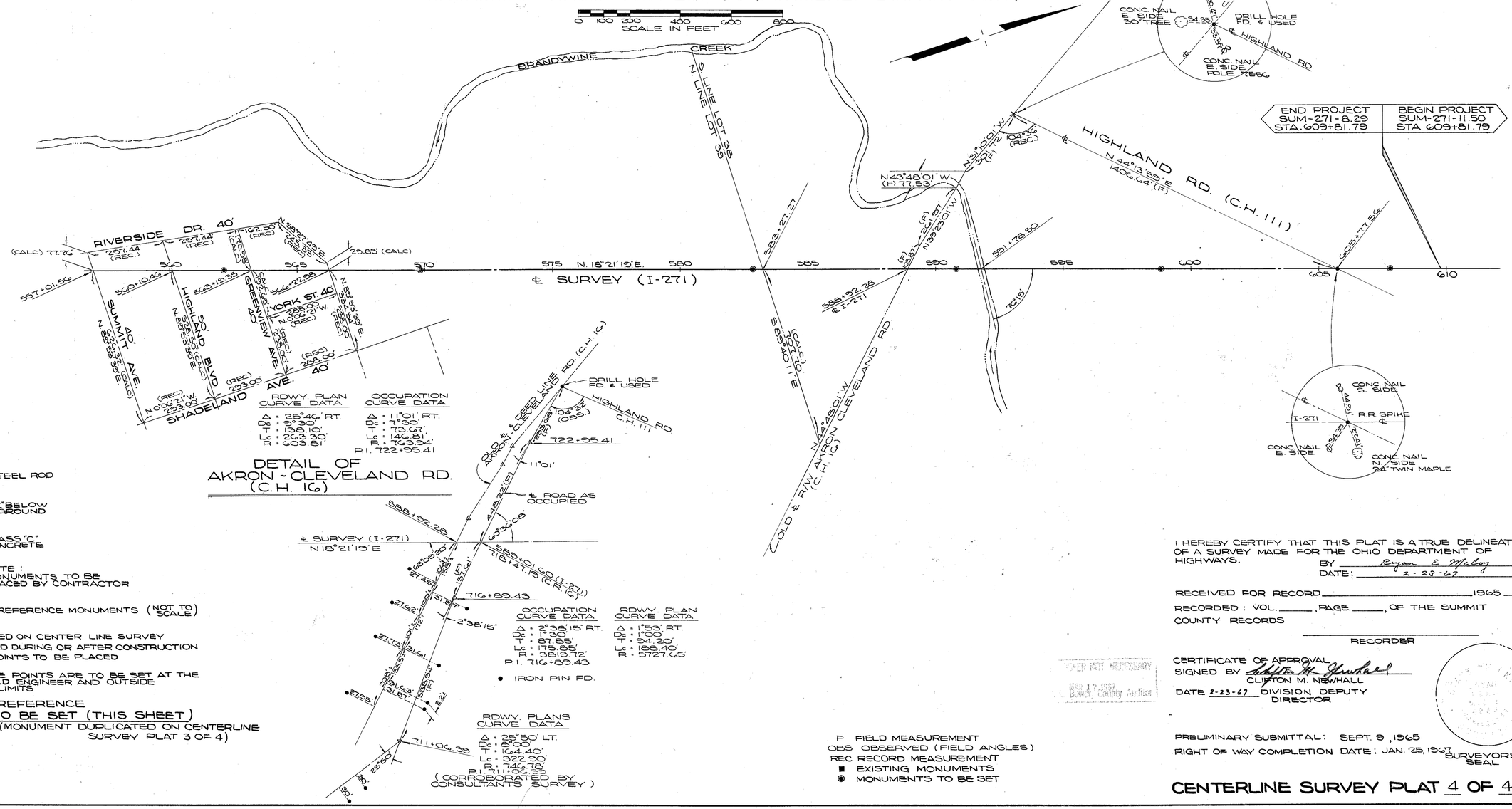
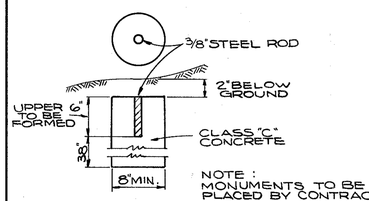
SAGAMORE HILLS TWP. LOT 40 (FORMERLY BOSTON TWP.)





DETAIL OF CENTERLINE REFERENCE MONUMENTS (NOT TO SCALE)

NOTES:
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CENTERLINE REFERENCE MONUMENTS TO BE SET (THIS SHEET)

P.O.T. STA. 562 + 14.03 (MONUMENT DUPLICATED ON CENTERLINE SURVEY PLAT 3 OF 4)
P.O.T. STA. 569 + 85.07
P.O.T. STA. 582 + 86.32
P.O.T. STA. 590 + 81.79
P.O.T. STA. 598 + 81.79
P.O.T. STA. 607 + 81.79

F FIELD MEASUREMENT
OBS OBSERVED (FIELD ANGLES)
REC RECORD MEASUREMENT
■ EXISTING MONUMENTS
◉ MONUMENTS TO BE SET

I HEREBY CERTIFY THAT THIS PLAT IS A TRUE DELINEATION OF A SURVEY MADE FOR THE OHIO DEPARTMENT OF HIGHWAYS.
BY Eugene E. McCoy
DATE: 2-28-67

RECEIVED FOR RECORD _____ 1965 _____
RECORDED: VOL. _____, PAGE _____, OF THE SUMMIT COUNTY RECORDS

_____ RECORDER

CERTIFICATE OF APPROVAL
SIGNED BY Clifton M. Newhall
CLIFTON M. NEWHALL
DATE 2-23-67 DIVISION DEPUTY DIRECTOR

OHIO DEPT. OF TRANSPORTATION
MAR 17 1967
SUMMIT County Auditor

PRELIMINARY SUBMITTAL: SEPT. 9, 1965
RIGHT OF WAY COMPLETION DATE: JAN. 25, 1967

SURVEYORS SEAL

CENTERLINE SURVEY PLAT 4 OF 4

St. Highway Dept. Div. 4
R/W ENGR & ADMIN SECT.
RAVENNA, OHIO
JAN 30 1967
LOGGED
Crds. _____ Bill Bk. _____

FED. RD.	STATE	PROJECT	
2	OHIO		

292
313

SUM - 271 - 8.29

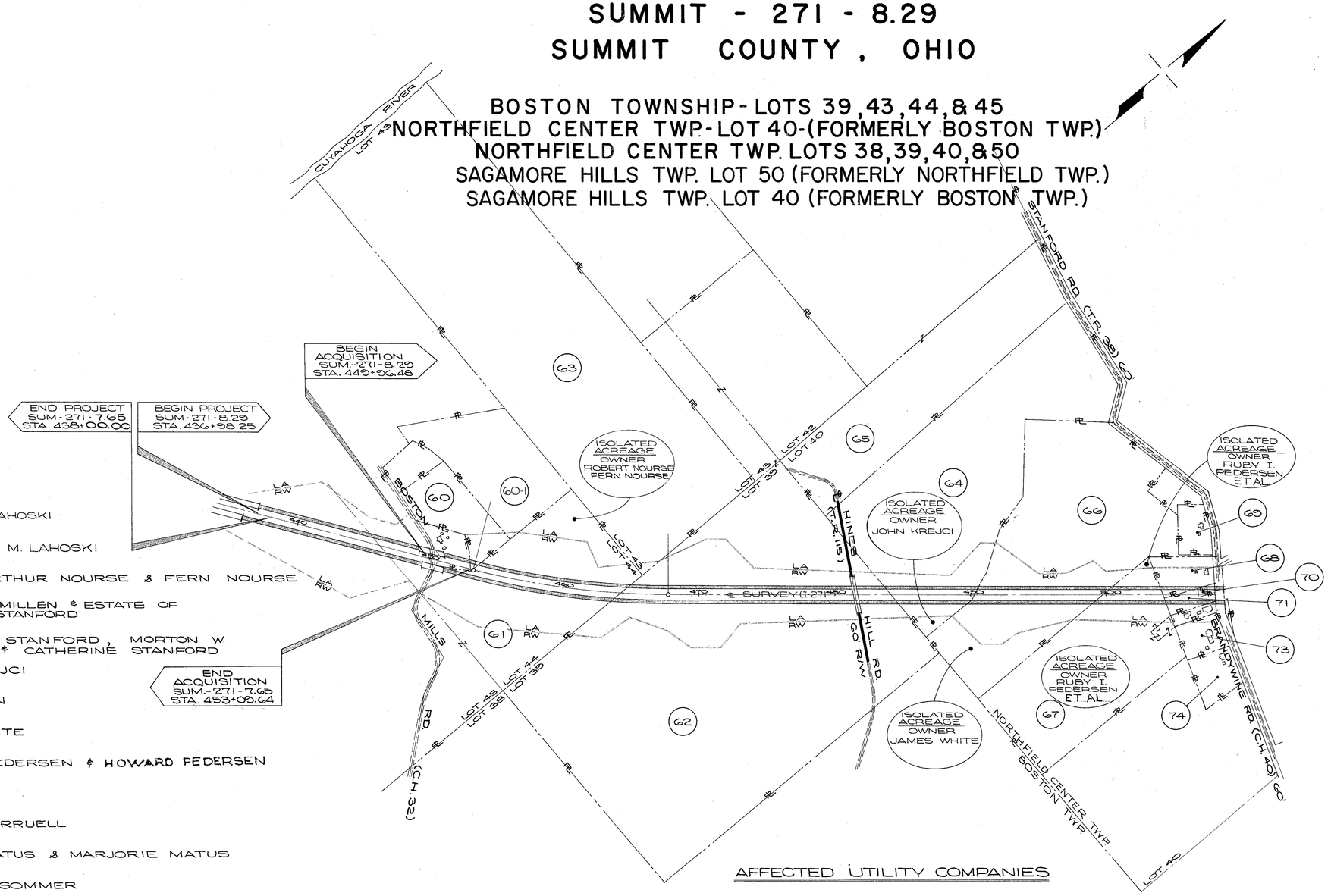
RIGHT OF WAY SHEET 5/25

PROPERTY MAP

SUMMIT - 271 - 8.29

SUMMIT COUNTY, OHIO

BOSTON TOWNSHIP - LOTS 39, 43, 44, & 45
NORTHFIELD CENTER TWP. - LOT 40 - (FORMERLY BOSTON TWP.)
NORTHFIELD CENTER TWP. LOTS 38, 39, 40, & 50
SAGAMORE HILLS TWP. LOT 50 (FORMERLY NORTHFIELD TWP.)
SAGAMORE HILLS TWP. LOT 40 (FORMERLY BOSTON TWP.)



60 JOSEPHINE LAHOSKI

60-1 BEN G. & ANN M. LAHOSKI

61 ROBERT ARTHUR NOURSE & FERN NOURSE

62 DAVID P. McMILLEN & ESTATE OF STELLA M. STANFORD

63 J. CLAYTON STANFORD, MORTON W. STANFORD, & CATHERINE STANFORD

64 JOHN KREJCI

65 W. L. SEMON

66 JAMES WHITE

67 RUBY I. PEDERSEN & HOWARD PEDERSEN

68 JUNE K. BURRUELL

69 GEORGE MATUS & MARJORIE MATUS

70 WILLIAM L. SOMMER

71 (Burial Lot) UNKNOWN HEIRS OF JAMES W. WALLACE DEC'D., ETAL

73 MARJORIE G. SEMON

74 FLORENCE E. LINDLEY

QUANTITY SUMMARY TYPE 47 FENCE	
SHEET NO.	LIN. FT.
10	606
11	4138
13	1975
15	2052
16	3010
18	3018
20	2585
21	2684
22	3022
23	2800
24	3179
25	1973
GRAND TOTAL	31,052 LIN. FT.

AFFECTED UTILITY COMPANIES

OHIO BELL TELEPHONE CO.
50 W. BOWERY ST.
AKRON, OHIO

EAST OHIO GAS CO.
1717 EAST 9TH ST.
CLEVELAND, OHIO

OHIO EDISON CO.
47 N. MAIN ST.
AKRON, OHIO

AMERICAN TELEPHONE & TELEGRAPH CO.
ROOM 1713 - 100 ERIEVIEW PLAZA
CLEVELAND, OHIO

LAUREL PIPE LINE CO.
P.O. BOX 426
CAMP HILL, PA.

BUCKEYE PIPE LINE CO.
DIXIE HIGHWAY & BUCKEYE RD.
LIMA, OHIO

INLAND CORPORATION
P.O. BOX 188
VANDALIA, OHIO

GRAPHIC SCALE
0 400 800 1200 1600

PRELIMINARY SUBMITTAL DATE: SEPT. 9, 1965
RIGHT OF WAY COMPLETION DATE: JAN. 25, 1967

Nº	REVISION'S	MADE BY	DATE
1	Deleted Pcl. 72 & 67-1, Combined Area with Pcl. 67 IOC. from H. Kandel & S. Guziak Dated 9-1-67	Lee	9-6-67
2	Name Change. Pcl 71 WL	Eqal	12-7-67

PROPERTY MAP SHEET Nº 1 of 3

State Highway Dept. Ohio
RW... ENGR & ADMIN SECT.
JAN 30 1967
LOGGED
Bill Bk.
Crds.

PROPERTY MAP

SUMMIT - 271 - 8.29

SUMMIT COUNTY, OHIO

BOSTON TOWNSHIP - LOTS 39, 43, 44, & 45
NORTHFIELD CENTER TWP. - LOT 40 - (FORMERLY BOSTON TWP.)
NORTHFIELD CENTER TWP LOTS 38, 39, 40, & 50
SAGAMORE HILLS TWP. LOT 50 (FORMERLY NORTHFIELD TWP.)
SAGAMORE HILLS TWP. LOT 40 (FORMERLY BOSTON TWP.)

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM - 271 - 8.29
SUM-271-10.25-SI(1)
SUM-271-10.30-SI(1)
RIGHT-OF-WAY SHEET

293
313

6
25

(75) BENJAMIN J. RICHARDS & JULIA C. RICHARDS
(76) JULIA C. RICHARDS
(77) HENRY S. NARTEN
(78) FERN F. NARTEN
(79) OHIO EDISON COMPANY, AN OHIO CORPORATION
(80) CATHOLIC CEMETERIES ASSOCIATION
(81) WILLIAM SCHOEPF & LIFE ESTATE TO JOHN SCHOEPF & ANNA SCHOEPF
(82) THOMAS R. SILVER & LLOYD F. HANNAFORD
(83) DOROTHY HANNAFORD

AFFECTED UTILITY COMPANIES

OHIO BELL TELEPHONE COMPANY
50 W. BOWERY ST.
AKRON, OHIO

EAST OHIO GAS COMPANY
1717 EAST 9TH ST.
CLEVELAND, OHIO

OHIO EDISON COMPANY
47 N. MAIN ST.
AKRON, OHIO

AMERICAN TELEPHONE & TELEGRAPH CO.
ROOM 1713 ~ 100 ERIEVIEW PLAZA
CLEVELAND, OHIO

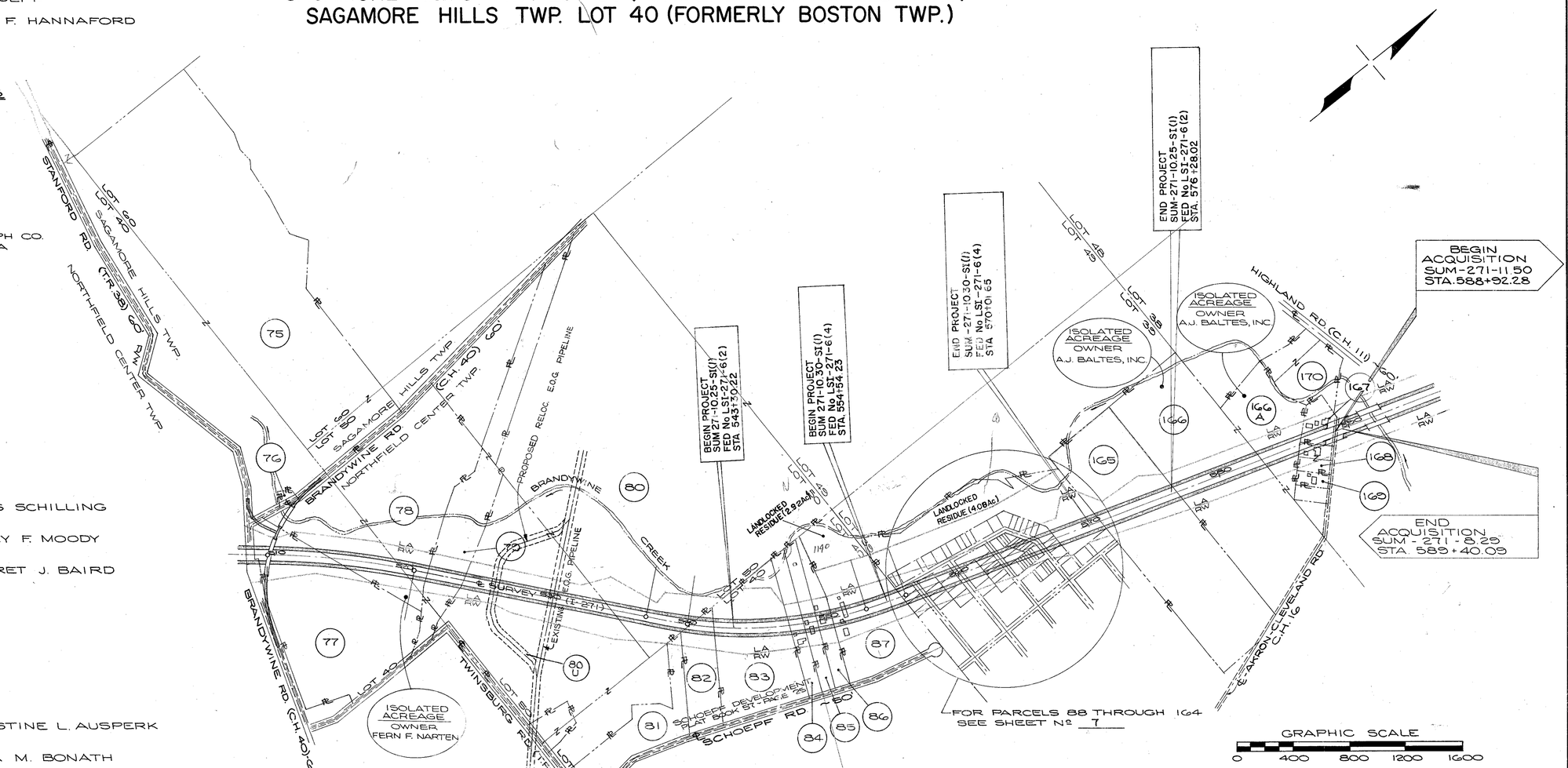
LAUREL PIPE LINE COMPANY
P.O. BOX 426
CAMP HILL, PA.

BUCKEYE PIPE LINE COMPANY
DIXIE HIGHWAY & BUCKEYE RD.
LIMA, OHIO

INLAND CORPORATION
P.O. BOX 188
VANDALIA, OHIO

(84) REGIS SCHILLING & PHYLLIS SCHILLING
(85) MARTIN M. MOODY & SHIRLEY F. MOODY
(86) GILBERT J. BAIRD & MARGARET J. BAIRD
(87) FRANK DOVICH JR.

(165) DIXIE OHIO EXPRESS
(166) (166 A) A.J. BALTES, INC.
(167) ALBERT A. AUSPERK & CHRISTINE L. AUSPERK
(168) JOHN P. BONATH & THELMA M. BONATH
(169) EDWARD B. DOLEJS & IVY H. DOLEJS
(170) ELIZABETH MELCHER
( )



FOR PARCELS 88 THROUGH 164 SEE SHEET Nº 7

GRAPHIC SCALE
0 400 800 1200 1600

PRELIMINARY SUBMITTAL DATE: SEPT. 9, 1965
RIGHT OF WAY COMPLETION DATE: JAN 25 1967

Nº	REVISIONS	MADE BY	DATE
1	ADDED WS Pcls & Landlock area to property map	BILL	6/14/67
2	ADDED BEGIN & END DESIGNATION BLKS.	AL	10/11/67
3	ADDED PCL. 80U PER H. STRAHL	LEE	7-22-68
4	REVISED NAME PCL. 79		10-8-71

Ohio Highway Dept. Div. 4
R/W - ENGR & ADMIN SECT.
ravenna, ohio
JAN 30 1967
Logged
Crds. Bill Bk.

PROPERTY MAP

SUMMIT - 271 - 8.29

SUMMIT COUNTY, OHIO

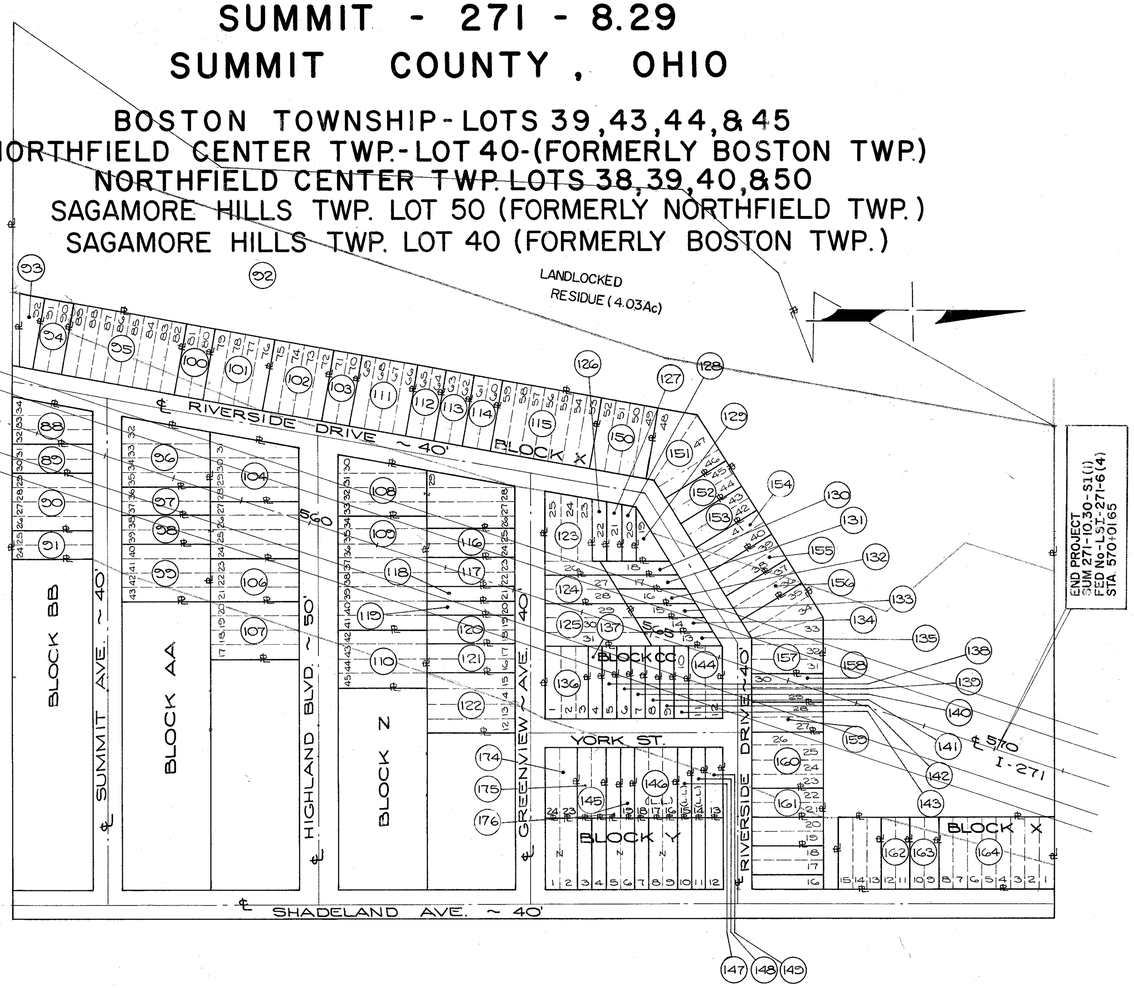
BOSTON TOWNSHIP - LOTS 39, 43, 44, & 45
NORTHFIELD CENTER TWP. - LOT 40 - (FORMERLY BOSTON TWP.)
NORTHFIELD CENTER TWP. LOTS 38, 39, 40, & 50
SAGAMORE HILLS TWP. LOT 50 (FORMERLY NORTHFIELD TWP.)
SAGAMORE HILLS TWP. LOT 40 (FORMERLY BOSTON TWP.)

FED. RD.	STATE	PROJECT	
2	OHIO		

294/313

SUM - 271 - 8.29
SUM - 271 - 10.25 - SI(1)
SUM - 271 - 10.30 - SI(1)
RIGHT-OF-WAY

7/25



NORTHFIELD HEIGHTS ALLOTMENT
PLAT BOOK 32 ~ PAGES 24 TO 32
ALL PROPERTY WITHIN ALLOTMENT REGISTERED LAND (TORRENS)

(88) LOLA E. STARCHER & ROBERT E. STARCHER
(89) PERCY G. HANSEN
(90) ALBERT M. KLINGAMAN
(91) PERCY G. HANSEN
(92) JUANITA G. SHELHART
(93) ABNER D. ZOOK
(94) THE ESTATE OF STANLEY WROBEL, DEC'D.
(95) PERCY G. HANSEN
ISOLATED AREA = 8960 SQ. FT. (0.2057 Ac)
(96) ESTATE OF NICK VIRZI, DEC'D et al / ROSE VIRZI
(97) A.J. & MARJORY R. POIRSON
(98) LOLA E. STARCHER & ROBERT E. STARCHER
(99) ANNA ANTOLICK
(100) CHARLES KALCIK, DEC'D / ELIZABETH KALCIK
(101) DOROTHY SCHULTZ
(102) PERCY G. HANSEN
(103) FRANK K. LEVIN
(104) UNKNOWN HEIRS OF MARY LUECHT, DECEASED
(106) IRENE E. VOLLERT, (COMMISSIONER)
(107) THE ESTATE OF CHARLES / ANNA VOHNOUTEK, BOTH DEC'D
(108) LOLA E. STARCHER & ROBERT E. STARCHER
(109) FRANK K. LEVIN
(110) MARY KNEBLEWICZ & JOHN KNEBLEWICZ
(111) LUCIEN FISK WAKEFIELD
(112) FRANK K. LEVIN
(113) WALTER KOBA & JOSEPHINE KOBA
(114) JUANITA G. SHELHART
(115) FRANK K. LEVIN
(116) FRED DYKE
(117) PERCY G. HANSEN
(118) JESSIE M. STEWART
(119) PERCY G. HANSEN
(120) FRANK SREDNIAWA
(121) HELEN HERVI
(122) WILLIAM NOVAK, CECELIA NOVAK, & JAMES NOVAK
(123) FRANK K. LEVIN
(124) THE ESTATE OF JOHN / MARY KANCE, BOTH DEC'D
(125) ABNER D. ZOOK
(126) LOLA E. STARCHER & ROBERT E. STARCHER
(127) UNKNOWN HEIRS OF HATTIE B. COURIER
(128) LOLA E. STARCHER & ROBERT E. STARCHER
(129) PETER KAPALINSKY & MARGARET KAPALINSKY
(130) ESTATE OF JOSEPH HEGEDUS DECEASED
(131) LOUIS DELCIAPPO & MARY DELCIAPPO
(132) ALONZO FOTHERINGHAM
(133) PERCY G. HANSEN
(134) LOLA E. STARCHER & ROBERT E. STARCHER
(135) FRANK K. LEVIN
(136) PERCY G. HANSEN
(137) FRANK K. LEVIN
(138) MRS. LURA KNIVETON
(139) STATE OF OHIO, DEPT. OF HIGHWAYS (Formerly Owned By Elizabeth M. Falco)
(140) LOLA E. STARCHER & ROBERT E. STARCHER
(141) JESSIE M. STEWART
(142) PERCY G. HANSEN
(143) TONY AGRUSA
(144) PERCY G. HANSEN
(145) FRANK K. LEVIN
(146) LOLA E. STARCHER & ROBERT E. STARCHER
(147) PERCY G. HANSEN
(148) FRANK K. LEVIN
(149) PERCY G. HANSEN
(150) LOLA E. STARCHER & ROBERT E. STARCHER
(151) FRANK K. LEVIN
(152) JOHANNA KUNART / FRANK K. LEVIN et al
(153) LOLA E. STARCHER & ROBERT E. STARCHER
(154) IRENE E. BOROSH
(155) STANLEY CWIERTNIA & ROSE CWIERTNIA
(156) JOSEPH GUERRA & GRACE GUERRA
(157) LOLA E. STARCHER & ROBERT E. STARCHER
(158) PERCY G. HANSEN
(159) STEVE SZEGO, DECEASED
(160) PERCY G. HANSEN
(161) FRANK K. LEVIN
(162) STANLEY L. ABRAMS
(163) THE ESTATE OF CHARLES W. PRATT / ELLEN PRATT, BOTH DEC'D
(164) STANLEY L. ABRAMS

(174) ERNEST WHITT & MOSSIE WHITT
(175) LOLA E. STARCHER & ROBERT E. STARCHER
(176) JOSEF KAISER

GRAPHIC SCALE
0 100 200 300 400

PRELIMINARY SUBMITTAL DATE: SEPT 9, 1965 RIGHT OF WAY COMPLETION DATE: JAN 25, 1967			
Nº	REVISIONS	MADE BY	DATE
1	Added WS Pcls. & Landlock Area to Property Map	BILL	6/14/67
2	Name Change Pcl. 139 WL	BILL	8/10/67
3	ADDED END DESIGNATION BLOCK & 2 PROJECT Nº	A.L.	10/11/67
4	Name Change Pcl. 194 WL	Smith	10-26-67

Deleted Pcl. 176-PR per L.O.C. from S.A. Guziak dated 1-12-68. Lee 1-15-68

NAME CHANGE PCL. 84-WL 1-10-67 Lee
NAME CHANGE PCLS. 107 / 124 L. Smith 1-8-68
NAME CHANGE PCLS. 96, 100, / 163 Smith 12-28-67
NAME CHANGE PCLS. 152, 121, / 159 - Smith 12-21-67
NAME CHANGE PCL. 111 WS 11-21-67 ~ Bill
NAME CHANGE PCL. 130 WL - 11-17-67 - Smith

PROPERTY MAP ~ SHEET Nº 3 of 3

DEPT. OF HIGHWAY ENGR. DIV. 6
N.W. ENGR. & ADMIN. SECT.
FINDLAY, OHIO
JAN 30 1967
LOGGED
Bill Bk.
Crds.

NOTE: JOB NUMBERS FOR FUNDING	(I Mainline)	(LSI-6(4) Scenic)	(LSI-6(2) Scenic)
Fed. Job No.	I-271-6(16)	LSI-271-6(4)	LSI-271-6(2)
Project No.	I-271-SUM-2.98 (8.29)	I-271-SUM-10.30	I-271-SUM-10.25
State Job No.	04699(0)	04945(0)	04877(0)

SUMMARY OF RIGHT-OF-WAY REQUIRED

FED. RD.	STATE	PROJECT	
2	OHIO	I-271-6(27)237	

295/313

SUM-271-8.29 RIGHT-OF-WAY
SUM-271-10.25-SI(I)
SUM-271-10.30-SI(I)

8/25

TOTAL NUMBER OF OWNERS WITH STRUCTURES TO BE TAKEN — 9

PARCEL Nº	OWNER	DEED RECORD BOOK	DEED RECORD PAGE	DEED AREA TOTAL ACRES	DEED AREA CORR. ACRES	TO BE ACQUIRED LAND ACRES	TO BE ACQUIRED P.R.O. ACRES	BLDGS.	RESIDUE LEFT	RESIDUE RIGHT	TYPE FUNDS	SHEET Nº	REMARKS
60 WL	JOSEPHINE LAHOSKI	3398	331	22.85	5.63	1.218		NO	4,412		I	11,12	DEED AREA CORRECTION DUE TO REMOTE OUTSALE
60-1WL	BEN G. LAHOSKI AND ANN M. LAHOSKI	4272	624	13.36		0.069		NO	13.291			12	
61 WL	ROBERT ARTHUR NOURSE & FERN NOURSE	1988	359	34.0	33.971	16.987	0.143	NO	4.023 (L)	12.818		11,12	
62 WL 62 WD 62-1WD 62-2WD 62-3WD 62-T 62-1T	DAVID P. MCMILLEN ESTATE OF STELLA M. STANFORD	3679	395	144.46	142.25	21.9936 0.0487 0.0806 0.0346 0.0238 0.1967 0.6419	0.4992 0.1436 0.1765 0.1454 0.1487	NO	42.2070	76.7483		12,13,14,15 13,14 13,14 13,14 13,14 13,14 13,14	DEED AREA CORRECTION DUE TO REMOTE OUTSALE 62 T TEMPORARY RUNAROUND 62-1T TEMPORARY RUNAROUND
63 WL	J. CLAYTON STANFORD, MORTON W. STANFORD & CATHERINE STANFORD	3176	604	92.85		0.169		NO	92.681			12	
64 WL 64 WD 64-1WD 64-T	JOHN KREJCI	2820	265	48.1237		5.4704 0.0500 0.0090 0.7878	0.2094 0.1592	NO	41.6887	0.537 (L)		13,14,15 13,14 14 13,14	64T TEMPORARY RUNAROUND
65T	WALDO L. SEMON	2234 2234 2234	623 625 627	134.31	127.61	0.0349		NO	127.61			14	65 T TEMPORARY RUNAROUND DEED AREA CORRECTION DUE TO REMOTE OUTSALE
66 WL 66 X	JAMES WHITE	3925	666	41,966		10.689 0.0826		NO	25.3742	5.9028 (L)		15,16 15,16	66 X CHANNEL EASEMENT
67 WL	RUBY I. PEDERSEN & HOWARD PEDERSEN	3925 4522 3917 3917	688 711 431 434	26.069		4.459		YES	0.142 (L)	21.468 (L)		15,16,17A	
68 WL	JUNE K. BURRUELL	3926	280	2.563		1.650		YES	0.913			16,17	
69WD	GEORGE MATUS & MARJORIE MATUS	3967	560	2.0								16,17	PARCEL NOT REQUIRED
70WL	WILLIAM L. SOMMER	3260	47		0.202	0.202		YES				16,17,17A	
71 WL	UNKNOWN HEIRS OF JAMES W. WALLACE DEC'D., ETAL.	15	241		0.91	0.91		NO				16,17,17A	ONLY DEED OF FEE THAT CAN BE FOUND. TRUSTEES HAVE NO RECORD OF ACQUIRING THIS PARCEL.
73WL 73WA	MARJORIE G. SEMON	2874	139	2.0		0.183		NO		1.817		16,17A 16,17A	73WA - GRADE EX. DRIVE
74 WA	FLORENCE E. LINDLEY	3100 3773	200 427	2.42				NO		2.42		17A	74WA - GRADE EX. DRIVE
75 SL 75 T	BENJAMIN J. RICHARDS & JULIA C. RICHARDS	2541	439	195.6979	83.9772	0.009 0.3276		NO	83.9772			16,17 17	75T TEMPORARY RUNAROUND & ACCESS DRIVE
76 T	JULIA CROSSLEY RICHARDS	2447	184	0.25		0.0527		NO	0.25			17	76 T TEMPORARY RUNAROUND
77 WL 77 77-1	HENRY S. NARTEN	2167	606	21.3389		3.5211 0.4330 0.7616	0.1524 0.0915	NO		16.3793		16,17,17A,18 16,17 16,17A	
78WL 78	FERN F. NARTEN	2167	619	26.5551		4.7277 0.7512	0.2978	NO	20.1866	0.5918 (L)		17,17,18 16,17	
79-WL	OHIO EDISON COMPANY, AN OHIO CORPORATION	4989	1	12.04		1.49		No	9.30	1.25	I	18	

TOTAL NUMBER AFFECTED OWNERS — 76

PARCEL Nº	OWNER	DEED RECORD BOOK	DEED RECORD PAGE	DEED AREA TOTAL ACRES	DEED AREA CORR. ACRES	TO BE ACQUIRED LAND ACRES	TO BE ACQUIRED P.R.O. ACRES	BLDGS.	RESIDUE LEFT	RESIDUE RIGHT	TYPE FUNDS	SHEET Nº	REMARKS
80 WL 80X 80Y 80U	CATHOLIC CEMETERIES ASSOCIATION	3789 3314 3480 3480 4266	613-615 31-32 621 624 182	283.29		12.0411 0.721 0.083		NO	247.2433	24.0056	I	18,20 20,21 20 18	80X CHANNEL RELOCATION 80Y CHANNEL RELOCATION 80-U E.O.G. PIPELINE RELOCATION
81 WL	WILLIAM SCHOEPF: JOHN & ANNA SCHOEPF, LIFE ESTATE	1497	355	9.28	7.1612	0.108	0.223	NO		6.644		20	AREA OF 6.975 AC. PER PROPERTY LINE AGREEMENT; VO. 57, PG. 25.
82 WL	THOMAS R. SILVER & LLOYD F. HANNAFORD	3968	206	4.5766		1.141		NO		3.167		20	
83 WL 83-WS	DOROTHY HANNAFORD " "	2148	190-191	11.88	12.7962	5.129 0.88		NO		7.929	I LSI-6(2)	20,21 21-A	AREA OF 13.3376 AC. PER PROPERTY LINE AGREEMENT; VOL. 57, PG. 25.
84 WL 84-WS	REGIS SCHILLING & PHYLLIS SCHILLING " "	3920	40	2.236	2.4478	0.723 0.86		YES		0.865	I LSI-6(2)	21 21-A	
85 WL 85-WS	MARTIN M. MOODY & SHIRLEY F. MOODY " "	4204	231	2.535	2.5379	0.736 0.98		YES		0.822	I LSI-6(2)	21 21-A	
86 WL 86-WS	GILBERT J. BAIRD & MARGARET J. BAIRD " "	2448	383	2.421		0.825 0.74		YES		.853	I LSI-6(2)	21 21-A	AREA OF 2.418 AC. PER PROPERTY LINE AGREEMENT; VOL. 57, PG. 25.
87WL 87-WS 87-A-WL	FRANK DOVICH, JR. " " " " " " DISPUTED OWNERSHIP	2330	445	13.744	13.6496 0.198	3.821 1.97 0.088		YES	2.92(L)	4.80	I LSI-6(2) I	21 21-A	AREA OF 13.644 AC. PER PROPERTY N.B. LINE AGREEMENT; VOL. 57, PG. 25. QUIT CLAIM DEED
88 WL	LOLA E. & ROBERT E. STARCHER	89	27431	6309S.F.		6309S.F.		NO			I	21	LOTS 32,33,34 BLOCK BB* Reg.Ind Cert. #27431
89 WL	PERCY G. HANSEN	122	37383	4450S.F.		4450S.F.		NO				21	LOTS 30,31 BLOCK BB* Reg.Ind. Cert. #37383
90 WL	ALBERT M. KLINGMAN	23	7807	8947S.F.		8947S.F.		NO				21	LOTS 26,27,28,29 BLOCK BB* Reg.Ind Cert. #7801
91 WL	PERCY G. HANSEN	122	37383	4496S.F.		4496S.F		NO			I	21	LOTS 24,25 BLOCK BB*Reg.Ind Cert.#37383
87 AWS	FRANK DOVICH, JR. and/or JUANITA G. SHELHART DISPUTED OWNERSHIP					0.06					LSI-6(2)		QUIT CLAIM DEEDS
92 WL 92-WS	JUANITA G. SHELHART " "	111	33996	12.032	12.03	2.487 5.40		NO	0.05(L) 4.08(L)		I LSI-6(4)	21,22 21-A,22-A	NOT CERTIFIED & REGISTERED Reg.Ind. Cert.#33996
93 WL	ABNER D. ZOOK	103	31708	2802S.F.		2802S.F.		NO			I	21	LOT 92 BLOCK X* Reg.Ind. Cert.#31708
94 WL	THE ESTATE OF STANLEY WROBEL, DEC'D.	92	28259	4000SF		4000 SF		NO				21	LOTS 90,91 BLOCK X* Reg Ind.Cert.#28259
95 WL 95-WS	PERCY G. HANSEN " "	122	37383	16000 SF		6858 SF 9142 SF		NO			I LSI-6(4)	21 21-A	LOTS 82 THRU 89 BLOCK X* Reg Ind. Cert.#37383
96 WL	ESTATE OF NICK VIRZI, DEC'D etal. & ROSE VIRZI.	27	9027	11089 SF		11089 SF		NO			I	21,22	LOTS 32,33,34,35 BLOCK AA*Reg Ind Cert. #9027
97 WL	A.J. & MARJORY R. POIRSON	119	36549	4960 SF		4960 SF		NO				21,22	LOTS 36,37 BLOCK AA* Reg.Ind Cert. #36549
98 WL	LOLA E. & ROBERT E. STARCHER	89	27431	14880 SF		14880 SF		NO				21,22	LOTS 24,25,26,27, 38,39 BLOCK AA*
99 WL	ANNA ANTOLICK	51 39	15931 12590	9920 SF		7440 SF		NO		2480 SF		21,22	LOTS 40,41,42,43 BLOCK AA *Reg Ind.Cert. #15931
100 WL 100-WS	CHARLES KALCIK, DEC'D & ELIZABETH KALCIK	15	5369	4000 SF		857 SF 3143 SF		NO			I LSI-6(4)	21,22 21-A,22-A	LOTS 80,81 BLOCK X* Reg.Ind. Cert.#5369
101WL 101-WS	DOROTHY SCHULTZ " "	52	16376	8000 SF		686 SF 7314 SF		NO			I LSI-6(4)	22 22-A	LOTS 76,77,78,79 BLOCK X* Reg.Ind.Cert.#16376
102-WS 102PR	PERCY G. HANSEN " " "	122	37383	8000 SF		8000 SF		NO			LSI-6(4) I	22 22	LOTS 72,73,74,75 BLOCK X* Reg.Ind Cert. #37383
103-WS 103PR	FRANK K. LEVIN " " "	86	26451	4000 SF		4000 SF		NO			LSI-6(4) I	22 22	LOTS 70,71 BLOCK X*Reg.Ind Cert.#26451
104WL	UNKNOWN HEIRS OF MARY LUECHT DECEASED	16 40	5632 12834	10882 SF		10882 SF		NO			I	22	LOTS 28,29,30,31 BLOCK AA*Reg Ind Cert. #5632
106WL	IRENE E. VOLLERT, (COMMISSIONER)	DOCKET 177 142	13 85	7440 SF		7440 SF		NO				22	NOT REGISTERED & CERTIFIED LOTS 21,22,23 BLOCK AA
107WL	THE ESTATE OF CHARLES & ANNA VOHNOUTEK, BOTH DECD	27	9030	9920 SF		2480 SF		NO		7440 SF		22	LOTS 17,18,19,20 BLOCK AA* Reg.Ind. Cert. #9030
108WL	LOLA E. & ROBERT E. STARCHER	89 90	27431 27616	18977 SF		18977 SF		NO				22	LOTS 26,27,28,29, 30,31,32,33, BLOCK Z*
109WL	FRANK K. LEVIN	86	26451	19840 SF		19840 SF		NO				22	LOTS 34,35,36,37,38,39,40,41 Reg.Ind.Cert. BLOCK Z * #26451
110WL	MARY & JOHN M. KNEBLEWICZ	121 36	36991 11442	9920 SF		4960 SF		NO		4960 SF	I	22	LOTS 42,43,44,45 BLOCK Z * Reg.Ind.Cert. #36991
111-WS 111PR	LUCIEN FISK WAKEFIELD	673	655	8000 SF		8000 SF		NO			LSI-6(4) I	22 22	LOTS 66,67,68,69 BLOCK X NOT CERTIFIED & REGISTERED

N.B. Deduct disputed area from combined Total of Pcls. 87 & 92

* REGISTERED LAND (TORRENS)
NORTHFIELD HEIGHTS ALLOTMENT
L - LANDLOCKED

Revise Area Pcl. 75SL 2-18-72 R.A.W.
Change Pcls 77WD, 77WD-1 & 78WD To Standard Easements Per I.O.C. From S.A. Guziak 11-30-67 Bill
Changed Parcel 75S to 75SL 11-2-70 REVISED T.B.A. Pcl. 75-T L.S. 9-30-70
CHANGED PARCEL 75 TO A SLOPE 10-1-70 NAME CHANGE PCL.107 SMITH 1-8-68
NAME CHANGE PCLS. 96 & 100 - SMITH - 12-28-67

Name Change Pcl 71 WL 12-7-67 Earl
Name Change Pcl. 111 WS & PR 11-21-67 Bill
Name Change Pcl. 104 WL 10-26-67 Smith
Name Change Pcl. 111 WS 10-24-67 - Smith
ADDED 3 PARCELS 102, 103, 111 & 2 SECTION NO. 10/11/67 CAL.
Deleted Pcl. 67-1 & 72, Combined Area With Pcl 67 Per I.O.C. from H. Kandel & S. Guziak Dated 9-1-67 9-6-67 Lee

DATE OF PREPARATION		
REV	DATE	DESCRIPTION
1	4-14-67	ADDED T.B.A., REVISED RESIDUE & FUNDING IN PARCELS 92 WL & 87 WL
2	6-16-67	REVISED DEED AREA & LEFT RESIDUE Pcl. 80 WL
3	7-28-67	Rev. Res. per I-O-C of 10-11-66
4	8-1-67	Rev. Pcls 81 thru 92 deed area
5	9/21/67	Added Funding Breakdown Lee

DELETED PCLS. 79-LA, 79 AERIAL, 79-1-AERIAL, 79-5A, 79-15A, 79-25A, 79-35A & 79-X. ADDED PCL. 79-WL 10-8-71

ADDED PCL. 80-U PER H. STRAHL. LEE 7-22-68
CHANGED NAME PCL. 94-WL 1-10-67 Lee
Changed Deed Area & T.B.A. Pcl. 71-WL, 1/4/68 Lee
Changed Pcl. 75-WD to a Standard Highway Easement Per I.O.C. from S.A. Guziak dated 12-6-67. Lee 12-6-67

State Highway Dept. Div. 4 R/W. ENGR. ADMIN SECT. JAN 30 1967

NOTE: JOB NUMBERS FOR FUNDING	I (Mailine)	LSI-6(4) (Scenic)	LSI-6(2) (Scenic)
Fed. Job No.	I-271-6(16)	LSI-271-6(4)	LSI-271-6(2)
Project No.	I-271-SUM-2.98 (8.29)	I-271-SUM-10.30	I-271-SUM-10.25
State Job No.	04699(0)	04945(0)	04877(0)

SUMMARY OF RIGHT-OF-WAY REQUIRED

FED. RD.	STATE	PROJECT	
2	OHIO	I-271-6(27)237	

SUM-271-8.29
SUM-271-10.25-SI(1)
SUM-271-10.30-SI(1)

RIGHT-OF-WAY SHEET

296/313

9/25

PARCEL No	OWNER	DEED RECORD BOOK	DEED RECORD PAGE	DEED AREA TOTAL ACRES	DEED AREA CORR. ACRES	TO BE ACQUIRED LAND ACRES	TO BE ACQUIRED P.R.O. ACRES	TO BE ACQUIRED BLDGS.	RESIDUE LEFT	RESIDUE RIGHT	TYPE FUNDS	SHEET No	REMARKS
112-WS 112-PR	FRANK K. LEVIN " " "	86	26451	4000 SF		4000 SF		NO			LSI-6(4) I	22-A 22	LOTS 64,65 BLOCK X* Reg.Ind.Cert. #26451
113-WS 113-PR	WALTER & JOSEPHINE KOBA " " "	18	6352	4000 SF		4000 SF		NO			LSI-6(4) I	22-A 22	LOTS 62,63 BLOCK X* Reg.Ind.Cert. #6352
114-WS 114-PR	JUANITA G. SHELHART " " "			4000 SF		4000 SF		NO			LSI-6(4) I	22-A 22	LOTS 60,61 BLOCK X NOT CERTIFIED & REGISTERED
115-WS 115-PR	FRANK K. LEVIN	86	26451	14000 SF		14000 SF		NO			LSI-6(4) I	22-A 22	LOTS 53,54,55,56,57,58,59 Reg.Ind.Cert. BLOCK X * #26451
116WL	FRED DYKE	19	6790	4960 SF		4960 SF		NO			I	22	LOTS 24,25 BLOCK Z* Reg.Ind.Cert.#6790
117WL	PERCY G. HANSEN	122	37383	4960 SF		4960 Sf		NO				22	LOTS 22,23, BLOCK Z*Reg.Ind.Cert. #37383
118WL	JESSIE M. STEWART	Auditor's	Deed 88148	2480 SF		2480 SF		NO				22	NOT CERTIFIED & REGISTERED LOT 21 BLOCK Z
119WL	PERCY G. HANSEN	122	37383	2480 SF		2480 SF		NO				22	LOT 20 BLOCK Z* Reg.Ind.Cert.#37383
120WL	FRANK SREDNIAWA	36	11465	4960 SF		4960 SF		NO				22	LOT 18,19 BLOCK Z*Reg.Ind.Cert.#11465
121WL	HELEN HERVI	24	8259	4960 SF		4960 SF		NO				22	LOT 16,17 BLOCK Z*Reg.Ind.Cert.#8259
122WL	WILLIAM NOVAK CECELIA NOVAK & JAMES NOVAK	117	35894	9920 SF		2480 SF		NO		7440 SF		22	LOTS 12,13,14,15 BLOCK Z* Reg.Ind.Cert. #35894
123WL	FRANK K. LEVIN	86	26451	7388 SF		7388 SF		NO				22	LOTS 23,24,25,26 BLOCK CC* Reg.Ind.Cert. #26451
124WL	THE ESTATE OF JOHN / MARY KANCE, BOTH DEC'D	18	6351	4047 SF		4047 SF		NO				22	LOTS 27,28 BLOCK CC*Reg.Ind.Cert.#6351
125 WL	ABNER D. ZOOK	103	31708	7904 SF		7904 SF		NO				22	LOTS 29,30,31 BLOCK CC* Reg.Ind.Cert. #31708
126WL	LOLA E. & ROBERT E. STARCHER	89	27431	1773 SF		1773 SF		NO				22	LOT 22 BLOCK CC*
127WL	UNKNOWN HEIRS OF HATTIE B. COURIER, DEC'D.	14	5219	1703 SF		1703 SF		NO				22	LOT 21 BLOCK CC* Reg.Ind.Cert.#5220
128WL	LOLA E. & ROBERT E. STARCHER	89	27431	1633 SF		1633 SF		NO				22	LOT 20 BLOCK CC*
129WL	PETER & MARGARET KAPALINSKY	21	7332	2453 SF		2453 SF		NO				22	LOT 19 BLOCK CC* Reg.Ind.Cert.#7332
130WL	THE ESTATE OF JOSEPH HEGEDUS DECEASED	33	10642	1980 SF		1980 SF		NO				22	LOT 18 BLOCK CC* Reg.Ind.Cert.#10642
131WL	LOUIS & MARY DELCIAPPO	14	5169	1980 SF		1980 SF		NO				22	LOT 17 BLOCK CC*
132WL	ALONZO FOTHERINGHAM	17	6033	1980 SF		1980 SF		NO				22	LOT 16 BLOCK CC*Reg.Ind.Cert.#6033
133WL	PERCY G. HANSEN	122	37383	1980 SF		1980 SF		NO				22	LOT 15 BLOCK CC* Reg.Ind.Cert.#37383
134WL	LOLA E. AND ROBERT E. STARCHER	89	27431	1980 SF		1980 SF		NO				22	LOT 14 BLOCK CC*
135WL	FRANK K. LEVIN	86	26451	1979 SF		1979 SF		NO				22	LOT 13 BLOCK CC*Reg.Ind.Cert.#26451
136WL	PERCY G. HAN SEN	122	37383	6336 SF		6336 SF		NO				22	LOT 1,2,3 BLOCK CC* Reg.Ind.Cert.#37383
137WL	FRANK K. LEVIN	86	26451	1980 SF		1980 SF		NO				22	LOT 4 BLOCK CC*Reg.Ind.Cert.#26451
138WL	LURA KNIVETON DECEASED	14	5298	1980 SF		1980 SF		NO				22	LOT 5 BLOCK CC*Reg.Ind.Cert.#5298
139WL	STATE OF OHIO DEPT. OF HIGHWAYS (Formerly Owned By E.M.FALCO)	14	5001	1980 SF		1980 SF		NO				22	LOT 6 BLOCK CC* Reg.Ind.Cert.#128538
140WL	LOLA E. & ROBERT E. STARCHER	90	27616	1980 SF		1980 SF		NO				22	LOT 7 BLOCK CC*Reg.Ind.Cert.#27616
141WL	JESSIE M. STEWART	Auditor's 88148 3383	Deed 242	1980 SF		1980 SF		NO				22	NOT CERTIFIED & REGISTERED LOT 8 BLOCK CC*
142WL	PERCY G. HANSEN	122	37383	1980 SF		1980 SF		NO				22	LOT 9 BLOCK CC* Reg.Ind.Cert.#37383
143WL	TONY AGRUSA	14	5119	1980 SF		1980 SF		NO				22	LOT 10 BLOCK CC* Reg.Ind.Cert.#5119
144 WL	PERCY G. HANSEN	122	37383	4356 SF		4356 SF		NO				22	LOT 11,12 BLOCK CC* Reg.Ind.Cert.#37383
145PR	FRANK K. LEVIN	86	26451	1980 SF				NO		1980 SF		22	LOT 19, BLOCK Y* Reg.Ind.Cert.#26451
146 WL	LOLA E. & ROBERT E. STARCHER	89	27431	5940 SF		637 SF		NO		5303 SF (L)		22	LOTS 16,17,18 BLOCK Y* Reg.Ind.Cert. #27431
147WL	PERCY G. HANSEN	122	37383	1980 SF		495 SF		NO		1485 SF (L)		22	LOT 15 BLOCK Y* Reg.Ind.Cert.#37383
148 WL	FRANK K. LEVIN	86	26451	1980 SF		637 SF		NO		1343 SF (L)		22	LOT 14 BLOCK Y * Reg.Ind.Cert.#26451
149WL	PERCY G. HANSEN	122	37383	2376 SF		951 SF		NO		1425 SF	I	22	LOT 13 BLOCK Y * Reg.Ind.Cert.#37383
150-WS 150-PR	LOLA E. & ROBERT E STARCHER	89	27431	8000 SF		8000 SF		NO			LSI-6(4) I	22-A 22	LOTS 49,50,51,52 BLOCK X*
151-WS 151-PR	FRANK K. LEVIN	86	26451	8525 SF		8525 SF		NO			LSI-6(4) I	22-A 22	LOTS 46,47,48 BLOCK X*Reg.Ind.Cert. #26451
152-WS 152-PR	JOHANNA KUNART & FRANK K. LEVIN etal.	16	5639	4000 SF		4000 SF		NO			LSI-6(4) I	22-A 22	LOTS 44,45 BLOCK X* Reg.Ind.Cert.#5639

PARCEL No	OWNER	DEED RECORD BOOK	DEED RECORD PAGE	DEED AREA TOTAL ACRES	DEED AREA CORR. ACRES	TO BE ACQUIRED LAND ACRES	TO BE ACQUIRED P.R.O. ACRES	TO BE ACQUIRED BLDGS.	RESIDUE LEFT	RESIDUE RIGHT	TYPE FUNDS	SHEET No	REMARKS
153-WS 153-PR	LOLA E. & ROBERT E. STARCHER " " " " "	89	27431	4000SF		4000 SF		NO			LSI-6(4) I	22-A 22	LOTS 42,43 BLOCK X*
154WL 154-WS	IRENE E. BOROSH " "	15	5477	4000 SF		667 SF 3333 SF		NO			I LSI-6(4)	22 22-A	LOTS 40,41 BLOCK X* Reg.Ind.Cert.#5447
155WL 155-WS	STANLEY & ROSE CWIERTNIA " " "	16	5733	4000 SF		2000 SF 2000 SF		NO			I LSI-6(4)	22 22-A	LOTS 38,39 BLOCK X* Reg.Ind. Cert.#5773
156 WL 156-WS	JOSEPH & GRACE GUERRA " " "	16	5734	4000 SF		3333 SF 667 SF		NO			I LSI-6(4)	22 22-A	LOTS 36,37 BLOCK X* Reg.Ind. Cert.#5734
157 WL	LOLA E. & ROBERT E. STARCHER	89	27431	10814 SF		10814 SF		NO			I	22	LOTS 31,32,33,34,35BLOCK X*
158 WL	PERCY G. HANSEN	122	37383	4000 SF		4000 SF		NO				22	LOTS 29,20 BLOCK X*Reg.Ind.Cert.#37383
159 WL	STEVE SZEGO, DECEASED	47	14904	4000 SF		4000 SF		NO				22	LOTS 27,28 BLOCK X*Reg.Ind.Cert.#14904
160WL	PERCY G. HANSEN	122	37383	8000 SF		8000 SF		NO				22	LOTS 23,24,25,26 BLOCK X* Reg.Ind.Cert. #37383
161WL	FRANK K. LEVIN	86	26451	4000 SF		2000 SF		NO		2000 SF		22	LOTS 21,22 BLOCK X* Reg.Ind.Cert.#26451
162WL	STANLEY L. ABRAMS	111	33981	4000 SF		201SF		NO		3799 SF		22	LOTS 11,12 BLOCK X* Reg.Ind.Cert.#33981
163WL	THE ESTATE OF CHARLES W. PRATT & ELLEN PRATT, BOTH DEC'D	21	7284	4000 SF		602 SF		NO		3398 SF		22	LOTS 9,10 BLOCK X* Reg.Ind.Cert.#7284
164WL	STANLEY L. ABRAMS	111	33981	15924 SF		6376 SF		NO		9548 SF		22	LOTS 1,2,3,4,5,6,7,8, BLOCK X* LOTS 11,12 BLOCK X* Reg.Ind.Cert.#33981
165WL 165-WS	DIXIE OHIO EXPRESS, INC. AN ALABAMA CORPORATION " " " " " "	4132	142	25.802		3.934 6.73		NO		15.137	I LSI-6(2)	22,23 22-A,23-A	AREA INCLUDES LOT 25, BLOCK L, NORTHFIELD HEIGHTS ALLOTMENT REGISTERED LAND
166WL	A.J. BALTES INC.	4438	186	25.613	25.5644	4.4796		NO	10.3122 (L)	10.7726	I	23	
166AWL	A.J. BALTES INC.	4441	132	6.62	6.623	2.0238		NO	4.2213 (L)	0.3779		23,24	
167WL	ALBERT A.&CHRISTINE L. AUSPERK	3479	379	8.188	1.57	0.9690	0.1582	YES	0.453			24	Sudlots 23,24, Block Y DEED AREA CORRECTION DUE TO 6.62 AC. OUTSALE TO BALTES INC. PAR. 166A WL
168WL	JOHN P. BONATH & THELMA M. BONATH	2559 2993	410 77	0.57 0.57		0.6426	0.0469	YES		0.4505		23,24	
171WA	SEAL S. & MARTHA S. HANN	3895	139					NO				25	FILL AND GRADE EXISTING CREEK LOT 84 NORTHFIELD PARK ESTATES
173WA	JENNIE KOLTCZ	4704	125					NO				25	FILL AND GRADE EXISTING CREEK LOTS 8 AND 83 NORTHFIELD PARK ESTATES
174	ERNEST WHITT & MOSSIE WHITT	17	6009									22	LOTS 23,24 BLOCK Y* No take Reg.Ind.Cert.#6009
175PR	LOLA E. & ROBERT E. STARCHER	89	27431					NO				22	LOTS 21,22 BLOCK Y* Reg.Ind.Cert.#27616
176	JOSEF KAISER	14	5087					NO			I	22	LOT 20, BLOCK Y*Reg.Ind.Cert.#5087

Deleted Pcl. 176-PR per I.O.C. from S.A. Guziak dated 1-12-68. Lee 1-15-68

* REGISTERED LAND (TORRENS)
NORTHFIELD HEIGHTS ALLOTMENT
L - LANDLOCKED

NAME CHANGE PCL. 124 SMITH 1-8-68

REV	DATE	DESCRIPTION
6	10/18/67	Name Change Pcl. 173WA Bill
7	10-20-67	Name Change Pcl. 138WL
8	11/1/67	Name Change Pcl. 127WL Bill
9	11-17-67	NAME CHANGE PCL. 130WL ~SMITH
10	12-21-67	NAME CHANGE PCLS. 121, 152 & 159 SMITH 12-21-67
11	12-28-67	NAME CHANGE PCL 163 - SMITH

DATE OF PREPARATION		
REV	DATE	DESCRIPTION
	6-9-67	Parcel 174PR deleted
2	8-10-67	NAME CHANGE Pcl. 139WL
3	9/21/67	Added Funding Breakdown Lee
4	10/11/67	ADDED FUNDING BREAKDOWN & LANDOR PARCELS 112 PR, 113PR, 114-PR, 115PR, 150 PR, 151PR, 152-PR & 153PR

State Highway Dept. Div. 4
R/W ENGR & ADMIN SECT.
RAVENNA, OHIO
JAN 30 1967
LOGGED

FED. RD.	STATE	PROJECT	
2	OHIO		

207/313

SUM.-271-8.29

RIGHT-OF-WAY SHEET 10/25

1-36" STUMP
3-18" ELM
3-30" ELM

1-24" STUMP
4-15" ELM
1-15" SYCAMORE
1-24" WILLOW

2-12" ELM
1-15" APPLE
6-20" SYCAMORE

2-12" ELM
1-15" APPLE
1-15" SYCAMORE

1-12" CHERRY
1-12" ELM
1-15" APPLE
2-18" WILLOW

2-18" HICKORY
3-18" WALNUT

3-18" HICKORY

3-12" POPLAR

SUMMIT COUNTY
BOSTON TOWNSHIP
LOT 1 ~ TRACT 1
RANGE 11 WEST
TOWNSHIP 4 NORTH

END PROJECT
SUM.-271-7.65
STA.438+00.00

BEGIN PROJECT
SUM.-271-8.29
STA.436+98.25

STA. 429+00

STA. 438+00

C. & JULIA ZIELENSKI

LOT 1

LOT 2

EAST LINE LOT 1

VEGETATION LINE Z

RIVER

WEST LINE LOT 45

CANAL

VEGETATION LINE J

GRAVEL DRIVE

POINT OF ACCESS STA. 430+40 LT. 8 LRT 20 WIDTH (UNDER BRIDGE ONLY)

POINT OF ACCESS STA. 434+34 RT. 10' WIDTH (UNDER BRIDGE ONLY)

C.P.A. 436+96 164.04'

E.P.A. 436+96 86.67'

E.P.A. 436+96 22.33'

E.P.A. 436+05 22.33'

E.P.A. 436+05 86.67'

C.P.A. 436+05 199.72'

PINE TREES

RESIDENCE DRIVE (ABANDON)

BEGIN WORK
SUM-271-8.29
STA.436+07.25

CONSTRUCTION LIMITS

BARBED WIRE FENCE

FIELD DRIVE

PASTURE

(52) WL T.B.A. 1.635 AC

(53) WL T.B.A. 0.636 AC

(54) WL

SURVEY (I-271)

N. 54°14'22"E.

343.48'

72.57'

84.21'

152.05'

N. 35°45'38"E.

N. 16°15'38"W.

N. 16°12'45"W.

N. 27°17'07"W.

N. 72°15'38"W.

N. 62°48'48"W.

N. 30°58'15"E.

644.21'

BEGIN SHEET

SUMMIT COUNTY
BOSTON TOWNSHIP
LOT 2 ~ TRACT 1
RANGE 11 WEST
TOWNSHIP 4 NORTH

CUYAHOGA

OHIO

EAST LINE LOT 2

VEGETATION LINE Z

SUMMIT COUNTY
BOSTON TOWNSHIP
LOT 45
RANGE 11 WEST
TOWNSHIP 4 NORTH

END SHEET

MATCH TO RW SHEET 11 OF 25

1-24" OAK

4-12" ELM
2-18" ELM
1-36" SYCAMORE

1-18" HICKORY
1-18" WALNUT

2-12" OAK
1-12" APPLE
2-15" ELM
1-30" ELM

2-12" SYCAMORE
3-18" CHERRY
1-20" CHERRY
2-24" HICKORY

5-12" ELM
1-12" SYCAMORE
1-24" HICKORY

FENCE QUANTITY - TYPE 47	
436+05 (RT) To 436+96 (LT.)	117 L.F.
436+05 (RT.) To 438+00 (RT.)	308 L.F.
436+96 (LT.) To 438+00 (LT.)	181 L.F.
TOTAL	606 L.F.

LEGEND

LA RW	LIMITED ACCESS RIGHT OF WAY (PROPOSED)
RW	PROPOSED AERIAL EASEMENT LINE
RW	SIDE ROAD RIGHT OF WAY (PROPOSED)
LA RW	LIMITED ACCESS AS PROPOSED UNDER PREVIOUS CONTRACT
	ALL PROPOSED EASEMENTS NOT INCLUDED ABOVE
	CONSTRUCTION LIMITS
	EXISTING RIGHT OF WAY (SIDE ROADS)
℄	EXISTING PROPERTY LINES
Z	FORMER PROPERTY OR LOT LINE
x x x	EXISTING & PROPOSED FENCE
	POLE FOR OHIO EDISON POWER LINES
	POLE FOR OHIO BELL TELEPHONE LINE
	POLE FOR OHIO EDISON & OHIO BELL TELEPHONE LINES
	TREE REMOVAL

THE TREES, AS SHOWN, REPRESENT THE COUNT AS BEING LEFT OR RIGHT OF THE CENTER LINE SURVEY AND LOCATED BETWEEN THE CORRESPONDING 100 FT. STATIONS.

◉ MONUMENTS TO BE SET

GRAPHIC SCALE
0 50 100 150 200

TYPE - I FUNDS

PRELIMINARY SUBMITTAL DATE: SEPT. 9, 1965
RIGHT OF WAY COMPLETION DATE: JAN 25, 1967

No.	REVISIONS	MADE BY	DATE

STA. 429+00 TO STA. 438+00

State Highway Dept. Div. 6
R/ ENGR. & ADMIN SECT.
ANDREW OHIO

JAN 20 1967

LOGGED
Crds. Ell Bk.

C.E.E.

FED. RD.	STATE	PROJECT	
2	OHIO		

298/313

SUM-271-8.29
RIGHT OF WAY SHEET 11/25

MATCH TO R/W SHEET 10 OF 25

MATCH TO R/W SHEET 12 OF 25

BEGIN SHEET

END SHEET

STA. 438+00

STA. 453+00

SUMMIT COUNTY
BOSTON TOWNSHIP
LOT 44
RANGE 11 WEST
TOWNSHIP 4 NORTH

SUMMIT COUNTY
BOSTON TOWNSHIP
LOT 45
RANGE 11 WEST
TOWNSHIP 4 NORTH

EDNA A. MABRY
54 WL
(PARCEL PURCHASED UNDER CONTRACT SUM-271-8.01)

JOSEPHINE LAHOSKI
60 WL

BEN G. & ANN M. LAHOSKI
55 WL
(PARCEL PURCHASED UNDER CONTRACT SUM-271-7.98)

T.B.A.* 1.219 Ac.

BOSTON MILLS ROAD (C.H. 32)

℄-SURVEY (I-271)

STA. 450+23.59 ℄-I-271 = STA. 117+39.69 ℄-R/W C.R. # 32

BEGIN ACQUISITION
SUM-271-8.29
STA. 449+36.48

END ACQUISITION
SUM.-271-7.65
STA. 453+09.64

ROBERT ARTHUR NOURSE & FERN NOURSE
TBA: 16.587 Ac
PRO: 0.143 Ac
TOTAL: 17.130 Ac

ROADWAY PLANS CURVE DATA
Δ = 62°30' RT.
T = 193.17
L = 347.22'
Dc = 18°
P.I. STA. 17+38.36

FENCE QUANTITY	TYPE 47
440+00 (RT) To 449+57 (RT)	1434 LF
449+22 (LT) To 449+44 (RT)	71 LF
440+00 (LT) To 449+07 (LT)	1318 LF
451+34 (RT) To 453+00 (RT)	527 LF
450+98 (LT) To 451+19 (RT)	71 LF
450+85 (LT) To 453+00 (LT)	717 LF
TOTAL	4138 LF

◉ MONUMENTS TO BE SET

GRAPHIC SCALE
0 50 100 150 200

TYPE I FUNDS

PRELIMINARY SUBMITTAL DATE: SEPT. 9, 1965
RIGHT OF WAY COMPLETION DATE: JAN. 25, 1967

Nº	REVISIONS	MADE BY	DATE
1	DELETED P.I. 55 WL, COMBINED WITH 55 WL	I RICK	3-30-67
2	ADDED LEADER LINE P.I.s 55 WL & 60 WL	I RICK	4-3-67

STA. 438+00 TO STA. 453+00

State of Ohio DEPT. OF HIGHWAYS R/W - ENGR. & ADMIN. SECT. RIVERSIDE DRIVE
JAN 30 1967
LOGGED
CHK'D. BY

K & E

FED. RD.	STATE	PROJECT	
2	OHIO		

299/313

SUM-271-8.29

RIGHT OF WAY SHEET 12/25

MATCH TO R/W SHEET 11 OF 25

MATCH TO R/W SHEET 13 OF 25

BEGIN SHEET

END SHEET

STA. 453+00

STA. 468+00

℄ SURVEY CURVE DATA

P.I. STA. 460+53.13
Δ = 14°29'18" LT.
D_c = 1°00'
R = 5729.58'
T = 728.30'
L = 1448.83'
E = 46.10'

BEN G. LAHOSKI ℄ ANN M. LAHOSKI

60-1 WL

T.B.A. = 0.069 Ac

3-15" POPLAR
1-24" OAK
1-36" OAK
13-15" OAK

1-12" OAK
3-15" POPLAR

2-15" POPLAR
2-12" OAK

N 65°20'36" E
165.00' (CALC.)

455+95.33
544.45'

580.00'± (D)
582.00' (CALC.) ℄ TO COR.

453+24.83
0.00

N 43°00'44" E
148.53'

110.58'

℄ TS

60'

455+42.63
281.85'

454+79.35
324.30'

370.00' (D)

N 0°18'53" E

LA RW

CONSTRUCTION LIMITS

POSSIBLE SLIDE AREA

JOSEPHINE LAHOSKI

60 WL

T.B.A. = 1.218 Ac

ROBERT ARTHUR NOURSE ℄ FERN NOURSE

61 WL

T.B.A. = 16.987 Ac
P.R.O. = 0.143 Ac
TOTAL = 17.130 Ac

SUMMIT COUNTY BOSTON TOWNSHIP LOT 44 RANGE 11 WEST TOWNSHIP 4 NORTH

2-12" MAPLE
10-12" OAK
1-36" OAK
1-24" OAK

13-15" ELM

19-12" ELM
1-15" CHERRY

1-15" WALNUT
4-15" OAK
1-24" OAK
3-15" ELM
2-12" MAPLE

N 48°05'04" E
520.87'

461+50
350'

3-15" MAPLE
1-15" SYCAMORE
3-15" CHERRY
8-15" ELM

3-15" OAK
2-12" MAPLE
7-15" ELM
7-15" CHERRY

1-15" CHERRY
6-15" BEECH
10-15" OAK
5-15" ELM

7-15" BEECH
10-15" ELM
5-25" OAK
2-15" OAK

MORTON W. STANFORD CATHERINE STANFORD J. CLAYTON STANFORD

63 WL

T.B.A. = 0.169 Ac

1-12" BEECH
4-15" OAK
4-15" CHERRY
3-15" ELM
1-24" WALNUT

3-15" ELM
1-15" POPLAR
5-15" OAK

S 85°56'07" E

LOT 43

LOT 44

617.34' (D) ℄

(LL)

SUMMIT COUNTY BOSTON TOWNSHIP LOT 43 RANGE 11 WEST TOWNSHIP 4 NORTH

466+91.75
241.42'

LOT 43
N 0°24'10" W
(310.11' (CALC.)
320.46'
LOT 39
N 15°04'27" E

464+09.24
R 1800

177.70

100.15'

80'

147.52'

63 WL

SET MON
464+35.93
212.71'

SET MON
467+19.05
212.71'

465+77.49
143.58'

MARKED STONE FD.

PT. STA 467+73.66

462+50
175'

N 33°54'55" E
253.04'

S 73°06'51" E
199.32'

℄ SURVEY (I-271)

455

460

465

N 54°14'22" E

N 35°45'04" E

453+09.64

13.96'

453+23.67
16.41'

453+14
13.26' RT.

453+24.83
0.00

2-12" OAK

2-12" APPLE

1-20" ELM
9-12" OAK
9-25" HICKORY
2-15" HICKORY

2-12" APPLE

1-18" HICKORY
2-18" OAK
21-12" OAK

3-12" BEECH
34-12" OAK
1-18" POPLAR
1-15" CHERRY
2-15" POPLAR

3-12" MAPLE
3-12" POPLAR
25-12" OAK
1-12" HICKORY
1-15" CHERRY

10-12" OAK
2-12" HICKORY
1-15" POPLAR
4-12" BEECH
5-15" CHERRY

7-12" CHERRY
5-12" MAPLE
5-12" HICKORY
16-12" OAK
14-12" BEECH

7-15" BEECH
7-12" OAK
1-20" POPLAR
5-20" OAK

1-15" POPLAR
7-20" OAK
6-20" BEECH
5-12" OAK
13-12" BEECH

1-20" POPLAR
1-20" ELM
4-20" OAK
6-12" BEECH

7-12" OAK
5-20" OAK
3-20" BEECH
2-15" BEECH
2-12" POPLAR

3-15" BEECH
2-20" OAK
8-12" OAK

ROBERT ARTHUR NOURSE ℄ FERN NOURSE

61 WL

DAVID P. McMILLEN ℄ ESTATE OF STELLA M. STANFORD

62 WL

T.B.A. = 21.9936
P.R.O. = 0.4592
TOTAL = 22.4528 Ac

POSSIBLE SLIDE AREA

CONSTRUCTION LIMITS

N 0°06'42" W
1330.98' (D)

LOT 44

LOT 39

466+34'

466+00
R 1800

299.38'
N 59°25'25" E

LA RW

467+73.66
269.06'

N 74°11'59" E
213.83'±

266.25'
N 59°11'54" E

481.21'
N 70°22'45" E

454+00
400'

460+87.97
342.34'

681.25'
N 44°57'04" E

224.75'

466+00
400'

229.12' (CALC.)

143.58'

464+19.47

17.08'

367.08'

465+77.49

MONUMENTS TO BE SET

GRAPHIC SCALE
0 50 100 150 200

TYPE I FUNDS

PRELIMINARY SUBMITTAL DATE: SEPT. 9, 1965
RIGHT OF WAY COMPLETION DATE: JAN 25, 1967

Nº	REVISIONS	MADE BY	DATE
1	ADDED LEADER LINE Pvt. 63WL	ERICK	4-3-67

STA. 453+00 TO STA. 468+00

State Highway Engr. & R/W Engr. & Admn. Sect. Harrisburg, Penna.
JAN 30 1967
LOGGED
Crds. Rill Bk.
K & E

FED. RD.	STATE	PROJECT	
2	OHIO		

300/313

SUM-271-8.29

RIGHT OF WAY SHEET 13/25

MATCH TO R/W SHEET 12 OF 25

STA. 468+00

BEGIN SHEET

SUMMIT COUNTY
BOSTON TOWNSHIP
LOT 39
RANGE 11 WEST
TOWNSHIP 4 NORTH

1-12" CHERRY
1-24" OAK
3-36" STUMPS
1-24" ELM
4-15" POPLAR
1-36" OAK

5-12" POPLAR
2-24" STUMPS
4-15" SYCAMORE

4-12" POPLAR
5-20" ELM
3-15" OAK

3-12" BEECH
5-15" OAK
3-12" POPLAR
1-24" OAK

1-12" SYCAMORE
2-24" POPLAR
5-15" OAK
3-12" BEECH
3-24" OAK

3-24" OAK
10-15" OAK
3-15" BEECH
3-15" POPLAR

1-12" POPLAR
3-15" ELM
1-18" OAK

6-12" PINE
PINE GROVE

1-24" ELM
13-15" OAK
3-24" OAK

1-12" APPLE
6-15" OAK
1-15" ELM

2-15" APPLE
1-15" ELM
3-12" OAK
3-12" MAPLE

470+20
405

N 39°45'04" E
150.00

472+00
405

LA RW

N 15°04'27" E
350.46

CONSTRUCTION LIMITS USING 3:1 BACKSLOPES

CONSTRUCTION LIMITS USING 2:1 BACKSLOPES

N 85°27'30" E
284.40

474+00
200

EPA

CPA

CONSTRUCTION LIMITS

512 LIN FT TYPE 47 FENCE

716.18'

N 41°55'24" E

LA RW

574'-TWIN 36" CONDUIT
STR. #SUM-271-0695

DAVID P. McMILLEN
& ESTATE OF
STELLA M. STANFORD

62 WL

T.B.A. = 21.9936 Ac
P.R.O. = 0.4592 Ac
TOTAL = 22.4528 Ac

470+72
50+00 CULV.

470

℄-SURVEY (I-271)

475

N 39°45'04" E

480

STA. 50+00 HINES HILL RD.
STA. 481+48.75 I-271

64 WD

64-1 WD

62 WD

62-1 WD

64 T

62 T

64 WL

107.40
107.39

N 39°45'04" E
284.67
RW

S 55°30'10" E
CONSTRUCTION LIMITS

S 55°49'03" E
510.27

TEMPORARY RUNAROUND

FOR ACREAGE, SEE SHT. 15

481+15.66 (L12.84')
481+24 (T.R. 115')

480+65.70 (174.76')
481+12.73 (T.R. 115')

10°50'58" SKEW

149.10

482+65.38
51+18

79°09'02"

HINES HILL RD.

P.C. STA.
145+78.58

P.T. STA.
151+40.52

(T.R. 115')

S 55°49'03" E
510.27

FOR ACREAGES AND OWNERSHIPS IN THE HINES HILL RD. AREA, SEE R/W SHEET Nº 14.

481+43.90 (184.31')
50+80.09 (35.50')

481+59.88 (183.05')
51+84.42 (T.R. 115')

S 55°49'03" E
CONSTRUCTION LIMITS

62-1 TH

62-3 WD

62-2 WD

8-12" OAK

FOR DETAILS OF HINES HILL ROAD, SEE R/W SHEET Nº 14.

END SHEET

STA. 483+00

MATCH TO R/W SHEET 15 OF 25

CPA

CONSTRUCTION LIMITS

1069 LIN FT TYPE 47 FENCE

884.25'
N 38°00'24" E

LA RW

EPA

CPA

472+00
200

LA RW

CONSTRUCTION LIMITS USING 2:1 BACKSLOPES

CONSTRUCTION LIMITS USING 3:1 BACKSLOPES

213.83'
N 74°11'55" E

228.04
N 12°22'22" W

449.50
350

210.00'
N 39°45'04" E

471+62
350

DAVID P. McMILLEN
& ESTATE OF
STELLA M. STANFORD

62 WL

T.B.A. = 21.9936 Ac
P.R.O. = 0.4592 Ac
TOTAL = 22.4528 Ac

SEE R/W SHEET Nº 14
FOR ADDITIONAL ACREAGES

1-20" OAK
1-12" HICKORY
1-12" ELM

1-20" POPLAR
9-20" OAK
1-20" WILLOW
2-12" SYCAMORE

1-12" SYCAMORE
9-12" OAK
5-12" WILLOW
1-18" OAK

1-20" OAK
9-12" OAK
2-12" POPLAR

1-20" OAK
10-15" BEECH
1-30" OAK
1-12" MAPLE

1-12" HICKORY
5-20" OAK
4-12" OAK

1-24" CHERRY
1-15" OAK
5-24" OAK
1-12" HICKORY
4-12" BEECH

9-12" PINE
2-12" HICKORY
6-12" POPLAR

12-12" PINE

◉ MONUMENTS TO BE SET

GRAPHIC SCALE
0 50 100 150 200

TYPE I FUNDS

PRELIMINARY SUBMITTAL DATE: SEPT. 9, 1965 RIGHT OF WAY COMPLETION DATE: JAN 25, 1967			
Nº	REVISIONS	MADE BY	DATE
1	ADDED LEADER LINES Pets 62 WL & 64-1 WD	IRICK	4-3-67

STA. 468+00 TO STA. 483+00

Date: January 20, 1967
R/W ENGR. & ADMIN. SECT.
RIVERSIDE, OHIO

Job 00 1967

LOGGED
Bill Bk.

Crds.

K & E

FED. RD.	STATE	PROJECT	
2	OHIO		

301/313

SUM-271-8.29

RIGHT OF WAY SHEET 14/25

SUMMIT COUNTY
NORTHFIELD CENTER TWP.
(FORMERLY BOSTON TWP.)
LOT 40
RANGE 11 WEST
TOWNSHIP 4 NORTH

WALDO L. SEMON
65 T TBA=0.0349Ac

JUNK YARD
JOHN KREJCI
64 T 0.7878 Ac
64 WL
64 WD TBA: 0500 PRO: 2094 2554 Ac
64-1 WD TBA: 0090 PRO: 1592 1682

APPROXIMATE LIMITS OF JUNK YARD
DIRT DRIVE
DIRT DRIVE
APPROXIMATE LIMITS OF JUNK YARD

N 20°05'25" W
EXISTING P.T. STA 42+15.58
S 64°56'35" E 71.44
S 66°45'03" E 510.27
S 64°05'31" E 54.16
S 62°15'54" E 160.87
S 61°05'54" E 208.71
S 61°05'54" E 267.59'
S 58°30'10" E 286.67
S 55°45'13" E 229.56' (CALC.)
I.P. FD.
LOT 40
LOT 39
BEGIN WORK STA. 43+00
BEGIN RUNAROUND HINES HILL RD STA. 42+00

64 T TEMP. RUNAROUND
CONST. LIMITS
62 T 0.1967 Ac
64 WD
62 WD
64-1 WD
62-1 WD TBA: 0806 PRO: 1765 TOTAL: 2571 Ac
62-1 T 0.6419 Ac
62-2 WD TBA: 0346 PRO: 1454 1800 Ac
62-3 WD TBA: 0238 PRO: 1487 TOTAL: 1725 Ac
62 WL
62-2 T 0.6415 Ac

WHITE PICKET FENCE
GATE
12" OAK
24" OAK
30" OAK
10°50'58" SKEW
340.37'
RW 66'
CONSTRUCTION LIMITS
HINES HILL RD (T.R. 115)
EXIST. R/W
EXISTING R/W
EXISTING P.I. STA. 41+14.22
EXISTING P.T. STA. 42+15.58
P.C. STA. 43+06.67
P.T. STA. 45+81.23
P.C. STA. 151+40.52
P.T. STA. 153+40.52
P.C. STA. 154+64.35
P.C. STA. 56+86.73
END WORK STA. 55+00
END RUNAROUND HINES HILL RD STA. 57+42.39
LINE STA. 57+42.39 = STA. 55+00.00

481+60.63 (171.15)
481+34.14 (45.64)
482+65.26 (167.18)
483+28.40 (178.05)
52+09.30 (142.77)
APPLE ORCHARD
S 51°08'28" E 295.14'
S 57°05'51" E 204.94'
S 26°54'39" E 117.52'
482+26.60 (181.67)
481+42.20 (164.23)
51+80.00 (39.50)
S 63°34'18" E 220.12'
481+15.46 (172.84)
481+24 (T.R. 115)
480+65.70 (174.76)
481+12.73 (48.71)
N 41°55'24" E 716.18'
79°09'02"
485
485
410.62 TO PROP. COR
N 85°45'13" W
482+45.62
172.04'
223.23
551.17
N 64°03'
E 620.35'
NORTHFIELD CENTER TWP.
BOSTON TWP.
21.88 Ac
341.32'
55.00
55.00
55.00

FED. RD.	STATE	PROJECT	
2	OHIO		

302/313

SUM-271-8.29

RIGHT OF WAY SHEET 15/25

MATCH TO R/W SHEET 13 OF 25

STA. 483+00

BEGIN SHEET

MATCH TO R/W SHEET 16 OF 25

STA. 498+00

END SHEET

JOHN KREJCI

JAMES WHITE

JUNK YARD

DIRT DRIVE

(ABANDON)

NORTHFIELD CENTER TWP.
BOSTON TWP.

DAVID P. McMILLEN
& ESTATE OF
STELLA M. STANFORD

RUBY I. PEDERSEN &
HOWARD PEDERSEN

SUMMIT COUNTY
BOSTON TOWNSHIP
LOT 39
RANGE 11 WEST
TOWNSHIP 4 NORTH

SUMMIT COUNTY
NORTHFIELD CENTER TWP.
LOT 40
RANGE 11 WEST
TOWNSHIP 4 NORTH
(FORMERLY BOSTON TWP.)

64 WL — T.B.A. = 5.4704 Ac

62 WL — T.B.A. = 21.9936 Ac
PROJ. = 0.4992 Ac
TOTAL = 22.4928 Ac

(LL) (0.537 Ac)

66 WL — T.B.A. = 10.689 Ac

67 WL (LL)

622 LIN. FT. TYPE 47 FENCE

633 LIN. FT. TYPE 47 FENCE

423 LIN. FT. TYPE 47 FENCE

374 LIN. FT. TYPE 47 FENCE

E.P.A.

CONSTRUCTION LIMITS USING 3:1 BACKSLOPES

CONSTRUCTION LIMITS USING 2:1 BACKSLOPES

CONSTRUCTION LIMITS USING 3:1 BACKSLOPES

STR. #SUM-271-6932 CONDUIT

I.P. FD.

MARKED STONE FD.

PIPE FD.

℄ SURVEY (I-271) N 39°45'04" E

491+50
50+00 CULV.

N 41°55'24" E 585.17'

N 7°05'45" W 328.57'

N 39°45'04" E 111.91'

N 75°27'11" E 386.55'

N 39°45'04" E 200'

N 15°31'24" E 219.32'

N 33°12'28" W 330.10' (D)

N 21°45'08" W 167.09'

N 39°45'04" E 146.00'

N 4°25'21" E 153.06'

N 0°22'40" W 216.02'

N 20°05'05" E 422.68'

N 89°24'31" E 1320.51' (CALC.)

N 89°49'12" W 1320.51' (CALC.)

N 89°24'31" E 1320.51' (CALC.)

N 82°31'52" E 227.66'

N 38°00'26" E 361.92'

410.62' (CALC.)

N 89°24'31" E 1320.51' (CALC.)

N 89°24'31" E 1320.51' (CALC.)

N 89°24'31" E 1320.51

FED. RD.	STATE	PROJECT	
2	OHIO		

303/313

SUM-271-8.29

RIGHT OF WAY SHEET 16/25

FOR DETAILS & CALCULATIONS OF RELOC. BRANDYWINE RD. AND RELOC. STANFORD RD., SEE R/W SHEETS 17 & 17A.

MATCH TO R/W SHEET 15 OF 25

STA. 498+00

BEGIN SHEET

STA. 513+00

END SHEET

MATCH TO R/W SHEET 18 OF 25

Added Station Ahead To Pcls. 77 & 78 12-13-67 Bill
Added Distance To Pcls. 77 & 78 WD 12-7-67 LAHL
Change Pcls. 77WD, 77WD-1 & 78WD To Standard Easements Per I.O.C. From S.A.Guziak 11-30-67 Bill

REVISED LOCATION OF PROPOSED STANFORD RD. L.S. 9-30-76

Revised TDoc & Dist. on Northerly & Pcl. 71-WL 1-4-67 Lee

R/W ENGR & ADMIN SECT. HAVANA, OHIO

LOGGED Phil Bk.

Date JAN 30 1967

K.S.E.

Detail "A"

EXISTING R/W
STANFORD RD. (T.R. 38)
BRANDYWINE RD. (C.H. 40)
3.9' S-54°08'11"-E
LA RW
507+87.70
200.00 Lt
No Scale

Trees

9 - 20" OAK
9 - 15" ELM

13 - 15" OAK
2 - 24" OAK

1 - 12" BEECH
1 - 10" ELM
1 - 10" MAPLE
6 - 10" OAK
1 - 12" CHERRY
1 - 48" OAK
6 - 24" OAK

5 - 15" WALNUT
1 - 12" MAPLE
1 - 12" CHERRY

2 - 12" APPLE
3 - 15" MAPLE

1 - 12" ASH
1 - 12" WALNUT

3 - 20" ELM
1 - 15" MAPLE
1 - 24" APPLE
1 - 12" ELM
4 - 12" CHERRY

1 - 18" CHERRY
2 - 20" PINE
3 - 12" APPLE

3 - 15" ELM
2 - 20" MAPLE

1 - 48" WILLOW
6 - 20" CHERRY
1 - 24" STUMP
10 - 15" ELM

3 - 12" APPLE
1 - 12" W. CHERRY
15 - 12" ELM

Parcels

66 WL — .0826 Ac
T.B.A. 10.689 Ac

JAMES WHITE

67 WL — T.B.A. 4.459 Ac

1473 LIN FT TYPE 47 FENCE

68 WL — T.B.A. 1.650 Ac

JUNE K. BURRUELL

GEORGE MATUS & MARJORIE MATUS

70 WL

WILLIAM L. SOMMER

71 WL

BURIAL LOT
T.B.A. 0.91 Ac
UNKNOWN HEIRS OF JAMES WALLACE, DEC'D., ETAL

73 WL — T.B.A. 0.183 Ac

MARJORIE G. SEMON

67 WL — T.B.A. 4.459 Ac

RUBY I. PEDERSEN & HOWARD PEDERSEN

75 SL

78 WL

FERN F. NARTEN

77 WL — T.B.A. = 3.5211 Ac
P.R.O. = 0.1524 Ac
TOTAL = 3.6735 Ac

77-1 — T.B.A. = 0.7616 Ac

HENRY S. NARTEN

(LL)

SUMMIT COUNTY
NORTHFIELD CENTER TWP.
LOT 40
RANGE 11 WEST
TOWNSHIP 4 NORTH
(FORMERLY BOSTON TWP.)

Survey Curve Data

P.I. STA. 514+81.11
Δ = 10°33'34" RT.
D_c = 1°00'
R = 5729.58'
T = 529.47'
L = 1055.94'
E = 24.41'

Added 7SSL J.R.T. 11-2-70

GRAPHIC SCALE
0 50 100 150 200

TYPE I FUNDS

PRELIMINARY SUBMITTAL DATE: SEPT 9, 1965
RIGHT OF WAY COMPLETION DATE: JAN. 25, 1967

Nº	REVISIONS	MADE BY	DATE
1	ADDED DETAIL "A"	Lee	3-17-67
2	ADDED LEADER LINE Pcls 66WL & 67WL	IRICK	4-3-67
3	Deleted Pcls. 67-1 & 72, Combined Area with Pcl. 67 Per I.O.C. from H. Kandel & S Guziak Dated 9/1/67	Lee	9/6/67
4	Name Change Pcl 71 WL	White	12-7-67

◉ MONUMENTS TO BE SET
▣ PROPOSED MONUMENT ASSEMBLIES

STA. 498+00 TO STA. 513+00

FED. RD.	STATE	PROJECT	
2	OHIO		

304 / 313

17 / 25

SUM-271-8.29

RIGHT OF WAY SHEET

CENTERLINE SURVEY CURVE DATA

P.I. STA. 514+81.11
Δ = 10°33'34" RT.
Dc = 1°00'
R = 5729.58'
T = 529.47'
Lc = 1055.94'
E = 24.41'

77 WL — T.B.A. = 3.5211 Ac; P.R.O. = 0.1524 Ac; TOTAL = 3.6735 Ac

77 — T.B.A. = 0.4330 Ac; P.R.O. = 0.0915 Ac; TOTAL = 0.5245 Ac

HENRY S. NARTEN

FOR CONTINUATION OF THIS SHEET, SEE R/W SHEET Nº 17A.

SUMMIT COUNTY
NORTHFIELD CENTER TWP.
LOT 50
RANGE 11 WEST
TOWNSHIP 5 NORTH

78 WL — T.B.A. = 4.7277 Ac

78 — T.B.A. = 0.7512 Ac; P.R.O. = 0.2578 Ac; TOTAL = 1.0450 Ac

FERN F. NARTEN

BRANDYWINE CREEK

CONSTRUCTION LIMITS Z

RELOCATED BRANDYWINE ROAD CURVE DATA
Δ = 71°22'23" LT.
Dc = 4°00'.
R = 1434.39'
Lc = 1786.00'
E = 220.90'
P.I. STA. 62+97.55

BEGIN WORK STA 54+75

LOT 50 / LOT 40

NORTHFIELD CENTER TWP. LINE

℄ 33' TO ℄ ANGLE BREAK AND PROPERTY LINE

SAGAMORE HILLS TWP. LINE

N 0° 31' 11" W

S 89° 26' 58" E

PC STA 55+51.45
STA. 50+00.00
ACCESS DRIVE

BRANDYWINE ROAD

RELOC. BRANDYWINE ROAD

TEMP RUNAROUND

Access Dr.

N 0° 26' 49" E 263.18 (Calc.)

N 0° 26' 49" E 145.77'

C.H. 40 BRANDYWINE ROAD

JULIA CROSSLEY RICHARDS

T.B.A. = 0.3276 Ac

T.B.A. = 0.0927 Ac

T.B.A. = 0.009 ac

BENJAMIN J. RICHARDS & JULIA C. RICHARDS

NOTE:
B.J. RICHARDS CLAIMS HIS WATER LINE, GAS LINE, AND POWER LINE ARE LOCATED IN DECK OF EXIST. BRIDGE. COUNTY ENGINEER IS UNABLE TO VERIFY THIS.

RELOC. STANFORD ROAD CURVE DATA
Δ = 60°00'
Dc = 75°00'
R = 76.39'
Lc = 44.10'
E = 80.00'
E = 11.82'
P.I. Sta. 59+09.94

SUMMIT COUNTY
SAGAMORE HILLS TWP.
(FORMERLY BOSTON TWP.)
LOT 40
RANGE 11 WEST
TOWNSHIP 4 NORTH

NOTE: UNABLE TO DETERMINE EXACT LOCATION OR WIDTH OF BUCKEYE PIPELINE EASEMENT

■ PROPOSED MONUMENT ASSEMBLIES
⦿ MONUMENTS TO BE SET

SUMMIT COUNTY
SAGAMORE HILLS TWP.
LOT 50
RANGE 11 WEST
TOWNSHIP 5 NORTH

DRIVE — 2½ STY HSE — GAR

LOT 50 / LOT 60

DETAIL OF BRANDYWINE ROAD (C.H. 40)

NO SCALE

RELOCATED BRANDYWINE RD.

0.22' — 41.75' — 263.18' — N 0° 26' 49" E — 0.26'

℄ R/W = N 0° 31' 11" W

℄ RDWY = N 0° 37' 41" W — 40.60 — 35.88' — N 0° 25' 15" E — 168.70'

N 0° 31' 11" W — 41.44' — N 0° 26' 49" E

R/W & RDWY N 10° 26' 49" E

PC. 55+51.45
R = 954.93

54+15 / 25.78

STANFORD ROAD

SAGAMORE HILLS TWP. LINE
N 0° 37' 09" W

NORTHFIELD CENTER TWP. LINE

(T.R. 38)

FIELD DRIVE

BUCKEYE PIPE LINE CO.

N 48° 08' 11" W

Sta. 1+64.44 BK = Sta. 0+00 AH

5.6' PIPE LINES

STA. 509+31.45 (SEE SUM-271-8.27) BRANDYWINE ROAD

STA. 509+46.26 BRANDYWINE ROAD

STA. 509+46.26 BRANDYWINE ROAD

STA. 509+46.26

FED. RD.	STATE	PROJECT	
2	OHIO		

305/313

SUM-27/- 8.29

RIGHT OF WAY SHEET 17A/25

RELOC. BRANDYWINE RD.
CURVE DATA
Δ = 71° 22' 23" LT.
Dc = 6° 00'
Rc = 954.93'
T = 686.06'
Lc = 1189.55'
E = 220.80'
P.I. STA. 62+37.55

SUMMIT COUNTY
NORTHFIELD CENTER TWP.
(FORMERLY BOSTON TWP.)
LOT 40
RANGE 11 WEST
TOWNSHIP 4 NORTH

CENTERLINE SURVEY
CURVE DATA
P.I. STA. 514+81.11
Δ = 10° 33' 34" RT.
Dc = 1° 00'
R = 5729.58'
T = 529.47'
Lc = 1055.34'
E = 24.41'

HENRY S. NARTEN

77 WL

77-1

T.B.A. = 3.5211 Ac
P.R.O. = 0.1524 Ac
TOTAL = 3.6735 Ac

T.B.A. = 0.7616 Ac

FOR CONTINUATION OF THIS SHEET AND RELOC. STANFORD RD., SEE R/W SHEET Nº 17.

WILLIAM L. SOMMER

70 WL

BURIAL LOT

71 WL

UNKNOWN HEIRS
JAMES W. WALLACE
DEC'D., ETAL

BRANDYWINE ROAD

EXIST. CENTERLINE BRANDYWINE ROAD

RELOC. BRANDYWINE RD.

RELOC. T.R. 38

STRUCTURE Nº SUM-271-0.60

STA. 509+66.36 BRANDYWINE RELOC. RD. ℄ T. 271

STA. 60+09.50 RELOC. BRANDYWINE

STA. 61+09.39 RELOC. STANFORD

P.C. STA. 509+51.64

P.T. STA. 515+41.04

END WORK STA. 65+00

68.00' (D)

S 70° 57' 04" E (C.H. 40)

TEMPORARY RUNAROUND

WOVEN WIRE FENCE

SCRUB

WOODS

THIS POLE NOT IN USE

SIGN POST

12" PINE

4-12" PINE

24" WILLOW

J.M. STONE - 65+45.72 (51.02)
DO NOT DISTURB

257.70' (D)

S 70° 36' 41" E 381.97' (D)

12" BEECH

6" TREE

24" MAPLE

24" CATALPA

6" PINE

DRILLED WELL

1½ STY BRICK HSE.

1 STY FR HSE.

SHED

12" PINES

2 STY FR. HSE.

CISTERN

8" STUMP

1½ STY FR. BARN

GAR.

BR. GAR.

SEPTIC TANK

20" TREE

8" TREES

GRAVEL DRIVE

STONE WALL

CONCRETE WALK

CONSTRUCTION LIMITS

RW

SCUPPERNONG

BUCKEYE PIPE LINE CO. 8"-16" PIPE LINES

BARBED WIRE

FENCE

GUY

POWER POLE

TELEPHONE PED.

STONE EDGE

PICKET FENCE

TREES

BUSH

SOC

EOP

EOW

EOS

℄

510+80 (158.86')
63+28.19 (133.37')

S 60° 45' 20" E 200.13'

63+56.39

509+16.62 (182.56')
63+60.81 (25.03')

S 60° 30' 48" E 35.01'

S 60° 30' 48" E 279.16' (D)
S 60° 11' E 279.18' (M)
S 60° 11' E 279.17' (Calc.)

N 54° 00' 11" W 61.95'

509+01.39

62.01'

45.01'

S 66° 40' 04" E 322.55'

S 65° 10' 56" E 185.05'

65+03.59
61.08'

65+82.10
74.05'

65+78.48
44.50'

64+62.60
62.13'

64+62.60
62.13'

63+56.39

66+10
40'

65+00
125'

S 60° 30' 48" E 96.41'

507+43.39

507+78.10

507+78.10

507+78.10

505+94.17
200.27'

505+03.81

504+86.30
196.87'

504+99.29
231.87'

N 36° 43' 55" E 240.45'

N 36° 43' 55" E 327.61' (Calc.)

N 22° 42' 40" E 351.72' (D)
N 22° 42' 40" E 351.73' (Calc.)
N 22° 42' 40" E 351.73' (M)

N 21° 19' 45" E 264.00' (D)
N 21° 19' 45" E 263.95' (Calc.)

N 21° 19' 45" E 327.34' (D)
N 21° 19' 45" E 327.31' (Calc.)

S 34° 37' (Calc.) E 225.94'

132'

37.33'

FLORENCE E. LINDLEY

74

MARJORIE G. SEMON

73

RUBY I. PEDERSEN &
HOWARD PEDERSEN

67 WL

73 WL

73 WA

74 WA

67 WL

- ◉ MONUMENTS TO BE SET
- ■ PROPOSED MONUMENT ASSEMBLIES

GRAPHIC SCALE
0 50 100 150 200

TYPE I FUNDS

PRELIMINARY SUBMITTAL DATE : SEPT. 9, 1965
RIGHT OF WAY COMPLETION DATE : JAN. 25, 1967

Nº	REVISION	MADE BY	DATE
1	ADDED LEADER LINE Pcls 67, 70, 71, & 77	IRICK	4-3-67
2	Deleted Pcl. GT-1 & 72, Conbined Area with Pcl. G7 Per IOC from H. Kandel & S. Guziak Dated 9/1/67	Lee	9-6-67
3	Change Pcl. 77 WD-1 To Standard Easement Per I.O.C. From S.A. Guzia H. 11-29-67	Bill	11-30-67
4	Name Change 71 WL	EARL	12-7-67

BRANDYWINE RD. & STANFORD RD.

Revised Dist. on North R. Pcl. 71-WL 1-4-67 Lee

State Highway Dept. Dist. 4
R/W - ENG. & ADMIN SECT.
RAVENNA, OHIO
JAN 08 1968
LOADED
Bill Bl.
Cards

K & E - AKRON

FED. RD.	STATE	PROJECT	
2	OHIO		

306 / 313

SUM-271-8.29

RIGHT OF WAY SHEET 18 / 25

MATCH TO R/W SHEET 16 OF 25

STA. 513+00

MATCH TO R/W SHEET 20 OF 25

STA. 528+00

1 - 24" ELM
1 - 18" STUMP
1 - 15" WILLOW
11 - 15" CHERRY

2 - 18" CHERRY
4 - 24" ELM

3 - 15" SYCAMORE
14 - 18" ELM

8 - 18" ELM

15 - 12" ELM
2 - 24" ELM

7 - 12" ELM

3 - 12" ELM

2 - 15" MAPLE
1 - 12" ELM
5 - 12" POPLAR
1 - 18" ELM

FERN F. NARTEN

78 WL

LOT 50
LOT 40

TO ℄ BRANDYWINE RD.

BRANDYWINE CREEK

SUMMIT COUNTY
NORTHFIELD CENTER TWP.
LOT 50
RANGE 11 WEST
TOWNSHIP 5 NORTH

517+00
100

617.72'

N 45° 21' 39" E

586.26'

CONSTRUCTION LIMITS

LA RW

LA P.A.

S 69° 26' 55" E
231.59'

N 53° 10' 55" E
423.58'

LA RW 386.76'

1310 LIN. FT. TYPE 47 FENCE

521+14.57
129.35

LAUREL PIPE LINE COMPANY
14" PIPE

UNDERGROUND CONDUIT CABLES

10' PRODUCTS PIPE LINE
INLAND CORP.

N 34° 55' 25" W
500.62' (CALC.)

OHIO EDISON COMPANY,
AN OHIO CORPORATION

N 28° 25' 05" W
400.78' (CALC.)

N 52° 47' 44" E
C.P.A.

LA RW
273.07'

523+87.38

78 WL

79 WL

T.B.A. - 1.49 Ac.

T.B.A. - 12.0411 Ac.

517+00

℄ - SURVEY (I-271)

102.47'

520

521+03.77

521+10±

521+37.2

10" PIPE LINE CASING

130' ±

EXIST. 10" PIPE LINE

PROPOSED A.T. & T. CO. UNDERGROUND CONDUIT CABLES

N 50° 18' 38" E

515

424.76'
TO P.C.

514+08.70

N 39° 45' 04" E

350.47'

224.24'

STR. No. 211-0982

519+06.16

520+70±

520+94.79
107.06

205.45'

C.P.A.

I.C.P. - 24" STRUCT. No. 211-0984

60.24'

523+00

523+44.06

525

+20.00

+30.00

523+55.91
41.13'

1508 LIN. FT. TYPE 47 FENCE

I.A.P.A.

224.96'

S 48° 09' 47" W

277.40'

N 50° 18' 38" E

523+22.60
125.00

525+70
125

252.76'

(N 41° 20' 19" W)
N 39° 41' 22" W

125.00'

260.67'

526+30
132

154.03'

N 63° 26' 40" E

751.07'

N 53° 21' 48" E

527+90
160

49.48'
N 54° 41' 22" W
*(N 56° 20' 19" W)

Prop. E.O.G. Easement Line

Prop. E.O.G. Pipeline

MATCH LINE "A"

49.63'
N 69° 44' 42" W
*(N 71° 23' 39" W)

49.58'
N 84° 46' 42" W
*(N 86° 25' 39" W)

80 U

116.22'
S 80° 18' 38" W
*(S 78° 36' 41" W)

S 80° 51' 18" W
*(S 78° 32' 21" W)
195.02'

MATCH LINE "A"

MATCH LINE "C"

LOT 50
LOT 40

50.82'
N 86° 04' 20" W
*(N 87° 43' 19" W)

1 - 12" SYCAMORE

50.00'
N 12° 53' 02" W
*(N 14° 31' 59" W)

49.90'
N 53° 28' 02" W
*(N 61° 06' 59" W)

530+18.09
583.66' Rt

MONUMENTS TO BE SET

S.E. CORNER
LOT 50

Grandville Rd. (Rte. 176)
Tuinsburg Rd. (Rte. 176)

N 48° 19' 59" W
427.39'

MATCH LINE "C"

S 68° 22' 21" W
94.28'

1 - 30" MAPLE
1 - 30" ELM

80 WL

50.09'
N 05° 03' 58" E
*(N 03° 25' 01" E)

2 - 15" OAK

49.92
N 05° 59' 42" W
*(N 11° 38' 39" W)

50.00'
N 24° 55' 42" W
*(N 26° 34' 39" W)

526+00
128.22'

525+70
125.48'

526+30
128.67'

N 10° 24' 39" E
60.71'

80 CO

80 WL

49.94
N 18° 53' 42" W
*(N 20° 32' 39" W)

530+17.57
583.86' Lt.

50.90'
N 07° 02' 38" E
*(N 05° 23' 41" E)

49.92'
N 05° 54' 02" W
*(N 07° 34' 59" W)

*(N 18° 27' 21" E)
N 20° 01' 18" E
312.56'

MATCH LINE "B"

312.56'
*(N 18° 22' 12" E)

CATHOLIC CEMETERIES ASSOCIATION

MATCH LINE "B"

BEGIN SHEET

STA. 513+00
120

5-8" PIPE LINES
BUCKEYE PIPE LINE CO.
1-12" PIPE LINE
BARBED WIRE FENCE

℄ SURVEY
CURVE DATA

P.I. STA. 514+81.11
Δ = 10° 33' 34" RT.
D_c = 1° 00'
R = 5729.58'
T = 529.47'
L = 1055.94'
E = 24.41'

SUMMIT COUNTY
NORTHFIELD CENTER TWP.
LOT 40
(FORMERLY BOSTON TWP.)
RANGE 11 WEST
TOWNSHIP 4 NORTH

HENRY S. NARTEN

77 WL

77 WL

P.T. STA. 520+67.58

520+97.80
139.42

S 48° 09' 47" W
309.23' (CALC.)

N 16° 13' 30" W
309.23' (CALC.)

309.23'
N 16° 08' 04" W (C)

(L.L.)

APPROX. 50'

STR. No. 211-0983
40.43

357.40'
N 48° 09' 47" E

323.83'

323.83'

70° PROP. CR.

NOTE :
UNABLE TO DETERMINE EXACT LOCATION AND WIDTH OF LAUREL PIPE LINE CO., BUCKEYE PIPE LINE CO., AND INLAND CORP. EASEMENTS.

LAUREL PIPE LINE EASEMENT RECORDED IN VOL. 3574 PG. 291 SUMMIT COUNTY REC.

UNABLE TO DETERMINE EXACT LOCATION AND WIDTH OF A.T. & T. CO. EASEMENT.

2 - 30" WILLOW
2 - 12" PINE
2 - 30" PINE
1 - 18" ELM
1 - 15" POPLAR
1 - 15" MAPLE

2 - 15" MAPLE
2 - 12" POPLAR
1 - 18" ELM
1 - 10" CHERRY
5 - 12" PINE

7 - 12" MAPLE
1 - 12" CHERRY
1 - 12" APPLE
5 - 12" ELM

4 - 12" ELM
1 - 20" MAPLE
4 - 12" MAPLE

3 - 12" CHERRY
2 - 12" APPLE
6 - 12" ELM

3 - 12" ELM
1 - 12" CHERRY

NOTE —
* Bearings in parentheses provided by E.O.G. & were used in the conveyance to the State of Ohio.

GRAPHIC SCALE
0 50 100 150 200

TYPE I FUNDS

PRELIMINARY SUBMITTAL DATE: SEPT. 9, 1965
RIGHT OF WAY COMPLETION DATE: JAN. 25, 1967

NO	REVISIONS	MADE BY	DATE
1	ADDED LEADER LINE R/L 79-LA & 80-WL	I. RICK	4-3-67
2	Added Pcl. 80-U per H. Strahl.	Lee	7-22-68
3	Added Bearings to Pcl. 80-U & Note	J.R.T.	8-31-71
4	DELETED PCL 79-LA, ADDED R/L 79-WL		10-5-71

STA. 513+00 TO STA. 528+00

State of Ohio, Dept. of Hwys.
R/W ENGINEERING SECT.
RIVERSIDE, OHIO

JAN 10 1967

LOGGED
Bill Bk.
Crds.

K & E

FED. RD.	STATE	PROJECT	
2	OHIO		

307
313

SUM.-271-8.29
RIGHT OF WAY SHEET

19
25

NOTE. THIS SHEET "VOID".
RAILROAD PROPERTY SOLD TO THE OHIO EDISON COMPANY.
THE R.R. GRADE SEPARATION WAS DEMOLISHED

SUMMIT COUNTY
NORTHFIELD CENTER TWP.
LOT 50
RANGE 11 WEST
TOWNSHIP 5 NORTH

NEW YORK CENTRAL RAILROAD
79 LA

FERN F. NARTEN
78 WL

CATHOLIC CEMETERIES ASSOCIATION
80 WL

N 53°16'55"E 423.58'
N 52°47'44"E 107.29'
LA RW
522+27.6 (124.90')
6.5'
7.12
RIGHT OF WAY
TRACKS
TO CLEVELAND
N 49°07'12"E 106.36'
N 28°29'05"W
523+87.38 (117.71')
711+88.38 (135.11')
N 49°26'35"E 812.71'
CONSTRUCTION LIMITS
521+14.57 (125.55')
712+12.86 (136.84')
A.T.&T. (2 CABLES)
℄ 130'
N 32°03'40"W 51.86'
N 32°03'40"W 44.35'
50.41'
14.13'
25.00'
12.41'
14.75'
8.24'
17.45'
N 57°56'20"E 7.80'
79 SA
79-1 SA
79 AER
N 32°03'40"W 46.24'
N 32°03'40"W 49.88'
62°22'21"
STRUCT № SUM.-271-0994
N 34°55'25"W 500.42' (CALC.)
CONDUIT
UNDERGROUND
PROPOSED A.T.&T.
79 X
20.00'
7.13
20.00'
522+35.30 (I-271)
713+25.24 (N.Y.C. RR)
521+03.77
521+18.43'
521+37.2
522
523
N 50°18'38"E
523+00
℄ SURVEY
522+41.86 (I-271)
713+24.37 (N.Y.C. R.R)
(I-271)
523+64.06
524
400.76' (CALC.) 120
520
520+70±
P.T. STA. 520+07.58
20.44'
24.00'
15.00'
19.00'
28.00'
24.00'
N 32°03'40"W 66.22'
N 32°03'40"W 63.86'
79-1 AER
N.Y.C. RAILROAD COMMUNICATIONS LINE (4 WIRES)
162'~24" PIPE
41.53'
713+50
125'
LOT 60
LOT 40
EXIST. 14" PIPE LINE LAUREL PIPE LINE COMPANY
EXIST. 10" PRODUCTS PIPE LINE INLAND CORPORATION
PROP. PIPE LINE & CASING
N 32°03'40"W 24.58'
22.51'
714
13.57'
15.0'
17.52'
N 32°03'40"W
79-2 SA
20.18'
20.18'
26.24'
N 50°18'38"E
26.24'
79-3 SA
℄ 90.24'
714+50
125'
62.53'
N 85°53'32"E
N 15°53'22"E
91.04'
CONSTRUCTION LIMITS
277.40'
N 50°18'38"E
LA RW
523+22.60 (125')
714+37.55 (103.12')
357.40'
N 48°09'47"E
LA RW
N 48°09'47"E ~ 224.96'
26.53'
52.23'
520+57.60 (153.42')
714+76.73 (118.87')
521+50 (31.47')
714+62.87 (47.10')
TO ℄ 369.23' (CALC.) N 34°05'55"W
(71.18')
715
N 32°03'40"W
TO KENT
309.23' (CALC.) N 18°01'30"W

NOTE: FOR STATION AND OFFSETS AND COMPLETE DIMENSIONS, SEE R/W SHEET № 19A

PAR. №	EASEMENT REQUIRED	TOTAL AREA	AREA OF OVERLAP		
			HIGHWAY	AERIAL	SPECIAL AGREEMENT
79 LA	HIGHWAY	55,144 S.F.		5,404 S.F.	735 S.F.
79 AERIAL	AERIAL	2,266 S.F.	2,266 S.F.		41 S.F.
79-1 AERIAL	AERIAL	3,138 S.F.	3,138 S.F.		379 S.F.
79 SA	SPECIAL AGREEMENT	17 S.F.	7 S.F.	10 S.F.	
79-1 SA	SPECIAL AGREEMENT	84 S.F.	53 S.F.	31 S.F.	
79-2 SA	SPECIAL AGREEMENT	280 S.F.	109 S.F.	171 S.F.	
79-3 SA	SPECIAL AGREEMENT	354 S.F.	146 S.F.	208 S.F.	
79 X	CHANNEL	622 S.F.			

GRAPHIC SCALE
0 20 40 60 80

PRELIMINARY SUBMITTAL DATE : SEPT. 9, 1965 RIGHT OF WAY COMPLETION DATE : JAN. 25, 1967			
№	REVISION	MADE BY	DATE

NEW YORK CENTRAL RAILROAD
RIGHT OF WAY PLAT

State Highway Engr. Div. of R/W, ENGR. ADMIN SECT. HAVANA, OHIO
JAN 09 1967
LOGGED
CHK. FIN. EX.
K&E

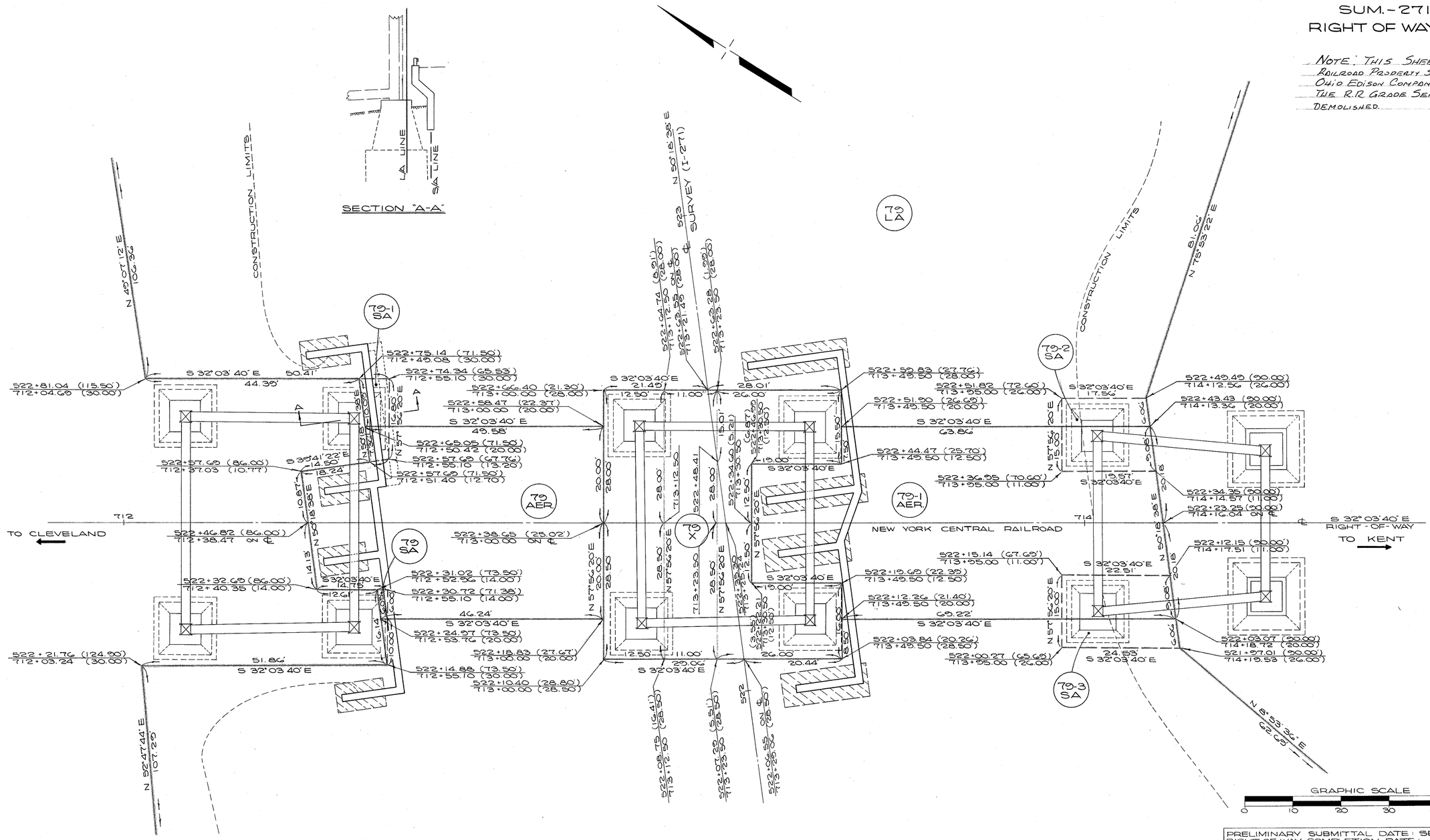
FED. RD.	STATE	PROJECT	
2	OHIO		

307A / 313

SUM.-271-8.29

RIGHT OF WAY SHEET 19A / 25

NOTE: THIS SHEET "VOID". RAILROAD PROPERTY SOLD TO THE OHIO EDISON COMPANY. THE R.R. GRADE SEPARATION WAS DEMOLISHED.



PRELIMINARY SUBMITTAL DATE: SEPT. 9, 1965 RIGHT-OF-WAY COMPLETION DATE: JAN. 25, 1967			
Nº	REVISION	MADE BY	DATE

NEW YORK CENTRAL RAILROAD RIGHT OF WAY PLAT

State Highway Dept. Ohio
R/W - ENGR. & ADMIN SECT.
AKRON, OHIO

JAN 30 1967

LOGGED
Bill Bk.
Cds.

FORM DDA-5

FED. RD.	STATE	PROJECT	
2	OHIO		

308/313

SUM-271-8.29

RIGHT OF WAY SHEET 20/25

4 - 15" OAK
2 - 36" OAK
12 - 24" OAK

7 - 18" OAK
1 - 15" BEECH

5 - 15" POPLAR
12 - 24" OAK
3 - 18" BEECH
1 - 15" CHERRY

6 - 18" OAK
10 - 15" BEECH
1 - 15" POPLAR
3 - 24" BEECH

1 - 36" STUMP
4 - 15" CHERRY
10 - 15" ELM

1 - 48" ELM
10 - 15" OAK
1 - 12" SYCAMORE

4 - 15" BEECH
1 - 12" CHERRY
1 - 18" ELM
22 - 15" OAK

1 - 18" ELM
15 - 15" OAK
4 - 15" OAK

15 - 18" OAK
2 - 15" CHERRY

1 - 12" CHERRY
2 - 12" BEECH
14 - 15" OAK
1 - 15" MAPLE

4 - 15" BEECH
1 - 18" OAK
1 - 24" OAK

CONSTRUCTION ℄ SURVEY DATA

Δ = 31°57'15" LT.
D = 2°00'
Lc = 3000'
R = 2864.79'
θs = 3°00'
Ts = 970.61'
Es = 116.47'
Lc = 1297.76'
ST = 2000.03'
ST = 100.03'
Δc = 25°57'15"
Rd = 660.21'
Ec = 75.05'
P.I. STA. 546+66.40

SUBSTITUTE CURVE DATA FOR RIGHT OF WAY

R = 3815.72'
D = 1°30'
Rc = 2000.00'
Δ = 3°00' LT.
T = 100.02'
P.C. 537+95.79
P.C.C. 539+95.79
P.C.C. 552+93.55
P.T. 554+93.55
P.I. STA. 538+95.81
P.I. STA. 553+93.57

2 - 20" POPLAR
2 - 15" MAPLE
7 - 15" OAK
1 - 24" OAK

1 - 15" BEECH
1 - 15" POPLAR
10 - 20" ELM

5 - 12" BEECH
10 - 18" OAK
3 - 24" OAK

CATHOLIC CEMETERIES ASSOCIATION

STA. 528+00

STA. 543+00

80 WL — T.B.A. - 12.0411 Ac

80 Y — 0.083 Ac

80 X — 0.721 Ac

EAST OHIO GAS CO. GAS LINE - T.P.L. = 5.20

533+70 215

534+60 215

532+00 130

533+10 170

534+60 168

534+00 160

533+91 50+00 CULV.

N 45°26'39" E 812.71'

1041 LIN. FT. TYPE 4T FENCE

N 36°16'20" E 176.20'

206.16'

LA RW

I.A.P.A.

C.P.A.

CONSTRUCTION LIMITS

N 41°37'14" E 356.33'

T.S. STA. 536+95.79

537+95.79 208

537+95.79 70' ONLY

N 11°22'40" W 96.55'

P.C. 537+95.79 FOR RIGHT OF WAY ONLY

E.P.A.

N 43°07'13" E 487.48'

RELOCATED CHANNEL BRANDYWINE CREEK

N 42°50'34" E 423.40'

542+48 221.60

541+62.47 146.23

S.C. STA. 539+95.79 P.C.C. STA. 539+95.79 FOR RIGHT OF WAY ONLY

R = 110' 539.93' 539.71' (CALC.)

DOROTHY HANNAFORD

83 WL — T.B.A. - 5.129 Ac

N 0°07'17" W 293.64' (CALC.) 212.92' (CALC.)

171.29'

541+88.99

540+15.40

540

530

535

℄ - SURVEY (I-271)

N 50°18'38" E

8.21'

184.62' (CALC.)

22.79'

471.73' (CALC.)

114.23

533+55.92 65.64'

82 WL — T.B.A. - 1.141 Ac

52.76'

143.47'

190.70'

700.25 CALC. TO ℄ SCHOEPF RD.

S 56°18'27" E

N 47°11'50" E 250.91'

104.84'

122.65' (D)

81 WL — T.B.A. - 0.105 Ac

533+77.80 155.62'

S 56°18'27" E 182.29' (D)

ATL. ST.

THOMAS R. SILVER
LLOYD F. HANNAFORD

T.B.A. - 1.141 Ac

1 - 12" OAK
1 - 12" ELM
9 - 20" OAK
24" POPLAR

1 - 12" BEECH
7 - 12" OAK
1 - 24" OAK

1 - 12" HICKORY
1 - 36" OAK
6 - 12" OAK
10 - 20" OAK

N 53°21'48" E 751.07'

LA RW

C.P.A.

I.A.P.A.

533+00 200

1884 LIN. FT. TYPE 4T FENCE

N 43°45'59" E 382.91'

536+77.11 181.70

BEGIN SHEET

MATCH TO R/W SHEET 18 OF 25

END SHEET

MATCH TO R/W SHEET 21 OF 25

STR. - SUM-271-10.14

294+60

NOTE :
UNABLE TO DETERMINE EXACT LOCATION AND WIDTH OF EAST OHIO GAS CO. EASEMENT.

SUMMIT COUNTY
NORTHFIELD CENTER TWP.
LOT 50
RANGE 11 WEST
TOWNSHIP 5 NORTH

81 WL

WILLIAM SCHOEPF ℄ LIFE ESTATE TO JOHN SCHOEPF AND ANNA SCHOEPF

115.22' L/A TO ℄ TWINSBURG ROAD

LOT 50

LOT 40

W. LINE OF SCHOEPF DEVELOPMENT

SUMMIT COUNTY
NORTHFIELD CENTER TWP.
LOT 40
RANGE 11 WEST
TOWNSHIP 5 NORTH

GRAPHIC SCALE
0 50 100 150 200

TYPE I FUNDS

2 - 12" OAK

1 - 12" OAK
3 - 12" CHERRY

5 - 12" OAK
4 - 20" OAK
2 - 20" CHERRY
2 - 15" MAPLE
2 - 12" CHERRY

5 - 12" OAK
4 - 18" OAK
3 - 24" ELM
2 - 18" MAPLE
2 - 12" CHERRY

2 - 18" ELM
6 - 15" OAK
1 - 12" HICKORY
5 - 12" OAK
5 - 12" BEECH

3 - 12" BEECH
4 - 20" OAK
7 - 12" OAK

6 - 12" BEECH
1 - 20" POPLAR
5 - 12" OAK
1 - 12" ELM
5 - 18" OAK

3 - 12" CHERRY
1 - 20" OAK
7 - 12" MAPLE
21 - 12" OAK

1 - 12" CHERRY
4 - 12" BEECH
1 - 12" HICKORY
25 - 12" OAK

37 - 12" OAK
1 - 12" MAPLE

◉ MONUMENTS TO BE SET

PRELIMINARY SUBMITTAL DATE: SEPT. 9, 1965 RIGHT OF WAY COMPLETION DATE: JAN 26, 1967			
№	REVISIONS	MADE BY	DATE
1	ADDED LEADER LINE, P.O.I.s. 80WL & 82WL	IRICK	4-3-67

STA. 528+00 TO STA. 543+00

State Highway Dept., Div. 3
R/W - ENGR & ADMIN SECT.
NAVARRE, OHIO

JAN 30 1967

LOGGED
Bill Bk.
Crds.

K & E

FED. RD.	STATE	PROJECT	
2	OHIO		

305 / 313

SUM-271-8.29
SUM-271-10.25-SI(1)
SUM-271-10.30-SI(1)

RIGHT OF WAY SHEET 21 / 25

MATCH TO R/W SHEET 20 OF 25

MATCH TO R/W SHEET 22 OF 25

SEE R/W SHEET 21-A OF 25

℄-1 DOVICH ℄ by DOVICH Deed
℄-2 SHELHART ℄ by SHELHART Deed

STA. 543+00

STA. 558+00

BEGIN SHEET

END SHEET

℄ SURVEY (I-71)

DOROTHY HANNAFORD
80 X
83 WL
LOT 50
LOT 40
BRANDYWINE CREEK
N 40°56'11"E 328.94
N 40°56'11"E 243.52'
543+30.22
287.95'
546+00
275
LA RW
EBA

SUMMIT COUNTY
NORTHFIELD CENTER TWP.
LOT 40
RANGE 11 WEST
TOWNSHIP 5 NORTH

SUMMIT COUNTY
NORTHFIELD CENTER TWP.
LOT 39
RANGE 11 WEST
TOWNSHIP 5 NORTH

1-15" CHERRY
1-15" OAK
6-15" BEECH

2-15" BEECH 7-12" ELM 1-15" OAK 5-18" OAK
14-15" OAK 9-15" OAK 6-24" OAK 1-15" CHERRY
1-24" OAK
5-15" BEECH

1-15" APPLE
7-18" OAK

1-12" PINE
1-24" OAK
1-12" MAPLE

1-12" MAPLE
3-12" OAK
2-12" MAPLE
3-12" POPLAR
3-15" MAPLE

Area of disputed ownership
FRANK DOVICH, JR.
87-A WL T.B.A. 0.088 Ac

1-24" STUMP
1-24" SYCAMORE
2-24" OAK

84 WL REGIS SCHILLING & PHYLLIS SCHILLING T.B.A. = 0.723 Ac

85 WL MARTIN M. MOODY & SHIRLEY F. MOODY T.B.A. = 0.736 Ac

86 WL GILBERT J. BAIRD & MARGARET J. BAIRD T.B.A. = 0.825 Ac

FRANK DOVICH JR.
87 WL T.B.A. 3.821 Ac.

SCHOEPF DEVELOPMENT
PROPERTY LINE AGREEMENT PLAT
PLAT BOOK 57 ~ PAGE 25

JUANITA G. SHELHART
92 WL Reg.Ind.Cert.#33996 T.B.A. = 2.486 Ac

BEGIN PROJECT
SUM-271-10.25-SI(1)
FED No LSI-271-6(2)
STA. 543+30.22

BEGIN PROJECT
SUM-271-10.30-SI(1)
FED No LSI-271-6(4)
STA. 554+54.23

T.B.A. = 5.125 Ac
T.B.A. 0.723 Ac
T.B.A. 0.736 Ac
T.B.A. 0.825 Ac
T.B.A. 3.821 Ac.
T.B.A. 0.088 Ac

547+28.45
548+30.51
549+30.12
550+40.24
547+02.65
47.52'
548+08.63
153.97'
545+14.84
150.30'
550+31.44
154.58'
100.43'
100.43'
110.47' I.P. FD
1112 LIN. FT. TYPE 47 FENCE
1512 LIN. FT. TYPE 47 FENCE
N 28°39'27"E
N 19°51'19"E
S 70°18'20"E
S 82°35'11"E
S 82°21'11"E (CALC.)
S 82°35'11"E
S 73°23'50"E (CALC.)
S 73°23'50"E
N 47°11'50"E
N 31°53'15"E
N 18°09'33"E
N 18°21'19"E
N 87°20'19"E
471.73' (CALC.)
N 50°18'38"E
535.44' (CALC.)
583.28'
375.15'
196.70'
105.00'
453.03'
0.28'
444.4'
400.9'
452.87'
482.55'
547+03.28
140.05'
548+45.03
(61.12')
549+44.60
(65.84')
550+42.24
(74.70')
101.12'
101.12'
111.23'
119.13'
(ABANDON)
175'
2 WOVEN WIRE
150'
157'
155'
150'
100.38'
110.41'
555+20.53
171.63'
555+08.10
171.52'
555+36.56
171.02'
555+20.80
171.63'
555+22.10
180.77'
556+09.80
142.10'
552+20.55
552+20.55
C.S. STA. 552+20.55
SUBSTITUTE CURVE DATA FOR RIGHT OF WAY
R = 3819.72'
LC = 7.80'
Δ = 3°00'00"
LT.
PCC 551+95.79
PCC 552+03.55
PT. 554+93.55
P.I. 553+99.61
P.I. 553+93.57
544+00
185
555
555+00
555+50
556+00
556+50
557+00
557+50
558+00
558+50
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569+50
570+00
570+50
571+00
571+50
572+00
572+50
573+00
573+50
574+00
574+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

SUM-271-8.29
SUM-271-10.25-SI (I)
SUM-271-10.30-SI (I)

309A

21-A
25

RIGHT OF WAY SHEET

℄-1 DOVICH ℄ by DOVICH Deed
℄-2 SHELHART ℄ by SHELHART Deed

SUMMIT COUNTY
NORTHFIELD CENTER TWP.
LOT 40
RANGE 11 WEST
TOWNSHIP 5 NORTH

SUMMIT COUNTY
NORTHFIELD CENTER TWP.
LOT 39
RANGE 11 WEST
TOWNSHIP 5 NORTH

LOT 49
LOT 39
LOT 50
LOT 40

CONSTRUCTION CENTERLINE SURVEY CURVE DATA
Δ = 31°57'19" LT.
Dc = 2°00'
Lc = 300'
R = 2864.79
Es = 3°00'
Ts = 970.61
Es = 116.47'
Lc = 1297.76
Lt = 200.03
S.T. = 100.03
Δc = 25°57'19"
Tc = 660.21
Ec = 75.09'
P.I. STA 546+66.40

SUBSTITUTE CURVE DATA FOR RIGHT OF WAY
R = 3819.72
Dc = 1°30'
Lc = 200.00
Δ = 3°00' LT.
T = 100.02
P.C.C. 552+93.55
P.T. 554+93.55
P.I. 553+93.57

Area of disputed ownership
FRANK DOVICH, JR. &
JUANITA SHELHART
87-A WS T.B.A. 0.11 Ac.

LANDLOCKED RESIDUE (2.92 Ac.)
FRANK DOVICH, JR.
LANDLOCKED RESIDUE Pcl 87-92WS (0.05 Ac.)
LANDLOCKED RESIDUE (4.08 Ac.)
JUANITA G. SHELHART 941.96'
N-18°-21'-19" E
92 WS T.B.A. 5.40 Ac.
N-21°-04'-03"-E 406.06'
87-A WS
N-18°-21'-19"-E 13.93'
0.06 ac.
87 WS T.B.A = 1.97 Ac.
86 WS T.B.A. 0.74 Ac.
85 WS T.B.A. 0.98 Ac.
84 WS T.B.A. 0.86 Ac.
83 WS T.B.A. 0.88 Ac.
DOROTHY HANNAFORD
REGIS SCHILLING & PHYLLIS SCHILLING
MARTIN M. MOODY & SHIRLEY F. MOODY
GILBERT J. BAIRD & MARGARET J. BAIRD
95 WS PERCY G. HANSEN T.B.A. = 9,142 S.F.
100 WS CHARLES KALCIK, DEC'D. & ELIZABETH KALCIK T.B.A. = 3,143 S.F.

546+31.36 / 469.53
547+42.28 / 549.89
548+58.95 / 606.60
548+93.97 / 622.36
549+79.14 / 355+00
554+38.80 / 369.65
554+54.23 / 369.82
543+30.22 / 287.95
546+00 / 275
552+93.55 / 554+93.55
555+08.10 / 171.96
555+03.53 / 171.63
555+96.32 / 182.97
556+02.17 / 183.41
557+65.49 / 193.29

N 00°07'17" W 328.94'
109.03
31.71
S 40°58'11" W
LA RW 243.52
S 81°20'49" W 158.80'
S 66°39'11" E 347.44
S 66°39'11" E 400.16'
S 66°39'11" E 452.87
482.55
N-76°-18'-20"-W 206.03
S 19°51'19" W 453.03'
S 28°39'27" W
100.43'
100.43'
110.47
160.00
155.29
157.02
154.81
S 89°33'17" E
N 89°33'17" W
S 19°51'19" W 12.43
S 09°48'23" W
S 21°54'04" W 163.63
N 80°11'37" W 40.00'
S 80°11'37" E 74.28
951.76
40.91
N 09°48'23" E
RIVERSIDE DR. 40'
SUMMIT AVE. 40'
N 18°21'19" E
C.S. STA. 552+93.55 PCC RIGHT OF WAY ONLY
P.T. 554+93.55 RIGHT OF WAY ONLY
543+00 STA.
STA. 558+00
545
550
555

BEGIN PROJECT
SUM-271-10.25-SI (I)
FED No LSI-271-6(2)
STA. 543+30.22

BEGIN PROJECT
SUM-271-10.30-SI (I)
FED No LSI-271-6(4)
STA. 554+54.23

BEGIN SHEET
END SHEET
℄ SURVEY I-271

SEE R/W SHEET 21 OF 25

GRAPHIC SCALE
0 50 100 150 200

TYPE LSI FUNDS

Revised	Parcel 87WS, 92WS, 87-92WS ADDED 2 DESIGNATION BLOCKS & 2 PROJECT NO. CHANGED 87-92 AWS TO 87AWS NAME CHANGE PCL 100	LANDOOR SMITH	6-9-67 10/11/67 12-28-67

STA. 543+00 TO STA. 558+00

FED. RD.	STATE	PROJECT	
2	OHIO		

310
313

SUM-271-8.29
SUM-271-10.25-SI(I)
SUM-271-10.30-SI(I)

RIGHT OF WAY SHEET 22 25

NAME CHANGE PCLS. 96 & 163 - SMITH 12-28-67
NAME CHANGE PCLS 121, 152 & 159 - SMITH 12-24-67
NAME CHANGE PCL 111 WS - 11-27-67 - BILL
NAME CHANGE PCL 130 WL - 11-17-67 - SMITH

Deleted Pcl. 17 G-PR Per IOC. from S.A. Guzdak dated 1-12-68 Lee 1-15-68

NAME CHANGE PCL. 124 - SMITH 12-8-67

State of OHIO Dept. Div. I
R/W Engr. & Plans Sect.
Mapping Group

JAN 30 1967

LOGGED
Chkd. BM Bk.

C & E

MATCH TO R/W SHEET 21 OF 25

BEGIN SHEET

STA. 558+00

STA. 572+00

END SHEET

SEE R/W SHEET 22-A OF 25

SUMMIT COUNTY
NORTHFIELD CENTER TWP.
LOT 39
RANGE 11 WEST
TOWNSHIP 5 NORTH

JUANITA G. SHELHART

DIXIE OHIO EXPRESS INC.
AN ALABAMA CORPORATION

3.934 Ac.

END PROJECT
SUM-271-10.30-SI(I)
FED No LSI-271-6(4)
STA 570+01.65

T.B.A. = 2.486 Ac±

RIVERSIDE DRIVE 40'

BLOCK X

BLOCK Z

BLOCK AA

BLOCK BB

BLOCK CC

BLOCK DD

BLOCK EE

BLOCK FF

BLOCK GG

BLOCK HH

HIGHLAND BLVD. 80'

GREENVIEW AVE. 80'

YORK ST. 40'

SHADELAND AVE. 40'

BRIDGE DR. 40'

(I-271)

℄ SURVEY

1-18" BEECH	2-18" ELM	1-18" SYCAMORE	3-24" OAK
2-24" BEECH	10-36" BEECH	4-15" ELM	1-12" SYCAMORE
3-15" OAK		2-15" BEECH	5-15" ELM
1-24" OAK		2-36" BEECH	3-36" BEECH
2-30" ELM			
3-12" MAPLE			

3-15" OAK	1-15" CHERRY	2-48" BEECH	7-24" BEECH	3-18" OAK	3-12" MAPLE	5-20" ELM	1-18" ELM	1-18" ELM	7-12" MAPLE
3-30" MAPLE	10-15" BEECH	1-36" STUMP	2-30" ELM	2-24" BEECH	1-18" ELM	5-30" OAK	1-15" CHERRY	1-15" CHERRY	10-15" OAK
1-15" CHERRY	5-15" OAK	1-15" PINE	1-36" OAK	2-20" PINE	2-12" PINE	5-36" OAK	3-15" MAPLE	3-15" MAPLE	1-48" OAK
5-15" ELM	2-36" BEECH	2-48" OAK		2-20" ELM		1-36" BEECH			
2-36" BEECH						2-40" OAK			

(101 WS) DOROTHY SCHULTZ T.B.A. = 7,314 S.F.

(96 WL) ESTATE OF NICK VIRZI, DEC'D etal / ROSE VIRZI T.B.A. = 11,085 S.F.

(97 WL) A.J. POIRSON & MARJORY R. POIRSON T.B.A. = 4960 S.F.

(98 WL) LOLA E. STARCHER & ROBERT E. STARCHER T.B.A. = 14,880 S.F.

(99 WL) ANNA ANTOLICK T.B.A. = 7440 S.F.

(101 WL) DOROTHY SCHULTZ T.B.A. = 686 S.F.

(102 PR) (102 WS) PERCY G. HANSEN T.B.A. = 8,000 S.F.

(103 PR) (103 WS) FRANK K. LEVIN T.B.A. = 4,000 S.F.

(104 WL) UNKNOWN HEIRS OF MARY LUECHT, DECEASED T.B.A. = 10,882 S.F.

(106 WL) IRENE E. VOLLERT, COMMISSIONER T.B.A. = 7440 S.F.

(107 WL) THE ESTATE OF CHARLES & ANNA VOHNOUTEK, BOTH DEC'D T.B.A. = 2480 S.F.

(108 WL) LOLA E. STARCHER & ROBERT E. STARCHER T.B.A. = 18,977 S.F.

(109 WL) FRANK K. LEVIN T.B.A. = 19,840 S.F.

(110 WL) MARY KNEBLEWICZ & JOHN M. KNEBLEWICZ T.B.A. = 4960 S.F.

(111 PR) (111 WS) LUCIEN FISK WAKEFIELD T.B.A. = 8,000 S.F.

(112 PR) (112 WS) FRANK K. LEVIN T.B.A. = 4,000 S.F.

(113 PR) (113 WS) WALTER KOBA & JOSEPHINE KOBA T.B.A. = 4,000 S.F.

(114 PR) (114 WS) JUANITA G. SHELHART T.B.A. = 4,000 S.F.

(115 PR) (115 WS) FRANK K. LEVIN T.B.A. = 14,000 S.F.

(116 WL) FRED DYKE T.B.A. = 4960 S.F.

(117 WL) PERCY G. HANSEN T.B.A. = 4960 S.F.

(118 WL) JESSIE M. STEWART T.B.A. = 2480 S.F.

(119 WL) PERCY G. HANSEN T.B.A. = 2480 S.F.

(154 WS) IRENE E. BOROSH T.B.A. = 3,333 S.F. Reg.Ind.Cert.#5447

(155 WS) STANLEY CWIERTNIA & ROSE CWIERTNIA T.B.A. = 2,000 S.F. Reg.Ind.Cert.#5773

(156 WS) JOSEPH GUERRA & GRACE GUERRA T.B.A. = 667 S.F. Reg.Ind.Cert.#5734

(120 WL) FRANK SREDNIAWA T.B.A. = 4960 S.F.

(121 WL) HELEN HERVI T.B.A. = 4960 S.F.

(122 WL) WILLIAM NOVAK, CECELIA NOVAK & JAMES NOVAK T.B.A. = 2,480 S.F.

(123 WL) FRANK K. LEVIN T.B.A. = 7388 S.F. Reg.Ind. Cert. #26451

(124 WL) THE ESTATE OF JOHN & MARY KANCE, BOTH DECD T.B.A. = 4047 S.F. Reg.Ind.Cert.6351

(125 WL) ABNER D. ZOOK T.B.A. = 7904 S.F.

(126 WL) LOLA E. STARCHER & ROBERT E. STARCHER T.B.A. = 1773 S.F.

UNKNOWN HEIRS OF

(127 WL) HATTIE B. COURIER, DEC'D. T.B.A. = 1703 S.F. Reg.Ind. Cert.#5220

(128 WL) LOLA E. STARCHER & ROBERT E. STARCHER T.B.A. = 1633 S.F.

(129 WL) PETER KAPALINSKY & MARGARET KAPALINSKY T.B.A. = 2453 S.F. Reg.Ind.Cert.#7332

(130 WL) THE ESTATE OF JOSEPH HEGEDUS DECEASED T.B.A. = 1980 S.F. Reg.Ind. Cert. #10642

(131 WL) LOUIS DELCIAPPO & MARY DELCIAPPO T.B.A. = 1980 S.F.

3-20" ELM	7-12" ELM	3-12" BEECH	1-12" BEECH
1-30" BEECH	2-30" BEECH	1-30" BEECH	3-12" ELM
4-30" BEECH	8-18" ELM	13-12" ELM	7-20" OAK
	3-18" SYCAMORE	1-24" OAK	1-20" ELM
		1-30" BEECH	

(132 WL) ALONZO FOTHERINGHAM T.B.A. = 12860 S.F. Reg.Ind. Cert. #6033

(133 WL) PERCY G. HANSEN T.B.A. = 1260 S.F. Reg.Ind. Cert.#37383

(134 WL) LOLA E. STARCHER & ROBERT E. STARCHER T.B.A. = 1980 S.F.

(135 WL) FRANK K. LEVIN T.B.A. = 1313 S.F. Reg.Ind. Cert.#26451

(136 WL) PERCY G. HANSEN T.B.A. = 6336 S.F. Reg.Ind. Cert. #37383

(137 WL) FRANK K. LEVIN T.B.A. = 1980 S.F. Reg.Ind. Cert. #26451

(138 WL) MRS. LURA KNIVETON DECD T.B.A. = 1980 S.F. Reg.Ind. Cert. #5298

(139 WL) (139 PR) (151 WS)

3-30" BEECH	1-12" BEECH	5-20" ELM	9-12" ELM
3-12" ELM	1-20" CHERRY	9-20" SYCAMORE	2-24" BEECH
13-12" ELM	7-20" OAK	2-12" PINE	2-12" SYCAMORE
1-24" OAK	1-20" ELM	2-30" BEECH	4-12" BEECH
1-30" BEECH			

STATE OF OHIO DEPT OF HIGHWAYS
Formerly Owned By
(ELIZABETH M. FALCO)
T.B.A. = 1980 S.F.

(140 WL) LOLA E. STARCHER & ROBERT E. STARCHER T.B.A. = 1260 S.F. Reg.Ind. Cert. #27616

(141 WL) JESSIE M. STEWART T.B.A. = 1980 S.F.

(142 WL) PERCY G. HANSEN T.B.A. = 1980 S.F. Reg.Ind. Cert.# 37383

(143 WL) TONY AGRUSA T.B.A. = 1980 S.F. Reg.Ind. Cert. #5119

(144 WL) PERCY G. HANSEN T.B.A. = 4356 S.F. Reg.Ind. Cert. #37383

(150 FR) (150 WS) LOLA E. STARCHER & ROBERT E. STARCHER T.B.A. = 8,000 S.F.

(151 PR) (151 WS) FRANK K. LEVIN T.B.A. = 8,525 S.F.

JOHANNA KUNART & FRANK K. LEVIN et al T.B.A. = 4,000 S.F.

(152 PR) (152 WS) LOLA E. STARCHER & ROBERT E. STARCHER T.B.A. = 4,000 S.F.

(153 PR) (153 WS)

(154 WL) IRENE E. BOROSH T.B.A. = 667 S.F.

(155 WL) STANLEY CWIERTNIA & ROSE CWIERTNIA T.B.A. = 2000 S.F.

(156 WL) JOSEPH GUERRA & GRACE GUERRA T.B.A. = 3333 S.F.

4-12" BEECH	2-12" PINE	3-30" BEECH	1-12" CHERRY
20-16" OAK	2-20" BEECH	3-12" OAK	7-20" OAK
1-12" PINE	2-12" BEECH	3-15" OAK	1-24" ELM
9-15" ELM	2-20" ELM		
2-12" SYCAMORE			
4-20" BEECH			

(157 WL) LOLA E. STARCHER & ROBERT E. STARCHER T.B.A. = 10,814 S.F.

(158 WL) PERCY G. HANSEN T.B.A. = 4000 S.F.

(159 WL) STEVE SZEGO, DECEASED T.B.A. = 4000 S.F.

(160 WL) PERCY G. HANSEN T.B.A. = 8000 S.F.

3-30" BEECH	1-12" CHERRY	1-18" ELM	1-15" CHERRY
3-12" OAK	7-20" OAK	1-15" CHERRY	3-15" MAPLE
3-15" OAK	1-24" ELM	3-15" MAPLE	1-48" OAK

(161 WL) FRANK K. LEVIN T.B.A. = 2000 S.F. Reg.Ind. Cert. #26451

(164 WL) STANLEY L. ABRAMS T.B.A. = 6376 S.F.

(162 WL) STANLEY L. ABRAMS T.B.A. = 201 S.F.

(163 WL) THE ESTATE OF CHARLES W. PRATT & ELLEN PRATT, BOTH DECD T.B.A. = 602 S.F.

(165 WL) 3.934 Ac.

(148 WL) FRANK K. LEVIN T.B.A. = 637 S.F. Reg.Ind. Cert. #26451

(147 WL) PERCY G. HANSEN T.B.A. = 425 S.F. Reg.Ind. Cert.#37383

(146 WL) LOLA E. STARCHER & ROBERT E. STARCHER T.B.A. = 637 S.F. Reg. Ind. Cert.#2743

GRAPHIC SCALE
0 50 100 150 200

TYPE I FUNDS

PRELIMINARY SUBMITTAL DATE: SEPT. 9, 1965 RIGHT OF WAY COMPLETION DATE: JAN. 25, 1967			
NO	REVISIONS	MADE BY	DATE
1	NAME CHANGE Pcl. 139 WL	Bill	9/11/67
2	ADDED (11) PIE'S, 1-DESIGNATION BLOCK & 2 PROJECT NO	LANDOR	10/11/67
3	Name Change Pcl. 138 WL	Smith	10-20-67
4	Name Change Pcl. 111 WS	Smith	10-24-67
5	Name Change Pcl 104 WL	Smith	10-24-67
6	Name Change Pcl. 127 WL	Bill	11-1-67

STA. 558+00 TO STA. 573+00

◉ MONUMENTS TO BE SET

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

310A

SUM-271-8.29
SUM-271-10.25-SI(1)
SUM-271-10.30-SI(1)

RIGHT OF WAY SHEET

22-A
25

(101 WS) DOROTHY SCHULTZ
T.B.A. = 7,314 S.F.

(102 WS) PERCY G. HANSEN
T.B.A. = 8,000 S.F.

(103 WS) FRANK K. LEVIN
T.B.A. = 4,000 S.F.

(111 WS) LUCIEN FISK WAKEFIELD
T.B.A. = 8,000 S.F.

(112 WS) FRANK K. LEVIN
T.B.A. = 4,000 S.F.

(113 WS) WALTER KOBA & JOSEPHINE KOBA
T.B.A. = 4,000 S.F.

(114 WS) JUANITA G. SHELHART
T.B.A. = 4,000 S.F.

(115 WS) FRANK K. LEVIN
T.B.A. = 14,000 S.F.

(150 WS) LOLA E. STARCHER & ROBERT E. STARCHER
T.B.A. = 8,000 S.F.

(151 WS) FRANK K. LEVIN
T.B.A. = 8,525 S.F.

(152 WS) JOHANNA KUNART & FRANK K. LEVIN et al
T.B.A. = 4,000 S.F.

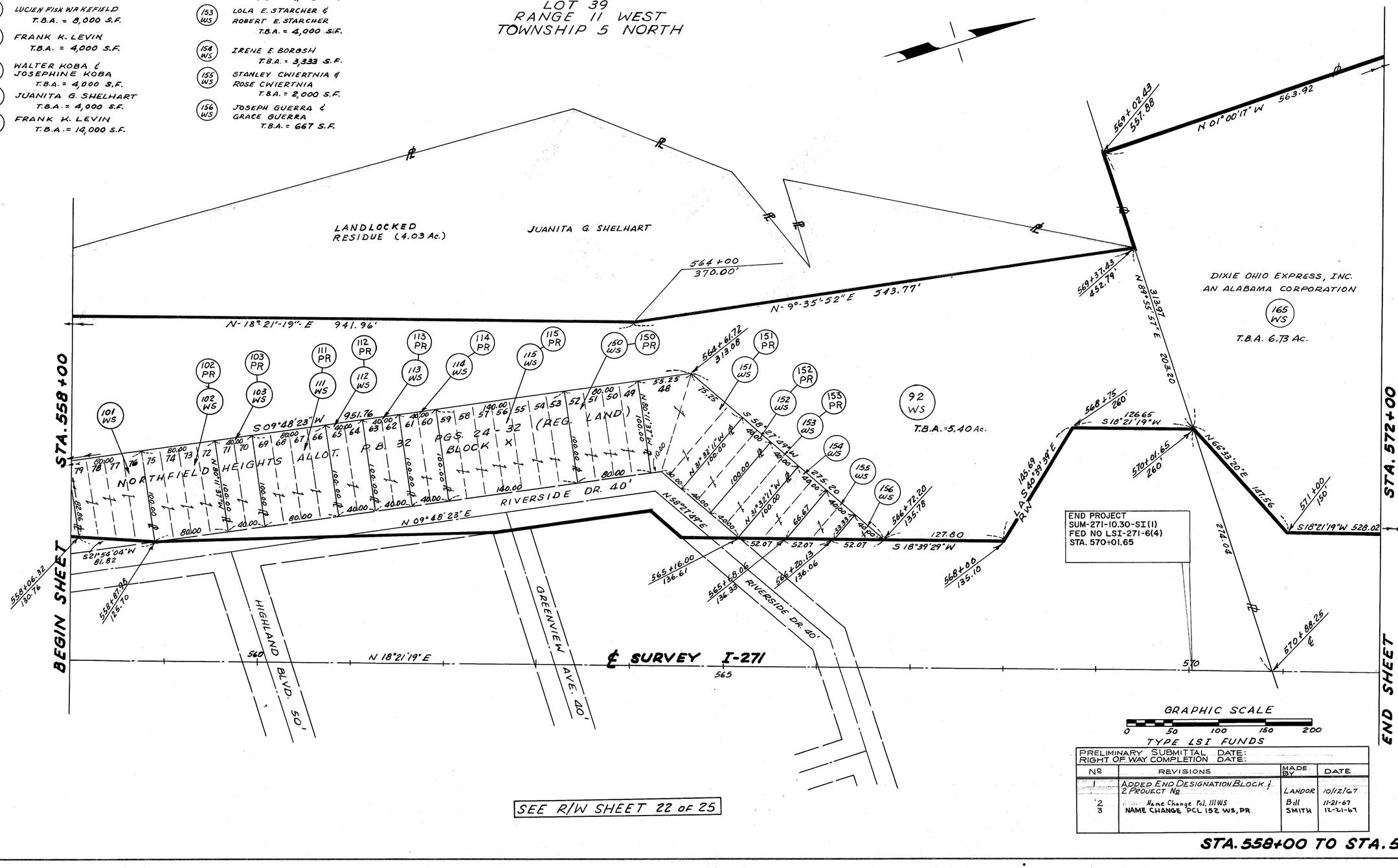
(153 WS) LOLA E. STARCHER & ROBERT E. STARCHER
T.B.A. = 4,000 S.F.

(154 WS) IRENE E. BOROSH
T.B.A. = 3,333 S.F.

(155 WS) STANLEY CWIERTNIA & ROSE CWIERTNIA
T.B.A. = 2,000 S.F.

(156 WS) JOSEPH GUERRA & GRACE GUERRA
T.B.A. = 667 S.F.

SUMMIT COUNTY
NORTHFIELD CENTER TWP.
LOT 39
RANGE 11 WEST
TOWNSHIP 5 NORTH



SEE R/W SHEET 22 OF 25

GRAPHIC SCALE
0 50 100 150 200

TYPE LSI FUNDS

PRELIMINARY SUBMITTAL DATE:
RIGHT OF WAY COMPLETION DATE:

Nº	REVISIONS	MADE BY	DATE
1	ADDED END DESIGNATION BLOCK & PROJECT Nº.	LANDOR	10/12/67
2	Name Change Pcl. 111 WS	Bill	11-21-67
3	NAME CHANGE PCL 152 WS, PR	SMITH	12-21-67

STA. 558+00 TO STA. 572+00

FED. RD.	STATE	PROJECT	
2	OHIO		

311/313

SUM-271-8.29
SUM-271-10.25-SI(1)
SUM-271-10.30-SI(1)

RIGHT OF WAY SHEET 23/25

NOTE:
UNABLE TO DETERMINE EXACT LOCATION AND WIDTH OF OHIO BELL TELEPHONE EASEMENT.

MATCH TO R/W SHEET 22 OF 25

SEE R/W SHEET 23-A OF 25

3-12" MAPLE
1-15" ELM

1-12" MAPLE
1-12" ELM

1-12" APPLE
1-12" MAPLE

1-15" MAPLE
3-12" ELM

1-15" ELM
1-12" ELM

1-12" POPLAR
1-12" MAPLE

STA. 572+00

BEGIN SHEET

N 18°21'19" E
528.02'

END PROJECT
SUM-271-SI(1)
FED No-LSI-271-6(2)
STA. 576+28.02

625.52'

STA 576+28.02
150'

15.74'

108°01'30" (F)

576+76.83

¢-SURVEY (I-271)

575

580

585

N 18°21'19" E

STA. 586+00

END SHEET

A.J. BALTES, INC.

166 WL

DEED AREA = 25.613 Ac
DEED CORR. = 25.5644 Ac
RESIDUE LEFT = 10.3122 Ac (ISOLATED)

40'±

650.44'

1400 LIN. FT. TYPE 47 FENCE

T.B.A. = 4.4796 Ac

CONSTRUCTION LIMITS

LA RW

S 10°40'11" E
446.92' (D)

I.P. FD.

S LINE LOT 38
N LINE LOT 39
OHIO BELL TELEPHONE LINES

429.81' (F)
836.50' (E)
836.74' (D)

582+78.46
150'

157.74'

583+27.27

108°01'30" (F)

SUMMIT COUNTY
NORTHFIELD CENTER TWP.
LOT 38
RANGE 11 WEST
TOWNSHIP 5 NORTH

A.J. BALTES, INC.

166A WL

DEED AREA = 6.62 Ac
DEED CORR. = 6.623 Ac
RESIDUE LEFT = 4.2213 Ac (ISOLATED)

N 18°21'19" E
429.43'

LA RW

CONSTRUCTION LIMITS

T.B.A. = 2.0238 Ac

165 WL 3.934 Ac

1400 LIN. FT. TYPE 47 FENCE

N 21°09'55" E
557.91'

A & P

577+25.64
150'

CONSTRUCTION LIMITS

650.44'

N 18°21'19" E

LA RW

165.71'

RESIDUE RIGHT = 10.7726 Ac

DIXIE-OHIO EXPRESS INC. AN ALABAMA CORPORATION

165 WL

T.B.A. = 3.934 Ac

SUMMIT COUNTY
NORTHFIELD CENTER TWP.
LOT 39
RANGE 11 WEST
TOWNSHIP 5 NORTH

N 88°40'11" W
1124.14' (CALC.)

583+76.08
150'

RESIDUE RIGHT = 0.3779 Ac

326.68' (F)

S 88°40'11" W

168 WL

JOHN P. BONATH ¢
THELMA M. BONATH

T.B.A. = 0.6426 Ac
P.R.O. = 0.0469 Ac
TOTAL = 0.6895 Ac

I.P. FD.

N 44°41'11" W
187.88' (F)

N 45°18'49" E
247.80' (D)

350.12' (D)

585+41.79
150'

232.52' (F)
230.00' (D)

I.P. FD.

N 45°18'49" E

274.57'

I.P. FD.

N 45°18'49" E

GRAPHIC SCALE
0 50 100 150 200

TYPE I FUNDS

PRELIMINARY SUBMITTAL DATE: SEPT. 9, 1965
RIGHT OF WAY COMPLETION DATE: JAN. 25, 1967

Nº	REVISIONS	MADE BY	DATE
1	ADDED LEADER LINE P#s 163, 166, 166A & 168	IRICK	4-3-67
2	ADDED END DESIGNATION BLOCK & 2 PROJECT Nº.	LANDOR	10/12/67

STA. 573+00 TO STA. 586+00

MATCH TO R/W SHEET 24 OF 25

4-12" MAPLE
3-12" ELM
10-12" APPLE
3-10" APPLE
2-12" APPLE
1-12" OAK
2-12" MAPLE
3-12" MAPLE

◉ MONUMENTS TO BE SET

Sta. ... Proj. Dept. Div. ...
R/W-ENGR & ADMIN SECT.
INVENNA, OHIO
JAN 09 1967
Crds. LOGGED BH

K & E

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

SUM-271-8.29
SUM-271-10.25-SI(I)
SUM-271-10.30-SI(I)

RIGHT OF WAY SHEET

311A

23-A
25

SUMMIT COUNTY
NORTHFIELD CENTER TWP.
LOT 39
RANGE 11 WEST
TOWNSHIP 5 NORTH

SUMMIT COUNTY
NORTHFIELD CENTER TWP.
LOT 38
RANGE 11 WEST
TOWNSHIP 5 NORTH

574 L 34.46
744.82

N 01°00'17" W 563.92

S 89°40'11" E 625.52

DIXIE OHIO EXPRESS, INC.
AN ALABAMA CORPORATION

165
WS

T.B.A. 6.73 Ac.

LOT 38
LOT 39

S 89°40'11" E

BEGIN SHEET STA. 572+00

576+28.02
150'

582+78.46
150'

S 18°21'19" W 528.02

L A E W

END SHEET STA. 586+00

END PROJECT
SUM-271-10.25-SI(1)
FED No LSI-271-6(2)
STA. 576+28.02

157.74

576+76.83
℄

583+27.27
℄

575 N 18°21'19" E ℄ SURVEY I-271 580 585

GRAPHIC SCALE
0 50 100 150 200

TYPE LSI FUNDS

PRELIMINARY SUBMITTAL DATE:
RIGHT OF WAY COMPLETION DATE:

No.	REVISIONS	MADE BY	DATE
1	ADDED END DESIGNATION BLOCK & PROJECT No.	LANDOR	10/12/67

SEE R/W SHEET 23 OF 25

STA. 572+00 TO STA. 586+00

FED. RD.	STATE	PROJECT	
2	OHIO		

312
313

SUM-271-8.29

RIGHT OF WAY SHEET 24 25

SUMMIT COUNTY
NORTHFIELD CENTER TWP.
LOT 38
RANGE 11 WEST
TOWNSHIP 5 NORTH

MATCH TO R/W SHEET 23 OF 25

MATCH TO R/W SHEET 25 OF 25

STA. 586+00

STA. 599+00

BEGIN SHEET

END SHEET

2-15" MAPLE
4-24" MAPLE
4-12" PINE

ALBERT A. AUSPERK &
CHRISTINE L. AUSPERK
DEED AREA = 8.188 AC
DEED CORR. = 1.6037 AC
RESIDUE LEFT = 0.4765 AC
T.B.A. = 0.9250 AC
P.R.O. = 0.1582 AC
TOTAL = 1.1272 AC

JOHN D. BONATH &
THELMA M. BONATH
T.B.A. = 0.6426 AC
P.R.O. = 0.0259 AC
TOTAL = 0.6685 AC

BRANDYWINE CREEK

STA. 589+01.60 I-271 =
STA. 718+47.19 C.R. 16

STA. 591+78.50 I-271

WILSON OLEYLAND RD. C.R. 16
24' TRAVELED ROAD

℄ I-271

℄ BRANDYWINE CREEK

℄ SURVEY (I-271) N 18°21'19"E

FIELD DRIVE (ABANDONED)

EXISTING RELOCATED HIGHLAND RD. T.R. 111

CONSTRUCTION LIMITS

1225 LIN. FT. TYPE 47 FENCE

1244 LIN. FT. TYPE 47 FENCE

NURSERY

GRAVEL

SEPTIC TANK

SHED

GAR.

1½ ST. BRK. HSE.

1 ST. BRK. HSE.

1 ST. L BRK. PORCH HSE.

SLAG

CPA

LA RW

END ACQUISITION
SUM-271-8.29
STA. 589+40.09

◉ MONUMENTS TO BE SET

- - - - 20" OSAGE ORANGE
- - - - WILLOW
- - - - MAPLE
- - - - APPLE
10" PINE

GRAPHIC SCALE
0 50 100 150 200

TYPE I FUNDS

PRELIMINARY SUBMITTAL DATE: SEPT. 9, 1965
RIGHT OF WAY COMPLETION DATE: JAN. 25, 1967

Nº	REVISIONS	MADE BY	DATE

STA. 586+00 TO STA. 599+00

State Highway Dept. Ohio
R/W - Engr. & Admin. Sect.
Mapping Unit
JAN 20 1967
Cmds. LOGGED Sill Bk.

E.S.E.

FED. RD.	STATE	PROJECT	
2	OHIO		

313
313

SUM-271-8.29

RIGHT OF WAY SHEET 25
25

SUMMIT COUNTY
NORTHFIELD CENTER TWP.
LOT 38
RANGE 11 WEST
TOWNSHIP 5 NORTH

MATCH TO R/W SHEET 24 OF 25

BEGIN SHEET

STA. 599+00

JENNIE KOLTCZ

SHADY LANE 50'

(OLD) HIGHLAND RD. (T.R. 111)

NORTHFIELD PARK ESTATES
VOL. 53
Pgs. 2-3-4-5-6-7

S.S.& M.S. HANN

JAMES & RUBY J. SOLLAZZO

THIS PARCEL ACQUIRED AS PAR. 51-173WA ON SUM.-271-11.50 CONTRACT.

DO NOT DISTURB CONC WALK & PAD

CONC WALK AND PAD

173 WA

171 WA

20' SEWER EASEMENT

2 STY. FR. HSE

1 STY. BR. GAR.

FR. SHED

SEWAGE DISPOSAL PLANT

GRAVEL DR.

ASPHALT DR.

DRIVE

EXIST. 18" SAN. SEW.

EXIST. 21" STORM SEW.

EXIST. 36" R.C.P.

CONSTRUCTION LIMITS

1126 LIN. FT. TYPE 47 FENCE

MEET EXISTING FENCE STA. 610+08.09 148.00'

MEET EXISTING FENCE STA. 607+81.79 109.00'

EQUATION
STA. 609+81.79 = STA. 32+00

EXISTING FENCE BY OTHERS

END OF PROJECT STA. 609+81.79

INDIAN CREEK

847 LIN. FT. TYPE 47 FENCE

RELOCATED INDIAN CREEK

EXISTING RELOCATED HIGHLAND RD. T.R. 111

EXIST. 18" SAN. SEW.

EXIST. 21" SAN. SEW.

EXIST. 27" SAN. SEW.

℄ - SURVEY (I-271)

O.L. 38
O.L. 28

O.L. 37
O.L. 27

R=303.10'

MONUMENTS TO BE SET

GRAPHIC SCALE
50 100 150 200

TYPE I FUNDS

PRELIMINARY SUBMITTAL DATE: SEPT. 9, 1965
RIGHT OF WAY COMPLETION DATE: JAN. 25, 1967

NO	REVISIONS	MADE BY	DATE
1	Name Change Pcl. 173 WA	Bill	11/8/67

STA. 599+00 TO STA. 609+81.79

Site Highway Drive Div. 3
R/W ENGR & ADMIN SECT.
RAVENNA, OHIO
JAN 69 1967
LOGGED
Date Bill Bk.

E.&E.

FED. REG.	STATE	PROJECT	
2	OHIO		

SUM - 2.71 - 8.29
SUM-271-10.25-SI(1)
SUM-271-10.30-SI(1)

SHEET 1

STATE OF OHIO
DEPARTMENT OF HIGHWAYS

SUM - 271 - 8.29
SUMMIT COUNTY
BOSTON TWP - NORTHFIELD CENTER TWP.
SAGAMORE HILLS TWP.
GRADE SEPARATION WITH N.Y.C. R.R.

"RIGHT-OF-WAY ONLY"
I-271-6(16)
LIMITED ACCESS
1965 SPECIFICATIONS

- LIMITED ACCESS -

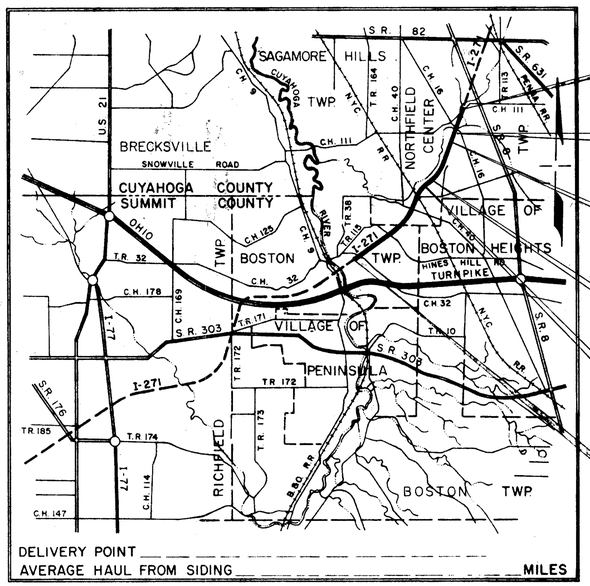
THIS IMPROVEMENT IS ESPECIALLY DESIGNED FOR THROUGH TRAFFIC AND HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY OR FREEWAY BY ACTION OF THE DIRECTOR OF HIGHWAYS IN ACCORDANCE WITH PROVISIONS OF SECTION 5511.02 REVISED CODE OF OHIO.

CONVENTIONAL SIGNS

State Line
County Line
Township Line
Section Line
Center Line
Corporation Line
Fence Line
Guard Rail (existing)
Guard Rail (proposed)
Railroad
Power Poles
Telephone Poles
Power or Telephone Poles with guys
Tower Line
Trees or Stumps (existing)
Limited Access — LA
Right of Way — RW
Limited Access & Right of Way — LA & RW

~ INDEX OF SHEETS ~

1-2-3-4	CENTERLINE PLATS
5-6-7	PROPERTY MAPS
8-9	SUMMARY SHEETS
10	STA. 429+00 TO STA. 438+00
11	STA. 438+00 TO STA. 453+00
12	STA. 453+00 TO STA. 468+00
13	STA. 468+00 TO STA. 483+00
14	HINES HILL ROAD
15	STA. 483+00 TO STA. 498+00
16	STA. 498+00 TO STA. 513+00
17, 17A	STANFORD ROAD & BRANDYWINE ROAD
18	STA. 513+00 TO STA. 528+00
19, 19A	NEW YORK CENTRAL RAILROAD PLAT
20	STA. 528+00 TO STA. 543+00
21	STA. 543+00 TO STA. 558+00
22	STA. 558+00 TO STA. 573+00
23	STA. 573+00 TO STA. 586+00
24	STA. 586+00 TO STA. 599+00
25	STA. 599+00 TO STA. 609+81.79



END PROJECT
SUM-271-8.29
FED No I-271-6(16)
STA. 600+81.79

END PROJECT
SUM 271-10.25-IS(1)
FED No LSI-271-6(2)
STA. 576+28.02

END PROJECT
SUM 271-10.30 SI(1)
FED No LSI-271-6(4)
STA. 570+01.65

BEGIN PROJECT
SUM 271-10.30SI (1)
FED No LSI-271-6(4)
STA. 554+54.23

BEGIN PROJECT
SUM-271-10.25-SI(1)
FED No LSI-271-6(2)
STA. 543+30.22

BEGIN PROJECT
SUM 271-8.29
FED No I-271-6(16)
STA. 436+98.25

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 THESE PLANS AND ESTIMATES.

APPROVED _____
DATE _____ DIVISION DEPUTY DIRECTOR

APPROVED _____
DATE _____ ENGINEER OF BRIDGES

APPROVED _____
DATE _____ ENGINEER OF LOCATION AND DESIGN

APPROVED _____
DATE _____ DEPUTY DIRECTOR OF DESIGN AND CONSTRUCTION

APPROVED _____
DATE _____ DEPUTY DIRECTOR OF RIGHT OF WAY

APPROVED _____
DATE _____ DEPUTY DIRECTOR OF PLANNING AND PROGRAMMING

APPROVED _____
DATE _____ FIRST ASSISTANT DIRECTOR

APPROVED _____
DATE _____ DIRECTOR OF HIGHWAYS

LOCATION MAP

SCALE OF MILES 0 1 2

PORTION TO BE IMPROVED
STATE ROADS
OTHER ROADS

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

SUPPLEMENTAL PRINTS OF STANDARD CONSTRUCTION DRAWINGS			

SUPPLEMENTAL SPECIFICATIONS

PREPARED AND RECOMMENDED BY
BEISWENGER, HOCH & ARNOLD, CONSULTING ENGINEERS
AKRON OHIO CLEVELAND

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

APPROVED

_____ DIVISION ENGINEER _____ DATE

FILE NO.

DATE OF LETTING _____ 196
CONTRACT NO. _____

OHIO HIGHWAY DEPT. DIV. 4
NEW RIDER & BOSTON SECT.
RAVENNA, OHIO
JAN 20 1967
LOADED
Ords. Bill Bk.

FED. RD.	STATE	PROJECT	
2	OHIO		

288 / 313

SUM-271 - 8.29
RIGHT OF WAY SHEET 1 / 25

CENTER LINE SURVEY PLAT

SUMMIT - 271 - 8.29

SUMMIT COUNTY, OHIO

(BILLING SECTION 2.98)

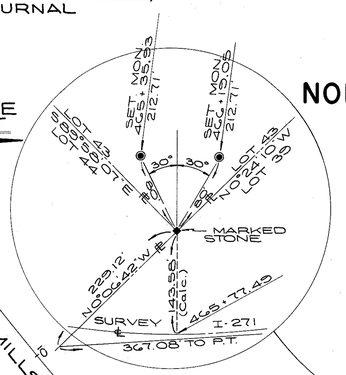
~ LIMITED ACCESS ~

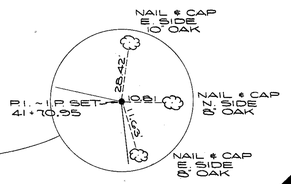
THIS IMPROVEMENT HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY FROM STATION 436+98.25 TO STATION 609+81.79 BY ACTION OF THE DIRECTOR OF HIGHWAYS AND RECORDED IN VOLUME 47, PAGE 952, OF THE DIRECTORS JOURNAL PURSUANT TO LAW.

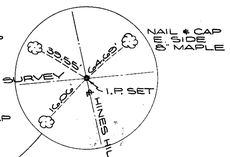
TWN 3/7/67

BOSTON TOWNSHIP - LOTS 39, 43, 44, & 45
NORTHFIELD CENTER TWP. - LOT 40 - (FORMERLY BOSTON TWP.)
NORTHFIELD CENTER TWP. LOTS 38, 39, 40, & 50
SAGAMORE HILLS TWP. LOT 50 (FORMERLY NORTHFIELD TWP.)
SAGAMORE HILLS TWP. LOT 40 (FORMERLY BOSTON TWP.)

DETAIL OF REFERENCE MONUMENTS TO BE SET



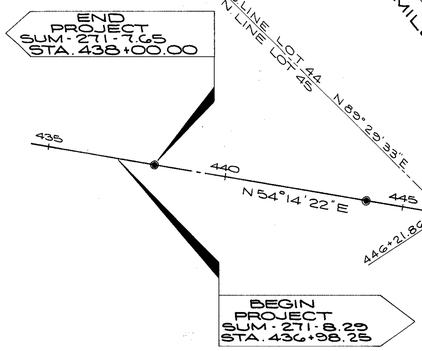




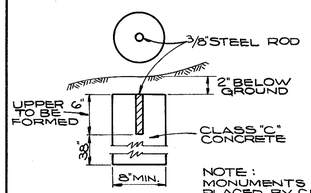
0 100 200 400 600 800
SCALE IN FEET

CENTERLINE SURVEY CURVE DATA
Δ = 14°29'18" LT.
Dc = 1°00'
R = 5729.58'
L = 1448.83'
T = 728.30'
E = 46.10'
P.I. = 460+53.13

HINES HILL ROAD CURVE DATA
Δ = 63°04'56" RT.
Dc = 6°2'
R = 955.37'
T = 596.72'
Lc = 101.75'
P.C. 41+14.23
P.T. 42+15.98
P.I. 41+70.95



MONUMENT ASSEMBLIES TO BE SET
HINES HILL ROAD
P.O.T. STA. 45+00
P.O.T. STA. 54+50



NOTE:
MONUMENTS TO BE PLACED BY CONTRACTOR

DETAIL OF CENTERLINE REFERENCE MONUMENTS (NOT TO SCALE)

NOTES:
MONUMENTS TO BE PLACED ON CENTER LINE SURVEY
MONUMENTS TO BE PLACED DURING OR AFTER CONSTRUCTION
IRON PIN REFERENCE POINTS TO BE PLACED BEFORE CONSTRUCTION
ALL IRON PIN REFERENCE POINTS ARE TO BE SET AT THE DISCRETION OF THE FIELD ENGINEER AND OUTSIDE OF THE CONSTRUCTION LIMITS

CENTERLINE REFERENCE MONUMENTS TO BE SET (THIS SHEET)

P.O.T. STA. 438+00.00
P.O.T. STA. 443+98.23
P.C. STA. 453+24.83
P.O.C. STA. 460+49.24 - MIDDLE ORDINATE
P.T. STA. 467+73.66
P.O.T. STA. 476+44.86
P.O.T. STA. 486+10.73 STA. 465+35.93 (212.71' LT.)
P.O.T. STA. 495+58.30 STA. 466+19.05 (212.71' LT.)

ROAD PLANS CURVE DATA
Δ = 6°2'30" RT.
R = 1833.17'
Dc = 1°0'
P = 318.31'
Lc = 347.22'
P.C. 15+46.19
P.T. 18+93.41
P.I. 17+35.36
CORROBORATED BY CONSULTANTS SURVEY

DETAIL OF BOSTON MILLS ROAD
(NO SCALE)

HINES HILL ROAD CURVE DATA
Δ = 27°34'26" RT.
Dc = 10°
R = 140.60'
Lc = 275.74'
P.C. 56+86.73
P.T. 59+62.47
P.I. 58+27.33

460850

RECEIVED FOR RECORD
MARCH 17 1967
At 1:45 o'clock P. M.
Recorded March 21 1967
Vol. 70 Page 16 TO 23 INC.
Ray R. Butt
Recorder Summit County, Ohio
Fee $34.80

TRANSFER NOT NECESSARY
MAR 17 1967
C. L. Bower, County Auditor

F FIELD MEASUREMENT
OBS. OBSERVED (FIELD ANGLES)
REC RECORD MEASUREMENT
■ EXISTING MONUMENTS
◉ MONUMENTS TO BE SET
▣ MONUMENT ASSEMBLIES TO BE SET

I HEREBY CERTIFY THAT THIS PLAT IS A TRUE DELINEATION OF A SURVEY MADE FOR THE OHIO DEPARTMENT OF HIGHWAYS.
BY Bryan E. McCoy
DATE: 2-28-67

RECEIVED FOR RECORD _____ 1965 _____
RECORDED : VOL. _____, PAGE _____, OF THE SUMMIT COUNTY RECORDS
_____ RECORDER

CERTIFICATE OF APPROVAL
SIGNED BY Clifton M. Newhall
CLIFTON M. NEWHALL
DATE 2-28-67 DIVISION DEPUTY DIRECTOR

PRELIMINARY SUBMITTAL: SEPT. 9, 1965
RIGHT OF WAY COMPLETION DATE: JAN. 25, 1967

SURVEYORS SEAL

CENTERLINE SURVEY PLAT 1 OF 4

Ohio Highway Dept. Div. 4
N. Engr. & Admin. Sect.
Ravenna, Ohio
Jan 30 1967
Logged
Bill Bk.

FED. RD.	STATE	PROJECT	
2	OHIO		

285/313

SUM-271-8.29
RIGHT OF WAY SHEET 2/25

~ LIMITED ACCESS ~

THIS IMPROVEMENT HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY FROM STATION 436+98.25 TO STATION 609+81.79 BY ACTION OF THE DIRECTOR OF HIGHWAYS AND RECORDED IN VOLUME 47, PAGE 1125, OF THE DIRECTORS JOURNAL 952 PURSUANT TO LAW.

CENTER LINE SURVEY PLAT

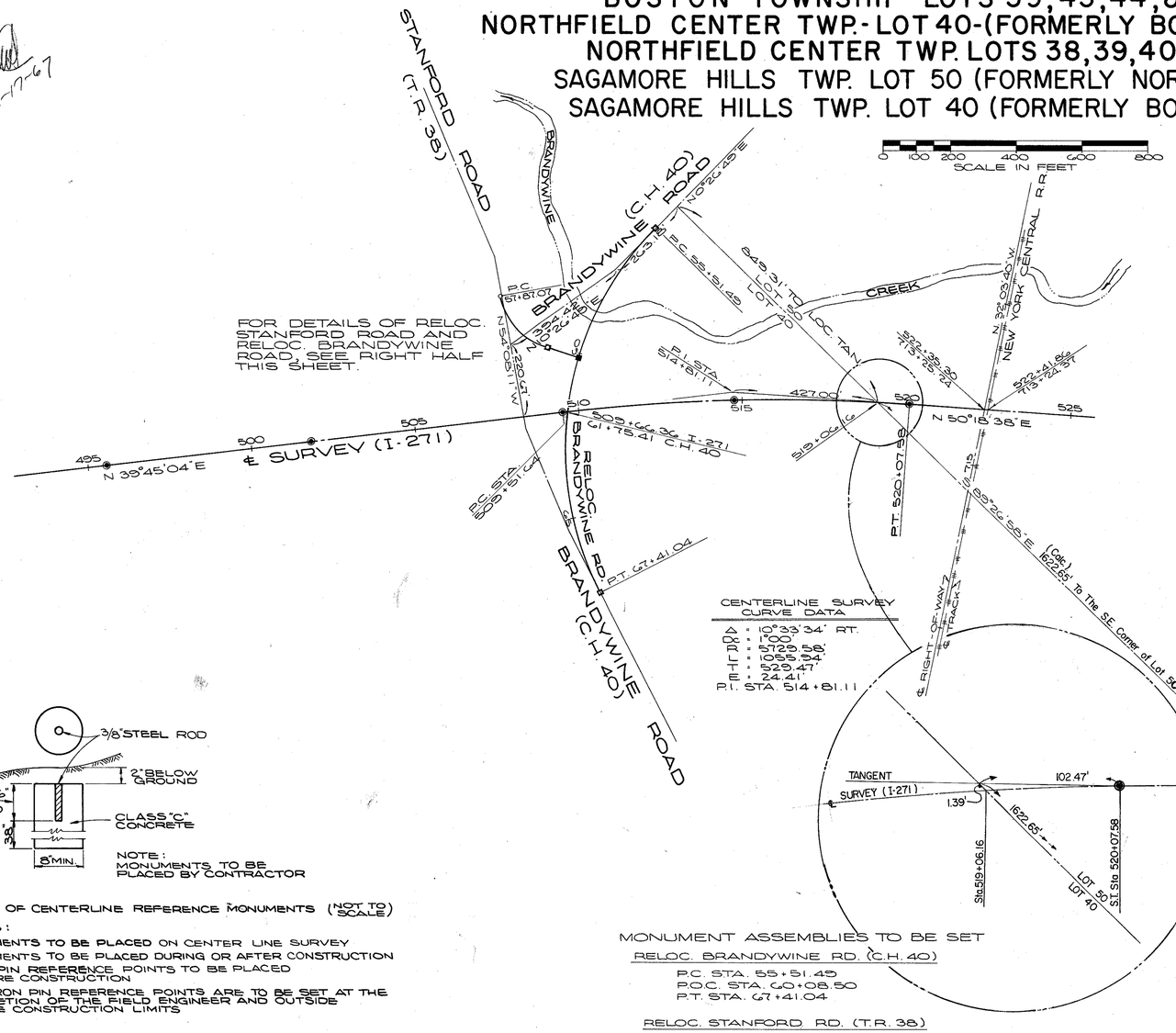
SUMMIT - 271 - 8.29

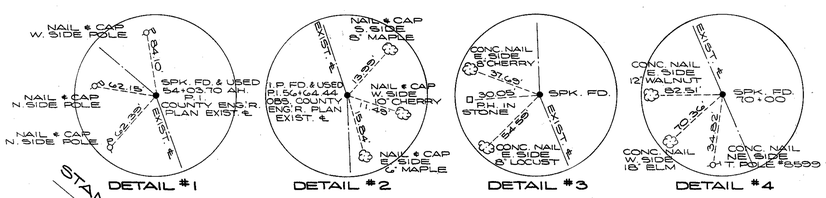
SUMMIT COUNTY, OHIO

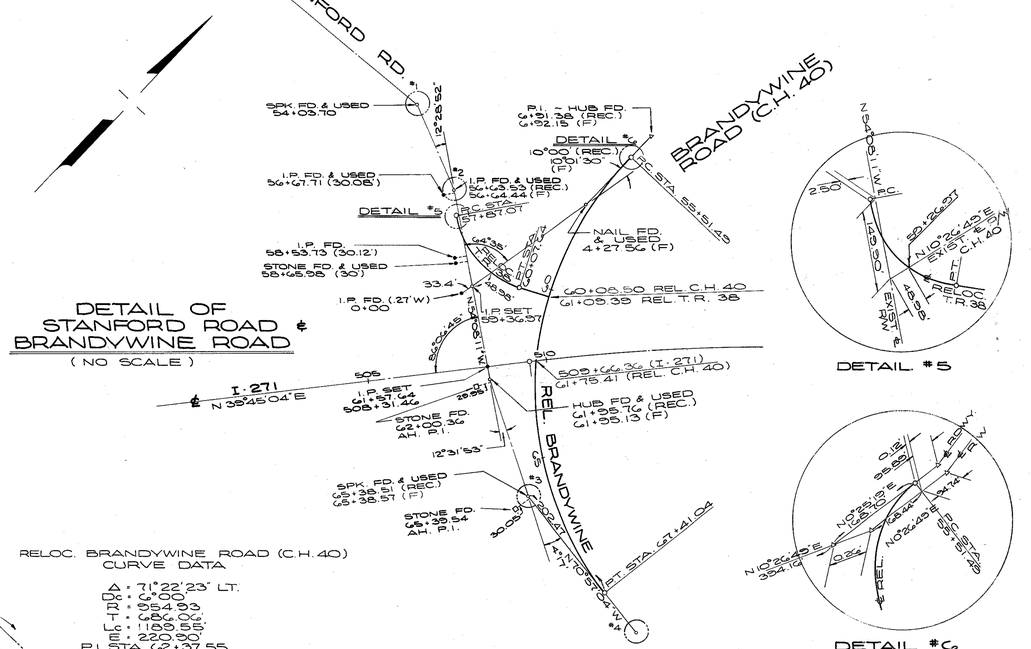
(BILLING SECTION 2.98)

BOSTON TOWNSHIP - LOTS 39, 43, 44, & 45
NORTHFIELD CENTER TWP. - LOT 40 - (FORMERLY BOSTON TWP.)
NORTHFIELD CENTER TWP. LOTS 38, 39, 40, & 50
SAGAMORE HILLS TWP. LOT 50 (FORMERLY NORTHFIELD TWP.)
SAGAMORE HILLS TWP. LOT 40 (FORMERLY BOSTON TWP.)

TMW 3-17-67







NOTES:
MONUMENTS TO BE PLACED ON CENTER LINE SURVEY
MONUMENTS TO BE PLACED DURING OR AFTER CONSTRUCTION
IRON PIN REFERENCE POINTS TO BE PLACED BEFORE CONSTRUCTION
ALL IRON PIN REFERENCE POINTS ARE TO BE SET AT THE DISCRETION OF THE FIELD ENGINEER AND OUTSIDE OF THE CONSTRUCTION LIMITS

MONUMENTS TO BE SET (THIS SHEET)

P.O.T. STA. 455+58.30 (MONUMENT DUPLICATED ON CENTERLINE SURVEY PLAT 1 OF 4)
P.O.T. STA. 501+82.95
P.C. STA. 509+51.64
P.O.C. STA. 514+79.61 - MIDDLE ORDINATE
P.T. STA. 520+07.58

CENTERLINE SURVEY CURVE DATA
Δ = 10°33'34" RT.
D = 1°00'
R = 5729.58'
L = 1055.54'
T = 529.47'
E = 24.41'
P.I. STA. 514+81.11

RELOC. BRANDYWINE ROAD (C.H. 40) CURVE DATA
Δ = 71°22'23" LT.
D = 6°00'
R = 954.93'
T = 686.03'
L = 1189.55'
E = 220.90'
P.I. STA. 62+37.55

RELOC. STANFORD ROAD (T.R. 38) CURVE DATA
Δ = 62°51'44" LT.
D = 28°30'
R = 201.04'
T = 122.87'
L = 220.57'
P.I. STA. 59+09.94

MONUMENT ASSEMBLIES TO BE SET

RELOC. BRANDYWINE RD. (C.H. 40)
P.C. STA. 55+51.49
P.O.C. STA. 60+08.50
P.T. STA. 67+41.04

RELOC. STANFORD RD. (T.R. 38)
P.T. STA. 60+07.64
P.O.T. STA. 61+09.39 (MONUMENT DUPLICATED AT STATION 60+08.50 C.H. 40)

DENOTES REFERENCE TIES

F FIELD MEASUREMENT
OBS OBSERVED (FIELD ANGLES)
REC RECORD MEASUREMENT
■ EXISTING MONUMENTS
◉ MONUMENTS TO BE SET
▣ MONUMENT ASSEMBLIES TO BE SET

TRANSFER NOT NECESSARY
MAR 7 1967
R.I. Shaver, County Auditor

I HEREBY CERTIFY THAT THIS PLAT IS A TRUE DELINEATION OF A SURVEY MADE FOR THE OHIO DEPARTMENT OF HIGHWAYS.
BY Bryan E. Mulvey
DATE: 2-23-67

RECEIVED FOR RECORD _____ 1965
RECORDED: VOL. ____, PAGE ____, OF THE SUMMIT COUNTY RECORDS
RECORDER

CERTIFICATE OF APPROVAL
SIGNED BY Clifton M. Newhall
CLIFTON M. NEWHALL
DATE 2-23-67 DIVISION DEPUTY DIRECTOR

PRELIMINARY SUBMITTAL: SEPT. 9, 1965
RIGHT OF WAY COMPLETION DATE: JAN. 25, 1967

SURVEYORS SEAL

CENTERLINE SURVEY PLAT 2 OF 4

State Highway Dept. Civ. & R/W Engr. & Admin. Sect. Review Prin. JAN 30 1967
Logged Bill Sh.
Cnds.
K.&E.

FED. RD.	STATE	PROJECT	
2	OHIO		

290/313

SUM-271-8.29
RIGHT OF WAY SHEET 3/25

~ LIMITED ACCESS ~

THIS IMPROVEMENT HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY FROM STATION 436+98.25 TO STATION 609+81.79 BY ACTION OF THE DIRECTOR OF HIGHWAYS AND RECORDED IN VOLUME 47, PAGE 332/1125, OF THE DIRECTORS JOURNAL PURSUANT TO LAW.

TWN OK MWD 3-17-67

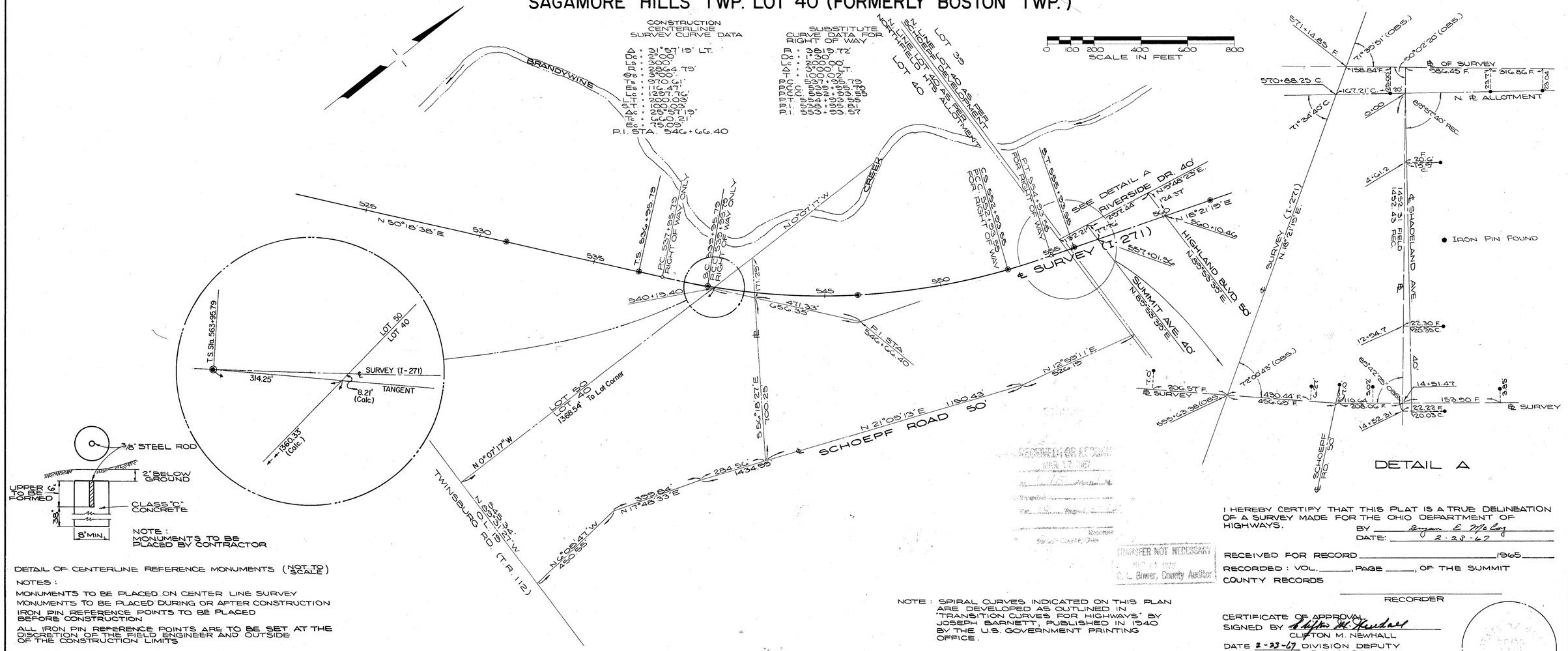
CENTER LINE SURVEY PLAT

SUMMIT - 271 - 8.29

SUMMIT COUNTY, OHIO

(BILLING SECTION 2.98)

BOSTON TOWNSHIP - LOTS 39, 43, 44, & 45
NORTHFIELD CENTER TWP. - LOT 40 - (FORMERLY BOSTON TWP.)
NORTHFIELD CENTER TWP. LOTS 38, 39, 40, & 50
SAGAMORE HILLS TWP. LOT 50 (FORMERLY NORTHFIELD TWP.)
SAGAMORE HILLS TWP. LOT 40 (FORMERLY BOSTON TWP.)



NOTE: MONUMENTS TO BE PLACED BY CONTRACTOR

DETAIL OF CENTERLINE REFERENCE MONUMENTS (NOT TO SCALE)

NOTES:

MONUMENTS TO BE PLACED ON CENTER LINE SURVEY
MONUMENTS TO BE PLACED DURING OR AFTER CONSTRUCTION
IRON PIN REFERENCE POINTS TO BE PLACED BEFORE CONSTRUCTION
ALL IRON PIN REFERENCE POINTS ARE TO BE SET AT THE DISCRETION OF THE FIELD ENGINEER AND OUTSIDE OF THE CONSTRUCTION LIMITS

CENTERLINE REFERENCE MONUMENTS TO BE SET (THIS SHEET)

P.O.T. STA. 531 + 15.38
T.S. STA. 536 + 95.79
S.C. STA. 539 + 95.79
P.O.C. STA. 546 + 44.66 - MIDDLE ORDINATE
C.S. STA. 552 + 93.55
S.T. STA. 555 + 93.55
P.O.T. STA. 562 + 14.03

NOTE: SPIRAL CURVES INDICATED ON THIS PLAN ARE DEVELOPED AS OUTLINED IN "TRANSITION CURVES FOR HIGHWAYS" BY JOSEPH BARNETT, PUBLISHED IN 1940 BY THE U.S. GOVERNMENT PRINTING OFFICE.

F FIELD MEASUREMENT
OBS OBSERVED (FIELD ANGLES)
REC RECORD MEASUREMENT
■ EXISTING MONUMENTS
◉ MONUMENTS TO BE SET

RECEIVED FOR RECORD MAR 13 '67
TRANSFER NOT NECESSARY
C. L. Brewer, County Auditor

I HEREBY CERTIFY THAT THIS PLAT IS A TRUE DELINEATION OF A SURVEY MADE FOR THE OHIO DEPARTMENT OF HIGHWAYS.
BY Roger E McCoy
DATE: 2-28-67

RECEIVED FOR RECORD _____ 1965

RECORDED: VOL. ____, PAGE ____, OF THE SUMMIT COUNTY RECORDS

RECORDER

CERTIFICATE OF APPROVAL
SIGNED BY Clifton M. Newhall
CLIFTON M. NEWHALL
DATE 2-23-67 DIVISION DEPUTY DIRECTOR

PRELIMINARY SUBMITTAL: SEPT. 9, 1965
RIGHT OF WAY COMPLETION DATE: JAN. 25, 1967

SURVEYOR'S SEAL

CENTERLINE SURVEY PLAT 3 OF 4

State Highway Dept. Div. 4
Right & Admin Sect.
Jan 6th 1967
LOGGED
Date

FED. RD.	STATE	PROJECT	
2	OHIO		

291 / 313

SUM-271-8.29
RIGHT OF WAY SHEET 4 / 25

~ LIMITED ACCESS ~

THIS IMPROVEMENT HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY FROM STATION 436+98.25 TO STATION 609+81.79 BY ACTION OF THE DIRECTOR OF HIGHWAYS AND RECORDED IN VOLUME 47, PAGE 952 1125, OF THE DIRECTORS JOURNAL PURSUANT TO LAW.

TUN OK 3-17-67

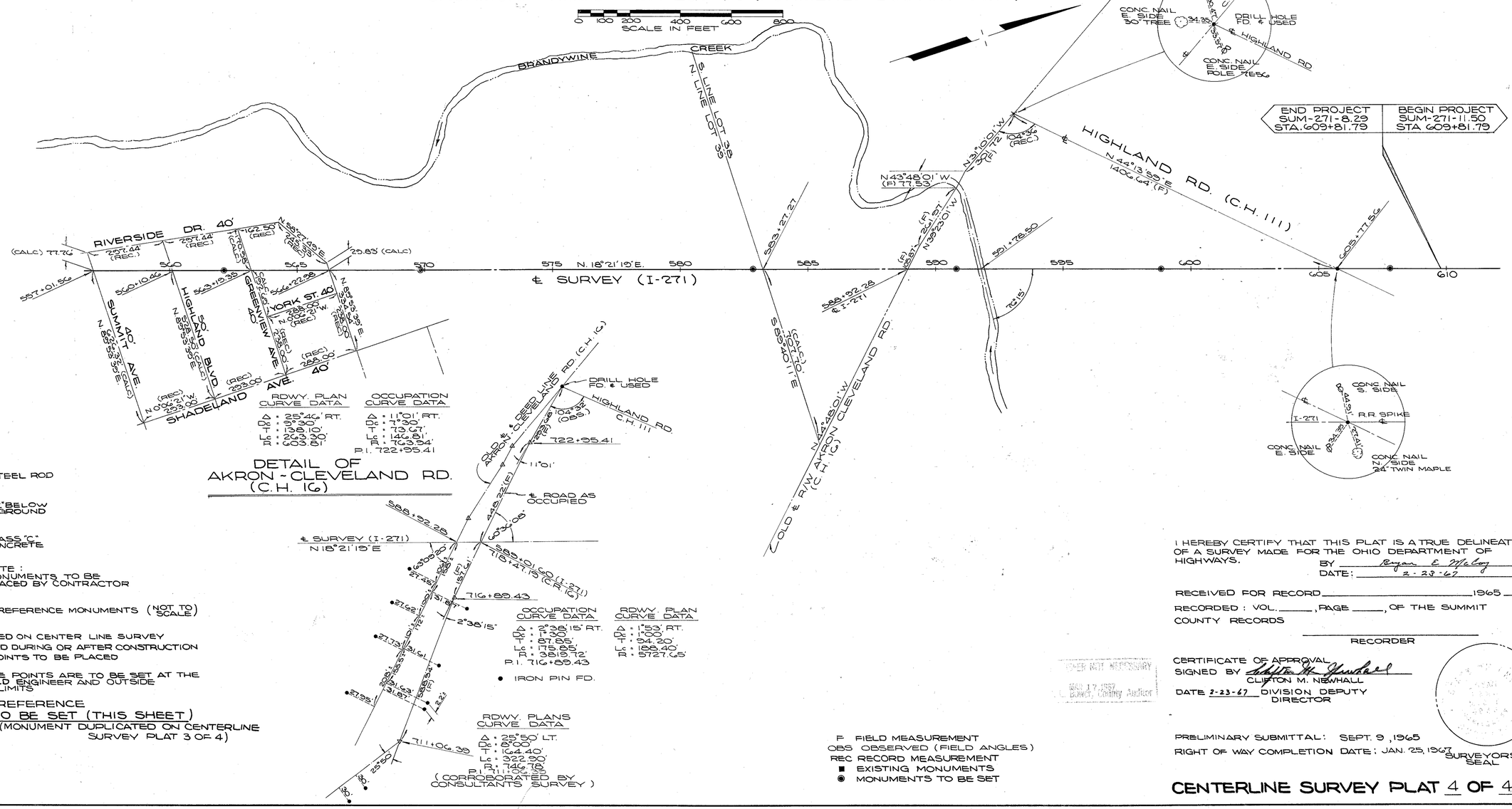
CENTER LINE SURVEY PLAT

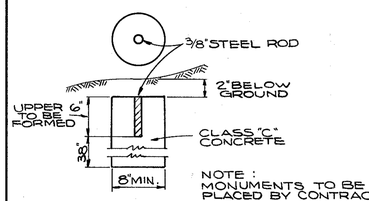
SUMMIT - 271 - 8.29

SUMMIT COUNTY, OHIO

(BILLING SECTION 2.98)

BOSTON TOWNSHIP - LOTS 39, 43, 44, & 45
NORTHFIELD CENTER TWP. - LOT 40 - (FORMERLY BOSTON TWP.)
NORTHFIELD CENTER TWP. LOTS 38, 39, 40, & 50
SAGAMORE HILLS TWP. LOT 50 (FORMERLY NORTHFIELD TWP.)
SAGAMORE HILLS TWP. LOT 40 (FORMERLY BOSTON TWP.)





DETAIL OF CENTERLINE REFERENCE MONUMENTS (NOT TO SCALE)

NOTES:
MONUMENTS TO BE PLACED ON CENTER LINE SURVEY
MONUMENTS TO BE PLACED DURING OR AFTER CONSTRUCTION
IRON PIN REFERENCE POINTS TO BE PLACED BEFORE CONSTRUCTION
ALL IRON PIN REFERENCE POINTS ARE TO BE SET AT THE DISCRETION OF THE FIELD ENGINEER AND OUTSIDE OF THE CONSTRUCTION LIMITS

CENTERLINE REFERENCE MONUMENTS TO BE SET (THIS SHEET)

P.O.T. STA. 562 + 14.03 (MONUMENT DUPLICATED ON CENTERLINE SURVEY PLAT 3 OF 4)
P.O.T. STA. 569 + 85.07
P.O.T. STA. 582 + 86.32
P.O.T. STA. 590 + 81.79
P.O.T. STA. 598 + 81.79
P.O.T. STA. 607 + 81.79

F FIELD MEASUREMENT
OBS OBSERVED (FIELD ANGLES)
REC RECORD MEASUREMENT
■ EXISTING MONUMENTS
◉ MONUMENTS TO BE SET

I HEREBY CERTIFY THAT THIS PLAT IS A TRUE DELINEATION OF A SURVEY MADE FOR THE OHIO DEPARTMENT OF HIGHWAYS.
BY Eugene E. McCoy
DATE: 2-28-67

RECEIVED FOR RECORD _____ 1965 _____
RECORDED: VOL. _____, PAGE _____, OF THE SUMMIT COUNTY RECORDS

_____ RECORDER

CERTIFICATE OF APPROVAL
SIGNED BY Clifton M. Newhall
CLIFTON M. NEWHALL
DATE 2-23-67 DIVISION DEPUTY DIRECTOR

OHIO DEPT. OF TRANSPORTATION
MAR 17 1967
SUMMIT County Auditor

PRELIMINARY SUBMITTAL: SEPT. 9, 1965
RIGHT OF WAY COMPLETION DATE: JAN. 25, 1967

SURVEYORS SEAL

CENTERLINE SURVEY PLAT 4 OF 4

St. Highway Dept. Div. 4
R/W ENGR & ADMIN SECT.
RAVENNA, OHIO
JAN 30 1967
LOGGED
Crds. _____ Bill Bk. _____

FED. RD.	STATE	PROJECT	
2	OHIO		

292
313

SUM - 271 - 8.29

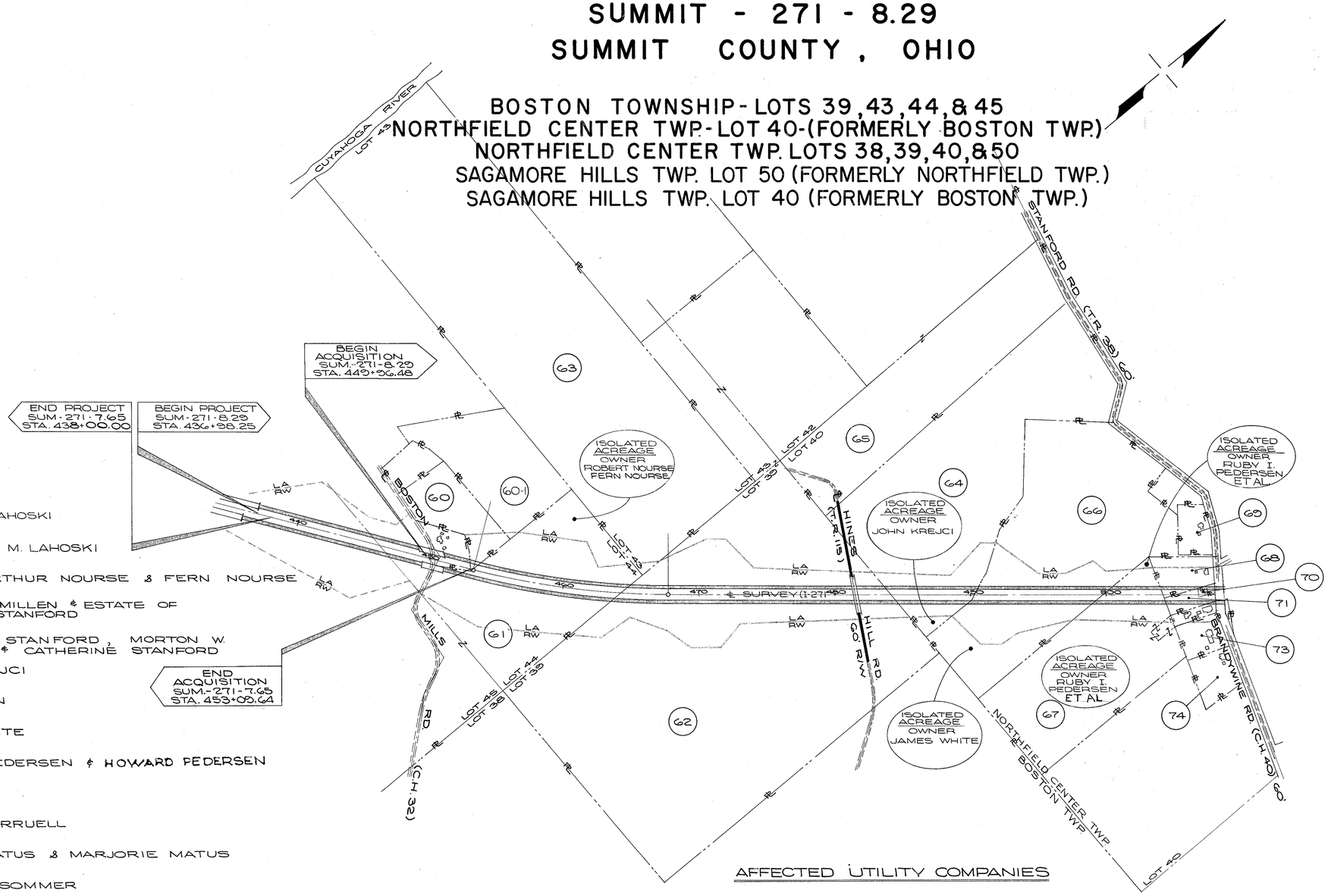
RIGHT OF WAY SHEET 5/25

PROPERTY MAP

SUMMIT - 271 - 8.29

SUMMIT COUNTY, OHIO

BOSTON TOWNSHIP - LOTS 39, 43, 44, & 45
NORTHFIELD CENTER TWP. - LOT 40 - (FORMERLY BOSTON TWP.)
NORTHFIELD CENTER TWP. LOTS 38, 39, 40, & 50
SAGAMORE HILLS TWP. LOT 50 (FORMERLY NORTHFIELD TWP.)
SAGAMORE HILLS TWP. LOT 40 (FORMERLY BOSTON TWP.)



60 JOSEPHINE LAHOSKI

60-1 BEN G. & ANN M. LAHOSKI

61 ROBERT ARTHUR NOURSE & FERN NOURSE

62 DAVID P. McMILLEN & ESTATE OF STELLA M. STANFORD

63 J. CLAYTON STANFORD, MORTON W. STANFORD, & CATHERINE STANFORD

64 JOHN KREJCI

65 W. L. SEMON

66 JAMES WHITE

67 RUBY I. PEDERSEN & HOWARD PEDERSEN

68 JUNE K. BURRUELL

69 GEORGE MATUS & MARJORIE MATUS

70 WILLIAM L. SOMMER

71 (Burial Lot) UNKNOWN HEIRS OF JAMES W. WALLACE DEC'D., ETAL

73 MARJORIE G. SEMON

74 FLORENCE E. LINDLEY

QUANTITY SUMMARY TYPE 47 FENCE	
SHEET NO.	LIN. FT.
10	606
11	4138
13	1975
15	2052
16	3010
18	3018
20	2585
21	2684
22	3022
23	2800
24	3179
25	1973
GRAND TOTAL	31,052 LIN. FT.

AFFECTED UTILITY COMPANIES

OHIO BELL TELEPHONE CO.
50 W. BOWERY ST.
AKRON, OHIO

EAST OHIO GAS CO.
1717 EAST 9TH ST.
CLEVELAND, OHIO

OHIO EDISON CO.
47 N. MAIN ST.
AKRON, OHIO

AMERICAN TELEPHONE & TELEGRAPH CO.
ROOM 1713 - 100 ERIEVIEW PLAZA
CLEVELAND, OHIO

LAUREL PIPE LINE CO.
P.O. BOX 426
CAMP HILL, PA.

BUCKEYE PIPE LINE CO.
DIXIE HIGHWAY & BUCKEYE RD.
LIMA, OHIO

INLAND CORPORATION
P.O. BOX 188
VANDALIA, OHIO

GRAPHIC SCALE
0 400 800 1200 1600

PRELIMINARY SUBMITTAL DATE: SEPT. 9, 1965
RIGHT OF WAY COMPLETION DATE: JAN. 25, 1967

Nº	REVISION'S	MADE BY	DATE
1	Deleted Pcl. 72 & 67-1, Combined Area with Pcl. 67 IOC. from H. Kandel & S. Guziak Dated 9-1-67	Lee	9-6-67
2	Name Change. Pcl 71 WL	Eqal	12-7-67

PROPERTY MAP SHEET Nº 1 of 3

State Highway Dept. Ohio
RW... ENGR & ADMIN SECT.
JAN 30 1967
LOGGED
Bill Bk.
Crds.

PROPERTY MAP

SUMMIT - 271 - 8.29

SUMMIT COUNTY, OHIO

BOSTON TOWNSHIP - LOTS 39, 43, 44, & 45
NORTHFIELD CENTER TWP. - LOT 40 - (FORMERLY BOSTON TWP.)
NORTHFIELD CENTER TWP LOTS 38, 39, 40, & 50
SAGAMORE HILLS TWP. LOT 50 (FORMERLY NORTHFIELD TWP.)
SAGAMORE HILLS TWP. LOT 40 (FORMERLY BOSTON TWP.)

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM - 271 - 8.29
SUM-271-10.25-SI(1)
SUM-271-10.30-SI(1)
RIGHT-OF-WAY SHEET

293
313

6
25

(75) BENJAMIN J. RICHARDS & JULIA C. RICHARDS
(76) JULIA C. RICHARDS
(77) HENRY S. NARTEN
(78) FERN F. NARTEN
(79) OHIO EDISON COMPANY, AN OHIO CORPORATION
(80) CATHOLIC CEMETERIES ASSOCIATION
(81) WILLIAM SCHOEPF & LIFE ESTATE TO JOHN SCHOEPF & ANNA SCHOEPF
(82) THOMAS R. SILVER & LLOYD F. HANNAFORD
(83) DOROTHY HANNAFORD

AFFECTED UTILITY COMPANIES

OHIO BELL TELEPHONE COMPANY
50 W. BOWERY ST.
AKRON, OHIO

EAST OHIO GAS COMPANY
1717 EAST 9TH ST.
CLEVELAND, OHIO

OHIO EDISON COMPANY
47 N. MAIN ST.
AKRON, OHIO

AMERICAN TELEPHONE & TELEGRAPH CO.
ROOM 1713 ~ 100 ERIEVIEW PLAZA
CLEVELAND, OHIO

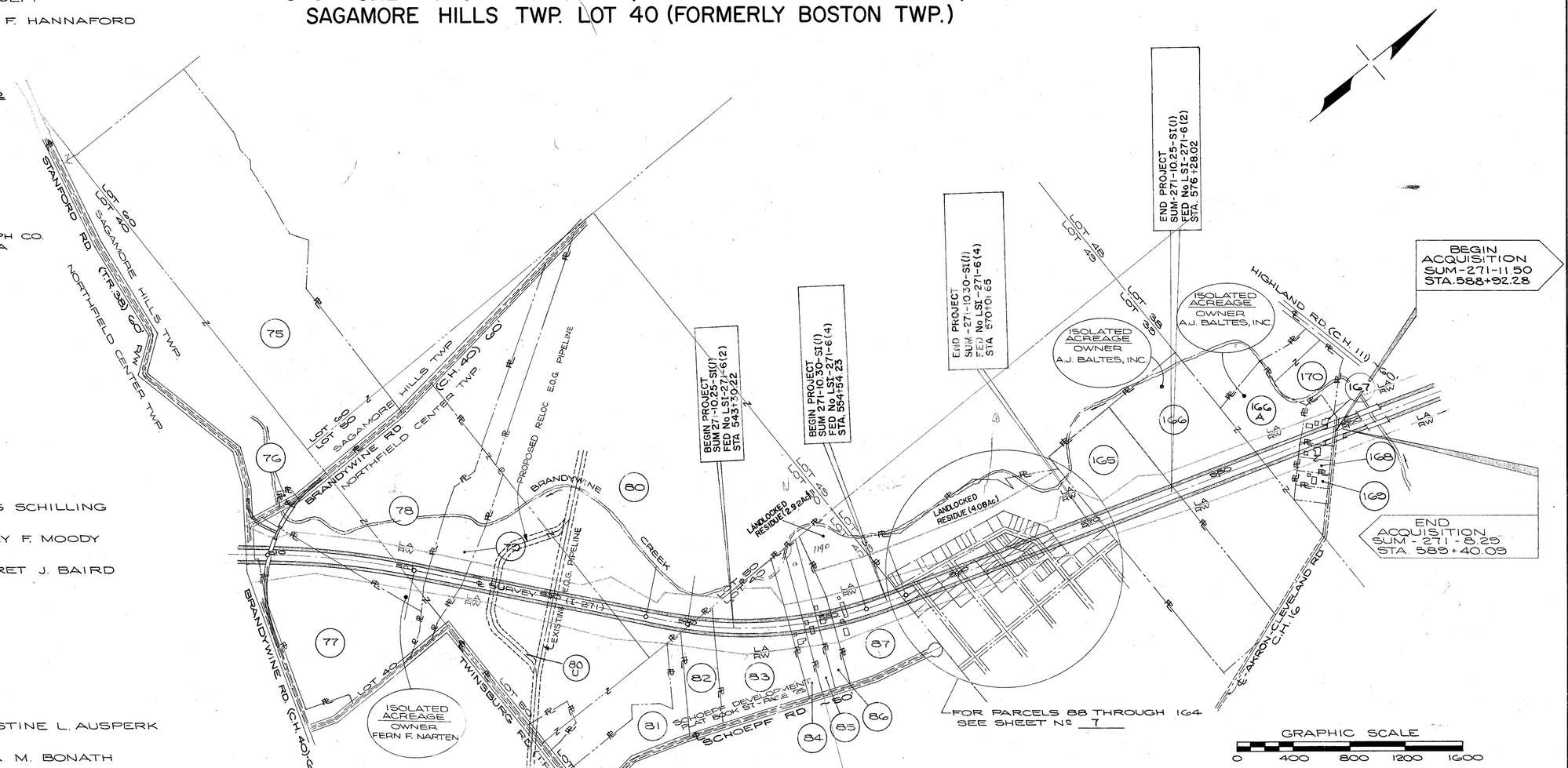
LAUREL PIPE LINE COMPANY
P.O. BOX 426
CAMP HILL, PA.

BUCKEYE PIPE LINE COMPANY
DIXIE HIGHWAY & BUCKEYE RD.
LIMA, OHIO

INLAND CORPORATION
P.O. BOX 188
VANDALIA, OHIO

(84) REGIS SCHILLING & PHYLLIS SCHILLING
(85) MARTIN M. MOODY & SHIRLEY F. MOODY
(86) GILBERT J. BAIRD & MARGARET J. BAIRD
(87) FRANK DOVICH JR.

(165) DIXIE OHIO EXPRESS
(166) (166 A) A.J. BALTES, INC.
(167) ALBERT A. AUSPERK & CHRISTINE L. AUSPERK
(168) JOHN P. BONATH & THELMA M. BONATH
(169) EDWARD B. DOLEJS & IVY H. DOLEJS
(170) ELIZABETH MELCHER
( )



FOR PARCELS 88 THROUGH 164 SEE SHEET Nº 7

GRAPHIC SCALE
0 400 800 1200 1600

PRELIMINARY SUBMITTAL DATE: SEPT. 9, 1965
RIGHT OF WAY COMPLETION DATE: JAN 25 1967

Nº	REVISIONS	MADE BY	DATE
1	ADDED WS Pcls & Landlock area to property map	BILL	6/14/67
2	ADDED BEGIN & END DESIGNATION BLKS.	AL	10/11/67
3	ADDED PCL. 80U PER H. STRAHL	LEE	7-22-68
4	REVISED NAME PCL. 79		10-8-71

Ohio Highway Dept. Div. 4
R/W - ENGR & ADMIN SECT.
ravenna, ohio
JAN 30 1967
Logged
Crds. Bill Bk.

PROPERTY MAP

SUMMIT - 271 - 8.29

SUMMIT COUNTY, OHIO

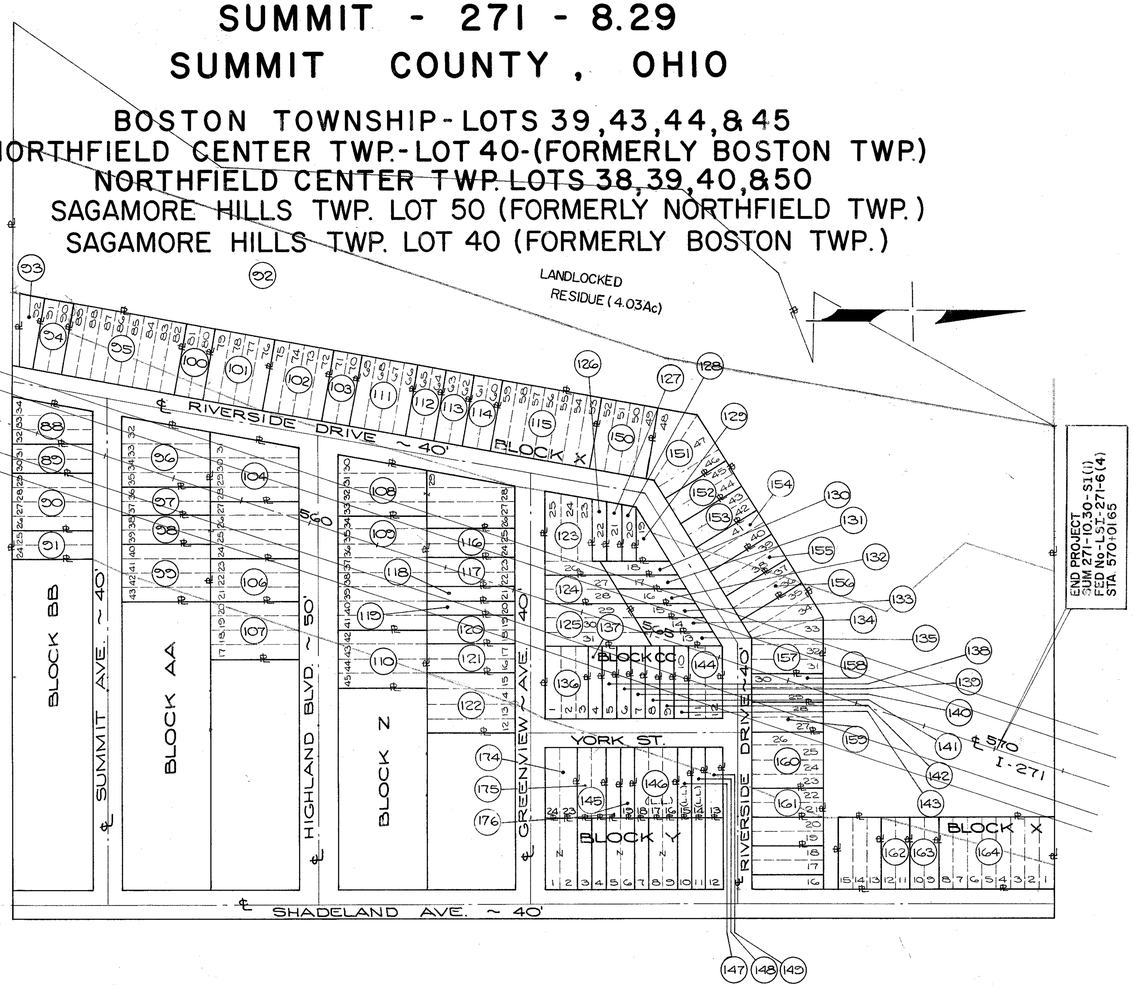
BOSTON TOWNSHIP - LOTS 39, 43, 44, & 45
NORTHFIELD CENTER TWP. - LOT 40 - (FORMERLY BOSTON TWP.)
NORTHFIELD CENTER TWP. LOTS 38, 39, 40, & 50
SAGAMORE HILLS TWP. LOT 50 (FORMERLY NORTHFIELD TWP.)
SAGAMORE HILLS TWP. LOT 40 (FORMERLY BOSTON TWP.)

FED. RD.	STATE	PROJECT	
2	OHIO		

294/313

SUM - 271 - 8.29
SUM - 271 - 10.25 - SI(1)
SUM - 271 - 10.30 - SI(1)
RIGHT-OF-WAY

7/25



NORTHFIELD HEIGHTS ALLOTMENT
PLAT BOOK 32 ~ PAGES 24 TO 32
ALL PROPERTY WITHIN ALLOTMENT REGISTERED LAND (TORRENS)

(88) LOLA E. STARCHER & ROBERT E. STARCHER
(89) PERCY G. HANSEN
(90) ALBERT M. KLINGAMAN
(91) PERCY G. HANSEN
(92) JUANITA G. SHELHART
(93) ABNER D. ZOOK
(94) THE ESTATE OF STANLEY WROBEL, DEC'D.
(95) PERCY G. HANSEN
ISOLATED AREA = 8960 SQ. FT. (0.2057 Ac)
(96) ESTATE OF NICK VIRZI, DEC'D et al / ROSE VIRZI
(97) A.J. & MARJORY R. POIRSON
(98) LOLA E. STARCHER & ROBERT E. STARCHER
(99) ANNA ANTOLICK
(100) CHARLES KALCIK, DEC'D / ELIZABETH KALCIK
(101) DOROTHY SCHULTZ
(102) PERCY G. HANSEN
(103) FRANK K. LEVIN
(104) UNKNOWN HEIRS OF MARY LUECHT, DECEASED
(106) IRENE E. VOLLERT, (COMMISSIONER)
(107) THE ESTATE OF CHARLES / ANNA VOHNOUTEK, BOTH DEC'D
(108) LOLA E. STARCHER & ROBERT E. STARCHER
(109) FRANK K. LEVIN
(110) MARY KNEBLEWICZ & JOHN KNEBLEWICZ
(111) LUCIEN FISK WAKEFIELD
(112) FRANK K. LEVIN
(113) WALTER KOBA & JOSEPHINE KOBA
(114) JUANITA G. SHELHART
(115) FRANK K. LEVIN
(116) FRED DYKE
(117) PERCY G. HANSEN
(118) JESSIE M. STEWART
(119) PERCY G. HANSEN
(120) FRANK SREDNIAWA
(121) HELEN HERVI
(122) WILLIAM NOVAK, CECELIA NOVAK, & JAMES NOVAK
(123) FRANK K. LEVIN
(124) THE ESTATE OF JOHN / MARY KANCE, BOTH DEC'D
(125) ABNER D. ZOOK
(126) LOLA E. STARCHER & ROBERT E. STARCHER
(127) UNKNOWN HEIRS OF HATTIE B. COURIER
(128) LOLA E. STARCHER & ROBERT E. STARCHER
(129) PETER KAPALINSKY & MARGARET KAPALINSKY
(130) ESTATE OF JOSEPH HEGEDUS DECEASED
(131) LOUIS DELCIAPPO & MARY DELCIAPPO
(132) ALONZO FOTHERINGHAM
(133) PERCY G. HANSEN
(134) LOLA E. STARCHER & ROBERT E. STARCHER
(135) FRANK K. LEVIN
(136) PERCY G. HANSEN
(137) FRANK K. LEVIN
(138) MRS. LURA KNIVETON
(139) STATE OF OHIO, DEPT. OF HIGHWAYS (Formerly Owned By Elizabeth M. Falco)
(140) LOLA E. STARCHER & ROBERT E. STARCHER
(141) JESSIE M. STEWART
(142) PERCY G. HANSEN
(143) TONY AGRUSA
(144) PERCY G. HANSEN
(145) FRANK K. LEVIN
(146) LOLA E. STARCHER & ROBERT E. STARCHER
(147) PERCY G. HANSEN
(148) FRANK K. LEVIN
(149) PERCY G. HANSEN
(150) LOLA E. STARCHER & ROBERT E. STARCHER
(151) FRANK K. LEVIN
(152) JOHANNA KUNART / FRANK K. LEVIN et al
(153) LOLA E. STARCHER & ROBERT E. STARCHER
(154) IRENE E. BOROSH
(155) STANLEY CWIERTNIA & ROSE CWIERTNIA
(156) JOSEPH GUERRA & GRACE GUERRA
(157) LOLA E. STARCHER & ROBERT E. STARCHER
(158) PERCY G. HANSEN
(159) STEVE SZEGO, DECEASED
(160) PERCY G. HANSEN
(161) FRANK K. LEVIN
(162) STANLEY L. ABRAMS
(163) THE ESTATE OF CHARLES W. PRATT / ELLEN PRATT, BOTH DEC'D
(164) STANLEY L. ABRAMS

(174) ERNEST WHITT & MOSSIE WHITT
(175) LOLA E. STARCHER & ROBERT E. STARCHER
(176) JOSEF KAISER

GRAPHIC SCALE
0 100 200 300 400

PRELIMINARY SUBMITTAL DATE: SEPT 9, 1965 RIGHT OF WAY COMPLETION DATE: JAN 25, 1967			
Nº	REVISIONS	MADE BY	DATE
1	Added WS Pcls. & Landlock Area to Property Map	BILL	6/14/67
2	Name Change Pcl. 139 WL	BILL	8/10/67
3	ADDED END DESIGNATION BLOCK & 2 PROJECT Nº	A.L.	10/11/67
4	Name Change Pcl. 194 WL	Smith	10-26-67

Deleted Pcl. 176-PR per L.O.C. from S.A. Guziak dated 1-12-68. Lee 1-15-68

NAME CHANGE PCL. 84-WL 1-10-67 Lee
NAME CHANGE PCLS. 107 / 124 L. Smith 1-8-68
NAME CHANGE PCLS. 96, 100, / 163 Smith 12-28-67
NAME CHANGE PCLS. 152, 121, / 159 - Smith 12-21-67
NAME CHANGE PCL. 111 WS 11-21-67 ~ Bill
NAME CHANGE PCL. 130 WL - 11-17-67 - Smith

PROPERTY MAP ~ SHEET Nº 3 of 3

DEPT. OF HIGHWAY ENGR. DIV. 6
N.W. ENGR. & ADMIN. SECT.
FINDLAY, OHIO
JAN 30 1967
LOGGED
Bill Bk.
Crds.

NOTE: JOB NUMBERS FOR FUNDING

	(I Mainline)	(LSI-6(4) Scenic)	(LSI-6(2) Scenic)
Fed. Job No.	I-271-6(16)	LSI-271-6(4)	LSI-271-6(2)
Project No.	I-271-SUM-2.98 (8.29)	I-271-SUM-10.30	I-271-SUM-10.25
State Job No.	04699(0)	04945(0)	04877(0)

SUMMARY OF RIGHT-OF-WAY REQUIRED

FED. RD.	STATE	PROJECT	
2	OHIO	I-271-6(27)237	

SUM-271-8.29 RIGHT-OF-WAY
SUM-271-10.25-SI(I)
SUM-271-10.30-SI(I)

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8/25

TOTAL NUMBER OF OWNERS WITH STRUCTURES TO BE TAKEN — 9

PARCEL Nº	OWNER	DEED RECORD BOOK	DEED RECORD PAGE	DEED AREA TOTAL ACRES	DEED AREA CORR. ACRES	TO BE ACQUIRED LAND ACRES	TO BE ACQUIRED P.R.O. ACRES	BLDGS.	RESIDUE LEFT	RESIDUE RIGHT	TYPE FUNDS	SHEET Nº	REMARKS
60 WL	JOSEPHINE LAHOSKI	3398	331	22.85	5.63	1.218		NO	4,412		I	11,12	DEED AREA CORRECTION DUE TO REMOTE OUTSALE
60-1WL	BEN G. LAHOSKI AND ANN M. LAHOSKI	4272	624	13.36		0.069		NO	13.291			12	
61 WL	ROBERT ARTHUR NOURSE & FERN NOURSE	1988	359	34.0	33.971	16.987	0.143	NO	4.023 (L)	12.818		11,12	
62 WL 62 WD 62-1WD 62-2WD 62-3WD 62-T 62-1T	DAVID P. MCMILLEN ESTATE OF STELLA M. STANFORD	3679	395	144.46	142.25	21.9936 0.0487 0.0806 0.0346 0.0238 0.1967 0.6419	0.4992 0.1436 0.1765 0.1454 0.1487	NO	42.2070	76.7483		12,13,14,15 13,14 13,14 13,14 13,14 13,14 13,14	DEED AREA CORRECTION DUE TO REMOTE OUTSALE 62 T TEMPORARY RUNAROUND 62-1T TEMPORARY RUNAROUND
63 WL	J. CLAYTON STANFORD, MORTON W. STANFORD & CATHERINE STANFORD	3176	604	92.85		0.169		NO	92.681			12	
64 WL 64 WD 64-1WD 64-T	JOHN KREJCI	2820	265	48.1237		5.4704 0.0500 0.0090 0.7878	0.2094 0.1592	NO	41.6887	0.537 (L)		13,14,15 13,14 14 13,14	64T TEMPORARY RUNAROUND
65T	WALDO L. SEMON	2234 2234 2234	623 625 627	134.31	127.61	0.0349		NO	127.61			14	65 T TEMPORARY RUNAROUND DEED AREA CORRECTION DUE TO REMOTE OUTSALE
66 WL 66 X	JAMES WHITE	3925	666	41,966		10.689 0.0826		NO	25.3742	5.9028 (L)		15,16 15,16	66 X CHANNEL EASEMENT
67 WL	RUBY I. PEDERSEN & HOWARD PEDERSEN	3925 4522 3917 3917	688 711 431 434	26.069		4.459		YES	0.142 (L)	21.468 (L)		15,16,17A	
68 WL	JUNE K. BURRUELL	3926	280	2.563		1.650		YES	0.913			16,17	
69WD	GEORGE MATUS & MARJORIE MATUS	3967	560	2.0								16,17	PARCEL NOT REQUIRED
70WL	WILLIAM L. SOMMER	3260	47		0.202	0.202		YES				16,17,17A	
71 WL	UNKNOWN HEIRS OF JAMES W. WALLACE DEC'D., ETAL.	15	241		0.91	0.91		NO				16,17,17A	ONLY DEED OF FEE THAT CAN BE FOUND. TRUSTEES HAVE NO RECORD OF ACQUIRING THIS PARCEL.
73WL 73WA	MARJORIE G. SEMON	2874	139	2.0		0.183		NO		1.817		16,17A 16,17A	73WA - GRADE EX. DRIVE
74 WA	FLORENCE E. LINDLEY	3100 3773	200 427	2.42				NO		2.42		17A	74WA - GRADE EX. DRIVE
75 SL 75 T	BENJAMIN J. RICHARDS & JULIA C. RICHARDS	2541	439	195.6979	83.9772	0.009 0.3276		NO	83.9772			16,17 17	75T TEMPORARY RUNAROUND & ACCESS DRIVE
76 T	JULIA CROSSLEY RICHARDS	2447	184	0.25		0.0527		NO	0.25			17	76 T TEMPORARY RUNAROUND
77 WL 77 77-1	HENRY S. NARTEN	2167	606	21.3389		3.5211 0.4330 0.7616	0.1524 0.0915	NO		16.3793		16,17,17A,18 16,17 16,17A	
78WL 78	FERN F. NARTEN	2167	619	26.5551		4.7277 0.7512	0.2978	NO	20.1866	0.5918 (L)		17,17,18 16,17	
79-WL	OHIO EDISON COMPANY, AN OHIO CORPORATION	4989	1	12.04		1.49		No	9.30	1.25	I	18	

TOTAL NUMBER AFFECTED OWNERS — 76

PARCEL Nº	OWNER	DEED RECORD BOOK	DEED RECORD PAGE	DEED AREA TOTAL ACRES	DEED AREA CORR. ACRES	TO BE ACQUIRED LAND ACRES	TO BE ACQUIRED P.R.O. ACRES	BLDGS.	RESIDUE LEFT	RESIDUE RIGHT	TYPE FUNDS	SHEET Nº	REMARKS
80 WL 80X 80Y 80U	CATHOLIC CEMETERIES ASSOCIATION	3789 3314 3480 3480 4266	613-615 31-32 621 624 182	283.29		12.0411 0.721 0.083		NO	247.2433	24.0056	I	18,20 20,21 20 18	80X CHANNEL RELOCATION 80Y CHANNEL RELOCATION 80-U E.O.G. PIPELINE RELOCATION
81 WL	WILLIAM SCHOEPF: JOHN & ANNA SCHOEPF, LIFE ESTATE	1497	355	9.28	7.1612	0.108	0.223	NO		6.644		20	AREA OF 6.975 AC. PER PROPERTY LINE AGREEMENT; VO. 57, PG. 25.
82 WL	THOMAS R. SILVER & LLOYD F. HANNAFORD	3968	206	4.5766		1.141		NO		3.167		20	
83 WL 83-WS	DOROTHY HANNAFORD " "	2148	190-191	11.88	12.7962	5.129 0.88		NO		7.929	I LSI-6(2)	20,21 21-A	AREA OF 13.3376 AC. PER PROPERTY LINE AGREEMENT; VOL.57, PG. 25.
84 WL 84-WS	REGIS SCHILLING & PHYLLIS SCHILLING " "	3920	40	2.236	2.4478	0.723 0.86		YES		0.865	I LSI-6(2)	21 21-A	
85 WL 85-WS	MARTIN M. MOODY & SHIRLEY F. MOODY " "	4204	231	2.535	2.5379	0.736 0.98		YES		0.822	I LSI-6(2)	21 21-A	
86 WL 86-WS	GILBERT J. BAIRD & MARGARET J. BAIRD " "	2448	383	2.421		0.825 0.74		YES		.853	I LSI-6(2)	21 21-A	AREA OF 2.418 AC. PER PROPERTY LINE AGREEMENT; VOL. 57, PG. 25.
87WL 87-WS 87-A-WL	FRANK DOVICH, JR. " " " " " " DISPUTED OWNERSHIP	2330	445	13.744	13.6496 0.198	3.821 1.97 0.088		YES	2.92(L)	4.80	I LSI-6(2) I	21 21-A	AREA OF 13.644 AC. PER PROPERTY LINE AGREEMENT; VOL. 57, PG 25. N.B. QUIT CLAIM DEED
88 WL	LOLA E. & ROBERT E. STARCHER	89	27431	6309S.F.		6309S.F.		NO			I	21	LOTS 32,33,34 BLOCK BB* Reg.Ind Cert. #27431
89 WL	PERCY G. HANSEN	122	37383	4450S.F.		4450S.F.		NO				21	LOTS 30,31 BLOCK BB* Reg Ind. Cert. #37383
90 WL	ALBERT M. KLINGMAN	23	7807	8947S.F.		8947S.F.		NO				21	LOTS 26,27,28,29 BLOCK BB* Reg.Ind Cert. #7801
91 WL	PERCY G. HANSEN	122	37383	4496S.F.		4496S.F.		NO			I	21	LOTS 24,25 BLOCK BB* Reg.Ind Cert. #37383
87 AWS	FRANK DOVICH, JR. and/or JUANITA G. SHELHART DISPUTED OWNERSHIP					0.06					LSI-6(2)		QUIT CLAIM DEEDS
92 WL 92-WS	JUANITA G. SHELHART " "	111	33996	12.032	12.03	2.487 5.40		NO	0.05(L) 4.08(L)		I LSI-6(4)	21,22 21-A,22-A	NOT CERTIFIED & REGISTERED Reg.Ind. Cert. #33996
93 WL	ABNER D. ZOOK	103	31708	2802S.F.		2802S.F.		NO			I	21	LOT 92 BLOCK X* Reg.Ind. Cert. #31708
94 WL	THE ESTATE OF STANLEY WROBEL, DEC'D.	92	28259	4000SF		4000 SF		NO				21	LOTS 90,91 BLOCK X* Reg Ind. Cert. #28259
95 WL 95-WS	PERCY G. HANSEN " "	122	37383	16000 SF		6858 SF 9142 SF		NO			I LSI-6(4)	21 21-A	LOTS 82 THRU 89 BLOCK X* Reg Ind. Cert. #37383
96 WL	ESTATE OF NICK VIRZI, DEC'D etal. & ROSE VIRZI.	27	9027	11089 SF		11089 SF		NO			I	21,22	LOTS 32,33,34,35 BLOCK AA* Reg Ind Cert. #9027
97 WL	A.J. & MARJORY R. POIRSON	119	36549	4960 SF		4960 SF		NO				21,22	LOTS 36,37 BLOCK AA* Reg.Ind Cert. #36549
98 WL	LOLA E. & ROBERT E. STARCHER	89	27431	14880 SF		14880 SF		NO				21,22	LOTS 24,25,26,27, 38,39 BLOCK AA*
99 WL	ANNA ANTOLICK	51 39	15931 12590	9920 SF		7440 SF		NO		2480 SF		21,22	LOTS 40,41,42,43 BLOCK AA *Reg Ind.Cert. #15931
100 WL 100-WS	CHARLES KALCIK, DEC'D & ELIZABETH KALCIK	15	5369	4000 SF		857 SF 3143 SF		NO			I LSI-6(4)	21,22 21-A,22-A	LOTS 80,81 BLOCK X* Reg.Ind. Cert. #5369
101WL 101-WS	DOROTHY SCHULTZ " "	52	16376	8000 SF		686 SF 7314 SF		NO			I LSI-6(4)	22 22-A	LOTS 76,77,78,79 BLOCK X* Reg.Ind.Cert. #16376
102-WS 102PR	PERCY G. HANSEN " " "	122	37383	8000 SF		8000 SF		NO			LSI-6(4) I	22 22	LOTS 72,73,74,75 BLOCK X* Reg.Ind Cert. #37383
103-WS 103PR	FRANK K. LEVIN " " "	86	26451	4000 SF		4000 SF		NO			LSI-6(4) I	22 22	LOTS 70,71 BLOCK X* Reg.Ind Cert. #26451
104WL	UNKNOWN HEIRS OF MARY LUECHT DECEASED	16 40)	5632 12834	10882 SF		10882 SF		NO			I	22	LOTS 28,29,30,31 BLOCK AA* Reg Ind Cert. #5632
106WL	IRENE E. VOLLERT, (COMMISSIONER)	DOCKET 177 142	13 85	7440 SF		7440 SF		NO				22	NOT REGISTERED & CERTIFIED LOTS 21,22,23 BLOCK AA
107WL	THE ESTATE OF CHARLES & ANNA VOHNOUTEK, BOTH DECD	27	9030	9920 SF		2480 SF		NO		7440 SF		22	LOTS 17,18,19,20 BLOCK AA* Reg.Ind.Cert. #9030
108WL	LOLA E. & ROBERT E. STARCHER	89 90	27431 27616	18977 SF		18977 SF		NO				22	LOTS 26,27,28,29, 30,31,32,33, BLOCK Z*
109WL	FRANK K. LEVIN	86	26451	19840 SF		19840 SF		NO				22	LOTS 34,35,36,37,38,39,40,41 BLOCK Z * Reg.Ind.Cert. #26451
110WL	MARY & JOHN M. KNEBLEWICZ	121 36	36991 11442	9920 SF		4960 SF		NO		4960 SF	I	22	LOTS 42,43,44,45 BLOCK Z * Reg.Ind.Cert. #36991
111-WS 111PR	LUCIEN FISK WAKEFIELD	673	655	8000 SF		8000 SF		NO			LSI-6(4) I	22 22	LOTS 66,67,68,69 BLOCK X NOT CERTIFIED & REGISTERED

N.B. Deduct disputed area from combined Total of Pcls. 87 & 92

* REGISTERED LAND (TORRENS)
NORTHFIELD HEIGHTS ALLOTMENT
L - LANDLOCKED

Revise Area Pcl. 75SL 2-18-72 R.A.W.
Change Pcls 77WD, 77WD-1 & 78WD To Standard Easements Per I.O.C. From S.A. Guziak 11-30-67 Bill
Changed Parcel 75S to 75SL 11-2-70 REVISED T.B.A. Pcl. 75-T L.S. 9-30-70
CHANGED PARCEL 75 TO A SLOPE 10-1-70 NAME CHANGE PCL. 107 SMITH 1-8-68
NAME CHANGE PCLS. 96 & 100 - SMITH - 12-28-67

Name Change Pcl 71 WL 12-7-67 Earl
Name Change Pcl. 111 WS & PR 11-21-67 Bill
Name Change Pcl. 104 WL 10-26-67 Smith
Name Change Pcl. 111 WS 10-24-67 - Smith
ADDED 3 PARCELS 102, 103, 111 & 2 SECTION NO. CAL. 10/11/67
Deleted Pcl. 67-1 & 72, Combined Area With Pcl 67 Per I.O.C. from H. Kandel & S. Guziak Dated 9-1-67 9-6-67 Lee

DATE OF PREPARATION		
REV	DATE	DESCRIPTION
1	4-14-67	ADDED T.B.A., REVISED RESIDUE & FUNDING IN PARCELS 92 WL & 87 WL
2	6-16-67	REVISED DEED AREA & LEFT RESIDUE Pcl. 80 WL
3	7-28-67	Rev. Res. per I-O-C of 10-11-66
4	8-1-67	Rev. Pcls 81 thru 92 deed area
5	9/21/67	Added Funding Breakdown Lee

DELETED PCLS. 79-LA, 79 AERIAL, 79-1-AERIAL, 79-5A, 79-15A, 79-25A, 79-35A & 79-X. ADDED PCL. 79-WL 10-8-71

ADDED PCL. 80-U PER H. STRAHL. LEE 7-22-68
CHANGED NAME PCL. 94-WL 1-10-67 Lee
Changed Deed Area & T.B.A. Pcl. 71-WL, 1/4/68 Lee
Changed Pcl. 75-WD to a Standard Highway Easement Per I.O.C. from S.A.Guziak dated 12-6-67. Lee 12-6-67

R/W. ENGR. ADMIN SECT. OHIO JAN 30 1967

NOTE: JOB NUMBERS FOR FUNDING

	I (Mailine)	LSI-6(4) (Seenic)	LSI-6(2) (Scenic)
Fed. Job No.	I-271-6(16)	LSI-271-6(4)	LSI-271-6(2)
Project No.	I-271-SUM-2.98 (8.29)	I-271-SUM-10.30	I-271-SUM-10.25
State Job No.	04699(0)	04945(0)	04877(0)

SUMMARY OF RIGHT-OF-WAY REQUIRED

FED. RD.	STATE	PROJECT	
2	OHIO	I-271-6(27)237	

SUM-271-8.29
SUM-271-10.25-SI(1)
SUM-271-10.30-SI(1)

RIGHT-OF-WAY SHEET

296 / 313

9 / 25

PARCEL Nº	OWNER	DEED RECORD BOOK	DEED RECORD PAGE	DEED AREA TOTAL ACRES	DEED AREA CORR. ACRES	TO BE ACQUIRED LAND ACRES	TO BE ACQUIRED P.R.O. ACRES	TO BE ACQUIRED BLDGS.	RESIDUE LEFT	RESIDUE RIGHT	TYPE FUNDS	SHEET Nº	REMARKS
112-WS 112-PR	FRANK K. LEVIN " " "	86	26451	4000 SF		4000 SF		NO			LSI-6(4) I	22-A 22	LOTS 64,65 BLOCK X* Reg.Ind.Cert. #26451
113-WS 113-PR	WALTER & JOSEPHINE KOBA " " "	18	6352	4000 SF		4000 SF		NO			LSI-6(4) I	22-A 22	LOTS 62,63 BLOCK X* Reg.Ind. Cert. #6352
114-WS 114-PR	JUANITA G. SHELHART " " "			4000 SF		4000 SF		NO			LSI-6(4) I	22-A 22	LOTS 60,61 BLOCK X NOT CERTIFIED & REGISTERED
115-WS 115-PR	FRANK K. LEVIN	86	26451	14000 SF		14000 SF		NO			LSI-6(4) I	22-A 22	LOTS 53,54,55,56,57,58,59 Reg.Ind.Cert. #26451 BLOCK X*
116WL	FRED DYKE	19	6790	4960 SF		4960 SF		NO			I	22	LOTS 24,25 BLOCK Z* Reg.Ind.Cert.#6790
117WL	PERCY G. HANSEN	122	37383	4960 SF		4960 Sf		NO				22	LOTS 22,23, BLOCK Z* Reg.Ind.Cert. #37383
118WL	JESSIE M. STEWART	Auditor's	Deed 88148	2480 SF		2480 SF		NO				22	NOT CERTIFIED & REGISTERED LOT 21 BLOCK Z
119WL	PERCY G. HANSEN	122	37383	2480 SF		2480 SF		NO				22	LOT 20 BLOCK Z* Reg.Ind.Cert.#37383
120WL	FRANK SREDNIAWA	36	11465	4960 SF		4960 SF		NO				22	LOT 18,19 BLOCK Z* Reg.Ind.Cert.#11465
121WL	HELEN HERVI	24	8259	4960 SF		4960 SF		NO				22	LOT 16,17 BLOCK Z* Reg.Ind.Cert.#8259
122WL	WILLIAM NOVAK CECELIA NOVAK & JAMES NOVAK	117	35894	9920 SF		2480 SF		NO		7440 SF		22	LOTS 12,13,14,15 BLOCK Z* Reg.Ind.Cert. #35894
123WL	FRANK K. LEVIN	86	26451	7388 SF		7388 SF		NO				22	LOTS 23,24,25,26 BLOCK CC* Reg.Ind.Cert. #26451
124WL	THE ESTATE OF JOHN / MARY KANCE, BOTH DEC'D	18	6351	4047 SF		4047 SF		NO				22	LOTS 27,28 BLOCK CC* Reg.Ind.Cert.#6351
125 WL	ABNER D. ZOOK	103	31708	7904 SF		7904 SF		NO				22	LOTS 29,30,31 BLOCK CC* Reg.Ind.Cert. #31708
126WL	LOLA E. & ROBERT E. STARCHER	89	27431	1773 SF		1773 SF		NO				22	LOT 22 BLOCK CC*
127WL	UNKNOWN HEIRS OF HATTIE B. COURIER, DEC'D.	14	5219	1703 SF		1703 SF		NO				22	LOT 21 BLOCK CC* Reg.Ind.Cert.#5220
128WL	LOLA E. & ROBERT E. STARCHER	89	27431	1633 SF		1633 SF		NO				22	LOT 20 BLOCK CC*
129WL	PETER & MARGARET KAPALINSKY	21	7332	2453 SF		2453 SF		NO				22	LOT 19 BLOCK CC* Reg.Ind.Cert.#7332
130WL	THE ESTATE OF JOSEPH HEGEDUS DECEASED	33	10642	1980 SF		1980 SF		NO				22	LOT 18 BLOCK CC* Reg.Ind. Cert.#10642
131WL	LOUIS & MARY DELCIAPPO	14	5169	1980 SF		1980 SF		NO				22	LOT 17 BLOCK CC*
132WL	ALONZO FOTHERINGHAM	17	6033	1980 SF		1980 SF		NO				22	LOT 16 BLOCK CC* Reg.Ind.Cert.#6033
133WL	PERCY G. HANSEN	122	37383	1980 SF		1980 SF		NO				22	LOT 15 BLOCK CC* Reg.Ind.Cert.#37383
134WL	LOLA E. AND ROBERT E. STARCHER	89	27431	1980 SF		1980 SF		NO				22	LOT 14 BLOCK CC*
135WL	FRANK K. LEVIN	86	26451	1979 SF		1979 SF		NO				22	LOT 13 BLOCK CC* Reg.Ind.Cert.#26451
136WL	PERCY G. HAN SEN	122	37383	6336 SF		6336 SF		NO				22	LOT 1,2,3 BLOCK CC* Reg.Ind.Cert.#37383
137WL	FRANK K. LEVIN	86	26451	1980 SF		1980 SF		NO				22	LOT 4 BLOCK CC* Reg.Ind.Cert.#26451
138WL	LURA KNIVETON DECEASED	14	5298	1980 SF		1980 SF		NO				22	LOT 5 BLOCK CC* Reg.Ind.Cert.#5298
139WL	STATE OF OHIO DEPT. OF HIGHWAYS (Formerly Owned By E.M.FALCO)	14	5001	1980 SF		1980 SF		NO				22	LOT 6 BLOCK CC* Reg.Ind.Cert.#128538
140WL	LOLA E. & ROBERT E. STARCHER	90	27616	1980 SF		1980 SF		NO				22	LOT 7 BLOCK CC* Reg.Ind.Cert.#27616
141WL	JESSIE M. STEWART	Auditor's 88148 3383	Deed 242	1980 SF		1980 SF		NO				22	NOT CERTIFIED & REGISTERED LOT 8 BLOCK CC*
142WL	PERCY G. HANSEN	122	37383	1980 SF		1980 SF		NO				22	LOT 9 BLOCK CC* Reg.Ind.Cert.#37383
143WL	TONY AGRUSA	14	5119	1980 SF		1980 SF		NO				22	LOT 10 BLOCK CC* Reg.Ind.Cert.#5119
144 WL	PERCY G. HANSEN	122	37383	4356 SF		4356 SF		NO				22	LOT 11,12 BLOCK CC* Reg.Ind.Cert.#37383
145PR	FRANK K. LEVIN	86	26451	1980 SF				NO		1980 SF		22	LOT 19, BLOCK Y* Reg.Ind.Cert.#26451
146 WL	LOLA E. & ROBERT E. STARCHER	89	27431	5940 SF		637 SF		NO		5303 SF (L)		22	LOTS 16,17,18 BLOCK Y* Reg.Ind.Cert. #27431
147WL	PERCY G. HANSEN	122	37383	1980 SF		495 SF		NO		1485 SF (L)		22	LOT 15 BLOCK Y* Reg.Ind.Cert.#37383
148 WL	FRANK K. LEVIN	86	26451	1980 SF		637 SF		NO		1343 SF (L)		22	LOT 14 BLOCK Y * Reg.Ind.Cert.#26451
149WL	PERCY G. HANSEN	122	37383	2376 SF		951 SF		NO		1425 SF	I	22	LOT 13 BLOCK Y * Reg.Ind.Cert.#37383
150-WS 150-PR	LOLA E. & ROBERT E STARCHER	89	27431	8000 SF		8000 SF		NO			LSI-6(4) I	22-A 22	LOTS 49,50,51,52 BLOCK X*
151-WS 151-PR	FRANK K. LEVIN	86	26451	8525 SF		8525 SF		NO			LSI-6(4) I	22-A 22	LOTS 46,47,48 BLOCK X* Reg.Ind.Cert. #26451
152-WS 152-PR	JOHANNA KUNART & FRANK K. LEVIN etal.	16	5639	4000 SF		4000 SF		NO			LSI-6(4) I	22-A 22	LOTS 44,45 BLOCK X* Reg.Ind.Cert.#5639

PARCEL Nº	OWNER	DEED RECORD BOOK	DEED RECORD PAGE	DEED AREA TOTAL ACRES	DEED AREA CORR. ACRES	TO BE ACQUIRED LAND ACRES	TO BE ACQUIRED P.R.O. ACRES	TO BE ACQUIRED BLDGS.	RESIDUE LEFT	RESIDUE RIGHT	TYPE FUNDS	SHEET Nº	REMARKS
153-WS 153-PR	LOLA E. & ROBERT E. STARCHER " " " " "	89	27431	4000SF		4000 SF		NO			LSI-6(4) I	22-A 22	LOTS 42,43 BLOCK X*
154WL 154-WS	IRENE E. BOROSH " "	15	5477	4000 SF		667 SF 3333 SF		NO			I LSI-6(4)	22 22-A	LOTS 40,41 BLOCK X* Reg.Ind.Cert.#5447
155WL 155-WS	STANLEY & ROSE CWIERTNIA " " "	16	5733	4000 SF		2000 SF 2000 SF		NO			I LSI-6(4)	22 22-A	LOTS 38,39 BLOCK X* Reg.Ind. Cert.#5773
156 WL 156-WS	JOSEPH & GRACE GUERRA " " "	16	5734	4000 SF		3333 SF 667 SF		NO			I LSI-6(4)	22 22-A	LOTS 36,37 BLOCK X* Reg.Ind. Cert.#5734
157 WL	LOLA E. & ROBERT E. STARCHER	89	27431	10814 SF		10814 SF		NO			I	22	LOTS 31,32,33,34,35BLOCK X*
158 WL	PERCY G. HANSEN	122	37383	4000 SF		4000 SF		NO				22	LOTS 29,20 BLOCK X* Reg.Ind.Cert.#37383
159 WL	STEVE SZEGO, DECEASED	47	14904	4000 SF		4000 SF		NO				22	LOTS 27,28 BLOCK X* Reg.Ind.Cert.#14904
160WL	PERCY G. HANSEN	122	37383	8000 SF		8000 SF		NO				22	LOTS 23,24,25,26 BLOCK X* Reg.Ind.Cert. #37383
161WL	FRANK K. LEVIN	86	26451	4000 SF		2000 SF		NO		2000 SF		22	LOTS 21,22 BLOCK X* Reg.Ind.Cert.#26451
162WL	STANLEY L. ABRAMS	111	33981	4000 SF		201SF		NO		3799 SF		22	LOTS 11,12 BLOCK X* Reg.Ind.Cert.#33981
163WL	THE ESTATE OF CHARLES W. PRATT & ELLEN PRATT, BOTH DEC'D	21	7284	4000 SF		602 SF		NO		3398 SF		22	LOTS 9,10 BLOCK X* Reg.Ind.Cert.#7284
164WL	STANLEY L. ABRAMS	111	33981	15924 SF		6376 SF		NO		9548 SF		22	LOTS 1,2,3,4,5,6,7,8, BLOCK X* LOTS 11,12 BLOCK X* Reg.Ind.Cert.#33981
165WL 165-WS	DIXIE OHIO EXPRESS, INC. AN ALABAMA CORPORATION " " " " " "	4132	142	25.802		3.934 6.73		NO		15.137	I LSI-6(2)	22,23 22-A,23-A	AREA INCLUDES LOT 25, BLOCK L, NORTHFIELD HEIGHTS ALLOTMENT REGISTERED LAND
166WL	A.J. BALTES INC.	4438	186	25.613	25.5644	4.4796		NO	10.3122 (L)	10.7726	I	23	
166AWL	A.J. BALTES INC.	4441	132	6.62	6.623	2.0238		NO	4.2213 (L)	0.3779		23,24	
167WL	ALBERT A.&CHRISTINE L. AUSPERK	3479	379	8.188	1.57	0.9690	0.1582	YES	0.453			24	Sudlots 23,24, Block Y DEED AREA CORRECTION DUE TO 6.62 AC. OUTSALE TO BALTES INC. PAR. 166A WL
168WL	JOHN P. BONATH & THELMA M. BONATH	2559 2993	410 77	0.57 0.57		0.6426	0.0469	YES		0.4505		23,24	
171WA	SEAL S. & MARTHA S. HANN	3895	139					NO				25	FILL AND GRADE EXISTING CREEK LOT 84 NORTHFIELD PARK ESTATES
173WA	JENNIE KOLTCZ	4704	125					NO				25	FILL AND GRADE EXISTING CREEK LOTS 8 AND 83 NORTHFIELD PARK ESTATES
174	ERNEST WHITT & MOSSIE WHITT	17	6009									22	LOTS 23,24 BLOCK Y* No take Reg.Ind.Cert.#6009
175PR	LOLA E. & ROBERT E. STARCHER	89	27431					NO				22	LOTS 21,22 BLOCK Y* Reg.Ind.Cert.#27616
176	JOSEF KAISER	14	5087					NO			I	22	LOT 20, BLOCK Y* Reg.Ind.Cert.#5087

Deleted Pcl. 176-PR per I.O.C. from S.A. Guziak dated 1-12-68. Lee 1-15-68

* REGISTERED LAND (TORRENS)
NORTHFIELD HEIGHTS ALLOTMENT
L - LANDLOCKED

NAME CHANGE PCL. 124 SMITH 1-8-68

REV	DATE	DESCRIPTION
6	10/18/67	Name Change Pcl. 173WA Bill
7	10-20-67	Name Change Pcl. 138WL
8	11/1/67	Name Change Pcl. 127WL Bill
9	11-17-67	NAME CHANGE PCL. 130WL ~SMITH
10	12-21-67	NAME CHANGE PCLS. 121, 152 & 159 SMITH 12-21-67
11	12-28-67	NAME CHANGE PCL 163 - SMITH

DATE OF PREPARATION

REV	DATE	DESCRIPTION
	6-9-67	Parcel 174PR deleted
2	8-10-67	NAME CHANGE Pcl. 139WL
3	9/21/67	Added Funding Breakdown Lee
4	10/11/67	ADDED FUNDING BREAKDOWN & LANDOR PARCELS 112 PR, 113PR, 114-PR, 115PR, 150 PR, 151PR, 152-PR & 153PR

State Highway Dept. Div. 4
R/W ENGR & ADMIN SECT.
RAVENNA, OHIO
JAN 30 1967
LOGGED

FED. RD.	STATE	PROJECT	
2	OHIO		

207/313

SUM.-271-8.29

RIGHT-OF-WAY SHEET 10/25

1-36" STUMP
3-18" ELM
3-30" ELM

1-24" STUMP
4-15" ELM
1-15" SYCAMORE
1-24" WILLOW

2-12" ELM
1-15" APPLE
6-20" SYCAMORE

2-12" ELM
1-15" APPLE
1-15" SYCAMORE

1-12" CHERRY
1-12" ELM
1-15" APPLE
2-18" WILLOW

2-18" HICKORY
3-18" WALNUT

3-18" HICKORY

3-12" POPLAR

SUMMIT COUNTY
BOSTON TOWNSHIP
LOT 1 ~ TRACT 1
RANGE 11 WEST
TOWNSHIP 4 NORTH

END PROJECT
SUM.-271-7.65
STA.438+00.00

BEGIN PROJECT
SUM.-271-8.29
STA.436+98.25

STA. 429+00

STA. 438+00

C. & JULIA ZIELENSKI

LOT 1

LOT 2

EAST LINE LOT 1

VEGETATION LINE Z

RIVER

WEST LINE LOT 45

CANAL

VEGETATION LINE J

GRAVEL DRIVE

POINT OF ACCESS STA. 430+40 LT. 8 LRT 20 WIDTH (UNDER BRIDGE ONLY)

POINT OF ACCESS STA. 434+34 RT. 10' WIDTH (UNDER BRIDGE ONLY)

C.P.A. 436+96 164.04'

E.P.A. 436+96 86.67'

E.P.A. 436+96 22.33'

E.P.A. 436+05 22.33'

E.P.A. 436+05 86.67'

C.P.A. 436+05 199.72'

PINE TREES

RESIDENCE DRIVE (ABANDON)

BEGIN WORK
SUM-271-8.29
STA.436+07.25

CONSTRUCTION LIMITS

BARBED WIRE FENCE

FIELD DRIVE

PASTURE

(52) WL T.B.A. 1.635 AC

(53) WL T.B.A. 0.636 AC

(54) WL

SURVEY (I-271)

N. 54°14'22"E.

343.48'

72.57'

84.21'

152.05'

N. 35°45'38"E.

N. 16°15'38"W.

N. 16°12'45"W.

N. 27°17'07"W.

N. 72°15'38"W.

N. 62°48'48"W.

N. 30°58'15"E.

644.21'

BEGIN SHEET

SUMMIT COUNTY
BOSTON TOWNSHIP
LOT 2 ~ TRACT 1
RANGE 11 WEST
TOWNSHIP 4 NORTH

CUYAHOGA

OHIO

EAST LINE LOT 2

VEGETATION LINE Z

SUMMIT COUNTY
BOSTON TOWNSHIP
LOT 45
RANGE 11 WEST
TOWNSHIP 4 NORTH

END SHEET

MATCH TO RW SHEET 11 OF 25

1-24" OAK

4-12" ELM
2-18" ELM
1-36" SYCAMORE

1-18" HICKORY
1-18" WALNUT

2-12" OAK
1-12" APPLE
2-15" ELM
1-30" ELM

2-12" SYCAMORE
3-18" CHERRY
1-20" CHERRY
2-24" HICKORY

5-12" ELM
1-12" SYCAMORE
1-24" HICKORY

FENCE QUANTITY - TYPE 47	
436+05 (RT) To 436+96 (LT.)	117 L.F.
436+05 (RT.) To 438+00 (RT.)	308 L.F.
436+96 (LT.) To 438+00 (LT.)	181 L.F.
TOTAL	606 L.F.

LEGEND

LA RW	LIMITED ACCESS RIGHT OF WAY (PROPOSED)
RW	PROPOSED AERIAL EASEMENT LINE
RW	SIDE ROAD RIGHT OF WAY (PROPOSED)
LA RW	LIMITED ACCESS AS PROPOSED UNDER PREVIOUS CONTRACT
	ALL PROPOSED EASEMENTS NOT INCLUDED ABOVE
	CONSTRUCTION LIMITS
	EXISTING RIGHT OF WAY (SIDE ROADS)
℄	EXISTING PROPERTY LINES
Z	FORMER PROPERTY OR LOT LINE
x x x	EXISTING & PROPOSED FENCE
	POLE FOR OHIO EDISON POWER LINES
	POLE FOR OHIO BELL TELEPHONE LINE
	POLE FOR OHIO EDISON & OHIO BELL TELEPHONE LINES
	TREE REMOVAL

THE TREES, AS SHOWN, REPRESENT THE COUNT AS BEING LEFT OR RIGHT OF THE CENTER LINE SURVEY AND LOCATED BETWEEN THE CORRESPONDING 100 FT. STATIONS.

◉ MONUMENTS TO BE SET

GRAPHIC SCALE
0 50 100 150 200

TYPE - I FUNDS

PRELIMINARY SUBMITTAL DATE: SEPT. 9, 1965
RIGHT OF WAY COMPLETION DATE: JAN 25, 1967

No.	REVISIONS	MADE BY	DATE

STA. 429+00 TO STA. 438+00

State Highway Dept. Div. 6
R/ ENGR. & ADMIN SECT.
ANDREW OHIO

JAN 20 1967

LOGGED
Crds. Ell Bk.

C.E.E.

FED. RD.	STATE	PROJECT	
2	OHIO		

298/313

SUM-271-8.29
RIGHT OF WAY SHEET 11/25

MATCH TO R/W SHEET 10 OF 25

MATCH TO R/W SHEET 12 OF 25

BEGIN SHEET

END SHEET

STA. 438+00

STA. 453+00

SUMMIT COUNTY
BOSTON TOWNSHIP
LOT 44
RANGE 11 WEST
TOWNSHIP 4 NORTH

SUMMIT COUNTY
BOSTON TOWNSHIP
LOT 45
RANGE 11 WEST
TOWNSHIP 4 NORTH

EDNA A. MABRY
54 WL
(PARCEL PURCHASED UNDER CONTRACT SUM-271-8.01)

JOSEPHINE LAHOSKI
60 WL

BEN G. & ANN M. LAHOSKI
55 WL
(PARCEL PURCHASED UNDER CONTRACT SUM-271-7.98)

T.B.A.* 1.219 Ac.

BOSTON MILLS ROAD (C.H. 32)

℄-SURVEY (I-271)

STA. 450+23.59 ℄-I-271 = STA. 117+39.69 ℄-R/W C.R. # 32

BEGIN ACQUISITION
SUM-271-8.29
STA. 449+36.48

END ACQUISITION
SUM.-271-7.65
STA. 453+09.64

ROBERT ARTHUR NOURSE & FERN NOURSE
TBA: 16.587 Ac
PRO: 0.143 Ac
TOTAL: 17.130 Ac

ROADWAY PLANS CURVE DATA
Δ = 62°30' RT.
T = 193.17
L = 347.22'
Dc = 18°
P.I. STA. 17+38.36

FENCE QUANTITY	TYPE 47
440+00 (RT) To 449+57 (RT)	1434 LF
449+22 (LT) To 449+44 (RT)	71 LF
440+00 (LT) To 449+07 (LT)	1318 LF
451+34 (RT) To 453+00 (RT)	527 LF
450+98 (LT) To 451+19 (RT)	71 LF
450+85 (LT) To 453+00 (LT)	717 LF
TOTAL	4138 LF

◉ MONUMENTS TO BE SET

GRAPHIC SCALE
0 50 100 150 200

TYPE I FUNDS

PRELIMINARY SUBMITTAL DATE: SEPT. 9, 1965
RIGHT OF WAY COMPLETION DATE: JAN. 25, 1967

Nº	REVISIONS	MADE BY	DATE
1	DELETED P.I. 55 WL, COMBINED WITH 55 WL	I RICK	3-30-67
2	ADDED LEADER LINE P.I.s 55 WL & 60 WL	I RICK	4-3-67

STA. 438+00 TO STA. 453+00

State of Ohio DEPT. OF HIGHWAYS R/W - ENGR. & ADMIN. SECT. RIVERSIDE DRIVE
JAN 30 1967
LOGGED
CHK'D. BY

K & E

FED. RD.	STATE	PROJECT	
2	OHIO		

299/313

SUM-271-8.29

RIGHT OF WAY SHEET 12/25

MATCH TO R/W SHEET 11 OF 25

MATCH TO R/W SHEET 13 OF 25

BEGIN SHEET

END SHEET

STA. 453+00

STA. 468+00

℄ SURVEY CURVE DATA

P.I. STA. 460+53.13
Δ = 14°29'18" LT.
D_c = 1°00'
R = 5729.58'
T = 728.30'
L = 1448.83'
E = 46.10'

BEN G. LAHOSKI ℄ ANN M. LAHOSKI

60-1 WL

T.B.A. = 0.069 Ac

3-15" POPLAR
1-24" OAK
1-36" OAK
13-15" OAK

1-12" OAK
3-15" POPLAR

2-15" POPLAR
2-12" OAK

N 65°20'36" E
165.00' (CALC.)

455+95.33
544.45'

580.00'± (D)
582.00' (CALC.) ℄ TO COR.

453+24.83
0.00

N 43°00'44" E
148.53'

110.58'

℄ TS

60'

455+42.63
281.85'

454+79.35
324.30'

370.00' (D)

N 0°18'53" E

LA RW

CONSTRUCTION LIMITS

POSSIBLE SLIDE AREA

JOSEPHINE LAHOSKI

60 WL

T.B.A. = 1.218 Ac

ROBERT ARTHUR NOURSE ℄ FERN NOURSE

61 WL

T.B.A. = 16.987 Ac
P.R.O. = 0.143 Ac
TOTAL = 17.130 Ac

SUMMIT COUNTY BOSTON TOWNSHIP LOT 44 RANGE 11 WEST TOWNSHIP 4 NORTH

2-12" MAPLE
10-12" OAK
1-36" OAK
1-24" OAK

13-15" ELM

19-12" ELM
1-15" CHERRY

1-15" WALNUT
4-15" OAK
1-24" OAK
3-15" ELM
2-12" MAPLE

N 48°05'04" E
520.87'

461+50
350'

3-15" MAPLE
1-15" SYCAMORE
3-15" CHERRY
8-15" ELM

3-15" OAK
2-12" MAPLE
7-15" ELM
7-15" CHERRY

1-15" CHERRY
6-15" BEECH
10-15" OAK
5-15" ELM

7-15" BEECH
10-15" ELM
5-25" OAK
2-15" OAK

MORTON W. STANFORD CATHERINE STANFORD J. CLAYTON STANFORD

63 WL

T.B.A. = 0.169 Ac

1-12" BEECH
4-15" OAK
4-15" CHERRY
3-15" ELM
1-24" WALNUT

3-15" ELM
1-15" POPLAR
5-15" OAK

S 85°56'07" E

LOT 43

LOT 44

617.34' (D) ℄

(LL)

SUMMIT COUNTY BOSTON TOWNSHIP LOT 43 RANGE 11 WEST TOWNSHIP 4 NORTH

466+91.75
241.42'

LOT 43
N 0°24'10" W
(310.11' (CALC.)
320.46'
LOT 39
N 15°04'27" E

464+09.24
R 1800

177.70

100.15'

80'

147.52'

63 WL

SET MON
464+35.93
212.71'

SET MON
467+19.05
212.71'

465+77.49
143.58'

MARKED STONE FD.

PT. STA 467+73.66

462+50
175'

N 33°54'55" E
253.04'

S 73°06'51" E
199.32'

℄ SURVEY (I-271)

455

460

465

N 54°14'22" E

N 35°45'04" E

453+09.64

13.96'

453+23.67
16.41'

453+14
13.26' RT.

453+24.83
0.00

2-12" OAK

2-12" APPLE

1-20" ELM
9-12" OAK
9-25" HICKORY
2-15" HICKORY

2-12" APPLE

1-18" HICKORY
2-18" OAK
21-12" OAK

3-12" BEECH
34-12" OAK
1-18" POPLAR
1-15" CHERRY
2-15" POPLAR

3-12" MAPLE
3-12" POPLAR
25-12" OAK
1-12" HICKORY
1-15" CHERRY

10-12" OAK
2-12" HICKORY
1-15" POPLAR
4-12" BEECH
5-15" CHERRY

7-12" CHERRY
5-12" MAPLE
5-12" HICKORY
16-12" OAK
14-12" BEECH

7-15" BEECH
7-12" OAK
1-20" POPLAR
5-20" OAK

1-15" POPLAR
7-20" OAK
6-20" BEECH
5-12" OAK
13-12" BEECH

1-20" POPLAR
1-20" ELM
4-20" OAK
6-12" BEECH

7-12" OAK
5-20" OAK
3-20" BEECH
2-15" BEECH
2-12" POPLAR

3-15" BEECH
2-20" OAK
8-12" OAK

ROBERT ARTHUR NOURSE ℄ FERN NOURSE

61 WL

DAVID P. McMILLEN ℄ ESTATE OF STELLA M. STANFORD

62 WL

T.B.A. = 21.9936
P.R.O. = 0.4592
TOTAL = 22.4528 Ac

POSSIBLE SLIDE AREA

CONSTRUCTION LIMITS

N 0°06'42" W
1330.98' (D)

LOT 44

LOT 39

466+34'

466+00
R 1800

299.38'
N 59°25'25" E

LA RW

467+73.66
269.06'

N 74°11'59" E
213.83'±

266.25'
N 59°11'54" E

481.21'
N 70°22'45" E

454+00
400'

460+87.97
342.34'

681.25'
N 44°57'04" E

224.75'

466+00
400'

229.12' (CALC.)

143.58'

464+19.47

17.08'

367.08'

465+77.49

MONUMENTS TO BE SET

GRAPHIC SCALE
0 50 100 150 200

TYPE I FUNDS

PRELIMINARY SUBMITTAL DATE: SEPT. 9, 1965
RIGHT OF WAY COMPLETION DATE: JAN 25, 1967

Nº	REVISIONS	MADE BY	DATE
1	ADDED LEADER LINE Pvt. 63WL	ERICK	4-3-67

STA. 453+00 TO STA. 468+00

State Highway Engr. & R/W Engr. & Admn. Sect. Harrisburg, Penna.
JAN 30 1967
LOGGED
Crds. Rill Bk.
K & E

FED. RD.	STATE	PROJECT	
2	OHIO		

300/313

SUM-271-8.29

RIGHT OF WAY SHEET 13/25

MATCH TO R/W SHEET 12 OF 25

STA. 468+00

BEGIN SHEET

SUMMIT COUNTY
BOSTON TOWNSHIP
LOT 39
RANGE 11 WEST
TOWNSHIP 4 NORTH

1-12" CHERRY
1-24" OAK
3-36" STUMPS
1-24" ELM
4-15" POPLAR
1-36" OAK

5-12" POPLAR
2-24" STUMPS
4-15" SYCAMORE

4-12" POPLAR
5-20" ELM
3-15" OAK

3-12" BEECH
5-15" OAK
3-12" POPLAR
1-24" OAK

1-12" SYCAMORE
2-24" POPLAR
5-15" OAK
3-12" BEECH
3-24" OAK

3-24" OAK
10-15" OAK
3-15" BEECH
3-15" POPLAR

1-12" POPLAR
3-15" ELM
1-18" OAK

6-12" PINE
PINE GROVE

1-24" ELM
13-15" OAK
3-24" OAK

1-12" APPLE
6-15" OAK
1-15" ELM

2-15" APPLE
1-15" ELM
3-12" OAK
3-12" MAPLE

470+20
405

N 39°45'04" E
150.00

472+00
405

LA RW

N 15°04'27" E
350.46

CONSTRUCTION LIMITS USING 3:1 BACKSLOPES

CONSTRUCTION LIMITS USING 2:1 BACKSLOPES

N 85°27'30" E
284.40

474+00
200

EPA

CPA

CONSTRUCTION LIMITS

512 LIN FT TYPE 47 FENCE

716.18'

N 41°55'24" E

LA RW

574'-TWIN 36" CONDUIT
STR. #SUM-271-0695

DAVID P. McMILLEN
& ESTATE OF
STELLA M. STANFORD

62 WL

T.B.A. = 21.9936 Ac
P.R.O. = 0.4592 Ac
TOTAL = 22.4528 Ac

470+72
50+00 CULV.

470

℄-SURVEY (I-271)

475

N 39°45'04" E

480

STA. 50+00 HINES HILL RD.
STA. 481+48.75 I-271

64 WD

64-1 WD

62 WD

62-1 WD

64 T

62 T

64 WL

107.40
107.39

N 39°45'04" E
284.67
RW

S 55°30'10" E
CONSTRUCTION LIMITS

S 55°49'03" E
510.27

TEMPORARY RUNAROUND

FOR ACREAGE, SEE SHT. 15

481+15.66 (L12.84')
481+24 (T.R. 115')

480+65.70 (174.76')
481+12.73 (T.R. 115')

10°50'58" SKEW

149.10

482+65.38
51+18

79°09'02"

HINES HILL RD.

P.C. STA.
145+78.58

P.T. STA.
151+40.52

(T.R. 115')

S 55°49'03" E
510.27

FOR ACREAGES AND OWNERSHIPS IN THE HINES HILL RD. AREA, SEE R/W SHEET Nº 14.

481+43.90 (184.31')
50+80.09 (35.50')

481+59.88 (183.05')
51+84.42 (T.R. 115')

S 55°49'03" E
CONSTRUCTION LIMITS

62-1 TH

62-3 WD

62-2 WD

8-12" OAK

FOR DETAILS OF HINES HILL ROAD, SEE R/W SHEET Nº 14.

END SHEET

STA. 483+00

MATCH TO R/W SHEET 15 OF 25

CPA

CONSTRUCTION LIMITS

1069 LIN FT TYPE 47 FENCE

884.25'
N 38°00'24" E

LA RW

EPA

CPA

472+00
200

LA RW

CONSTRUCTION LIMITS USING 2:1 BACKSLOPES

CONSTRUCTION LIMITS USING 3:1 BACKSLOPES

213.83'
N 74°11'55" E

228.04
N 12°22'22" W

449.50
350

210.00'
N 39°45'04" E

471+62
350

DAVID P. McMILLEN
& ESTATE OF
STELLA M. STANFORD

62 WL

T.B.A. = 21.9936 Ac
P.R.O. = 0.4592 Ac
TOTAL = 22.4528 Ac

SEE R/W SHEET Nº 14
FOR ADDITIONAL ACREAGES

1-20" OAK
1-12" HICKORY
1-12" ELM

1-20" POPLAR
9-20" OAK
1-20" WILLOW
2-12" SYCAMORE

1-12" SYCAMORE
9-12" OAK
5-12" WILLOW
1-18" OAK

1-20" OAK
9-12" OAK
2-12" POPLAR

1-20" OAK
10-15" BEECH
1-30" OAK
1-12" MAPLE

1-12" HICKORY
5-20" OAK
4-12" OAK

1-24" CHERRY
1-15" OAK
5-24" OAK
1-12" HICKORY
4-12" BEECH

9-12" PINE
2-12" HICKORY
6-12" POPLAR

12-12" PINE

◉ MONUMENTS TO BE SET

GRAPHIC SCALE
0 50 100 150 200

TYPE I FUNDS

PRELIMINARY SUBMITTAL DATE: SEPT. 9, 1965 RIGHT OF WAY COMPLETION DATE: JAN 25, 1967			
Nº	REVISIONS	MADE BY	DATE
1	ADDED LEADER LINES Pets 62 WL & 64-1 WD	IRICK	4-3-67

STA. 468+00 TO STA. 483+00

Date: January 20, 1967
R/W ENGR. & ADMIN. SECT.
RIVERSIDE, OHIO

Job 00 1967

LOGGED
Bill Bk.

Crds.

K & E

FED. RD.	STATE	PROJECT	
2	OHIO		

301/313

SUM-271-8.29

RIGHT OF WAY SHEET 14/25

SUMMIT COUNTY
NORTHFIELD CENTER TWP.
(FORMERLY BOSTON TWP.)
LOT 40
RANGE 11 WEST
TOWNSHIP 4 NORTH

WALDO L. SEMON
65 T TBA=0.0349Ac

JUNK YARD
JOHN KREJCI
64 T 0.7878 Ac
64 WL
64 WD TBA: 0500 PRO: 2094 2554 Ac
64-1 WD TBA: 0090 PRO: 1592 1682

APPROXIMATE LIMITS OF JUNK YARD
DIRT DRIVE
DIRT DRIVE
APPROXIMATE LIMITS OF JUNK YARD

N 20°05'25" W
EXISTING P.T. STA 42+15.58
S 64°56'35" E 71.44
S 66°45'03" E 510.27
S 64°05'31" E 54.16
S 62°15'54" E 160.87
S 61°05'54" E 208.71
S 61°05'54" E 267.59'
S 58°30'10" E 286.67
S 55°45'13" E 229.56' (CALC.)
I.P. FD.
LOT 40
LOT 39
BEGIN WORK STA. 43+00
BEGIN RUNAROUND HINES HILL RD STA. 42+00

64 T TEMP. RUNAROUND
CONST. LIMITS
62 T 0.1967 Ac
64 WD
62 WD
64-1 WD
62-1 WD TBA: 0806 PRO: 1765 TOTAL: 2571 Ac
62-1 T 0.6419 Ac
62-2 WD TBA: 0346 PRO: 1454 1800 Ac
62-3 WD TBA: 0238 PRO: 1487 TOTAL: 1725 Ac
62 WL
62-2 T 0.6415 Ac

WHITE PICKET FENCE
GATE
12" OAK
24" OAK
30" OAK
10°50'58" SKEW
340.37'
RW 66'
CONSTRUCTION LIMITS
HINES HILL RD (T.R. 115)
EXIST. R/W
EXISTING R/W
EXISTING P.I. STA. 41+14.22
EXISTING P.T. STA. 42+15.58
P.C. STA. 43+06.67
P.T. STA. 45+81.23
P.C. STA. 151+40.52
P.T. STA. 153+40.52
P.C. STA. 154+64.35
P.C. STA. 56+86.73
END WORK STA. 55+00
END RUNAROUND HINES HILL RD STA. 57+42.39
LINE STA. 57+42.39 = STA. 55+00.00

481+60.63 (171.15)
481+34.14 (45.64)
482+65.26 (167.18)
483+28.40 (178.05)
52+09.30 (142.77)
APPLE ORCHARD
S 51°08'28" E 295.14'
S 57°05'51" E 204.94'
S 26°54'39" E 117.52'
482+26.60 (181.67)
481+42.20 (164.23)
51+80.00 (39.50)
S 63°34'18" E 220.12'
481+15.46 (172.84)
481+24 (T.R. 115)
480+65.70 (174.76)
481+12.73 (48.71)
N 41°55'24" E 716.18'
79°09'02"
485
485
410.62 TO PROP. COR
N 85°45'13" W
482+45.62
172.04'
223.23
551.17
N 64°03'
E 620.35'
NORTHFIELD CENTER TWP.
BOSTON TWP.
21.88 Ac
341.32'
55.00
55.00
55.00

FED. RD.	STATE	PROJECT	
2	OHIO		

302/313

SUM-271-8.29

RIGHT OF WAY SHEET 15/25

MATCH TO R/W SHEET 13 OF 25

STA. 483+00

BEGIN SHEET

MATCH TO R/W SHEET 16 OF 25

STA. 498+00

END SHEET

JOHN KREJCI

JAMES WHITE

JUNK YARD

DIRT DRIVE

(ABANDON)

NORTHFIELD CENTER TWP.
BOSTON TWP.

DAVID P. McMILLEN
& ESTATE OF
STELLA M. STANFORD

RUBY I. PEDERSEN &
HOWARD PEDERSEN

SUMMIT COUNTY
BOSTON TOWNSHIP
LOT 39
RANGE 11 WEST
TOWNSHIP 4 NORTH

SUMMIT COUNTY
NORTHFIELD CENTER TWP.
LOT 40
RANGE 11 WEST
TOWNSHIP 4 NORTH
(FORMERLY BOSTON TWP.)

64 WL — T.B.A. = 5.4704 Ac

62 WL — T.B.A. = 21.9936 Ac
PROJ. = 0.4992 Ac
TOTAL = 22.4928 Ac

(LL) (0.537 Ac)

66 WL — T.B.A. = 10.689 Ac

67 WL (LL)

622 LIN. FT. TYPE 47 FENCE

633 LIN. FT. TYPE 47 FENCE

423 LIN. FT. TYPE 47 FENCE

374 LIN. FT. TYPE 47 FENCE

E.P.A.

CONSTRUCTION LIMITS USING 3:1 BACKSLOPES

CONSTRUCTION LIMITS USING 2:1 BACKSLOPES

CONSTRUCTION LIMITS USING 3:1 BACKSLOPES

STR. #SUM-271-6932 CONDUIT

I.P. FD.

MARKED STONE FD.

PIPE FD.

℄ SURVEY (I-271) N 39°45'04" E

491+50
50+00 CULV.

N 41°55'24" E 585.17'

N 7°05'45" W 328.57'

N 39°45'04" E 111.91'

N 75°27'11" E 386.55'

N 39°45'04" E 200'

N 15°31'24" E 219.32'

N 33°12'28" W 330.10' (D)

N 21°45'08" W 167.09'

N 39°45'04" E 146.00'

N 4°25'21" E 153.06'

N 0°22'40" W 216.02'

N 20°05'05" E 422.68'

N 89°24'31" E 1320.51' (CALC.)

N 89°49'12" W 1320.51' (CALC.)

N 89°24'31" E 1320.51' (CALC.)

N 82°31'52" E 227.66'

N 38°00'26" E 361.92'

410.62' (CALC.)

N 89°24'31" E 1320.51' (CALC.)

N 89°24'31" E 1320.51' (CALC.)

N 89°24'31" E 1320.51

FED. RD.	STATE	PROJECT	
2	OHIO		

303/313

SUM-271-8.29

RIGHT OF WAY SHEET 16/25

FOR DETAILS & CALCULATIONS OF RELOC. BRANDYWINE RD. AND RELOC. STANFORD RD., SEE R/W SHEETS 17 & 17A.

MATCH TO R/W SHEET 15 OF 25

STA. 498+00

BEGIN SHEET

STA. 513+00

END SHEET

MATCH TO R/W SHEET 18 OF 25

Added Station Ahead To Pcls. 77 & 78 12-13-67 Bill
Added Distance To Pcls. 77 & 78 WD 12-7-67 LAHL
Change Pcls. 77WD, 77WD-1 & 78WD To Standard Easements Per I.O.C. From S.A.Guziak 11-30-67 Bill

REVISED LOCATION OF PROPOSED STANFORD RD. L.S. 9-30-76

Revised TDoc & Dist. on Northerly & Pcl. 71-WL 1-4-67 Lee

R/W ENGR & ADMIN SECT. HAVANA, OHIO

LOGGED Phil Bk.

Date JAN 30 1967

K.S.E.

Detail "A"

EXISTING R/W
STANFORD RD. (T.R. 38)
BRANDYWINE RD. (C.H. 40)
3.9' S-54°08'11"-E
LA RW
507+87.70
200.00 Lt
No Scale

Trees

9 - 20" OAK
9 - 15" ELM

13 - 15" OAK
2 - 24" OAK

1 - 12" BEECH
1 - 10" ELM
1 - 10" MAPLE
6 - 10" OAK
1 - 12" CHERRY
1 - 48" OAK
6 - 24" OAK

5 - 15" WALNUT
1 - 12" MAPLE
1 - 12" CHERRY

2 - 12" APPLE
3 - 15" MAPLE

1 - 12" ASH
1 - 12" WALNUT

3 - 20" ELM
1 - 15" MAPLE
1 - 24" APPLE
1 - 12" ELM
4 - 12" CHERRY

1 - 18" CHERRY
2 - 20" PINE
3 - 12" APPLE

3 - 15" ELM
2 - 20" MAPLE

1 - 48" WILLOW
6 - 20" CHERRY
1 - 24" STUMP
10 - 15" ELM

3 - 12" APPLE
1 - 12" W. CHERRY
15 - 12" ELM

Parcels

66 WL — .0826 Ac
T.B.A. 10.689 Ac

JAMES WHITE

67 WL — T.B.A. 4.459 Ac

1473 LIN FT TYPE 47 FENCE

68 WL — T.B.A. 1.650 Ac

JUNE K. BURRUELL

GEORGE MATUS & MARJORIE MATUS

70 WL

WILLIAM L. SOMMER

71 WL

BURIAL LOT
T.B.A. 0.91 Ac
UNKNOWN HEIRS OF JAMES WALLACE, DEC'D., ETAL

73 WL — T.B.A. 0.183 Ac

MARJORIE G. SEMON

67 WL — T.B.A. 4.459 Ac

RUBY I. PEDERSEN & HOWARD PEDERSEN

75 SL

78 WL

FERN F. NARTEN

77 WL — T.B.A. = 3.5211 Ac
P.R.O. = 0.1524 Ac
TOTAL = 3.6735 Ac

77-1 — T.B.A. = 0.7616 Ac

HENRY S. NARTEN

(LL)

SUMMIT COUNTY
NORTHFIELD CENTER TWP.
LOT 40
RANGE 11 WEST
TOWNSHIP 4 NORTH
(FORMERLY BOSTON TWP.)

Survey Curve Data

P.I. STA. 514+81.11
Δ = 10°33'34" RT.
D_c = 1°00'
R = 5729.58'
T = 529.47'
L = 1055.94'
E = 24.41'

Added 7SSL J.R.T. 11-2-70

GRAPHIC SCALE
0 50 100 150 200

TYPE I FUNDS

PRELIMINARY SUBMITTAL DATE: SEPT 9, 1965
RIGHT OF WAY COMPLETION DATE: JAN. 25, 1967

Nº	REVISIONS	MADE BY	DATE
1	ADDED DETAIL "A"	Lee	3-17-67
2	ADDED LEADER LINE Pcls 66WL & 67WL	IRICK	4-3-67
3	Deleted Pcls. 67-1 & 72, Combined Area with Pcl. 67 Per I.O.C. from H. Kandel & S Guziak Dated 9/1/67	Lee	9/6/67
4	Name Change Pcl 71 WL	White	12-7-67

◉ MONUMENTS TO BE SET
▣ PROPOSED MONUMENT ASSEMBLIES

STA. 498+00 TO STA. 513+00

FED. RD.	STATE	PROJECT	
2	OHIO		

304 / 313

17 / 25

SUM-271-8.29

RIGHT OF WAY SHEET

CENTERLINE SURVEY CURVE DATA

P.I. STA. 514+81.11
Δ = 10°33'34" RT.
Dc = 1°00'
R = 5729.58'
T = 529.47'
Lc = 1055.94'
E = 24.41'

77 WL — T.B.A. = 3.5211 Ac; P.R.O. = 0.1524 Ac; TOTAL = 3.6735 Ac

77 — T.B.A. = 0.4330 Ac; P.R.O. = 0.0915 Ac; TOTAL = 0.5245 Ac

HENRY S. NARTEN

FOR CONTINUATION OF THIS SHEET, SEE R/W SHEET Nº 17A.

SUMMIT COUNTY
NORTHFIELD CENTER TWP.
LOT 50
RANGE 11 WEST
TOWNSHIP 5 NORTH

78 WL — T.B.A. = 4.7277 Ac

78 — T.B.A. = 0.7512 Ac; P.R.O. = 0.2578 Ac; TOTAL = 1.0450 Ac

FERN F. NARTEN

BRANDYWINE CREEK

CONSTRUCTION LIMITS Z

RELOCATED BRANDYWINE ROAD CURVE DATA
Δ = 71°22'23" LT.
Dc = 4°00'.
R = 1434.39'
Lc = 1786.00'
E = 220.90'
P.I. STA. 62+97.55

BEGIN WORK STA 54+75

LOT 50 / LOT 40

NORTHFIELD CENTER TWP. LINE

℄ 33' TO ℄ ANGLE BREAK AND PROPERTY LINE

SAGAMORE HILLS TWP. LINE

N 0° 31' 11" W

S 89° 26' 58" E

PC STA 55+51.45
STA. 50+00.00
ACCESS DRIVE

BRANDYWINE ROAD

RELOC. BRANDYWINE ROAD

TEMP RUNAROUND

Access Dr.

N 0° 26' 49" E 263.18 (Calc.)

N 0° 26' 49" E 145.77'

C.H. 40 BRANDYWINE ROAD

JULIA CROSSLEY RICHARDS

T.B.A. = 0.3276 Ac

T.B.A. = 0.0927 Ac

T.B.A. = 0.009 ac

BENJAMIN J. RICHARDS & JULIA C. RICHARDS

NOTE:
B.J. RICHARDS CLAIMS HIS WATER LINE, GAS LINE, AND POWER LINE ARE LOCATED IN DECK OF EXIST. BRIDGE. COUNTY ENGINEER IS UNABLE TO VERIFY THIS.

RELOC. STANFORD ROAD CURVE DATA
Δ = 60°00'
Dc = 75°00'
R = 76.39'
Lc = 44.10'
E = 80.00'
E = 11.82'
P.I. Sta. 59+09.94

SUMMIT COUNTY
SAGAMORE HILLS TWP.
(FORMERLY BOSTON TWP.)
LOT 40
RANGE 11 WEST
TOWNSHIP 4 NORTH

NOTE: UNABLE TO DETERMINE EXACT LOCATION OR WIDTH OF BUCKEYE PIPELINE EASEMENT

■ PROPOSED MONUMENT ASSEMBLIES
⦿ MONUMENTS TO BE SET

SUMMIT COUNTY
SAGAMORE HILLS TWP.
LOT 50
RANGE 11 WEST
TOWNSHIP 5 NORTH

DRIVE — 2½ STY HSE — GAR

LOT 50 / LOT 60

DETAIL OF BRANDYWINE ROAD (C.H. 40)

NO SCALE

RELOCATED BRANDYWINE RD.

0.22' — 41.75' — 263.18' — N 0° 26' 49" E — 0.26'

℄ R/W = N 0° 31' 11" W

℄ RDWY = N 0° 37' 41" W — 40.60 — 35.88' — N 0° 25' 15" E — 168.70'

N 0° 31' 11" W — 41.44' — N 0° 26' 49" E

R/W & RDWY N 10° 26' 49" E

PC. 55+51.45
R = 954.93

54+15 / 25.78

STANFORD ROAD

SAGAMORE HILLS TWP. LINE
N 0° 37' 09" W

NORTHFIELD CENTER TWP. LINE

(T.R. 38)

FIELD DRIVE

BUCKEYE PIPE LINE CO.

N 48° 08' 11" W

Sta. 1+64.44 BK = Sta. 0+00 AH

5.6' PIPE LINES

STA. 509+31.45 (SEE SUM-271-8.27) BRANDYWINE ROAD

STA. 509+46.26 BRANDYWINE ROAD

STA. 509+46.26 BRANDYWINE ROAD

STA. 509+46.26

FED. RD.	STATE	PROJECT	
2	OHIO		

305/313

SUM-27/- 8.29

RIGHT OF WAY SHEET 17A/25

RELOC. BRANDYWINE RD.
CURVE DATA
Δ = 71° 22' 23" LT.
Dc = 6° 00'
Rc = 954.93'
T = 686.06'
Lc = 1189.55'
E = 220.80'
P.I. STA. 62+37.55

SUMMIT COUNTY
NORTHFIELD CENTER TWP.
(FORMERLY BOSTON TWP.)
LOT 40
RANGE 11 WEST
TOWNSHIP 4 NORTH

CENTERLINE SURVEY
CURVE DATA
P.I. STA. 514+81.11
Δ = 10° 33' 34" RT.
Dc = 1° 00'
R = 5729.58'
T = 529.47'
Lc = 1055.34'
E = 24.41'

HENRY S. NARTEN

77 WL

77-1

T.B.A. = 3.5211 Ac
P.R.O. = 0.1524 Ac
TOTAL = 3.6735 Ac

T.B.A. = 0.7616 Ac

FOR CONTINUATION OF THIS SHEET AND RELOC. STANFORD RD., SEE R/W SHEET Nº 17.

WILLIAM L. SOMMER

70 WL

BURIAL LOT

71 WL

UNKNOWN HEIRS
JAMES W. WALLACE
DEC'D., ETAL

BRANDYWINE ROAD

EXIST. CENTERLINE BRANDYWINE ROAD

RELOC. BRANDYWINE RD.

RELOC. T.R. 38

STRUCTURE Nº SUM-271-0.60

STA. 509+66.36 BRANDYWINE RELOC. RD. ℄ T. 271

STA. 60+09.50 RELOC. BRANDYWINE

STA. 61+09.39 RELOC. STANFORD

P.C. STA. 509+51.64

P.T. STA. 515+41.04

END WORK STA. 65+00

68.00' (D)

S 70° 57' 04" E (C.H. 40)

TEMPORARY RUNAROUND

WOVEN WIRE FENCE

SCRUB

WOODS

THIS POLE NOT IN USE

SIGN POST

12" PINE

4-12" PINE

24" WILLOW

J.M. STONE - 65+45.72 (51.02)
DO NOT DISTURB

257.70' (D)

S 70° 36' 41" E 381.97' (D)

12" BEECH

6" TREE

24" MAPLE

24" CATALPA

6" PINE

DRILLED WELL

1½ STY BRICK HSE.

1 STY FR HSE.

SHED

12" PINES

2 STY FR. HSE.

CISTERN

8" STUMP

1½ STY FR. BARN

GAR.

BR. GAR.

SEPTIC TANK

20" TREE

8" TREES

GRAVEL DRIVE

STONE WALL

CONCRETE WALK

CONSTRUCTION LIMITS

RW

SCUPPERNONG

BUCKEYE PIPE LINE CO. 8"-16" PIPE LINES

BARBED WIRE

FENCE

GUY

POWER POLE

TELEPHONE PED.

STONE EDGE

PICKET FENCE

TREES

BUSH

SOC

EOP

EOW

EOS

℄

510+80 (158.86')
63+28.19 (133.37')

S 60° 45' 20" E 200.13'

63+56.39

509+16.62 (182.56')
63+60.81 (25.03')

S 60° 30' 48" E 35.01'

S 60° 30' 48" E 279.16' (D)
S 60° 11' E 279.18' (M)
S 60° 11' E 279.17' (Calc.)

N 54° 00' 11" W 61.95'

509+01.39

62.01'

45.01'

S 66° 40' 04" E 322.55'

S 65° 10' 56" E 185.05'

65+03.59
61.08'

65+82.10
74.05'

65+78.48
44.50'

64+62.60
62.13'

64+62.60
62.13'

63+56.39

66+10
40'

65+00
125'

S 60° 30' 48" E 96.41'

507+43.39

507+78.10

507+78.10

507+78.10

505+94.17
200.27'

505+03.81

504+86.30
196.87'

504+99.29
231.87'

N 36° 43' 55" E 240.45'

N 36° 43' 55" E 327.61' (Calc.)

N 22° 42' 40" E 351.72' (D)
N 22° 42' 40" E 351.73' (Calc.)
N 22° 42' 40" E 351.73' (M)

N 21° 19' 45" E 264.00' (D)
N 21° 19' 45" E 263.95' (Calc.)

N 21° 19' 45" E 327.34' (D)
N 21° 19' 45" E 327.31' (Calc.)

S 34° 37' (Calc.) E 225.94'

132'

37.33'

FLORENCE E. LINDLEY

74

MARJORIE G. SEMON

73

RUBY I. PEDERSEN &
HOWARD PEDERSEN

67 WL

73 WL

73 WA

74 WA

67 WL

- ◉ MONUMENTS TO BE SET
- ■ PROPOSED MONUMENT ASSEMBLIES

GRAPHIC SCALE
0 50 100 150 200

TYPE I FUNDS

PRELIMINARY SUBMITTAL DATE : SEPT. 9, 1965
RIGHT OF WAY COMPLETION DATE : JAN. 25, 1967

Nº	REVISION	MADE BY	DATE
1	ADDED LEADER LINE Pcls 67, 70, 71, & 77	IRICK	4-3-67
2	Deleted Pcl. GT-1 & 72, Conbined Area with Pcl. G7 Per IOC from H. Kandel & S. Guziak Dated 9/1/67	Lee	9-6-67
3	Change Pcl. 77 WD-1 To Standard Easement Per I.O.C. From S.A. Guzia H. 11-29-67	Bill	11-30-67
4	Name Change 71 WL	EARL	12-7-67

BRANDYWINE RD. & STANFORD RD.

Revised Dist. on North R. Pcl. 71-WL 1-4-67 Lee

State Highway Dept. Dist. 4
R/W - ENG. & ADMIN SECT.
RAVENNA, OHIO
JAN 08 1968
LOADED
Bill Bl.
Cards

K & E - AKRON

FED. RD.	STATE	PROJECT	
2	OHIO		

306 / 313

SUM-271-8.29

RIGHT OF WAY SHEET 18 / 25

MATCH TO R/W SHEET 16 OF 25

STA. 513+00

MATCH TO R/W SHEET 20 OF 25

STA. 528+00

1 - 24" ELM
1 - 18" STUMP
1 - 15" WILLOW
11 - 15" CHERRY

2 - 18" CHERRY
4 - 24" ELM

3 - 15" SYCAMORE
14 - 18" ELM

8 - 18" ELM

15 - 12" ELM
2 - 24" ELM

7 - 12" ELM

3 - 12" ELM

2 - 15" MAPLE
1 - 12" ELM
5 - 12" POPLAR
1 - 18" ELM

FERN F. NARTEN

78 WL

LOT 50
LOT 40

TO ℄ BRANDYWINE RD.

BRANDYWINE CREEK

SUMMIT COUNTY
NORTHFIELD CENTER TWP.
LOT 50
RANGE 11 WEST
TOWNSHIP 5 NORTH

517+00
100

617.72'

N 45° 21' 39" E

586.26'

CONSTRUCTION LIMITS

LA RW

LA P.A.

S 69° 26' 55" E
231.59'

N 53° 10' 55" E
423.58'

LA RW 386.76'

1310 LIN. FT. TYPE 47 FENCE

521+14.57
129.35

LAUREL PIPE LINE COMPANY
14" PIPE

UNDERGROUND CONDUIT CABLES

10' PRODUCTS PIPE LINE
INLAND CORP.

N 34° 55' 25" W
500.62' (CALC.)

OHIO EDISON COMPANY,
AN OHIO CORPORATION

N 28° 25' 05" W
400.78' (CALC.)

N 52° 47' 44" E
C.P.A.

LA RW
273.07'

523+87.38

78 WL

79 WL

T.B.A. - 1.49 Ac.

T.B.A. - 12.0411 Ac.

517+00

℄ - SURVEY (I-271)

102.47'

520

521+03.77

521+10±

521+37.2

10" PIPE LINE CASING

130' ±

EXIST. 10" PIPE LINE

PROPOSED A.T. & T. CO. UNDERGROUND CONDUIT CABLES

N 50° 18' 38" E

515

424.76'
TO P.C.

514+08.70

N 39° 45' 04" E

350.47'

224.24'

STR. No. 211-0982

519+06.16

520+70±

520+94.79
107.06

205.45'

C.P.A.

I.C.P. - 24" STRUCT. No. 211-0984

60.24'

523+00

523+44.06

525

+20.00

+30.00

523+55.91
41.13'

1508 LIN. FT. TYPE 47 FENCE

I.A.P.A.

224.96'

S 48° 09' 47" W

277.40'

N 50° 18' 38" E

523+22.60
125.00

525+70
125

252.76'

(N 41° 20' 19" W)
N 39° 41' 22" W

125.00'

260.67'

526+30
132

154.03'

N 63° 26' 40" E

751.07'

N 53° 21' 48" E

527+90
160

49.48'
N 54° 41' 22" W
*(N 56° 20' 19" W)

Prop. E.O.G. Easement Line

Prop. E.O.G. Pipeline

MATCH LINE "A"

49.63'
N 69° 44' 42" W
*(N 71° 23' 39" W)

49.58'
N 84° 46' 42" W
*(N 86° 25' 39" W)

80 U

116.22'
S 80° 18' 38" W
*(S 78° 36' 41" W)

S 80° 51' 18" W
*(S 78° 32' 21" W)
195.02'

MATCH LINE "A"

MATCH LINE "C"

LOT 50
LOT 40

50.82'
N 86° 04' 20" W
*(N 87° 43' 19" W)

1 - 12" SYCAMORE

50.00'
N 12° 53' 02" W
*(N 14° 31' 59" W)

49.90'
N 53° 28' 02" W
*(N 61° 06' 59" W)

530+18.09
583.66' Rt

MONUMENTS TO BE SET

S.E. CORNER
LOT 50

Grandville Rd. (Rte. 176)
Tuinsburg Rd. (Rte. 176)

N 48° 19' 59" W
427.39'

MATCH LINE "C"

S 68° 22' 21" W
94.28'

1 - 30" MAPLE
1 - 30" ELM

80 WL

50.09'
N 05° 03' 58" E
*(N 03° 25' 01" E)

2 - 15" OAK

49.92
N 05° 59' 42" W
*(N 11° 38' 39" W)

50.00'
N 24° 55' 42" W
*(N 26° 34' 39" W)

526+00
128.22'

525+70
125.48'

526+30
128.67'

N 10° 24' 39" E
60.71'

80 CO

80 WL

49.94
N 18° 53' 42" W
*(N 20° 32' 39" W)

530+17.57
583.86' Lt.

50.90'
N 07° 02' 38" E
*(N 05° 23' 41" E)

49.92'
N 05° 54' 02" W
*(N 07° 34' 59" W)

*(N 18° 27' 21" E)
N 20° 01' 18" E
312.56'

MATCH LINE "B"

312.56'
*(N 18° 22' 12" E)

CATHOLIC CEMETERIES ASSOCIATION

MATCH LINE "B"

BEGIN SHEET

STA. 513+00
120

5-8" PIPE LINES
BUCKEYE PIPE LINE CO.
1-12" PIPE LINE
BARBED WIRE FENCE

℄ SURVEY
CURVE DATA

P.I. STA. 514+81.11
Δ = 10° 33' 34" RT.
D_c = 1° 00'
R = 5729.58'
T = 529.47'
L = 1055.94'
E = 24.41'

SUMMIT COUNTY
NORTHFIELD CENTER TWP.
LOT 40
(FORMERLY BOSTON TWP.)
RANGE 11 WEST
TOWNSHIP 4 NORTH

HENRY S. NARTEN

77 WL

77 WL

P.T. STA. 520+67.58

520+97.80
139.42

S 48° 09' 47" W
309.23' (CALC.)

N 16° 13' 30" W
309.23' (CALC.)

309.23'
N 16° 08' 04" W (C)

(L.L.)

APPROX. 50'

STR. No. 211-0983
40.43

357.40'
N 48° 09' 47" E

323.83'

323.83'

70° PROP. CR.

NOTE :
UNABLE TO DETERMINE EXACT LOCATION AND WIDTH OF LAUREL PIPE LINE CO., BUCKEYE PIPE LINE CO., AND INLAND CORP. EASEMENTS.

LAUREL PIPE LINE EASEMENT RECORDED IN VOL. 3574 PG. 291 SUMMIT COUNTY REC.

UNABLE TO DETERMINE EXACT LOCATION AND WIDTH OF A.T. & T. CO. EASEMENT.

2 - 30" WILLOW
2 - 12" PINE
2 - 30" PINE
1 - 18" ELM
1 - 15" POPLAR
1 - 15" MAPLE

2 - 15" MAPLE
2 - 12" POPLAR
1 - 18" ELM
1 - 10" CHERRY
5 - 12" PINE

7 - 12" MAPLE
1 - 12" CHERRY
1 - 12" APPLE
5 - 12" ELM

4 - 12" ELM
1 - 20" MAPLE
4 - 12" MAPLE

3 - 12" CHERRY
2 - 12" APPLE
6 - 12" ELM

3 - 12" ELM
1 - 12" CHERRY

NOTE —
* Bearings in parentheses provided by E.O.G. & were used in the conveyance to the State of Ohio.

GRAPHIC SCALE
0 50 100 150 200

TYPE I FUNDS

PRELIMINARY SUBMITTAL DATE: SEPT. 9, 1965
RIGHT OF WAY COMPLETION DATE: JAN. 25, 1967

NO	REVISIONS	MADE BY	DATE
1	ADDED LEADER LINE R/L 79-LA & 80-WL	I. RICK	4-3-67
2	Added Pcl. 80-U per H. Strahl.	Lee	7-22-68
3	Added Bearings to Pcl. 80-U & Note	J.R.T.	8-31-71
4	DELETED PCL 79-LA, ADDED R/L 79-WL		10-5-71

STA. 513+00 TO STA. 528+00

State of Ohio, Dept. of Hwys.
R/W ENGINEERING SECT.
RIVERSIDE, OHIO

JAN 10 1967

LOGGED
Bill Bk.
Crds.

K & E

FED. RD.	STATE	PROJECT	
2	OHIO		

307
313

SUM.-271-8.29
RIGHT OF WAY SHEET

19
25

NOTE. THIS SHEET "VOID".
RAILROAD PROPERTY SOLD TO THE OHIO EDISON COMPANY.
THE R.R. GRADE SEPARATION WAS DEMOLISHED

SUMMIT COUNTY
NORTHFIELD CENTER TWP.
LOT 50
RANGE 11 WEST
TOWNSHIP 5 NORTH

NEW YORK CENTRAL RAILROAD
79 LA

FERN F. NARTEN
78 WL

CATHOLIC CEMETERIES ASSOCIATION
80 WL

N 53°16'55"E 423.58'
N 52°47'44"E 107.29'
LA RW
522+27.6 (124.90')
6.5'
7.12
RIGHT OF WAY
TRACKS
TO CLEVELAND
N 49°07'12"E 106.36'
N 28°29'05"W
523+87.38 (117.71')
711+88.38 (135.11')
N 49°26'35"E 812.71'
CONSTRUCTION LIMITS
521+14.57 (125.55')
712+12.86 (136.84')
A.T.&T. (2 CABLES)
℄ 130'
N 32°03'40"W 51.86'
N 32°03'40"W 44.35'
50.41'
14.13'
25.00'
12.41'
14.75'
8.24'
17.45'
N 57°56'20"E 7.80'
79 SA
79-1 SA
79 AER
N 32°03'40"W 46.24'
N 32°03'40"W 49.88'
62°22'21"
STRUCT № SUM.-271-0994
N 34°55'25"W 500.42' (CALC.)
CONDUIT
UNDERGROUND
PROPOSED A.T.&T.
79 X
20.00'
7.13
20.00'
522+35.30 (I-271)
713+25.24 (N.Y.C. RR)
521+03.77
521+18.43'
521+37.2
522
523
N 50°18'38"E
523+00
℄ SURVEY
522+41.86 (I-271)
713+24.37 (N.Y.C. R.R)
(I-271)
523+64.06
524
400.76' (CALC.) 120
520
520+70±
P.T. STA. 520+07.58
20.44'
24.00'
15.00'
19.00'
28.00'
24.00'
N 32°03'40"W 66.22'
N 32°03'40"W 63.86'
79-1 AER
N.Y.C. RAILROAD COMMUNICATIONS LINE (4 WIRES)
162'~24" PIPE
41.53'
713+50
125'
LOT 60
LOT 40
EXIST. 14" PIPE LINE LAUREL PIPE LINE COMPANY
EXIST. 10" PRODUCTS PIPE LINE INLAND CORPORATION
PROP. PIPE LINE & CASING
N 32°03'40"W 24.58'
22.51'
714
13.57'
15.0'
17.52'
N 32°03'40"W
79-2 SA
20.18'
20.18'
26.24'
N 50°18'38"E
26.24'
79-3 SA
℄ 90.24'
714+50
125'
62.53'
N 85°53'32"E
N 15°53'22"E
91.04'
CONSTRUCTION LIMITS
277.40'
N 50°18'38"E
LA RW
523+22.60 (125')
714+37.55 (103.12')
357.40'
N 48°09'47"E
LA RW
N 48°09'47"E ~ 224.96'
26.53'
52.23'
520+57.60 (153.42')
714+76.73 (118.87')
521+50 (31.47')
714+62.87 (47.10')
TO ℄ 369.23' (CALC.) N 34°05'55"W
(71.18')
715
N 32°03'40"W
TO KENT
309.23' (CALC.) N 18°01'30"W

NOTE: FOR STATION AND OFFSETS AND COMPLETE DIMENSIONS, SEE R/W SHEET № 19A

PAR. №	EASEMENT REQUIRED	TOTAL AREA	AREA OF OVERLAP		
			HIGHWAY	AERIAL	SPECIAL AGREEMENT
79 LA	HIGHWAY	55,144 S.F.		5,404 S.F.	735 S.F.
79 AERIAL	AERIAL	2,266 S.F.	2,266 S.F.		41 S.F.
79-1 AERIAL	AERIAL	3,138 S.F.	3,138 S.F.		379 S.F.
79 SA	SPECIAL AGREEMENT	17 S.F.	7 S.F.	10 S.F.	
79-1 SA	SPECIAL AGREEMENT	84 S.F.	53 S.F.	31 S.F.	
79-2 SA	SPECIAL AGREEMENT	280 S.F.	109 S.F.	171 S.F.	
79-3 SA	SPECIAL AGREEMENT	354 S.F.	146 S.F.	208 S.F.	
79 X	CHANNEL	622 S.F.			

GRAPHIC SCALE
0 20 40 60 80

PRELIMINARY SUBMITTAL DATE : SEPT. 9, 1965 RIGHT OF WAY COMPLETION DATE : JAN. 25, 1967			
№	REVISION	MADE BY	DATE

NEW YORK CENTRAL RAILROAD
RIGHT OF WAY PLAT

State Highway Engr. Div. of R/W, ENGR. ADMIN SECT. HAVANA, OHIO
JAN 09 1967
LOGGED
CHK. FIN. EX.
K&E

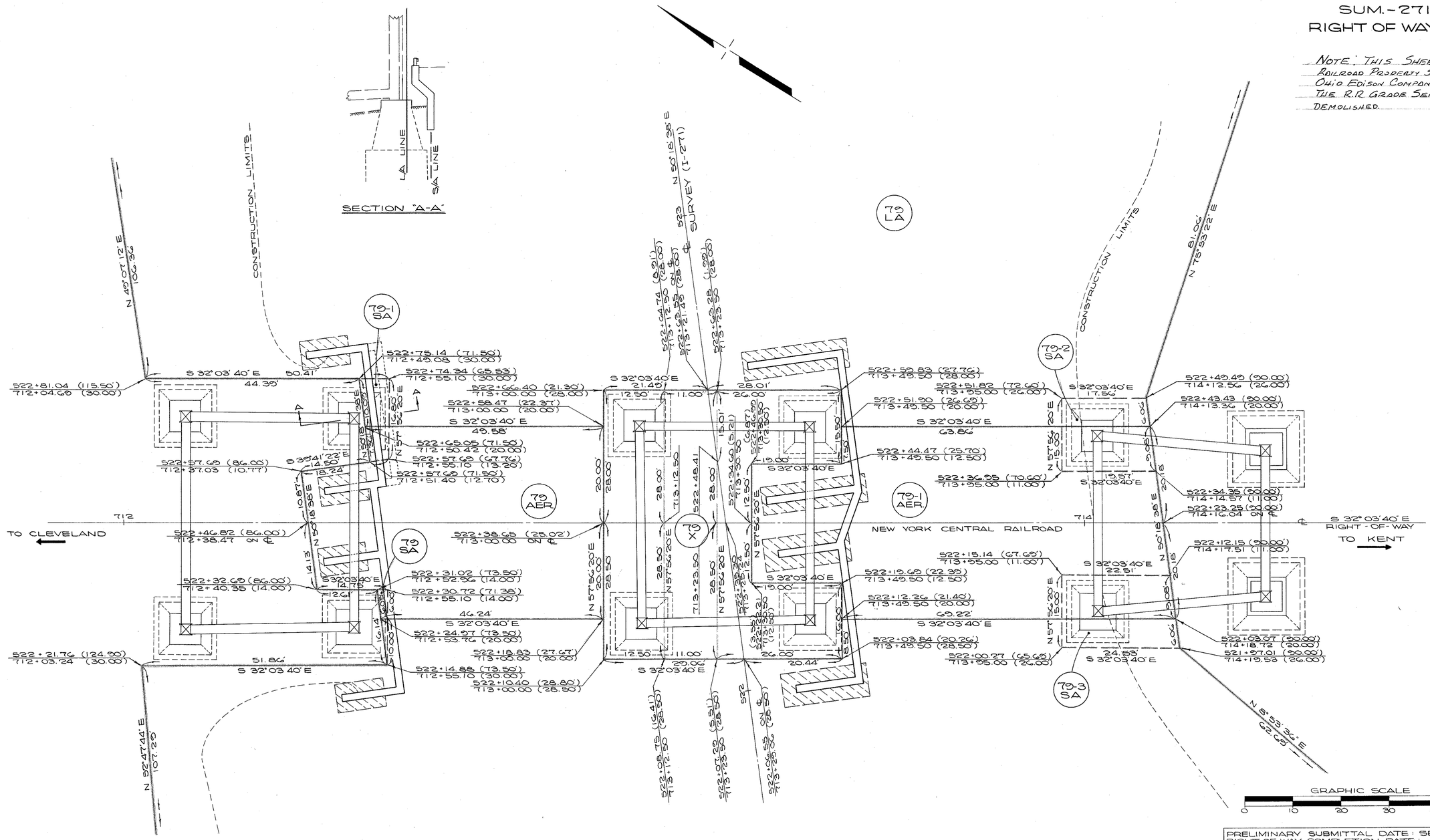
FED. RD.	STATE	PROJECT	
2	OHIO		

307A / 313

SUM.-271-8.29

RIGHT OF WAY SHEET 19A / 25

NOTE: THIS SHEET "VOID". RAILROAD PROPERTY SOLD TO THE OHIO EDISON COMPANY. THE R.R. GRADE SEPARATION WAS DEMOLISHED.



PRELIMINARY SUBMITTAL DATE: SEPT. 9, 1965 RIGHT-OF-WAY COMPLETION DATE: JAN. 25, 1967			
Nº	REVISION	MADE BY	DATE

NEW YORK CENTRAL RAILROAD RIGHT OF WAY PLAT

State Highway Dept. Ohio
R/W - ENGR. & ADMIN SECT.
AKRON, OHIO

JAN 30 1967

LOGGED
Bill Bk.
Cds.

FORM DDA-5

FED. RD.	STATE	PROJECT	
2	OHIO		

308/313

SUM-271-8.29

RIGHT OF WAY SHEET 20/25

4 - 15" OAK
2 - 36" OAK
12 - 24" OAK

7 - 18" OAK
1 - 15" BEECH

5 - 15" POPLAR
12 - 24" OAK
3 - 18" BEECH
1 - 15" CHERRY

6 - 18" OAK
10 - 15" BEECH
1 - 15" POPLAR
3 - 24" BEECH

1 - 36" STUMP
4 - 15" CHERRY
10 - 15" ELM

1 - 48" ELM
10 - 15" OAK
1 - 12" SYCAMORE

4 - 15" BEECH
1 - 12" CHERRY
1 - 18" ELM
22 - 15" OAK

1 - 18" ELM
15 - 15" OAK
4 - 15" OAK

15 - 18" OAK
2 - 15" CHERRY

1 - 12" CHERRY
2 - 12" BEECH
14 - 15" OAK
1 - 15" MAPLE

4 - 15" BEECH
1 - 18" OAK
1 - 24" OAK

CONSTRUCTION ℄ SURVEY DATA

Δ = 31°57'15" LT.
D = 2°00'
Lc = 3000'
R = 2864.79'
θs = 3°00'
Ts = 970.61'
Es = 116.47'
Lc = 1297.76'
ST = 2000.03'
ST = 100.03'
Δc = 25°57'15"
Rd = 660.21'
Ec = 75.05'
P.I. STA. 546+66.40

SUBSTITUTE CURVE DATA FOR RIGHT OF WAY

R = 3815.72'
D = 1°30'
Rc = 2000.00'
Δ = 3°00' LT.
T = 100.02'
P.C. 537+95.79
P.C.C. 539+95.79
P.C.C. 552+93.55
P.T. 554+93.55
P.I. STA. 538+95.81
P.I. STA. 553+93.57

2 - 20" POPLAR
2 - 15" MAPLE
7 - 15" OAK
1 - 24" OAK

1 - 15" BEECH
1 - 15" POPLAR
10 - 20" ELM

5 - 12" BEECH
10 - 18" OAK
3 - 24" OAK

CATHOLIC CEMETERIES ASSOCIATION

STA. 528+00

STA. 543+00

80 WL — T.B.A. - 12.0411 Ac

80 Y — 0.083 Ac

80 X — 0.721 Ac

EAST OHIO GAS CO. GAS LINE - T.P.L. = 5.20

533+70 215

534+60 215

532+00 130

533+10 170

534+60 168

534+00 160

533+91 50+00 CULV.

N 45°26'39" E 812.71'

1041 LIN. FT. TYPE 4T FENCE

N 36°16'20" E 176.20'

206.16'

LA RW

I.A.P.A.

C.P.A.

CONSTRUCTION LIMITS

N 41°37'14" E 356.33'

T.S. STA. 536+95.79

537+95.79 208

537+95.79 70' ONLY

N 11°22'40" W 96.55'

P.C. 537+95.79 FOR RIGHT OF WAY ONLY

E.P.A.

N 43°07'13" E 487.48'

RELOCATED CHANNEL BRANDYWINE CREEK

N 42°50'34" E 423.40'

542+48 221.60

541+62.47 146.23

S.C. STA. 539+95.79 P.C.C. STA. 539+95.79 FOR RIGHT OF WAY ONLY

R = 110' 539.93' 539.71' (CALC.)

DOROTHY HANNAFORD

83 WL — T.B.A. - 5.129 Ac

N 0°07'17" W 293.64' (CALC.) 212.92' (CALC.)

171.29'

541+88.99

540+15.40

540

530

535

℄ - SURVEY (I-271)

N 50°18'38" E

8.21'

184.62' (CALC.)

22.79'

471.73' (CALC.)

114.23

533+55.92 65.64'

82 WL — T.B.A. - 1.141 Ac

52.76'

143.47'

190.70'

700.25 CALC. TO ℄ SCHOEPF RD.

S 56°18'27" E

N 47°11'50" E 250.91'

104.84'

122.65' (D)

81 WL — T.B.A. - 0.105 Ac

533+77.80 155.62'

S 56°18'27" E 182.29' (D)

ATL. ST.

THOMAS R. SILVER
LLOYD F. HANNAFORD

T.B.A. - 1.141 Ac

1 - 12" OAK
1 - 12" ELM
9 - 20" OAK
24" POPLAR

1 - 12" BEECH
7 - 12" OAK
1 - 24" OAK

1 - 12" HICKORY
1 - 36" OAK
6 - 12" OAK
10 - 20" OAK

N 53°21'48" E 751.07'

LA RW

C.P.A.

I.A.P.A.

533+00 200

1884 LIN. FT. TYPE 4T FENCE

N 43°45'59" E 382.91'

536+77.11 181.70

BEGIN SHEET

MATCH TO R/W SHEET 18 OF 25

END SHEET

MATCH TO R/W SHEET 21 OF 25

STR. - SUM-271-10.14

294+60

NOTE :
UNABLE TO DETERMINE EXACT LOCATION AND WIDTH OF EAST OHIO GAS CO. EASEMENT.

SUMMIT COUNTY
NORTHFIELD CENTER TWP.
LOT 50
RANGE 11 WEST
TOWNSHIP 5 NORTH

81 WL

WILLIAM SCHOEPF ℄ LIFE ESTATE TO JOHN SCHOEPF AND ANNA SCHOEPF

115.22' L/A TO ℄ TWINSBURG ROAD

LOT 50

LOT 40

W. LINE OF SCHOEPF DEVELOPMENT

SUMMIT COUNTY
NORTHFIELD CENTER TWP.
LOT 40
RANGE 11 WEST
TOWNSHIP 5 NORTH

GRAPHIC SCALE
0 50 100 150 200

TYPE I FUNDS

2 - 12" OAK

1 - 12" OAK
3 - 12" CHERRY

5 - 12" OAK
4 - 20" OAK
2 - 20" CHERRY
2 - 15" MAPLE
2 - 12" CHERRY

5 - 12" OAK
4 - 18" OAK
3 - 24" ELM
2 - 18" MAPLE
2 - 12" CHERRY

2 - 18" ELM
6 - 15" OAK
1 - 12" HICKORY
5 - 12" OAK
5 - 12" BEECH

3 - 12" BEECH
4 - 20" OAK
7 - 12" OAK

6 - 12" BEECH
1 - 20" POPLAR
5 - 12" OAK
2 - 12" ELM
5 - 18" OAK

3 - 12" CHERRY
1 - 20" OAK
7 - 12" MAPLE
21 - 12" OAK

1 - 12" CHERRY
4 - 12" BEECH
1 - 12" HICKORY
29 - 12" OAK

37 - 12" OAK
1 - 12" MAPLE

◉ MONUMENTS TO BE SET

PRELIMINARY SUBMITTAL DATE: SEPT. 9, 1965 RIGHT OF WAY COMPLETION DATE: JAN 26, 1967			
Nº	REVISIONS	MADE BY	DATE
1	ADDED LEADER LINE, P.O.I.s. 80WL & 82WL	IRICK	4-3-67

STA. 528+00 TO STA. 543+00

State Highway Dept., Div. 3
R/W - ENGR & ADMIN SECT.
RAVENNA, OHIO

JAN 30 1967

LOGGED
Cnds. Bill Bk.

K & E

FED. RD.	STATE	PROJECT	
2	OHIO		

305 / 313

SUM-271-8.29
SUM-271-10.25-SI(1)
SUM-271-10.30-SI(1)

RIGHT OF WAY SHEET 21 / 25

MATCH TO R/W SHEET 20 OF 25

MATCH TO R/W SHEET 22 OF 25

SEE R/W SHEET 21-A OF 25

℄-1 DOVICH ℄ by DOVICH Deed
℄-2 SHELHART ℄ by SHELHART Deed

STA. 543+00

STA. 558+00

BEGIN SHEET

END SHEET

℄ SURVEY (I-71)

DOROTHY HANNAFORD
80 X
83 WL
LOT 50
LOT 40
BRANDYWINE CREEK
N 40°56'11"E 328.94
N 40°56'11"E 243.52'
543+30.22
287.95'
546+00
275
LA RW
EBA

SUMMIT COUNTY
NORTHFIELD CENTER TWP.
LOT 40
RANGE 11 WEST
TOWNSHIP 5 NORTH

SUMMIT COUNTY
NORTHFIELD CENTER TWP.
LOT 39
RANGE 11 WEST
TOWNSHIP 5 NORTH

1-15" CHERRY
1-15" OAK
6-15" BEECH

2-15" BEECH 7-12" ELM 1-15" OAK 5-18" OAK
14-15" OAK 9-15" OAK 6-24" OAK 1-15" CHERRY
1-24" OAK
5-15" BEECH

1-15" APPLE
7-18" OAK

1-12" PINE
1-24" OAK
1-12" MAPLE

1-12" MAPLE
3-12" OAK
2-12" MAPLE
3-12" POPLAR
3-15" MAPLE

Area of disputed ownership
FRANK DOVICH, JR.
87-A WL T.B.A. 0.088 Ac

1-24" STUMP
1-24" SYCAMORE
2-24" OAK

84 WL REGIS SCHILLING & PHYLLIS SCHILLING T.B.A. = 0.723 Ac

85 WL MARTIN M. MOODY & SHIRLEY F. MOODY T.B.A. = 0.736 Ac

86 WL GILBERT J. BAIRD & MARGARET J. BAIRD T.B.A. = 0.825 Ac

FRANK DOVICH JR.
87 WL T.B.A. 3.821 Ac.

SCHOEPF DEVELOPMENT
PROPERTY LINE AGREEMENT PLAT
PLAT BOOK 57 ~ PAGE 25

JUANITA G. SHELHART
92 WL Reg.Ind.Cert.#33996 T.B.A. = 2.486 Ac

BEGIN PROJECT
SUM-271-10.25-SI(1)
FED No LSI-271-6(2)
STA. 543+30.22

BEGIN PROJECT
SUM-271-10.30-SI(1)
FED No LSI-271-6(4)
STA. 554+54.23

T.B.A. = 5.125 Ac
T.B.A. 0.723 Ac
T.B.A. 0.736 Ac
T.B.A. 0.825 Ac
T.B.A. 3.821 Ac.
T.B.A. 0.088 Ac

547+28.45
548+30.51
549+30.12
550+40.24
547+02.65
47.52'
548+08.63
153.97'
545+14.84
150.30'
550+31.44
154.58'
100.43'
100.43'
110.47' I.P. FD
1112 LIN. FT. TYPE 47 FENCE
1512 LIN. FT. TYPE 47 FENCE
N 28°39'27"E
N 19°51'19"E
S 70°18'20"E
S 82°35'11"E
S 82°21'11"E (CALC.)
S 82°35'11"E
S 73°23'50"E (CALC.)
S 73°23'50"E
N 47°11'50"E
N 31°53'15"E
N 18°09'33"E
N 18°21'19"E
N 87°20'19"E
471.73' (CALC.)
N 50°18'38"E
535.44' (CALC.)
583.28'
375.15'
196.70'
105.00'
453.03'
0.28'
444.4'
400.9'
452.87'
482.55'
547+03.28
140.05'
548+45.03
(61.12')
549+44.60
(65.84')
550+42.24
(74.70')
101.12'
101.12'
111.23'
119.13'
(ABANDON)
175'
2 WOVEN WIRE
150'
157'
155'
150'
100.38'
110.41'
555+20.53
171.63'
555+08.10
171.52'
555+36.56
171.02'
555+20.80
171.63'
555+22.10
180.77'
556+09.80
142.10'
552+20.55
552+20.55
C.S. STA. 552+20.55
SUBSTITUTE CURVE DATA FOR RIGHT OF WAY
R = 3819.72'
LC = 7.80'
Δ = 3°00'00"
LT.
PCC 551+95.79
PCC 552+03.55
PT. 554+93.55
P.I. 553+99.61
P.I. 553+93.57
544+00
185
555
555+00
555+50
556+00
556+50
557+00
557+50
558+00
558+50
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559+50
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571+50
572+00
572+50
573+00
573+50
574+00
574+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

SUM-271-8.29
SUM-271-10.25-SI (I)
SUM-271-10.30-SI (I)

309A

21-A
25

RIGHT OF WAY SHEET

℄-1 DOVICH ℄ by DOVICH Deed
℄-2 SHELHART ℄ by SHELHART Deed

SUMMIT COUNTY
NORTHFIELD CENTER TWP.
LOT 40
RANGE 11 WEST
TOWNSHIP 5 NORTH

SUMMIT COUNTY
NORTHFIELD CENTER TWP.
LOT 39
RANGE 11 WEST
TOWNSHIP 5 NORTH

LOT 49
LOT 39
LOT 50
LOT 40

CONSTRUCTION CENTERLINE SURVEY CURVE DATA
Δ = 31°57'19" LT.
Dc = 2°00'
Lc = 300'
R = 2864.79
Es = 3°00'
Ts = 970.61
Es = 116.47'
Lc = 1297.76
Lt = 200.03
S.T. = 100.03
Δc = 25°57'19"
Tc = 660.21
Ec = 75.09'
P.I. STA 546+66.40

SUBSTITUTE CURVE DATA FOR RIGHT OF WAY
R = 3819.72
Dc = 1°30'
Lc = 200.00
Δ = 3°00' LT.
T = 100.02
P.C.C. 552+93.55
P.T. 554+93.55
P.I. 553+93.57

Area of disputed ownership
FRANK DOVICH, JR. &
JUANITA SHELHART
87-A WS T.B.A. 0.11 Ac.

LANDLOCKED RESIDUE (2.92 Ac.)
FRANK DOVICH, JR.
LANDLOCKED RESIDUE Pcl 87-92WS (0.05 Ac.)
LANDLOCKED RESIDUE (4.08 Ac.)
JUANITA G. SHELHART 941.96'
N-18°-21'-19" E
92 WS T.B.A. 5.40 Ac.
N-21°-04'-03"-E 406.06'
87-A WS
N-18°-21'-19"-E 13.93'
0.06 ac.
87 WS T.B.A = 1.97 Ac.
86 WS T.B.A. 0.74 Ac.
85 WS T.B.A. 0.98 Ac.
84 WS T.B.A. 0.86 Ac.
83 WS T.B.A. 0.88 Ac.
DOROTHY HANNAFORD
REGIS SCHILLING & PHYLLIS SCHILLING
MARTIN M. MOODY & SHIRLEY F. MOODY
GILBERT J. BAIRD & MARGARET J. BAIRD
95 WS PERCY G. HANSEN T.B.A. = 9,142 S.F.
100 WS CHARLES KALCIK, DEC'D. & ELIZABETH KALCIK T.B.A. = 3,143 S.F.

546+31.36 / 469.53
547+42.28 / 549.89
548+58.95 / 606.60
548+93.97 / 622.36
549+79.14 / 355+00
554+38.80 / 369.65
554+54.23 / 369.82
543+30.22 / 287.95
546+00 / 275
552+93.55 / 554+93.55
555+08.10 / 171.96
555+03.53 / 171.63
555+96.32 / 182.97
556+02.17 / 183.41
557+65.49 / 193.29

N 00°07'17" W 328.94'
109.03
31.71
S 40°58'11" W
LA RW 243.52
S 81°20'49" W 158.80'
S 66°39'11" E 347.44
S 66°39'11" E 400.16'
S 66°39'11" E 452.87
482.55
N-76°-18'-20"-W 206.03
S 19°51'19" W 453.03'
S 28°39'27" W
100.43'
100.43'
110.47
160.00
155.29
157.02
154.81
S 89°33'17" E
N 89°33'17" W
S 19°51'19" W 12.43
S 09°48'23" W
S 21°54'04" W 163.63
N 80°11'37" W 40.00'
S 80°11'37" E 74.28
951.76
40.91
N 09°48'23" E
RIVERSIDE DR. 40'
SUMMIT AVE. 40'
N 18°21'19" E
C.S. STA. 552+93.55 PCC RIGHT OF WAY ONLY
P.T. 554+93.55 RIGHT OF WAY ONLY
543+00 STA.
STA. 558+00
545
550
555

BEGIN PROJECT
SUM-271-10.25-SI (I)
FED No LSI-271-6(2)
STA. 543+30.22

BEGIN PROJECT
SUM-271-10.30-SI (I)
FED No LSI-271-6(4)
STA. 554+54.23

BEGIN SHEET
END SHEET
℄ SURVEY I-271

SEE R/W SHEET 21 OF 25

GRAPHIC SCALE
0 50 100 150 200

TYPE LSI FUNDS

Revised	Parcel 87WS, 92WS, 87-92WS ADDED 2 DESIGNATION BLOCKS & 2 PROJECT NO. CHANGED 87-92 AWS TO 87AWS NAME CHANGE PCL 100	LANDOOR SMITH	6-9-67 10/11/67 12-28-67

STA. 543+00 TO STA. 558+00

FED. RD.	STATE	PROJECT	
2	OHIO		

310
313

SUM-271-8.29
SUM-271-10.25-SI(I)
SUM-271-10.30-SI(I)

RIGHT OF WAY SHEET 22 25

NAME CHANGE PCLS. 96 & 163 - SMITH 12-28-67
NAME CHANGE PCLS 121, 152 & 159 - SMITH 12-24-67
NAME CHANGE PCL 111 WS - 11-27-67 - BILL
NAME CHANGE PCL 130 WL - 11-17-67 - SMITH

Deleted Pcl. 17 G-PR Per IOC. from S.A. Guzdak dated 1-12-68 Lee 1-15-68

NAME CHANGE PCL. 124 - SMITH 12-8-67

State of OHIO Dept. Div. I
R/W Engr. & Plans Sect.
Mapping Group

JAN 30 1967

LOGGED
Chkd. BM Bk.

C & E

MATCH TO R/W SHEET 21 OF 25

BEGIN SHEET

STA. 558+00

STA. 572+00

END SHEET

SEE R/W SHEET 22-A OF 25

SUMMIT COUNTY
NORTHFIELD CENTER TWP.
LOT 39
RANGE 11 WEST
TOWNSHIP 5 NORTH

JUANITA G. SHELHART

DIXIE OHIO EXPRESS INC.
AN ALABAMA CORPORATION

3.934 Ac.

END PROJECT
SUM-271-10.30-SI(I)
FED No LSI-271-6(4)
STA 570+01.65

T.B.A. = 2.486 Ac±

RIVERSIDE DRIVE 40'

BLOCK X

BLOCK Z

BLOCK AA

BLOCK BB

BLOCK CC

BLOCK DD

BLOCK EE

BLOCK FF

BLOCK GG

BLOCK HH

HIGHLAND BLVD. 80'

GREENVIEW AVE. 80'

YORK ST. 40'

SHADELAND AVE. 40'

BRIDGE DR. 40'

(I-271)

℄ SURVEY

1-18" BEECH	2-18" ELM	1-18" SYCAMORE	3-24" OAK
2-24" BEECH	10-36" BEECH	4-15" ELM	1-12" SYCAMORE
3-15" OAK		2-15" BEECH	5-15" ELM
1-24" OAK		2-36" BEECH	3-36" BEECH
2-30" ELM			
3-12" MAPLE			

3-15" OAK	1-15" CHERRY	2-48" BEECH	7-24" BEECH	3-18" OAK	3-12" MAPLE	5-20" ELM	1-18" ELM	1-18" ELM	7-12" MAPLE
3-30" MAPLE	10-15" BEECH	1-36" STUMP	2-30" ELM	2-24" BEECH	1-18" ELM	5-30" OAK	1-15" CHERRY	1-15" CHERRY	10-15" OAK
1-15" CHERRY	5-15" OAK	1-15" PINE	1-36" OAK	2-20" PINE	2-12" PINE	5-36" OAK	3-15" MAPLE	3-15" MAPLE	1-48" OAK
5-15" ELM	2-36" BEECH	2-48" OAK		2-20" ELM		1-36" BEECH			
2-36" BEECH						2-40" OAK			

(101 WS) DOROTHY SCHULTZ T.B.A. = 7,314 S.F.

(96 WL) ESTATE OF NICK VIRZI, DEC'D etal / ROSE VIRZI T.B.A. = 11,085 S.F.

(97 WL) A.J. POIRSON & MARJORY R. POIRSON T.B.A. = 4960 S.F.

(98 WL) LOLA E. STARCHER & ROBERT E. STARCHER T.B.A. = 14,880 S.F.

(99 WL) ANNA ANTOLICK T.B.A. = 7440 S.F.

(101 WL) DOROTHY SCHULTZ T.B.A. = 686 S.F.

(102 PR) (102 WS) PERCY G. HANSEN T.B.A. = 8,000 S.F.

(103 PR) (103 WS) FRANK K. LEVIN T.B.A. = 4,000 S.F.

(104 WL) UNKNOWN HEIRS OF MARY LUECHT, DECEASED T.B.A. = 10,882 S.F.

(106 WL) IRENE E. VOLLERT, COMMISSIONER T.B.A. = 7440 S.F.

(107 WL) THE ESTATE OF CHARLES & ANNA VOHNOUTEK, BOTH DEC'D T.B.A. = 2480 S.F.

(108 WL) LOLA E. STARCHER & ROBERT E. STARCHER T.B.A. = 18,977 S.F.

(109 WL) FRANK K. LEVIN T.B.A. = 19,840 S.F.

(110 WL) MARY KNEBLEWICZ & JOHN M. KNEBLEWICZ T.B.A. = 4960 S.F.

(111 PR) (111 WS) LUCIEN FISK WAKEFIELD T.B.A. = 8,000 S.F.

(112 PR) (112 WS) FRANK K. LEVIN T.B.A. = 4,000 S.F.

(113 PR) (113 WS) WALTER KOBA & JOSEPHINE KOBA T.B.A. = 4,000 S.F.

(114 PR) (114 WS) JUANITA G. SHELHART T.B.A. = 4,000 S.F.

(115 PR) (115 WS) FRANK K. LEVIN T.B.A. = 14,000 S.F.

(116 WL) FRED DYKE T.B.A. = 4960 S.F.

(117 WL) PERCY G. HANSEN T.B.A. = 4960 S.F.

(118 WL) JESSIE M. STEWART T.B.A. = 2480 S.F.

(119 WL) PERCY G. HANSEN T.B.A. = 2480 S.F.

(154 WS) IRENE E. BOROSH T.B.A. = 3,333 S.F. Reg.Ind.Cert.#5447

(155 WS) STANLEY CWIERTNIA & ROSE CWIERTNIA T.B.A. = 2,000 S.F. Reg.Ind.Cert.#5773

(156 WS) JOSEPH GUERRA & GRACE GUERRA T.B.A. = 667 S.F. Reg.Ind.Cert.#5734

(120 WL) FRANK SREDNIAWA T.B.A. = 4960 S.F.

(121 WL) HELEN HERVI T.B.A. = 4960 S.F.

(122 WL) WILLIAM NOVAK, CECELIA NOVAK & JAMES NOVAK T.B.A. = 2,480 S.F.

(123 WL) FRANK K. LEVIN T.B.A. = 7388 S.F. Reg.Ind. Cert. #26451

(124 WL) THE ESTATE OF JOHN & MARY KANCE, BOTH DECD T.B.A. = 4047 S.F. Reg.Ind.Cert.6351

(125 WL) ABNER D. ZOOK T.B.A. = 7904 S.F.

(126 WL) LOLA E. STARCHER & ROBERT E. STARCHER T.B.A. = 1773 S.F.

UNKNOWN HEIRS OF

(127 WL) HATTIE B. COURIER, DEC'D. T.B.A. = 1703 S.F. Reg.Ind. Cert.#5220

(128 WL) LOLA E. STARCHER & ROBERT E. STARCHER T.B.A. = 1633 S.F.

(129 WL) PETER KAPALINSKY & MARGARET KAPALINSKY T.B.A. = 2453 S.F. Reg.Ind.Cert.#7332

(130 WL) THE ESTATE OF JOSEPH HEGEDUS DECEASED T.B.A. = 1980 S.F. Reg.Ind. Cert. #10642

(131 WL) LOUIS DELCIAPPO & MARY DELCIAPPO T.B.A. = 1980 S.F.

3-20" ELM	7-12" ELM	3-12" BEECH	1-12" BEECH
1-30" BEECH	2-30" BEECH	1-30" BEECH	3-12" ELM
4-30" BEECH	8-18" ELM	13-12" ELM	7-20" OAK
	3-18" SYCAMORE	1-24" OAK	1-20" ELM
		1-30" BEECH	

(132 WL) ALONZO FOTHERINGHAM T.B.A. = 12860 S.F. Reg.Ind. Cert. #6033

(133 WL) PERCY G. HANSEN T.B.A. = 1260 S.F. Reg.Ind. Cert.#37383

(134 WL) LOLA E. STARCHER & ROBERT E. STARCHER T.B.A. = 1980 S.F.

(135 WL) FRANK K. LEVIN T.B.A. = 1313 S.F. Reg.Ind. Cert.#26451

(136 WL) PERCY G. HANSEN T.B.A. = 6336 S.F. Reg.Ind. Cert. #37383

(137 WL) FRANK K. LEVIN T.B.A. = 1980 S.F. Reg.Ind. Cert. #26451

(138 WL) MRS. LURA KNIVETON DECD T.B.A. = 1980 S.F. Reg.Ind. Cert. #5298

(139 WL) (139 PR) (151 WS)

3-30" BEECH	1-12" BEECH	5-20" ELM	9-12" ELM
3-12" ELM	1-20" CHERRY	9-20" SYCAMORE	2-24" BEECH
13-12" ELM	7-20" OAK	2-12" PINE	2-12" SYCAMORE
1-24" OAK	1-20" ELM	2-30" BEECH	4-12" BEECH
1-30" BEECH			

STATE OF OHIO DEPT OF HIGHWAYS
Formerly Owned By
(ELIZABETH M. FALCO)
T.B.A. = 1980 S.F.

(140 WL) LOLA E. STARCHER & ROBERT E. STARCHER T.B.A. = 1260 S.F. Reg.Ind. Cert. #27616

(141 WL) JESSIE M. STEWART T.B.A. = 1980 S.F.

(142 WL) PERCY G. HANSEN T.B.A. = 1980 S.F. Reg.Ind. Cert.# 37383

(143 WL) TONY AGRUSA T.B.A. = 1980 S.F. Reg.Ind. Cert. #5119

(144 WL) PERCY G. HANSEN T.B.A. = 4356 S.F. Reg.Ind. Cert. #37383

(150 FR) (150 WS) LOLA E. STARCHER & ROBERT E. STARCHER T.B.A. = 8,000 S.F.

(151 PR) (151 WS) FRANK K. LEVIN T.B.A. = 8,525 S.F.

JOHANNA KUNART & FRANK K. LEVIN et al T.B.A. = 4,000 S.F.

(152 PR) (152 WS) LOLA E. STARCHER & ROBERT E. STARCHER T.B.A. = 4,000 S.F.

(153 PR) (153 WS)

(154 WL) IRENE E. BOROSH T.B.A. = 667 S.F.

(155 WL) STANLEY CWIERTNIA & ROSE CWIERTNIA T.B.A. = 2000 S.F.

(156 WL) JOSEPH GUERRA & GRACE GUERRA T.B.A. = 3333 S.F.

4-12" BEECH	2-12" PINE	3-30" BEECH	1-12" CHERRY
20-16" OAK	2-20" BEECH	3-12" OAK	7-20" OAK
1-12" PINE	2-12" BEECH	3-15" OAK	1-24" ELM
9-15" ELM	2-20" ELM		
2-12" SYCAMORE			
4-20" BEECH			

(157 WL) LOLA E. STARCHER & ROBERT E. STARCHER T.B.A. = 10,814 S.F.

(158 WL) PERCY G. HANSEN T.B.A. = 4000 S.F.

(159 WL) STEVE SZEGO, DECEASED T.B.A. = 4000 S.F.

(160 WL) PERCY G. HANSEN T.B.A. = 8000 S.F.

3-30" BEECH	1-12" CHERRY	1-18" ELM	1-15" CHERRY
3-12" OAK	7-20" OAK	1-15" CHERRY	3-15" MAPLE
3-15" OAK	1-24" ELM	3-15" MAPLE	1-48" OAK

(161 WL) FRANK K. LEVIN T.B.A. = 2000 S.F. Reg.Ind. Cert. #26451

(164 WL) STANLEY L. ABRAMS T.B.A. = 6376 S.F.

(162 WL) STANLEY L. ABRAMS T.B.A. = 201 S.F.

(163 WL) THE ESTATE OF CHARLES W. PRATT & ELLEN PRATT, BOTH DECD T.B.A. = 602 S.F.

(165 WL) 3.934 Ac.

(148 WL) FRANK K. LEVIN T.B.A. = 637 S.F. Reg.Ind. Cert. #26451

(147 WL) PERCY G. HANSEN T.B.A. = 425 S.F. Reg.Ind. Cert.#37383

(146 WL) LOLA E. STARCHER & ROBERT E. STARCHER T.B.A. = 637 S.F. Reg. Ind. Cert.#2743

GRAPHIC SCALE
0 50 100 150 200

TYPE I FUNDS

PRELIMINARY SUBMITTAL DATE: SEPT. 9, 1965 RIGHT OF WAY COMPLETION DATE: JAN. 25, 1967			
NO	REVISIONS	MADE BY	DATE
1	NAME CHANGE Pcl. 139 WL	Bill	9/11/67
2	ADDED (11) PIE'S, 1-DESIGNATION BLOCK & 2 PROJECT NO	LANDOR	10/11/67
3	Name Change Pcl. 138 WL	Smith	10-20-67
4	Name Change Pcl. 111 WS	Smith	10-24-67
5	Name Change Pcl 104 WL	Smith	10-24-67
6	Name Change Pcl. 127 WL	Bill	11-1-67

STA. 558+00 TO STA. 573+00

◉ MONUMENTS TO BE SET

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

310A

SUM-271-8.29
SUM-271-10.25-SI(1)
SUM-271-10.30-SI(1)

RIGHT OF WAY SHEET

22-A
25

(101 WS) DOROTHY SCHULTZ
T.B.A. = 7,314 S.F.

(102 WS) PERCY G. HANSEN
T.B.A. = 8,000 S.F.

(103 WS) FRANK K. LEVIN
T.B.A. = 4,000 S.F.

(111 WS) LUCIEN FISK WAKEFIELD
T.B.A. = 8,000 S.F.

(112 WS) FRANK K. LEVIN
T.B.A. = 4,000 S.F.

(113 WS) WALTER KOBA & JOSEPHINE KOBA
T.B.A. = 4,000 S.F.

(114 WS) JUANITA G. SHELHART
T.B.A. = 4,000 S.F.

(115 WS) FRANK K. LEVIN
T.B.A. = 14,000 S.F.

(150 WS) LOLA E. STARCHER & ROBERT E. STARCHER
T.B.A. = 8,000 S.F.

(151 WS) FRANK K. LEVIN
T.B.A. = 8,525 S.F.

(152 WS) JOHANNA KUNART & FRANK K. LEVIN et al
T.B.A. = 4,000 S.F.

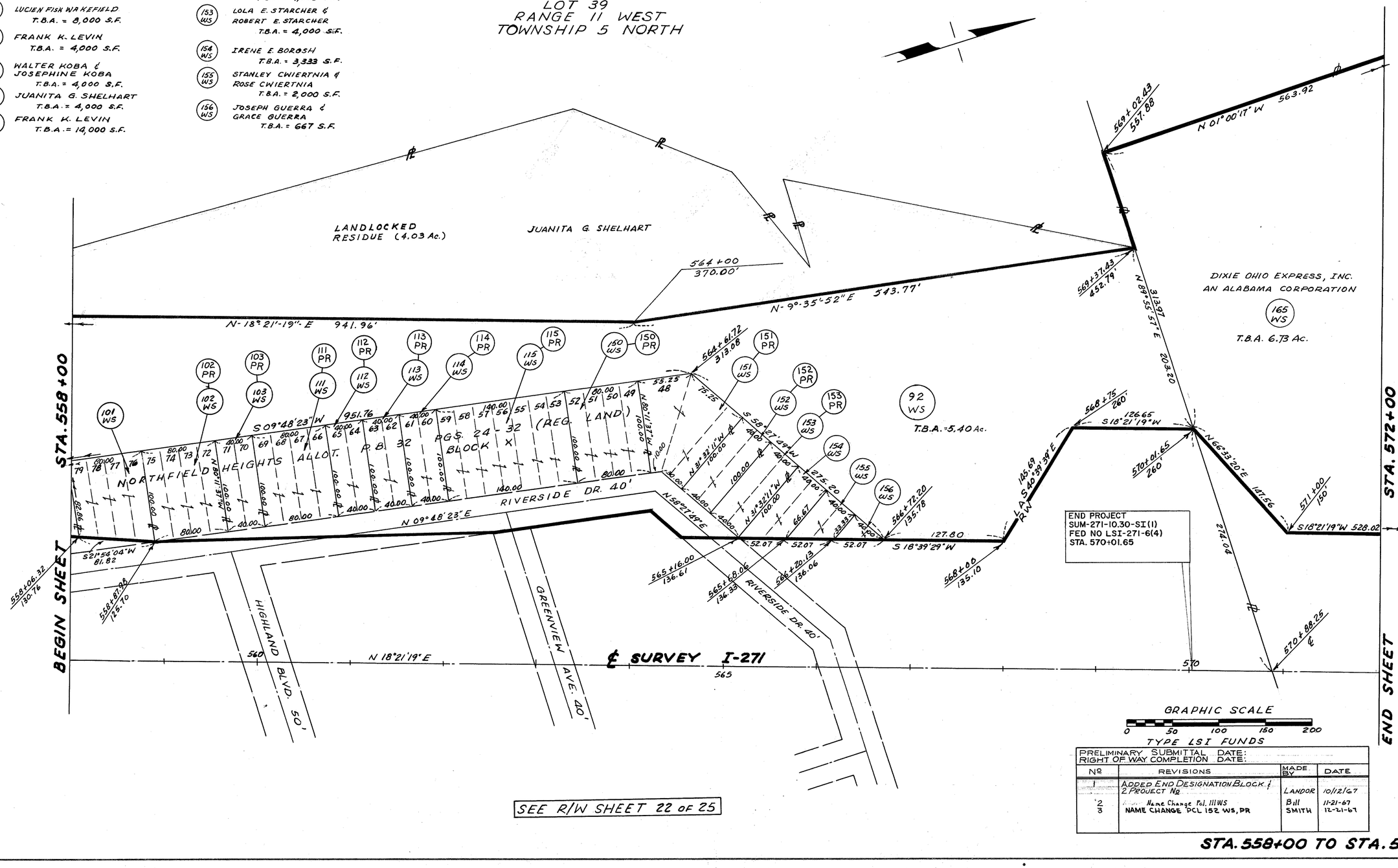
(153 WS) LOLA E. STARCHER & ROBERT E. STARCHER
T.B.A. = 4,000 S.F.

(154 WS) IRENE E. BOROSH
T.B.A. = 3,333 S.F.

(155 WS) STANLEY CWIERTNIA & ROSE CWIERTNIA
T.B.A. = 2,000 S.F.

(156 WS) JOSEPH GUERRA & GRACE GUERRA
T.B.A. = 667 S.F.

SUMMIT COUNTY
NORTHFIELD CENTER TWP.
LOT 39
RANGE 11 WEST
TOWNSHIP 5 NORTH



SEE R/W SHEET 22 OF 25

GRAPHIC SCALE
0 50 100 150 200

TYPE LSI FUNDS

PRELIMINARY SUBMITTAL DATE:
RIGHT OF WAY COMPLETION DATE:

Nº	REVISIONS	MADE BY	DATE
1	ADDED END DESIGNATION BLOCK & PROJECT Nº.	LANDOR	10/12/67
2	Name Change Pcl. 111 WS	Bill	11-21-67
3	NAME CHANGE PCL 152 WS, PR	SMITH	12-21-67

STA. 558+00 TO STA. 572+00

FED. RD.	STATE	PROJECT	
2	OHIO		

311/313

SUM-271-8.29
SUM-271-10.25-SI(1)
SUM-271-10.30-SI(1)

RIGHT OF WAY SHEET 23/25

NOTE:
UNABLE TO DETERMINE EXACT LOCATION AND WIDTH OF OHIO BELL TELEPHONE EASEMENT.

MATCH TO R/W SHEET 22 OF 25

SEE R/W SHEET 23-A OF 25

3-12" MAPLE
1-15" ELM

1-12" MAPLE
1-12" ELM

1-12" APPLE
1-12" MAPLE

1-15" MAPLE
3-12" ELM

1-15" ELM
1-12" ELM

1-12" POPLAR
1-12" MAPLE

STA. 572+00

BEGIN SHEET

N 18°21'19" E
528.02'

END PROJECT
SUM-271-SI(1)
FED No-LSI-271-6(2)
STA. 576+28.02

625.52'

STA 576+28.02
150'

15.74'

108°01'30" (F)

576+76.83

¢-SURVEY (I-271)

575

580

585

N 18°21'19" E

STA. 586+00

END SHEET

A.J. BALTES, INC.

166 WL

DEED AREA = 25.613 Ac
DEED CORR. = 25.5644 Ac
RESIDUE LEFT = 10.3122 Ac (ISOLATED)

40'±

650.44'

1400 LIN. FT. TYPE 47 FENCE

T.B.A. = 4.4796 Ac

CONSTRUCTION LIMITS

LA RW

S 10°40'11" E
446.92' (D)

I.P. FD.

S LINE LOT 38
N LINE LOT 39
OHIO BELL TELEPHONE LINES

429.81' (F)
836.50' (E)
836.74' (D)

582+78.46
150'

157.74'

583+27.27

108°01'30" (F)

SUMMIT COUNTY
NORTHFIELD CENTER TWP.
LOT 38
RANGE 11 WEST
TOWNSHIP 5 NORTH

A.J. BALTES, INC.

166A WL

DEED AREA = 6.62 Ac
DEED CORR. = 6.623 Ac
RESIDUE LEFT = 4.2213 Ac (ISOLATED)

N 18°21'19" E
429.43'

LA RW

CONSTRUCTION LIMITS

T.B.A. = 2.0238 Ac

165 WL 3.934 Ac

1400 LIN. FT. TYPE 47 FENCE

N 21°09'55" E
557.91'

A & P

577+25.64
150'

CONSTRUCTION LIMITS

650.44'

N 18°21'19" E

LA RW

165.71'

RESIDUE RIGHT = 10.7726 Ac

DIXIE-OHIO EXPRESS INC. AN ALABAMA CORPORATION

165 WL

T.B.A. = 3.934 Ac

SUMMIT COUNTY
NORTHFIELD CENTER TWP.
LOT 39
RANGE 11 WEST
TOWNSHIP 5 NORTH

N 88°40'11" W
1124.14' (CALC.)

583+76.08
150'

RESIDUE RIGHT = 0.3779 Ac

326.68' (F)

S 88°40'11" W

168 WL

JOHN P. BONATH ¢
THELMA M. BONATH

T.B.A. = 0.6426 Ac
P.R.O. = 0.0469 Ac
TOTAL = 0.6895 Ac

I.P. FD.

N 44°41'11" W
187.88' (F)

N 45°18'49" E
247.80' (D)

350.12' (D)

585+41.79
150'

232.52' (F)
230.00' (D)

I.P. FD.

N 45°18'49" E

274.57'

I.P. FD.

N 45°18'49" E

GRAPHIC SCALE
0 50 100 150 200

TYPE I FUNDS

PRELIMINARY SUBMITTAL DATE: SEPT. 9, 1965
RIGHT OF WAY COMPLETION DATE: JAN. 25, 1967

Nº	REVISIONS	MADE BY	DATE
1	ADDED LEADER LINE Pcls 163, 166, 166A & 168	IRICK	4-3-67
2	ADDED END DESIGNATION BLOCK & 2 PROJECT Nº.	LANDOR	10/12/67

STA. 573+00 TO STA. 586+00

MATCH TO R/W SHEET 24 OF 25

4-12" MAPLE
3-12" ELM
10-12" APPLE
3-10" APPLE
2-12" APPLE
1-12" OAK
2-12" MAPLE
3-12" MAPLE

◉ MONUMENTS TO BE SET

Sta. ... Proj. Dept. Div. ...
R/W-ENGR & ADMIN SECT.
INVENNA, OHIO
JAN 69 1967
Crds. LOGGED BH

K & E

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

SUM-271-8.29
SUM-271-10.25-SI(I)
SUM-271-10.30-SI(I)

RIGHT OF WAY SHEET

311A

23-A
25

SUMMIT COUNTY
NORTHFIELD CENTER TWP.
LOT 39
RANGE 11 WEST
TOWNSHIP 5 NORTH

SUMMIT COUNTY
NORTHFIELD CENTER TWP.
LOT 38
RANGE 11 WEST
TOWNSHIP 5 NORTH

574 L 34.46
744.82

N 01°00'17" W 563.92

S 89°40'11" E 625.52

DIXIE OHIO EXPRESS, INC.
AN ALABAMA CORPORATION

165
WS

T.B.A. 6.73 Ac.

LOT 38
LOT 39

S 89°40'11" E

BEGIN SHEET STA. 572+00

576+28.02
150'

582+78.46
150'

S 18°21'19" W 528.02

L A E W

END SHEET STA. 586+00

END PROJECT
SUM-271-10.25-SI(1)
FED No LSI-271-6(2)
STA. 576+28.02

157.74

576+76.83
℄

583+27.27
℄

575 N 18°21'19" E ℄ SURVEY I-271 580 585

GRAPHIC SCALE
0 50 100 150 200

TYPE LSI FUNDS

PRELIMINARY SUBMITTAL DATE:
RIGHT OF WAY COMPLETION DATE:

No.	REVISIONS	MADE BY	DATE
1	ADDED END DESIGNATION BLOCK & PROJECT No.	LANDOR	10/12/67

SEE R/W SHEET 23 OF 25

STA. 572+00 TO STA. 586+00

FED. RD.	STATE	PROJECT	
2	OHIO		

312
313

SUM-271-8.29

RIGHT OF WAY SHEET 24 25

SUMMIT COUNTY
NORTHFIELD CENTER TWP.
LOT 38
RANGE 11 WEST
TOWNSHIP 5 NORTH

MATCH TO R/W SHEET 23 OF 25

MATCH TO R/W SHEET 25 OF 25

STA. 586+00

STA. 599+00

BEGIN SHEET

END SHEET

2-15" MAPLE
4-24" MAPLE
4-12" PINE

ALBERT A. AUSPERK &
CHRISTINE L. AUSPERK
DEED AREA = 8.188 AC
DEED CORR. = 1.6037 AC
RESIDUE LEFT = 0.4765 AC
T.B.A. = 0.9250 AC
P.R.O. = 0.1582 AC
TOTAL = 1.1272 AC

JOHN D. BONATH &
THELMA M. BONATH
T.B.A. = 0.6426 AC
P.R.O. = 0.0259 AC
TOTAL = 0.6685 AC

BRANDYWINE CREEK

STA. 589+01.60 I-271 =
STA. 718+47.19 C.R. 16

STA. 591+78.50 I-271

WILSON OLEYLAND RD. C.R. 16
24' TRAVELED ROAD

℄ I-271

℄ BRANDYWINE CREEK

℄ SURVEY (I-271) N 18°21'19"E

FIELD DRIVE (ABANDONED)

EXISTING RELOCATED HIGHLAND RD. T.R. 111

CONSTRUCTION LIMITS

1225 LIN. FT. TYPE 47 FENCE

1244 LIN. FT. TYPE 47 FENCE

NURSERY

GRAVEL

SEPTIC TANK

SHED

GAR.

1½ ST. BRK. HSE.

1 ST. BRK. HSE.

1 ST. L BRK. PORCH HSE.

SLAG

CPA

LA RW

END ACQUISITION
SUM-271-8.29
STA. 589+40.09

◉ MONUMENTS TO BE SET

- - - - 20" OSAGE ORANGE
- - - - WILLOW
- - - - MAPLE
- - - - APPLE
10" PINE

GRAPHIC SCALE
0 50 100 150 200

TYPE I FUNDS

PRELIMINARY SUBMITTAL DATE: SEPT. 9, 1965
RIGHT OF WAY COMPLETION DATE: JAN. 25, 1967

Nº	REVISIONS	MADE BY	DATE

STA. 586+00 TO STA. 599+00

State Highway Dept. Ohio
R/W - Engr. & Admin. Sect.
Mapping Unit
JAN 20 1967
Cmds. LOGGED Sill Bk.

E.S.E.

FED. RD.	STATE	PROJECT	
2	OHIO		

313
313

SUM-271-8.29

RIGHT OF WAY SHEET 25
25

SUMMIT COUNTY
NORTHFIELD CENTER TWP.
LOT 38
RANGE 11 WEST
TOWNSHIP 5 NORTH

MATCH TO R/W SHEET 24 OF 25

BEGIN SHEET

STA. 599+00

JENNIE KOLTCZ

SHADY LANE 50'

(OLD) HIGHLAND RD. (T.R. 111)

NORTHFIELD PARK ESTATES
VOL. 53
Pgs. 2-3-4-5-6-7

S.S.& M.S. HANN

JAMES & RUBY J. SOLLAZZO

THIS PARCEL ACQUIRED AS PAR. 51-173WA ON SUM.-271-11.50 CONTRACT.

DO NOT DISTURB CONC WALK & PAD

CONC WALK AND PAD

173 WA

171 WA

20' SEWER EASEMENT

2 STY. FR. HSE

1 STY. BR. GAR.

FR. SHED

SEWAGE DISPOSAL PLANT

GRAVEL DR.

ASPHALT DR.

DRIVE

EXIST. 18" SAN. SEW.

EXIST. 21" STORM SEW.

EXIST. 36" R.C.P.

CONSTRUCTION LIMITS

1126 LIN. FT. TYPE 47 FENCE

MEET EXISTING FENCE STA. 610+08.09 148.00'

MEET EXISTING FENCE STA. 607+81.79 109.00'

EQUATION
STA. 609+81.79 = STA. 32+00

EXISTING FENCE BY OTHERS

END OF PROJECT STA. 609+81.79

INDIAN CREEK

847 LIN. FT. TYPE 47 FENCE

RELOCATED INDIAN CREEK

EXISTING RELOCATED HIGHLAND RD. T.R. 111

EXIST. 18" SAN. SEW.

EXIST. 21" SAN. SEW.

EXIST. 27" SAN. SEW.

℄ - SURVEY (I-271)

O.L. 38
O.L. 28

O.L. 37
O.L. 27

R=303.10'

MONUMENTS TO BE SET

GRAPHIC SCALE
50 100 150 200

TYPE I FUNDS

PRELIMINARY SUBMITTAL DATE: SEPT. 9, 1965
RIGHT OF WAY COMPLETION DATE: JAN. 25, 1967

NO	REVISIONS	MADE BY	DATE
1	Name Change Pcl. 173 WA	Bill	11/8/67

STA. 599+00 TO STA. 609+81.79

Site Highway Drive Div. 3
R/W ENGR & ADMIN SECT.
RAVENNA, OHIO
JAN 69 1967
LOGGED
Date Bill Bk.

E.&E.

TE 95
400 1-63

GENERAL INFORMATION

INTRODUCTION

The project consists of the construction of 3.3 miles of IR 271, beginning 0.24 mile southwest of Boston Mills Road, approximately 0.4 mile north of the Ohio Turnpike, extending northeastward, terminating 0.7 mile north of Highland Drive, approximately 0.2 mile west of SR 8. Included in this report are profiles of intersecting roads, Twp. Rd. 115, Co. Rd. 40, and Twp. Rd. 38.

Proposed grades indicate the following maximum cuts and maximum fill embankments:

	CUTS (MAX.)	FILL EMBANKMENTS (MAX.)
IR 271	83'	105'
Twp. Rd. 115 (Hines Hill Rd.)	-	3'
Co. Rd. 40 (Brandywine Rd.)	7'	1'
Twp. Rd. 38 (Stanford Rd.)	5'	-

GEOLOGY AND OBSERVATIONS OF THE PROJECT

The alignment incepts on the steep east valley wall of the Cuyahoga River, traverses several deep valleys and steep valley walls, parallels the Brandywine Creek and its valley walls and terminates on a relatively flat upland portion of the glaciated Allegheny Plateau, where thin to deep glacial drift overlies shale, sandstone, and indurated clay bedrock, of Upper Mississippian and Pennsylvanian ages.

A rock outcrop was observed and measured in the vicinity of mainline station 500+00.

EXPLORATION

Exploratory borings were made by means of truck-mounted mechanical soil auger, hand auger (in areas of difficult access), and rotary type drill rig, between November 1, and December 20, 1964. Also included in this report are the logs of borings made for the SUM-CUY-8-(25.20) (0.00) roadway investigation, transmitted April 20, 1963.

INVESTIGATIONAL FINDINGS

Materials occurring immediately below proposed grade are predominantly comprised of silts (A-4a and A-4b) and silt clays (A-6a), generally having low moisture contents and moisture contents in the lower portion of the plastic range, as well as shale bedrock.

Bedrock is anticipated in the following excavation areas:

Between stations 529+50 and 532+50 - shale at both grades, in the ditches and backslopes.

Between stations 537+50 and 548+00, Eastbound Lanes - shale at grade and in the ditches; interbedded shale and sandstone in the backslopes.

Between stations 537+50 and 539+50, Westbound Lanes - shale at grade.

Between stations 548+00 and 558+00 - shale at both grades, in the ditches and shale at both grades, in the ditches and backslopes.

Frost susceptible silts were encountered within three feet below proposed grade at mainline stations 457+00, 476+00, and 508+84 (Eastbound Lanes), and Co. Rd. 40 stations 62+50 and 67+50.

Materials in the embankment foundation areas are predominantly comprised of silts (A-4a and A-4b) and silt clays (A-6a), generally having low moisture contents and moisture contents in the lower portion of the plastic range.

Wet materials occasionally containing various amounts of organic material were encountered at stations 439+00, 442+00, 448+00, 449+00, 457+00, 459+00, 461+75, 465+50, 465+50, 468+00, 471+00, 492+00, 506+00, 506+30, 508+84, 516+00, 597+82, 600+82, and 605+72.

Elastic clays were encountered at stations 448+00, 531+00 and 606+82.

LEGEND FOR PROJECT AVERAGE RESULTS OF TESTS — 394 SAMPLES TESTED

DESCRIPTION	H.R.B. CLASS	OHIO CLASS	% AGG	% C. SAND	% F. SAND	% SILT	% CLAY	LIQUID LIMIT	PLASTICITY INDEX	WATER CONTENT	SAMPLES TESTED
Gravel and/or stone fragments	A-1-a(0)	A-1-a	64	18	8	- 10 -		NP	NP	10	9
Gravel and/or stone fragments with sand	A-1-b(0)	A-1-b	38	28	21	6	7	NP	NP	10	11
Coarse and fine sand	-----	A-3a	0	45	27	10	18	NP	NP	8	1
Gravel and/or stone fragments with sand and silt	A-2-4(0)	A-2-4	57	5	6	16	16	30	8	17	6
Gravel and/or stone fragments with sand, silt, and clay	A-2-6(0)	A-2-6	48	14	16	10	12	31	13	14	3
Sandy silt	A-4(4)	A-4a	24	5	15	32	24	25	5	15	37
Silt	A-4(8)	A-4b	1	1	4	62	32	27	3	22	95
Silt and clay	A-6(9)	A-6a	6	3	5	37	49	33	12	18	180
Silty clay	A-6(10)	A-6b	2	3	5	31	59	38	16	18	10
Elastic clay	A-7-5(10)	A-7-5	19	2	7	35	37	45	15	32	2
Clay	A-7-6(11)	A-7-6	4	2	3	36	55	42	16	21	15
Weathered indurated clay				VISUAL CLASSIFICATION							5
Weathered shale				VISUAL CLASSIFICATION							13
Weathered sandstone				VISUAL CLASSIFICATION							3
Shale				VISUAL CLASSIFICATION							4
Sandstone				VISUAL CLASSIFICATION							
Various other materials				VISUAL CLASSIFICATION							

Sod and/or Topsoil=X'=Approximate depth.

Auger boring - plan view.

Drive sample and/or core boring - plan view.

Auger boring plotted to vertical scale only.

Drive sample and/or core boring plotted to vertical scale only.

● Water content nearly equal to or greater than liquid limit.

Indicates a non-plastic material with a high water content.

Free water.

Number of blows for "Standard Penetration" test.
X=number of blows for first 6 inches.
Y=number of blows for second 6 inches.

B Indicates broken rock interval.

NOTE: Figures beside borings indicate water content in percent. e.g. 15

SOIL PROFILE

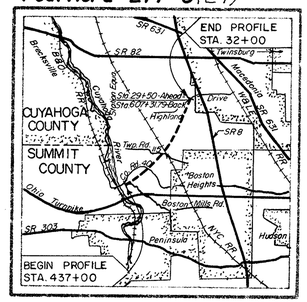
1/52

SUMMIT COUNTY
SUM-IR 271-8.29

OHIO STATE HIGHWAY TESTING LABORATORY
1620 W. 8th AVE. ST. COLUMBUS 12, OHIO

NOTE: INFORMATION SHOWN BY THIS SUBGRADE PROFILE WAS OBTAINED SOLELY FOR USE IN ESTABLISHING DESIGN CONTROLS FOR THE PROJECT. THE STATE OF OHIO DOES NOT GUARANTEE THE ACCURACY OF THIS DATA AND IT IS NOT TO BE CONSTRUED AS A PART OF THE CONTRACT GOVERNING CONSTRUCTION OF THE PROJECT.

Fed. No. I-271-6(27)



LOCATION MAP

Recon - P.D.B. - 10/27/64
Drilling - -Auger - L.M.D., A.J.R. - 11/1/64 to 11/13/64, 12/11/64 to 12/20/64.
-Core - D.W.B., K.J.F. - 11/13/64 to 12/9/64.
Drafting - R.L.M., R.E.L., C.L.I. - 2/16/65.

SUMMARY OF SOIL TEST DATA

NOTE: NP shown in Liquid Limit and Plasticity Index columns indicates that the material is non-plastic.
*Denotes sample taken at or near grade.

STATION & OFFSET		DEPTH FROM-TO	% AGG.	% C.S.	% F.S.	% SILT	% CLAY	L.L.	P.I.	% W.C.	SHTL CLASS.
439+00	CL	0.0-4.0	41	8	7	21	23	26	7	12	A-4a
		4.0-7.0	0	1	3	55	41	33	12	20	A-6a
		7.0-11.0	0	0	1	87	12	NP	NP	26	A-4b
		11.0-17.0	0	1	0	61	38	NP	NP	24	A-4b
		17.0-22.0	0	0	1	50	49	30	9	24	A-4b
		22.0-28.0	0	1	0	73	26	NP	NP	23	A-4b
		28.0-30.0	0	0	11	77	12	NP	NP	16	A-4b
442+00	160'Lt	0.5-4.0	50	29	14	- 7 -		NP	NP	4	A-1-a
		4.0-9.0	0	3	6	27	64	37	15	16	A-6a
		9.0-11.5	0	1	3	39	57	30	11	18	A-6a
		11.5-13.0	0	45	27	10	18	NP	NP	8	A-3a
		13.0-15.5	C	1	1	79	19	NP	NP	24	A-4b
		15.5-21.0	0	1	1	31	67	37	15	26	A-6a
		21.0-27.0	0	0	1	36	63	34	12	23	A-6a
		27.0-30.0	0	1	2	39	58	32	11	25	A-6a
442+00	220'Rt	0.0-4.0	0	4	9	51	36	28	6	17	A-4b
		4.0-7.0	0	9	45	22	24	NP	NP	17	A-4a
		7.0-10.0	56	23	11	- 10 -		NP	NP	9	A-1-a
		10.0-13.0	C	2	4	61	33	NP	NP	20	A-4b
		13.0-18.0	0	1	2	29	68	36	12	19	A-6a
		18.0-21.0	15	3	14	46	20	NP	NP	23	A-4a
		21.0-25.0	0	0	2	77	21	NP	NP	20	A-4b
		25.0-30.0	0	0	1	25	74	36	11	27	A-6a
446+00	110'Lt	0.0-5.5	0	0	3	54	43	30	7	22	A-4b
446+00	60'Lt	0.0-5.0	0	0	16	60	24	NP	NP	11	A-4b
		5.0-6.0	0	0	7	41	52	29	11	19	A-6a
446+00	60'Rt	0.0-41.0	0	0	3	67	30	NP	NP	20	A-4b
		41.0-5.0	0	2	7	41	50	34	11	20	A-6a
446+00	170'Rt	0.0-6.0	0	0	0	25	75	40	12	31	A-6a
446+00	260'Rt	0.0-5.0	0	1	5	37	57	36	12	17	A-6a
448+00	160'Lt	0.0-2.0	0	4	8	50	38	34	6	35	A-4b
		2.0-4.0	0	2	10	54	34	48	18	53	A-7-5
		4.0-5.0	54	2	1	17	26	29	4	23	A-4a
448+00	80'Lt	0.3-5.0	0	0	1	61	38	30	7	19	A-4b
448+00	60'Rt	0.0-6.0	0	0	0	53	47	34	8	24	A-4b
448+00	130'Rt	0.0-3.0	0	1	2	39	58	36	11	30	A-6a
		3.0-6.5	0	0	1	60	39	NP	NP	28	A-4b
		6.5-8.0	0	0	2	62	36	NP	NP	24	A-4b
449+00	80'Lt	0.3-1.5	0	4	14	40	42	37	14	40	A-6a
		1.5-4.0	25	38	18	5	14	NP	NP	24	A-1-b
		4.0-5.0	0	4	9	26	61	33	11	24	A-6a
449+00	60'Rt	0.3-4.5	0	1	3	47	49	35	11	21	A-6a
452+00	CL	0.0-4.0	0	2	6	29	63	39	13	18	A-6a *
455+00	200'Rt	0.0-6.0	0	2	5	25	68	39	17	18	A-6b
		6.0-12.0	0	3	4	38	55	34	15	18	A-6a
		12.0-17.0	0	4	6	35	55	35	15	19	A-6a
		17.0-21.0	0	4	6	31	59	33	12	19	A-6a
		21.0-26.0	0	1	4	31	64	31	12	17	A-6a
		26.0-30.0	0	2	5	34	59	33	14	20	A-6a
455+25	190'Lt	0.0-6.0	0	3	5	35	57	35	14	14	A-6a
		6.0-12.0	0	3	5	38	54	35	14	17	A-6a
		12.0-17.0	0	4	6	35	55	34	14	17	A-6a
		17.0-20.0	0	3	6	37	54	34	13	18	A-6a
		20.0-25.0	0	2	4	50	44	30	10	18	A-4b
		25.0-30.0	0	2	5	40	53	29	11	19	A-6a
459+00	200'Lt	0.0-6.0	17	4	6	31	42	33	12	16	A-6a
		6.0-11.0	16	1	3	25	55	37	15	19	A-6a
		11.0-17.0	16	3	5	29	47	35	16	18	A-6b
		17.0-24.0	0	4	6	34	56	30	12	18	A-6a
		24.0-30.0	0	2	5	36	57	30	11	17	A-6a
459+00	130'Rt	0.0-6.0	0	3	5	34	58	39	16	16	A-6b
		6.0-12.0	0	2	5	40	53	28	11	19	A-6a
		12.0-18.0	0	0	0	23	77	41	13	28	A-7-6
		18.0-20.0	0	0	1	50	49	23	6	31	A-4b
		20.0-22.0	41	24	32	- 3 -		NP	NP	4	A-1-b
		22.0-25.0	0	1	1	30	68	33	11	26	A-6a
		25.0-30.0	0	3	2	39	56	42	19	24	A-7-6

SUMMARY OF SOIL TEST DATA(Cont'd)

NOTE: NP shown in Liquid Limit and Plasticity Index columns indicates that the material is non-plastic.
*Denotes sample taken at or near grade.

STATION & OFFSET		DEPTH FROM-TO	% AGG.	% C.S.	% F.S.	% SILT	% CLAY	L.L.	P.I.	% W.C.	SHTL CLASS.
461+75	62'Rt	0.0-3.0	0	2	5	34	59	33	11	18	A-6a
		3.0-8.0	44	22	23	- 11 -		NP	NP	7	A-1-b
		8.0-14.0	0	1	1	29	69	34	11	24	A-6a
		14.0-19.0	0	1	1	61	37	33	10	29	A-4b
		19.0-25.0	0	1	2	75	22	33	11	34	A-6a
		25.0-30.0	0	1	1	51	47	31	8	28	A-4b
462+00	58'Lt	0.0-4.0	0	13	12	29	46	35	12	15	A-6a
		4.0-9.0	0	1	1	36	62	40	11	27	A-6a
		9.0-14.0	0	0	0	43	57	35	11	26	A-6a
		14.0-19.0	0	1	1	34	64	33	11	20	A-6a
		19.0-20.0	33	34	22		- 11 -	NP	NP	7	A-1-b
462+00	210'Rt	0.0-5.0	0	3	7	27	63	41	18	17	A-7-6
		5.0-12.0	0	4	6	29	61	36	14	16	A-6a
		12.0-19.0	0	4	7	34	55	35	14	18	A-6a
		19.0-20.0	0	3	6	33	58	32	12	19	A-6a
462+50	CL	0.0-5.5	0	3	6	33	58	38	17	17	A-6b
		5.5-10.0	0	3	6	34	57	38	16	20	A-6b
		10.0-14.0	0	1	4	37	58	35	11	20	A-6a
		14.0-19.0	0	1	1	50	48	NP	NP	27	A-4b
		19.0-22.0	0	2	4	32	62	31	11	14	A-6a
465+00	75'Lt	0.0-4.0	0	3	5	29	63	41	18	17	A-7-6
		4.0-6.0	45	14	20	14	7	28	12	11	A-2-6
		6.0-11.0	0	2	2	32	64	41	16	23	A-7-6
		11.0-18.5	0	1	2	26	71	38	16	20	A-6b
		18.5-20.0	35	36	25		- 4 -	NP	NP	3	A-1-b
465+35	80'Rt	0.0-5.0	0	0	5	41	54	34	13	16	A-6a
		5.0-6.0	51	11	14	8	16	34	15	18	A-2-6
		6.0-11.0	0	0	1	44	55	31	11	27	A-6a
		11.0-16.0	0	2	2	30	66	37	15	18	A-6a
		16.0-20.0	0	1	3	34	62	35	12	20	A-6a
		20.0-22.0	35	47	14		- 4 -	NP	NP	4	A-1-b
465+50	CL	0.0-5.0	0	2	5	37	56	35	11	17	A-6a
		5.0-7.0	0	2	2	37	59	41	18	15	A-7-6
		7.0-11.0	47	16	13	10	14	31	12	14	A-2-6
		11.0-17.5	0	3	2	57	38	NP	NP	23	A-4b
		17.5-20.0	0	2	2	38	58	33	12	15	A-6a
468+00	112'Lt	0.0-4.5	30	18	15	15	22	27	9	11	A-4a
468+00	CL	0.0-6.0	22	6	10	32	30	30	11	14	A-6a
		6.0-9.0	22	17	7	24	30	30	5	22	A-4a
		9.0-16.0	0	3	5	47	45	35	11	30	A-6a
		16.0-21.0	0	0	0	75	25	NP	NP	21	A-4b
		21.0-27.0	0	1	1	78	20	NP	NP	27	A-4b
		27.0-30.0	0	0	2	64	34	41	14	34	A-7-6
468+00	130'Rt	0.0-6.0	24	0	0	33	43	38	11	18	A-6a
		6.0-9.0	0	9	8	19	64	38	13	22	A-6a
		9.0-15.0	0	0	0	85	15	NP	NP	24	A-4b
		15.0-22.0	0	0	9	73	18	NP	NP	20	A-4b
		22.0-26.0	0	0	1	52	47	31	10	29	A-4b
		26.0-30.0	0	0	1	76	23	NP	NP	11	A-4b
471+00	146'Lt	0.0-5.0	0	6	8	37	39	28	7	20	A-4a
		5.0-7.0	70	4	6	13	7	NP	NP	23	A-1-b
		7.0-11.0	0	1	38	48	13	NP	NP	22	A-4a
		11.0-17.0	0	0	10	67	23	NP	NP	20	A-4b
		17.0-22.0	0	0	5	78	17	NP	NP	21	A-4b
		22.0-27.0	0	0	2	78	20	NP	NP	24	A-4b
		27.0-30.0	0	0	0	56	44	NP	NP	20	A-4b
471+00	CL	0.0-2.0	21	30	24	12	13	NP	NP	8	A-1-b
		2.0-5.0	69	12	7	9	3	NP	NP	16	A-1-a
		5.0-9.0	0	1	8	70	21	NP	NP	22	A-4b
		9.0-14.0	0	1	1	54	44	NP	NP	28	A-4b
		14.0-20.0	0	1	1	55	43	NP	NP	27	A-4b
		20.0-25.0	0	0	1	33	66	32	11	29	A-6a
		25.0-30.0	0	0	0	50	50	27	4	25	A-4b
471+00	270'Rt	0.0-4.0	70	21	4		- 5 -	NP	NP	7	A-1-a
		4.0-10.0	Gray Sandy Silt					33	7	36	A-4a
		10.0-15.0	0	1	1	17	81	40	13	34	A-6a
		15.0-20.0	0	1	3	28	68	35	11	28	A-6a
474+90	60'Lt	0.0-5.0	0	3	6	31	60	38	16	16	A-6b
		5.0-10.0	0	3	5	35	57	36	15	15	A-6a
		10.0-14.0	21	2	5	33	39	31	11	16	A-6a
		14.0-19.0	0	1	4	31	64	32	12	23	A-6a
		19.0-20.0	40	14	26	8	12	NP	NP	7	A-1-b
475+00	67'Rt	0.0-6.0	0	3	6	48	43	33	11	14	A-6a
		6.0-11.0	0	3	7	38	52	33	11	14	A-6a
		11.0-16.0	0	2	6	51	41	32	11	17	A-6a *
		16.0-20.0	0	2	6	45	47	33	12	17	A-6a *
		20.0-25.0	0	2	6	44	48	30	11	18	A-6a
		25.0-30.0	0	1	6	37	56	30	11	19	A-6a
476+00	CL	0.0-7.0	0	3	6	33	58	35	11	15	A-6a
		7.0-12.0	0	3	6	35	56	35	11	17	A-6a
		12.0-17.0	0	3	6	39	52	34	11	19	A-6a
		17.0-24.0	0	3	3	36	58	36	13	18	A-6a
		24.0-30.0	0	1	6	50	43	28	8	18	A-4b *
481+50	50'Rt	0.0-6.0	0	3	5	36	56	36	14	14	A-6a
		6.0-11.0	0	4	6	40	50	34	13	17	A-6a
		11.0-16.0	0	3	6	39	52	31	11	17	A-6a
		16.0-20.0	0	2	6	80	12	29	7	18	A-4b
		20.0-26.0	0	2	6	39	53	33	11	17	A-6a *
		26.0-28.0	0	2	6	39	53	27	11	14	A-6a
		28.0-30.0	0	1	1	68	30	NP	NP	22	A-4b
482+00	50'Rt	0.0-5.0	15	3	7	33	42	38	13	19	A-6a
		5.0-10.0	0	3	6	35	56	36	12	16	A-6a
		10.0-15.0	0	3	7	51	39	33	11	15	A-6a
		15.0-20.0	0	3	7	47	43	30	11	16	A-6a *
		20.0-26.0	0	2	3	49	46	33	11	17	A-6a
		26.0-30.0	0	1	2	64	33	28	6	14	A-4b
486+00	50'Lt	0.0-5.0	0	3	5	41	51	33	11	14	A-6a
		5.0-10.0	0	3	6	40	51	34	11	16	A-6a
		10.0-15.0	0	3	6	38	53	35	11	16	A-6a *
		15.0-19.0	0	3	6	40	51	37	11	19	A-6a *
		19.0-25.0	0	2	5	39	54	32	12	18	A-6a
		25.0-30.0	0	1	1	42	56	31	11	20	A-6a
488+55	60'Lt	0.0-6.0	0	3	6	38	53	38	14	14	A-6a *
		6.0-12.0	0	3	7	37	53	32	11	17	A-6a *
		12.0-18.0	0	2	1	52	45	31	11	18	A-6a
		18.0-24.0	0	2	7	38	52	28	11	16	A-6a
		24.0-30.0	30	2	3	26	39	32	12	19	A-6a
492+00	120'Lt	0.0-4.0	0	1	31	36	32	29	6	17	A-4a
		4.0-6.0	76	4	6	7	7	-	-	4	A-1-a
		6.0-11.0	0	0	7	52	41	24	4	26	A-4b
		11.0-17.0	0	0	8	57	35	22	3	22	A-4b
		17.0-22.0	0	2	21	29	48	25	4	20	A-4a
		22.0-26.0	0	0	0	84	16	NP	NP	24	A-4b
		26.0-30.0	12	1	4	50	33	NP	NP	22	A-4b
492+00	130'Rt	0.0-5.0	63	4	7	15	11	26	7	8	A-2-4
		5.0-9.0	0	0	1	53	46	25	6	30	A-4b
		9.0-11.0	0	0	2	85	13	NP	NP	22	A-4b
		11.0-17.0	0	0	1	71	28	NP	NP	26	A-4b
		17.0-21.0	0	0	3	35	62	33	12	28	A-6a
		21.0-26.0	0	6	6	57	31	NP	NP	17	A-4b
		26.0-28.0	0	0	0	50	50	NP	NP	27	A-4b
		28.0-30.0	0	0	1	84	15	NP	NP	23	A-4b
492+00	260'Rt	0.0-5.0	28	1	16	31	24	25	4	12	A-4a
		5.0-10.0	0	0	1	52	47	NP	NP	23	A-4b
		10.0-15.0	0	0	19	53	28	NP	NP	22	A-4b
		15.0-16.0	0	0	1	55	44	25	5	24	A-4b
496+96	77'Lt	0.0-6.0	0	2	4	45	49	30	11	13	A-6a
		6.0-13.0	16	2	3	36	44	30	11	17	A-6a
		13.0-16.0	0	2	7	43	48	30	11	16	A-6a
		16.0-22.0	0	2	5	43	50	29	11	17	A-6a
497+00	CL	0.0-5.0	30	1	4	36	29	33	11	13	A-6a
		5.0-10.0	14	3	6	41	36	33	11	16	A-6a *
		10.0-16.0	11	3	6	42	38	32	11	19	A-6a *
		16.0-21.5	0	2	8	44	46	31	11	17	A-6a *
		21.5-27.0	0	2	5	43	48	30	11	18	A-6a
		27.0-28.0	0	1	3	50	46	29	7	20	A-4b
		28.0-30.0	0	2	4	52	42	29	10	18	A-4b
497+00	100'Rt	0.0-6.0	29	2	4	30	35	32	11	13	A-6a
		6.0-11.0	0	1	2	68	29	NP	NP	17	A-4b
		11.0-17.0	0	0	3	79	18	NP	NP	21	A-4b
		17.0-19.0	24	4	6	36	30	31	11	16	A-6a
		19.0-23.0	0	2	7	47	44	27	11	17	A-6a
		23.0-25.0	0	1	4	54	41	30	8	21	A-4b
		25.0-30.0	0	3	8	50	39	29	8	17	A-4b
502+75	60'Lt	0.0-6.0	0	2	7	38	53	34	11	14	A-6a
		6.0-10.0	0	2	6	42	50	32	11	17	A-6a
		10.0-16.0	0	3	6	42	49	29	11	17	A-6a
		16.0-18.0	0	2	7	40	51	30	11	18	A-6a
		18.0-21.0	0	2	7	55	36	25	7	18	A-4b
		21.0-25.0	10	2	4	41	43	29	11	19	A-6a *
		25.0-30.0	12	2	4	39	43	29	11	18	A-6a *
506+30	CL	0.0-7.0	12	1	6	34	47	34	11	15	A-6a
		7.0-10.0	25	2	5	26	42	30	11	17	A-6a
		10.0-15.0	0	3	7	39	51	31	11	17	A-6a
		15.0-20.0	0	3	7	40	50	30	11	18	A-6a
		20.0-21.5	0	3	10	50	37	22	6	22	A-4b
		21.5-26.0	0	3	8	41	48	27	11	19	A-6a
		26.0-27.0	0	0	8	71	21	NP	NP	18	A-4b
		27.0-30.0	0	2	6	50	42	26	7	17	A-4b
508+84	100'Rt	0.0-3.0	0	4	3	44	49	28	11	17	A-6a
		3.0-5.0	0	1	10	71	18	NP	NP	16	A-4b
		5.0-7.0	17	3	7	35	38	27	11	17	A-6a
		7.0-11.0	0	3	6	44	47	29	11	17	A-6a
		11.0-14.0	17	5	9	33	36	25	11	14	A-6a
		14.0-18.0	0	5	13	45	37	24	11	16	A-6a
		18.0-21.0	24	4	8	46	24	20	3	16	A-4a
		21.0-25.0	19	0	0	54	27	NP	NP	27	A-4b
		25.0-29.0	0	1	1	56	43	NP	NP	26	A-4b
		29.0-30.0	12	3	4	43	38	34	11	25	A-6a
513+00	45'Lt	0.0-2.5	0	5	41	32	22	NP	NP	12	A-4a
513+00	50'Rt	0.0-6.0	19	3	14	27	37	30	11	13	A-6a
		6.0-9.0	67	6	2	9	16	-	-	19	A-1-b
		9.0-10.0	Gray Clayey Shale							6	Visual
516+00	40'Rt	0.0-2.0	68	1	4	12	15	36	10	19	A-2-4
		2.0-3.0	Gray Weathered Shale							7	Visual
519+00	60'Lt	0.0-4.5	44	1	2	25	28	39	12	19	A-6a
		4.5-6.0	Gray Weathered Shale							11	Visual
519+00	70'Rt	0.0-6.0	0	1	19	53	27	25	7	10	A-4b
		6.0-10.0	50	7	7	30	6	31	10	11	A-4a
		10.0-11.0	48	6	7	22	17	27	7	16	A-4a
523+00	60'Rt	0.3-4.5	0	2	4	44	50	41	15	18	A-7-6
		4.5-10.0	0	2	15	53	30	23	6	18	A-4b
		10.0-16.0	56	6	5	19	14	31	9	23	A-2-4
523+15	50'Lt	0.3-3.5	37	6	6	28	23	35	11	18	A-6a
		3.5-6.0	52	7	7	18	16	32	9	21	A-2-4
527+00	50'Lt	0.3-3.0	31	2	5	29	33	31	11	15	A-6a *
		3.0-6.0	52	2	5	20	21	30	11	19	A-6a
527+00	50'Rt	0.3-5.0	35	5	5	24	31	30	11	12	A-6a *
		5.0-11.0	40	6	6	19	29	-	-	13	A-7-6*
527+00	130'Rt	0.3-4.0	16	7	5	42	30	26	11	10	A-6a
		4.0-10.0	0	3	3	26	68	-	-	20	A-7-6

STATION & OFFSET		DEPTH FROM-TO	% AGG.	% C.S.	% F.S.	% SILT	% CLAY	L.L.	P.I.	% W.C.	SHTL CLASS.
531+00	110'Lt	0.0-5.0	38	2	4	17	39	42	11	12	A-7-5
		5.0-9.0	26	3	3	26	42	44	16	11	A-7-6
		9.0-15.0	Gray Weathered Indurated Clay							7	Visual
531+00	CL	0.0-2.0	26	3	7	35	29	34	11	13	A-6a
536+80	90'Rt	0.0-5.0	Brown Weathered Shaly Sandstone							8	Visual
537+00	80'Lt	0.0-2.0	Sandstone Boulders							-	Visual
		2.0-7.0	21	1	1	31	46	42	14	15	A-7-6
		7.0-10.0	36	2	4	35	23	26	4	7	A-4a
539+00	170'Lt	0.0-5.0	Brown Weathered Sandy Shale							7	Visual
		5.0-6.5	Gray Weathered Indurated Clay							10	Visual
539+20	40'Lt	0.0-5.0	Brown Weathered Shale							9	Visual
543+00	205'Lt	0.0-2.0	22	7	12	32	27	35	8	8	A-4a
		2.0-3.0	Gray Weathered Indurated Clay							6	Visual
543+00	CL	0.0-1.5	Light-Brown Weathered Shale							11	Visual
543+00	110'Rt	0.0-6.0	Light-Brown Weathered Indurated Clay							11	Visual
		6.0-11.5	Brown Weathered Shale							7	Visual
543+50	110'Lt	0.0-1.5	38	3	3	25	31	37	11	21	A-6a
		1.5-4.0	30	3	3	31	33	37	13	13	A-6a
546+00	240'Lt	0.0-1.5	44	3	7	25	21	34	11	11	A-6a
		1.5-3.0	Gray Weathered Indurated Clay							7	Visual
546+00	100'Lt	0.0-5.0	38	3	4	26	29	32	11	10	A-6a
546+00	20'Rt	0.0-2.0	Brown and Gray Weathered Shale							8	Visual
549+25	CL	0.3-3.0	26	3	14	30	27	27	7	14	A-4a
		3.0-8.0	0	2	8	63	27	24	3	16	A-4a
		8.0-10.0	Grayish-Brown Weathered Shale							11	Visual
554+00	CL	0.5-3.0	0	5	13	42	40	32	11	19	A-6a
		3.0-7.0	14	2	9	50	25	25	4	17	A-4b
		7.0-10.0	14	3	11	41	31	24	2	20	A-4a
559+10	CL	0.0-2.0	0	1	10	49	40	38	13	25	A-6a
		2.0-8.0	14	2	9	51	24	27	5	18	A-4b
		8.0-11.0	37	4	9	31	19	25	5	10	A-4a *
564+00	CL	0.0-4.0	31	3	9	31	26	27	6	14	A-4a
		4.0-11.0	19	3	8	45	27	26	4	16	A-4a *
		11.0-15.5	Gray Broken Cloyey Shale							9	Visual
567+00	CL	0.0-5.0	17	3	8	40	32	32	11	13	A-6a *
		5.0-9.0	27	4	8	33	28	29	11	17	A-6a
569+00	220'Lt	0.0-2.0	52	5	7	22	14	32	9	11	A-4a
569+00	60'Rt	0.0-6.0	32	4	4	33	27	26	11	12	A-6a
		6.0-11.5	Brown Weathered Shale							9	Visual
569+15	100'Lt	0.0-1.5	Brownish-Gray Weathered Shale							15	Visual
570+30	CL	0.0-6.0	35	2	6	29	28	29	11	11	A-6a *
		6.0-12.0	34	8	13	26	19	21	4	11	A-4a
		12.0-14.0	Brown Weathered Shale							9	Visual
577+00	CL	0.0-4.0	0	2	2	47	49	39	14	16	A-6a
		4.0-7.0	Grayish-Brown Broken Cloy Shale							10	Visual
		7.0-9.5	Gray Weathered Shale							7	Visual
582+00	CL	0.0-4.0	0	3	11	50	36	32	11	14	A-6a
		4.0-10.5	Gray Weathered Shale							9	Visual
587+00	25'Lt	0.0-3.0	0	4	14	45	37	28	11	14	A-6a
		3.0-5.0	0	1	1	34	64	42	15	18	A-7-6
		5.0-10.5	Brown Weathered Shale							9	Visual
595+00	CL	0.0-3.0	C	1	6	49	44	45	19	29	A-7-6
		3.0-7.0	28	6	8	25	33	27	11	15	A-6a
		7.0-12.0	0	3	9	65	23	NP	NP	17	A-4b
		12.0-15.5	25	4	10	42	19	22	5	16	A-4a

Twp. Rd. 115 (Hines Hill Rd.)

45+50	12'Rt	0.0-5.0	0	3	6	39	52	33	12	18	A-6a *
		5.0-10.0	0	5	6	33	56	32	12	16	A-6a
48+00	12'Rt	0.0-3.0	0	4	6	39	51	39	17	17	A-6b
		3.0-7.0	0	3	6	41	50	36	15	15	A-6a
		7.0-12.0	0	2	6	41	51	35	13	16	A-6a
52+00	15'Lt	0.0-4.0	0	3	7	40	50	33	11	16	A-6a *
		4.0-8.0	0	3	6	45	46	34	11	15	A-6a
		8.0-12.0	0	3	6	39	52	34	11	18	A-6a
54+50	15'Lt	0.0-5.0	0	3	6	37	54	31	11	16	A-6a *
		5.0-10.0	0	3	5	42	50	33	11	16	A-6a

Co. Rd. 40 (Brandywine Rd.)

59+50	20'Rt	0.0-5.0	53	11	16	11	9	-	-	10	A-1b *
63+50	12'Rt	0.0-4.5	0	3	7	69	21	NP	NP	22	A-4b *
		4.5-8.0	0	2	9	42	47	28	11	17	A-6a
		8.0-10.0	0	3	7	44	46	27	11	15	A-6a
64+65	12'Rt	0.0-4.5	0	2	55	30	13	NP	NP	10	A-4a *
		4.5-10.0	15	5	7	43	30	27	11	18	A-6a *
67+50	12'Rt	0.0-4.0	0	1	8	72	19	NP	NP	22	A-4b *
		4.0-7.0	34	2	8	34	22	24	5	19	A-4a *
		7.0-10.0	0	3	8	55	34	21	4	14	A-4b

SOIL PROFILE

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SUMMIT COUNTY
SUM-IR 271-8.29

OHIO STATE HIGHWAY TESTING LABORATORY
1626 W. BROAD ST. COLUMBUS 23, OHIO

STATION & OFFSET		DEPTH FROM-TO	% AGG.	% C.S.	% F.S.	% SILT	% CLAY	L.L.	P.I.	% W.C.	SHTL CLASS.
		Twp. Rd. 38 (Stanford Rd.)									
57+50	15'Rt	0.0-5.0	17	4	8	30	41	27	11	15	A-6a *
		5.0-10.0	22	3	6	37	32	27	11	17	A-6a *
		10.0-13.0	53	6	5	21	15	23	4	14	A-4a
		DRIVE SAMPLE SOIL TEST DATA									
442+00	120'Rt	5.0-6.0	66	15	7	4	8	-	-	15	A-1-a
		10.0-11.0	63	19	9	- 9 -		NP	NP	8	A-1-a
		15.0-16.0	64	13	8	5	10	-	4	13	A-1-a
		20.0-21.0	0	0	0	80	20	NP	NP	25	A-4b
		25.0-26.0	0	1	0	21	78	40	16	33	A-6b
		30.0-31.0	0	0	1	27	72	37	14	33	A-6a
		40.0-41.0	0	2	0	72	26	30	8	27	A-4b
		45.0-46.0	0	0	1	75	24	NP	NP	28	A-4b
		50.0-51.0	0	0	0	77	23	NP	NP	26	A-4b
		55.0-56.0	0	0	1	80	19	25	4	16	A-4b
		60.0-61.0	Gray Sandy Silt					NP	NP	25	A-4a
		65.0-66.0	0	0	5	74	21	NP	NP	25	A-4b
		70.0-71.0	0	0	2	43	55	33	11	26	A-6a
		75.0-76.0	0	4	18	41	37	19	4	16	A-4a
		80.0-80.3	Gray Sand							-	Visual
		80.3-85.0	0	2	11	43	44	24	5	24	A-4a
		90.0-90.5	Gray Sandy Silt					23	5	18	A-4a
457+00	CL	5.0-6.0	0	2	5	46	47	41	15	20	A-7-6
		10.0-11.0	0	5	5	53	37	38	14	18	A-6a
		15.0-16.0	0	12	13	40	35	33	12	22	A-6a
		20.0-21.0	16	3	5	39	37	34	12	19	A-6a
		25.0-26.0	0	8	8	42	42	28	11	22	A-6a
		30.0-31.0	51	12	7	9	21	27	8	15	A-2-4
		35.0-36.0

SUMMIT COUNTY
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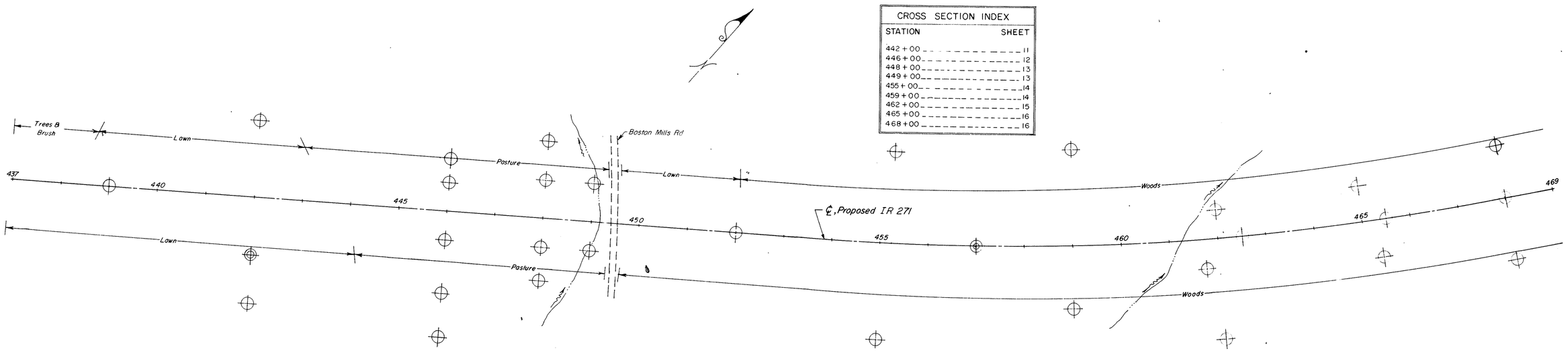
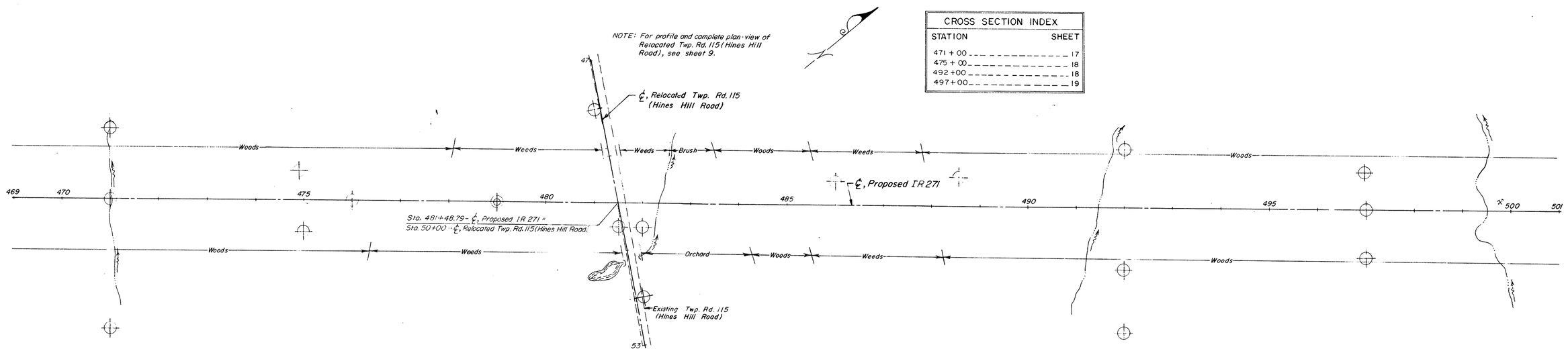
CROSS SECTION INDEX	
STATION	SHEET
442+00	11
446+00	12
448+00	13
449+00	13
455+00	14
459+00	14
462+00	15
465+00	16
468+00	16



CROSS SECTION INDEX	
STATION	SHEET
471+00	17
475+00	18
492+00	18
497+00	19

NOTE: For profile and complete plan view of Relocated Twp. Rd. 115 (Hines Hill Road), see sheet 9.



SOIL PROFILE

SUMMIT COUNTY
SUM-IR 271 - 8.29

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OHIO STATE HIGHWAY TESTING LABORATORY
1620 W. BROAD ST. COLUMBUS 23, OHIO

840 830 820 810 800 790 780 770 760 750 740 730 720 710 700 690 680 670

437 438 439 440 441 442 443 444 445 446 447 448 449 450 451 452 453 454 455 456 457 458 459 460 461 462 463 464 465 466 467 468 469

℄

12
20 W
26
24
24
23
16

120' Rt.

15
8
13
25
33
33
27 ●
28
26
42 ●
25
25
26
18
Gray sand
24 ●
18
* = Refusal

Westbound Lanes
Eastbound Lanes

60' Lt.

11
19
Refusal (Hand auger)

60' Rt.

24
Refusal (Hand auger)

60' Rt.
Spd =0.3'

21
Refusal (Hand auger)

℄

18
Refusal (Hand auger)

200' Rt.

18
18
19
19
17
20

℄

20
18
22
19
22
15
19
26 ●
19
Grayish-brown sandy clayey silt and gravel.
Gray clayey sandy silt with small gravel.
Gray silty clay
10
27
28
28 ●
29
25
23
27 ●
21 ●
* Refusal

200' Lt.

16
19
18
18
17

58' Lt.

15
27
26
20
7

℄

17
20
20
27
14

℄

17
15
14
23
15

℄

14
22
30 Trace of organic
21
27
34

SOIL PROFILE

5
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SUMMIT COUNTY
SUM-IR 271-8.29

OHIO STATE HIGHWAY TESTING LABORATORY
1620 W. BROAD ST. COLUMBUS 23, OHIO

67' Rt.

50' Rt.

Proposed grade, Relocated Twp. Rd. 115 (Hines Hill Road)

50' Rt.

50' Lt.

60' Lt.

℄ Eastbound Lanes

℄ Westbound Lanes

℄ Eastbound Lanes

℄ Westbound Lanes

130' Rt.

Slightly organic

Slightly organic

Sandy shale

Hole squeezed in at elev. 681.0'

SOIL PROFILE

SUMMIT COUNTY
SUM-IR271-8.29

OHIO STATE HIGHWAY TESTING LABORATORY
1620 W. BROAD ST. COLUMBUS 23, OHIO

6
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NOTE: For profiles and complete plan-views of Relocated Co. Rd. 40 (Brandywine Road) and Relocated Twp. Rd. 38 (Stanford Road), see sheet 10.

Existing Twp. Rd. 38 (Stanford Road)

Existing Co. Rd. 40 (Brandywine Road)

℄ Proposed IR 271

℄ Relocated Co. Rd. 40 (Brandywine Road)

Sta. 505+66.36 ℄ Proposed IR 271 =
Sta. 61+75.41 - ℄ Relocated Co. Rd. 40 (Brandywine Road)

NYC RR

Woods · Weeds · Woods · Trees & Brush · Weeds · Weeds & Brush · Woods
Woods · Lawn · Woods · Trees & Brush · Weeds · Weeds & Brush · Woods

501 505 510 515 520 525 530 533

60 64

CROSS SECTION INDEX

STATION	SHEET
506+00	19
513+00	20
519+00	20
523+00	21
527+00	21
531+00	22

950 940 930 920 910 900 890 880 870 860 850 840 830 820

501 502 503 504 505 506 507 508 509 510 511 512 513 514 515 516 517 518 519 520 521 522 523 524 525 526 527 528 529 530 531 532 533

Top of rail, elev. 940.7' (NYC Railroad Trestle)

130' Rt. ℄ 30 (3/6) 13 Refusal
Brown silty clay with stone fragments.
Top of Rock
A.
B.

82' Rt. ℄ 17 (6/23) 18 (8/28) 20 (7/23) 14 (7/17) 18 (8/18) 15 (8/28) 18 (8/28) 13 (6/21) 27 (3/7) 28 (13/15) 16 (8/24) 13 (4/21) Trace silt

60' Lt. 14 17 17 18 18 19 18

Proposed grade, Relocated Co. Rd. 40 (Brandywine Road)

100' Rt. 17 16 17 17 14 16 16 27 26 25

45' Lt. 12 Refusal (Hand auger)

40' Rt. TS = 0.8' 19 7 Trace of organic Refusal

60' Lt. 19 11 Refusal

50' Rt. Sod = 0.3' 12 13 Refusal

Eastbound Lanes

Westbound Lanes

60' Rt. Sod = 0.3' 18 18 23 Refusal

A. Clay shale, brown to gray, fissile, soft to medium-firm, jointed and broken, moderately weathered. Core loss 11%.

B. Shale, gray, arenaceous, fissile, medium-firm, jointed, slightly weathered in top 15.0'. Core loss 1%.

SOIL PROFILE

SUMMIT COUNTY

SUM-IR 271-8.29

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OHIO STATE HIGHWAY TESTING LABORATORY
1615 W. BROAD ST. COLUMBUS 23, OHIO

CROSS SECTION INDEX	
STATION	SHEET
537+00	22
539+00	23
543+00	24
546+00	25
547+00	26

Woods
Lawn
Pond
Weeds
℄, Proposed IR 271

A. Sandstone, brown, fine-grained, firm, with clay seams. Core loss 8%.

B. Shale, gray, fissile, soft to medium-firm, with sandstone comprising 34% of the interval. Core loss 12%.

C. Shale, gray, non-fissile, firm. No core loss.

100'Rt. — Top of Rock — 14 (RQD 29) — A. — B.

℄ Sod=0.3' — 14 — 16 — 11 — Refusal

℄ TS=05' — 19 — 17 — 20 — Refusal

℄ — 25 — 18 — 10 — Refusal

℄ — 14 — 16 — B — 9 — Refusal

Westbound Lanes

Eastbound Lanes

20'Rt. — 8 — Refusal (Hand auger)

60'Rt. — Brown silty clay. — Top of Rock — A. — B. — C.

40'Lt. — 9 — Refusal

℄ — 11 — Refusal (Hand auger)

80'Lt. — Brown clayey silt with sandstone fragments. — 15 — 7 — Refusal

A. Clay shale, brown, very soft and crumbly, extremely weathered. Core loss 65%.

B. Shale, gray, fissile, argillaceous, arenaceous and calcareous in part, medium-firm, jointed and broken, slightly weathered, with clay seams. Core loss 4%.

C. Sandstone, gray, very fine-grained, calcareous in part, firm, with shale comprising 25% of the interval. No core loss.

D. Shale, gray, arenaceous, fissile, firm, with thin sandstone seams. Core loss 7%.

1000 990 980 970 960 950 940 930 920 910 900 890 880 870

533 534 535 536 537 538 539 540 541 542 543 544 545 546 547 548 549 550 551 552 553 554 555 556 557 558 559 560 561 562 563 564 565

SOIL PROFILE

SUMMIT COUNTY

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OHIO STATE HIGHWAY TESTING LABORATORY
1620 W. BROAD ST. COLUMBUS 23, OHIO

NOTE: For cross section of Sta. 569+00, see sheet 26.

Woods | Weeds | Lawn | Barnyard | Weeds

℄ Proposed IR 271

Co. Rte. 15

Brandywine Creek

565 570 575 580 585 590 595 597

1000 990 980 970 960 950 940 930 920 910

℄ 13 17 Refusal (Boulders)

℄ 11 11 9 Refusal

℄ Sod=0.4' B 16 10 7 Refusal

℄ Sod=0.4' 14 9 Refusal

25' Lt. Sod=0.3' 14 18 9 Refusal

℄ Sod & TS=0.4' 29 15 17 16 Refusal

565 566 567 568 569 570 571 572 573 574 575 576 577 578 579 580 581 582 583 584 585 586 587 588 589 590 591 592 593 594 595 596 597

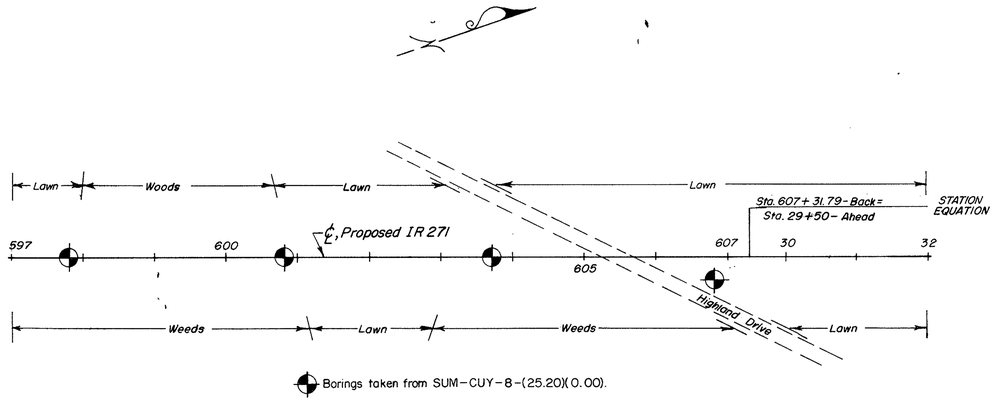
SOIL PROFILE

SUMMIT COUNTY

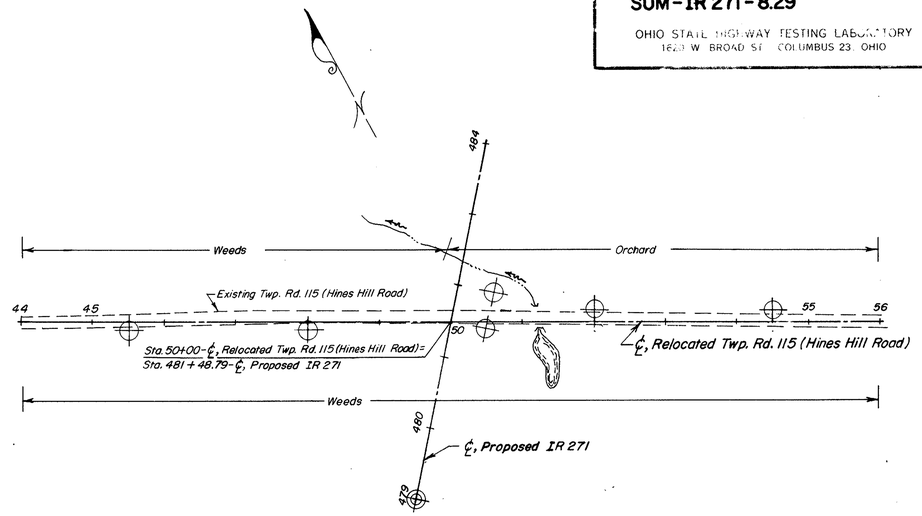
SUM-IR 271-8.29

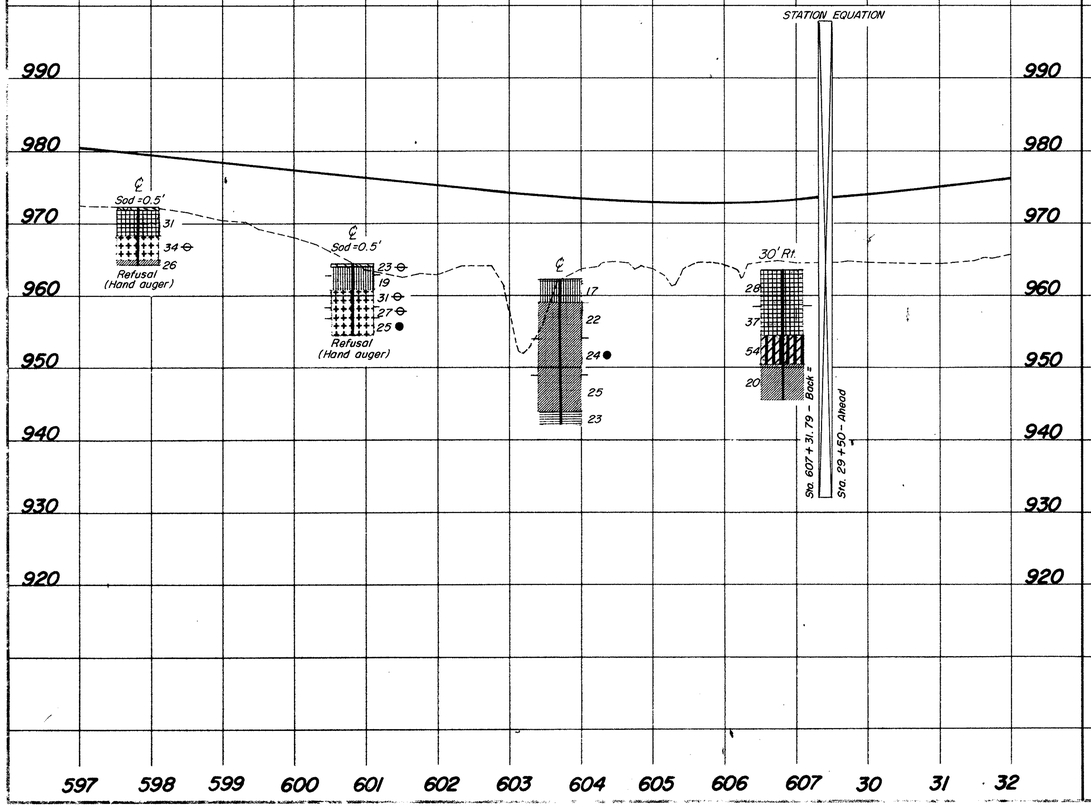
9/52

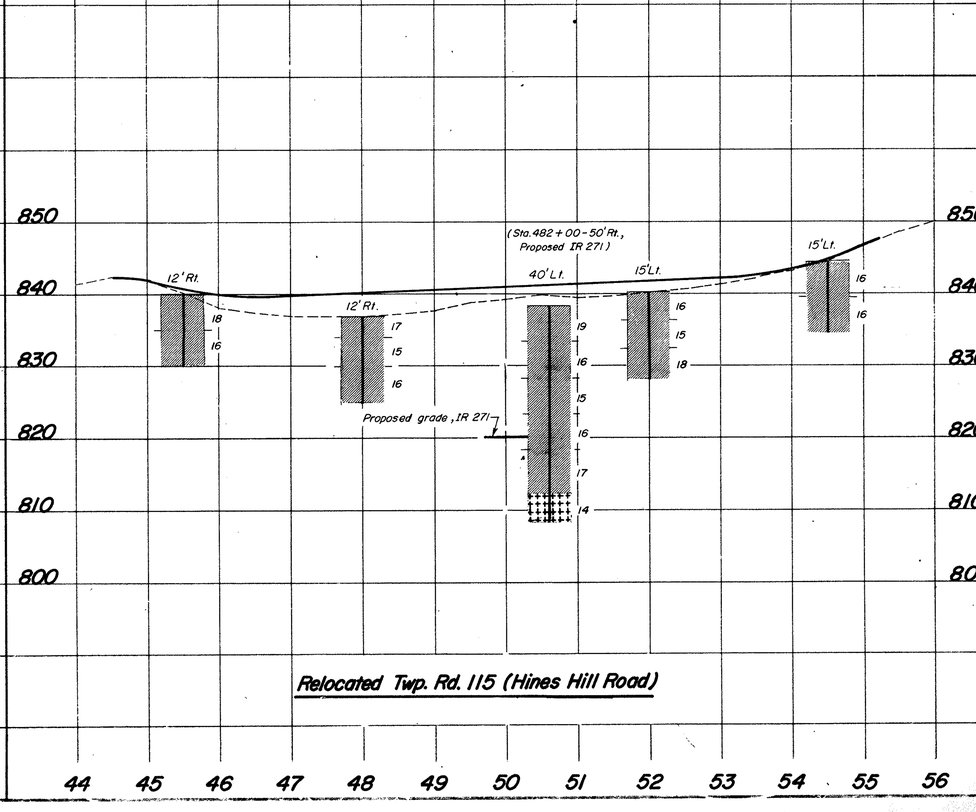
OHIO STATE HIGHWAY TESTING LABORATORY
1620 W. BROAD ST. COLUMBUS 23, OHIO



Borings taken from SUM-CUY-8-(25.20)(0.00).







Relocated Twp. Rd. 115 (Hines Hill Road)

SOIL PROFILE

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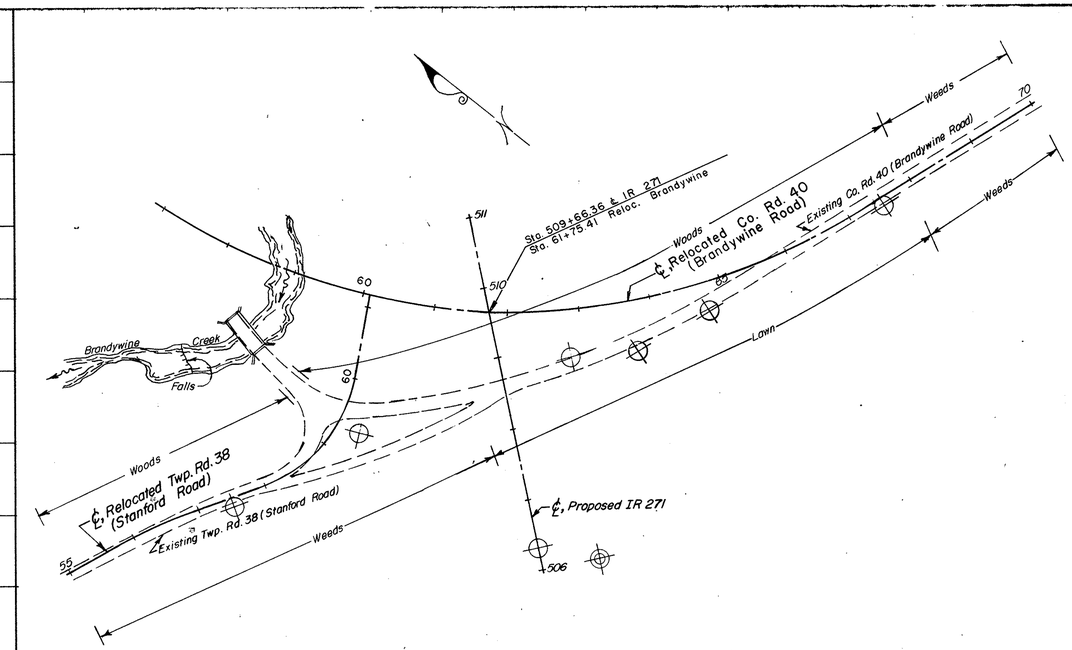
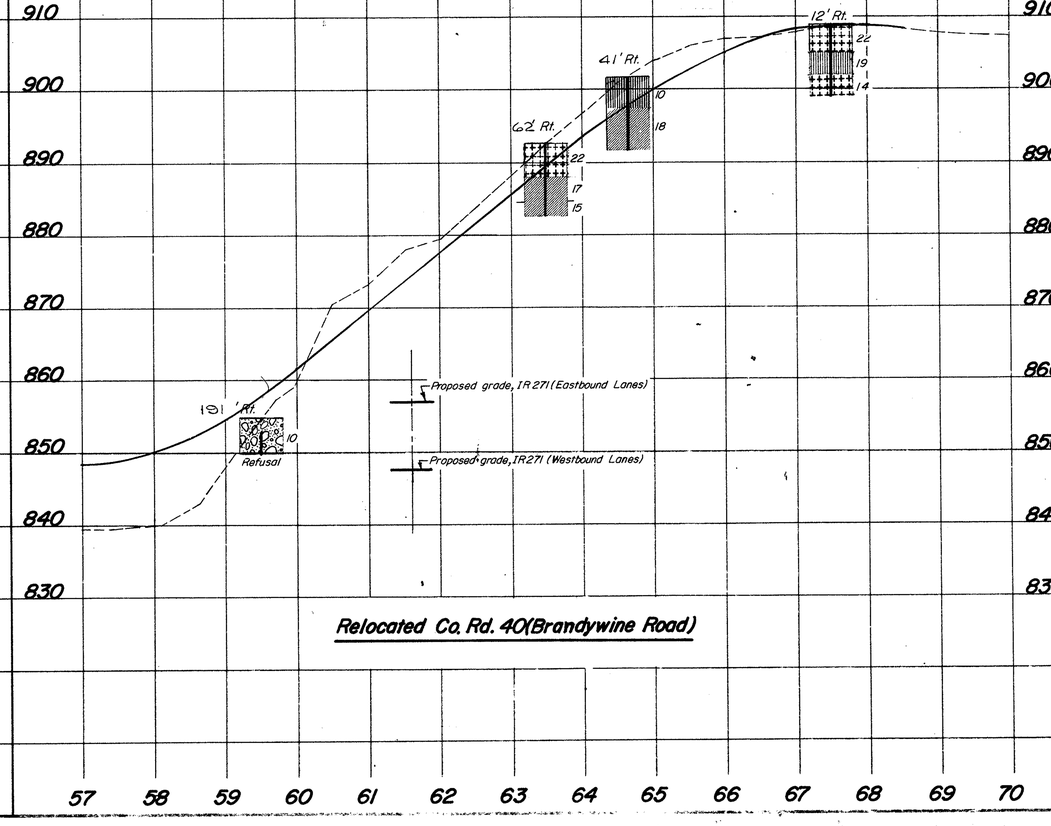
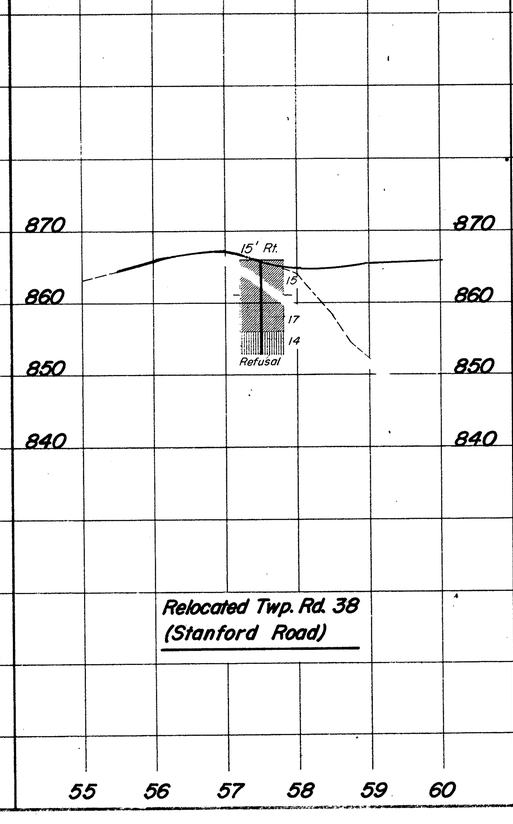
SUMMIT COUNTY
SUM-IR 271-8.29

OHIO STATE HIGHWAY TESTING LABORATORY
1620 W. BROAD ST. COLUMBUS 23, OHIO





Relocated Co. Rd. 40 (Brandywine Road)



Relocated Twp. Rd. 38 (Stanford Road)

SOIL PROFILE

SUMMIT COUNTY

SUM-IR 271-8.29

OHIO STATE HIGHWAY TESTING LABORATORY
1620 W. BROAD ST. COLUMBUS 23, OHIO

11/52

Sta. 442+00

810
800
790
780
770
760
750
740
730
720
710

Sod=0.5'

4
16
18
8
24⊖
25
23
25

17
17
15
9
20
19
23
20
27

2/6 15
8/8 8
6/7 13
2/12 25⊖
5/7 33
6/7 33
10/10 27●
10/9 28⊖
11/24 26⊖
6/4 42●
12/17 25⊖
9/9 25⊖
6/8 26
20/20 16
50/4 Gray sand
20/4 24●
50/3 18

*=Refusal

170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70 80 90 100 110 120 130 210 220

SOIL PROFILE

SUMMIT COUNTY

SUM-IR271-8.29

OHIO STATE HIGHWAY TESTING LABORATORY
1620 W. BROAD ST. COLUMBUS 23, OHIO

12/52

Sta. 446+00

820
810
800
790
780
770
760
750
740
730
720
710
700

22
Refusal
(Hand auger)

11
19
Refusal
(Hand auger)

20
20
Refusal
(Hand auger)

31
Refusal
(Hand auger)

17
Refusal
(Hand auger)

120 110 100 90 80 70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70 80 90 100 110 120 150 160 170 180 190 240 250 260

SOIL PROFILE

SUMMIT COUNTY

SUM-IR 271-8.29

OHIO STATE HIGHWAY TESTING LABORATORY
1620 W. BROAD ST. COLUMBUS 23, OHIO

13/52

Sta. 449+00

740 730 720 710 700 690 680

Sod=0.3'
40 Organic
24
24
Refusal
(Hand auger)
(Hole caved in at elev. 689.0')

Sod=0.3'
21
Refusal
(Hand auger)

160 150 100 50 ℄ 50 100 150 160

Sta. 448+00

750 740 730 720 710 700 690 680

Sod=0.4'
35
53 Organic
23 Slightly organic
W
Refusal
(Hand auger)

Sod=0.3'
19
Refusal
(Hand auger)

24
Refusal
(Hand auger)

30
28
24
Refusal
(Hand auger)
(Hole squeezed in at elev. 739.8')

160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160

SOIL PROFILE

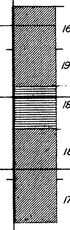
SUMMIT COUNTY

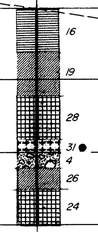
SUM-IR271-8.29

OHIO STATE HIGHWAY TESTING LABORATORY
1620 W. BROAD ST. COLUMBUS 23, OHIO

14/52

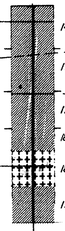
Sta. 459+00

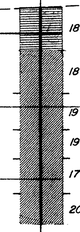




Sta. 455+00

(Sta. 455+25)



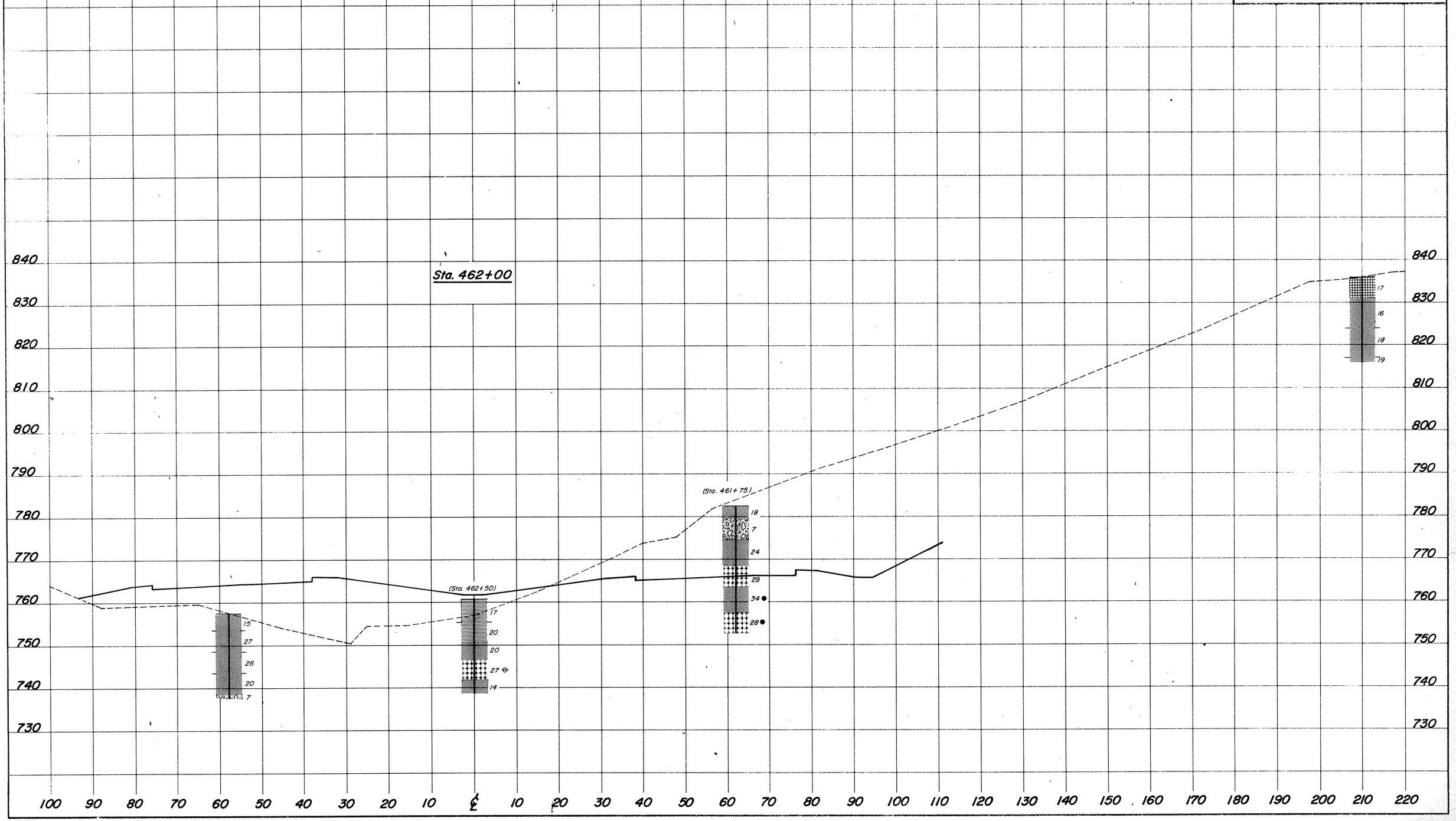


SOIL PROFILE

15
52

SUMMIT COUNTY
SUM-IR271-8.29

OHIO STATE HIGHWAY TESTING LABORATORY
1620 W. BROAD ST. COLUMBUS 23, OHIO



SOIL PROFILE

16/52

SUMMIT COUNTY

SUM-IR 271-8.29

OHIO STATE HIGHWAY TESTING LABORATORY
1620 W. BROAD ST. COLUMBUS 23, OHIO.

Sta. 468+00

780 770 760 750 740 730 720 710 700 690 680

170 150 100 50 ℄ 50 100 150

11
Refusal
(Boulders)

14
22
30 Trace of organic
21
27
34

18
22
24
20
29
11

Sta. 465+00

780 770 760 750 740 730 720

17
11
23
20
3

(Sta. 465+50)
17
15
14
23
15

(Sta. 465+35)
16
18
27
18
20
4
Refusal
(Hole caved in at elev. 740.9')

780 770 760 750 740 730 720

170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

SOIL PROFILE

SUMMIT COUNTY

SUM-IR271-8.29

OHIO STATE HIGHWAY TESTING LABORATORY
1620 W. BROAD ST. COLUMBUS 23, OHIO

17/52

Sta. 471+00

790
780
770
760
750
740
730
720
710
700
690
680
670
660

20
23 Trace of organic
22
20
21
24
20

8
16
22
28
27
29
25

Hole squeezed in at elev. 681.0'

7
36
34
28

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70 80 90 100 110 120 130 240 250 260 270

SOIL PROFILE

SUMMIT COUNTY

SUM-IR 271-8.29

OHIO STATE HIGHWAY TESTING LABORATORY
1620 W BROAD ST COLUMBUS 23 OHIO

18
52

Sta. 492+00

840 830 820 810 800 790 780 770 760 750 740 730 720

130 120 110 100 90 80 70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 230 240 250 260

17
4
26 ●
22 ●
20
24
22 ⊖

8
30 ● Slightly organic
22 ⊖ Slightly organic
26 ⊖
28
17
27 ⊖
23

12
23
⊖ 22
● 24

Sta. 475+00

830 820 810 800 790 780 770

160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160

(Sta. 474+90)
16
15
16
23
7

14
14
17
17
18
19

TE-96
2500-8-64

SOIL PROFILE

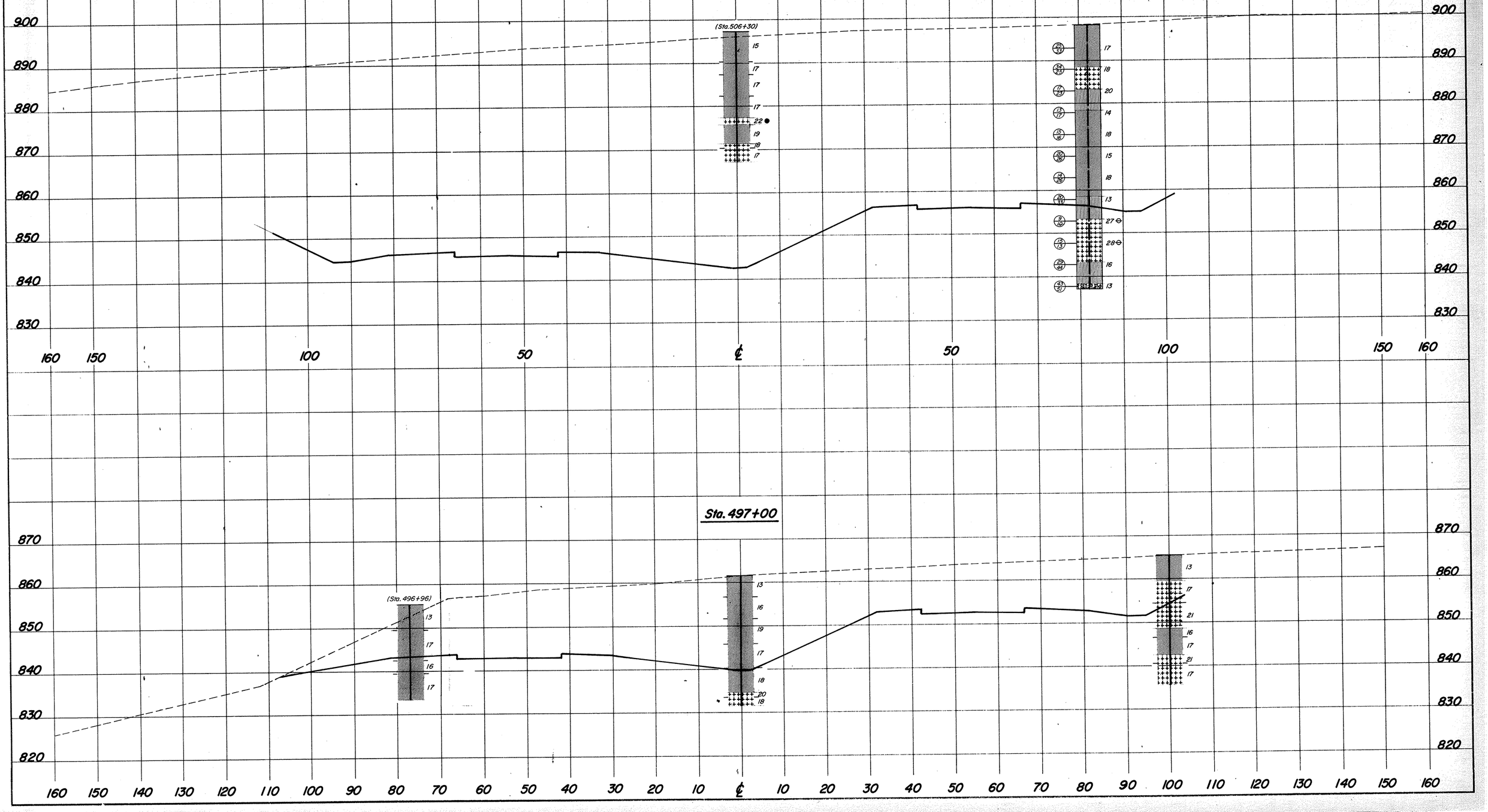
SUMMIT COUNTY

SUM-IR271-8.29

OHIO STATE HIGHWAY TESTING LABORATORY
1620 W. BROAD ST. COLUMBUS 23, OHIO

19
52

Sta. 506+00



SOIL PROFILE

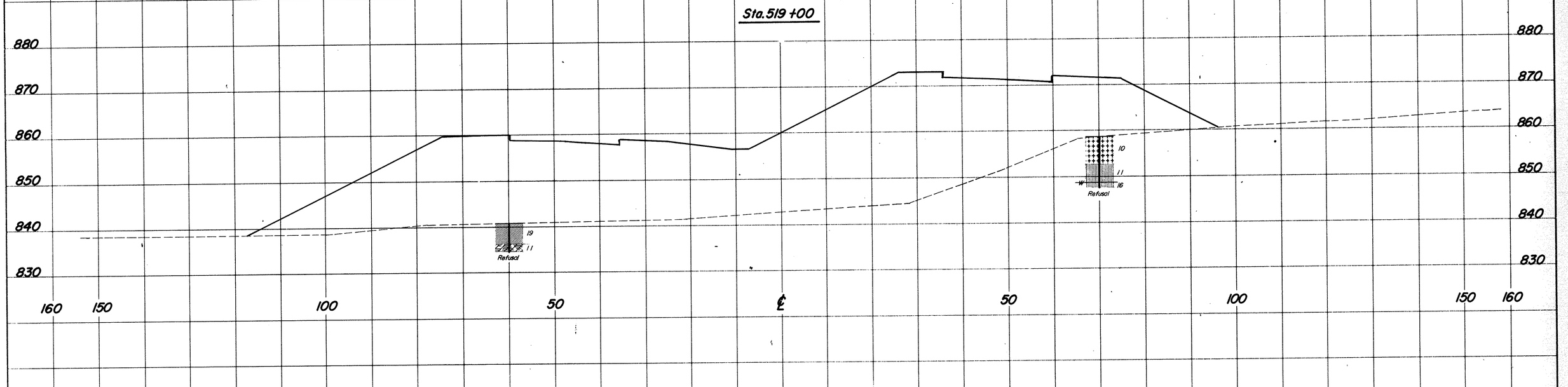
20/52

SUMMIT COUNTY

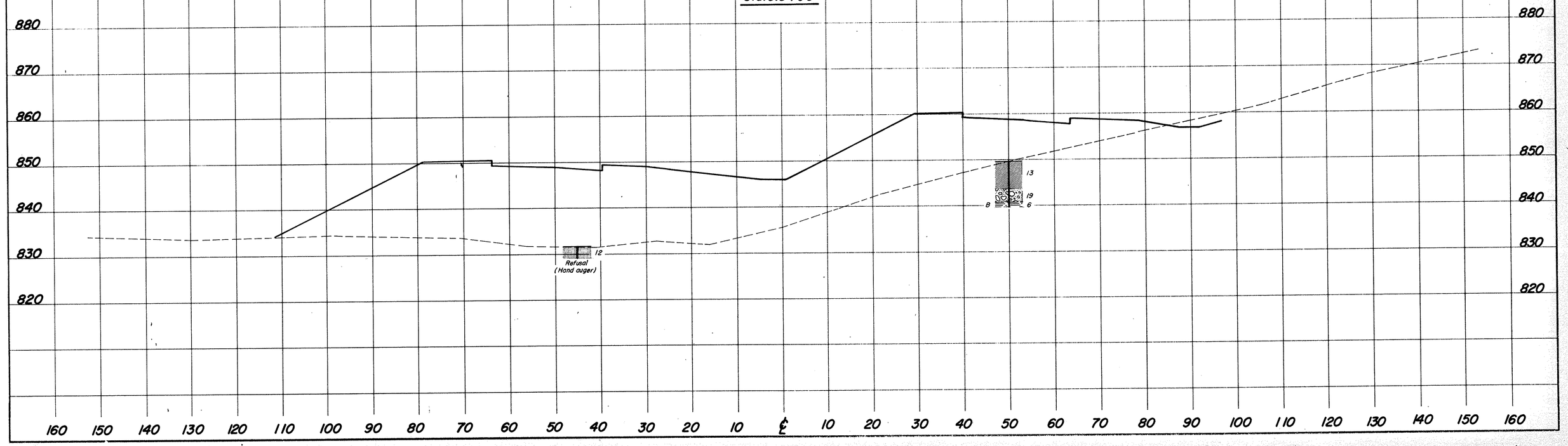
SUM-IR271-8.29

OHIO STATE HIGHWAY TESTING LABORATORY
1620 W. BROAD ST. COLUMBUS 23, OHIO

Sta. 519+00



Sta. 513+00



SOIL PROFILE

21
52

SUMMIT COUNTY

SUM-IR271-8.29

OHIO STATE HIGHWAY TESTING LABORATORY
1620 W. BROAD ST. COLUMBUS 23, OHIO

Sta.527+00

Sod=0.3'
15
19
Refusal

Sod=0.3'
12
13
Refusal

Sod=0.3'
10
20

℄

Sta.523+00

(Sta.523+15)
Sod=0.3'
18
21
Refusal

Sod=0.3'
18
18
23
Refusal

920 910 900 890 880 870 860 850

160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160

SOIL PROFILE

SUMMIT COUNTY

SUM-IR 271-8.29

OHIO STATE HIGHWAY TESTING LABORATORY
1620 W BROAD ST COLUMBUS 23, OHIO

22/52

Sta. 537+00

(Sta. 536+80)

8

Refusol

Brown clayey silt with sandstone fragments.

15

7

Refusol

Sta. 531+00

13

Refusol

12

11

7

Refusol

30

Brown silty clay with stone fragments

Top of Rock

Clay shale, brown to gray, fissile, soft to medium-firm, jointed and broken, moderately weathered. Core loss 11%.

Shale, gray, arenaceous, fissile, medium-firm, jointed, slightly weathered in top 15.0'. Core loss 1%.

950 940 930 920 910 900 890 880

160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160

SOIL PROFILE

SUMMIT COUNTY

SUM-IR271-8.29

OHIO STATE HIGHWAY TESTING LABORATORY
1620 W. BROAD ST. COLUMBUS 23, OHIO

23
52

Sta 539+00

970
960
950
940
930
920
910
900
890
880
870
860
850

(Sta 539+20)
9
Refusal

7
10
Refusal

Brown silty clay

Top of Rock

Sandstone, brown, fine-grained, firm, with clay seams. Core loss 8%.

Shale, gray, fissile, soft to medium-firm, with sandstone comprising 34% of the interval. Core loss 12%.

Shale, gray, non-fissile, firm. No core loss.

190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70 80 90 100 110 120 130

SOIL PROFILE

(24/52)

SUMMIT COUNTY
SUM-IR 271- 8.29

OHIO STATE HIGHWAY TESTING LABORATORY
1620 W. BROAD ST COLUMBUS 23, OHIO

990
980
970
960
950
940
930
920
910
900
890
880
870
860

Sta. 543 + 00

11
7
Refusal

11
Refusal
(Hand auger)

(Sta. 543+50)
21
13
Refusal

8
12.6
Refusal

210 200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70 80 90 100 110

SOIL PROFILE

25
52

SUMMIT COUNTY
SUM- IR 271- 8.29

OHIO STATE HIGHWAY TESTING LABORATORY
1620 W. BROAD ST. COLUMBUS 23, OHIO

Sta. 546+00

990
980
970
960
950
940
930
920
910
900
890
880

8
Refusal
(Hand auger)

10
Refusal

11
7
Refusal

240 230 220 210 200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70 80

SOIL PROFILE

26/52

SUMMIT COUNTY
SUM-IR271-8.29

OHIO STATE HIGHWAY TESTING LABORATORY
1620 W. BROAD ST. COLUMBUS 23, OHIO

Sta. 569+00

(Sta. 569+15)
15
Refusal
(Hand auger)

11
Refusal
(Hand auger)

12
9
Refusal

Sta. 547+00

14 Top of Rock
Clay shale, brown, very soft and crumbly, extremely weathered. Core loss 65%.

Shale, gray, fissile, argillaceous, arenaceous and calcareous in part, medium-firm, jointed and broken, slightly weathered, with clay seams. Core loss 4%.

Sandstone, gray, very fine-grained, calcareous in part, firm, with shale, comprising 25% of the interval. No core loss.

Shale, gray, arenaceous, fissile, firm, with thin sandstone seams. Core loss 7%.

TE - 118
600 - 11 - 64

SUMMIT COUNTY
SUM-IR271-8.29

27/52 — 1/4

GEOLOGY OF THE SITE

The structure site is located upon the glaciated Allegheny Plateau. Deep glacial-derived soil overlies sandstone and shale bedrock, of Mississippian age.

EXPLORATION

The exploration consisted of two drive sample borings, made between April 28 and May 5, 1965, and eight drive rod penetration tests, made between February 3 and 9, 1965.

INVESTIGATIONAL FINDINGS

The borings encountered loose to medium-dense and soft to medium-stiff silts and clays above approximately elevation 640 feet, some containing organic material; below this, dense to very dense, stiff to very stiff gravelly sandy silts, silts, and clays. The borings were terminated at 71 and 101-foot depths, elevations 628 and 602 feet, after penetrating 10 and 30 feet of material requiring more than 30 blows per foot in the standard penetration test.

Rod soundings met very rapid increase in penetration resistance with increase in depth and were terminated upon encounter with refusal or near-refusal to penetration 30 to 45 feet below ground surface, elevations 687 to 650 feet, considered to be in very dense and stiff silts and clays, as revealed by the borings.

Free water was encountered in the majority of the rod sounding holes, between elevations 700 and 691 feet.

No test penetrated to bedrock surface.

LEGEND

- Auger Boring Location - Plan View.
- Press and / or Drive Sample and / or Core Boring Location - Plan View.
- Drive Rod Penetration Resistance Sounding Location - Plan View.
- Capped Pile
- Footing
- Footing on Pile
- *TR* — Top of Rock
- Horizontal Bar on Boring Log Indicates the Depth the Sample Was Taken.
- X/Y — Figures Beside the Boring Log in Profile Indicate the Number of Blows for Standard Penetration Test.
  X = Number of Blows for First 6 inches.
  Y = Number of Blows for Second 6 inches.
- Drive Rod Penetration Resistance Sounding Log - Profile
- Casing
- Resistance "R" < 10,000 lbs.
- Resistance "R" > 10,000 lbs.
- Z — Indicates Final Measurement of Penetration, in Inches.
- W — Indicates Free Water Elevation.
- Indicates Static Water Elevation.

SYMBOLS OF ROCK TYPES

- Coal
- Weathered Indurated Clay
- Indurated Clay
- Weathered Shale
- Shale
- Weathered Sandstone
- Sandstone
- Leached Dolomite
- Dolomite
- Leached Limestone
- Limestone

GENERAL INFORMATION

Drive Rod Penetration Sounding Tests

Drive rod penetration resistance tests constitute driving a 1.315-inch diameter steel rod, with a 45° cone point, into the ground, using a 122-pound drop-hammer with a free fall of five feet. At one or two-foot depth intervals, a measurement is taken to determine the amount of penetration achieved in three hammer drops. This reading is converted to an empirical value for capacity "R", in thousands of pounds (which is a measure of both the point resistance and frictional resistance on the rod), by using charts prepared by the Ohio Department of Highways, Bureau of Bridges, on the basis of correlation study of rod penetration with past performance of pile driving. For interpretation, a graph is prepared by plotting the value "R" against the depth at which the reading was taken, and connecting the plotted points. The curve so obtained reflects the density of subsurface materials in a manner that can be readily compared with data from similar tests at other locations on the structure site. From this comparison, the overall uniformity of subsurface condition may be evaluated.

Drive Sample Borings - Drive-Press Sample Borings

Drive sample borings are made by means of a rotary-type drill rig, employing a 2" O.D., 1-3/8" I.D. sampler, at 2-1/2 and / or 5-foot depth intervals, driven by means of a 140 - pound drop-hammer with a free fall of 30 inches. The number of blows required to drive the sampler 12 inches is considered the standard penetration test.

Drive-press sample borings are made by means of a rotary-type drill rig, employing a 2" O.D., 1-3/8" I.D. drive sampler, and 3" O.D. thin-wall press sampler. The press sampler is advanced by continuous uniform pressure, applied by the drill rig.

The boring log sheets show a graphic plot of the information obtained, including depth and elevation of the sample, number of blows for the standard penetration tests in two 6-inch increments, depth of press samples, field sample number, sample description - based on laboratory tests and the Casagrande AC classification system - and gradation, plasticity, and moisture content determinations. Results of strength and consolidation testing, if performed, appear on separate enclosures.

At depths where materials are bouldery or gravelly to the extent that the sampler can not be driven, a wash sample is procured for visual classification, in order to determine the general character of the material. These samples are not considered sufficiently representative to warrant laboratory testing.

Particle Size Definitions

Boulders	Cobbles	Gravel	Coarse Sand	Fine Sand	Silt	Clay
8"	3"	2.0mm (No. 10 sieve)	0.42mm (No. 40 sieve)	0.074mm (No. 200 sieve)	0.005mm	

NOTE: Information shown by this subsurface investigation was obtained solely for the use in establishing design controls for the project. The State of Ohio does not guarantee the accuracy of this data and it is not to be construed as a part of the plans governing construction of the project.

OHIO DEPARTMENT OF HIGHWAYS
TESTING LABORATORY
1620 WEST BROAD STREET, COLUMBUS 23, OHIO

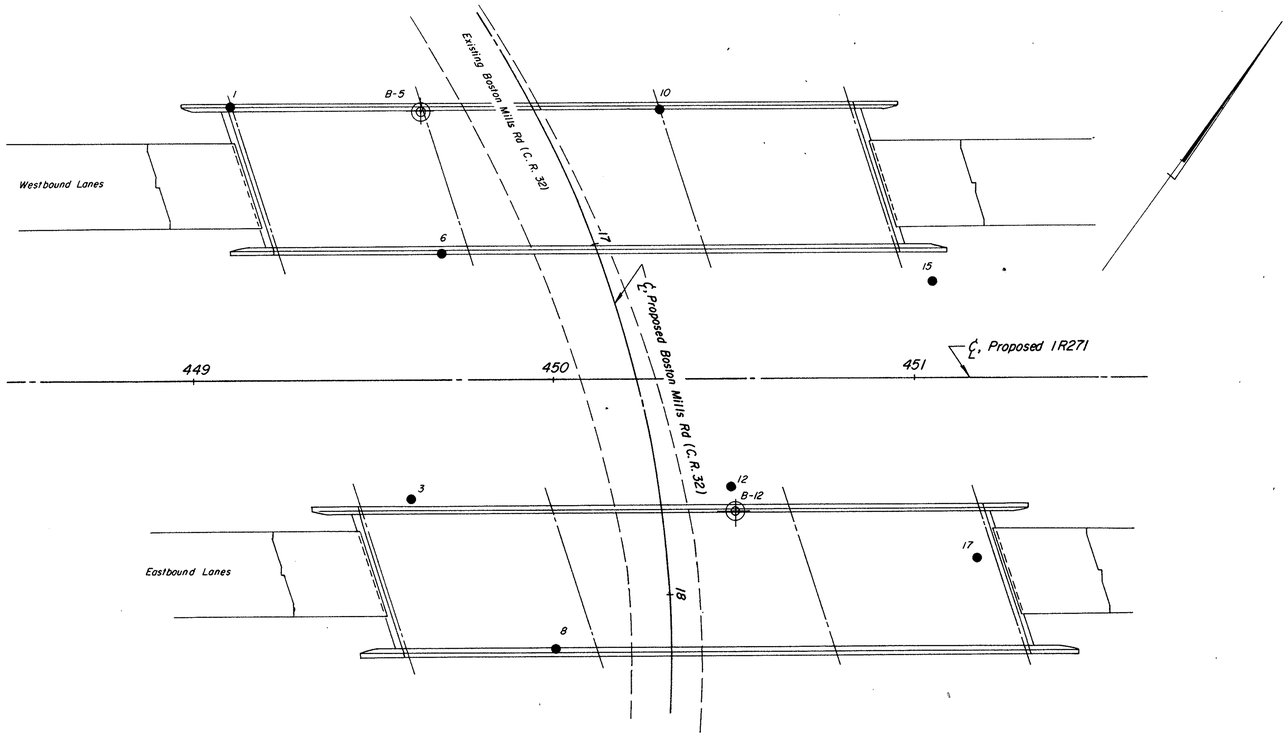
STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. SUM-IR271-0854 L/R
OVER BOSTON MILLS RD (COUNTY ROAD 32)
SEC. SUM-IR271-8.29

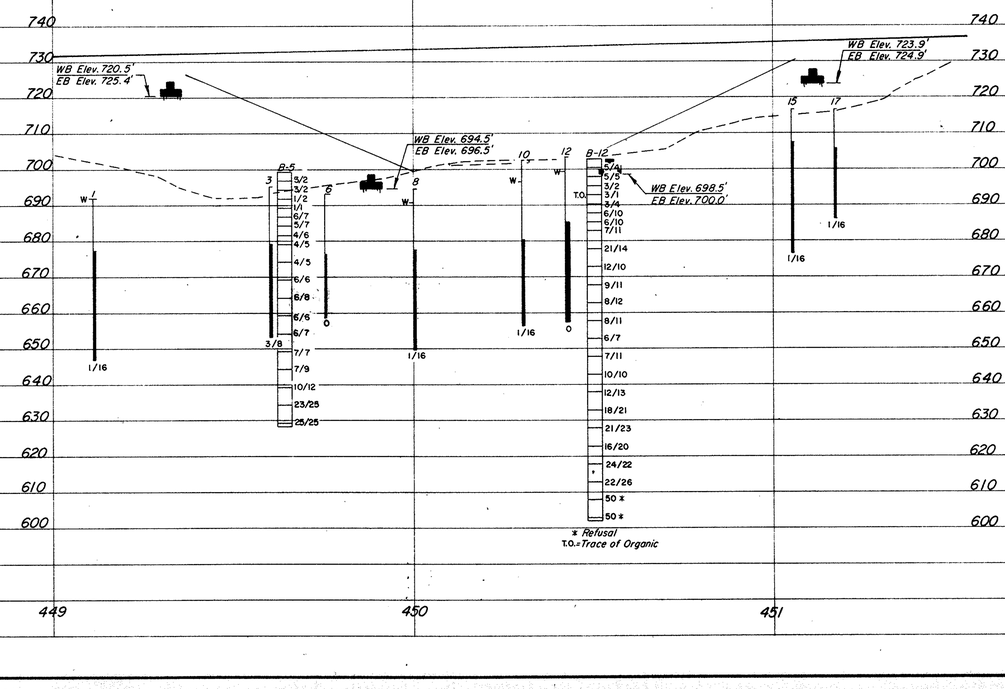
CHECKED BY	REVIEWED BY	DATE
R.H.P	R.D.R.	6/9/65

TE - 119
500 - 11 - 64

28
52

SUM-IR271-8.29 2/4





SCALE: 1" = 20'

OHIO DEPARTMENT OF HIGHWAYS
TESTING LABORATORY
1620 WEST BROAD STREET, COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. SUM-IR271-0854 L/R
OVER BOSTON MILLS RD (COUNTY ROAD 32)
SEC. SUM-IR271-8.29

PLAN AND PROFILE

DRAWN BY	CHECKED BY	REVIEWED BY	DATE
R.L.C.	R.H.P.	R.D.R.	6/9/65

TE - 122
600 - 11 - 64

29
52
3
4

SUM - IR 271 - 8.29

LOG OF BORING

Date Started 5-4-65 | Sampler Type SS | Dia. 2 3/8" | Water Elev. —
Date Completed 5-5-65 | Casing: Length — | Dia. — | Surface Elev. 699.5'
Boring No. B-5 | Station & Offset 449+64, 75' Lt (REAR PIER)

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	Physical Characteristics: % Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	SHTL Class.
699.5	0														
697.0	2	3/2			Brownish-Gray Silt	1	0	0	8	62	30	26	6	28	
694.5	4	3/2			Mottled Brown and Gray Clayey Silt	2	0	0	2	62	36	32	9	26	
692.0	6	1/2			Brownish-Gray Silt	3	0	0	16	58	26	NP	NP	30	
689.5	8	1/1			Brownish-Gray Silt	4	0	0	18	57	25	NP	NP	28	
687.0	10	6/7			Gray Clayey Silt	5	0	0	2	54	44	25	9	31	
684.5	12	5/7			Gray Silt and Clay	6	0	0	0	54	46	29	12	29	
682.0	14	4/6			Gray Silt and Clay	7	0	0	0	34	66	37	15	37	
679.5	16	4/5			Gray Clayey Silt	8	0	0	0	50	50	28	10	34	
674.5	18	4/5			Gray Clay	9	0	0	0	35	65	41	21	27	
669.5	20	6/6			Gray Silt and Clay	10	0	0	0	42	58	34	15	29	
664.5	22	6/8			Gray Silty Clay	11	0	0	0	41	59	38	17	28	
659.5	24	6/6			Gray Silty Clay	12	0	0	0	32	68	45	19	31	
654.5	26	6/7			Gray Silty Clay	13	0	0	0	30	70	43	19	34	
649.5	28	7/7			Gray Silt and Clay	14	0	0	1	27	72	39	15	27	
644.5	30	7/9			Gray Clayey Silt	15	0	0	1	53	46	25	7	28	
639.5	32	10/12			Gray Clayey Silt	16	0	0	0	52	48	30	8	24	
634.5	34	23/25			Gray Silt	17	15	2	1	73	9	NP	NP	20	
629.5	36	25/25			Gray Silt — BOTTOM OF BORING	18	0	1	1	87	11	NP	NP	32	

LOG OF BORING

Date Started 4-28-65 | Sampler Type SS | Dia. 2 3/8" | Water Elev. —
Date Completed 4-28-65 | Casing: Length 25' | Dia. 3 1/2" | Surface Elev. 702.9'
Boring No. B-12 | Station & Offset 450+50, 37' Rt (FORWARD PIER)

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	Physical Characteristics: % Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	SHTL Class.
702.9	0														
700.4	2	5/4			Brown and Gray Silt and Clay	1	0	4	3	40	53	36	15	28	
697.9	4	5/5			Brown Silt and Clay	2	0	4	6	48	42	32	11	23	
695.4	6	3/2			Gray Silty Gravelly Sand	3	25	30	11	21	13	NP	NP	17	
692.9	8	3/1			Gray Clayey Silt, Trace of Organic	4	0	3	11	60	26	31	7	30	
690.4	10	3/4			Gray Silty Gravelly Sand	5	40	35	7	6	12	22	7	21	
687.9	12	6/10			Gray Silt and Clay	6	0	2	4	34	60	38	15	22	
685.4	14	6/10			Brown and Gray Gravelly Silt	7	22	8	3	37	30	30	9	23	
682.9	16	7/11			Brown and Gray Silt and Clay	8	0	1	4	39	56	35	15	21	
677.9	18	21/14			Gray Silt	9	9	1	1	63	26	NP	NP	23	
672.9	20	12/10			Gray Silty Clay	10	0	1	0	17	82	44	19	34	
667.9	22	9/11			Gray Silt and Clay	11	0	0	0	40	60	34	13	26	
662.9	24	8/12			Gray Silty Clay	12	0	0	0	37	63	37	17	32	
657.9	26	8/11			Gray Silt and Clay	13	0	0	0	22	78	37	15	33	
652.9	28	8/7			Gray Clay	14	0	1	0	25	74	43	23	34	
647.9	30	7/11			Gray Silt and Clay	15	0	0	1	35	64	38	15	28	
642.9	32	10/10			Gray Silt and Clay	16	0	1	1	34	64	33	12	23	
637.9	34	12/13			Gray Silt and Clay	17	0	0	0	36	64	32	12	23	
632.9	36	18/21			Gray Silt	18	0	0	1	59	40	NP	NP	32	
627.9	38	21/23			Gray Silt	19	0	0	1	85	14	NP	NP	18	
622.9	40	16/20			Gray Clayey Silt	20	0	2	6	72	20	26	8	17	
617.9	42	24/22			Gray Silt	21	0	0	1	60	39	NP	NP	21	
612.9	44	22/26			Gray Silt	22	0	1	1	56	42	NP	NP	21	
607.9	46	50* (0.7')			Gray Gravelly Silt	23	15	3	2	32	48	31	9	13	
602.9	48	50* (0.8')			Gray Silt and Clay — BOTTOM OF BORING	24	9	4	5	33	49	29	13	25	

*Refusal

OHIO DEPARTMENT OF HIGHWAYS
TESTING LABORATORY
1620 WEST BROAD STREET, COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. SUM - IR 271 - 0854 L/R
OVER BOSTON MILLS RD (COUNTY ROAD 32)
SEC. SUM - IR 271 - 8.29

BORING DATA

TYPED BY	CHECKED BY	REVIEWED BY	DATE
B. J. R.	R.C.	R.D.R.	6/9/65

TS-114
1000-1-64

30
52
4
4

Test Location No. 1
Station & Offset 449+11.76' LT
REAR ABUTMENT
Surface Elev. 692.0' Water Elev. 692.0'
Piling
Hammer
Formula
Reference
Rod Condition GOOD

Test Location No. 3
Station & Offset 449+60.33' RT
REAR ABUTMENT
Surface Elev. 695.1' Water Elev. Closed at Top of Hole
Piling
Hammer
Formula
Reference
Rod Condition ROD BENT-12'

Test Location No. 6
Station & Offset 449+69.35' LT
REAR PIER
Surface Elev. 693.3' Water Elev. Closed at Top of Hole
Piling
Hammer
Formula
Reference
Rod Condition GOOD

Test Location No. 8
Station & Offset 450+00.75' RT
REAR PIER
Surface Elev. 694.8' Water Elev. 690.8'
Piling
Hammer
Formula
Reference
Rod Condition GOOD

Test Location No. 10
Station & Offset 450+30.75' LT
FORWARD PIER
Surface Elev. 702.6 Water Elev. 696.6'
Piling
Hammer
Formula
Reference
Rod Condition GOOD

Test Location No. 12
Station & Offset 450+49.30' RT
FORWARD PIER
Surface Elev. 703.4' Water Elev. 699.4'
Piling
Hammer
Formula
Reference
Rod Condition GOOD

Test Location No. 15
Station & Offset 451+05.27' LT
FORWARD ABUTMENT
Surface Elev. 716.7' Water Elev. DRY-Hole Closed at El. 711.7'
Piling
Hammer
Formula
Reference
Rod Condition GOOD

Test Location No. 17
Station & Offset 451+17.50' RT
FORWARD ABUTMENT
Surface Elev. 716.7' Water Elev. DRY-Hole Closed at El. 710.7'
SUM-IR271-8.29
Piling
Hammer
Formula
Reference
Rod Condition

726 722 718 714 710 706 702 698 694 690 686 682 678 674 670 666 662 658 654 650 646

TEST ROD

10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

OHIO STATE HIGHWAY TESTING LABORATORY
1620 WEST BROAD ST. COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. SUM-IR271-0854 L/R
OVER BOSTON MILLS RD (COUNTY ROAD 32)
SEC. SUM-IR271-8.29

DRIVE ROD PENETRATION RESISTANCE DATA

PLOTTED BY	CHECKED BY	REVIEWED BY	DATE
R.C.	R.H.P.	R.D.R.	6/9/65

GEOLOGY OF THE SITE

The structure site is located upon the glaciated Allegheny Plateau. Deep glacial-derived soil overlies sandstone and shale bedrock, of Mississippian age.

EXPLORATION

The exploration consisted of two drive sample-core borings and five drive rod penetration tests, made between January 28 and February 11, 1965.

INVESTIGATIONAL FINDINGS

The borings encountered medium-dense to very dense, stiff to very stiff, gravelly sandy silts, silts, and clays. The borings were terminated at 81-foot depths, elevations 760 and 757 feet, after penetrating 30 feet of material requiring more than 30 blows per foot in the standard penetration test.

Rod soundings met very rapid increase in penetration resistance with increase in depth and were terminated upon encounter with refusal or near-refusal to penetration 19 and 20 feet below ground surface, elevations 821 and 817 feet, considered to be in very dense and stiff silts and clays, as revealed by the borings.

No free water was observed in any of the rod sounding holes.

No test penetrated to bedrock surface.

LEGEND

- Auger Boring Location - Plan View.
- Press and / or Drive Sample and / or Core Boring Location - Plan View.
- Drive Rod Penetration Resistance Sounding Location - Plan View.
- Capped Pile
- Footing
- Footing on Pile
- TR — Top of Rock
- Horizontal Bar on Boring Log Indicates the Depth the Sample Was Taken.
- X/Y — Figures Beside the Boring Log in Profile Indicate the Number of Blows for Standard Penetration Test.
  X = Number of Blows for First 6 inches.
  Y = Number of Blows for Second 6 inches.
- Drive Rod Penetration Resistance Sounding Log - Profile
- Casing
- Resistance "R" < 10,000 lbs.
- Resistance "R" > 10,000 lbs.
- Z — Indicates Final Measurement of Penetration, in Inches.
- W — Indicates Free Water Elevation.
- Indicates Static Water Elevation.

SYMBOLS OF ROCK TYPES

- Coal
- Weathered Indurated Clay
- Indurated Clay
- Weathered Shale
- Shale
- Weathered Sandstone
- Sandstone
- Leached Dolomite
- Dolomite
- Leached Limestone
- Limestone

GENERAL INFORMATION

Drive Rod Penetration Sounding Tests

Drive rod penetration resistance tests constitute driving a 1.315-inch diameter steel rod, with a 45° cone point, into the ground, using a 122-pound drop-hammer with a free fall of five feet. At one or two-foot depth intervals, a measurement is taken to determine the amount of penetration achieved in three hammer drops. This reading is converted to an empirical value for capacity "R", in thousands of pounds (which is a measure of both the point resistance and frictional resistance on the rod), by using charts prepared by the Ohio Department of Highways, Bureau of Bridges, on the basis of correlation study of rod penetration with past performance of pile driving. For interpretation, a graph is prepared by plotting the value "R" against the depth at which the reading was taken, and connecting the plotted points. The curve so obtained reflects the density of subsurface materials in a manner that can be readily compared with data from similar tests at other locations on the structure site. From this comparison, the overall uniformity of subsurface condition may be evaluated.

Drive Sample Borings - Drive-Press Sample Borings

Drive sample borings are made by means of a rotary-type drill rig, employing a 2" O.D., 1-3/8" I.D. sampler, at 2-1/2 and / or 5-foot depth intervals, driven by means of a 140 - pound drop-hammer with a free fall of 30 inches. The number of blows required to drive the sampler 12 inches is considered the standard penetration test.

Drive-press sample borings are made by means of a rotary-type drill rig, employing a 2" O.D., 1-3/8" I.D. drive sampler, and 3" O.D. thin-wall press sampler. The press sampler is advanced by continuous uniform pressure, applied by the drill rig.

The boring log sheets show a graphic plot of the information obtained, including depth and elevation of the sample, number of blows for the standard penetration tests in two 6-inch increments, depth of press samples, field sample number, sample description - based on laboratory tests and the Casagrande AC classification system - and gradation, plasticity, and moisture content determinations. Results of strength and consolidation testing, if performed, appear on separate enclosures.

At depths where materials are bouldery or gravelly to the extent that the sampler can not be driven, a wash sample is procured for visual classification, in order to determine the general character of the material. These samples are not considered sufficiently representative to warrant laboratory testing.

Particle Size Definitions

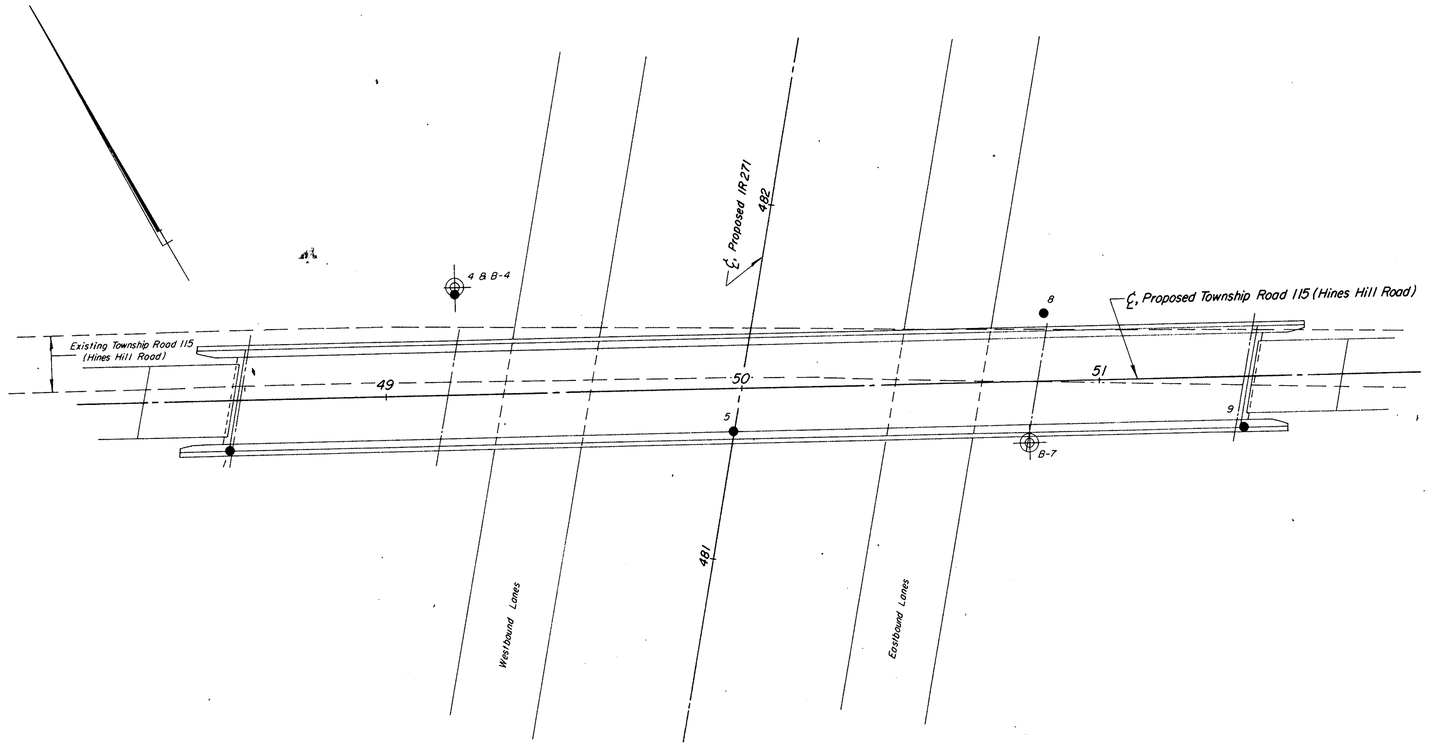
Boulders	Cobbles	Gravel	Coarse Sand	Fine Sand	Silt	Clay
8"	3"	2.0mm (No. 10 sieve)	0.42mm (No. 40 sieve)	0.074mm (No. 200 sieve)	0.005mm	

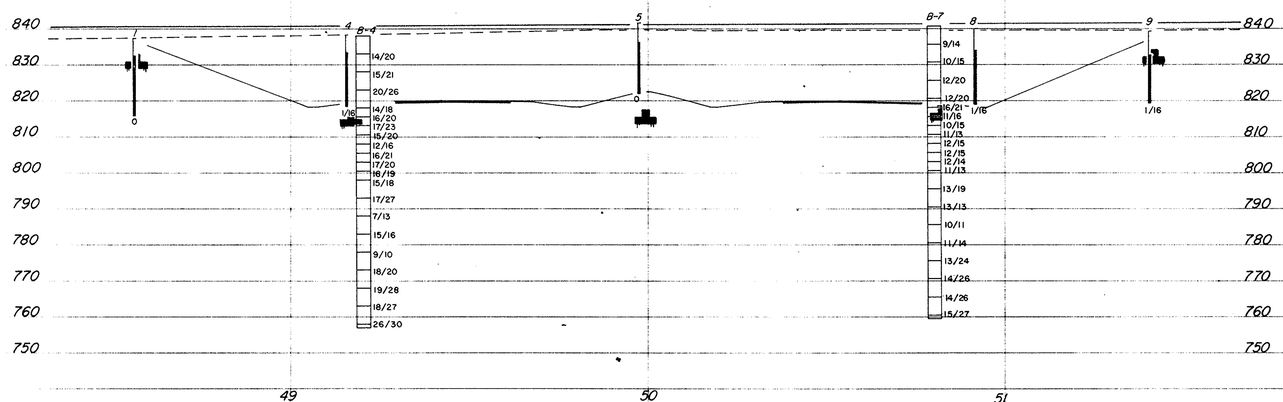
NOTE: Information shown by this subsurface investigation was obtained solely for the use in establishing design controls for the project. The State of Ohio does not guarantee the accuracy of this data and it is not to be construed as a part of the plans governing construction of the project.

OHIO DEPARTMENT OF HIGHWAYS
TESTING LABORATORY
1620 WEST BROAD STREET, COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. SUM-IR271-0914
UNDER TOWNSHIP ROAD 115(HINES HILL ROAD)
SEC. SUM-IR271-8.29

CHECKED BY	REVIEWED BY	DATE
R.H.P.	R.D.R.	2/25/65





SCALE: 1" = 20'

OHIO DEPARTMENT OF HIGHWAYS
TESTING LABORATORY
1620 WEST BROAD STREET, COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. SUM-IR271-0914
UNDER TOWNSHIP ROAD 115 (HINES HILL ROAD)
SEC. SUM-IR271-8.29

PLAN AND PROFILE

DRAWN BY	CHECKED BY	REVIEWED BY	DATE
R.L.C.	R.H.P.	R.D.R.	2/25/65

15 - 122
6/62 - 11 - 64

LOG OF BORING

Date Started 2-9-65 | Sampler Type SS | Dia. 1 3/8" | Water Elev. ———
Date Completed 2-11-65 | Casing: Length ——— | Dia. ———
Boring No. B-4 | Station & Offset 49+20, 30' Lt (REAR PIER) | Surface Elev. 838.1'

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	Physical Characteristics: % Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	SHTL Class.
838.1	0														
	2														
	4														
833.1	6	14/20			Brown and Gray Silt and Clay	1	0	2	6	34	58	35	14	20	
	8														
828.1	10	15/21			Brown Silt and Clay	2	0	3	6	37	54	34	14	20	
	12														
	14														
823.1	16	20/26			Brown and Gray Silt and Clay	3	0	3	7	43	47	32	12	20	
	18														
818.1	20	14/18			Brown Silt and Clay	4	0	2	8	37	53	30	12	21	
815.6	22	16/20			Gray and Brown Clayey Silt	5	0	3	5	47	45	29	9	17	
813.1	24	17/23			Gray and Brown Clayey Silt	6	0	3	6	46	45	28	8	19	
810.6	26	15/20			Gray Clayey Silt	7	0	2	6	64	28	29	9	21	
808.1	28	12/16			Brown and Gray Sandy Gravelly Silt	8	25	11	7	25	32	32	9	22	
805.6	30	16/21			Gray Clayey Silt	9	0	1	8	46	45	28	8	21	
803.1	32	17/20			Gray and Brown Clayey Silt	10	0	2	5	45	48	29	8	19	
800.6	34	16/19			Gray Gravelly Silt	11	23	3	4	30	40	30	7	21	
798.1	36	15/18			Gray Clayey Silt	12	0	2	5	39	54	32	10	21	
	38														
	40														
	42														
793.1	44	17/27			Gray Silty Clay	13	0	1	1	17	81	43	19	26	
	46														
788.1	48	7/13			Gray Clayey Silt	14	0	0	1	41	58	32	10	28	
	50														
783.1	52	15/16			Gray Silt	15	0	0	0	51	49	28	6	27	
	54														
778.1	56	9/10			Gray Silt	16	0	0	0	50	50	28	4	27	
	58														
773.1	60	18/20			Gray Silt	17	0	3	4	44	49	26	6	17	
	62														
768.1	64	19/28			Gray Clayey Silt	18	0	4	5	44	47	28	7	18	
	66														
763.1	68	18/27			Gray Clayey Silt	19	0	2	4	64	30	28	7	17	
	70														
758.1	72				BOTTOM OF BORING										
757.1	74	26/30			Gray Clayey Silt	20	0	2	4	35	59	30	8	20	
	76														
	78														
	80														

LOG OF BORING

Date Started 1-27-65 | Sampler Type SS | Dia. 1 3/8" | Water Elev. ———
Date Completed 2-4-65 | Casing: Length ——— | Dia. ———
Boring No. B-7 | Station & Offset 50+80, 17' Rt (FORWARD PIER) | Surface Elev. 840.8'

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	Physical Characteristics: % Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	SHTL Class.
840.8	0														
	2														
	4														
835.8	6	9/14			Brown and Gray Silt and Clay	1	0	5	6	35	54	34	14	20	
	8														
830.8	10	10/15			Brown Silt and Clay	2	0	2	5	40	53	33	12	16	
	12														
	14														
825.8	16	12/20			Brown Clayey Silt	3	0	2	7	53	38	29	9	18	
	18														
820.8	20	12/20			Gray and Brown Clayey Silt	4	0	3	6	61	30	31	10	19	
818.3	22	16/21			Gray Silt and Clay	5	0	4	6	51	39	30	13	18	
815.8	24	11/16			Gray Clayey Silt	6	0	2	6	52	40	28	9	17	
813.3	26	10/15			Gray Clayey Silt	7	0	3	7	58	32	28	9	15	
810.8	28	11/13			Gray Clayey Silt	8	0	1	4	73	22	27	8	16	
808.3	30	12/15			Gray Gravelly Silt	9	16	5	7	54	18	28	9	19	
805.8	32	12/15			Gray Clayey Silt	10	0	3	6	64	27	29	10	18	
803.3	34	12/14			Gray Clayey Silt	11	0	2	4	84	10	30	10	20	
800.8	36	11/13			Gray Silt and Clay	12	0	1	3	47	49	31	11	19	
	38														
	40														
	42														
795.8	44	13/19			Gray Clayey Silt	13	0	3	5	60	32	30	9	23	
	46														
790.8	48	13/13			Gray Silt and Clay	14	0	0	1	56	43	34	12	29	
	50														
785.8	52	10/11			Gray Silt	15	0	2	1	74	23	28	6	25	
	54														
780.8	56	11/14			Gray Clayey Silt	16	0	2	3	57	38	26	8	13	
	58														
775.8	60	13/24			Gray Clayey Silt	17	0	1	2	55	42	30	9	18	
	62														
770.8	64	14/26			Gray Clayey Silt	18	0	4	5	57	34	27	7	17	
	66														
765.8	68	14/26			Gray Clayey Silt	19	0	2	5	59	34	30	10	15	
	70														
760.8	72				BOTTOM OF BORING										
759.8	74	15/27			Gray Clayey Silt	20	0	5	7	48	40	29	8	17	
	76														
	78														
	80														

OHIO DEPARTMENT OF HIGHWAYS
TESTING LABORATORY
1620 WEST BROAD STREET, COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. SUM-IR271-0914
UNDER TOWNSHIP ROAD 115 (HINES HILL RD)
SEC. SUM-IR271-8.29

BORING DATA

TYPED BY	CHECKED BY	REVIEWED BY	DATE
B.J.R.	R.C.	R.D.R.	2/25/65

TE-114
1000-11-64

34
52

SUM-IR271-8.29 (4/4)

Test Location No. ____
Station & Offset ____
Surface Elev. ____ Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition ____

Test Location No. ____
Station & Offset ____
Surface Elev. ____ Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition ____

Test Location No. ____
Station & Offset ____
Surface Elev. ____ Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition ____

Test Location No. 1
Station & Offset 48+56.14' RT
REAR ABUTMENT
Surface Elev. 837.6 Water Elev. DRY-Hole Closed at El. 831.6'
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition GOOD
TEST ROD

Test Location No. 4
Station & Offset 49+20.28' LT
REAR PIER
Surface Elev. 838.3 Water Elev. DRY-Hole Closed at El. 834.3'
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition GOOD
TEST ROD

Test Location No. 5
Station & Offset 49+97.12' RT
CENTER PIER
Surface Elev. 841.7 Water Elev. DRY-Hole Closed at El. 832.7'
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition GOOD
TEST ROD

Test Location No. 8
Station & Offset 50+85.19' LT
FORWARD PIER
Surface Elev. 840.0' Water Elev. DRY-Hole Closed at El. 837.0'
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition GOOD
TEST ROD

Test Location No. 9
Station & Offset 51+40.14' RT
FORWARD ABUTMENT
Surface Elev. 839.2' Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition GOOD
TEST ROD

Capacity "R" in Thousands of Pounds: 10 20 30 40 50 60 70 80 90 100

OHIO STATE HIGHWAY TESTING LABORATORY
1620 WEST BROAD ST. COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. SUM-IR271-0914
UNDER TOWNSHIP ROAD 115 (HINES HILL ROAD)
SEC. SUM-IR271-8.29

DRIVE ROD PENETRATION RESISTANCE DATA

PLOTTED BY	CHECKED BY	REVIEWED BY	DATE
R.C.	R.H.P.	R.D.R.	2/25/65

GEOLOGY OF THE SITE
The structure site is located in the glaciated Allegheny Plateau region on a dissected portion east valley wall of the Cuyahoga River. Thin to moderately deep glacially derived soils overlie shales and sandstones, of Lower Mississippian and Upper Devonian age.

EXPLORATION
The exploration consisted of three drive sample-core borings and eight drive rod penetration tests were made between April 5 and 14, and on June 8, 9, and 10, 1966.

INVESTIGATIONAL FINDINGS
Borings encountered medium-dense to dense gravelly silts and some sandy gravels to bedrock surface, encountered at 6 to 25-foot depths, elevations 846 to 843 feet. The borings were terminated 14 and 19 feet below bedrock surface, elevations 829 and 827 feet.

Rod soundings met rapid increase in penetration resistance with increase in depth, and were terminated upon encounter with refusal or near refusal to penetration at 9 to 16-foot depths, elevations 853 to 840 feet: soundings 3, 4, and 7, considered to be on, or below bedrock surface, and the remainder of the soundings in the dense material above bedrock, as revealed by the borings.

On the basis of tests, bedrock surface is considered to be somewhat flat-lying across the site between elevations 846 and 843 feet.

If it is the intention to found the rear and center piers on bedrock, it is considered advisable that the open excavations be inspected in the field in order to insure that the excavations have been extended to rock throughout the entire founding area. It is further suggested that the area of the footing contact not be subjected to prolonged atmospheric exposure, and that the excavation be kept drained at all times, due particularly to the fact that while this shale and indurated clay bedrock is generally firm in place, it is susceptible to disintegration upon exposure to the atmosphere and water.

Unconfined compression tests on similar bedrock indicate a crushing strength of 50 tons per square foot for the weathered shale and indurated clay, and 100 tons per square foot for the medium-firm shale.

LEGEND

- Auger Boring Location - Plan View.
- Press and / or Drive Sample and / or Core Boring Location - Plan View.
- Drive Rod Penetration Resistance Sounding Location - Plan View.
- Capped Pile
- Footing
- Footing on Pile
- TR — Top of Rock
- Horizontal Bar on Boring Log Indicates the Depth the Sample Was Taken.
- X/Y — Figures Beside the Boring Log in Profile Indicate the Number of Blows for Standard Penetration Test.
  X = Number of Blows for First 6 inches.
  Y = Number of Blows for Second 6 inches.
- Drive Rod Penetration Resistance Sounding Log - Profile
- Casing
- Resistance "R" < 10,000 lbs.
- Resistance "R" > 10,000 lbs.
- Z — Indicates Final Measurement of Penetration, in Inches.
- W — Indicates Free Water Elevation.
- Indicates Static Water Elevation.

SYMBOLS OF ROCK TYPES

- Coal
- Weathered Indurated Clay
- Indurated Clay
- Weathered Shale
- Shale
- Boulders
- Weathered Sandstone
- Sandstone
- Leached Dolomite
- Dolomite
- Leached Limestone
- Limestone

GENERAL INFORMATION

Drive Rod Penetration Sounding Tests

Drive rod penetration resistance tests constitute driving a 1.315-inch diameter steel rod, with a 45° cone point, into the ground, using a 122-pound drop-hammer with a free fall of five feet. At one or two-foot depth intervals, a measurement is taken to determine the amount of penetration achieved in three hammer drops. This reading is converted to an empirical value for capacity "R", in thousands of pounds (which is a measure of both the point resistance and frictional resistance on the rod), by using charts prepared by the Ohio Department of Highways, Bureau of Bridges, on the basis of correlation study of rod penetration with past performance of pile driving. For interpretation, a graph is prepared by plotting the value "R" against the depth at which the reading was taken, and connecting the plotted points. The curve so obtained reflects the density of subsurface materials in a manner that can be readily compared with data from similar tests at other locations on the structure site. From this comparison, the overall uniformity of subsurface condition may be evaluated.

Drive Sample Borings - Drive-Press Sample Borings

Drive sample borings are made by means of a rotary-type drill rig, employing a 2" O.D., 1-3/8" I.D. sampler, at 2-1/2 and / or 5-foot depth intervals, driven by means of a 140 - pound drop-hammer with a free fall of 30 inches. The number of blows required to drive the sampler 12 inches is considered the standard penetration test.

Drive-press sample borings are made by means of a rotary-type drill rig, employing a 2" O.D., 1-3/8" I.D. drive sampler, and 3" O.D. thin-wall press sampler. The press sampler is advanced by continuous uniform pressure, applied by the drill rig.

The boring log sheets show a graphic plot of the information obtained, including depth and elevation of the sample, number of blows for the standard penetration tests in two 6-inch increments, depth of press samples, field sample number, sample description - based on laboratory tests and the Casagrande AC classification system - and gradation, plasticity, and moisture content determinations. Results of strength and consolidation testing, if performed, appear on separate enclosures.

At depths where materials are bouldery or gravelly to the extent that the sampler can not be driven, a wash sample is procured for visual classification, in order to determine the general character of the material. These samples are not considered sufficiently representative to warrant laboratory testing.

Particle Size Definitions

Boulders	Cobbles	Gravel	Coarse Sand	Fine Sand	Silt	Clay
8"	3"	2.0mm (No. 10 sieve)	0.42mm (No. 40 sieve)	0.074mm (No. 200 sieve)	0.005mm	

NOTE: Information shown by this subsurface investigation was obtained solely for the use in establishing design controls for the project. The State of Ohio does not guarantee the accuracy of this data and it is not to be construed as a part of the plans governing construction of the project.

OHIO DEPARTMENT OF HIGHWAYS
TESTING LABORATORY
1620 WEST BROAD STREET, COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION

BRIDGE NO. SUM-IR 271-0966
UNDER C.H. 40
SEC. SUM-IR 271-8.29

CHECKED BY	REVIEWED BY	DATE
L.N.L.	R.D.R.	6/20/66

TE - 119
500 - 11 - 64

SUM-IR 271-8.29

36
52
2
4

Proposed Structure 0967

Westbound Lanes

Eastbound Lanes

510

509

3 & B-3

B-6

10 & B-10

℄ Proposed C.H. 40

℄ Proposed IR 271

℄ Relocated Stanford Road

Existing C.H. 40

60

61

62

63

64

900
890
880
870
860
850
840
830
820
810

B-3
TR.
0
3
4
4/5
6/8
1/16

B-6
6/10
23/30
15/30
TR.
6
5
1/16
1/16

7
8
1/16
0

B-10
10
9
7/16
7/10
3/5
4/11
11/25
50+
19/26
50+ Top of Weathered Rock
50+
TR.
1/16
1/16

+ Refusal

SCALE: 1" = 20'

OHIO, DEPARTMENT OF HIGHWAYS
TESTING LABORATORY
1620 WEST BROAD STREET, COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION

BRIDGE NO. SUM-IR 271-0966
UNDER C.H. 40

SEC. SUM-IR 271-8.29

PLAN AND PROFILE

DRAWN BY	CHECKED BY	REVIEWED BY	DATE
R.L.F.	L.N.L.	R.D.R.	6/20/66

TE - 122
600 - 4 - 66

SUM - IR 271-8.29

37/52

3/4

LOG OF BORING

Date Started 4-12-66 | Sampler Type SS | Dia. 1 3/8" | Water Elev. —
Date Completed 4-12-66 | Casing: Length — | Dia. —
Boring No. B-3 | Station & Offset 60+87, 13' Lt. (Rear Pier) | Surface Elev. 849.0'

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	Physical Characteristics % Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	SHTL Class.
849.0	0														
	2														
846.5	4	4/5			Brown Gravelly Silt	1	44	5	7	21	25	30	10	21	A-4a
844.0	6	6/8			Brown Clay with Shale Fragments — TOP OF ROCK	2	46	5	6	18	25	39	18	21	
843.0	8		1.8	2.2	Clay shale, brown, very soft, crumbly, fissile, extremely weathered. Core Loss 75%										
	10														
	12		4.4	0.6	Shale, dark gray, slightly carbonaceous, fissile, medium-firm, jointed and broken, with clay seams in top 2.0' Core Loss 10%										
	14														
833.0	16														
	18		4.9	0.1	Sandstone, gray, very fine-grained, argillaceous, firm, with shale stringers. No Core Loss.										
829.0	20				BOTTOM OF BORING										

LOG OF BORING

Date Started 6-8-66 | Sampler Type SS | Dia. 1 3/8" | Water Elev. —
Date Completed 6-10-66 | Casing: Length 16' | Dia. 3 1/2"
Boring No. B-6 | Station & Offset 61+71, 12' Rt. (Center Pier) | Surface Elev. 863.2'

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	Physical Characteristics % Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	SHTL Class.
863.2	0														
	2														
858.2	4														
	6	6/10			Brown Clayey Sandy Gravel	1	55	2	3	18	22	33	11	22	A-6a
853.2	8														
	10														
	12	23/30			Brown Silty Sandy Gravel	2	43	5	6	25	21	27	6	15	A-4a
848.2	14														
	16	15/50			Brown Sandy Gravelly Silt	3	26	4	16	25	29	23	4	14	A-4a
846.2	18				TOP OF ROCK										
	20		2.0	1.0	Indurated Clay, gray, soft and crumbly, with few thin shale seams, badly broken, slightly weathered. Core Loss *39%.										
	22														
	24		2.5	2.5											
837.2	26														
	28														
	30		5.0	0.0	Shale, dark gray, carbonaceous, fissile, medium-firm, slightly jointed. Core Loss *4%.										
	32														
829.7	34		5.4	0.6	Sandstone, gray, argillaceous, fine-grained, firm, slightly broken. Core Loss *12%.										
827.2	36				BOTTOM OF BORING										

*Core Loss partially due to mechanical difficulties.

LOG OF BORING

Date Started 4-13-66 | Sampler Type SS | Dia. 1 3/8" | Water Elev. —
Date Completed 4-14-66 | Casing: Length 42' | Dia. 3 1/2"
Boring No. B-10 | Station & Offset 63+18, 13' Rt. (Forward Abutment) | Surface Elev. 868.1'

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	Physical Characteristics % Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	SHTL Class.
868.1	0														
	2														
865.6	4	7/16			Brown Gravelly Clay	1	30	5	7	25	33	33	15	16	A-6a
863.1	6	7/10			Brown Gravelly Silt	2	31	3	6	29	31	28	8	20	A-4a
860.6	8	3/5			Brown Gravelly Silt	3	22	4	5	31	38	30	10	25	A-4a
858.1	10	4/11			Gray and Brown Silt	4	0	1	2	59	38	NP	NP	26	A-4b
855.6	12	11/25			Gray and Brown Sandy Silt	5	0	1	40	47	12	NP	NP	18	A-4a
853.1	14	50* (0.8)			Brown Silty Sandy Gravel	6	51	4	12	24	9	NP	NP	13	A-2-4
850.6	16				No Sample Recovered - Boulders (Driller's Des.)		V		I		S	U		A	L
848.1	18	19/26			Gray Clayey Gravel	7	50	6	5	24	15	PL = 23		9	
	20														
	22														
843.1	24	50* (0.3)			TOP OF WEATHERED ROCK — Gray Weathered Clay Shale	8	V	I	S	U	A	L	PL = 21		11
	26														
	28														
838.1	30	50* (0.3)			Gray Weathered Clay Shale	9	47	1	1	29	22	PL = 21		11	
837.1	32				TOP OF ROCK										
	34		3.2	1.5	Shale, dark gray, very slightly carbonaceous, fissile, medium-firm, broken with clay seams in top 3.0' Core Loss 16%										
	36														
830.1	38		5.0	0.0	Sandstone, gray, argillaceous, very fine-grained, firm, with shale stringers. No Core Loss.										
828.1	40				BOTTOM OF BORING										

*Refusal

OHIO DEPARTMENT OF HIGHWAYS
TESTING LABORATORY
1620 WEST BROAD STREET, COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. SUM - IR 271 - 0966
UNDER C. H. 40
SEC. SUM - IR 271 - 8.29

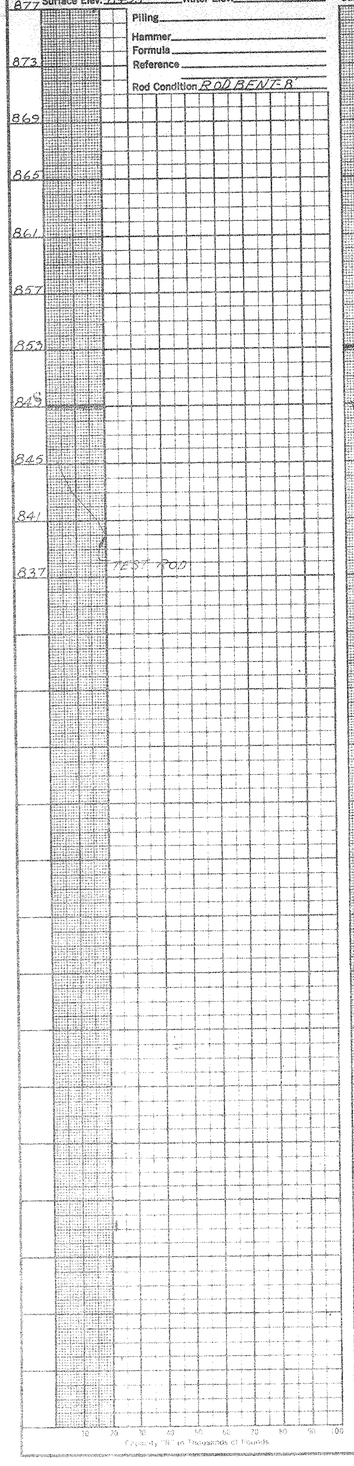
BORING DATA

TYPED BY	CHECKED BY	REVIEWED BY	DATE
S.A.J.	L.N.L.	R.D.R.	6/20/66

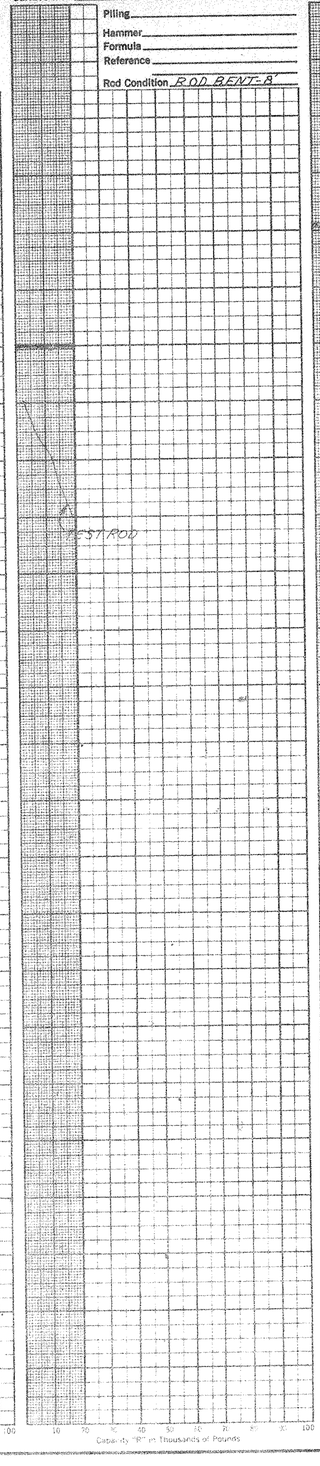
TR-14
1990-1-84

38
52
4/4

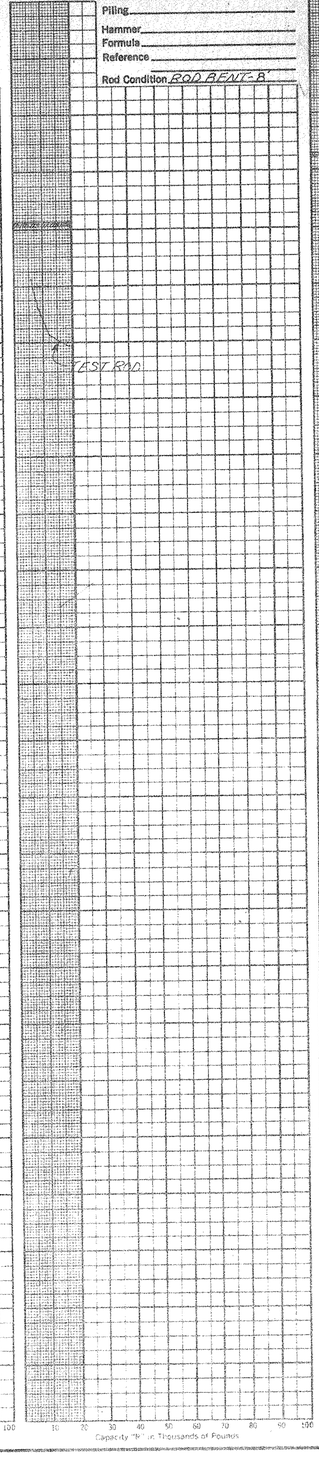
Test Location No. 3
Station & Offset 60+87, 12' LT
REAR PIER
Surface Elev. 849.1' **Water Elev.**
Piling
Hammer
Formula
Reference
Rod Condition ROD BENT-B'



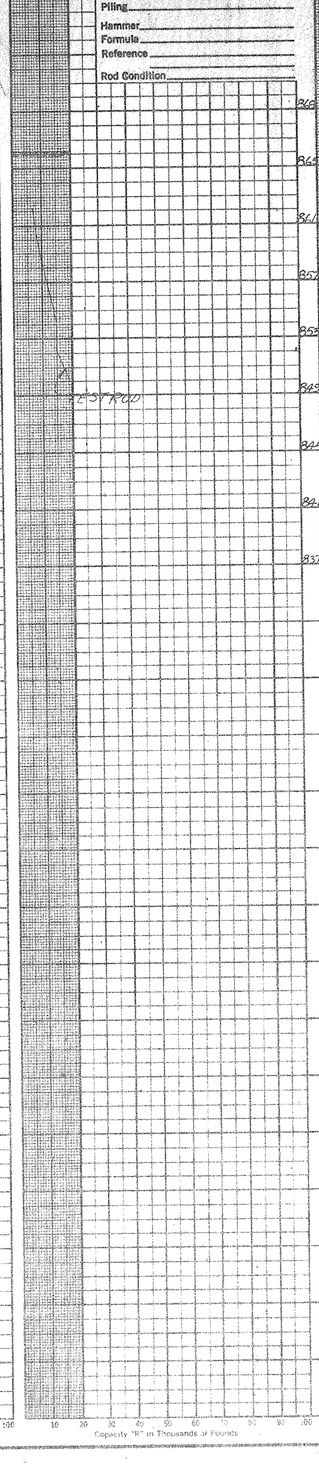
Test Location No. 4
Station & Offset 60+95, 12' RT
REAR PIER
Surface Elev. 853.1' **Water Elev.**
Piling
Hammer
Formula
Reference
Rod Condition ROD BENT-B'



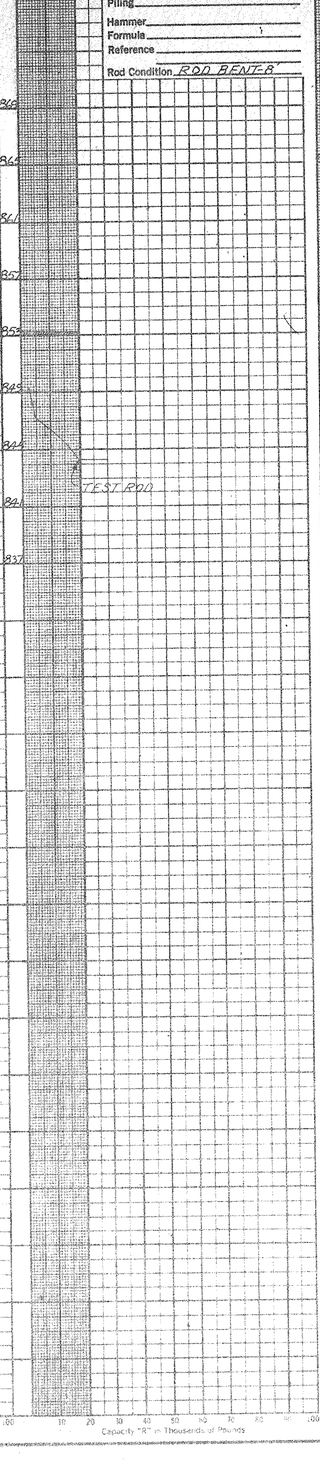
Test Location No. 5
Station & Offset 61+72, 12' LT
CENTER PIER
Surface Elev. 861.8' **Water Elev.**
Piling
Hammer
Formula
Reference
Rod Condition ROD BENT-B'



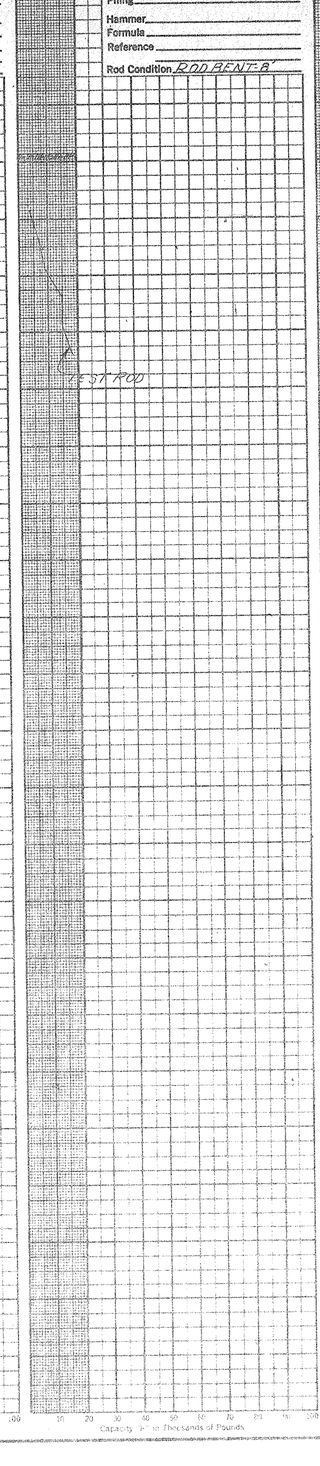
Test Location No. 6
Station & Offset 61+78, 12' RT
CENTER PIER
Surface Elev. 866.2' **Water Elev.**
Piling
Hammer
Formula
Reference
Rod Condition



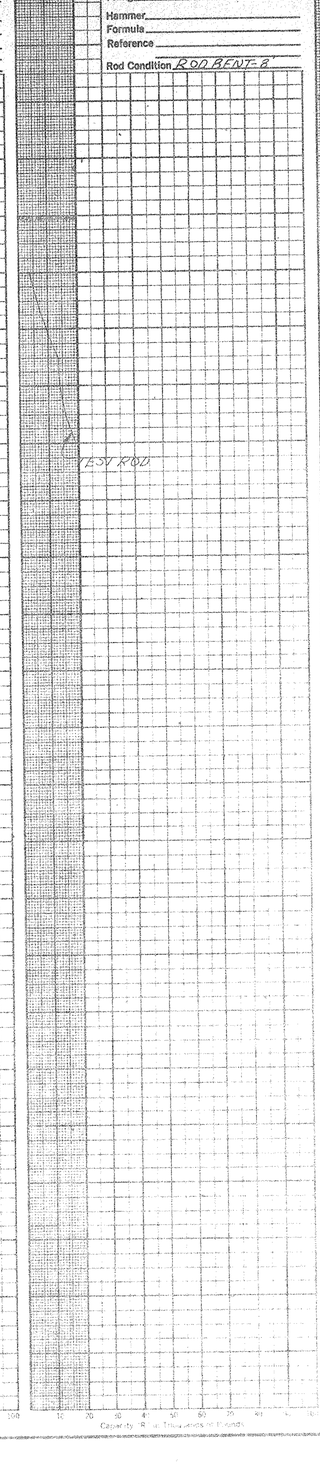
Test Location No. 7
Station & Offset 62+56, 12' LT
FORWARD PIER
Surface Elev. 853.3' **Water Elev.**
Piling
Hammer
Formula
Reference
Rod Condition ROD BENT-B'



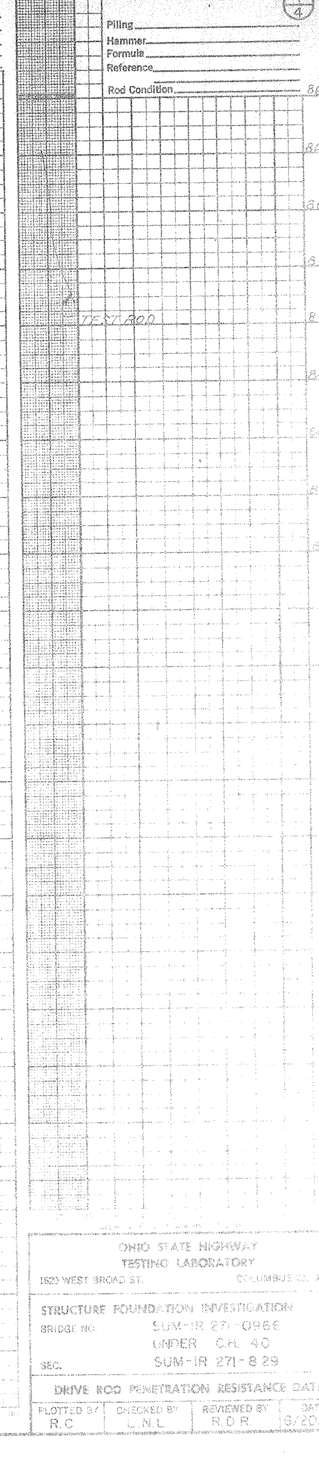
Test Location No. 8
Station & Offset 62+60, 12' RT
FORWARD PIER
Surface Elev. 865.6 **Water Elev.**
Piling
Hammer
Formula
Reference
Rod Condition ROD BENT-B'



Test Location No. 9
Station & Offset 63+15, 14' LT
FORWARD ABUTMENT
Surface Elev. 861.0' **Water Elev.**
Piling
Hammer
Formula
Reference
Rod Condition ROD BENT-B



Test Location No. 10
Station & Offset 63+18, 14' RT
FORWARD ABUTMENT
Surface Elev. 869.3 **Water Elev.**
SUM-IR 271-8.29
Piling
Hammer
Formula
Reference
Rod Condition



OHIO STATE HIGHWAY
TESTING LABORATORY
1620 WEST BROAD ST. COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. SUM-IR 271-0986
UNDER C.H. 40
SEC. SUM-IR 271-8.29

DRIVE ROD PENETRATION RESISTANCE DATA

PLOTTED BY	CHECKED BY	REVIEWED BY	DATE
R.C.	L.N.L.	R.D.R.	6/26/68

GEOLOGY AND OBSERVATIONS OF THE SITE

The structure site is located in the glaciated moderately rolling portion of the Allegheny Plateau Region, presently being incised by Brandywine Creek, in an area where absent to shallow glacial drift overlies sandstone bedrock, of Mississippian age. Sandstone outcrops were observed in the vicinity of the rear pier and abutment.

EXPLORATION

The exploration consisted of one drive sample-core boring, and one core boring, made on Aprill 11 and 12, 1966, and two mechanically driven rod penetration tests, and two hand driven probes, made April 4, 1966.

INVESTIGATIONAL FINDINGS

The borings disclosed that sloping bedrock surface, encountered at 3 and 10-foot depths, elevations 830 and 827 feet, is overlain by medium-dense silt and medium-stiff clays. The borings were terminated 10 and 12 feet below bedrock surface, elevations 820 and 814 feet.

The rod soundings encountered rapid increase in penetration resistance with increase in depth. The rod soundings and hand probes were terminated upon encounter with refusal to penetration at 3 to 5-foot depths, elevations 828 to 825 feet, considered to be on bedrock surface, as revealed by the borings.

If it is the intention to found pier substructure units on bedrock, it is considered advisable that the open excavations be inspected in the field, in order to insure that the excavations have been extended to rock throughout the entire founding area.

Unconfined compression tests on similar sandstone bedrock indicate a crushing strength on the order of 150 tons per square foot.

No free water was observed in any of the rod sounding holes.

LEGEND

- Auger Boring Location - Plan View.
- Press and / or Drive Sample and / or Core Boring Location - Plan View.
- Drive Rod Penetration Resistance Sounding Location - Plan View.
- Capped Pile
- Footing
- Footing on Pile
- TR — Top of Rock
- Horizontal Bar on Boring Log Indicates the Depth the Sample Was Taken.
- X, Y — Figures Beside the Boring Log in Profile Indicate the Number of Blows for Standard Penetration Test.
  X = Number of Blows for First 6 inches.
  Y = Number of Blows for Second 6 inches.
- Drive Rod Penetration Resistance Sounding Log - Profile
- Casing
- Resistance "R" $<$ 10,000 lbs.
- Resistance "R" $>$ 10,000 lbs.
- Z — Indicates Final Measurement of Penetration, in Inches.
- W — Indicates Free Water Elevation.
- Indicates Static Water Elevation.

SYMBOLS OF ROCK TYPES

- Coal
- Weathered Indurated Clay
- Indurated Clay
- Weathered Shale
- Shale
- Weathered Sandstone
- Sandstone
- Leached Dolomite
- Dolomite
- Leached Limestone
- Limestone

GENERAL INFORMATION

Drive Rod Penetration Sounding Tests

Drive rod penetration resistance tests constitute driving a 1.315-inch diameter steel rod, with a 45° cone point, into the ground, using a 122-pound drop-hammer with a free fall of five feet. At one or two-foot depth intervals, a measurement is taken to determine the amount of penetration achieved in three hammer drops. This reading is converted to an empirical value for capacity "R", in thousands of pounds (which is a measure of both the point resistance and frictional resistance on the rod), by using charts prepared by the Ohio Department of Highways, Bureau of Bridges, on the basis of correlation study of rod penetration with post performance of pile driving. For interpretation, a graph is prepared by plotting the value "R" against the depth at which the reading was taken, and connecting the plotted points. The curve so obtained reflects the density of subsurface materials in a manner that can be readily compared with data from similar tests at other locations on the structure site. From this comparison, the overall uniformity of subsurface condition may be evaluated.

Drive Sample Borings - Drive-Press Sample Borings

Drive sample borings are made by means of a rotary-type drill rig, employing a 2" O.D., 1-3/8" I.D. sampler, at 2-1/2 and / or 5-foot depth intervals, driven by means of a 140 - pound drop-hammer with a free fall of 30 inches. The number of blows required to drive the sampler 12 inches is considered the standard penetration test.

Drive-press sample borings are made by means of a rotary-type drill rig, employing a 2" O.D., 1-3/8" I.D. drive sampler, and 3" O.D. thin-wall press sampler. The press sampler is advanced by continuous uniform pressure, applied by the drill rig.

The boring log sheets show a graphic plot of the information obtained, including depth and elevation of the sample, number of blows for the standard penetration tests in two 6-inch increments, depth of press samples, field sample number, sample description - based on laboratory tests and the Casagrande AC classification system - and gradation, plasticity, and moisture content determinations. Results of strength and consolidation testing, if performed, appear on separate enclosures.

At depths where materials are bouldery or gravelly to the extent that the sampler can not be driven, a wash sample is procured for visual classification, in order to determine the general character of the material. These samples are not considered sufficiently representative to warrant laboratory testing.

Particle Size Definitions

Boulders	Cobbles	Gravel	Course Sand	Fine Sand	Silt	Clay
	8"	3"	2.0mm (No. 10 sieve)	0.42mm (No. 40 sieve)	0.074mm (No. 200 sieve)	0.005mm

LOG OF BORING

Date Started 4-11-66 — Sampler Type SS — Dia 1 3/8" — Water Elev. ———
Date Completed 4-11-66 — Casing: Length ——— — Dia ———
Boring No. B-2 — Station & Offset 56+00, 24' Rt. (Rear Abutment) — Surface Elev 840.3'

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No	% Agg	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C	SHTL Class.
840.3	0														
	2														
837.8	4	3/3			Brown Clay	1	0	5	11	34	50	PL = 18		23	
835.3	6	3/4			Brown and Gray Gravelly Clay	2	47	4	8	24	17	PL = 21		24	
832.8	8	6/8			TOP OF ROCK Brown and Gray Silt with Sandstone Frgts.	3	39	2	8	32	19	28	7	23	A-4a
830.3	10														
	12		4.8	0.2	Sandstone, brown, medium-grained, firm, moderately weathered and friable, jointed. Core Loss 8%										
	14														
	16														
	18		4.4	0.6											
820.3	20				BOTTOM OF BORING										

LOG OF BORING

Date Started 4-12-66 — Sampler Type SS — Dia 1 3/8" — Water Elev. ———
Date Completed 4-12-66 — Casing: Length ——— — Dia ———
Boring No. B-7 — Station & Offset 59+70, 10' Lt. (Forward Abutment) — Surface Elev. 829.3'

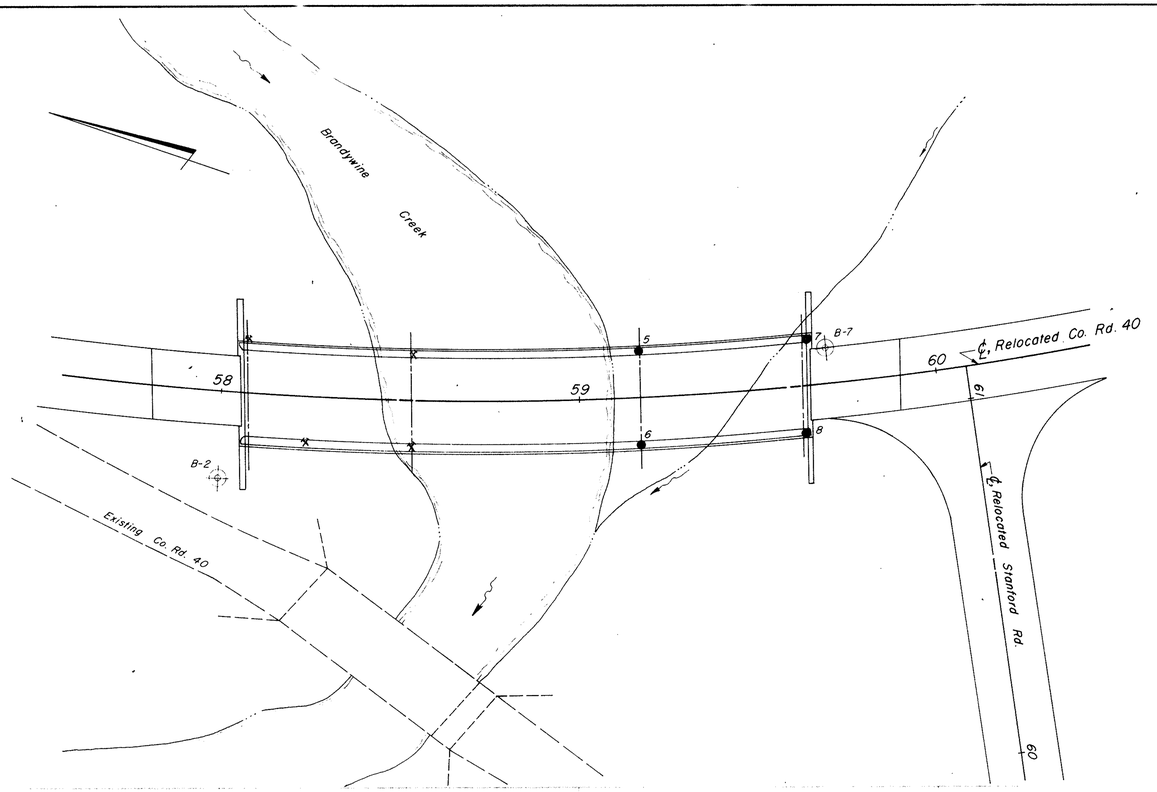
Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	% Agg	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	SHTL Class.
829.3	0														
	2				TOP OF ROCK										
826.6	4		2.3	0.0											
	6				Sandstone, gray, medium-grained, firm, massive, very slightly friable and weathered. Core Loss 3%										
	8		4.6	0.4											
	10														
	12		5.0	0.0											
814.3	14				BOTTOM OF BORING										

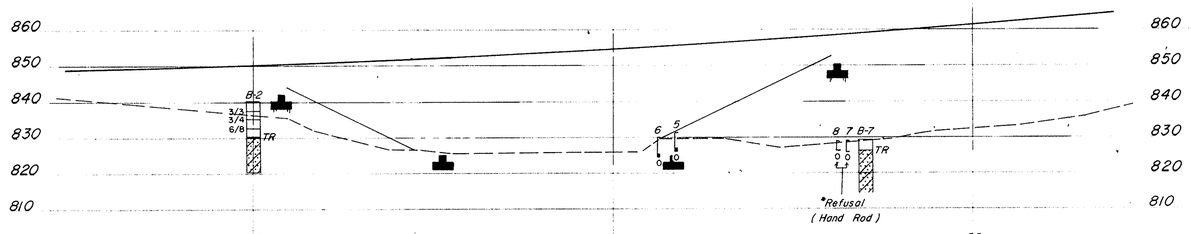
NOTE. Information shown by this subsurface investigation was obtained solely for the use in establishing design controls for the project. The State of Ohio does not guarantee the accuracy of this data and it is not to be construed as a part of the plans governing construction of the project.

OHIO DEPARTMENT OF HIGHWAYS
TESTING LABORATORY
1620 WEST BROAD STREET, COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. SUM-IR271-0967
RELOC. CO. RD. 40 OVER BRANDYWINE CREEK
SEC. SUM-IR271-8.29

CHECKED BY	REVIEWED BY	DATE
L. N. L.	R. D. R.	5/3/66





SCALE: 1" = 20'

OHIO DEPARTMENT OF HIGHWAYS
TESTING LABORATORY
1620 WEST BROAD STREET, COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. SUM-IR271-0967
RELOC. CO. RD.40 OVER BRANDYWINE CREEK
SEC. SUM-IR271-8.29

PLAN AND PROFILE

DRAWN BY	CHECKED BY	REVIEWED BY	DATE
R. L. D.	L. N. L.	R. D. R.	5/3/66

TE-114
1000-1-64

41
52
3
3

Test Location No. _____
Station & Offset _____
Surface Elev. _____ Water Elev. _____
Piling _____
Hammer _____
Formula _____
Reference _____
Rod Condition _____

848
844
840
836
832
828
824

10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. _____
Station & Offset _____
Surface Elev. _____ Water Elev. _____
Piling _____
Hammer _____
Formula _____
Reference _____
Rod Condition _____

10 20 30 40 50 60 70 80 90 10
Capacity "R" in Thousands of Pounds

Test Location No. _____
Station & Offset _____
Surface Elev. _____ Water Elev. _____
Piling _____
Hammer _____
Formula _____
Reference _____
Rod Condition _____

10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. _____
Station & Offset _____
Surface Elev. _____ Water Elev. _____
Piling _____
Hammer _____
Formula _____
Reference _____
Rod Condition _____

10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. 5
Station & Offset 59+17, 13' LT FORWARD PIER
Surface Elev. 831.6' Water Elev. _____
Piling _____
Hammer _____
Formula _____
Reference _____
Rod Condition GOOD

840
836
832
828
824
TEST ROD

10 20 30 40 50 60 70 80 90 100
apacity "R" in Thousands of Pounds

Test Location No. 6
Station & Offset 59+17, 13' RT FORWARD PIER
Surface Elev. 830.0' Water Elev. _____
Piling _____
Hammer _____
Formula _____
Reference _____
Rod Condition GOOD

TEST ROD

10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. 7
Station & Offset 59+65, 13' LT FORWARD ABUTMENT
Surface Elev. 829.1' Water Elev. _____
Piling _____
Hammer _____
Formula _____
Reference _____
Rod Condition GOOD

HAND ROD

10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. 8
Station & Offset 59+62, 13' RT FORWARD ABUTMENT
Surface Elev. 828.9' Water Elev. _____
SUM-IR271-8.29
Piling _____
Hammer _____
Formula _____
Reference _____
Rod Condition GOOD

840
836
832
828
824
HAND ROD

10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

OHIO STATE HIGHWAY
TESTING LABORATORY
1620 WEST BROAD ST. COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. SUM-IR271-0967
RELOC. CO. RD. 40 OVER BRANDYWINE CREEK
SEC. SUM-IR271-8.29

DRIVE ROD PENETRATION RESISTANCE DATA

PLOTTED BY	CHECKED BY	REVIEWED BY	DATE
R. L. D.	L. N. L.	R. D. R.	5/3/66

TE - 118
600 - 11 - 64

SUMMIT COUNTY
SUM-1R271-8.29

42
52
5

GEOLOGY OF THE SITE

The structure site is located upon the glaciated Allegheny Plateau. Moderately deep glacial-derived soil overlies sandstone and shale bedrock, of Upper Mississippian and Lower Pennsylvanian ages.

EXPLORATION

The exploration consisted of four drive sample-core borings and eight drive rod penetration tests, made between April 6 and 14, 1965.

INVESTIGATIONAL FINDINGS

The borings disclosed dense and extremely dense gravel, sand, silt, stiff clays, and cobbles, overlying sloping bedrock surface, encountered at 5 to 14-foot depths, elevations 873 to 856 feet. The borings were terminated at 25-foot depths, elevations 855 to 836 feet, after penetrating 11 and 20 feet below bedrock surface.

Rod soundings met rapid increase in penetration resistance with increase in depth and were terminated upon encounter with high resistance and refusal to penetration 11 to 25 feet below ground surface, elevations 868 and 850 feet, considered to be on or slightly below bedrock surface, as revealed by the borings.

Free water was encountered in the majority of the rod sounding holes, between elevations 865 and 861 feet.

LEGEND

- Auger Boring Location - Plan View.
- Press and / or Drive Sample and / or Core Boring Location - Plan View.
- Drive Rod Penetration Resistance Sounding Location - Plan View.
- Capped Pile
- Footing
- Footing on Pile
- TR — Top of Rock
- Horizontal Bar on Boring Log Indicates the Depth the Sample Was Taken.
- X/Y — Figures Beside the Boring Log in Profile Indicate the Number of Blows for Standard Penetration Test.
  X = Number of Blows for First 6 inches.
  Y = Number of Blows for Second 6 inches.
- Drive Rod Penetration Resistance Sounding Log - Profile
- Casing
- Resistance "R" < 10,000 lbs.
- Resistance "R" > 10,000 lbs.
- Z — Indicates Final Measurement of Penetration, in Inches.
- W — Indicates Free Water Elevation.
- Indicates Static Water Elevation.

SYMBOLS OF ROCK TYPES

- Coal
- Weathered Indurated Clay
- Indurated Clay
- Weathered Shale
- Shale
- Weathered Sandstone
- Sandstone
- Leached Dolomite
- Dolomite
- Leached Limestone
- Limestone

GENERAL INFORMATION

Drive Rod Penetration Sounding Tests

Drive rod penetration resistance tests constitute driving a 1.315-inch diameter steel rod, with a 45° cone point, into the ground, using a 122-pound drop-hammer with a free fall of five feet. At one or two-foot depth intervals, a measurement is taken to determine the amount of penetration achieved in three hammer drops. This reading is converted to an empirical value for capacity "R", in thousands of pounds (which is a measure of both the point resistance and frictional resistance on the rod), by using charts prepared by the Ohio Department of Highways, Bureau of Bridges, on the basis of correlation study of rod penetration with past performance of pile driving. For interpretation, a graph is prepared by plotting the value "R" against the depth at which the reading was taken, and connecting the plotted points. The curve so obtained reflects the density of subsurface materials in a manner that can be readily compared with data from similar tests at other locations on the structure site. From this comparison, the overall uniformity of subsurface condition may be evaluated.

Drive Sample Borings - Drive-Press Sample Borings

Drive sample borings are made by means of a rotary-type drill rig, employing a 2" O.D., 1-3/8" I.D. sampler, at 2-1/2 and / or 5-foot depth intervals, driven by means of a 140 - pound drop-hammer with a free fall of 30 inches. The number of blows required to drive the sampler 12 inches is considered the standard penetration test.

Drive-press sample borings are made by means of a rotary-type drill rig, employing a 2" O.D., 1-3/8" I.D. drive sampler, and 3" O.D. thin-wall press sampler. The press sampler is advanced by continuous uniform pressure, applied by the drill rig.

The boring log sheets show a graphic plot of the information obtained, including depth and elevation of the sample, number of blows for the standard penetration tests in two 6-inch increments, depth of press samples, field sample number, sample description - based on laboratory tests and the Casagrande AC classification system - and gradation, plasticity, and moisture content determinations. Results of strength and consolidation testing, if performed, appear on separate enclosures.

At depths where materials are bouldery or gravelly to the extent that the sampler can not be driven, a wash sample is procured for visual classification, in order to determine the general character of the material. These samples are not considered sufficiently representative to warrant laboratory testing.

Particle Size Definitions

Boulders	Cobbles	Gravel	Coarse Sand	Fine Sand	Silt	Clay
	8"	3" / 2.0mm	0.42mm	0.074mm	0.005mm	
		No. 10 sieve	No. 40 sieve	No. 200 sieve		

NOTE: Information shown by this subsurface investigation was obtained solely for the use in establishing design controls for the project. The State of Ohio does not guarantee the accuracy of this data and it is not to be construed as a part of the plans governing construction of the project.

OHIO DEPARTMENT OF HIGHWAYS
TESTING LABORATORY
1620 WEST BROAD STREET, COLUMBUS 23, OHIO

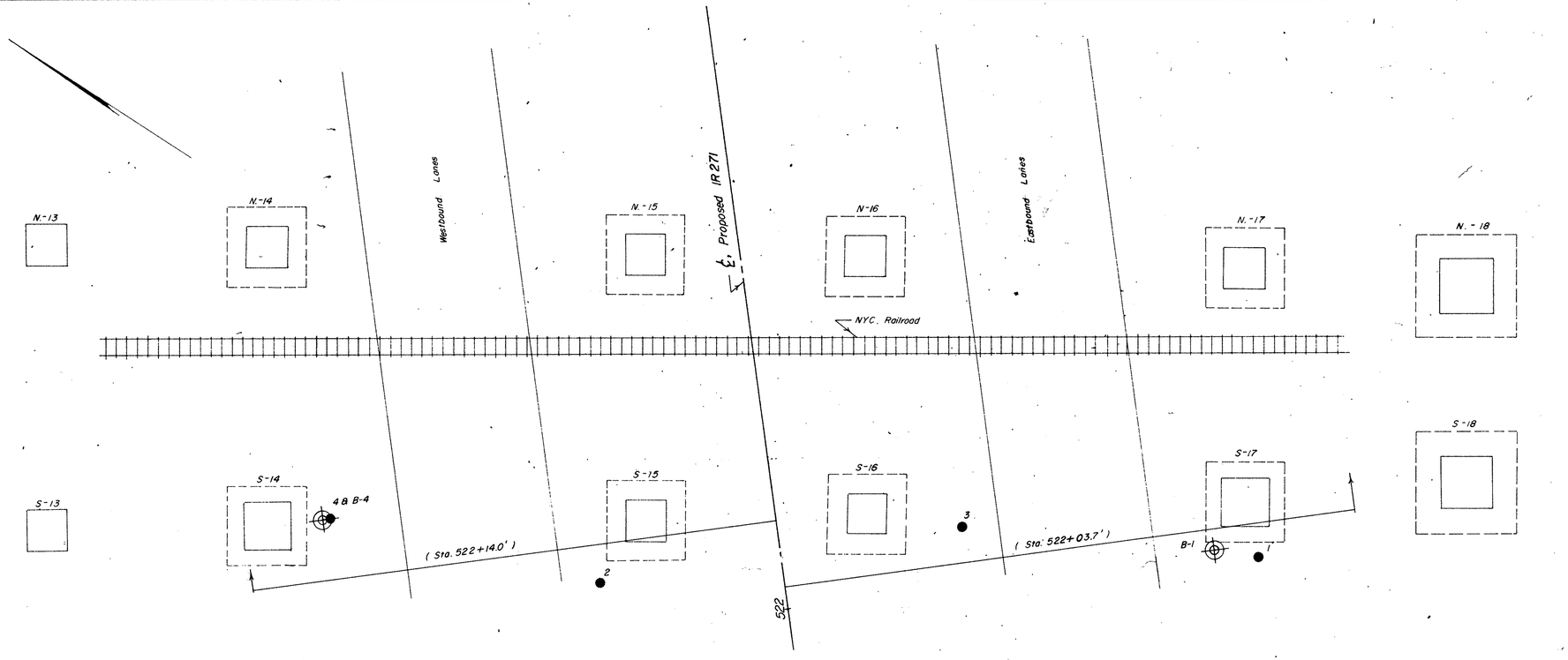
STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. SUM-1R271-
UNDER NYC RAILROAD
SEC. SUM-1R271-8.29

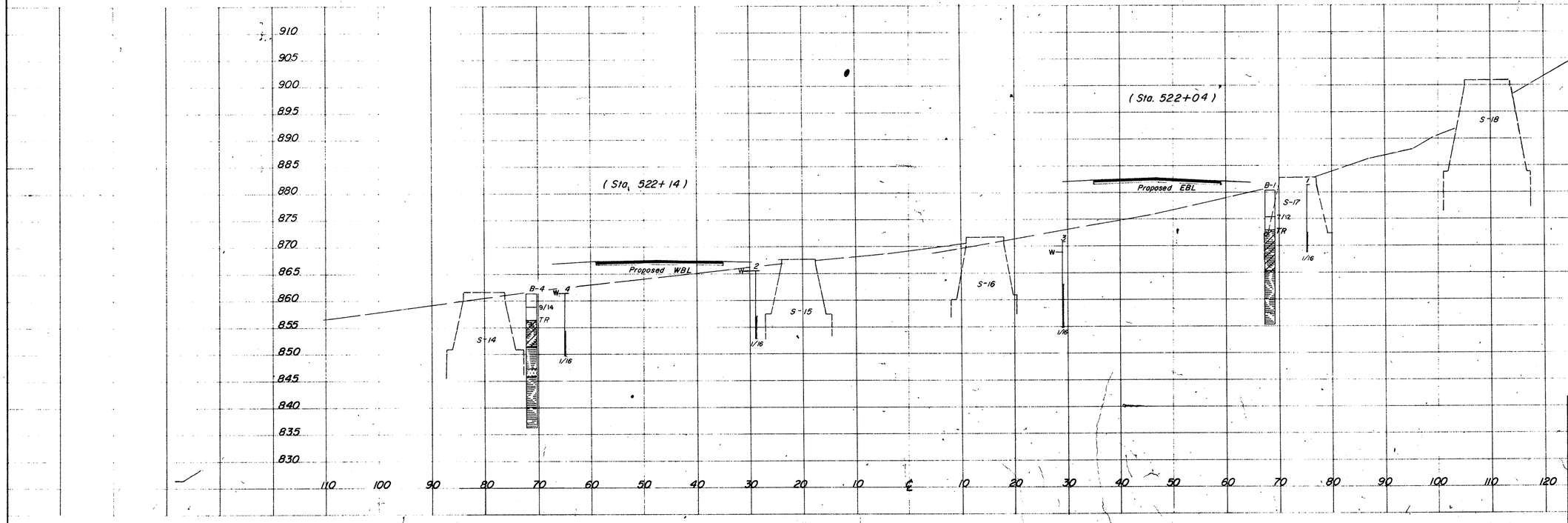
CHECKED BY	REVIEWED BY	DATE
R.H.P.	R.D.R.	4/27/65

TE - 119
5M0 - 11 - 64

43
52
25

SUM-IR 271-8.29





SCALE: 1" = 10'

OHIO DEPARTMENT OF HIGHWAYS
TESTING LABORATORY
1620 WEST BROAD STREET, COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION

BRIDGE NO. SUM-IR 271-
UNDER NYC RAILROAD
SEC. SUM-IR 271-8.29

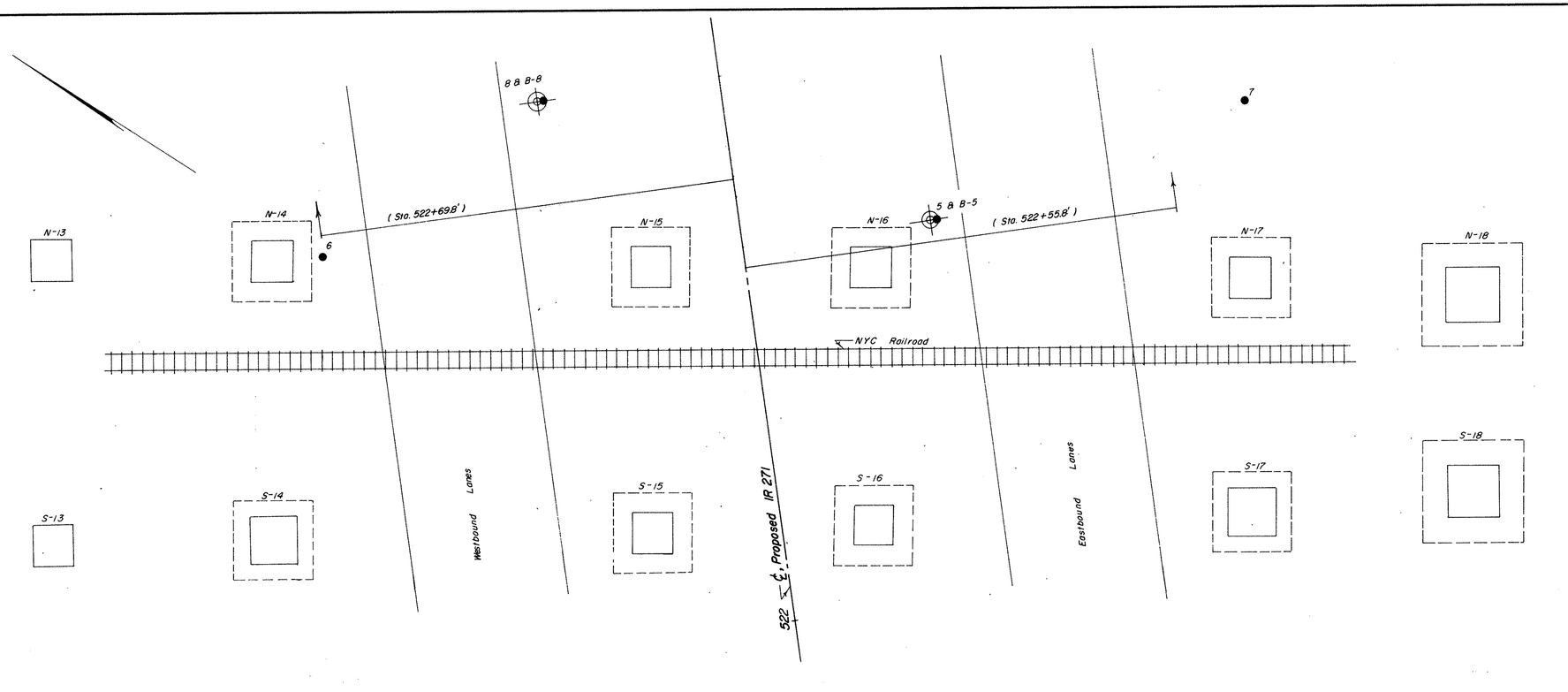
PLAN AND PROFILE

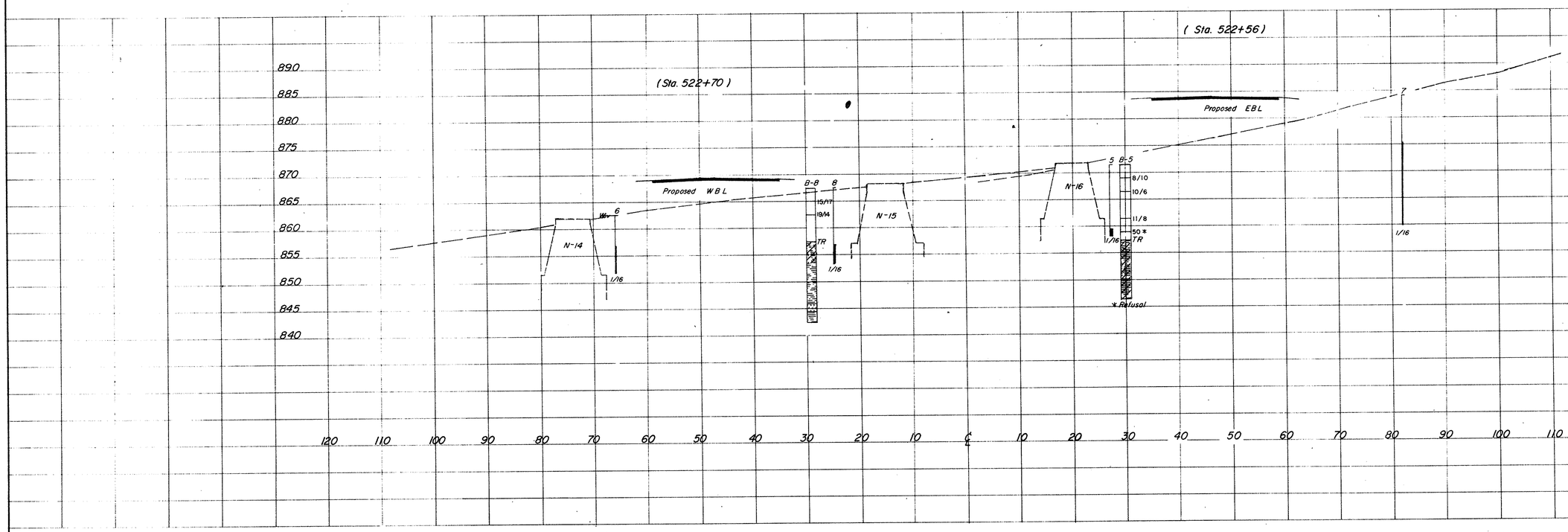
DRAWN BY	CHECKED BY	REVIEWED BY	DATE
R.L.F.	R.H.P.	R.D.R.	4/27/65

TE - 119
500 - 11 - 64

44
52
3
5

SUM-IR 271-8.29





SCALE: 1" = 10'

OHIO DEPARTMENT OF HIGHWAYS
TESTING LABORATORY
1620 WEST BROAD STREET, COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION

BRIDGE NO. SUM-IR 271
UNDER NYC RAILROAD

SEC. SUM-IR 271-8.29

PLAN AND PROFILE

DRAWN BY	CHECKED BY	REVIEWED BY	DATE
R. L. F.	R.H.P.	R.D.R.	4/27/65

TE - 122
600 - 11 - 64

45
52

SUM-IR271-8.29

4
5

LOG OF BORING

Date Started 4-6-65 | Sampler Type SS | Dia. 1 3/8" | Water Elev. —
Date Completed 4-7-65 | Casing: Length — | Dia. — | Surface Elev. 880.3'
Boring No. B-1 | Station & Offset 522+00, 68' Rt (REAR ABUTMENT)

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	Physical Characteristics: % Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	SHTL Class.
880.3	0														
	2														
875.3	4														
	6	7/12			Mottled Brown and Gray Clay	1	0	5	2	21	72	55	26	25	
872.8	8				TOP OF ROCK										
	10				Clay shale, brown to gray, fissile, very soft, extremely weathered. Core loss 78%.										
	12		1.1	3.9											
865.3	14														
	16				Shale, dark gray, argillaceous and slightly carbonaceous, fissile, medium-firm, jointed and broken. Core loss 12%.											
	18		4.3	0.7											
	20														
	22														
	24		4.5	0.5											
855.3					BOTTOM OF BORING										

LOG OF BORING

Date Started 4-7-65 | Sampler Type SS | Dia. 1 3/8" | Water Elev. —
Date Completed 4-8-65 | Casing: Length — | Dia. — | Surface Elev. 861.3'
Boring No. B-4 | Station & Offset 522+24, 71' Lt (REAR PIER)

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	Physical Characteristics: % Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	SHTL Class.
861.3	0														
	2														
858.8	4	9/14			Brown Sandy Gravelly Clay	1	34	13	4	18	31	34	12	18	
856.3	6														
	8				TOP OF ROCK										
	10		0.6	4.4	Shale, gray, argillaceous, fissile, extremely weathered and broken. Core loss 85%.										
851.3	12														
	14		2.7	2.3	Shale, gray, argillaceous, medium firm, fissile, very badly broken. Core loss 50%.										
847.3	16														
845.8	18				Sandstone, gray, fine-grained, firm. No core loss.										
	20		2.9	2.1											
	22				Shale, dark gray, slightly carbonaceous and argillaceous, medium-firm, fissile, jointed and badly broken. Core loss 25%.											
	24		4.7	0.3											
836.3					BOTTOM OF BORING										

LOG OF BORING

Date Started 4-13-65 | Sampler Type SS | Dia. 1 3/8" | Water Elev. —
Date Completed 4-14-65 | Casing: Length 12.5' | Dia. 3 1/2" | Surface Elev. 871.5'
Boring No. B-5 | Station & Offset 522+59, 30' Rt (FORWARD PIER)

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	Physical Characteristics: % Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	SHTL Class.
871.5	0														
869.0	2														
	4	8/10			Brown Sandy Gravelly Clay	1	37	8	11	23	21	29	11	23	
866.5	6	10/6			Brown Clayey Sandy Gravel	2	44	11	8	23	14	29	12	16	
	8														
861.5	10	11/8			Brown Silt and Stone Fragments	3	48	8	5	20	19	29	9	14	
859.0	12														
858.5		50/*			Brown silty clay with cobbles.										
857.8	14		0.8	1.2											
	16				TOP OF ROCK										
	18		1.4	3.6	Clay shale, gray, soft and crumbly, very badly broken, moderately weathered, with few argillaceous shale seams. Core loss 69%.										
851.5	20														
	22				Shale, gray, argillaceous, fissile, medium-firm, jointed and very badly broken, with clay seams, slightly weathered. Core loss 30%.											
	24		3.5	1.5											
846.5					BOTTOM OF BORING										

*Refusal

LOG OF BORING

Date Started 4-8-65 | Sampler Type — | Dia. 1 3/8" | Water Elev. —
Date Completed 4-9-65 | Casing: Length 15' | Dia. 3 1/2" | Surface Elev. 867.5'
Boring No. B-8 | Station & Offset 522+86, 29' Lt (FORWARD ABUTMENT)

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	Physical Characteristics: % Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	SHTL Class.
867.5	0														
865.0	2														
	4	15/17			Brown and Gray Clayey Sandy Gravel	1	49	8	7	15	21	33	13	26	
862.5	6	19/14			Brown and Gray Clayey Sandy Gravel	2	48	10	5	15	22	35	14	19	
861.5	8														
	10				Cobbles and stone fragments.										
857.5	12				TOP OF ROCK										
	14		0.7	4.3											
	16				Shale, gray, argillaceous, fissile, jointed and badly broken, medium-firm, extremely weathered in top 4.0'. Core loss 46%.											
	18		3.5	1.5											
	20														
846.0	22				Sandstone, gray, fine-grained, firm. No core loss.										
844.5	24		4.7	0.3	Shale, gray, fissile, medium-firm, jointed and broken. No core loss.										
842.5					BOTTOM OF BORING										

OHIO DEPARTMENT OF HIGHWAYS
TESTING LABORATORY
1620 WEST BROAD STREET, COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. SUM-IR271-
UNDER NYC RAILROAD
SEC. SUM-IR271-8.29

BORING DATA

TYPED BY	CHECKED BY	REVIEWED BY	DATE
B.J.R.	R.C.	R.D.R.	4/27/65

TE-114
1000-1-64

46/52

5/5

SUM-IR271-8.29

Test Location No. 1
Station & Offset 521+98.75' RT.
Surface Elev. 881.3 Water Elev. DRY-Hole Closed at El. 877.3'
Piling
Hammer
Formula
Reference
Rod Condition GOOD
TEST ROD
889 885 881 877 873 869 865 861 857 853 849
10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. 2
Station & Offset 522+08.29' LT
Surface Elev. 865.4 Water Elev. 862.4'
Piling
Hammer
Formula
Reference
Rod Condition GOOD
TEST ROD
10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. 3
Station & Offset 522+09.29' RT
Surface Elev. 870.9' Water Elev. 868.9'
Piling
Hammer
Formula
Reference
Rod Condition GOOD
TEST ROD
10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. 4
Station & Offset 522+24.70' LT
Surface Elev. 861.3' Water Elev. 861.3'
Piling
Hammer
Formula
Reference
Rod Condition GOOD
TEST ROD
10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. 5
Station & Offset 522+59.31' RT
Surface Elev. 871.5' Water Elev. DRY-Hole Closed at El. 868.5'
Piling
Hammer
Formula
Reference
Rod Condition GOOD
TEST ROD
881 877 873 869 865 861 857 853 849
10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. 6
Station & Offset 522+67.66' LT
Surface Elev. 862.5' Water Elev. 862.5'
Piling
Hammer
Formula
Reference
Rod Condition GOOD
TEST ROD
10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. 7
Station & Offset 522+70.82' RT
Surface Elev. 884.1' Water Elev. DRY-Hole Closed at El. 881.0'
Piling
Hammer
Formula
Reference
Rod Condition GOOD
TEST ROD
10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. 8
Station & Offset 522+86.28' LT
Surface Elev. 867.5' Water Elev. Hole Closed at El. 867.5'
Piling
Hammer
Formula
Reference
Rod Condition GOOD
TEST ROD
881 877 873 869 865 861 857 853 849
10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

OHIO STATE HIGHWAY
TESTING LABORATORY
1620 WEST BROAD ST. COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. SUM-IR271-
UNDER NYC RAILROAD
SEC. SUM-IR271-8.29

DRIVE ROD PENETRATION RESISTANCE DATA

PLOTTED BY	CHECKED BY	REVIEWED BY	DATE
R.C.	R.H.P.	R.D.R.	4/27/65

TE - 118
600 - 11 - 64

GEOLOGY OF THE SITE

The structure site is located upon the glaciated Allegheny Plateau. Shallow soil cover overlies sandstone and shale bedrock, of Mississippian age.

EXPLORATION

The exploration consisted of one core boring, one drive sample-core boring, and sixteen drive rod penetration tests, made between January 20 and 27, 1965.

INVESTIGATIONAL FINDINGS

The borings disclosed that bedrock surface, encountered at 5 and 9-foot depths, elevation 960 feet, is overlain by clay, shale fragments, and bricks. The borings were terminated at elevations 950 and 940 feet, after penetrating 11 and 20 feet below bedrock surface.

Rod soundings met very rapid increase in penetration resistance with increase in depth and were terminated upon encounter with refusal to penetration 3 and 8 feet below ground surface, elevations 964 and 960 feet, considered to approximate bedrock surface across the structure site.

On the basis of the tests, bedrock surface is considered to be variable across the site between elevations 964 and 960 feet.

Since it is the intention to found the pier units on bedrock, it is considered advisable that the open excavation be inspected in the field in order to insure that the excavations have been extended to rock throughout the entire founding area.

Free water was encountered in the majority of the rod sounding holes between elevations 967 and 961 feet.

LEGEND

- Auger Boring Location - Plan View.
- Press and / or Drive Sample and / or Core Boring Location - Plan View.
- Drive Rod Penetration Resistance Sounding Location - Plan View.
- Capped Pile
- Footing
- Footing on Pile
- TR — Top of Rock
- Horizontal Bar on Boring Log Indicates the Depth the Sample Was Taken.
- X/Y — Figures Beside the Boring Log in Profile Indicate the Number of Blows for Standard Penetration Test.
  X = Number of Blows for First 6 inches.
  Y = Number of Blows for Second 6 inches.
- Drive Rod Penetration Resistance Sounding Log - Profile
- Casing
- Resistance "R" < 10,000 lbs.
- Resistance "R" > 10,000 lbs.
- Z — Indicates Final Measurement of Penetration, in Inches.
- W — Indicates Free Water Elevation.
- Indicates Static Water Elevation.

SYMBOLS OF ROCK TYPES

- Coal
- Weathered Indurated Clay
- Indurated Clay
- Weathered Shale
- Shale
- Weathered Sandstone
- Sandstone
- Leached Dolomite
- Dolomite
- Leached Limestone
- Limestone

GENERAL INFORMATION

Drive Rod Penetration Sounding Tests

Drive rod penetration resistance tests constitute driving a 1.315-inch diameter steel rod, with a 45° cone point, into the ground, using a 122-pound drop-hammer with a free fall of five feet. At one or two-foot depth intervals, a measurement is taken to determine the amount of penetration achieved in three hammer drops. This reading is converted to an empirical value for capacity "R", in thousands of pounds (which is a measure of both the point resistance and frictional resistance on the rod), by using charts prepared by the Ohio Department of Highways, Bureau of Bridges, on the basis of correlation study of rod penetration with past performance of pile driving. For interpretation, a graph is prepared by plotting the value "R" against the depth at which the reading was taken, and connecting the plotted points. The curve so obtained reflects the density of subsurface materials in a manner that can be readily compared with data from similar tests at other locations on the structure site. From this comparison, the overall uniformity of subsurface condition may be evaluated.

Drive Sample Borings - Drive-Press Sample Borings

Drive sample borings are made by means of a rotary-type drill rig, employing a 2" O.D., 1-3/8" I.D. sampler, at 2-1/2 and / or 5-foot depth intervals, driven by means of a 140 - pound drop-hammer with a free fall of 30 inches. The number of blows required to drive the sampler 12 inches is considered the standard penetration test.

Drive-press sample borings are made by means of a rotary-type drill rig, employing a 2" O.D., 1-3/8" I.D. drive sampler, and 3" O.D. thin-wall press sampler. The press sampler is advanced by continuous uniform pressure, applied by the drill rig.

The boring log sheets show a graphic plot of the information obtained, including depth and elevation of the sample, number of blows for the standard penetration tests in two 6-inch increments, depth of press samples, field sample number, sample description - based on laboratory tests and the Casagrande AC classification system - and gradation, plasticity, and moisture content determinations. Results of strength and consolidation testing, if performed, appear on separate enclosures.

At depths where materials are bouldery or gravelly to the extent that the sampler can not be driven, a wash sample is procured for visual classification, in order to determine the general character of the material. These samples are not considered sufficiently representative to warrant laboratory testing.

Particle Size Definitions

Boulders	8"	Cobbles	3"	Gravel	2.0mm No. 10 sieve	Coarse Sand	0.42mm No. 40 sieve	Fine Sand	0.074mm No. 200 sieve	Silt	0.005mm	Clay

LOG OF BORING

Date Started 1-20-65 — Sampler Type SS — Dia. 1 3/8" — Water Elev. —
Date Completed 1-22-65 — Casing: Length 10' — Dia. 3 1/2" — Surface Elev. 969.9'
Boring No. B-5 — Station & Offset 588+37, 77' Rt (REAR PIER)

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	Physical Characteristics: % Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	SHTL Class.
969.9	0														
	2														
	4														
964.9	6	13/30			Brown Sandy Gravelly Clay	1	29	8	8	32	23	31	11	13	
962.4	8	50* (9.7')			Brown and Gray Clay with Stone Fragments	2	54	4	6	19	17	34	11	17	
960.3	10				TOP OF ROCK										
	12														
	14		5.0	0.0	Sandstone, gray, fine-grained, argillaceous, firm, broken and jointed, with shale comprising 25% of the interval. No core loss.										
	16														
	18		5.0	0.0											
949.9	20				BOTTOM OF BORING										

*Refusal

LOG OF BORING

Date Started 1-25-65 — Sampler Type SS — Dia. 1 3/8" — Water Elev. —
Date Completed 1-26-65 — Casing: Length — Dia. — Surface Elev. 965.3'
Boring No. B-12 — Station & Offset 589+90, 75' Lt (FORWARD PIER)

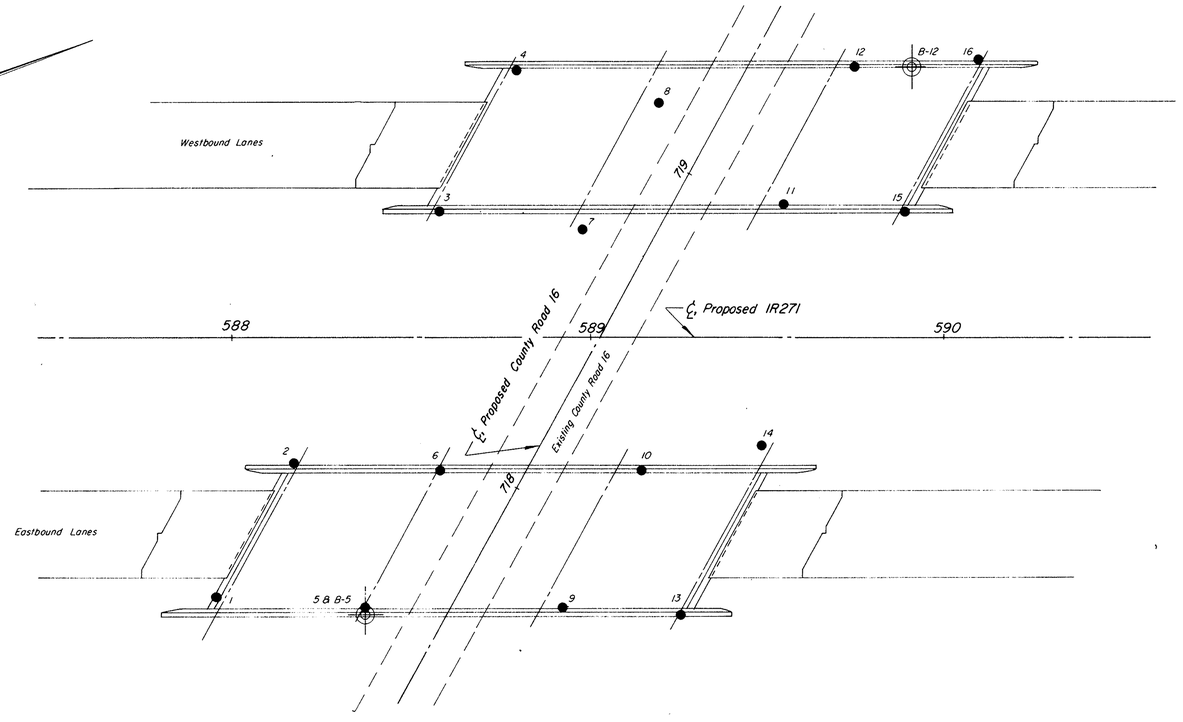
Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	Physical Characteristics: % Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	SHTL Class.
965.3	0														
	2				Brown sandy clay - bricks (Driller's description).										
	4														
960.3	6				TOP OF ROCK										
	8		3.9	1.1											
	10														
	12														
	14		4.5	0.5	Shale, gray, arenaceous, with few calcareous intervals, fissile, firm, with thin clay seams. Core loss 8%.										
	16														
	18														
	20		5.0	0.0											
	22														
	24		5.0	0.0											
940.3					BOTTOM OF BORING										

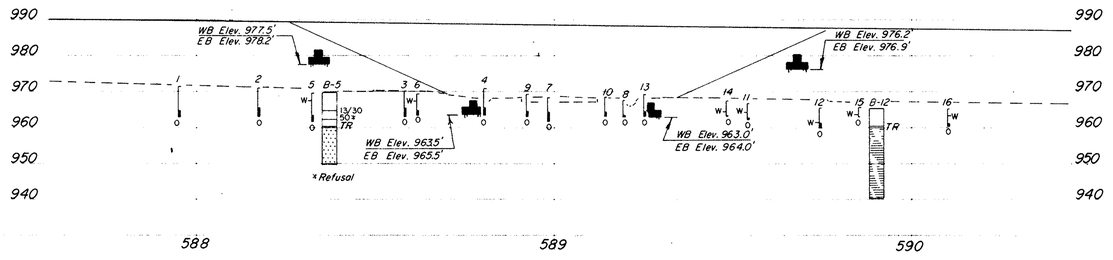
NOTE: Information shown by this subsurface investigation was obtained solely for the use in establishing design controls for the project. The State of Ohio does not guarantee the accuracy of this data and it is not to be construed as a part of the plans governing construction of the project.

OHIO DEPARTMENT OF HIGHWAYS
TESTING LABORATORY
1620 WEST BROAD STREET, COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. SUM-IR271-1117 L/R
OVER COUNTY ROAD 16
SEC. SUM-IR271-8.29

CHECKED BY	REVIEWED BY	DATE
L.N.L.	R.D.R.	2/10/65





SCALE: 1" = 20'

OHIO DEPARTMENT OF HIGHWAYS
TESTING LABORATORY
1620 WEST BROAD STREET, COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. SUM-IR271-1117 L/R
OVER COUNTY ROAD 16
SEC. SUM-IR271-8.29

PLAN AND PROFILE

DRAWN BY	CHECKED BY	REVIEWED BY	DATE
R.L.C.	L.N.L.	R.D.R.	2/10/65

TC-115
500-1-64

49
52
3
3

SUM-IR271-8.29

Test Location No. 1
Station & Offset 587+95.72' RT. REAR ABUTMENT
Surface Elev. 971.3 Water Elev. DRY
Piling
Hammer
Formula
Reference
Rod Condition
979 975 971 967 963 959
TEST ROD
10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. 2
Station & Offset 588+17.35' RT. REAR ABUTMENT
Surface Elev. 971.0 Water Elev. DRY
Piling
Hammer
Formula
Reference
Rod Condition
TEST ROD
10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. 3
Station & Offset 588+58.36' LT. REAR ABUTMENT
Surface Elev. 970.1 Water Elev. DRY
Piling
Hammer
Formula
Reference
Rod Condition
TEST ROD
10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. 4
Station & Offset 588+80.74' LT. REAR ABUTMENT
Surface Elev. 970.9 Water Elev. DRY
Piling
Hammer
Formula
Reference
Rod Condition
TEST ROD
10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. 5
Station & Offset 588+37.75' RT. REAR PIER
Surface Elev. 969.7 Water Elev. 967.7'
Piling
Hammer
Formula
Reference
Rod Condition GOOD
971 967 963 959
TEST ROD
10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. 6
Station & Offset 588+58.37' RT. REAR PIER
Surface Elev. 969.4' Water Elev. 967.4'
Piling
Hammer
Formula
Reference
Rod Condition GOOD
TEST ROD
10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. 7
Station & Offset 588+98.30' LT. REAR PIER
Surface Elev. 968.4' Water Elev. DRY
Piling
Hammer
Formula
Reference
Rod Condition GOOD
TEST ROD
10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. 8
Station & Offset 589+19.65' LT. REAR PIER
Surface Elev. 967.8 Water Elev. DRY
Piling
Hammer
Formula
Reference
Rod Condition GOOD
971 967 963 959
TEST ROD
10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. 9
Station & Offset 588+92.75' RT. FORWARD PIER
Surface Elev. 969.3 Water Elev. DRY
Piling
Hammer
Formula
Reference
Rod Condition GOOD
979 975 971 967 963 959
TEST ROD
10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. 10
Station & Offset 589+14.37' RT. FORWARD PIER
Surface Elev. 968.7' Water Elev. DRY
Piling
Hammer
Formula
Reference
Rod Condition GOOD
TEST ROD
10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. 11
Station & Offset 589+54.37' LT. FORWARD PIER
Surface Elev. 966.9' Water Elev. 964.4'
Piling
Hammer
Formula
Reference
Rod Condition GOOD
TEST ROD
10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. 12
Station & Offset 589+74.75' LT. FORWARD PIER
Surface Elev. 965.7' Water Elev. 961.7'
Piling
Hammer
Formula
Reference
Rod Condition GOOD
TEST ROD
10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. 13
Station & Offset 589+25.77' RT. FORWARD ABUTMENT
Surface Elev. 969.3 Water Elev. DRY
Piling
Hammer
Formula
Reference
Rod Condition GOOD
971 967 963 959
TEST ROD
10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. 14
Station & Offset 589+48.30' RT. FORWARD ABUTMENT
Surface Elev. 967.6 Water Elev. 964.6
Piling
Hammer
Formula
Reference
Rod Condition GOOD
TEST ROD
10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. 15
Station & Offset 589+88.35' LT. FORWARD ABUTMENT
Surface Elev. 965.8' Water Elev. 963.8'
Piling
Hammer
Formula
Reference
Rod Condition GOOD
TEST ROD
10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. 16
Station & Offset 590+10.77' LT. FORWARD ABUTMENT
Surface Elev. 965.2' Water Elev. 963.2
Piling
Hammer
Formula
Reference
Rod Condition GOOD
971 967 963 959
TEST ROD
10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

OHIO STATE HIGHWAY TESTING LABORATORY
1620 WEST BROAD ST. COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. SUM-IR271-1117 L/R
OVER COUNTY ROAD 16
SEC. SUM-IR271-8.29

DRIVE ROD PENETRATION RESISTANCE DATA

PLOTTED BY	CHECKED BY	REVIEWED BY	DATE
R.C.	L.N.L.	R.D.R.	2/10/65

GEOLOGY OF THE SITE

The structure site is located upon the glaciated Allegheny Plateau. Shallow soil cover overlies sandstone and shale bedrock, of Mississippian age.

EXPLORATION

The exploration consisted of one core boring made on January 26 and 27, 1965, and two core borings and sixteen hand-driven probes, made between April 19 and 23, and on June 18, 1963.

INVESTIGATIONAL FINDINGS

The borings disclosed that bedrock surface, encountered at 5 and 6-foot depths, elevations 961 and 954 feet, is overlain by clay, shale fragments, cinders, and bricks. The borings were terminated at elevations 951 and 949 feet, after penetrating 9 and 20 feet below bedrock surface.

The hand-driven probes met refusal to penetration at 1 to 6-foot depths, elevations 964 and 956 feet, considered to approximate bedrock surface.

On the basis of the tests, bedrock surface is considered to slope from the rear and forward abutment areas, elevations 959 and 961 feet, respectively, to the central portion of the structure site, elevation 954 feet.

Since it is the intention to found the pier units on bedrock, it is considered advisable that the open excavation be inspected in the field in order to insure that the excavations have been extended to rock throughout the entire founding area.

Unconfined compression tests on similar shale and sandstone bedrock indicates a crushing strength on the order of 200 tons per square foot.

LEGEND

- Auger Boring Location - Plan View.
- Press and/or Drive Sample and/or Core Boring Location - Plan View.
- Drive Rod Penetration Resistance Sounding Location - Plan View.
- Capped Pile
- Footing
- Footing on Pile
- TR — Top of Rock
- Horizontal Bar on Boring Log indicates the Depth the Sample was Taken.
- X - Figures Beside the Boring Log in Profile Indicate the Number of Blows for Standard Penetration Test. X = Number of Blows for First 6 Inches. Y = Number of Blows for Second 6 Inches.
- Drive Rod Penetration Resistance Sounding Log - Profile
- Casing
- Resistance (R) < 10,000 lbs.
- Resistance (R) > 10,000 lbs.
- Z — Indicates Final Measurement of Penetration, in Inches.
- W — Indicates Free Water Elevation.
- ▼ — Indicates Static Water Elevation.

SYMBOLS OF ROCK TYPES

- Coal
- Weathered Indurated Clay
- Indurated Clay
- Weathered Shale
- Shale
- Weathered Sandstone
- Sandstone
- Leached Dolomite
- Dolomite
- Leached Limestone
- Limestone

GENERAL INFORMATION

Drive Rod Penetration Sounding Tests

Drive rod penetration resistance tests constitute driving a 1.315-inch diameter steel rod, with a 45° cone point, into the ground, using a 122-pound drop-hammer with a free fall of five feet. At one or two-foot depth intervals, a measurement is taken to determine the amount of penetration achieved in three hammer drops. This reading is converted to an empirical value for capacity (R), in thousands of pounds (which is a measure of both the point resistance and frictional resistance on the rod), by using charts prepared by the Ohio Department of Highways, Bureau of Bridges, on the basis of correlation study of rod penetration with post performance of pile driving. For interpretation, a graph is prepared by plotting the value "R" against the depth at which the reading was taken, and connecting the plotted points. The curve so obtained reflects the density of subsurface materials in a manner that can be readily compared with data from similar tests at other locations on the structure site. From this comparison, the overall uniformity of subsurface condition may be evaluated.

Drive Sample Borings - Drive-Press Sample Borings

Drive sample borings are made by means of a rotary-type drill rig, employing a 2" O.D., 1-3/8" I.D. sampler, at 2-1/2 and/or 5-foot depth intervals, driven by means of a 140-pound drop-hammer with a free fall of 30 inches. The number of blows required to drive the sampler 12 inches is considered the standard penetration test.

Drive-press sample borings are made by means of a rotary-type drill rig, employing a 2" O.D., 1-3/8" I.D. drive sampler, and 3" O.D. thin-wall press sampler. The press sampler is advanced by continuous uniform pressure, applied by the drill rig.

The boring log sheets show a graphic plot of the information obtained, including depth and elevation of the sample, number of blows for the standard penetration tests in two 6-inch increments, depth of press samples, field sample number, sample description - based on laboratory tests and the Casagrande AC classification system - and gradation, plasticity, and moisture content determinations. Results of strength and consolidation testing, if performed, appear on separate enclosures.

At depths where materials are bouldery or gravelly to the extent that the sampler cannot be driven, a wash sample is procured for visual classification, in order to determine the general character of the material. These samples are not considered sufficiently representative to warrant laboratory testing.

Particle Size Definitions

Boulders | Cobbles | Gravel | Coarse Sand | Fine Sand | Silt | Clay

LOG OF BORING

Date Started 6-18-63 — Sampler Type SS — Dia. 1 3/8" — Water Elev. —
Date Completed 6-18-63 — Casing: Length — Dia. —
Boring No. B-1 — Station & Offset 590+88, 60' Lt (REAR ABUTMENT) — Surface Elev. 964.5'

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	Physical Characteristics: % Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	SHTL Class.
964.5	0				Gray clay with shale fragments (Driller's description).										
	2														
	4														
959.5	6				TOP OF ROCK										
	8		5.0	0.0	Shale, gray, hard, very arenaceous, carbonaceous, broken diagonal joints; with thin interbeds of carbonaceous, dark-gray, firm, fissile, very broken shale and very crumbly clay or clay shale. No core loss.										
	10														
	12		5.0	0.0											
	14														
949.5					BOTTOM OF BORING										

LOG OF BORING

Date Started 1-26-65 — Sampler Type SS — Dia. 1 3/8" — Water Elev. —
Date Completed 1-27-65 — Casing: Length — Dia. —
Boring No. B-5 — Station & Offset 591+23, 75' Lt (REAR PIER) — Surface Elev. 958.8'

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	Physical Characteristics: % Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	SHTL Class.
958.8	0				Brown sandy clay - cinders - bricks. (Driller's description).										
	2														
954.3	4				TOP OF ROCK										
	6														
	8		5.0	0.0	Shale, gray, arenaceous, sub-fissile, firm, jointed and broken, argillaceous and fissile below elevation 941.8'. No core loss.										
	10														
	12		5.0	0.0											
	14														
	16														
	18		5.0	0.0											
	20														
	22														
	24		4.4	0.1											
933.8					BOTTOM OF BORING										

LOG OF BORING

Date Started 6-18-63 — Sampler Type SS — Dia. 1 3/8" — Water Elev. —
Date Completed 6-18-63 — Casing: Length — Dia. —
Boring No. B-16 — Station & Offset 592+71, 80' Rt (FORWARD ABUTMENT) — Surface Elev. 966.5'

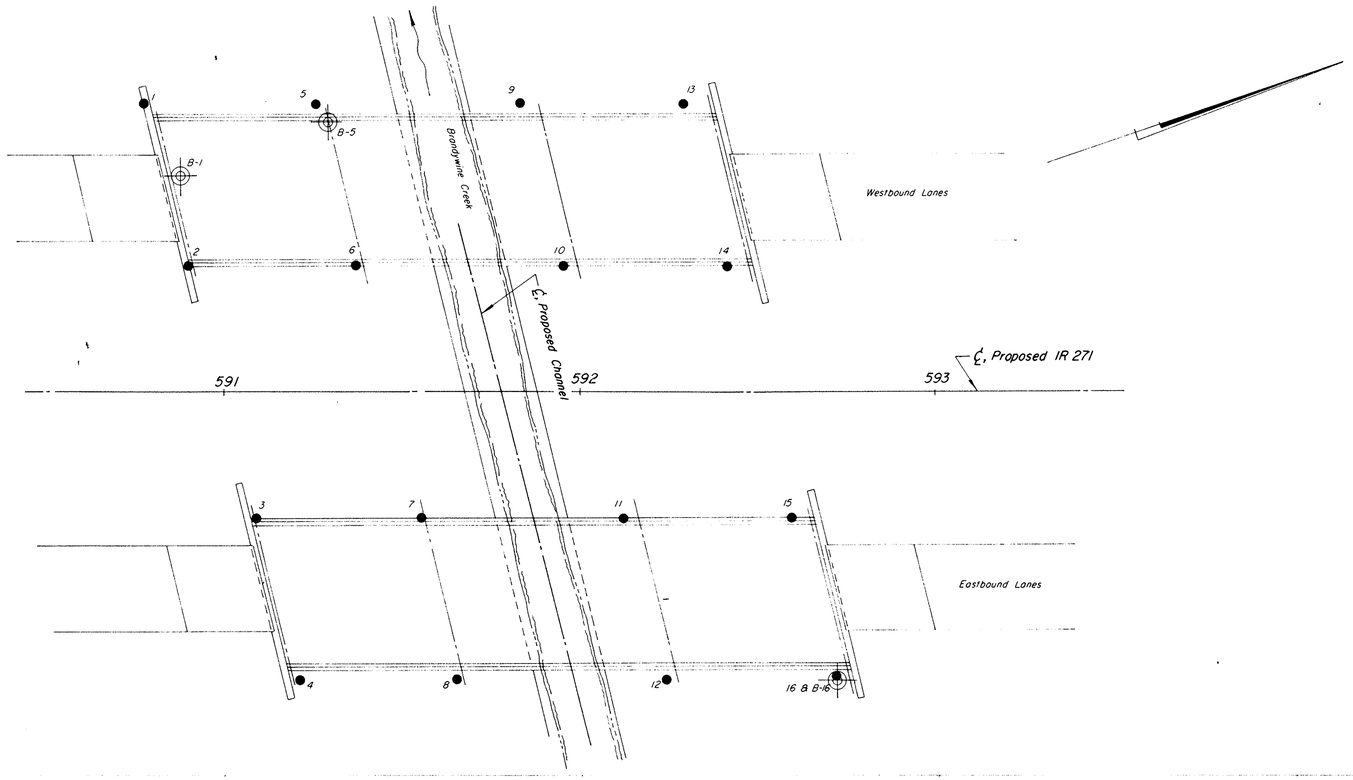
Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	Physical Characteristics: % Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	SHTL Class.
966.5	0				Gray clay with shale fragments (Driller's description).										
	2														
	4														
959.9	6				TOP OF ROCK										
	8		4.3	0.7	Sandstone, gray, fine-grained, argillaceous, firm, with few thin interbeds of black carbonaceous shale, few vertical weathered joints. Interval very broken. Core loss 8%.										
	10														
	12														
	14		4.9	0.1											
953.5					BOTTOM OF BORING										

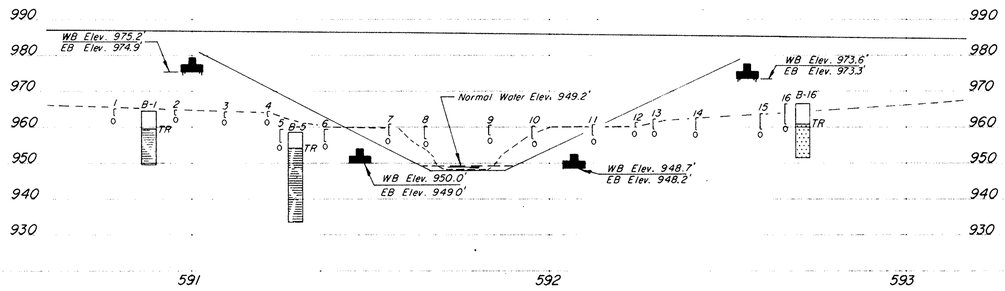
NOTE: Information shown on this subsurface investigation was obtained solely for the use in establishing design controls for the project. The State of Ohio does not guarantee the accuracy of this data and it is not to be construed as a part of the plans governing construction of the project.

OHIO DEPARTMENT OF HIGHWAYS
TESTING LABORATORY
1620 WEST BROAD STREET, COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. SUM-IR271-1122 L/R
OVER BRANDYWINE CREEK
SEC. SUM-IR271-8.29

CHECKED BY	REVIEWED BY	DATE
R.H.P.	R.D.R.	2-9-65





SCALE: 1" = 20'

OHIO DEPARTMENT OF HIGHWAYS
TESTING LABORATORY
1620 WEST BROAD STREET, COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. SUM-IR271-1122 L/R
OVER BRANDYWINE CREEK
SEC. SUM-IR271-8.29

PLAN AND PROFILE

DRAWN BY	CHECKED BY	REVIEWED BY	DATE
R.L.C.	R.H.P.	R.D.R.	2-9-65

TC-115
500-1-64

52
52

SUM-IR271-8.29

3
3

Test Location No. 1
Station & Offset 590+78.80'LT REAR ABUTMENT
Surface Elev. 965.1' Water Elev.
Piling
Hammer
Formula
Reference
Rod Condition
HAND ROD
Capacity "R" in Thousands of Pounds

Test Location No. 2
Station & Offset 590+90.35'LT REAR ABUTMENT
Surface Elev. 964.9' Water Elev.
Piling
Hammer
Formula
Reference
Rod Condition
HAND ROD
Capacity "R" in Thousands of Pounds

Test Location No. 3
Station & Offset 591+09.35'RT REAR ABUTMENT
Surface Elev. 964.2' Water Elev.
Piling
Hammer
Formula
Reference
Rod Condition
HAND ROD
Capacity "R" in Thousands of Pounds

Test Location No. 4
Station & Offset 591+21.80'RT REAR ABUTMENT
Surface Elev. 964.5' Water Elev.
Piling
Hammer
Formula
Reference
Rod Condition
HAND ROD
Capacity "R" in Thousands of Pounds

Test Location No. 5
Station & Offset 591+26.80'LT REAR PIER
Surface Elev. 959.6' Water Elev.
Piling
Hammer
Formula
Reference
Rod Condition
HAND ROD
Capacity "R" in Thousands of Pounds

Test Location No. 6
Station & Offset 591+37.35'LT REAR PIER
Surface Elev. 959.6' Water Elev.
Piling
Hammer
Formula
Reference
Rod Condition
HAND ROD
Capacity "R" in Thousands of Pounds

Test Location No. 7
Station & Offset 591+55.35'RT REAR PIER
Surface Elev. 960.9' Water Elev.
Piling
Hammer
Formula
Reference
Rod Condition
HAND ROD
Capacity "R" in Thousands of Pounds

Test Location No. 8
Station & Offset 591+65.80'RT REAR PIER
Surface Elev. 960.2' Water Elev.
Piling
Hammer
Formula
Reference
Rod Condition
HAND ROD
Capacity "R" in Thousands of Pounds

Test Location No. 9
Station & Offset 591+83.80'LT FORWARD PIER
Surface Elev. 960.7' Water Elev.
Piling
Hammer
Formula
Reference
Rod Condition
HAND ROD
Capacity "R" in Thousands of Pounds

Test Location No. 10
Station & Offset 591+95.35'LT FORWARD PIER
Surface Elev. 960.2' Water Elev.
Piling
Hammer
Formula
Reference
Rod Condition
HAND ROD
Capacity "R" in Thousands of Pounds

Test Location No. 11
Station & Offset 592+12.35'RT FORWARD PIER
Surface Elev. 960.8' Water Elev.
Piling
Hammer
Formula
Reference
Rod Condition
HAND ROD
Capacity "R" in Thousands of Pounds

Test Location No. 12
Station & Offset 592+24.80'RT FORWARD PIER
Surface Elev. 961.3' Water Elev.
Piling
Hammer
Formula
Reference
Rod Condition
HAND ROD
Capacity "R" in Thousands of Pounds

Test Location No. 13
Station & Offset 592+29.80'LT FORWARD ABUTMENT
Surface Elev. 962.3' Water Elev.
Piling
Hammer
Formula
Reference
Rod Condition
HAND ROD
Capacity "R" in Thousands of Pounds

Test Location No. 14
Station & Offset 592+41.35'LT FORWARD ABUTMENT
Surface Elev. 962' Water Elev.
Piling
Hammer
Formula
Reference
Rod Condition
HAND ROD
Capacity "R" in Thousands of Pounds

Test Location No. 15
Station & Offset 592+59.35'RT FORWARD ABUTMENT
Surface Elev. 963.8' Water Elev.
Piling
Hammer
Formula
Reference
Rod Condition
HAND ROD
Capacity "R" in Thousands of Pounds

Test Location No. 16
Station & Offset 592+71.70'RT FORWARD ABUTMENT
Surface Elev. 966.5' Water Elev.
Piling
Hammer
Formula
Reference
Rod Condition
HAND ROD
Capacity "R" in Thousands of Pounds

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DRIVE ROD PENETRATION RESISTANCE DATA

PLOTTED BY	CHECKED BY	REVIEWED BY	DATE
RC	R. H. P.	R. D. R.	2-9-65